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CATALOGUE

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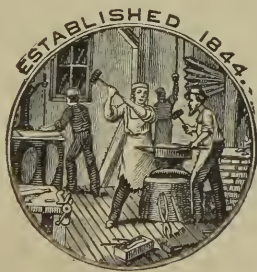
SURGICAL INSTRUMENTS,

DEFORMITY APPARATUS,

ARTIFICIAL LIMBS, ARTIFICIAL EYES, ELASTIC STOCKINGS
TRUSSES, CRUTCHES, SUPPORTERS, GALVANIC
AND FARADIC BATTERIES, ETC.

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OF EVERY DESCRIPTION.




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CHICAGO.

FOURTEENTH EDITION.

BONHUE & HENNEBERRY, PRINTERS, ENGRAVERS AND BINDERS, CHICAGO


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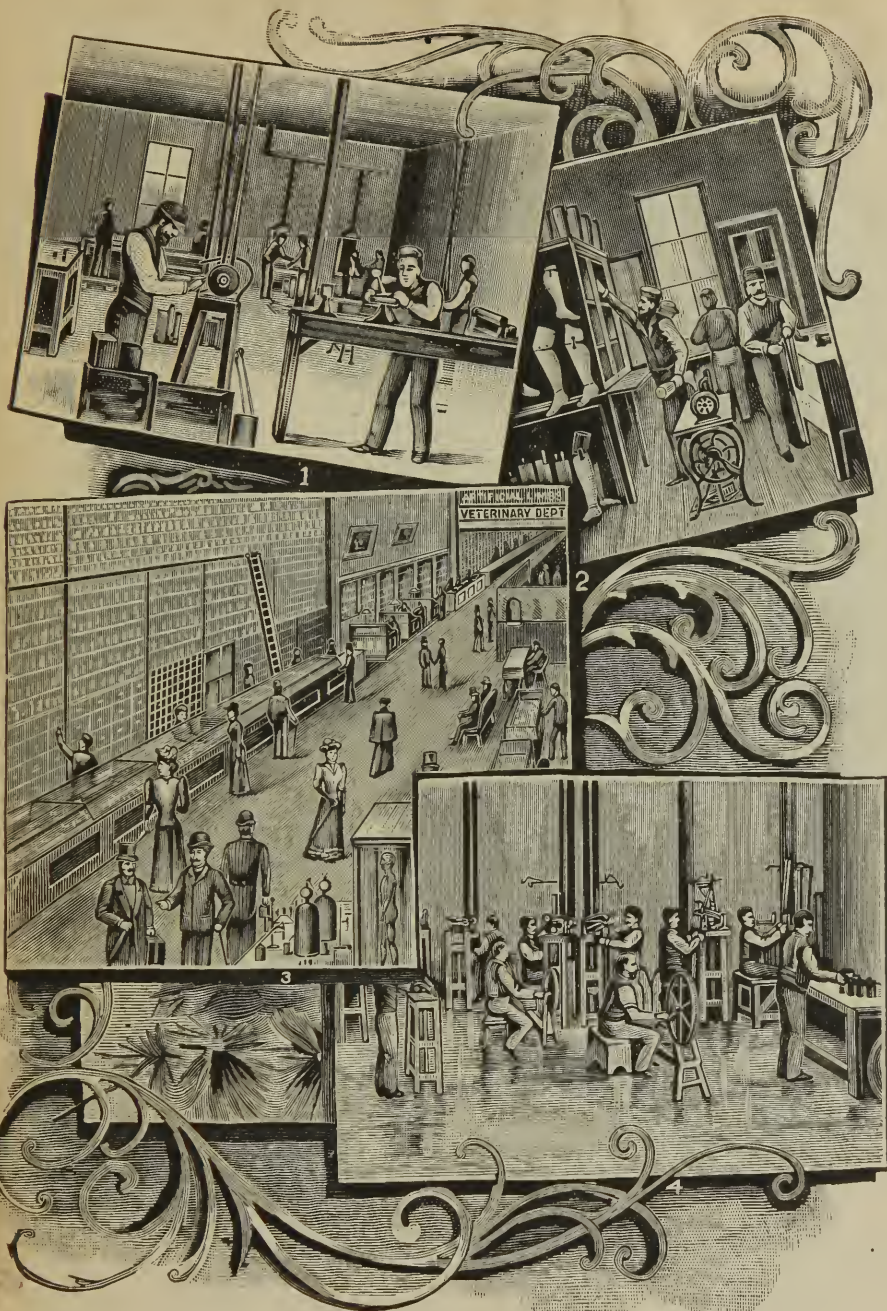
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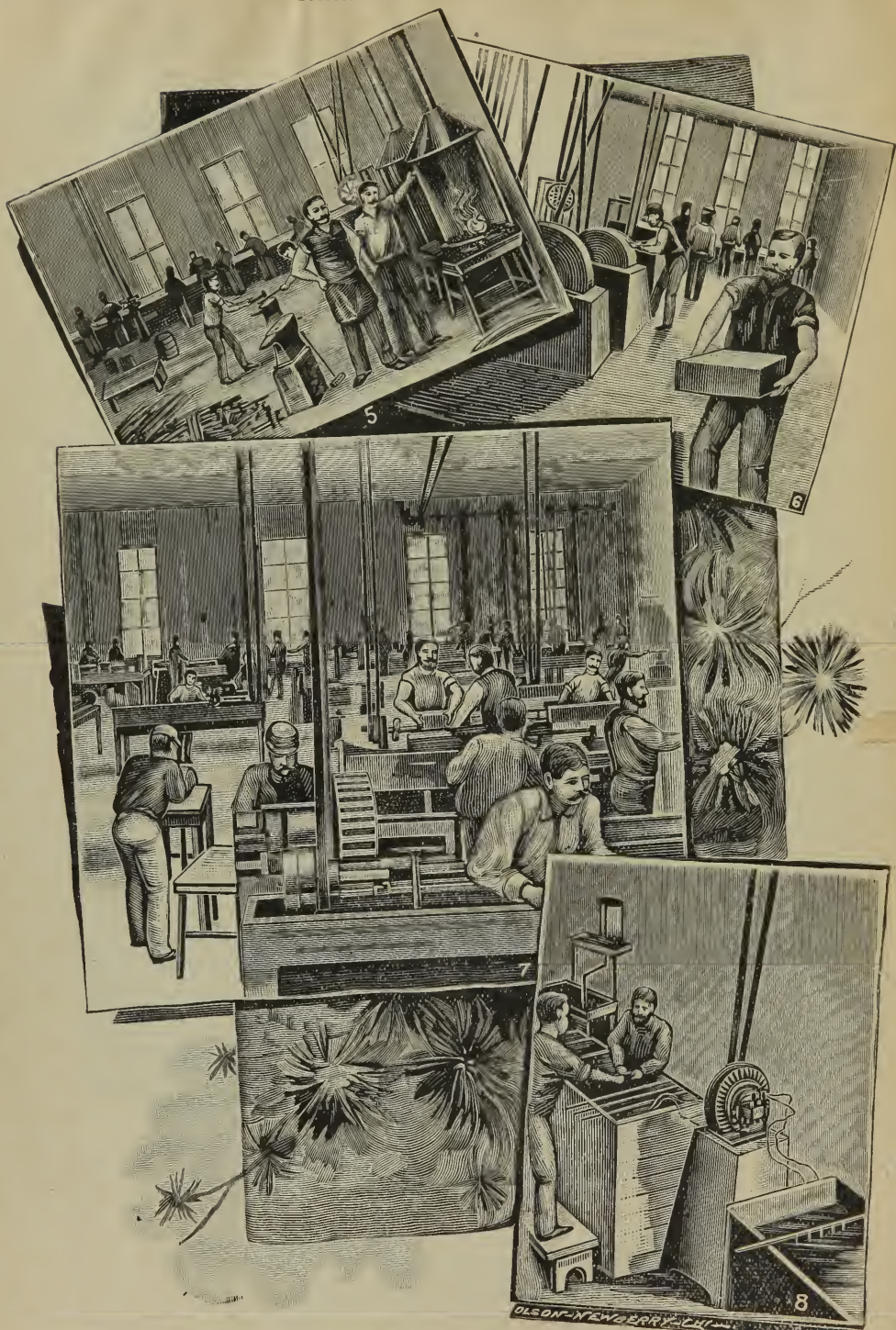
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SHARP & SMITH, CHICAGO.



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THE name of your Town, County and State, and your own name, should be plainly written.

Articles sent by mail are sent at the risk of the purchaser.

When Instruments are sent for repair, the address of the person sending them should be plainly marked on outside of package.

Instruments ordered by parties unknown to us will be sent by express C. O. D., including the charges for returning the money; and a remittance sufficient to cover express charges should accompany the order.

Sharp or pointed Instruments, and articles wholly or partly of glass, cannot be sent by mail, excepting in tin boxes.

All parcels sent by mail, on which letter postage has not been paid, are opened and examined at the Chicago office, and if writing is found inclosed, letter rate is charged on the parcel, which sometimes amounts to far more than express rates. This penalty postage we charge to the person sending the parcel.

We pay great attention to having goods carefully packed, so that they can be transported to any part of the world safely; goods so packed cease to be our property when placed in the hands of the carrier. Therefore, for all delays or damages, the customer must look to the express company, who alone is legally responsible to the owner for their safe and prompt delivery.

All articles of our manufacture and those bearing our name, we warrant; and any article sold by us not answering our description, or not according to order, will be taken back cheerfully; and any errors on our part will be promptly rectified.

Reference to former correspondence should be avoided as much as possible. Do not depend on our remembering former orders, but designate the article wanted, either by name or description; and when measures are required send new measures. Attention to this suggestion will frequently save time and avoid delay.

Very respectfully,

SHARP & SMITH.

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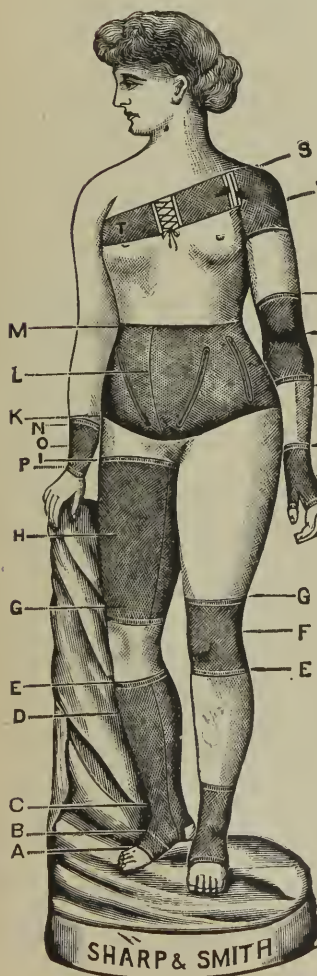
DIRECTIONS FOR MEASUREMENT

Which should be taken in the Morning before rising. The Measurement of Length is essential. Give the exact Measurement. All Measurements for Length should be taken on Inside of Limb. We allow for Expansion.

WHEN ORDERING PLEASE STATE QUALITY DESIRED, WHETHER OF STOUT OR SECOND GRADE SILK, OR COTTON ELASTIC.

 Silk Goods sent unless Cotton is Indicated in Order.

GOODS MADE TO ORDER ON SHORT NOTICE WHEN SIZES ARE IRREGULAR OR EXTRA LARGE.



	Stout Silk.	Second Grade.	Cotton
FOR A THIGH STOCKING.—Circumference at A, B, C, D, E, F, G, H, I. Length from floor to F, and from F to I.	\$9 00	\$7 50	\$5 75
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FOR A THIGH KNEE-CAP.—Circumference at E, F, G, H, I. Length from F to I.	5 00	4 00	3 50
FOR A THIGH-PIECE.—Circumference at G, H, I. Length from G to I.	2 50	2 00	1 75
FOR A KNEE STOCKING.—Circumference at A, B, C, D, E, F, G. Length from floor to F, and from F to G.	6 50	5 00	3 75
FOR A KNEE LEGGING.—Circumference at C, D, E, F, G. Length from C to F, and from F to G.	5 00	4 00	3 50
FOR A KNEE-CAP.—Circumference at E, F, G. Length from E to F, and F to G.	2 50	2 00	1 75
FOR A GARTER STOCKING.—Circumference at A, B, C, D, E. Length from floor to E.	4 00	3 00	2 00
FOR A GARTER LEGGING.—Circumference at C, D, E. Length from C to E.	2 50	2 00	1 75
FOR AN ANKLET.—Circumference at A, B, C. Length from floor to C.	2 50	2 00	1 75
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Wristlet, with hand-piece.	2 50
FOR AN ABDOMINAL BELT.—Circumference at K, L, M. Depth in front and back.	10 00	8 00
FOR AN UMBILICAL BELT WITH PAD.—Circumference at the Navel.	11 00	.....	9 00
FOR A SHOULDER CAP.—Circumference of Chest at Axilla T. Arm from Axilla to S, and Axilla to R. Arm three inches below Axilla.	8 00	6 00
State which shoulder, right or left.	2 50	2 00
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FOR ELBOW CAP.—Circumference at X, Y, Z. Length from X to Y, and from Y to Z.	2 50	2 00	1 75

For Extra Large Sizes an additional charge will be made.

AMPUTATING AND GENERAL OPERATING CASES.

We furnish the following cases at prices quoted, only when sold complete. We make several of each style at one time, and are thereby enabled to sell the cases complete, at a much less figure than the instruments would amount to if sold separately. In omitting any instrument we cannot allow the net price for each instrument, and if cases are wanted modified we will make the prices reasonable, or will be pleased to send quotations on same or entirely new and special cases which we make it a point to turn out very quickly.

Old instruments can be repaired and made to look like new, and put in cases with new instruments.

The following cases supplied with metal aseptic or ebony handle knives as desired:

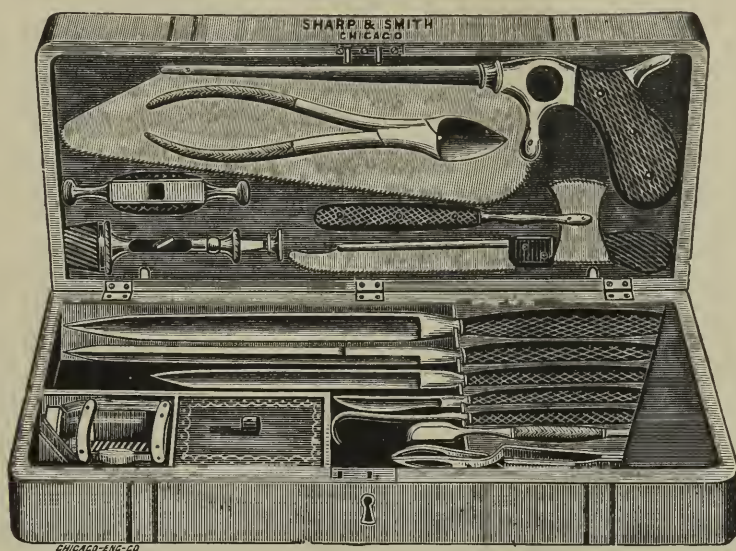
FIG.	
* 900.	Sharp & Smith's Amputating and Trephining Case.....\$26 00
901.	" " " " " " " " No. 2 24 75
* 902.	Parker's General Operating Set..... 67 00
* 903.	Sharp & Smith's Set of Amputating Instruments No. 3... ..18 75
* 904.	" " Amputating and Minor Operating Set..... 39 00
904-A.	Sharp & Smith's Amputating and Minor Operating Set ivory handles..... 51 00
* 905.	Sharp & Smith's General Operating Case No. 5, with Minor Operating Case inclosed..... 75 00
906.	Sharp & Smith's General Operating Case No. 6 with Minor Operating Case inclosed..... 52 50
906-A.	Sharp & Smith's General Operating Case No. 7 with Minor Operating Case inclosed.....125 00
907.	Sharp & Smith's General Operating Set No. 1 52 00
907-A.	" " " " " " " in ivory handles.... 63 00
908.	" " " " " " No. 2 75 00
909.	Mott's General Operating Set..... 54 00
910.	Markoe's " " " 50 00
911.	California " " " 50 00
912.	Buck's General Operating Set.....135 00
913.	Detmold's " " " 48 50
914.	Seymour's " " "132 00
915.	Parker's Compact Operating Set 46 50
916.	Blackman's General "..... 98 00
917.	Trephining Set..... 12 00
918.	Post's General Operating Set .....109 00
919.	Sharp & Smith's Operating Set 33 75
920.	Bone Exsecting Set..... 48 75
921.	Wood's General Operating Set.....52 00
922.	Hamilton's " " " 75 00
923.	Conant's Amputating and Minor Operating Case..... 40 00

All instruments designated by a * are illustrated.

See pages 271-A to 281-I for prices of other Operating Cases.

AMPUTATING AND GENERAL OPERATING CASES.

Metal Aseptic or Ebony Handle Knives.



*Fig. 900. Sharp & Smith's Amputating and Trephining Case, No. 1.

Sharp & Smith's Amputating and Trephining Set, No. 1.

- | | |
|---------------------------------------|---|
| 1 Liston's long Knife, hip and thigh. | 1 Capital Saw. |
| 1 Liston's medium Knife, leg and arm. | 1 Metacarpal Saw. |
| 1 Catling, foot and hand. | 1 Galt's conical Trephine and Handle. |
| 1 Tenaculum. | 1 Pair spring-catch Fenestrated Artery Forceps. |
| 1 Scalpel. | 1 Tourniquet. |
| 1 Elevator and Raspatory. | 1 Pair Liston's Bone Forceps. |
| 1 Brush. | Needles, Silk, Plastic Pins, Wax, etc. |
| 1 Hey's Saw. | |

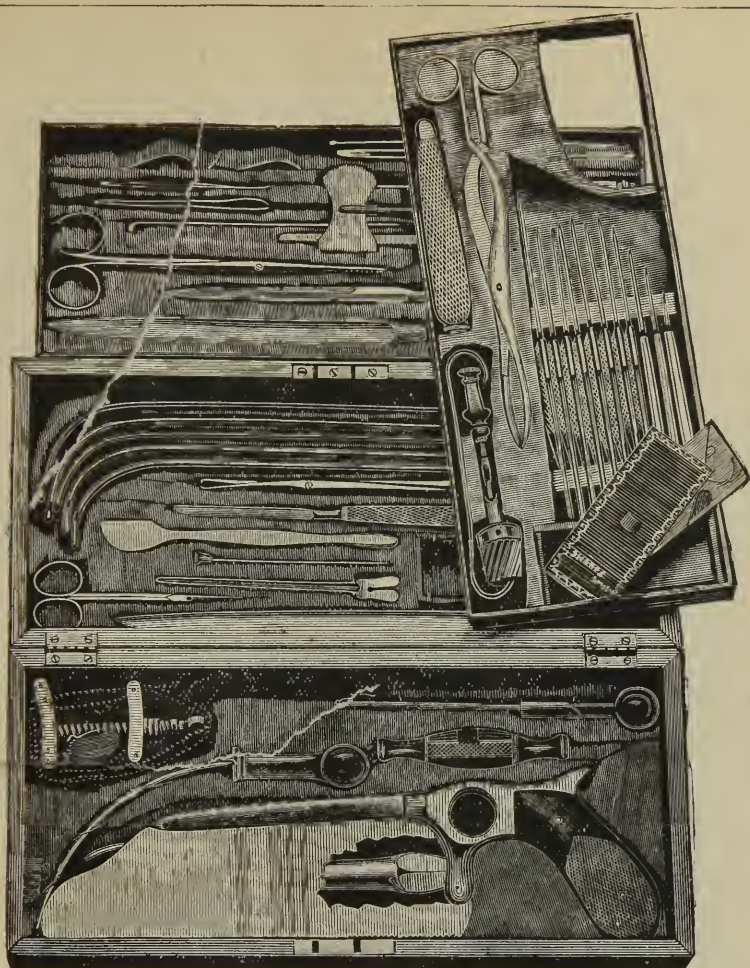
Mahogany Case, lined with oil dyed velvet.....\$26 00

Fig. 901. Sharp & Smith's Amputating and Trephining Set, No. 2.

- | | |
|---------------------------|---|
| 1 Liston's Knife. | 1 Metacarpal Saw. |
| 1 Catling. | 1 Galt's Trephine. |
| 1 Tenaculum. | 1 Pair spring-catch Fenestrated Artery Forceps. |
| 1 Scalpel. | 1 Tourniquet. |
| 1 Elevator and Raspatory. | 1 Pair Liston's Bone Forceps. |
| 1 Brush. | Needles, Silk, Plastic Pins, Wax, etc. |
| 1 Hey's Saw. | |
| 1 Capital Saw. | |

Mahogany Case, lined with oil-dyed velvet.....\$24 75

All instruments designated by a * are illustrated.



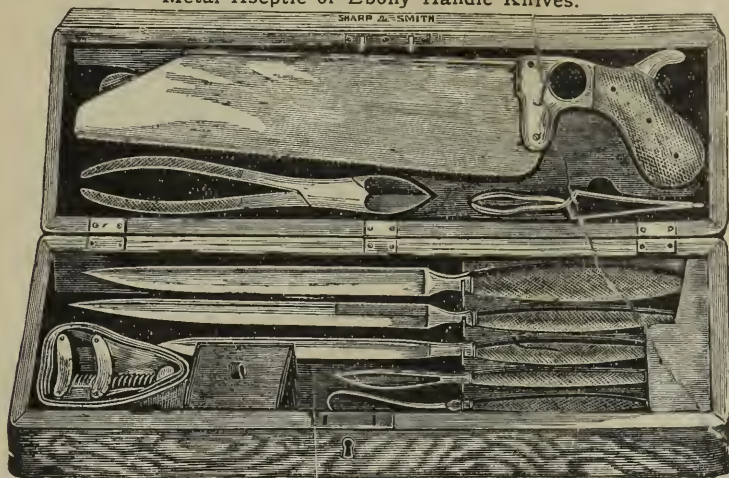
*Fig. 902. Parker's General Operating Set.

- | | |
|--|---|
| 1 Liston's Amputating Knife, screw handle. | 1 Tiemann & Co.'s Bullet Forceps. |
| 1 Liston's Amputating Knife medium Size. | 1 Tenotome. |
| 1 Small Catlin. | 1 Pair Parker's Retractors. |
| 1 Capital Saw. | 1 Small Trocar, straight. |
| 1 Metacarpal Saw. | 1 Rectum Trocar, curved. |
| 1 German Silver Wire Eye Speculum. | 1 Pair Artery Forceps, plain. |
| 1 Hey's Saw. | 1 Pair Polypus Forceps. |
| 1 Trephining Elevator and Raspatory | 1 Steel Sound. |
| 1 Galt's Trephine and Handle. | 2 Lithotomy Staffs. |
| 1 Finger Knife. | 1 Lithotomy Bistoury. |
| 1 Curved Probe Pointed Bistoury. | 1 Pair Lithotomy Forceps. |
| 1 Curved Sharp Pointed Bistoury. | 1 Pair Liston's Bone Forceps. |
| 1 Cooper's Hernia Knife. | 1 Pair Eye Scissors, curved on the flat. |
| 3 Scalpels, assorted. | 2 Silver Catheters. |
| 1 Cataract Knife. | 1 Spiral Tourniquet. |
| 1 Parker's Lachrymal Needle. | 1 Eye Needle, curved. |
| 1 Exploring Trocar. | 1 Set Parker's Aneurism Needles. |
| 1 Director, steel. | 1 Pair Strabismus Forceps. |
| 1 Pair Probes, Silver. | 1 Pair Artery Forceps, spring-catch, plain. |

Needles, Silk, Plastic Pins, Wax, Etc.

Rosewood Case, brass-bound, lined with silk velvet, one patent leather cover, waterproof...\$67 00

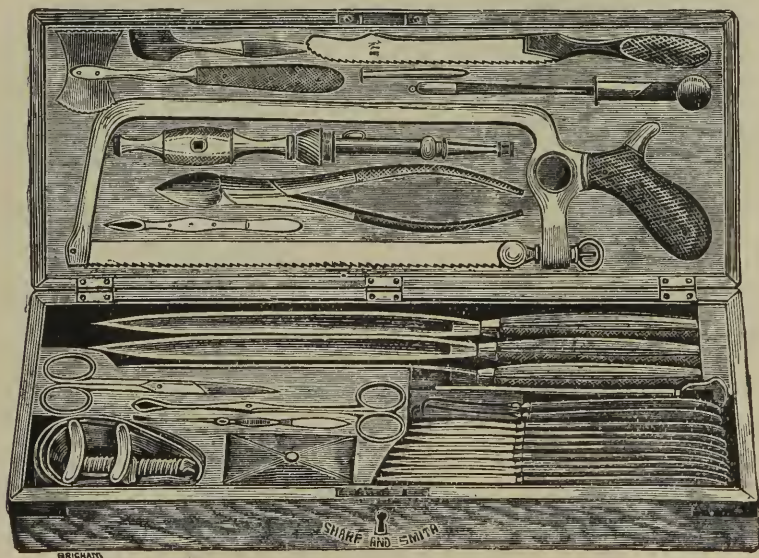
AMPUTATING AND GENERAL OPERATING CASES. Metal Aseptic or Ebony Handle Knives.



*Fig. 903. Sharp & Smith's Set of Amputating Instruments. No. 3.

- | | |
|-------------------------------------|--|
| 1 Liston's Knife, hip and thigh. | 1 Metacarpal Saw. |
| 1 Liston's Knife, leg and arm. | 1 Capital Saw, solid handle. |
| 1 Catling, small, hand and foot. | 1 Tourniquet. |
| 1 Scalpel. | 1 Pair Bone Forceps. |
| 1 Tenaculum. | Needles, Silk, Plastic Pins, Wax, etc. |
| 1 Pair spring-catch Artery Forceps. | |

Mahogany Case, lined with fine oil-dyed velvet.....\$18 75



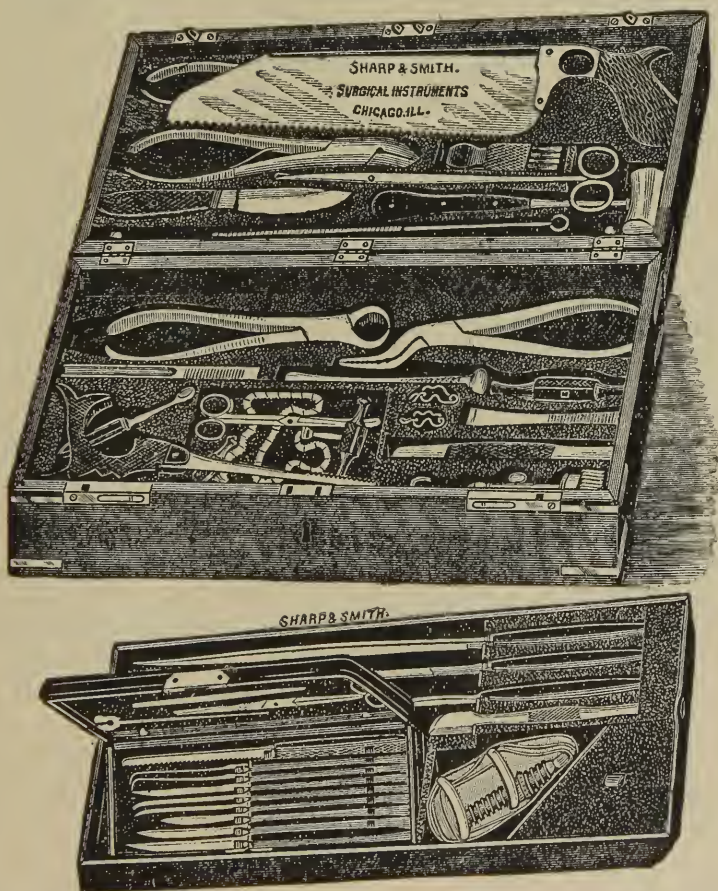
*Fig. 904. Sharp and Smith's Amputating and Minor Operating Set. For contents see next page.....\$39 00

AMPUTATING AND GENERAL OPERATING CASES.

* Fig. 904. Sharp & Smith's Amputating and Minor Operating Set.
Illustrated on preceding page.

- | | |
|----------------------------------|--|
| 1 Bow Saw, two blades. | 1 Director. |
| 1 Large Amputating Knife. | 1 Hey's Saw. |
| 1 Medium Amputating Knife. | 1 Movable Back Saw. |
| 1 Small Amputating Knife. | 1 Conical Trepphine. |
| 1 Pair Artery Forceps, Bull Dog. | 1 Bone Forceps, with spring. |
| 3 Scalpels. | 1 Trocar and Canula |
| 1 Finger Bistoury. | 1 Vulsellum Forceps. |
| 1 Curved Probe Bistoury. | 1 Tortion Forceps. |
| 1 Tenotome. | 1 Elevator and Brush. |
| 1 Curved Sharp Bistoury. | 1 Pair Straight Scissors. |
| 1 Hernia Bistoury. | 1 Pair Curved Scissors. |
| 1 Tenaculum. | 1 Exploring Needle |
| 1 Aneurism Needle. | 1 Spiral Tourniquet. |
| | Needles, Silk, Plastic Pins, Wax, etc. |

Brass bound Rosewood Case, velvet-lined\$39 00
Fig. 904-A. Same, with Ivory Handles..... 51 00



* Fig. 905. Sharp & Smith's General Operating Case, No. 5, with Minor Operating Case inclosed. For contents see next page\$75 00

AMPUTATING AND GENERAL OPERATING CASES.

***Fig. 905. Sharp & Smith's General Operating Case No. 5,
with Minor Operating Case inclosed.**

See preceding page.

- | | |
|-----------------------------------|------------------------------------|
| 1 Liston's Knife, hip and thigh. | 1 Tiemann & Co.'s Bullet Probe. |
| 1 Liston's Knife, leg and arm. | 1 Lead Mallet. |
| 1 Catlin, small. | 1 Bone Chisel. |
| 1 Bow Saw. | 1 Bone Gouge. |
| 1 Liston's Bone Forceps, curved. | 1 Scissors, curved on the flat. |
| 1 Spiral Tourniquet. | 1 Dressing and Polypus Forcep. |
| 1 Galt's Trephine and Handle. | 1 Piffard's Bone Scoop. |
| 1 Elevator and Raspatory. | 1 Sayre's Periosteotome. |
| 1 Hey's Saw. | 1 Satterlee's Bone Forcep. |
| 1 Brush. | 2 Steel Serresfins. |
| 1 Trocar and Canula. | 1 Van Buren's Sequestrum Forcep |
| 1 Heavy Cartilage Knife. | 1 Curved Hand Gouge. |
| 2 Retractors, Parker's. | 1 Ferguson's Lion Jaw Bone Forcep. |
| 1 Tiemann & Co.'s Bullet Forceps. | 1 Chain Saw. |

The following instruments included in this set are fitted into a compact minor operating case, which can be removed from the larger one and carried in the pocket if desired. This minor case is leather covered and velvet lined, and contains:

- | | |
|-------------------------|----------------------------|
| 1 Metacarpal Saw. | 1 Tenaculum. |
| 2 Scalpels. | 1 Bulldog Artery Forcep. |
| 1 Sharp-point Bistoury. | 1 Pair Scissors. |
| 1 Probe-point Bistoury. | 1 Director and Tongue Tie. |
| 1 Tenotome. | 1 Aneurism Needle. |
| 1 French Finger Knife. | 2 Long Silver Probes. |
| 1 Plain Artery Forcep. | |

Twelve needles, silk, coil of silver wire, wax and pins, all in a finely carved, brass-bound case, lined with oil-dyed velvet, and supplied with patent leather, slip-over cover, waterproof.....\$75 00

Fig. 906. Sharp & Smith's Operating Case No. 6.—Same style as above.

- | | |
|----------------------------------|----------------------------------|
| 1 Liston's Knife, hip and thigh. | 1 Heavy Cartilage Knife. |
| 1 Liston's Knife, leg and arm. | 2 Retractors, Parker's. |
| 1 Catlin, small. | 1 Tiemann & Co.'s Bullet Forcep. |
| 1 Bow Saw. | 1 Tiemann & Co.'s Bullet Probe. |
| 1 Bone forcep, Liston's best. | 1 Lead Mallet. |
| 1 Spiral Tourniquet. | 1 Bone Chisel. |
| 1 Galt's Trephine and Handle. | 1 Bone Gouge. |
| 1 Elevator and Raspatory. | 1 Scissors, curved on the flat. |
| 1 Hey's Saw. | 1 Dressing and Polypus Forcep. |
| 1 Brush. | 1 Serresfins. |
| 1 Trocar and Canula. | 1 Vulsellum Forcep. |

The following instruments included in this set are fitted into a compact minor operating case, which can be removed from the larger one and carried in the pocket if desired. The minor case is leather covered and velvet lined, and contains:

- | | |
|-------------------------|----------------------------|
| 1 Metacarpal Saw. | 1 Tenaculum. |
| 2 Scalpels. | 1 Bulldog Artery Forcep. |
| 1 Sharp-point Bistoury. | 1 Pair Scissors. |
| 1 Probe-point Bistoury. | 1 Director and Tongue Tie. |
| 1 Tenotome. | 1 Aneurism Needle. |
| 1 French Finger Knife. | 1 Long Silver Probe. |
| 1 Plain Artery Forcep. | 12 Needles. |

Silk, coil of silver wire, pins and wax, all in a neat, brass-bound case, lined with oil-dyed velvet.....\$52 50

AMPUTATING AND GENERAL OPERATING CASES.**Fig. 906-A. Sharp & Smith's Complete Operating Case No. 7.**

Same Style as Fig. 905.

- | | |
|-------------------------------------|-----------------------------------|
| 1 Liston's Knife, hip and thigh. | 1 Bone Gnawing Forcep. |
| 1 Liston's Knife, leg and arm. | 2 Sponge Holders. |
| 1 Catlin, small. | 1 Horn Screw for Lockjaw. |
| 1 Bow Saw, two blades. | 1 Lithotomy Staff. |
| 1 Liston's Bone Forceps, curved. | 1 Lithotomy Forcep. |
| 1 Spiral Tourniquet. | 1 Lithotomy Bistoury. |
| 1 Galt's Trephine and Handle. | 1 Gaylard's Bone Drill. |
| 1 Elevator and Raspatory. | 1 Set Brainard's Bone Drills. |
| 1 Hey's Saw. | 1 Fenestrated Slide-catch Forcep. |
| 1 Brush. | 1 Fritche's Needle Holder. |
| 1 Trocar and Canula. | 1 Cooper's Hernia Knife. |
| 1 Heavy Cartilage Knife. | 1 Large Trepanning Scalpel. |
| 2 Retractors, Parker's. | 2 Steel Sounds. |
| 1 Tiemann & Co.'s Bullet Forceps. | 2 Male Catheters, plated. |
| 1 Tiemann & Co.'s Bullet Probe. | 1 Pair Vulsellum Forceps. |
| 1 Lead Mallet. | 1 Plain Artery Forcep, heavy. |
| 1 Bone Chisel. | 1 Eye Speculum, Noyes', best. |
| 1 Bone Gouge. | 1 Dix's Spud. |
| 1 Scissors, curved on the flat. | 1 Beer's Knife. |
| 1 Polypus Forcep. | 1 Linear Knife. |
| 1 Piffard's Bone Scoop. | 1 Iris Forcep. |
| 1 Sayre's Periosteotome. | 1 Iris Scissors. |
| 1 Satterlee's Bone Forceps. | 1 Curved Trocar. |
| 2 Steel Serresfins. | 1 Eye Needle. |
| 1 Van Buren's Sequester Forceps. | 1 Brunn's Bone Scoop. |
| 1 Curved Hand Gouge. | 1 Chain Saw Carrier. |
| 1 Ferguson's Lion Jaw Bone Forceps. | 1 Double Operating Hook. |
| 1 Chain Saw, rotating handles. | 1 Adams' Subcutaneous Saw. |

The following instruments included in this set are fitted into a compact minor operating case, which can be removed from the larger one and carried in the pocket if desired. This minor case is leather covered and velvet lined, and contains :

- | | |
|-------------------------|--|
| 1 Metacarpal Saw. | 1 Bulldog Artery Forceps. |
| 2 Scalpels. | 1 Pair Scissors. |
| 1 Sharp-point Bistoury. | 1 Director and Tongue Tie. |
| 1 Probe-point Bistoury. | 1 Aneurism Needle. |
| 1 Tenotome. | 2 Long Silver Probes. |
| 1 French Finger Knife. | 12 Needles, silk, coil of silver wire, one |
| 1 Plain Artery Forcep. | coil iron wire, wax and pins. |
| 1 Tenaculum. | |

All in a finely finished case, lined with fine oil-dyed velvet, with patent leather waterproof cover for case.....\$125 00

Metal Aseptic or Ebony Handle Knives.

ASK FOR

SHARP & SMITH'S INSTRUMENTS

When Ordering through Dealers.

SUPPLEMENT.

AMPUTATING AND GENERAL OPERATING CASES.

An Aseptic Emergency Case.

BY JOHN E. OWENS, M. D., Professor of Surgical Anatomy and Operative Surgery in the Chicago Medical College.

A case containing all that is required by the operating surgeon in the first treatment of injuries, whether single or multiple, whether slight or severe, is a desideratum. Thus equipped, one is enabled immediately to respond to urgent calls, and to fulfill the indications presented by the varied injuries of the occasion. In the latter part of 1889, after various modifications in style of instruments and their arrangement, the "Emergency Case," which I bring to your notice, was completed.



Fig. 906-B. Dr. John E. Owens' Case (Closed).

It weighs twenty-four pounds, the length is fifteen and three-quarter inches, eight inches wide, twelve inches high. The top is oval, so that it can be conveniently carried under the legs in an ordinary buggy. The bag is made of imitation Russia leather, and it and contents are protected by a movable canvas cover bound with leather. The box containing the instruments is made of polished cedar. The contents are arranged in the bottom of the box in two bottom trays, which are easily lifted by means of a ring fastening. The instruments are kept in position and protected by double red leather flaps or pads. The case fits into the bottom of the valise.

The articles not in the wood box, but in the top of the bag, are the following: Scrubbing-brush, razor, large size fountain syringe, chloroform mask, one bottle of mercuric antiseptic tablets, ninety-five per cent. solution of carbolic acid $\frac{3}{32}$ ss—in bottle with corrugated metal cover, a similar bottle containing cocaine, one ligature bottle (Owens') with aluminum reels and frame for catgut (both in corrugated covers which keep the rubber stopper in place), Esmarch's apparatus, bottle of drainage tubes, operating cushion, two (Owens') hard rubber boxes—one for iodoform and one for boric acid, two hard rubber flat boxes—one for Hagedorn needles and one for ordinary surgeon's needles, one-half pound ether, small bottle chloroform, three soft catheters, safety pins, a roll of combination dressing in oiled silk, some extra gauze and cotton, tablets of morphine, one silver catheter and a Symes' staff, a few rollers, a piece of rubber tissue in which are tied sponges (kept till wanted for use in carbolic acid).

AMPUTATING AND GENERAL OPERATING CASES.

Dr. John E. Owen's Aseptic Emergency Case (Continued).

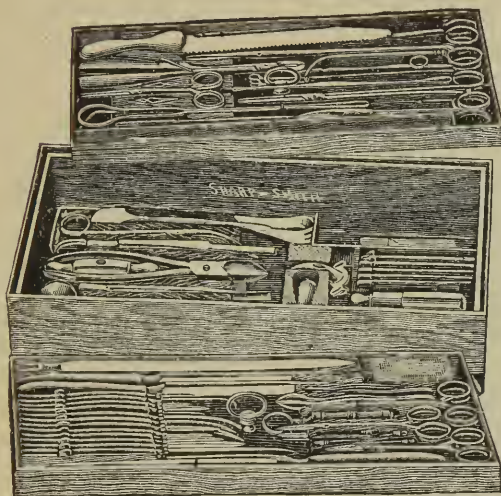


Fig. 906-B. Showing the Trays in Owen's Case.

- 1 sponge carrier.
- 1 sequestrum forceps.
- 1 double Volkmann's spoon.
- 1 articulated vulsellum forceps (taken apart it serves for retractors).
- 1 Levis' double hernia director.
- 1 Bellocq's silver canula.

Contents of Instrument Case.

Top Tray.—1 patent hard rubber handle, with 2 amputating knives.

2 amputating knives (Owen's model).

1 finger or metacarpal saw.

1 aneurism needle, 1 tenaculum.

1 sharp, 1 probe-pointed, and 1 hernia bistoury.

5 assorted scalpels, 1 tenotomy knife, 1 hard rubber eye spud.

1 fenestrated artery forceps, 1 small mouse-tooth forceps.

6 hæmostatic forceps, 1 splinter forceps.

1 syringe of glass and one of hard rubber, vulcanized.

2 hypodermic points, 1 aspirator point.

1 cocaine point.

1 long finger or metacarpal knife.

2 cards of silk and wire.

Second Tray.—1 screw probang and silver hook (cesophageal).

1 long and 1 short silver probe.

1 long curved scissors, 1 cotton probe or carrier.

1 Nelaton's bullet probe, 1 grooved director.

1 articulated bullet-extracting forceps.

1 Tiemann & Co.'s new "antiseptic" needle forceps, for Hagedorn and other needles (can be taken entirely apart.)

2 short Langenbeck's clamp artery forceps.

1 lifting back saw, 1 straight scissors, 2 virgin silver flexible directors for external urethrotomy.

1 hæmostatic forceps and dilating retractors, serving for two retractors when taken apart, in operations on the mastoid process.

Third Tray (bottom of box).—1 trocar and silver canula, 2 trephines.

1 tissue forceps, 1 set of bone drills, 1 burr head drill, 1 antrum hook, 1 set (4) hard rubber ear specula, 1 aluminum tracheal tube, 2 double retractors, sharp and blunt with guards.

1 steel hammer, 1 pair articulated bone forceps, 1 chisel, 1 gouge, 1 bone-gouging forceps, 1 pair polypus forceps

All these instruments can be taken apart for cleansing, and the hard rubber handles are all vulcanized upon the steel shank, and can be boiled in hot water if necessary without damage. The manufacturer's process consists in vulcanizing and subjecting the handles to a powerful heat by steam.

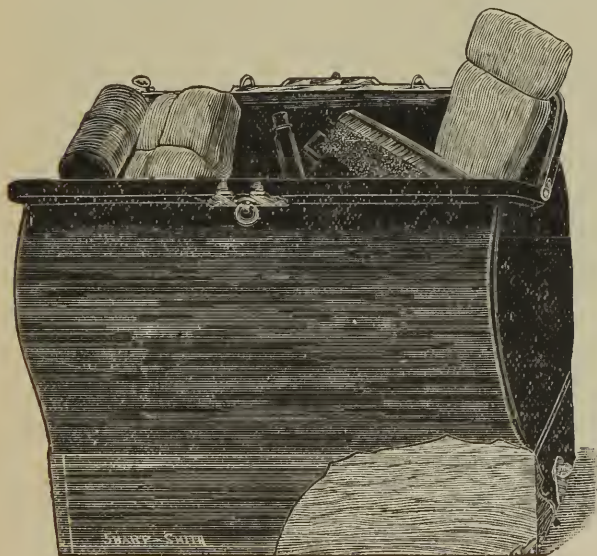


Fig. 906-B. Showing the Upper Portion of Case Opened.

AMPUTATING AND GENERAL OPERATING CASES.

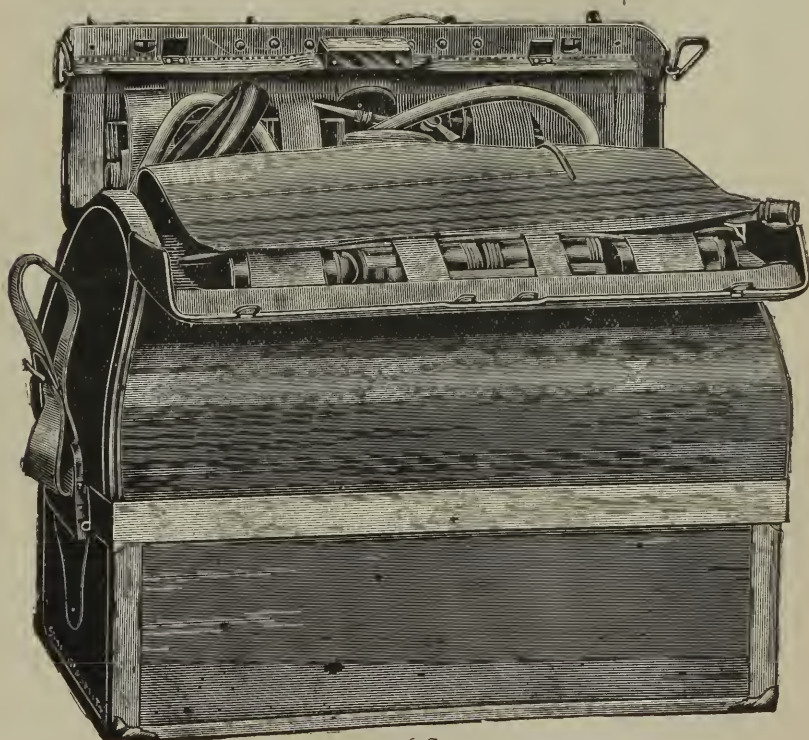
Prices in this whole Catalogue Strictly Net, except where otherwise stated.

DR. AP MORGAN VANCE'S COMPLETE EMERGENCY CASE.

Fig. 906-C. Dr. Ap Morgan Vance's (Louisville, Ky.) Complete Emergency Operating Case, contains a more complete line of instruments, dressings, etc., than any one case yet put up. The lower half of the case contains the steel instruments, knives, forceps, etc., blocked in four wooden trays (see Trays 1, 2, 3 and 4). These wooden trays fit snugly into hard rubber trays, which are used during an operation to hold solution and instruments (as shown in Tray 4). These trays are $16\frac{1}{8}$ inches long, $9\frac{1}{8}$ inches wide, and $1\frac{3}{8}$ inches deep.

These set of trays in case can be separated from the upper part of the case. The upper part of case contains the surgical dressings, medicines, and *all necessities* of an "Emergency Case."

See following pages for description.



906-C.

AMPUTATING AND GENERAL OPERATING CASES.

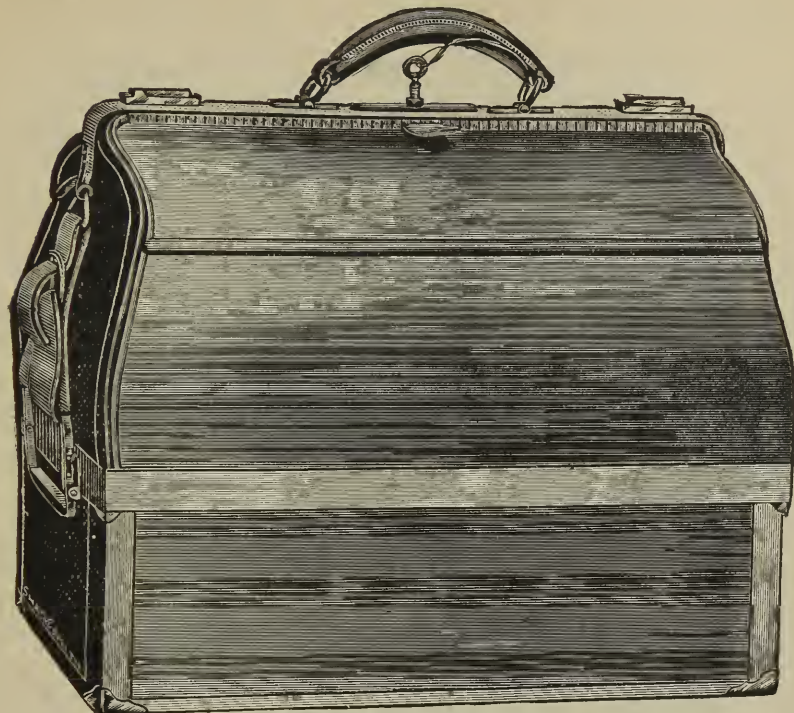
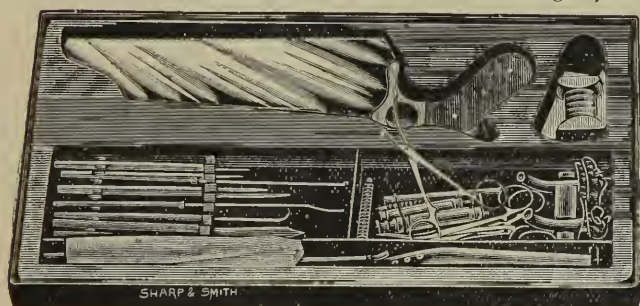


Fig. 906-C.—Dr. Ap Morgan Vance's Emergency Case—Closed.

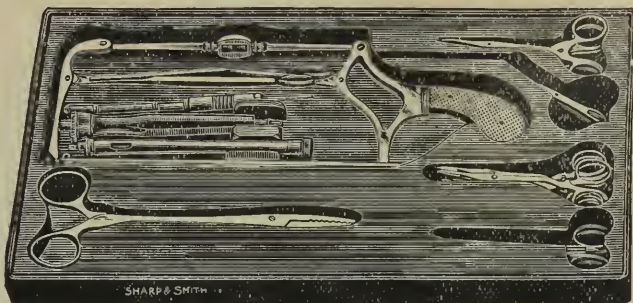


Tray 1.—For
Dr. Vance's Case con-
taining Capital Saw,
Needles, Silk and
Artery Instruments.



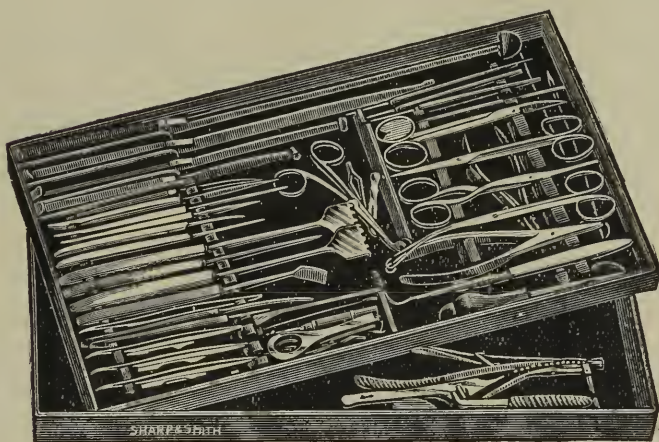
Tray 2.—For
Dr. Vance's Case con-
taining Trephining
and Necroses Instru-
ments.

AMPUTATING AND GENERAL OPERATING CASES.



7003

Tray 3.—For Dr. Vance's case containing Bow saw and Hæmostatic Forceps and Instruments.



7004

Tray 4.—Showing Wooden Tray, also Hard Rubber Tray, which holds the Wooden Trays, holding amputating Knives, Forceps, Scissors and a general assortment of Instruments.

This case complete contains over 200 instruments. We do not furnish list of contents herewith because these cases are generally put up according to each doctor's selection, adding whatever instruments he may have on hand. Dr. Vance's capital idea is what we desire most to call attention to. All instruments are with smooth Metal Handles thereby aseptic, and are blocked in oiled "Hard Wood" which prevents the instruments from rusting.

See pages 276 to 286 for other Operating Cases.

AMPUTATING AND GENERAL OPERATING CASES.

Sharp & Smith's New Compact Sole Leather Operating Case.



FIG. 906-D—Closed.

The illustrations on this page represent our new Sole Leather Case which is the newest and most compact case ever yet offered to the profession. The case when closed is only $11\frac{1}{4}$ inches long, $2\frac{3}{8}$ inches wide and $4\frac{1}{8}$ inches deep, can be carried by hand or in a good sized coat pocket or an ordinary sized overcoat pocket.

Following are the contents, which will be found to be as complete as in most of the larger sized operating cases :

- 1 Capital Saw, 8-inch blade, with detachable aseptic handle.
- 1 Amputating Knife, $7\frac{1}{2}$ -inch " " "
- 1 Catlin, $7\frac{1}{2}$ -inch " " "

- 1 Curved Sharp Bistoury.
- 1 Curved Blunt Bistoury.
- 1 Straight Sharp Bistoury.

- 1 Tenotome.
- 1 Large Scalpel.
- 1 Medium Scalpel.

- 1 Tenaculum.
- 1 Metacarpal Saw.

Each of above minor Operating Knives made in one piece of steel, and thoroughly aseptic.

- 1 pr. Patent Lock Aseptic Bone Forceps.
- 1 pr. Lawson Tait's Aseptic Haemostatic Forceps.
- 1 pr. Pean's Aseptic Haemostatic Forceps.
- 1 pr. Straight Scissors with Collins' Aseptic Lock.
- 1 pr. Curved Scissors with Collins' Aseptic Lock.
- 1 pr. Bulldog Fenestrated Artery and Needle Forceps, combined.
- 1 Director and Tongue Tie.
- 1 pr. Probes.
- 1 Esmarch's Tourniquet Chain
- $\frac{1}{2}$ doz. as'td Needles in pocket
- 1 Card Surgeon's Silk.

Price, NET - - \$25.00

This case is lined inside with leather which is easily cleaned

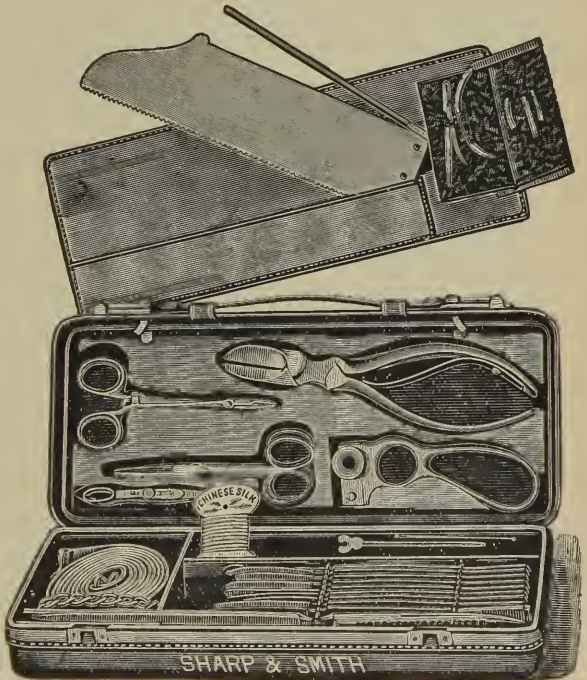


FIG. 906-D—Open

AMPUTATING AND GENERAL OPERATING CASES.

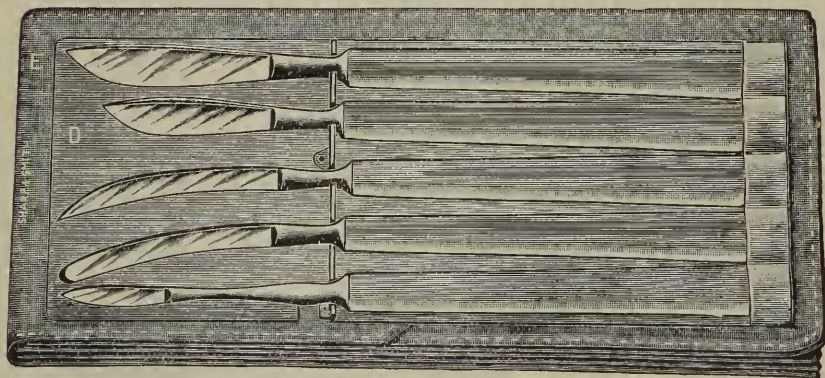
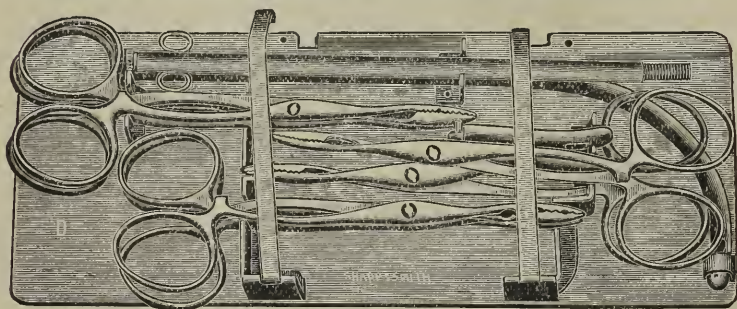
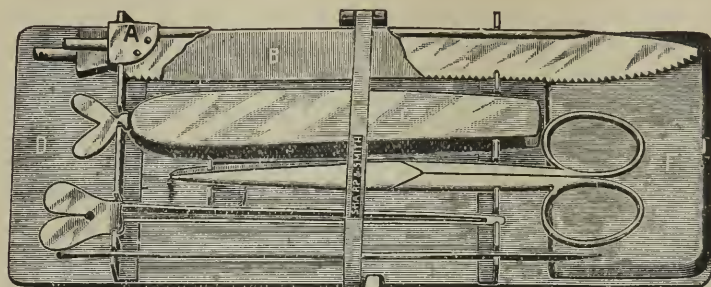
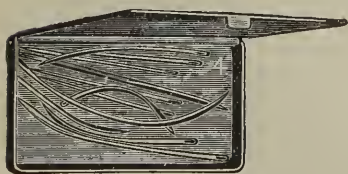


Fig. 906-E. Prof. G. F. Shears' Aseptic Pocket Operating Case.



is B, the amputating knife, both of which fit into the metal handle C. D shows the size of the aluminum tray. E is the cloth case, F the aluminum needle box. Other trays may be added if needed. Cut No. 4 represents the "needle box" open.

(Description continued on following page.)

AMPUTATING AND GENERAL OPERATING CASES.

(Prof. G. F. Shears' Aseptic Pocket Operating Case.—Continued.)

The advantages claimed for this case are: **First.** It is, as the name suggests, thoroughly aseptic. There is nothing connected with it that may not be put into boiling water without injury—case, trays and instruments. When one considers how easily the ordinary leather pocket case may become foul from the secretions of the hands or body, the advantage of the washable case is apparent, and its cheapness allows of its being frequently replaced.

Fig. 906-G. Sharp & Smith's New Emergency Bag.



Fig. 9 6-G. Showing the bag closed and with metal trays strapped to the bottom

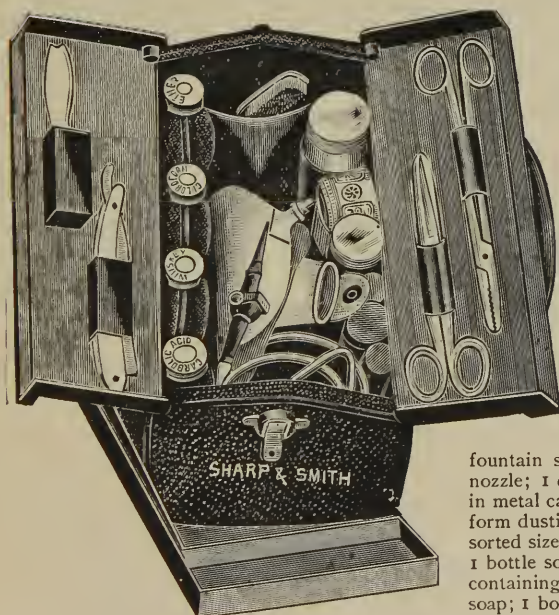


Fig. 906-G. Showing bag open, and contents and trays exposed.

Second. The selection of instruments is such as enables one to carry in small compass sufficient instruments to make any ordinary operation, from the removal of a tumor to the amputation of a leg. Most of the pocket cases contain only one pair of artery forceps, and a number of useless instruments, such as finger bistoury, gum lancet, thumb lancet, all of which might be represented by one knife. This case contains six pairs of forceps, sufficient for any ordinary operation, and makes use of the same for needle-holder, dressing forceps, and similar instruments.

Third. The instruments and trays being made of aluminum and the case of cloth, make the whole case exceedingly light and easily carried.

Size of trays, $7 \times 2\frac{3}{4}$ inches.
Size of case filled complete, $7\frac{3}{4} \times 3\frac{1}{2} \times 1\frac{3}{8}$ inches.

Price.....Net, \$25 00

Fig. 906-G. Sharp & Smith's New Emergency Bag.

This Emergency Bag is manufactured from dark seal grained leather, neatly lined with American kid. The bag is cabinet shape, so that when open its contents are all exposed, and within easy reach. The lids are each supplied with flaps, under which are loops for instruments.

Improved Emergency Bag No. 1 contains 1 eight oz., 2 four oz., and 1 two oz. metal covered bottles; 1 bone spicula forceps; 1 pair heavy scissors for removing clothing; 1 good quality razor; 1 one gallon fountain syringe with Esmarch's irrigating nozzle; 1 dozen carbolyzed surgeon's sponges in metal capped bottle; 1 hard rubber iodoform dusting box; 1 bottle braided silk, assorted sizes; 1 bottle cat.gut, assorted sizes; 1 bottle soft rubber drainage tubes; 1 bottle containing needles and pins; 1 cake antiseptic soap; 1 bottle antiseptic tablets; 1 nail brush; 1 linen roll, with adjustable loops. All arranged in a 15 inch black seal grain leather bag, provided with two metal trays, as shown in the illustration. Price, net.....\$25 00

AMPUTATING AND GENERAL OPERATING CASES.

Fig. 907. Sharp & Smith's General Operating Set No. 1.

1 Amputating Saw, best.	1 Lithotomy Bistoury.
1 Metacarpal Saw, movable back.	1 Grooved Director and Tongue Tie.
1 Galt's Trephine and Handle.	1 Set Mott's Aneurism Needles.
1 Hey's Skull Saw.	1 Tenaculum.
1 Trephine Elevator and Raspatory.	1 Hernia Knife.
1 Pair Bone Forceps.	1 Bistoury, probe-pointed.
1 Pair Lithotomy Forceps.	1 Bistoury, sharp-pointed.
1 Pair Bullet Forceps.	4 Scalpels, assorted.
1 Trocar and Canula.	1 Tenotome.
2 Urethral Sounds.	1 Pair Scissors, straight.
1 Lithotomy Staff.	1 Pair Scissors, curved on flat.
1 Male Catheter, silver plated.	1 Pair Artery Torsion or Needle For-
1 Spiral Tourniquet.	ceps.
1 Amputating Knife, long.	1 Pair Vulsellum Forceps.
1 Amputating Knife, medium.	1 Exploring Needle.
1 Catlin, long.	1 Pair Artery Forceps, fenestrated.
Needles, Silk, Plastic Pins, Wax, etc.	

Neat Brass-bound Rosewood Case, lined with velvet . . . \$52 00

907 A. Same, with ivory handles 63 00

Fig. 908. Sharp & Smith's General Operating Set, No. 2.

2 Retractors.	2 Silver Probes, five inches.
4 Scalpels, assorted sizes.	1 Silver Probe, seven inches.
1 Straight Bistoury.	1 Nelaton Probe.
1 Sharp-curved Bistoury.	1 Mathieu's Throat Forceps.
1 Probe-curved Bistoury.	1 Pair Liston's Bone Forceps.
1 Hernia Knife.	1 Trocar.
1 Aneurism Needle.	1 Galt's Trephine.
1 Tenaculum.	1 Van Buren's Sequestrum Forceps.
1 Director and Tongue Tie.	1 Pair Bone Gouging Forceps.
1 Tourniquet.	3 Steel Sounds.
1 Liston's Knife.	1 Screw Handle for same.
1 Catlin.	3 Silver-plated Catheters.
1 Screw Handle to fit above.	1 Bone Chisel.
1 Bow Saw with two Blades.	1 Bone Gouge.
1 Screw Handle to fit above.	1 Sayre's Periosteotome.
1 Phelps' Artery Forceps.	1 Tiemann & Co.'s Bullet Forceps.
1 Plain Artery Forceps.	1 Polypus Forceps, straight.
1 Pair Straight Scissors.	1 Lithotomy Director.
1 Pair Curved Scissors.	1 Coil Silver Wire.
1 Trephine Elevator.	Needles, Silk, Plastic Pins, Wax, etc.

Rosewood Case, brass-bound, leather cover \$75 00

AMPUTATING AND GENERAL OPERATING CASES.**Fig. 909. Mott's General Operating Set.**

- | | |
|--------------------------------------|--|
| 1 Mott's Knife, large. | 1 Curved Bistoury, sharp-pointed. |
| 1 Mott's Knife, medium. | 1 Curved Bistoury, probe-pointed. |
| 1 Small Catlin. | 1 Steel Director. |
| 1 Capital Saw. | 2 Silver Probes. |
| 1 Metacarpal Saw. | 1 Pair Polypus Forceps. |
| 1 Tourniquet. | 1 Pair Scissors, straight. |
| 1 Tenaculum. | 1 Pair Scissors, angular curved. |
| 1 Pair Artery Forceps, plain. | 2 Mott's Retractors. |
| 1 Pair Artery Forceps, spring-catch, | 1 Finger Knife. |
| plain. | 3 Scalpels. |
| 1 Tiemann & Co.'s Bullet Forceps. | 1 Double Hook. |
| 1 Liston's Bone Forceps, best. | 1 Hey's Saw. |
| 1 Galt's Trephine and Handle. | 1 Trocar and Canula. |
| 1 Trephining Elevator and Raspatory. | Needles, Silk, Plastic Pins, Wax, etc. |
| 1 Tenotome. | |

Rosewood Case, lined with oil-dyed velvet.....\$54 00

Fig. 910. Markoe's General Operating Set.

- | | |
|---------------------------|--|
| 1 Liston's Knife, Long. | 1 Elevator and Raspatory. |
| 1 Liston's Knife, medium. | 1 Pair Artery Forceps, plain. |
| 1 Liston's Knife, small. | 1 Pair Artery Forceps, spring-catch |
| 1 Straight Bistoury. | fenestrated. |
| 1 Curved Bistoury. | 1 Pair Vulsellum Forceps. |
| 1 Curved Bistoury Probe. | 1 Pair Toe-Nail Forceps. |
| 1 Hernia Knife. | 1 Capital Saw. |
| 2 Scalpels. | 1 Galt's Trephine. |
| 1 Tenotome. | 1 Pair Parker's Retractors. |
| 1 Tenaculum. | 1 Pair Liston's Bone Forceps. |
| 1 Aneurism Needle. | 1 Bone Gouge. |
| 1 Tourniquet. | 1 Silver Male Catheter. |
| 1 Chisel. | 1 Steel Sound. |
| 1 Metacarpal Saw. | Needles, Silk, Plastic Pins, Wax, etc. |
| 1 Hey's Saw. | |

Rosewood Case, lined with velvet.....\$50 00

Fig. 911. California General Operating Set.

- | | |
|--------------------------------------|--|
| 1 Capital Saw. | 1 Curved Bistoury, probe-pointed. |
| 1 Amputating Knife, long. | 1 Curved Bistoury, sharp-pointed. |
| 1 Amputating Knife, medium. | 3 Scalpels, assorted sizes. |
| 1 Small Catling. | 1 Tenotomy Knife. |
| 1 Scalpel. | 1 Aneurism Needle. |
| 1 Elevator and Raspatory. | 1 Pair Polypus Forceps. |
| 1 Pair Artery Forceps, spring catch, | 1 Hey's Saw. |
| plain. | 1 Metacarpal Saw. |
| 1 Pair Artery Forceps, slide-catch, | 1 Pair Dissecting Scissors. |
| bulbous points. | 1 Double Hook. |
| 1 Tourniquet. | 1 Green's Tonsil Bistoury. |
| 1 Trocar, straight. | 1 Probang. |
| 1 Tongue Depressor, japanned. | 1 Catheter, German silver, plated. |
| 1 Pair Liston's Bone Forceps. | 1 Metal Bougie. |
| 1 Galt's Trephine and Handle. | 1 Pair Tiemann & Co.'s Bullet Forceps |
| 1 Steel Director. | Needles, Silk, Plastic Pins, Wax, etc. |
| 1 Straight Bistoury. | |

Mahogany Case, lined with oil-dyed velvet.....\$50 00

AMPUTATING AND GENERAL OPERATING CASES.

Fig. 912.—Buck's General Operating Set.

1 Liston's long Knife, hip and thigh.	1 Pair Lithotomy Forceps.
1 Liston's medium Knife, leg and arm.	1 Glass Ear Speculum.
1 Metacarpal Knife, large.	1 Tourniquet.
1 Straight Bistoury, ferruled handled.	4 Silver Catheters, Nos. 3, 6, 9 and 12.
1 Curved Bistoury, sharp point.	1 Tiemann & Co.'s Bullet Forceps.
1 Curved Bistoury, probe point.	1 Steel Director.
1 Hernia Bistoury.	1 Pair Coxeter's Forceps.
1 Tenotome.	2 Vulsellum Forceps.
4 Scalpels, assorted sizes.	1 Pair Eye Scissors, curved on the flat.
1 Tenaculum.	1 Pair Heavy Scissors, angular curved.
1 Pair Crampton's Artery Needles.	1 Lithomy Bistoury.
1 Double-pronged Hook.	1 Wire Ecraseur.
1 Beer's Cataract Knife.	1 Pair spring-catch Artery Forceps,
1 Desmarre's Scarifying Knife.	fenestrated.
1 Straight-Eye Needle.	1 Pair Buck's Throat Forceps.
1 Curved Eye Needle.	1 Pair Polypus Forceps.
1 Gouge and Spud for removing for-	1 Pair Strabismus Forceps.
eign bodies from the Eye.	1 Buck's Hernia Director.
1 Folding Probang, with silver Bucket.	1 Capital Saw.
1 Long Bullet Probe, German silver.	1 Chain Saw, best.
1 Nelaton's Bullet Probe.	1 Trephine and Handle.
1 Pair German Silver Retractors.	1 Metacarpal Saw, movable back.
1 Double Silver Trachea Tube.	1 Finger Saw, narrow blade.
1 Curved Rongeur, with spring.	3 Lithotomy Staffs.
1 Ferguson's Bone-Holding Forceps,	3 Steel Bougies.
Lion Jaw.	1 Syme's Staff.
1 Pair Liston's Bone Forceps.	1 Buck's Sponge-holder.
1 Pair Sequestra or Toe-Nail Forceps.	1 German Silver Eye Speculum.
1 Small, straight Trocar and Canula.	1 Edema Glottis Instrument.
1 Ferguson's Bone-Holding Forceps,	2 Coils silver suture Wire.
crowbill.	4 Coils Iron Wire.
1 Rectum Trocar and Canula, curved.	3 Silver Probes.
2 Gouges.	6 Serrefins.
2 Chisels.	Needles, Silk, Plastic Pins, Wax, etc.
1 Straight Trocar and Canula, large size.	
Mahogany or Rosewood Case, brass bound, good French Lock, lined with silk velvet, neatly arranged, one patent leather cover, water proof	\$135 00

Fig. 913.—Detmold's General Operating Set.

Detmold's General Operating Set.....	48 50
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Fig. 914.—Seymour's General Operating Set.

Seymour's General Operating Set.....	132 00
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Fig. 915.—Parker's Compact Operating Set.

Parker's Compact Operating Set.....	46 50
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Fig. 916.—Blackman's General Operating Set.

Blackman's General Operating Set.....	98 00
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Fig. 917.—Trephining Set.

Trephining Set.....	12 00
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Contents of above cases furnished on application.

AMPUTATING AND GENERAL OPERATING CASES.

Fig. 918.—Post's General Operating Set.

- | | |
|--|---|
| 1 Granger's Sponge Holder, gilt. | 1 Galt's Trephine. |
| 1 Pair Dressing Forceps. | 1 Bone Trephine. |
| 1 Pair Polypus Forceps. | 1 Trephine Handle. |
| 1 Pair Strabismus Forceps. | 1 Ebony Gorget. |
| 1 Pair Strabismus Scissors. | 1 Pair Coxeter's Forceps. |
| 1 Set Mott's Aneurism Needles. | 1 Pair Dressing Scissors. |
| 1 Pair Angular Scissors, heavy. | 1 Trephining Elevator. |
| 1 Kramer's Ear Speculum, best steel and German silver. | 1 Pair Spring catch Artery Forceps, plain |
| 1 Pair Liston's Bone Forceps, larger than usual. | 1 Rongeur. |
| 1 Female Catheter, silver. | 1 Double Trachea Tube, silver. |
| 1 Metacarpal Saw. | 1 Pair Eutropium Forceps. |
| 6 English Gum Elastic Catheters. | 1 Silver Catheter, No. 9. |
| 1 Medium-sized Trocar and Canula. | 1 Hey's Saw. |
| 1 Probang, with Silver Bucket | 1 Pair Mott's Retractors. |
| 1 Nelaton's Probe. | 1 Japanned Tongue Depressor. |
| 1 Pair Cilia Forceps. | 1 Rectum Trocar. |
| 1 Sharp-pointed Curved Bistoury, with Ferrule. | 1 Pair Sequestrum Forceps, toe nail. |
| 1 Finger Bistoury. | 1 Wire Eye Speculum. |
| 3 Scalpels, assorted sizes. | 1 Tiemann & Co.'s Bullet Forceps |
| 1 Tenaculum. | 1 Lachrymal Needle. |
| 1 Trephining Scalpel and Raspatory. | 1 Tenotome. |
| 1 Long Amputating Knife. | 1 Probe-pointed Bistoury. |
| 1 Blunt Hook. | 1 Straight and 1 Curved Eye Needle. |
| 2 Coils Silver Wire and Silk. | 1 Beer's Cataract Knife. |
| 1 Metal Bullet Probe. | 1 Medium-sized Amputating Knife. |
| 1 Pair Uvula Scissors, with Claws. | 2 Silver Probes. |
| Rosewood Case, brass-bound, lined with waterproof..... | 1 Director. |
| | 1 Pair Vulsellum Forceps. |
| | 12 Suture Needles, Silk, Wax, Plastic Pins. |
| | 1 Suture Needle, silk velvet, one patent-leather cover, |
| | waterproof..... |
| | \$109 00 |

Fig. 919.—Sharp & Smith's Operating Set.

- | | |
|---------------------------|--|
| 1 Capital Saw. | 1 Tourniquet. |
| 1 Catling, long. | 1 Ivory Exploring Needle. |
| 1 Liston's Medium Knife. | 1 Vulsellum Forceps. |
| 1 Elevator and Raspatory. | 1 Pair Curved Scissors. |
| 2 Scalpels. | 1 Pair Straight Scissors. |
| 1 Straight Bistoury. | 1 Galt's Trepine. |
| 1 Tenotome. | 1 Movable Back Saw. |
| 1 Probe Bistoury. | 1 Hey's Saw. |
| 1 Sharp-curved Bistoury. | 1 Liston's Bone Forceps. |
| 1 Tenaculum. | 1 Pair Spring-catch Artery Forceps. |
| 1 Aneurism Needle. | Needles, Silk, Plastic Pins, Wax, etc. |

Brass bound Rosewood Case.....	\$33 75
--------------------------------	---------

Fig. 920.—Bone Exsecting Set.

- | | |
|---|--|
| 1 Chain Saw, best. | 1 Pair Mott's Retractors. |
| 2 Chisels, different sizes. | 3 Coils Silver Wire. |
| 2 Gouges, different sizes. | 1 Pair Bone Forceps, angular. |
| 1 Curved Rongeur or Gouge Forceps, with spring. | 1 Pair Ferguson's Lion Jaw Bone-holding Forceps. |
| 1 Pair Liston's Bone Forceps, large. | 1 Lead Mallet. |
| 1 Set Brainard's Bone Drills. | 1 Metacarpal and Interosseous Saw, narrow. |
| 1 Bone Trephine and Handle. | |

AMPUTATING AND GENERAL OPERATING CASES.

Fig. 920.—Bone Exsecting Set—Continued.

1 Elevator and Raspatory.	1 Pope's Antrum Drill.
1 Pair Sequestrum Forceps.	Needles, Silk, Plastic Pins, Wire, etc.
Mahogany Case, lined with oil-dyed velvet.....\$48 75	
Fig. 921 Wood's General Operating Set.....	\$52 00
" 922 Hamilton's " " ".....	75 00
" 923 Conant's Amputating and Minor Operating Case.....	40 00

MINOR OPERATING CASES.

Fig. 950 Hospital Minor Operating Set.....	\$56 00
" 951 Conant's " " ".....	26 25
" 952 Sharp & Smith's Minor Operating Set.....	No. 1 24 00
" 953 " " " ".....	No. 2 15 00
" *954 " " " ".....	No. 3 11 25
" 955 Otis' " " ".....	48 75
" 956 Erskine Mason's " " ".....	33 75
" 957 Frank Rockwell's " " ".....	45 00

Fig. 950.—Hospital Minor Operating Set.

2 Finger knives; 2 Straight probe pointed bistouries; 1 Straight hernia knife; 2 Curved sharp pointed bistouries; 2 Curved probe pointed bistouries; 1 Curved hernia knife; 1 Abscess knife; 1 Short, straight bistoury; 4 Tenotomes, various shapes; 1 Tenaculum; 1 Pair Sharp & Smith's needle forceps; 1 Pair Parker's retractors; 3 Serresfins, steel; 1 Straight tonsil knife; 1 Curved tonsil knife; 7 Scalpels, assorted sizes and shapes; 1 Green's double hook, plain; 1 Pair fenestrated artery forceps; 1 Pair Coxeter's artery forceps, small; 1 Pair strabismus forceps; 1 Pair Tiemann & Co.'s bullet forceps; 1 Bullet probe, Tiemann's; 1 Pair polypus forceps; 1 Pair Vulsellum forceps; 1 Pair straight, heavy scissors; 1 Pair scissors, curved on the flat; 1 Pair scissors, angular curved; 1 Trocar and canula; 1 German silver ear speculum; 1 Bellocq's canula, for epistaxis, silver; 1 Steel director; 12 yards annealed iron wire. Assorted needles, silk, silver wire, and plastic pins, all in neat rosewood case, brass bound and lined with oil-dyed velvet..... \$56 00

Fig. 951.—Conant's Minor Operating Case.

1 Pair Small, fine Bone Forceps; 1 Pair Van Buren's Scissors; 1 Chisel; 1 Combination Catheter; 1 Set Mott's Aneurism Needles; 1 G. S. Director; 1 Pair Silver Probes; 1 Pair Needle Forceps, slide catch; 1 Pair Parker's Retractors; 1 Scalpel; 1 Finger Knife; 2 Bistouries; 1 Hernia Knife; 1 Double Hook; 1 Amputating Knife and Saw, to screw into one handle; Needles and Silk. Put up in a mahogany, brass bound case, 8 inches long, 3½ inches wide, 1¾ inches deep, outside measurements.

Price..... \$26 00

Fig. 952.—Sharp & Smith's Minor Operating Case No. 1.

1 Double Hook.	1 Narrow Metacarpal Saw.
1 Curved Sharp-pointed Bistoury.	1 Pair Plain Artery Forceps.
1 Curved Probe-Pointed Bistoury.	1 Small Trocar.
1 Cooper's Hernia Knife.	1 Pair angular Scissors.
4 Scalpels, assorted.	1 Pair Slide-catch Artery Forceps.
1 Pair small Polypus Forceps.	6 Needles, Silk, Iron and Silver Wire.
1 Tenotome.	1 Steel Director.
1 Tenaculum.	2 Silver Probes.
1 Aneurism Needle.	

In morocco case, lined with oil-dyed velvet..... \$24 00

**Fig. 953. Sharp & Smith's Minor Operating Case No. 2.**

- | | |
|-------------------------|----------------------------|
| 1 Metacarpal Saw. | 1 Tenaculum. |
| 2 Scalpels. | 1 Bulldog Artery Forcep. |
| 1 Sharp Point Bistoury. | 1 Pair Scissors. |
| 1 Probe Point Bistoury. | 1 Director and Tongue Tie. |
| 1 Tenotome. | 1 Aneurism Needle. |
| 1 French Finger Knife. | 2 Long Silver Probes. |
| 1 Plain Artery Forcep. | |
- Twelve needles, all in a neat morocco covered case, very compact..... \$15 00

* This is the same case that is contained in our general operating cases, and parties purchasing it from us may at any future time buy the balance of the operating set, thus completing the case without loss.

***Fig. 954. Sharp & Smith's Minor Operating Case No. 3.**

- | | |
|----------------------------|---------------------------|
| 2 Scalpels. | 1 G. S. Director. |
| 1 Straight Sharp Bistoury. | 1 Pair Silver Probes. |
| 1 Curved Sharp Bistoury. | 1 Pair Straight Scissors. |
| 1 Hernia Knife. | 1 Pair Thumb Forceps. |
| 1 Tenaculum. | Needles and Silk. |
| 1 Metacarpal Saw. | |

Put up in a fine morocco case..... \$11 25

FIG.

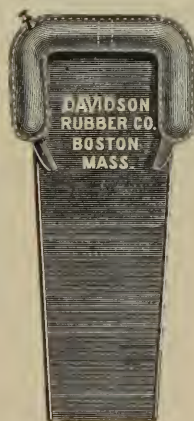
955.	Otis' Minor Operating Case.....	\$48 75
956.	Dr. Erskine Mason's Minor Operating Case.....	33 75
957.	Dr. Frank Rockwell's " " " ".....	45 00

Contents of cases furnished on application.

*958.	Diameter of Cushion	20 inches.....	4 00
*959.	"	24 ".....	5 00
*960.	"	14 ".....	4 00



958-959



960

These Cushions are made with an inflatable rim at the top, to prevent the escape of the fluid upon the bedding or clothing, and by the opening and apron this fluid is conducted down into a bucket, placed to receive the same.

The rubber, unlike other Cushions on the market, has a velvety softness that makes them very comfortable to the patient; the color is a clear tan, and they are made with the greatest care to give them durability. They are being largely used in obstetrical, perineal, cervical and general surgical operations, especially where cleanliness and convenience are desired.

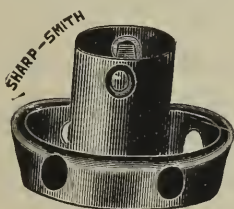
OPERATING INSTRUMENTS.

FIG.

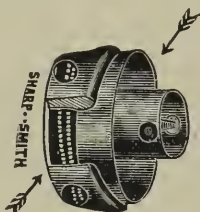
975	Murphy's (Chicago) Anastomosis Buttons, per set of 3	\$10 00
975	" " " "	5 00
976	Forceps for Introducing Anastomosis Buttons...	2 25
977	" Intestinal Clamp Forceps	1 75

MURPHY'S BUTTON FOR ANASTOMOSIS OF THE HOLLOW VISCERA.

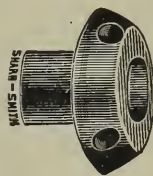
The operations which can be performed by means of this button, in shorter time, with greater ease and with greater safety than by other means, are the following :



975

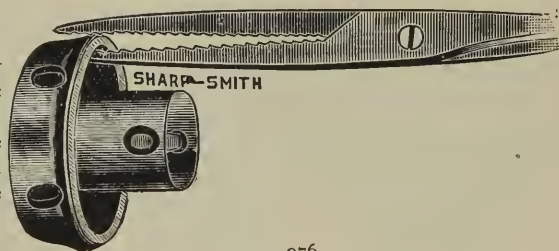


975



- 1 **Gastrostomy :** This operation is performed for the purpose of nourishing a patient suffering from stenosis of the œsophagus from any cause. It can be performed with the button in from 5 to 7 minutes after the peritoneal cavity is opened, with a certainty that the stomach and peritoneum will remain in contact until union takes place. It is done as follows : Two stitches are taken in the wall of the stomach in a direction from the operator, a loop is left and two return stitches taken three lines from and parallel to the first ; an incision is then made through the wall of the stomach and female half of button inserted with shank protruding ; the shank is pushed through the parietal peritoneum one-half inch from line of incision, and male half of button pressed into it ; the incision in the peritoneum is then closed and the operation is completed.

- 2 **Gastroenterostomy,** performed for all obstructions at the pylorus, whether from cicatricial or neoplastic formations. It is performed same as above, only the male portion of button is inserted into the bowel and then the button pressed together. The operation can be done in from 7 to 10 minutes.



976

- 3 **Cholecystoenterostomy ;** Approximation of Gall Bladder to Bowel ; Treatment for Cholecystitis, Cholelithiasis, Obstruction Jaundice from stone or other causes. It is performed by putting half of the button in the Gall Bladder and the other half in the Duodenum and pressing them together. The gall stones may or may not be removed at time of operation. The operation can be performed in from 11 to 20 minutes.
- 4 **Cholecystostomy,** by this means can be performed in from 6 to 8 minutes ; it is done in the same manner as in Gastrostomy, only the gall bladder is used in place of the stomach. It is done in so much less time than with the suture, and is very much safer.—*Continued on following page.*

OPERATING INSTRUMENTS—MURPHY'S BUTTONS.—Continued.

- 5 End to End Approximation of Bowel : This operation will be called for in Gangrene of Bowel from strangulated hernia, volvulus, constriction by bands, or other causes. For bullet wounds where a portion of the bowel must and should be resected. Following removal of portions of bowel for malignant diseases. The end of the bowel can also be joined to its sides. The operation is so simple that a novice can perform it in 15 to 20 minutes by inserting a purse string suture in each end of bowel, securing half of the button in position, drawing the suture and pressing button together.
- 6 Colostomy : This operation is no longer to be looked upon as justifiable, considering the ease with which ileo-colostomy can be performed with the button. Nevertheless it can be performed in exactly the same way as Gastrostomy or Cholecystostomy, by means of the button.
- 7 Pylorectomy : The Pylorus is resected in the usual way and the gastric opening completely closed. The male portion of the button is inserted into the resected end of the duodenum as described in the end to end approximation of the bowel ; the female end of the button is inserted into the posterior wall of the stomach in the same manner as in Gastrostomy.
- 8 Resection of the Cæcum : Can be performed in the same manner as Pylorectomy. The usual resection of the Cæcum having been made, the end of the colon is completely sewed up. By means of button the resected end of the ileum is united to the side of the colon as previously described in pylorectomy.
- 9 Resection of Rectum, for stricture or malignant growth, the upper portion being held down in position by the button.



977

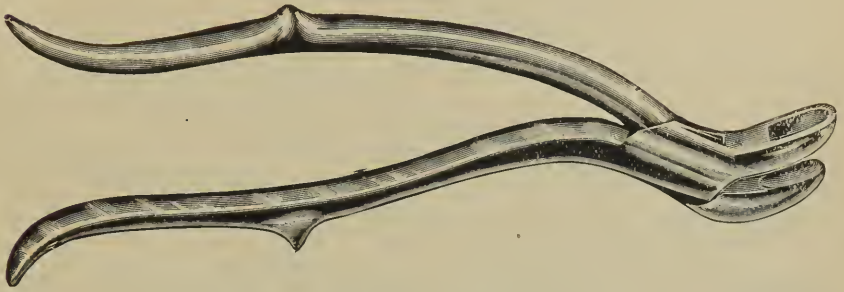
- 10 Annular Strictures of Rectum : The Cicatricial band is clasped in the button and it sloughs out.
- 11 Bacon's Method : The new and ingenious method of treating strictures of the rectum suggested by Dr. Bacon of this city, by the use of the button, commends itself. By his plan cures are made possible in a class of cases that has been the bugbear of rectal surgery for the last century.

A full description of the technique
furnished on application by
Sharp & Smith.

J. B. MURPHY, M. D.,
Room 911 Venetian Building,
Chicago.

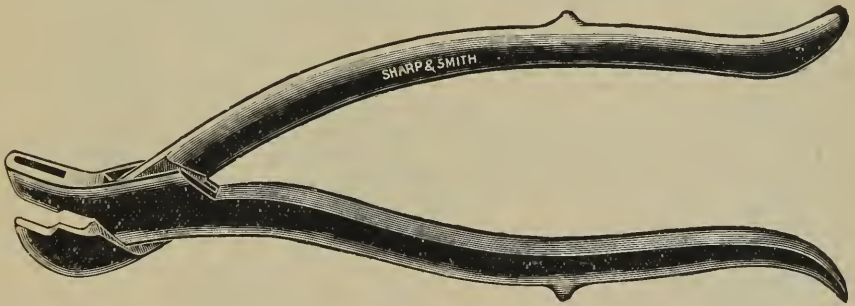
CRANIAL INSTRUMENTS.

By W. F. KNOLL, M. D., Chicago.



981

Fig. 981—Prof. Knoll's Rongeur Punch Forceps, for enlarging lineal dimensions following the "Raphe" Punch Forceps, Fig. 982.



982

Dr. Knoll's Raphe Punch Forceps, Fig. 982, are intended for any case which may require a lineal dimension of the skull. With it the Sinuses can be crossed with perfect safety.

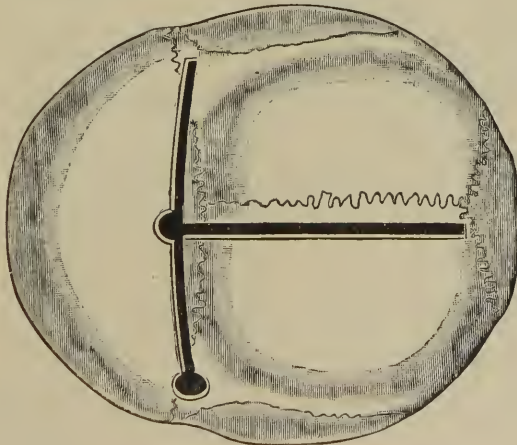


Illustration showing skull cut after the operation of Prof. Knoll by the use of instruments Figs. 981 and 982.

AMPUTATING, GENERAL, AND MINOR OPERATING INSTRUMENTS.

ANTISEPTIC GOODS.—See Index.

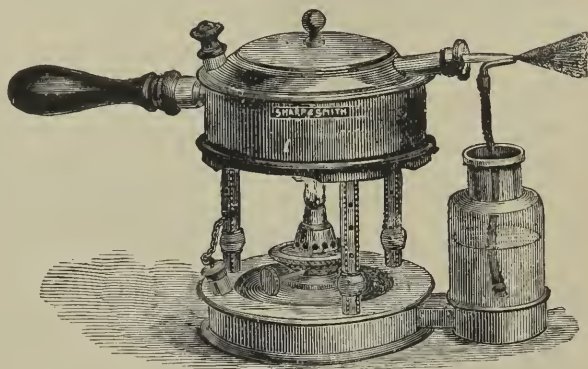
FIG.			
* {	1000	Atomizers—Wier's Antiseptic, small	\$12 00
	1001	“ “ large	13 75
* {	1002	“ Hank's	12 00
* {	1003	Aprons—Rubber, for operators' use	\$3 00 to 6 00
		Bandages, all kinds, see index.	
1003-A	Small Iodoform Duster		\$0 50
* 1003-B	Medium “		75
1003-C	Large “		1 00



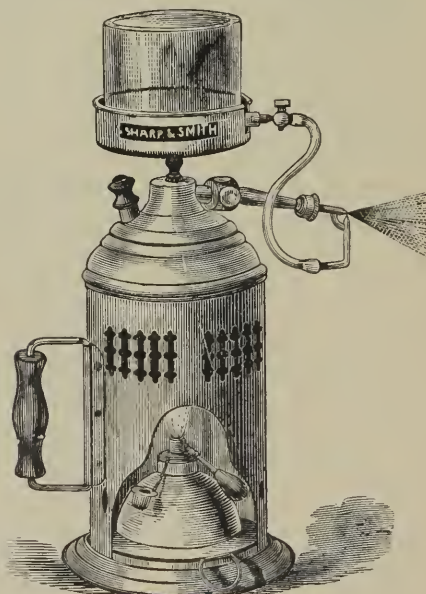
1003-B



1003



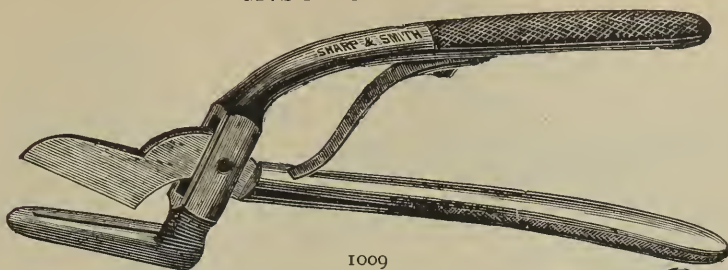
1000-1001



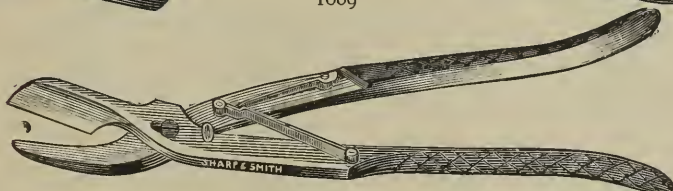
1002

Instruments designated by a * are illustrated.

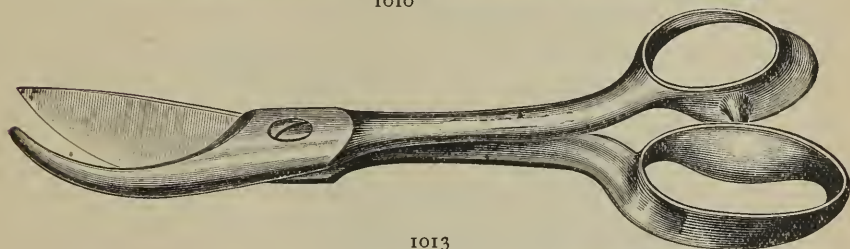
AMPUTATING GENERAL AND MINOR OPERATING
INSTRUMENTS.



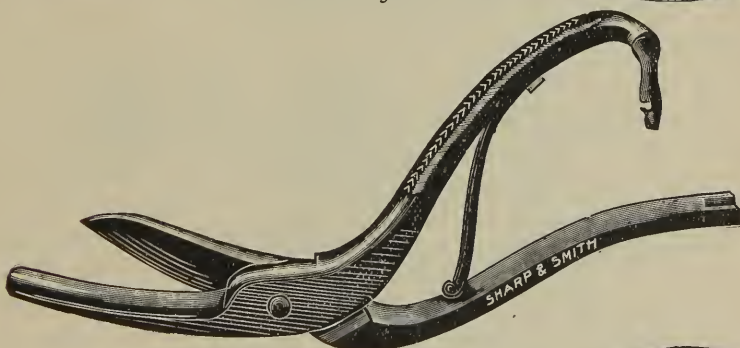
1009



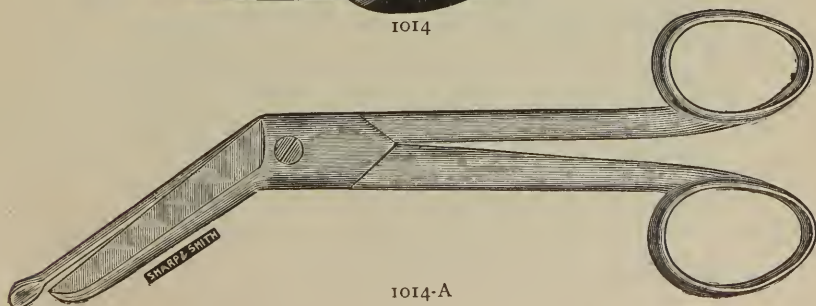
1010



1013

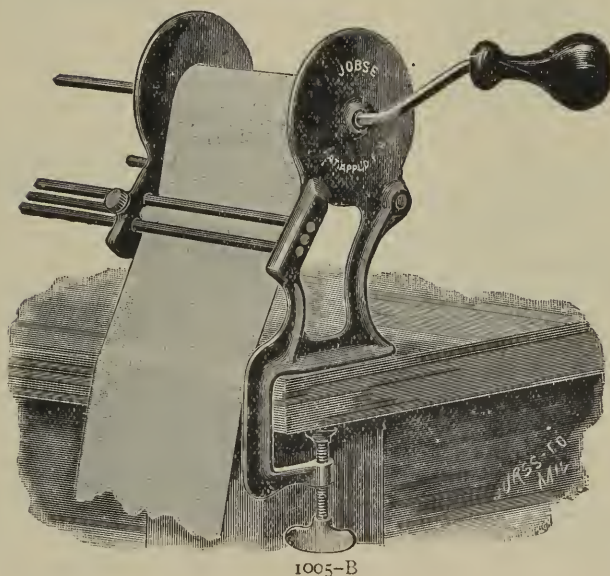
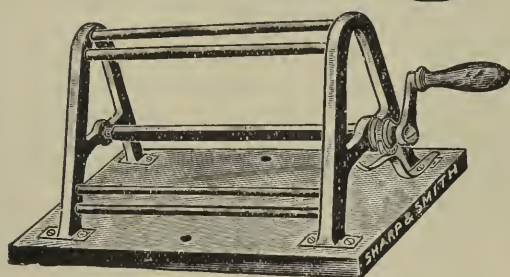
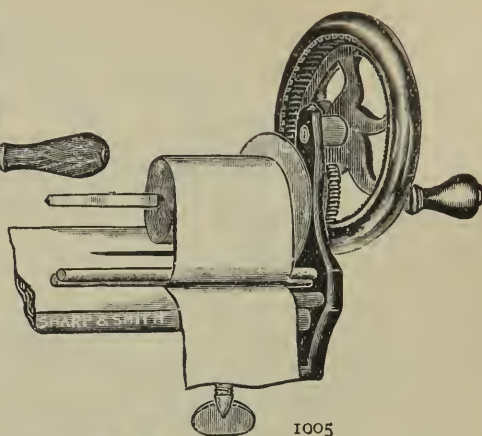
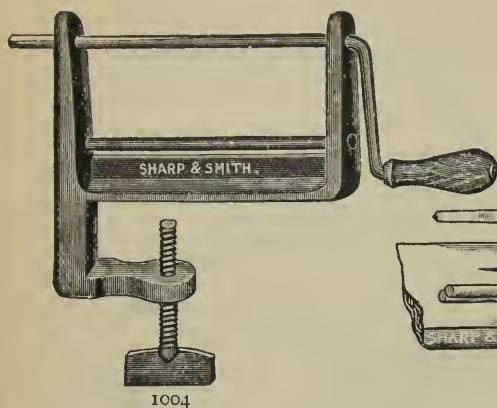


1014



1014-A

AMPUTATING, GENERAL AND MINOR OPERATING INSTRUMENTS.



AMPUTATING, GENERAL AND MINOR OPERATING
INSTRUMENTS.

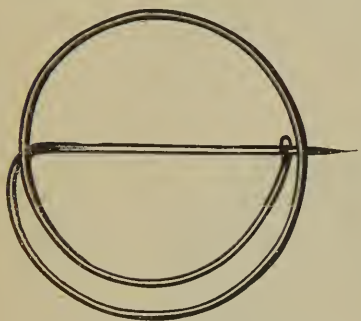
FIG.

*1005-A.	Bandage roller, nickel plated	\$2	25
*1005-B.	" " "Jobse," nickel plated	3	00
*1007-C.	Hancock's Surgical Bandage or Drainage Tube Safety Pins.....	25	
*1007-D.	Ward Cousins, " " " " " " per doz.....	35	

A New Surgical Safety Pin for Holding Drainage Tube in Place.

BY DR. JOSEPH L. HANCOCK.

I have recently invented a simple device for holding soft drainage tubes in place which, from its field of usefulness, prompts me in laying it before the medical profession. It is a surgical safety pin, constructed, as will be seen in

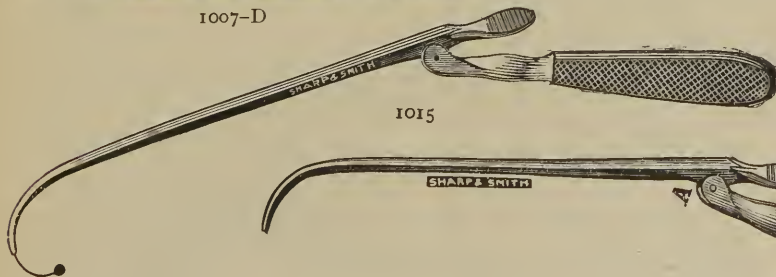


Dr. J. L. Hancock's New Surgical
Safety Pin.

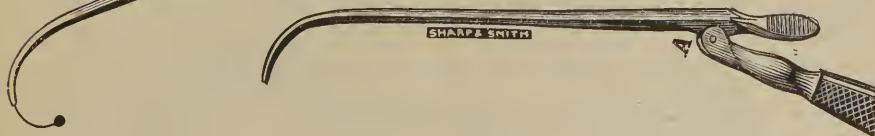
my drawing, of one piece of nickel plated steel or brass wire, turned into a circular form once and a half around. Then, a sudden bend is made and the end carried straight across the middle to the opposite side where the point rests upon the wire. The other end of the curved wire is turned up into a small hook to receive the point, for holding and giving firmness to the springing frame which is so made to facilitate the catching and unlocking of the pin. The advantage it possesses over the ordinary safety pin and other devices used for similar purposes is at once appreciable, namely: It is simple, easy to keep clean, and secures the drainage tube perfectly in place when the dressing and bandage is put on.



1007-D



1015



1016

Instruments designated by a * are illustrated.

AMPUTATING, GENERAL AND MINOR OPERATING INSTRUMENTS.

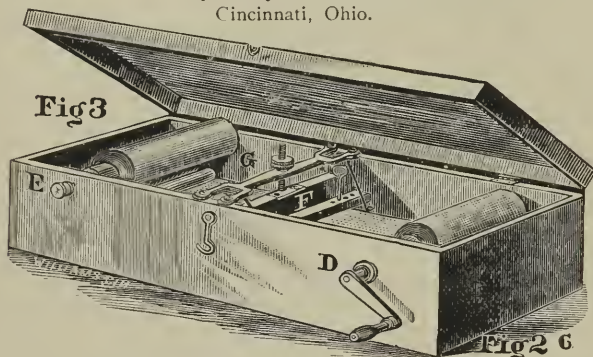
FIG.			
*1004.	Bandage Rollers, plain.....		\$1 00
*1005.	" " Crocker's.....		4 50
1006.	" " Plaster Paris, Greene's.....		4 00
*1007.	" " " Judkin's.....		6 00
*1007-A.	" Clamp, Esmarch's.....		55
1007-B.	" " Langenbeck's.....		1 25
1008.	" Shears, Braun's.....		6 00
*1009.	" " Sayres'.....		5 00
1010.	" " Szymanowsky's.....		6 75
1011.	" " Esmarch's.....		2 50
*1012.	" " Wackerhagen's.....		4 50
*1013.	" " Wright's.....		2 50
1014.	" " Henry's.....		5 50
*1014-A.	" " Leiter's.....		2 00

All Instruments designated by a * are illustrated.

A New Apparatus for Preparing Plaster-of-Paris Bandages.

By WM JUDKINS, M. D.

Cincinnati, Ohio.

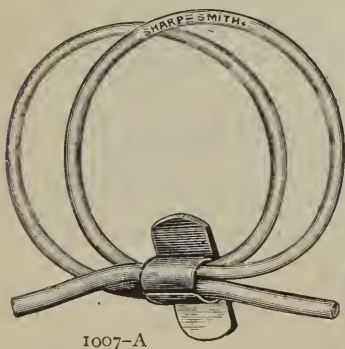


1007

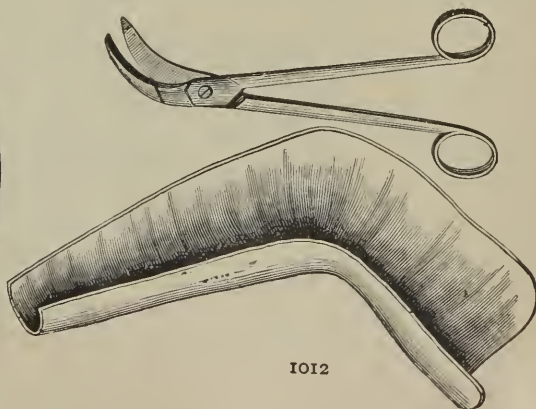
Directions for Use.

Run the end of Bandage on rod E under the bar near bottom of box through gate of regulator F, and fasten on rod D. Place the plaster in the box at G, and turning the handle, the Bandage in passing through the gate has all superfluous plaster scraped off and its meshes are thoroughly impregnated with a coat of plaster. By means of a thumb screw on regulator F, the Bandage may be charged of any *desired thickness*.

After Bandage is all wound on Crank D give same two or three *reverse turns* and withdraw. The Bandage, now ready for use, is wrapped in paper and put away in a *tin box* until wanted.



1007-A



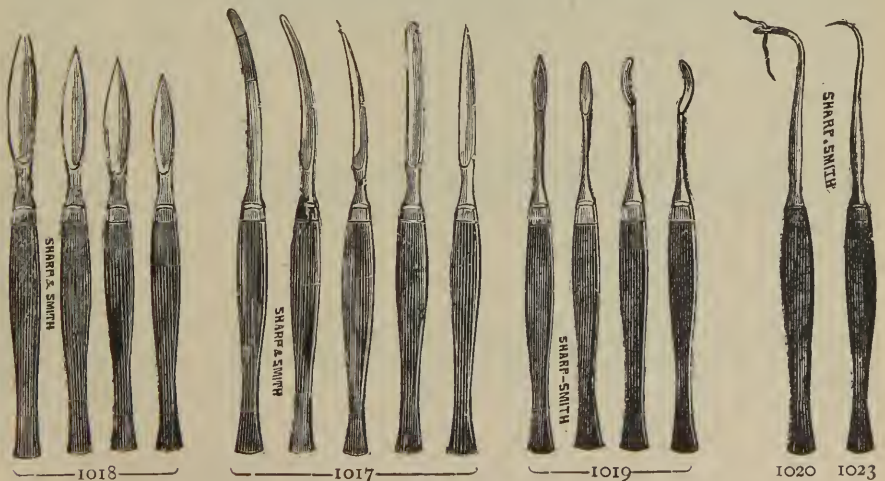
1012

AMPUTATING, GENERAL AND MINOR OPERATING INSTRUMENTS.

FIG.

INSTRUMENTS.

*1015	Bone Staffs, Prince's.....	(See page 289-B)	\$2	50	
*1016	" " Blandin's.....	(See page 289-B)	2	25	
*1016-A	Metal Fenestrated Knives, very light and thoroughly aseptic...			85	
* {	1017	Bistouries, Straight, Sharp	{	Plain Ebony Handle, Riveted...	50
	1017	" " Blunt		" " " " Ch'd.	75
	1017	" " Curved		" " " " Ferruled...	85
	1017	" " Sharp		Plain Ivory " Riveted...	85
	1017	" " Hernia		" " " " Ch'd.	I 00
			Solid Metal	" { Thor. }	
			" " "	Minor Opt. { Asep. }	85
*1018	Scalpels	{	Plain Ebony Handle, Riveted.....	50	
*1019	Tenotomes		" " " " and Ch'd...	75	
*1020	Tenaculums		" " " " Ferruled.....	85	
1021	Exploring Needles		Plain Ivory " Riveted.....	85	
1022	Gum Lancets		" " " " and Ch'd...	I 00	
*1023	Aneurism Needle	Solid Metal	" { Thor. }		
		" " "	Minor Opt. { Asep. }	85	
*1024	Knives, Catlin, Short....			2 00	
1025	" " Medium.....			2 25	
1026	" " Large.....			2 75	
1027	" Liston's Amputating, Short, Hand and Foot.....			2 00	
*1028	" " " Medium, Leg and Arm.....			2 25	
*1029	" " " Large, Hip and Thigh.....			2 75	
1030	" Brain.....			I 25	
1031	" Liston's with Parker Handles.....			4 00	
1032	" Amputating, Wood's Circular.....			3 00	
1033	" " Mott's.....		\$I 85 to	3 50	
1034	" Conant's One Knife and Saw.....			5 50	
*1035	" (see 1053), Conant's Two Knives and Saw.....			7 00	
1036	" Finger, Long, French.....			I 50	
1037	" Lenticular.....			I 25	
1038	" Valentine's Section.....			6 00	
1039	" Heavy Cartilage.....			I 50	
1040	" Adams' Subcutaneous.....			I 15	
1041	" Wright's Folding.....			4 25	



AMPUTATING, GENERAL AND MINOR OPERATING KNIVES.

FIG.		Each.
*1016-B	Ferguson's Minor Operating Scalpel, Aseptic.....	\$1 25
*1017-A	Bistouries, all patterns with hollow Aseptic metal handles..	75
*1018-A	Scalpels, all sizes, with hollow Aseptic metal handles.....	75
*1019-A	Tenotomes, sharp and blunt with hollow Aseptic metal handles.....	75
*1020-A	Tenaculum, with hollow Aseptic metal handles.....	75



1016-B



1017-A



1017-A



1018-A



1019-A



1020-A



1024

1028

1029

All instruments designated by a * are illustrated.

AMPUTATING, GENERAL AND MINOR OPERATING
KNIVES.

*1041-A.	Dr. J. Frank's Large Resection Scalpel.....	\$1 50
*1041-B.	“ “ small “ “	1 50
*1041 C.	“ “ Probe Point Resection Bistoury.....	1 50
*1041-D.	“ “ Sharp “ “	1 50
*1041-E.	Dr. Jno. B. Hamilton's Scalpel and Fascia Elevator	1 00
*1041-G.	Shears' large Convex Edge Tenotome.....	1 00
*1041-H.	“ “ Bellied Tenotome	1 00
*1041 I.	“ “ Straight “ “	1 00
*1041-K.	“ small Concave Edge Tenotome.....	1 00
*1041-L.	“ “ “ “ “	1 00
*1041-M.	“ “ Straight Tenotome.....	1 00



1041-A



1041-B



1041 C



1041-D



G



H



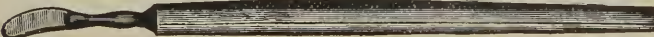
I



K



L



M

1041-G to M



1041-E.

All instruments designated by a * are illustrated.

AMPUTATING, GENERAL AND MINOR OPERATING INSTRUMENTS.

SAWS.

FIG.		
*1042-A	Leonard's Aseptic Amputating Saw	\$3 50
*1042-B	Sharp & Smith's Aseptic Phalangeal Bow Saw.....	3 50
*1042-C	Rust's Aseptic Amputating Saw (9 in. blade).....	8 00

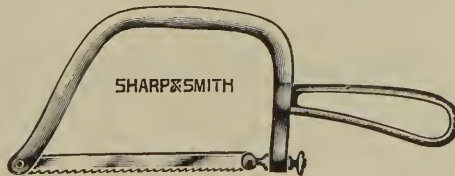
AN IMPROVED ASEPTIC AMPUTATING SAW.

BY WILLIAM R. LEONARD, M. D., New York.

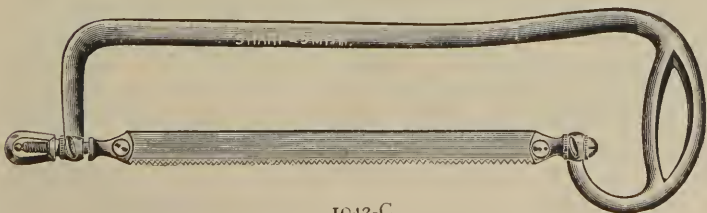
The amputating saws in general use in this country have the old-fashioned pistol-handle shape grip, which is objectionable, especially if the hand is wet or smeared with oil or blood. The grip becomes lessened and the force reduced. The cut here presented shows the improvement at a glance. The saw is in three sections; the blade, back and handle, which takes but a few seconds to put together or detach for cleaning. The slot in the blade catches on to a pin in the handle, the screw passes through the handle, back and blade, making one solid piece. The screw also acts as a joint to enable you to raise the back at a right angle to the blade, in case you wish to saw down through the spinal column or a femur. The handle is made round, flat, or oval, preferably round, and is on a plane with the blade, connected by a neck. The shape and angle of the handle give the most secure grip, and it is impossible for it to slip out of the hand. The increased force given by this handle enables the operator to work faster, and save several seconds in time in sawing through the femur.



1042-A



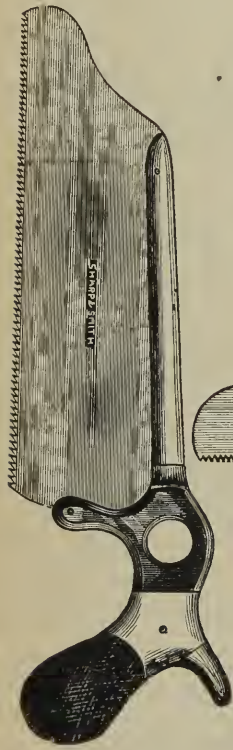
1042-B



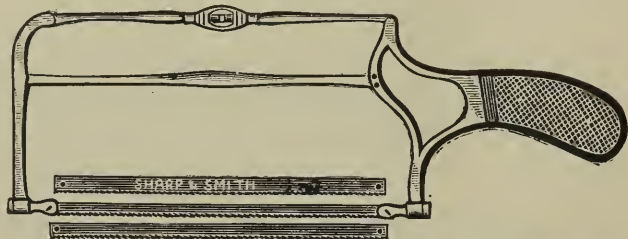
1042-C

SAWS.

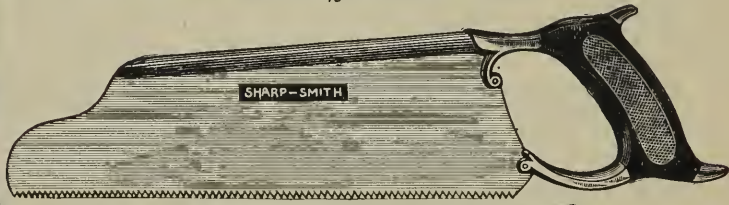
1042-D	Saw—Capital—Sharp & Smith's Aseptic	\$16 00
This saw is thoroughly aseptic has two blades which can be put at any angle for operating. The saw is made exclusively of metal, and nickel plated, and is one of the most useful instruments yet offered to the profession.		
*1043	Saw, Capital, Aseptic, Satterlee's.....	3 50
*1044	" " " Parker's	3 00
*1045	" " " Butcher's	12 00
1046	" " " Bow.....	5 00
1047	" " " Movable Back.....	3 50
1048	" " " Detmold's	3 75
1049	" " " Pfarrer's.....	3 75
*1049-A	" " " Sharp & Smith's No. 2.....	5 00



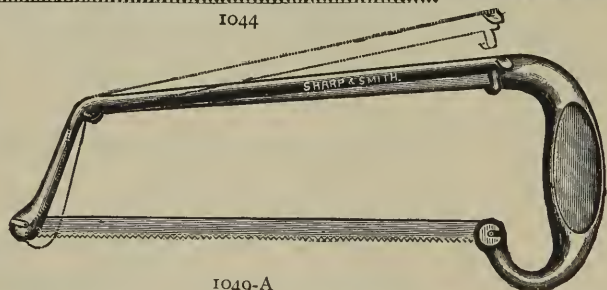
1043



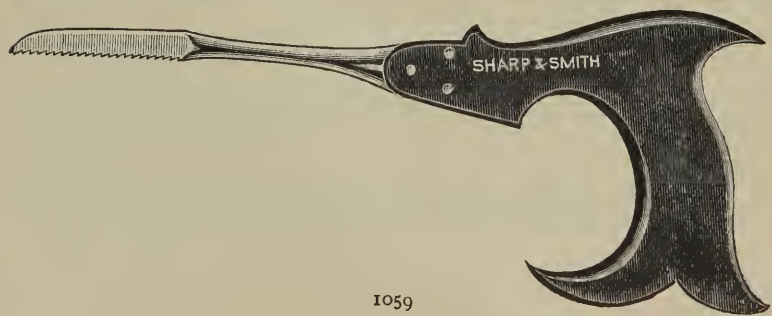
1045



1044



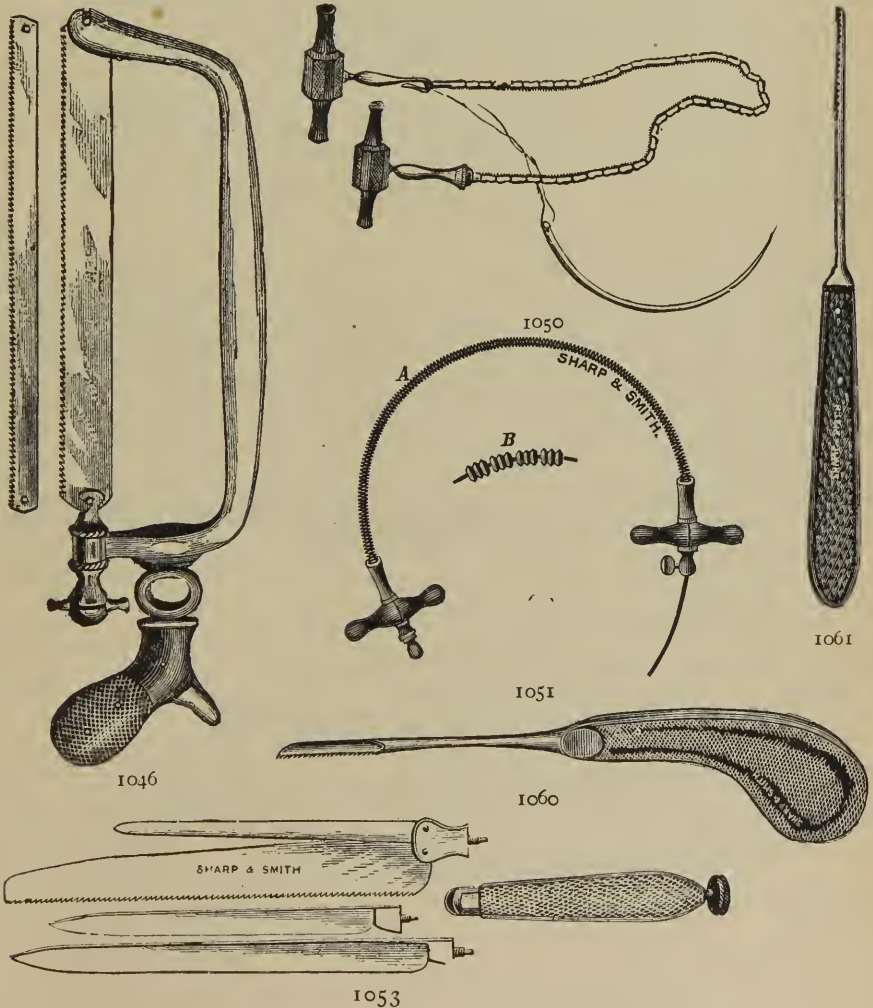
1049-A



1059

SAWS.

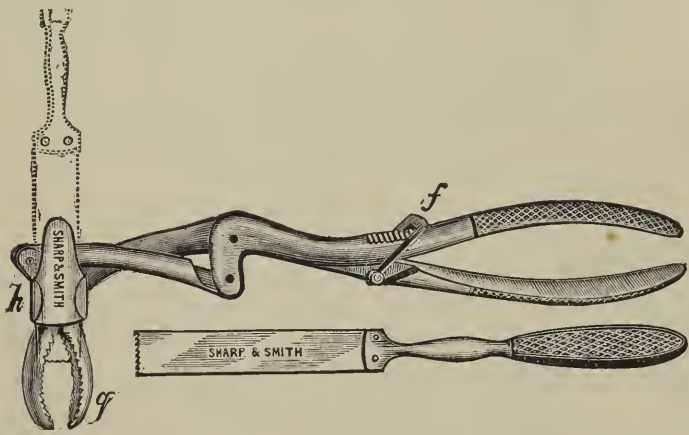
FIG.			
*1050	Saws—Chain, best.....	\$	6 00
*1051	“ T. & Co.’s beaded.....		4 50
1052	“ Conant’s and Knife, 1 blade		5 00
*1053	“ “ “ “ 2 “		6 50
*1054	“ Hey’s Skull..... Aseptic \$1 50 plain		1 30
1055	“ Goodwillie’s Oral.....		2 00
1056	“ Graefe’s Circular.....		15 00
*1057	“ Wyeth’s Exsecting.....		15 00
1058	“ Szymanowsky’s Exsecting		15 00
*1059	“ Adam’s Interosseous, large.....		3 00
*1060	“ “ “ small.....		2 00
*1061	“ Lente’s “		1 00



All instruments designated by a * are illustrated.

SAWS.

Dr. Jno. Wyeth's New Instrument for Exsections.



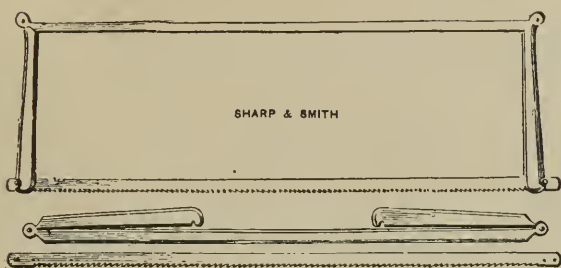
1057

The above instrument has been used successfully in exsections of the humerus and shoulder joint, the elbow joint, the hip joint, cutting through both trochanters with perfect facility, the radius, the metatarsus, and the acromion process and spine of the scapula. It can also be used in exsections of small bones closely related to each other, as the metacarpal bones. The handles work with a double-jointed motion, and have a fixation clamp, *f*, like the Russian needle holder. By opening or closing the handles, the jaws, *g*, are separated or closed. The action of the rotating shield, *h*, and the saw, *l*, are the same.

FIG.		
*1062	Saws—Schrady's—Subcutaneous Saw and Knife.....	\$ 5 25
1063	“ Hunter's Plastic Saw.....	2 00
*1064	“ Lewis folding.....	1 50
1065	“ Tiemann & Co.'s Circular.....	9 00
*1066	“ Metacarpal, plain handle.....	1 00
1067	“ “ Ivory “	1 50
*1068	“ “ Movable Back.....	\$1 75 to 3 50
1069	“ Maxilla R. & L.....each.	1 30
*1070	“ Post's Chain Saw Carrier.....	3 00
*1071	“ Buck's “ “ “	1 50

All instruments designated by a * are illustrated.

SAWS.



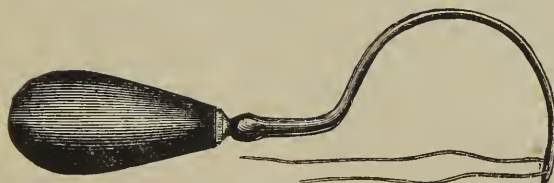
1064



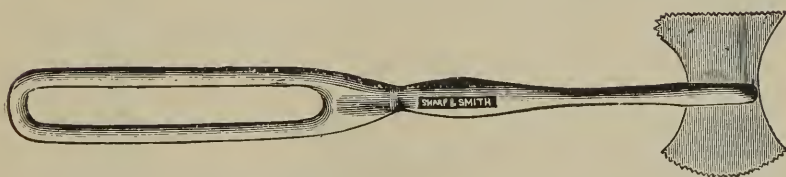
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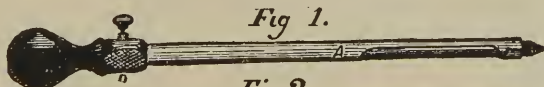


Fig 2.

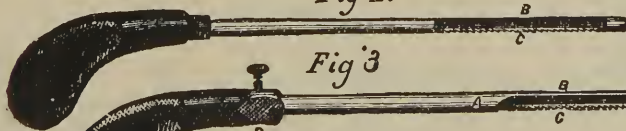
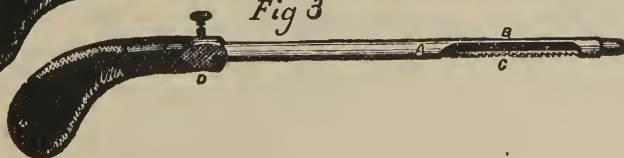


Fig 3

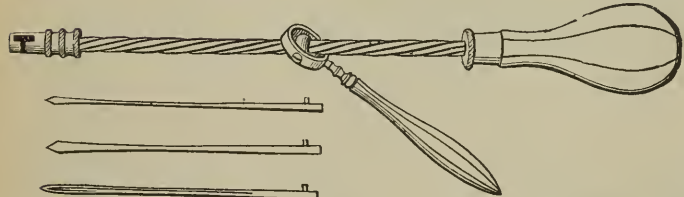
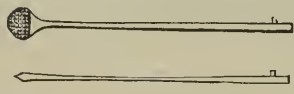


1062

DRILLS.



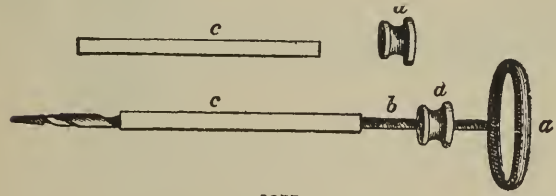
1072



1073



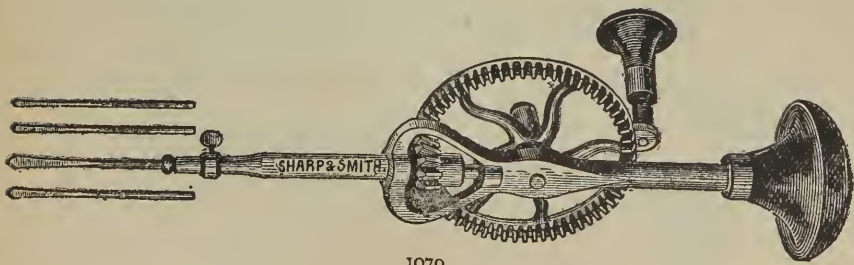
1076



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1074



1079

DRILLS.

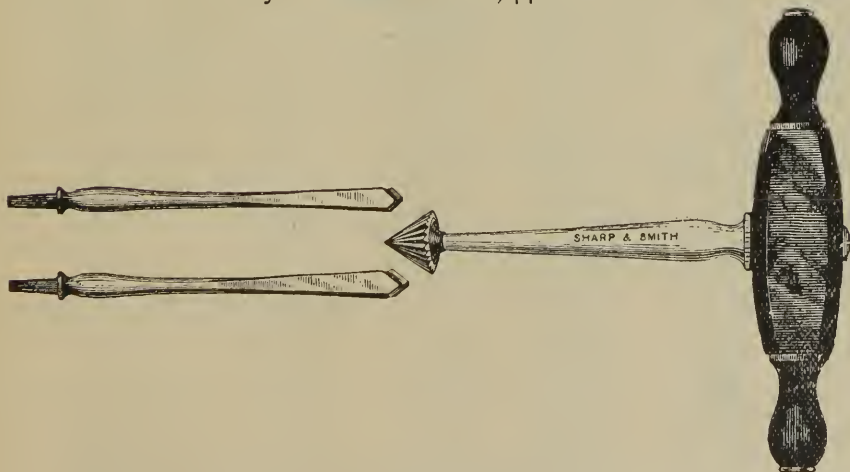
FIG.

*1072	Drills—Brainard's, set 5 and handle.....set	\$ 2 65
*1073	“ Hamilton's.....	4 00
*1074	“ Howard's.....	5 25
1075	“ Gunn's.....	2 50
*1076	“ Pope's Antrum.....	2 60
*1077	“ Gaillard's, for ununited fractures.....	1 90
*1078	“ Wyeth's set.....	4 00
*1079	“ Tiemann's Drill Stock.....	5 25
*1080	“ Buck's Drills for the mastoid process.....	2 25



1078

Wyeth's Set Bone Drills, \$4.00 Net.



1080

All instruments designated by a * are illustrated.

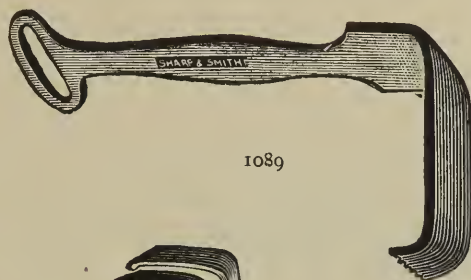
RETRACTORS AND HOOKS.

FIG			
1081	Retractors—	Volkman's See Figs. 1081-A to D, page 299-A each.	
*1082	"	Parker's..... pair.	\$ 1 00
*1083	"	Mott's	" 1 00
*1084	"	Blackman's.....	" 2 25
1085	"	Prince's.....	" 2 60
*1086	"	Bilroth's R. and L., 3 prong blunt..... each	1 75
*1087	"	" " " 6 " sharp	" 2 25
*1088	"	" " " 3 " blunt, angle on flat	" 1 75
*1089	"	Gerster's.....	" 1 85
1090	"	" Modified by Sharp & Smith, with longer handle and longer blade.... per pair.	1 85
*1091	"	Collins' Fenestrated.....	" 1 85
*1092	"	" without Fenestra.....	" 1 85
*1093	Greene's Double Hook.....		1 85
*1094	Langenbeck's Double Hook.....		3 00
	" Levator and Hook.....		1 30
1095	Vulsellum Hooks, 2 prong.....		1 10
1096	" " 3 "		1 30
*1097	Tenaculum Forceps, Disarticulating.....		1 85
1098	Prince's Tenaculum Forceps.....		4 50
*1099	Mastin's " " Double.....		2 25



All instruments designated by a * are illustrated.

RETRACTORS AND HOOKS.



1089



1094



1093



1092



1091



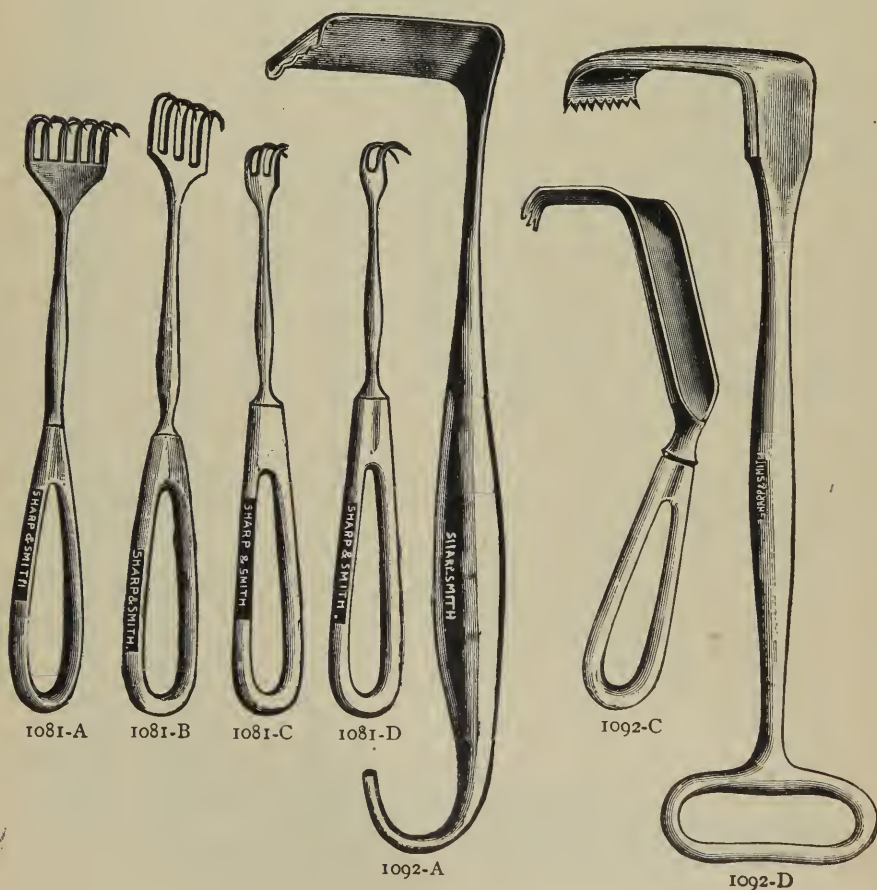
1097



1099

ASEPTIC RETRACTORS AND HOOKS.

FIG.			
*1081-A	Volkman's six prong Aseptic Retractor	\$2 00	
*1081-B	“ four “ “ “	1 75	
*1081-C	“ three “ “ “	1 50	
*1081-D	“ two “ “ “	1 25	
*1092-A	Lange's large Aseptic Retractor.....	1 75	
1092-B	“ smaller “ “	1 50	
*1092-C	“ large curved Aseptic Retractor.....	1 25	
*1092-D	Giant Aseptic Retractor.....	2 00	
*1094-A	Dr. Jno. E. Owens, Guarded Double End Aseptic Retractor..	2 50	
*1094-B	“ “ “ “ Aseptic Retractor Forceps.....	2 25	
*1094-C	Hagedorn's Aseptic Retractor.....	2 50	
*1094-D	Langenbeck's Sharp Point Aseptic Retractor	1 50	
*1094-E	“ Blunt “ “	1 50	
*1094-G	Dusham's flat end Fenestrated Aseptic Retractor.....	2 00	
*1094-H	“ round “ “ “ “	2 00	

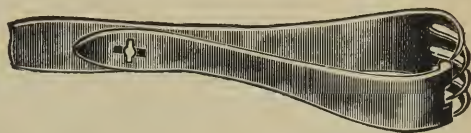


All instruments designated by * are illustrated.

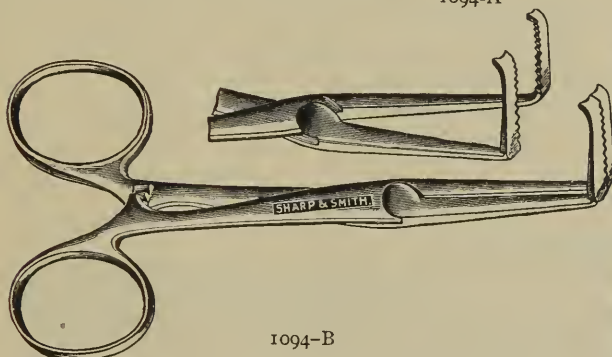
ASEPTIC RETRACTOR AND HOOKS.



This retractor has sharp prongs on one end, and blunt on the other. The sharp prongs are covered by a guard which protects the hand when the blunt end of retractor is being used. It is especially useful in deep wounds, abdominal wounds, wounds in the loins, etc.



1094-A

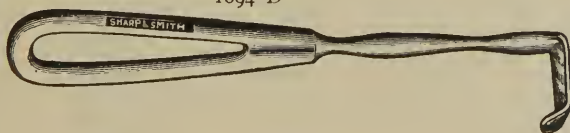


1094-B

These Retractor Forceps are provided with the Collins' Aseptic Lock, and when taken apart each blade can be used as a single Retractor in Tracheotomy, for instance, and other wounds, or in operations upon the mastoid. When used together, the instrument not only serves for retracting or reopening of wounds, but by opening the handles they also enlarge the wound longitudinally.



1094-D



1094-E



1094-C



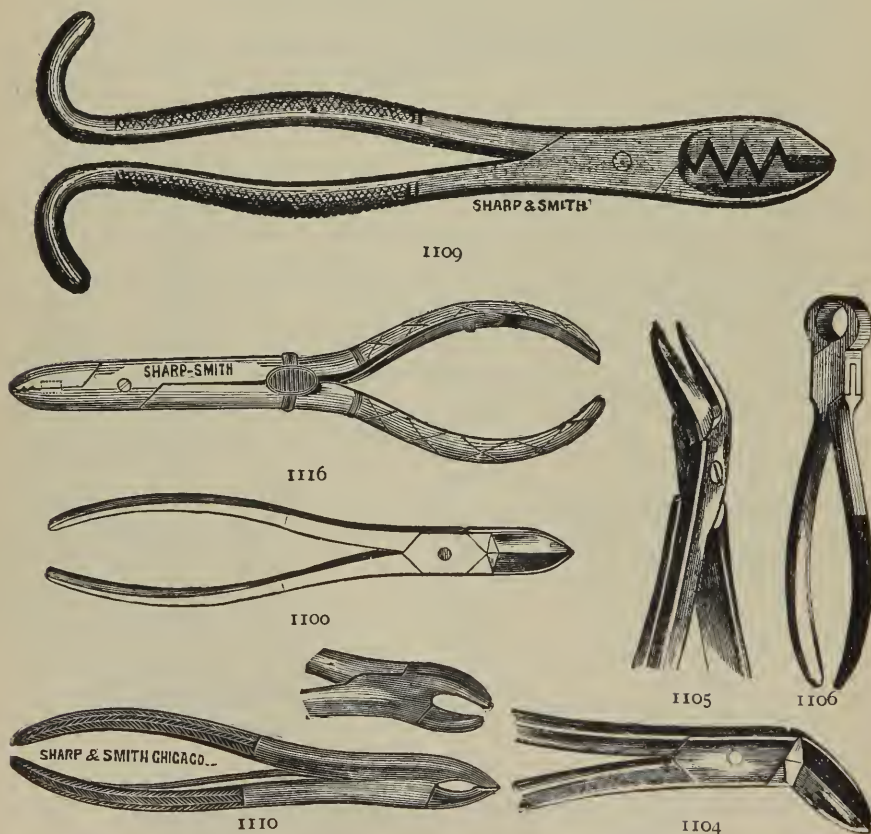
1094-G



1094-H

BONE INSTRUMENTS.

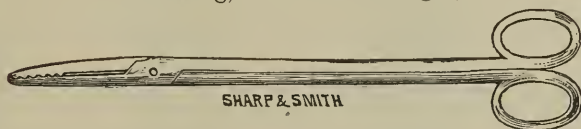
FIG.						
* 1100	Forceps—Bone	Cutting—Liston's,	plain.....	\$	1	85
1101	"	"	" " spring.....	2	00	
1102	"	"	" " large.....	2	00	
1103	"	"	" " with spring.....	2	50	
* 1104	"	"	" " angular.....	2	25	
* 1105	"	"	" " curved on flat.....	2	25	
* 1106	"	"	Satterlee's.....	2	00	
1107	"	"	" " curved.....	3	25	
1108	"	"	Isaacs' Bayonet shape.....	2	50	
* 1109	"	"	Hamilton's Serrated.....	6	00	
* 1110	"	Rongeur,	straight.....	2	50	
1111	"	"	half curved.....	2	50	
1112	"	"	full ".....	2	50	
1113	"	"	Little's, for pocket.....	3	00	
1114	"	"	Hoffman's Gouge.....	3	00	
1115	"	"	and Bone Holder, Darby's.....	3	00	
Wyeth's Exsecting Forceps and Saw, see page 294.						
* 1116	Forceps—Needle	Cutting, Stimson's.....		2	75	



All instruments designated by a * are illustrated.

BONE INSTRUMENTS.

FIG.			
*1118	Forceps, Toe Nail, Post's.....	\$	2 00
1119	" Trephining and Sequestrum, Van Buren's.....		2 00
*1120	" Sequestrum, Markoe's curved.....		1 85
*1121	" " Hamilton's.....		1 85
1122	" " Ferguson's, with spring.....		1 85
*1123	" " Van Buren's.....		2 00
1124	" " Poor's angular.....		2 25
*1125	" " Duck Bill.....		1 85
1126	" " Gross' plain.....		2 00
1127	" " with hinged spring.....		3 25
*1128	Bone Holding—Ferguson's Lion Jaw.....		2 25
1129	" " --Darby's.....		3 00
1130	" " Gnawing, curved and straight, each.....		2 50
*1131	" " Farabeuf's (Osteopher).....		4 50
*1132	" " Holding Hamilton's, (Osteopher).....		3 00
1133	" " Gnawing, curved and straight, each.....		2 50



1121



1118



1125



1123



1120

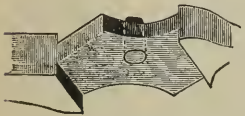


1128



All instruments designated by a * are illustrated.

ASEPTIC BONE INSTRUMENTS.

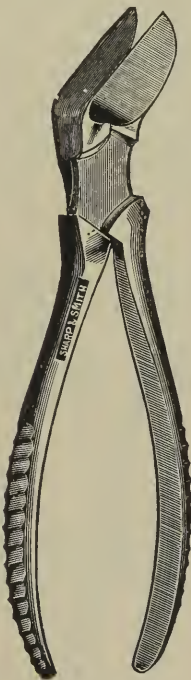


"Open Box Joint."

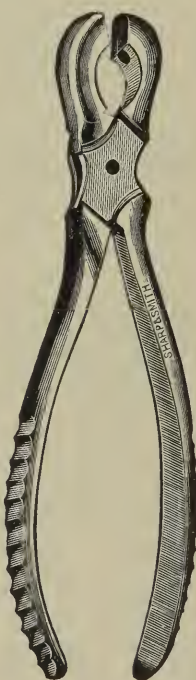
The accompanying cut illustrates a very useful and serviceable "joint" for use in all styles of forceps and scissors. It is known as the "box joint;" Forceps made with this lock are thoroughly aseptic, and are also as strong as the ordinary pattern. It can be unjointed instantly, and as quickly put together. Following we show some styles of forceps furnished with the above described lock.



1100-A



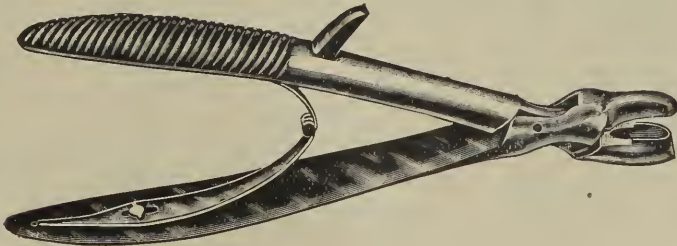
1105-A



1110-A



1128-A



1114-A

ASEPTIC BONE INSTRUMENTS.

FIG.

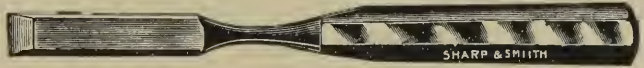
*1100-A	Bone Cutting Forceps, Liston's, Aseptic Lock.....	\$ 2 50
1100-B	" " " " " " " " with spring.....	2 75
*1105-A	" " " " " " " " curved on flat.....	2 75
1105-B	" " " " " " " " with spring.....	3 00
*1110-A	Rongeur, or Bone Gouging Forceps, straight, Aseptic Lock.....	3 00
1110-B	" " " " " " " " with spring.....	3 25
*1114-A	Hoffman's Gouge Forceps, Aseptic Lock.....	3 50
*1128-A	Ferguson's Lion Jaw Bone Holding Forceps, Aseptic Lock.....	3 00
*1145-B	Bone Chisel, Von Brun's Straight Aseptic.....	1 25
*1145-C	" " " " " " " " Gouge.....	1 75
*1145-D	" " " " " " " " Curved ".....	2 00
*1145-E	" " " " " " " " Curved plain ".....	1 25
*1145-G	" " " " " " " " Luer's Aseptic, Left.....	2 00
*1145-H	" " " " " " " " Luer's Aseptic, Right.....	2 00
*1145-J	" " " " " " " " Dolores Aseptic.....	2 75
*1148-A	Gouge or Scraper, Volkman's Aseptic.....	1 40
*1155-A	Aseptic Lead Mallet.....	1 75



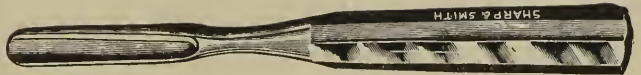
1145-G 1145-H



1143-A



1145-B



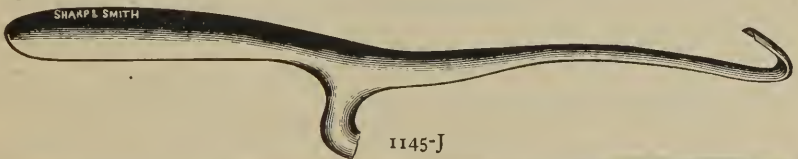
1145-C



1145-D



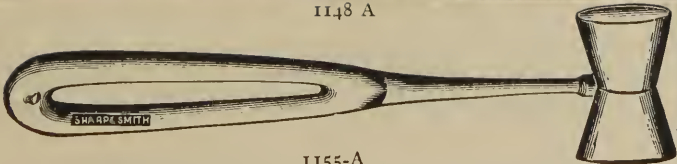
1145-E



1145-J



1148 A



1155-A

All instruments designated by a * are illustrated.

ASEPTIC BONE INSTRUMENTS.

FIG.

*1155-B	Blake's Double End Bone Curette, Aseptic	\$3 00
*1155-C	Bone Curette and Drill "	1 50
*1155-D	Owens' Double End Bone Curette, "	1 75
*1155-E	Sharp & Smith's Double End Bone Curette, Aseptic.....	1 50
*1155-G	Bone Scoop and Scraper, Aseptic.....	1 25
*1155-H	Pratt's Bone Scoop and Spud, Aseptic.....	1 50
*1155-I	Kocher's Director, "	1 25
*1155-K	Knoll's Periosteotome, "	1 75
*1155-L	Prof. N. Senn's Periosteotome, "	1 75
*1155-M	Matthieu's Raspatory, "	1 50
*1155-N	Matthieu's Bone Reamer, "	1 25
*1155-O	Steel Nails for Excision, "	60
*1155-P	Bone Pins for Excision, "per dozen,	1 00
*1155-Q	Sharp & Smith's Bone Curette, "	1 50
*1155-R	Fink's Rounded Sharp Knife, "	1 50



1155-B



1155-C



1155-D



1155-E



1155-G



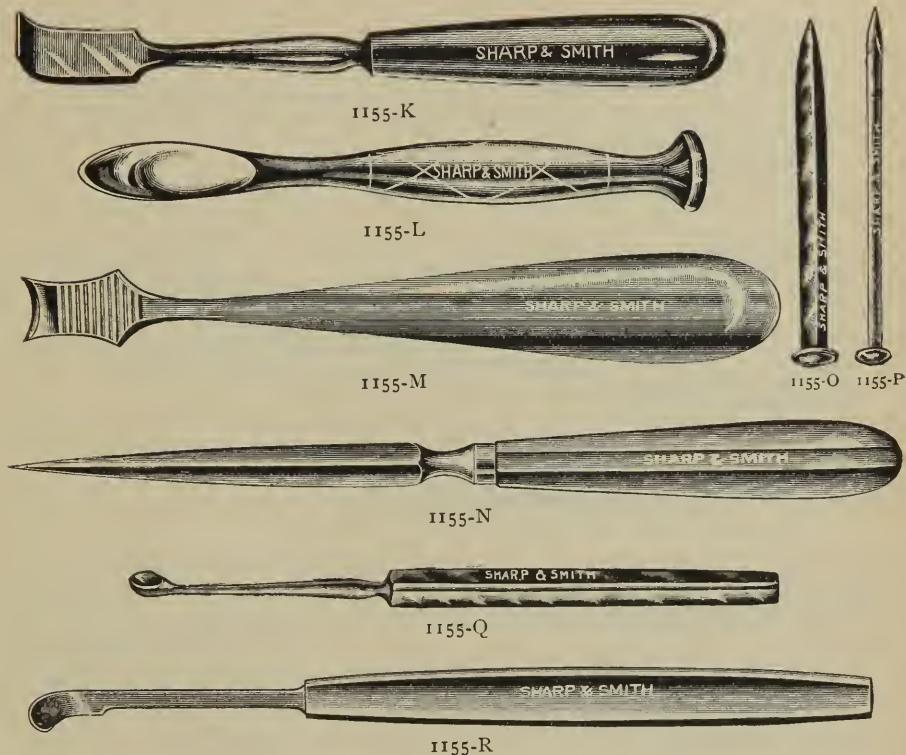
1155-H



1155-I

Instruments designated by a * are illustrated.

ASEPTIC BONE INSTRUMENTS.



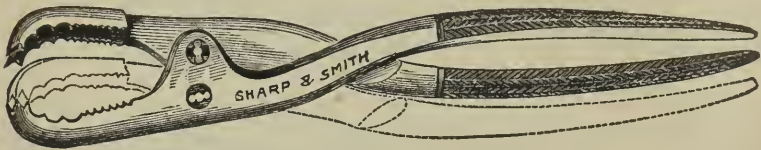
I take pleasure in introducing to the surgical profession an instrument of my own device (Fig. 1155-R). I call it a Curved Bistoury, for the want of a better name. It is a bistoury with a cutting edge, continuous on the rounded point, bent upon itself, forming almost a half circle (see illustration).

The uses of this instrument will at once suggest themselves to the surgeon. To sever attachments where a straight bistoury, or curved scissors cannot be satisfactorily brought into use. It is also serviceable for cutting away necrose of bone, in like manner cutting or curetting the same. It is useful as a curette in cavities requiring a cutting edge. This instrument is particularly serviceable in some amputations about the joints, in severing synovial ligaments, especially those of the carpal bones of the hand, in gunshot wounds, crushing them, requiring their removal at the joints, in conservative surgery.

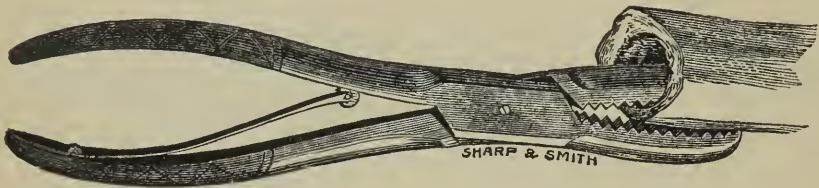
The above illustrated instrument I had made for my own use at the house of Sharp & Smith, Chicago, Ill.

I. W. FINK M. D., Hillsboro, Ill.

BONE INSTRUMENTS.



1131



1132



1134



SHARP & SMITH

1135



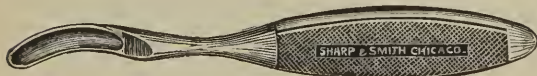
1137



1138



1141



1147



1140

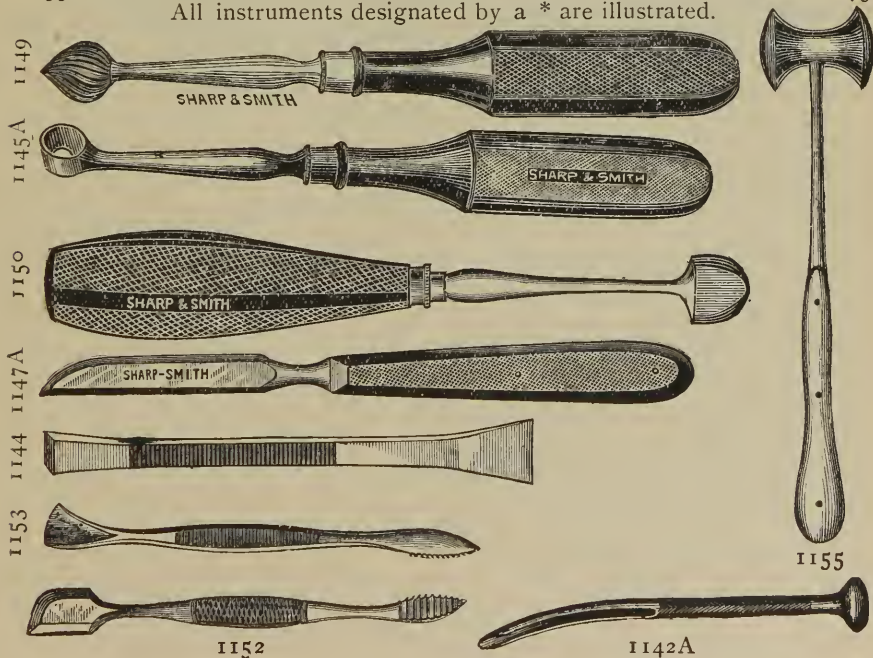


1139

BONE INSTRUMENTS.

FIG.			
*1134	Sands' Periosteotome.....	\$	1 75
*1135	Sayre's "		1 50
1136	Poore's "		1 50
*1137	Goodwillie's Periosteotome, Levator, half curved.....		1 50
*1138	" " " full "		1 50
*1139	Linhardt's Knife Chisel		1 50
1140	Darby's set of Chisels and Gouges.....		5 00
*1141	Szymanowsky's Chisel.....		1 50
1142	Hand Chisel, curved (like Fig. 1142).....		1 00
1143	Ebony Handle Chisel		1 50
*1144	Plain " "		75
1145	" " " large.....		1 00
*1146	Macewen's Chisel, 3 sizes, each		2 25
*1147	Szymanowsky's Gouge.....		1 50
*1142A	Hand Gouge, curved.....		1 00
*1143A	Plain " See page 301B.....		75
1144A	" " large.....		1 00
*1145A	Hebra's Bone Scraper.....		1 50
1146A	Charriere's Bone Scraper.....		1 75
*1147A	Fine Ebony Handle Bone Scraper.....		1 50
1148	" Steel pointed " "		1 85
*1149	Marshall's Osteotrite, Olive Head.....		1 75
*1150	" " Round Head.....		1 75
1151	Gowan's Osteotome		15 75
*1152	Elevator and Raspatory.....		1 00
*1153	" Trephining.....		75
1154	Goodwillie's Elevator for roof of mouth, straight or curved, each		1 50
*1155	Lead Mallet.....		1 75

All instruments designated by a * are illustrated.



MACEWEN'S CHISELS AND OSTEOTOMES.

Dr. Wm. Macewen ("Osteotomy") says: The instruments used by me are of two different kinds, the chisel and the osteotome. The former being of the same form as the carpenters'—though different in temper, the latter being sharpened like an attenuated double inclined plane.

The *chisel* is used for paring, shaving and cutting out of bone, such as a cuneiform portion of the tibia in anterior curvature.

The *osteotome* is used only for making simple incisions or wedge-shaped openings without removal of bone.



Fig. 1146. Macewen's Chisels.

The blade of the *chisel* has two parallel sides extending as far as the cutting edge. The cutting surface has one side straight, the other beveled. It ought not to be too thick, otherwise the bone will splinter. For most purposes an eighth of an inch at the base of the bevel is suitable. The breadth of the instrument varies according to the size of the bone. Half an inch broad is found very suitable in the majority of cases; but for narrow fibulæ a quarter of an inch is better. The breadth ought always to be less than that of the bone to be divided, otherwise the soft tissues on either side would be cut. Though the form of the instrument is similar to many employed by the carpenter, yet the temper and quality are quite different. A chisel tempered so as to cut wood, such as a carpenter's, would not be suitable to cut bone. On the other hand, the instrument employed by the iron cutter (dresser) would be equally faulty in thickness and temper. The bone would be apt to turn the edge of the former, while the latter would be apt to splinter it. The nearest approach of the requisite temper will be found in the tools of the hard wood or ivory turner; but it is best to get the chisel tempered to suit bone, and its quality may be easily tested on the thighbone of an ox. The osseous surface left by a sharp chisel ought to be quite smooth. This instrument is used for cutting a wedge and removing it out of the bone. For the purpose of making a simple osteotomy, or in order to have a wedge-shaped opening in the bone, without removal of any osseous substance, an *osteotome* is employed.

The Surgical Needle of Dr. Hagedorn, of Magdeburg.

The curved surgical needles at present in general use have a stem, the section of which forms either a section or an oval. The needle, at the inner side of its curve, is flattened to a broad double edge, terminating in a point. The edge is transverse to the curve of the needle.

A puncture made with such a needle is parallel with the direction of the wound, as shown in cut, *a, a*. On tying the suture the stitch-wound forms a gap, as shown, *b, b*, which frequently causes small fistulas, and will not always heal by first intention.

In the Hagedorn needle the section of the stem forms an oblong parallelogram. It is of equal length and thickness throughout its entire length from eye to point, and is curved in its axis, with its short cutting edge on its convex side near the point. The length of the cutting edge is about twice or thrice the width of the needle. The needle for intestinal sutures, however, makes an exception, its point being round.

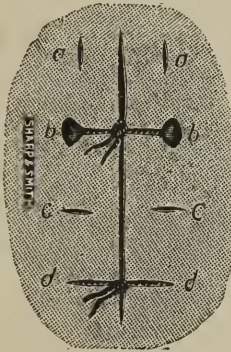
The Advantages Claimed by this New Kind of Needle are :

1. Being curved on the edge, they are more resistant, the point following the intended direction of puncture without deviation.

2. The eye can be made larger and tapering at the terminal end, so that even a stout double thread will pass through the puncture without difficulty.

3. Owing to its equal thickness the needle can be firmly and safely grasped at any point, whereby its direction will be greatly facilitated.

The Hagedorn Needles are put up in packages of one dozen of any one size, either straight, semi-curved or full-curved. Price per package, \$1.25.

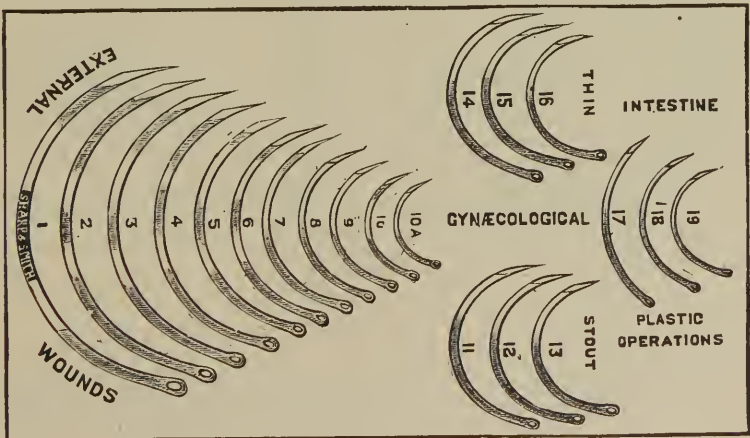


4. The cutting edge being on the convex side, cannot be blunted by the needle holder.

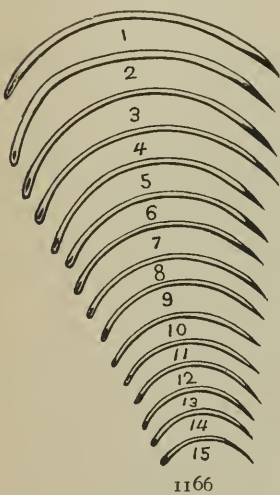
5. The incision made by the needle is in a right angle to the edge of the wound (see *c, c'*.) The two edges of the stitch wound, on tying the suture, are drawn into close apposition, whereby their union is favored (see *d, d'*).

6. The flat needles cause less injury, especially in sutures of nerves and tendons.

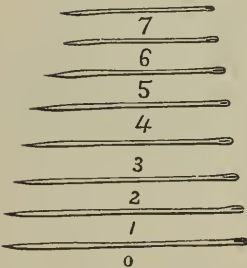
Card Containing 20 Different Curved Needles.



NEEDLES, Etc.



1166



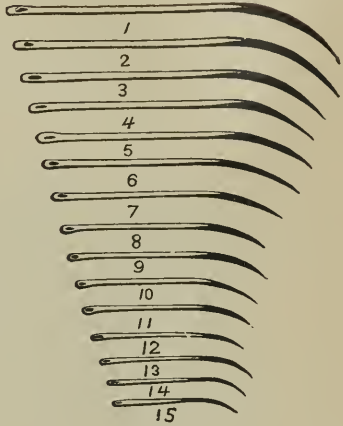
1165



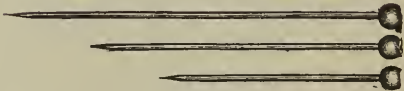
1170



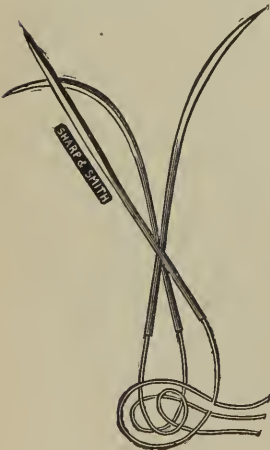
1161



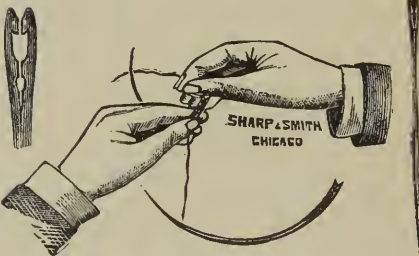
1167



1174



1172



1169



1164

NEEDLES, PINS, Etc.

FIG.	
1156	Buck's Pin Carrier.....\$ 1 00
1157	Hare-lip Pins.....per doz. 15
1158	" " Silver Canula.....each 35
1159	Plastic " lance point....." 20
1160	Acupressure Pins, lance point.....per doz. 50
*1161	Buck's " 1 to 2 inch....." 05
*1162	" " 2 1/2 "....." 10
*1163	" " 3 "....." 15
*1164	Hair-lip Needles....." 1 25
*1165	Needles—Ordinary Surgeons, Straight....." 50
*1166	" Curved....." 50
*1167	" Half curved....." 50
*1168	" Hagedorn's....." 75
*1169	" Self Threading....." 1 00
*1170	" For Mouth....." 1 00
1171	" For Silver Wire.....each. 10
*1172	" In which Silver Wire can be screwed....." 35
1173	" Acupressure, Simpson's....." 20
*1174	" " with Glass Heads....." 10
1175	" Acupuncture " " "....." 10
Ligatures all kinds, see index.	
*1176	Langenbeck's Serresfins, steel..... 50
1177	" " " curved..... 50
*1178	" " can be taken apart to be cleaned..... 50
*1179	Serresfin's Silver Wire, straight..... 20
*1180	" " curved..... 20
*1181	Hoff's, set with handle, used to approximate the edges of wounds while passing sutures..... 4 25
1182	Tucker's Wire Cutter..... 4 00
*1183	Milne's Compressor..... 1 10



1179-1180



1183



1178



1181

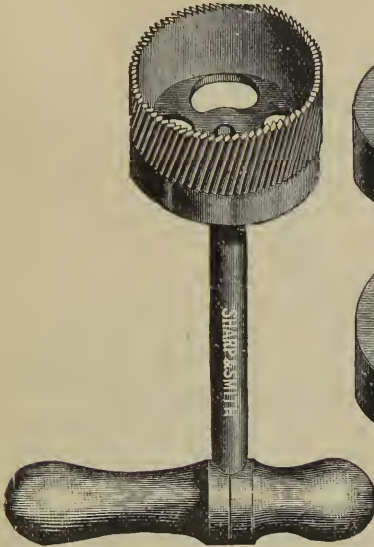


1182

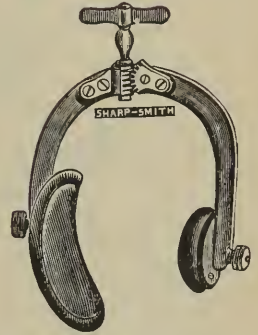
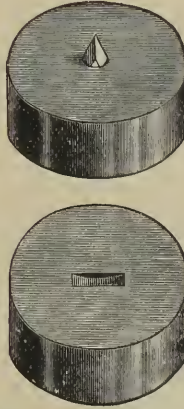


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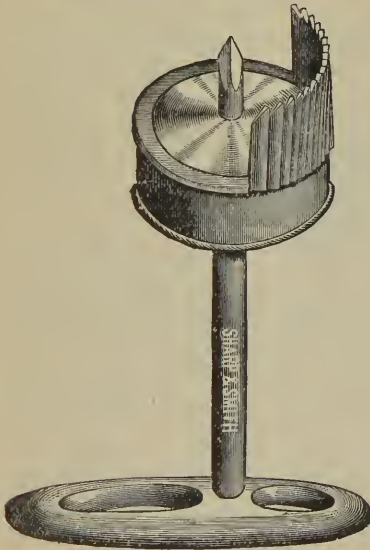
TOURNIQUETS, TREPHINES, ETC.



1185-A



1207-A



1185-A

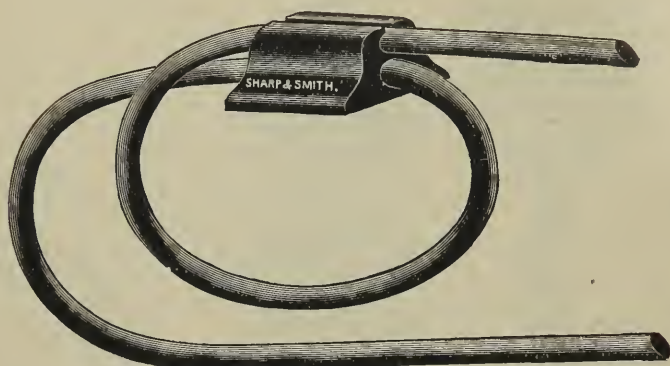


1207-B

FIG.			
*1185-A	Roberts' Aseptic Trephines,	$\frac{1}{2}$ inch.....	\$5 00
*1185-A	" " "	$\frac{3}{4}$ "	5 00
*1185-A	" " "	1 "	6 00
*1185-A	" " "	$1\frac{1}{4}$ "	6 50
*1185-A	" " "	$1\frac{1}{2}$ "	7 00
*1207-A	Signoroni's Tourniquet.....		10 00
*1207-B	Ward Cousin's Instantaneous Tourniquet, Aseptic.		2 00
*1207-C	Esmarch's Emergency Tourniquet, with elastic ligator.....		50
*1207-D	Clover's Ether Inhaler		15 00
Instruments designated by a * are illustrated			

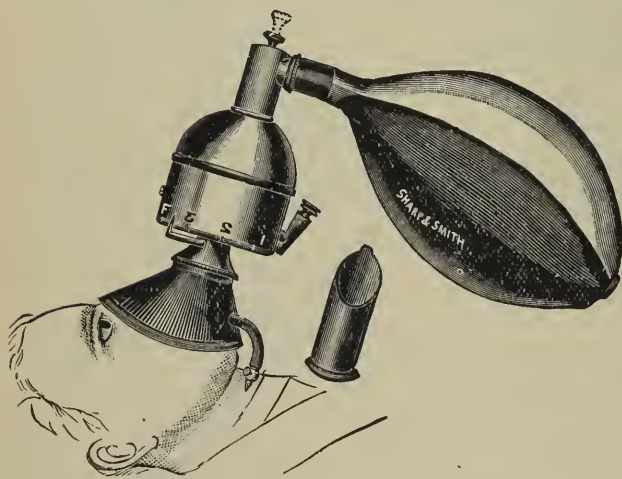
Instruments designated by a * are illustrated

TOURNIQUETS—ETHER INHALERS



1207-C

ETHER INHALERS.



1207-D

FIG. 1207-E. Clover's Ether Inhaler.

This Inhaler is in general use throughout New York and this city. The Indicator between F and 3, in cut, is used for the purpose of giving any desired amount of ether or air, or both together. When Indicator is at F, the patient is inhaling pure ether; when at 3, one part air and three parts ether; when at 2, equal quantities of ether and air; at 1, one part ether and two parts air.

At the top of the Inhaler will be noticed "dotted lines," which represent a valve, used by means of a slight pressure of a finger, to give the patient *pure air*. The mouth piece consists of an inflated rim which fits very securely over the patient's mouth. Following are a few recommendations from some who have used the Clover's Inhaler:

"Whenever I am obliged to use Sulphuric Ether as an anæsthetic in ovariectomy or hysterectomy, I much prefer Clover's Instrument to any other Inhaler.

R. LUDLAM.

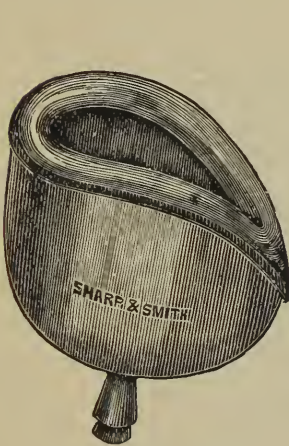
"*Professor of the Surgical Diseases of Women in the Hahnemann Medical College and Hospital of Chicago.*"

"The best Ether Inhaler in my opinion is that of Clover, of London, which I imported several years ago, and have since used exclusively in private practice. The accompanying diagram will explain its use. Its chief advantages are: Ease of anesthesia, and saving of ether, so that an operation lasting an hour will usually not require more than three ounces of ether.

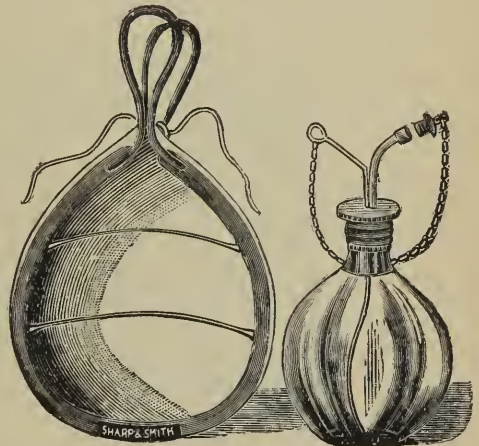
PAUL F. MUNDE."

ETHER INHALERS.

FIG.		
*1208	Allis Ether Inhaler, Rubber Cover.....	\$2 25
1209	“ “ “ Leather “	2 25
*1210	Fowler's Modification of Allis' Ether Inhaler.....	2 50
1211	Waterford's Ether Inhaler.....	2 50
*1212	Lente's Ether Inhaler.....	1 50
1213	Hutchinson's Ether Inhaler.....	3 00



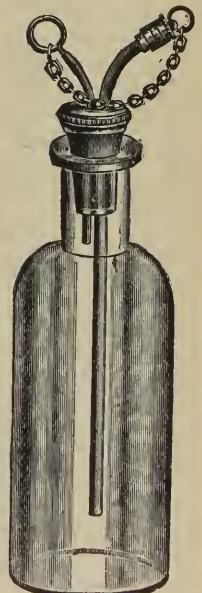
1212



1225



1208



SHARP & SMITH
1226

A FOLDING ALLIS' ETHER INHALER.

By GEORGE R. FOWLER, M D, Brooklyn, N Y.

Extract from "The Medical Record," July 2d, 1887.

Although many surgeons still prefer the ordinary folded napkin or improvised cone method of administering ether, yet there can be no doubt as to the advantages to be derived from the use of a specially devised apparatus like the Allis' inhaler. It is open to the objection, though to a less extent than other instruments of its class, of being somewhat cumbersome when carried about, and of occupying, therefore, considerable space in the operating satchel. I have therefore endeavored to overcome this objectionable feature by slightly altering the shape of the inhaler in such a manner as to allow of its being folded flatwise. The

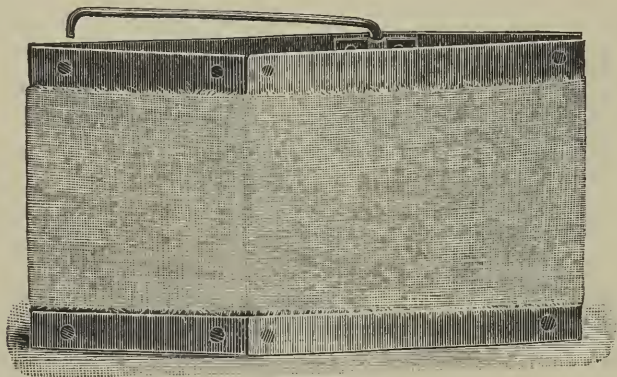


Fig. 1210. No. 1.

accompanying cuts will show how this is accomplished. Fig. 1 represents the inhaler folded ready for placing in the pocket or satchel, in which shape it occupies about as much room in the pocket or satchel as an ordinary visiting list. By a very simple movement, provided for by bringing together the corners of the metal sides, the two long sides are made to separate from each other, until

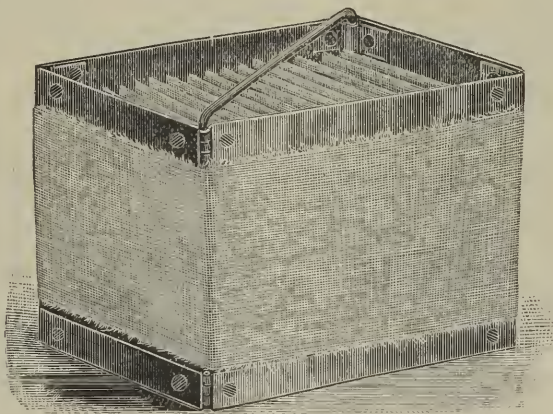


Fig. 1210. No. 2.

the shape shown by Fig. 2 is formed, in which position it is securely held by a little bar which swings over from one corner to the one diagonally opposite, and fastened, by its bent extremity, into a socket provided for the purpose.

ETHER INHALERS.

FIG.		
1214	Matter's Ether Inhalers.....	\$10 00
1215	Huel's " "	7 50
1216	Adams' " "	4 00
1217	Squibbs' " "	1 75
1218	Spier's George, Ether Inhaler.....	2 65
1219	Morton's " "	3 75
1220	Junker's " "	9 00
1221	Chisholm's " "	for pocket. 1 90
1222	Cheatham's " "	2 75
1223	Noyes' " "	6 00
*1224	Young's Combined Anæsthetic Can and Inhaler (Chloroform or Ether).....	7 00

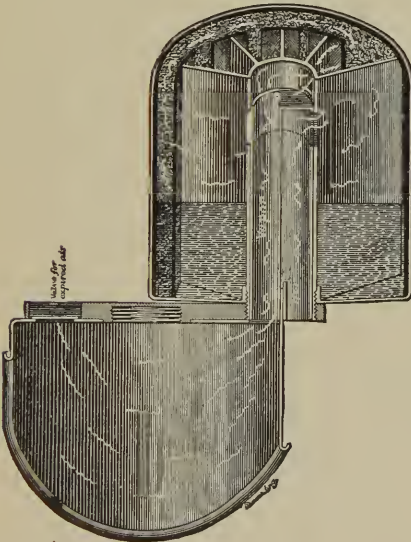
This instrument is small enough to carry in the pocket, and may be kept constantly filled ready for use. It fits perfectly any form of face.

*1225	Esmarch's Chloroform Inhaler with Mask.....	1 50
*1226	Esmarch's Chloroform Dropper.....	75
1227	Lente's " Inhaler.....	4 50

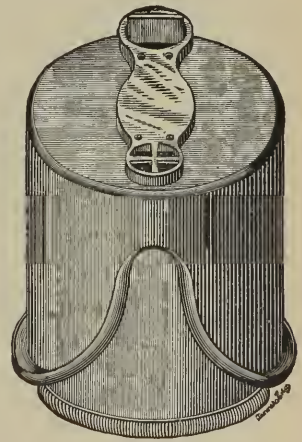
For other kinds of Inhalers, see index.

Young's Combined Anæsthetic Can and Inhaler.
(Chloroform or Ether.)

SAFE, EFFICIENT, ECONOMICAL, CONVENIENT AND CLEANLY IS SMALL ENOUGH TO CARRY IN THE POCKET, AND MAY BE KEPT CONSTANTLY FILLED READY FOR USE. FITS PERFECTLY ANY FORM OF FACE. LIQUID CANNOT RUN OUT WHILE USING IN ANY POSITION.



1224



1224

The instrument may be taken apart by unscrewing the head from the can, the packing here being a soft string, wound around a number of times underneath the head.

This inhaler is especially adapted for obstetric practice, the patient being recommended to hold it herself; she drops it when she reaches the stage of muscular relaxation.

ETHER INHALERS.

FIG.

*1227-A	Dr. Henry Flood's Anæsthetic Inhaler	\$7 50
*1227-B	Dr. Joseph B. Eddy's Modified Allis Ether Inhaler.....	9 00
*1227-C	Allis Antiseptic Ether Inhaler	3 50

[Extract from the Medical Record, June 8, 1889.]

NEW ANÆSTHETIC INHALER, BY HENRY FLOOD, M. D., ELMIRA, N. Y.

The inhaler consists of two parts, a cone and bottle to hold the anæsthetic. The cone is made of a soft rubber ring, five inches in diameter. The rubber ring is soft, and will not injure or be uncomfortable for the patient. It is pliable enough when slight pressure is used, to adapt itself to the contour of the face.

To the rubber ring four steel wires are fastened, equal distances apart. The wires are five and one-half inches long. The other ends of these are soldered in a metal ring which is three-quarters of an inch in diameter. The metal ring makes the apex of the cone. This forms a spring frame, that always takes the form of a cone. If the cone is pressed together, as if caught by a patient, as soon as the pressure is removed the frame springs back into shape.

It requires only a minute or two to pin a towel around the frame, which should be done with safety pins, or, what is more convenient, I have made a hood of toweling which fits the cone. The hood is easily pulled over the frame and pinned at the base of the cone.

To prevent air passing through the meshes of the toweling there is a second hood made of soft rubber cloth. The rubber hood is pulled over the toweling. The rubber hood is longer than the cone, leaving a free border of an inch or more which lies on the face. During inspiration the rubber cloth acts as a valve and prevents air from rushing under the cone. When the cone and rubber hood are pressed tightly to the face, air can be entirely excluded from the cone. If air is wanted pull up the rubber hood, and it will pass through the meshes of the toweling.

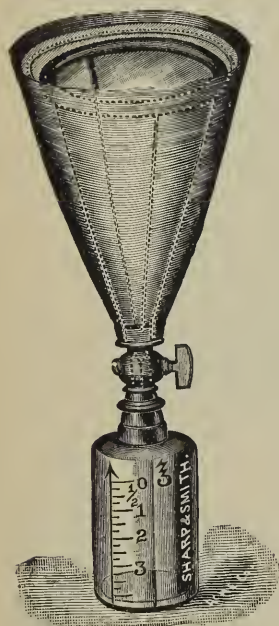
The ring at the apex of the cone has threads cut into it to screw the cork of the anæsthetic bottle into the cone. The metal cork also screws into the anæsthetic bottle. The metal cork has a stopcock to turn off or on the anæsthetic. Through the cork are two holes which pass through the bottle-end and through the stopcock, where each of the two holes divides and turns so as to open at the lower edge of the cork, thus distributing the anæsthetic, which passes through the cork in four directions, and throws it inside of the cone against the toweling.

A small piece of absorbent cotton pushed into the apex of the cone, will prevent the anæsthetic from dripping into the patient's face.

The anæsthetic bottle holds four fluid ounces and is graduated so that at any time the amount of anæsthetic that has been used in the cone may be known. When the bottle becomes empty it is easily unscrewed, refilled and replaced without removing the cone from the face.

The Inhaler is easily taken apart and cleaned, the soiled towel or hood is to be thrown aside to be washed, and a clean one is to take its place; the frame and bottle should be washed, and each part of the inhaler can be treated with an antiseptic fluid. This is a very important feature when practising antiseptic surgery, especially in operations about the face and neck. (Continued on following page.)

All Instruments designated by a * are illustrated.



1227-A

ETHER INHALERS.

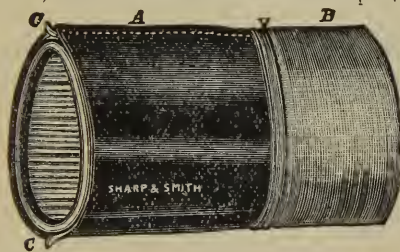
The anæsthetic can be given as rapidly or as slowly as desired. The stop-cock gives absolute control over the quantity put into the cone, and prevents a large amount of waste, requiring one-fourth to one-half as much as is generally used. I have produced complete anæsthesia with chloroform in less than three minutes, and with ether in from four to seven minutes. I have kept patients anæsthetized undergoing capital operations, for nearly an hour, using less than a fluid ounce of chloroform; and in severe and painful operations for forty-five minutes with less than four fluid ounces of ether.

[Extract from "The Medical Record," New York, May 11, 1889.]

A MODIFIED ALLIS' ETHER INHALER.

BY JOSEPH W. EDDY, M. D., OSWEGO, N. Y.

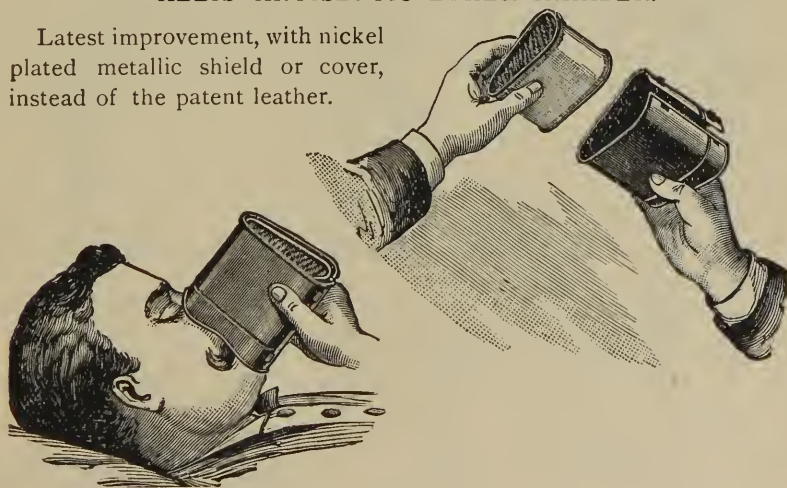
After using a number of kinds of ether inhalers, I have come to the conclusion that the Allis inhaler is the best; there being no valves to get out of order, and the construction is simple; but I found that where it was needed for a number of patients, as in a railroad accident, it generally became too dirty in a short time to use, owing to the presence of saliva and vomited matter, and taking it apart to clean and put in a new canton flannel bandage was very tedious and trying to the hands, especially in removing and putting on the rubber cap. In my modification the canton flannel is not threaded through between the bars, but slipped over as the top comes off, and then in place of the rubber cap over the bars, I use a black patent leather jacket, over one end of which is slipped a rubber face piece, which has the end going over the patent leather jacket distended by a metal ring or band so that there is no trouble in introducing it over the jacket. Surgeons will find that this inhaler can be taken apart, and the bandage changed in few moments.



1227-B

ALLIS' ANTISEPTIC ETHER INHALER.

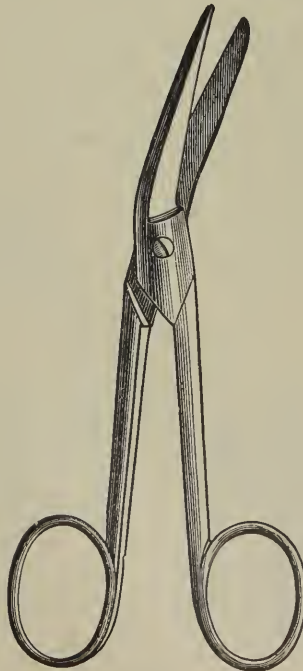
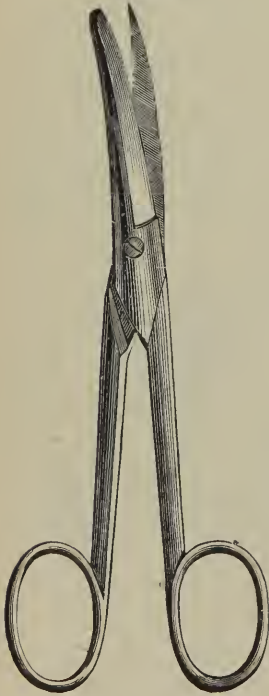
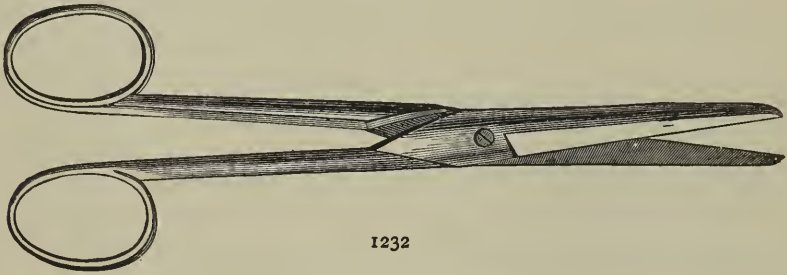
Latest improvement, with nickel plated metallic shield or cover, instead of the patent leather.



1227-C

SCISSORS, FORCEPS, SPONGE HOLDERS.

FIG.			
1228	Dugas' Operating Scissors, one probe point	\$1	25
1229	Gays " "	1	25
*1230	Scissors and Forceps combined.....	1	50
1231	Scissors—Operating, large, straight	1	25
*1232	" " medium.....		75
1233	" " small, "		60
1234	" " large, curved.....	1	40
*1235	" " medium, "	1	60
1236	" " small, "		70
*1237	" " angular, small		70
1238	" " " medium.....		85
1239	" " " large	1	10
*1240	Dr. Chas. N. D. Jones' Antiseptic (see description page 313).....	2	60
*1241	Sims' Sponge Holder		50
*1242	Husson's Sponge Holder, Aseptic (see description page 313)		50

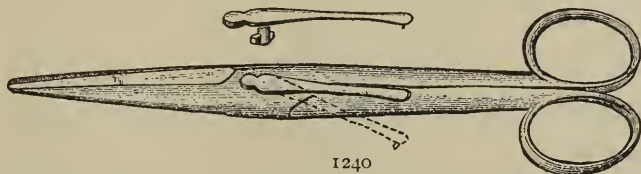


A NEW ANTISEPTIC SCISSORS AND FORCEPS LOCK.

By CHARLES NOAH DIXON JONES, M D., Surgeon to the Woman's Hospital, Brooklyn.

The objections to the ordinary separable or antiseptic lock are four: 1. It is easily broken off by careless manipulation. 2. It is not always easily cleaned. 3. In a few weeks the blades work loose, so that they do not close accurately. 4. Each time the blades of the scissors are ground the pivot must be shortened.

The new forceps lock which I introduced a few weeks ago (see "New York Medical Journal," Feb. 11, p. 151) is not entirely free from some of these objections. 1. The blades of the forceps or scissors are liable to become separated, during the progress of an operation, and cause annoyance and loss of time. 2. The pivot in time works loose. 3. It is very difficult to grind the blades of the scissors accurately, owing to the projecting arm.



In order to overcome these difficulties, I have constructed a lock after the following pattern: The pivot is attached to a spring lever, so that the scissors or forceps consist of three separate pieces, which can be easily adjusted. The blades are plain, with only an opening in each to receive the pivot, so that they can easily be ground or cleaned. The scissors are put together as follows: The blades are placed together, and the pivot is passed through the opening in each blade, and then sprung around into place.

The spring lever always serves to keep the cutting edges in apposition, and to compensate for wear of the surfaces. When properly closed the blades cannot by any amount of careless handling or rough manipulation become separated or twisted apart. The cut explains itself.



We call the attention of the profession to an easily cleaned and perfectly aseptic sponge holder.

The instrument is nine inches long and made out of a single piece of steel wire, nickel plated. The blades are brought together by an incomplete ring of steel, which can be readily slipped off, thus permitting the instrument to be thoroughly cleaned.

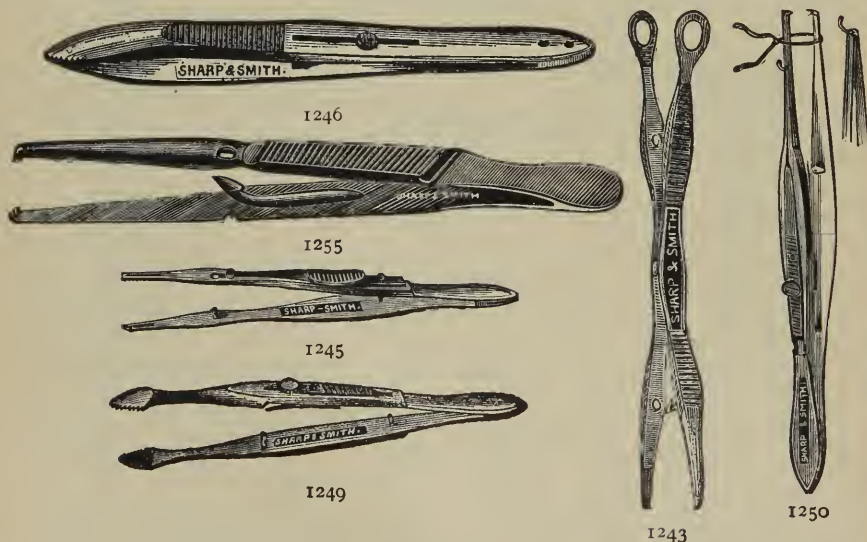
The cut represents the instrument so clearly that further explanation is unnecessary.

The advantages that are claimed for this instrument are:

1. That it is easily cleaned, hence thoroughly aseptic.
2. That it is light, strong and durable.
3. That it is cheap.



FIG.				
*1243	Forceps, Artery and Tissue, Cleborne's Spring Catch.....		\$	2 50
1244	" " Ligature			1 85
*1245	" " Hunter's Slide Catch.....			1 85
*1246	" " Langenbeck's Slide Catch			1 10
1247	" " Milne's.....			1 10
1248	" " Shield's Self Grasping			1 50
*1249	" " Andrews' Slide Catch.....			1 75
*1250	" " Bigelow's, with slide.....			2 75
1251	" " French's Slide Catch			1 50
1252	" " Lankford's " "			2 00
1253	" " Fricke's " "			1 50
1254	" " Dugas' " "			1 15
*1255	" " Maclean's Spring Catch.....			1 25
1256	" " Phelps' Torsion Spring Catch.....			3 00
1257	" " Wight's Spring Catch			1 50
*1258	" " Hæmostatic Artery, Little's, French Lock and Snap Catch			1 50
*1259	" " " " Lawson Tait's " " " " " "			1 25
*1260	" " " " Spencer Wells' " " " " " "			1 25
1261	" " " " Wood's " " " " " "			1 50
*1262	" " " " Pean's " " " " " "			1 00
*1263	" " " " " " Heart Shape, French Lock and Snap Catch ...			2 00
1264	" " " " " " Long Blade			1 75
1265	" " " " " " "T" shape, French Lock and Snap Catch.....			2 00
1266	" " " " " " Olive shape, " " " " " "			2 00
1267	" " " " " " Oval shape, " " " " " "			2 00
1268	" " " " " " Sabine's Snap Catch.....			2 00
1269	" " " " " " Thomas' " "			1 85
1270	" " " " " " Wylie's " "			1 50
1271	" " " " " " Knoll's " "			1 75
1272	" " " " " " Gerster's.....			1 85
*1273	" " " " " " Dr. Charles N. D. Jones', with Collins' New Lock (see description)			2 50
1274	Forceps, Artery, Hewson's Torsion.....			6 00
*1275	" " Wells' Bow Torsion			1 85
1276	" " Tilleaux' Torsion			3 75
*1277	" " Cliquet's for Retracted Arteries in Stumps.....			2 75
*1278	" Duval's Tri blade, for dressing small wounds.....			2 00



Instruments designated by a * are illustrated.

HÆMOSTATIC FORCEPS.



1259



1258



1260



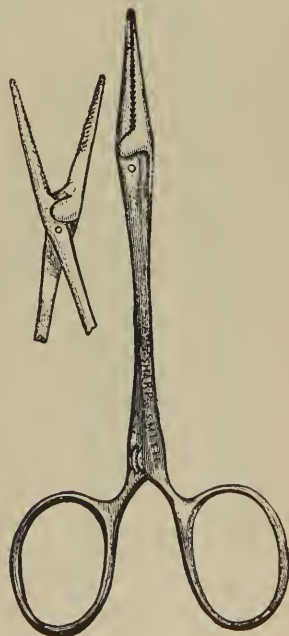
1263



1262



1275



1273

ARTERY FORCEPS.

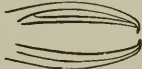
FIG.			
*1279	Forceps	Artery, plain (thumb).....	\$ 40
*1280	"	" Fenestrated Spring catch.....	1 25
1281	"	" " Slide ".....	1 75
*1282	"	" Slide Catch Torsion.....	1 80
*1283	"	" Fenestrated Cross Action.....	1 50
*1284	"	" and Needle combined Fenestrated Spring Catch.....	1 50
1285	"	" " " " Slide ".....	2 00
1286	"	" Hamilton's Fenestrated.....	1 50
*1287	Liston's	Mouse Tooth Forceps Spring.....	1 25
1288	"	" " " " Plain.....	75
1289	Coxeter's	Artery Forceps.....	1 00



1283



1280



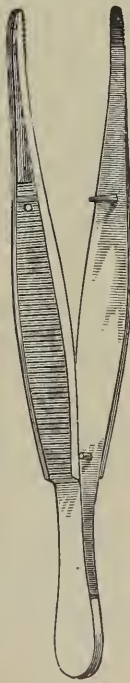
1287



1284



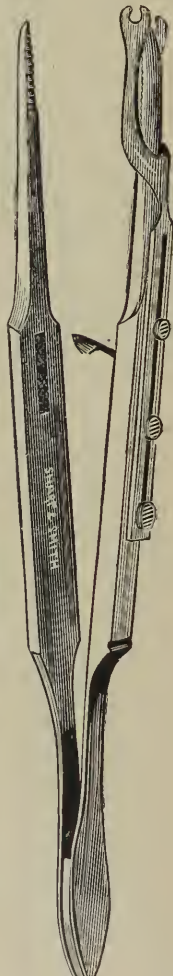
1282



1279



1278



1277

Instruments designated by a * are illustrated.

ARTERY FORCEPS.

FIG.

*1280A	Forceps, Allis' Acupressure, straight.....	\$ 1 10
*1281A	“ “ “ curved.....	1 25
*1282A	“ “ “ “.....	1 25
*1282B	“ “ “ “.....	1 00
*1283A	“ “ Suture.....	1 25
*1284A	“ “ Acupressure Scissor Handle.....	2 25
*1285A	“ “ “ “ “.....	2 25
*1286A	“ “ Suture “ “.....	2 25

(Extract from "Medical News," September 1st, 1883.)

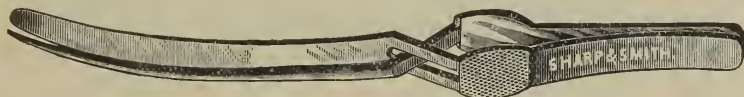
ACUPRESSURE FORCEPS.

An Instrument for the Instantaneous Arrest of Hemorrhage during Surgical Operations.

BY OSCAR H. ALLIS, M. D.,

Surgeon to the Presbyterian Hospital ; Lecturer on Orthopædic Surgery and Joint Diseases in the Post Graduate Course at Jefferson Medical College ; Surgeon to the Jefferson Medical College Hospital.

Under this heading I wish to introduce an instrument to the medical profession that I have devised for the arrest of hemorrhage. It consists of two blades, Fig. 1282, under the command of a spring, the lower of which is a needle, and designed to transfix bleeding tissues, which done, the grasp of the hand is released, and compression is instantly effected between the blunt blade which lies upon the surface of the bleeding vessels and the needle which lies beneath them.



1282-A

Its special application is where hemorrhage takes place simultaneously from many bleeding vessels. Few surgeons have not felt the need of a certain and instantaneous hæmostatic in operations in which the tourniquet cannot be used, or after the tourniquet has been removed. In the latter case, though the main vessels have been ligated, the hemorrhage is often so great from numerous small bleeding points, and the usual means of arrest and ligation so tardy, that fatal collapse has not infrequently resulted.

It is for this class of cases that the acupressure forceps have been devised. Beneath a bleeding area the needle is thrust, and the spring, instantly denoting that the hemorrhage has been arrested, leaves the operator to turn his attention to another point of danger. Thus half a dozen instruments will be found as efficient and much more transparent than a corps of assistants—not getting in the operator's way, and maintaining a silent but effective grip until the ligature may be applied, and the instruments one by one removed. In the surgical clinics of medical colleges, in hospitals, in active military service, and in the private practice of those surgeons who cannot command adequate assistance, this instrument will, I believe, be found of great service.

As acupressure forceps, they often render the ligature unnecessary, for no oozing will follow their removal if the vessels are small, and their application has continued for several minutes. In operating on the female perineum, in which the



1280-A

ligature is to be avoided, this instrument, especially No. 1280, will do excellent work.

ARTERY FORCEPS.



1281-A

Four varieties and nine sizes are made. One, in which both blades are needles—a suggestion of Dr. Reen, as represented by Fig. 1281. Nos. 1282 and 1280 will be found most generally useful. No. 1280 or a larger size,

will be found effectual in deep wounds, as in lithotomy. For plastic operations upon the face a small size is made (Fig. 1282). There are three sizes of No. 1280, three of No. 1282—the largest of which is fully eight inches long.

Although each instrument may be used not only as a hæmostatic, but also as a tenaculum, yet the two designed especially as tenacula are represented in 1282A and 1282B. For this purpose I have found the large size (Fig. 1282B)



1282-B

to work admirably. In using the instruments, a quick, firm thrust is necessary, but this manœuvre can easily be acquired on the coat sleeve.

My preference (if I could have but one variety) is for No. 1280. Were I ordering a dozen I should take three of No. 1280, three of No. 1282, two of each a size larger, one of No. 1282B, and one of mammoth No. 1282. No. 1282-B is not necessary if an ordinary tenaculum is at hand, but I believe that those having No. 1282-B will set the old tenaculum aside.

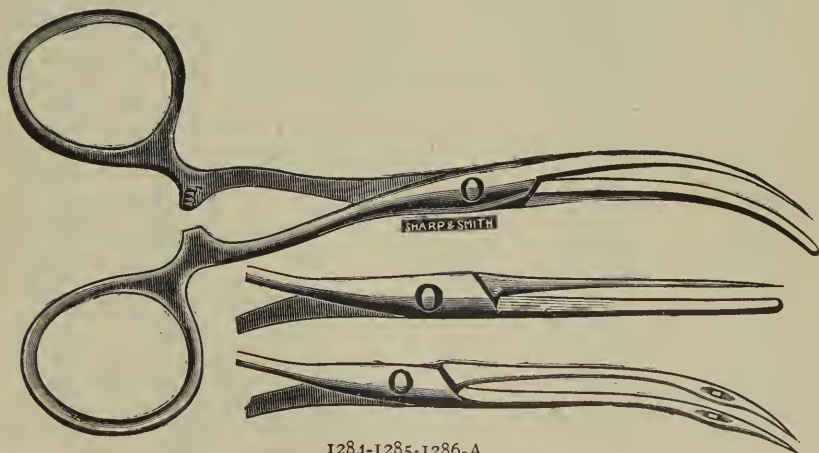
Figure 1282-B is not shown in cut; it is the same as 1282-A, only larger.



1283-A

SUTURE FORCEPS.

I have given these instruments a satisfactory trial in the Jefferson Medical College clinic and hospital, and in the Presbyterian Hospital, and feel that they have a useful future before them.

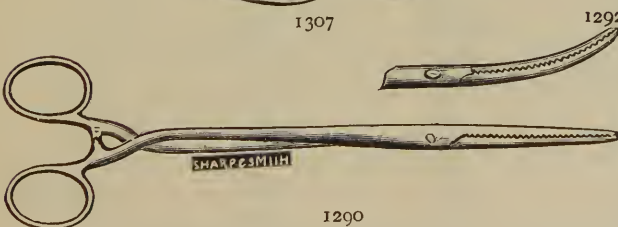
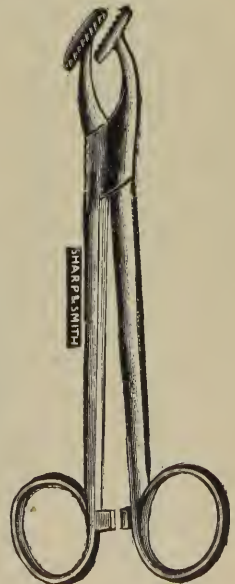
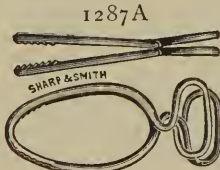
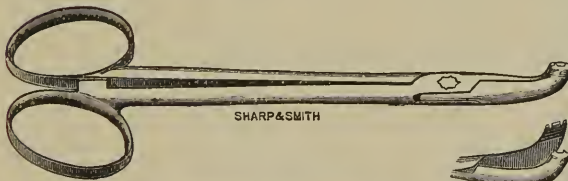
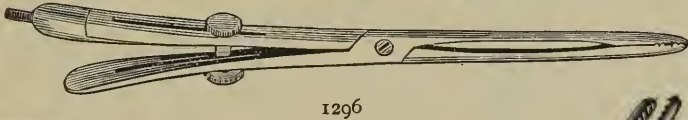


1284-1285-1286-A

The above Allis' Forceps with Scissor Handles are supposed to be an improvement on the old style, and at present seem to be in fair demand.

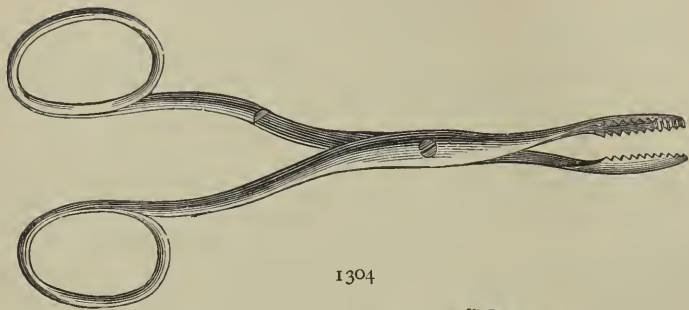
ARTERY FORCEPS.

FIG.			
*1287A	Forceps, Pratt's Artery, angular.....	\$	1 50
1288A	“ “ “ long.....		1 75
*1289A	“ “ new Artery and tissue.....		2 00
*1290	“ Fænger's Compression French Lock, large 8 inches...		2 25
1291	“ “ “ “ small, 6 “ ...		1 75
*1292	“ “ “ curved, 9½ inch.....		2 50
1293	Langenbeck's Artery Compressor		50
1294	Milne's “ “		1 10
*1295	Levis' “ “		25
*1296	Gross' “ “		2 60
1297	Buck's “ “		27 00
1298	Skey's “ “		18 00
1299	Erichson's “ “		18 75
1300	Briddon's “ “	\$22 50 to	45 00
*1301	Hahn's Artery Compressing Forceps.....		2 25
*1302	Dr. J. Frank's (Chicago) Dressing Forceps.....		1 50
*1303	Adam's Splinter Forceps.....		75
*1303A	Little's “ “		75
*1304	Polypus Dressing “ plain.....		1 00
1305	“ “ catch.....		1 00
*1306	Spier's Artery Constrictor.....		3 00
*1307	Mattock's Key Ring Artery Clamp.....		35



Instruments designated by a * are illustrated.

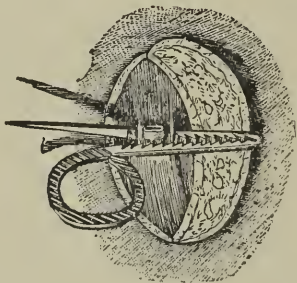
ARTERY FORCEPS.



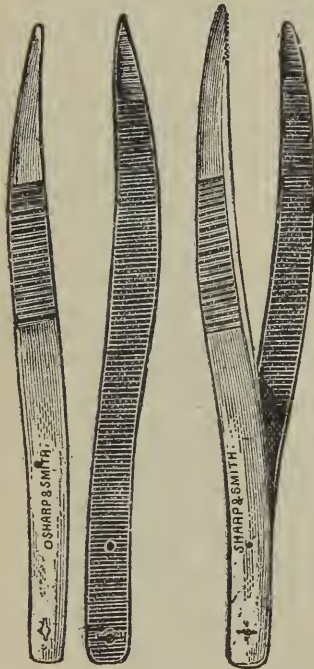
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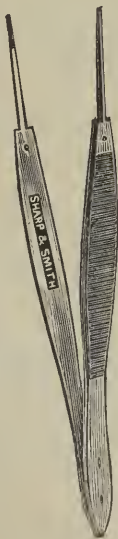
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1295



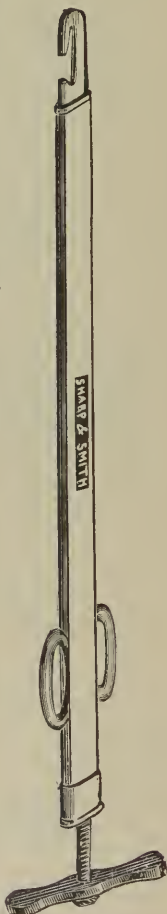
1302



1303-A



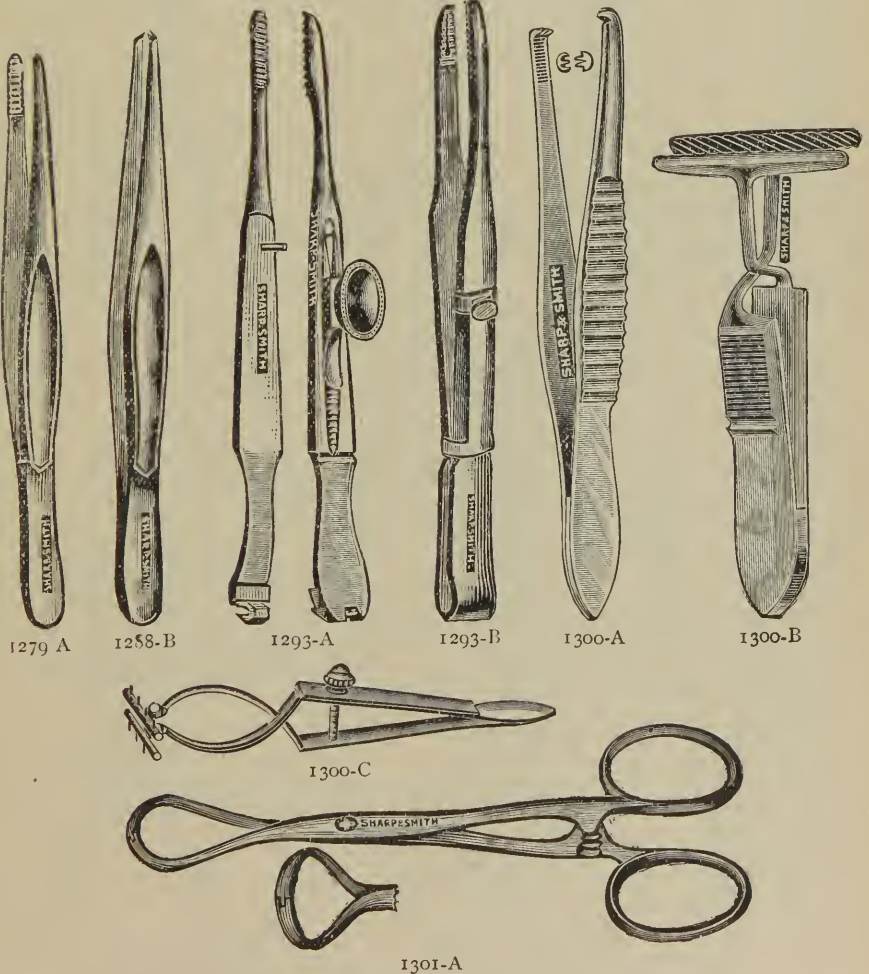
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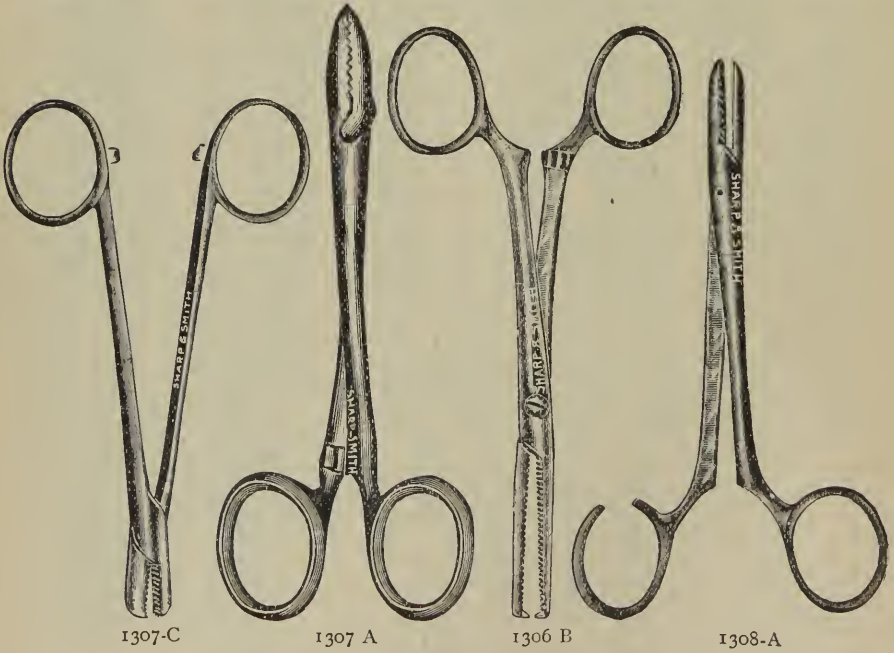
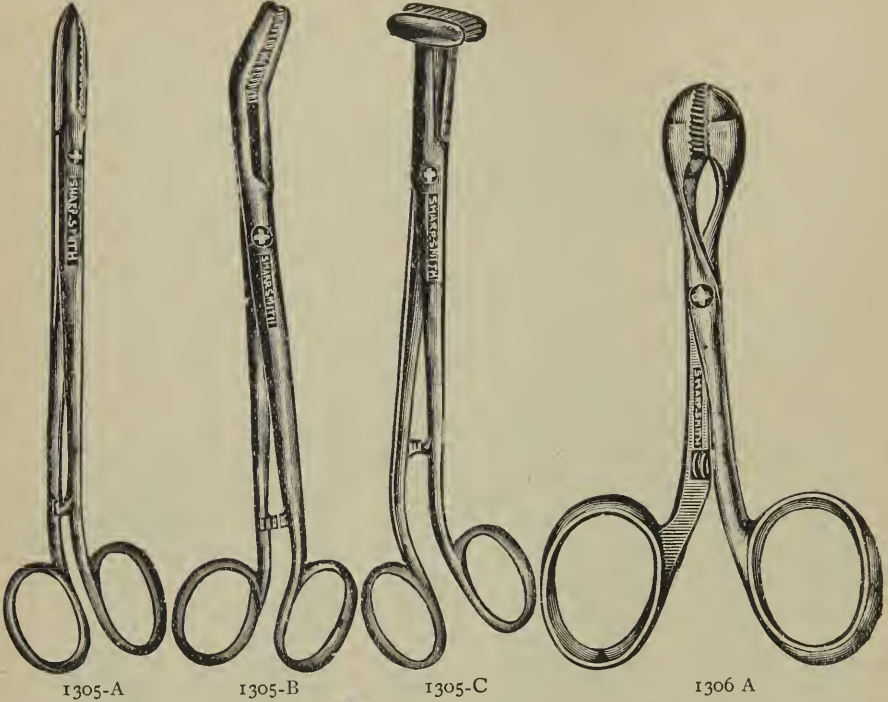
1306

ARTERY FORCEPS.

FIG.			
*1279-A	Aseptic Artery Forceps, plain.....	\$	60
*1288-B	" " " Liston's Mouse Tooth.....		75
*1293-A	" " " Sharp & Smith's Slide Catch.....	I	85
*1293-B	" " " Walcher's.....	I	50
*1300-A	" " " Dr. Christian Faenger's.....	I	50
*1300-B	Dr. J. Frank's Scalp Wound Clamp Forceps.....	2	00
*1300-C	Forceps (cross action) for spreading open the lips of a wound.....	3	75
*1301-A	Dr. H. W. Boone's Clamp Forceps, for securing and ligating deep sutures....	3	00
*1305-A	Byford's Single Curve Compression Forceps..... (see following page)	2	00
*1305-B	" Double " " " " " " " " " "	2	5
*1305-C	" T " " " " " " " " " "	2	50
*1306-A	Senn's Bulbous Artery Forceps.....	"	25
*1306-B	" plain Aseptic Artery Forceps.....	"	75
*1307-A	Lawson Tait's " lock Artery Forceps.....	"	25
*1307-B	" " " curved Artery Forceps.....	"	50
*1307-C	Knoll's Blunt Artery Forceps.....	"	75
*1308-A	Bouffleur's Artery and Needle Forceps for round or flat needles " " "	2	50



All instruments designated by a * are illustrated.



See preceding page for prices.

NEEDLE HOLDERS.

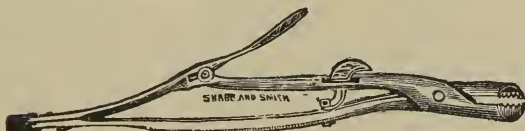
FIG.				
*1308.	Needle Holding Forceps,	Prout's	.....	\$2 60
1309.	"	"	Physic's	1 50
*1310.	"	"	Sand's	3 00
	"	" (see index.)	and Artery Combined Fen strated	2 00
1311.	"	"	Philadelphia	4 00
*1312.	"	"	Parker's	1 50
1313.	"	"	Fritche's	3 50
*1314.	"	"	Russian	3 00
1315.	"	"	" Imp.	3 25
1316.	"	"	Stimson's (See Fig. 3512, page 609.)	2 75
*1317.	"	"	Sim's plain	1 75
1318.	"	"	" with catch	2 00
1319.	"	"	Thomas'	3 50
1320.	"	"	Wyeth's	3 40
*1321.	"	"	Whitney's	3 25



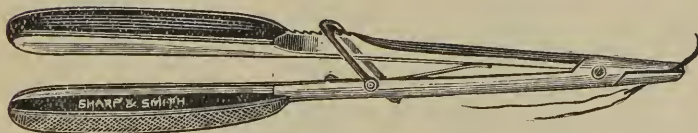
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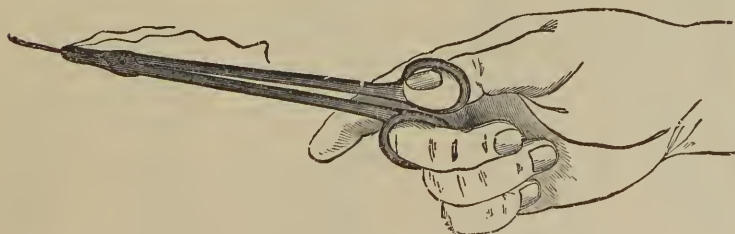
1308



1310



1314



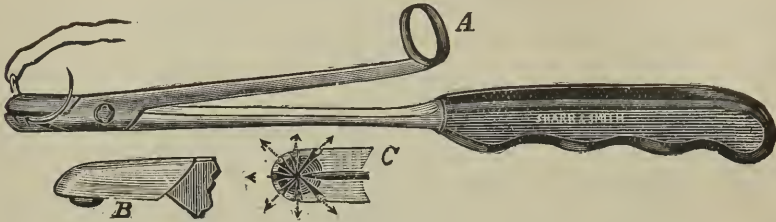
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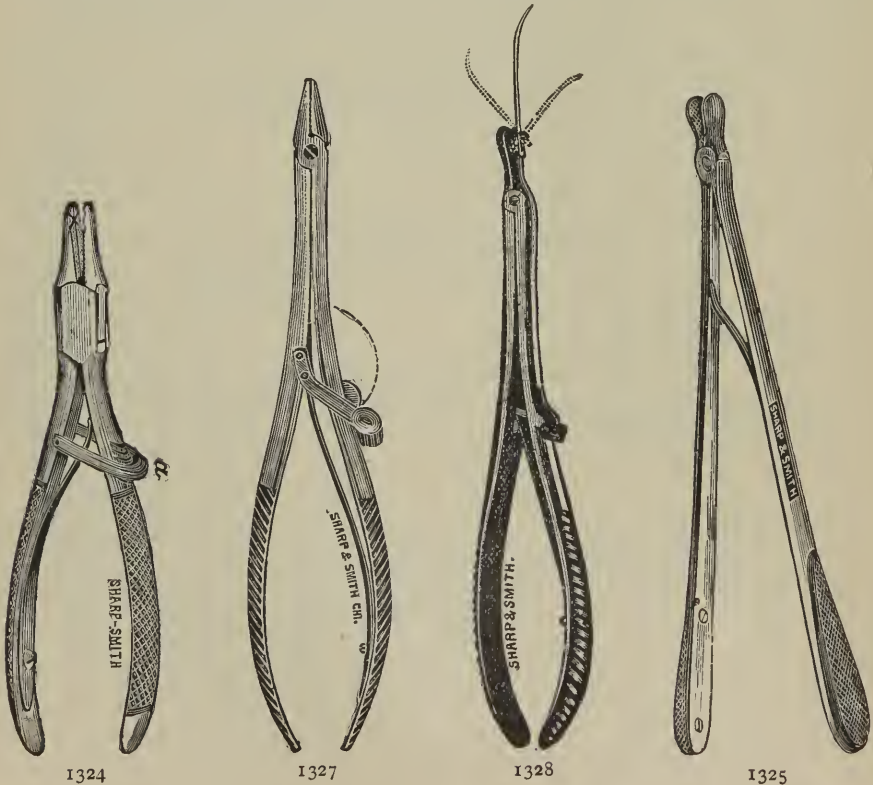
Instruments designated by a * are illustrated.

NEEDLE HOLDERS.

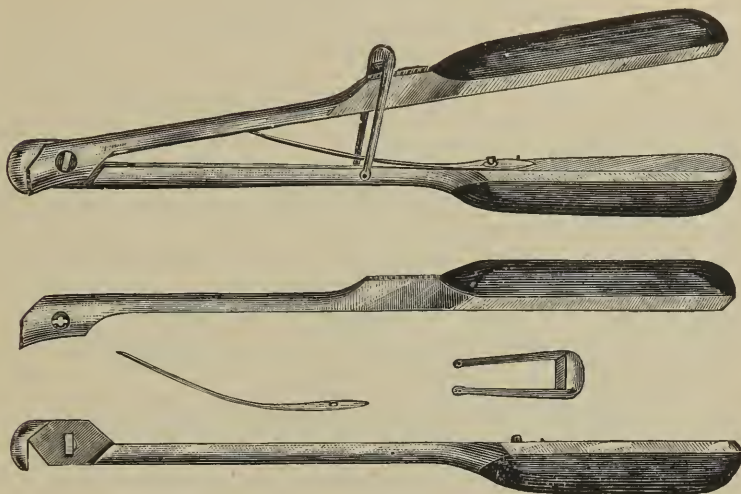


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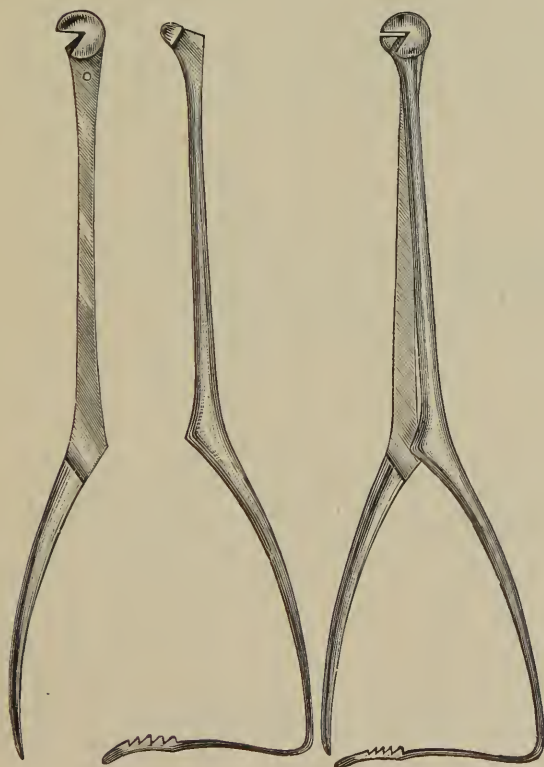
This needle-holder is constructed in such a manner as to hold at different angles a very large or very small, decidedly curved or absolutely straight Hagedorn or round needle. The principle of holding the different curved and shaped needles of this design consists in having the ends of the forceps for seizing the needle ground to fit each other like the ball and socket joint. The socket or lower end of the forceps is ground in grooves at three or four different angles to a point below the base of the socket. And thus the needle fits in either one of these several grooves and the ball end of the forceps presses directly upon the needle in the center of the socket, and holds it firmly. The parts are disjoining, one portion is long for the hand to grasp firmly or lightly, as may be needed, the other is shorter, and made with a ring for the end of the thumb. This is placed at right angles to the axis of the instrument.



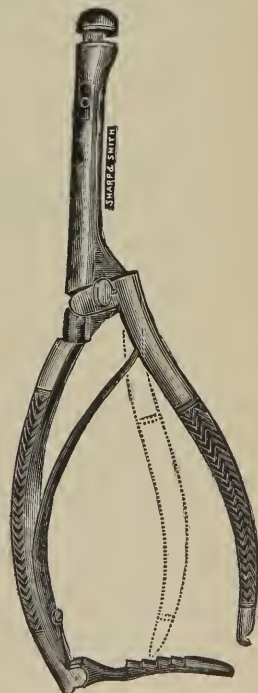
NEEDLE HOLDERS.



1332



1333



1330

NEEDLE HOLDERS.

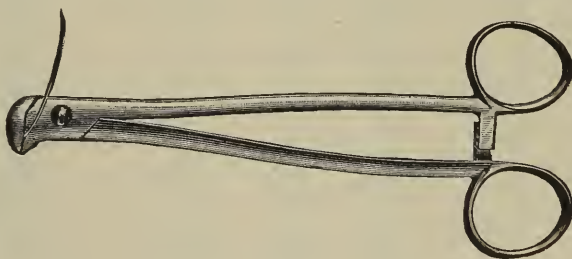
FIG.	Needle Holding Forceps,				
1322	Needle Holding Forceps,	Mathis', for curved needles	\$3 75		
*1323	"	"	Hanks'	3 00	
*1324	"	"	Heuel's	3 00	
*1325	"	"	Emmet's	2 25	
1326	"	"	" with Catch	2 65	
*1327	"	"	Reiners'	3 00	
*1328	"	"	French	3 50	
1329	"	"	Hagedorn's, small	5 00	
*1330	"	"	" large	6 00	
*1331	"	"	Fowler's	3 00	
*1332	"	"	" with Russian handle	4 00	
*1333	"	"	Gibbons'	4 50	

All instruments designated by a * are illustrated.

ASEPTIC UNIVERSAL NEEDLE FORCEPS.

BY GEORGE R. FOWLER, M. D., Brooklyn.

Ever since the introduction of the excellent form of flat needle known as the Hagedorn, surgeons have regretted the apparent necessity for a needle holder of considerable complexity of mechanism, in order to grasp this form of needle firmly. The device of Hagedorn for accomplishing this purpose is open to the very serious objection of having a number of "stow-away" places for dirt, and consequently infectious material. It requires the services of a



1331

mechanician, when it is cleaned, in order to take it apart and put it together again properly. We have made, a needle forceps which combines three very desirable qualities. In the first place, it is thoroughly aseptic, being composed of but two parts, which unhook and come apart by means of what is known as the "French lock." Secondly, its jaws are of hard steel, instead of being faced with soft copper, as is the case in the Hagedorn forceps, and consequently are more durable; and, lastly, it is so arranged as to grasp firmly a needle of any shape, whether flat, round, or three-cornered. The above cut represents the needle-holder grasping a Hagedorn needle, which can be placed at any angle between its jaws. A shallow groove upon the face of one of its jaws enables it to hold with equal security a round or a three-cornered needle. The advantages of possessing a needle holder capable of grasping any sort of needle will be apparent to every surgeon.

NEEDLE HOLDERS.

ASEPTIC NEEDLE FORCEPS.

By A. Adv, M. D., Muscatine, Iowa.

The instrument represented by the engraving will hold any kind of needle—round, flat, straight or curved—and hold it firmly. It has both a diagonal and a rectangular slot. In these days of antiseptics, all surgical appliances should be as free as possible from any danger of carrying septic material from one case to another; and any instrument that can not be readily taken apart

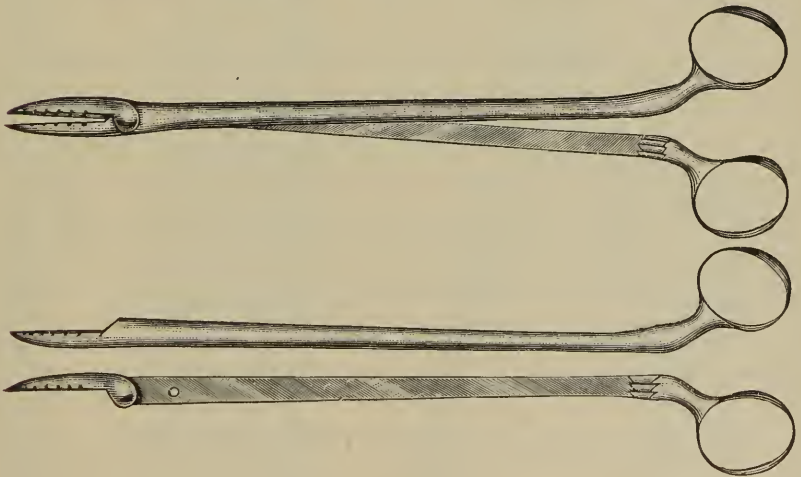


I334

for the purpose of cleansing is consequently dangerous. This holder was invented with special reference to the avoidance of any such danger. Being practically composed of only four pieces, it can be taken apart instantly by removing the nut, and cleansed, and as readily put together again.



I336



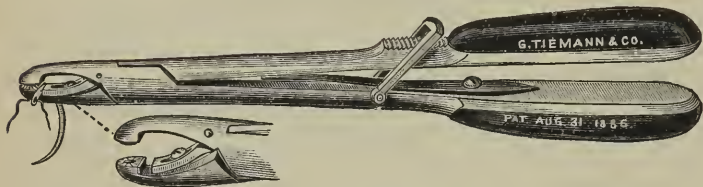
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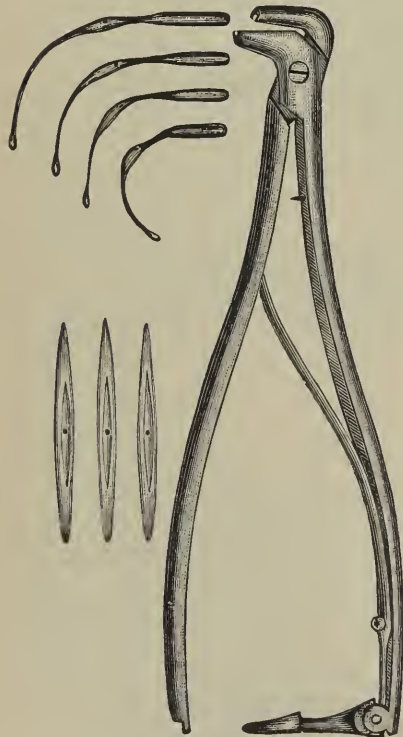
I338

NEEDLE HOLDERS.

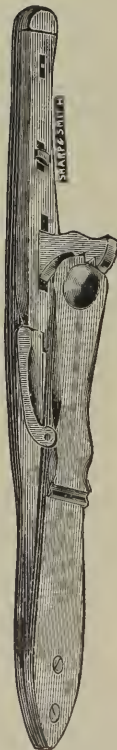
FIG.					
*1334	Needle Holding	Forceps, Ady's	\$	7 50
*1335	"	"	"	Ethridge's	3 75
*1336	"	"	"	Dr. A. J. Skenes	4 00
*1337	"	"	"	Tiemann & Co.'s Patent	4 50
*1338	"	"	"	Sharp & Smith's	2 50
*1339	"	"	"	Thiersch's & Spindles	7 50
*1340	"	"	"	Abbe's modification of Hagedorn's	2 00
*1340-A	"	"	"	Pocket Case, size of Hagedorn's Needle Holder	6 50



1337



1339



1340-A



1335

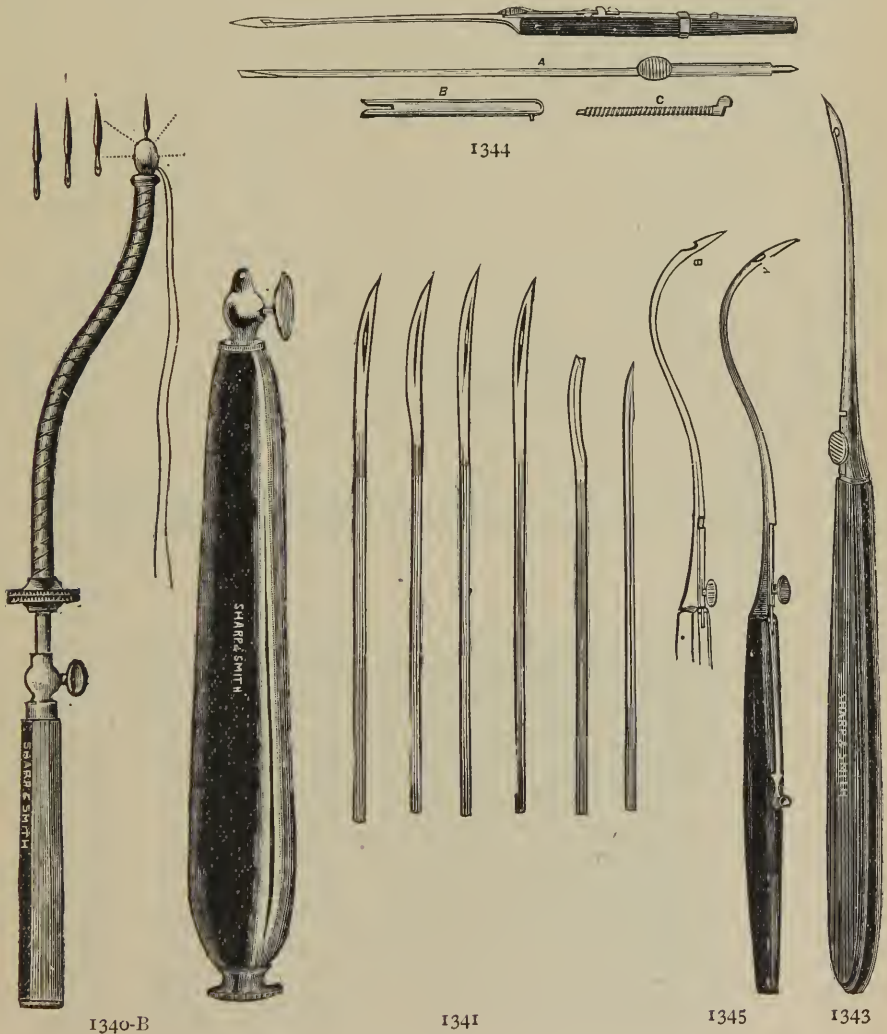
All instruments designated by a * are illustrated.

ARTERY AND PERINEUM NEEDLES.

FIG.

1340-B	Bozeman's Needle Carrier.....	\$6 00
*1341	Parker's Needles, set of six in handle, handle serves as a case for the Needles.....	3 75
*1342	Agnew's Needle and Needle Holder.....set.	3 40
*1343	Rivedon's Perineum Needles in three different curves ... each.	2 50
*1344	Keyes' modification of Rivedon's Perineum Needle, straight...	7 00
*1345	" " " " " " " curved....	7 00

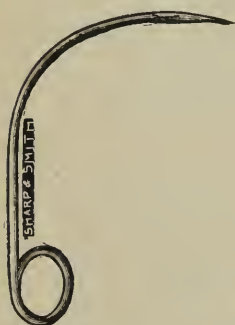
The Keyes Modification Needles can be taken apart and easily cleaned, and consequently are aseptic.



All instruments designated by a * are illustrated.

PERINEUM NEEDLES.

FIG.			
* 1346	Wilson's Needle Perineum.....	\$	1 00
* 1347	" " Right and left..... each.		1 25
* 1347-A	Papine's Perineum Needle.....		65
* 1347-B	Knox Perineum Needle.....		75
* 1347-C	Knox New Perineum Needle.....		75
* 1348	Sharp & Smith's Hollow Silver Wire Needles, with two Needles.	3	00
1349	" " " " " " " three "	4	00
* 1350	Mott's Aneurism Needle.....	2	25
1351	" " " and Director.....		50
1352	Spiral " ".....	1	40
1353	Student's " ".....	2	25
1354	Gunn's Artery ".....	2	60



1347-B



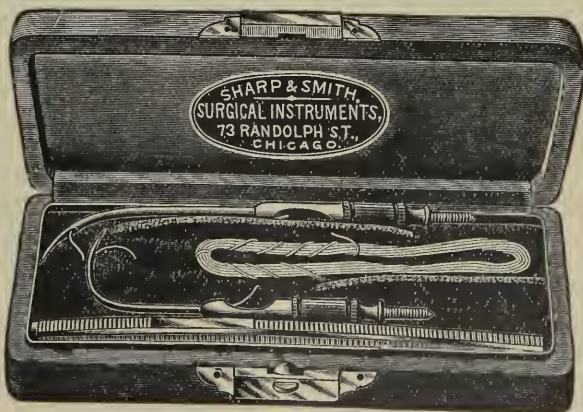
1346



1347-A



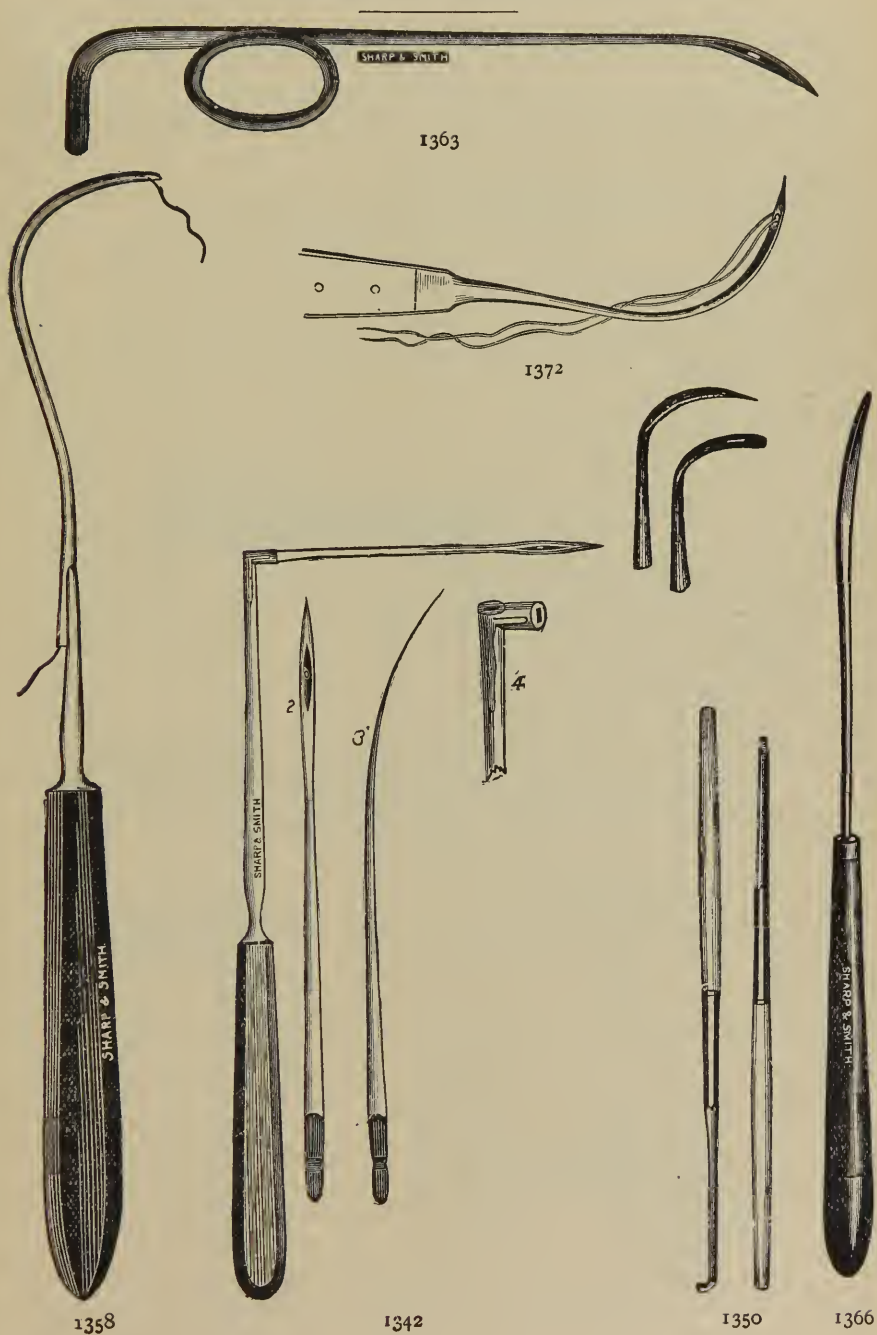
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1348

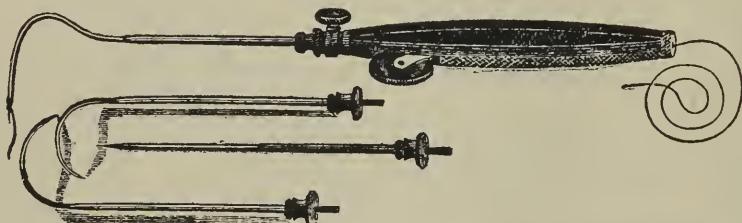
All instruments designated by a * are illustrated.

PERINEUM NEEDLES.



PERINEUM NEEDLES.

FIG.				
1355	Clampton's Artery Needle R. & L.....	per pair	\$3	75
1356	Parker's " "		1	25
1357	Stone's Canulated "		1	00
*1358	Emmet's " "		1	85
*1359	Pease's " "		8	00
1360	Von Brun's " "	set of 2	3	00
1361	" " " "	" 3	4	25
1362	Currie's Double Canulated Needle.....		5	25
1363	T. & Co.'s " " for wire sutures.....		3	00
1364	" " Automatic "		4	85
1365	Hoff's " "		4	25
*1366	Naevus "	each		75
1367	Helical "	"	1	25
1368	Thomas' Perineum "	doz.	1	00
1369	Emmet's Cervical "	"	1	00
1370	Sims' "	"	1	00
*1372	Plain Aneurism "			75
*1373	Whitehead's Aneurism "		1	30
*1374	Von Brun's "		1	50



1359

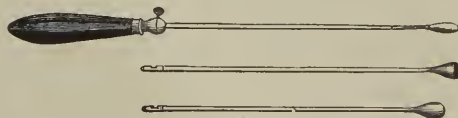


1373



1374

*1374-A	Cautery Irons—Thomas'—Set of 3, with handle.....	per set.	\$3	35
1374-B	" " " " 4, " "	"	4	50
1374-C	" " " " Single	each.	1	00
1374-D	" " Handle.	"		75
1374-E	" Iron Lamp, Self Blowing.....	"	3	00



1374-A

All instruments designated by a * are illustrated.

TROCARS, CURETTES, ETC.



1385



1389



1381



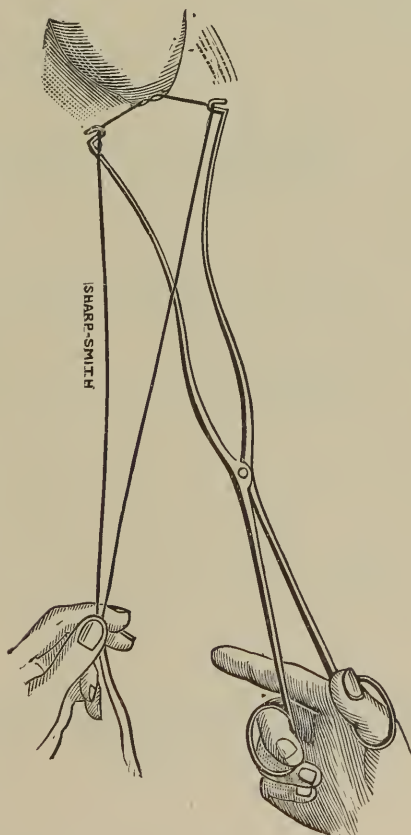
1392



1379



1378



1375



1380

TROCARS, DIRECTORS, PROBES, ETC.

FIG.			
*1375	Carroll's Knot Tyer.....	\$	1 50
1376	Volkman's Bone Scoop.....		1 40
1376-A	Hebra's " ".....		1 50
1377	Brunn's " ".....		1 50
*1378	Piffard's " " 3 sizes.....	each.	1 50
*1379	Hoag's Fenestrated Bone Scoop		2 50
*1380	Scoop and Elevator.....		1 25
*1381	Dessault's Serre Noed		75
1383	Spatula and Elevator.....		50
1384	" " Tongue Tie.....		50
*1385	Nested Trocars, 4 in set, Metal Pencil Case.....		3 50
1387	" " 3 " " " ".....		3 50
1387-A	" " 3 " Ebony Handle.....		3 00
*1387-B	" " 4 " " ".....		3 50
1388	" " 3 " Metal ".....		3 00
*1388-A	Exploring Trocars.....		90
*1389	Southey's Trocars and Canulas for Anasarca in Ivory Case....		2 50
1390	Trocar, with German Silver Canula		1 00
1391	Self Acting Blow Pipe.....		3 00
*1392	Commodone Extractor.....		50
1393	Porte Meche.....		40
*1394	Director—German Silver and Tongue Tie.....		45
*1395	" " " " Aneurism Needle.....		50
1396	" " " " Ear Spoon.....		50
1397	" Steel and Tongue Tie.....		75
1398	" " Little's.....		60
1399	" " Spear Point and Tongue Tie.....		90
*1400	" " Angular and Tongue Tie.....		90
1401	" " and Probe Point.....		75
1402	" Silver and Olive ".....		1 50
1403	" " " Tongue Tie.....		1 50
1404	" " " Aneurism Needle.....		1 50
1405	" " " Ear Spoon.....		1 50
*1405A	Hunter's Steel Director and Counter Pressure Spatula.....		75
1406	Probes, Silver, 4 to 5 inch.....	per pair	50
1407	" Plated, 4 to 5 ".....	"	35
1408	" Silver, 6 ".....	"	75
1409	" " 8 ".....	"	1 10
1410	" " 10 ".....	"	1 35
1411	" Hamilton's, with Director Set.....		1 50



1388-A

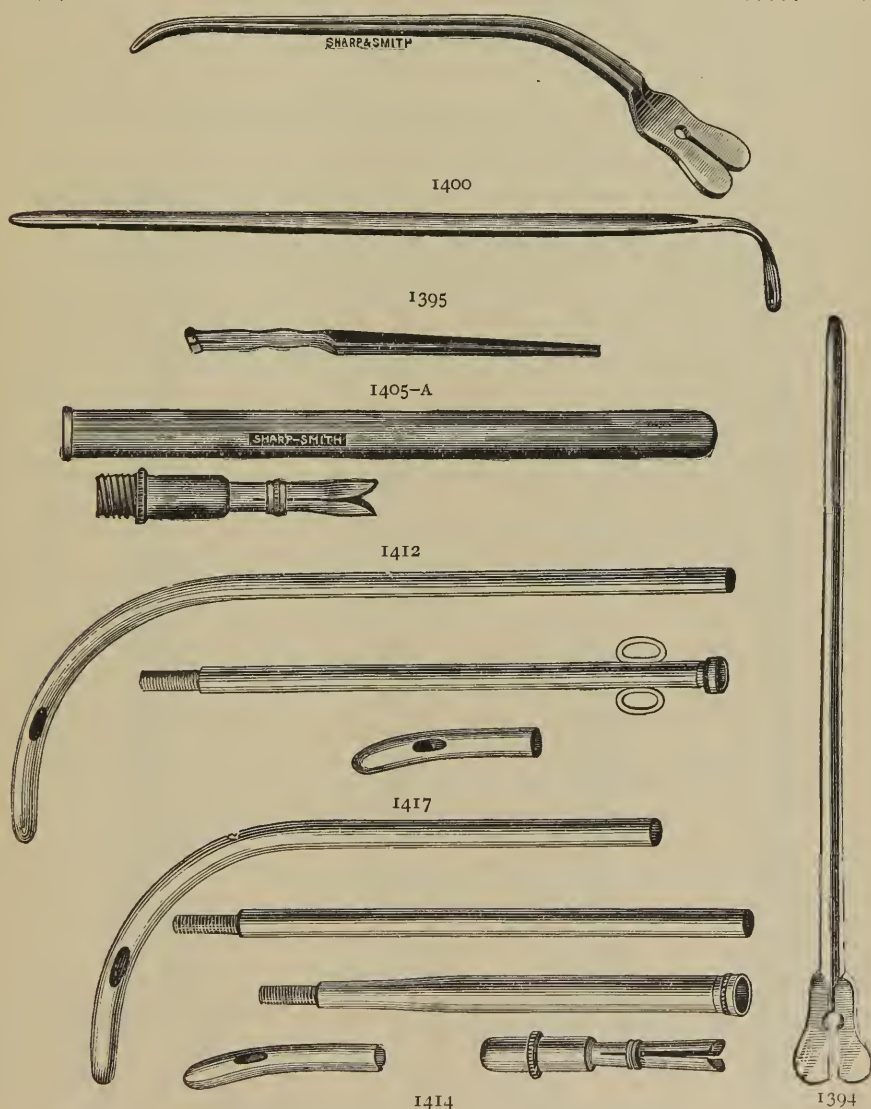


1387-B

All instruments designated by a * are illustrated.

CAUSTIC HOLDERS, CATHETERS, ETC.

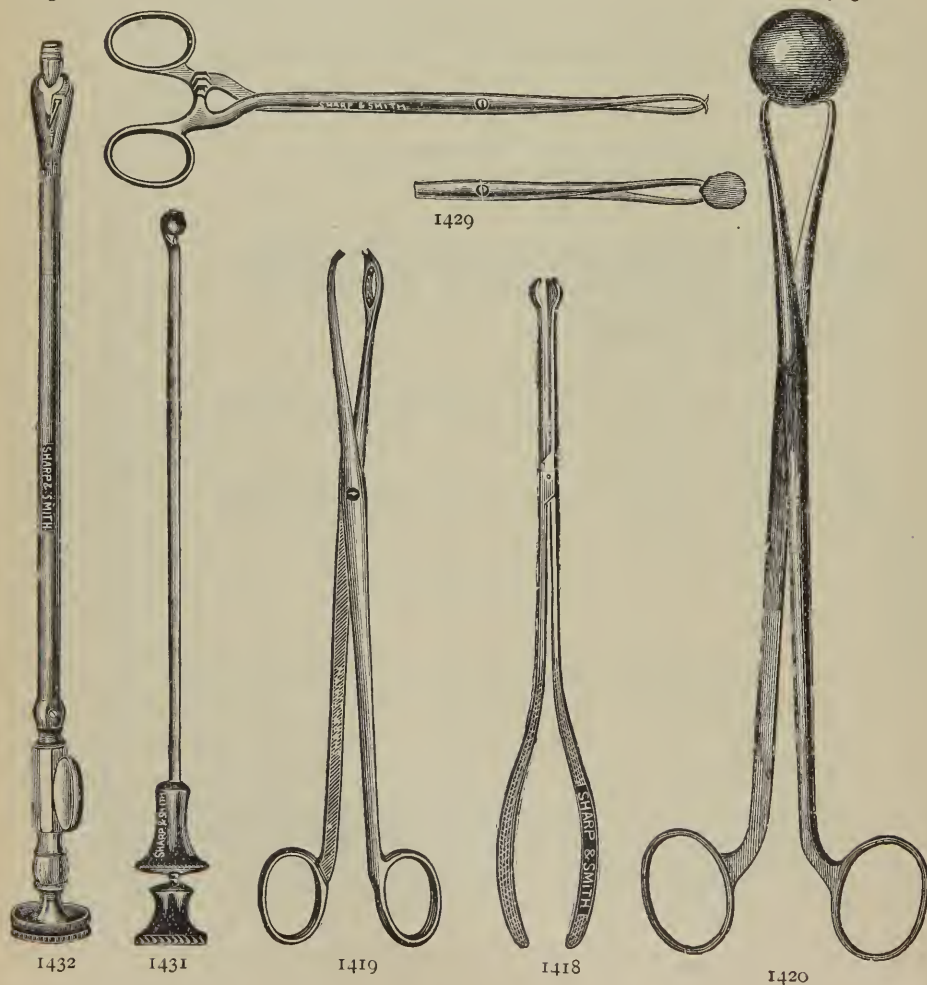
FIG.		
*1412	Silver Caustic Holder.....	\$1 50
	For more complete line of Caustic Holders, see index.	
1412A	Catheters, Plated, Male, 1 to 12	65
1413	" Silver, " 1 to 12.....	1 50
*1414	" Parker's Combined, with Caustic Holder, Silver.....	3 00
1415	" " " " Plated.....	1 50
1416	" Combined Male and Female, Plated.....	85
*1417	" " " Silver.....	85



All instruments designated by a * are illustrated.

BULLET INSTRUMENTS.

FIG.			
* 1418	Bullet Forceps, U. S. A.....	\$1 50	
* 1419	" " Gross'.....	1 75	
* 1420	" " American.....	1 50	
1421	" " T. & Co.'s Spiral.....	4 50	
1422	" " " latest.....	2 60	
1423	" " Moses'.....	2 60	
1424	" " Gunn's.....	2 25	
1425	" " Hamilton's	1 75	
1426	Dr. Jno. T. Darby's Forceps and Bullet Probe Combined.....	3 00	
1427	Bullet Forceps, Canulated.....	2 60	
1428	Dr. Jno. F. Ball's Bullet and Tenaculum Forceps Combined...	1 85	
* 1429	Bullet Forceps, Prussian.....	2 25	
1430	" Extractors, Jones'.....	3 00	
* 1431	" " Moses'.....	2 60	
* 1432	" " Leonard's.....	7 50	

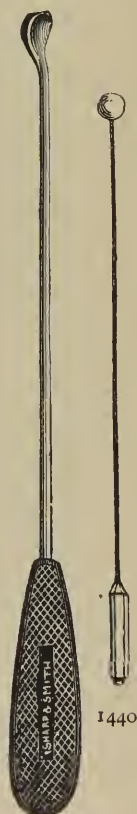
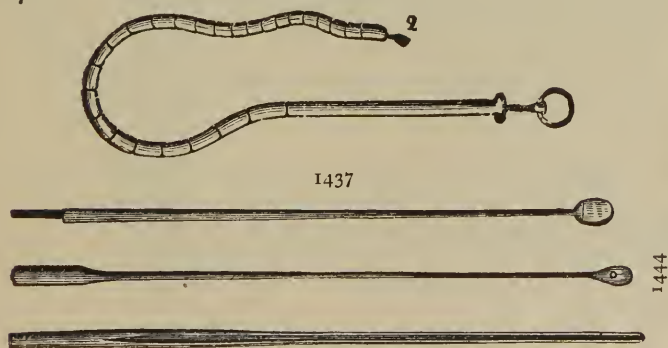


BULLET INSTRUMENTS.

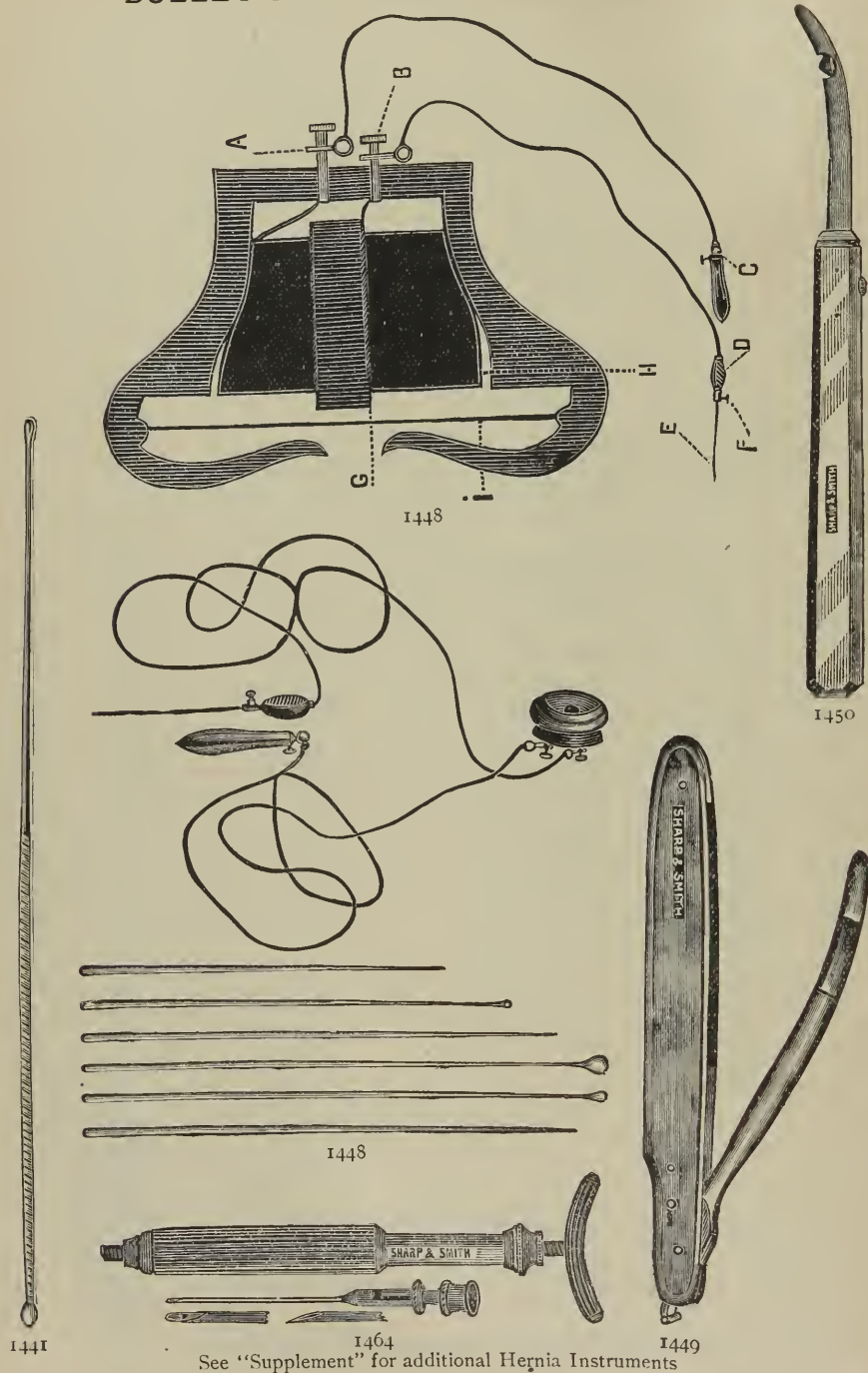
FIG.			
*1433	Bullet Scoop, T. & Co.'s.....	\$	1 30
1434	" Seeker, " Burr Head.....		75
1435	" " "	6	00
1436	" Screw "	1	50
*1437	Bullet Probes, Sayre's Vertebrated Silver.....	6	00
1438	" " Long Silver.....	50c to	1 50
1439	" " Lead.....		35
*1440	" " Nelaton's, Porcelain Head.....		45
*1441	" " Spiral (10 inches long) Porcelain Head.....	1	00
1442	" " T. & Co.'s and Lint Introducer.....		60
1443	" " Steele's Elastic.....	1	25
*1444	" " Hamilton's Jointed, with Director and Porcelain Head.....		1 50
1445	Bullet Probes T. & Co.'s.....		75
1446	" " Thomasin's.....	1	85
1447	" " Dr. Jno. T. Darby's Probe and Bullet Forceps Combined.....		3 00
*1448	Bullet Probes, Girdner's Telephonic.....	12	00

HERNIA INSTRUMENTS.

*1449	Hernia Knives, Cooper's Slide Catch.....	\$	1 10
*1450	" " Stewart's.....	\$	3 75
1451	" " Wood's.....	1	15
*1452	" Director, Stanley's.....	1	85
*1453	" " Peters'	2	00
*1454	" " Levis'	1	10
1455	" " Hinged.....	1	15
1456	" " Curved.....	1	85
1457	" " Buck's.....	1	50
1458	" Needle, Dowell's.....	each.	75
*1459	" " Warren's.....	1	50
1460	" " Woods'	1	10
1461	" " Riggs'	3	75
*1462	" Syringe, Warren's.....	14	00
1463	" " Heaton's.....	3	00
*1464	" " De Garmo's.....	6	00
*1465	" " Greene's.....	5	00
*1466	Herniatome, Allis'	5	50
*1467	Hernia Instrument, Agnew's.....	4	75
1467A	" " Wutzer's.....	9	00
1467B	" " Redfern-Davis'	11	25



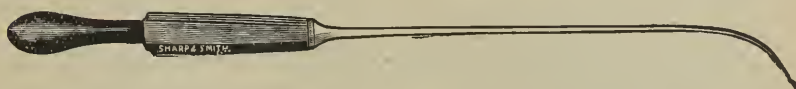
BULLET AND HERNIA INSTRUMENTS.



HERNIA INSTRUMENTS.



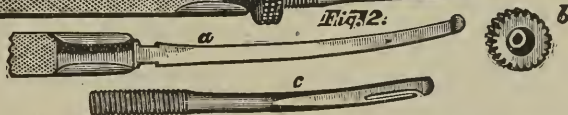
1462



1467



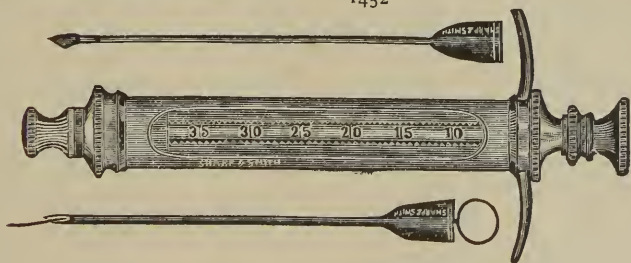
Fig. 1



1466



1452



1465



1453

See "Supplement" for additional Hernia Instruments.

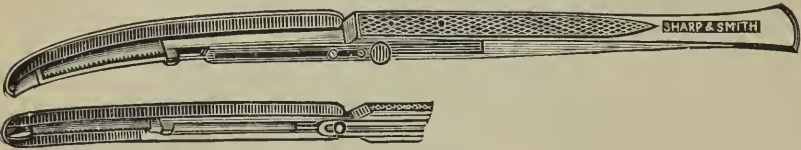


1459

HERNIA INSTRUMENTS.

FIG.

*1467-C	Guarded Herniatome	\$13 50
*1467-D	Warren's Double Edge Hernia Scalpel.....	1 50
*1467-E	Grimala's Hernia Knife	3 75
*1467-G	Cooper's " "	1 50
*1467-H	Belmay's " "	1 50
*1467-I	Thompson's " "	1 50
*1467-K	Tesse's " "	1 75

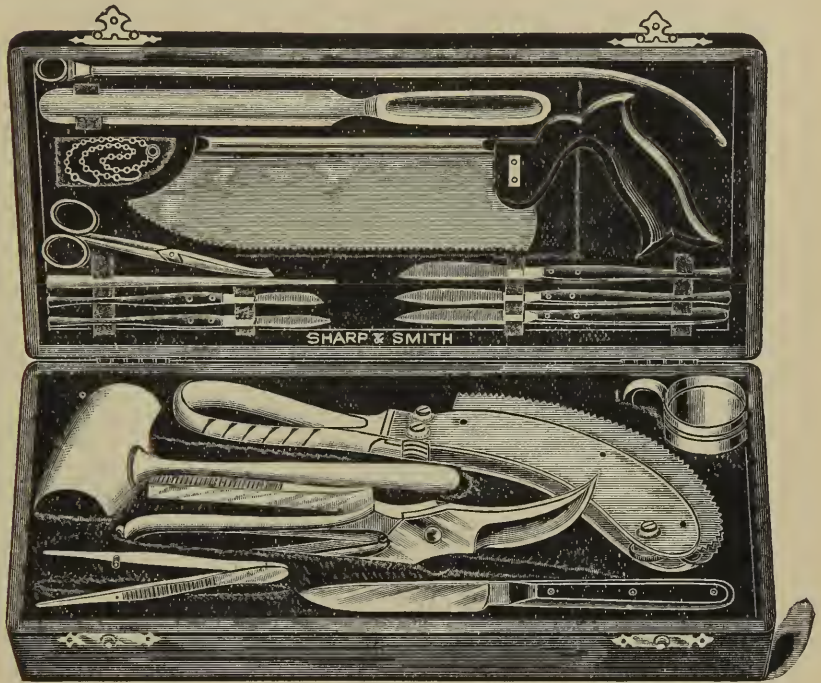


1467-C



Instruments designated by a * are illustrated.

DISSECTING AND POST-MORTEM INSTRUMENTS AND CASES.



1468-A

Case of Post-Mortem Instruments, designed by Dr. A. Meyer, Physician to the Illinois Eastern Hospital for the Insane, at Kankakee, Ill.

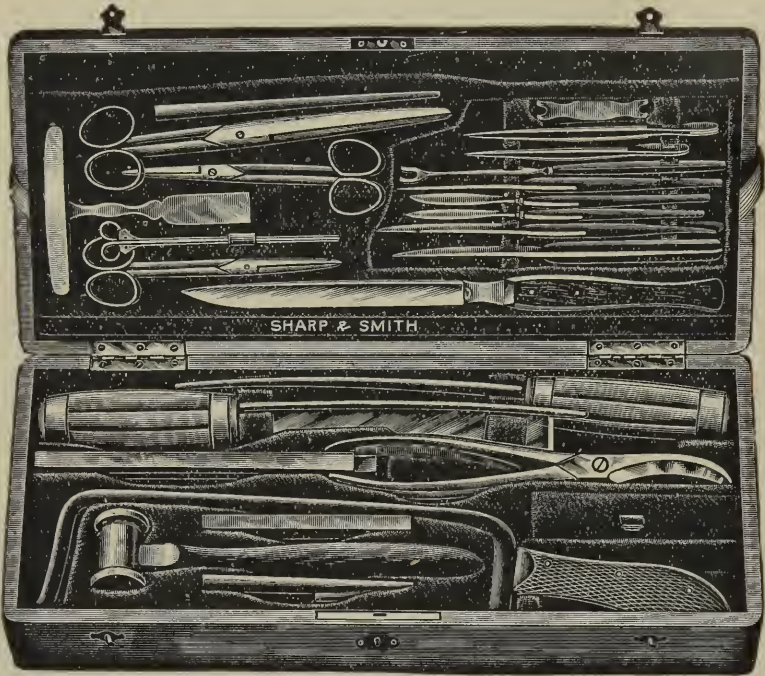
CONTENTS :

- | | |
|-----------------------------|-----------------------------|
| 1 Heavy Section Knife. | 5 Large and Small Scalpels. |
| 1 Dissecting Forceps. | 1 Blow Pipe. |
| 1 Rib Shears. | 1 Probe Pointed Scissors. |
| 1 Mallet | 1 Saw. |
| 1 Chisel. | 1 Chain Hook. |
| 1 Rachitome. | 1 Brain Knife. |
| 1 Cup for Measuring Fluids. | 1 Catheter. |

The Case is made of Gum Wood, outside and inside. Is very durable and easily kept clean ; has lock and key, and is compact. The contents of this case was furnished us by Dr. Ludvig Hektoen.

Price of Casenet, \$33 00

DISSECTING AND POST-MORTEM INSTRUMENTS
AND CASES.



1468-B

This case, modeled by Dr. Ludvig Hektœn after the one made by Leiter in Vienna, contains the following instruments :

- | | |
|--|--|
| 1 Knife with Stout Handle and Thick Blade. | 2 Probes. |
| 4 Knives. | 1 Blowpipe. |
| 1 Brain Knife. | 1 Chisel with Transverse Handle. |
| 2 Dissecting Forceps. | 1 Saw. |
| 1 Blunt Hook. | 1 Hammer. |
| 1 Sharp Hook. | 2 Chisels. |
| 1 Straight Scissors. | 1 Bone Shears. |
| 1 Curved Scissors. | 1 Measure. |
| 1 Enterotome. | 1 Pair of Chisels for Opening Spinal Canal from the Front. |
| 1 Grooved Director. | Needles and Thread. |

This Case is made of, and is lined with gum wood, and provided with a convenient handle, making a compact and complete outfit. Has lock and key and bolts.

Price of Case.....net, \$40 00

DISSECTING AND POST-MORTEM INSTRUMENTS.

FIG.

- *1468-C Pick's Myelotome for dividing spinal cord at right angles in removal of the brain, \$1 50
 *1468-D Rawhide Mallet. 75
 *1468-E Dr. Ludvig Hektoen's Enterotome with smooth blunt end. 2 00
 *1468-G Brunetti's Chisels for opening spinal canal anteriorly. each, 3 50
 *1468-H Double Edge Thin Brain Knife. 1 50
 *1468-I Luer's Improved Double Rachitome for opening spinal canal. 11 25
 *1468-K Chisel, with cross bar for removing the skull cap. 1 50
 *1468-M Cones (wood). each, 75

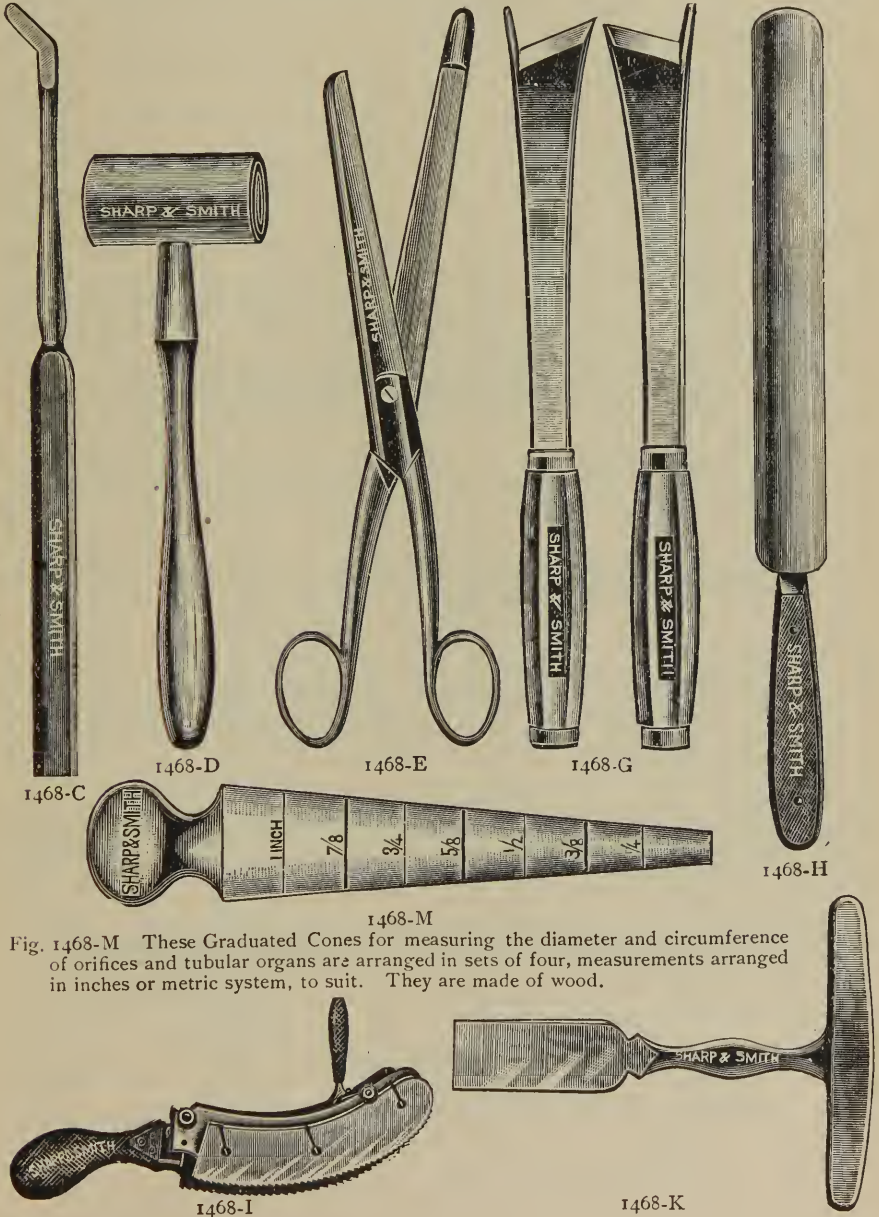
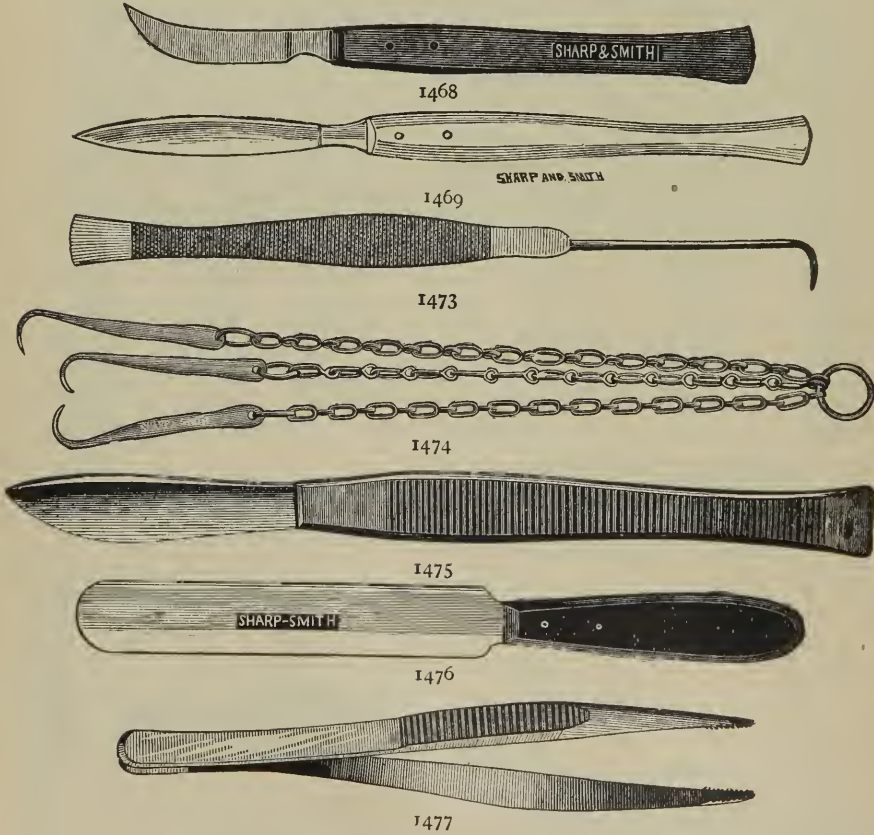


Fig. 1468-M These Graduated Cones for measuring the diameter and circumference of orifices and tubular organs are arranged in sets of four, measurements arranged in inches or metric system, to suit. They are made of wood.

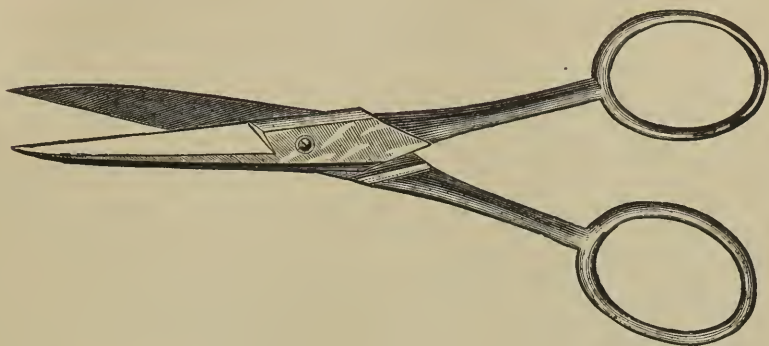
DISSECTING INSTRUMENTS

FIG.			
* I468	Sherman's Dissecting Scalpel.....	\$	60
* I469	Ebony Handle Scalpels.....		35
I470	Ivory " ".....		75
I471	Ebony " Tenacula.....		35
I472	Ivory " ".....		75
* I473	Metal " ".....		45
* I474	Chain and Hooks.....	per set.	20
* I475	Cartilage Knife, all Steel.....		45
	" " heavy Ebony Handle.....	I	50
* I476	Brain Knife.....	I	50
* I477	Dissecting Forceps, plain....		40
I478	" " Coxeter's.....	I	00
* I479	" Scissors, straight.....		45
* I480	" " curved.....		65
* I481	Blowpipes.....		15
* I482	Movable Back Saws.....	I	50
* I483	Plain Chisels.....		85
* I484	Costetome Chisels.....	I	15
* I485	Rachitome ".....	I	50

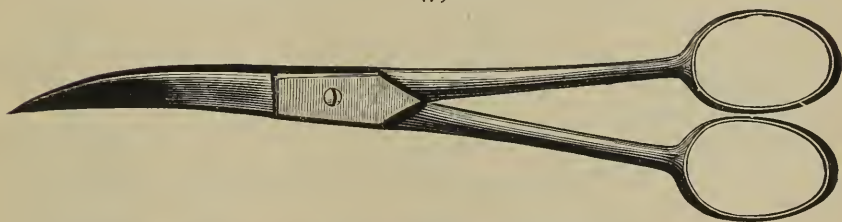


Instruments designated by a * are illustrated.

DISSECTING AND POST MORTEM INSTRUMENTS.



1479



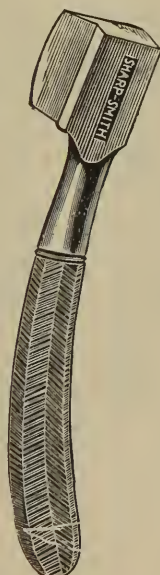
1480



1481



1484



1485



1488



1483



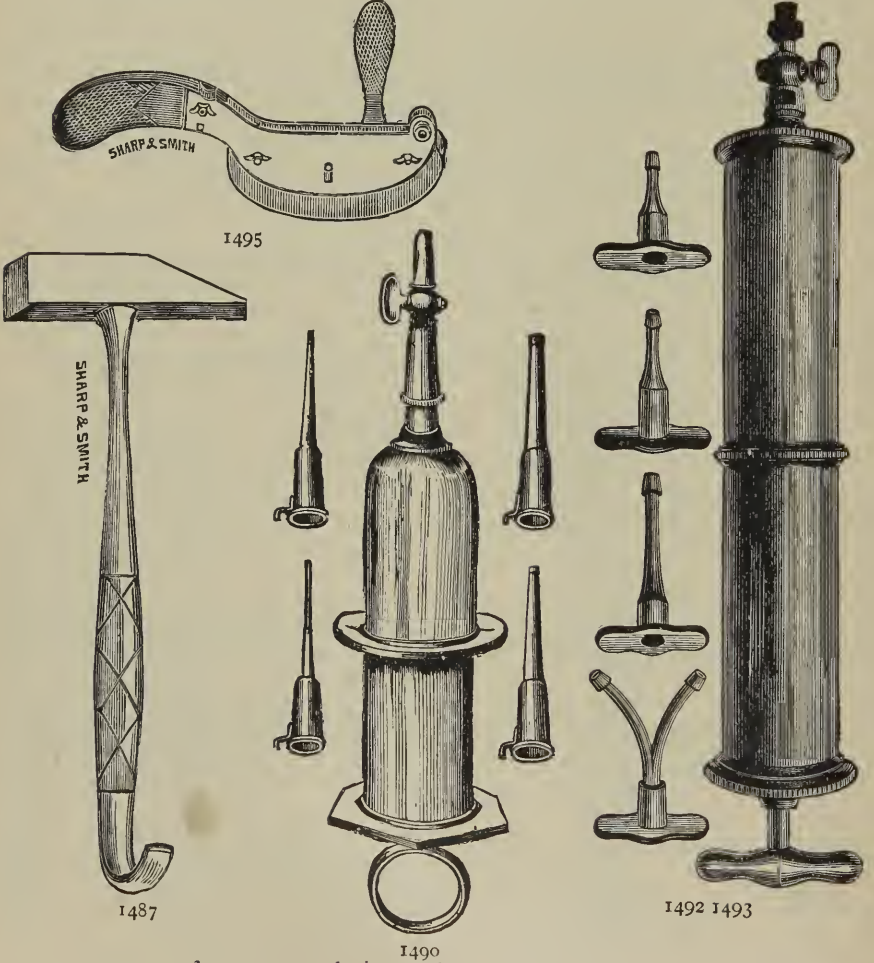
1482

Instruments designated by a * are illustrated.

DISSECTING AND POST MORTEM INSTRUMENTS.

FIG.

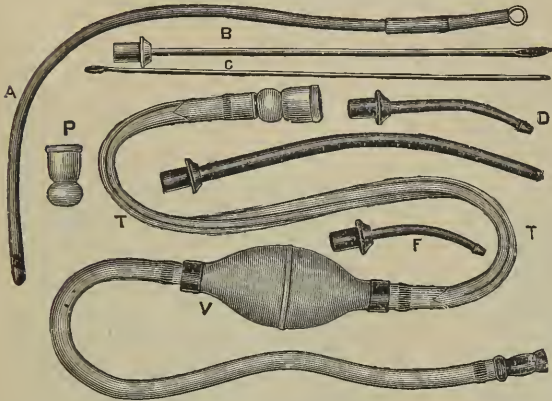
1486	Finnel's Knife and Saw in one handle.....	\$3 50
*1487	Steel Mallet.....	1 65
*1488	Lead ".....	1 75
*1489	Omega Embalming Syringe.....	3 00
*1490	Embalming Syringes.....	\$3 00 to 30 00
1491	" Pump.....	17 00
*1492	Anatomical Pump, No. 1.....	30 00
*1493	" " No. 2.....	22 50
1494	Post Mortem Needles.....	each. 15
1494A	Skull Clamp for holding the head.....	4 25
*1495	Double Saw (Rachitome).....	11 25
*1496	Rib Shears.....	3 75
*1497	Enterotome.....	1 75
*1498	Tripod Head Rest.....	2 25



Instruments designated by a * are illustrated.

POST MORTEM AND DISSECTING INSTRUMENTS.

OMEGA EMBALMING SYRINGE. Continuous Flow.



1489

"Omega Embalming Syringe," \$3.00.

long curved hard rubber tube for lungs etc.; improved long flexible tube for stomach, etc.; plated clearing wire, patent flexible thimble.

All parts and attachments of this Syringe can be obtained from us.

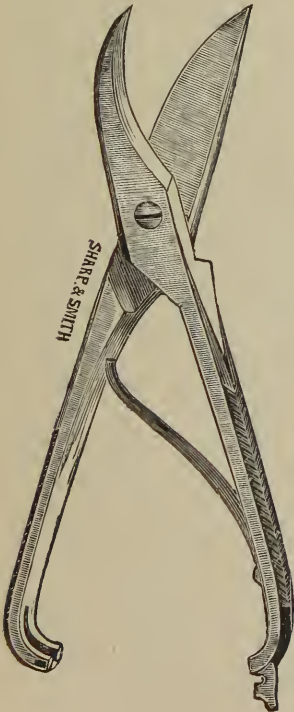
Price packed in handsome book-cloth case.....each \$3 00

This Syringe produces a continuous flow, and is especially adapted for embalmers.

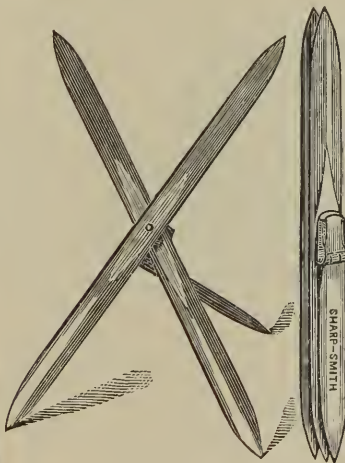
It is the easiest syringe in the world to operate, never tiring the hand. It saves one-half the time usually required in embalming.

The Patent Collapsible Tube PREVENTS ANY BACK ACTION, return of fluid, or injection of air. IT OBVIATES ALL DANGER OF BURSTING AN ARTERY. It has no screw threads or washers therefore it cannot leak. The injection tubes are quickly attached by our Patent Soft Rubber Slip Joint Socket.

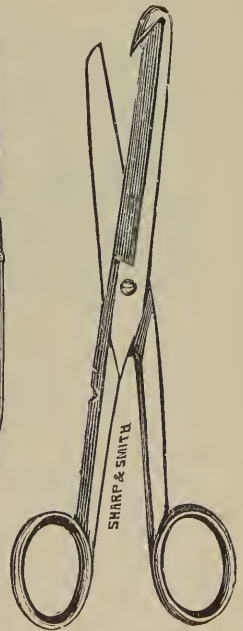
ATTACHMENTS.—Hard rubber large and small curved arterial tubes; nickel plated long trocar;



1496



1498

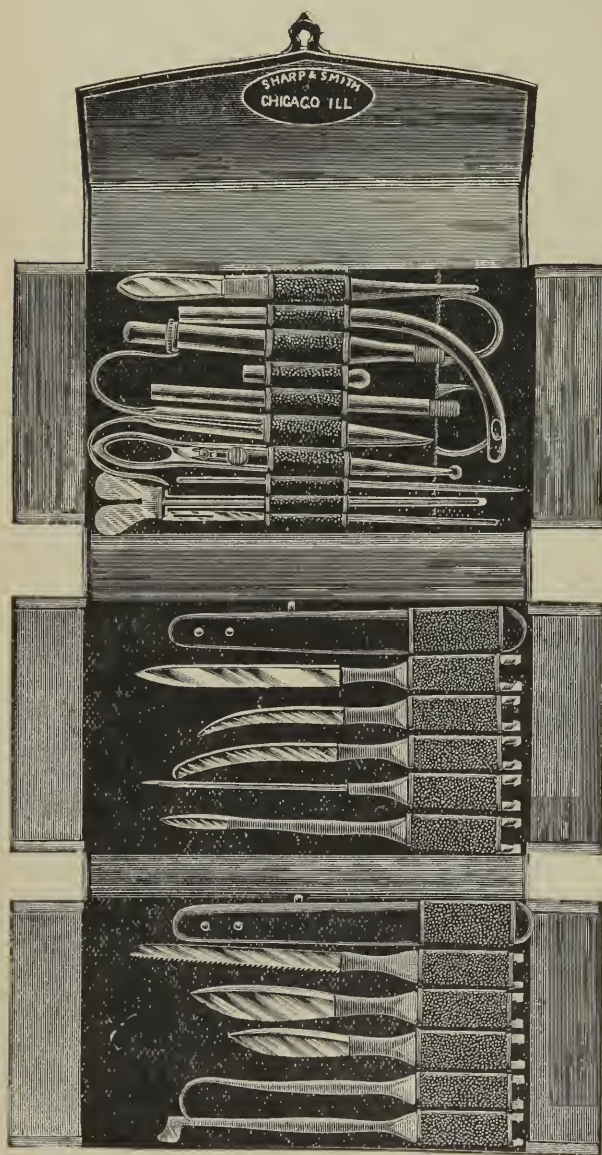


1497

SURGICAL POCKET CASES.

FIG.	
*1507	Sharp & Smith's Patent Knife Case, No. 1.....\$20 00
1508	“ “ “ “ No. 2.....15 00
*1509	“ “ “ “ No. 3.....12 00
1509A	Patent Knife Case, No. 4.....20 00
*1510	Sharp & Smith's Two-fold (fine) Russia Pocket Case, No. 1....25 00
*1511	“ “ “ “ “ “ No. 2....18 75
*1512	Two-fold Pocket Set.....9 00
1512-A	“ “7 50
1513	Peck's Fine Pocket Set.....12 50
1514	Van Buren's “\$10 50 to 15 00
1515	Four-fold “13 50
1516	Multum in Parvo “13 50
1517	Gunn's “13 00
1518	Parker's Plain “13 50
1519	“ Fine “18 75
*1520	Three-fold “11 00
1521	“ Pocket Set, Rubber handles.....\$7 50 to 10 00
*1522	Hamilton's “20 00
1523	Two-fold “9 00
1524	“ “ Rubber handles.....\$5 50 to 7 00
1525	Powell's “16 50
1526	Andrews' “22 50
1527	Danforth's “24 75
1528	Jay's “15 00
1529	Fine Four-fold “25 00
1530	Owen's “11 25
*1532	Tiemann's Patent Pocket Case.....24 75
Empty	Pocket Cases, Four-fold Morocco, best.....2 75
“	“ Three-fold “ (Fig. 1515).....2 25
“	“ “ “\$1 75 to 1 75
“	“ Two-fold “ best (Fig. 1512).....1 50
“	“ “ “\$1 25 to 1 25
“	“ One-fold “ best.....1 75
“	“ Russia, One-fold.....1 75
“	“ “ Two-fold (Fig. 1510).....2 25
“	“ “ Three-fold.....2 50
“	“ Gross' (Fig. 1511).....2 00
“	“ Genuine Sealskin, One-fold.....2 50
“	“ “ Two-fold.....3 00
“	“ “ Three-fold.....3 75
“	“ Alligator, best.....3 00
“	“ Sharp & Smith's Patent, No. 1 (Fig. 1507).....3 00
“	“ “ “ No. 2 (Fig. 1508).....2 75
“	“ “ “ No. 3 (Fig. 1509).....2 50
“	“ “ “ fine No. 1.....2 50
“	“ “ “ “ No. 2.....2 00
“	“ “ “ “ No. 3.....2 00
“	“ Hamilton's.....3 00
“	“ Van Buren's.....\$1 25 to 2 00
“	“ Gunn's.....2 00
Chamois Covers for	Pocket Case, One-fold.....40
“ “ “ “	Two-fold.....50
“ “ “ “	Three-fold.....60

Fig. 1507. Sharp & Smith's Patent Aseptic Case No. 1.



CONTENTS:

- I Straight Sharp Bistoury.
- I Curved " "
- I " Blunt "
- I Exploring Needle.
- I Tenotomy Knife.
- I Metacarpal Saw.
- I Large Scalpel.
- I Medium " "
- I Tenaculum.
- I Gum Lancet.
- Two Aseptic handles
to fit any of the above
blades.
- I Pair Plain Artery Forceps.
- I Fenestrated Artery and
Needle, Forceps com
bined.
- I Pair Pean's French Snap
Forceps.
- I Open Ring Scissors.
- I Parker's Plated Catheter.
- I Director and Aneurism
Needle
- I Pair Plated Probes.
- ½ Dozen assorted Needles
and Silk.

1507

In fine Calf Skin Case, Velvet and Satin Lined, $5 \times 3\frac{1}{4} \times 1$ inches when closed.

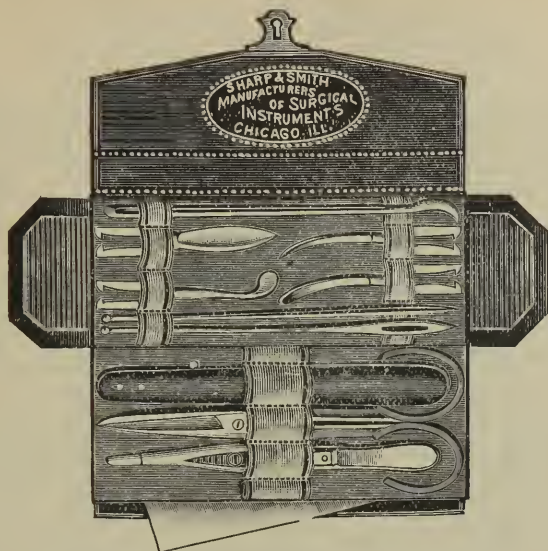


Fig. 1509. Sharp & Smith's Patent Aseptic Case No. 3. Contains:

- | | |
|---|--------------------------------|
| 1 Adjustable Hard Rubber Antiseptic Handle. | 1 pair Scissors. |
| 1 Antiseptic Scalpel. | 1 " Artery and Needle Forceps. |
| 1 " Gum Lancet. | 1 " Probes. |
| 1 " Probe Pointed Bistoury. | 1 Ear Scoop. |
| 1 " Sharp Pointed Bistoury. | 1 Grooved Director. |
| | Needles and Silk. |

Fig. 1509-A. Aseptic Patent Knife Case No. 4, contains:

- | | |
|----------------------------|--------------------------|
| 1 Exploring Needle. | 1 Curved Sharp Bistoury. |
| 1 Curved Blunt Bistoury. | 1 Large Scalpel. |
| 1 Straight Sharp Bistoury. | 1 Tenotomy Knife. |
| 1 Small Scalpel. | 1 Tenaculum. |
| 1 Gum Lancet. | 1 Metacarpal Saw. |

The above knives all fit in two patent catch rubber handles. The case also contains:

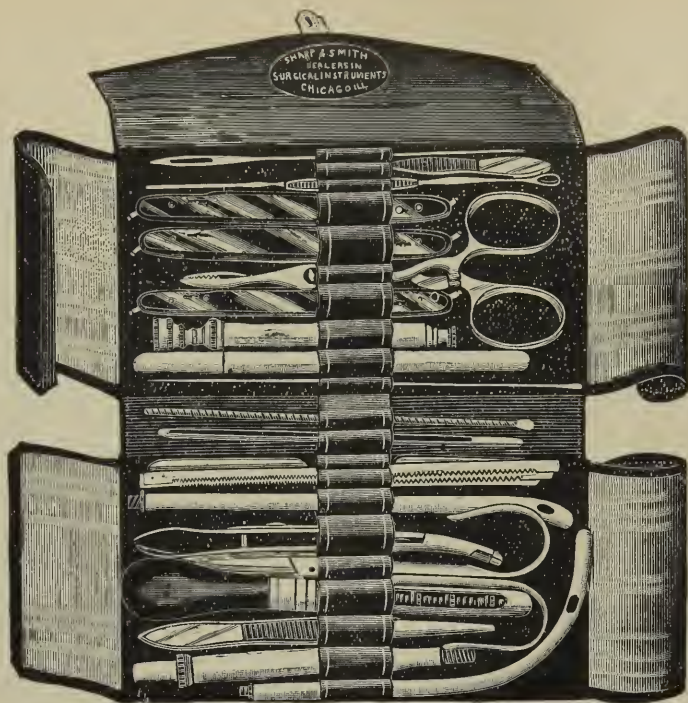
- | | |
|--|-----------------------------------|
| 1 Plated Combination Male and Female Catheter. | 1 pair Straight Scissors. |
| 1 pair Pean's French Snap Artery Forceps. | 1 " plain Artery Forceps. |
| 1 pair Probes. | 1 Silver Tip Caustic Holder. |
| 1 Gross' Ear Spoon and Hook. | 1 G. S. Director and Tongue Tie. |
| | ½ doz. assorted Needles and Silk. |

In a fine calfskin velvet and satin lined case, 5x3¼x1 inches, when closed.

The above case is one of the neatest and cheapest cases in the market, and is equally as aseptic as cases 1507, 1508 and 1509.

We can put any of the above instruments in cases according to your own selection, charging accordingly.

Cases of all kinds put up to order



1510

Fig. 1510—Contains a Combined Catheter, Male and Female, with Caustic Holder, Vaccinating Lance and Exploring Needle.

- 1 Self Registering Indestructible Index Fever Thermometer, in Metal Case.
- 1 Silver Barrel Hypodermic Syringe.
- 1 pair Dressing and Polypus Forceps.
- 1 " Plain Artery Forceps.
- 3 double slide catch pocket case knives (6 blades). Any style knives in combination wanted.
- 1 Lewis' Saw, Folding.
- 1 set Probes to screw together, comprising Bullet Probe (flexible) Porcelain Head.
- 12 Needles and Braided Silk (4 sizes on tablet).
- 1 Set (of 3) Nested Trocars and Canulas.
- 1 Ear Spoon and Spud.
- 1 pair Open Ring Scissors, Gray's.
- 1 " Splinter Forceps.
- 1 " Combined Needle and Artery Forceps.
- 1 Eye Probe.
- 1 Grooved Director.

All put up in a two-fold Russia case with chamois or buckskin cover.

Fig. 1511. Sharp & Smith's 2-fold Russia (fine) Pocket Case No. 2, contains:

- 1 Scalpel and probe-pointed Bistoury.
- 1 Sharp-pointed Bistoury and Tenotome.
- 1 Gum Lancet and Tenaculum.
- 1 Pair Straight Scissors.
- 1 Pair Bull Dog Artery Forceps, with spring catch.
- 1 Pair Dressing Polypus Forceps.
- 1 Turkey Morocco case, silk velvet lining, silver lock.
- 1 Steel Director.
- 2 Silver Probes.
- 1 Metacarpal Saw.
- 1 Thumb Lancet.
- 1 Exploring Needle.
- 1 Compound Catheter and Caustic Case, of sterling silver.
- 1 Spatula and Elevator.

Instruments double-bladed, tortoise-shell handles, slide-catch.

For illustration of 1511 case, see next page.

SURGICAL POCKET CASES.

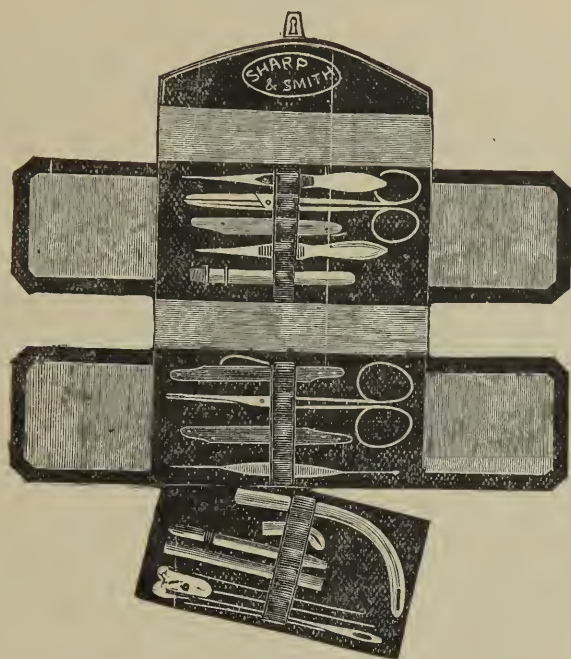


Fig. 1511. For contents see preceding page.

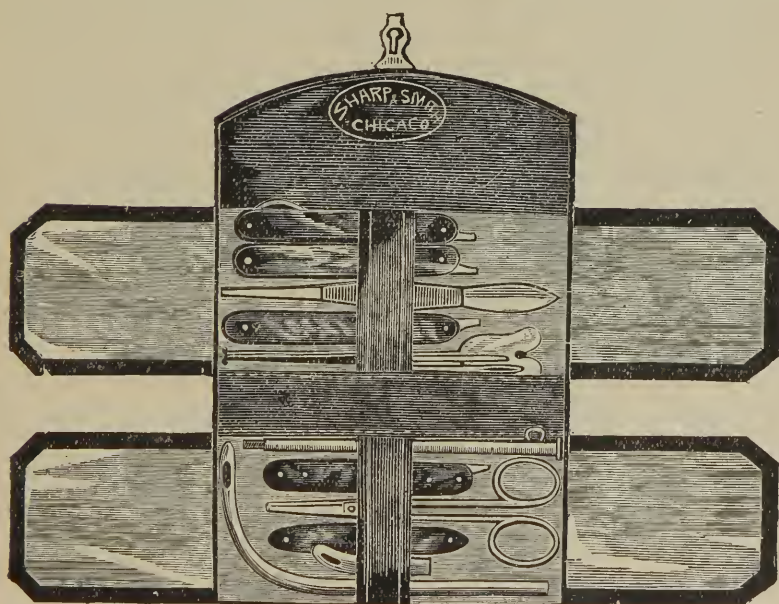


Fig. 1512. For contents see following page.

SURGICAL POCKET CASES.

Fig. 1512. Two-Fold Morocco Case, single bladed Instruments, with tortoise shell handles. Contents: (For illustration see preceding page.)

- | | |
|---------------------------|--|
| 1 Scalpel. | 1 Pair Dressing Forceps. |
| 1 Probe-pointed Bistoury. | 1 Hard Rubber and Silver Caustic Case. |
| 1 Tenaculum. | 1 Compound (Male and Female) Catheter. |
| 1 Pair Straight Scissors. | 1 Director. |
| 1 " Artery Forceps. | 6 Needles, and 1 Skein Silk. |
| 1 " Silver Probes. | |

Fig. 1512-A. Same Case as above, except Knives in Rubber Handles.

Fig. 1513. Peck's Fine Pocket Set.

Two-Fold fine Russia Case, velvet-lined. Instruments are tortoise shell handled, with slide catch and double bladed. Contents:

- | | |
|-----------------------------------|--|
| 1 Scalpel and Straight Bistoury. | 1 Ivory Exploring Needle. |
| 1 Sharp and Probe-curved Bistoury | 1 Pair Probes. |
| 1 Tenaculum and Tenotome. | 1 Compound (Male and Female) Catheter. |
| 1 Pair Straight Scissors. | 1 Director and Aneurism Needle. |
| 1 " Fenestrated Artery Forceps. | 1 Coil Silver and 1 Coil Iron Wire. |
| 1 " Thumb Forceps. | |
- Needles, Silk, etc.

Fig. 1514. Van Buren's Pocket Set.

Turkey Morocco Case, silk velvet lining, silver lock. Instruments double bladed, tortoise shell handles, with slide or spring catch. Contents:

- | | |
|---|---|
| 1 Sharp pointed Bistoury and Tenotome. | 1 Steel Director. |
| 1 Scalpel and 1 Probe pointed Bistoury. | 2 Silver Probes. |
| 1 Gum Lancet and Tenaculum. | 1 Compound (Male and Female) Catheter, Sterling Silver. |
| 1 Pair Straight Scissors. | 1 Caustic Case, Sterling Silver, seamless. |
| 1 " Bull Dog Artery Forceps. | Needles, Silk, etc. |

Fig. 1515. Four-Fold Pocket Set.

Four Fold Morocco Case. Instruments have tortoise shell handles and are single bladed. Contents:

- | | |
|--|------------------------------|
| 1 Compound (Male and Female) Catheter. | 1 Sharp Pointed Bistoury. |
| 1 Tenaculum. | 1 Pair Straight Scissors. |
| 1 Hard Rubber Caustic Case. | 1 " Curved Scissors. |
| 2 Silver Probes. | 1 Thumb Lancet. |
| 1 Exploring Needle. | 1 Spatula. |
| 1 Director and Aneurism Needle. | 1 Pair Dissecting Forceps. |
| 1 Probe Pointed Bistoury. | 1 Straight Finger Bistoury. |
| 1 Pair Dressing Polypus Forceps. | 1 Seton Needle. |
| 1 Scalpel. | Needles, Ligature Silk, etc. |

Fig. 1516. Multum in Parvo Pocket Set.

Turkey Morocco Case, silk velvet lining, silver lock. Instruments are tortoise shell handled, with spring or slide catch, and double bladed. Contents:

- | | |
|--|--|
| 1 Scalpel and Probe pointed Bistoury. | 1 Pair Fenestrated spring catch Artery Forceps. |
| 1 Sharp pointed Bistoury and Tenotome. | 1 Female Catheter and Caustic Case, made of Sterling Silver. |
| 1 Gum Lancet and Tenaculum. | 2 Silver Probes. |
| 1 Pair Straight Scissors. | Needles, Silk, etc. |
| 1 Steel Director. | |

SURGICAL POCKET CASES.

Fig. 1517. Gunn's Pocket Set.

Turkey Morocco Case, silk velvet lining, silver lock. Instruments double bladed, with tortoise shell handles and slide or spring catch. Contents:

- | | |
|---------------------------------------|------------------------------------|
| 1 Scalpel and Exploring Needle. | 1 Pair Scissors. |
| 1 Sharp Pointed Bistoury and Teno- | 1 Screw Probe Director. |
| tome. | 1 Pair Torsion Forceps, with slide |
| 1 Probe Pointed Bistoury and Scalpel. | catch and a long groove (answers |
| 1 Seton Needle. | also for holding Suture Needle.) |
| 1 Tenaculum. | Needles, Silk, etc. |

Fig. 1518. Parker's Plain Pocket Set.

Two Fold Morocco Case, plain double bladed Instruments, with tortoise shell handles. Contents:

- | | |
|---------------------------------------|--------------------------------------|
| 1 Scalpel and Probe Pointed Bistoury. | 1 Lancet. |
| 1 Tenotome and Sharp Pointed " | 2 Silver Probes. |
| 1 Tenaculum and Gum Lancet. | 1 Steel Spatula. |
| 1 Pair Dressing Forceps. | 1 Steel Director. |
| 1 " Artery Forceps. | 1 Plated Compound Catheter and Caus- |
| 1 " Scissors. | tic Holder. |
| Needles, Silk, etc. | |

Fig. 1519. Parker's Fine Pocket Set.

Contents the same as Parker's Pocket Set. Tortoise shell handled Instruments, either slide or spring catch, extra fine finished; the Compound Catheter (Male and Female) is made of sterling silver; the Caustic Holder is *seamless*, and will last much longer than a soldered one. The case is made of genuine Turkey Morocco, with a silver lock, very neat and compact.

Fig. 1520. Three Fold Pocket Set.

Three Fold Morocco Case, single bladed Instruments, with tortoise shell handles. Contents:

- | | |
|----------------------------------|------------------------------|
| 1 Scalpel. | 1 Spatula. |
| 1 Probe Pointed Bistoury. | 1 Sharp Pointed Bistoury. |
| 1 Tenaculum. | 1 Gum Lancet. |
| 1 Pair Straight Scissors. | 1 Compound (Male and Female) |
| 1 " Artery Forceps. | Catheter. |
| 1 " Dressing Forceps. | 1 Director. |
| 1 Hard Rubber and Silver Caustic | 1 Pair Silver Probes. |
| Case. | 6 Needles, and 1 Skein Silk. |

For description, see following page.

Fig. 1522. Hamilton's Pocket Set.

Turkey Morocco Case, lined with silk velvet, silver lock. Instruments double bladed, with tortoise shell handles and spring catch. Contents:

- | | |
|---------------------------------------|-------------------------------------|
| 1 Large Scalpel and Exploring Needle. | 1 Pair Slide Catch Torsion Forceps. |
| 1 Medium and 1 Small Scalpel. | 1 " Straight Scissors. |
| 1 Tenaculum and Aneurism Needle. | 1 Thumb Lancet. |
| 1 Sharp and 1 Blunt pointed Teno- | 1 Set Silver Probes and Nelaton's |
| tome. | Bullet Probe. |
| 1 Metacarpal Saw. | 1 Compound (Male and Female) |
| 1 Pair Bull Dog Artery Forceps, with | Catheter and Caustic Holder, of |
| spring catch. | Sterling Silver |

Needles, Ligature Silk, etc.

For description see following page.

SURGICAL POCKET CASES.

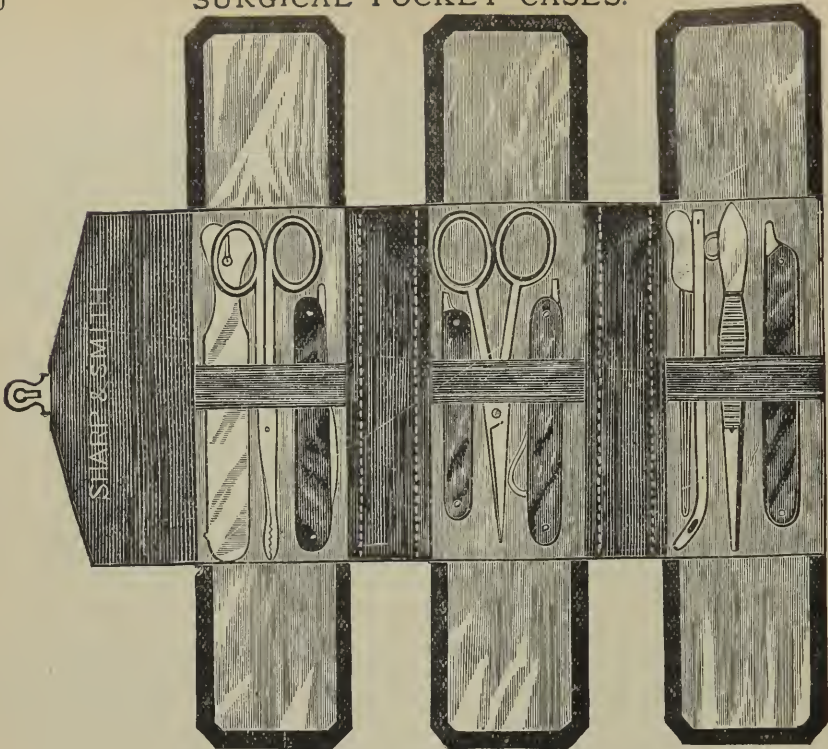


Fig. 1520. For contents see preceding page.

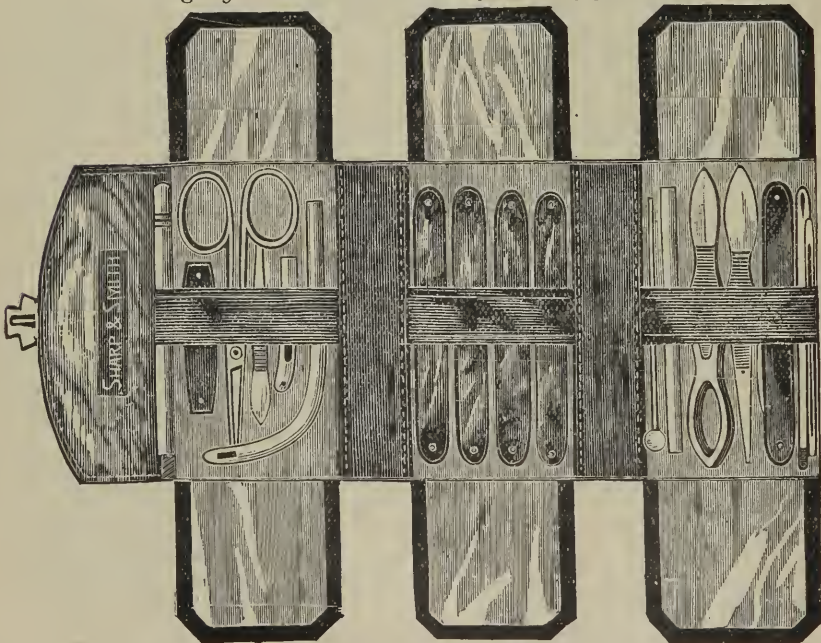


Fig. 1522. For contents see preceding page.

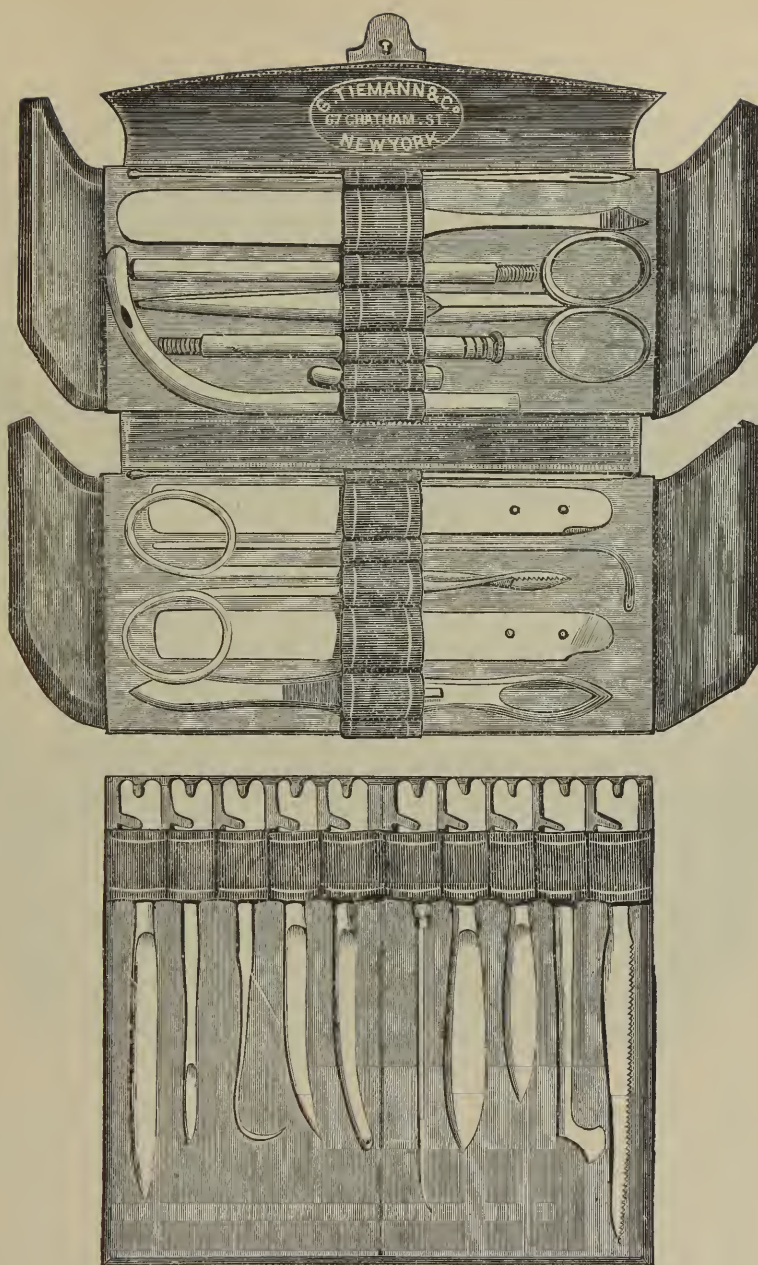


Fig. 1532. T. & Co.'s Patent Pocket Set.—PATENT CATCH INSTRUMENTS.

A very neat and compact Case, of Turkey Morocco, with silver lock. Contents:

- | | | | |
|----------------------------|-------------------|---|-----------------------------|
| 2 Patent Catch Handles. | 1 Tenotomy Knife. | 1 Pair Straight Scissors. | 1 Grooved Director and |
| 1 Post's Exploring Needle. | 1 Large Scalpel. | 1 Pair Dressing Forceps. | Aneurism Needle. |
| 1 Tenaculum. | 1 Small Scalpel. | 1 Pair spring-catch Fenestrated Artery Forceps. | 1 Compound Catheter, of |
| 1 Gum Lancet. | 1 Finger Knife. | 1 Spatula. | Sterling Silver |
| 1 Sharp Pointed Bistoury. | 1 Metacarpal Saw. | 2 Silver Probes. | 1 Caustic Case, of Sterling |
| 1 Probe Pointed Bistoury. | 1 Lancet. | | Silver, seamless. |

Needles, Suture Silk, Suture Wire, etc.,

SURGICAL POCKET CASES.

Dr. Albert I. Bouffleur's Antiseptic Pocket Case.

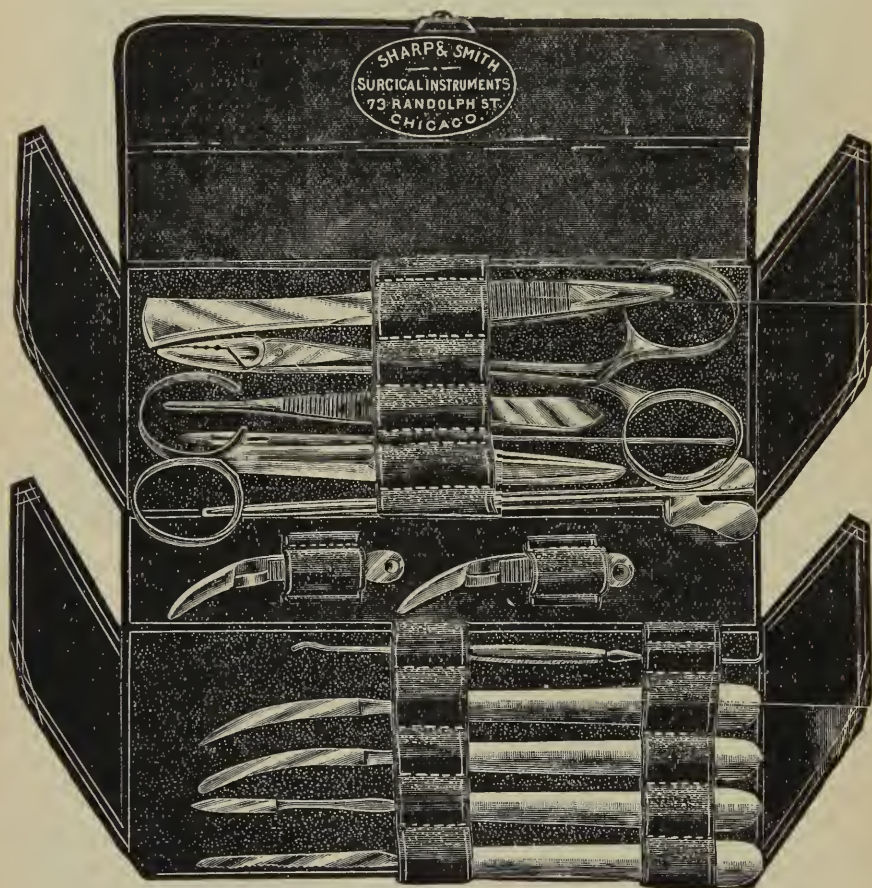


Fig. 1532-A

With the development of the modern methods of wound treatment there has come a change in the selection and construction of surgical instruments in general, and it is natural, therefore, that there should be a change in the time-worn pocket case of our grandfathers, containing a large assortment of shell-handled knives, catheter, etc.

The new cases placed on the market have contained so many instruments, and were consequently very expensive, or the mechanical devices have been so complicated as to be rejected, or at most, sparingly used by the general practitioner. Every man needs instruments peculiarly adapted to his use in certain kinds of work, but there is quite a broad "common ground" in which all use practically the same instruments. It is absolutely impossible for the general practitioner to carry a case of absolutely aseptic instruments, therefore Dr. Bouffleur advocates the use of the next best set, the contents of which will admit of being readily disinfected—made aseptic.

SURGICAL POCKET CASES.

Dr. Albert I. Bouffleur's Antiseptic Pocket Case.—Continued.

In response to numerous requests from the students of Rush Medical College during the session of 1889 and 1890, Dr. Bouffleur made the following selection for a pocket case, as meeting, in his opinion, the most indications with the fewest objections or omissions. The elements aimed at were :

1st. **COMPLETENESS**—Sufficient for minor emergency and dress cases.

2d. **INSTRUMENTS**—Should be few in number, simple and durable in construction, and of general utility.

3d. **ANTISEPTIBILITY**—As no doctor can carry absolutely aseptic instruments; those he does carry should admit of being readily disinfected, hence instruments should be all metal and detachable.

4th. **ARRANGEMENT**—Should be compact as possible.

5th. **CASE**—Should be light and as small as is compatible with useful instruments, and should be lined with glazed leather, which is readily cleaned.

6th. **REASONABLE COST.**

This case meets the requirements as well, if not better, than any case on the market, and its use by the general practitioner has given universal satisfaction.

Contents :

- 1 Pair Heavy Dissecting Forceps.
- 1 Pair Light Dissecting Forceps.
- 1 Pair Detachable Scissors.
- 1 Grooved Director with tongue-tie handle.
- 2 Probes—one with open end admitting of use as an aneurism needle.
- 2 Detachable Serrefins (firm spring).
- 1 Universal Needle Holder and Artery Forceps combined (Bouffleur's) with Collins lock and catch.
- 1 Finger Knife with plated but *unpolished* handle.
- 1 Tenotome " " "
- 1 Scalpel " " "
- 1 Curved Bistoury " " "
- 1 Small Saw " " "
- 1 Gross' Ear Spoon (very useful as a small curette).
- ½ Dozen Needles.
- 1 Card of Assorted Silk.

Case, leather, $5\frac{1}{2} \times 2\frac{1}{2} \times \frac{3}{4}$ inches. Weight when filled $5\frac{1}{2}$ oz. Being made of leather throughout, it admits of a reasonable degree of cleanliness.

There is no catheter to soil and infect the case, and if the instruments are thoroughly cleaned and dried before being replaced, a leather case will keep cosmetically clean for months and even years.

The instruments are readily detachable and admit of being boiled if desired, and therefore the need of a case is simply to serve as a convenient and safe method of carrying them.

The universal objection to the ordinary small-polished-metal-handled knives is obviated in this case by the shape and finish of the handles, which makes their use both safe and satisfactory.

The combined needle holder and artery forceps has given general satisfaction, and leaves nothing to be desired in that line.

The forceps with the two serrefins give a doctor three effective hæmostatic agents.

This selection of instruments and the case as a whole have given such general satisfaction in practice that the Doctor has not had occasion to add to or detract from its original design. It certainly meets the indications for a pocket case most admirably. Price, net. \$10 00

SURGICAL POCKET CASES.

Dr. Nicholas Senn's Aseptic Pocket Operating Case.



1532-B

Fig. 1532-B—Dr. Nicholas Senn's Pocket Operating Case. All Instruments and Case Aseptic. Contents:

- | | |
|--|--|
| 1 Silver Combination Catheter. | 1 Curved Sharp Bistoury, solid handle. |
| 1 Needle Holder and Artery Forceps Combined. | 1 Straight " " " " |
| 1 Senn's Blunt Retractor. | 1 Tenotome, solid handle. |
| 1 " Sharp " | 1 Scalpel, " " |
| 1 Foreign Body Hook and Curette. | 1 Metacarpal Saw, solid handle. |
| 2 Pair Senn's Haemostatic Forceps. | 1 Senn's Double End Curette. |
| 1 " " Dissecting " | 2 " Spiral Porcelain Head Bullet Probes. |
| 1 " " Mouse Tooth " | 1 Grooved Director and Tongue Tie. |
| 1 " Straight Scissors. | 2 Langenbeck's Clamps. |
| 1 Aneurism Needle, solid handle. | 1 Metal Box for Needles. |
| 1 Tenaculum " " | 1 dozen Assorted Needles. |
| 1 Curved Blunt Bistoury, solid handle. | Silk Ligature. |

In Metal Aseptic Case. Price, complete, \$30.00.

SURGICAL POCKET CASES.

PROF. A. J. OCHSNER'S POCKET SURGICAL CASE.

ALL INSTRUMENTS ASEPTIC.

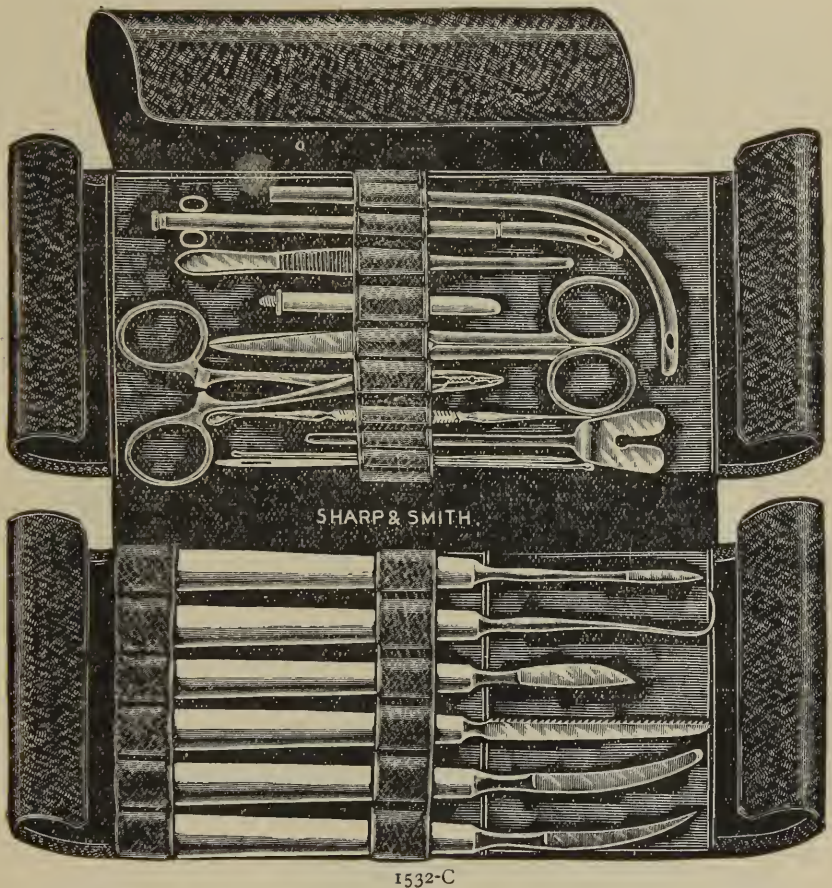


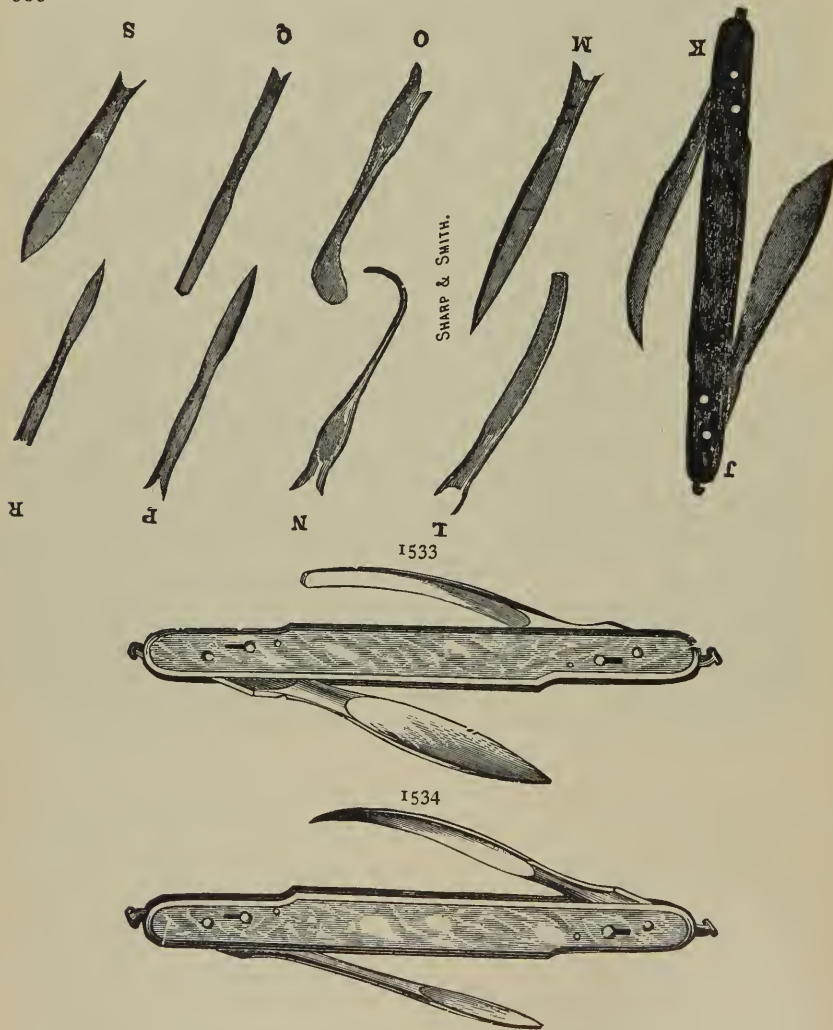
Fig. 1532-C Prof. A. J. Ochsner's Pocket Surgical Case. Contents:

- | | |
|---|---|
| 1 Pair Gunn's Artery Forceps. | 1 Curved Sharp Bistoury, solid metal handle, all one piece. |
| 1 " Pean's Hæmostatic Forceps. | 1 Curved Blunt Bistoury, solid metal handle, all one piece. |
| 1 " Straight Scissors. | 1 Tenaculum, solid metal handle, all one piece. |
| 2 Langenbeck's Clamps. | 1 Metacarpal Saw, solid metal handle, all one piece. |
| 1 Pair Mouse Tooth Forceps. | 1 Director and Tongue Tie. |
| 1 " Plain Dressing " | 1 Pair Silver Probes. |
| 1 Scoop and Spud. | 1 Doz. Assorted Needles, Silk, etc. |
| 1 Scalpel, solid metal handle, all one piece. | |
| 1 Straight Sharp Bistoury, solid metal handle, all one piece. | |

In Fine Morocco Case, Leather Lined. Price \$11.75.

POCKET CASE INSTRUMENTS.

FIG.			
*1533	Double Blade Slide Catch, Tortoise Shell handle Knives,		
	Scalpel and curved sharp Bistoury, J K.....	\$	1 50
*1533	Double Blade Slide Catch, straight, sharp and curved blunt		
	Bistoury, L M.....		1 50
*1533	Double Blade Slide Catch Tenaculum and Gum Lancet, N O...		1 50
*1533	" " Sharp and Blunt Tenotome, P Q.....		1 50
*1533	" " Scalpel and Tenotome, R S.....		1 50
*1534	" " " " curved blunt Bistoury...		1 50
*1535	" " Tenotome and curved sharp Bistoury.		1 50



(See following page for additional Double Slide Pocket Case Knives).

All instruments designated by a * are illustrated.

POCKET CASE KNIVES.

Aluminum Handles, if Preferred.

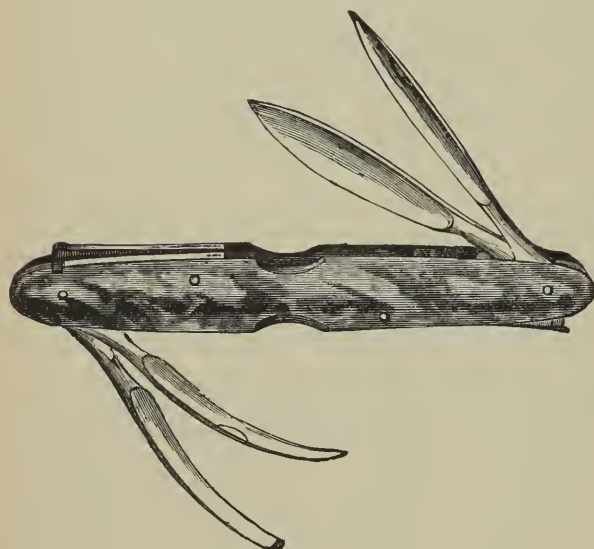
In addition to the few illustrations of Double Slide Pocket Case Knives shown on preceding page—we keep the following “Combinations” in stock :

Should you not find the exact combinations, we can put the blades wanted together at short notice.

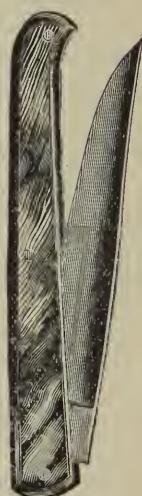
Double Slide Catch Shell Handle	Scalpel and	Gum Lancet.....	\$1 50
“ “ “ “	“ “	Sharp Curved Bistoury.....	1 50
“ “ “ “	“ “	Straight Sharp “	1 50
“ “ “ “	“ “	Hernia Knife.....	1 50
“ “ “ “	“ “	Exploring Needle.	1 50
“ “ “ “	“ “	Tenaculum.....	1 50
“ “ “ “	“ “	Scalpel.....	1 50
“ “ “ “	“ “	Aneurism Needle.....	1 50
“ “ “ “	Gum Lancet	Straight Bistoury.....	1 50
“ “ “ “	“ “	Tenaculum.....	1 50
“ “ “ “	“ “	Probe Curved Bistoury.....	1 50
“ “ “ “	“ “	Sharp “ “	1 50
“ “ “ “	“ “	Tenotome.....	1 50
“ “ “ “	“ “	Exploring Needle.....	1 50
“ “ “ “	“ “	Aneurism “	1 50
“ “ “ “	Tenotome	Straight Sharp Bistoury.....	1 50
“ “ “ “	“ “	Sharp and Blunt “	1 50
“ “ “ “	“ “	Exploring Needle.....	1 50
“ “ “ “	“ “	Probe Curved Bistoury.....	1 50
“ “ “ “	“ “	Aneurism Needle.....	1 50
“ “ “ “	Tenaculum	Tenotome.....	1 50
“ “ “ “	“ “	Exploring Needle.....	1 50
“ “ “ “	“ “	Sharp Curved Bistoury.....	1 50
“ “ “ “	“ “	“ Straight “	1 50
“ “ “ “	“ “	Aneurism Needle.	1 50
“ “ “ “	“ “	Probe Curved Bistoury....	1 50
“ “ “ “	“ “	Hernia Knife.....	1 50
“ “ “ “	Sharp	Probe Straight Bistoury.....	1 50
“ “ “ “	“ “	Straight and Curved Bistoury.....	1 50
“ “ “ “	“ “	“ “ “ Blunt Bistoury....	1 50
“ “ “ “	“ “	Curved Bistoury and Hernia Knife....	1 50
“ “ “ “	“ “	“ “ “ Aneurism Needle..	1 50
“ “ “ “	“ “	“ “ “ Exploring “ ...	1 50
“ “ “ “	“ “	Straight “ “ “	1 50
“ “ “ “	Probe Curved	“ “ “ Aneurism “ ...	1 50
“ “ “ “	“ “	“ “ “ Exploring “ ...	1 50
“ “ “ “	Hernia Knife	“ “ “ Aneurism “ ...	1 50
“ “ “ “	“ “	“ “ “ and Probe Curved Bistoury....	1 50
“ “ “ “	“ “	“ “ “ Straight Bistoury	1 50
“ “ “ “	Exploring and Aneurism Needle.....		1 50

Any of the above Knives without Catch. each, 1 00

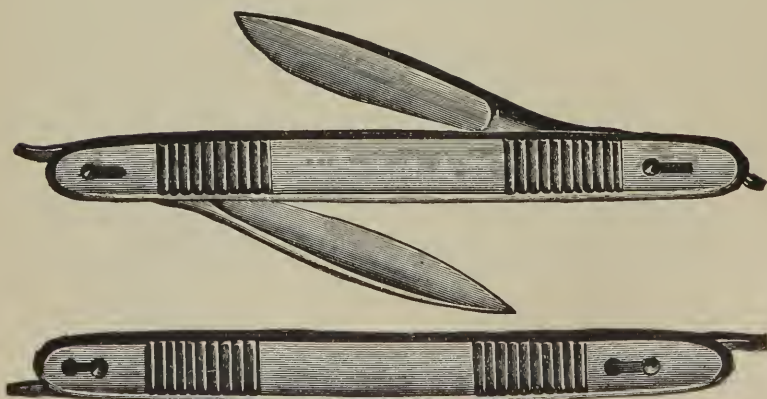
POCKET CASE INSTRUMENTS.



1536



1541-A

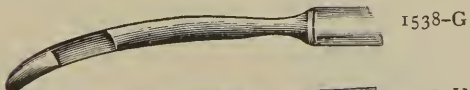


1535-A

POCKET CASE INSTRUMENTS.

FIG.

*1535-A.	Metal Aseptic Sliding Handle Knives, 2 blades in handle, any combination of knives, as described on page 353.....	each	\$2 50
1535-B.	Metal Aseptic Sliding Handle Knives, 1 blade in handle, any style blade (same style as Fig. 1535-A).....	each	1 50
*1536.	Four Blade Knife containing Scalpel, Straight Sharp Bistoury, Curved Sharp Bistoury, Curved Blunt Bistoury.....		3 50
*1538-A.	Prof. A. I. Bouffleur's Aseptic Pocket Case Scalpel.....		60
*1538-B.	" " " " " Tenotome.....		60
*1538-C.	" " " " " Straight Sharp Bistoury.....		60
*1538-D.	" " " " " Curved " ".....		60
*1538-E.	" " " " " Aneurism Needle.....		60
*1538-F.	" " " " " Tenaculum.....		60
*1538-G.	" " " " " Hernia Bistoury.....		60
*1538-H.	" " " " " Curved Blunt Bistoury.....		60
*1541-A.	McLean's Reversible Knife.....		2 00
*1575-A.	Pocket Case Reversible Aseptic Trocar.....		75



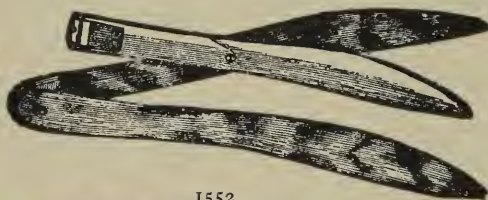
1575-A

All instruments designated by a * are illustrated.

POCKET CASE INSTRUMENTS.

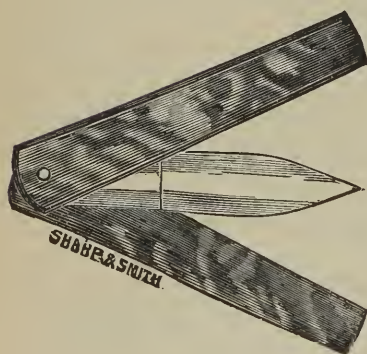
FIG.

1539	Single Blade Slide Catch Tortoise Shell Handle Finger Knife.....	\$ 1 00
1539-A	" " " " Gum Lancet.....	1 00
1539-B	" " " " Sharp Tenotome.....	1 00
1539-C	" " " " Blunt ".....	1 00
1539-D	" " " " Tenaculum.....	1 00
1539-E	" " " " Exploring Needle.....	1 00
1539-F	" " " " Hernia Bistoury.....	1 00
1539-G	" " " " Symes Abscess Knife.....	1 00
1539-H	" " " " Aneurism Needle.....	1 00
1539-I	" " " " Scalpel.....	1 00
1539-J	" " " " Sharp Curved Bistoury.....	1 00
1539-K	" " " " Blunt ".....	1 00
1539-L	" " " " Sharp Straight ".....	1 00
1540	" " Plain " (any of the above).....	75
1541	" " " " H. R. Handle (any of the above).....	50
*1542	Abscess Lancets, Shell Handle.....	75
1543	" " " " H. R. ".....	50
*1544	Thumb " " " " Shell ".....	50
1545	" " " " H. R. ".....	35
1546	" " " " Evans' Genuine.....	75
*1547	Vaccinating Lancet with Steel Comb.....	75
1548	" " " " Spear Point.....	60
1549	" " " " Combs.....	20 to 75
1550	Lancet Cases, Leather, one hole.....	25
1551	" " " " two ".....	50
*1552	Seton Needle, Shell Handle.....	75
*1553	Exploring Needles, Ebony Case.....	30
1554	" " " " Shell Handle.....	75
1555	" " " " Ivory Case.....	35
	Surgeon's " (see index).....	
	Post's and Buck's Needles, Shell Handle.....	each 1 75

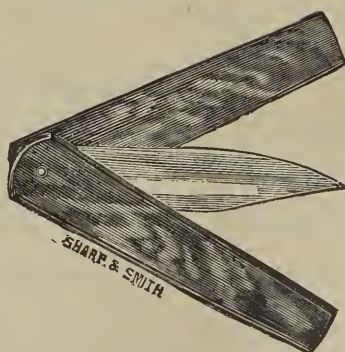


1552

1547



1544



1542



1553

POCKET CASE INSTRUMENTS.

FIG.		
1556	Finger Saws, shell handle, slide catch.....	\$ 1 50
1557	" " " " without catch.....	1 10
*1558	" " Lewis folding. (see page 360).....	1 50
1559	Spatulas and Tongue Tie.....	45
1560	" Folding.....	75
1561	" and Elevator, Dugas'	75
1561A	" Pocket Case.....	40
1562	Greene's Double Tenaculum and Operating Hook.....	1 25
*1563	Gross' Ear Spoon and Hook.....	50
*1564	" " " Spud	75
*1565	Director and Tongue Tie, German silver.....	45
1566	" " Ear Spoon.....	55
*1567	" " Aneurism Needle.	45
1568	Caustic Holders, short, silver.....	1 10
*1569	" " medium, silver	1 35
1570	" " hard rubber, small.....	35
1571	" " " medium	45
*1572	" " " silver burner.....	75
*1573	Exploring Trocar, Silver Canula.	90
*1574	Nested Trocars, 3 in set	3 00
*1575	Southey's Set of Trocars and Canulas for Anasarca, in case.....	2 50

For other Trocars, see index.



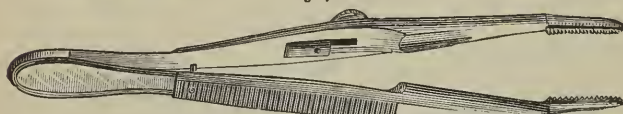
All Instruments designated by a * are illustrated.

POCKET CASE INSTRUMENTS.

FIG.				
1576	Probes, silver, per pair.....	\$	50	
1577	“ plated, “ “		35	
	(For other Probes, see index.)			
*1578	Needle Holding Forceps, Whitney's.....	3	25	
*1579	“ “ “ Sand's.....	3	00	
*1580	“ “ “ Prout's.....	2	60	
*1581	“ “ “ Parker's.....	1	50	
*1582	“ “ “ Hagedorn's, pocket case style.....	6	00	
*1583	“ “ “ French snap	1	00	
*1584	“ “ “ and Artery combined, fenestrated....	1	50	
*1585	“ “ “ and Torsion combined.....	1	50	
*1586	“ “ “ Heuel's	3	00	
*1587	“ “ “ Sharp & Smith's.....	2	50	



1587



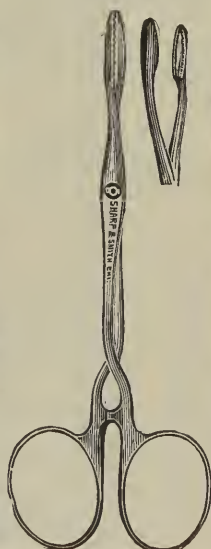
1585



1580



1579



1583



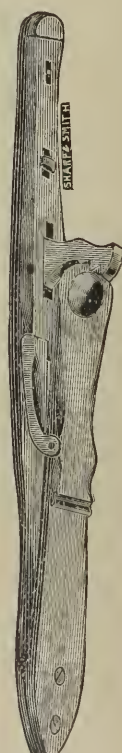
1584



1578



1581

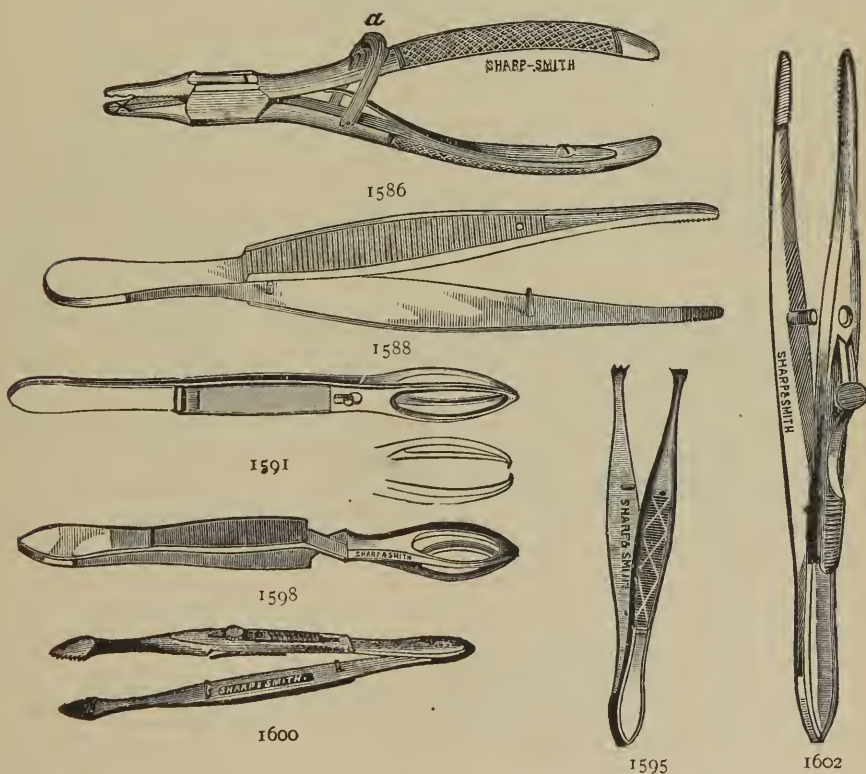


1582

All instruments designated by a * are illustrated.

POCKET CASE INSTRUMENTS.

FIG.				
*1588	Artery Forceps,	plain.....	\$	40
1589	"	" Liston's plain.....		75
1590	"	" " " spring catch.....	I	25
*1591	"	" Fenestrated spring catch.....	I	25
1592	"	" " " slide ".....	I	25
*(1584)	"	" " " " and Needle Holder...	I	50
*(1585)	"	" " Slide Catch and Needle.....	I	75
1593	"	" Danforth's.....	2	25
1594	"	" McLean's.....	I	25
*1595	"	" Owen's.....	I	25
1596	"	" Hamilton's Fenestrated Spring Catch.....	I	50
1597	"	" " " Slide ".....	I	50
	"	" Pratt's (see page 319.).....	I	75
	"	" " new (see page 319.).....	2	50
*1598	"	" Cross Action.....	I	50
1599	"	" Shield's.....	I	50
*1600	"	" Andrews'.....	I	75
1601	"	" Lankford's.....	I	10
*1602	"	" Frickes'.....	I	50

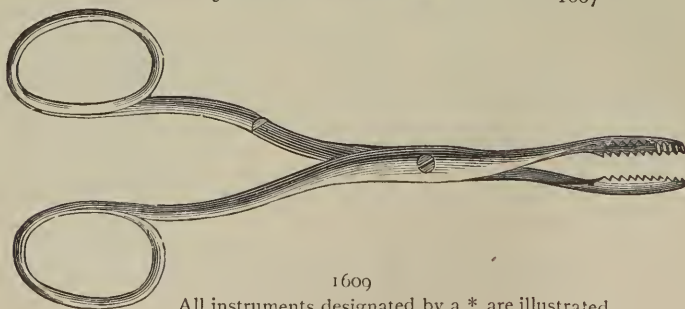
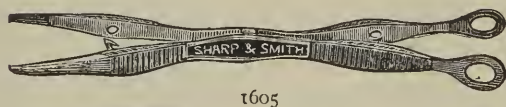
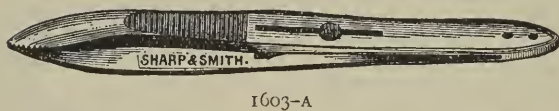
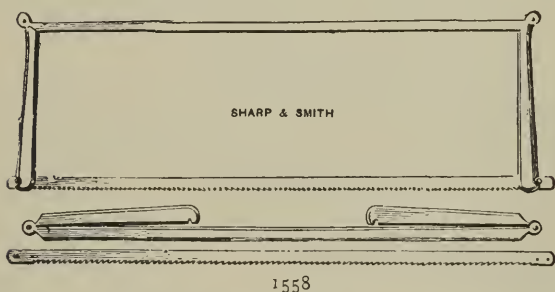


All instruments designated by a * are illustrated.

FORCEPS.

FIG.

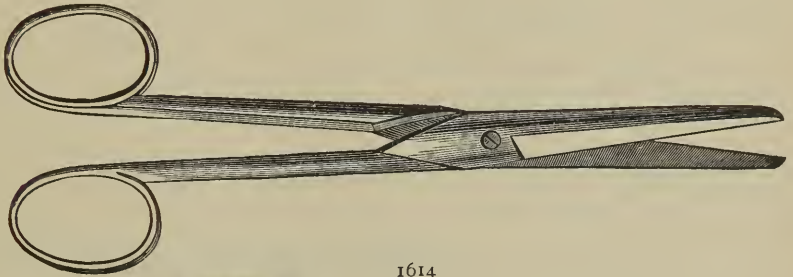
1603	Artery Forceps,	Bigelow's.....	\$ 2 75
1603A	"	"	1 10
1604	"	"	1 15
*1605	"	"	2 50
	"	"	1 50
	"	"	1 25
	"	"	1 50
	"	"	1 00
	"	"	1 50
	"	"	1 50
	"	"	1 50
1606	Phelps' Torsion Forceps,	spring catch.....	3 00
*1607	Adams' Splinter Forceps.....		50
*1608	Little's	"	65
*1609	Polypus Dressing	" plain.....	75
*(1583)	"	"	1 00
1610	Bone Cutting Forceps,	small.....	2 50
1611	Ann Arbor Dressing Forceps.....		1 00



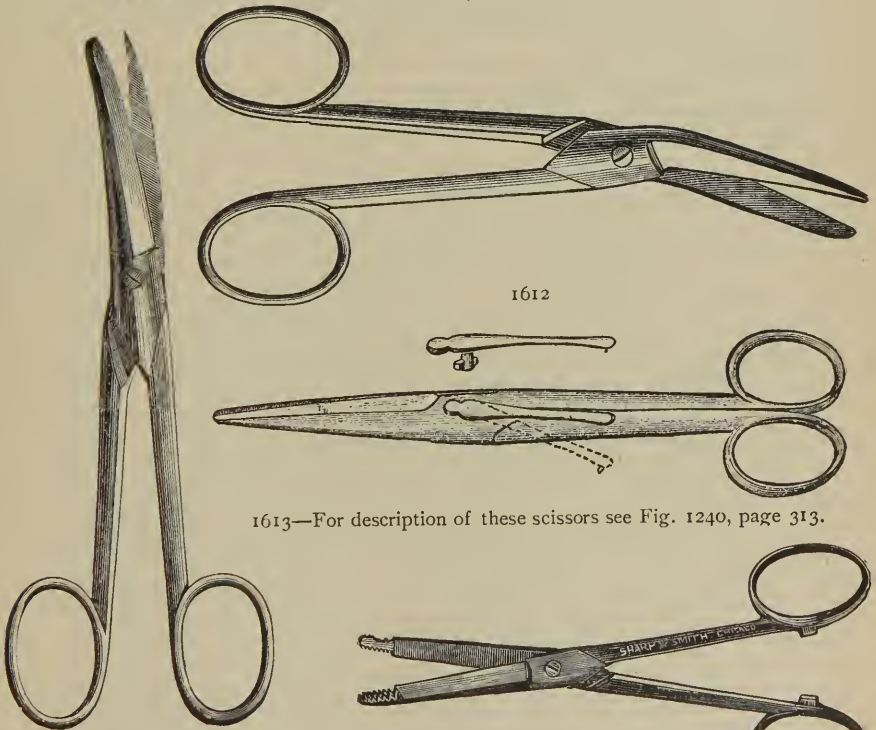
All instruments designated by a * are illustrated.

SCISSORS.

FIG.			
*1612	Angular P. C. Scissors.....	\$	80
*1613	Chas. N. Dixon Jones' Scissors.....	2	00
*1614	Straight P. C. Scissors, long.....		70
1615	" " " medium.....		65
1616	" " " 1 point probed.....	1	00
1617	Gray's Straight P. C. Scissors, open ring.....		75
*1618	Curved on flat P. C. Scissors.....		85
1619	Folding Straight Scissors.....	1	15
*1620	Scissors and Forceps combined.....	1	50



1614



1612

1613—For description of these scissors see Fig. 1240, page 313.

1618

1620

All instruments designated by a * are illustrated.

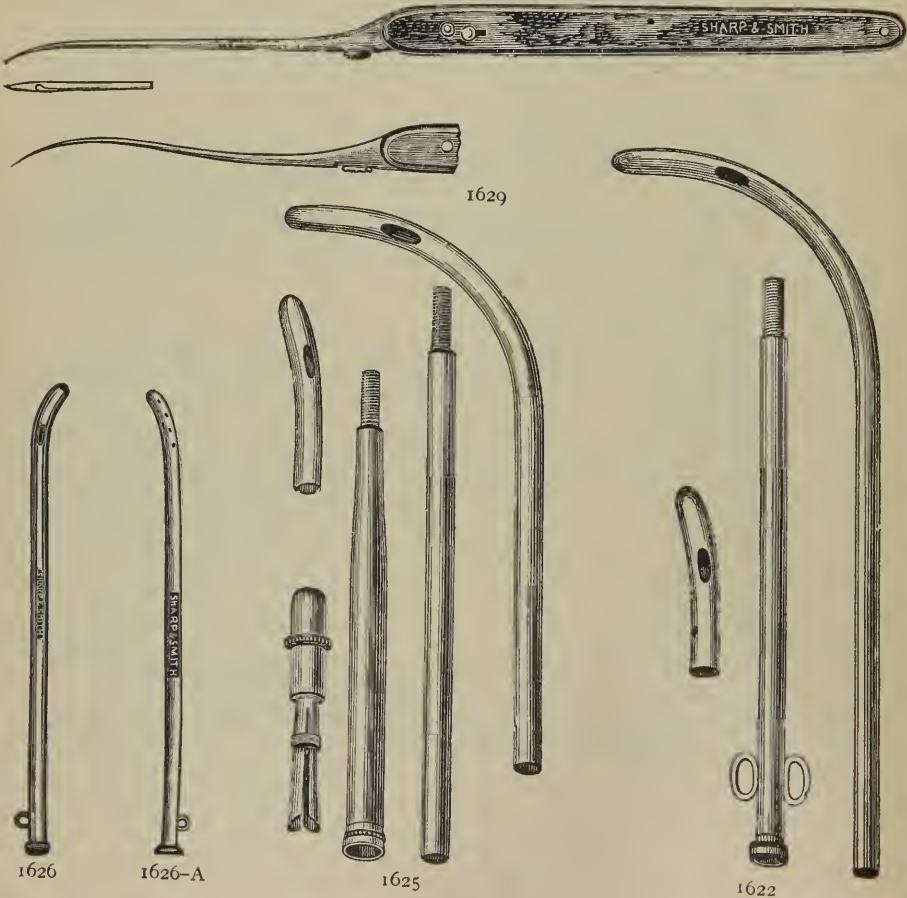
POCKET CASE INSTRUMENTS.

FIG.						
1621		Catheters—Combined	Male and Female	.....	\$	85
*1622		"	"	"	plated	85
1623		"	"	"	silver	1 85
1624		"	"	"	Parker's, with Caustic	
		Holder, plated	.....			1 50
*1625		Catheters—Combined	Male and Female, Parker's, silver	.....	3	00
*1626		Catheters, silver, female	.....			75
*1626A		"	"	fine holes in end	.....	75
1627		"	plated	.....		35
1628		"	with Caustic Holder, Vaccinating Needle and Ex-			
		ploring Trocar, plated	.....		2	50

All of our Metal Catheters have plugged ends, which prevents the secretive matter from being held, and disease transmitted from one patient to another.

*1629 Rivedon's Pocket Case Perineum Needle..... \$3 00

This needle was introduced in this city by Dr. R. Ludlam of Chicago, who brought it from France, and he uses it constantly. We recommend it to every practicing physician.



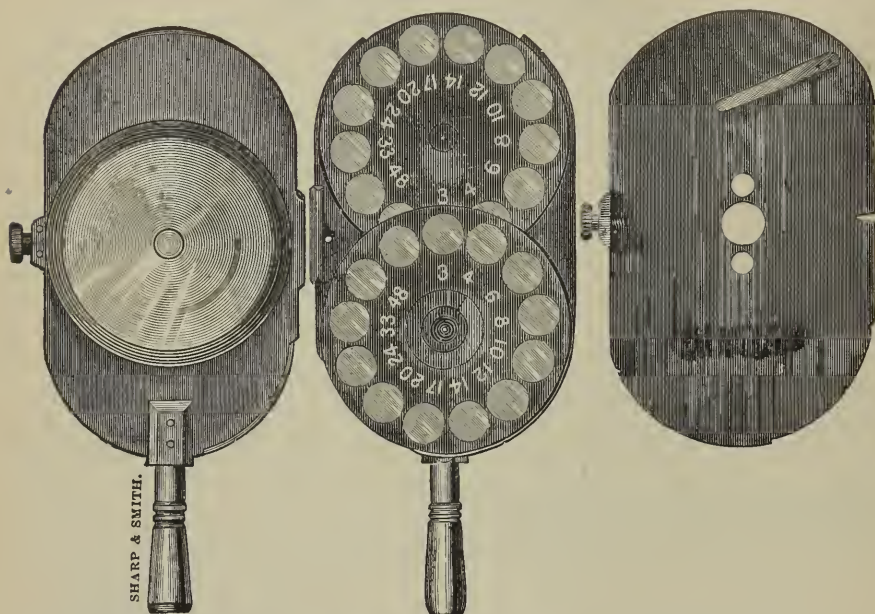
EYE INSTRUMENTS.

FIG.					
*1630	Ophthalmoscopes, Loring's	Double Disk.....			
*1631	"	Single Disk.....			
1632	"	7-Lens.....		\$3 50	
1633	"	12 ".....		6 00	
*1634	"	15 " Student.....		6 25	
1635	"	15 " Tilting Mirror....	\$7 50 to	13 50	
1636	"	24 " ".....		18 00	
1637	"	20 " ".....		18 00	
1638	"	15 " 4-Inch Quadrant Tilting Mirror.....			
1639	"	Knapp's 12-Lens, Single Disk.....			
*1640	"	" 24 ".....			
1641	"	Double Disk.....			
1641A	"	" ".....			
1641B	"	" ".....			
*1641C	"	Metric System.....			
1642	"	Liebreich's best.....		3 00	
1643	"	Allen's.....		2 75	
1644	"	Graefe's.....		4 85	
1645	"	Nacht's.....		5 25	
1647	"	Binocular.....		22 50	
1648	"	Polyclinic, 23 Lenses.....		21 00	



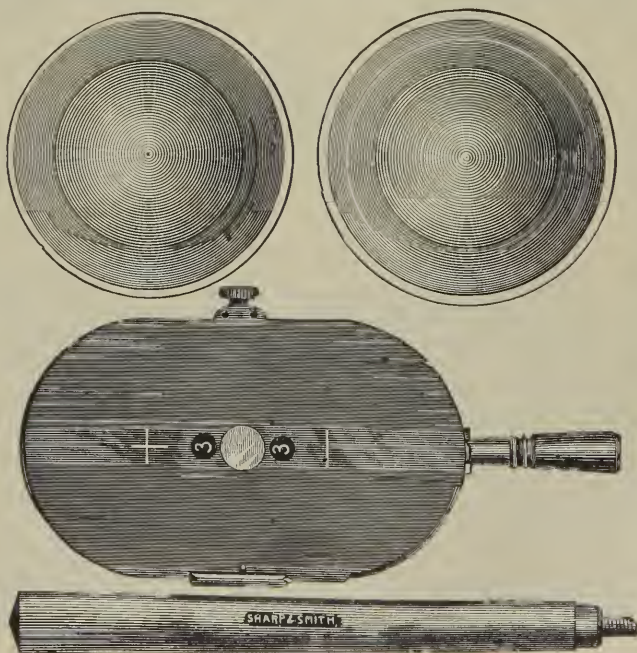
Application of the Ophthalmoscope.

OPHTHALMOSCOPES.



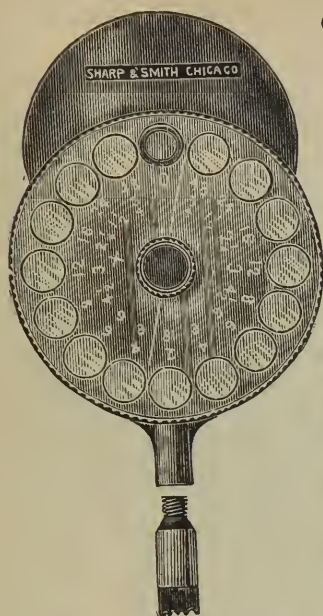
1641-A. Knapp's Double Disk Ophthalmoscope (Front View.)

1641. Knapp's Double Disk Ophthalmoscope, Lense, Disks and Covers (removed), \$35.00



1641-B. Back View of Knapp's Ophthalmoscope and Magnifying Lenses (Handles Detached)

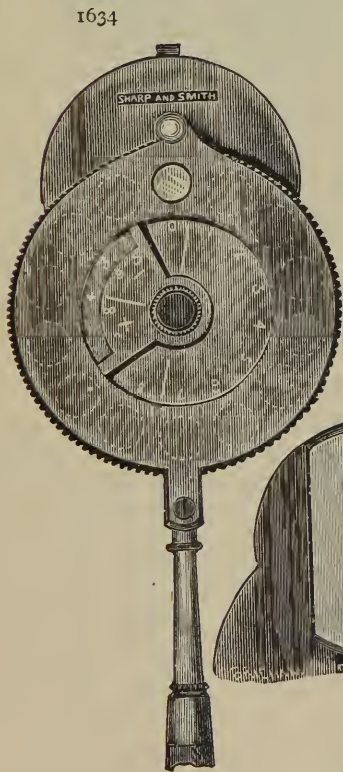
OPHTHALMOSCOPES.



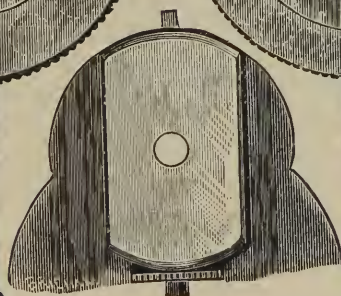
1634



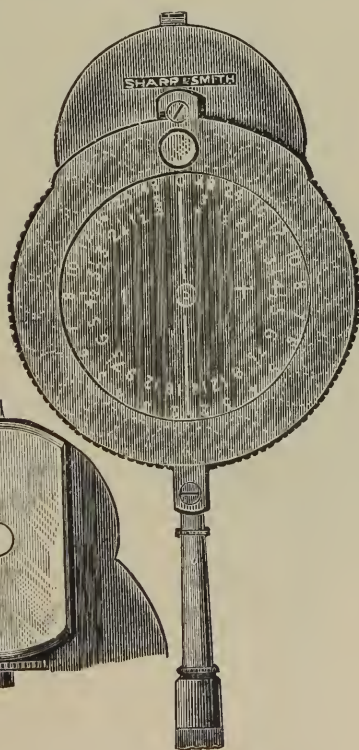
Case for Loring's Ophthalmoscopes. This Case is included in price of Ophthalmoscopes. Handles and two Lenses are also included.



1630

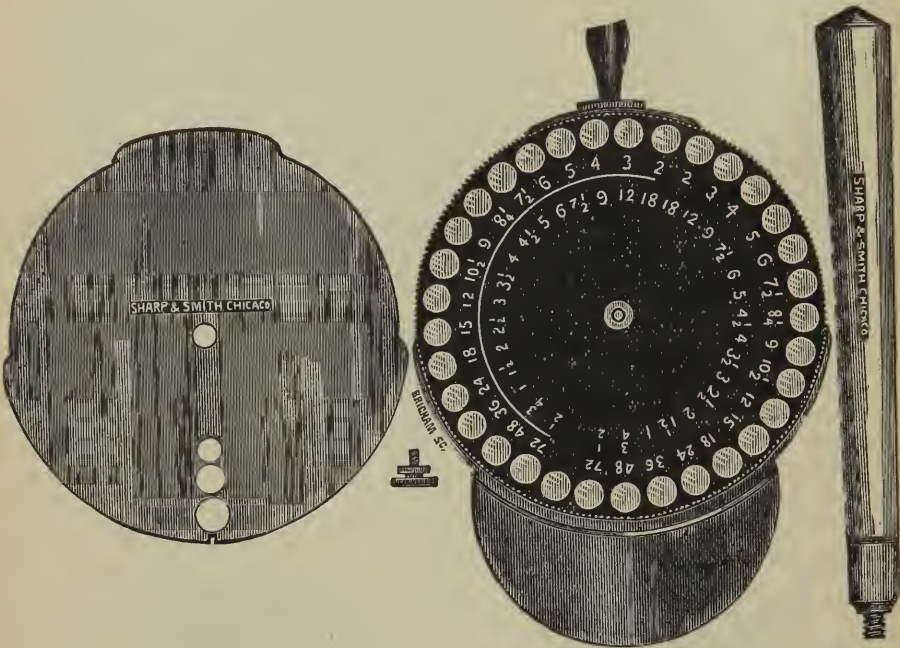


Back View.

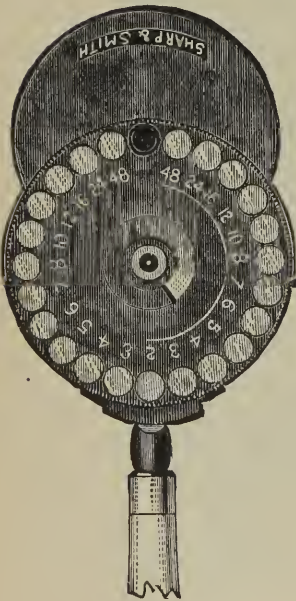


1631

OPHTHALMOSCOPES.



1641-C.

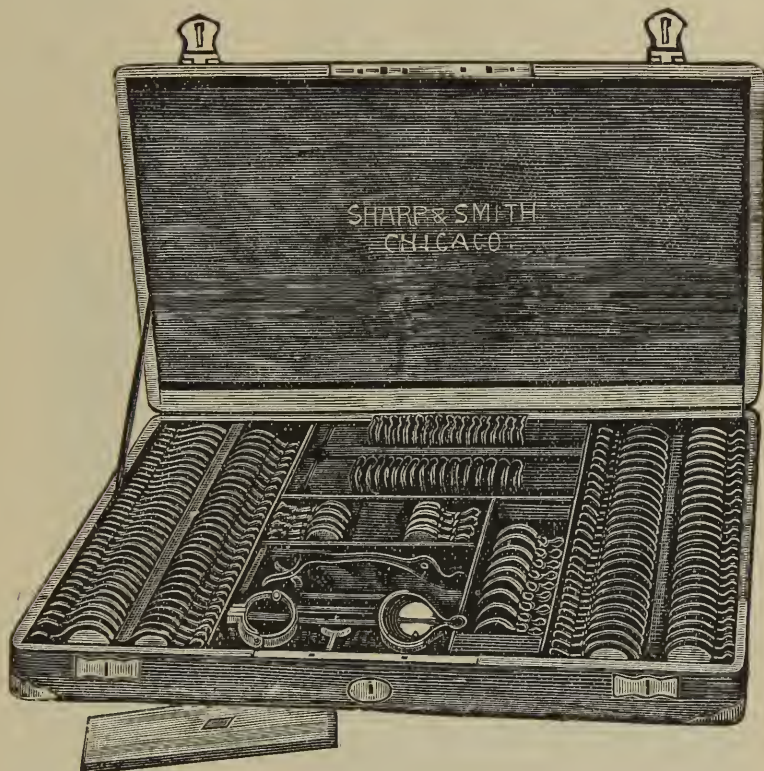


1640

All Ophthalmoscopes are put in Velvet Line Morocco Covered Cases, including two Lenses not shown in any of the illustrations.

TEST CASES.

FIG.		
*1649	Nachet's Complete Series of Trial Glasses.....	\$90 00
1650	Loring's Set of Trial Glasses, containing 24 pairs of cylindrical and spherical glasses, a holder, and necessary test types. . .	14 00
1651	Snellen's Series Test Types, bound.....	each, 75
1652	German Trial Frame.....	3 00
1653	Nachet's " "	1 50



1649

Nachet's, with complete series of trial glasses, comprising 30 pairs each of spherical, convex and concave lenses, from $1\frac{3}{4}$ to 148 inches focus; 18 pairs each of cylindrical, convex and concave lenses, from 6 to 148 inches focus; 10 prisms of angles from 2 to 20 degrees; 4 plain glasses, of assorted colors; 1 plain white glass; 1 half ground glass; 2 metal discs, with slits of assorted widths, 1 each metal discs, solid and with central perforation, all mounted in *gold* and *silver* plated metal rims, with handles; 1 adjustable spectacle frame, with graduated revolving fittings, for holding the various lenses; 1 adjustable lens holder, of horn. In elegant velvet lined case.

We have a very complete stock of Trial Cases ranging in price from \$14 to \$100, and can furnish same at lower prices than any one in the city. Write for contents and prices.

WE IMPORT THESE GOODS DIRECT.

All instruments designated by a * are illustrated

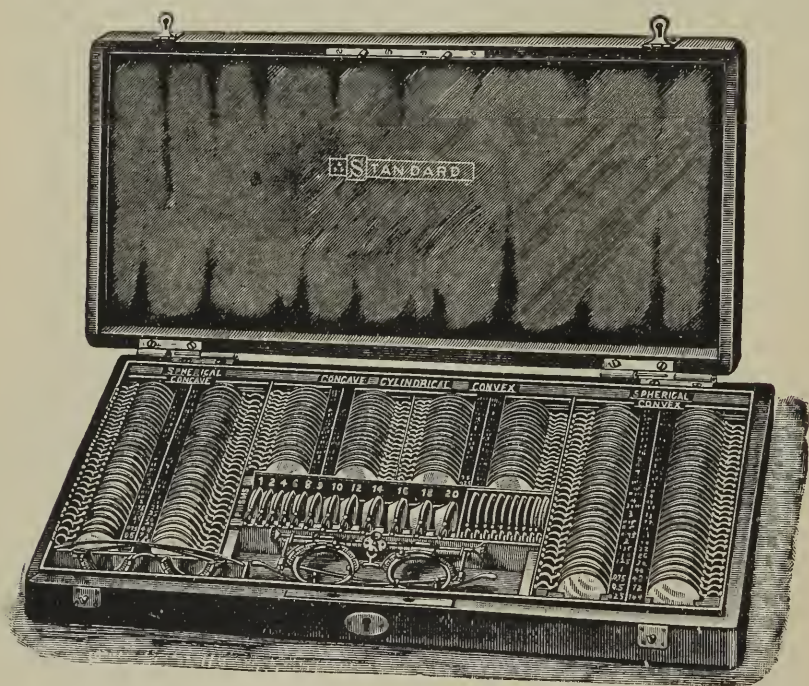
TEST CASES.

STANDARD TRIAL CASE.

This trial case embodies all the technical improvements suggested during years of practical experience, and is made in answer to an urgent demand for a reliable American made article.

The lenses are mounted in gilt and silver rims with handles, and the focal strength of each lens is stamped on the handles and marked on the glass. They are carefully tested and a written guarantee certifying their accuracy accompanies each case. Two trial frames are furnished with the case. One is our improved adjustable trial frame giving measurement of distances between pupils and height of nose; the other is a double grooved graduated frame with open cells to hold two pairs of lenses.

The case is morocco covered, chamois lined, has a patent detachable cover which, if taken off, makes it compact and convenient for daily office use.

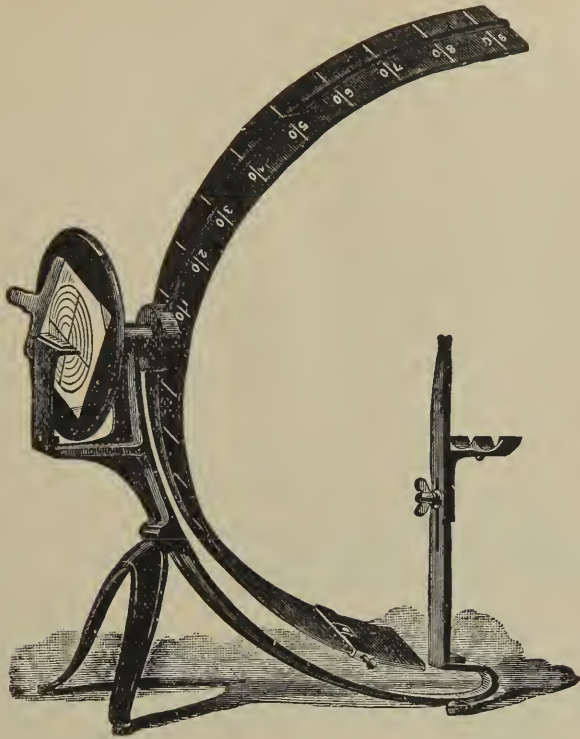


CONTENTS:

34 pairs convex spherical lenses, from 12 to 20 D.
 34 pairs concave spherical lenses, from 12 to 20 D.
 24 pairs convex cylindrical lenses, from 12 to 6, D.
 24 pairs concave cylindrical lenses, from 12 to 6, D.
 13 prisms, $\frac{1}{2}$ to 20 degrees.

4 plain colored glasses.
 1 white glass.
 1 half-ground glass.
 2 metal disks, with stenopaic slit,
 1 stenopaic disk, with hole.
 1 solid metal disk.
 1 improved adjustable trial frame with revolving cells and graduating scales.
 1 double-grooved graduated frame

Price complete, with full mounted set of test types (strictly net).....\$75 00



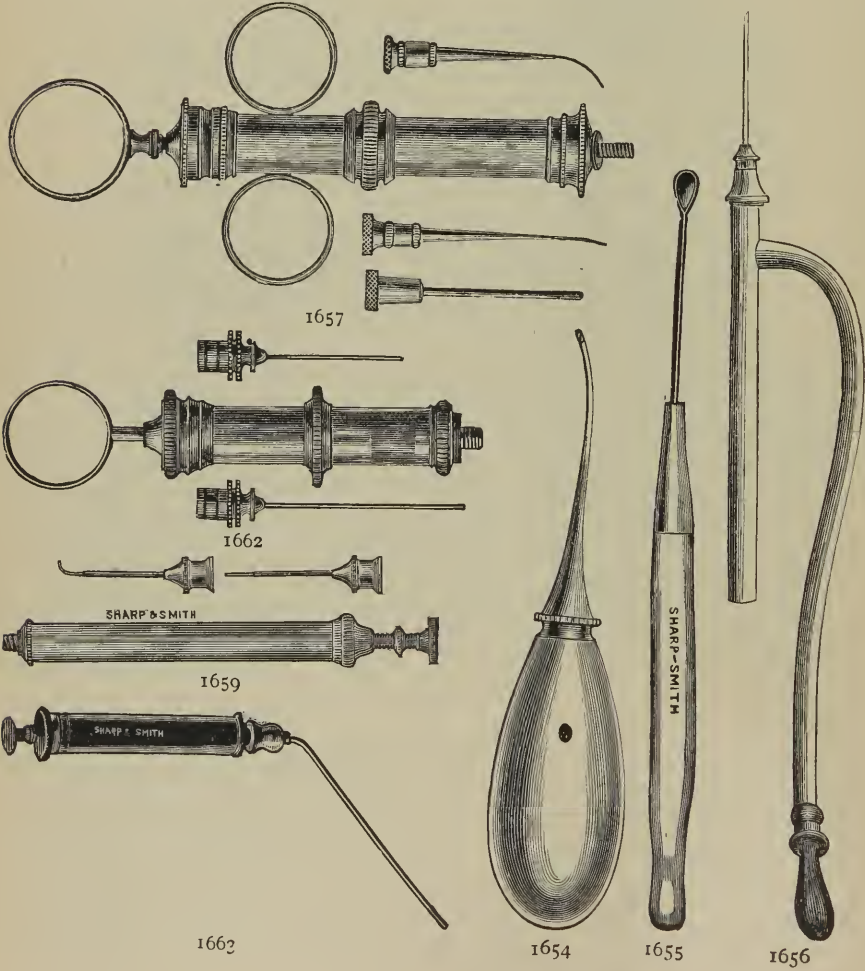
The Registering Perimeter combines the most practical points of the Landoldt and Priestley-Smith Perimeters. It is light and well-balanced and has the broad, hard rubber arc, with two sliding object-carriers of the Landoldt and the registering attachment of Priestley-Smith. It has an adjustable double chin-rest, sliding upon the upright bar, the end of which carries a rubber plate and determines the points of fixation.

The chart is fitted to a hard rubber disk at the back of the instrument and is revolved with the arc. It is in proper position when the 0° marks of the chart and disk meet, and held in place by a spring clamp. A stationary scale, mounted upon an upright arm is graduated to correspond to the divisions of the arc and is placed immediately back of the disk holding the chart. By means of this ingenious combination the exact position of the objective point upon the arc and the meridian of the arc itself may be pricked upon the chart by a single puncture.

Price complete, with sliding object-carrier, assorted color disks, handle,
needle and two dozen charts.....net, \$25 00

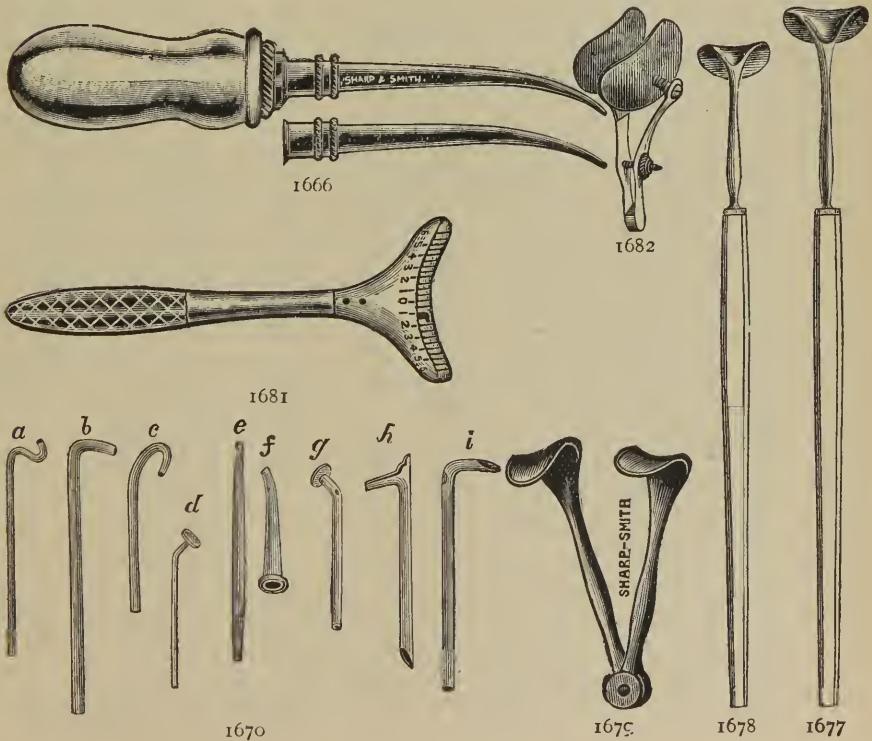
EYE INSTRUMENTS.

FIG.		
*1654	Blanchett's Instrument for exhausting soft cataract.....	\$1 75
*1655	Hollow Scoop for soft cataract.....	1 50
*1656	Bowman's Instrument for exhausting soft cataract.....	2 00
*1657	Anel's Silver Lachrymal Syringe, with silver and gold points...	8 00
*1658	“ “ “ H. R. with gold points.....	3 50
*1659	“ “ “ metal barrel, silver points in case.....	3 00
1660	Anel's White Metal Lachrymal Syringe.....	1 75
1661	“ Glass Barrel “ “	3 50
*1662	Agnew's Lachrymal Syringe.....	3 25
*1663	McFarlan's Hard Rubber Lachrymal Syringe.....	1 50
1664	Hard Rubber Lachrymal Syringe, one needle.....	1 25
1665	“ “ “ “ “ silver.....	2 50
*1666	Dr. J. E. Colburn's Lachrymal Syringe, No. 1, blunt steel needle.....	1 15



EYE INSTRUMENTS.

*1670	Lachrymal Styles, A, hard rubber.....	40
*1670	“ “ B, lead.....	20
*1670	“ “ C, E, Williams', each.....	35
*1670	“ “ D, silver.....	35
*1670	“ “ F, canulated silver.....	40
*1670	“ “ G, “ “	40
*1670	“ “ H, “ “	40
*1670	“ “ I, “ “	40
1671	“ “ in gold.....	\$1 50 to 3 50
1672	Silver Lachrymal Canula.....	40
1673	Wecker's “ “	1 00
1674	Gold “ “	\$2 00 to 3 50
1675	Gensole's “ “ for cauterizing the nasal duct.....	2 25
1676	Liebold's Subpappberal Syringe.....	1 10
*1677	Desmarre's Eyelid Retractor, large.....	1 00
*1678	“ “ “ small.....	1 00
*1679	“ “ “ jointed for pocket.....	1 25
1680	Noyes' “ “	1 25
*1681	Ivory Strabometer.....	1 50
*1682	Stokes' Eyelid Compressor.....	2 25



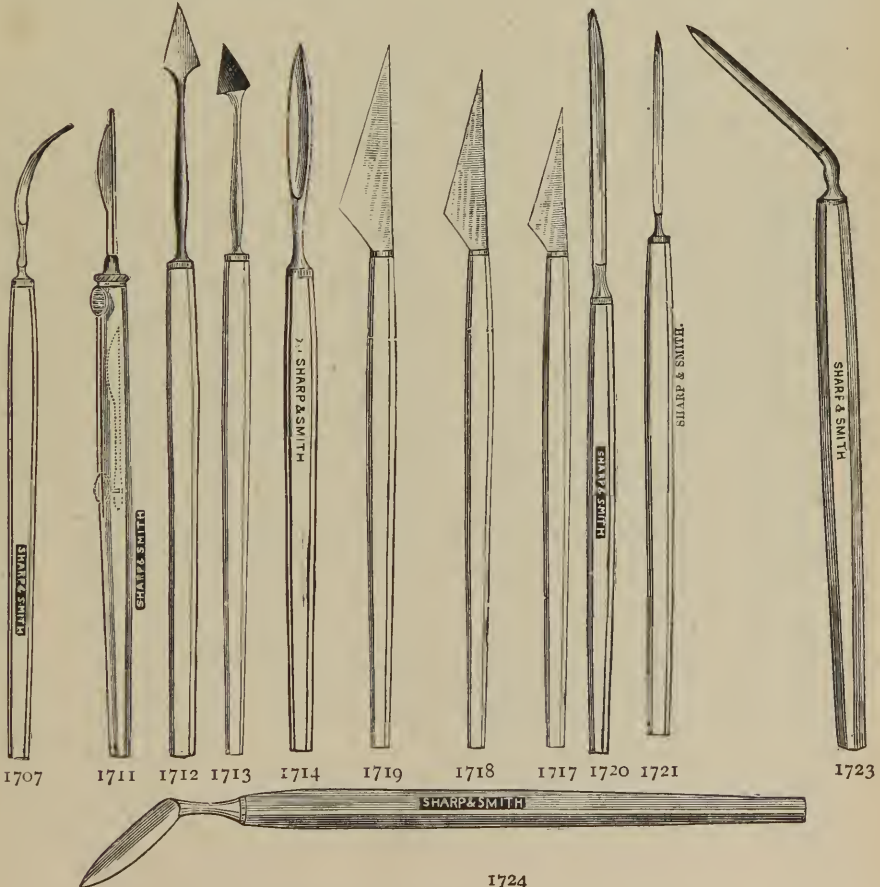
EYE INSTRUMENTS.

FIG.		
*1683	Dix's Spud, half round.....	90
*1684	" " flat.....	90
1685	" " and Curette.....	1 75
*1686	" " and Exploring Needle.....	1 75
1687	Walton's Foreign Body Gouge.....	1 10
1688	Desmarre's Trocar, long point.....	1 25
*1689	" Paracentesis Trocar, short point.....	1 25
1690	Wecker's Iridectomy Instruments.....	9 00
*1691	Graefe's Tractor.....	1 10
1692	Knapp's Cystotome.....	1 10
*1693	Desmarre's ".....	1 10
1694	" " and Curette.....	1 75
*1695	" " and Silver Lens Scoop.....	1 75
*1696	Pocket Gouge and Spatula in Sliding Case.....	1 75
*1697	Needle and Spud.....	1 75
*1698	Noyes' Canaliculous Knives, flexible shank.....	1 15
*1699	" Jointed Canaliculous Knife.....	3 00
*1700	" Stilling's ".....	1 20
*1701	Stilling's Canaliculous Knife.....	1 10
*1702	Agnew's ".....	1 15



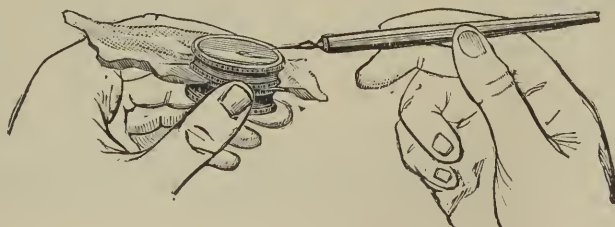
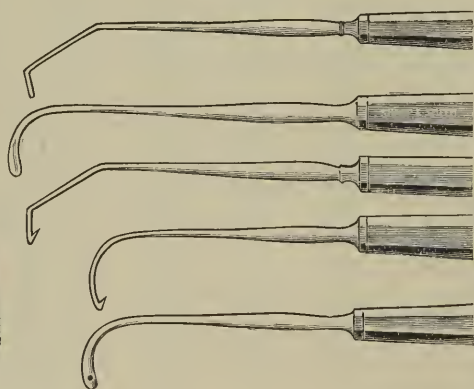
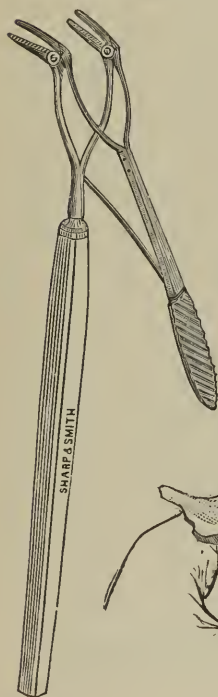
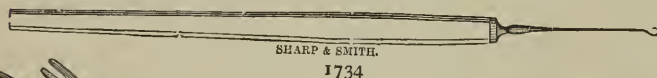
EYE INSTRUMENTS.

FIG.			
1703	Weber's Straight Canaliculous Knife.....	\$	1 10
1704	" Half Curved Canaliculous Knife.....		1 10
1705	" Full " ".....		1 10
1706	Bowman's Canaliculous Knife, sharp.....		1 10
*1707	" " " blunt.....		1 10
1708	Angular " ".....		1 10
1709	Leibrich's " ".....		1 25
1710	Beaumont's Concealed " ".....		6 00
*1711	Greenslade's " ".....		6 00
*1712	Jaeger's Keratome, straight.....		1 10
*1713	" " angular.....		1 10
*1714	Scalpel, large.....		1 10
1715	" medium.....		1 10
1716	" small.....		1 10
*1717	Beers' Cataract Knife, small.....		1 10
*1718	" " medium.....		1 10
*1719	" " large.....		1 10
*1720	Graefe's " ".....		1 00
*1721	" " mod. by Noyes.....		1 10
1722	" " convex edge.....		1 15
*1723	Baeder's " " angular, right or left.....		1 10
*1724	Agnew's Iridectomy Knife.....		1 30



EYE INSTRUMENTS.

FIG.				
1724A	Strabismus Hooks, large.....	\$	90	
*1725	" " small.....		90	
*1726	" " Wecker's double.....	3	00	
*1727	" " with eye.....	1	00	
*1728	" " McDonald's barbed.....	1	20	
*1729	" " Taylor's ".....	1	20	
*1730	" " ".....	1	00	
1731	" Bistoury.....	1	75	
1732	Ball's Double Hooks, with slide.....	2	25	
1733	Knapp's Foreign Body Hooks, silver.....	1	25	
*1734	Tyrrell's Sharp Hooks.....		90	
*1735	" Blunt ".....		90	
*1736	Noyes' Barbed Hook.....	1	10	
1737	Ophthalmostats, three pointed.....	1	10	
*1738	" Jaeger's.....	6	00	
1739	" Noyes'.....	1	50	
1740	Pamard's Pique for fixing the eye.....	1	15	
*1741	Test Drum for testing edges of cutting instruments.....		50	



1738

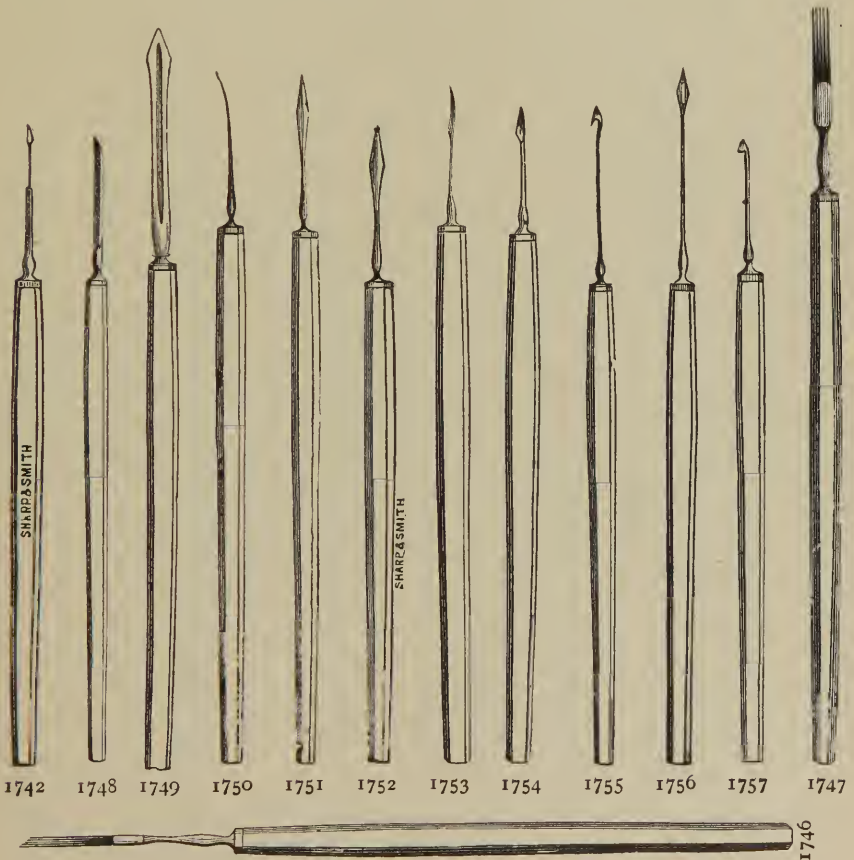
1741

1735

1736

EYE INSTRUMENTS.

FIG.		
*1742	Bowman's Stop Needle.....	\$1 00
1743	Iris Needle, plain....	1 10
1744	" " De La Roosa's.....	1 00
1745	Couching Needle	1 00
*1746	Baeder's Tattooing Needle.....	1 50
*1747	Agnew's " ".....	1 25
*1748	Grooved " ".....	1 25
*1749	Walton's " " grooved	1 25
*1750	" " Round Pointed Needle	1 50
*1751	Paracentesis Needle, broad	1 00
*1752	" " very broad	1 00
*1753	Hayes' Knife ".....	1 10
*1754	Sharp & Smith's Knife Needle.....	1 10
*1755	Luzardi's Hooked ".....	1 10
*1756	Levis' Needle, with eye	1 20
*1757	Critchett's Hooked Needle	1 00
1758	Caron de Villard's Needle.....	1 00
1759	Angular Needle	1 00
1760	Needle and Spud, metal case	1 60
1761	" " " hard rubber case.....	1 60
1762	" " " ivory case.....	1 75



All instruments designated by a * are illustrated.

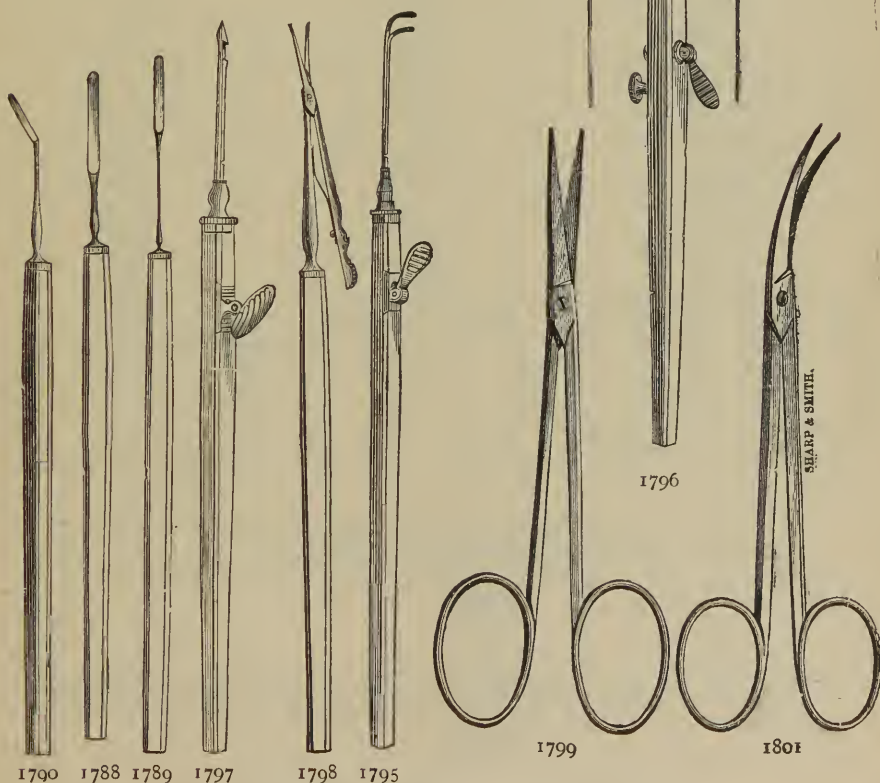
EYE INSTRUMENTS.

FIG.			
*1763	Cataract Needles, Beers', straight.....	\$	1 00
1764	“ “ hollow curved.....		1 25
*1765	“ “ Noyes', narrow.....		1 00
*1766	Decision “ narrow.....		1 00
1767	“ “ broad.....		1 00
1768	“ “ long.....		1 00
1769	“ “ stop.....		1 10
1770	Depression Needles, large curved.....		1 00
	Eye Needles, per dozen.....		75
	“ Silk, see index.....		
*1771	Plain Iris Knife.....		1 10
1772	Broad “ “.....		1 10
*1773	Stop “ “.....		1 10
*1774	Double Edge Iris Knife.....		1 10
*1775	Sickle Shape “ “.....		1 25
1776	Concave Edge, Secondary Knife.....		1 10
1777	Convex “ “.....		1 10
1778	Desmarre's Angular Secondary Knife.....		1 25
*1779	“ Scarificator.....		1 10
1780	Critchett's Concave Lens Scoop.....		1 10
1781	“ Flat “ “.....		1 10
*1782	Shell Lens Scoop.....		1 15
1783	Hard Rubber Lens Scoop.....		60



EYE INSTRUMENTS.

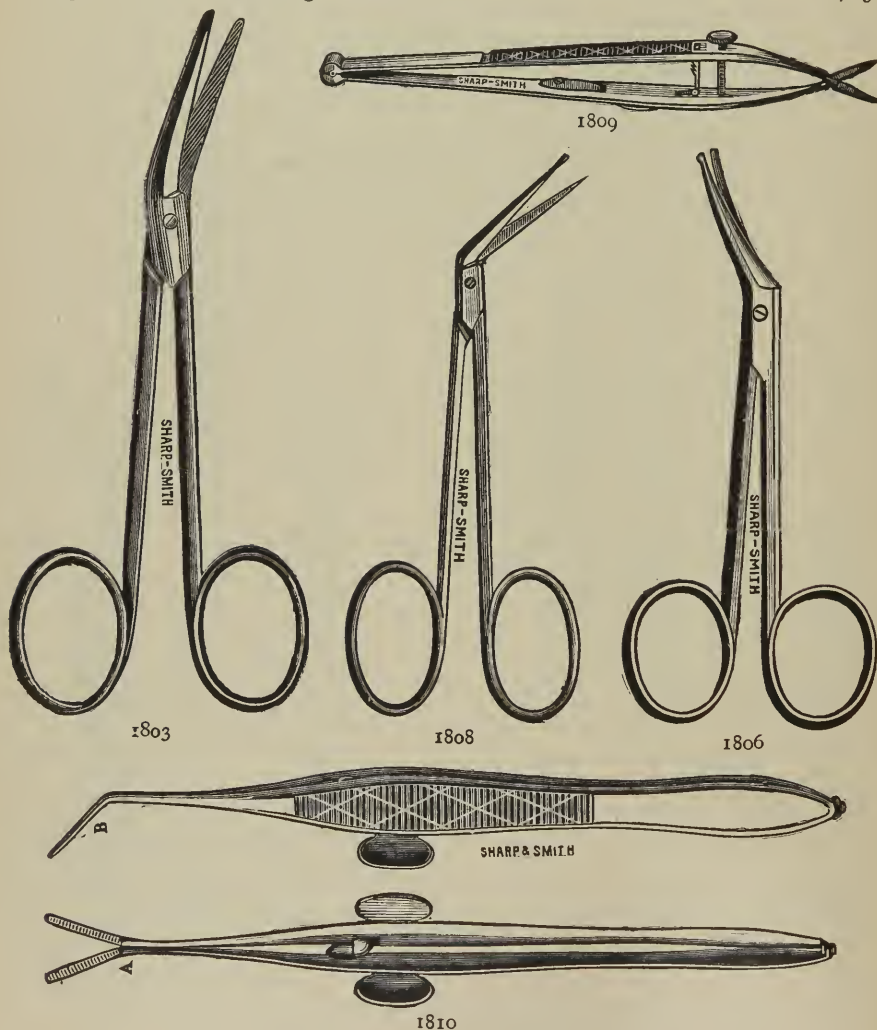
FIG.			
*1784	Graefe's Lens Scoop.....	\$	1 25
*1785	Fenestrated Lens Scoop.....	I	20
1786	Lens Scoop and Spud	I	75
1787	Hard Rubber Spoon.....		50
*1788	Desmarre's Knife for enlarging the cornea section.....	I	15
*1789	“ “ Short Knife for enlarging the cornea section.....	I	15
*1790	Angular Knife for enlarging the cornea section, R. or L....each	I	25
1791	Strabismus Bistoury, curved.....	I	75
1792	“ “ straight.....	I	10
1793	Jaeger's Bistoury Cache.....	6	00
1794	Parker's Fistula Lachrymalis knife	I	15
*1795	Wilde's Canulated Forceps.....	9	00
*1796	“ “ “ Scissors,		
	and Forceps Needle, in 1 handle.	I	25
*1797	Wilde's Canulated Needle.....	9	00
*1798	Noyes' Iris Scissors.....	3	00
1798-A	“ “ “ delicate points.	4	50
*1799	Straight Iris Scissors, light....	I	10
1800	“ “ “ heavy....	I	10
*1801	Curved on flat Iris Scissors, light.	I	10
1802	“ “ “ “ heavy	I	10



Instruments designated by a * are illustrated.

EYE INSTRUMENTS.

FIG.				
*1803	Scissors	Strabismus, angular.....	\$	1 10
1804	"	" curved on flat.....		1 10
1805	"	" Noyes'.....		3 00
*1806	"	" Hobby's curved.....		2 25
1807	"	Conjunctiva.....		1 10
*1808	"	Maunoir's Canaliculous, one blade, probe-pointed....		1 10
*1809	"	Dudley's Cataract.....		7 50
*1810	"	Wecker's Iridectomy.....		4 00
1811	"	McDowell's ".....		3 25
1812	"	Haldeck's ".....		4 00
1813	"	Strawbridge's Keratome.....		7 50



All instruments designated by a * are illustrated.

EYE SCISSORS.

FIG.

*1814.	Eye Scissors, Chadwick's Pterigum.....	\$ 4 50
*1815.	“ “ “ “	2 00
*1816.	“ “ Stevens' Subconjunctival Tenotome Scissors....	2 25

(Extract from "*Archives of Ophthalmology*," June, 1888.)

THE ANOMALIES OF THE OCULAR MUSCLES.

By Dr. GEORGE T. STEVENS, New York.

* * * The method of operating in heterophoria has been described in a former paper. Since writing that paper the method has been still further modified, and I shall here only refer to the modified steps in the operation.

In making the incision through the conjunctiva the smallest possible opening is made, precisely over the center of the insertion of the tendon. The opening should be less than $\frac{1}{2}$ millimeter in extent. Then the blades of the scissors are introduced with greatest care, one on the scleral and the other on the conjunctival side of the tendon, when they are insinuated toward the border, then pressed strongly against the insertion of the tendon.

In order to permit the blades to be introduced in this small wound and to be carried properly into position for cutting the tendon, they have been modified in an important manner. As now made the blades are quite thick and strong until within about one-third of an inch from the extremity, when they become suddenly very slender, the two united being less than the size of No. 1 Bow-



man's probe. The points, although so extremely delicate, are perfectly strong, and "walk and talk" together in the most perfect manner. There is no catching or failure to cut under any circumstances.

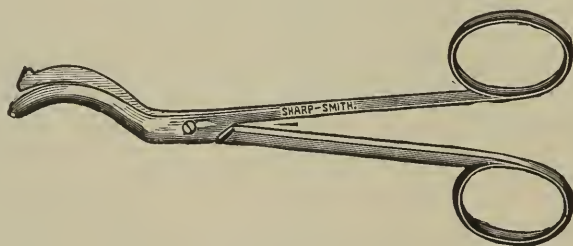
In operating for esophoria, a certain allowance is to be made for the contraction which occurs in the process of healing.

I have found it advisable not to allow more than 1° or 2° exophoria immediately after the operation, with abduction of 11° , or at most of 12° . If we allow a greater degree of exophoria or of abduction, we are open to risk of permanent exophoria. Exophoria of 1° or 2° on the day following the operation is liable to progressive increase, and should the abduction remain in excess with exophoria 1° or more on the next day after the operation, the excess should be corrected. An exophoria 1° or 2° , with abduction of 11° or 12° at the time of operation, very rarely, if ever, shows an over-correction after the first few

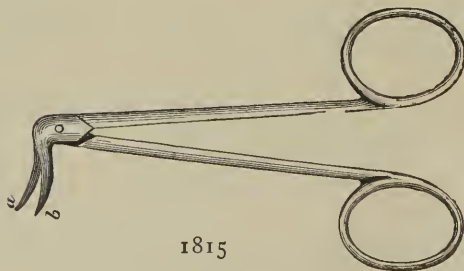
hours. On the following day after such an operation, we should hope for abduction of 8° with no esophoria.

Should it be required to reduce the extent of the operation, it can be accomplished in the following manner: A delicate Tyrell's hook is introduced beneath the conjunctiva and the divided extremity of the tendon. The hook is then turned with its point forward and pressed against the central part of the tendon, when traction is made. The extreme cut border of the tendon is drawn into the small opening of the conjunctiva, when a needle carrying a No. 000000 silk thread is passed as near to the edge as possible. It is then passed into the subconjunctival tissue at the corneal side of the wound and outward, including the conjunctiva, to the extent of less than one millimeter. The thread is tied so as to graduate the tension, bringing the tendon forward sufficiently to guard against exophoria while preserving the required relaxation.

This procedure, when required, should be made with the finest of thread and with the most extreme delicacy of manipulation.



1814

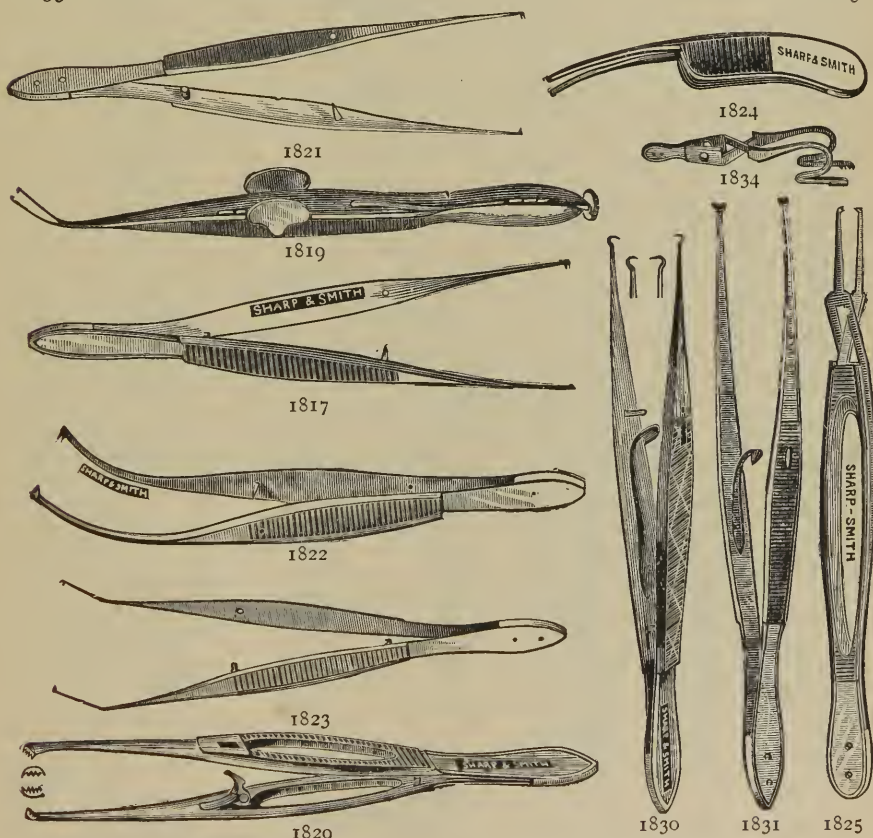


1815

EYE INSTRUMENTS.

FIG.

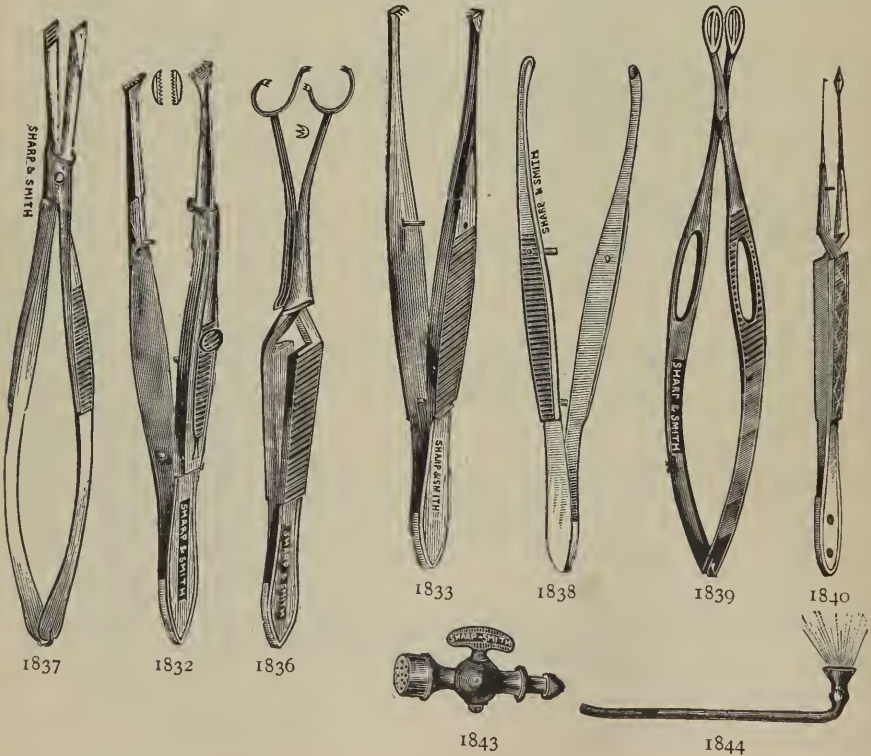
*1817	Strabismus Forceps, straight....	\$1 00
1818	" " curved	1 10
*1819	Iris Forceps, Leibrich's Rotating.....	3 00
1820	" " " latest.....	4 25
*1821	" " straight.....	90
*1822	" " curved	90
*1823	" " Graefe's Angular.....	1 10
*1824	" " Fischer's	90
*1825	" " Walton's Self Holding.....	1 85
1826	Fixation Forceps, Noyes' Curved	1 00
1827	" " " with spring.....	1 50
1828	" " " slide	2 25
*1829	" " Dudley's	2 25
*1830	" " De la Roosa's.....	1 50
*1831	" " Graefe's.....	1 50
*1832	" " Carron de Villard's.....	2 25
*1833	" and Tumor Forceps.....	1 10
*1834	Conjunctiva Forceps, Noyes'.....	2 50
1835	Adhesion " curved.....	1 50



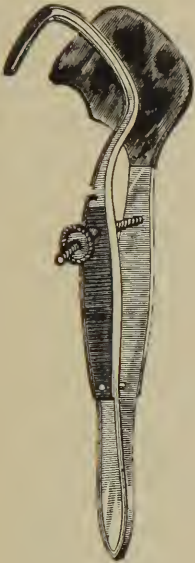
All instruments designated by a * are illustrated.

EYE INSTRUMENTS.

FIG.			
*1836	Blitz' Extirpation Forceps.....	\$2	25
*1837	Henry's Depilating ".....	1	75
*1838	Cilia Forceps.....		75
*1839	Foreign Body Forceps.....	2	40
*1840	Lanne's Forceps Needle, for false membranes.....	3	25
1841	Noyes' Eyelid Clamp Forceps.....	1	85
1842	Rattis Trichiasis ".....	2	25
*1843	Eye Spray, hard rubber.....		50
*1844	Eye Spray.....		60
	For other Sprays, see Index.		
*1845	Entropium Forceps, Snellen's.....	2	00
*1846	" " T. & Co.'s, with knife.....	5	25
1847	" " Knapp's.....	2	50
*1848	" " Laurence's.....	2	25
*1849	" " Prout's reversible.....	2	60
1850	" " Plain.....	1	50
*1851	" " Cross Bar.....	1	75
1852	" " Ring.....	2	25
1853	" " Desmarre's Shell.....	2	00
*1854	" " " metal.....	2	00
*1855	" " Noyes', with set screw.....	1	85
1856	" " " with slide catch.....	1	85
*1856A	Sharp & Smith's Ring Lid Elevator.....		50



EYE INSTRUMENTS.



1845



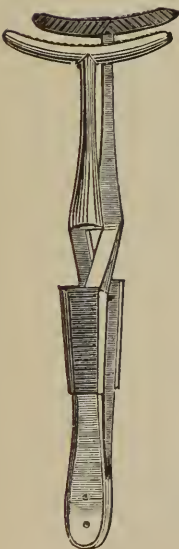
1846



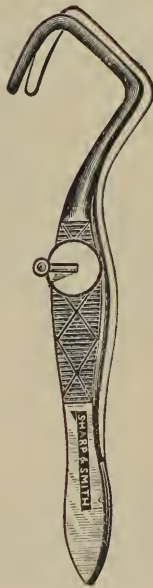
1848



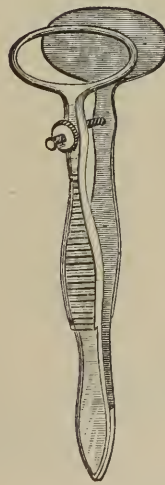
1849



1851



1855



1854

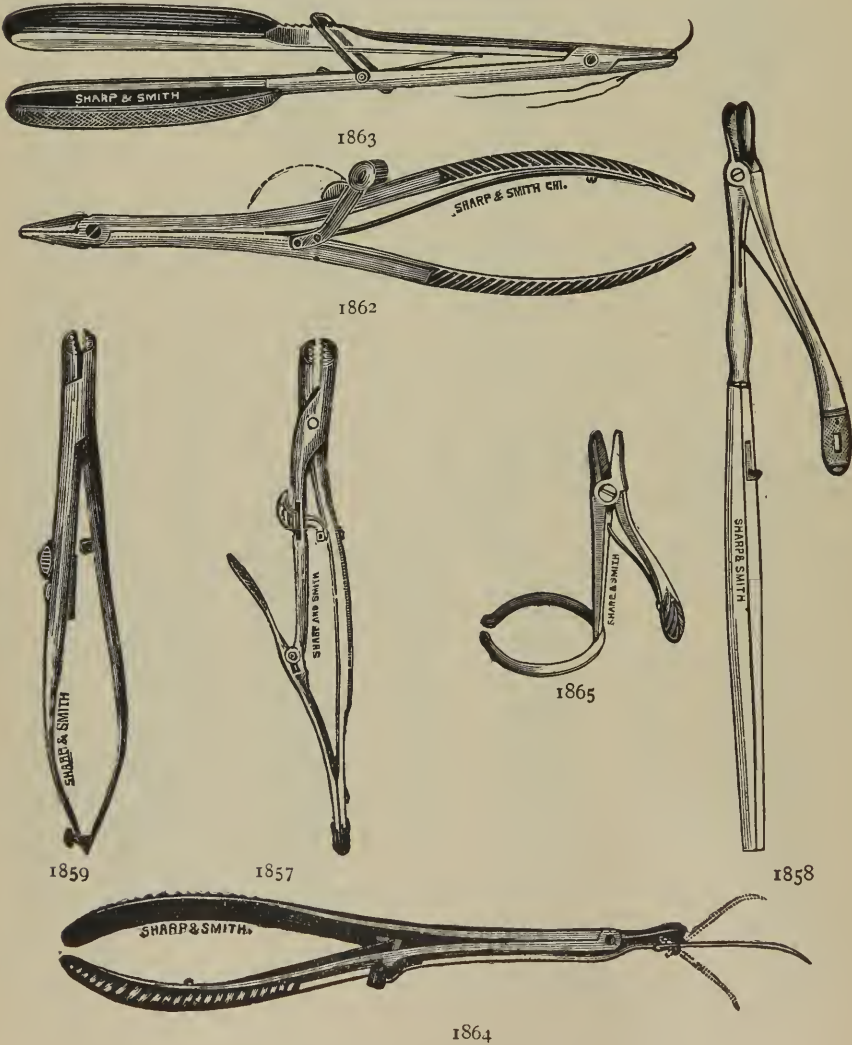


1856—A

EYE INSTRUMENTS.

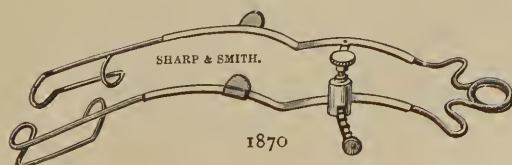
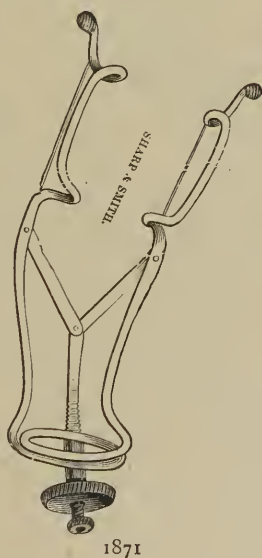
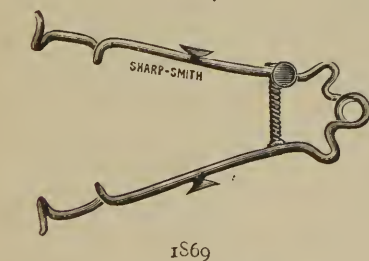
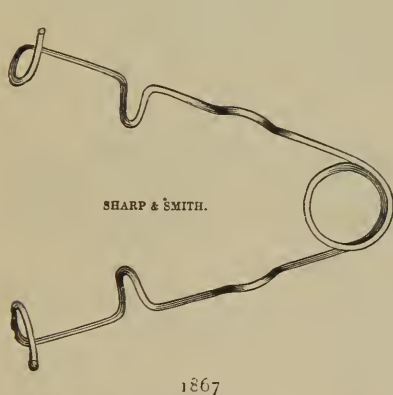
FIG.					
*1857	Needle Holding Forceps,	Sand's	.....	\$	3 00
*1858	"	"	Knapp's, very delicate	.....	2 50
*1859	"	"	Prout's	.....	2 60
1860	"	"	Whitney's	.....	3 25
1861	"	"	Collins'	.....	3 25
*1862	"	"	Renier's	.....	3 00
*1863	"	"	Russian	.....	3 00
*1864	"	"	Paris	.....	3 50
*1865	"	"	Galezowsky's	.....	2 25
1866	"	"	Hagedorn's	.....	6 00

For other Needle Holders, see index.

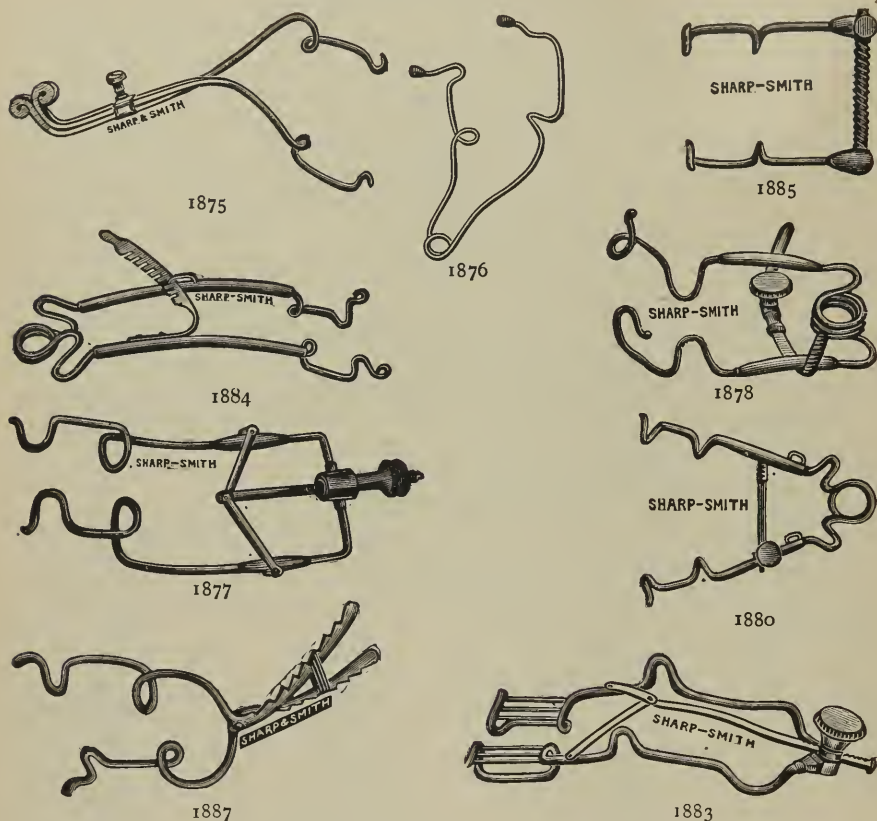


EYE INSTRUMENTS.

FIG.			
*1867	Specula, plain wire.....	\$	40
*1868	" ".....		40
*1869	" Graefe's, short.....	1	25
*1870	" " long.....	1	25
*1871	" Noyes' Improved, steel gilt.....	2	25
1872	" " nickel plated.....	1	50
*1873	" " plain.....		75
1874	" " right and left, each.....	1	50
*1875	" Liebold's.....	1	75
*1876	" Hart's.....	1	00
*1877	" Galante's.....	1	75
*1878	" Liebrich's.....	1	50
1879	" Laurence's.....	2	25
*1880	" Critchet's.....	1	35
1881	" Agnew's.....	3	75
1882	" Mittendorf's.....	1	50
*1883	" Pana's.....	3	00
*1884	" Schweigger's.....	2	00
*1885	" Luer's.....	1	50
1886	" Comb's.....	1	75
*1887	" Schwatka's.....	1	50



EYE SPECULUMS.



This Speculum (Fig. 1887), the invention of Lieut. Schwatka of the United States army, is well explained by the above illustration.

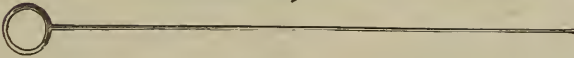
The branches that pass under and clasp the eyelids can be of any of the various forms that may suit the ideas of different operators. It is in the lever branches that open and close the former that the essential novelty of the instrument is found. These levers are reflected back on to the same side as the branches they respectively operate, so that their closure opens the branches, and *vice versa*. They are serrated on their outer edges, which indentations are made to firmly receive a rubber band that is the power in opening the speculum, and which power may be made variable by simply slipping the band along the serrations according to the well known principles of the lever. It is evident that more than one band can be used and increased power be obtained, but as now made, the single band at the end of the levers is sufficient to almost break the finest made instruments when attempting to close the branches, and is therefore sufficient. The crowns of the teeth are somewhat rounded, making it easy to slip the round rubber band along them to any point, and even during an operation. That fineness of touch so common among oculists, acquired by the manipulation of such delicate instruments as are necessary in their profession, will here materially assist them in properly adjusting this instrument for any operation.

EYE INSTRUMENTS.

FIG.			
1888	Eye Probes, Noyes' Set	.....	\$ 2 25
1889	" " Levis'	.....	1 50
*1890	" " Theobald's Set of 16 (8 pieces)	.....	3 00
1891	" " silver, delicate.....	.....	25
1892	" " Anel's, silver.....	.....	25
*1893	" " Bowman's, set of eight, silver.....	.....	2 10
1894	" " " single, silver, two sizes .....	.....	55
1895	" " " set of eight, hard rubber, same as Fig. 1873.....	.....	1 50
1896	" " " single, hard rubber, two sizes.....	.....	40
1897	" " Livingston's elastic.....	.....	1 75
*1898	" " Williams', set of eight, silver, A and B.....	.....	2 15
*1898	" " Dilator, Williams', silver, C.....	.....	75
*1898	" " " D and E.....	.....	35
1899	Weber's Graduated Dilator .....	.....	75
*1900	Galezowsky's Canaliculous Dilator .....	.....	1 90
*1901	Bowman's Silver Director .....	.....	40
*1902	Wecker's Lachrymal Canula .....	.....	1 00
*1903	Spier's " Catheter, silver.....	.....	75



1890



1892



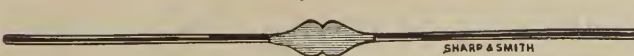
1893



1898

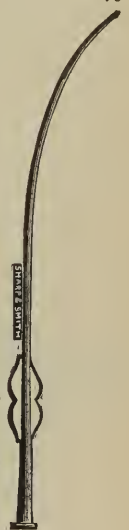


1901



SHARP & SMITH

1903



1902



1900

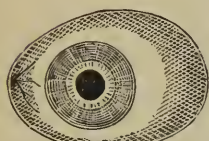
EYE INSTRUMENTS.

FIG.			
*1904	Jaeger's Plate Lid Holder, hard rubber	..	\$ 50
1905	shell.....		1 00
*1906	Alum Pencils.....		25
*1906	Blue Vitriol Pencils.....		25
1907	Nitrate of Silver Pencils.....		1 00
*1908	Hotz' Eye Glass Drop.....		10
	Medicine Droppers, per dozen.....		50
1909	Ophthalmo Phantomes, hard rubber, jointed stand, and face on pivot, two eyes		8 50
*1910	one eye....		7 50
1911	“ “ plain japanned, movable stand, one eye		6 00
1912	Glass Eye Baths		25
1913	Thompson's Optometer		1 60
1914	Pupulometer.....		3 75
*1915	Perins' Eye.....		22 50
1916	Camel's Hair Brushes, per dozen.....		25
1917	Desmarre's Cautery Irons		2 25
1918	Silver Case Caustic Holder, short.....		1 10
1919	“ “ “ medium.....		1 50
1920	Knapp's “ “		80
1921	Eye Cups.....		25
1922	Eye Bath Bottles.....		75
1923	“ Douche, common.....		75
1924	“ “ H. R. stop cock (see Fig. 1843).....		50
1925	“ “ Agnew's.....		25
1926	Eye Shades, single, small		15
1927	“ “ double “		35
1926	“ “ single, large.....		15
1927	“ “ double, “		35
	Artificial Eyes, all styles (see page 387.).....		5 00
	Price to Patients, \$10.00 each.		

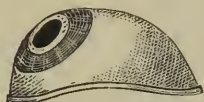


All instruments designated by a * are illustrated.

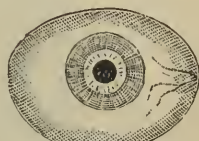
HEADQUARTERS FOR
FRENCH AND GERMAN ARTIFICIAL EYES.



SHARP & SMITH CHICAGO



SHARP & SMITH CHICAGO



SHARP & SMITH CHICAGO

We have on hand a large assortment of colors, forms and sizes, for the right and left eye, from which personal selections may be made, or we can send them by express; but as the success of being well matched depends on the exactness of the description and the minuteness of adaptation and accommodation of the Artificial Eye to the remains of the natural one, we advise patients to apply to their physician and have him send us the following particulars:

1. Right or left eye.
2. Diameter of the iris of the well eye.
3. Normal diameter of the pupil.
4. Degree of atrophy of globe in comparison to well eye.
5. Form of anterior of stump, flat, round or conical.
6. Partial or entire presence or absence of cornea remaining transparent.
7. Depth of furrow behind lower lid.
8. Sex and age of patient.
9. A drawing (natural size) representing accurately the eye region of both eyes, the color of the iris and sclerótica (or a minute description).

Price to Patients, - \$5.00

IN ORDERING GOODS

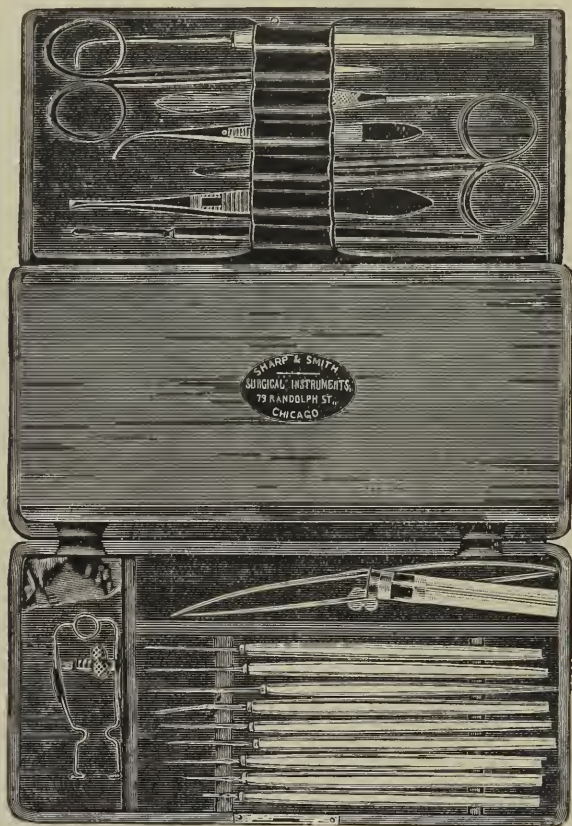
PLEASE STATE

NUMBER OF FIGURE AND PAGE OF CATALOGUE.

PLEASE DO NOT DEFACE THE CATALOGUE BY CUTTING
OUT THE ILLUSTRATIONS.

SHARP & SMITH.

EYE CASES.



1928

Fig. 1928.—Dr. W. T. Montgomery's Eye Case contains:

- | | |
|--------------------------------------|---------------------------------------|
| 1 Gallante's Eye Speculum. | 1 Graefe's Cataract Knife. |
| 1 Graefe's Narrow Cataract Knife. | 1 Small Angular Keratome. |
| 1 Large Angular Keratome. | 1 Plastic Scalpel. |
| 1 Cataract Needle. | 1 Stop Cataract Needle. |
| 1 Noye's Canaliculous Knife. | 1 David's Rubber Spoon. |
| 1 Lens Spoon. | 1 Pair Spring Catch Fixation Forceps. |
| 1 Pair Curved Iris Forceps. | 1 " Tenotomy (Strabismus) Forceps. |
| 1 " Iris Scissors. | 1 " Optic Scissors. |
| 1 " Tenotomy Scissors, (Strabismus). | 1 Set Bowman's Probes, 1 to 8. |
| 1 Desmarre's Entropium Froceps. | 1 Whitney's Needle Holder. |
| 2 Strabismus Hooks. | 1 Pair Heavy Curved Scissors. |

Needles and Silk, in fine Morocco covered Velvet lined case, \$32 00

This case can be had modified in any way desirable. The case as it now is, is sufficiently small to be carried in the hip pocket.

Any desired case put up to order, adding any instruments that you may have on hand.

EYE CASES.**Fig. 1929. EYE CASE, No. 5, CONTAINS:**

Beer's Knife; Curved Needle; Iris Needle; Forceps; Scissors, fine-pointed, curved on the flat; Wire Speculum; Strabismus Hook; Dix's Hook; Dix's Spud; Silver Probe; 3 Suture Needles; Fine Silk; Tyrrell's Sharp Iris Hook; David's Curette. Morocco case, lined with silk velvet.

Price.....\$ 12 75

Fig. 1930. SHARP & SMITH'S EYE CASE, No. 4, CONTAINS:

1 Beer's Knife; 1 Keratome or Artificial Knife; 1 Dix's Spud; 1 Curved Needle; 1 Straight Needle; 1 Pair Iris Scissors, straight; 1 Pair Strabismus Scissors; 1 Strabismus Hook; 1 Wire Speculum; 1 Parker's Fistula Lachrymalis Knife; Tyrrell's Blunt Hook; Silver Probe; 1 Critchett's Lens Scoop; 1 Pair Forceps; 6 Suture Needles; Fine Silk. In a Rosewood case, lined with silk velvet.

Price.....\$ 18 00

Fig. 1931. SHARP & SMITH'S EYE CASE, No. 3, CONTAINS:

Graefe's Linear Knife; Parker's Fistula Lachrymalis Knife; Beer's Cataract Knife; Desmarre's Scarificator; Straight Keratome; Angular Keratome; Strabismus Hook; Small Scalpel; Large Curved Needle, couching; Small Curved Needle; Straight Iris Needle; Cystotome; Tyrrell's Blunt Hook; Tyrrell's Scoop; Wire Speculum; Cilia Forceps; Strabismus Forceps; Iridectomy Forceps; Straight Iris Scissors; Iris Scissors, curved on the flat; Anel's Silver Probe; 6 Suture Needles and Fine Silk. Rosewood case, lined with silk velvet.

Price.....\$ 25 75

Fig. 1932. SHARP & SMITH'S SET OF STRABISMUS INSTRUMENTS, No. 2, CONTAINS:

1 Pair Strabismus Scissors; 1 Pair Strabismus Forceps; 1 Double Hook; 1 Strabismus Hook; 1 Wire Speculum. In a neat morocco case.

Price.....\$ 6 25

Fig. 1933. SHARP & SMITH'S EYE CASE, No. 1, CONTAINS:

1 Curved Couching Needle; 1 Strabismus Hook; 1 Beer's Cataract Knife; 1 Double Hook; 1 Pair Curved Forceps; 1 Pair Strabismus Scissors; 1 Wire Speculum. In a neat morocco case, lined with silk velvet.

Price.....\$ 9 00

Fig. 1934. NOYES' EYE CASE, CONTAINS:

2 Desmarre's Eyelid Retractors, large and small; 1 Wire Speculum; 1 Noyes' Canalicula Knife; 1 Set Bowman's Probes, silver, Nos. 1 to 8; 1 Small Scalpel; 1 H. R. Dental Syringe; 2 Strabismus Hooks; 1 Pair Straight Iris Scissors; 1 Pair Curved Iris Scissors; 1 Pair Fixation Forceps; 1 Dissecting Forceps; 1 Dix's Spud; 1 Spatula; 1 Straight Iridectomy Knife (Keratome); 1 Angular Iridectomy Knife; 1 Short Iris Forcep; 1 Large Curved Iris Forceps; 1 Tyrrell's Blunt Hook; 2 Straight Decision Needles; 1 Graefe's Linear Knife, wide pattern; 1 Small Sharp Iris Hook; 1 Pair Prout's Entropium Forceps; 1 Cystotome and Curette; 1 Sands' Needle Forceps; 2 Graefe's Linear Knives; 1 H. R. Spoon; 1 Critchett's Lens Scoop; 6 Small Curved and 3 Straight Suture Needles, and Fine Silk. In a fine Rosewood, brass bound case, lined with silk velvet.

Price.....\$ 49 50

Any style of case made to order.

EYE INSTRUMENTS.

FIG.			
*1934-A	Knapp's Roller	Trachoma Forceps.....	\$ 3 00
*1934-B	Ayres' Chalazion	Forceps.....	2 00
*1934-C	Liebold's Iris	".....	3 00
*1934-D	"	Scissors.....	3 00
*1934-E	Kuhnt's Eyelid	Elevator.....	2 65
*1934-G	Dr. J. S. Pyles'	Fixation Forceps.....	2 25
*1934-H	"	Self Retaining Lid Retractor.....	7 50

FORCEPS FOR THE EXPRESSION OF THE MORBID SUBSTANCE
IN THE TREATMENT OF TRACHOMA.

Since the method of expressing, or squeezing out, the trachomatous substance in the treatment of trachoma, has been popularized by Hotz, Noyes, Sargent, Prince and others, a large number of instruments have been invented for the purpose. One of the most popular is "Knapp's Roller-Forceps." It is made of steel, and is on the principle of the mangle. The branches divide at their ends like a horse shoe, the space between the ends is closed by a creased cylinder, as shown in the accompanying cut.



1934-A

The cylinder rolls on pivots in sockets. The branches are elastic, so that the cylinder can be removed, cleansed and reinserted.



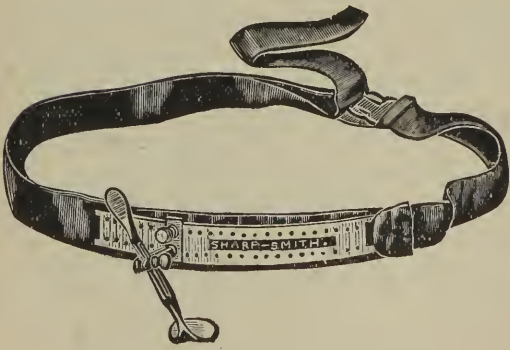
1934-B



1934-E



1934-G



1934-H



1934-C



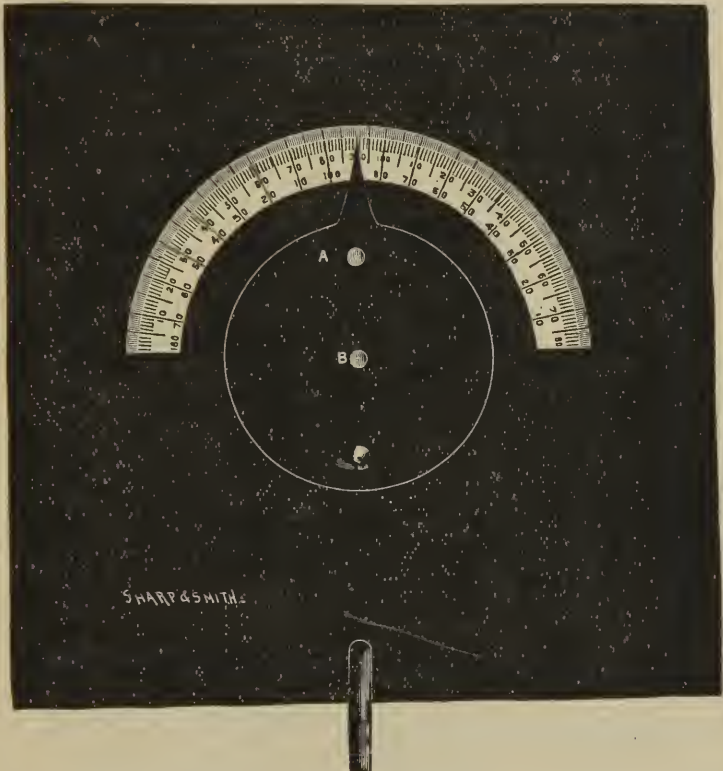
1934-D

Instruments designated by a * are illustrated.

EYE INSTRUMENTS.

A NEW ASTIGMOMETER

By F. C. Hotz, M. D., Attending Surgeon Illinois Charitable Eye and Ear Infirmary, Chicago, Ill.



This very useful instrument for detecting astigmatism (made for me by Messrs. Sharp & Smith), consists of a blackened metal screen twenty centimeters (eight inches) square; in its center it has a round aperture (B); and the semicircle of a protractor is fastened to it, so that the ninety degree mark is exactly perpendicular over the round hole, and the one hundred and eighty degree mark exactly on a horizontal line with it. Between the protractor and the central hole, a semicircular slot, ten millimetres wide, is cut into the screen, but is covered in front by a round metal disc, which can be rotated round the central opening, and which has, near its periphery, a round hole (A), so arranged that it travels exactly along the slot when the disc is rotated. Just over this second hole (A), the edge of the disc is drawn out to an arrow-like point, which reaches the concave margin of the protractor. This point and the centers of the two holes are exactly in a straight line, and therefore the angular degree of the protractor to which the arrow points will always show the radius in which the movable hole (A) is situated. Both holes are exactly of the same size. They have a diameter of four millimeters, and are filled with a thin piece of ground glass. When placed before a light, these holes appear elongated to an astigmatic eye looking at them at a distance of 15 to 20 feet. Whenever, therefore, a patient sees them oblong, we know he is astigmatic; and as the movable hole (A) can always be brought into the line of elongation of the central hole, the instrument will at once tell us by the indicator the exact direction of the one principal meridian.

Price.....\$5 00 net.

(See Journal of the American Medical Association, September 20, 1890.)

EYE INSTRUMENTS.



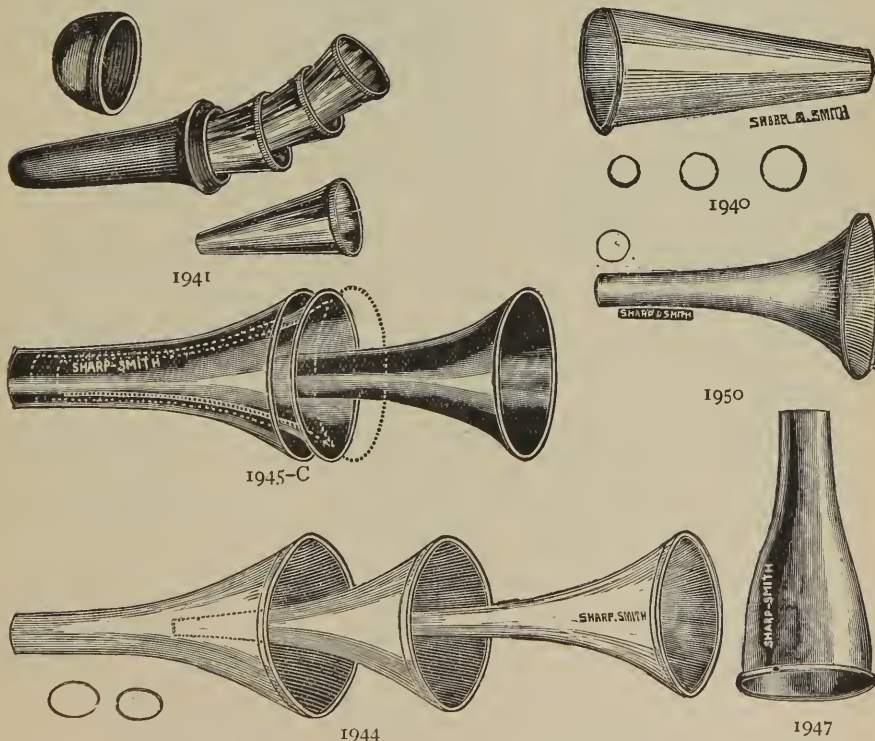
FIG.

*1935-A	Stevens' Eye Needle Holder.....	\$3 50
*1935-B	" Fixation Forceps.....	1 75
*1935-C	" Straight Tendon Forceps.....	1 25
*1935-D	" Curved Tendon ".....	1 25
*1935-E	" Eyelid Retractor.....	1 30
*1935-F	" Traction Hook (anterior view).....	1 50
*1935-G	" " ".....	1 50
*1935-H	" Tenotomy Hook.....	1 10
*1936	Wells' Enucleating Hook.....	2 00
*1937	Prince's Trachoma Forceps.....	1 90
*1938	Noyes' " ".....	1 30

Instruments designated by a * are illustrated.

EAR INSTRUMENTS.

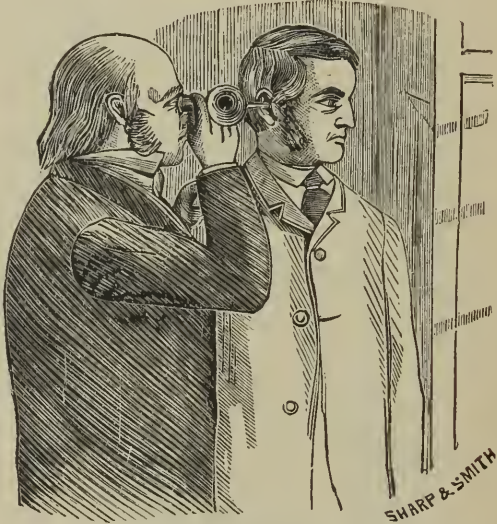
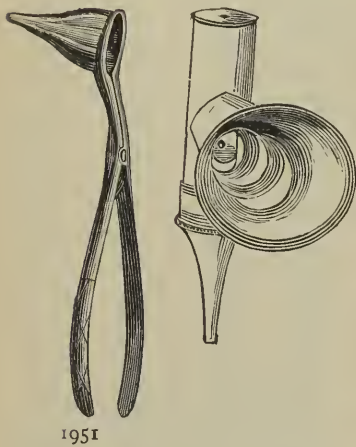
FIG.							
*1940	Wilde's	Ear Specula, set of 3 in case, H. R.....	\$	50			
*1941	"	" " " " 3 " silver.....	2	50			
1942	"	" " " " 3 " " plated.....	1	00			
1943	Toynbee's	" " " " 3 " H. R.....	1	10			
*1944	"	" " " " 3 " silver....	2	75			
1945	"	" " " " 3 " " plated.....	1	50			
1945-A	Hotz's	" " " " 3 " H. R.....	1	00			
1945-B	"	" " " " 3 " silver.....	3	00			
*1945-C	"	" " " " 3 " " plated....	2	00			
1946	Gruber's	" " " " 3 " H. R.....	60				
*1947	"	" " " " 3 " silver....	2	75			
1948	"	" " " " 3 " " pla d.....	1	50			
*1950	Sexton's	" " " " 3 " " ".....	2	25			
*1951	Kramer's Bivalve Ear Specula, nickel plated, 3 sizes.....	each	1	00			
1952	"	" " " " " " with set screw....	1	85			
1953	Bivalve	" " " " " " ".....	1	00			
1954	Knapp's Tubular	" " " 3 in set, H. R.....	1	20			
*1955	Spiers' Self-Retaining Ear Specula.....		1	50			
1956	Glass Mirror	" " ".....	35				
1957	Porcelain	" " ".....	40				
*1958	Fergen's	" " ".....	3	50			
1959	Siegele's	" " ".....	2	25			
1960	Hudson's	" " ".....	2	25			



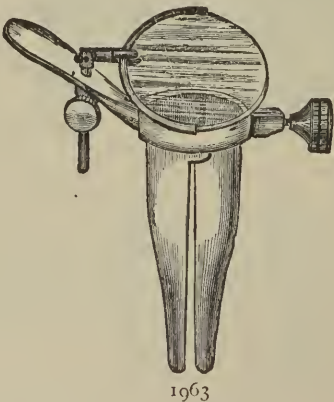
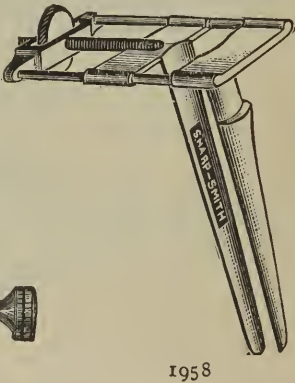
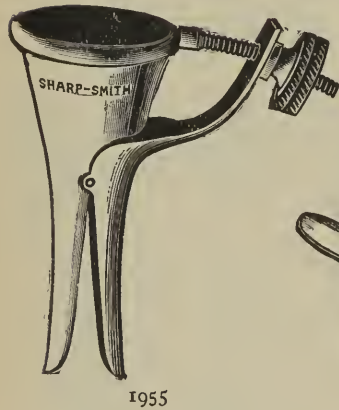
All instruments designated by a * are illustrated.

EAR INSTRUMENTS.

FIG.		
*1961	Brunton's Otoscope.....	\$4 00
*1962	Clark's ".....	7 50
*1963	Simrock's " with Lens.....	2 75
*1964	Hassenstein's " three Tips.....	3 00
*1965	Siegele's Aural Otoscope.....	2 75
*1966	Ely's modification of Siegele's Otoscope.....	5 25

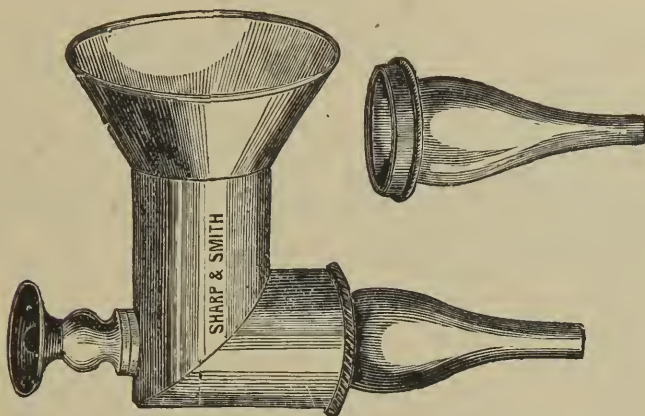


Application of the Otoscope.

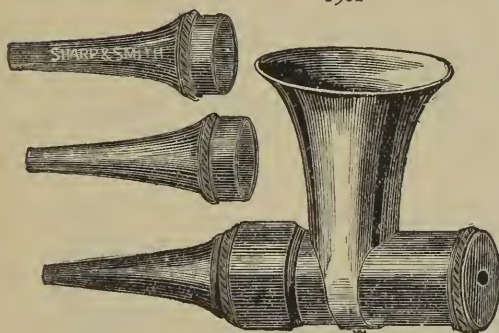


See next page for balance of Oscopes.

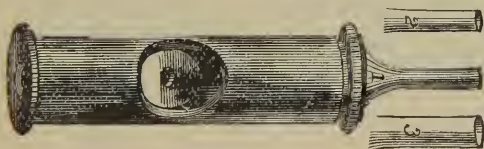
EAR INSTRUMENTS.



1962



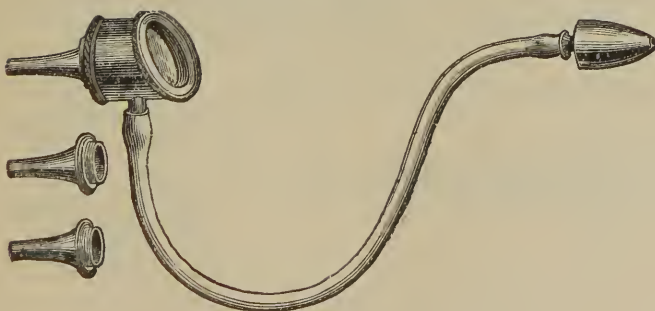
1961



1964



1966



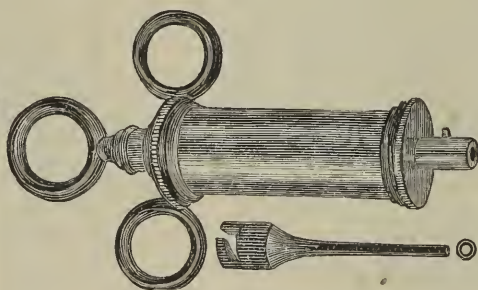
1965

EAR INSTRUMENTS.

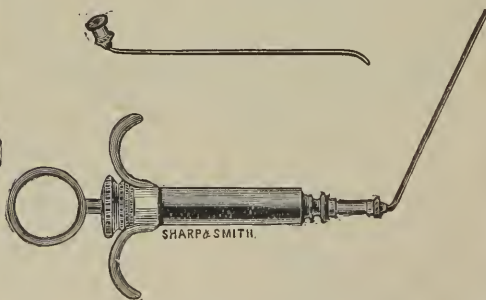
FIG.					
1967	Blake's Inner Ear Mirrors, Set			\$	5 25
1968	Troeltsch's Mirrors with handle, 3 inches.....				2 00
1969	" " " 2 1/2 "				1 75
*1970	" " " 2 "				1 50
1971	" " " " and head band, extra.....				1 00
1972	Mirrors, Ball and Socket, 2 inch with Head Band and Handle.				3 00
1973	Miller's Lamp.....				11 00
*1974	Collins' Lamp.....				5 25
*1975	Pomeroy's Ear Syringe.....				2 50
*1976	Blake's Inner Ear Syringe....				3 25
1977	Kramer's Brass Ear Syringe with Rings, Small.....				1 75
*1978	" " " " Large.....				2 25
1979	" " " " Ivory Nozzle.....				2 50
*1980	Hard Rubber " 1 OZ.....				65
1981	" " " 2 OZ.....				85
1982	" " " 3 OZ.....				1 25
1983	" " " 4 OZ, two tips.....				1 50
*1984	Wheelock's Reversible Flow H. R. Syringe.....				1 50
*1985	Sexton's Inner Ear Syringe.....				7 50
*1985-A.	Roosa's " " Continuous Flow.....				6 50
1986	Sexton's Ear Douche.....				4 50
*1987	Lucae's Reflux Ear Syringe, Hard Rubber.....				1 00
1987-A.	Rumboldt's Modification of Lucae's Douche.....				3 75
1987-B.	" " " " tube only.....				1 00



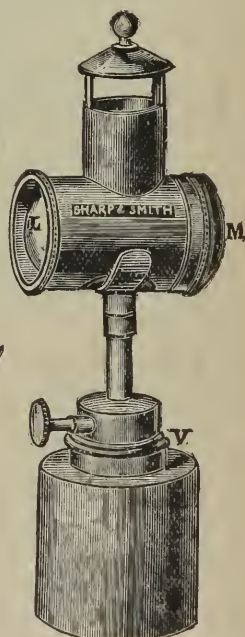
1975



1985



1976



1974

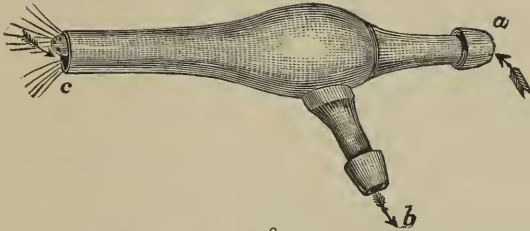
For other Syringes see next page.

All instruments designated by a * are illustrated.

EAR INSTRUMENTS.



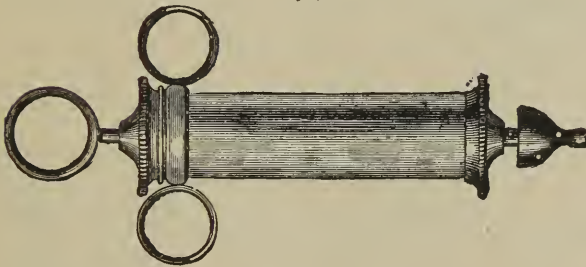
1984



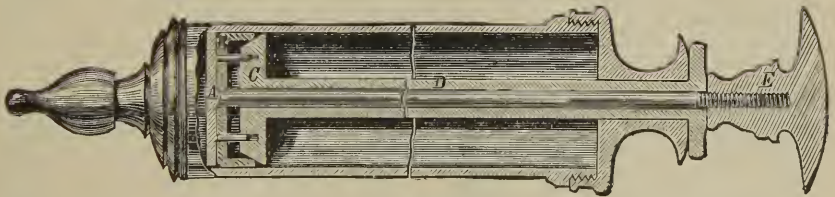
1987



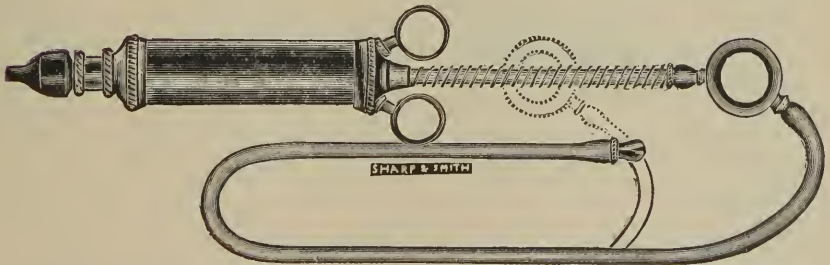
1970



1978



1980



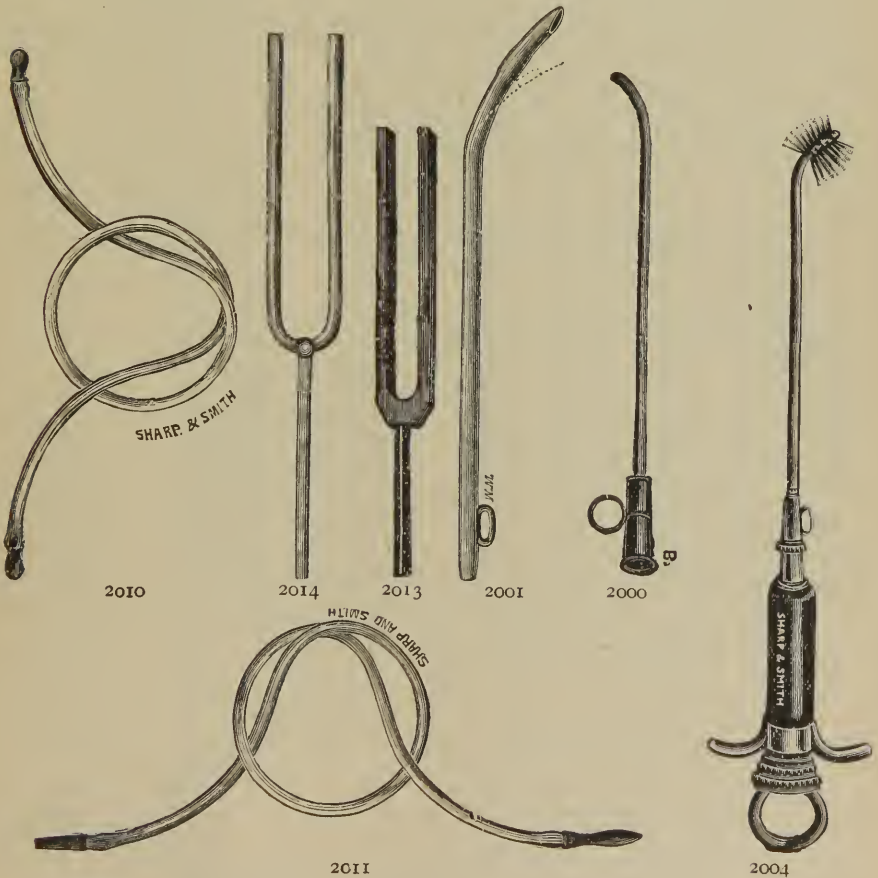
1985-A

By means of this Syringe a continuous syringing of the ear is effected, doing away with the old process of refilling the syringe. By virtue of the spiral wire around the piston rod the piston is forced back automatically, the syringe filling and emptying by an arrangement of valves in the piston, and through the hollow piston-rod which communicates with the reservoir, by means of the rubber tubing, thus creating a continuous flow.

EAR INSTRUMENTS.

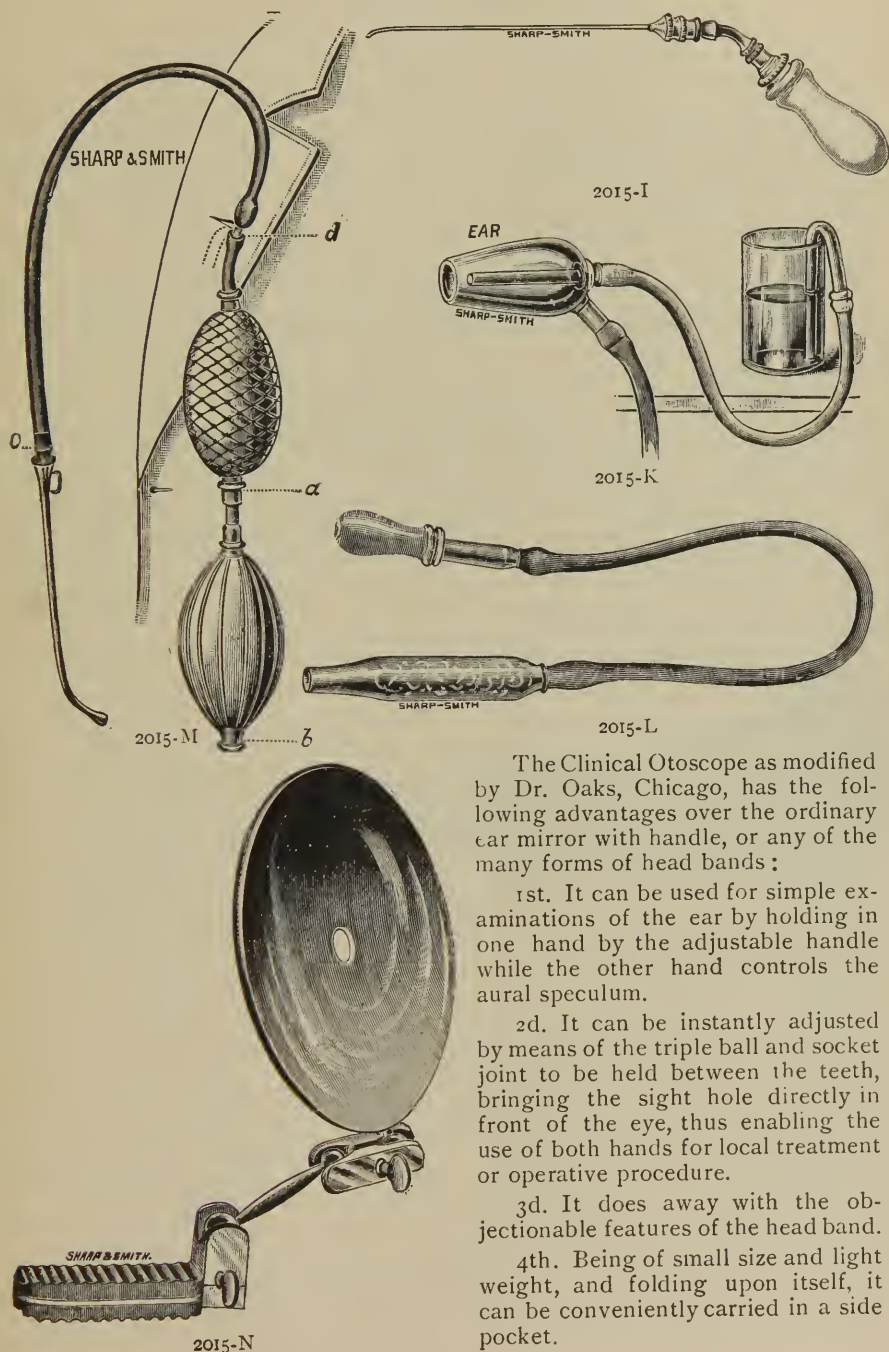
FIG.

1996	Virgin Silver Eustachian Catheter.....	\$ 1 00
1997	Noyes' " " ".....	1 65
1998	Coin " " ".....	1 00
1999	Plated " " ".....	60
*2000	Hard Rubber " " ".....	50
*2000-A	Ferguson's Soft Rubber Eustachian Catheter.....	1 50
*2001	Rumbold's " " ".....	1 00
2002	Spier's Eustachian Catheter.....	90
2003	Seiss' " " with Rubber Syringe.....	2 25
*2004	Levis " " Hard Rubber Syringe.....	2 50
2005	Bonafont's " " Holder.....	1 50
2006	Stark's " " ".....	3 00
2007	Pomeroy—Kramer's Eustachian Catheter Holder.....	2 50
2008	Fullgraf's " " Spray.....	4 50
2009	Hackley's " " ".....	4 85
*2010	Toynbee's Diagnostic Tube.....	60
*2011	" " Explorer, to fit same.....	60
2012	Clark's Ear Tube.....	40
*2013	Tuning Fork-A.....	35
*2014	Tuning Fork-C.....	1 15



All instruments designated by a * are illustrated.

EAR INSTRUMENTS.



The Clinical Otoscope as modified by Dr. Oaks, Chicago, has the following advantages over the ordinary ear mirror with handle, or any of the many forms of head bands :

1st. It can be used for simple examinations of the ear by holding in one hand by the adjustable handle while the other hand controls the aural speculum.

2d. It can be instantly adjusted by means of the triple ball and socket joint to be held between the teeth, bringing the sight hole directly in front of the eye, thus enabling the use of both hands for local treatment or operative procedure.

3d. It does away with the objectionable features of the head band.

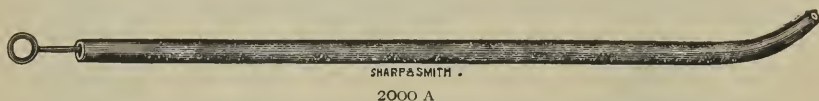
4th. Being of small size and light weight, and folding upon itself, it can be conveniently carried in a side pocket.

EAR INSTRUMENTS.

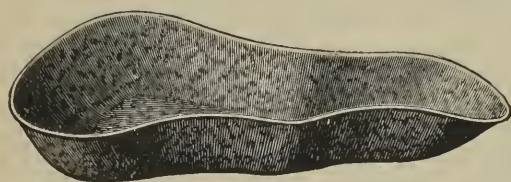
An Improved Form of Eustachian Catheter.

BY H. LINDO FERGUSON, F. R. C. S. J., DUNEDIN, N. Z.

In order to overcome the difficulty of passing an Eustachian catheter in cases where the inferior turbinated bone or a displaced septum encroaches on the nasal passage, and to avoid giving pain to the patient when the nasal mucous membrane is much swollen and sensitive, a soft rubber catheter might be used, fitted with a straight style, on withdrawal of which the catheter would resume its curve.



The catheter is of the ordinary shape, and is of soft red rubber, having inside the stem and extending nearly to the point, a spiral of fine wire, which prevents the lumen of the instrument being lessened by pressure when in position. There is a straight style of the same length as the catheter, which, when it is introduced, obliterates the curve at the beak. The catheter on the style is introduced like a straight probe along the floor of the nostril, with the side to which the beak tends to curve, outward. When the back of the pharynx is felt, the style is withdrawn and the beak curls around to the mouth of the Eustachian tube. In several cases I have not had to draw it forward at all, for the curve of the beak withdraws the point about the right distance. The instrument passes through very much obstructed nostrils and gives no pain in cases in which the hard rubber catheter cannot be tolerated.



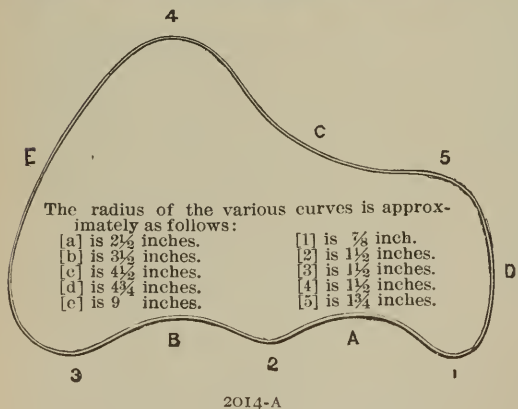
2014-A

NEW PUS BASIN.

From Design of H. L. Smith, M.D.

For hospital, dispensary and private practice, this basin will be much appreciated over the common ones in use, as some portion of it will perfectly fit any portion of the body.

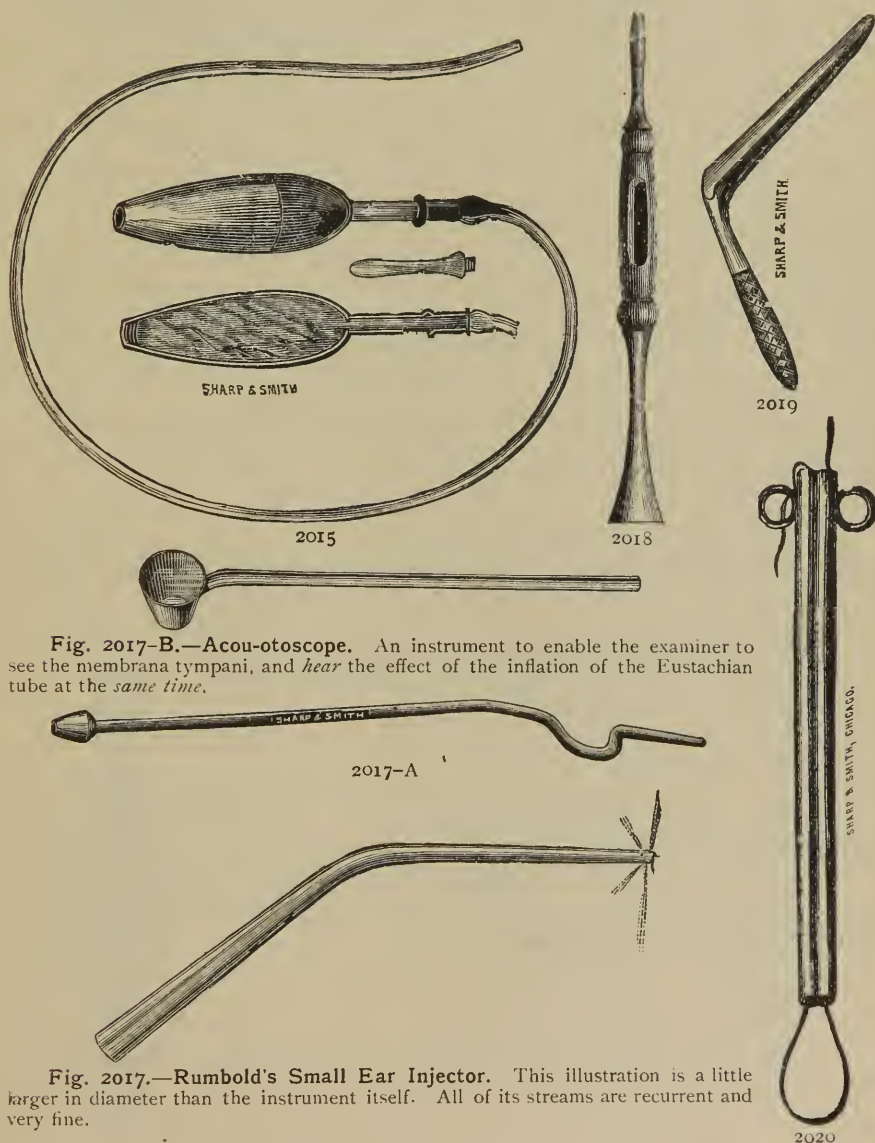
Made of sheet iron, pressed into shape and coated with a pure vitreous enamel, which, for tenacity and power of resisting the action of acids, has no equal. The surface is smooth and as easily cleaned as china, while the article is light, and practically indestructible.

Fig. 2014-A — Pus Basins—
Each \$1.50.

For other Pus Basins, see page 405.

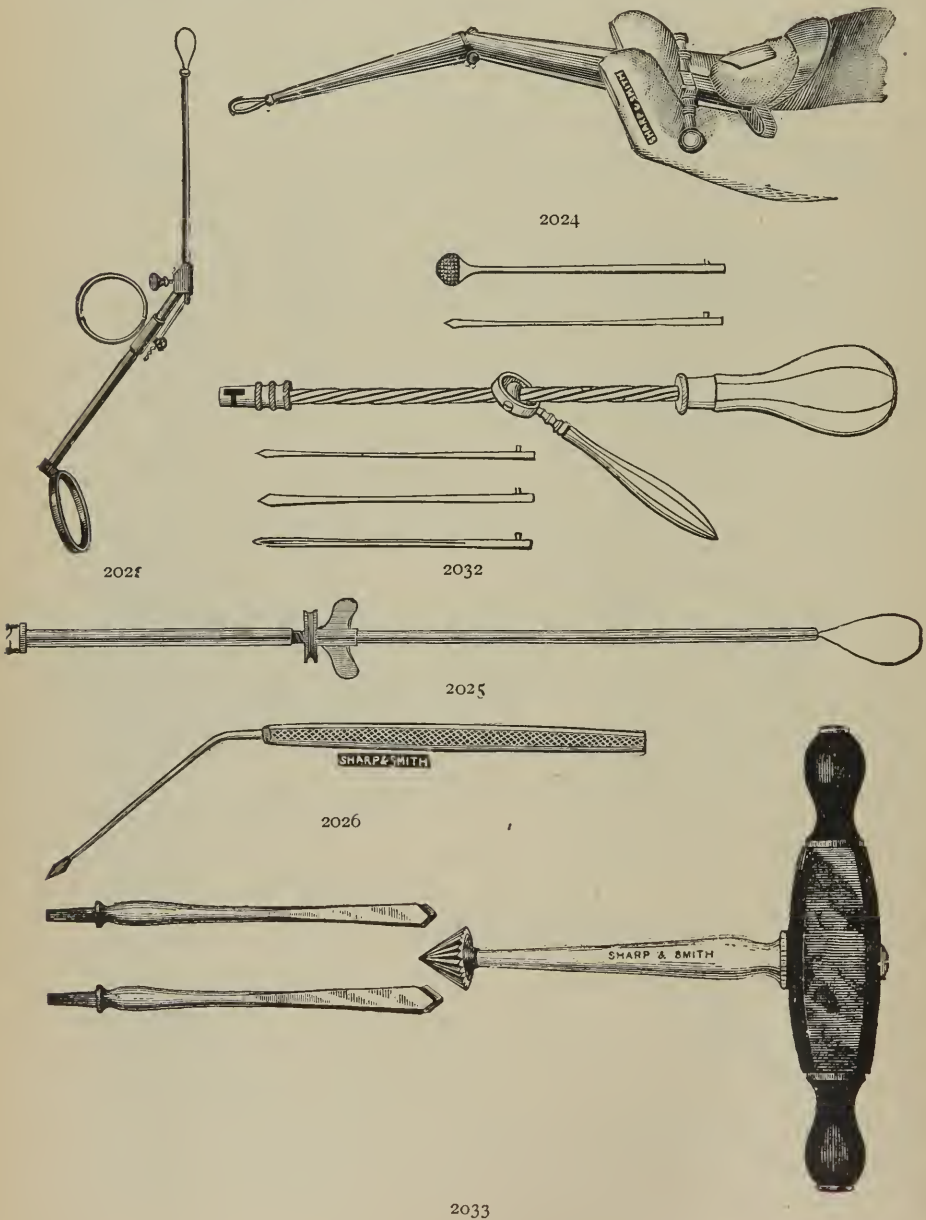
EAR INSTRUMENTS.

FIG.					
*2015	Buttles' Iodine Inhaler.....			\$	I 00
*2016	Pomero's Glass Inhaler.....				10
*2017	Rumbold's Injector.....			Y	00
*2017-A	" Curved Injector.....				I 00
*2017-B	" Acou-Otoscope				I 85
*2018	Knapp's Powder Blower.....				I 00
*2019	Wilde's Ear Gorget.....			Z	00
*2020	Gooch's Double Polypus Canula for removing polypi, silver.....				I 75
2020-A	" " " " " plated.....				I 00
2021	Hawley's " " " " " ".....				I 00



EAR INSTRUMENTS.

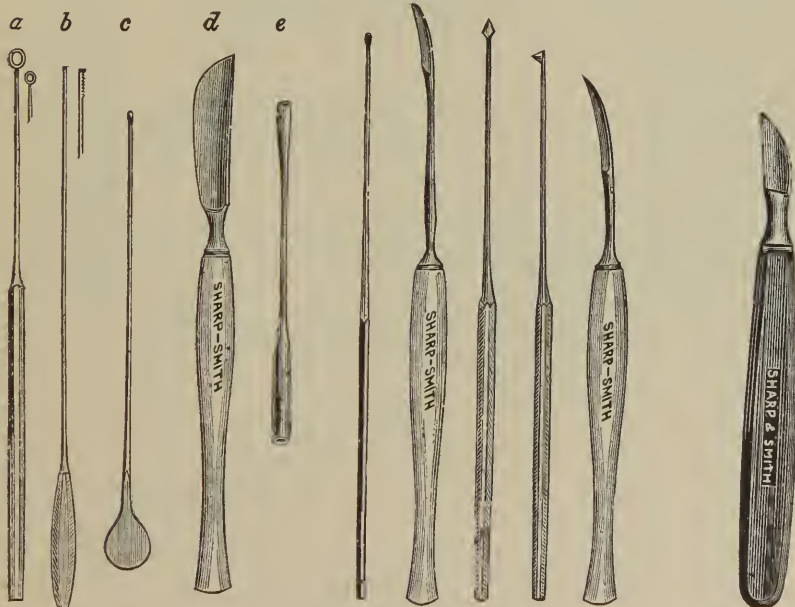
FIG.		
*2022	Blake's Polypus Snare.....	\$ 2 00
2023	" " " with three assorted Canulas and one Tympanum Perforator, in case.....	6 25
*2024	Wilde's Polypus Snare.....	2 00



EAR INSTRUMENTS.

FIG.		
*2025	Jarvis' Polypus Snare, straight.....	\$1 50
2025-A	" " " curved.....	1 50
*2026	Politzer's Tympanum Perforator, angular.....	75
2026-A	" " " " Ivory handle.....	1 10
2027	Prout's " " ".....	1 10
2028	Noyes' " " ".....	1 10
2029	Blake's " " ".....	1 10
2030	Gruber's Tensor Tympani Instrument.....	2 25
2031	Weber's " " ".....	6 00
*2032	Drill, with Guard for perforating the Mastoid Process.....	3 75
*2033	Buck's Drill " " ".....	2 25
2034	Politzer's Meatus Knife.....	1 10
2035	Gruber's " " Sickie shape.....	1 20
*2036-A	Buck's Curette.....	55
*2036-B	" Cotton Holder.....	25
*2036-C	" Silver Probe.....	60
*2036-D	" Knife for Mastoid Process.....	1 10
*2036-E	" Port-Acid Glass.....	10
*2036-F	" Silver Probe.....	60
*2036-G	" Blunt pointed curved Bistoury.....	1 10
*2036-H	" Maryngotome.....	70
*2036-I	" Furnucle.....	1 00
*2036-K	" Sharp pointed curved Bistoury.....	1 10
*2037	Burnett's Knife for Mastoid Process.....	1 15
2038	Post's Rongeur Forceps for Mastoid Process.....	2 25
2039	Hand Gouge " " ".....	1 15

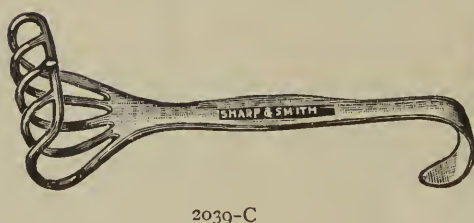
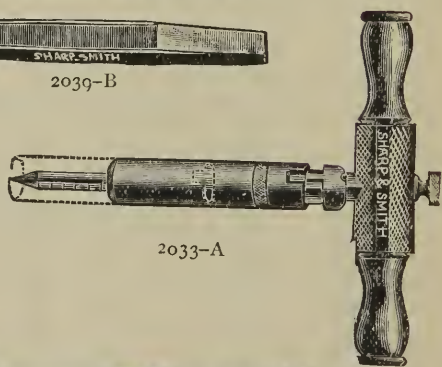
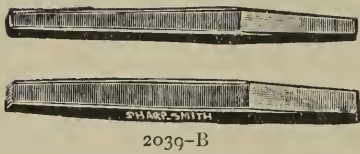
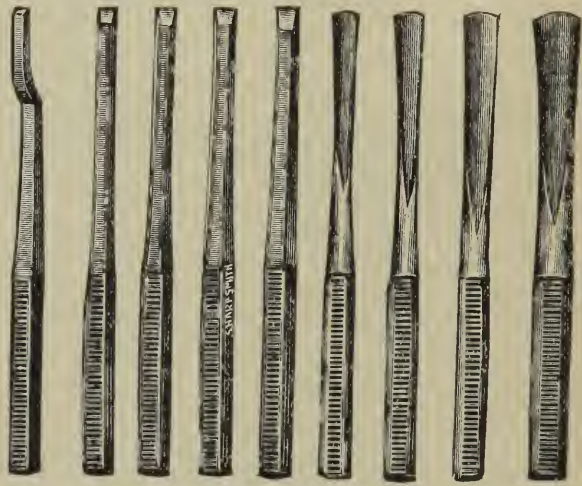
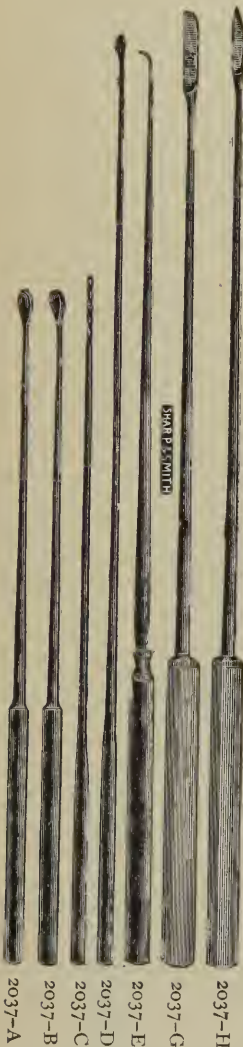
f g h i k



2036

2037

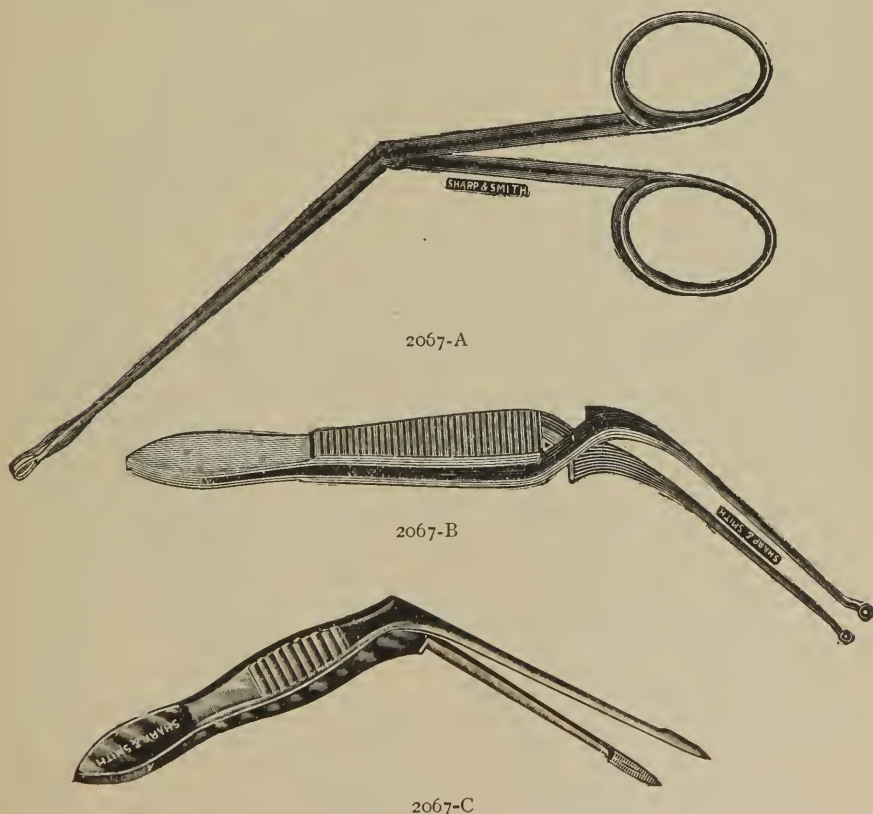
EAR INSTRUMENTS.



EAR INSTRUMENTS.

FIG.

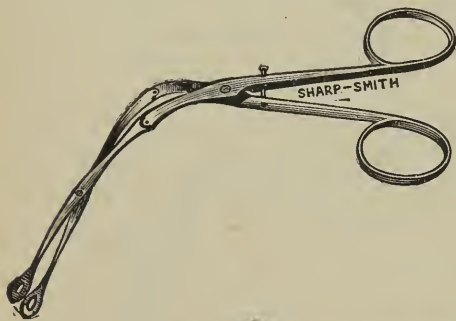
*2033-A.	Wilson's Mastoid Drill	\$5 00
*2037-A.	Dr. F. C. Hotz, Ear Spoon, long metal handle	50
*2037-B.	" " " Curette, " "	50
*2037-C.	" " " Cotton Carrier	50
*2037-D.	" " " Probe, flexible, pure silver	75
*2037-E.	" " " Tenaculum	60
*2037-G.	" " " Knife for operations on membrana tympani	1 00
*2037-H.	Dr. F. C. Hotz, Ear Knife for operations on membrana tympani	1 00
*2039-A.	Schwartz's Gouges and Chisels, each	75
*2039-B.	Buck's Chisels	75
*2039-C.	" Fenestrated Retractor	3 50
*2039-D.	" Mastoid Hook Guide	1 65
*2067-A.	Durham's Fenestrated Ear Forceps	4 50
*2067-B.	Hotz Fenestrated Curette Forceps	2 00
*2067-C.	Dunn's Nasal and Ear Polypus Forceps	1 50



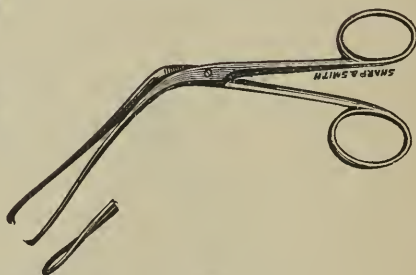
All instruments designated by a * are illustrated.

EAR INSTRUMENTS.

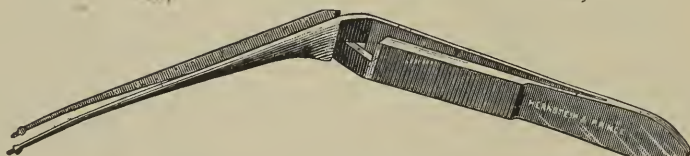
FIG.						
2068	Bumstead's Canulated Ear Forceps.....					\$3 00
*2069	Pomeroy's	"	"			1 85
2070	Toynbee's Angular	"	"			1 25
2071	Roosa's	"	"			1 25
2072	Mathieu's	"	"			3 25
*2073	Rumbold's Eyelet	"	"			2 60
2074	Tiemann's	"	"			3 75
2075	Wiers'	"	"			3 25
*2076	Duplay's	"	"			4 00



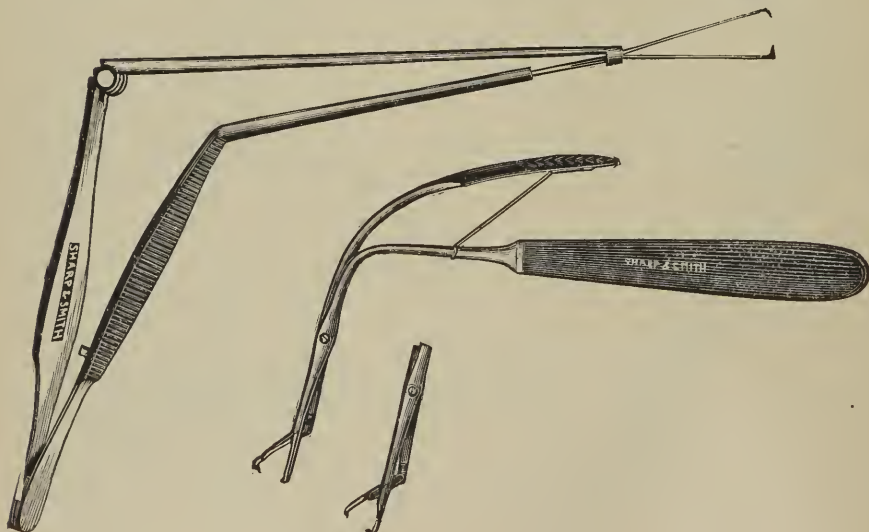
2068



2069



2070



2072

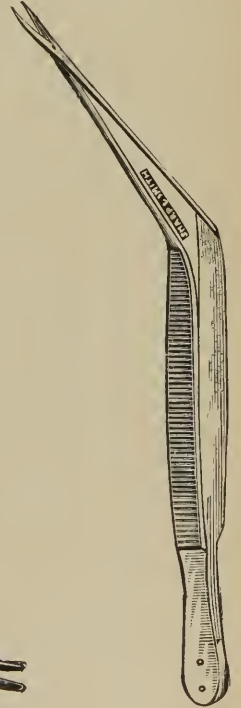
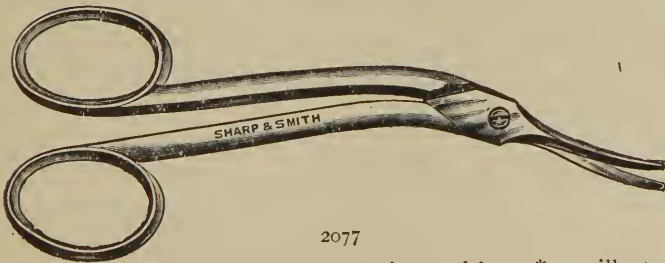
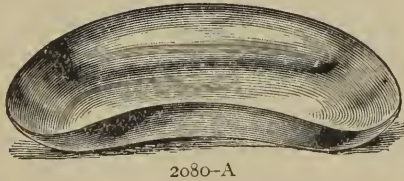
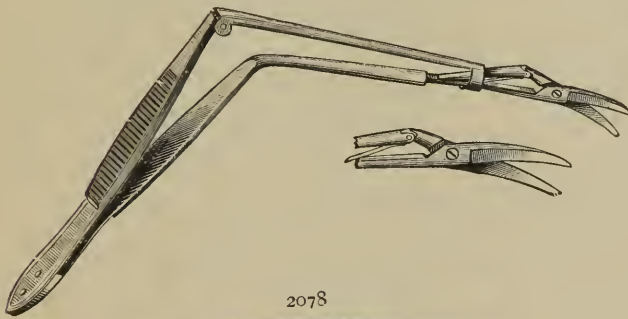
2076

All instruments designated by a * are illustrated

EAR INSTRUMENTS.

FIG.

*2077	Gruber's Ear Scissors.....	\$1 75
*2078	Jarvis' " ".....	4 50
*2079	Simrock's " ".....	3 30
2080	Pus Basins, Nickel Plated, small.....	90
*2080-A	" " " " medium.....	1 10
2080-B	" " " " large.....	1 25
2080-C	" " " " triangular, small.....	1 75
2080-D	" " " " " medium.....	2 00
2080-E	" " " " " large.....	2 25
2081	" " Hard Rubber, small.....	75
2081-A	" " " " medium.....	1 00
2081-B	" " " " large.....	1 25
2081-C	" " Papier Mache, triangular, small.....	1 00
2081-D	" " " " " medium.....	1 25
2081-E	" " " " " large.....	1 50
2082	" " Papier Mache, small.....	35
2082-A	" " " " medium.....	50
2082-B	" " " " large.....	75
For other Pus Basins, see page 398.		
2083	Holcomb's Cotton Carrier, steel.....	25
2084	Spiral " ".....	50
2085	Hard Rubber Cotton Carrier.....	50



All instruments designated by a * are illustrated.

DIAGNOSTIC AND OPERATING EAR CASES.

FIG.		
2086	Dr. A. H. Buck's Pocket Ear Set.....	\$ 5 50
2087	Dr. Samuel Sexton's " "	14 00
2088	Roosa's Ear Case.....	37 50
2089	Dr. A. H. Buck's Operating Case.....	27 00



Fig. 2086. DR. A. H. BUCK'S POCKET EAR SET, CONTAINS:

- | | | |
|-----------------------------|------------------------------|-------------|
| 3 Plain Fenestrated Scoops. | 1 Silver Probe. | 1 Tenotome. |
| 1 Tympanum Perforator. | 2 Holcomb's Cotton Carriers. | |
- Put up in a fine morocco case, 6½ inches long, 1⅝ inches wide, ½ inch deep.

Fig. 2087. DR. SAMUEL SEXTON'S POCKET EAR SET, CONTAINS:

- | | |
|--|-----------------------------|
| 1 Blake's Ear Snare, with tympanum perforator. | 1 Pure Silver Probe. |
| 2 Abscess Knives. | 1 Tensor Tympani knife. |
| 1 Universal Handle for Knives, etc. | 1 Granulation Knife or Hoe. |
- In morocco covered velvet lined case.

Fig. 2088. EAR CASE, BY D. B. ST. JOHN ROOSA, M. D., CONTAINS:

- | | |
|---|---|
| 1 Roosa's Mirror, with head band and handle. | ½ Dozen Artificial Ear Drums. |
| 1 Set Gruber's Ear Specula. | 1 Tape Measure. |
| 1 Rhinoscopic Mirror. | 1 Scalpel, fine ivory handle. |
| 1 Green's Tongue Depressor. | 1 Bistoury, " " " |
| 1 Blake's Ear Snare, with tympanum perforator. | 1 Conversation Tube. |
| 1 Pair Wilde's Angular Ear Forceps. | 1 Hard Rubber Ear Syringe. |
| 1 Glass Acid Rod. | 1 Tuning Fork, C. |
| 2 German Silver Eustachian Catheters. | 1 Diagnostic Tube. |
| 1 Politzer's Apparatus, with Roosa's attachments. | 1 Hard Rubber Eustachian Catheter, for a child. |
| | 1 Cotton Holder. |
- Put up in a neat morocco case.

Fig. 2089. DR. A. H. BUCK'S OPERATING EAR SET, CONTAINS:

- | | |
|---|---|
| 1 3 inch Mirror, with head band. | 1 Extra Fine Ivory Handled Scalpel. |
| 1 Pair Delicate Angular Forceps. | 1 Myringotome. |
| 1 Set of Drills, with sharp edges. | 1 Furuncular Knife. |
| 1 Set (4) Wilde's Silver Ear Specula. | 2 Curettes, steel handles. |
| 1 Blake's Ear Snare, with pure silver canula. | 4 Cotton Carriers, steel handles, assorted sizes. |
| 1 Extra Fine Ivory Handled Sharp Curved Bistoury. | 1 Porte-acid Glass, with platina applicator. |
| 1 Extra Fine Ivory Handled Blunt End Curved Bistoury. | 1 Middle Ear Probe. |
- Other Ear cases put up to order.

APPARATUS FOR ASSISTING THE HEARING.

FIG.					Jap.	N. P.
2090	Conversation Tubes, 5 feet, Silk.....				\$6 50	
*2091	" " " Conical, 3 feet, Silk.....				4 50	
2091-A	" " " " 5 " Mohair.....				5 00	
2091-B	" " " " 3 " ".....				3 25	
*2092	" " " Straight, 3 " Silk.....				2 50	
2092-A	" " " " 3 " Mohair.....				2 00	
*2093	Dipper Ear Trumpets, large.....				6 00	
2093-A	" " " medium.....				5 00	
2093-B	" " " small.....				4 50	
2094	Jointed " " ".....				3 50	\$5 00
*2094-A	" " " medium.....				4 00	6 00
2094-B	" " " large.....				5 00	8 00
2095	Bugle Shape Ear Trumpets, large.....				4 00	6 00
*2095-A	" " " " medium.....				3 00	4 50
2095-B	" " " " small.....				2 50	3 50
2096	London Hearing Horns, large.....				5 00	
*2096-A	" " " medium.....				4 50	
2096-B	" " " small.....				4 00	
The London Horns furnished in Nickel Plate or Black at same price.						
*2097	Leather Covered Auricles.....				3 50	
2097-A	Silk " ".....				5 00	
*2098	Silver Cornets.....			per pair.	3 00	
2099	" " connected with wire.....			set.	4 00	
*2100	Artificial Tympanum.....			each.	25	
*2101	Apparitor Auris.....			per pair.	6 00	

DEAFNESS AND ITS CAUSES.

APPLIANCES FOR ASSISTING THE HEARING.

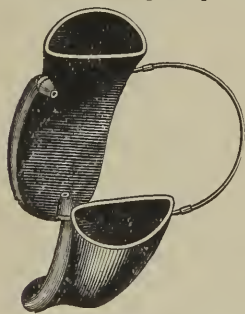
Sound is the result of any impulse conveyed by the undulations of the air to the organs of hearing, which are so constructed as to receive these undulations, and so organized as to become sensible of them, and to convey the impressions to the brain. These organs consist, first and essentially, of a special nerve expanded on membranes and endowed with the property of sensibility to the impression of sound; secondly, of a physical apparatus fitted for receiving and conducting these impulses in their course to the sentient nerve. We may divide the ear into an external, middle and internal portion. The external comprises the auricles commonly called the ear, and the external opening or tube. The middle ear consists of the tympanum or drum, with the ossicular auditus. The internal, or true ear, is termed the labyrinth, and comprises several parts, among which are the auditory nerves, or cochlea. The mechanism of the ear is exceedingly complicated. Although many minute parts compose this organ, yet the seats of disease are few. The drum (*membrana tympani*), the most delicate portion, is situated near the middle of the tube (*Eustachian*) which extends from the external opening in the ear to the nose and throat, and forms a partition in this tube, the air on one side reaching the drum from the ear, on the other side from the throat and nose. They lubricate the meatus

EAR TRUMPETS AND TUBES.

and preserve the suppleness of the lining membrane. The wax prevents the introduction of bodies that may be floating in the air, and by its bitterness and unctuousness prevents insects from penetrating the more delicate parts of the internal ear. It must thus appear that deafness must exist in the state of inaction of either the drum, the nerves, the cochlea, the follicles secreting the wax, or the membranes of the passages of the ear. The diseases which affect hearing are most generally of scrofulous or nervous origin, excepting those which occur from violence, or the excessive use of powerful drugs.

Noises in the head are caused by colds. The follicles do not perform their functions, and in consequence of the absence of the lubricating substance the formation of scales or scurf (which it is the function of the follicles to prevent) upon the drum of the ear, ensues. This formation prevents this organ from vibrating in response to slight movements of air which in health move it effectually. This formation in the ear decreases the size of the conducting canal, while it covers up the wax glands, which prevents the healthy wax from coming out. Hence arises deafness. The drum is thickened by a formation of scales. These are imperfectly attached by their edges, and slight movements of air rustle them, while violent movements force them upon the drum, and the scales and drum moving together, produce sound. Hence in a mill or railroad car where there is a great noise, you hear even a whisper better than when in a quiet room. In this case it would be well to consult with a physician. But in most cases our Auricle (Fig. 2097) will be, to say the least, extremely useful. This Auricle is made from different metals, so combined as to secure electric power. It is covered with fine morocco, and, that it may not be conspicuous, is connected with a fine steel spring, with sufficient power to press the soft rubber tubes into the ear. A person with long hair wearing an instrument of this construction can wear it without its being in any way conspicuous or inconvenient. It enables the air to have free access to the drum, and by it a circle of electric nerve power is made to connect from one ear to the other externally, and complete the circle through the nerve internally.

Electricity moves in circles, and the nerve power of the human body is electricity. This fact is illustrated by applying the ordinary magnetic battery to the nerve of a cadavera, and it will cause the subject to rise, the face to grimace, and give power to the nerves which have lost their power, and recall



2097

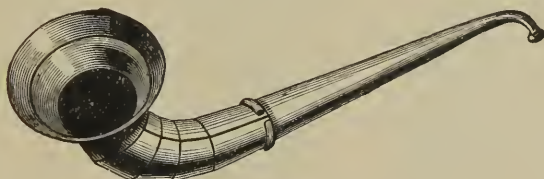
them to life. The Silver Ear Vibrator (Fig. 2099, not illustrated), answers the same purpose as the Auricle in cases of Primary Deafness. Catarrhal Deafness is the result of a cold. Catarrh, as it is usually, is when the lining membrane of the nose is the seat. It commences with a discharge, slight in quantity and of a watery character. As the disease progresses suppuration of the parts takes place, and the violence of the disease may be determined by the nature of the discharge. When the inflammation reaches the covering of the bones of the nose the discharge is distinguished by its offensiveness, and a further progress results in the destruction of the bones of the nose and closing of the Eustachian tubes. Some are affected in damp or

rainy weather with deafness, and cannot account for the cause. It arises from the thickening of the membrane lining the Eustachian tube. It is evident, too, for the radical cure, you must attack the root of the cause of thickening. This may be done by the use of the Nasal Douche, after the method of Professor Thudicum of London, or by the use of most any style of "Nasal Douche."

EAR TRUMPETS AND TUBES.

By a thorough course of this popular and scientific treatment of Catarrh, the abnormal secretions are caused to pass out through their natural outlets. The discharge from the nose will soon cease, as well as the pain in the temple and the noises in the head, when produced by this cause. If the lining membranes of the throat or nose have lost their sensation of taste or smell, they will speedily yield to this treatment, and be restored to their normal condition. For Catarrh in its incipient stages, Dr. Warner's Catarrhal Syringe has been found very useful. This valuable instrument is the result of long study. The hard rubber tube, which is to pass into the posterior nares, is connected with the soft rubber bag by a piece of flexible tube, so as to enable patients to use it themselves simply by compressing the bulb, thus avoiding the unpleasant sensation caused by using the ordinary syringe for that purpose, as you cannot always feel sure of throwing the injection forward.

In cases of Deafness, where the patient has no organic constitutional trouble, is over forty years of age, and enjoys fair average health, he can only expect to obtain relief by the use of the Ear Trumpet. As age increases the deafness becomes worse. To these persons we recommend our Ear Trumpet (Fig. 2094), japanned or German silver. They can be taken apart, and are sufficiently compact to admit of being carried without inconvenience. This Trumpet magnifies the sound so as to require no raising of the voice, and conversation can be carried on in an ordinary tone.



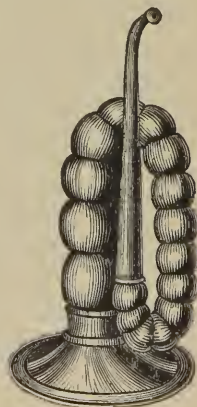
2094-A

For the benefit of those who desire to hear lectures, attend church or hear public speakers at a distance, we manufacture the Dipper Trumpet (Fig. 2093), with a piece of metal across the bell, perforated with small holes to admit sound. The metal plate acts as an electric conductor in condensing and concentrating sound, greatly vibrating the increased volume of air before it reaches the nerves, thus giving the Trumpet all the more power of increasing sound.



2093

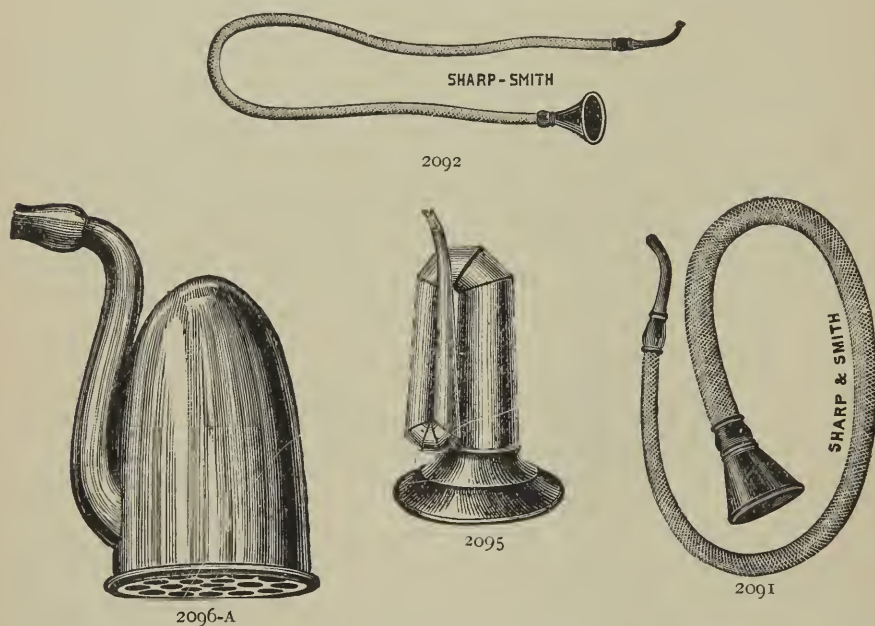
Many persons now supposed to be incurably deaf, might be restored to a respectable degree of hearing—greatly to be desired by themselves, as well as by their friends—by using our Ear Trumpet represented in Fig. 2095A. Corrugated and composed of different metals, it is one of the most powerful Ear Trumpets we manufacture. This Trumpet is of great use where the deafness results from scarlet fever. In many cases the small bones of the ear come away and total deafness ensues.



2095-A

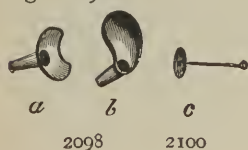
EAR TRUMPETS AND TUBES.

Conversation Tubes (Figs. 2091 and 2092). These we have manufactured expressly for us. They are perfectly flexible, and do not produce an external sound, which is the fault with too many Conversation Tubes. This tube suits the most obstinate cases of deafness, and is particularly convenient at the dinner table and in company, as the wearer can converse in almost a whisper, and private conversation can be carried on without attracting the attention of others.



The most popular of all the Trumpets are the London Hearing Horns (Fig. 2096 A), which are constructed on new and scientific principles, and although they are equally as strong as many of the larger instruments, they answer for those who are moderately deaf, and as they can easily be carried in the pocket and concealed in the hand when in use, they are highly prized by those having them. We have them in black and nickel plated, and in sizes varying from $2\frac{1}{2}$ inches to 4 inches high. The plated ones are finely polished, and present a neat and handsome appearance, while the black ones are preferred by those who wish to conceal them and desire to make as little show as possible.

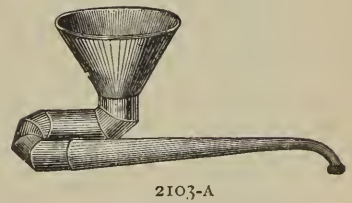
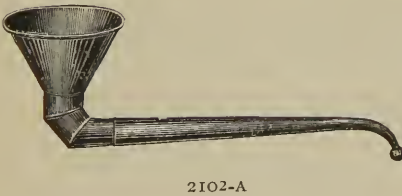
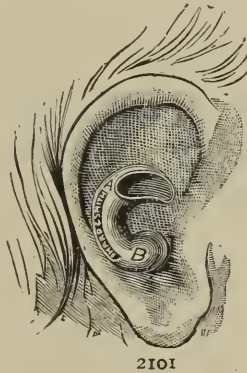
Cornets are the smallest of hearing instruments, and will be found efficient in cases of obstruction of the meatus by reason of contraction or the presence of polypi. As they usually come in contact with tissues that are more or less inflamed, they should always be made from gold or silver. These are shown in Figs. 2098 A and B.



Artificial Tympanums are used to diminish the evil results occurring from perforation of the drum. The Artificial Tympanum is pressed against the remains of the natural one, and the opening thus closed. They are shown in Fig. 2100 C.

EAR TRUMPETS AND TUBES.

FIG.					
2102	Jointed Plain Ear Trumpet, Japanned, small.....				\$ 2 00
*2102A	"	"	"	medium.....	2 50
2102B	"	"	"	large.....	3 00
2103	Double Curve " " small.....				2 00
*2103A	"	"	"	medium.....	2 50
2103B	"	"	"	large.....	3 00
2104	Bell Shape " "				6 00



The Apparitor Auris is shown in Fig. 2101 A, and is so shaped that it may be worn entirely within the concha, being almost unobservable on account of its close fit and flesh color. The advantage of this instrument over the cornet consists in having the canal elongated so that the waves of sound that enter the aperture are not diffused, but conducted through the meatus to the tympanum.

Those commencing the use of hearing instruments, especially of Trumpet and Auricles, will frequently be disappointed with first trials, and will complain that sounds are confused, but after a short experience they will usually appear natural, and the assistance derived will be so highly valued that the use of artificial aids will not willingly be dispensed with.

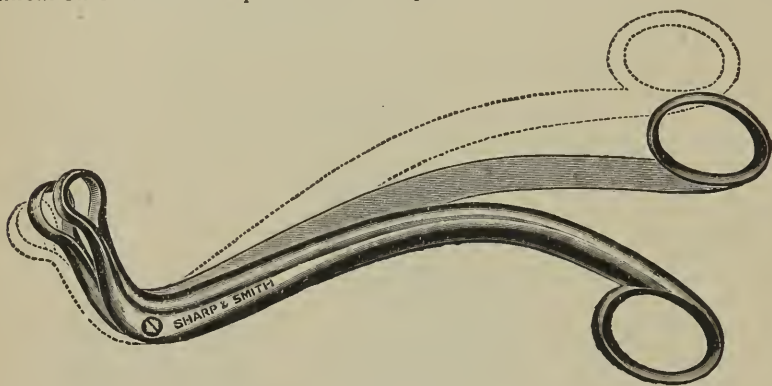
All instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

A NEW ADENOID FORCEPS.

By FREDERIC D. OWSLEY, M. D., Professor of Laryngology and Rhinology, Post Graduate Medical School of Chicago; Laryngologist and Rhinologist to Cook County Hospital.

This forceps, which I recommend to the attention of the profession, is a modification of Schultze's post nasal forceps.



2104-A.

The advantageous features of this instrument are, first, the rapidity with which the growths may be removed, thereby doing away with the necessity of other than local anæsthetics; and secondly, after introducing the instrument behind the soft palate, it is impossible with ordinary force to grasp within the cutting blade of the instrument any normal tissue. The structure of this is such that the operator has the assurance that in removing adenoid vegetations he will not mutilate the orifices of the Eustachian tubes, the septum, or any normal development in the post nasal cavity.



2104-B—Modification of Gottstein's Post Nasal Curette.

The slight modification I have recommended in the contour of the ring knife has proved in my hands to be an improvement.

FREDERIC D. OWSLEY.

NASAL INSTRUMENTS.

FIG.	Dr. Frederic D. Owsley's Modification of Schultze's Post Nasal Curette Forceps.....	\$5 00
*2104-A	Dr. Frederic D. Owsley's Modification of Gottstein's Curette.....	2 25
*2104-B	Dr. Carl E Munger's " " " ".....	2 50
*2104-C	Dr. Frank E. Miller's " " " ".....	2 50
*2104-D	Dr. Myles' Nasal Trimmer.....Each	5 00

A MODIFIED GOTTSTEIN'S CURETTE.

BY CARL E. MUNGER, M. D.

Clinical Assistant Manhattan Eye and Ear Hospital, Throat Department, New York.

Those who have used Gottstein's ring knife for the removal of "adenoids" from the naso-pharynx, have found it of the greatest convenience and utility, by reason of its ease of introduction and manipulation. It is an instrument which can ordinarily be used without the aid of anæsthesia, and the further advantages possessed are its adaptability to patients of all ages, the absence of danger of harming surrounding tissue, and the thoroughness of removal of the adenoid vegetations.

In a recent number of the RECORD is an excellent article by Dr. Frank E. Miller on the "Removal of Adenoid Vegetations from the Vault of the Pharynx" by "Gottstein's new improved curette." A still further modification of this most useful instrument, and one which I have found to be in every way satisfactory, is reached by having the instrument so made that, while preserving the general contour of the "improved Gottstein," the distal portion of the ring, instead of having a slightly convex or nearly flat surface, has its form so changed that the ring presents a heart shaped appearance, as seen in the accompanying cut. The advantage of this is that the curette can be made, as it were, to straddle the posterior edge of the nasal septum and by so doing allow the two wings of the "heart" to reach into the choanæ. By this means the curette can be brought farther forward and the space more thoroughly cleared than by any other form of the ring-knife.

A somewhat similar instrument was recently shown by Professor Adam Politzer, of Vienna, at a meeting of aurists in London, but, so far as I know, this shape has not been used in this country.

I have found this modification of Gottstein's "ring messer" or curette to be very satisfactory in the removal of adenoids, and take great pleasure in recommending it to those using like instruments.



2104-C



2104-D



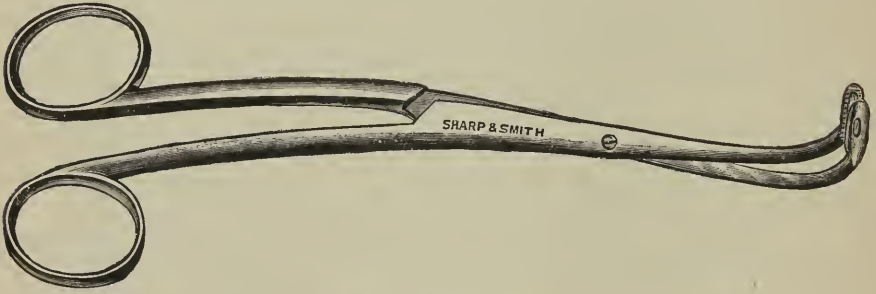
2104-E

Fig. 2104-E—This instrument is for use in trimming obstructing cartilages and bones in the nasal cavity. It is made in the form of the alligator forceps and its jaws are after the manner of a punch and die, the solid upper blade sinking into the lower fenestrated jaw.

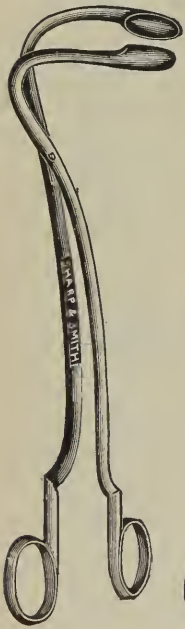
Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

FIG						
*2105	Brown's	Post	Nasal	Curette	Forceps.....	\$3 25
2106	Lowenberg's	"	"	"	.....	3 00
2107	Politzer's	"	"	"	.....	3 40
*2108	Cohen's	"	"	"	.....	2 50
*2109	"	"	Cutting	"	.....	3 00
2110	Stoerck's	"	"	"	.....	2 50
*2111	Wagner's	"	"	"	.....	2 25
2112	"	"	Cutting	"	.....	4 00
*2113	Luer's	"	Polypus	"	.....	3 00
2114	Plain	"	"	"	short.....	1 00
*2115	"	"	"	"	long.....	1 50
*2116	Gross'	"	"	"	.....	1 50



2111



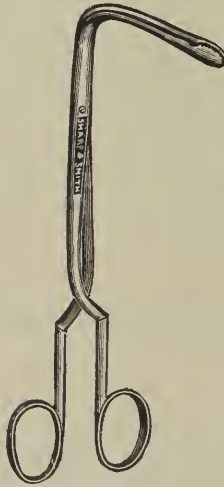
2109



2115



2113



2108



2105



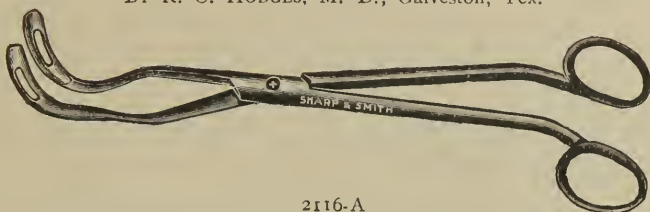
2116

Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

A NEW FORCEPS FOR ADENOID GROWTHS.

By R. C. HODGES, M. D., Galveston, Tex.



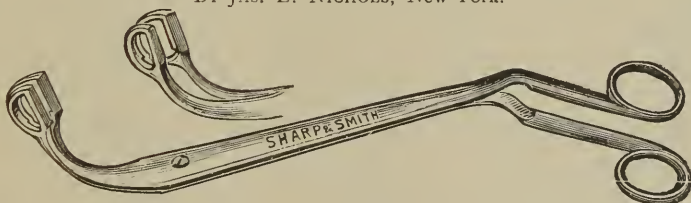
2116-A

"The Adenoid Forceps ordinarily employed are frequently a source of danger to the uvula or soft palate, as the crossed or scissors action is apt to pinch or cut. In operating on these adenoid growths in the vault of the pharynx very often one is obliged to dispense with a palate retractor. This is most frequently the case in operating on children.

"To avoid injuring, and at the same time to admit of lifting and detracting the palate, I have devised this forceps. The spreading of the blades enables the surgeon to cut freely and avoid the uvula. Another advantage is the large cutting surface. I have found this instrument very useful and practical, and believe that it possesses all the advantages of other forceps, and is superior to all of them in the points I have mentioned."

A NEW NASO-PHARYNGEAL FORCEPS.

By JAS. E. NICHOLS, New York.



2116-B

For the treatment of the very important and now commonly recognized disease known as chronic hypertrophic naso-pharyngitis, or adenoids of the pharyngeal vault, there have been many instruments in use with varying degrees of success. Since Loewenberg first made use of his post-nasal forceps, there have been numerous changes and modifications in his model, each one of which has, I suppose, a "raison d'être." I venture to add another to the number, for the reason that so many have expressed an appreciation of its excellence, and not with any claim to great originality. The main objection to the forceps of the Loewenberg or Hooper type is that having only a pinching edge with very small space between the blades when closed, the adenoid issue is not cut off in a cleanly, efficient way, but rather torn off in bits of varying size, according to the strength of the pinch, and the grasp of the pincher. The result is a more or less roughened surface, and in many cases a stripping down of the pharyngeal mucous membrane, followed by unpleasant cicatrices. It is always advisable to leave as smooth a surface as possible after an operation of this nature, in order that speedy healing may take place, as well as the diseased tissue be entirely eradicated.

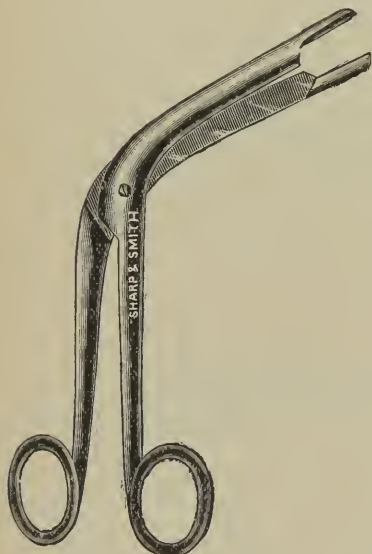
The forceps shown in the accompanying cut have proven successful in this respect. The curve of the scissors blade is such as to fit the vault's normal curve, and the cutting edge is long enough to cover the origin of most growths. Being fenestrated, a very large amount of tissue can be removed at one grasp, and I have rarely found it necessary to introduce the instrument more than twice on one patient. The scissors handle is believed to be more manageable than the straight handle, with spring, of the Gradle forceps, from which the principal features of the instrument are derived.

NASAL INSTRUMENTS.

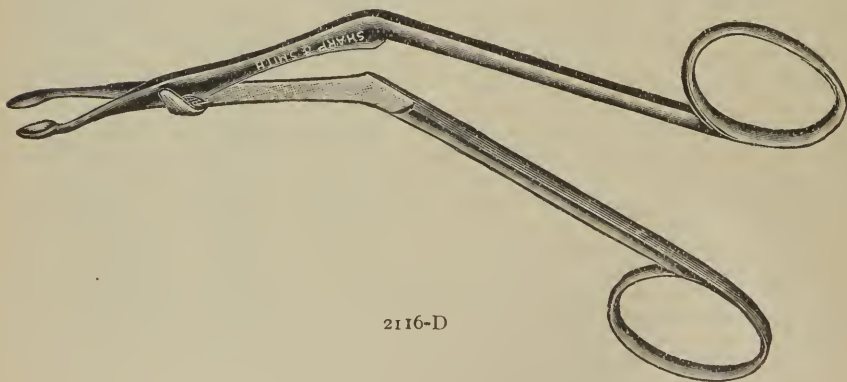
FIG.		
*2116-A	Dr. R. C. Hodges' Forceps for Adenoid Growths (see preceding page).....	\$3 50
*2116-B	Dr. Jas. E. Nichols' Naso-Pharyngeal Forceps (see preceding page).....	3 75
*2116-C	Dr. Norval H. Pierce's Nasal Rongeur Forceps.....	3 00
*2116-D	Heyman's Nasal Curette Forceps.....	3 00

Fig. 2116-C. DR. PIERCE'S NASAL RONGEUR FORCEPS.

These forceps were originally designed for removal of the middle turbinated bodies, including the bony parts, in suppuration of the turbinated cells. They may, however, be used for removing the anterior head of the middle turbinated in those cases where the employment of the wire snare is often rendered impossible. Such cases are found in proliferation of the external muco-perosteum, as in the same condition when it attacks the muco-perosteum lining the labyrinth. They are made in three sizes, and are constructed so that a good deal of force may be conveyed to the cutting edges. It is unnecessary to say that they may be used for nipping off those small polypsoid hypertrophies which are sometimes situated in positions which render the use of the snare impossible.



2116-C



2116-D

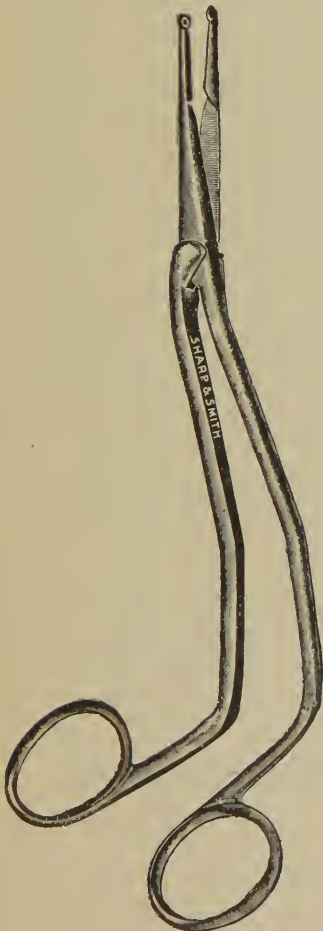
Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

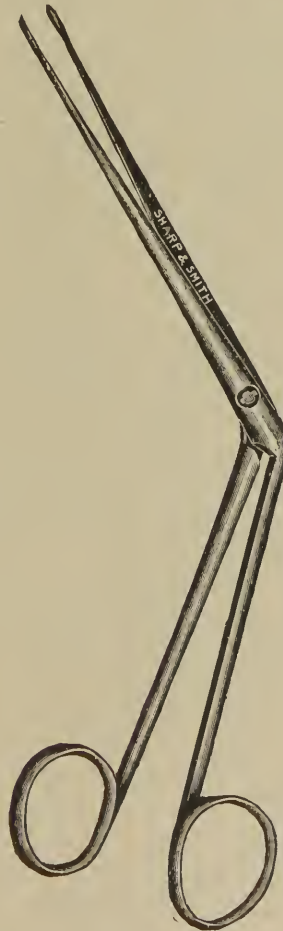
FIG.		
*2117—A	Long, Slender, Ring Polypus Forceps	\$3 00
*2117—B	Sharp & Smith's Long, Slender, Angular Polypus Forceps	2 25
*2117—C	" " " " Curved	2 25
*2117—D	Leonard's Nasal Polypus Forceps...	2 25



2117—D



2117—A



2117—B



2117—C

All instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

FIG.			
*2117—E	Dr. Leonard A. Dessar's Nasal Electrode	\$1	50
*2117—G	Dr. Goodwillie's Nasal Plug Placer.		85
*2117—H	Rhinoscopic Mirror, extra small with handle.		60
2117—I	“ “ “ “ without “		50
2117—K	“ “ handles (Universal).		35

A NEW NASAL ELECTRODE.

BY LEONARD A. DESSAR, M. D., New York.

“The risk of infection from the use of the ordinary cautery electrodes led me to the idea of devising an instrument by which this danger might be obviated.

“Mucus and pus are apt to collect on and about the binding cords of the ordinary electrode and so become a source of infection, as it is almost impossible to cleanse these instruments thoroughly.”

At my suggestion there has been constructed a set of electrodes made of metal which, when not in use, may be immersed in a solution of carbolic acid or other disinfectants, and thus rendered perfectly aseptic.

Another advantage of these electrodes is the fact that they can be heated to the proper degree with a weaker electrical current than those in ordinary use. The instruments are made of copper, nickel plated, and the shafts are united by two metal bands, the insulating material used being ether fibre, asbestos, or ivory.

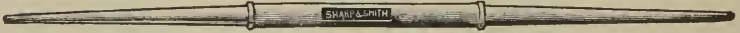
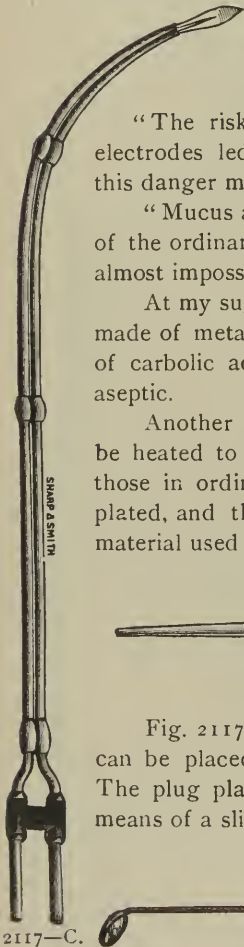


Fig. 2117-D.—In cases of hemorrhage a hard-wound cotton plug can be placed in any desired position by means of this instrument. The plug placer can be withdrawn without disturbing the plug by means of a slide which pushes the plug off the instrument.

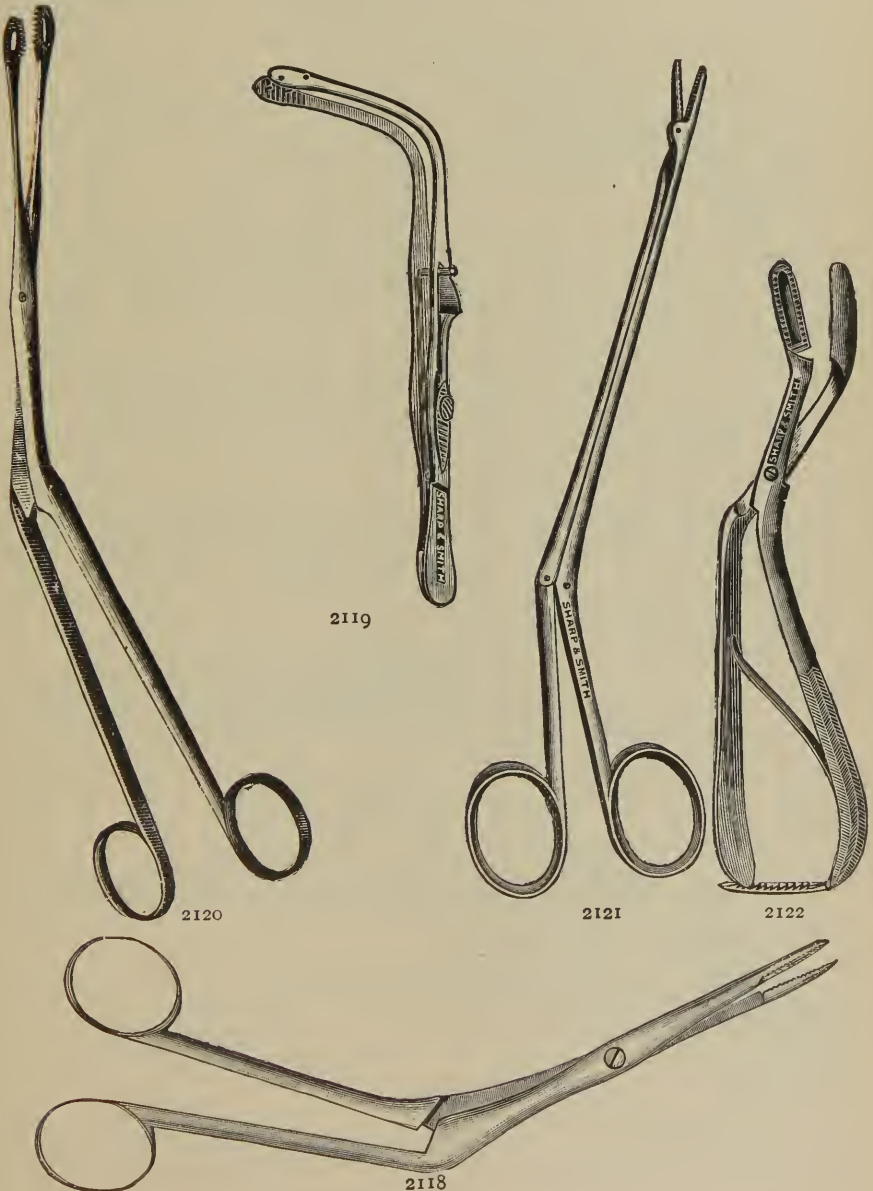


This Mirror is of extra small size, being only 8 mm. diameter, and is especially adapted for rhinoscopic diagnosis.

All instruments designated by a * are illustrated.

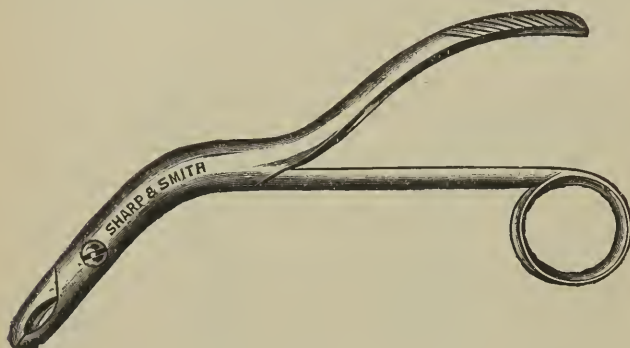
NASAL INSTRUMENTS.

FIG.		
2117	Robinson's Pharyngeal Forceps.....	\$ 2 50
*2118	Knight's Nasal	2 25
*2119	Sajou's Pharyngeal	2 25
2119-A	" Nasal Bone	3 00
*2120	Simrock's Polypus	1 50
*2121	Noyes' Alligator Nasal Polypus Forceps	3 25
*2122	Cohen's Evulsion Forceps for Naso-Pharyngeal Tumors.....	3 75

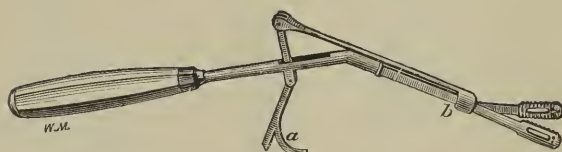


NASAL INSTRUMENTS.

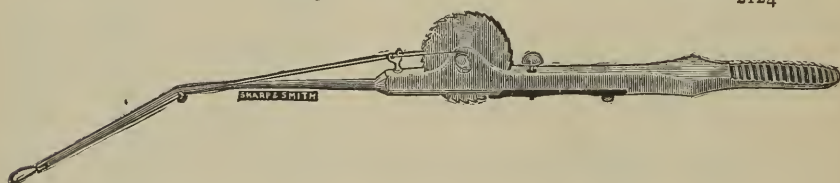
FIG.		
*2123	Jarvis Rongeur Forceps.....	\$ 4 50
*2124	Rumbold's Polypus " .....	...
*2125	" Pharyngo Nasal Forceps.....	...
*2126	McKenzie's Polypus " Snare.....	6 00
*2126A	Penn's Cat Gut Ecraseur.....	4 00



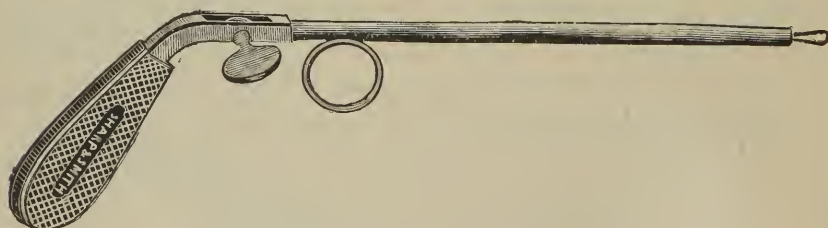
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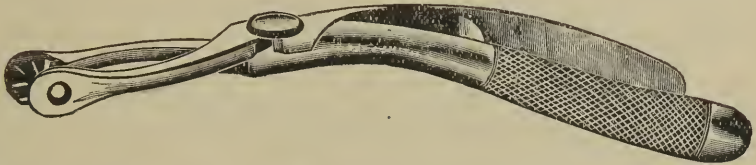
2126

For removing small tumors from the nose, fauces, rectum and uterus. Two very small holes through the pin receive the ends of an "E" violin string, which is doubled and passed through from the opposite end of the tube.

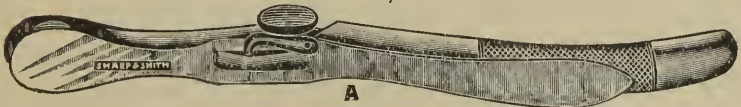
NASAL INSTRUMENTS.

FIG.

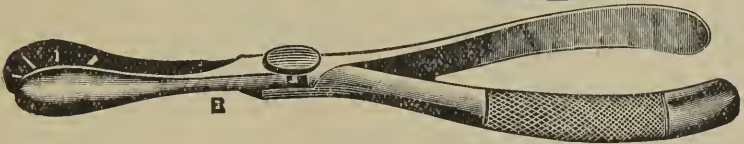
*2127	Jarvis' Septum Punch.....	\$ 6 25
2128	Sajou's (set) " ".....	9 00
*2129	Steele's " ".....	7 50
*2130	Gradle's " Forceps.....	6 00
2131	Bosworth's Rhinoplastos.....	3 00
*2132	Adams' " ".....	2 25
*2133	Goodwillie's Nasal Snare Forceps.....	11 25



2127



A



B

2129

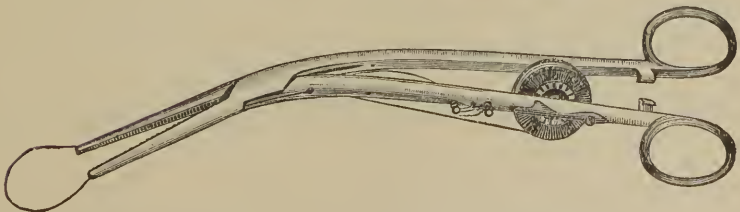


2132



SHARP & SMITH

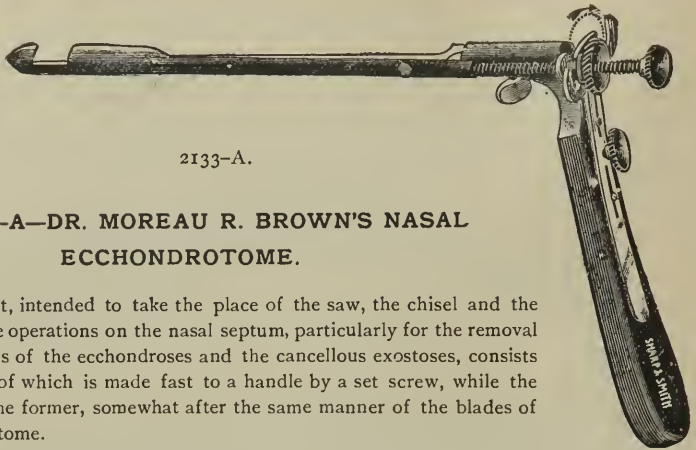
2130



2133

Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.



2133-A.

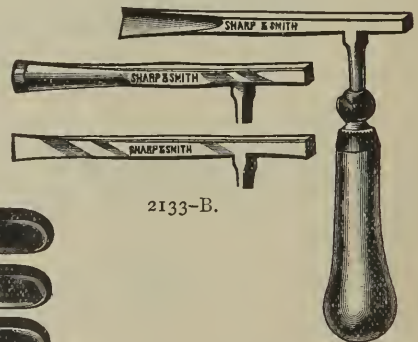
**Fig. 2133-A—DR. MOREAU R. BROWN'S NASAL
ECCHONDROTOME.**

This instrument, intended to take the place of the saw, the chisel and the knife in many of the operations on the nasal septum, particularly for the removal of the various forms of the ecchondroses and the cancellous exostoses, consists of two blades, one of which is made fast to a handle by a set screw, while the other slides along the former, somewhat after the same manner of the blades of a Mackenzie tonsilotome.

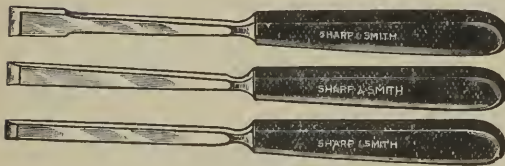
The cutting edges of the two blades may be made to approximate each other rapidly by pushing the second or sliding blade with the thumb, or slowly by means of a screw; experience having demonstrated that to be a very advantageous arrangement.

The blades can be turned on their long axis so as to operate in either the left or right nasal cavity.

These instruments are made by Sharp & Smith.



2133-B.



2133-C.



2133-D.

This Trephine, used with the Electric Motor, is particularly safe on account of the shield, and its great advantage lies in the shoulder at the end of the shank, which prevents the teeth of the Trephine from striking the end of the shield.

NASAL INSTRUMENTS.

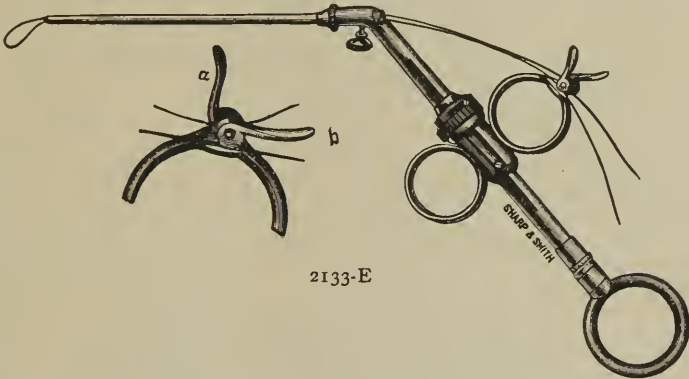
FIG.		
*2133-A	Dr. Moreau R. Brown's Nasal Echondrotome.....	\$8 50
*2133-B	Hartmann's Nasal Chisel set of 3 in one handle.....	5 50
*2133-C	" " Hand Chisel, made in three sizes.....each,	1 50
*2133-D	Dr. Myles' Guarded Nasal Trephine.	6 00
*2133-E	Dr. E. L. Oatman's new Nasal Snare.....	9 75
*2133-G	Dr. Moreau R. Brown's Nasal Snare Handle.....	1 00
*2133-H	Dr. Norval H. Pierce's Allæ Nasi Instrument	50
*2133-I	Dr. Myles' " " " "	50
*2133-K	Dr. Norval H. Pierce's Rod for Dry Massage.....	75

(From "The Medical Record," April 16, 1892.)

NEW METHOD OF FASTENING THE WIRE IN NASAL SNARES.

BY E. L. OATMAN, M. D., Nyack, N. Y.

In the best of nasal snares the manner of fastening the ends of the wire is oftentimes a source of annoyance and delay, especially so when in the midst of an operation it becomes necessary to shorten the loop. My attempted improvement consists in catching the wire between an eccentric wheel, with an attached lever and the flattened upper surface of the carriage, the opposing surfaces being roughened to prevent slipping. The modification was adapted to Hooper's snare

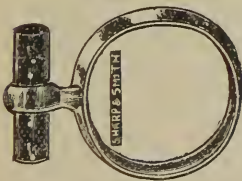


2133-E

and ecraseur, but it is also applicable to any other instrument similarly constructed. The wire should be accurately placed and the lever pressed down with only moderate force.

2133-H. Instrument for Overcoming Convergence of the Allæ Nasi.

(See DR. NORVAL PIERCE'S Paper in the *International Medical Magazine* for October, 1892.)



2133-G Brown's Cautery Snare Handle.



2133-II



2133-I

With this instrument there is no pressure exerted on the septum, and the instrument itself is hid from sight. It is introduced by passing the heads into the pockets at the end of the nose and showing the springs up until the connecting part rests upon the septum cutaneum.



2133-K

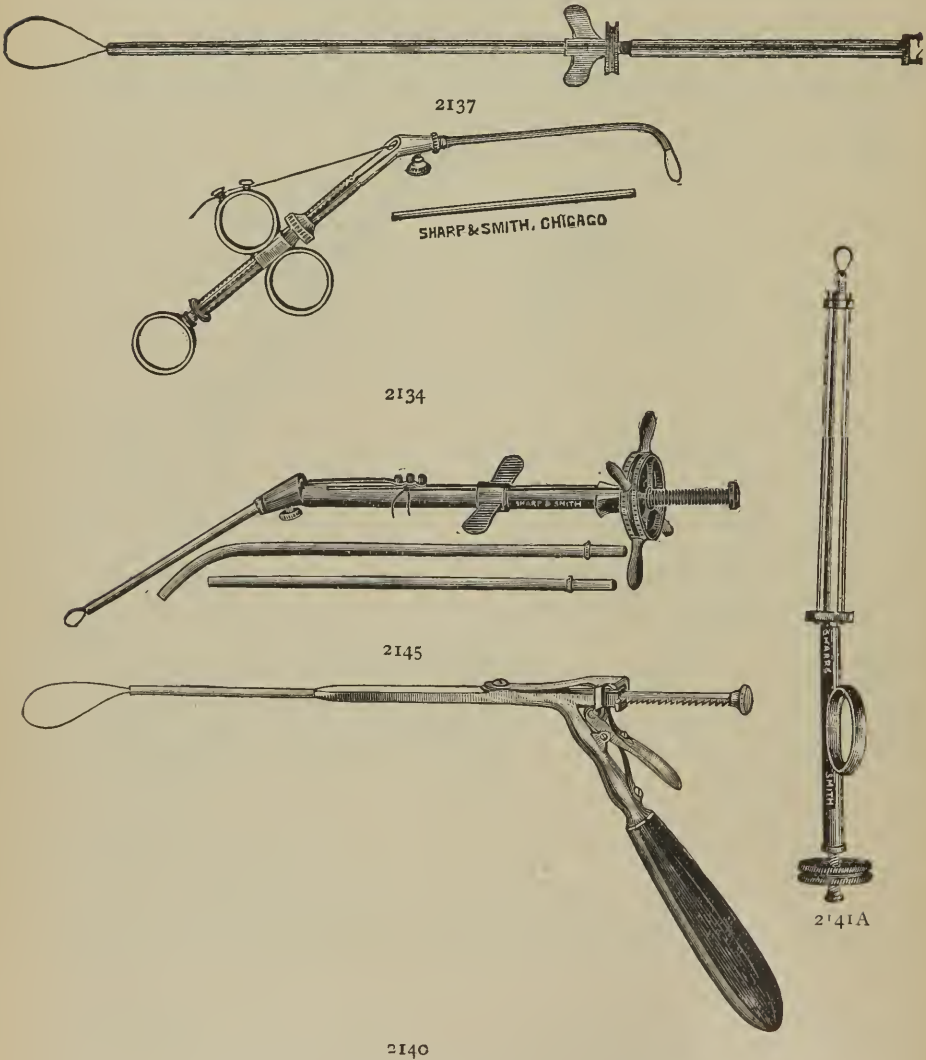
Dr. Norval H. Pierce's Rod for Dry Massage of the nose—a long steel rod having a clutch which is secured by means of a sliding knob. The clutch carries a wad of dry cotton loosely held together, with which the nasal mucous membrane is massaged after the method of Braun of Trieste.

Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

FIG.

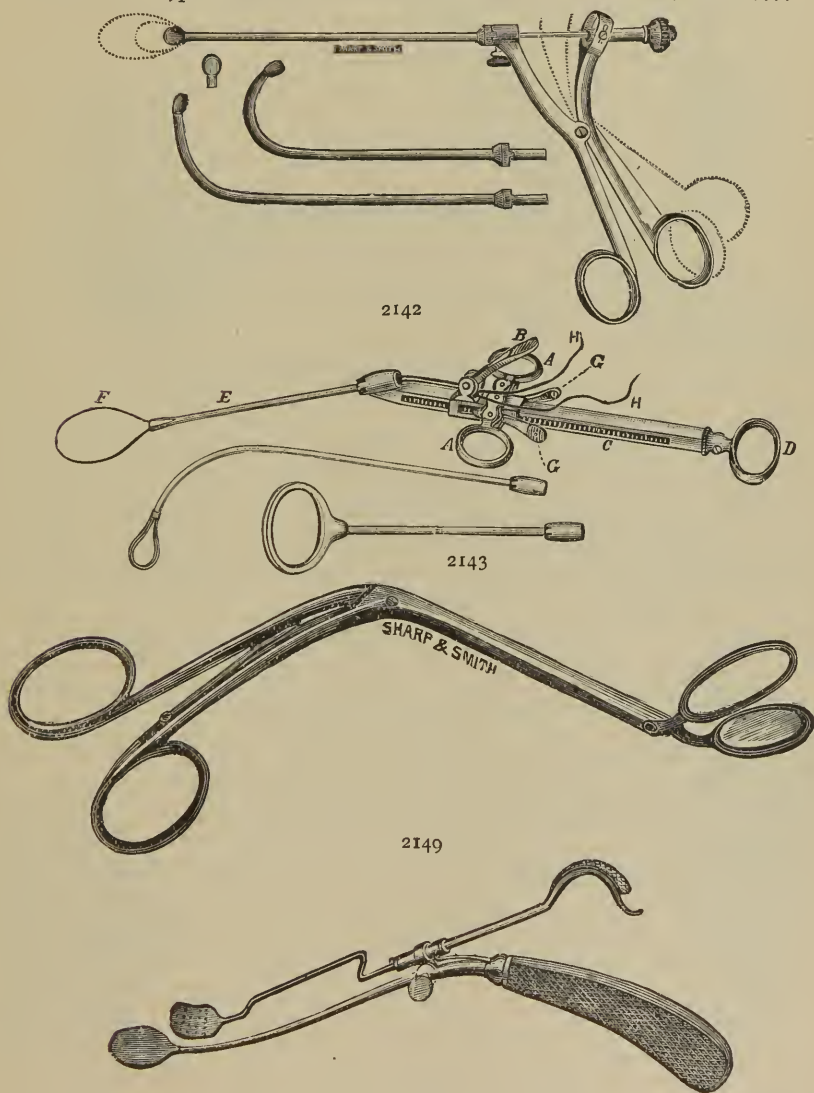
*2134	Bosworth's Nasal Snare.....	
2135	“ “ “ in case.....	\$3 00
2136	“ Set of Nasal Snares.....	9 00
*2137	Jarvis' Nasal Snare, straight.....	1 50
2138	“ “ “ curved.....	1 75
2139	“ “ “ two tips.....	3 00
*2140	Wyeth's “ “.....	7 50
2141	Sajou's Modification of Jarvis' Snare.....	2 25
*2141A	Rumbold's “ “ “.....	



Instruments designated by a * are illustrated.

NASAL INSTRUMENTS

FIG.			
*2142	Sajou's Polypus Snare.....	\$ 6 00	
*2143	Allen's " "	15 00	
2144	Wilde's " "	2 00	
*2145	Hobby's " "	5 00	
2146	Green's " "	3 50	
2147	Ellsberg's " "	6 00	
2148	Douglass' " "	6 75	
	Ingal's " "		(pages 437, 438)
	Piano Wire for Polypus Snare	15	
	" " $\frac{1}{4}$ lb. Bunches.....	75	



See next page for prices on Rhinoscopes.

Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

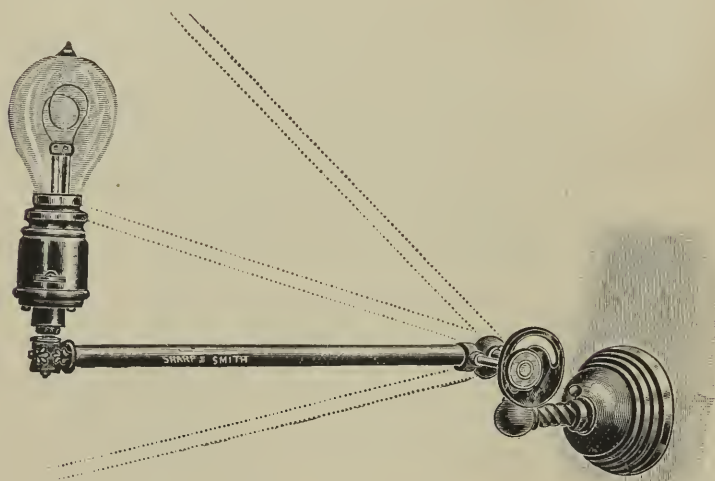


Fig. 2148-A Dunn's Universal Electric Bracket.

This bracket is composed of a wall piece, a double-acting joint, and a single arm. The joint is so arranged that it gives a circular motion on a fixed plane, while the arm can be elevated or lowered to any angle, and fixed by the set screw which works in the little wheel. Through the whole bracket is strung an electric wire, which can be connected with the regular incandescent current, or to the current of a strong storage battery. Dr. Dunn has attached to his bracket a twenty-four candle power coiled wire electric bulb, which gives a light as clear as sunlight (if used with this condenser) without the intense heat of the latter.

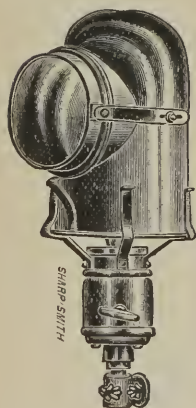


Fig. 2148-C Showing Condenser with bracket attachment.

Fig. 2148-B Dunn's Electric Light Condenser.

Consists of a bell-shaped hood, which covers the electric light bulb, while it allows the lens to pass over the top when not in use (see Fig. 2148-B). At the side of the bell is an opening over which fits the plano convex lens. The lens is set in a frame and attached to the sides of the bell in such a manner that the lens can be elevated and retained on top of the bell when the operator does not wish to use the *condensed* light. This condenser is attached to the metal piece of the light bulb by a number of arms, and can be used with any form of incandescent bulb. It is distinct from the bracket.

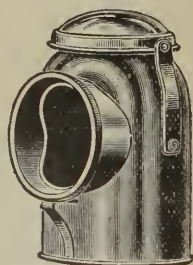


Fig. 2148-B Dunn's Electric Condenser, showing the lens over the top.

NASAL INSTRUMENTS.

A New Combined Electro-Cautery and Cold Snare Handle.

By W. A. DUNN, M. D., Professor of the Diseases of the Throat and Nose, Hahnemann Medical College and Hospital, Chicago, Ill.

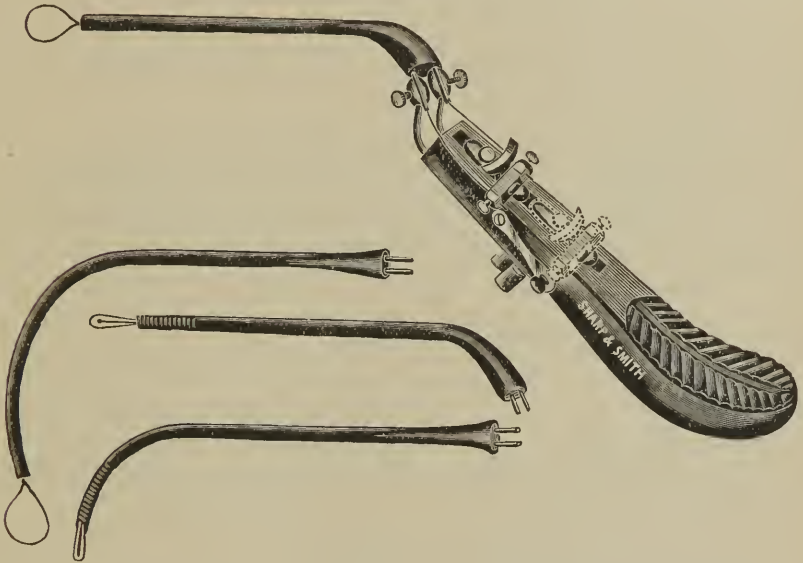


Fig. 2148-D. Dunn's Combined Electro-Cautery and Cold Snare Handle.

This handle, as made for me by Messrs. Sharp & Smith, Chicago, Ill., is composed of hard rubber, and patterned after the usual pistol handle with an additional curve to the right. This allows a good firm grasp in the right hand, in such manner that the thumb and index finger are free to manipulate the current and snare slide respectively. On the top of the handle is a groove, in which is set the slide of the snare, to which the snare wires are attached by small set screws. This slide has a curved brace on top for the tip of the index finger, by which it can be drawn toward the hand, thereby bringing home the wire. The slide can be retained at any point by a set screw, and is used as a brace for the forefinger when used as a simple cautery. The cords are attached to posts on the under surface of the instrument by a pin and socket joint, and are usually made to fit the cord of a Flemming Electro-Cautery Battery, but may be made to fit any make of cord. The current breaker is a spring attachment on the lift surface of the instrument, which is manipulated by the pressure of the thumb on the button at the end of the spring, which brings the metal in contact with a post in the side of the handle and completing the circuit. The metal tips of the handle to which the electrode is attached may be bent at any angle, so that the hand of the operator is entirely out of the range of vision in the many operations about the throat, nose and ear. Any form of electrode may be used with the handle, but the styles shown in the cut answer every purpose if skillfully used.



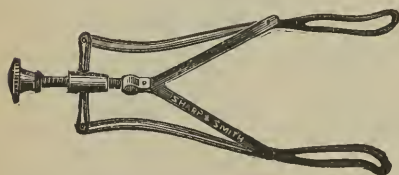
Fig. 2148-E Dunn's Nasal Cotton Applicator, for applying solutions to the nose and naso-pharynx, and for plugging the nose with cotton, is composed of a German silver shank and a virgin silver point, which is pliable. The point is flat, and can be bent to reach any part of the nose or naso-pharynx. It can be had with fixed handle or without handle, to fit the Universal Handle.

FIG.

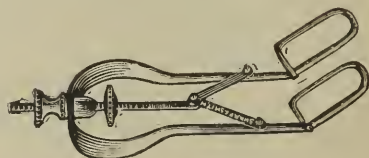
*2143-A	Dr W. A. Dunn's Universal Electric Bracket.	\$
*2148-B	" " " Electric Light Condenser.	10 00
*2148-C	" " " " " attached to bracket.	
*2148-D	" " " Electric Cautery and Cold Snare Handle, without Electrodes.	7 50
*2148-E	" " " Nasal Cotton Applicator.	75

NASAL INSTRUMENTS.

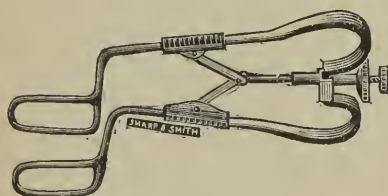
FIG.					
*2149	Duplay's Rhinoscope.....				\$ 5 00
2150	Plain ".....				60
*2151	Simrock's ".....				6 00
2152	Jarvis' ".....				3 50
*2153	Frankel's Nasal Speculum, different sizes.....				1 50
*2154	" Improved Nasal Speculum.....				1 50
*2155	Swift's " ".....				1 75
2156	" Improved " ".....				2 00
*2157	Roth's " " ".....				1 50
2158	Robert & Collins' " " ".....			N. P.....	1 50
2159	" " " " ".....			H. R.....	1 50
	Plain Bivalve " " ".....			(see Ear Instruments).....	1 00
	Shoulder " " ".....			(see Ear Instruments).....	1 00
	" " " " ".....			with screw, (see Ear Inst'ts)	1 50
*2160	Bonafont's Bivalve Nasal Speculum.....				1 85
*2161	Ellsberg's " " " steel.....				3 00
*2162	Folsom's " " " ".....				1 00



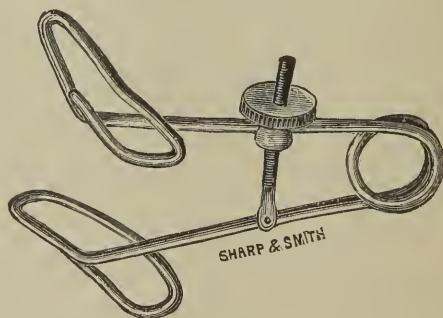
2153



2154



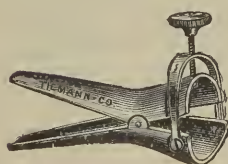
2155



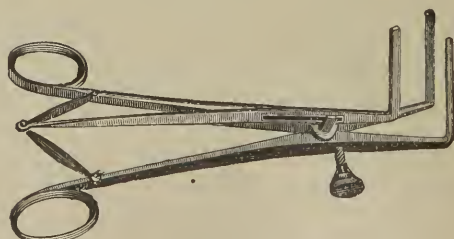
2162



2157



2160

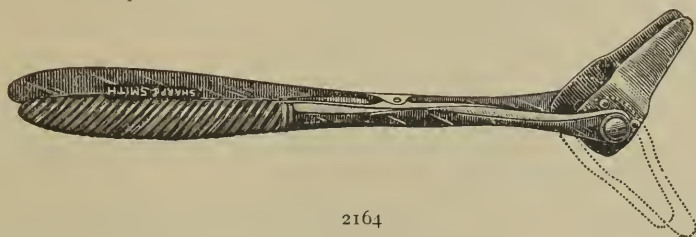


2161

Instruments designated by a * are illustrated.

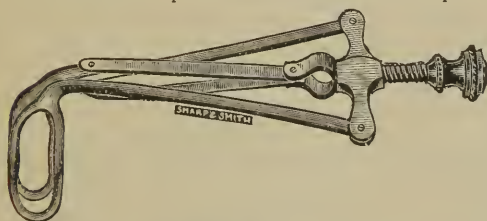
NASAL INSTRUMENTS.

FIG.			
*2163	Goodwillie's Nasal Speculum	.....	\$ 60
*2164	Rumbold's " "	.....	2 50
*2165	Leonard's " "	.....	2 50
*2166	Thudicum's " "	.....	60
2167	" " with screw	.....	1 00
2168	Sexton's " "	.....	1 50
2169	Roosa's " "	.....	1 85
*2170	Bosworth's " "	.....	85
2170A	" Wire " "	.....	75
*2171	" Speculum with shield, reversible to either side for cauterizing	.....	2 00
*2171A	Hotz's Nasal Speculum	.....	85

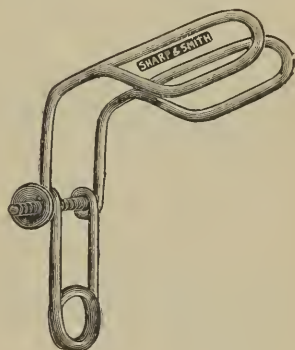


2164

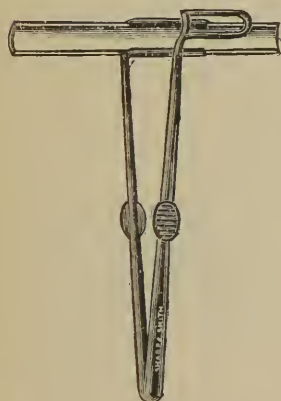
Fig. 2164.—Nasal Speculum, eight inches long, with reversible blades. This length is given to it to enable the patient to hold it in his nasal passage.



2165



2171A



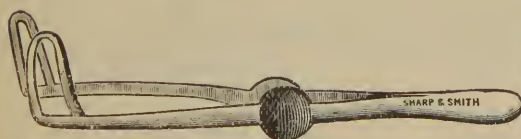
2171



2163



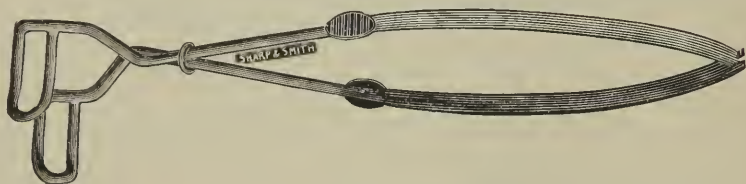
2166



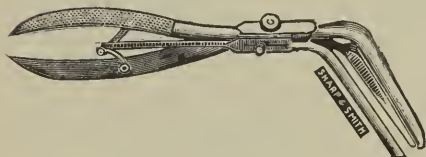
2170

NASAL INSTRUMENTS.

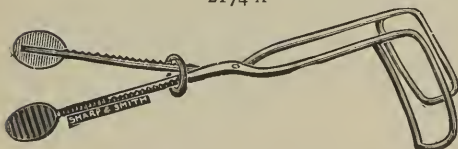
FIG.		
* 2172	Simrock's Nasal Speculum.....	\$1 00
2173	Seiler's " ".....	
* 2174	Sajou's " ".....	1 35
* 2174A	Brandis' " ".....	3 25
* 2175	Jarvis' small " ".....	60
* 2176	" (operating) latest Nasal Speculum.....	1 00
2177	Set of three Hard Rubber " ".....	75
2178	" " Allen's " ".....	75
2179	Belloq's Canula for Epistaxis, plated.....	1 00
* 2180	" " " " silver.....	2 00
* 2181	Gooch's Double Polypus Canula, plated.....	1 00
2182	Tampon for Epistaxis, Hard Rubber.....	75



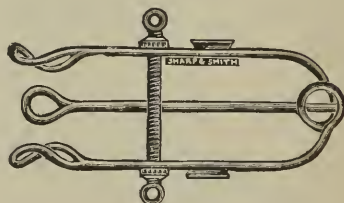
2176



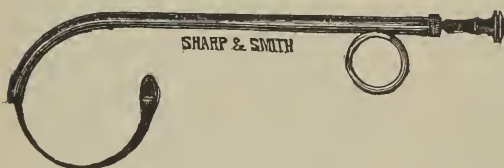
2174-A



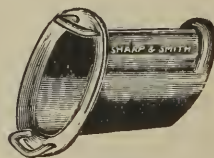
2175



2174



2180



2172



SHARP & SMITH, CHICAGO.

2181

Instruments designated by a * are illustrated.

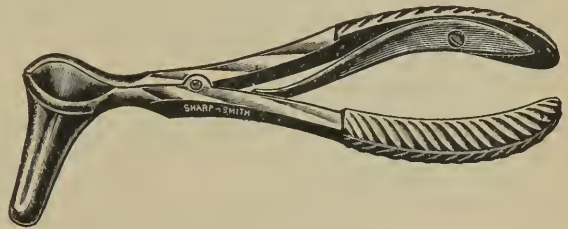
NASAL INSTRUMENTS.

FIG.

*2178-A	Dr. W. A. Dinn's set of 3 H. R. Nasal Specula.....	\$	1 00
*2178-B	Dr. Frederick D. Owsley's Nasal Speculum.....	I	50
*2178-C	Fenestrated Nasal Speculum.....	2	50
*2178-D	Myles' Nasal Speculum.....	I	75
*2178-E	Claiborne's Speculum for applying caustic to the deep structures of the nasal cavity.....	I	00
*2178-G	Seiler's Self-Retaining Nasal Speculum, R. & L.....	each,	50
*2178-H	Black's.....	2	00
*2178-I	Smith's Nasal Speculum.....	I	25
*2178-K	Devilbiss' Self-Retaining Nasal Speculum.....	I	50
*2178-L	Palmer's.....		50



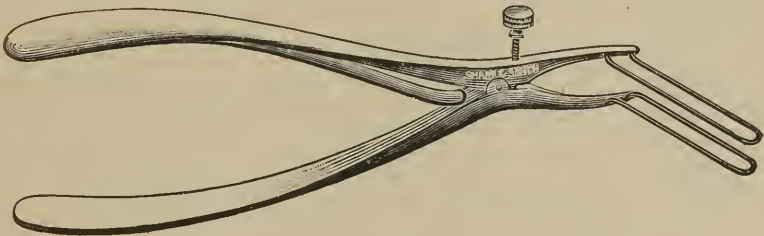
2178-A



2178-B

FIG. 2178-B-DR. FREDERICK D. OWSLEY'S NASAL SPECULUM.

The above Nasal Speculum is a modification of Kramer's ear speculum, and its advantages lie in the fact that the curves of the blades are so formed as to adjust themselves easily to natural contour of the nostrils, and its freedom from sharp edges prevents the instrument from contusing and wounding the membrane of the nasal cavity.



2178-C

FIG. 2178-D—MYLES' NASAL SPECULUM.

Myles' Combination Speculum consists of a Lenox Browne handle attached to a split Simrock Speculum, and is self-retaining by means of a small shoulder at the inner edges. The spread of the nostrils is accomplished by a lateral movement on a rigid bar, which is corrugated on the inside and holds it at any desired distention.



2178-D

Instruments designated by a * are illustrated.

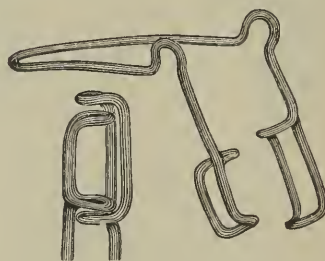
NASAL INSTRUMENTS.



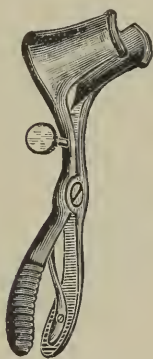
Showing Fig. 2178-G—Applied.



2178—E



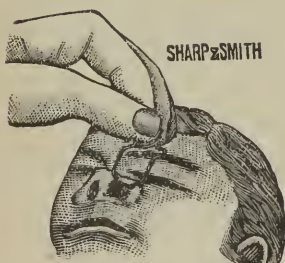
2178-G



2178-H



2178-I



2178-L—Applied.



2878-L

NASAL INSTRUMENTS.

FIG.

*2183	Leffert's Palate Hook.....	\$ 1 50
*2184	Hard Rubber Palate Retractor.....	50
*2185	Sajou's " ".....	1 50
*2186	Rumbold's Soft " ".....	5 25
*2187	" " " " Curved.....	11 25
2188	" Inflator for Eustachian Tube, Hard Rubber.....	75
2188A	" " " " " Glass.....	25
2189	Sexton's " ".....	2 60



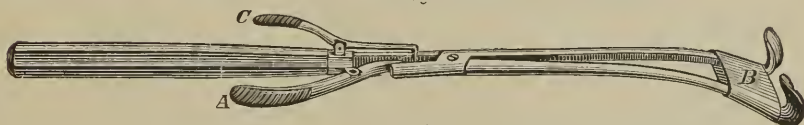
2183



2184



2185



2186

Fig. 2186. Soft Palate Retractor.—*A*, lever to separate the arms. *B*, the soft rubber band that closes the arms, and holds the uvula out of the operator's way. *C*, the lever that raises the wedge. After the instrument is introduced behind the velum, and the arms spread by the lever *A*, then the wedge retains them in this position.



2187

Fig. 2187. Curved Soft Palate Retractor.—The curved extremity is passed along the floor of one nostril until it reaches the pharyngo-nasal cavity; pressing the two ring levers *a* and *b* together causes the curved extremity to draw the velum forward, the probe point *c* preventing the slipping of the velum.



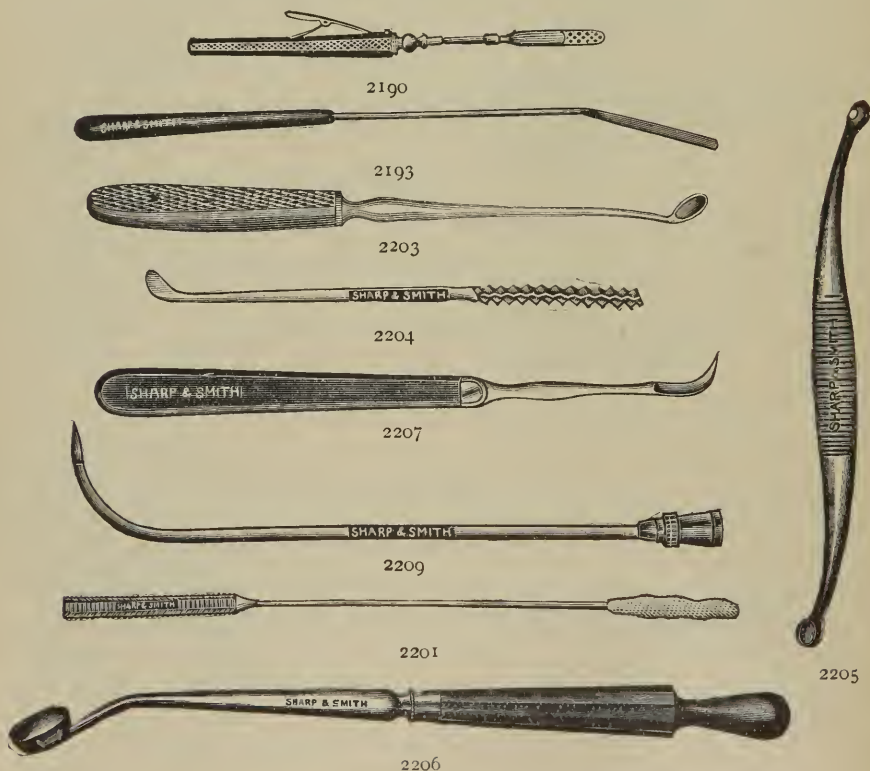
2189-A

Fig. 2189-A. Dr. Behren's.—Curette to be introduced through the nostril for removal of adenoid growths in the post-nasal space. \$1.75 net.

All Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

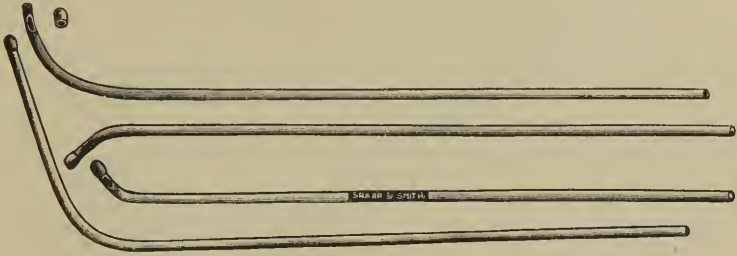
FIG.		
*2190	Sajou's Acetic Acid Applicator.....	\$5 00
2191	" Chromic "	4 50
2192	McCoy's Applicator.....	4 50
*2193	Bosworth's Aluminium Applicator.....	75
2194	Posterior Pharyngeal "	1 50
	Ingals' Aluminium " (page 439).....	
2195	Bosworth's Aluminium Probe.....	75
2196	Hard Rubber Probe.....	35
2197	Silver Probe.....	1 00
2198	Steel "	60
2199	Cohen's Pharyngeal Cotton Holder.....	2 25
2200	Turnbull's " " "	1 00
*2201	Allen's Cotton Holder.....	25
2202	Volkman's Curette	2 25
*2203	Sass' (3 curves) Curette.....each.	1 85
*2204	Spiers' Curved "	75
*2205	Hyde's "	1 15
*2206	Gradle's Spoon "	1 75
*2207	Allen's Septum Knife.....	1 25
2208	Sajou's Periosteal Knife.....	1 15
	Ingals' Knife (page 439).....	
*2209	Sajou's Abscess retro-Pharyngeal Trocar.....	1 50



NASAL INSTRUMENTS.

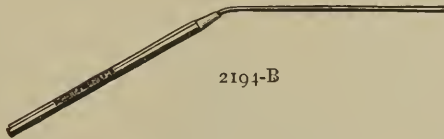
FIG.

*2194-A	Dr. Payne's modification of Gleitsmann's Aluminum Trichloroacetic Acid Applicator, per set of (4).....	\$3 00
*2194 B	Bosworth's Acid Applicator.....	25
*2194-C	Chromic Acid Applicator.....	4 50
*2209-A	Woakes' Nasal Plow.....	1 85
*2209 G	Fritche's Nasal Curette.....	2 25
*2209-H	Lowenberg's Revolving Curette.....	3 50
*2209 I	" Nasal Curette	2 25

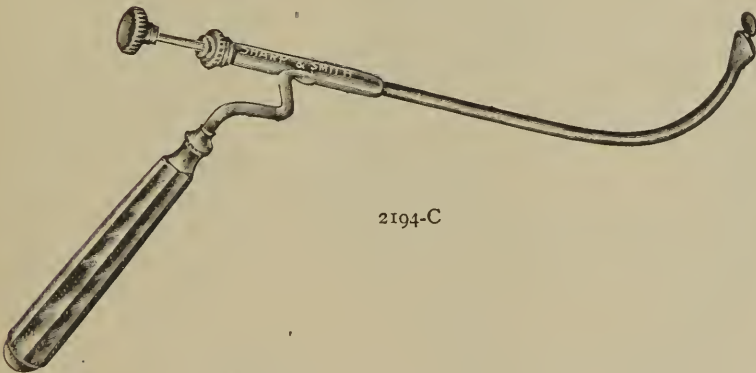


2194-A

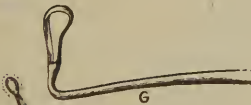
This modification consists of the small cap, which is screwed over the open end and confines the application of acid to the location to be treated. These Applicators are made of aluminum.



2194-B



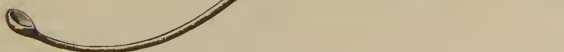
2194-C



G



H



I



2209-A

2209-G—H. I,
Instruments designated by a * are illustrated.

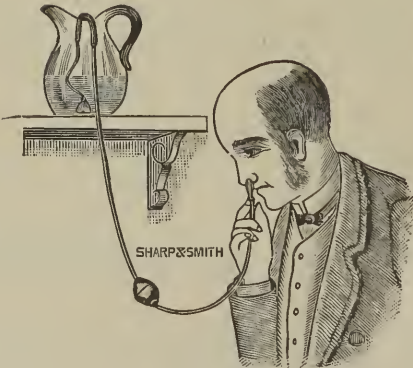
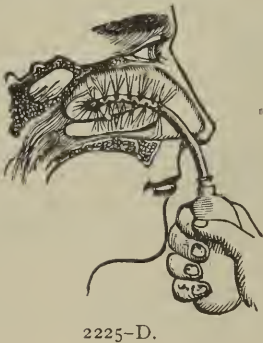
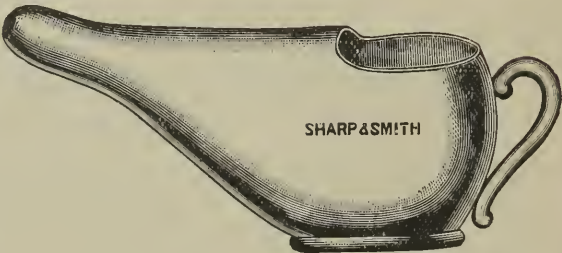
NASAL INSTRUMENTS.

FIG.			
*2225-A	Dr. Dessar's Nasal Douche Cup.....	\$	35
*2225-B	Dr. Lenox Brown's Nasal Hand Douche.....	I	50
*2225-C	Pocket Nasal Douche.....		10
*2225-D	Success Nasal Douche.....		75
*2225-E	Dr. Norman Bridge's Nasal Douche.....		60

DR. DESSAR'S NASAL DOUCHE CUP.

This Douche Cup is well adapted to place in the hands of patients, especially children, as it is very simple and perfectly safe for treatment of Catarrhal affections.

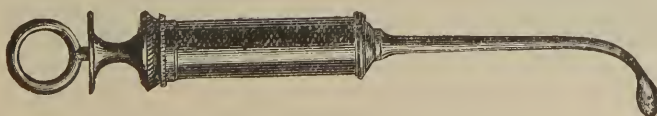
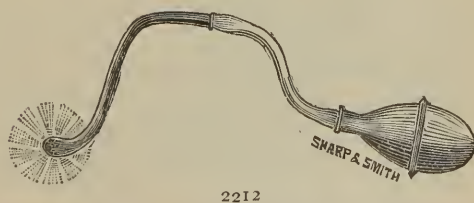
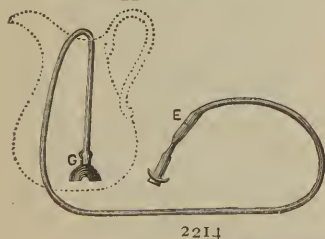
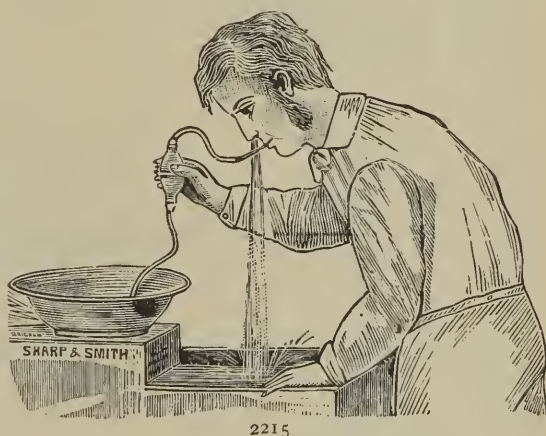
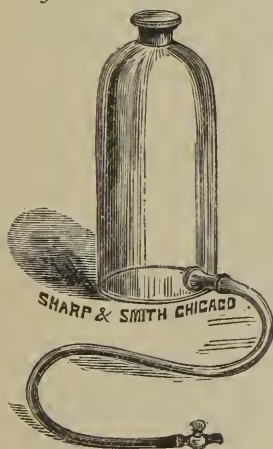
If you should desire to prescribe them for your patients we will supply your druggist with them.



Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

FIG.				
*2210	Thudicum's Nasal Douche, 1 Quart.....			75
2210A	" " " 1 Pint.....			60
2211	Sawyer's " ".....			50
*2212	Warner's " ".....			75
*2213	Syphon " ".....			75
*2214	Traveler's " ".....			1 00
*2215	Sharp & Smith's " ".....			1 50
2216	Hales' " ".....			1 00
2217	Nichols' " ".....			1 25
2218	Potter's " ".....			1 50
2219	Allen's " ".....			60
2220	Mead's " ".....			50
2221	Lincoln's Syphon " ".....			1 00
2222	Pierce's Nasal " ".....			50
2223	Fullgraff's Nasal " ".....			1 50
2224	Bridge's " ".....			60
2225	" Irrigating " ".....			1 50
2226	Pomeroy's Double Nasal Douche, tips.....			75
2227	Oliver's Nasal Douche, 2 tips.....			2 40
2228	Rumbold's Catheter Douche.....			3 75
2229	Hazen's Nasal Douche.....			2 25
	Warner's Catarrhal Syringe (see Index).....			
2230	Howard's " " five tips.....			4 50
*2231	Hard Rubber Post Nasal Syringe.....			85

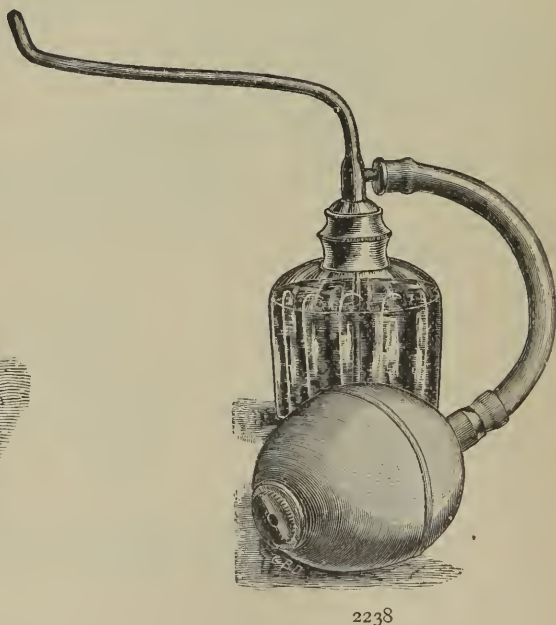
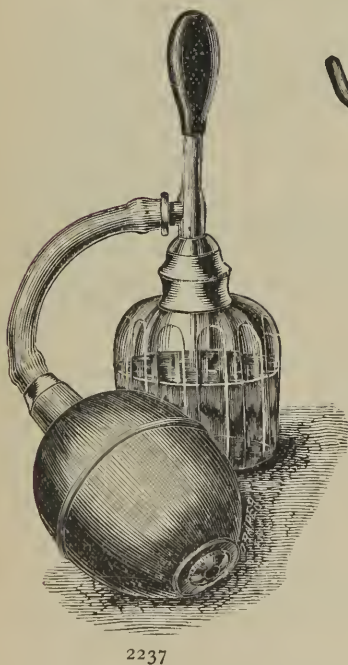
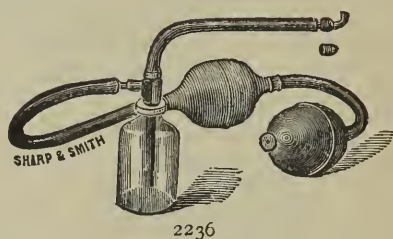
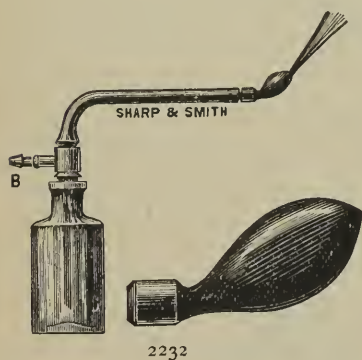


2231

Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

FIG.		
*2232	Leffert's Nasal Spray, one tip.....	\$2 00
2233	“ “ “ three tips	3 00
2234	Hall's “ “ two tips	2 50
2235	Roosa's Post Nasal Spray.....	2 50
*2236	Sharp & Smith's Nasal Spray, two tips.....	2 00
*2237	No. 3 Nasal Spray.....	1 50
*2238	No. 7 Posterior Nasal Spray.....	1 50

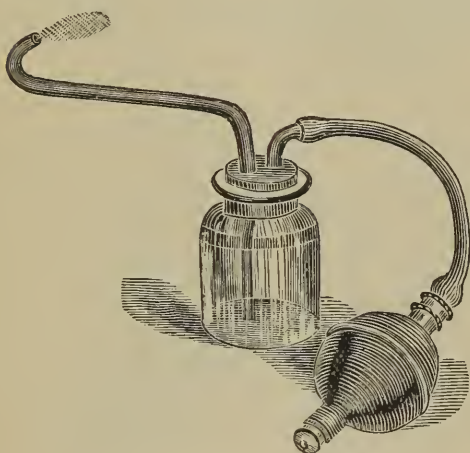


Instruments designated by a * are illustrated.

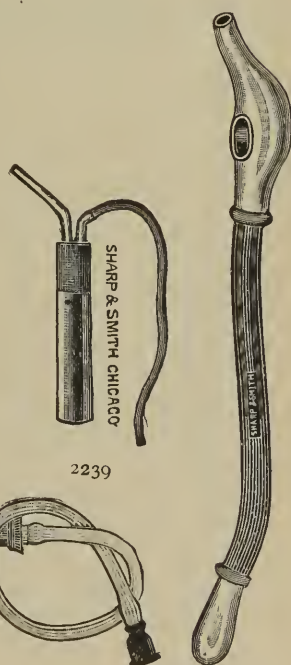
NASAL INSTRUMENTS.

FIG.

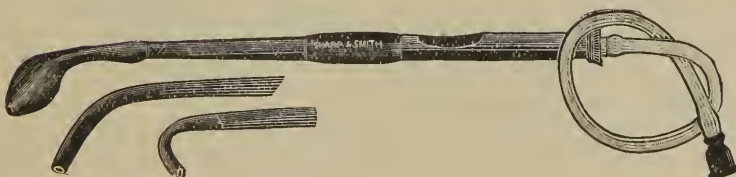
*2239	Bishop's Powder Blower for Pocket.....	\$ 30
2241	Leffert's H. R. Powder Blower, one tip	1 50
2242	Richardson's " " three tips.....	2 75
*2243	Robinson's " " "	1 50
*2244	" " " with mouth piece, three tips.....	3 75
2245	" " " reversible, two tips	3 25
*2246	Morgan's " " "	5 00
2247	Smith's " " " two tips.....	2 25
2248	" " " three tips.	2 50
*2249	C. & S.'s " " No. 213....	2 25
*2250	Sajou's " " "	50
*2251	No. 12 Posterior Nasal Powder Blowers.	1 50
*2252	No. 8 " " " and Douche.....	1 75
*2253	No. 1 Mattson's " " "	1 25
*2254	No. 2 " " "	1 00



2243

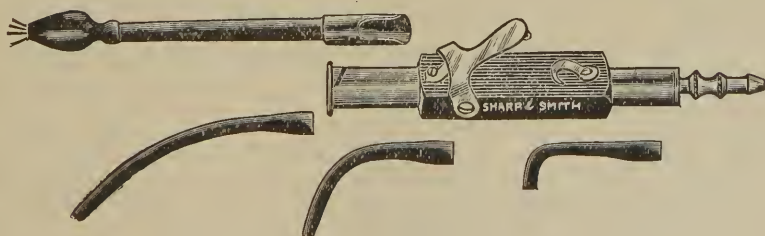


2239



2244

2250



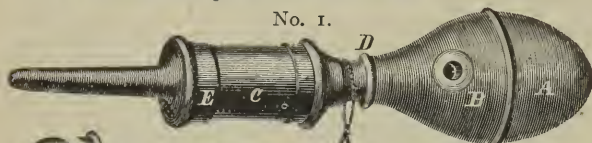
2246

Description of other Powder Blowers see following page.

NASAL INSTRUMENTS.

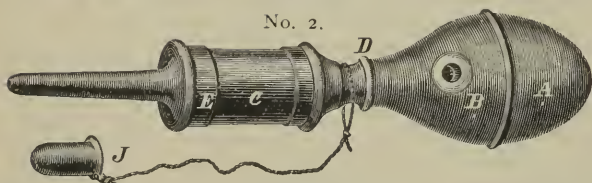


No. 1.



2253

No. 2.

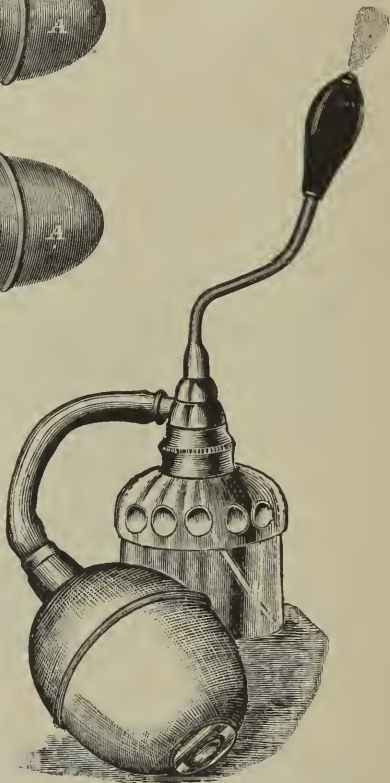


2254

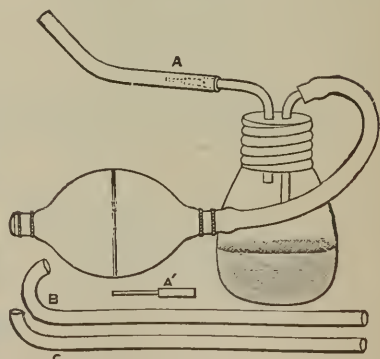
Patented.

The Powder Projector to be used in the treatment and cure of *Nasal and Bronchial Catarrhs*, is acknowledged, by all who have seen it, to be the best instrument of the kind that has yet been introduced.

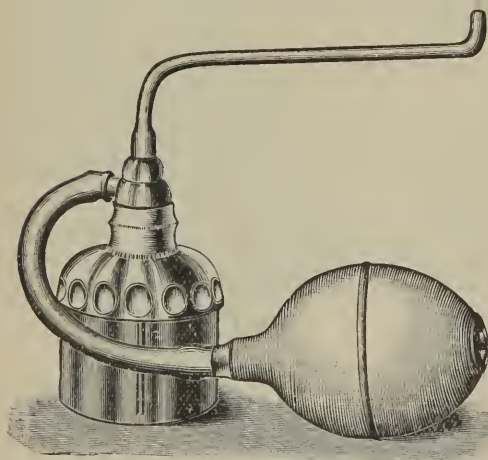
The chamber will hold powder enough for numerous applications. In this respect, it is a great improvement upon the ordinary *powder blowers* which have to be filled at each puff of the powder. The instrument being in an axial line, it may be carried in a side pocket, provided the outlet tube, *E*, is closed at its end by the rubber cap, *f*. The *naso-pharyngeal H, F*, shown in No. 1, will be used by physicians to introduce any special powder into the posterior nasal cavities from behind the soft palate, without invading other portions of the respiratory tract.



2252



2249



2251

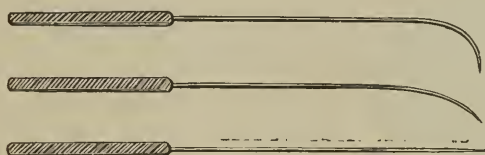
NASAL INSTRUMENTS.

FIG.

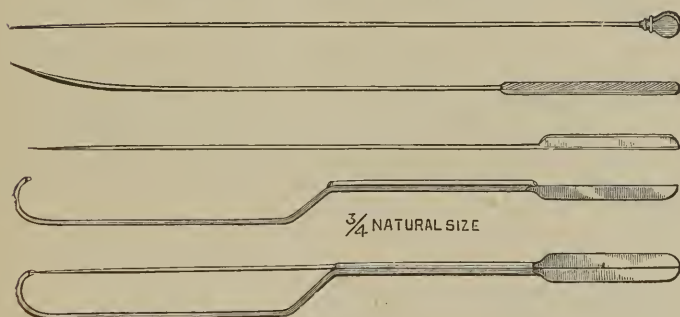
*2256	Sharp & Smith's Chisel for Rhinoplastic Operations.....	\$1 15
*2257	" Nasal Chisel with shoulder to prevent too deep penetration	75
*2258	Jarvis' Transfixing Needles, set	75
*2259	Swazey's " " set.....	3 00
*2260	Rumbold's Pharyngeal Mirror.....	7 50
2261	Nasal Bougies, Metal set of, each.....	60
2262	" " Gum, all sizes, seven each.....	50
2263	Woake's Nasal Plough.....	1 85
2264	Brace for Dislocated Septum.....	8 00



2256



2258



2259



2257



2260

Rumbold's Hinged Pharyngeal Mirror.—By pressure on the lever on the handle, the mirror may be made to take any desired angle, thus reflecting the posterior, superior and anterior surfaces of the pharyngo-nasal cavity, and, by turning the reflecting surface toward the larynx, this passage can also be seen. Rotation on its axis reflects the lateral surfaces.

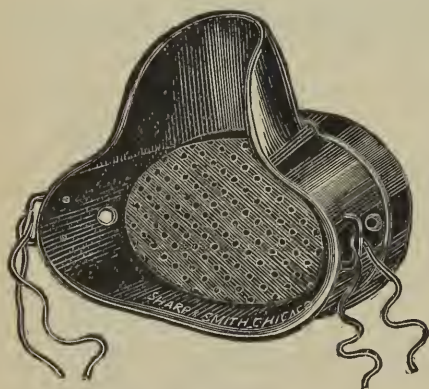
Instruments designated by a * are illustrated.

NASAL INSTRUMENTS.

FIG.			
*2265	Anti-Dust Nose and Mouth Respirator.....	\$	1 25
*2266	Nose and Mouth (ordinary) “		1 50
2267	Nitz's Nose and Mouth “		1 50
*2268	Tyndale's Nose and Mouth “		2 60

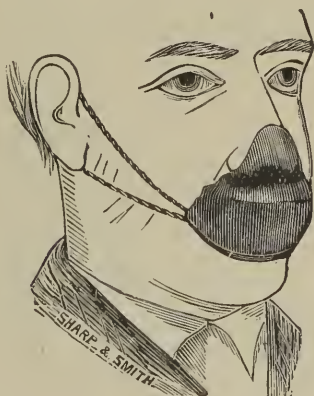
THE ANTISEPTIC ORO NASAL RESPIRATOR.

(TYNDALE'S RESPIRATOR.)



2268

The Respirator is manufactured in hard rubber, or of brass nickel plated, made to fit accurately the mouth and lower part of the nose. A membrane in the shape of a sieve separates the main body of the inhaler from a detachable cup (also perforated) for the reception of absorbent cotton, sponge, lint or oakum, upon which is dropped the antiseptic to be used. Openings on either side of the mouth-piece allow of the escape of exhaled air. The respirator is fastened behind the ears by thin round elastic ribbons, or by spectacle wires, as desired. It is small and portable, the hard rubber instrument weighing only one ounce. The antiseptic remedies chiefly used for more or less continuous inhalation, are iodoform, eucalyptol (Sanders'), creosote, phenic acid, and oil of turpentine.



2266

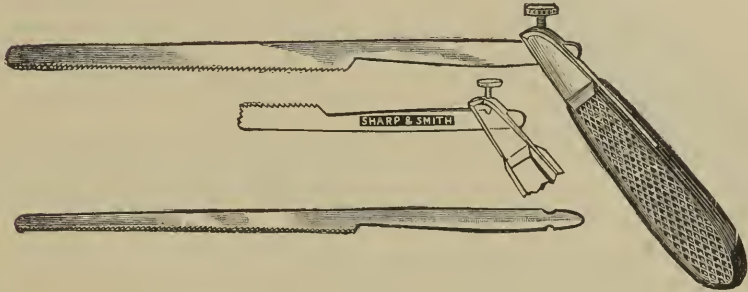


2265

NASAL INSTRUMENTS.

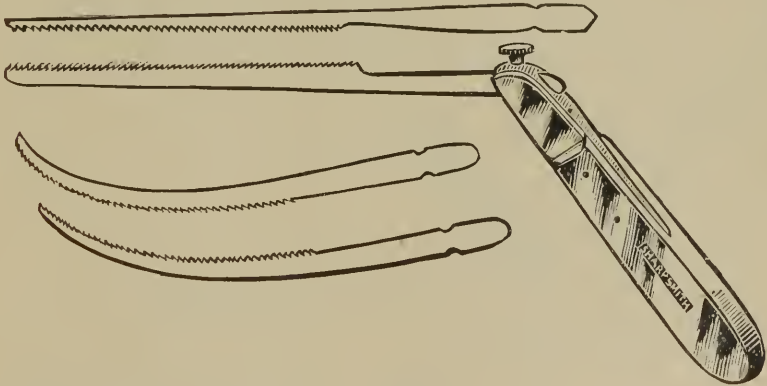
A NEW NASAL SAW.

BY C. A. BUCKLIN, M. D., NEW YORK.



2268-A

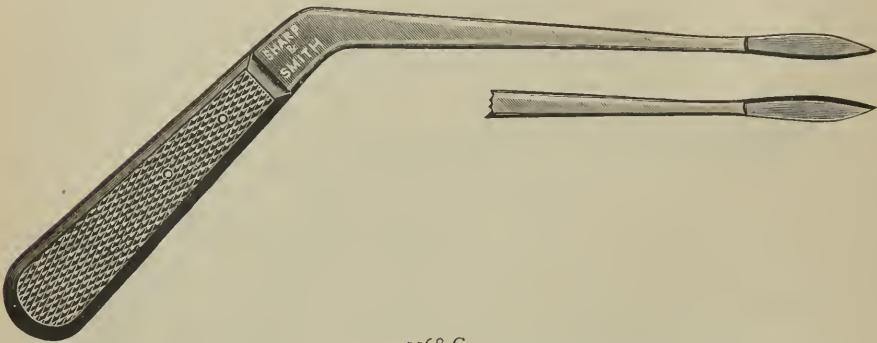
Bucklin's Reversible Nasal Saw has two blades which are reversible in the handle. With it can be removed from the nose any bony obstruction which is detrimental to perfect nasal respiration. Exceptional cases are encountered where the displacement of the septum is so great that the difficulty cannot be relieved by its removal. In these cases the complete removal of one turbinated bone, although in its normal position, will usually give satisfactory breathing room. The rapidity with which the saw does this work is illustrated by the fact that the entire lower turbinated bone can be removed in less than one minute.



2268-B

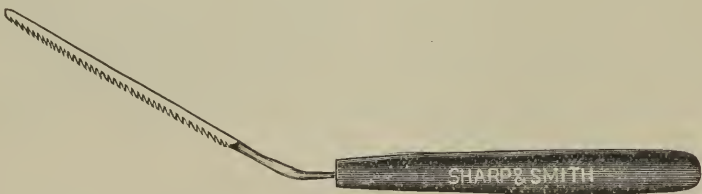
*2268-A	Bucklin's Reversible Nasal Saw, two blades.....	\$2 00
*2268-B	Webster's Modification of Bucklin's Reversible Nasal Saw, four blades.....	3 50
*2268-C	Dunn's Nasal Knife.....	1 50
2268-D	Jarvis' Hæmostatic Septal Compressorium.....	3 35
2268-E	“ Tubular Crown Drill.....	3 00

NASAL INSTRUMENTS.



2268-C

Dunn's Nasal Knife is a small bistoury, either sharp or probe pointed, set at an obtuse angle to the handle. The shank is of sufficient length to reach the posterior portion of the nose. It may be in a fixed or universal handle.



2268-G

Dr. W. A. Dunn's Nasal Saw.....\$1 50



2268-11

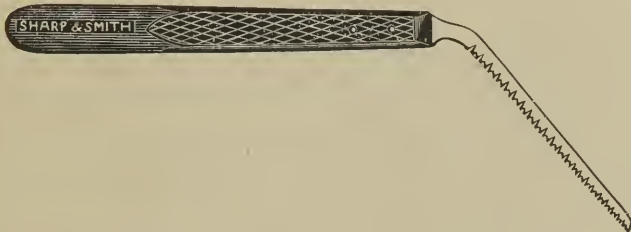
Rice's Nasal Saw.....\$1 50

The improvement in this Saw consists of an angular shank which removes the handle from the line of vision and still preserves its position parallel to the blade. The blade is removable, and can be set either up or down.

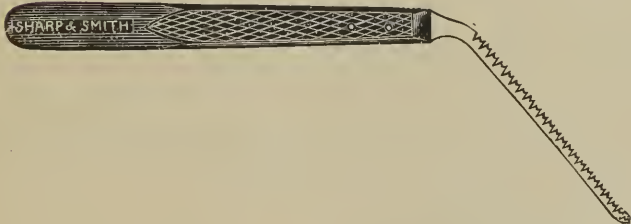
NASAL INSTRUMENTS.

FIG.

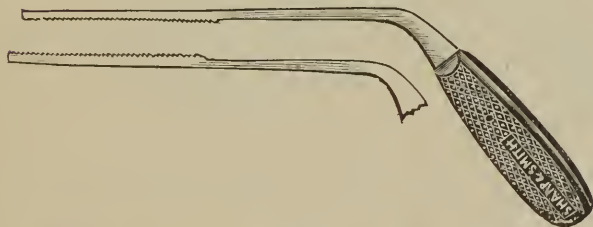
*2269	Sajou's Saw, Cutting Edge down..	\$1 50
*2270	" " " up.....	1 50
*2271	" Exostosis Saw.....	1 50
*2272	Bosworth's Saw.....	1 50
*2273	Noyes' "	2 25
*2274	Rumbold's Heavy Nasal Scissors for Clipping Turbinated Bones and Growths on the Turbinated Process.....	4 00
*2275	Jarvis' Nasal Scissors.....	6 75
*2276	F. Hamilton Potter's Nasal Scissors, see description next page..	3 00
*2277	Knight's Nasal Scissors.....	2 25



2269



2270



2272



2274



2271



2273

Instruments designated by a * are illustrated.

A NASAL SCISSORS.

By Frank Hamilton Potter, M. D., Lecturer on Laryngology, Medical Dept. Niagara University.



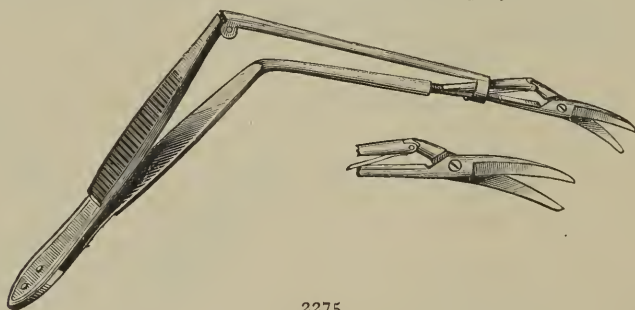
2276

These scissors can be used with great advantage in many operative procedures upon the nasal passages. The cut above illustrates a new form of the instrument, which it is thought, possesses sufficient merit for publication.

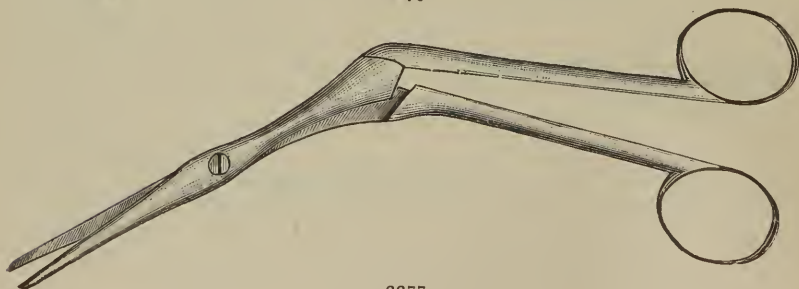
Attention is called to the following points:

1. The hand of the operator is always below the line of vision, whether the instrument is open or shut.
2. The blades are one and five-eighths inches long, and will thus grasp large growths; or, with but a slight movement of the handles, they can be opened sufficiently to trim the edges of wounds. The latter point is well illustrated in the cut.
3. The cutting edges are serrated, so as to make an uneven wound, and thus favor the coagulation of blood.
4. It is strongly made, and thus allows, when necessary, the use of considerable force.

Other scissors have been devised embodying some of the points mentioned above, but it is believed that this instrument has so combined them as to increase the practical value of the scissors in nasal surgery.



2275



2277

SOME NEW NASAL, PHARYNGEAL, AND LARYNGEAL INSTRUMENTS.

By S. SHERWELL, M. D., Brooklyn N. Y.

FIG.			
*2278	Dr. S. Sherwell's Nasal Scissors, No. 1.....	\$ 4 00	
*2279	“ Pharyngeal, Scissors, No. 2.....	5 50	
*2280	“ Nasal “ No. 3.....	5 50	
*2281	“ Laryngeal “ No. 4.....	11 00	
*2282	Dr. Prince's Spool Eyed Needle.....	3 50	

In connection with my dermatological work I have to do with a not inconsiderable number of diseases of the upper air passages, often certainly as syphilitic annexes, but far more frequently of the character of non-specific affections. At one clinic, that for skin and throat diseases at the Brooklyn Eye and Ear Hospital, I see about five hundred new throat and nose cases each year, which, together with private practice of the same kind, and duties in other hospitals, would bring the total amount to very considerably over one thousand cases annually.

I have consequently had to meet, and get over as best I might, most of the difficulties that occur in these regions in the way of operative interferences. And although I have a fair array of instrumental armamenta for that special work, still I suppose no man has at his command all the special instruments made for help in such cases; and in fact, sometimes, if not frequently, he is called upon to either modify some existing instrument, or to devise new ones (as I claim to have done in the instruments I now lay before you) to meet the exigencies of the existing situation, or to supply deficiencies. The instruments in question, I hope, in many cases will serve to fill the traditional “long felt want,” and I shall publish them as Sherwell's Nasal, Pharyngeal and Laryngeal Scissors.

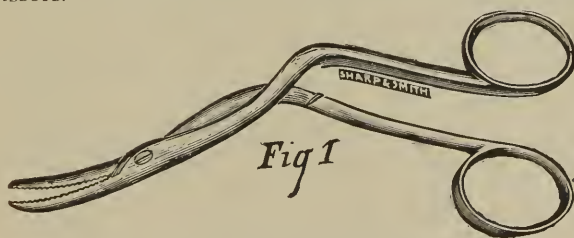


Fig. 2278.—Nasal Scissors.

The nasal scissors are intended for removal of neoplastic growths, or hypertrophic tissue, from the anterior or middle, or even the deeper portions of the nares, and consist of a pair of serrated blades similar to the alligator-tooth scissors, slightly concave-convex, and with handles bent downward in the long axis so as not to obstruct the vision while operating.

The pair shown were made five months ago for operation on the nose, for the removal of hypertrophied turbinated tissue in the person of a well-known professor of surgery, and succeeded in their purpose fairly well. It will be noticed that they are best adapted for the left nares—on that side the trouble was present in this case; but they can be, and have been, used for right nares by inverted handling. The notched teeth prevent slipping and pushing of the tissues away, as can be best demonstrated by cutting a piece of India rubber with them, and then doing so with the ordinary smooth scissor-blades. It will be noticed, also, that the shanks of the handles are narrowest when the blades are open nearly, if not fully, to the greatest necessary extent.

Figs. 2 and 3, pharyngeal and nasal, I give in order of priority of make.

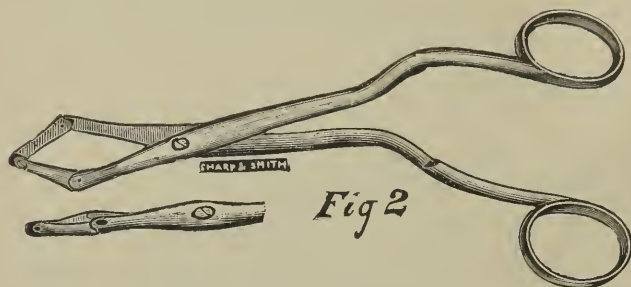
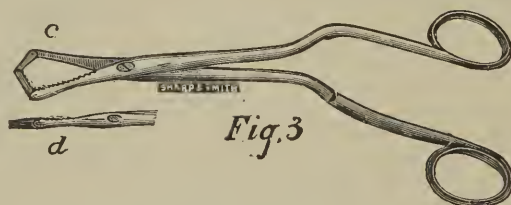


Fig. 2279.—Pharyngeal Scissors.

In Fig. 2 I have tried to construct an instrument capable of being used by any one, however inexpert; that should run no risk of piercing the pharynx, or the important vessels back of the tonsils, etc., no matter what unguarded movements a nervous or intractable patient might make during the operation. This is intended to trim a pharynx, to cut out small teat-like projections of a fretted or ragged tonsil, which are so often seen—and which are, from their size and shape, impossible to remove by the tonsilotome—and also as a most useful uvulatomer. The advantage, so readily seen by the expert, of its needing no help with forceps—thus leaving one hand free for tongue depression or for steadying the head of the patient—seems to me obvious enough; and it has certainly so proven in the relatively few cases in which, owing to its recent make, I have had an opportunity to use it.

The instrument, as will be noticed, is an absolutely pointless scissors, hinged about one-third of the distance from the extreme end, and thus composed, as will be seen, of four blades, but forming but two, as it were, by cutting at the hinged-joints as well, when the handles are closed.

The instrument when open, and it should be ordinarily introduced that way if the pharyngeal space is shallow, has an inside cutting surface something like the old Roman spear head, the apex directed toward the operator; it needs but one word to explain why that is made so: This serves to thrust the inclosed tissues forward to the operator instead of away from him, as is the case with the ordinary curved or straight scissors.



c, Blades open ; d, Blades closed

Fig. 2280.—Nasal Scissors.

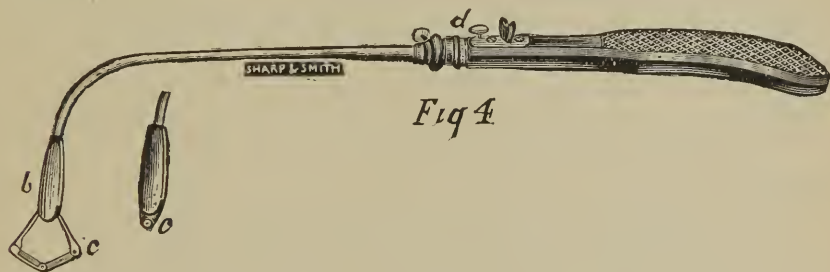
I think this idea has the merit of novelty at least, for I cannot recall any other instrument in which the cutting is going on all around at the same moment, save in *écraseurs*.

* By draughtsman's error the proximal blades are not made long enough ; angle of distal blades correct ; the lumen should be considerably longer.

I have purposely given Fig. 3 out of its natural sequence, although it is intended for the same use as Instrument No. 1, *i. e.*, for the removal of hypertrophic or other tissues from any part of the anterior or deeper nares. I think it has many advantages over the first shown, but it is more complex. It is, as will be seen, but a modification of the pharyngeal scissors just described, but is more delicate, and has serrated edges. It will be noticed that the inside cutting edge is not that of the Roman spear, but rather that of the Indian arrow head or javelin; this is accomplished, as is evident, by making the site of the hinged joint nearer the extremity of the blade. I operated with it on January 29, 1887, the day it came from the maker's hands, having reserved a patient with the growths above named; it worked very well. It needs no special instruction in its use, is absolutely free from danger, and causes, it may be said, no hæmorrhage.

I think the instrument made a little stronger might be better.

The last instrument (Fig. 4), though it has, and must have, more limited use and a far narrower circle of users, I am somewhat enthusiastic over. Probably all laryngologists have been bothered (we may take the confessions of the most noted, at least, that they have been) to get hold of and crush or cut, or both combined, those little or big neoplasms that occur, fortunately, relatively so rarely in the recesses of the larynx. I average three or four laryngeal tumors, I think, annually, and have a fair supply of Stoerk's, Mackenzie's, Schrotter's, Fauvel's, etc., instruments; but every now and then I have been exceedingly annoyed at the elusiveness of these little tumors situated on the vocal cords and elsewhere in that vicinity. I have sometimes tried all my own tools, and borrowed others, and worked till my patience or that of the patient was exhausted; this is apt more particularly to be the case in and of those sessile outgrowths, papillomata, or what not, from one or the other vocal cord.



a, Tube; b, Sheath, cutting edge below slot; Instrument retracted into sheath; d, Sliding retractor grip on wire.

Fig. 2281.—Laryngeal Scissors.

The instrument now shown is then adapted to one of Schrotter's tubes and handles, and consists virtually of the same idea as that of the hinged and jointed four-bladed scissors just as given in the preceding two, naturally much lessened in size, and with yet a different lumen. The instrument is introduced closed into the larynx, allowed to expand by the automatic spring arrangement on pressing the wire attached to the finger-piece, and when, as the expert will know, it is at or about the site of the growth, is redrawn up into the tube, and into the slot in the tube, by retracting finger pressure.

The instrument may not cut the growth off cleanly, but a very slight pushing and retracting will divide the tissues met with there. The cleanness of separation is of little consequence anyhow, for we know, as a matter of fact, that the nutrition of these small neoplasms once essentially interfered with by crushing or cutting, they tend to disappear, as do warts and such by astringent and alterative applications being applied with the brush, etc.

I believe this instrument to be a good addition to the existing armamenta for laryngeal operation, and hope it and the others will commend themselves to the gentlemen more especially interested in such work.

Owing to its recent make I have had but one opportunity of using this instrument on a laryngeal growth; it succeeded then admirably. One point omitted in description of instrument is, that there is a screw-joint at junction of shaft and tube, permitting any degree of rotation of cutting surfaces.

I also believe that the principle of this hinged and pointless scissors would adapt itself for use in some of the mucous openings and cavities of the body. The four blades closing at once give it an essentially *écraseur*-like action, so that hæmorrhage is usually extremely slight.

(Extract from the *American Journal of Ophthalmology*, February, 1887.)

PRINCE'S SPOOL EYE NEEDLE.

By E. A. Prince, M. D., Jacksonville, Ill.

The accompanying cut of my spool advancement needle was received with the request that an account of it be given to some medical journal for publication.

Its necessity first became evident about six years ago. In attempting to correct an internal strabismus of moderate degree, the capsule of Tenon was sufficiently lacerated to allow the tendon to retreat so much as to occasion an extreme external squint, decidedly worse than the original deformity.

Stimulated by the prospect of disgrace, I extemporized a hook, after drawing the temper of a surgical needle, and fortunately succeeded in advancing the retracted muscle, which was then secured to its proper place with a perfect cosmetic result.

A study of this case developed the operation of "advancement of the rectus," together with the capsule and conjunctiva, published in the *St. Louis Medical and Surgical Journal*, June, 1881, and in Noyes' "Diseases of the Eye," page 116. The operation was improved by a pulley modification, which appeared in the *New York Medical Record*, August 8, 1885, with a cut of the needle then in use, after the manner of the corkscrew-staphyloraphy needle.

The antiseptic importance of keeping the thread from touching the face, hair or clothing, together with the realization of its extensive usefulness in cauthoplasty and other operations on the conjunctiva, led to the conception that it merited a spool in the handle, to carry antiseptic silk, shielded from contact with pyogenic organisms.



2252

This requirement was met in August, 1885, by the introduction of a bobbin, *a*, to carry about thirty feet of silk, which issues from a very small opening in the shield and passes through the eye of the needle, *b*, to be caught by toothed forceps—after the tissues have been transfixed.

The loop suture for advancement is made by transfixing the rectus a second time from within outward, catching the thread and withdrawing the needle before cutting it off. The thread for the anterior fixation point (pulley) should be entered one or two millimeters from the cornea, slightly into the

dense tissue, which purpose is better served by the sharpness and delicacy of a No. 25 eye needle. This thread is then tied to encircle one branch of the loop suture in a form of pulley over which it is drawn to any degree of tightness, and tied with a surgical bow-knot, to be modified or made secure after an interval, when a perfect position shall have been established. The silk which has been employed is iron-dyed No. 2. It is first soaked in a one-tenth per cent. sublimate solution, dried, waxed (to prevent untwisting), and treated with iodoform in vaseline (three per cent.), when, wound on the spool, it is always ready for use.

FIG.

2283	Bosworth's Permanent Clamp.....	\$ 1 65
	Quier's Foreign Body Extractor (see index).....	2 00
2284	Breathing Inhibitor.....	2 00

NASAL INTUBATION.

By D. H. Goodwillie, M. D.

On this occasion it is only my purpose to introduce to you a method of nasal intubation as a valuable aid in the treatment of intranasal disease, and at some future time to give more in detail the result of an experience of some years of its use.

My first efforts began by the use of pure rubber gum tubing of different sizes and strength, and made applicable to each case by such impromptu means as I had at command. These experiments, after being carried on for some time, were so encouraging that I had the tubes made in soft rubber and platinum or aluminium from models that have proved by experience to be of practical application. These improved tubes have given me such good results that I merely call your attention to them for your consideration.



These tubes are oval (*a*) in shape and of the same size, with the exception of the anterior end (*b*), that is shaped so as to fit the vestibule of the nostril, and by that they are retained in place.

They are made in different sizes, $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter, and in length from $2\frac{1}{2}$ to $3\frac{1}{2}$ inches, but may readily be cut to any desired length.

The metal tubes can be changed in their caliber by passing through them a core of the desired shape. The anterior end may be soft rubber, as it is more comfortable by its flexibility in the vestibule of the nose.

The small rubber tubes are made use of at the beginning of the treatment and changed to larger ones until there is normal space or the deformity has been corrected. Then the metal tubes may be used if so desired, as they allow freer respiration through them. The tube is put into the nostril by raising the end of the nose and gently passing it into the inferior meatus, then releasing the end of the nose and passing the anterior end into the vestibule. They cannot be seen externally, and so can be worn and treatment carried on without any unsightly appearance, or even knowledge of their presence.

They can be readily removed by the patient for cleansing and returned to the nostril. Some of my patients have worn them constantly for months without discomfort, and always with benefit.

I will simply refer to some of the nasal diseases in which they have been made use of, viz.:

1. Intranasal hæmorrhage.
 2. Fractures of the nose, internal and external.
 3. Deviations of the cartilaginous and bony septum after the necessary surgical operation of section or removal of exostosis.
 4. After the removal of hypertrophic turbinated tissues or polypi, whether by the cautery or snare.
 5. Hypertrophies of the soft tissues without an operation, when worn for a sufficient time to produce absorption.
-

Beginning on the following Page is a

LIST OF INSTRUMENTS

DEvised BY

E. FLETCHER INGALS, M. D.,

CHICAGO, Ills.

COMPILED BY

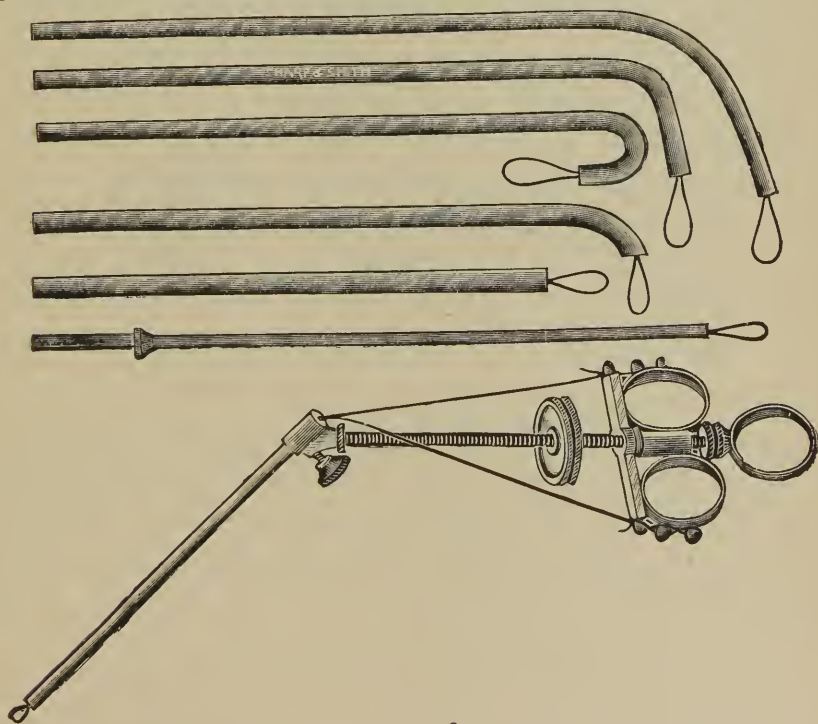
JNO. EDWIN RHODES, M. D.,

CHICAGO, Ills.

Pages 437 to 446 inclusive.

DR. INGALS' NASAL INSTRUMENTS.

FIG.			
*2285	Ingals' Cold Wire Nasal Snare, Steel Post, with 6 tubes.....	\$5 00	
2286	" " " " " 6 " in case..	6 00	
*2287	" Glass Powder Blower (3 tubes) Rubber Bulb.....	1 00	
*2287-A	" Nasal Syringe.....	1 00	
*2288	" Caution Electrodes.....	per set. 12 00	
2289	" " " " " each.	1 60	
*2290	" Septum Knife.....	1 00	
*2291	" Cotton Applicator.....	40	
*2292	" Silver Canula.....	1 00	
*2293	" Brush Holder.....	75	
*2294	" Flat Nasal Probe.....	75	
*2295	" Nasal Speculum.....	1 25	
*2296	" Bone Cutting Forceps.....	2 25	
*2297	" Dressing Forceps.....	2 00	
*2298	" Foreign Growth Forceps.....	2 50	
*2299	" Wire Loop Adjuster.....	9 00	
*2300	" Nasal Dressing Scissors.....	2 50	
*2301	" Turbinate Bone ".....	2 50	
*2302	" Nasal Spatulas.....	set of 3. 75	
*2303	" Nasal Spout, including Rubber Tube.....	2 00	
*2304	" 4-inch Mirror, with Lens.....	4 50	



2285

Fig. 2285.—INGALS' COLD WIRE NASAL SNARE.

(For description, see following page.)

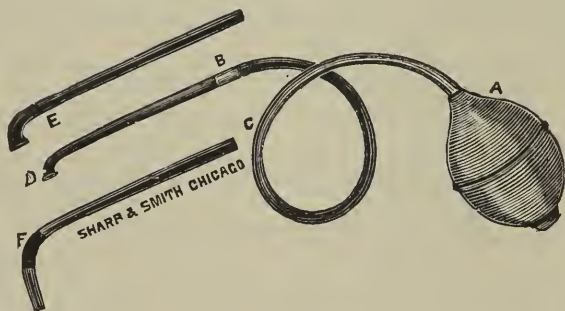
DR. INGALS' INSTRUMENTS.

FIG.		
*2305	Ingals' Head Band.....	\$ 1 50
*2306	" Set of Spray Tubes with rack.....	4 50
*2307	" Nasal Saw.....	1 50
*2308	" Rubber Tampon.....	75
*2309	" Tonsil Forceps.....	2 50
*2310	" Laryngeal Forceps, any style.....each.	3 50
*2311	" Case of Instruments.....	22 00
*2312	" Cautery Battery	50 00

Fig. 2285.—INGALS' COLD WIRE SNARE.

(For illustration, see preceding page.)

This is a well-constructed snare, with steel post and six tubes. Suitable for removal of tumors, hypertrophied tissues, foreign bodies, etc., in nasal cavities, pharynx and larynx. It is armed by means of a piece of No. 5 piano wire doubled into a loop, the ends being passed through the tube and wound about the posts securely. When additional traction power is needed the small wheel may be run down upon the horizontal bar, and turned as may be desired in cases where it is necessary to cut through the growth slowly, in order to avoid hemorrhage. In this way twenty, thirty minutes or more may be employed in the removal of a growth.



2287

Fig. 2287.—INGALS' POWDER BLOWER.

Consists of a rubber bulb with rubber tubing attached, 12 inches in length, provided with straight and bent glass tubes. The distal ends of the glass tubes are slightly spread. When the powder has been placed in the rounded end of the glass tube, the rubber tubing is forced over that end, the glass tube seized by thumb and fore finger of the right hand and the bulb lying in the palm of the hand is compressed by the remaining fingers of the hand. In this way the other hand is free for use of the nasal speculum, throat mirror, etc.

Fig. 2287-a.—INGALS' NASAL SYRINGE.—(Not Illustrated.)

The fluid to be used is drawn into the bulb by first exhausting the air by compression, and with the end of the tube immersed in the fluid, the bulb is filled by suction. It can then be forced out with as little pressure and as slowly as desired.

DR. INGALS' INSTRUMENTS.



2290

Fig. 2290.—INGALS' SEPTUM KNIFE.

Blade one and one-quarter inches long, with sharp point. Used in operations upon the cartilaginous septum.



2291

Fig. 2291.—INGALS' APPLICATOR.

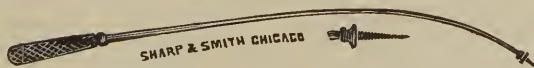
These are made of copper, nickel plated, eight inches in length. They are quadrilateral in shape from the point five inches. They are flexible, and can be bent at any angle, for use in naso-pharynx, larynx, etc. When used in making applications in the larynx, it is best to tie the cotton swab securely with a piece of thread, winding it about the applicator, thus avoiding the risk of having the cotton drawn from the applicator, when grasped by the spasmodic action of the glottis.



2292

Fig. 2292.—INGALS' SILVER CANULA.

This canula is made for attachment to a common hypodermic syringe, and is used for making applications of solutions of cocaine in the nasal passages.



2293

Fig. 2293.—INGALS' THROAT BRUSH-HOLDER.

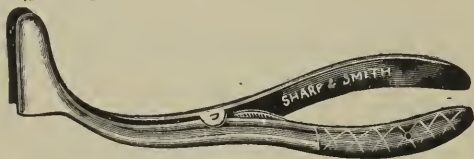
The quill is cut off an ordinary camel's hair brush at the base, and the holder is then screwed on. It can be bent at any desired angle, and is used to make applications of pigments to the throat or larynx.

DR. INGALS' INSTRUMENTS.

2294

INGALS' FLAT NASAL PROBE.

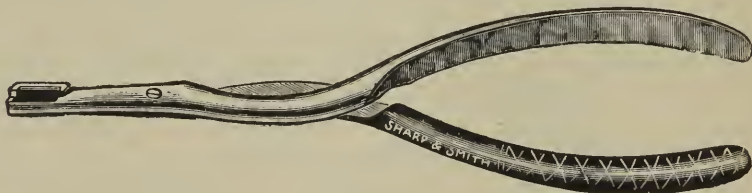
Five and one half inches in length, made of aluminium, bent at an angle of forty-five degrees in order that the hand may not be in the line of vision when using it in the nasal passages.



2295

INGALS' NASAL SPECULUM.

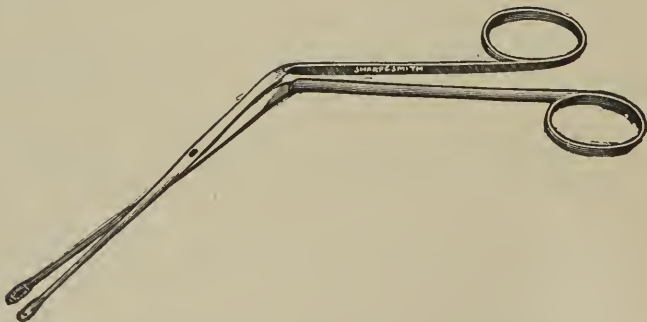
Nickel plated. Adapted to the shape of the nasal opening. The jaws can be separated one inch. The Speculum is five inches in length.



2296

INGALS' NASAL BONE FORCEPS.

These are made to remove projections from the Septum in operations for exostoses, and wherever bone forceps are necessary in operations within the nasal passages.



2297

INGALS' NASAL DRESSING FORCEPS.

Bent, as per cut, at a proper angle, and a useful and necessary instrument in the laryngologist's armamentarium.

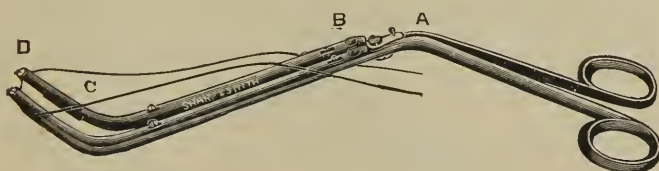
DR. INGALS' INSTRUMENTS.



2298

Fig. 2298.—INGALS' FOREIGN GROWTH CUTTING FORCEPS.

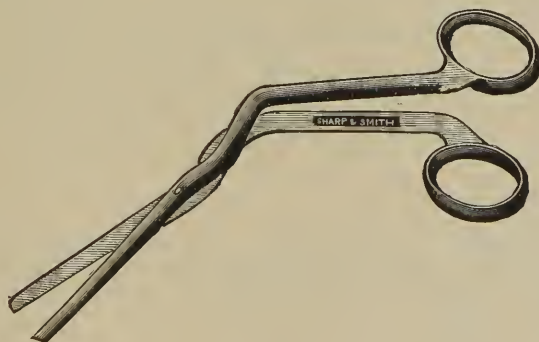
These were devised to remove granulations in the trachea after tracheotomy, but will also be found of service for certain cutting operations on the nose or throat.



2299

Fig. 2299.—INGALS' WIRE LOOP ADJUSTER FOR TUMORS IN NASOPHARYNX.

This loop adjuster was devised for carrying the wire behind and around tumors in the naso-pharynx, when operating for removal with the cold wire snare. It is so arranged that the wire can be disengaged in situ, and the instrument removed.



2300

Fig. 2300.—INGALS' NASAL SCISSORS.

These scissors are useful in intra-nasal operations, made of suitable strength, and so constructed that the blades can be separated widely when operating in the nares.

DR. INGALS' INSTRUMENTS.



Fig. 2302. INGALS' NASAL SPATULA.—Set of Three.

These are made of steel, and nickel plated. They are five and one-quarter inches long, are from one-half inch to one-quarter inch in width, and are bent at an angle of about 45° . They are very useful in pressing back swollen tissues in the nares to afford a better view of the nasal chamber; also in tamponing the nares, breaking down adhesions, etc., in some cases answering the purpose of a nasal speculum.

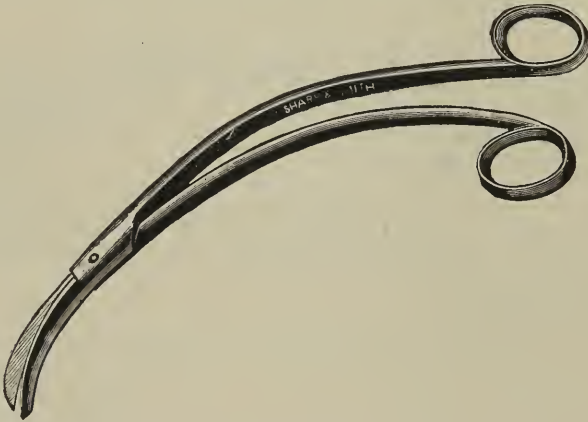
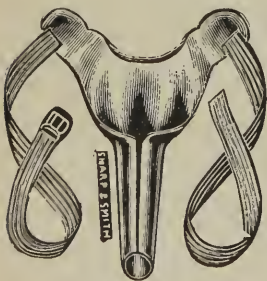


Fig. 2301. INGALS' TURBINATED BONE SCISSORS.

In some cases where it is necessary to remove tissues, or a part of the middle turbinated body, these scissors will be found to serve the purpose well.



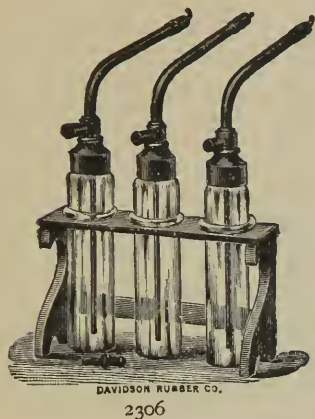
2303

Fig. 2303. INGALS' NASAL SPOUT.

This is furnished with a rubber tube to convey fluids to a suitable jar. It is used in operations in the nares.

DR. INGALS' INSTRUMENTS.

Fig. 2306.—INGALS' NASAL SPRAYS



These sprays are put up in sets of three, and are made especially for office use. The bottles are of extra length, and the tubes are fitted to screw into a hard rubber cap attached to the bottle. They give a powerful spray with an air pressure of from ten to fifteen pounds, and throw fluid cosmoline, petrolina or aqueous solutions equally well. These atomizers are set in a neat rack, and each tube is furnished with a straight, curved, and Dr. Ingals' long tip for larynx and posterior nares.

SHARP & SMITH have also an excellent cut-off to fit these tubes for use with compressed air apparatus



Fig. 2307.—INGALS' NASAL SAW.

This saw is used in operations upon the nasal septum for the removal of exostoses and corrections of deviations.



Fig. 2308.—INGALS' NASAL TAMPON.

Made of soft rubber, in a number of sizes. It is carried into the nares, collapsed, and is then inflated, causing pressure to prevent hemorrhage, and for other purposes.



Fig. 2309.—INGALS' TONSIL FORCEPS.

Used to grasp the tonsil in tonsillotomy with the Ingals' snare.

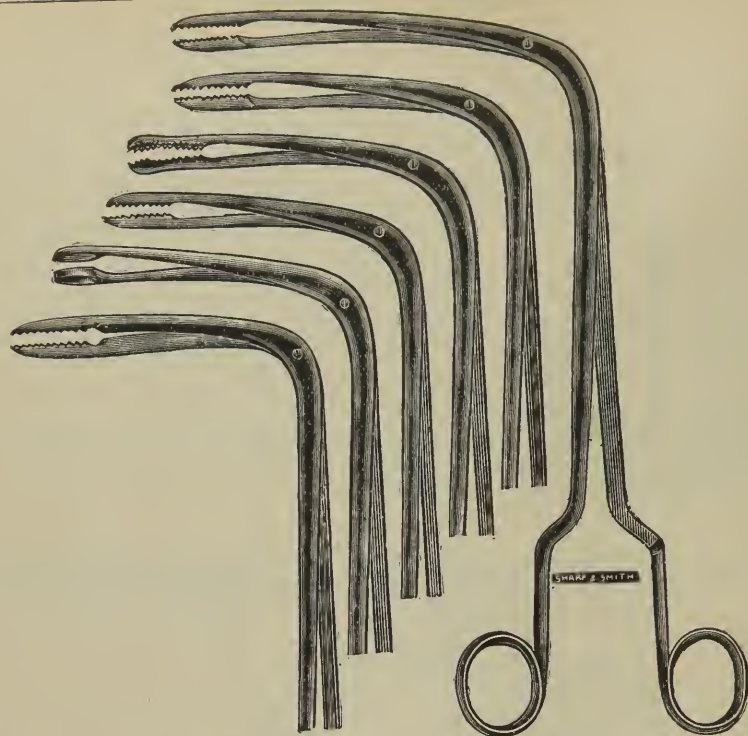
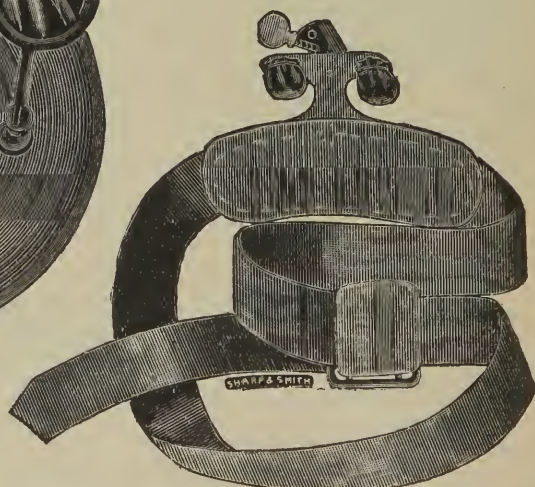


Fig. 2310.—INGALS' LARYNGEAL FORCEPS.

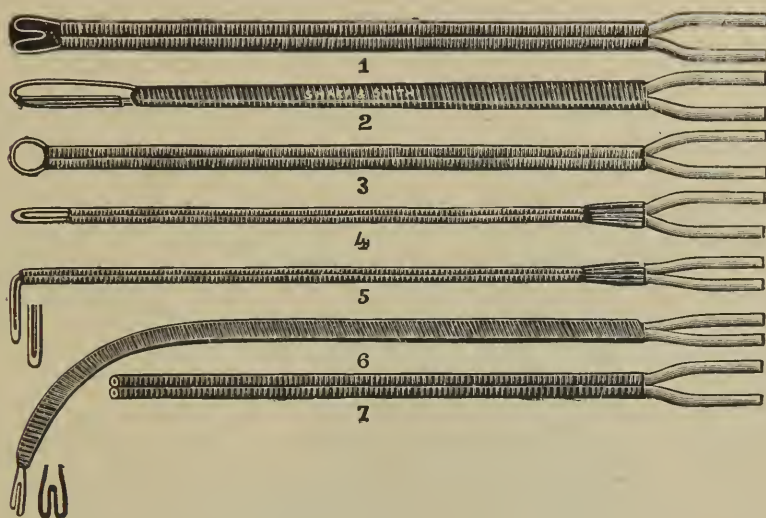


2304



INGALS' HEAD BAND AND MIRROR. 2305

DR INGALS' INSTRUMENTS.



2288

Fig. 2288.—INGALS' CAUTERY ELECTRODES.

Ingals' Cautery Electrodes, made of No. 14 copper tubing, neatly wound and shellacked.

No. 1. Five inches in length, with platinum wire, No. 22 tip, shield of non-combustible vulcanized fibre, used in making superficial cauterizations of the nasal mucous membrane.

No. 2. Five inches in length, blade $\frac{3}{4}$ inches long, of No. 20 platinum wire. Used principally in making linear cauterizations of the turbinated bodies and submucous thickenings at sides of vomer. The side opposite the cautery wire is carefully wound and shellacked.

No. 3. Five inches in length, with tip of No. 21 platinum wire. Useful in the cauterization of bases of polypi, after removal of the tumor, etc.

No. 4. Five inches in length, very flexible, with adjustable tip of No. 25 platinum wire.

No. 5. Five inches in length, tip of No. 22 platinum wire. Used in operations on pharynx, tonsils, etc.

No. 6. Seven and one-quarter inches in length, adjustable tip of No. 22 platinum wire. Used in cauterizations of naso-pharynx, base of tongue, epiglottis, etc.

The tip is sometimes guarded with vulcanized fibre, the same as No. 1.

No. 7. Five inches in length, with tip of No. 22 platinum wire.

No. 8. Galvano-cautery Ecraseur, same as Fleming's.

DR. INGALS' INSTRUMENTS.

Fig. 2311. Dr. Ingals' Case of Laryngeal Instruments contains: 1 Plain Wire Nasal Speculum; 1 Ingals' 4-Inch Mirror and Head Band; 8 Metal Screw Top 2 dr. Vials; 1 Pair Ingals' Dressing Forceps; 4 Laryngeal Mirrors, in fixed handles; 1 Ingals' Powder Blower, with glass tubes; 1 Folding Tongue Depressor; 1 Flat Platina Applicator; 2 Cotton Carriers; Absorbent Cotton. In neat morocco covered, velvet lined case, opening in center, with handles for carrying.

This is a correct list as furnished by Dr. Ingals, through Dr. Rhodes.

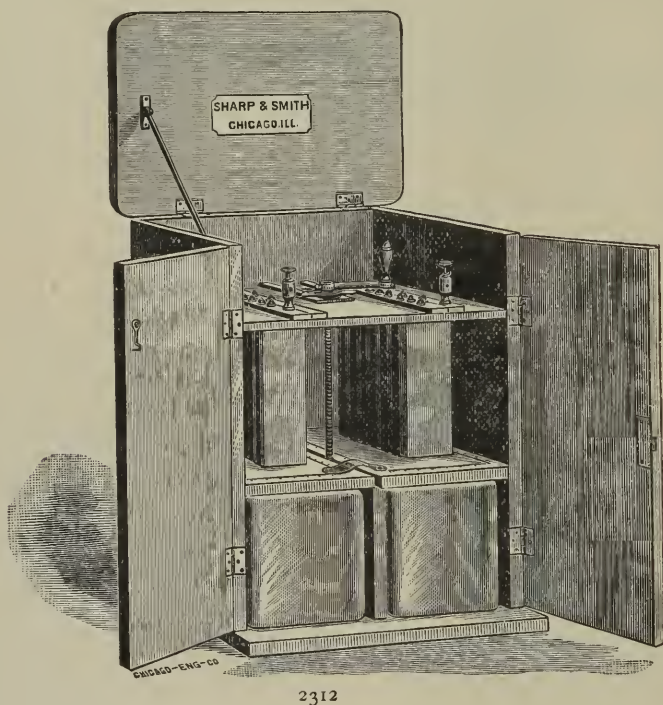
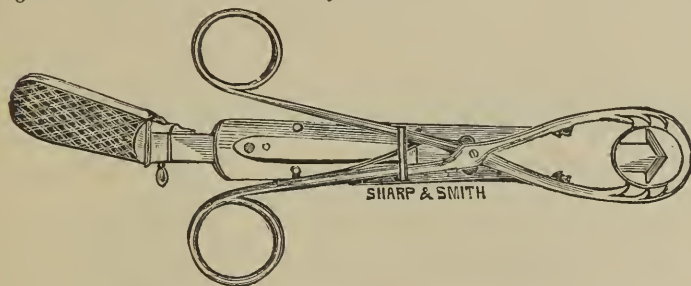


Fig. 2312.—DR. INGALS' CAUTERY BATTERY.

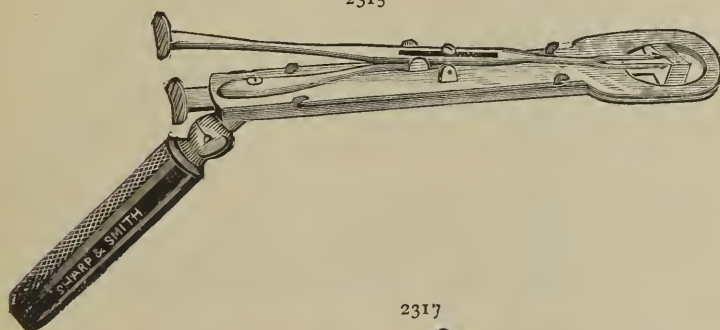
This battery has been before the profession now for several years, and the recent improvements have made it the best and strongest cautery battery in the market. There are two large cells, and the elements consist of large zinc and carbon plates, which are depressed by a screw to any desired depth, regulating the strength of the current perfectly. The cells hold a large amount of fluid which requires less frequent changing. The battery needs very little care. Some of them have been in constant use a number of years. The battery is inclosed in a neat black walnut case, 12x15x22 inches high.

MOUTH AND THROAT INSTRUMENTS.

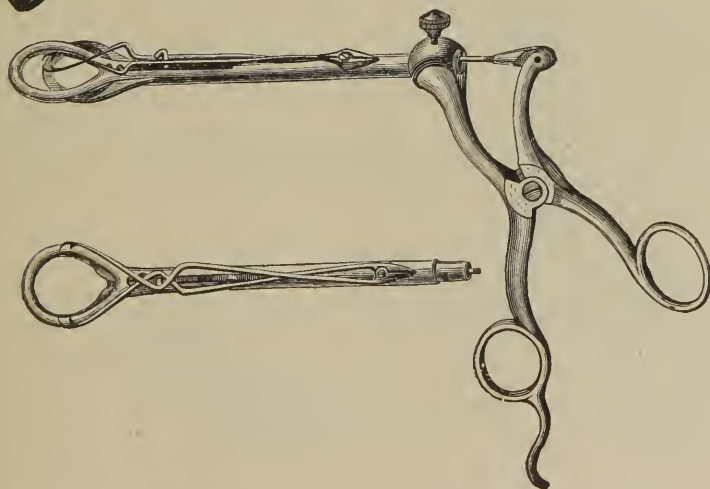
FIG.		
*2315	Hamilton's Tonsillotome.....	\$10 50
*2316	Billings' " (see page 449-B).....	7 00
*2317	Gunn's "	10 00
2318	Tiemann & Co.'s one Blade Tonsillotome.....	11 00
*2319	" " two "	17 00
*2320	Fahnstock's plain all Metal "	3 50
2321	" Best Ebony Handle "	4 50



2315



2317



2319

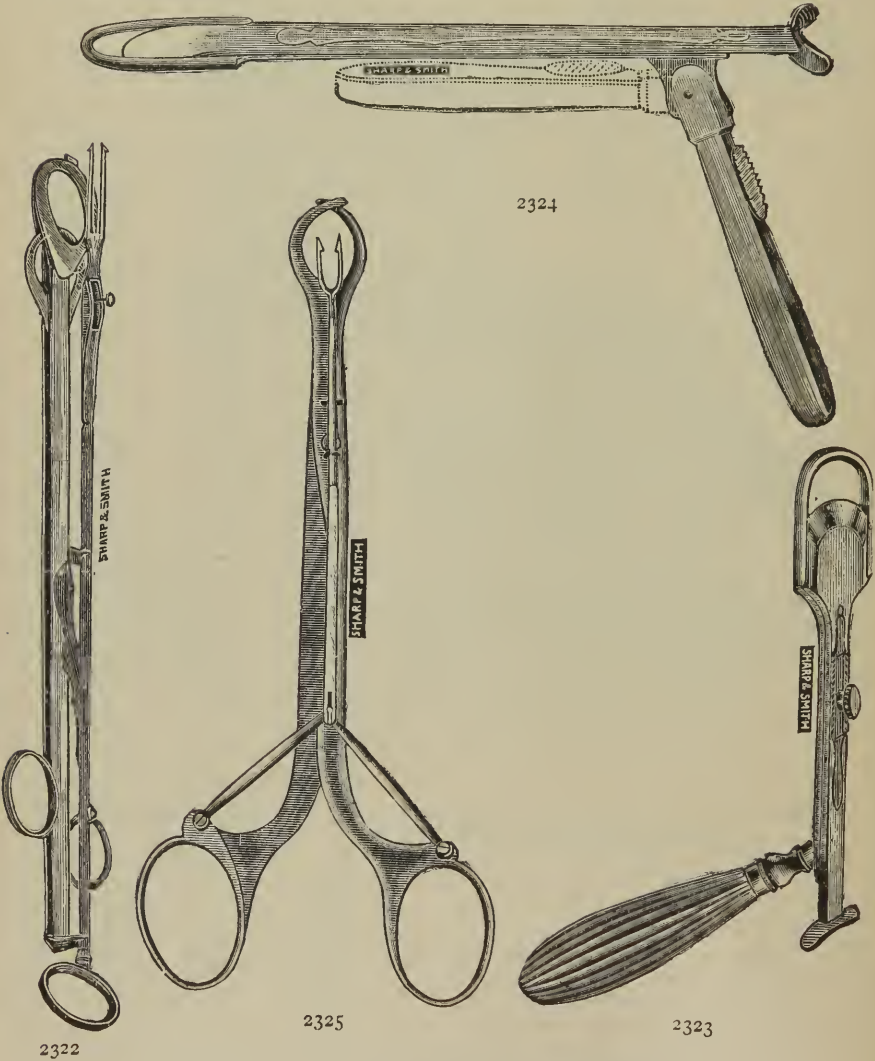


2320

Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.		
*2322	Mathieu's Tonsillotome, three sizes, each.....	\$ 5 00
*2323	Mackenzie's "	5 00
*2324	Bishop's "	7 50
*2325	Rupprecht's "	10 00
2326	Sajon's "	9 00
2327	Lentz's "	5 00
2328	Elsberg's "	6 50



All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2329	Sajou's Uvalotome.....	\$ 6 00
*2330	Tiemann & Co.'s Uvalotome.....	6 75
*2331	Wood's Uvula Scissors, with claws.....	3 75
*2332	Seiler's Angular Uvula Scissors with claws.....	5 00
*2333	Tonsil Scissors, Curved or Flat.....	1 75
2334	Hamilton's ".....	1 50
2335	Mathieu's ".....	1 50
2336	Tiemann & Co.'s Scissors.....	6 25
2337	Ericksen's ".....	3 75
2338	Richter's Angular ".....	3 00
2339	Whitehead's " for dividing Muscles.....	3 35
*2340	McKenzie's set of Scissors, Forceps and Ecraseur.....	18 75



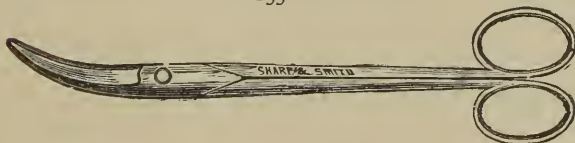
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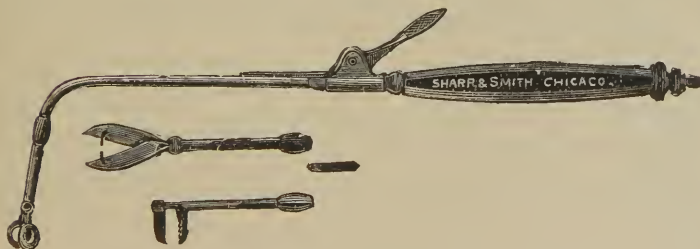
2331



2332



2333



2340



2330

All instruments designated by a * are illustrated.

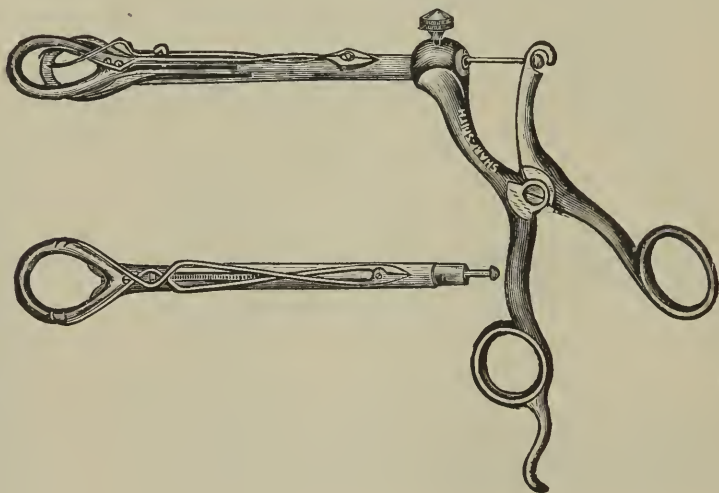
MOUTH AND THROAT INSTRUMENTS.

FIG.

*2340-A	Dr. Jas. P. Parker's Modified Tiemann's Tonsilotome.....	\$11 25
*2340-B	Dr. Norval H. Pierce's Snare Tonsilotome.....	7 50
*2340-C	Dr. W. A. Dunn's Modified Mackenzie Tonsilotome.....	6 75
*2340-D	Dr. Casselberry's Naso-Pharyngeal Tonsilotome (see p. 449C)	15 00
*2340-E	Dr. Casselberry's Lingual Tonsilotome.....(" ")	7 50

A NEW TONSILOTOME.

BY JAS. P. PARKER, M. D., Kansas City, Mo.



2340-A.

Of all the amygdalotomes that have been devised, the instrument known in this country as Tiemann's is probably the most popular. The only objection that could be urged against it was the inconvenience of attaching the blade to the handle by a screw, which led me to suggest a ball-and-socket attachment. As now modified it is a very satisfactory instrument.

The blade is easily fixed in position by a thumbscrew, when the bar attached to the knife is drawn out as far as it can be, allowing it to drop into the slot of the handle; with the thumb of the left hand on the ball it is pushed forward until the ball glides into the socket. The blade is readily removed by reversing the manipulation.

By slackening the thumbscrew, the blade may be turned in position for the right or left tonsil. Its use requires but one hand and one motion, and the hand of the operator never obstructs the light. When once applied to the tonsil, only the closure of the scissors-handle is required. The tonsil is first pierced by the forks and raised from its bed, and then the knife is drawn home and cuts the gland, leaving it grasped by the forks. The instrument is easily taken apart and cleaned, and is therefore perfectly aseptic.

Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.



2316 (See page 447).

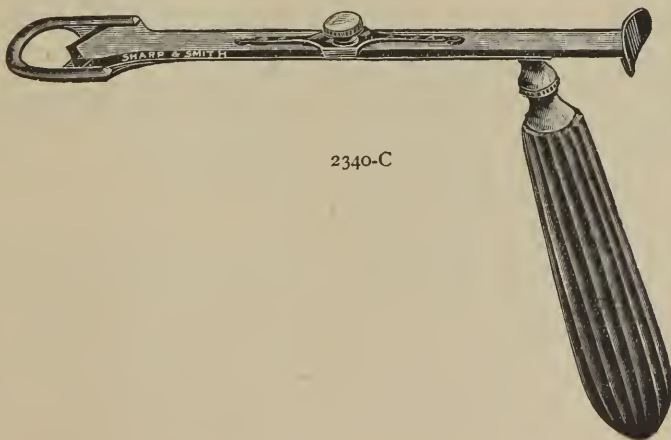


2340-B

***Fig. 2340-B DR. N. H. PIERCE'S SNARE TONSILLOTOME.**

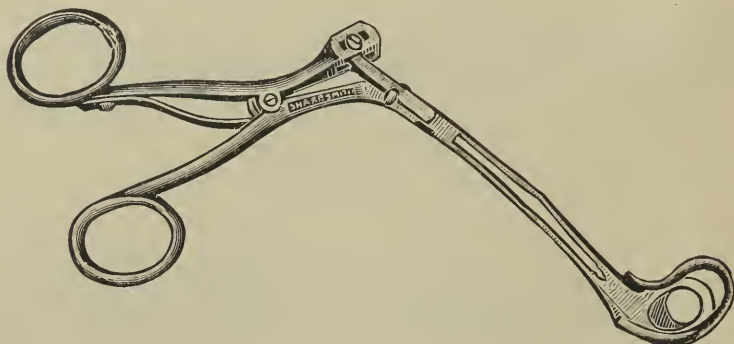
This is a thoroughly acceptable instrument. The end piece is easily detachable, and may be replaced instantly. There is less bleeding after its use.

This Tonsillotome was designed with a view of excising muckle-shaped tonsils. In operating on these a forceps is used, the tonsil is pulled away from the wall of the pharynx, and the wire drawn. The wire does not cut through the tonsil, however. The cutting edge is situated on the semilunar surface of the shaft. The simplicity of its construction makes it possible to be produced at a lower cost than the regular tonsillotome.

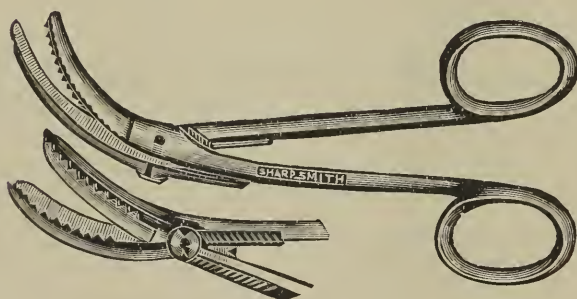


2340-C

MOUTH AND THROAT INSTRUMENTS.

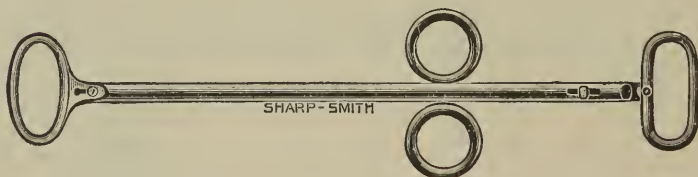


2340-D



2340-E

DR. CASSELBERRY'S IMPROVED MATHIEU TONSILOTOME



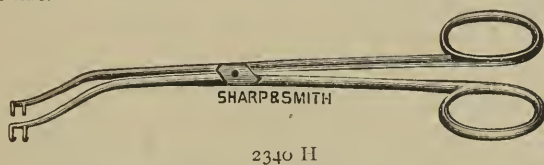
2340-G

"The wire snare is an excellent means of abscission when the child is anesthetized, as when combining this operation with that for 'adenoids,' but otherwise it is too slow and painful, and like the galvano-cautery snare, it requires more time and quietude for adjustment than are available with young children.

"The tonsilotome is still the best method for children, and I take pleasure in presenting a simplified instrument which I have used for years with the utmost satisfaction. It is the Mathieu guillotine so constructed as to do away with the fork attachment. (See Fig. 2340-G.)"—
(Continued on following page.)

MOUTH AND THROAT INSTRUMENTS.

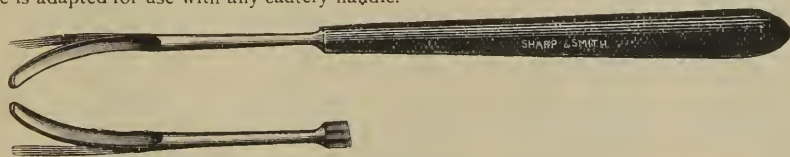
In place of the fork I use, held in the other hand, a specially constructed vulsellum by which the tonsil can be grasped, drawn out of its bed, and abscised at the point desired with much greater accuracy than by the fork attachment. (See 2340-H.) I have found the action of the fork to be largely accidental, dependent on the size and shape of the tonsil and the amount of gagging by the patient, that now it determined too deep an abscission, and again misses the tonsil entirely, especially if this happens to be rather small or flat. In other words, the new instrument assisted by the vulsellum, will abscise many tonsils that could not be satisfactorily grasped by the old mechanism, and it will abscise all tonsils with a reasonable degree of accuracy at the proper line.



DR. KNIGHT'S ELECTRIC TONSIL SNARE.

2340-I

This instrument consists of a cautery canula, braced by an insulated metallic guide, ending in a fenestra similar to the McKensie Tonsilotome. The platinum wire is tied to the ring by a fine silk thread, which holds it in position to properly grasp the tonsil. The heating of the wire burns the thread and the metallic ring protects the surrounding parts during the operation. This Snare is adapted for use with any cautery handle.



2340-K



2340-L

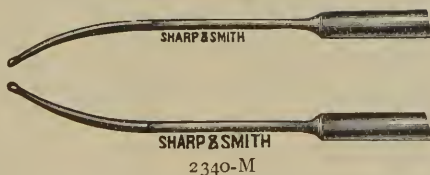
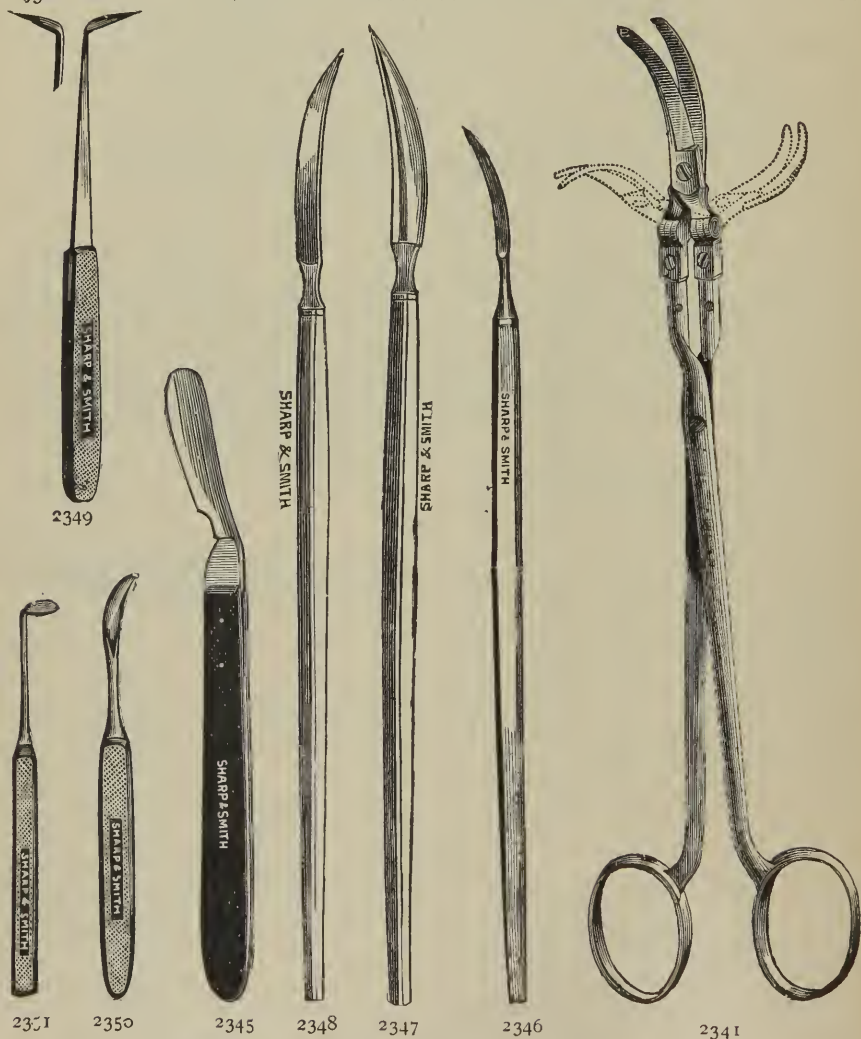
SHARP & SMITH
2340-M

FIG.			
*2340-G	Dr. Casselberry's Improved Mathieu's Tonsilotome.....	\$6	00
*2340-H	Dr. Casselberry's Grasping Forceps.....	2	25
*2340-I	Dr. Knight's Electric Tonsil Snare.....	3	00
*2340-K	Dr. Hobbs' Curved Blunt Tonsil Bistouries.....	each,	1 35
*2340-L	Dr. Hobbs' Tonsil Hooks.....	"	1 35
*2340-M	Dr. Hobbs' Double Edge Tonsil Knives.....	"	1 35

Instruments designated by * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

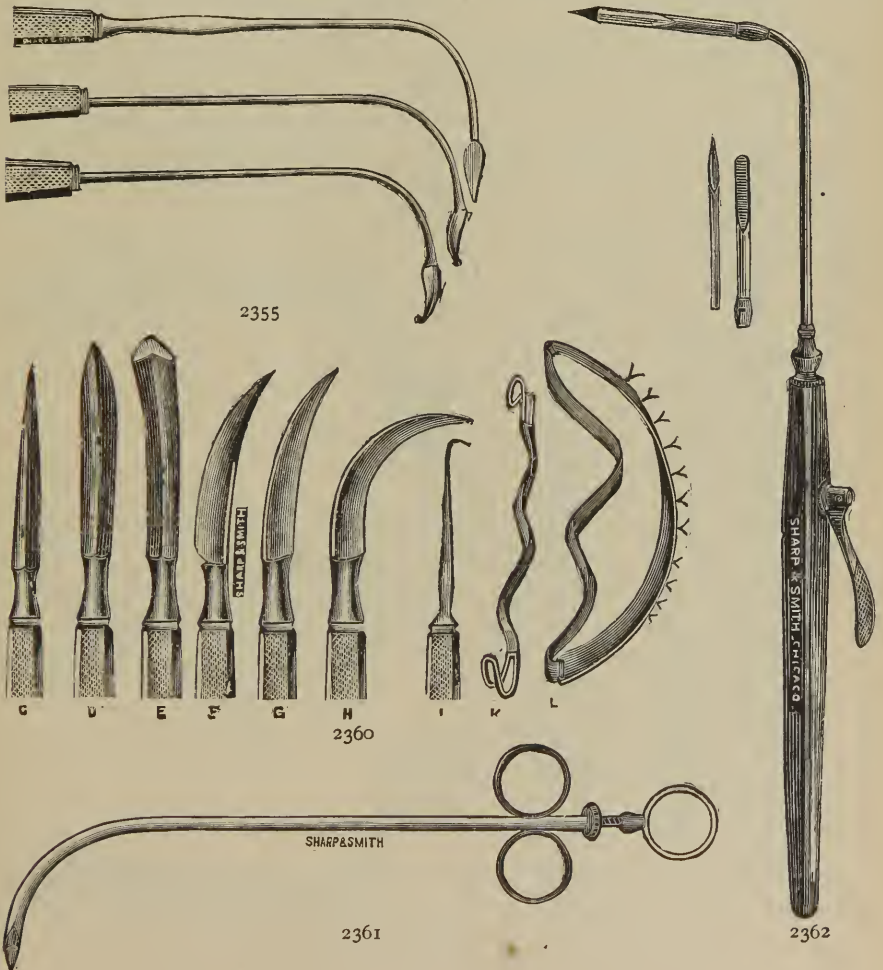
FIG.		
*2341	Heywood Smith's Scissors.....	\$ 9 00
2342	Concealed Scarifier.....	4 75
2343	Tonsil Scarifiers, 12 Patterns, each.....	\$1 10 to 2 00
2344	Green's Tonsil Bistoury.....	1 00
*2345	Yearsley's " Knife.....	1 65
*2346	Updegraff's Tonsil Bistoury.....	1 25
*2347	Double Edge Staphylarophy Bistoury.....	1 75
*2348	Curved R. & L. " " each.....	1 75
*2349	Whitehead's Paring Knife.....	1 10
*2350	" Gum ".....	1 10
*2351	" Hoe ".....	1 10



All instruments designated by a * are illustrated.

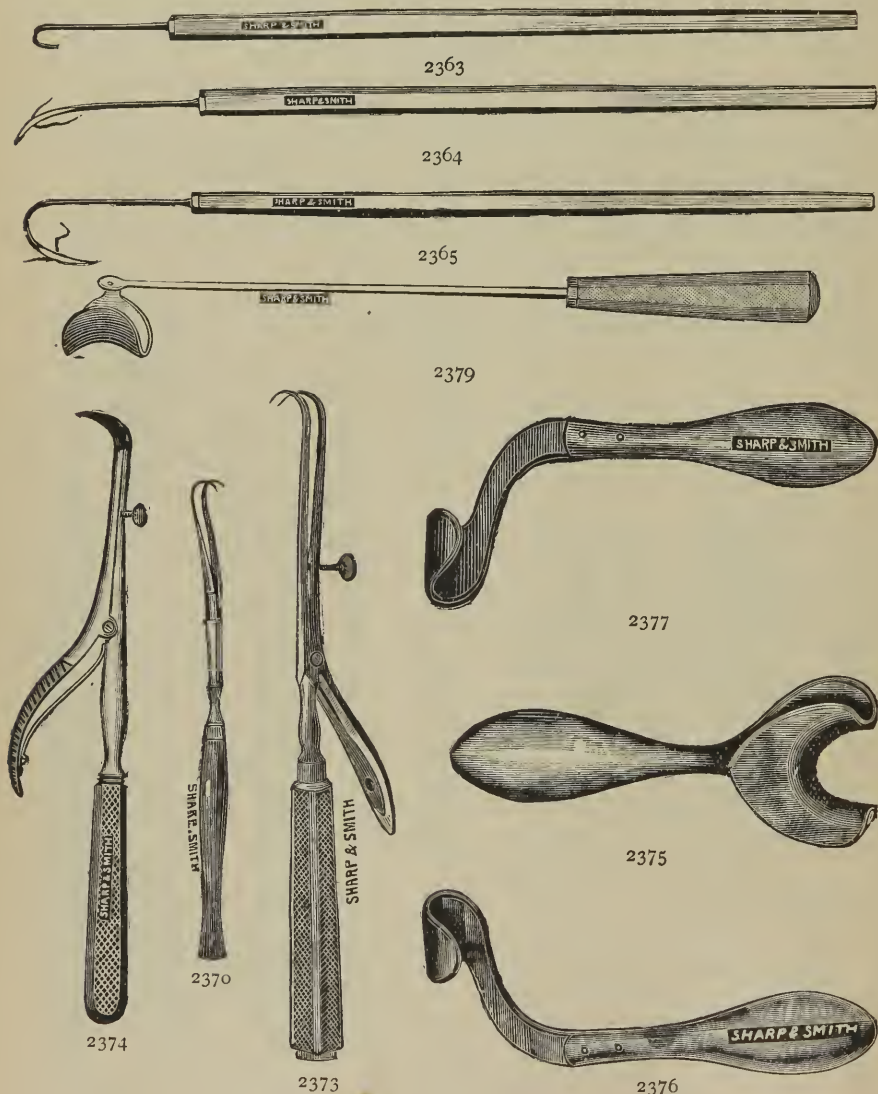
MOUTH AND THROAT INSTRUMENTS.

FIG.			
2352	Tobold's Polypus Forceps	Concave Cutting Edge.....	\$ 1 15
2353	"	" " Convex ".....	1 15
2354	"	Lanciform Forceps....	1 15
*2355	"	Laryngeal Knives, any pattern, each.....	1 15
2356	Buck's	" " ".....	2 00
2357	Concave	" " ".....	1 50
2358	Convex	" " ".....	1 50
*2360-C	Langenbeck's	Narrow, Double Edge Staphyloraphy Knife.....	1 25
*2360-D	"	Wide " " " Button.....	1 25
*2360-E	"	" " " " ".....	1 25
*2360-F	"	Single Edge Staphyloraphy Knife....	1 25
*2360-G	"	" " " " ".....	1 25
*2360-H	"	" " " " ".....	1 25
*2360-I	"	Staphyloraphy Tenaculum.....	1 15
*2360-K	"	Retractor.....	1 85
*2360-L	"	Suture Holder.....	2 25
*2361	Tobold's	Laryngeal Lancet (concealed).....	2 50
*2362	McKenzie's	3 blade Laryngeal Lancet.....	11 00
	Buck's	Tonsil Lancet.....	1 85



MOUTH AND THROAT INSTRUMENTS.

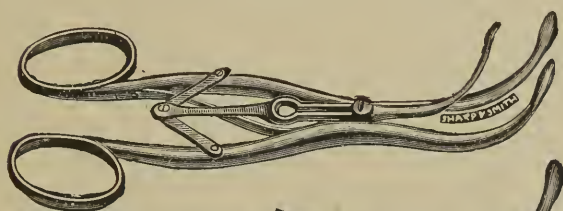
FIG.			FIG.		
*2363	Updegraff's Staphylarophy Hook,	\$1 25	2372	Plain Hard Rubber Palate Hook.	\$ 40
*2364	" " Needle	1 25	*2373	Langenbeck's Double Trachea	
*2365	" " Needle			Hook.	2 25
	Bent	1 25	*2374	Langenbeck's Tracheatome	3 00
2366	Updegraff's Staphylarophy Case.	6 75	*2375	Luer's Cheek Retractor, either side	1 60
2367	Whitehead's Spiral Needle	1 25	*2376	" " " right side	1 00
2368	Silver Wire Needle. each	10	*2377	" " " left side	1 00
2369	Green's Tonsil Hook	1 30	2378	Dieffenbach's Cheek Retractor,	
*2370	Green's Double Tonsil Hook.	1 75	*2379	S. & S. Cheek Retractor.	2 25
2371	Leffert's Palate Hook.	1 50			



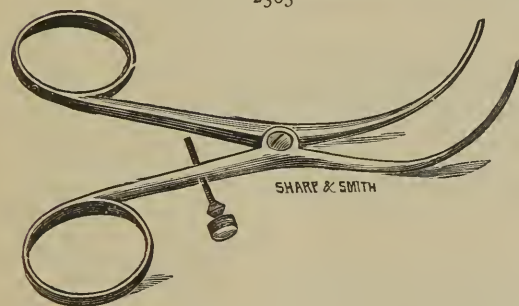
All Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

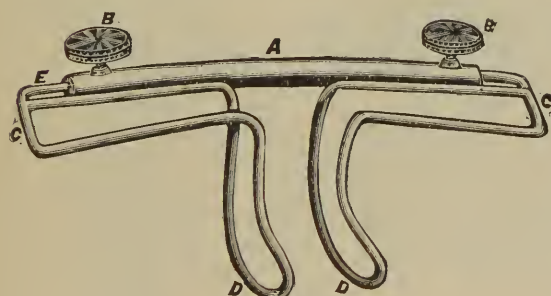
FIG.			FIG.		
*2380	Otis' Trachea Dilator.....	\$2 50	2384	Wells' Trachea Dilator.....	\$1 60
2381	Elastic Trachea Dilator.....	60	*2385	Delaborde's Trachea Dilator.....	3 75
*2382	Minor's Trachea Dilator.	3 50	*2386	Trosseau's Trachea Dilator.....	1 75
*2383	Ellsberg's Trachea Dilator.....	1 85	*2387	Rumboldt's Uvula Retractor....	1 10



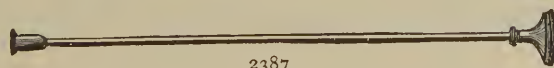
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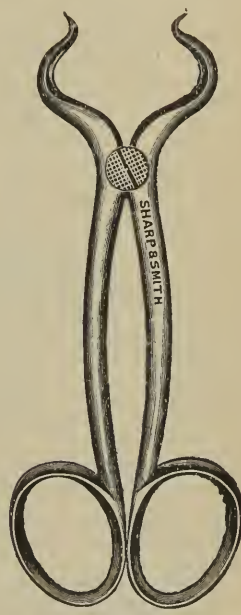
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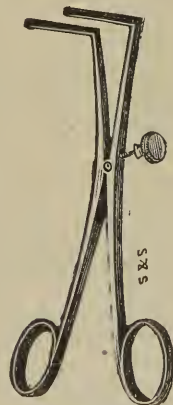
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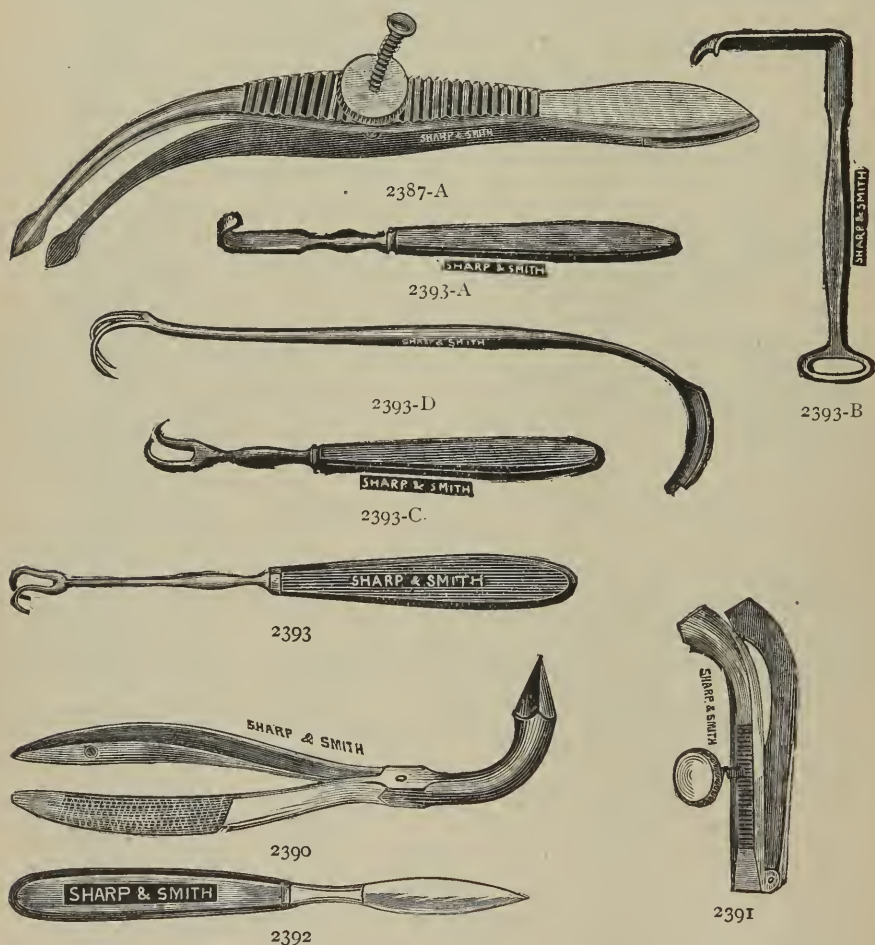
Fig. 2387. Uvula Retractor. The body of the instrument is a slender tube, about six inches long. Its larger extremity is trumpet shaped, and is covered with thin sheet rubber; its smaller extremity is so made, that the uvula may be drawn into it.

Instruments designated by a * are illustrated.

Other Trachea Instruments, see Supplement at end of book.

MOUTH AND THROAT INSTRUMENTS.

FIG.		
*2387-A	Burrows' Trachea Dilator	\$ 2 00
2388	Hanks' Tracheotome	6 75
2389	Russell & King's Tracheotome	25 00
2389-A	" " Hospital Style	27 50
*2390	Pitha's " "	2 75
*2391	Tiemann & Co.'s " and Dilator	6 25
*2392	Trachea Scalpel	1 10
*2393	Pilcher's Trachea Retractor	1 25
*2393-A	Gerster's Short Blunt Trachea Retractor	1 50
*2393-B	" Long Hooked " "	1 50
*2393-C	" Short Sharp " "	1 50
*2393-D	Pilcher's Supra Sternal Retractor	2 00

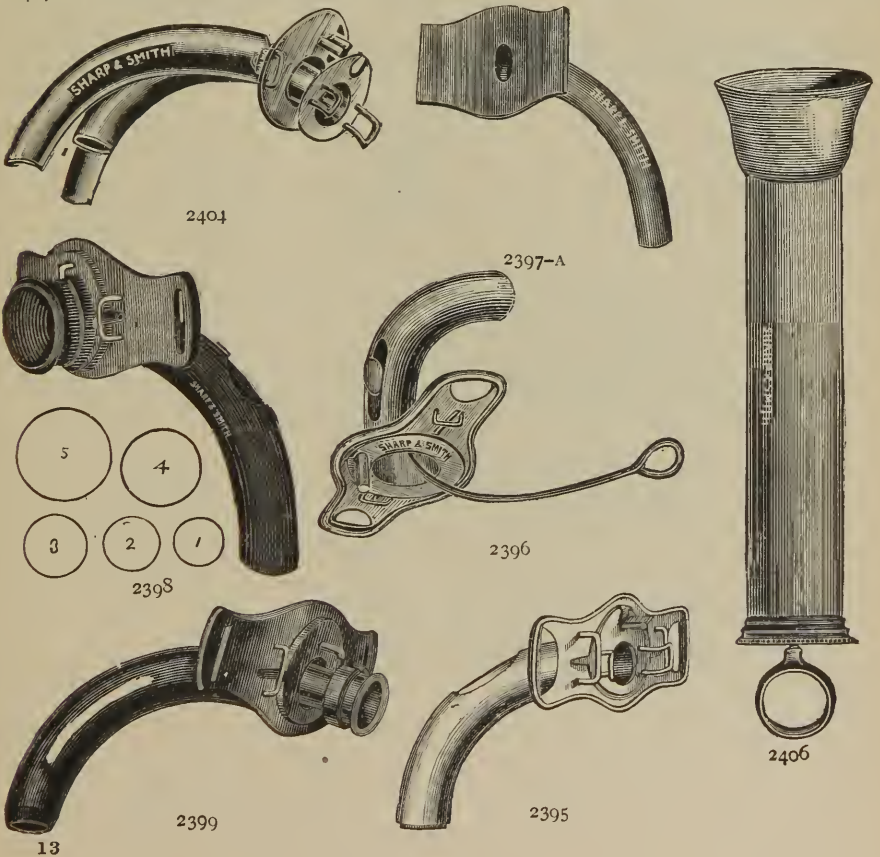


Instruments designated by a * are illustrated.

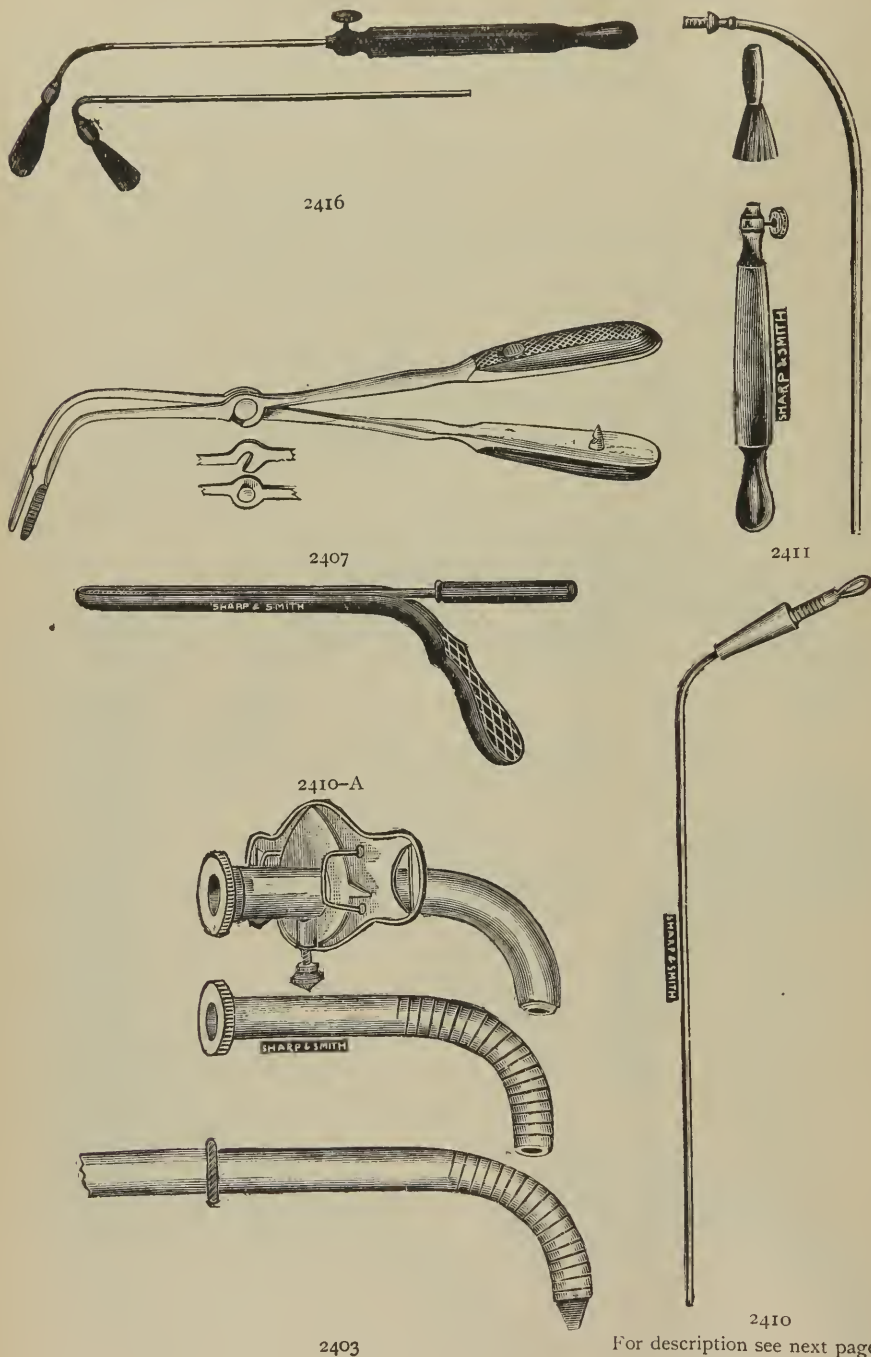
Other Trachea Instruments, see Supplement end of book.

MOUTH AND THROAT INSTRUMENTS.

FIG.		(Trachea).	
2394	Single Silver Trachea Tube.....		2 50
*2395	Double " " " ".....		3 75
*2396	" " " " with flexible Mirror.		3 75
2397	" Aluminium Trachea Tube.....		2 00
*2397-A	" Soft Rubber " ".....		1 50
*2398	" Hard " " " ".....		1 00
*2399	" " " " " ".....		1 50
2400	" Silver Plated " ".....		2 25
2401	Trivalve Silver " ".....		7 50
2402	Durham's Set of " ".....		7 50
*2403	Johnson's Double " " and Obdurator.		7 50
*2404	Gendron's " Split Silver Trachea Tube.....		6 00
2405	T. & Co.'s Vertebrated " ".....		4 50
*2406	" Tracheal Aspirator.....		1 85
*2407	Ellsberg's Cotton Applicator.....		4 50
2408	McCoy's " ".....		4 00
2409	Goodwillie's " ".....		1 00
*2410	Dunn's Laryngeal Cotton Applicator, Silver.....		1 50
*2410-A	Stucky's Modification of Smith's Acid Applicator.....		2 25
*2411	Flexible Stem Brush Holder, 12 Brushes.....		1 50
2412	Plain " ".....		50
2413	California " ".....		1 50
2414	Child's Brush and Caustic Holder.....		1 85
2415	Teeger's " Holder.....		1 65
*2416	Wagner's Brush Holder with two stems and 12 brushes.....		2 00
2417	McKenzie's Brush Holder with one brush.....		75



MOUTH AND THROAT INSTRUMENTS.



MOUTH AND THROAT INSTRUMENTS.

A NEW LARYNGEAL COTTON APPLICATOR.

BY W. A. DUNN, M. D.,

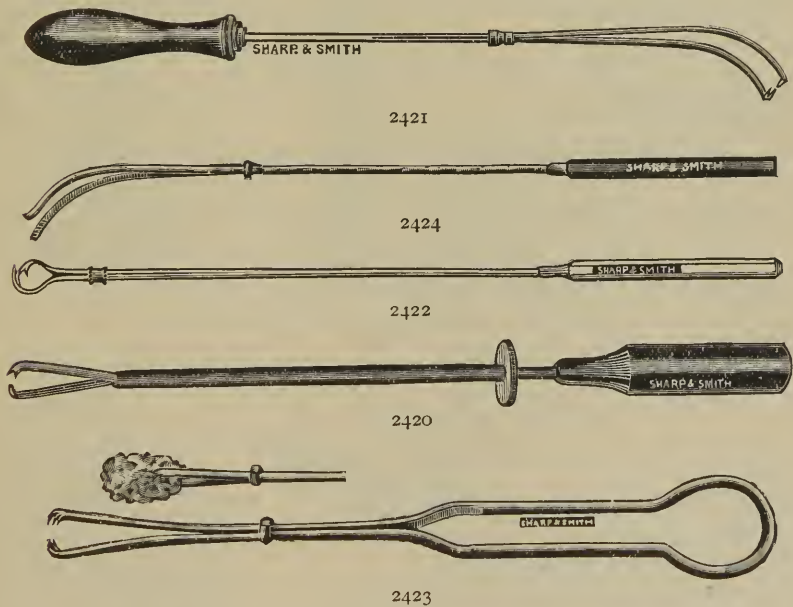
Clinical Instructor in the Diseases of the Throat, and Microscopist to the Hahnemann Hospital.
(For illustration see preceding page).

Instead of the Laryngeal brush which is very unpleasant on account of irritation of the mucus surface and the difficulty in keeping clean, I had made for my own use, by Sharp & Smith, a pencil, the shank of which is of German silver next the handle, and the remaining portion of pure silver, that it may be very pliable. The screw, eye and cap are of hard silver.

You thread the eye with absorbent cotton, screw down the cap and trim off the surplus cotton which is changed for each operation.

It has the advantage of being absolutely clean and very much less irritating to the larynx than the brush. It is impossible to leave the cotton in the larynx.

FIG.	Ellsberg's Sponge Holder and Cotton Applicator.....	\$	4	50
2418	Buck's " "			65
*2420	Hart's " "	I	00	
*2421	Emmet's " "			75
*2422	Sims' " "			75
*2423	Husson's " " " "			75
*2424	Fergen's " " " "	I	00	
2425	Granger's " "	I	50	
2426	Post Nasal " "			85



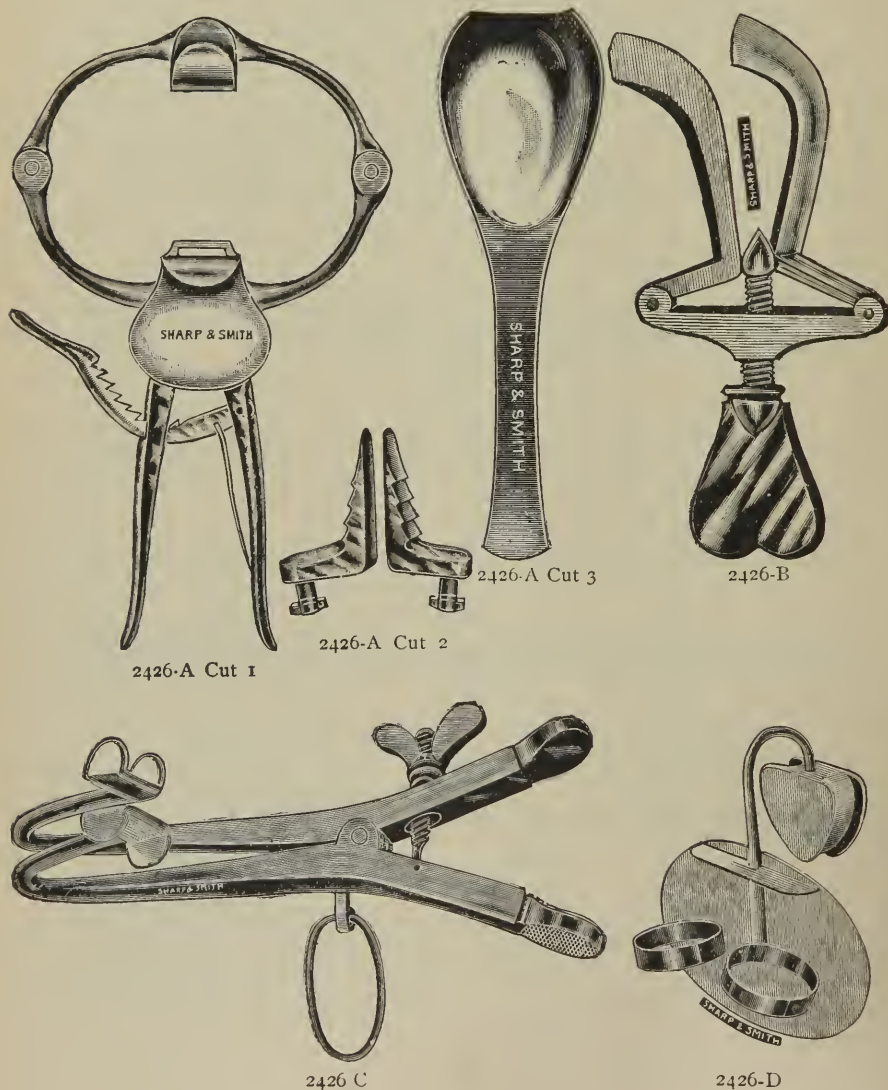
We direct the profession to an easily cleaned and perfectly aseptic sponge holder. The instrument is nine inches long and made out of a single piece of Steel Wire, Nickel Plated. The blades are brought together by an incomplete ring of steel, which can be readily slipped off, thus permitting the instrument to be thoroughly cleaned. The Cut represents the instrument so clearly that further explanation is unnecessary. The advantages that are claimed for this instrument are:

1. That it is easily cleaned, hence thoroughly aseptic. 2. That it is light, strong and durable. 3. That it is cheap.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2426-A	Dr. N. H. Pierce's Combined Mouth Gag, Speculum, Oris and Tongue Depressor.....	\$10 00
*2426-B	Faenger's Mouth Gag.....	4 50
*2426-C	Allingham's ".....	5 25
*2426-D	Henrotin's ".....	2 00

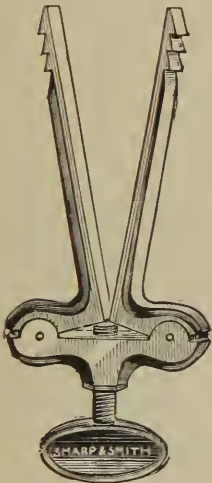


MOUTH AND THROAT INSTRUMENTS.

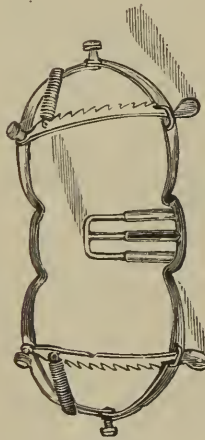
FIG.

2427	Buck's Trachea Guide.....	\$#	1 50
*2428	Heister's Speculum Oris.....		3 75
*2429	Goodwillie's " ".....		4 50
2430	Westmoreland's Speculum Oris.....		4 50
2431	Ehrhart's " ".....		3 50
*2432	Gross' " ".....		3 75
*2433	Roser's " ".....		3 75
*2434	Sharp & Smith's Mouth Specula, each.....		1 00
2434-A	" " " set of three.....		3 00
2434-B	" " " four.....		3 75
*2435	Hard Rubber Oral Screw.....		75
2435-A	Whitehead's Mouth Gag.....		7 50

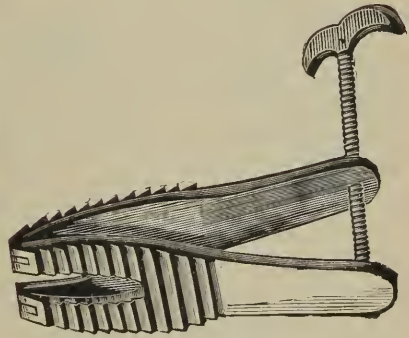
For other mouth gags see page 516.



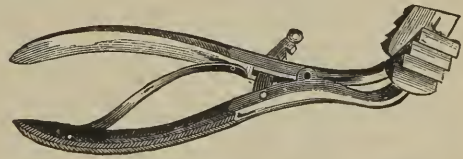
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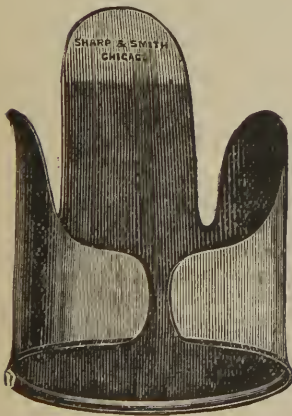
2435-A



2433



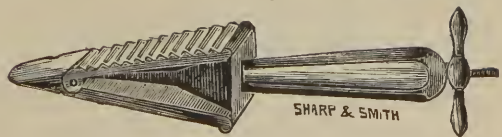
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2435



2429

All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2435-B	Faenger's New Mouth Gag.....	\$5 00
*2435-C	Mussey Mouth Gag.....	5 25
*2435-D	Parker's " ".....	2 00
*2435-E	Goodwillie's Mouth Gag.....	2 25
*2435 G	Dr. Knoll's Spiral Æsophageal Stylets..... each,	1 25

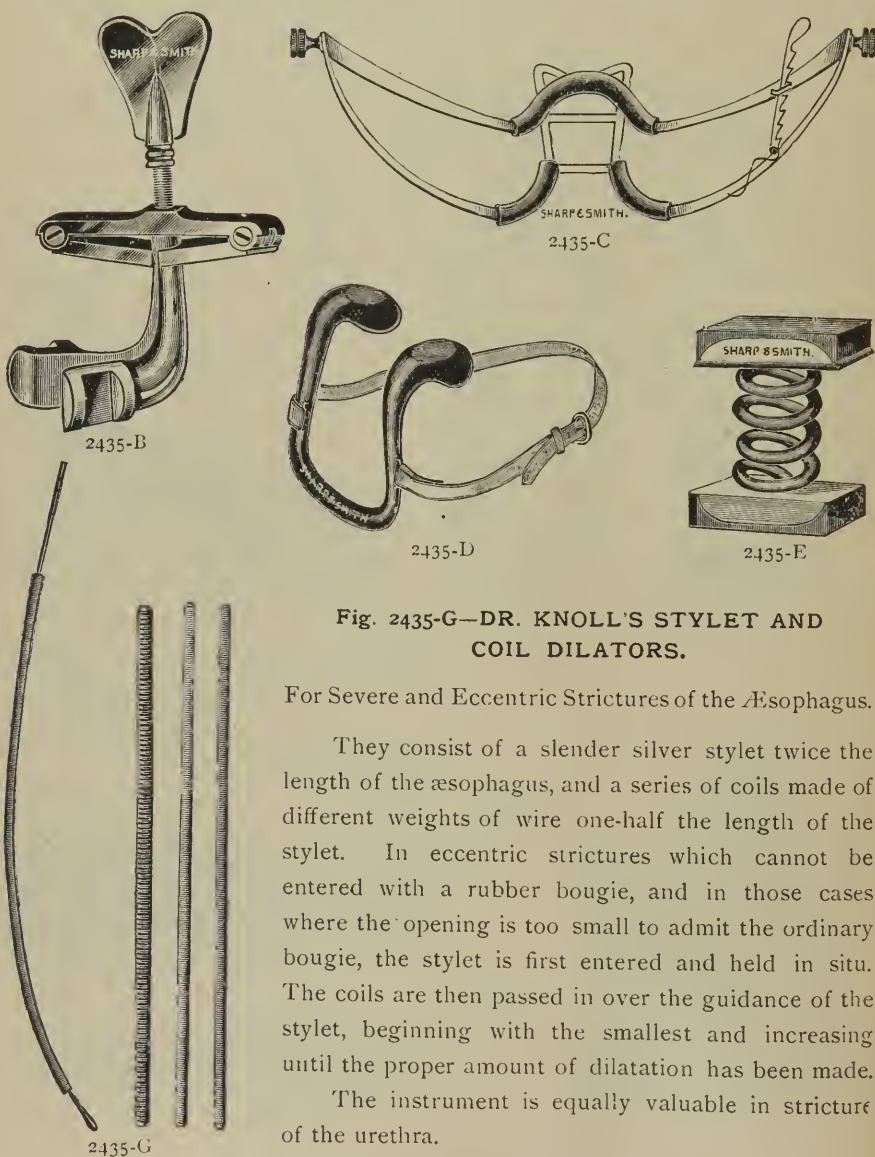


Fig. 2435-G—DR. KNOLL'S STYLET AND COIL DILATORS.

For Severe and Eccentric Strictures of the Æsophagus.

They consist of a slender silver stylet twice the length of the æsophagus, and a series of coils made of different weights of wire one-half the length of the stylet. In eccentric strictures which cannot be entered with a rubber bougie, and in those cases where the opening is too small to admit the ordinary bougie, the stylet is first entered and held in situ. The coils are then passed in over the guidance of the stylet, beginning with the smallest and increasing until the proper amount of dilatation has been made.

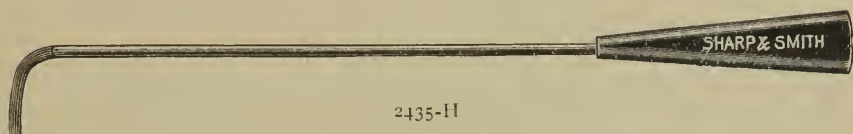
The instrument is equally valuable in stricture of the urethra.

Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2435-H	Behrens' Laryngeal Applicator.....	\$1 25
*2435-I	Hard Rubber (Esophageal Bougies	1 25
*2435-K	Sharp & Smith's Set of (Esophageal Bougies, Bulbs in handles	3 50
*2435-L	Plain (Esophageal Tubes.....	1 15



2435-H

Fig. 2435-H—Dr. Behrens' Instrument for applying nitrate of silver in the larynx. Before using, the instrument is to be dipped in a melting mixture of nitrate of silver and nitrate of potash, the proportion to be decided according to the requirements of the case. If the application of a solution is preferable, cotton batting wrapped around the hooked end and soaked in the solution will do better than pencils, the use of which is very often clumsy, and for other reasons objectionable. The ruffled side will prevent the cotton batting from falling off.



2436



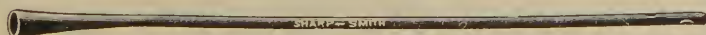
2435-I



2437



2435-K



2435-L

Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.			\$
2436	Plain Cylindrical (Esophageal Bougies.....		85
2437	Olive Tip		1 00
*2438	Sets of Six (6), (Hard Rubber) (Esophageal Bougies.....		3 00
*2438	“ “ (6), (Ivory)		4 50
*2438	“ “ (6), (Metal)		3 50
2438-A	“ Ten (10), Ingals' (8 to 22 centimetres) (Esophageal Bougies		7 50
*2439	Dr. I. L. Crawcour's (Esophageal Bougies		1 85

A Dilator for Stricture of the Œsophagus.

BY I. L. CRAWCOUR, M. D., M. R. C. S., England.

FORMERLY PROFESSOR OF MEDICINE, NEW ORLEANS SCHOOL OF MEDICINE.

Some time ago I was called to a case of stricture of the œsophagus. A child eight years of age, had accidentally swallowed some condensed lye. Four months had elapsed since the accident, and nothing had been done. When I saw the child, it had not been able to swallow anything for three days. The smallest œsophageal sound would not pass, a small gum catheter or bougie bent against the obstruction, and one with the stylet would not take the proper curve. In this dilemma I bethought me of Otis' flexible urethral probe; this, the smallest (a No. 8 French scale) passed, but with great difficulty; after some



2439

few days I passed Emmet's uterine probe, which is somewhat larger, and in this way was enabled gradually to dilate the stricture. The child meanwhile was fed by enemata. The stricture was gradually dilated by means of ivory bulbs attached to a flat metallic wire. It struck me that a series of flexible bougies, made on the spiral wire system, would be useful, not only in such cases, but also as urethral dilators.

They are fifteen inches long, and as will be seen by the cut, have a broad, flat handle. They terminate in an acorn-shaped bulb, and are as follows:

No. 1. Bulb No. 15, French gauge, attached to a short and narrow neck, rapidly increasing to No. 17.

No. 2. Bulb 17, shank 19.

No. 3. Bulb 19, shank 21.

No. 4. Bulb 21, shank 24.

These are the sizes which I think will be found in practice the most useful, and they are perfectly flexible.



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MOUTH AND THROAT INSTRUMENTS.

TONGUE DEPRESSORS.

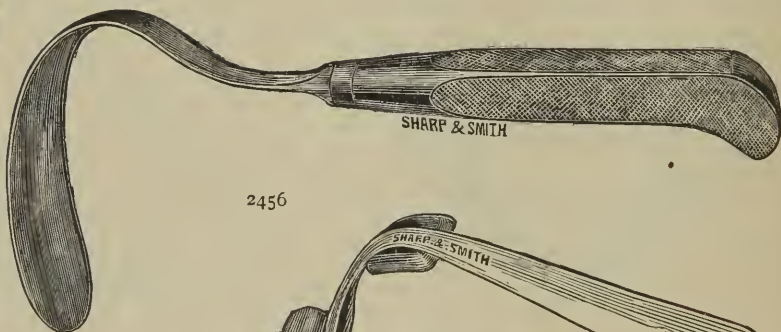
FIG.			
*2451	Sharp & Smith's Folding Tongue Depressor.....	\$	50
2452	“ Coin Silver Folding Tongue Depressor	3	00
2453	Cohen's Folding Tongue Depressor	1	50
*2454	“ Steel Tongue Depressor.....	1	15
2455	Parker's “ “ “		95
*2456	Sass' “ “ “	2	25
*2457	Tobold's “ “ “	1	00
*2458	Church's Self Holding Tongue Depressor.	5	00



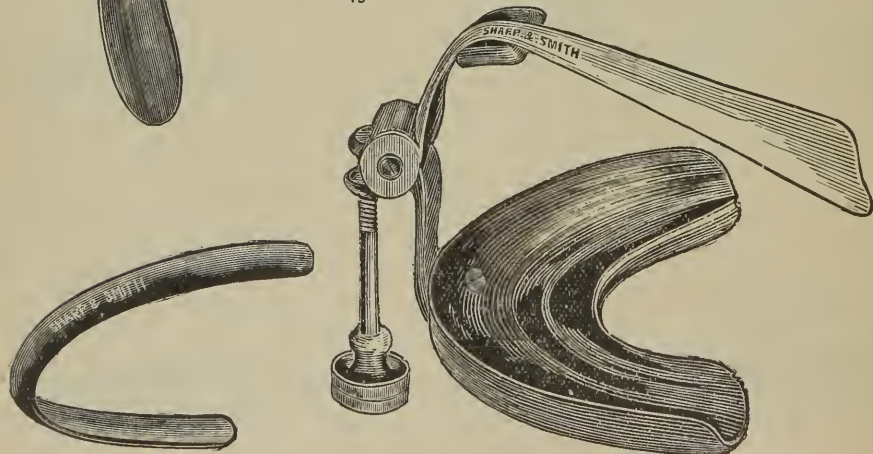
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2456



2458

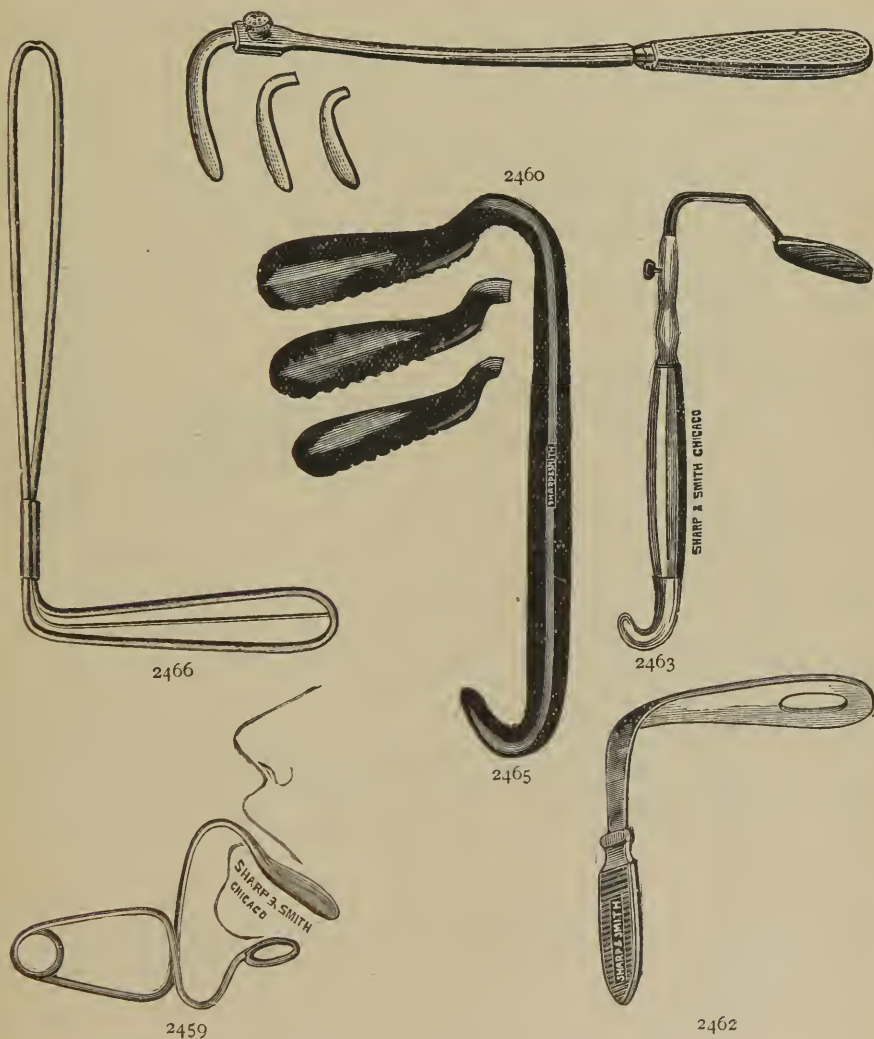
2454

All Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

TONGUE DEPRESSORS.

FIG.		
*2459	Stehmen's Self-holding Tongue Depressor.....	\$ 1 50
*2460	Rumbold's Tongue Depressor Set.....	3 75
2461	Ellsberg's ".....	2 00
*2462	Bosworth's Steel Tongue Depressor.....	75
*2463	Tuerk's set of 3, " ".....	3 00
2464	" H. R. Cov'd " " set of 3.....	5 00
*2465	" Single " ".....	1 10
*2466	Devilbiss' set of 3 " ".....	1 00



All instruments designated by a * are illustrated.

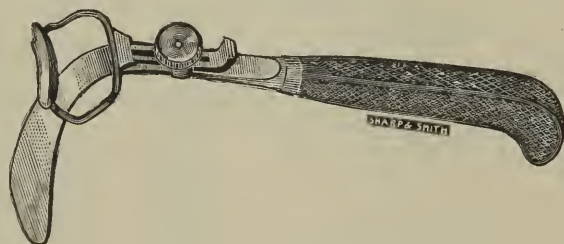
MOUTH AND THROAT INSTRUMENTS.

Fig. *2467 Dr. J. J. Higgins' Self-retaining Tongue Depressor\$ 4 50

A SELF-RETAINING TONGUE DEPRESSOR.

BY J. J. HIGGINS, A. M., M. D.

Dr. Higgins says, among other things: In examinations of the fauces, and especially in operations thereon, the need of a self-retaining tongue depressor and speculum oris is sadly felt. For all the minor operations—such as penciling, application of remedial agents in divers ways, excision of the uvula, etc.—the convenience (in some cases the necessity) of having the use of both hands is without question. So strongly have I felt the want of a suitable instrument for such purposes in my own practice that I have been compelled (the armamentarium of our instrument makers not having one at all adapted to the regular and daily use of the practitioner) to invent and have one made for my own use and feel constrained to make it more generally known through the columns of



2467

your valuable paper. Mechanical description would be tedious, and is unnecessary, as the cut illustrating the instrument is a perfect representation, and tells the story at a glance. It is adjustable for any size of mouth, or opening thereof—with not even discomfort, much less pain—can be handled and place *in situ* as readily as the usual tongue depressor, and is self-retaining. It is manufactured of the best quality of steel—handsomely nickel-plated—handle and other attachments of vulcanite, baked on and highly polished, and thoroughly aseptic in construction.

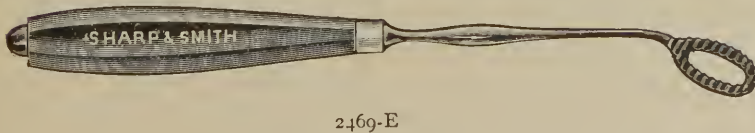
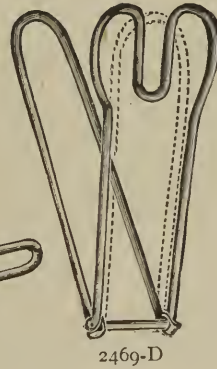
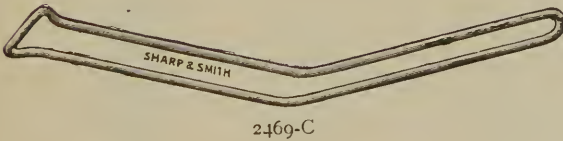
Moreover, its construction is such that, by the simple turn of a milled screw, an ordinary tongue depressor of a special and improved pattern and shape is at one's service.

For the photographing of the posterior fauces or buccal cavity it is exceedingly serviceable, the sides or walls not being occluded by the instrument as is the case with vaginal or other specula, but they are seen in their entirety.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2469 A	Dr. W. A. Dunn's Modification of Tuerk's Tongue Depressor, with 3 blades..	\$3 35
*2469-B	Dr. C. Q. Jackson's Aseptic Tongue Depressor	1 50
*2469-C	Parker's All Wire " " "	95
*2469-D	Fenestrated " " "	75
*2469 E	Dr. Norval H. Pierce's " " "	1 50
*2469-F	Hinde's Palate Retractor	75
*2469-G	Moritz Schmidt's Palate Retractor	3 75
*2469-H	Sohen's Uvula Retractor	2 50
*2469 I	Dr. Norval H. Pierce's Mirror, for use with Palate Retractor	1 25



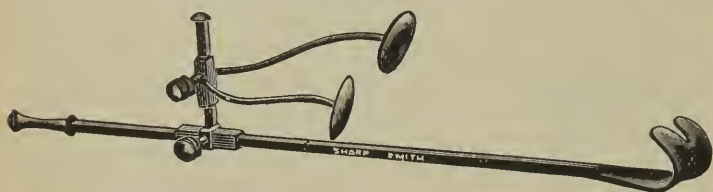
All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

MORITZ SCHMIDT'S PALATAL RETRACTOR.

By DR. NORVAL H. PIERCE, CHICAGO.

Fig. 2469-G consists of a metal rod about 14 cm. long, the distal end of which is flattened out and bent upward. The notch at this end is to accommodate the vomer, the indentation is for the uvula. At right angles to this rod a shorter one is fitted which may be slid forward and backward, and which bears two rests which fit into the fossa canina on either side of the allæ nasi.



2469-G

Directions for Employing the Palatal Retractor.

After having warmed and disinfected the instrument, it is taken in right hand and introduced carefully into the mouth, while the tongue is pressed downward by the index finger of the left hand.

I. POSITION.

The nibs and rests are directed toward the right. In this position the hook is brought in contact with the posterior pharyngeal wall, and so held while the patient produces a nasal tone.

II. POSITION.

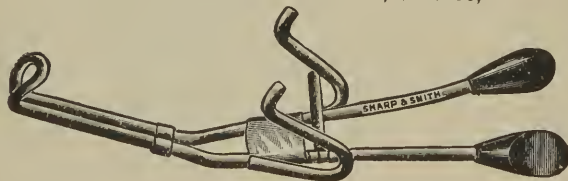
The nibs and rests are turned upward, the proximal end of the long rod slightly depressed. The hook is thus passed up back of the soft palate.

III. POSITION.

With the left hand make fast the rest against the upper lip, while at the same time the proximal end of the long rod is drawn forward. The hand very quickly feels the resistance of the palate, and this position is secured by means of the screw connected with the long rod. It is often necessary after one or more seconds to make greater traction as the velum relaxes.

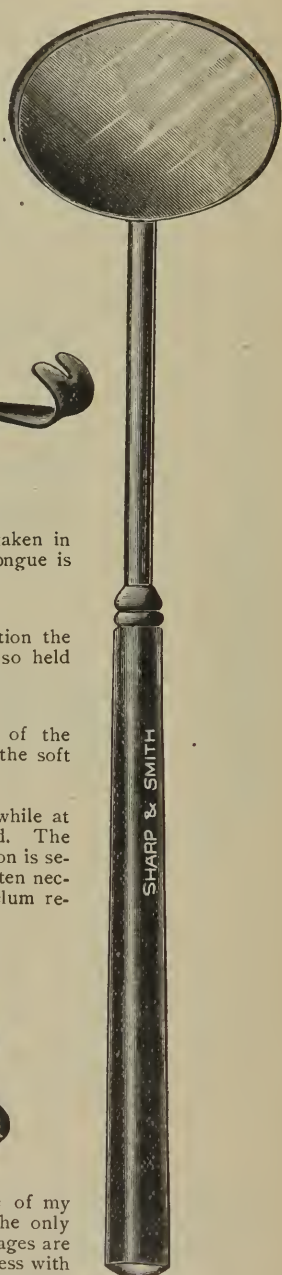
SOHEN'S UVULA RETRACTOR.

By DR. FREDERIC D. OWSLEY, CHICAGO,



2469-H

Fig. 2469 H. This unique instrument owes its origin to one of my students, Dr. Sohen of Washington, D. C. In my opinion it is the only perfectly practical self-retaining uvula retractor. Its chief advantages are these: 1st. The ease with which it can be introduced. 2d. The firmness with which it holds itself in position after adjustment. 3d. Its position neither interfering with a free view or the manipulation necessary in operative procedures. 4th. It has no sharp edges or angles which can occasion pain by pressure, and taking all in all, it is an ideal instrument.

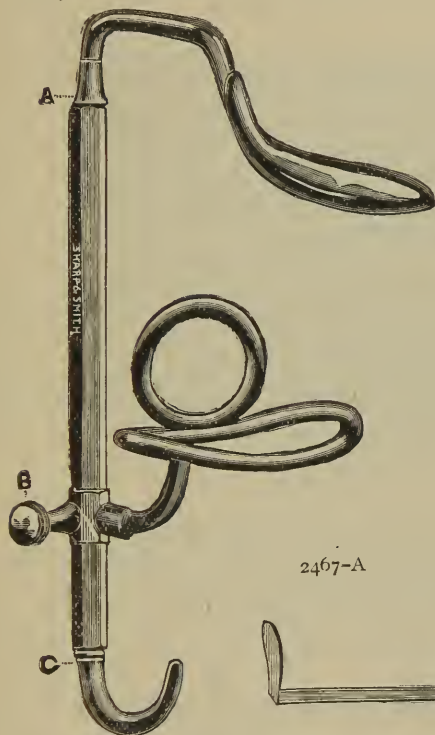


2469-I

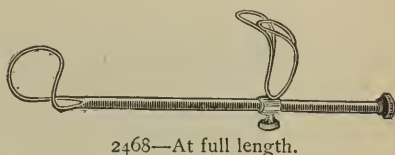
MOUTH AND THROAT INSTRUMENTS.

FIG.

*2467-A	White's Tongue Depressor.....	\$ 2 00
*2468	White's Palate Retractor and Post Nasal Speculum.....	1 50
*2468	“ “ “ “ “ “	1 50
*2469	Porcher's “ “	2 25



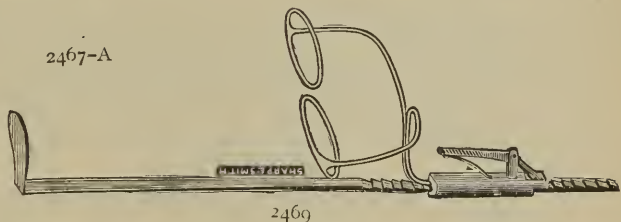
2467-A



2468—At full length.



2468—Folded.



2469

2469. A new Self-Retaining Uvula and Palate Retractor, by W. Peyre Porcher, M. D., Charleston, S. C., and of it he says: This instrument as will appear from the cut, is an ordinary palate-hook, upon the stem of which a slide-attachment has been added. From the front of this slide project two arms, which end in two medium sized rings, and at its rear is an automatic spring-catch which penetrates the perforated stem at short intervals. When in position the two rings on the arms rest on either side of the nose, just above the alveolar processes, and are easily retained there by the counter-pressure of the retracted palate. It is light in construction, weighing but four hundred and forty-five grains, easily adjusted, and releases both hands for operation and the management of the mirror. It has been highly commended by distinguished laryngologists, as well as by general practitioners.

The following letter was received from Dr. J. Solis Cohen, to whom I submitted a model of the instrument, and he has kindly consented to its publication :

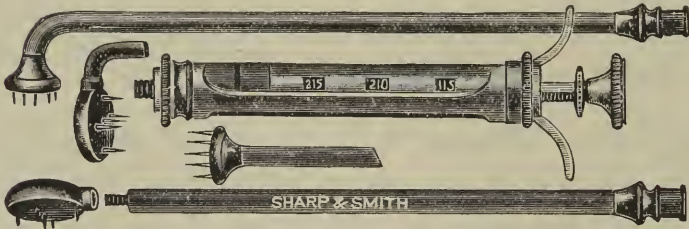
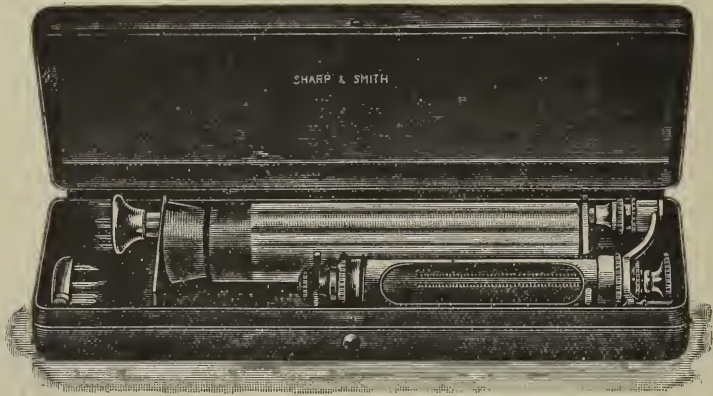
1421 WALL STREET, PHILADELPHIA, September 28, 1887.

MY DEAR DOCTOR:—To-day is the first opportunity I have had to give the instrument you forwarded to me a trial. I was very successful in using it and without cocaine. I like it very much indeed, and I think it the simplest mechanism I have seen. Yours very truly,

J. SOLIS COHEN.

MOUTH AND THROAT INSTRUMENTS.

DR. A. SEIBERT'S SYRINGE FOR SUB-MEMBRANOUS MEDICATION
IN THE TREATMENT OF DIPHTHERIA.



2470-A

This treatment consists in injecting fresh chlorine water (U. S. Pharmacopœia) through the diphtheritic pseudomembrane into the inflamed mucosa below. I now inject about fifteen drops into each spot, and according to the extension of the process as many as six or eight injections are made in one sitting. See Archives of Pediatrics, June, 1891—p. 428.

Sub-membranous local injections of chlorine water in pharyngeal diphtheria, therefore, may be applied with good effect in all cases, where the process is yet accessible to local treatment.

Two Tubes. Two Tips with $\frac{1}{8}$ inch points. Two Tips with 3-16 in. points. Syringe and Amber Bottle.

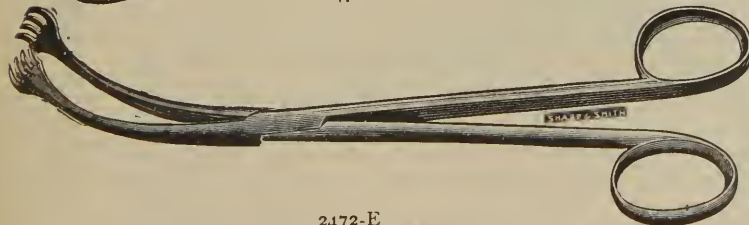
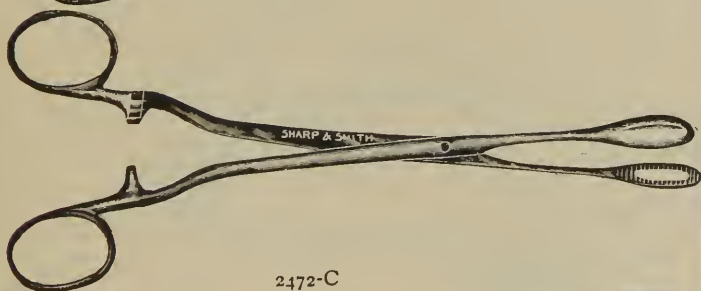
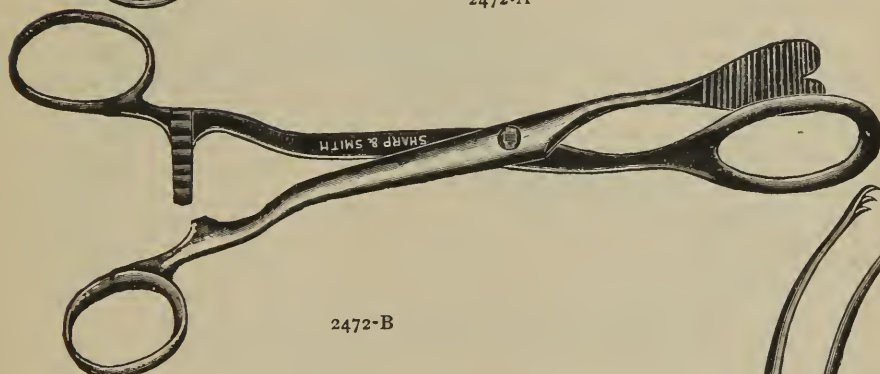
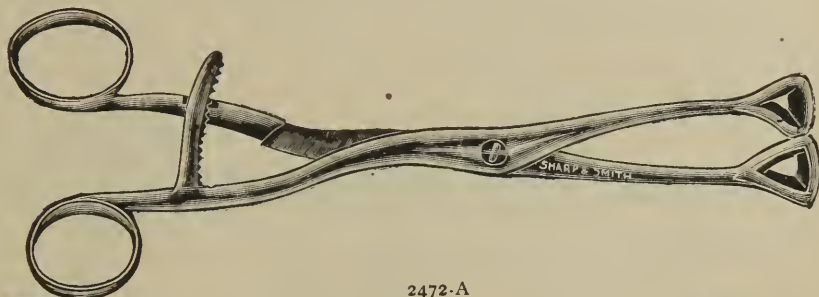
FIG.

2470-A	Price Complete in Metal Case.....	\$ 10 00
“	“ in Morocco, Satin Lined Case.....	7 50
	Tips, Extra.....each	1 50
	Tubes, Straight or Curved	75
	Syringe.....	1 00
	Metal Case.....	3 00
	Morocco Case, Satin Lined	1 25

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2472-A	Dr. Christian Faenger's Tongue Holding Forceps.....	\$ 4 00
*2472-B	Dr. J. Frank's Tongue Holding Forceps.....	3 50
*2472-C	Esmarch's Tongue Holding Forceps.....	3 00
*2472-D	Dr. Christian Faenger's Curved Tonsil Forceps.....	2 25
*2472-E	Dr. F. C. Hotz Curved Tonsil Forceps.....	3 00



2472-E

All instruments designated by a * are illustrated.



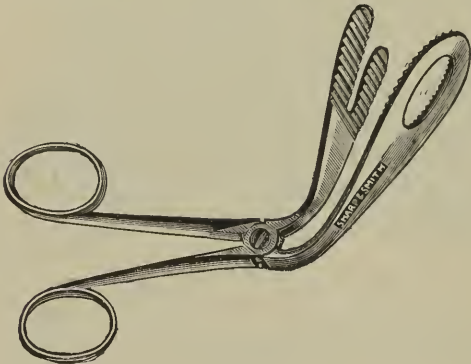
MOUTH AND THROAT INSTRUMENTS.

FIG.

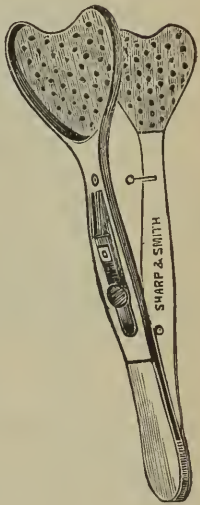
*2470	Goodwillie's Oral Saws.....	\$ 2 60
*2471	Dobell's Tongue Holding Forceps.....	2 25
*2472	Cuscoe's " "	2 00
*2473	Simrock's Rhinoscope.....	6 00
*2474	Duplay's "	5 00



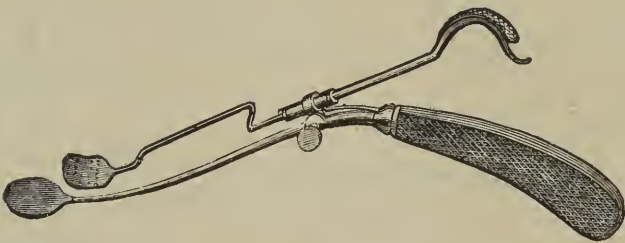
2470



2472



2471



2473

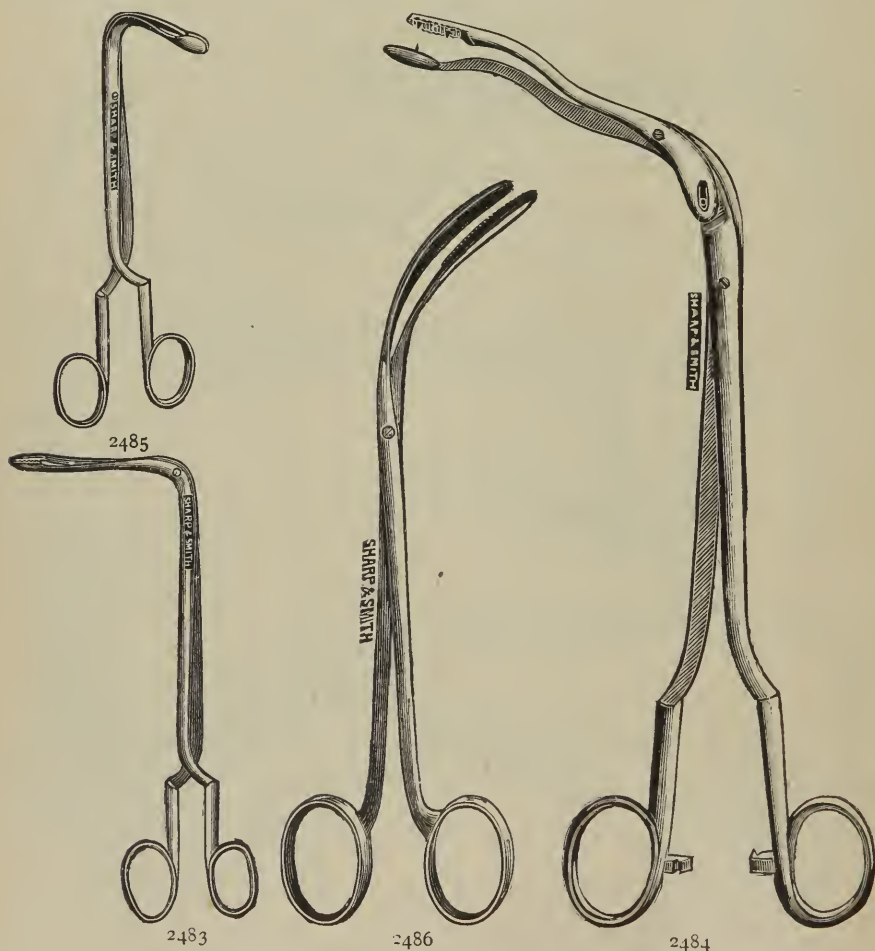


2474

All instruments designated by a * are illustrated.

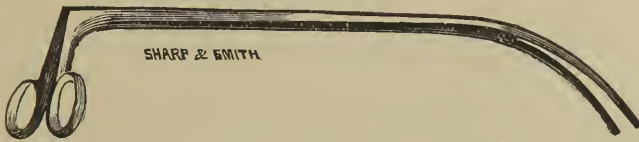
MOUTH AND THROAT INSTRUMENTS.

FIG.			
2481	Schroeter's Throat Forceps and Lancet.....	\$11	25
2482	Cohen's Cotton Holding Forceps.....	2	50
*2483	" Throat Forceps, Large	2	50
*2484	Cuscoe's " "	3	50
*2485	Cohen's Post Nasal Forceps	2	50
*2486	Buck's Throat Forceps.....	1	90
2487	Knight's " "	3	00
2488	Bond's " "	2	25
2489	Ellsberg's " "	3	25
2490	United States Throat Forceps	2	25
*2491	Burgess' " "	3	20
2492	Brun's " "	3	35
*2493	Alligator " "	4	50
2494	Oesophagus " "	1	85
*2495	Flexible " "	3	75
2496	Tascher's " "	2	50
*2497	Rumbold's " " set of 4.....	18	75

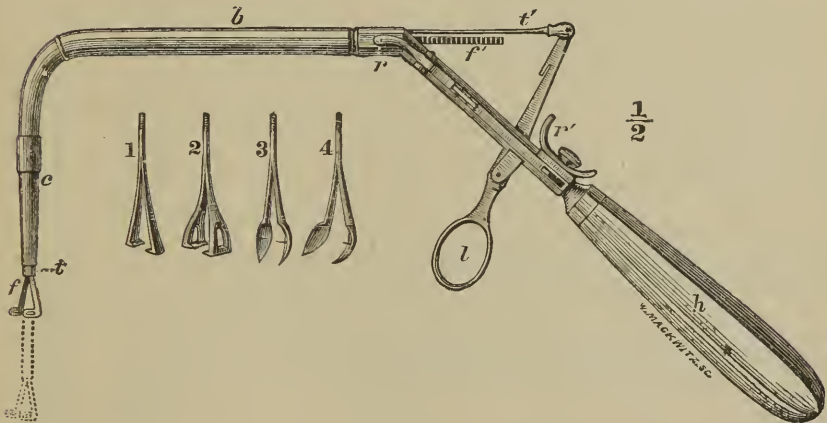


All Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.



2491



2497

Figure 2497. Tubular Laryngeal Forceps. Traction on the lever l pushes the two rods t' and f' into the tube b , and causes the forceps to descend to the required distance as marked by the dotted lines; then pressure on r' which is connected with the clutches r , will arrest the serrated rod f' and prevent the forceps f from descending farther into the larynx. If the rod t' is still pushed by the lever l into the tube b , the tube at f will close the forceps on the object in the larynx.

1, 2, 3 and 4 represent different shaped forceps that may be attached to the instrument.



2495



2493

MOUTH AND THROAT INSTRUMENTS.

FIG.			
2498	Braun's Epiglottis Forceps.....	\$	2 25
2499	Self-grasping Vulsellum Forceps.....		1 90
*2500	French " ".....		2 00
*2501	Byrne's " ".....		2 25
*2502	Musseau's " ".....		1 90
*2503	Skene's " ".....		2 25
*2504	Nott's Wire Twisting ".....		2 25
2505	Emmet's " ".....		2 25
2506	Sims' " ".....		2 25
*2507	Langenbeck's Seizing ".....		1 90
2508	Nott's " ".....		2 25
2509	Durham's " ".....		3 35
*2510	Whitehead's " ".....		3 35
2511	Ellsberg's Sponge-holding ".....		3 25



2507



2510



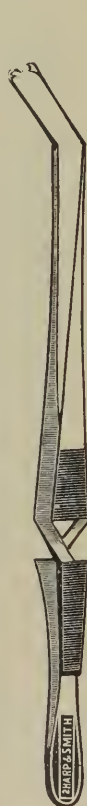
2500



2502



2503



2501

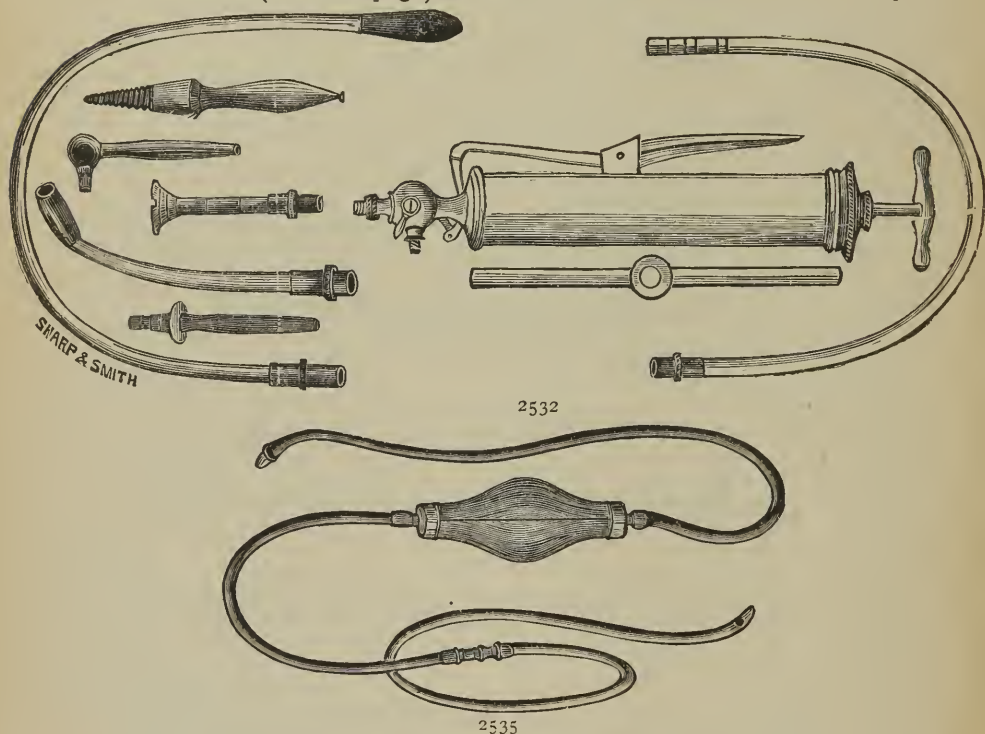


2504

Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

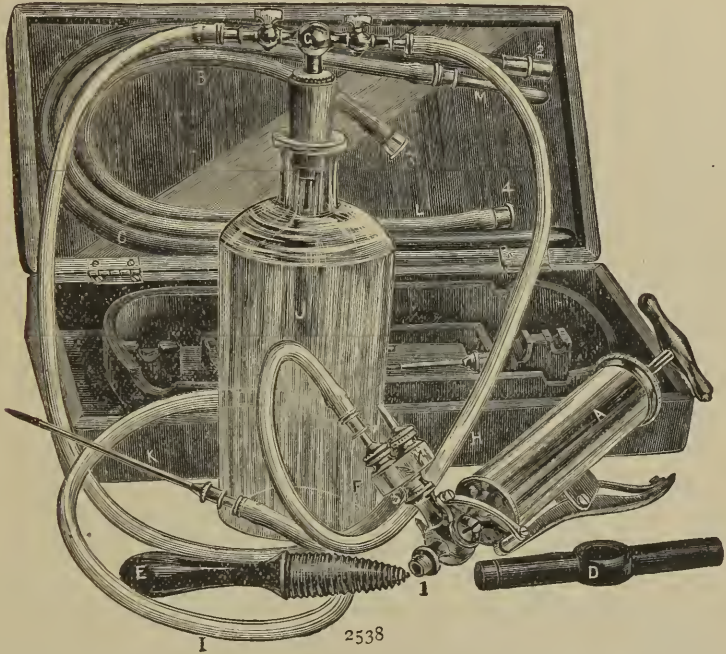
FIG.				
2529	Maw's English Stomach Pump.....	\$15	00	
2530	Gray's " " ".....	13	50	
2531	Plain " " ".....	6	75	
*2532	Sharp & Smith's " " N. P.....	12	00	
2533	Tiemann's " " ".....	12	50	
2534	" " H. R. ".....	9	00	
*2535	Toswell's Siphon " " ".....	2	00	
2537	Stomach Pump attachment for C. & S. Aspirator.....	4	50	
*2538	Excelsior Stomach Pump, Aspirator and Enema Syringe combined (see next page).....	15	00	



Washing out the stomach, and the aspiration of liquids secreted by it, is more and more practiced in Germany, since Kussmaul highly praised this method. Dr. Schliep uses the Syphon Principle in nearly all affections of the stomach, especially in chronic gastritis, with or without dilatation. The cure of chronic catarrh, according to his account in the *Deutsche Klinik*, vol. xiv., would require a limited number of applications. In simple catarrh five would suffice on an average. He uses this method even in dyspepsia of consumptive patients. In dilatation of the stomach, he empties that organ with the pump every day. He performs the washing out, even in cancer, with pure water; or adds bicarbonate of soda to the water if the liquids be very acid; or permanganate of potash if these liquids show signs of fermentation; carbolic acid when they contain vegetable parasites; boracic acid as a disinfectant, and tincture of myrrh, in atonic dyspepsia with abundant secretion of mucus.

Instruments designated by a * are illustrated.

THE EXCELSIOR STOMACH PUMP, ASPIRATOR AND ENEMA SYRINGE.



Stomach Pump.—A, Stomach Pump. B, Suction Tube, connects at Nos. 1 and 3. C, Stomach Tube, connects at Nos. 2 and 5. D, Mouth Gag. E, Mouth Screw. **Aspirator.**—A, Pump. F, Valve Box, connect as per cut. G, Double Stop Cock connect with tubes H and I. H—I, Tubing connect to Force or Exhaust with Valve Box as per Arrows. J, Bottle. K, Needle. **Enema Syringe.**—A, Pump. B, Suction Tube, connect at Nos. 1 and 3. L, Tubing, connects at Nos. 4 and 5. M, Rectal Nozzle.

A complete Stomach Pump, Aspirator and Enema Syringe, combined, has long been sought for by the medical profession. In offering the Excelsior Pump and Aspirator we have combined three distinct instruments, each complete in itself, thus making one portable apparatus, and avoiding the necessity of purchasing each instrument separately.

In manufacturing the above we have taken mandril drawn tubing for the barrel of the pump which offers an even surface to the packing of the piston and insures perfect suction.

The valves in Valve box F, are made of metal, ground to fit the sockets securely, and cannot be injured by fluids or become dried as the oiled-silk valves formerly used. This enables the practitioner to use the Pump both for Forcing or Exhausting Fluids or Air.

The valves in Valve Box F can be easily cleansed by unscrewing the conic nozzles at F.

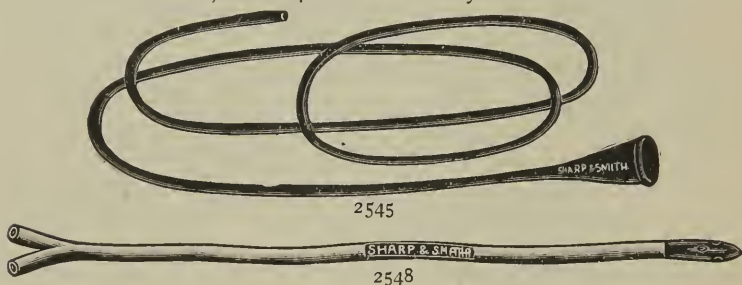
In order to make as compact and portable an instrument as possible, we have fitted the Double Stop Cock G with a Conic Soft Rubber Stopper, which will fit any ordinary bottle, thus avoiding the necessity of carrying a bottle in the same case with the Pump.

All the metal parts are Nickel-plated and the whole is encased in a polished Wood Box, Velvet lined.

The combinations of parts for Stomach Pump, Aspirator or Enema Syringe separately, are formed as above. For prices, see preceding page.

MOUTH AND THROAT INSTRUMENTS.

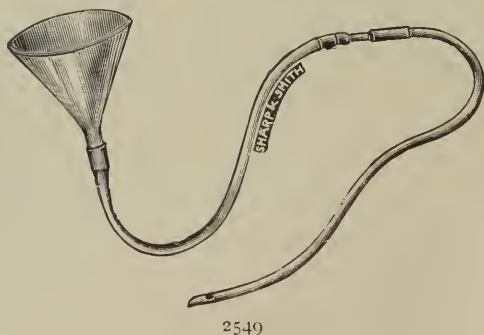
FIG.					
2539	Best English Stomach tubes.....				\$ 1 00
2540	English	"	"	funnel end.....	1 25
2541	Plain English	"	"	.....	1 00
2542	Silk Web	"	"	best.....	2 00
2543	"	"	"	funnel end.....	3 00
2544	Soft Rubber	"	"	.....	1 00
*2545	"	"	"	funnel end.	1 25
2546	"	"	"	" " with bulb in center....	1 50
2547	"	"	"	Jaques.....	1 50
*2548	English Double Channel Stomach Tube.....				2 50
2548A	"	"	"	" " silk.....	4 00
*2549	Dr. S. S. Cohen's Apparatus for Lavage in the treatment of gastric affections, with 28 inch Velvet Eye Stomach Tube.....				2 25
2549A	Dr. S. S. Cohen's Apparatus for Lavage in the treatment of gastric affections, with 24 inch Velvet Eye Stomach Tube.....				1 85



LAVAGE IN THE TREATMENT OF GASTRIC AFFECTIONS.

BY SOLOMON SOLIS-COHEN, M. D., of Philadelphia, Pa.

Any agent, or any method that promises to enlarge our therapeutic resources against those obstinate conditions of "gastric catarrh," "functional dyspepsia," etc., that are a source of distress to the patient, of annoyance to the physician, and of profit to the pepsin and patent medicine manufacturers, deserves at least a respectful consideration. The method that I desire briefly to present to the Society this evening—lavage, or irrigation of the stomach—has been employed for many years in Europe, so that it can no longer be considered to be merely on trial. In America, however, it has not won general introduction, nor am I aware that any discussion of it has been had before this body. This, then, is my excuse for calling attention to a subject in connection with which I have nothing new to communicate.



LAVAGE IN TREATMENT OF GASTRIC AFFECTIONS.—Continued.

The manner of performing lavage, recommended by the latter observer, is that which I have followed in the few cases in which I could induce private patients to submit to it. The results obtained in these cases have been sufficiently encouraging to induce me to continue, at least to propose it wherever it seems applicable.

The apparatus and its employment are sufficiently simple. An œsophageal tube, with blunt, double-eyed extremity of flexible rubber, about twenty-eight inches long, and from one-quarter of an inch to a little less than half an inch in diameter—practically an enlarged catheter, and made of similar material—is attached by a small section of glass tubing to a soft rubber tube about one yard in length, into the free extremity of which a glass or rubber funnel of from six ounces to eight ounces' capacity, is inserted.

The patient sits or stands, facing the physician. The œsophageal tube having been dipped into warm water or warm milk, is placed within the entrance of the œsophagus, and is then propelled by successive pushes into the stomach, the process being facilitated by efforts at deglutition on the part of the patient.

The first introduction of the tube, and possibly the second and third, will occasion more or less dyspnœa, often nausea and retching, rarely vomiting. These effects, though partly physical, are largely psychical, and will disappear with tolerance. The dyspnœa may be immediately checked by insisting on full inspirations. Nausea is overcome as soon as the water enters the stomach, floating the tube away from immediate contact with the mucous membrane. In highly neurotic subjects it may be well to prepare for the operation, at first, by administering full doses of bromides. I have tried anointing the end of the tube with a solution of cocaine in glycerin, but cannot claim any striking benefit from the procedure. Firm but skillful handling of the tube is the best sedative.

Sometimes during the withdrawal of the solution solid particles of food (grains of corn in one of my cases) may become impacted in the eyes of the tube, and the flow of liquid will cease. A little more of the solution must then be introduced, both to wash away the obstruction and to re-establish the syphon current. If the tube should be pushed too far into the cavity of the stomach, it may curve upon itself, and the syphon will not work. Withdrawal of the tube for a few inches will remedy this; if the flow is not readily established, it is said that it may be favored by manipulation of the stomach, and efforts at coughing may be made by the patient. I have not had occasion to resort to these devices.

When *lavation* alone (washing) is the object of the procedure, a weak alkaline solution is employed; a drachm or two of sodium sulphate, sodium chloride, sodium borate or sodium bicarbonate, in a quart of warm water, at about 100° F.

Should it be considered necessary, however, various sedative or antiseptic medicaments may be added to the lavage solution. Those most highly recommended are resorcin (1 per cent.), boric acid (1 per cent.), creasote (1 per cent.), carbon disulphide water (one part of a solution containing 15 grains to the quart, to two parts of water), charcoal powder (two to four tablespoonfuls), chloroform water (saturated), bismuth subnitrate (two tablespoonfuls to the pint).

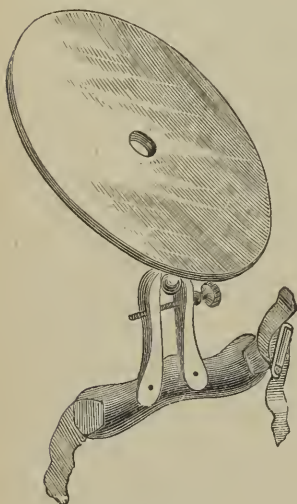
In the use of agents, like resorcin, carbolic acid, etc., the liability to absorption if the solution be not all removed, must not be forgotten. In using what he terms "milk of bismuth," Dujardin-Beaumetz advises that the solution be allowed to remain a few minutes in the stomach, so as to allow the bismuth to be deposited; after which the supernatant liquid may be withdrawn.

Lavage should be performed when the stomach is empty; therefore some authors recommend the hour of rising in the morning. I have found noon—say four or five hours after a light breakfast—or the same interval after lunch or dinner, to be more convenient for myself, and to answer as well in most instances. One lavation daily is usually enough. After a while the intervals may gradually be lengthened, until the process is discontinued.

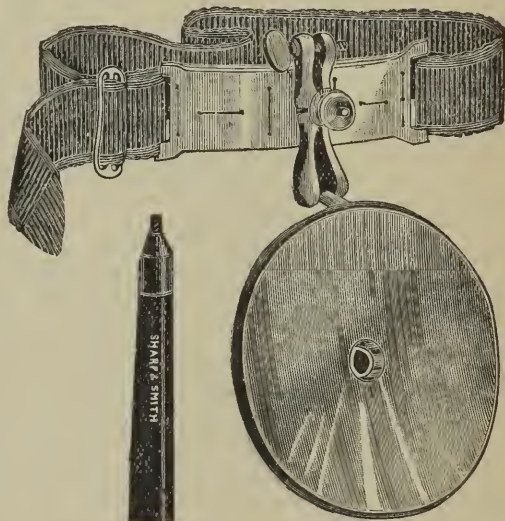
MOUTH AND THROAT INSTRUMENTS.

FIG.

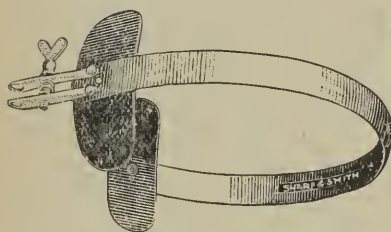
*2550	Head Mirrors with plain head band, 3 inch.....	\$ 2 50
2550 A	“ “ “ “ 3½ “	2 75
2550 B	“ “ “ “ 4 “	3 25
*2551	“ “ with improved head band, 3 inch.....	3 25
2551 A	“ “ “ “ 3½ “	3 50
2551 B	“ “ “ “ 4 “	4 00
*2552	“ “ “ Schroeter's head band, 3 inch.....	3 00
2552 A	“ “ “ “ 3½ “	3 25
2552 B	“ “ “ “ 4 “	3 75



2550



2551



2554



2552

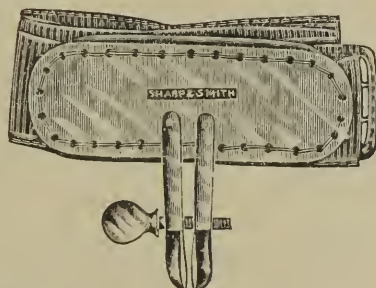
Fig. 2554. Metal Head Band for holding a Head Reflector on the Forehead. There is a joint on top, in the middle of the band, which allows the posterior half to be turned into the anterior half. The pads are made of black rubber, and may be turned into line with the head band. The metal band should not be longer than is required to easily reach from the forehead to the occiput. For price see next page.

All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.

2553	Ingals' Mirror and Head Band, 4 inch.....	\$ 5 50
*2554	Rumbolds' Head Band to go over the head	2 50
*2555	Dr. A. S. Gray's Head Band to go over the head.....	3 25
*2556	Sardy's Combined Head Band and Mirror Protector for 3 inch Mirror.....	1 50
2556A	Sardy's Combined Head Band and Mirror Protector for 3½ inch Mirror.....	1 75
2556B	Sardy's Combined Head Band and Mirror Protector for 4 inch Mirror.....	2 75
2556C	Sardy's Spectacle Frame Head Band.....	3 00
2557	Semeleder's " "	6 00
2558	Plain Head Bands (see Fig. 2550).....	75
2559	Schroeter's Head Bands, with Nose Rests (see Fig. 2552).....	1 25
2560	Improved " " " " (see Fig. 2551).....	1 50
*2560-A	Dr. W. A. Dunn's Head Band.....	1 50



2560-A

SARDY'S COMBINED HEAD BAND AND PROTECTOR.

(Patent applied for.)

These cuts, figures 2556, show a new head band which possesses several advantages over the old styles.

When closed it affords perfect protection to the mirror, and is convenient to carry.

When open it is self-adjustable to any forehead, and rests more comfortably and with greater security than other head bands. Any mirror attached to it can be brought into perfect juxtaposition with the eye, and when not in use can be easily turned up from the forehead.

They are made of the best material, with silk bands, and metal part oxidized so as to prevent reflection.



IN USE

2556



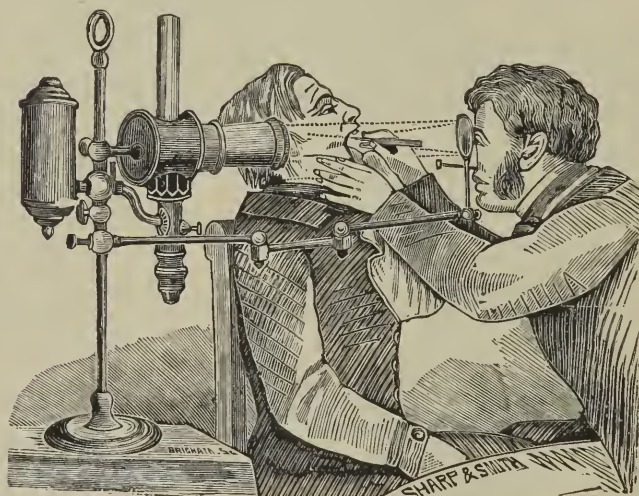
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2556

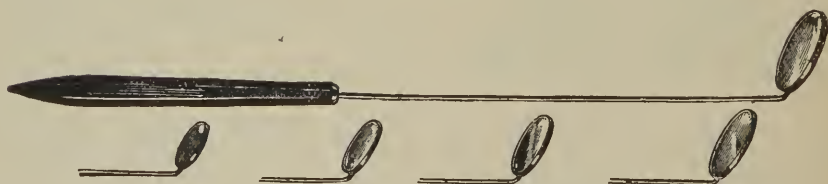
All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.				
*2561	Throat Mirrors, in handle, 5 sizes.....	each	\$	60
2561A	“ “ without handle, 5 sizes.....	“		50
2561B	“ “ set of 6 in case, with one Universal handle....	4	00	
2562	“ “ extra quality.....	each		75
2563	“ “ oval.....	1	00	
2564	Tobold's Large Laryngoscope in case, with Head Mirror and two Throat Mirrors, without Student Lamp	14	50	
2564A	Tobold's Small Laryngoscope in case, with Head Mirror and two Throat Mirrors.....	10	50	
*2565	Tobold's Large Laryngoscope in case, with Student Lamp....	18	00	
2565A	“ Small “ “ “ “ “ “	15	00	
2566	Seeger's Modification of Tobold's Laryngoscope, for gas.....	25	50	
*2567	Stucky's Improved Laryngoscope complete (see page 480).....	50	00	



2565



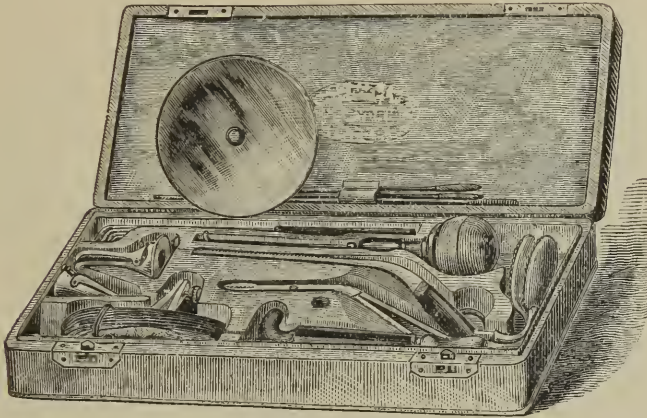
2561

Instruments designated by a * are illustrated.

LARYNGOSCOPIC CASES.

FIG.

*2567A	Sharp & Smith's No. 1 Laryngoscopic Set	\$ 18 00
2567B	" " No. 2 " " " "	13 50
2567C	" " No. 3 " " " "	10 00
2567D	" " No. 4 " " " "	8 25
2567E	Fowler's Laryngoscopic Set	13 50
2567F	Bosworth's " " " "	16 50



2567-A

Fig. 2567A Sharp & Smith's No. 1. Laryngoscopic Set contains: 1 $3\frac{1}{2}$ inch Glass Concave Mirror, 1 Schroeter's Head Band, 1 Post Nasal Syringe, 1 Scoop Powder Blower, 1 Pair Polypus Forceps, 3 Throat Mirrors, 2 Universal Handles, 1 Tongue Depressor, 1 Sponge Holder to fit Universal Handles, 1 Set Toynbee's Ear Specula.

Fig. 2567B Sharp & Smith's No. 2. Case containing $3\frac{1}{2}$ inch Glass Concave Mirror, Head Band and Handle, 3 Throat Mirrors, 1 Post Nasal Syringe, 1 Sponge Holder, 1 Brush Holder and 6 Brushes, 1 Tongue Depressor, 2 Universal Handles.

Fig. 2567C Sharp & Smith's No. 3. Case containing $3\frac{1}{2}$ inch Glass Concave Mirror, Head Band and Handle, 3 Throat Mirrors, 1 Universal Handle, 1 Tongue Depressor.

Fig. 2567D Sharp & Smith's No. 4. Case containing 3 inch Glass Concave Mirror, Head Band and Handle, 2 Throat Mirrors, 1 Universal Handle, 1 Tongue Depressor.

2567E Dr. Fowler's Case containing $3\frac{1}{2}$ inch Glass Concave Mirror, Head Band, 1 Tongue Depressor, 2 Vials, 3 Throat Mirrors, 2 Universal Handles, 1 Brush Holder, 6 Brushes.

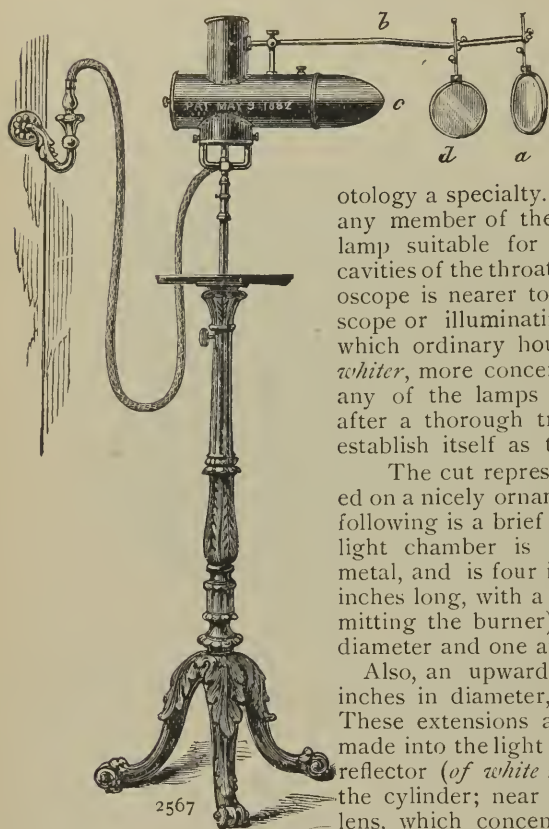
2567F Dr. Bosworth's Case containing $3\frac{1}{2}$ inch Glass Concave Mirror, Nasal Rest Head Band, 1 Post Nasal Syringe with Ear Nozzle, 2 Throat Mirrors, 2 Universal Handles, 1 Tongue Depressor, 1 Sponge Holder, 1 set Toynbee's Ear Specula.

All of our Cases are morocco covered and lined with velvet.

Laryngoscopic sets put up to order.

Instruments designated by a * are illustrated.

LARYNGOSCOPE.



We desire to call the attention of the profession to a new illuminating lamp, especially adapted to, and filling, as we believe, the wants of those who make laryngology, rhinology and

otology a specialty. Indeed, we cannot see how any member of the profession can do without a lamp suitable for thoroughly illuminating the cavities of the throat, nose and ears. This Laryngoscope is nearer to perfection than any laryngoscope or illuminating lamp we have ever seen, on which ordinary house gas is used. It gives a *whiter*, more concentrated and intense light than any of the lamps in the market. We believe, after a thorough trial by the profession, it will establish itself as the best laryngoscope.

The cut represents the Laryngoscope mounted on a nicely ornamented iron table-stand. The following is a brief description of the lamp: The light chamber is made of a cylinder of sheet metal, and is four inches in diameter and eleven inches long, with a downward extension (for admitting the burner) three and one-half inches in diameter and one and one-half inches in length.

Also, an upward extension or chimney three inches in diameter, and three inches in length. These extensions are nicely fitted into openings made into the light chamber. A concave metallic reflector (*of white metal*) is placed in one end of the cylinder; near the other is a double convex lens, which concentrates the rays of light from the burner. The lens is fastened in position by a thumb screw. A bent arm, about one-fourth of an inch in diameter, is secured about two inches above the light chamber—by being passed through a perpendicular post on the light chamber—and is screwed into a threaded perforation in the chimney. The rod extends about two feet from the chimney, and serves to hold the mirrors in position. On this rod is fastened by a thumb screw, two mirrors (four inches in diameter) which have ball and socket joints, and can be placed in any position—one is a plain mirror, by which the patient can see, in his own throat and nose, what the operator or any one standing behind his chair sees. This is a great desideratum when you desire to demonstrate to the patient or his friends the condition of the diseased organ. The other mirror is convex, for reflecting the light. Both the plain and convex mirrors can be used for reflecting, if desired, in this way concentrating all the light coming from the lamp. The light chamber has a wedge shaped cylinder, which is fastened on the end opposite the reflector, and serves to shade the eyes of the operator. The shade and mirrors can be changed, so that the operator can have his patient on his right or left side.

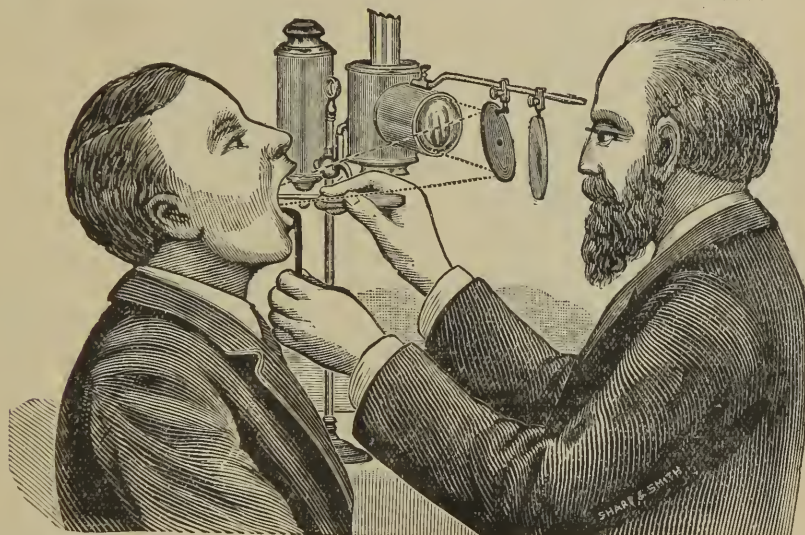
Its convenience, simplicity, and stronger, whiter, and more concentrated light commend it at once to the profession, and especially to laryngologists.

For price, see page 478.

LARYNGOSCOPES.

FIG.

*2568	Devilbiss' Laryngoscope with Lamp (complete).....	\$13 50
2568-A	“ “ without Lamp.....	10 00
2568-B	“ Condenser, plain Mirror and Mirror bar.....	8 50
2569	Czermak's Laryngoscope.....	7 50
2570	Ellsberg's Pocket Laryngoscope.....	4 50
2571	Semeleder's Laryngeal Instruments.....each	7 50
2572	Gibbs' “ Ecraseur.....	2 25



2568

This Laryngoscope is a modification of Mackenzie's light concentrator, and although simpler in construction than Tobold's yet it possesses several advantages not found in the latter instrument.

It is provided with two mirrors, one plain and the other concave, both of which are attached to a stationary mirror bar by means of ball and socket joints so arranged that they may be easily changed to any position on the bar, and inclined to any angle.

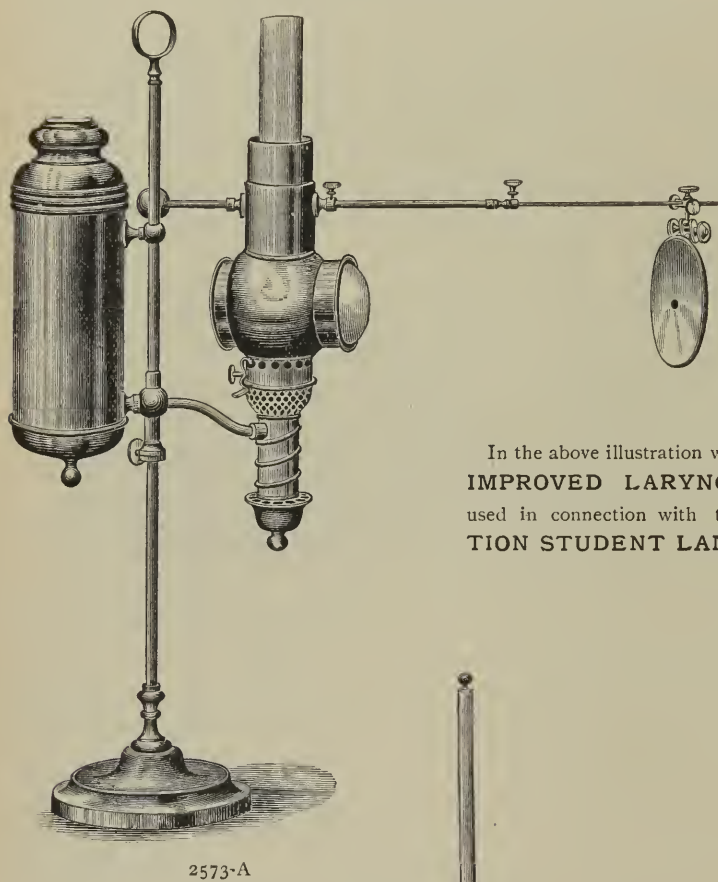
The plain mirror enables the physician to show his patient the condition of the affected parts, and, if needing treatment, explain its necessity. By this method patients may oftentimes see the extent and nature of their disease, and thus be induced to receive treatment who might otherwise consider it of but little importance, not demanding medical assistance. We venture the assertion that patients will go for years with an ulcerated or otherwise inflamed condition of the nares, who, if shown the actual state of affairs, would give the matter the attention that the case demanded, for not one out of a large number, who, if the same diseased condition existed externally, would not seek medical assistance, and that promptly. If deemed advisable, the patient may be shown from time to time the changing condition of his disease, and thus keep interested in its treatment. By this device the patient can see to keep himself "in light," thus relieving the physician from the necessity of frequently adjusting the mirror.

This Laryngoscope can be adjusted to a student's lamp, and may be raised or lowered by means of a single set screw. This advantage will be appreciated by those who have used the "Tobold," for in order to change the height of the latter, it requires the adjustment of three screws.

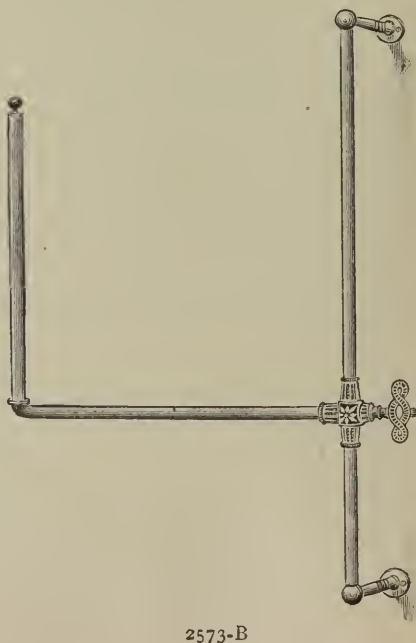
LARYNGOSCOPES.

FIG.

*2573-A	Boekel's Improved Laryngoscope in connection with Perfection Student Lamp—complete as shown in cut.....	\$15 00.
2573-A	Boekel's Perfection Student Lamp (only).....	3 75
(For prices of Separate Apparatus see following page.)		
*2573-B	Adjustable Wall Brackets for Student Lamp.....	'3 00



In the above illustration we show Boekel's
IMPROVED LARYNGOSCOPE as
 used in connection with the **PERFEC-**
TION STUDENT LAMP.



CONDENSERS, ETC.

FIG.			
*2576	Boekel's	Light Condenser and Bracket, complete.....	\$10 00
*2576B	"	Bracket and Mirror Bar for Light Condenser....	5 00
*2576C	"	Light Condenser without Bracket or Mirror Bar.....	5 00
2576D	"	" " " and Bracket without Mirror.....	7 50

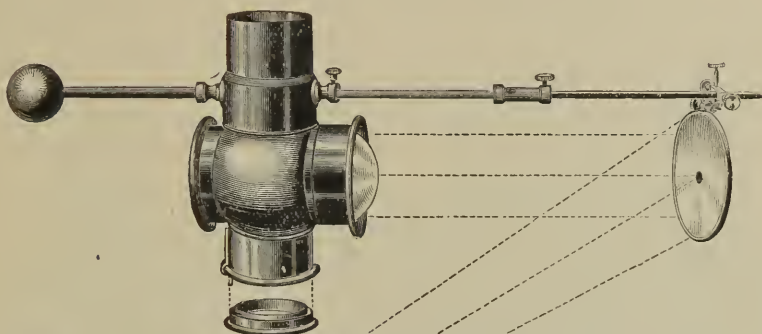


Fig. 2576. Bracket and Laryngoscope Combined.

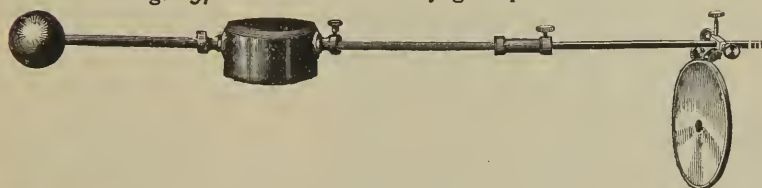


Fig. 2576 B.



Fig. 2576C. Plain Laryngoscope.

This is preferable to any other Light Condenser for the following reasons:

First. On account of the spherical or round form of the flame chamber, which has a tendency to concentrate the rays, producing thereby a more powerful light than could be otherwise obtained. The light, thus condensed, is thrown forward through the lens on to the mirror by a reflector in the rear.

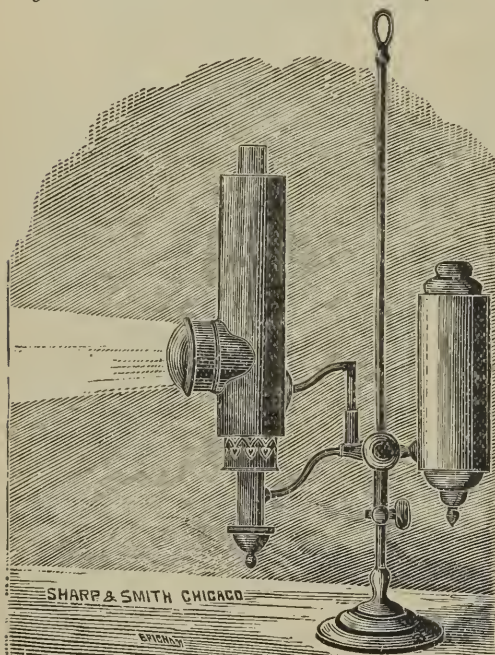
Second. To avoid the annoyance of placing the mirror in the right position each and every time when brought to use, we have added a rod or bracket fastened to a band, which slides over the chimney and rests on the sphere, while the rod penetrates the chimney, holding it steadily and parallel with the focal line. At the extreme end of this rod the mirror is suspended by means of a ball joint, similar to the one used on the improved headbands, to allow the direction of the light wherever needed. The ball joint can be raised or lowered according to the size of the mirror. With this bracket the operator is never hindered in his movements, as the mirror is thereby always held in the focal line, which is most decidedly an improvement over the independent stand or headbands and all the other devices that have been used before for that purpose.

Third. A ball-shaped weight which screws on the back of the band counterbalances the mirror when adjusted to a gas bracket or lamp. The Laryngoscope with its attachments is constructed with screw-joints and can readily be taken apart for convenient packing.

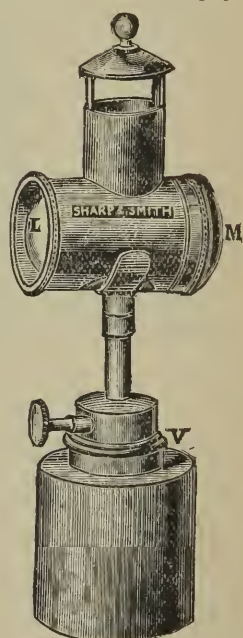
In connection with the above we recommend our Adjustable Gas Bracket.

CONDENSERS, ETC.

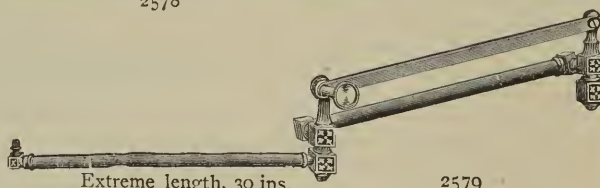
FIG.			
2577	Mackenzie's Light Condenser.....	\$3 50	
2577-A	" " " with Student Lamp.....	7 00	
*2578	Ingals' " " " " " ".....	9 00	
2578-A	" " " " " ".....	5 00	
		Brass.	N. P.
*2579	Boekel's Adjustable Gas Bracket.....	\$7 50	\$8 00
*2580	Collins' Lamp.....	3 75	
2581	Miller's ".....	11 00	
2582	Students' Nickel Plated Lamp.....	3 50	



2578



2580



Extreme length, 30 ins.

2579

To satisfy the long felt want for a good adjustable Gas Bracket, to be used especially in connection with our "Improved Mackenzie Laryngoscope," we have succeeded in constructing one which we think will gratify the demand of the trade in every respect.

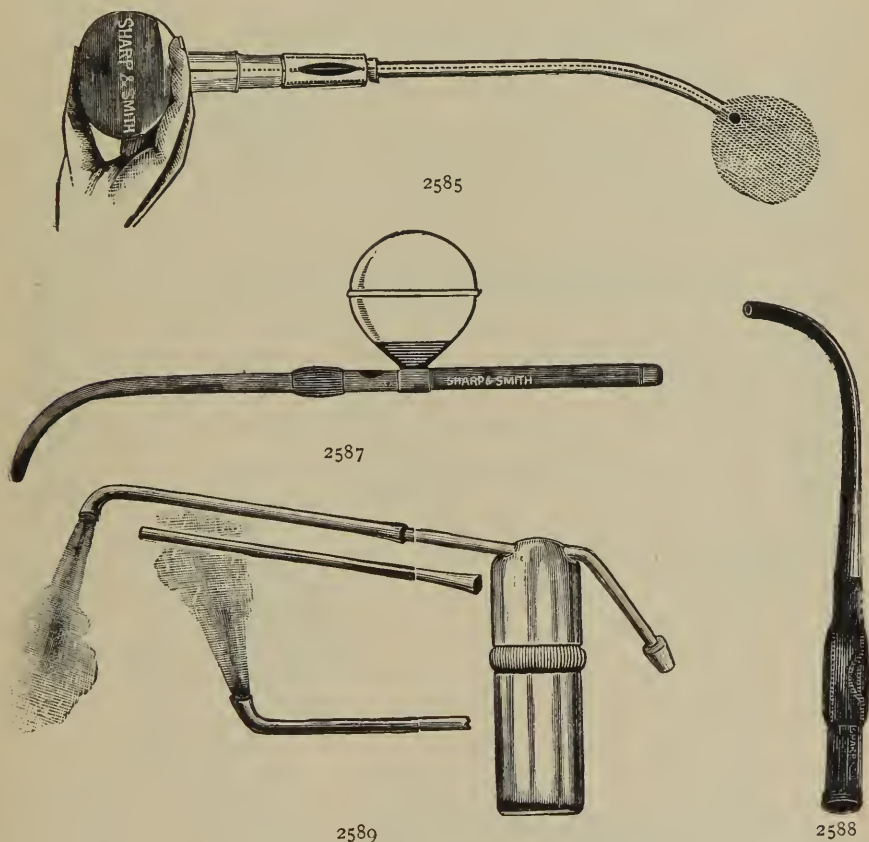
The Bracket (as represented in the above cut) is more easily raised and lowered than any of the Brackets that have been in the market before.

As the handle "a" is at the same time the set-nut for the Friction Disc, by means of which the Bracket is held in position, only one hand is required to loosen, move and set the Bracket with ease.

This Bracket is made stronger than any of its kind in the market, fully strong enough to bear the required weight.

POWDER BLOWERS.

FIG.					
2583	Ellsberg's Powder Blower.....	\$1	65		
2584	Bosworth's Glass Powder Blower.....		35		
2584-A	" Hard Rubber Powder Blower.....	1	00		
*2585	Clay's " " " "		75		
2586	Leffert's one tip " "	1	50		
*2587	" " " "	1	50		
*2588	" "with mouthpiece " "	1	00		
*2589	Devilbiss' " "		75		
2589-A	" " with Bulb	1	00		
2589-B	" " with Bottle and Bulb.	1	50		
2590	Goodwillie's " "	1	25		
2591	Kelly's " "	2	00		



THE DEVILBISS POWDER BLOWER

Can be used with either condensed air apparatus or rubber bulb. Can readily change from one kind of powder to another by slipping cups apart, empty and refill with any powder that may be desired. It diffuses the powder perfectly, as it carries it by the counter current of air, and not by a direct one, which is always liable to throw the powder in a bunch.

See Index for other Powder Blowers.

POWDER BLOWERS.

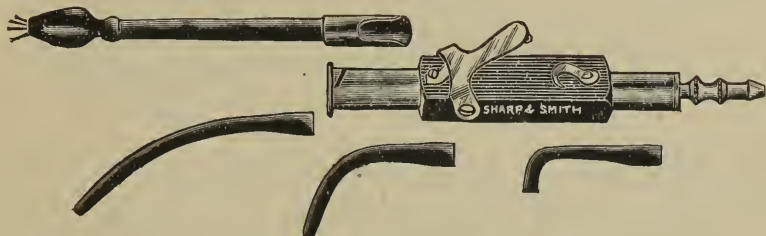
FIG.					
*2592	Ingals'	Powder Blower	.....	\$1	00
*2593	Bishop's Pocket	" "	.....		30
*2594	Knapp's	" "	.....		75
2595	Smith's	" "	.....	2	00
2596	Robinson's Reversible	Powder Blower, two tips	.....	1	50
*2597	"	Powder Blower, with mouthpiece	.....	3	75
2598	Oliver's	" "	.....	1	85
*2599	Gradle's	" "	.....	1	50
*2601	Sajou's (for patients)	Powder Blower	.....		50
*2602	Scoop	" "	.....		75



MOUTH AND THROAT INSTRUMENTS.

FIG.

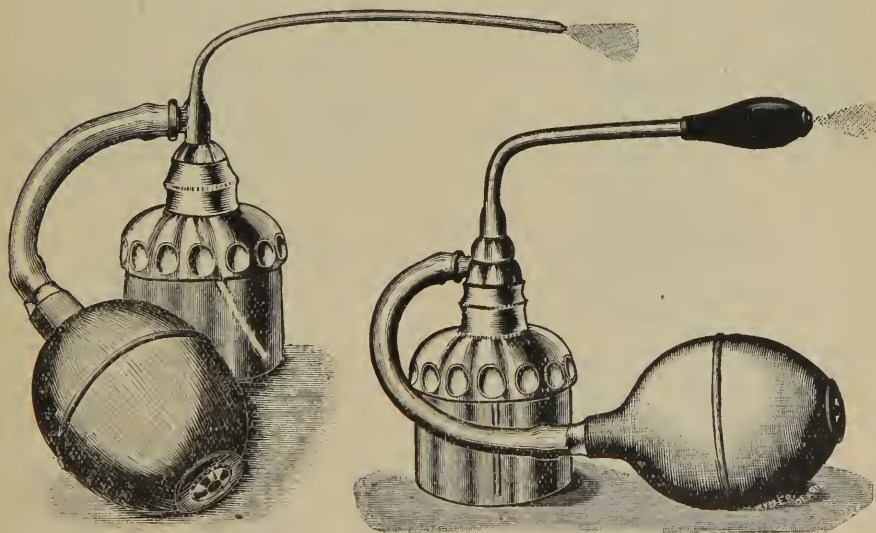
*2603	Millard's No. 9 Laryngeal Powder Blower.....	\$1 50
*2604	“ “ 11 Throat “ “	1 50
*2605	Morgan's Powder Blower.....	5 00
2605-A	Mattson's No. 1 Powder Blower (see page 426).....	1 00
2605-B	“ “ 2 “ “ (“ “ 426).....	75
2606	Butts' “ “ “ “	1 50



2605

MORGAN'S POWDER BLOWER.

Among the many Powder Blowers suitable for use with compressed air, we particularly recommend two, one recently devised by Dr. E. Carroll Morgan, of Washington, D. C., and one by Dr. A. Devilbiss, of Toledo, O. The former is a perfect instrument, suited to the wants of the specialists and others who need an instrument for frequent and constant use. As shown by Fig. 2605, it consists of a hard rubber handle, to which is attached a scoop for holding the powder. The powders should be kept in small wide-mouth bottles so that the quantity to be administered may be taken up in the scoop and the latter attached to the handle when it is ready for use. It is provided with four tips, rendering it applicable for all kinds of work.



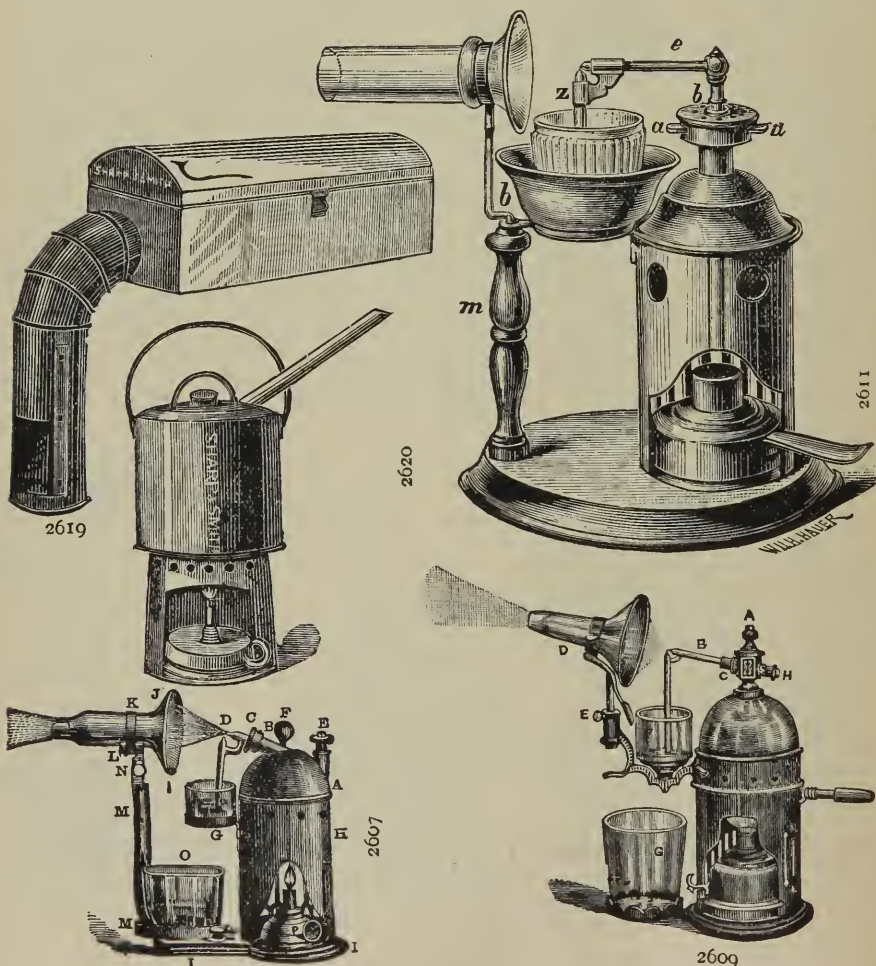
2603

2604

All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.							
*2607	Codman & Shurtleff's Steam Atomizer.....						\$4 00
2608	“ “ “ Nickel Plated Steam Atomizer.....						5 50
*2609	Sharp & Smith's Steam Atomizer.....						3 50
2610	Tiemann & Co.'s “ “						4 00
*2611	German Nickel Plated “ “						2 00
			Glass.	Hard Rubber.	Metal.	Silver.	
2612	Atomizing Tubes for C. & S. Atomizer..	20C	\$1 35	\$1 00	\$	2 00	
2613	“ “ “ T. & Co.'s “ ..	20C	1 35	1 00		2 00	
2614	“ “ “ S. & S. “ ..	20C	1 35	1 00		2 00	
2615	“ “ Bulbs, single, with tubing.....					35	
2616	“ “ “ double, “					60	
2617	“ “ “ pure gum, double					75	
2618	“ “ “ “ “ and net.....					1 00	
*2619	Hot Air Bath.....					3 75	
*2620	Croup Kettle.....					3 50	
2621	Waxham's Feeding Bottle.....					1 25	

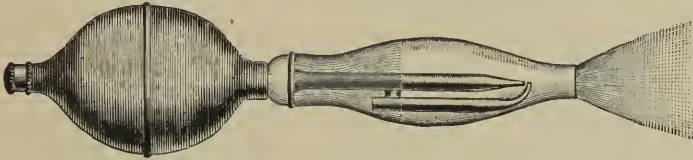


MOUTH AND THROAT INSTRUMENTS.

FIG.

*2622	The "Randolph" Ointment Atomizer.....	\$ 75
*2623	Devilbiss' Vaseline " with Bulb.....	I 25

THE "ONLY" OINTMENT ATOMIZER FOR WARMING AND SPRAYING PURE VASELINE AND OINTMENTS. (Patent Pending.)



2622

The attention of the medical profession is respectfully called to the invention figured above, of an Atomizer, especially designed for warming and spraying pure Vaseline, plain or medicated, for the treatment of such diseases of the respiratory organs as Nasal Catarrh, Hay Fever, Asthma, Bronchitis, Consumption, etc.

The application of the healing and soothing properties of warm Vaseline Spray to the treatment of this class of diseases commends itself to the intelligence of every one at once, while ample experience with the method has fully confirmed its value.

This Atomizer renders possible the use of pure Vaseline Spray, applied warm, by which its remedial effects are much increased.

A great variety of medicines are combined with Vaseline, in extemporaneous prescriptions by physicians to use in this instrument, among the most successful of which may be mentioned: Cocaine, Menthol, Camphor, Carbolic Acid, Iodoform, Bismuth, Sub. Carb., Zinc Oxide, Hamamelis, and Ol. Eucalyptus.

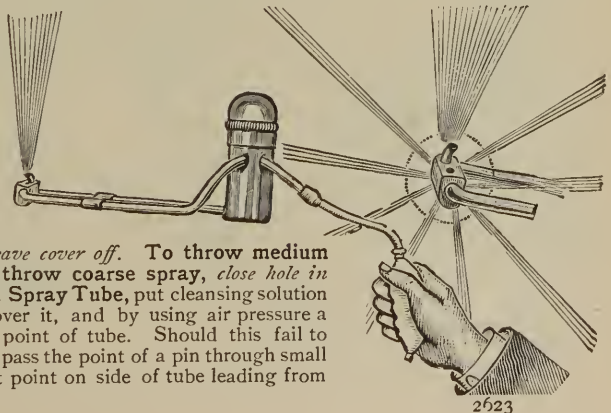
There has been a question about the entrance of the Spray into the bronchial tubes, the affirmative of which is proven by the sensations of the patients, AND THE REAPPEARANCE OF THE SPRAY UPON THE EXPIRED BREATH.

The inspired air passing over parts coated with medicated Vaseline becomes impregnated with the remedy, if volatile, and carries it much farther along the respiratory track.

The application of plain Vaseline Spray, in cold weather, to the throat, nasal passages and bronchial tubes, has been found superior to any oro nasal respirator as a protective.

**THE DEVILBISS
SPRAY PRODUCER.**

This instrument throws a spray in any direction desired. Will throw oils and vaseline by heating it from point to cup to blood heat.



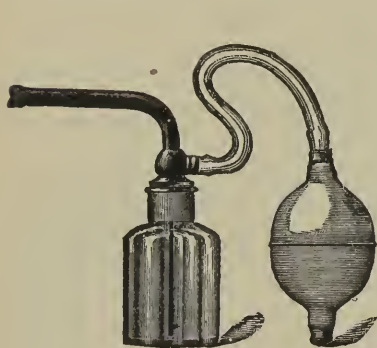
2623

To throw fine spray, leave cover off. To throw medium spray, place cover on. To throw coarse spray, close hole in cover with finger. To Clean Spray Tube, put cleansing solution in cup, place thumb tightly over it, and by using air pressure a stream will be thrown from point of tube. Should this fail to clean the tube, take out point, pass the point of a pin through small holes, then replace with bent point on side of tube leading from cup.

MOUTH AND THROAT INSTRUMENTS.

FIG.

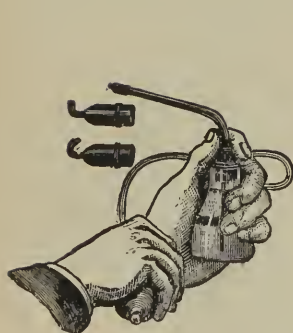
2624	Essex Atomizer, single bulb.....	\$1 00
*2625	No. 59. Davidson Atomizer, single bulb.....	1 75
*2626	No. 62. " " for Cocaine.....	1 00
2626A	No. 65. " " (see Ingals' Nasal Instruments)...	3 50
2626B	No. 66. " " (" " " ")...	4 50
*2627	Gilbert's Atomizer, single bulb.....	1 50
2628	Delano's " " "	1 50
*2629.	No. 20. Tyrian Atomizer, double bulb.....	1 00
*2630	Clark's " " "	2 25
2631	Hall's " " "	1 50
2632	Leffert's, one tip " " "	2 00
2633	" three tips " " "	3 00



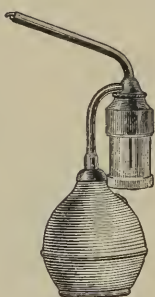
2629



2627



2625



2626



Sharp & Smith.

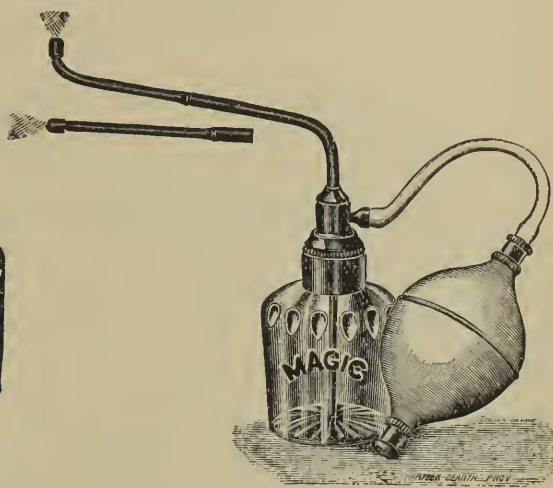
2630

All Instruments designated by a * are illustrated.

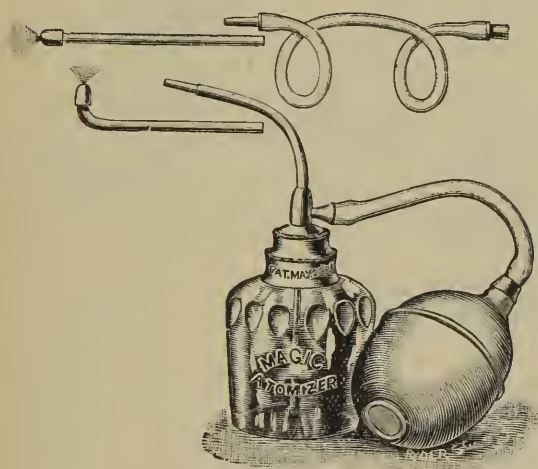
MOUTH AND THROAT INSTRUMENTS.



2634



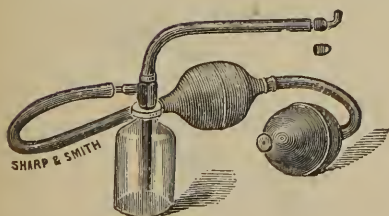
2636



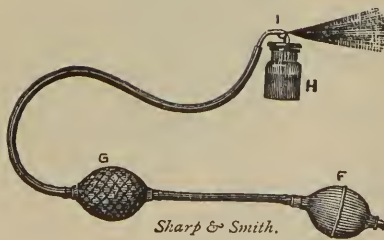
2635



2647



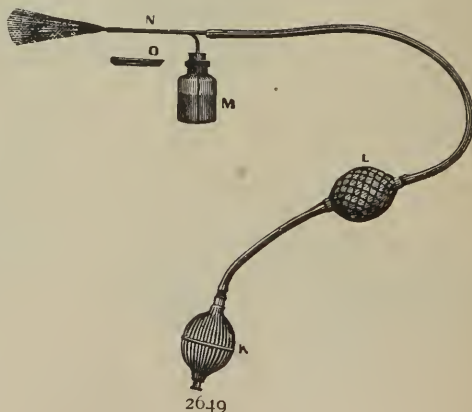
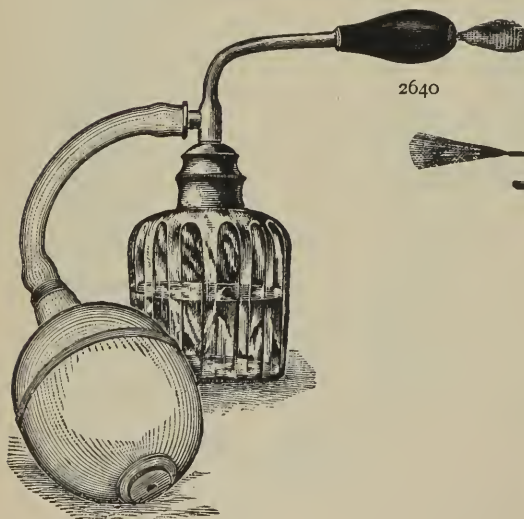
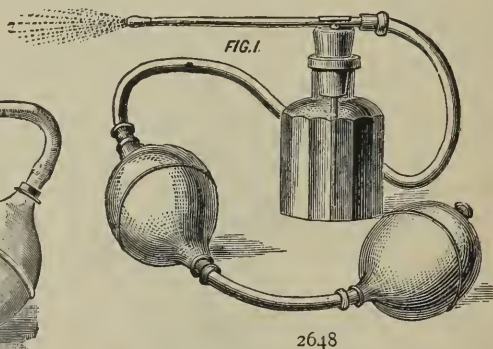
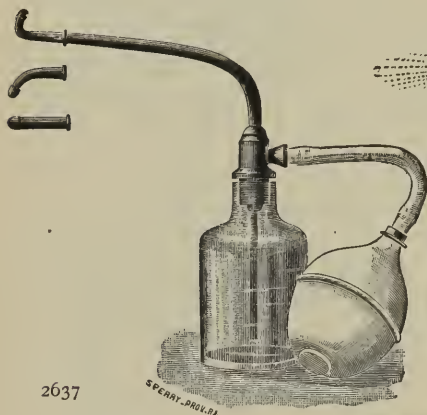
2644



2646

MOUTH AND THROAT INSTRUMENTS.

FIG.					
*2634	Magic Atomizer, No. 1, single bulb.....				\$1 00
*2635	" " " " Hard Rubber, No. 5, single bulb.....				1 25
*2636	" " " " " " No. 25 " ".....				1 50
*2637	" " " " " " No. 30 " ".....				1 40
2638	Mattson's No. 1 Atomizer, single bulb.....				75
2639	" Clinical " " " ".....				1 25
*2640	Millard's No. 5 " " Throat and Ear, single bulb.....				1 50
*2641	" " No. 6 " " Larynx, single bulb.....				1 50
*2642	" " No. 10 " " Throat " ".....				1 50
2643	Reversible Atomizer, double bulb.....				1 50
*2644	Richardson's " " " ".....				1 50
2645	Davidson's " " single " ".....				1 50
*2646	Shurtleff's " " " ".....				2 60
*2647	Phoenix " " " ".....				60
*2648	Holmes' " " " ".....				2 60
*2649	S. & S. Freezing Atomizer,				2 60



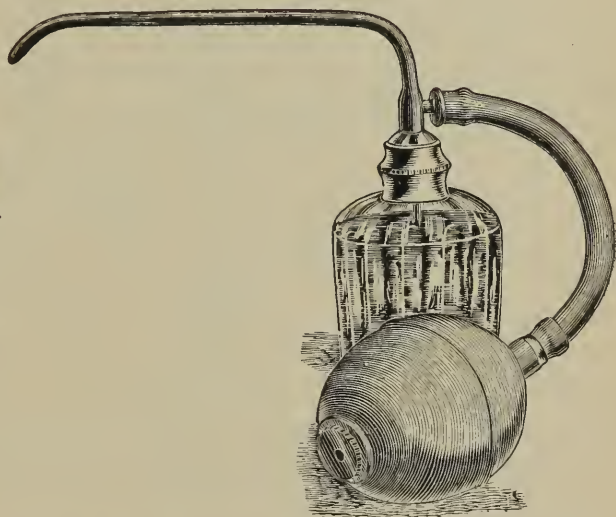
MOUTH AND THROAT INSTRUMENTS.

FIG.

*2650	Atomizer Tips, Throat, straight, Platina lined, No. 1.....	\$ 40
*2651	“ “ “ curved “ “ “ 2.....	40
*2652	“ “ “ “ “ “ “ 3.....	40
*2653	“ “ Nasal “ “ “ “ 4.....	60
*2654	“ “ Hall's “ “ “ “	60

Tips for all Atomizers furnished at once.

CAPS.

No. 1.
2650No. 2.
2651No. 3.
2652No. 4.
2653

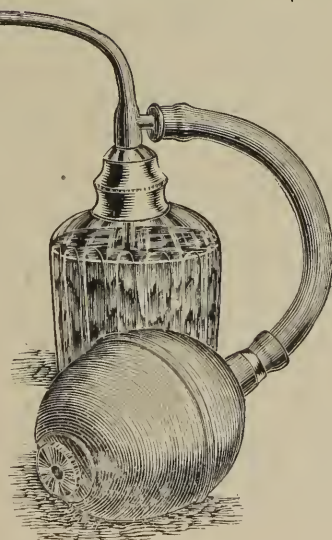
2641



2654

2654-A Dr. Dunn's
Double Nasal Tip. \$ 60

2654-B Ingals' Nasal Tip. \$ 60



2642

instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

A DEVICE TO PREVENT MOUTH-BREATHING DURING SLEEP.

Suggested by THOMAS R. FRENCH, M. D., Brooklyn.



2654 C Device in Position.

Extract from New York Medical Journal, April 16, 1892.

ARTICLE BY DR. FRENCH.

"When, from any cause, the nasal passages are greatly diminished in size, or occluded, breathing through the mouth is, of course, a necessity; but even after the cause has been removed the habit of mouth-breathing not infrequently persists. Again, this injurious habit is often practiced because of relaxation of the muscles of the lower jaw during sleep. The mouth may be closed on going to sleep, opened while sleeping, and when consciousness arrives is found closed again, so that many are ignorant of the fact that they ever breathe through the mouth. Adults who present symptoms of the practice of this habit during sleep will, as a rule, deny its existence, but if they are questioned closely they will usually admit that the mouth and throat are almost always dry in the morning, and that it may be several hours before those parts regain their normal condition.

"For all cases in which the presence of the habit is known or suspected, and also to determine the existence of sufficient nasal capacity during sleep, it has been my custom in the past few years to direct the use of strips of a material known as 'wash blonde' in such a way that, if the nasal passages are sufficiently free, the lower jaw will be held in place, and, as a consequence, nasal breathing enforced. With the kind assistance of Mr. S. V. W. Lee, recently under my professional care, this device has been much improved and is serving an excellent purpose.

"The device consists of a piece of 'wash blonde,' a kind of 'illusion,' which is attached to straps of light webbing and adjusted to the head in the manner shown in the accompanying sketch.

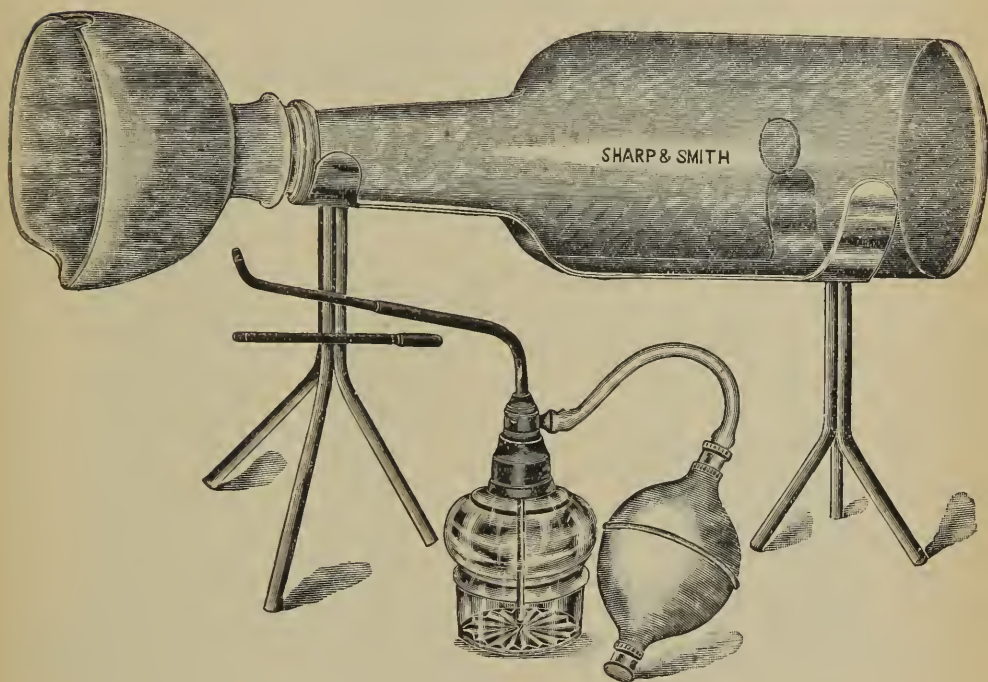
"The 'wash blonde' is placed under the chin and the perpendicular straps buckled together at the top of the head. In this way the needful support is given to the lower jaw. The perpendicular straps are held in position on the head by two back straps, which are looped on to them, and which are also regulated by a buckle. The buckle at the top of the head is padded to prevent uncomfortable pressure being made, and the whole appliance is so light and elastic that it is usually worn, after a trial or two, without the slightest discomfort."

The apparatus is made in two sizes, for adults and children. Price each, \$1.00, net.

This apparatus will be found very effective in preventing and curing the habit of snoring

MOUTH AND THROAT INSTRUMENTS. CHLORINE INHALER FOR TREATMENT OF PHTHISIS.

By The Shurly & Gibbes Method.



2654-D

This is an apparatus devised to enable patients to take at their homes the inhalations as recommended by Drs. Shurly & Gibbes, in their treatment of Phthisis.

It consists of a nickel plated frame which holds the Inhaler. The Inhaler is a glass bottle on the end of which is attached a Rubber Hood; this Hood fits tightly over the face. Near the end of Inhaler is a hole about 1 inch in diameter, through which is sprayed the solution to be used. With this instrument also goes a hard rubber two-tip Atomizer with continuous spray. The apparatus is neat in appearance, and occupies a space of only about $13 \times 8\frac{1}{2} \times 5$ inches.

A solution of Chloride of Sodium, Grs. XII to the ounce, filtered, is used in the Atomizer, with which Aqua Chlori (Hance Brothers & White, Philadelphia) is mixed in the proportion of one-half to one drachm to the ounce. This solution is then sprayed into the large bottle through the opening in the side. The patient places the shield tightly over the mouth and nose and inhales as deeply as possible as the solution is being sprayed into the chamber.

Instead of the Hand Atomizer (generally used on this apparatus) can be attached an Air Condenser, in connection with the Davidson No. 65 or 66 Atomizer. (See following page.)

The inhalation should be used about ten minutes morning and evening, and the amount of the Aqua Chlori should be carefully regulated so as to avoid too much irritation.

This apparatus is used by Dr. E. Fletcher Ingals and Dr. John Edwin Rhodes in their treatment of cases by the Shurly-Gibbes method.

See following page for prices.

MOUTH AND THROAT INSTRUMENTS.

SHARP & SMITH'S No. 73 IMPROVED CONDENSED AIR APPARATUS.

Complete with Pump, Davidson's Spray, Cut-off, Etc.

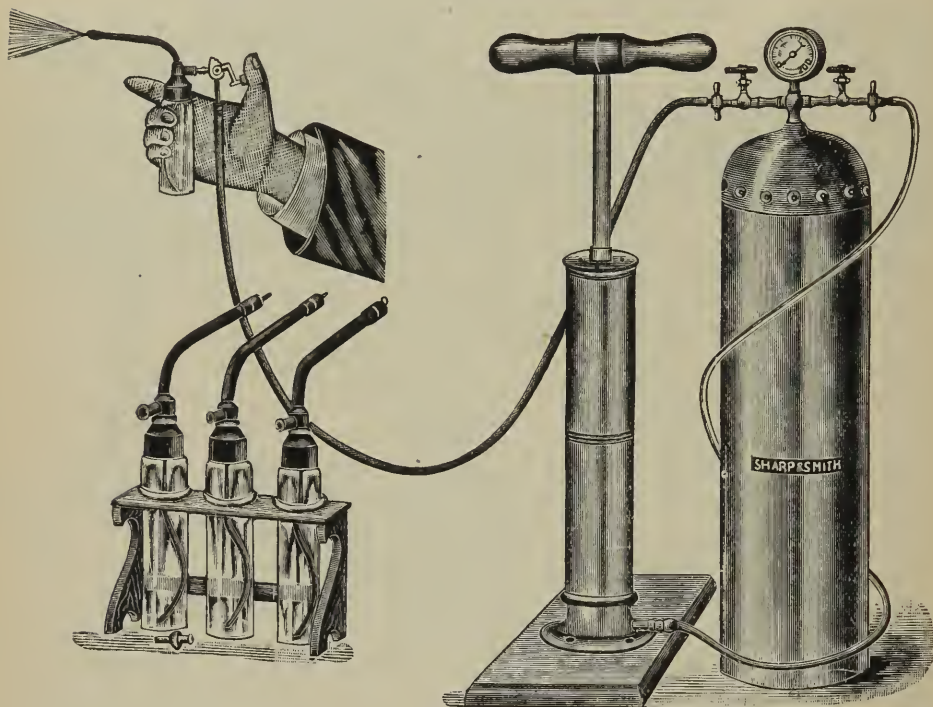


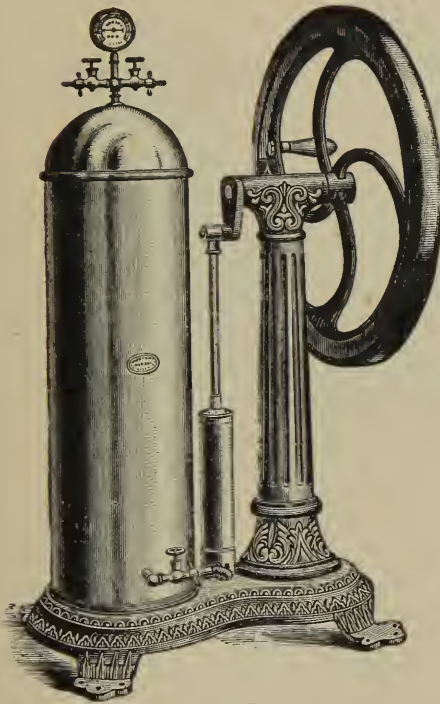
Fig. 2655-A

The Receiver of the above apparatus is of copper, 7 inches in diameter by 28 inches high, nickel plated, and is tested to 300 pounds to the square inch, and provided with an A No. 1 gauge registering from 1 to 200 pounds' pressure. The valves are made so they will not leak *at any* pressure, being made of bronze, and nickel plated, as is also the gauge. The receiver stands as high as an ordinary table, and the valves can be easily controlled. The Pump is nickel plated and of the latest improved pattern, and differs in construction from most of the pumps generally sold with receivers. The Tubes (Davidson's) are of hard rubber with platina lined tips, throwing spray in different directions. These spray tubes are connected to the receiver by means of a "shut-off," as shown in "hand" on cut, which shut-off is connected with the receiver by silk covered tubing. These tubes can also be used with the ordinary Atomizer Hand Bulb. *This apparatus can be used in the "Shurly & Gibbs" method, as shown on preceding page.*

FIG.	
*2654-D	Shurly Gibbs Chlorine Inhaler complete (as shown in cut)..... \$6 00
	Hypodermic Syringe, with three needles, in case..... 2 50
	Chloride of Gold and Sodium (genuine)..... per ounce, 1 00
	Iodine (genuine)..... " 1 00
*2655-A	Sharp & Smith's No. 73 Improved Condensed Air Apparatus, <i>complete</i> net 30 00

For parts of Condensed Air Apparatus, see page 497.

NEW COMPRESSED AIR APPARATUS.



2655-B

Fig. 2655-B - This cut represents our new Air Receiver and Pump combined. The base, column and fly wheel are made of iron, japanned in black and ornamented in bronze; the extreme height is 42 inches, the base is 14 by 24 inches, and the wheel 24 inches in diameter. The pump and air receiver are made of brass, highly polished, and nickel plated. The air receiver is 32 inches high and 9 inches in diameter, provided with a 50 pound gauge and two exhaust valves, and thoroughly tested to 100 pounds' hydraulic pressure, warranted to be air-tight.

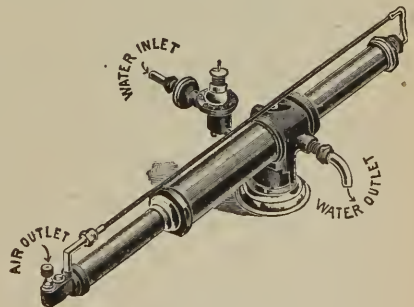
The pump has most excellent valves, thereby greatly increasing its working capacity, the chamber is $2\frac{1}{8}$ inches in diameter, by 7 inch stroke.

The whole apparatus is well made and handsomely finished, especially adapted as an ornament to a physician's office, occupying only a small space.

Price complete, including 10 feet of silk covered tubing, a set of (3) Davidson's H. R. Sprays and Automatic Cut-off, \$65.00.

THE QUADRUPLE HYDRAULIC AIR COMPRESSOR.

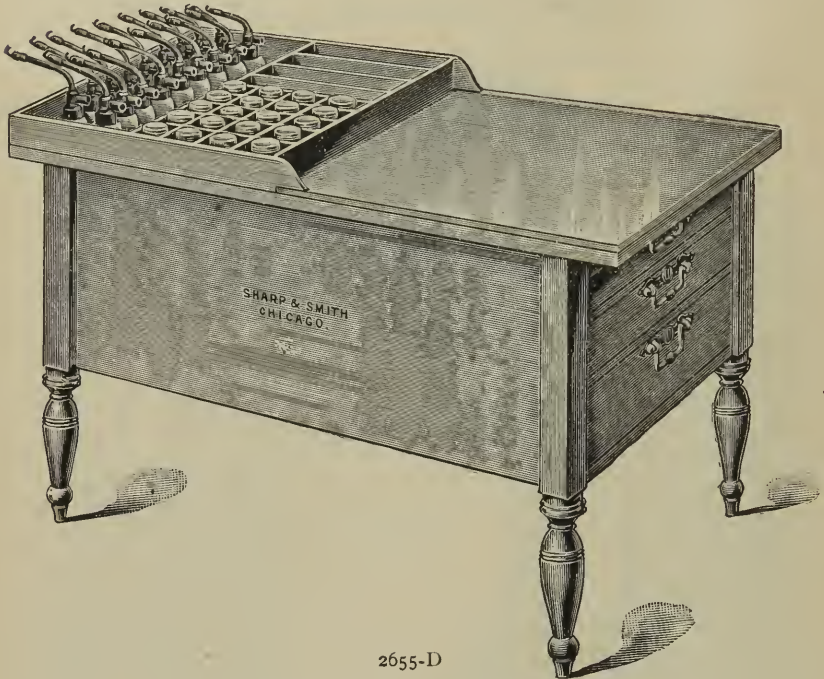
The superiority of this Compressor (Fig. 2655-C) consists in the fact that it will compress air to FOUR TIMES the pressure of the water supply to which it is attached, so that with a WATER PRESSURE OF 15 LBS. AN AIR PRESSURE OF 60 LBS. will be obtained in the air receiver. It is automatic and noiseless in its action and wastes no water, as it ceases to operate when the receiver is filled, but will again begin to work as soon as the pressure in the receiver has been reduced. It is a highly finished nickel plated cylinder, and is not objectionable in size or appearance. Length, 31 inches, height, 8 inches.



2655-C

Price.....\$45 00

A NEW STAND FOR HOLDING SPRAY TUBES AND MEDICINES.

**Fig. 2655-D—THE PIERCE TABLE.**

FOR RHINOLOGICAL, LARYNGOLOGICAL AND OTOLOGICAL WORK.

After the Design and Specifications of DR. NORVAL H. PIERCE, of Chicago.

The dimensions of the table are, height 28 inches; width 21 inches; length $34\frac{1}{2}$ inches. It was designed with the idea of embracing economy of space, capacity and convenience; its shape allows it to be placed in the corner of the consultation room, and even in this position every part is readily accessible to the operator, who sits at the side.

In hospital or clinical work it may be placed between two operators, and then each one has free access to every portion. In it are three drawers, in which may be kept all instruments used in general work, all uncommon pigments and powders, towels, etc. The surface is divided into three portions, the first a plain surface, 15×21 inches, covered with heavy plate glass, the edges of which are ground to a bevel; this is readily disinfected, and is the surface which comes in contact with instruments before or during operations. The next portion is divided into 20 compartments, each measuring 2 inches square, and 4 additional compartments, measuring 2 inches in width, and $8\frac{3}{8}$ inches in length; the former receive jars for containing pigments and powders, the latter are for applicators, probes, speculæ, mirrors for specific and non-specific cases, etc., etc. The last portion contains 24 perforations for receiving the Davidson atomizers and powder blowers. The table is attractive in appearance and is an elegant addition to the specialist's office furniture, aside from its utility and convenience. Price, \$30.00 net.

COMPRESSED AIR APPARATUS.

FIG.

*2657	No. 4 Compressed Air Apparatus.....	\$36 50
*2658	" 5 " " "	41 50

Prices of Figs. 2657 and 2658 include appurtenances, same as in Fig. 2655.



No. 4. This Receiver is made of superior tinned steel, japanned in rich chocolate color, with first-class gauge registering from one to one hundred pounds' pressure, and high-pressure valves warranted not to leak. Also, provided with couplings for attaching the necessary rubber tubing.

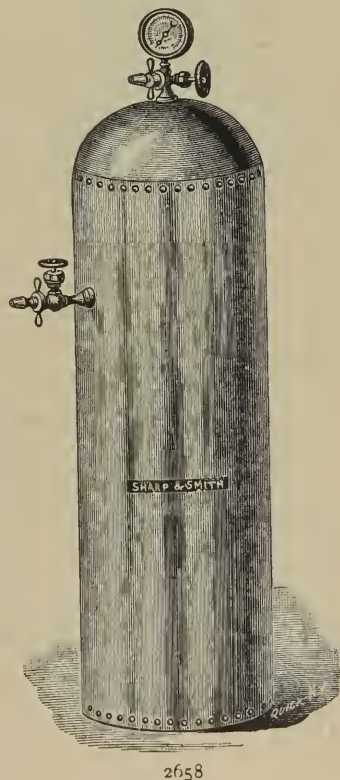
The gauge and valves are made entirely of bronze, highly finished and plated.

Size, 10 inches diameter by 18 inches high.

No. 5. This Receiver is made of superior tinned steel, japanned in rich chocolate color, with first-class gauge registering from one to one hundred pounds' pressure, and latest improved high-pressure valves, warranted not to leak. Also, provided with couplings for attaching the necessary rubber tubing.

The gauge, valves, and couplings are made of bronze, highly finished and plated.

Size, 10 inches diameter by 32 inches high.



MOUTH AND THROAT INSTRUMENTS.

FIG.

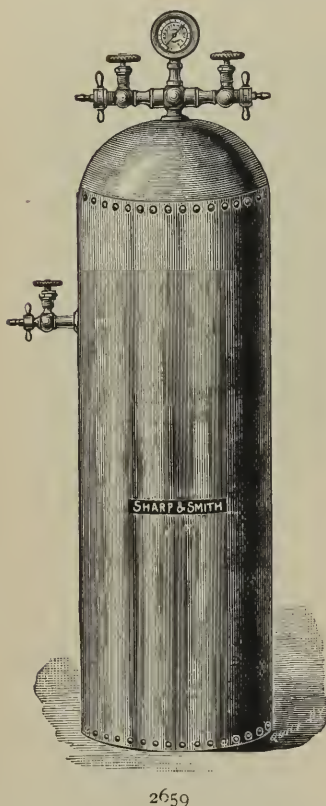
* 2659	No. 6, Condensed Air Apparatus.....	\$42 50
* 2660	No. 7, " " "	37 50
* 2661	No. 8, " " "	39 50
2662	Burgess " " " (tubes extra)	20 00

Prices of figures 2659, 2660 and 2661, include appurtenances same as in figure 2655.

Fig. 2659—No. 6. This Receiver is made of same material and finish as the No. 5, and provided with the latest improved high-pressure valves, warranted not to leak; first class gauge registering from one to one hundred lbs., and couplings for attaching the necessary rubber tubing.

It is designed for use with globe inhaler as well as with ordinary spray tubes.

Size, 10 inch. diameter by 32 inch. high.



2659

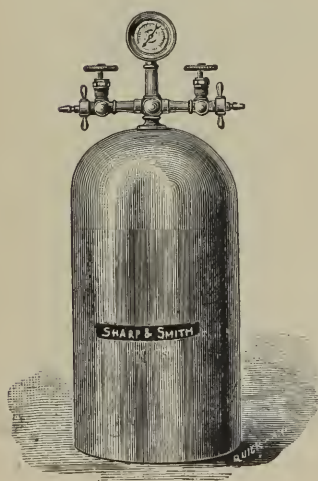


2660

Fig. 2660—No. 7. This Receiver is made of copper, highly finished and plated. With first-class gauge, registering from one to fifty lbs. pressure; two accurately-fitted air cocks, and couplings for attaching the necessary rubber tubing.

The gauge, air-cocks, and couplings are made of bronze, and nickel plated.

Size, 9 inch. diameter by 16 inch. high.



2661

Fig. 2661—No. 8. This Receiver is made of same material and finish as the No. 7, and provided with two latest improved high-pressure valves, warranted not to leak, and couplings for attaching the necessary rubber tubing. The gauge (first quality) registering from one to fifty lbs. pressure.

Size, 9 inch. by 16 inch. high

MOUTH AND THROAT INSTRUMENTS.

FIG.	No. 3	Air Receiver (only) as described in Fig. 2656.....	\$27 00
	No. 4	" " " " " 2657.....	19 00
	No. 5	" " " " " 2658.....	24 00
	No. 6	" " " " " 2659.....	25 00
	No. 7	" " " " " 2660.....	20 00
	No. 8	" " " " " 2661.....	22 00

FIG.

PARTS OF CONDENSED AIR APPARATUS.

*2663	Automatic Cut off (cut off only).....	\$ 3 00
*2664	Devilbiss' Automatic Cut off.....	1 00
*2664-A	Rumbold's " " " " " ".....	1 90
*2665	Sass' Spray Tubes, Glass mounted.....	each 1 00
2666	" " " Metal " ".....	" 1 50
2667	" " " Hard rubber mounted.....	" 2 00
2665-A	" " " Glass, not " ".....	" 80
2666-A	" " " Metal " ".....	" 1 25
2667-A	" " " Hard rubber not mounted.....	" 1 75
*2667-B	Holmes' Spray Tubes.....	" 1 85
	Devilbiss' " " Metal for Vaseline (see index)	
	Mounted.....	each 2 00
*2668	Hanks' Spray Tubes, Glass 3 sizes, not mounted.....	85
	Rumbold's Spray Tubes (see pages 499 and 500).....	
2668-A	(As in Fig. 2663) Spray Tube bottle with cork.....	25
2669	Thimbles for Spray Tubes.....	30
2670	Silk Covered Rubber Tubing.....	per foot 50
2671	Lined " " " " " ".....	" 18
2672	Plated Air Pumps (T Handle) latest improved (same as in Fig. 2655).....	7 00
2673	Black Walnut Stand to hold six spray tubes.....	2 00
2674	Hard Rubber Atomizer Stand, mounted on nickel-plated pillars, to hold nine sprays.....	10 00
2674-A	Pressure Gauge $2\frac{1}{2}$ inches, including fitting for Receiver, made of bronze and nickel-plated.....	6 00
*2674-B	No. 65, Set of H. R. Spray Tubes, complete.....	3 50
*2674-C	No. 195, " " Powder Blowers, " ".....	3 50

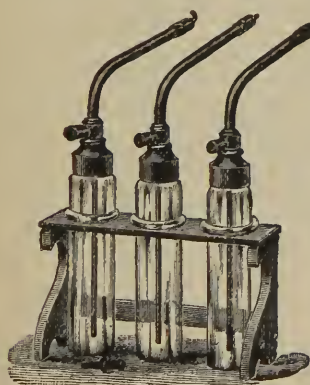


Fig. 2674-B. Spray Producers.

Fig. 2674-B. These sprays are put up in sets of three, and are made especially for office use. The bottles are of extra length, and the tubes are fitted to screw into a hard rubber cap attached to the bottle. They give a powerful spray with an air pressure of from ten to fifteen pounds, and throw fluid cosmoline, petrolina or aqueous solutions equally well. These atomizers are set in a neat rack, and each tube is furnished with a straight and curved tip for larynx and posterior nares and connection for condensed air apparatus, if desired.

Fig. 2674-C. These tubes are put up same as the Fig. 2674-B and used on the condensed air apparatus or with bulb, for throwing powder.

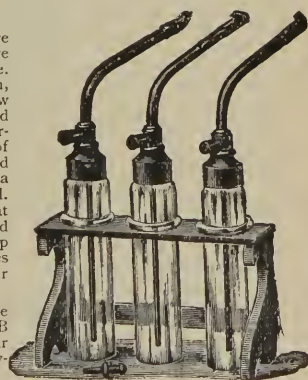


Fig. 2674-C. Powder Blowers.

MOUTH AND THROAT INSTRUMENTS.

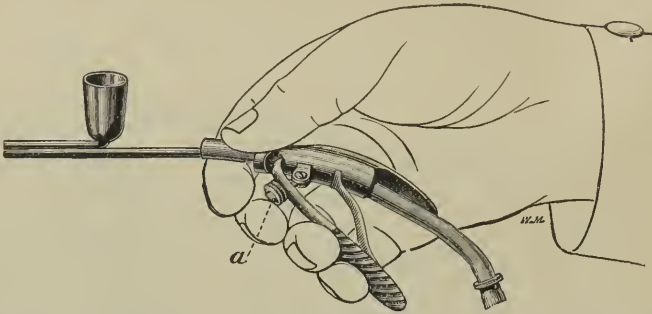
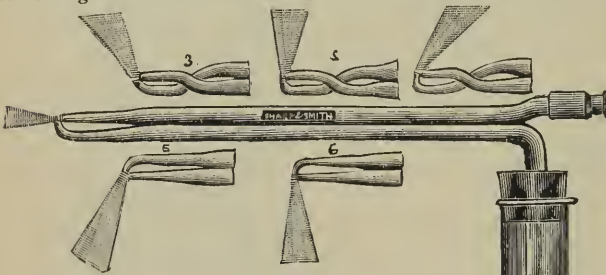
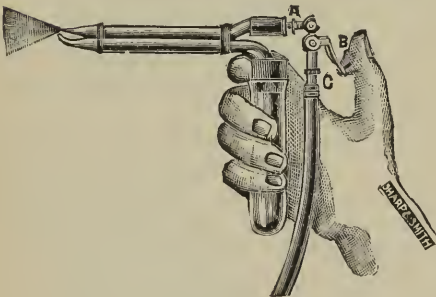


Figure 2664-a. Rumbold's Spray Controller. *a*, set-screw, to control the pressure on the rubber tube connected with the compressed air reservoir. The illustration shows the manner of holding the instrument. The Spray Controller is thus made the handle of the Spray Producer.



2665



2663

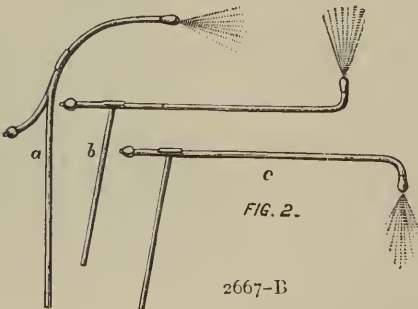


FIG. 2.

2667-B



2668

MOUTH AND THROAT INSTRUMENTS.

FIG.						
*2675 to 2682	Rumbold's Glass	Vaseline Spray Tubes.....	each	\$	40	
*2675 to 2682	"	Metal " " " " " " " "	"	I	50	
*2675 to 2682	"	Glass " " " " " " " "	Mounted for			
		connection with Air Condenser....	each		70	
*2675 to 2682	Rumbold's Metal	Vaseline Spray Tubes, mounted for				
		connection with Air Condenser.....	each	I	75	

The Rumbold Tubes are considered by those who have used them to be superior to any other in use. They are made in glass and metal—the glass being used the most. They are preferable because the desired amount of medicine can be measured and put in the cup.



Figure 2675, Spray Producer No. 4. This instrument is used to make local applications to the pharyngo-nasal cavity.



Figure 2676, Spray Producer No. 5. This instrument is used to make local applications to the posterior nasal cavities, treating the surface under the inferior, middle and superior turbinated processes.



Figure 2677, Spray Producer No. 1. This is used to treat the fauces, tonsils, and by inhalation, the lower portion of the pharynx, and slightly the larynx, vocal cords and bronchial tubes.



Figure 2678, Spray Producer No. 2. This instrument is used to make local applications to the anterior portions of the nasal passages.

MOUTH AND THROAT INSTRUMENTS.



Figure 2679, Spray Producer No. 3. This instrument is used to cleanse the posterior wall of the pharyngo-nasal cavity, when it is coated with a heavy, thick secretion that cannot be removed by the No. 4 spray producer.

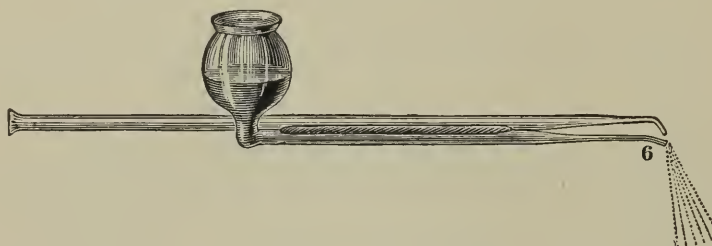


Figure 2680, Spray Producer No. 6. This instrument is used to make applications to ulcerated surfaces on the posterior wall of the pharynx, and posterior wall of the epiglottis.

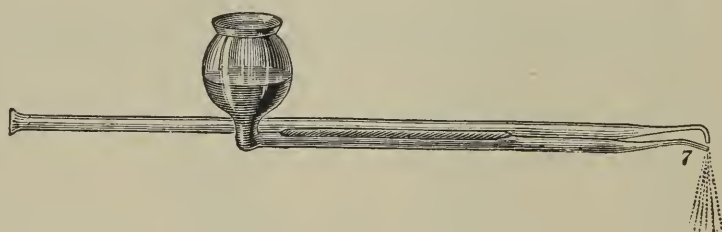


Figure 2681, Spray Producer No. 7. This instrument is used to make local applications to ulcerated surfaces located on the superior border of the epiglottis, the ary-epiglottic folds, arytenoid processes, and vocal cords.

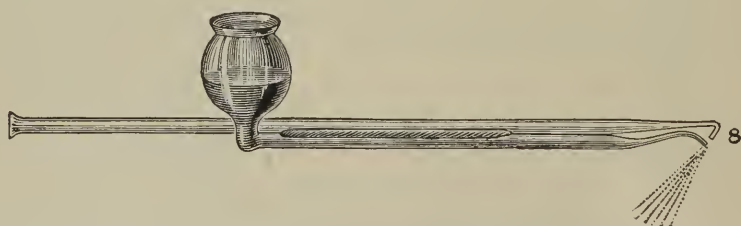


Figure 2682, Spray Producer, No. 8. This instrument is used to make applications to ulcerated surfaces that cannot be reached by Nos. 6 and 7.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2683	No. 9.	Rotary Air Pump.....	\$25 00
*2684	" 10.	" " " two wheel.....	50 00

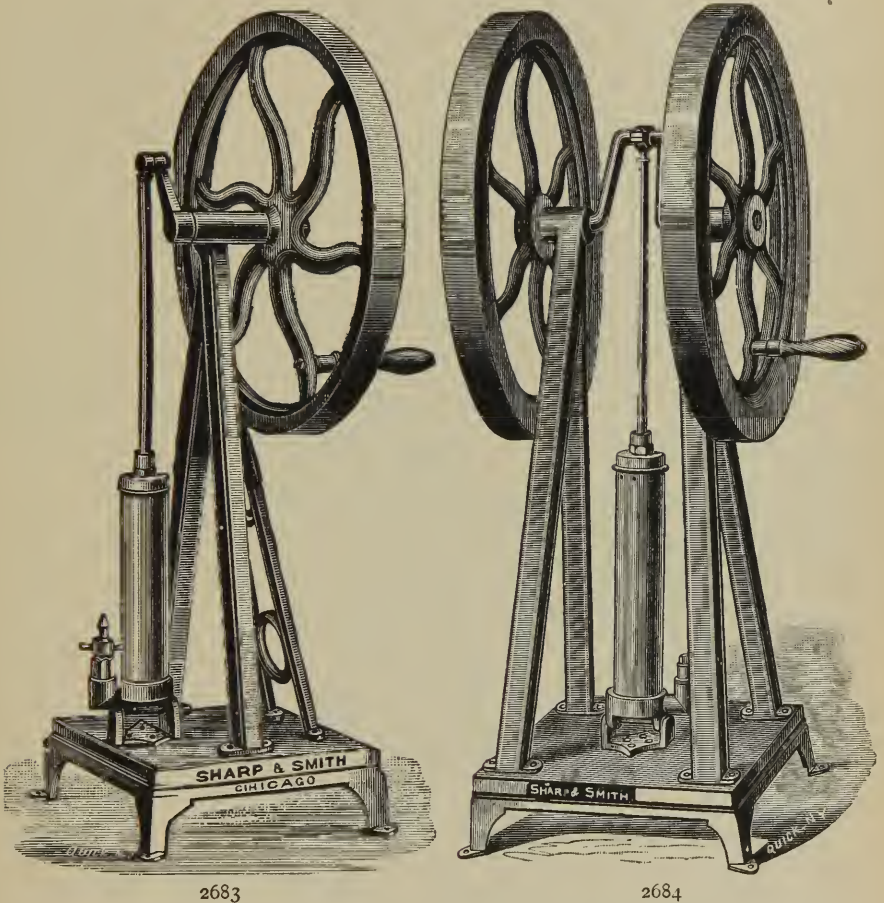


Fig. 2683.—This cut represents the well-known ROTARY AIR PUMP, designed for exhausting as well as compressing air for atomizing purposes, and for compressing oxygen.

The construction of the pump is such that a pressure of one hundred pounds to the square inch can be obtained with comparatively little effort. The fly-wheel, frame part, and base are nicely japanned in black and ornamented in bronze, and all bright parts highly finished and plated—making this pump especially adapted for the office.

Height of pump from floor to top of wheel, 40 inch.; size of base, 14 by 14 inch.; diameter of wheel, 20 inch.; diameter of chamber, 2 by 6½ inch. stroke; weight of pump, 90 pounds.

Fig. 2684.—This cut represents the two-wheel ROTARY, PUMP, of same material and finish as the Fig. 2683 ROTARY but considerably heavier in construction, and designed for compressing air or gas into Receivers of extra large sizes.

Height of pump from floor to top of wheel, 43½ inch.; size of base, 14 by 14 inch.; diameter of wheels, 20½ inch.; diameter of chamber, 2 inch. by 8 inch. stroke; weight of entire pump, 150 pounds.

Instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.

- *2685 Dr. N. L. McBride's Inhaling Apparatus complete as shown in cut, with Rotary Air Pump, and Figure 2658 No. 5 Air Receiver 10x32 inch.....\$67 00
- 2686 Dr. N. L. McBride's Inhaling Apparatus only, Improved..... 12 00

This apparatus can be had by itself or in connection with any of our air condensers or pumps.

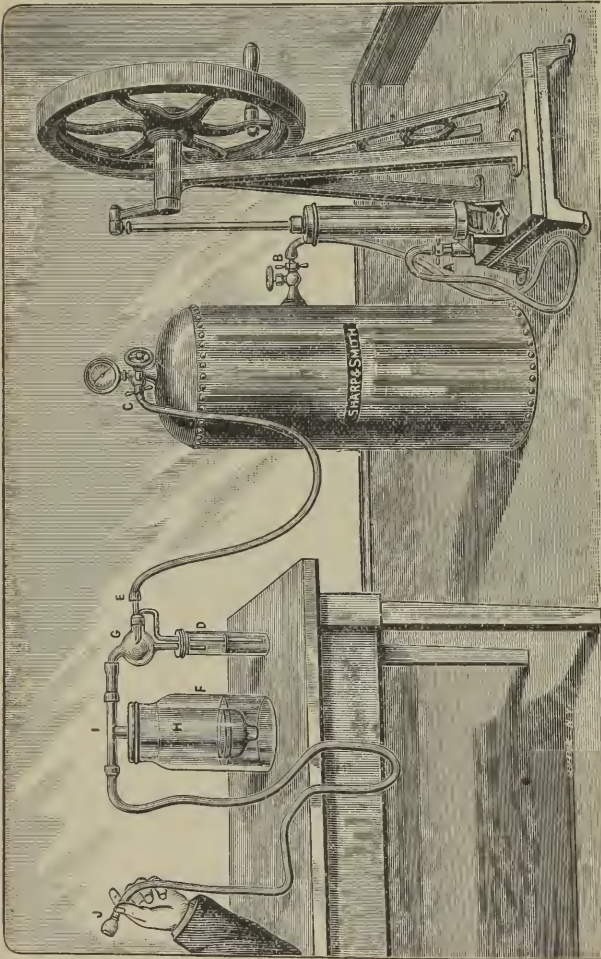


Fig. 2685.—INHALING APPARATUS.

For administering Vaporized Medicine in the treatment of Throat and Lung difficulties, as designed by Dr. N. L. McBride, New York. Shown in connection with the celebrated Rotary Air Pump and No. 5 Air Receiver, 10 by 32 inches.

Each Inhaler is provided with the necessary rubber tubing, (3½ feet) and one hard rubber mouthpiece. Glass tube *D* to contain the liquid to be vaporized; glass jar *F* to be half filled with clear water.

All of our Air Condensing apparatus, etc., are thoroughly reliable, and are guaranteed by us as represented. We pack them carefully, and would suggest in ordering, to have them sent by freight.

MOUTH AND THROAT INSTRUMENTS. A NEW HYDRAULIC PUMP.

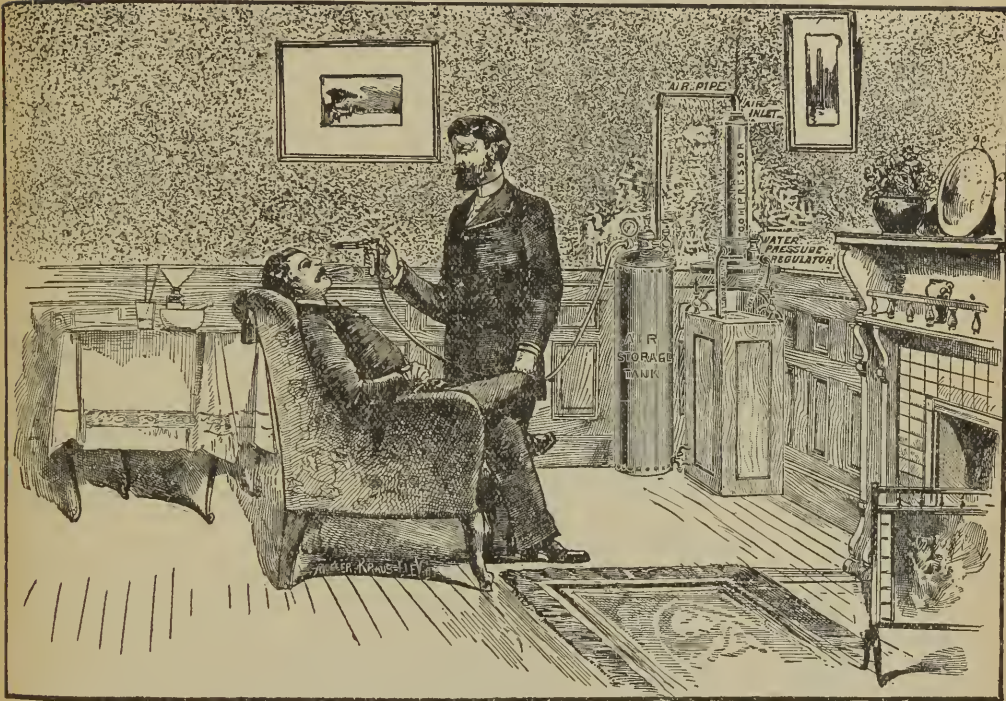


Fig. 2687-A. Showing Working of the New Hydraulic Pump.

Fig. 2687-A shows our HYDRAULIC AIR COMPRESSOR in use in a physician's office. By using this perfectly automatic pump, a continual steady air pressure is maintained, thus enabling the operator to give his entire attention to the patient.

An Air storage reservoir and the Hydraulic pump can be attached in any convenient place, and if the water pressure which is to operate pump is a low pressure water service, the pump should be connected in the Basement, or at the lowest possible level [as it is not necessary to

place Pump and Air Reservoir in the same room], so as to allow of the waste water being carried to the sewer connection. This pump can be attached to any of our condensed air apparatus, as shown on pages 494, 495, 496, and on this page.

We solicit Correspondence, and shall be pleased to furnish additional information regarding the advantages of using this Pump for the purpose specified.



Fig. 2689-A shows Sharp & Smith's Air Receiver. Twenty inches high, with pressure gauge. Three sizes glass spray tubes and bottles. Has 3 metal clasps on top of cylinder, fastened to back of gauge, for holding the bottles and tubes. One nickel-plated "T" Pump.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2687-A	Hydraulic Air Pump (Pump only).....	\$24 00
*2688-A	Jno. Edwin Rhodes' Muriate of Ammonia Inhaler.....	1 00
*2688-B	Sharp & Smith's Vaseline and Alboline Atomizer.....	80
*2689-A	" Apparatus Complete.....	40 00

DR. JNO. EDWIN RHODES' MURIATE OF AMMONIA INHALER.

The accompanying cut represents a very desirable form of a Muriate of Ammonia Inhaler.

Muriate of Ammonia is generated by the union of Ammonia with Muriatic Acid, and with this apparatus it is carried in a minutely nebulized form to the mucous membrane of the respiratory tract, thus being applied directly to the diseased surface. It is a useful method of treatment in many cases and forms of Catarrh, also Bronchitis, Laryngitis, Trachetis, etc.

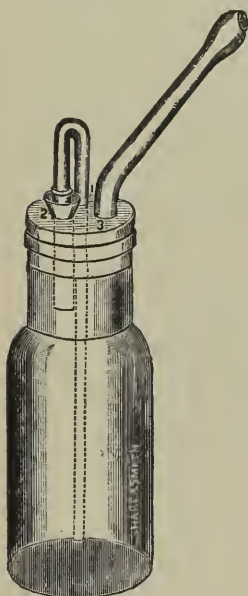
Combinations with various other useful inhalants may be made by adding the desired amount of the drug to the Aqueous Solution of Ammonia. Among those that may be used are Oil of Tar, Eucalyptol, Menthol, Terebene, Extract Pinus Canadensis Dest., Extract Hamamelis Dest., Carbolic Acid, etc., etc.

DIRECTIONS.

Fill the bottle one-half full of water, and add eight to ten drops of strong Ammonia. Fill the small vial in the cork one-half full of Hydrochloric Acid. Push the long tube through the opening marked 1 down to the flange, placing the curved end immediately over the acid receptacle. Place the mouth-piece in opening 3, cork the bottle tightly and inhale the fumes. **Do not blow through the mouth-piece.**

To the water in the bottle may be added five to ten drops of either Oil of Tar or Eucalyptol, or the desired quantity of such other inhalant, as may be prescribed. The solution in the bottle should be changed every twenty-four hours. The receptacle for acid should always be one-half full, and should be changed once a week.

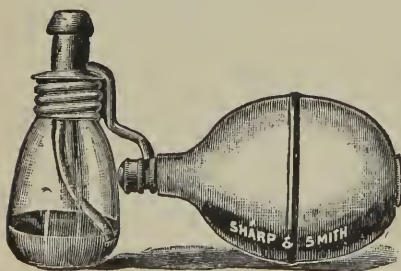
It is desirable to use the inhaler for five to ten minutes, morning and evening.



2688-A

SHARP & SMITH'S VASELINE AND ALBOLINE ATOMIZER NO. 73.

For Warming and Atomizing Pure Vaseline Ointments and Alboline.



2688-B

We wish to call the attention of the profession to this Atomizer which we have designed for warming and spraying pure Vaseline and Alboline, either plain or medicated, for the treatment of Nasal Catarrh, Hay Fever, Asthma, Bronchitis, and other diseases of the respiratory organs.

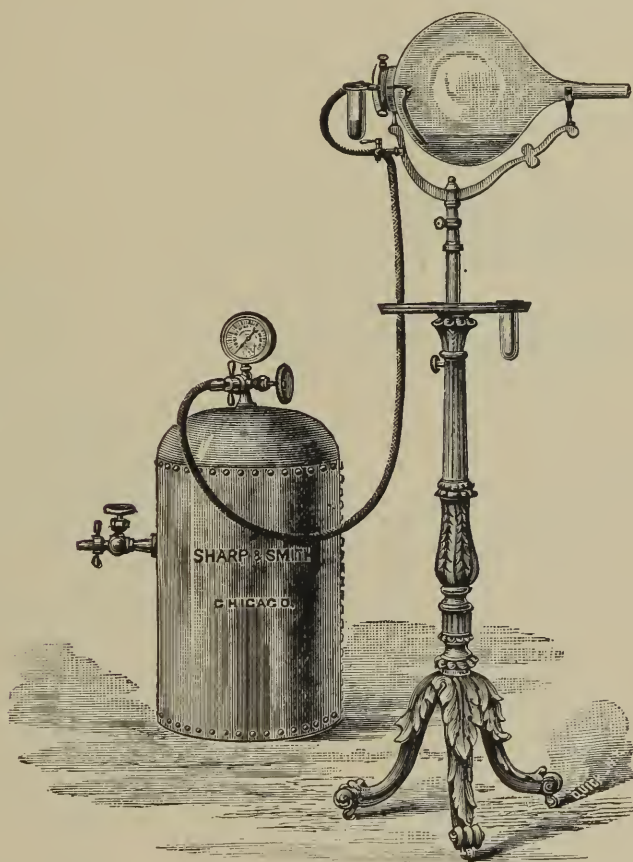
In the treatment of this class of diseases, the application of Vaseline or Alboline warmed, and applied as a spray, commend themselves at once.

With this Atomizer it is possible to apply the pure, warm Vaseline or Alboline spray, by which their beneficial effects are greatly increased.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2690	Globe Inhaler on Stand (without receiver shown in cut).....	\$30 00
2691	“ “ only.....	3 00
2692	“ “ with trimmings.....	12 00
2693	“ “ “ “ and bracket.....	20 00



2690

This instrument consists of a glass vessel, 9 inches diameter by 12 inches long, one end being provided with a metal cap with a spray tube attached, reaching about two inches into the globe. The liquid to be vaporized can be taken from the globe, or from a test tube attached to the frame.

The instrument can be adjusted to the height of the patient.

The iron table stand is nicely ornamented in black and gilt, and the other metal parts are highly finished and plated.

Price of Inhaler, without Receiver, \$30.00. Two mouthpieces and six feet of silk covered tubing are furnished with each instrument.

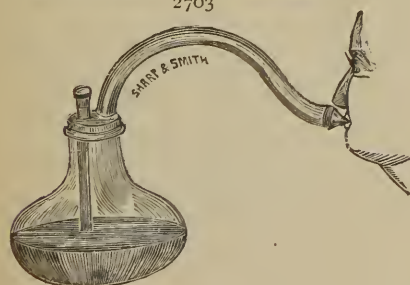
MOUTH AND THROAT INSTRUMENTS.

FIG

*2703	Brady's Inhaler.....	\$ 75
2704	Fulgraff's ".....	50
*2705	Hunter's ".....	85
2706	Schofield's ".....	2 25
2707	Kirkwood's Large Inhaler.....	3 00
2707-A	" Small ".....	1 50
2708	Crumb's Inhaler.....	1 00
2709	Vilas' ".....	1 75
2710	Oliver's Tar ".....	75
2711	Fitch's Hard Rubber Inhaler.....	75
2712	Roosa's Iodine " two tips.....	1 00
2713	Gedding's ".....	4 00
2714	Hazen's ".....	2 25
2715	Hutchinson's ".....	3 50
2716	Laforme's ".....	60
2717	Ramage's ".....	60
*2718	Semple's ".....	3 00
2719	Stafford's ".....	75
2720	Delano's ".....	85



2703



2705

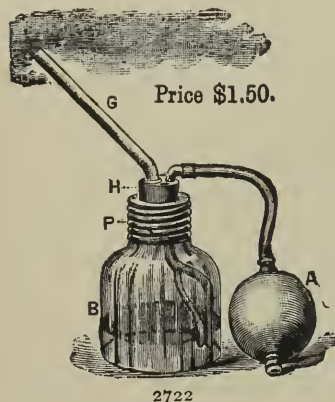


2718

All instruments designated by a * are illustrated.

MOUTH AND THROAT INSTRUMENTS.

FIG.		To Patients.	To Physicians.
*2721	American Nebulizer.....	\$3 00	\$2 00
*2722	Oliver's "	2 00	1 50



In this Vaporizing or Nebulizing Apparatus, based upon the invention of Dr. Henry K. Oliver, the medicine, when suitably constituted by the addition of glycerine or other vehicle, is first atomized and then further broken into a fine cloud by striking against a hard surface. Issuing from the inhaling tube it floats upon the atmosphere for a long time without being absorbed into it. Possessing this quality, it is admirably adapted to be received by the air-cells of the lungs, into which it surely penetrates, as abundantly proved by careful observers.

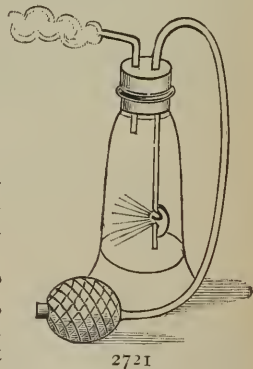
To use it, take the rubber bulb in the hand, compress it strongly, let it expand quickly and continue this as rapidly as convenient, and air charged with fine vapor of the medicament will

issue from the inhaling tube G.

In affections of the lungs and bronchial tubes, take this tube well into the mouth, close the lips and inhale the vapor with long, deep inspirations, holding the breath as long as can be done without inconvenience, and then allow it to pass out slowly through the nose. The bulb being worked continuously, the small hole in the rubber stopper being closed by the finger while breathing outward, the inspired vapor of the medicament will pass into the lungs and then outward through the pharyngeal vault and both nostrils, and will thus be brought in contact with the entire respiratory tract. For catarrh, coughs and colds, in addition to the foregoing, insert the inhaling tube a short distance into each nostril by turns, close the mouth and work the bulb while holding the finger over the small hole in the stopper. The vapor will now pass through one nostril into the deeper cavities of the nose and out at the other nostril.

A number of valuable recipes with suggestions for their appropriate use, obtained from high medical authority, will be supplied with each.

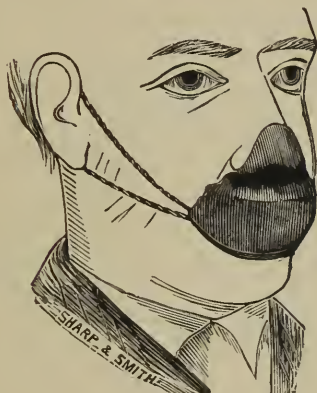
This ingenious little apparatus converts liquid remedies into a nebula or vapor so very fine that it remains suspended in the air like smoke, and can be inhaled and retained within the lungs as readily as the air we breathe, or can be introduced into the nasal passages without the slightest discomfort. Nor is the substance thus inhaled a mere gas or the odor of a medicine, but the actual medicine itself in its full remedial potency. Much good was expected from atomization, but it failed because the atomized liquid condenses in the throat, and never finds its way into the lower air passages. This is entirely different, however, with this new method, for the remedy selected penetrates to the very air cells of the lungs to the most remote cavity of the head, or to the middle ear, as may be desired—a fact which a single application will conclusively demonstrate. Every nebulizer is accompanied by valuable recipes for the cure of the various diseases named above, gathered from the practice of well known specialists of established reputation. Your druggist can prepare the remedies.



MOUTH AND THROAT INSTRUMENTS.

FIG.

*2723	Plain Mouth Respirator.....	75
*2724	Mouth and Nose Respirator.	1 50
2725	Nitz' Mouth and Nose Respirator	1 50
*2726	Anti-Dust "	1 25
*2727	Tyndale's "	2 60
*2728	Robinson's "	50



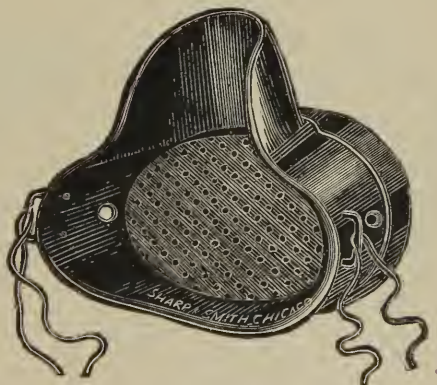
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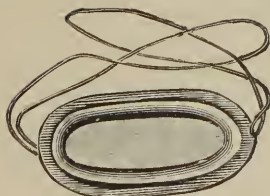
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2727.



2723

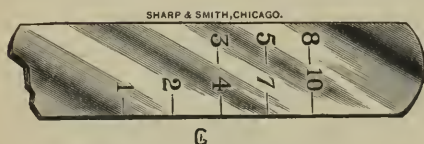
Instruments designated by a * are illustrated.

INTUBATION APPARATUS.

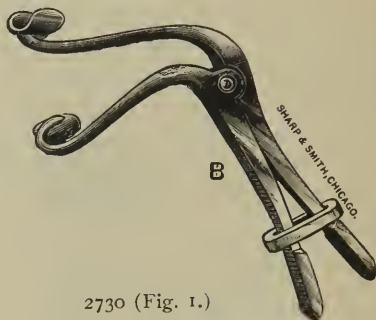
Fig. 2729 O'Dwyer's Intubation Set, complete.....\$24 00

Comprising:

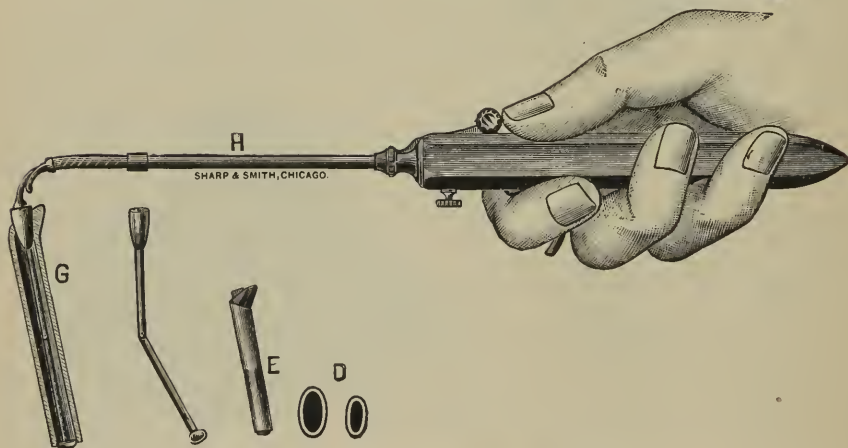
- *2730 Fig. 1. O'Dwyer's Mouth Gag.
 *2731 " 2. " Tube Introducer.
 *2732 " 2-G " Tubes with Obturator.
 *2733 " 3. " Scale for measuring the Tubes to assist in the selection of proper size.
 *2734 " 4. " Extracting Forceps.



2733 (Fig. 3.)

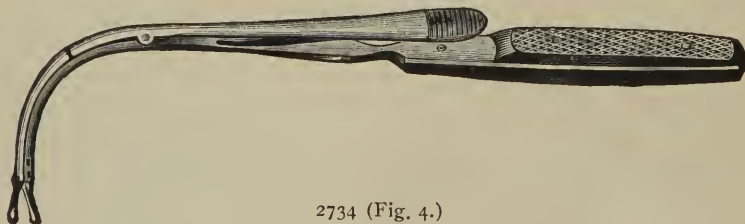


2730 (Fig. 1.)



2732 (Fig. 2-G.)

2731 (Fig. 2.)



2734 (Fig. 4.)

The numbers on the scale (Fig. 3) indicate the years for which the corresponding tubes are suitable. For instance, the smallest tubes when applied to the scale will reach to the first line, marked 1, and is intended to be used up to

the age of twelve or thirteen months; the size marked 2 is suitable for the next year, 3 and 4 for these years, and so on. When the proper tube is selected for the case to be operated on, a fine thread is passed through the small hole near its anterior angle, and left long enough to hang out of the mouth; its object being to remove the tube should it be found to have passed into the œsophagus instead of the larynx.

The obturator is then screwed tightly to the introducer, to prevent the possibility of its rotating while being inserted and passed into the tube.

The following is the *method of introducing the tube*, which is done without the use of an anæsthetic. The child is held upright in the arms of a nurse, and the gag (Fig. 1) inserted in the left angle of the mouth, well back between the teeth, and opened widely; an assistant holds the head, thrown somewhat backward, while the operator inserts the index finger of the left hand to elevate the epiglottis and direct the tube into the larynx.

The handle of the introducer (Fig. 2) is held close to the patient's chest in the beginning of the operation, and rapidly elevated as the canula approaches the glottis. The tube is then pushed downward without using much force. It is then detached. The joint in the shank of obturator is for the purpose of facilitating this part of the operation. As soon as the obturator is removed, and it is ascertained that the tube is in the larynx, the thread is withdrawn, but at the same time the finger is kept in contact with the tube to prevent its being also withdrawn.

It is important that the attempt at introduction be made quickly, as respiration is practically suspended from the time that the finger enters the larynx until the obturator is removed. It is therefore, under the circumstances, much safer to make several abortive attempts than one prolonged effort, even if successful.

For the purpose of removal the patient is held in a similar position, except that the head is not inclined backward, or very slightly so, and the extractor passed into the tube guided by the index finger of the left hand, which also fixes the epiglottis, and is brought in contact with the head of the canula. Firm pressure with the thumb is then made on the lever above the handle while the tube is being withdrawn. If secondary dyspnoea supervenes at any time, the tube should be removed, and a larger one substituted. To avoid accidents it is very essential to have some preliminary practice on the cadaver, particularly in extracting, which is the more difficult operation, owing to the aperture of the tube being so much smaller than that of the larynx. These tubes will also prove valuable as dilators in chronic stenosis of the larynx or trachea.

Parties wishing our instruments, and finding it more convenient to obtain them through dealers, are requested to order "**S. & S. manufacture,**" as otherwise inferior goods are frequently substituted. All instruments of our manufacture have our name on them, which is a guarantee of the quality.

SHARP & SMITH,

Manufacturers of Surgical Instruments,

73 Randolph Street, Chicago.

INTUBATION SETS.

FIG.

2735 Waxham's Intubation Set, latest.....\$27 50

Comprising: *

1 O'Dwyer's Tube Introducer (2731—Fig. 2).

1 " " Extractor (2734—Fig. 4).

1 " Scale (2733—Fig. 3).

1 Waxham's Gag.

1 Pair Waxham's Trachea Forceps.

1 " Respirator.

5 " Tubes, with Epiglottis and Intubators.

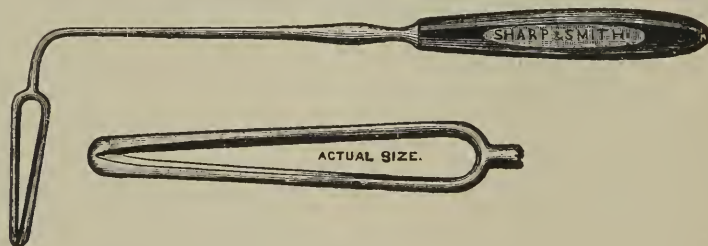
*2736 O'Dwyer's Instrument for Intubation in Chronic Stenosis of the Larynx..... 2 50

Extract from an article entitled

"INTUBATION IN CHRONIC STENOSIS OF THE LARYNX."

BY JOSEPH O'DWYER, M. D.

* * I have also devised a snare (Fig. 2736) for the removal of laryngeal growths, particularly when situated in the subglottic region, where it is difficult to reach them with forceps in adults, and impossible in children. For growths attached to the lateral aspects of the larynx the snare is passed far enough down to give room for the neoplasm to slip between the blades, when it is



2736

pressed firmly against the side of the larynx, and withdrawn. If the seat of attachment is unknown, both sides, and then the anterior and posterior portions of the glottis, can be curetted in succession.

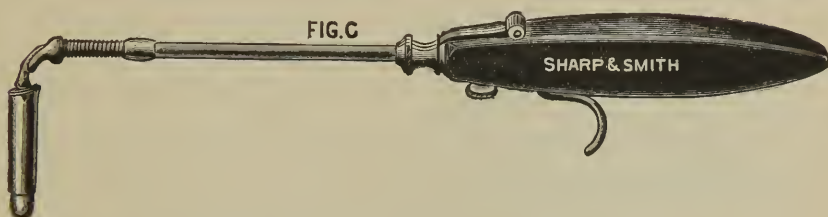
This instrument will not seize any of the normal tissues when applied laterally, but in removing it, when used antero-posteriorly, it is necessary to protect the epiglottis and uvula with the finger. Two sizes of this snare are necessary, that shown in the cut being suitable for children. In young subjects it is guided into the larynx in the same manner as in practicing intubation. In adults it can be inserted with greater facility by the aid of the mirror.

All Instruments designated by a * are illustrated.

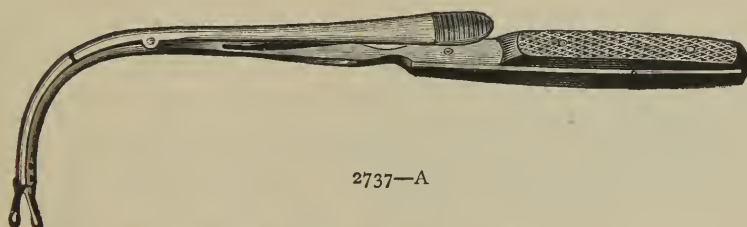
INTUBATION.

FIG.

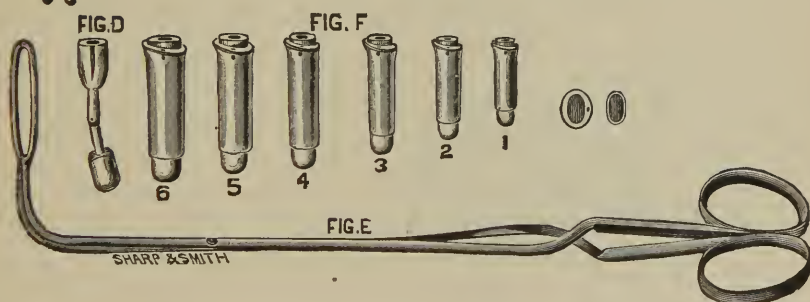
- 2737 Dr. J. Tascher's Intubation Set.....\$27 00
 Comprising:
 1 O'Dwyer's Tube Introducer (2737)—Fig. C).
 1 " " Extractor (2734—Fig. A).
 1 " Scale (2733—Fig. 3).
 1 Prof. S. A. McWilliams' Gag (2737—Fig. B).
 6 TASCHER'S TUBES, with Epiglottis (2738—Fig. F), and one pair
 TASCHER'S Throat Forceps (2738—Fig. E.)



2737—C



2737—A



2738—D, E and F.

Fig. D in above cut represents the false Epiglottis used in the introduction of each tube.



2737—B

Cut Showing the O'Dwyer Tube in Position.

INTUBATION.

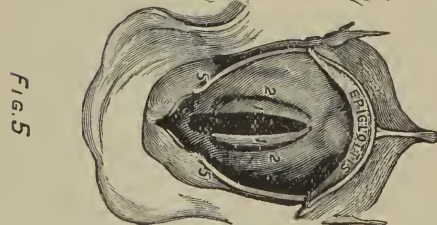
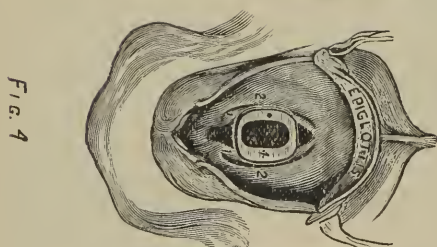
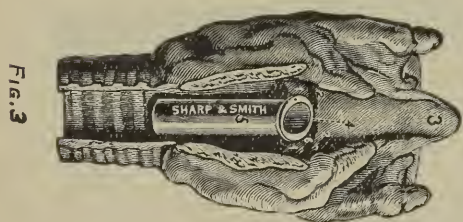
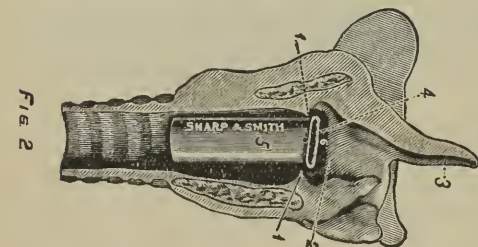
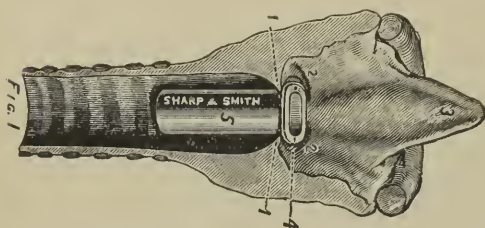


Fig. 1 represents the anterior portion of a transverse section of the larynx, showing the head resting in the ventricle of the larynx; No. 1, the true vocal cords as they grasp the body of the tube beneath the flange; No. 2, the false vocal cords resting above the flange; No. 3 the epiglottis; No. 4 the head of the tube; No. 5, the body; No. 6 ventricle.

Fig. 2 represents an antero-posterior section of the larynx, giving a side view of the position of the tube in the larynx. No. 1, true vocal cords; No. 2, false vocal cords; No. 3, epiglottis; No. 4, head of the tube; No. 5, body of the tube; No. 6, ventricle.

Fig. 3 represents the larynx slit open posteriorly, with tube in position. No. 1, true vocal cords; No. 2, false vocal cords; No. 3, epiglottis; No. 4, head of tube situated in ventricle; No. 5, body of the tube; No. 6, ventricle.

Fig. 5 represents the larynx as viewed through the epiglottid aperture, showing the position of the true vocal cords, without tube.

Fig. 4, same view with tube in position.

MOUTH AND THROAT INSTRUMENTS.

FIG.

*2739	Dr. J. Mount Bleyer's Tongue Tractor.....	\$4 50
*2740	“ Mouth Gag.....	5 00
*2741	“ Cupped and False Epiglottis Tube.....	3 00

TONGUE AND LARYNX TRACTOR

For the Performance of Forced Laryngoscopy in Children. Mouth-Gag and Cupped-Out Intubation-Tube, with False Metal Epiglottis Attachment.

BY J. MOUNT BLEYER, M. D., New York.

Among the methods of examination which are at our disposal for the recognition of laryngeal disease in children, laryngoscopy takes the first place, and the results which are thus attained are of such great importance in diagnosis that I was led to devise some means which would assist in such a procedure. It is extremely difficult, by a mere verbal description, to explain clearly

any process requiring the use of an instrument and skill. In such cases a single practical demonstration is of more value than a dozen pages of written directions.

This tongue and larynx tractor, which is represented in the accompanying illustration,

Tongue Tractor.—2739.

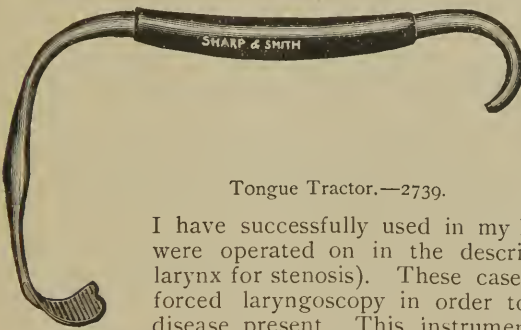
I have successfully used in my last three hundred cases, which were operated on in the described manner (intubation of the larynx for stenosis). These cases were previously examined by forced laryngoscopy in order to ascertain the extent of the disease present. This instrument was found to facilitate the

examination necessary in the majority of cases of acute laryngeal disease in children under four years of age. Such procedure is not to be underrated in importance, nor neglected on account of any personal disinclination to undergo the necessary trouble involved in making it. If such an inspection will disclose facts of diagnostic importance, surely it will not be neglected by any earnest physician.

Suggestions for Operating with the Tongue and Larynx Tractor.

The patient is to be placed upon the lap of a nurse, who is directed to hold the child in an upright posture, facing the operator, the feet being most conveniently held between the knees of the nurse. With a towel envelop the body and arms, which are thus to be pinned securely. The gag is now inserted. At this stage of the operation a five per cent. solution of cocaine, with which the pharyngeal and laryngeal surfaces are to be thoroughly sprayed, or without any use of cocaine, as I often do when the examination is of short duration, the operator passes the tractor down, and secures the base of the tongue, guided upon the forefinger of his left hand. Then drawing upon the base of the tongue, which favors partial elevation of the larynx, the tractor is to be passed upward, outward and downward.

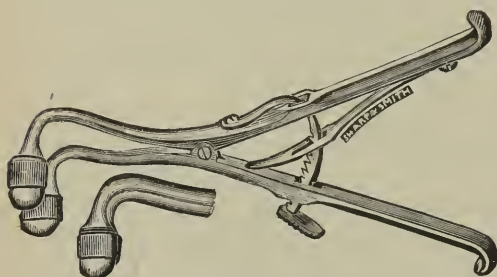
Enforced laryngoscopic examination in children is performed in the above described manner, and there is no doubt that many advantages are thereby gained. Often a very common difficulty is met with in the position of the epiglottis, as more or less depressed, overhanging the larynx, or compressed and rolled together at its sides. By forcing and steadying the epiglottis against the base of the tongue this difficulty is nearly obviated, and a thorough view of the larynx and neighboring parts may be viewed and treated.



TONGUE AND LARYNX TRACTOR.—Continued.

Other important advantages of this instrument are that where there might occur some difficulty in extracting a tube after intubation, extraction is performed after elevation of the larynx with any ordinary forceps.

The mouth gag, which is herein represented, will be found to have superior qualities in its construction in many points. I have found that all other gags are very troublesome to introduce into the mouth of the child, on



Mouth-Gag.—2740.

account of the shoulders of the alveolar processes of the gagger, which are very large, and especially when one has to deal with a stubborn patient, who will not begin to open his mouth. This led me to have a wedge attachment made to the side of the alveolar process, and very low shoulders, in order to help to open the mouth and thereby slip immediately the gag in between the angles of the jaw. The alveolars of the gag are padded with soft rubber, and which can be changed in every case; thus no damage is done to the teeth, and where no teeth exist the gums are protected thereby. The shoulders are very low, so that while the gag is in position it will not press upon the hard palate and crush in the same, as I often had experienced. Slipping of the gag is avoided by the anatomical construction of the angles of the gag; also the soft rubber padding keeping it in place by the indentation of the teeth.

The separating of the jaws by the gag can be accomplished to any degree and with ease. Also it lies flat upon the cheek, and is self-retaining.

To Dr. Charles E. Denhard of New York, I must credit the principle of this gag.

Dr. J. Mount Bleyer's Cupped and False Epiglottis Tube.

The tube is an improvement upon the soft rubber false epiglottis of Dr. T. E. Waxham of Chicago, to whom all honors should be given for this ingenious idea. When one has operated many cases he begins to see the necessary wants and deficiencies which exist. These tubes have many advantages over the



Cup and Tube.—2741.

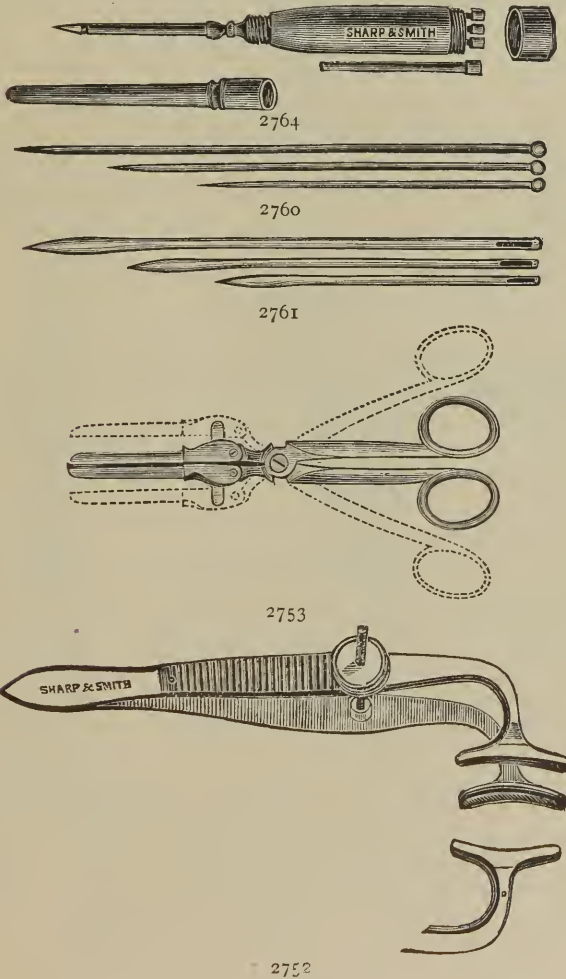
first tubes of Dr. O'Dwyer. They are cupped out at the head, and admit of the extractor engaging itself into the tube, and thereby the extraction made easy. A metal-hinged artificial epiglottis, which is intended to assist the patient in swallowing, to prevent the falling of foods and fluids through the canula into the bronchi, and to guard against the dangers of broncho-pneumonia.

Since the use of these tubes I have had better results.

FIG.			
2742	Mussey's	Mouth Gag	\$5 00
2743	Dedham's	" "	3 50
2744	Whitehead's	" "	7 50
2745	Smith's	" "	9 00
2746	Wier's	" "	5 25
2747	Lentz's	" "	4 50
2748	O'Dwyer's	" (see page 510)	3 00
2749	Waxham's	" "	3 00
2750	Warren's	" "	3 00
2750-A	Hartman's	" and Retractor	10 00

HARE LIP INSTRUMENTS.

FIG.			
2751	Smith's Hare Lip Forceps.....		\$3 75
*2752	Hutchinson's Hare Lip Forceps.....		2 25
*2753	Parallel.....		6 75
2754	Simpson's Pin Cutting Forceps.....		2 75
2755	Prince's Hare Lip Clamp.....		2 25
2756	Buck's Pin Carrier Folding, Plain.....		75
*2757	" " " Folding, Plain.....		1 50
2758	Post's " " " Folding, Plain.....		75
2759	Buck's & Post's Pin Carrier, in one handle.....	\$ 2 25	
*2760	Buck's Pins, 1 to 2 inch.....doz.	05	
*2760	" " 2½ inch.....doz.	10	
*2760	" " 3 inch.....doz.	15	
*2761	Hare Lip Needles.....per dozen	1 00	
2762	Canulated Silver Needles.....each	40	
2763	Plastic Needles.....doz.	20	
*2764	Southey's Set of Trocars and Canulas.....	2 50	

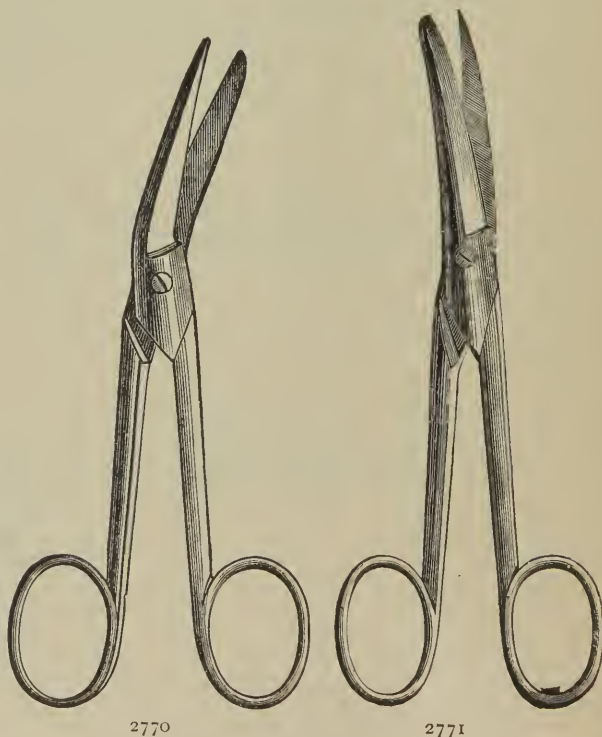
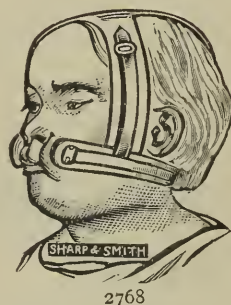
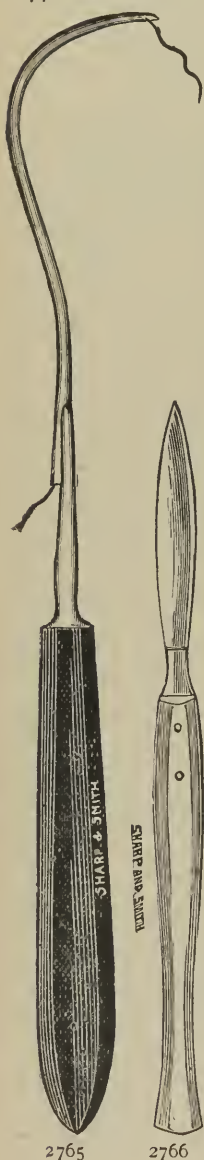


All instruments designated by a * are illustrated.

2757

HARE LIP INSTRUMENTS.

FIG.		
*2765	Emmet's Canulated Needle.....	\$1 85
*2766	Ivory Handle Scalpel.....	1 00
2767	Ebony " ".....	75
*2768	Hornby's Hare Lip Truss.....	4 50
2769	Hamilton's Hare Lip Scissors....	1 50
*2770	Angular " " ".....	1 00
*2771	Curved " " ".....	1 00



TOOTH-EXTRACTING FORCEPS.

ALL OUR FORCEPS ARE OF THE BEST QUALITY, NICKEL PLATED AND FULLY WARRANTED.

FIG.

*2775	No. 19—Right Upper Molar.....	} \$1 50 each.
*2776	No. 19—Left “ “	
*2777	No. 24—Universal “	
*2778	No. 28—Right and Left Lower Molar.....	

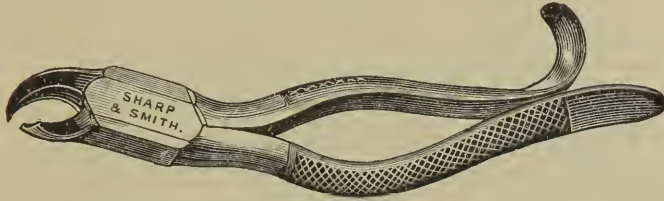


Fig. 2775 (No. 19). Right Upper Molar.

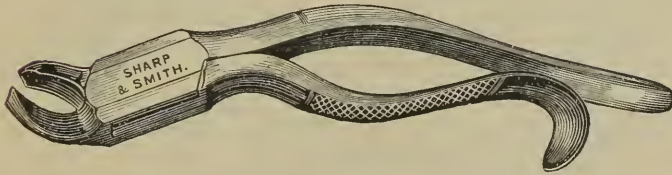


Fig. 2776 (No. 19). Left Upper Molar.

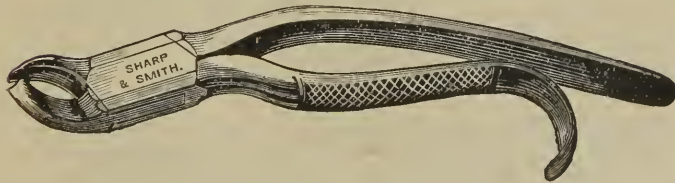


Fig. 2777 (No. 24). Universal Molar.

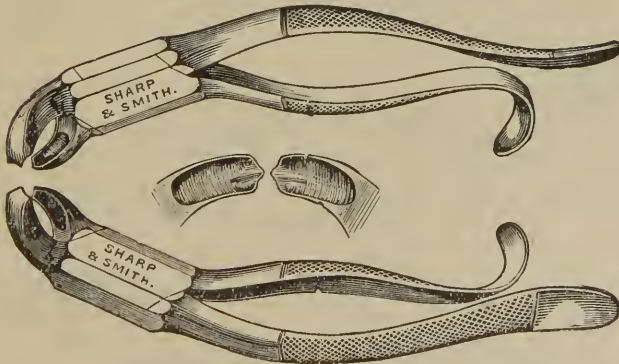


Fig. 2778 (No. 28). Right and Left Lower Molars.

TOOTH FORCEPS.

FIG.			
*2779	No. 47	Hutchinson's Tooth Forceps.....	\$ 1 50
*2780	No. 23	Lower Molar Cow-Horn, either side.....	1 50
*2781	No. 16	" " " "	1 50
*2782	No. 45	Upper " " " "	1 50
*2783	No. 14	Lower Incisor.....	1 50
*2784	No. 13	Upper "	1 50

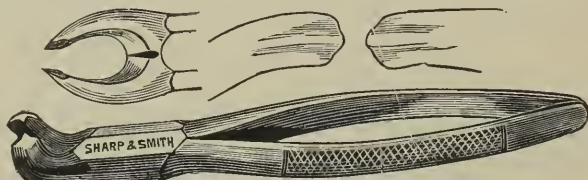


Fig. 2779 (No. 47). Lower Molar (Hutchinson's).

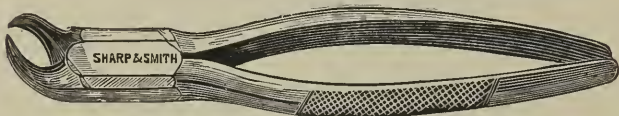


Fig. 2780 (No. 23). Lower Molar Cow-Horn, either side.



Fig. 2781 (No. 16). Lower Molar Cow-Horn, either side.

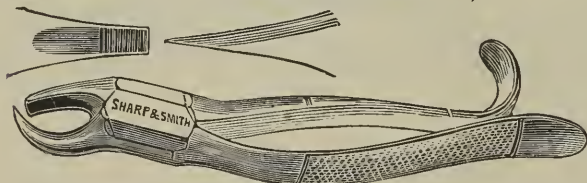


Fig. 2782 (No. 45). Upper Molar Cow-Horn, either side.



Fig. 2783 (No. 14). Lower Incisor.

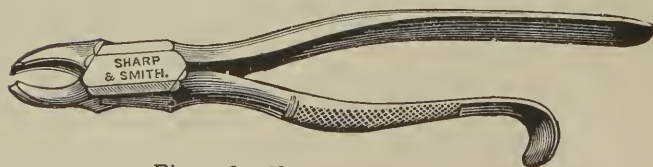


Fig. 2784 (No. 13). Upper Incisor.

TOOTH FORCEPS.

FIG.

*2785	No. 8	Universal Incisor and Bicuspid.....	\$ 1 50
*2786	No. 46	Lower " " ".....	1 50
*2787	No. 4	Upper and Lower Bicuspid, half curve.....	1 50
*2788	No. 25	Lower Bicuspid, Safety.....	1 50
*2789	No. 27	Lower Wisdom.....	1 50
*2790	No. 10	Upper Dentes Sapien-tiæ, with or without hook, either side.....	1 50

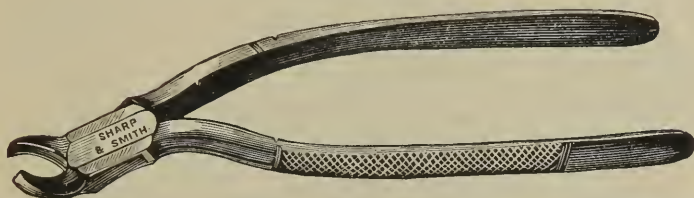


Fig. 2785 (No. 8). Universal Incisor and Bicuspid.

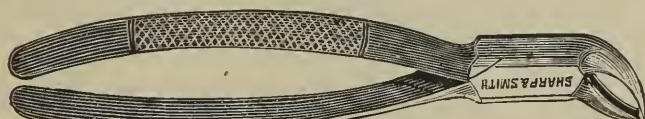


Fig. 2786 (No. 46). Lower Incisor and Bicuspid, either side.

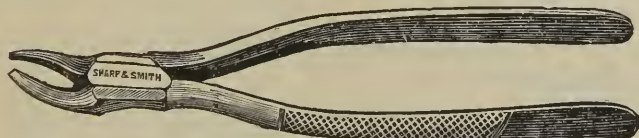


Fig. 2787 (No. 4). Upper and Lower Bicuspid, half-curve.

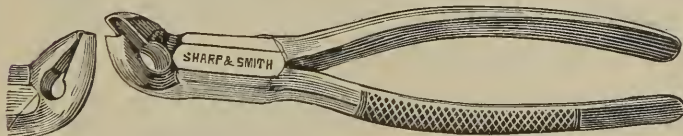


Fig. 2788 (No. 25). Lower Bicuspid, Safety.



Fig. 2789 (No. 27). Lower Wisdom.

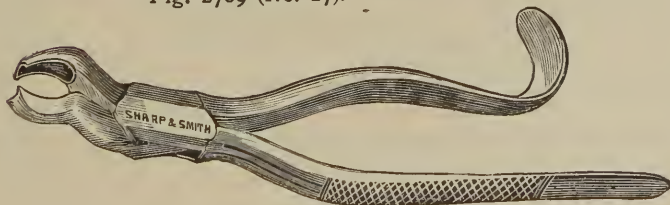


Fig. 2790 (No. 10). Upper Dentes Sapien-tiæ, with or without Hook, either side.

TOOTH FORCEPS.

FIG.		
*2791	No. 22.	Lower Dentes Sapiientiæ either side.....
*2792	No. 7.	Universal Root.....
*2793	No. 3.	Lower Root, Full Curve.....
*2794	No. 2.	Upper and Lower Root, Half-Curved.....
*2795	No. 1.	Upper Front Root, Straight.....
*2796	No. 35.	Bayonet Root.....

} \$1 50 each.

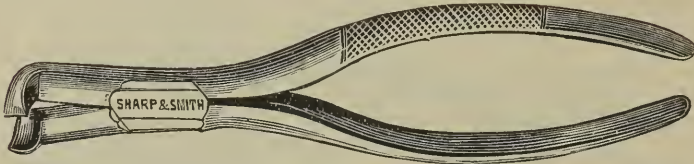


Fig. 2791 (No. 22). Lower Dentes Sapiientiæ, either side.

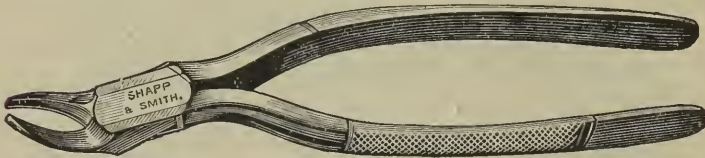


Fig. 2792 (No. 7). Universal Root.

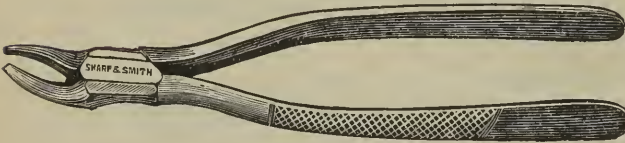


Fig. 2794 (No. 2). Upper and Lower Root, Half-Curved.



Fig. 2795 (No. 1). Upper Front Root, Straight.

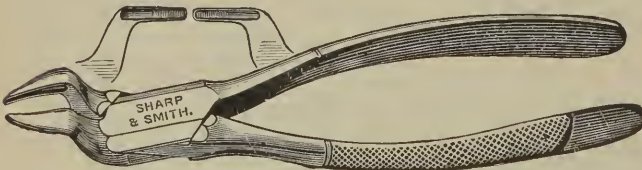


Fig. 2796 (No. 35). Bayonet Root.



Fig. 2793 (No. 3.) Lower Root, Full Curve.

TOOTH FORCEPS AND SETS.

*2797 Brophy's set of Tooth Forceps, for Physicians' use\$7 85

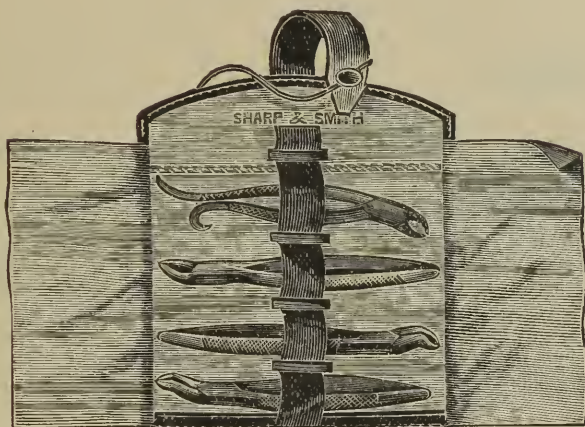


Fig. 2797. Dr. Brophy's (Rush College) Set of Tooth Forceps for Physicians' use.

CONTAINING

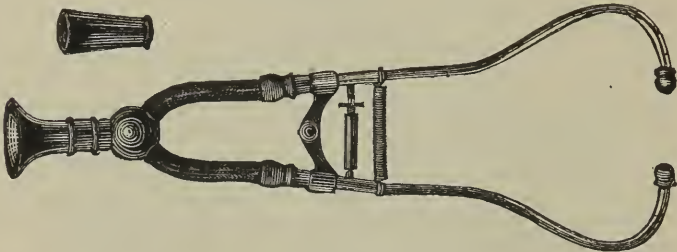
- | | | | | |
|-------------------------|------|----------|-------|------------------------|
| 1 | Pair | No. 28R, | Tooth | Forceps. |
| 1 | " | " | 32, | " " |
| 1 | " | " | 39, | " " |
| 1 | " | " | 10, | Special Tooth Forceps. |
| In Chamois Lined Pouch. | | | | |

PLEASE DO NOT CUT OR MUTILATE THIS BOOK.

In ordering state number of figure and page,
and we can promptly fill your order.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

FIG.	
*2800	Camman's Ordinary Stethoscope.....\$1 35
*2801	“ Stethoscope with closed spring adjustment..... 2 25
*2802	Sharp & Smith's Improved spring adjustment Stethoscope..... 3 75
*2803	Knight's Improved (Camman's) Stethoscope..... 3 50



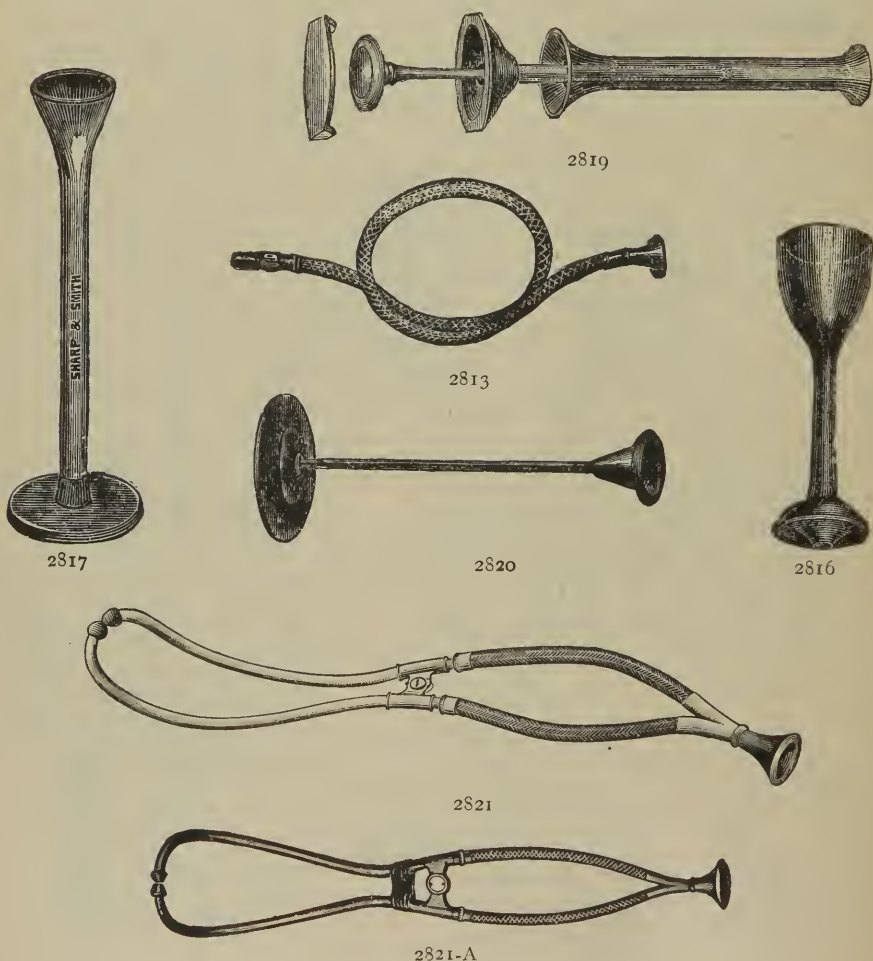
2801



Instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

FIG.		
*2813	Arnold's Stethoscope.....	\$ 1 00
2814	Boeker's ".....	1 00
2815	Martin's Combined Stethoscope.....	3 75
*2816	Cedar Stethoscope.....	40
2816-A	" " with rubber ring.....	85
*2817	Ebony ".....	1 00
2817-A	" and Ivory Stethoscope.....	1 50
2818	" Stethoscope, with rubber ring.....	1 25
*2819	" " with Pleximeter and Hammer.....	2 50
*2820	Hawksley's New Stethoscope.....	1 00
*2821	University Stethoscope, Improved.....	2 00
*2821A	" ".....	2 00

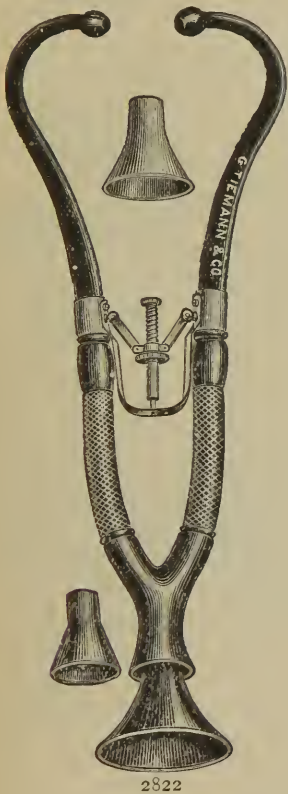


Instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

Fig. *2822 Dennison's Hard Rubber Stethoscope.....\$4 00 to \$9 00

The instrument here presented is the result of considerable experimenting and differs from those heretofore used in many particulars which are of great importance in a good instrument, though in outward appearance it is very much like other stethoscopes. The points of dissimilarity are those which by having many different kinds made, are the essentials in a perfect instrument.



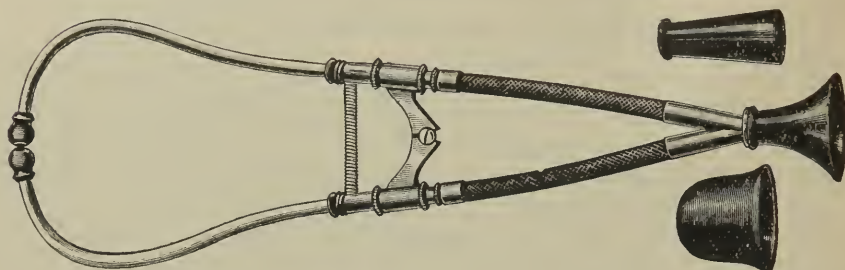
1. *As to the quality of sound.*—The material of which an instrument is made determines the character of the sound obtained. A stethoscope made wholly of metal or with metal tubes only, gives a metallic quality to all the sounds transmitted, whose pitch seems to be elevated and thereby unnatural. This perversion of natural sounds is not obtained in any such degree by gutta-percha, wood or celluloid. In this instrument is chosen hard rubber for the arms instead of the metal heretofore used in most stethoscopes, and I have had the flexible tubes made so as to give a smooth inner surface to the coiled wire, which holds them in shape. We have succeeded in embedding the wire between two tubes of soft rubber and then vulcanizing them together. This arrangement gives nearly as natural effects as does a stethoscope made wholly of hard rubber, which of course would be inflexible and unyielding.

2. *As to the form of the instrument.*—The size of the canal in this instrument is largest at the attachment of the bell and gradually decreases in diameter to the ear ends, and is in imitation of those trumpets or conversation tubes which best serve the purposes of deaf persons, owing to their property of concentrating and conducting the waves of sound, and forms one of the principal advantages of the instrument.

The larger sized tube used in this stethoscope is an especial advantage to those physicians who have slight defects in hearing, and will be preferred we believe by the great majority of the profession. The ear-tips are shaped with particular reference to the direction of the canal in the arms of the stethoscope and have the lower and forward edges bulged to such an extent as to fill in spaces behind the tragi, so that it throws the tube openings in the direction of the auditory canals. The ear-tips are crowded into the external auditory canal as firmly as can be comfortably done by means of a rather stiff spring, which brings the arms of the instrument together, and which is supplied with a set screw so that it can be regulated to suit the listener.

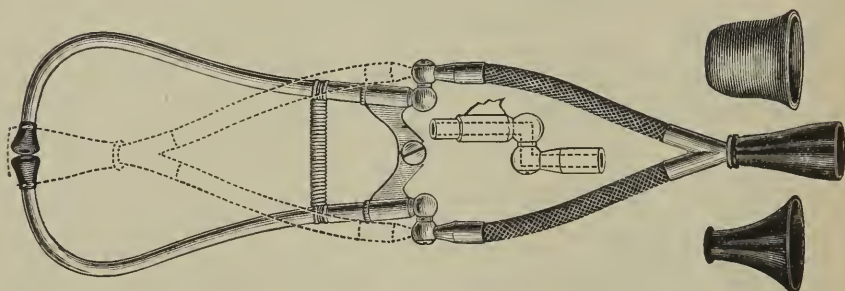
All the joints, bells, tubes and arms are constructed on the principle of a slightly conical tube, each portion fitting evenly and tightly into the other, and the fastenings of the flexible portion to the gutta-percha are so perfect that there is no interruption in the transmission of sounds from the chest to the ear.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

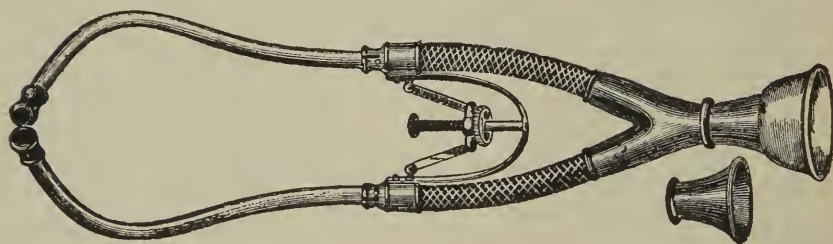


2801-A

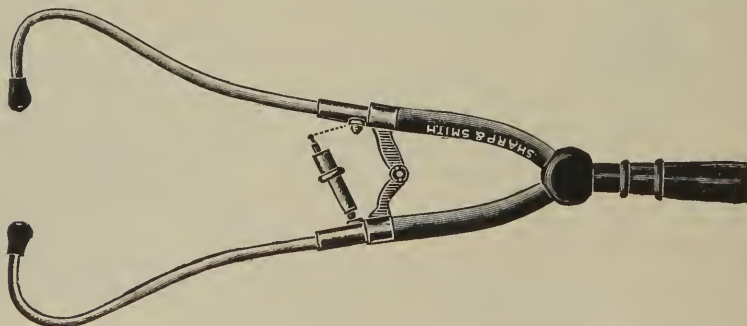
CAMMAN'S FOLDING STETHOSCOPE.



2801-B



2808



2822-A

The advantages of this stethoscope are that the curves of the tubes are very carefully formed—and the whole stethoscope is *without joints*, thereby transmitting a more correct sound.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS

FIG.

*2801-A	Camman's Spiral Spring Stethoscope.....	\$1 35
*2801-B	" Folding Stethoscope.....	3 00
*2822-A	Professor F. T. Johnson's Stethoscope.....	4 00
*2822-B	Dr. R. K. Valentine's Improved Stethoscope.....	3 35

Medical Record, July 16, 1892.

AN IMPROVED STETHOSCOPE.

BY R. K. VALENTINE, M. D., BROOKLYN HOME FOR CONSUMPTIVES,
BROOKLYN, N. Y.

In presenting this instrument to the profession we claim for it the three cardinal virtues of a stethoscope, namely, excellence as a transmitter of sound; convenience for applying to the chest-wall, and for carrying in the pocket (not an unimportant factor); and thirdly, comparative cheapness. The instrument is composed of hard rubber, the bell and ear pieces being united by two pieces of ordinary soft rubber tubing, each about three and a half inches in length.

The bell is a cylinder five inches long, having an internal diameter at the mouth of seven-eighths of an inch.

At the top of the cylinder there are two openings, one-quarter of an inch in diameter each, separated by a sharp septum of hard rubber, and the same diameter is continued the full length of the ear-pieces.

When the instrument is in use, the divided waves of sound are carried from the cylinder in two straight lines along the ear-pieces to the curves, which lead them directly into the ears of the operator. The expense of making the stethoscope is largely due to the perfectly smooth finish of the interior of the hard rubber tubing, throughout its entire length, by which means only are such good results obtained.

A simple method of testing stethoscopes, as to their power of transmitting sound, is by applying their bells to the face of a clock or a watch. By this method, the famous instrument of Dr. Dennison, of Colorado—having a diameter of a quarter of an inch more at the mouth of the bell than the one under consideration—is the only stethoscope we have been able to find which transmits a louder sound, and that but slightly, when the accessory bells are not in use; but when this stethoscope is armed with its ordinary soft rubber cone, having a diameter of one and three-quarter inches at the mouth, it transmits a louder sound than does the Dennison instrument even with its largest hard rubber bell adjusted, and having a diameter of two and three-quarter inches. The cause of this is, doubtless, due to the Dennison accessory bell being attached to the permanent bell by passing it within the latter, thus constricting the canal, whereas with this instrument the rubber cone is caught on the outside of the mouth of the cylinder, where several neat circular ridges serve not only for ornament but also for the purpose of retaining it in position.



2822-B

The ordinary soft rubber tubing connecting the cylinder and ear-pieces permits of folding, and thus the stethoscope is readily carried in the pocket. Just here we would suggest dropping it into the pocket with the sharply flexed rubber tubing uppermost, so that it will not crease.

When the interior of the bell becomes very dusty, invert the whole instrument under the cold-water faucet, and wash out all the canals.

Instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.



2822-C

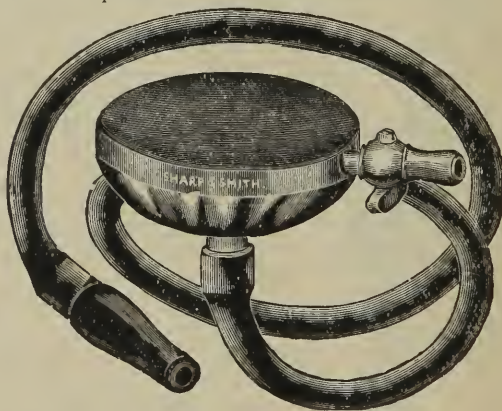


2822-D

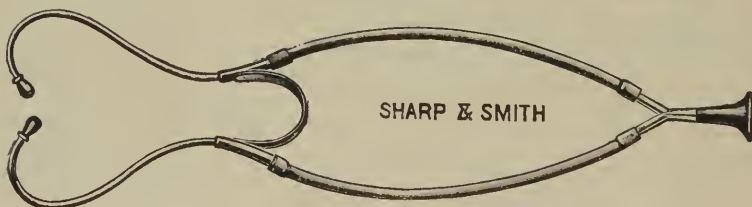
FIG. 2822-C—POWELL - CAMMAN'S STETHO-SCOPE.

A simple, useful and durable combination of Powell's and Camman's Stethoscope has been attained, and will no doubt be found serviceable by the medical profession. The price is such that it is within the reach of all. The suction bulb is placed centrally, and forms a permanent part of the instrument.

In applying the Stethoscope, the bulb is slightly compressed, the hard rubber part is placed wherever desired; when the bulb is allowed to assume its normal shape, the hard rubber bell will adhere to the skin, a vacuum being formed by the bulb exhausting the air from the circular chamber. The metal part is nickel plated and well finished; the elastic parts are made of best quality rubber. Every instrument warranted perfect.



2822-E



2822-G

Instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

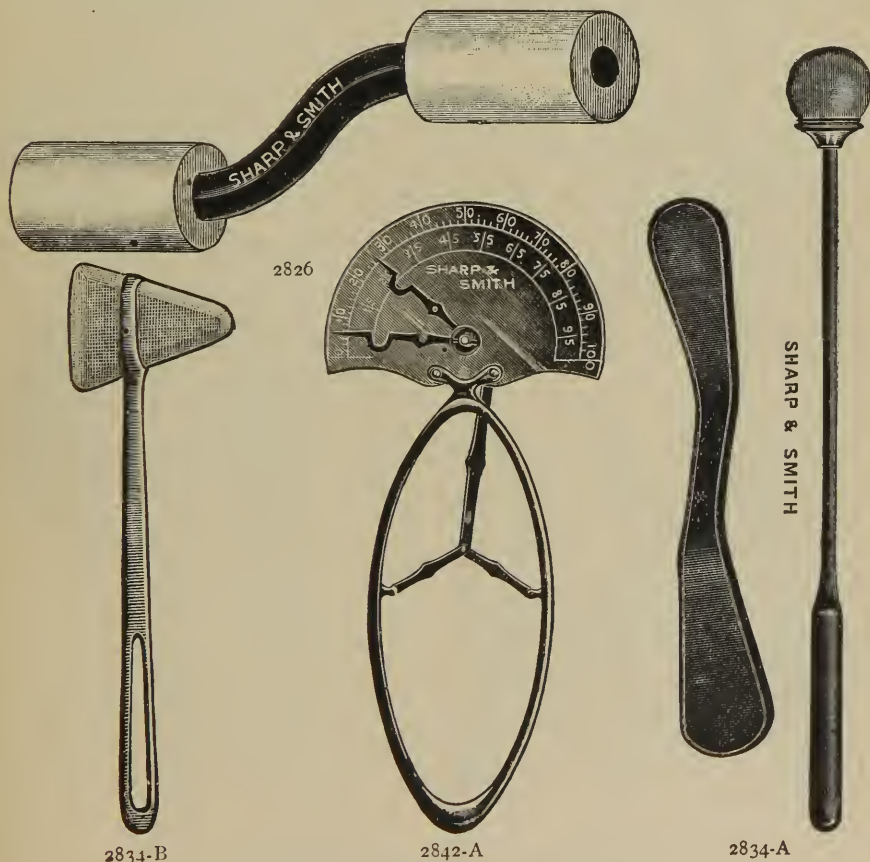
FIG.

*2822-C	Powell's Mod. Camman's Stethoscope.....	\$2 25
*2822-D	Hard Rubber Telescopic ".....	2 50
*2822-E	Dr. Jno. H. Chew's ".....	2 50
*2822-G	Prof. Campbell's ".....	2 50
*2822-H	Snofton's ".....	2 00
*2834 A	Dr. Norman Bridges' Percussion Hammer and Pleximeter.....	1 00
*2834-B	Taylor's Percussion Hammer.....	1 50
*2842-A	Dr. Hammond's Dynamometer.....	10 00



2822 H

This Stethoscope is very compact and convenient, and is very extensively used in Great Britain and the Colonies.



2834-B

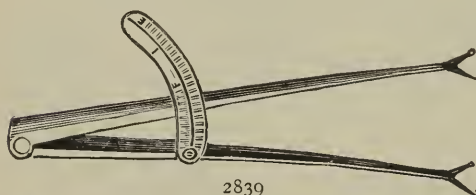
2842-A

2834-A

Instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

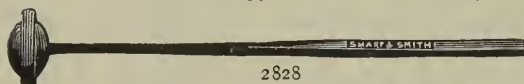
FIG.				
*2823	Flint's Percussion Hammer, best	.....	\$	75
*2824	“ “ “ rubber	.....		50
2825	Bennett's “ “	.....	I	00
*2826	Bartlett's “ “	.....		90
2827	Winterich's “ “	.....	I	50
*2828	Wells' “ “	.....	I	25
2829	Schroeter's “ “	.....	I	50
2830	North's “ “	.....	I	00
2831	Post's Hard Rubber Pleximeter	.....		60
*2832	Flint's “ “	.....		25
2833	“ “ Ivory “	.....		75
2834	Bartlett's Hard Rubber “	.....		60
*2835	Camman's Inter Costal Auscultator	.....	I	00
*2836	Ingal's Embalometer	.....	2	25
2837	Seguin's Æsthesiometer	.....	3	20
*2838	Vance's “	4	00
*2839	Carroll's “	3	00
2840	Hammond's “	2	00
2841	Sievekings “	3	20



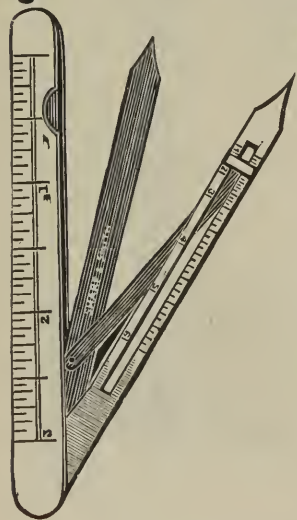
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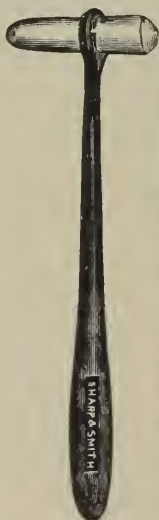
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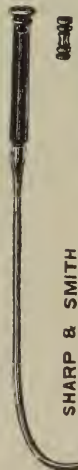
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2838



2824



2836



2823



2832

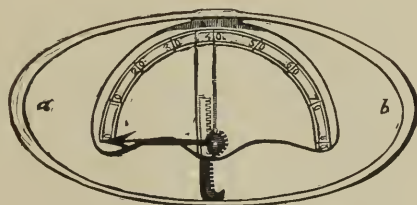
All instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

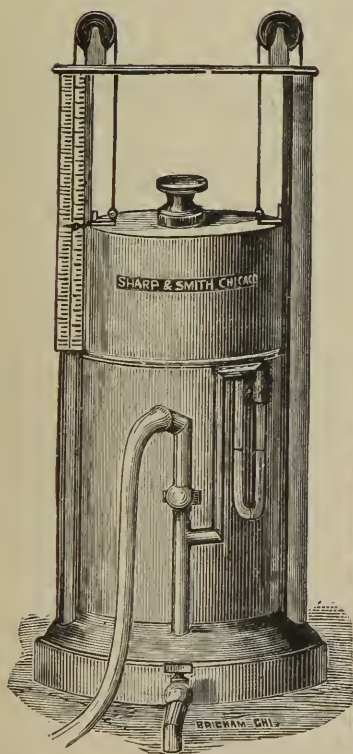
FIG.		
*2842	Dynamometer.....	\$ 6 00
2843	Dudgeon's Sphygmograph.....	18 75
*2844	Marez's	60 00
*2845	Pond's	35 00
2846	Brown's Spirometer.....	9 00
2847	Barnes'	6 00
*2848	Hutchinson's	25 00
*2849	Marsh's	2 50
2850	Extra Balloon for Marsh's Spirometer.....	25
2851	Dio Lewis' Improved	11 00



2849



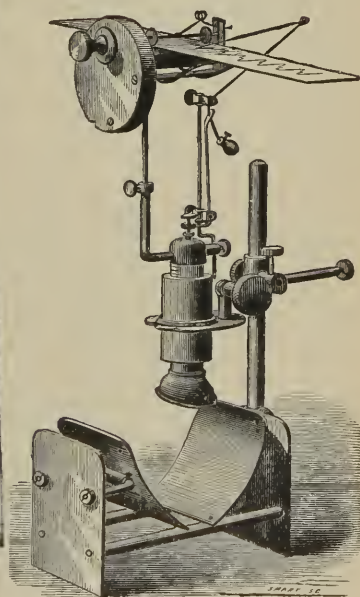
2842



2848



2844

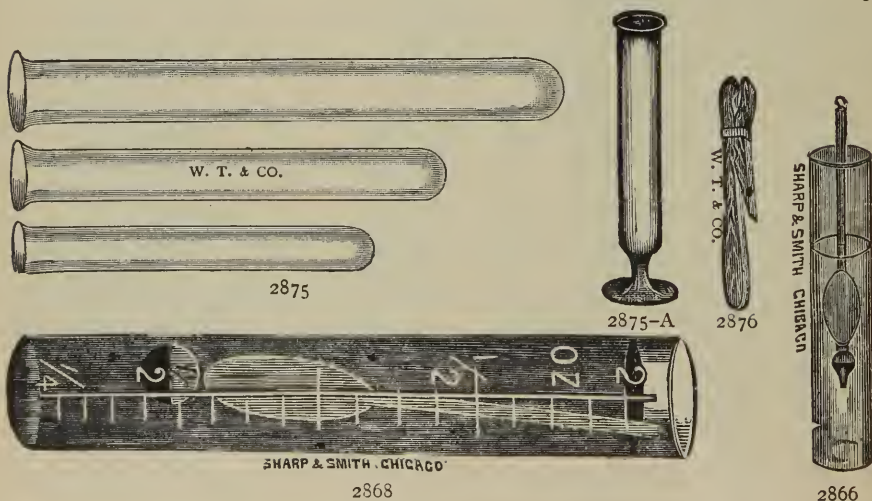


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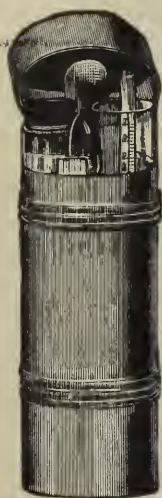
All instruments designated by a * are illustrated.

INSTRUMENTS FOR PHYSICAL DIAGNOSIS.

FIG.			
2852	Carroll's Stethometer.....	\$	2 40
2853	Quain's ".....		8 00
2854	Marsh's Pocket Respirometer.....		12 00
2855	Waldenberg's Pneumatometer.....		6 50
2856	" Pneumatic Apparatus.....		67 50
2857	Tobold's ".....		37 50
2859	Holden's Resonator.....		2 00
2860	Camman's Cardiometer.....		3 75
2861	Flint's ".....		8 00
2862	White's Haemarheumoscope.....		1 20
2863	Spring Tape Measure, Metal Case, 3 feet.....		35
2864	" " " 5 feet.....		45
2865	Chestermann Steel Tape Measure, Metal Case ...		1 50
*2866	Plain Urinometer, Wood Case.....		40
2867	English ".....		75
*2868	Best " enamel stem, plain black letters, and gradu- ated test glass.....		75
2869	Squibbs' Urinometer.....		75
2870	Hard Rubber " (patent).....		2 25
2871	Thermometer and Urinometer combined.....		1 25
2872	Vance's Urinary Test Case.....		4 50
2873	Compact ".....		5 00
2874	Complete " with reagents.....		16 50
*2874-A	Bartley's ".....		2 00
*2875	Test Tubes, 6 inch..... per doz.		35
2875	" 5 ".....		30
2875	" 4 ".....		25
2875	" 3 ".....		20
2875	" 8 ".....		40
2875	" 3 to 6 "..... nested		30
*2875-A	" on foot.....		10
*2876	" Holders.....		25



All Instruments designated by a * are illustrated.

BARTLEY'S POCKET URINARY TEST CASE.**WARRANTED.****MANUFACTURED OF GERMAN SILVER.**Dimensions $4 \times 1 \frac{1}{4} \times 1 \frac{1}{2}$ inches.

2874-A

THOUSANDS IN USE.

The Re-agents (Powders) are prepared from the formulæ of Dr. E. H. BARTLEY, of the Long Island College Hospital, and chemist to the Board of Health of the City of Brooklyn. The Case is designed for the use of physicians at the bedside of the patient, or for the office. With it a complete examination of the urine, for clinical purposes, can be made.

These Re-agents leave nothing to be desired as regards delicacy and certainty.

No filtering of the Urine necessary.

The Re-agents can be renewed by your home Druggist.

It is unique, durable and cleanly.

This case contains a scientifically correct urinometer inclosed in a cloth bag to prevent breakage, a heavy glass test tube serving as a urinometer jar and test tube, a package of litmus test papers, a pipette for convenience in handling the urine, two vials to contain the test powders and spoon. With these the following points may be determined at the bedside, viz.: The quantity of urine passed, the color, transparency, reaction, specific gravity, total solids passed, and the presence or absence of sugar and albumen.

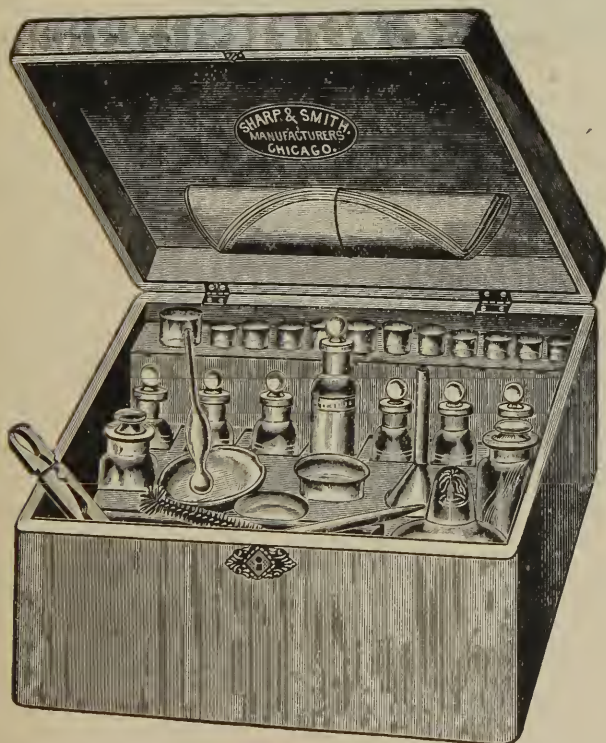
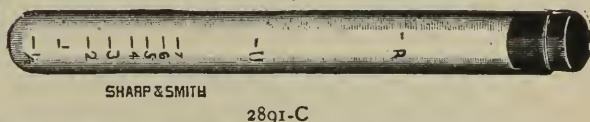
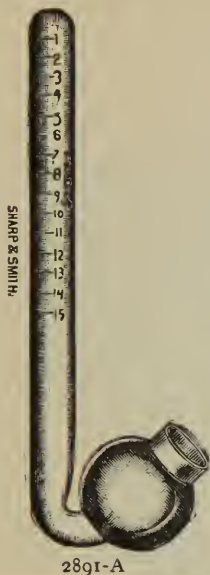
Each Bottle contains sufficient Powders for some 50 Tests.

A small handbook containing instructions, formulæ for the powders and valuable information obtained by recent investigations of Dr. Bartley and others, accompanies the case.

Please do not mutilate this book.

Send us Number of Page and Figure, and we can promptly fill your order.

PHYSICAL DIAGNOSIS APPARATUS—URINARY.

SHARP & SMITH'S
TEST CASE FOR
URINARY
ANALYSIS.

This case contains everything necessary for the Analysis of Urine.

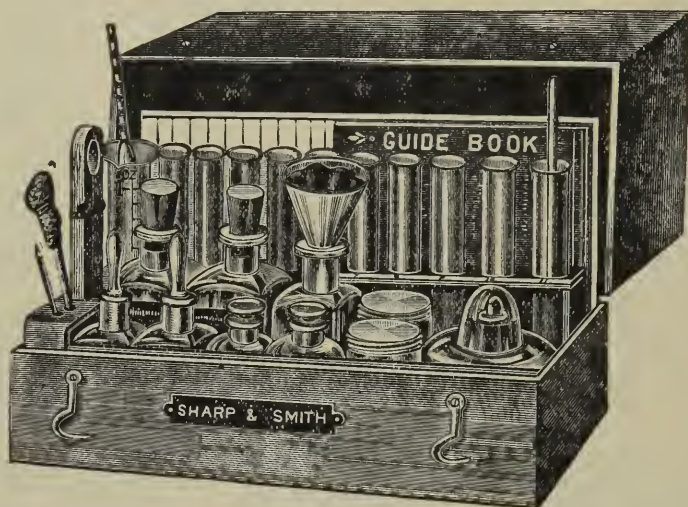
CONTENTS:

6 Re-agent Bottles, filled;
1 Re-agent Bottle, empty;
2 Salt Mouth Glass Stoppered Bottles; 1 dozen Test Tubes; 1 Test Tube Holder; 1 Pipette; 1 Stirring Rod; 1 Funnel; 1 Alcohol Lamp; 6 small Filtering Papers; 6 large Filtering Papers; 1 Porcelain Evaporating Dish; 6 small Glass Evaporating Dishes; 1 Book Red Litmus Paper; 1 Book Blue Litmus Paper; 2 Beaker Glasses; 1 Test Tube Swab; 1 Urinometer.
Complete, in handsome polished box, size $14 \times 10 \frac{1}{4} \times 7 \frac{3}{4}$ inches.

See following page for prices.

PHYSICAL DIAGNOSIS APPARATUS—URINARY.

FIG.		
*2891-A	Doremus' Ureometer, with directions.....	\$1 00
*2891-B	Einhorn's Saccharometer, ".....	1 00
*2891-C	Esbach's Albuminometer, ".....	1 00
*2891-D	Sharp & Smith's Urinary Test Case.....	5 00
*2891-E	Prof. S. A. McWilliams' Urinary Test Case.....	4 00



2891-E

PROF. S. A. McWILLIAMS' URINE TEST CASE.

For Hasty Office Examination.

This Case contains:

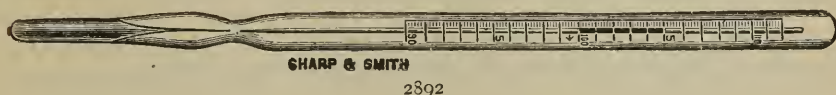
- I 3 oz. lamp with wick and alcohol.
- I Good Urinometer.
- I Urinometer jar with lip, and graduated, $5\frac{1}{2} \times 1\frac{3}{8}$ inch.
- IO Test tubes, $5\frac{1}{2} \times 1\frac{3}{8}$ inch.
- I Test tube holder.
- I Stick with cotton on for cleaning tubes.
- I Fine pointed nipple pipette for dropping nitric acid into test tubes.
- I Fine pointed cubic centimeter pipette, longer than above, to suck up urine for sugar examination.
- I Bottle nitric acid.
- I Bottle acetic acid.
- I Glass stirring rod.
- I Bottle of sodio potassic solution for Fehling's test.
- I Bottle of cupric sulphate solution for Fehling's test. The solution keeps best in separate bottles,—mix in equal quantities in test tube when used.
- I Jar of litmus paper, red and blue.
- I Jar of matches.
- I Bottle for bichloride water, into which place nipple pipette after using with nitric acid.
- I Bottle for bichloride water, into which put long pipette after using, with urine, until ready to clean.
- I Strip of paper, marked 1, 2, 3, etc., in order to facilitate the record of persons' urine when allowed to stand in tubes, as—No. 2 Tube is Mr. Jones'.
- I Tab. of paper $9\frac{3}{4}$ by $5\frac{3}{4}$ inches by $\frac{1}{4}$ inch thick, for taking notes of examinations.
- I Urinary analysis guide book.
- I Lead pencil with eraser to keep notes on tab.
- I Bottle with small glass funnel for filtering cloudy urine.
- 12 Filter papers.

Instruments designated by a * are illustrated.

SELF-REGISTERING FEVER THERMOMETERS.

With Absolutely Indestructible Register.

The great improvement made in self registering fever Thermometers, by forming an indestructible register, has within the past year or two, practically driven from the market the old style of fever Thermometer, which registered by means of a piece of mercury detached and separated from the main column by a small air space. The indestructible register is formed by a very small contraction of the caliber near the bulb, which allows the column to rise, but upon contraction of the mercury the column breaks at the contraction in the caliber, thus leaving that part of the column above it a stationary register, until shaken down by the operator. *We particularly recommend this Thermometer to the trade* All of our clinical Thermometers are made from seasoned tubes, and put up in hard rubber cases. Certificates from the Thermometric Bureau of Yale College, will be furnished if desired.



A Few Remarks about Clinical Thermometers.

The normal temperature of the human body, at completely sheltered parts of its surface, amounts to 98.4° Fahr., or a few tenths more or less, and a rising above 99.5° Fahr., or a depression below 97.3° Fahr., are sure signs of some kind of ailment, if such increase or decrease is persistent.

The average temperature of the trunk of the body in the tropics is nearly one degree higher than in temperate climates.

The increase of temperature above 99° F., as measured by the thermometer is the best index of the amount of fever present in any disease.

The temperature of the body in disease is much more readily and rapidly influenced than either the pulse or respiration. The co-relation of the pulse, respiration and temperature is of the utmost importance to be known in many diseases. For example, in pneumonia, if the mean of the temperature is not above 104° Fahr., and that of the pulse is not above 120 in a minute, and the mean of the respirations not over 40 in same time, the case must be considered a slight one, and if the patient is healthy otherwise, he will surely commence to get well in from eight to twelve days, without any medical treatment beyond attention to diet and rest.

Each disease which runs a definite course (scarlet fever, measles, small pox, typhus, typhoid, rheumatism, acute phthisis, etc., etc.,) has a characteristic and distinctive range of temperature.

The necessity of using a reliable thermometer is, therefore, of the utmost importance.

CLINICAL THERMOMETERS.

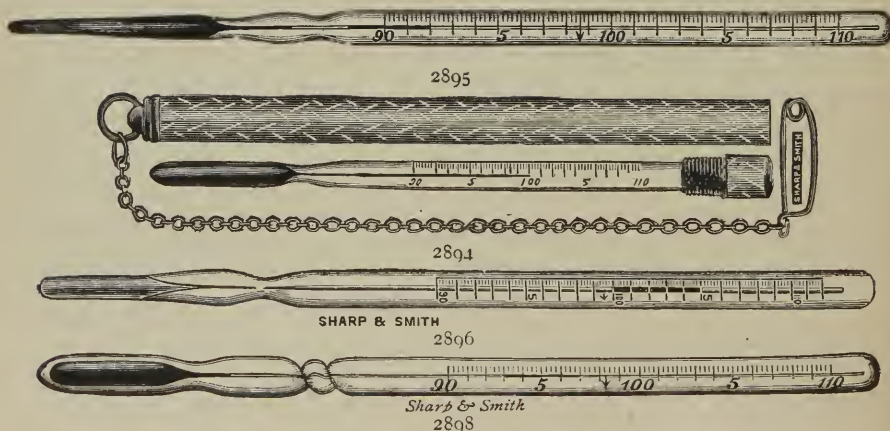
Please Read and Carefully Observe these Directions.

Thermometers are in working order, and always ready for application when the top part of the small bit of mercury that forms the Index is below the arrow point. After using it, and in order to bring the Index again below the arrow point and ready for use, take the top part of the stem of the Thermometer (near the 105) between the thumb and first finger, with the bulb turned downward, or inclined toward the floor. In this position quietly swing from you (like a pendulum) from the elbow down, leave wrist hang as loose as possible. Always look at the position of your Index after each swing, until you again see the top part of it below the arrow point, and it is again ready for application. If it be found that one or two quiet swings is not sufficient to bring the top part of the Index below the arrow point let your swing be somewhat forcible. Don't shake the Index lower than is necessary.

One or more separations of the column does not put the instrument out of order. Always take the top part of the top separation for a reading, and so long as any separation remains the instrument is good for years.

By observing these directions you will have no trouble with your Thermometer.

FIG.	
*2892	Sharp & Smith's Self-Registering Indestructible Index Thermometer..... \$1 25
2893	Sharp & Smith's Self-Registering Indestructible Index Thermometer, black..... 1 00
*2894	Sharp & Smith's (Gilt Case and Chain) Self-Registering Indestructible Index Thermometer..... 1 50
*2895	Sharp & Smith's (one minute) Self-Registering Indestructible Index Thermometer..... 1 25
*2896	Hicks' Self-Registering Indestructible Index Thermometer. 1 25
2897	" Lens front " " " 2 25
*2898	Spiral " " " " 1 25
*2899	T. & Co.'s Syphon " " " " 2 50
*2900	Spiral Surface Self-Registering Thermometer \$6 00 to 7 50
2900A	Surface " " 2 50 to 7 50
*2901	Seguin's Surface " " 2 00



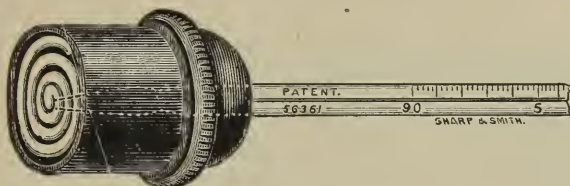
All Instruments designated by a * are illustrated,

CLINICAL THERMOMETERS.

FIG.						
*2902	Patent Double Bulb Thermometer (see description below)	.....	\$	1	50	
2903	" New Twisted " " " "			2	50	



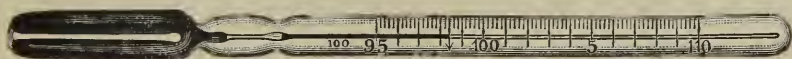
2899



2900



2901



2902

A matter of great importance to physicians, in order to obtain the temperature of a feverish patient, is to have a correct, quick working instrument, and one that will enable them to see the register quickly.

Many are the contrivances resorted to to enlarge the column, but the trouble has always been that a large bore tube requires a correspondingly large bulb, which would be too slow of motion, and therefore impracticable. Hicks, of London, has succeeded in enlarging the column of mercury by the use of a prismatic (magnifying) front, but there still remains the need of first finding the proper axis of the prism, so as to enlarge the column.

Annexed cut shows at once the advantage of this instrument above all others.

I. Instead of a large, slow moving bulb, we use two small bulbs which by uniform action supply the large bore with a big column of mercury, the standing of which can be seen at a glance.

II. The two bulbs exposing double the amount of surface to the influence of temperature than the single, will necessarily move much quicker.

III. The double bulb forming a flat surface, will prevent the instrument from rolling, a point that will not fail to be appreciated by the practitioner.

IV. The instrument having an indestructible index (self register) by which the losing of the register is completely overcome.

In recommending this new instrument we guarantee that every thermometer is fully seasoned and carefully tested before leaving our factory, and certificates, when desired, will be issued from the Observatory in Yale College, New Haven, which will bear out our claim for accuracy.

CLINICAL THERMOMETERS.

FIG.

*2904	Immisch's	Avitreous	Clinical	Thermometer,	silver.....
2904-A	"	"	"	"	with certificate, silver.
2905	"	"	"	"	" " gold ..
2905-A	"	"	"	"	" " ..



No. 2904.

The glass Thermometers now in use, are of necessity so frail that the chances of breaking one almost as soon as bought are excellent, and for this reason many physicians are compelled to spend from twenty-five to fifty dollars a year for Clinical Thermometers alone. A reliable instrument that will last indefinitely has always been desired, but until *Immisch's Avitreous Thermometer* was invented could not be obtained.

These neat and elegant instruments are in shape like a miniature watch with thick glass face and either gold or silver case, and though the first cost is a trifle more than that of the ordinary glass thermometer, they are far cheaper in the end, as with ordinary care they will last a lifetime.

The figures on the face or scale are clearly marked in both Fahrenheit and Celcius, and the temperature can be read far easier than on any other thermometer; in fact, in this respect alone, the Avitreous Thermometers possess the greatest possible advantage over the best glass tube instruments ever made.

On account of their shape and size they can be either worn on the watch chain as a charm, or carried in a neat case in the vest pocket; while, if preferred, they may be attached to a small cord round the neck, which will allow the instrument to be inserted either in the mouth or axilla without fear of being swallowed or falling.

As a surface Thermometer it is unsurpassed for readily recording the temperature; its sensitive nature is shown by the slightest breath on the case causing the indicator to move.

For use internally it can neither injure nor receive injury, and is consequently convenient and safe. Before being applied the instrument can be brought by friction to about normal; this saves much time with a restless patient or fractious child. No shaking down is required, the instrument readily accommodating itself to the altered temperature. About 30 seconds elapse before the temperature last recorded is changed. This is generally admitted to be sufficient time in which to take the reading.

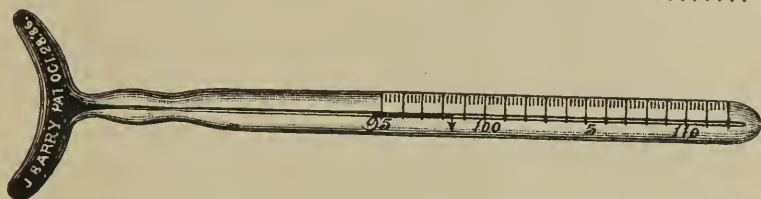
The mechanism is so simple that it would be hardly possible for it to get out of order, and even in so unlikely an event it can be easily and inexpensively repaired. The action of the instrument depends upon the opening and closing of a metallic tube which is filled with highly expansive liquids; this being the case, it is insensible to barometric changes, as has been proved to the satisfaction of the highest scientific authorities. It received the only First Class award for Thermometers at the International Medical Congress, 1881, but has only recently been made for sale.

Possessing so many advantages over the ordinary thermometer, the glass of which is generally made so thin over the bulb that it becomes often dangerous to use, it cannot be wondered at, that it has received the highest praise from the medical press and profession, while the meteorological, engineering, and other scientific journals unite in recommending it to the public generally, as an accurate, ingenious and sensitive instrument.

All instruments designated by a * are illustrated.

CLINICAL THERMOMETERS.

*2906	Sharp & Smith's Companion Case	\$ 3 50
*2907	Barry's New Self Registering Indestructible Index Thermometer	1 75
2908	" " " " " "	
	ordinary.....	1 25
2909	Colored Bulb Self Registering Indestructible Index Thermometer, Bayer's.....	1 00



2907

The improvement in Fig. 2907, Thermometer, is in the stem or graduated part, being brought parallel with the center of the cylinder, and having the bulb partly curved so that it will come in contact with all the necessary parts under the tongue, and at the same time will rest securely and not slide either way. By this means, as well as by the fact that the bulb is surrounded by the flesh, either with the mouth shut or open, the heat being evenly distributed, a more uniform and satisfactory result is obtained. The instrument may be used for surface temperatures, and its crutch shape also adapts it to the axilla. They cannot roll, are strongly made, and with ordinary care will last for years.



2906

Sharp & Smith's Companion Case contains 1 No. 3 Hypo. Syringe, 1 Fig. 2892 Thermometer, 1 Soft Rubber Catheter, Hypodermic Tablets, all in neat morocco covered, velvet lined case, $4\frac{3}{4} \times 1\frac{3}{4} \times \frac{7}{8}$.

HYPODERMIC SYRINGES.

We keep in stock a very large assortment of Hypodermic Syringes of our own make, and others. We guarantee the quality of all of them, and will repair syringes free of charge where the fault is our own.

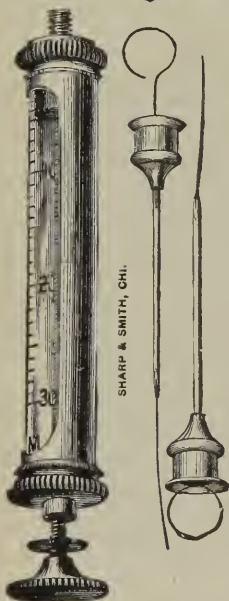
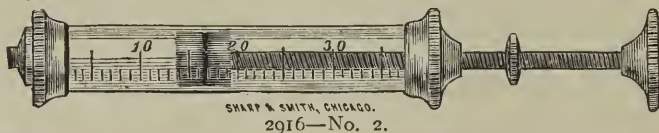
In ordering "needles" for Hypodermic Syringes, it is better to send us the syringe on which they are to fit, or an old needle of the kind wanted, so as to insure an accurate fit.

In sending syringes to us for repairs, please put your name on the bottom of the syringe box or on a tag attached to the syringe.

The "pistons" of all syringes should be kept in proper order by frequent oiling, and renewing of the leather packing whenever it becomes too loose.

FIG.

- | | | |
|-------|--|---------|
| 2915 | Sharp & Smith's Hypodermic Syringe, No. 1. Fenestrated, graduated glass barrel, two needles..... | \$ 1 50 |
| *2916 | Sharp & Smith's Hypodermic Syringe, No. 2. Plain, graduated glass barrel, two needles..... | 1 25 |
| *2917 | Sharp & Smith's Hypodermic Syringe, No. 3. Fenestrated, graduated glass barrel, two N. P. Needles..... | 1 25 |
| *2918 | Sharp & Smith's Hypodermic Syringe, No. 3x. Fenestrated, graduated glass barrel, two N. P. Needles (reinforced), morocco case, with space in top for wire, packing, etc..... | 1 50 |
| 2919 | Sharp & Smith's Hypodermic Syringe, No. 4. Solid barrel, graduated on piston, two N. P. Needles..... | 1 75 |



2917—No. 3.

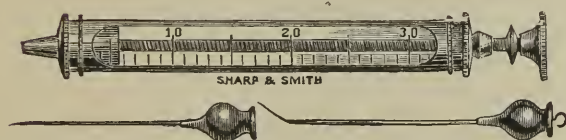


2918—No. 3x

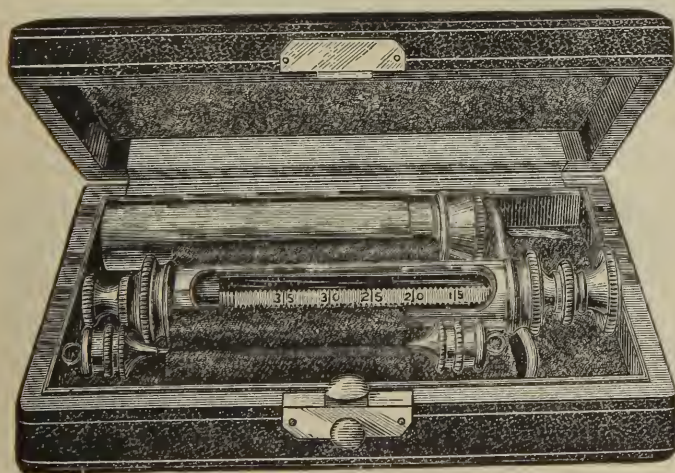
All of our Hypodermic Syringes are furnished with "cases," whether illustrated as such or not—except when otherwise designated.

HYPODERMIC SYRINGES.

FIG.		
2920	Sharp & Smith's Hypodermic Syringe, No. 5, Fenestrated, graduated glass barrel, two N. P. Needles, oval Morocco case...	\$ 1 75
2921	Sharp & Smith's Hypodermic Syringe, No. 6, Fenestrated, graduated glass barrel, two N. P. Needles, metal case.....	1 75
2922	Sharp & Smith's Hypodermic Syringe, No. 7, Hard rubber barrel, graduated on piston, two needles.....	1 25
*2923	Sharp & Smith's Hypodermic Syringe, No. 8, Fenestrated, graduated glass barrel, two gold-plated needles, syringe gold-plated, Morocco case, space in top for wire, etc.....	3 00
*2924	Sharp & Smith's Hypodermic Syringe, No. 9, Double Fenestrated, graduated on both piston and glass, 3 assorted steel, nickel plated needles—in fine Morocco covered case, space in top of case for wire, etc., screw cap for keeping packing moist	1 75
2925	Sharp & Smith's Hypodermic Syringe, No. 10, Pocket syringe, Double Fenestrated, capped at both ends, carrying two fine steel needles in one end, and provided with room at the other end for carrying tablets if desired.....	2 00



2923—No. 8.

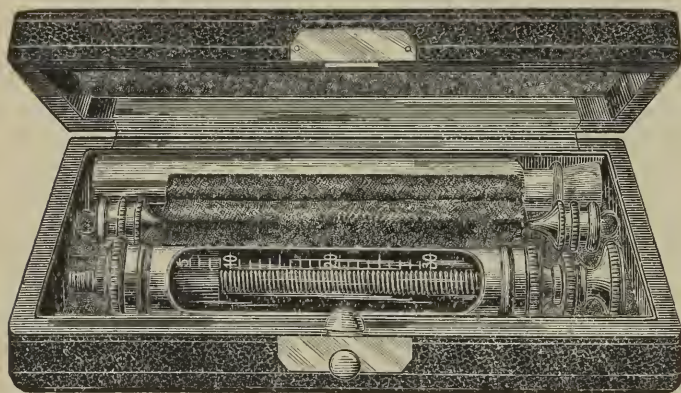


2924—No. 9.

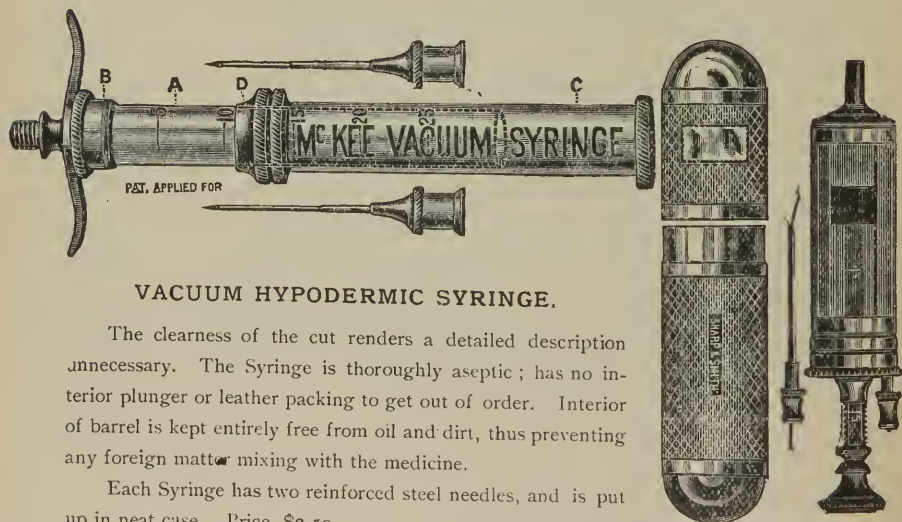
This Hypodermic Syringe is a very popular one, being made with finger rests on the sides, which are of considerable assistance in using the instrument. They are also provided with a vial with perforated rubber stopper, which greatly facilitates the filling of the Syringe.

HYPODERMIC SYRINGES.

- FIG.
- | | | |
|-------|--|--------|
| *2926 | Sharp & Smith's Hypodermic Syringe No. 11. Same style as figure 2918, but with Gold Plated Needles..... | \$2 00 |
| 2927 | Sharp & Smith's Hypodermic Syringe No. 12. For Pocket. Patent Hollow Piston arranged similar to Fig. 2925, but with only one needle | 1 75 |
| *2928 | Sharp & Smith's Hypodermic Syringe No. 13. Very compact, holds 15 minims only, has two fine needles which are carried parallel with the barrel and are protected from rust by carefully sealed cylinders. The syringe in case is but 2½ inches long..... | 2 50 |
| *2929 | Sharp & Smith's Hypodermic Syringe No. 14. Double Fenestrated, graduated on piston, end of barrel removable for introduction of hypodermic tablets; metal cap to screw on in place of the needle when the syringe is not in use. Six bottles of hypodermic tablets, two needles, in neat satin-lined Morocco case, with extra wires and washers..... | 3 00 |
| 2930 | Sharp & Smith's Hypodermic Syringe No. 15. Same as No. 14, but with ears on syringe | 3 50 |



2926



VACUUM HYPODERMIC SYRINGE.

The clearness of the cut renders a detailed description unnecessary. The Syringe is thoroughly aseptic; has no interior plunger or leather packing to get out of order. Interior of barrel is kept entirely free from oil and dirt, thus preventing any foreign matter mixing with the medicine.

Each Syringe has two reinforced steel needles, and is put up in neat case. Price, \$2.50.

2928

HYPODERMIC SYRINGES.

FIG.

*2931	Sharp & Smith's No. 9-A Hypodermic Syringe.....	\$2 50
2932	Tiemann's No. 9 Hypodermic Syringe.....	3 00
2933	" " 1 " "	3 00
2934	" " 3 " "	2 50
*2935	Fowler's Hard Rubber Pocket Hypodermic Syringe.....	2 50

Fig. 2931. SHARP & SMITH'S No 9-A HYPODERMIC SYRINGE.



This Syringe is in shape and size same as our No. 9, but differs from that and all others in the construction of the piston, which is provided with an *oil chamber* between the exhausting and ejecting sections of the packing, which, when filled with oil, will distribute the same along the inner surface of the glass cylinder. The leather packing, in passing along this surface, will come in contact with the oil, and be continually lubricated. This will be found of great advantage when the instrument is not in constant use because, as soon as the piston is withdrawn, the oil contained in the chamber is immediately brought in contact with the leather packing, which renders it soft, distends it, and keeps the syringe always ready for use. The chamber should be refilled occasionally. To refill, unscrew the upper cap and withdraw the piston just enough to expose the chamber, drop in a small quantity of oil, then replace the piston, and screw the cap down firmly.

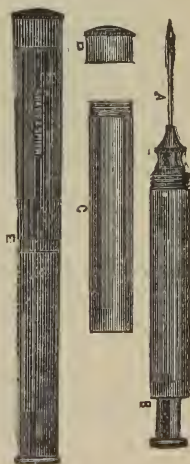
We put these Syringes up in same style as the No. 9, in velvet lined, morocco covered case — 3 fine steel N. P. points, and a bundle of non-corrosive wires.

The Syringe is made at the end so as to allow of tablets being used.

Fig. 2935. FOWLER'S HYPODERMIC SYRINGE.
For the Pocket or Pocket Case.

This Syringe consists of a hard rubber barrel and piston (*b*), a needle (*a*) whose mounting screws into the barrel, and a hard rubber tube (*c*) with a cap (*d*). This second barrel serves the double purpose of a protection for the needle, and a receptacle for powders, eight of which, of a quarter of a grain each of morphine, can be placed in it.

The instrument all screwed together, is represented at *e*, and is about the size and shape of an ordinary *Hard Rubber Thermometer Case*, and occupies no more room in the pocket. To give a hypodermic injection, remove the receptacle, unscrew the needle, draw back the piston and empty one of the powders into the barrel. Then pour a few drops of water into the barrel, replace the point, and after giving the instrument a few shakes to make sure that the morphine is all dissolved, it is ready for use.



Instruments designated by a * are illustrated.

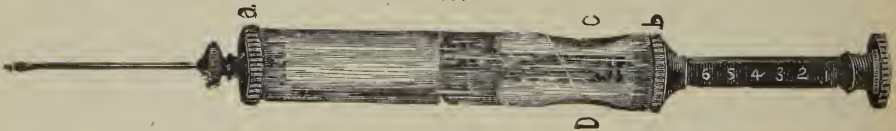
2935

HYPODERMIC SYRINGES.

FIG.				
2936	Declat's Hypodermic Syringe, with two Needles.....	\$5	00	
*2937	“ “ “ “ four “	6	00	
*2938	Leiter's “ “ Hard Rubber Case.....	3	75	
*2939	“ “ “ Leather Case, No. 1.....	3	00	
	Stimson's “ “ for pocket, all silver needles fit in- side the Syringe.....	2	00	
2940	Celluloid Barrel Hypodermic Syringe, two steel Needles, Celluloid Case	3	00	
2941	Celluloid Barrel Hypodermic Syringe, two steel Needles, met'l case	1	25	
2942	Hypodermic Syringe and Cocaine Set.....	3	00	
*2943	Greene's Hypodermic Case.....	9	00	



2937



2938



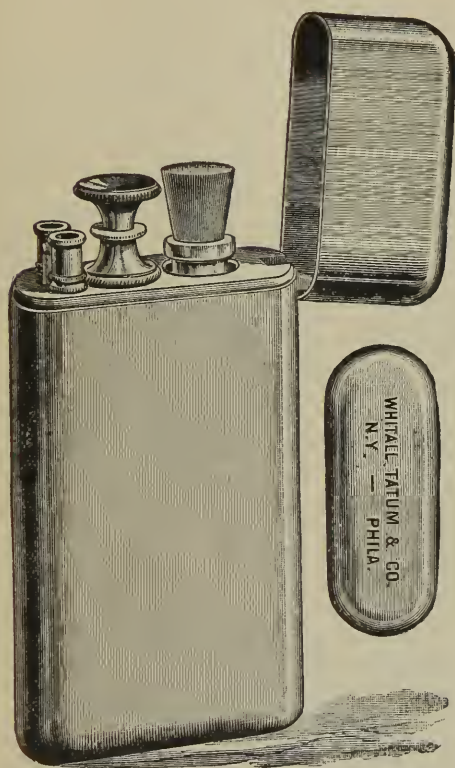
2939

All Instruments designated by a * are illustrated,

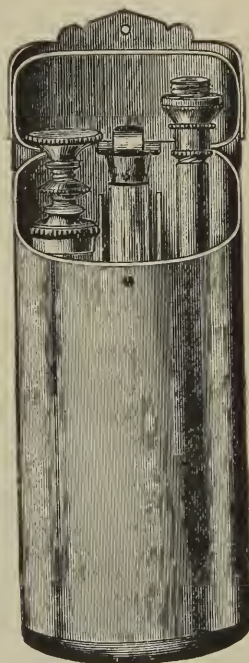
HYPODERMIC SYRINGES.

FIG.

*2944	Sharp & Smith's Hypodermic Syringe, No. 16.....	\$2 25
*2945	W. T. & Co.'s No. 3 Phoenix Hypodermic Syringe.....	2 00
*2946	"Farny" Metal Case Hypodermic Syringe.....	3 00



2945



2944



2946

Fig. 2944 This Hypodermic Syringe is designed to use with soluble tablets, and is put up in very neat and compact nickel-plated case, $\frac{3}{8} \times 1\frac{1}{4} \times \frac{1}{2}$ inch. Beside the Syringe and two Needles, the case contains 20 tablets of Morphine Sulphate $\frac{1}{4}$ grain.

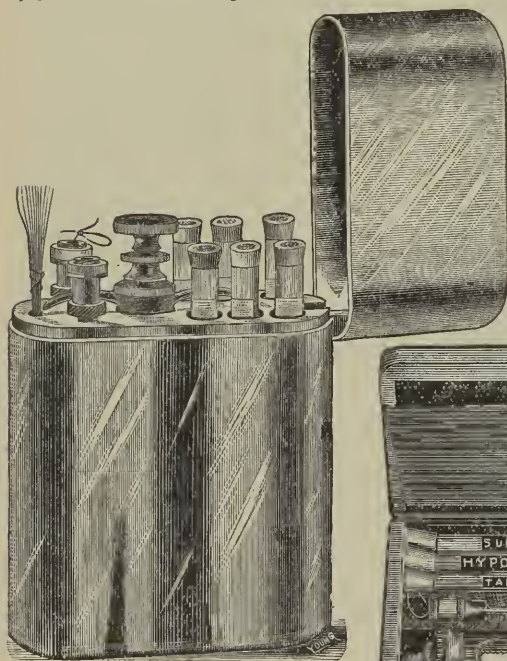
In other respects the same description will apply to this Syringe as to Fig. 2929.

Instruments designated by a * are illustrated.

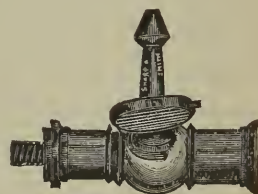
HYPODERMIC SYRINGES.

FIG.

*2947	P. D. & Co's. Tablet Syringe in metal case, with six bottles of Tablets. This Syringe has the Patent Plunger Attachment.....	\$3 50
*2947-A	Sharp & Smith's Hypodermic Syringe No. 17.....	2 25
*2948	Stop Cocks for Aspirator Attachment to Hypodermic Syringes.....	1 25
*2949	Pure Silver Canulas (Ingals'), to fit Hypodermic Syringes.....	1 00
2950	Hypodermic Bottles, Tiemann & Co.'s.....	75
2951	" Minim Measure ..	40
2952	" " Pipette.....	40
2953	" Points, steel, best ..	25
2954	" " gold plated ..	35
2955	" " nickel-plated ..	25
2956	" " gold tips.....	75
2957	" " aluminium.....	75
2958	" " platinum ..	75
2959	" " extra long.....	35
2960	" Trocar.....	75
2961	Oil Stone, for sharpening points, each.....	25c. to 1 00
2962	Reamers for cleaning out Needles ..	10
2963	Wire for needles, per bunch.....	05



2947



2948



2947-A

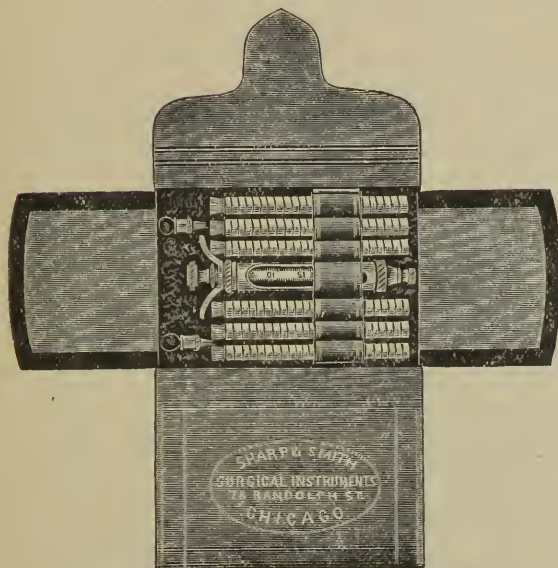
No. 17 same as Fig. 2917 (No. 3) except with 6 Tablet Bottles.



2949

All instruments designated by a * are illustrated.

MISCELLANEOUS SYRINGES.

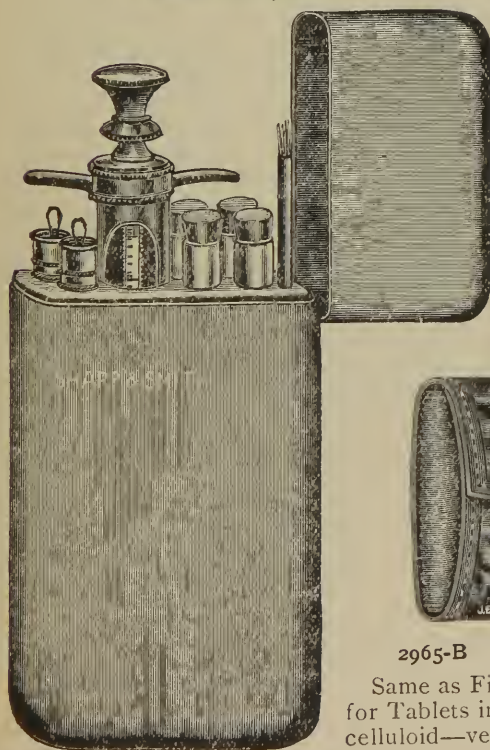


2965

Fig. 2965 Sharp & Smith's
No. 9-B Tablet Syringe,
in Flexible Leather
Case.

This is the most convenient style of Hypodermic Syringe in the market. The syringe has the "Oil Chamber" and also the "Expanding Piston," thereby doubly insuring an "always ready for use" syringe.

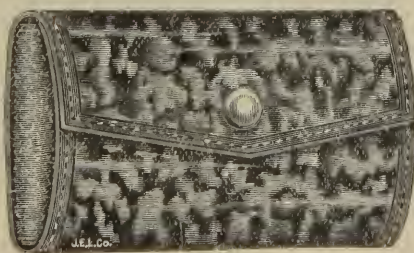
With this syringe we furnish 6 vials of Hypodermic Tablets, assorted. Price, \$3.50.



2965-A

Fig. 2965-A. Sharp & Smith's
Metal Case Hypodermic Syringe
with Four Bottles for Tablets.

This Syringe has patent "Oil Chamber" and is always ready for use. The case is the most compact of its kind considering the contents, and measures only $3\frac{1}{4} \times 1\frac{1}{8} \times \frac{5}{8}$ inches. Price, \$2.50 net, without tablets.



2965-B Sharp & Smith's Tablet Syringe.

Same as Fig. 2965, except with four bottles for Tablets instead of six. The case is made of celluloid—very handsome and durable. Price, \$2.50 net, without tablets.

MISCELLANEOUS SYRINGES.

Fig. 2967 THE KOCH LYMPH SYRINGE.

We have the pleasure of presenting to our customers an illustration of the Koch Lymph Syringe. The instrument is worked by means of a rubber bulb instead of the piston used in ordinary hypodermic syringes. The cylinder, which is glass, has a capacity of two grammes, is accurately graduated, pointed at one end to receive the shoulder of the hypodermic needle, and squared at the other to adapt itself to the bulb attachment. The cylinder, after being filled with the requisite amount of lymph, is then attached to the bulb, the stop-cock of which has been previously shut. After the needle is inserted under the skin, the stop-cock is opened, and the fluid injected by pressure upon the bulb. The advantages claimed for the instrument are its simplicity, efficiency, and the ease with which it can be kept clean.

**PROFESSOR KOCH'S LYMPH.**

The material used by Professor Koch in his inoculations for tuberculosis is a viscid fluid, the color of a dilute solution of iodine, is of a slightly syrupy consistence, and is supplied in white glass corked bottles, containing each about forty grammes. It is prepared for use by adding one hundred grammes of sterilized water, the maximum dose of injection being one gramme. The injection is made subcutaneously in any part of the body, but preferably between the scapulæ. No reaction appears locally, but at the end of four hours severe constitutional effects are manifested in the appearance of rigors with malaise, followed by a temperature which may reach 106° F., with a corresponding increase in the pulse-beat from 120 to 160. Vomiting frequently occurs at the acme of the fever. In some cases the reaction is attended with alarming symptoms, very great prostration, requiring the use of stimulants, and severe dyspnœa. When the tuberculous deposit is superficial, there is in and around it great tumefaction. The amount of constitutional disturbance is said to be governed by the extent of the tubercular deposit. This is noted particularly in cases of lupus and in tuberculous glands of the neck. The constitutional symptoms are usually of short duration. Subsequent injections are not attended with systemic disturbances. Over the surface and in the neighborhood of tuberculous swelling scabs appear which, on being separated, leave healthy granulating surfaces. Cases in that stage are said to be cured, inasmuch as they show no constitutional reaction.

FIG.

*2965	Sharp & Smith's No. 9-B Tablet Hypodermic Syringe.....	\$3 50
2966	Dr. Geo. F. Fiske's (Lucae's) Double Bulb.....	5 00
*2967	Professor Koch's Lymph Syringe.....	2 00

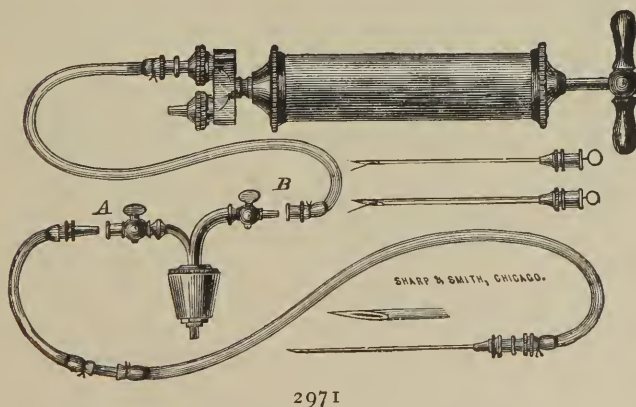
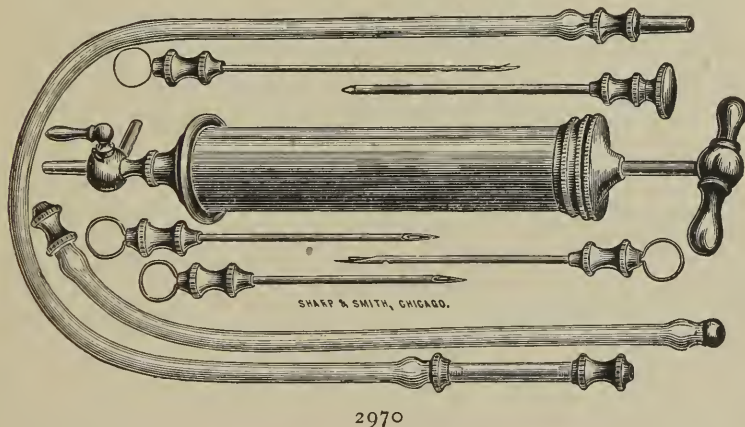
Instruments designated by a * are illustrated.

ASPIRATORS.

We recognize the fact, that it is of the UTMOST IMPORTANCE to have an "Aspirator" in working order just when needed, and on this account we are more than particular to have every instrument (in this line) leave our office in PERFECT CONDITION.

FIG.

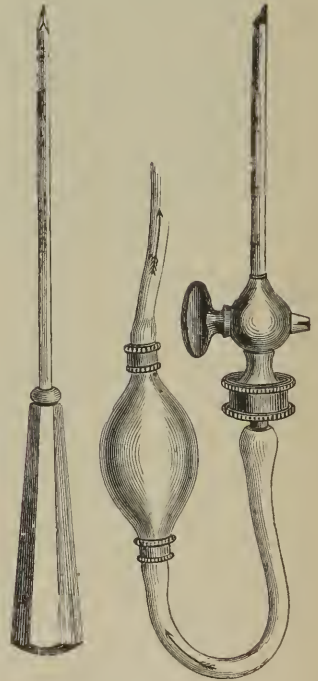
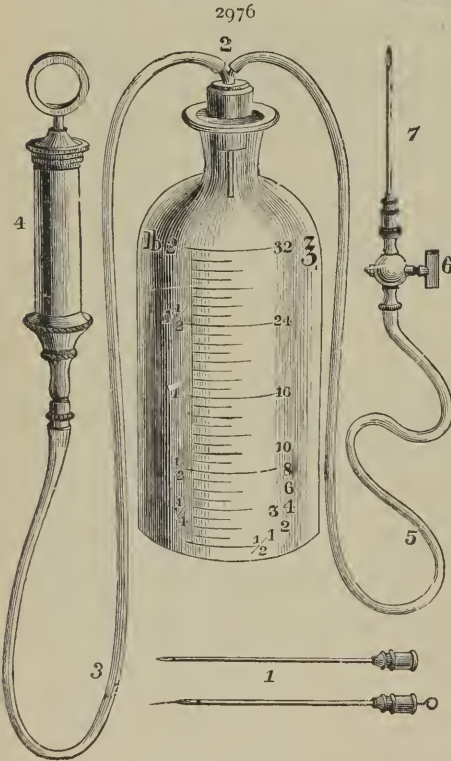
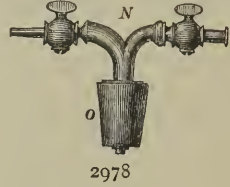
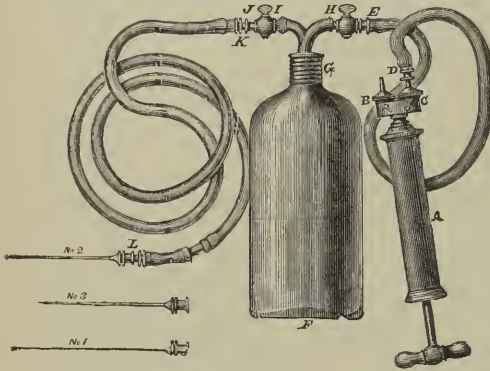
*2970	Sharp & Smith's No. 1, Aspirator.....	\$15 00
*2971	" " " 2, " French Pattern.....	10 00
2972	" " " 3, " with Trocars and Stop Cock.....	18 50
2973	Stomach Pump Attachment for Sharp & Smith's Aspirators.....	4 50



Instruments designated by a * are illustrated.

ASPIRATORS.

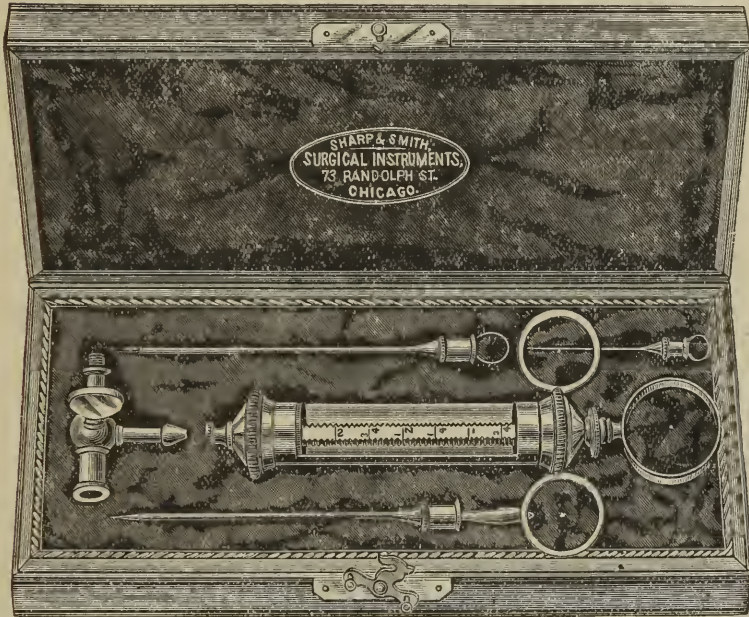
FIG.		
*2974	Sharp & Smith's No. 4 Aspirator, large	\$11 50
2975	" " No. 5 " small	9 75
*2976	Codman & Shurtleff's No. 1 Aspirator, in walnut case	12 00
2977	" " No. 2 " without bottle, in morocco covered case, with stopcock (to fit any bottle)	10 00
*2978	Stop Cock for C. & S.'s Aspirators—to fit any bottle	2 50
*2979	Flint's Aspirating Trocar, with Syringe	3 75



ASPIRATORS.

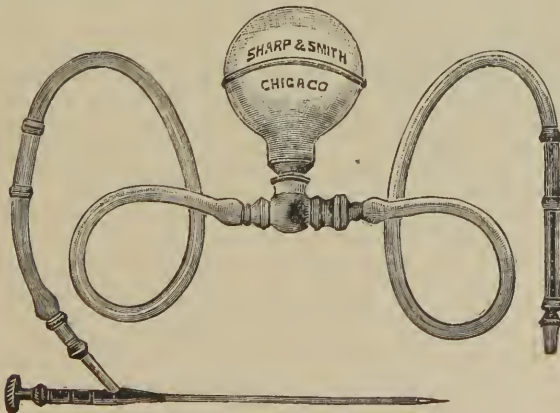
FIG.

*2980	Sharp & Smith's Compact Aspirator.....	\$ 3 50
*2981	“ “ Pocket Aspirator, Hypodermic and Brandy Syringe Combined.....	2 50
2982	Sharp & Smith's Pocket Aspirator, etc, Syringe, same as above, without finger rings.....	2 25



2981

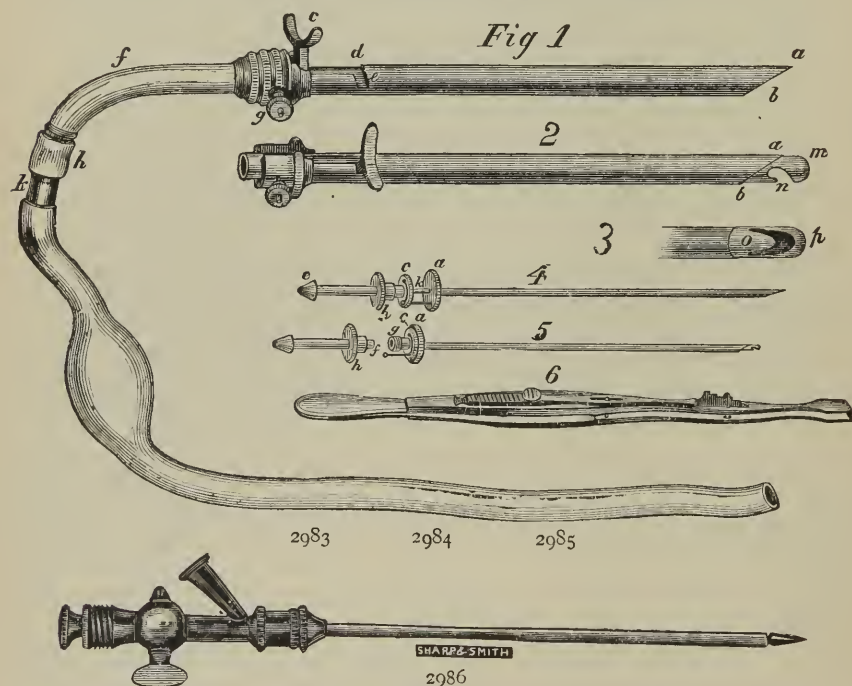
The above syringe will be found to be of the greatest importance to every practitioner. It is small, can be carried in the pocket or instrument bag, and in a case of emergency when a large "Aspirator" is necessary (and is not on hand), will be invaluable.



2980

ASPIRATORS AND TROCARS.

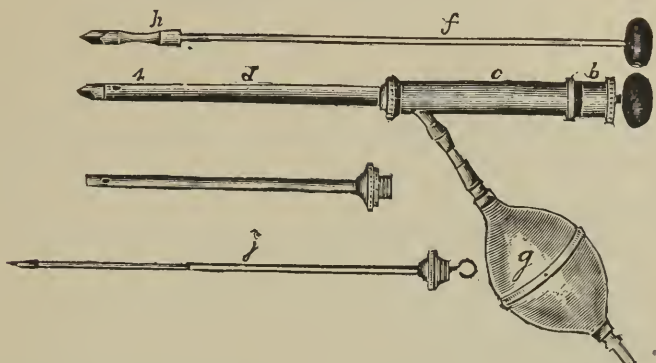
FIG.	Fitch's Dome Trocar for Paracentesis Abdominis, 1, 2, 3, complete	\$ 6 00
*2983	" Aspirator Needles " " 4, 5.....	1 75
*2985	" Clamp Forceps " " 6.....	3 35
*2986	Aspirating Trocar with Stop Cock.....	2 75
2987	" " " " gold plated.....	3 25
2988	" Needles, assorted lengths, "each.	1 25
2989	" " " " nickel plated.....	75
2990	" Trocars, nickel plated.....	1 25
2991	Otis' Hard Rubber Aspirator.....	4 50
2992	Emmet's Aspirator.....	9 00
2993	English ".....	13 50
2994	Dieulafoy's ".....	25 00
2995	Excelsior " and Stomach Pump combined.....	15 00
*2996	Dr. H. Landis Getz's Aspirating Trocar and Canula.....	6 75



DR. H. LANDIS GETZ' NEW IMPROVED COMBINED TROCAR AND CANULA AND ASPIRATING NEEDLE.

We take pleasure in presenting and recommending to the profession a New Improved Combined Trocar and Canula and Aspirating Needle, devised by Dr. H. Landis Getz. The object of this instrument is to overcome the disadvantages of the common trocar and canula and common aspirating needle and yet to preserve the advantages and applicabilities of both, and at the same time combining the instruments in a neat and compact manner at reasonable expense. The advantages of the instrument will readily suggest themselves, and we will therefore give only a brief description and a few suggestions concerning its application.

ASPIRATORS AND TROCARS.



2996

a. Button which screws on trocar rod *f*, which is used as a handle, and also prevents the trocar from passing too far through the canula. To rod *f* are attached the three largest sizes of trocar tips; *h*, one of the tips are screwed on the rod *f*; *c*, handle portion of canula to which are attached by screw-joint the largest sizes of canula and the smaller or aspirating size *j*; *e*, represents the outlet from handle portion of canula; *i*, a short piece of glass tubing through which fluid is seen to pass; *g*, a reversible bulb which may be used for exhausting or injecting; *b*, cap attaching to *c*, by screw joint into which is placed a small rubber disk, cut from rubber bandage material, through which pass the exploring trocar, or the larger trocar rod; *4*, one of the openings, of which there are several in the end of each canula, to allow the fluid to pass, which will aid in determining the entrance of the sac; *j*, exploring canula with trocar needle passed through it. This needle is of the same length as the parts *f* and *h* combined, and when *f* is used the needle is entered in the opening in *b*, passed through the small rubber disk and then passed on through *c* and *j* until the needle point projects about one-eighth of an inch beyond the canula.

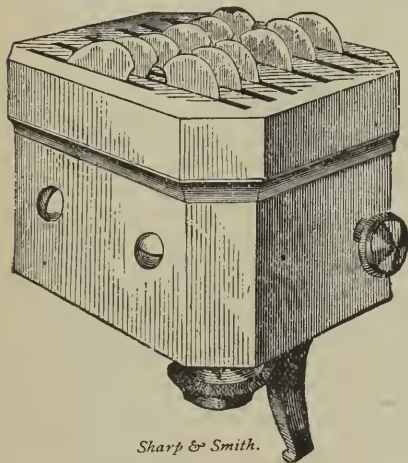
The instrument may now be used in the same manner as when used for exploring. The sac having been evacuated, the trocar point is pushed forward into the canula just beyond the attachment with *c*—the instrument still in the cavity, the bulb is now reversed, the trocar is again withdrawn past *e* and the cavity injected. The manner of again evacuating will readily suggest itself.

Should it be desirable to leave a drainage tube within the sac, detach the handle portion of canula *c* from the canula proper, leaving the canula still in the sac, and pass the tube through canula into sac and now withdraw canula, leaving the tube dipping into the sac. The instrument is novel, neat, compact, inexpensive and complete.

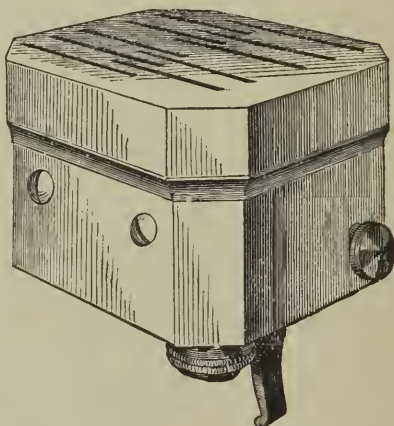
NOTE.—A convenient and perfect female catheter is formed by the parts *a*, *b*, *c*, *e* and *f*, and the largest sized canula and a catheter tip (instead of trocar tip) attached to *f*. If the bladder is to be injected or washed, the instrument is used as when washing any other cavity. To use the instrument for washing or injecting the male bladder use parts *b*, *c*, *e*, *i* and *g*, with such size of canula attached to *c* as the end of will slip tightly into the opening of the male catheter.

CUPPING INSTRUMENTS.

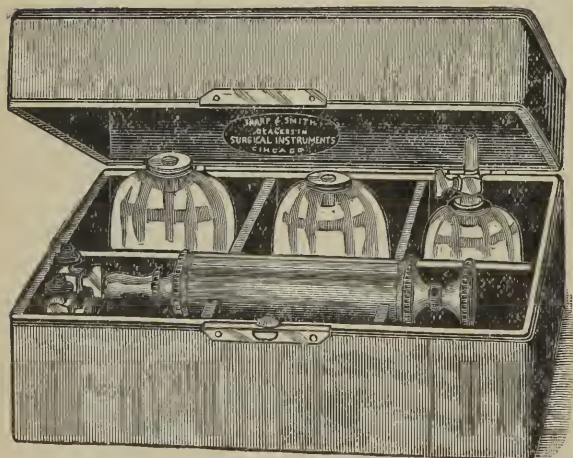
FIG.			
3000	8-blade	Scarificators.....	\$2 75
*3001	10 "	plain Scarificators.....	2 75
*3002	10 "	reverse ".....	3 00
*3003	12 "	plain ".....	3 00
*3004	12 "	reverse ".....	3 50
*3005	Cupping Case complete.....		5 50
3006	Plain Glass Cupping Cups.....per doz.		1 00
*3007	"	" with Rubber Bulb.....each.	50
3008	All Rubber Cupping Cups.....		75
3009	Cupping Cup Caps.....		60
3010	"	Pump, metal, nickel plated.....	1 85
3011	"	" with Stop Cock.....	3 00
3012	Stop Cocks for Cupping Cups.....		60



3001-3003



3002-3004



3005

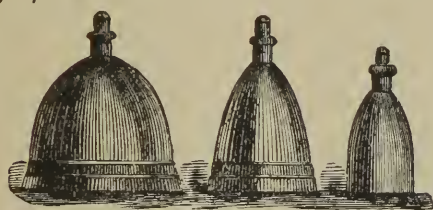
This case contains : Three Glass Cups, mounted ; three Stop-cocks, and fine nickel plated Pump. In morocco case, velvet lined.



3007

CUPPING INSTRUMENTS.

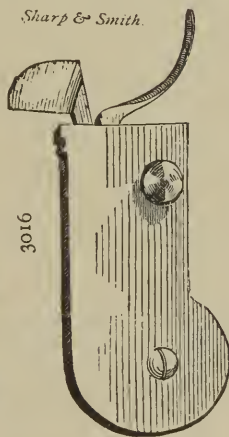
FIG.		
*3013	Knapp's Glass Cupping Cups with Rubber Rim, No. 1....each.	\$1 25
*3013	" " " " " " " " 2.... "	1 00
*3013	" " " " " " " " 3.... "	75
*3013	" " " " " " " " 4.... "	75
*3013	" " " " " " " " 5.... "	50
*3014	" Metal Cupping Pumps.....	1 00
*3014	" Japan ".....	75
*3015	Thomas' Hard Rubber Dry Cupper.....	1 00
*3016	American Spring Lancets.....	1 25
3017	German " ".....	50
3018	" silver " ".....	1 75
3019	" " " with 5 blades.....	2 00
3020	Tiemann & Co.'s Spring Lancets.....	2 50
*3021	Reece's Artificial Leech.....	3 50
3022	Herteloup's " ".....	6 00
3023	Smith's " ".....	3 50
*3024	Aveling's Transfusion Apparatus.....	6 00
3025	Fryer's " ".....	4 85
3026	Garrigue's Mediate Transfusion Apparatus.....	3 00
3027	McDonald's " ".....	4 50



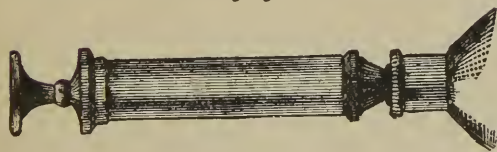
No. 3. No. 4. No. 5.

3013

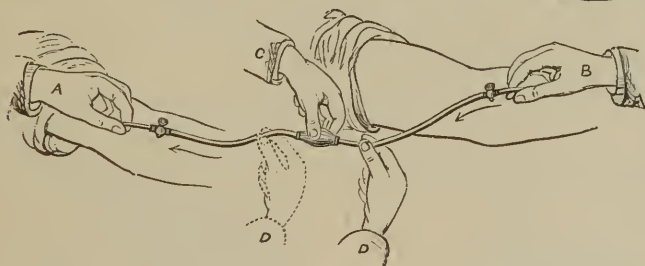
Sharp & Smith.



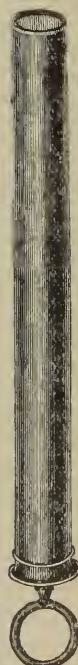
3016



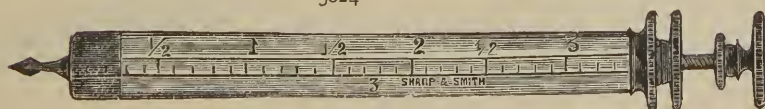
3014



3024



3015



3021

VACCINATING INSTRUMENTS.

FIG.			
3028	Spear-point Vaccinating Lancet.....	\$	60
*3029	Thumb " ".....		50
*3030	Vaccinating Lancet and Comb.....		75
3031	U. S. Army Vaccinating Instruments.....	I	85
3032	Vaccinating Trocar.....	I	85
3033	" Comb, plain metal (6 needles).....		20
3034	" Scarifier, plain.....		75
*3035	Cyrus Edson's new Vaccinator.....	I	50

A NEW VACCINATOR.

BY CYRUS EDSON, M. D., New York.

The little instrument shown in the cut has been in the hands of members of the vaccinating corps of the Health Department of New York during the past year, and has proved very useful. It consists of a needle holder, similar to those used by microscopists, having two jaws that are approximated by means of a sliding ring. These jaws are funnel shaped at their extremity in order to facilitate the introduction of the needle, which is inserted to the depth of three-fourths of its length.

The handle is of hard rubber, with hollow space sufficiently large to hold twenty-five No. 5 needles. To use the instrument the operator unscrews the cap, selects a needle, fixes it in the jaws, and proceeds to scarify. Having performed the operation, the needle is removed and thrown away.

The scarification made by the needle will be found to be better for the purpose in question than that made by the lancet—the skin and vessels being



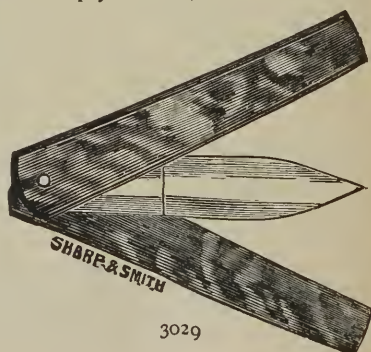
torn, and not cleanly cut. The result is that a larger absorbing surface is exposed and just sufficient blood and serum exuded to dissolve the virus from the quill.

The instrument can be used more rapidly than the lancet, if time is taken to cleanse the latter after each vaccination is performed.

The cost of needles is only five or six cents per paper of twenty-five.

The device was contrived partly to meet the objections to vaccination made by parents of children attending school, on the ground that in the use of the lancet disease was liable to be transmitted from child to child. Indeed, one case of skin disease was alleged to have been caused in this manner; investigation, however, disproved it.

The popular prejudice against the lancet is deeply rooted, and is best and easier overcome by the new vaccinator.



GYNÆCOLOGICAL—UTERINE DILATORS.

FIG		
*3050	Atlee's Uterine Dilator	\$ 2 10
*3051	Nott's " "	2 25
3052	Ady's " "	11 25
*3053	Ellinger's " " with Ratchet	7 50
3053-A	" " " plain	6 50
*3054	Goodell's modification of Ellinger's Uterine Dilator	7 50
3055	Baer's " " " " " "	6 75
*3056	Hobbs' Uterine Dilator	3 75
*3057	Wylie's " "	2 50
*3058	Wilson's " "	4 00
*3059	Miller's " "	7 50
3060	Schweig's " "	7 50
*3061	Canulated " "	3 00



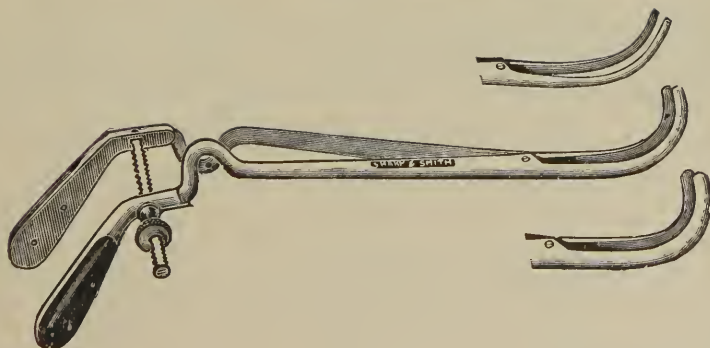
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3051



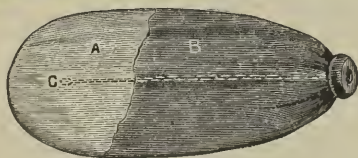
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3058

All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—UTERINE DILATORS.



3056



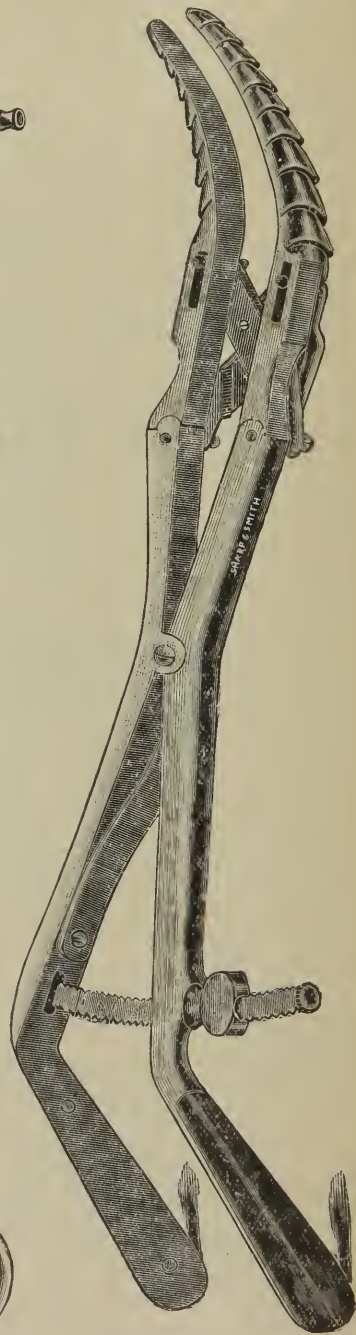
3059



3061



3053



3054

GYNÆCOLOGICAL—UTERINE DILATORS.

small button shaped extremity, and is introduced through the gum tube to the inside of the bag, and finally lodged in the center of the extremity, thus enabling the bag to fold and adjust itself neatly and closely around the probe during its passage through the cervix and along the canal, while the force is applied in the most advantageous position, *i. e.*, inside the dilating bag.

FIG. *3070	Dr. Malcolm McLean's modification of Barnes' Uterine Dilator.	\$ 1 85
*3071	“ “ Forceps for introducing above.....	3 35
*3072	Dr. Bernay's Utero Tractor.....	4 50

THE MANAGEMENT OF PLACENTA PREVIA.

BY MALCOLM McLEAN, M. D., New York.

* * * There are several objections to the usual form of Barnes dilators which are worthy of notice, and it is especially to the correction, as far as possible, of these faults, that I wish to call attention. The instruments, modified, as I shall demonstrate, seem to fulfil all the indications above alluded to without the attendant disadvantages.

The usual fiddle shaped bags are inserted by means of a sound introduced into the little pouch, which is situated, necessarily, at an awkward point on the surface of the bag. This pouch, besides being liable to be punched through in a somewhat dangerous manner in the attempt at introduction, is a convenient receptacle for septic matter. And I have always felt misgivings in passing such a one into the uterine mouth. That the operation of inserting an ordinary Barnes' dilator in the ordinary manner is often a tedious performance, I think those who have most frequently used them or have seen them used, will agree.

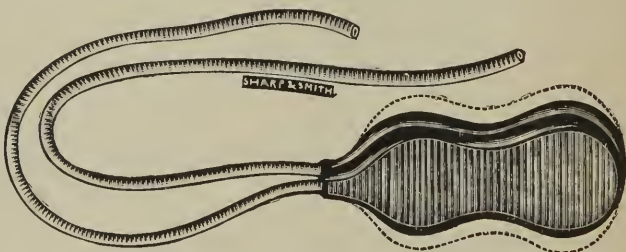
I have more than once seen a skillful accoucheur baffled for fifteen or twenty minutes in this simple manœuvre. To facilitate matters, Dr. Cowan of Danville, Ky., has offered a modification of these bags, in which there is no superfluous pouch, the instrument being made more cylindrical, and the distal end reinforced so as to allow firm pressure of a rod which is passed through the tube into the cavity of the dilator.

There is one objection to Dr. Cowan's instrument as it is presented, viz., necessity of withdrawing the inserting rod before distension of the bag is commenced. This renders it liable to become displaced from the os uteri before it

is expanded sufficiently to retain it. Again, there is the very serious objection to all the dilators described, in their use in cases of placenta previa, that they have to be graduated in sizes to suit the dilating cervix.

In exchanging from a small one to a larger there is liability to some hæmorrhage, and the operation of insertion has to be gone through a second or third time. Anything we may do to avoid unnecessary manipulation is desirable, especially in instrumental manœuvres.

I have therefore devised a modification of Dr. Barnes' dilator, by which the operation of dilation, etc., by their use, is easily accomplished without the disadvantages alluded to. As will be seen at a glance, it is a duplication of the

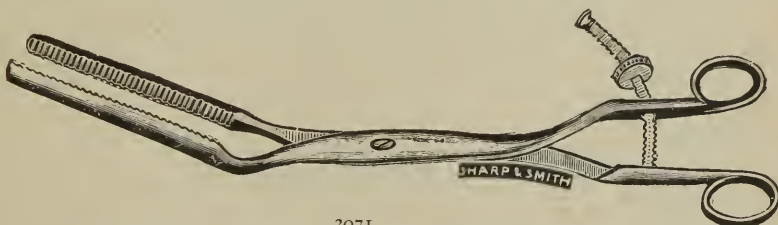


3070

GYNÆCOLOGICAL—UTERINE DILATORS.

bag and tube, so that one side may be distended independently of the other, thus requiring but one insertion to get a very extensive dilation. These bags are made as smooth as possible, have no extra pocket, and are easily and quickly inserted by means of a pair of somewhat curved forceps, and are held *in situ* until sufficiently distended to retain themselves within the grasp of the cervix.

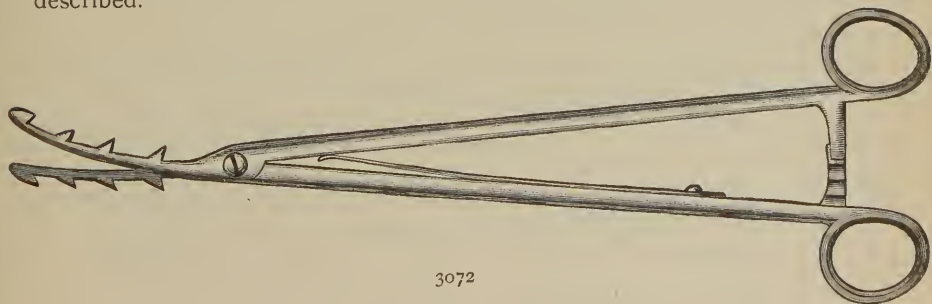
Any one who will use this means of inserting the water bags will be impressed with the advantage gained over other methods. In placenta previa time is exceedingly valuable, and this instrument renders the operation more valuable by being *promptly* accomplished. I have generally found one size all that is required in dilating the cervix, so that *one* insertion has sufficed to complete the necessary expansion. They are easily cleansed, are very strongly made, and there need be but two sizes used. I have found them also very valuable in the induction of labor for eclampsia, and I know of *no other means which will accomplish delivery so safely and quickly*. The objection made by some to India rubber dilators, that they are "apt to be found rotten just when needed," is scarcely worthy of notice. Because, in the first place, when well made and preserved, they will last for many months. (I have used one over two years.) And second, they may be obtained new on order at the better instrument makers of the cities.



3071

The largest size I have found useful as a vaginal dilator or colpeurynter. For expanding this instrument I always used carbolized hot water. The pressure made by it is very powerful, and they should be slowly injected; *one* side being fully distended first, and as soon as the grasp of the cervix begins to relax the other tube is attached to the syringe and very slowly filled. In this manner *continuous dilatation with complete occlusion of the bleeding os* is accomplished, giving us most valuable aid in the management of placenta previa.

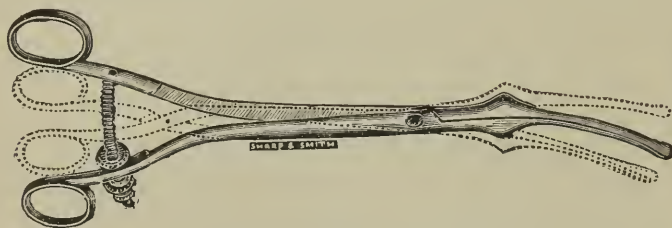
I ought to make mention of Tarnier's dilator, which consists essentially of a rubber bulb, which is carried *through* the os *into* the uterine cavity, and being distended to about the size of a large English walnut, is left to excite uterine contractions. This instrument will seldom be useful, as the larger instruments may generally be introduced without difficulty by the means above described. * * *



3072

GYNÆCOLOGICAL—UTERINE DILATORS.

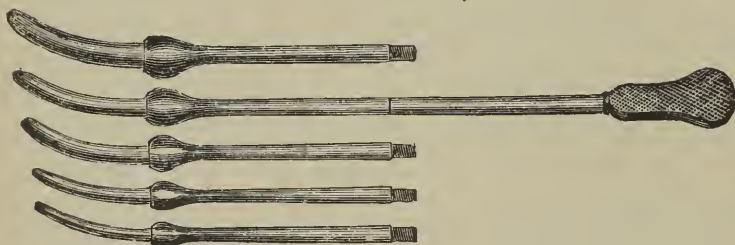
FIG.	Thomas' Uterine Dilator.....	\$ 3 50
3073	Hunter's " "	10 50
*3074	Peaslee's " " per set.....	4 50
*3075	Seimon's " " (7 sizes).....	1 00
3076	Palmer's " "	3 00
*3077	" " "	3 50
*3077-A	" " "	4 50
3079	Mansfield's Electric Uterine Dilator.....	4 50
*3080	Simpson's Set of " "	4 50



3077



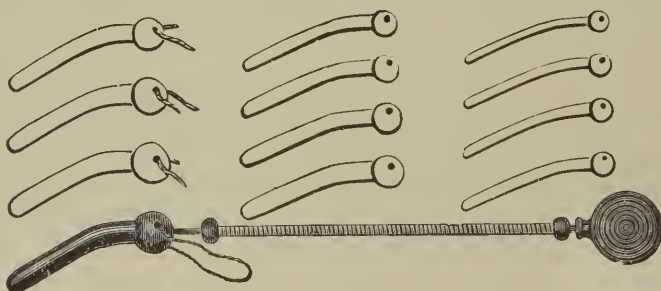
3077-A



3075



3076



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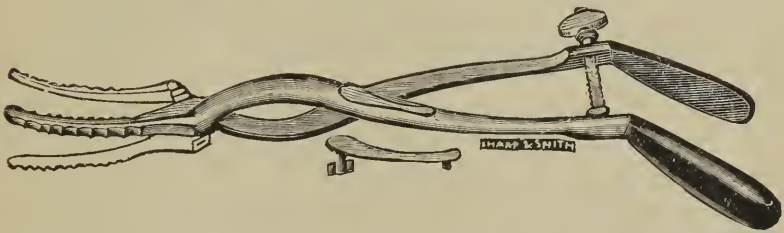
GYNÆCOLOGICAL—UTERINE DILATORS.

FIG.

*3081	Sims' New Blade Uterine Dilator.....	\$9 00
3082	Seeley's " "	2 00
3083	Scanzoni's " "	7 50
3084	Priestley's " "	7 50
3085	Emmet's Water " "	1 50
3086	" Sponge " "	1 85
*3087	Dr. Wm. Wm. H. Wathen's (Louisville, Ky.) Uterine Dilator ..	5.00
*3088	Solid Elm Tents, straight.....	per doz. 75
*3089	" " " curved.....	" 1 50
*3090	Hollow " " straight.....	" 1 10

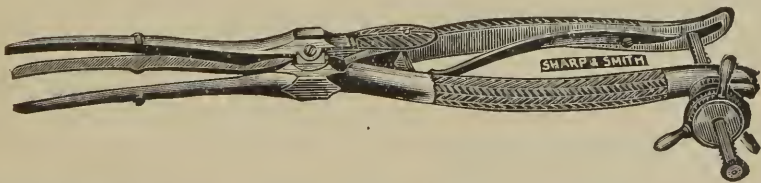
UTERINE DILATOR.

BY WILLIAM H. WATHEN, M. D., Louisville, Ky.



3087

This dilator has been much improved, and to its superior qualities has been added a principle that makes it as perfectly aseptic as it is possible to have any surgical instrument. The blades are held together by a modified French lock that admits of the instrument being separated into its different parts in a few seconds, so as to be easily cleaned and made aseptic. This is the only dilator that is made after this fashion, and as the handles are of vulcanized rubber, hermetically sealed over the steel, there is no place where it is possible to have poisonous matter retained after any reasonable degree of surgical cleanliness.



3081



3089

3088

3090

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—UTERINE DILATORS.

FIG.

*3091	Cervical Elm Plugs or Tampons.....	each	25c to 50
3092	Sponge Tents, best quality, carbolized.....	per doz	\$ 50
3093	“ “ “ “ “ “ curved.....	“	1 00
3094	“ “ “ “ “ “ straight waxed....	“	75
3095	“ “ “ “ “ “ extra large “	“	1 50
3096	Sea Tangle Tents, best quality solid.....	“	75
3096-A	“ “ “ “ “ “ hollow.....	“	1 00
*3097	Tupello “ “ “ “ solid.....	“	75
3097-A	“ “ “ “ “ “ hollow.....	“	1 00
*3097-B	Tent Expeller.....		50
*3098	Dr. R. W. Wilcox's Forceps for introducing Uterine Tents		1 50
*3099	Elm Vaginal Plugs.....	each	30 to 60



3098

DR. R. W. WILCOX'S UTERINE TENT FORCEPS.

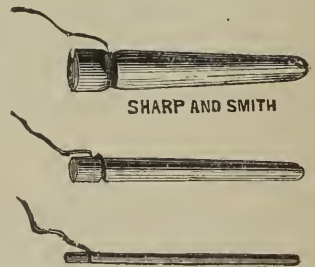
After considerable experience with the various forceps in use for the introduction of tents into the uterus, it was found that these instruments were faulty because of the construction of the jaws, or of the handle. The jaws were too long or too smooth, or of a bad curve; the scissors handles are also objectionable. In this instrument the proper length of the jaws was ascertained by experiment; they are made rough to take a firm hold upon the tent, and they are curved so that an unobstructed view of the tent itself and the field of operation is obtained. The handle is modeled after the very convenient ones in use upon the Collins needle holders, and the instrument can be taken apart to insure thorough cleanliness.



3091



3099



3097



3097-B

All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—UTERINE DILATORS.

STERILITY: INTRODUCING A NEW INSTRUMENT FOR ITS CURE.

By P. E. OUTERBRIDGE, M. D., Assistant Surgeon to the Woman's and New York Cancer Hospitals; Attending Gynæcologist to the Demilt Dispensary.

An apology may seem in order for drawing the attention of the reader to a subject which is touched upon in most of the gynæcological textbooks of the present day, and with which every gynæcologist is supposed to be familiar. But at the present time there is a decided tendency to study with care only those things that are entirely new. I am aware that in taking up this topic I shall have to go over some old ground, but I trust, nevertheless, to be able to throw a little light on this rather old and threadbare subject. My connection with two of the largest clinics for diseases of women in this city has brought before me the frequency of the existence of sterility and its unhappy consequences, a condition, the amelioration of which must be apparent to all; moreover, I have found it to be the fact that by a large majority of the patients at the clinics sterility is often regarded with shame, not unmixed with a feeling of disgrace, ideas quite contrary to those entertained by patients among the better educated class, in whom superior training has lessened these ancient convictions, for we know that among the old Romans a barren wife was considered a cause for separation. The patients, therefore, who come to consult for this condition, often fail to mention the subject directly, in the hope that something may be done to bring about the possibility of conception. It is only, therefore, by close and careful questioning that we elicit from them the real object of their visit.

In cases that give this history some other reason is always found, but it is nevertheless possible that it may be due to some constitutional trouble which impairs the general condition, or from lack of food or exercise the parenchyma of the uterus and appendages is weakened and so rendered incapable of developing and sustaining a healthy ovum; but I believe this to be of rare occurrence. In my opinion the absence of proper conjugal feeling will almost invariably be found to be of local origin, and if diagnosed correctly and treatment be carried out intelligently, at least in seventy per cent. of the cases our efforts to cure will prove successful.

It must be remembered that sterility may exist in the male as well as the female, even though the sexual relation appears normal, and after a careful examination of the female, and no cause can be found for the existing condition, an examination of the male should not be omitted. I will not at present enter into detail as to how this should be conducted, but will simply state that with the microscope and other modern appliances a diagnosis can very easily be made. The reader can readily understand, if such a condition exist, it would be a great injustice to subject the female to prolonged treatment, even if she have some slight trouble.

Recognizing the many difficulties to be overcome, first, in obtaining the history, and next, in following out any of the lines of treatment suggested in the textbooks, which in many instances, are extremely difficult and in the end perhaps futile, I thought if some very simple means could be devised by which the two vital elements could at least be brought together, the probability of the desired result occurring (*viz.*, pregnancy) would be increased fully fifty per cent., and so solve this difficult problem. It is unnecessary at present to mention the various operations and surgical appliances devised to accomplish this simple thing, for the reader is doubtless perfectly familiar with them, and knows or believes that, in a large majority of cases, a successful result is not obtained.

DR. OUTERBRIDGE'S INSTRUMENT—Continued.

The instrument I introduce in the following cuts is a very simple affair, consisting of a continuous steel wire made so as to form an anterior and posterior blade, with a slight eversion at one end, and at the other is bent at right angles. This shape adapts it admirably for the position it is to occupy in the cervical canal. The instrument is entirely self-retaining, and in consequence of its form, is not liable to change position. If, however, this should occur, it shows that it is not adapted to this special canal, and the operator can, with a

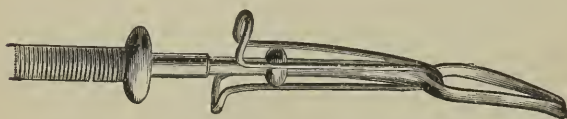


Fig. 3098-B—Outerbridge's Introducer, showing apparatus ready for introduction.

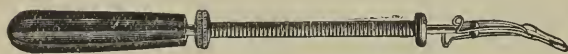


Fig. 3098-B—Outerbridge's Introducer, showing Dilator Inserted, and Introducer being withdrawn.

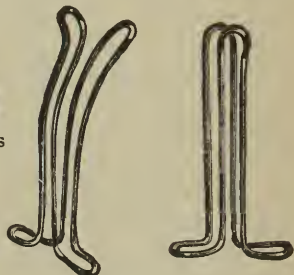


Fig. 3098-A—Outerbridge's Dilators.

small forceps, bend it to meet requirements. The dilator varies in length from one to three inches. The wire should be bent as desired, then tempered to give sufficient power, and heavily silver or gold-plated. This makes it perfectly clean—in other words, renders it safe. The first instrument I made by simply taking a hair pin and bending it into the required shape; this was used shortly afterward, being scraped and cleansed thoroughly with soap and water, and introduced with a plain dressing forceps, the uterus being steadied by a tenaculum.

This primitive instrument, of course is very much less effective, and apt to be even dangerous on account of its non-elasticity and possible accumulation of rust, whereas the present instrument is both yielding and aseptic.

The patient was allowed to go home with this instrument *in situ*, with the effect of relieving the dysmenorrhœa from which she suffered, and inducing conception immediately after the next menstrual period.

For introduction, the patient may rest either in Sims' position or on the back, if using a bivalve speculum. The dilator is then put in the grasp of an instrument made especially for this purpose, such as is seen in the accompanying cuts. It is about ten inches long, and consists of two small steel blades, crescentic in shape, slightly curved and about half an inch in length, which at the end fall together, making it similar to a slightly flexible blunt probe. There is a small place between these two blades, which gradually increases in size for two-eighths of an inch, then grows smaller and coalesces in a slightly flexible rod which is about an inch long, smooth and round; on this there is a movable ball; the blades are shaped to hold and compress the smaller or inner end of the dilator, and being movable, can be adjusted to any sized instrument that may be required.

I claim for this instrument that it dilates the cervical canal, making it possible in every instance, after copulation, for the semen to gain admission to the uterine cavity, thus bringing the male and female vital principles together with certainty.

For further description of these instruments, see "Medical Record," April 20, 1889.

GYNÆCOLOGICAL INSTRUMENTS—CURETTES.

FIG.

*3106-A	Ludlam's Uterine Curette	\$2 00
*3106-B	Dudley's " "	1 50
*3106-C	Peck's " "	1 50
*3106-D	Leavitt's " "	1 75
*3106-E	Holbrook's " " 1 tip	3 25
3106-G	" " " 2 "	3 50



SHARP & SMITH.

3106-A



3106-B



3106-C



3106-D

LEAVITT'S UTERINE CURETTE.

This instrument is well represented in the cut. It is larger at one end than it is at the other; the smaller spoon being intended for use in a uterus not recently pregnant. The larger spoon is the one which is commonly used in obstetrical work.

The handle is flattened so that it can be held firmly, and rotation during use thereby prevented.

This instrument is given a lateral sweep, by means of which small fragments of retained secundines and morbid structures are secured with greater certainty.

After a uterine cavity, more or less covered with vegetations, has been curetted with apparent thoroughness by an ordinary instrument and the debris washed away, and the cavity dried by thorough swabbing, it will be astonishing to the operator how imperfect has been his work, if he now employs the Holbrook curette. The instrument is sufficiently heavy and well-balanced to adapt it perfectly to the most delicate manipulations, enabling one to employ a much finer sense of touch as the instrument comes in contact with the endometrium, and in this respect is much superior to other instruments. Its chief merit, however, lies in the fact that it serves not only as a curette, but also as an intra-uterine douche at the same time. The stem is hollow and the uterine extremity of the tube opens in the scoop of the curette, so that the water is reflected forward, thus immediately washing away all debris loosened by the curette. The tube of a fountain syringe is to be fastened to the handle, and after the stream is well started and the curette is introduced into the uterine cavity, it is to be handled as any other curette, only this can be done more delicately on account of its happy poise.

In order to adapt it to all possible conditions the spoon extremity is furnished with two spoon tips of different sizes, which can be fastened at will to the handle by a screw attachment.

Instruments designated by a * are illustrated.

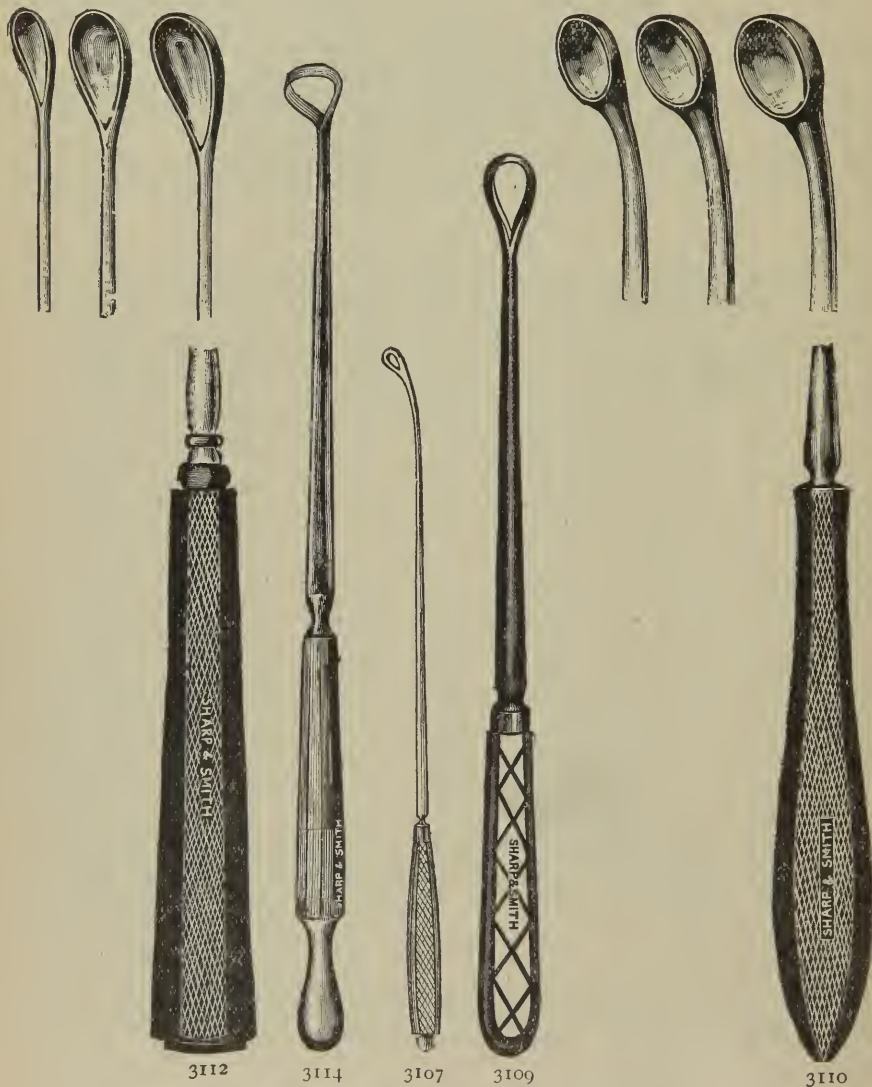


3106-E

GYNÆCOLOGICAL—CURETTES.

FIG.

*3107	Sims' Sharp Uterine Curette	.....	\$ 1 00
3108	" Blunt	" "	1 00
*3109	Thomas' Blunt	" "	1 00
*3110	Siemons'	" "	each 1 25
3111	Peaslee's	" "	2 25
*3112	Skene's	" "	1 00
3113	White's	" "	1 50
*3114	Hoag's	" "	2 50

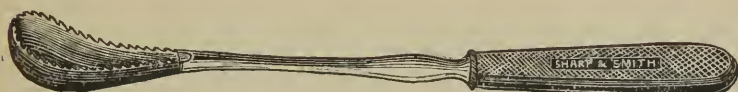


Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—CURETTES.

FIG.

*3115	Marcy's Uterine Curette.....	\$ 2 65
*3116	Burt's " "	2 00
*3117	Cheatham's " "	1 85
*3118	Thomas' Serrated Uterine Curette or Spoon.....	2 25
3119	Engelman's " "	2 25
*3120	Duke's " "	1 00
*3121	Wylie's " "	1 75
*3122	Byford's " "	1 00
*3123	Recamier's " "	1 50



3118



3115



3116



3117



3119



3120



3121



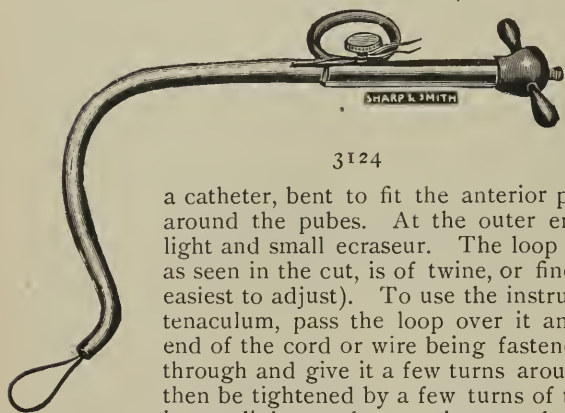
3122

All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—TOURNIQUETS.

FIG.		
*3124	A. Ady, M. D's. New Uterine Constrictor	\$3 75
*3125	" " " " Tourniquet and Expanding Curette	3 00
*3126	Dr. Chas. N. Dixon Jones' Rope Ecraseur for Hysterectomy...	5 75

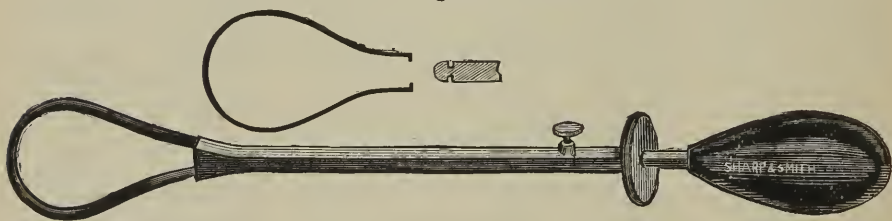
DR. A. ADY'S UTERINE CONSTRICTOR.



This is a simple and inexpensive instrument that answers the purpose of operations in trachealoraphy admirably, and is not in the way of the operator.

It consists of a canula like a catheter, bent to fit the anterior part of the vagina, and hook around the pubes. At the outer end is a screw like that in a light and small ecraseur. The loop that goes around the cervix, as seen in the cut, is of twine, or fine copper wire (which is the easiest to adjust). To use the instrument, grasp the os with the tenaculum, pass the loop over it and around the cervix. One end of the cord or wire being fastened to the peg, pull the other through and give it a few turns around the same; the loop can then be tightened by a few turns of the screw. The instrument is very light, needs no assistant to hold it, and is easily cleansed.

DR. A. ADY'S UTERINE TOURNIQUET AND EXPANDING CURETTE.



This instrument was originally used as an Expanding Curette, and roughly made of a piece of watch spring and a piece of catheter. It is also an improvement of the Emmet's.

It is light, small, and can be taken apart for cleaning by turning one set screw.

We should have several different lengths of watch-spring loops; for the tourniquet, the latter is better made light, but, when used as a curette, it should be of the strongest.

In doing Emmet's operation, place the loop around the cervix, tighten it by pushing on the flange to any desired tension, and fasten it by set-screw; it will not slip off or come loose during the operation. It is very easily controlled.

When it is desirable to use it as a curette, put in a heavier and shorter loop, and draw it back into the canula, when it is easily introduced into the uterine cavity, where it can be expanded by pulling on the flange with the thumb, to any desired extent. The piece of watch-spring adapts itself to the cavity, and, when rotated, will detach anything that may be attached in the shape of a secundine, without danger of lacerating the uterine walls.

All instruments designated by a * are illustrated.

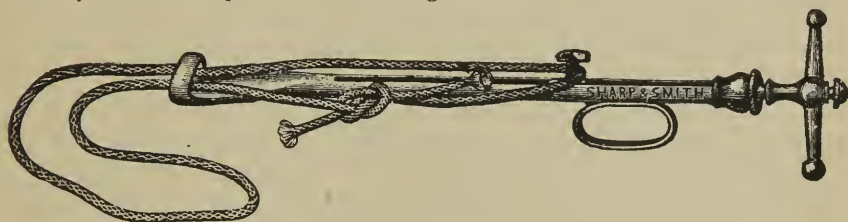
GYNÆCOLOGICAL—ECRASEURS.

A ROPE ECRASEUR FOR HYSTERECTOMY.

BY CHARLES N. DIXON JONES, M. D., Brooklyn.

The accompanying cut illustrates a temporary rope ecraseur which I exhibited at the December meeting of the Section in Surgery of the New York Academy of Medicine. Those who are accustomed to use the elastic ligature in hysterectomy or supra-vaginal amputation of the uterus for myoma, will find the operation greatly facilitated by the use of this instrument.

Some form of instrument for temporary compression of the pedicle during manipulation and enucleation, before the stump is permanently secured, is a necessity in order to prevent hæmorrhage.



3126

The elastic tourniquet is not so rapid nor so powerful in its action, and, furthermore, it is open to the more serious objection that it is apt to slip over the stump after the tumor is removed.

The rope ecraseur is a modification of Mr. Lawson Tait's well known clamp. It is made stronger and longer, being about fourteen inches in length so as to give a wide range of compression in the rope.

The rope is thoroughly boiled before use, so that it is not likely to slip. The instrument may be easily tightened during any stage of the operation. After it has accomplished its purpose the rope is cut, and the instrument is quickly removed and laid aside.

A COMBINED CURETTE AND DOUBLE CATHETER.

Fig. 3127.

BY GEORGE E. ABBOTT, M. D., New York.

I send herewith a drawing of a double catheter, with a curette attachment, which has been found to work well by my friends and myself in several cases. It consists of a fac simile of a double catheter lent to me by Dr. Edwin F. Ward, (of New York) which has unusually large fenestræ for the free return of the injected fluid, to which may be attached the curettes *D*, *E*, *F*, on the round end of the catheter *G*. The curettes are of various sizes, and dull or sharp as desired.

For curetting the anterior surface of the uterus or other cavity, screw the curette on as far as it will go, when it will be in position as at *D*, Fig. 1, or *A*, Fig. 2. For the posterior surface, give the curette a half turn, when its concavity will look backward, and will attack the posterior surface wall. For curetting the sides, unscrew the curette a quarter turn or a three-quarter turn, when it will have the position of Fig. 2, *C* or *B*. (See next page.)

GYNÆCOLOGICAL—ECRASEURS.—Continued.

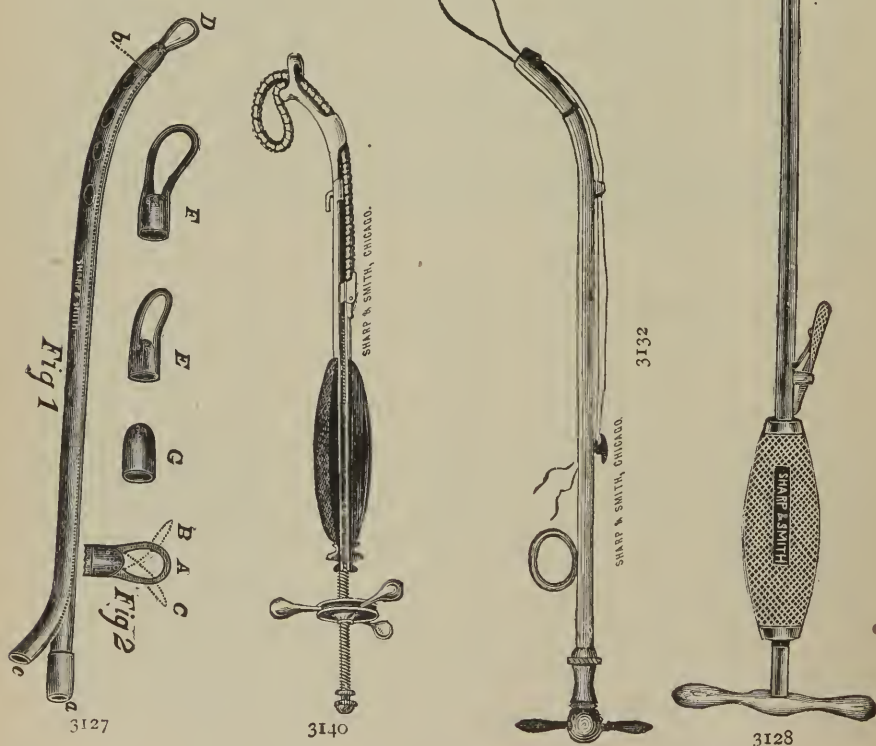
It will at first seem that, when placed in these positions, the curette would not attack its work, but would turn this way and that. That this is not the case can be demonstrated by curetting the sides of the hand as it grasps the instrument.

The curettes are attached by a fine thread and a long shoulder or tenon, as at *b*, and thus allow of the positions above indicated without loss of firmness.

In use, a Davidson's syringe or irrigating tube is attached to the catheter at Fig. 1, *a*, through which the antiseptic fluid passes, emerging at the little holes at the base of the curette *D*.

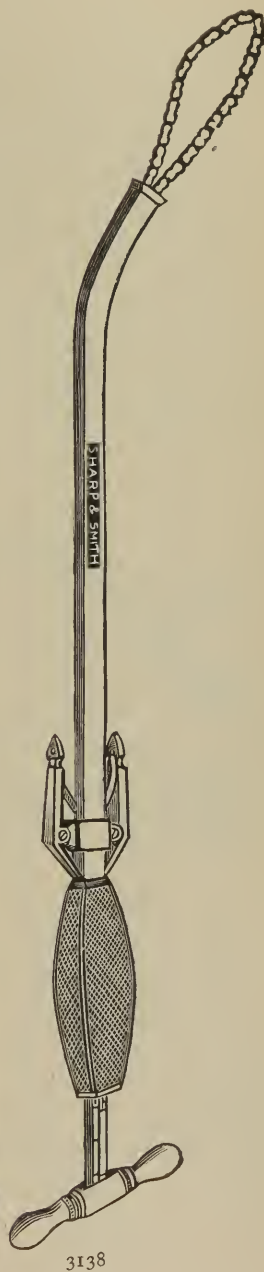
The return current passes through the large fenestræ below *b*, and out at *c*, into a white receiving vessel. (It will add much to the comfort of the surgeon to have a tube attached to *c*, thus avoiding wetting his hands, etc.)

The advantages gained are: 1. In making the parts thoroughly aseptic. The antiseptic fluid being allowed to run before entering the cervical canal, and during the time of operating. 2. The denuded surfaces are immediately covered by the antiseptic fluid before infection can possibly take place. 3. The detritus is immediately and fully removed. 4. The surgeon can see by the returns in his white receiving bowl what he is doing—fungosities, membrane, pure blood, or clear antiseptic fluid. 5. No bacteria are introduced, as in the use of the ordinary curette. 6. No fungosities or detritus remain to decompose.



GYNÆCOLOGICAL—ECRASEURS.

FIG.		
*3127	Dr. Geo. E. Abbott's Combined Uterine Curette and Double Catheter	\$ 4 00
*3128	Emmet's Uterine Tourniquet.....	4 00
3129	Millers' " "	4 50
3130	Spohns' " " set of 7.	2 50
3131	Smith's Straight Wire Ecraseur	3 00
*3132	" Curved " "	3 25
3133	" " " " 2 points	4 00
3134	Braxton Hicks' " " 3 "	11 25
3135	Barnes' " "	3 75
3136	Chassaignac's Small Straight Chain Ecraseur.....	10 50
3137	Chassaignac's Small Curved Chain Ecraseurs.....	11 00
*3138	Chassaignac's large Curved or Straight Chain Ecraseur.....	13 50

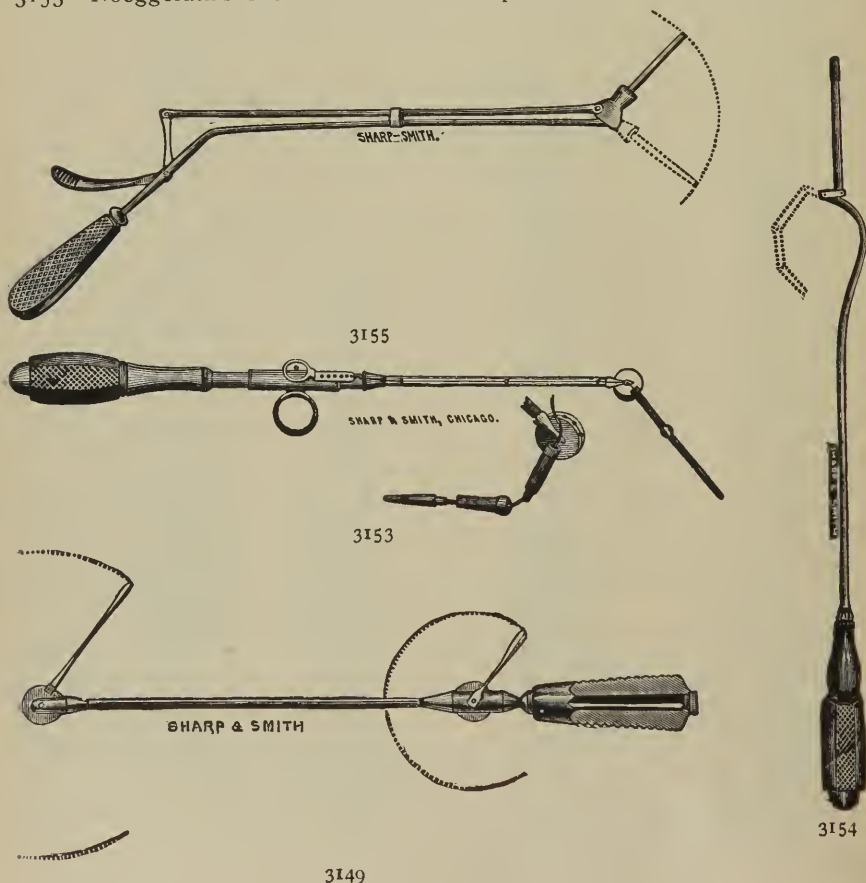


GYNÆCOLOGICAL—REPLACERS.

FIG.					
3139	T. & Co.'s Short Chain Ecraseur.....	\$	8	00	
*3140	“ Long “ “		15	00	
3141	Emmet's “ “		26	50	
3142	Edwards' “ “		13	50	
*3143	Sims' Porte “ “		26	25	
3144	Nott's Rectilinear “		9	00	
3145	Koeberle's “		5	00	
*3146	Gooch's Polypus Canula, silver		2	00	
*3146	“ “ plated.....		1	00	
*3147	Aveling's Polypotome.....		6	00	
*3148	Simpson's “		2	00	

UTERINE ELEVATORS.

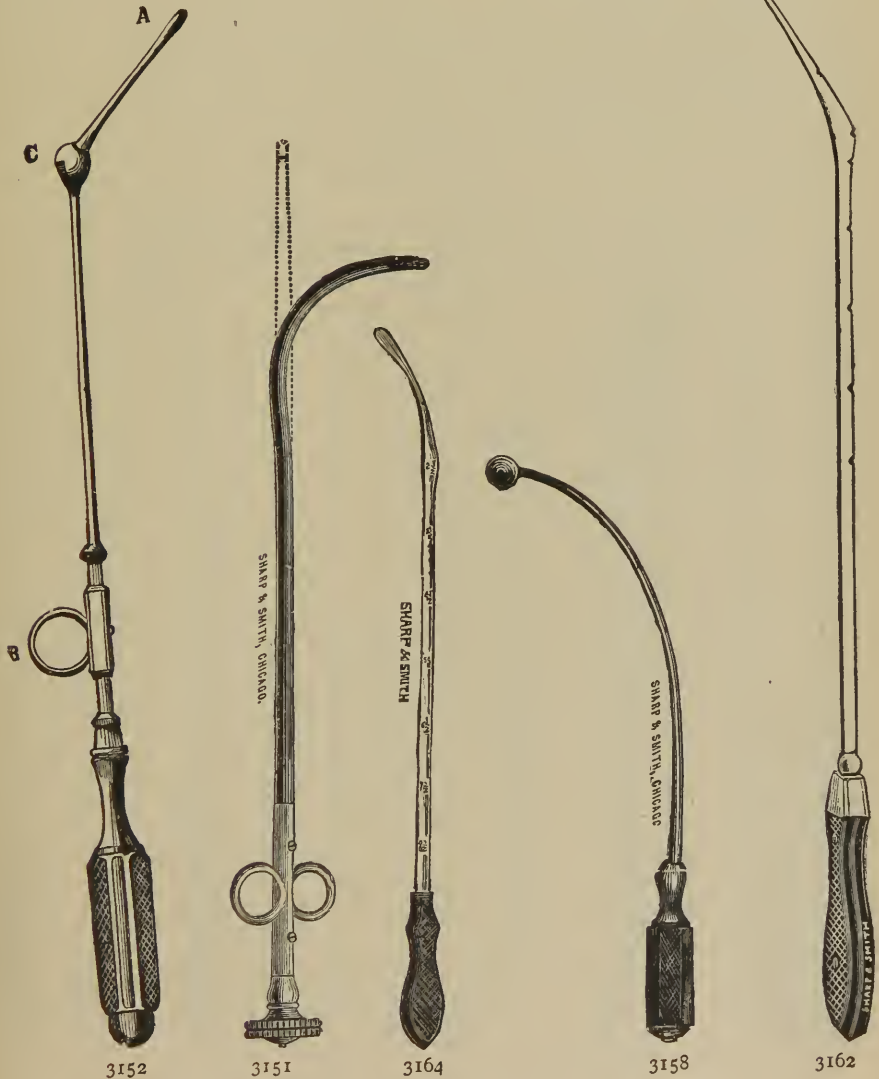
*3149	Ludlam's Uterine Elevator.....	\$	3	50
3150	“ Modification of Guernsey's Uterine Elevator.....		1	00
*3151	Elliott's Uterine Elevator or Replacer.....		2	50
*3152	Sims' “ “ “		4	00
*3153	Noeggerath's Uterine Elevator or Replacer		6	75



GYNÆCOLOGICAL—ELEVATORS.

FIG.

*3154	Emmet's Uterine Elevator.....	\$ 3 00
*3155	Carroll's " "	2 60
3156	Wylie's " "	5 00
3157	Miller's " "	2 00
*3158	Guernsey's " "	1 00
3159	Skene's " "	5 25
3160	Gardner's " "	6 00
3161	White's " "	3 75
*3162	Simpson's Uterine Sound, graduated.....	65
3163	" " " not graduated.....	65
*3164	" Plain Uterine Sound "	65



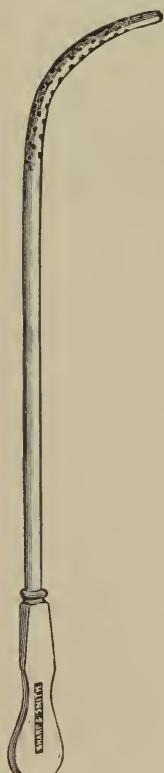
GYNÆCOLOGICAL—SOUNDS.



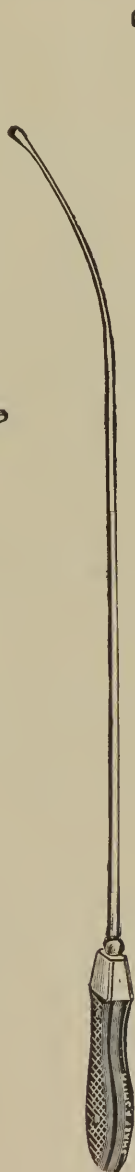
3172



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3179

GYNÆCOLOGICAL.

FIG.
*3180 Jennison's Exploring and Indicating Sound.....\$ 3 00

We have pleasure in calling the attention of physicians to this Instrument, containing valuable and remarkable qualities never before embodied in any for similar uses. In explorations of the uterine canal, and the diagnosis of malformations, growths, displacements, and, to a certain extent, as a repositor, there seems abundant reason for the belief that it is possessed of peculiar and positive value.

In its construction a number of light steel springs about fifteen inches in length are arranged upon and parallel to each other, united at their ends, and placed within a small metal tube, which surrounds them, with the exception of about three inches at each end. One end of this tube is covered with hard rubber of size and form to constitute a convenient handle, which allows the instrument to rotate easily within it, affording complete freedom of movement while being introduced; or it may be held above or below the handle if freedom is undesirable. The ends are each of about the diameter of Simpson's Sound.

The whole of the instrument, except the handle, being covered with a delicate flexible rubber sheath, is protected from the intrusion of fluids, and is in all respects complete and convenient.

Its construction being understood, it will be evident that any simple or single curve made in either of the flexible ends will be reproduced in an inverted form at the other; that an S, or double curve, in one end, will cause the other end to become straight; and that the instrument, while able to conform its distal extremity to the uterine canal, whether normal or abnormal, will reveal its real form at the proximal extremity.

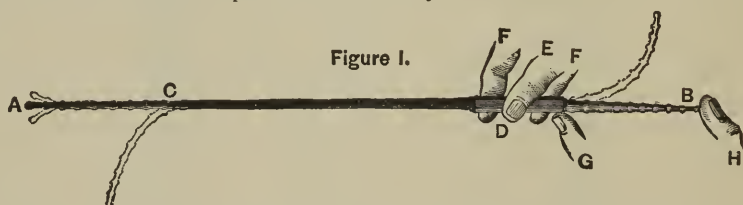
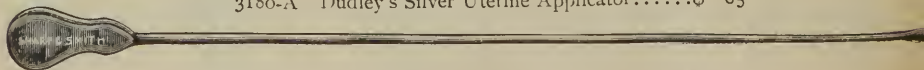


Fig. 1 is a representation, the dotted lines showing some of the almost unlimited number of positions of the ends attainable by manipulation. In the diagnosis of displacements by the use of flexible silver instruments, their form, when withdrawn from the os, indicates little or nothing, because of straightening; not so, however, with this instrument, which, at each movement of introduction or of withdrawal, indicates at the exposed end the form of the covered one.

In the use of any metal or partially flexible sound in a canal whose axis does not correspond exactly to its own, the sound overcomes resistance to its advancement by compelling the canal to assume its own shape; with the new instrument, on the contrary, an undulatory movement, or a slight increase of the curve already indicated, is obtained by gently manipulating its proximal end, so that it may be made to pass where other instruments would be excluded.



3180-A Dudley's Silver Uterine Applicator.....\$ 85



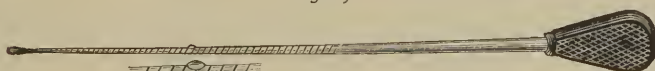
3180-B Dudley's Silver Uterine Probe.....\$ 85

GYNÆCOLOGICAL—PROBES.

FIG.			
3181	Sims' Silver Uterine Probe.....	\$	85
3182	" " " " with shield.....	I	00
3183	" Aluminium Uterine Probe.....		90
3184	" " " " with shield.....	I	05
*3185	Emmet's Silver Uterine Probe.....		85
3186	" " " " with shield.....	I	00
3187	" Aluminium Uterine Probe.....		90
3188	" " " " with shield.....	I	05
*3189	Lente's Caustic Probe, one bulb.....		95
3190	" " " " two ".....	I	15
*3191	Jenks' Uterine Probe.....		85
3192	Skene's " " and knife.....		75
3193	Whalebone Uterine Probe.....		40
3194	Leadon " ".....		35
3195	Budd's Hard Rubber Uterine Probe.....		35
3196	Thomas' Flat Hard Rubber Uterine Probe.....	I	35
*3197	" " " " ".....		85
*3198	Emmet's Silver Uterine Applicator, with slide.....	I	00
3199	" Aluminium " ".....	I	00
3200	Mitchell's Uterine Applicator.....	I	25
*3201	Budd's Hard Rubber Uterine Applicator.....		40
3202	Thomas' " " " ".....	I	50
3203	Sims' " " " ".....	I	25
*3204	Turner's Uterine Applicator....		75
3205	Dudley's " ".....	I	00
3206	" Whalebone Uterine Applicator.....		75
3207	Miller's Hard Rubber " ".....		35
3208	Nott's " " " ".....		75
3209	Rea's Uterine Applicator.....		75
3210	Recamier's Uterine Applicator.....	I	00
3211	Woodbury's " ".....		75
3212	Wylie's " ".....		75
*3213	" Cervical Protector.....	I	50
3214	Barker's Ointment Bougies.....	I	00
3215	Dixon's " ".....	I	00
*3216	Lallemand's Porte Caustic.....	3	00
3217	Gross, " ".....	3	00



3189



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3185

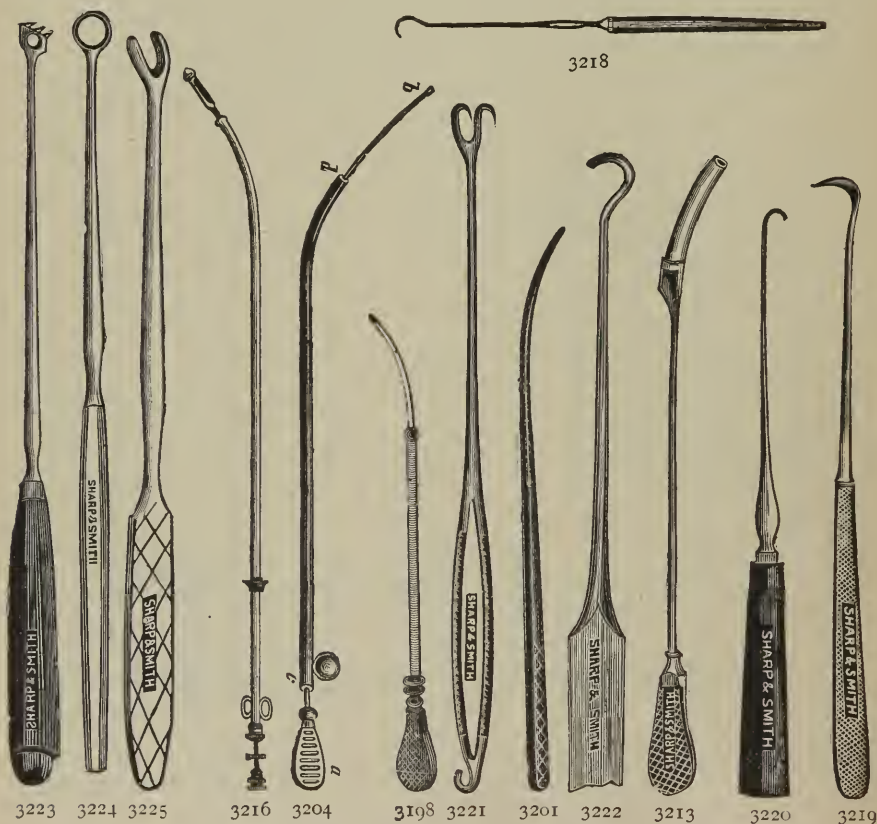


3197

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—HOOKS.

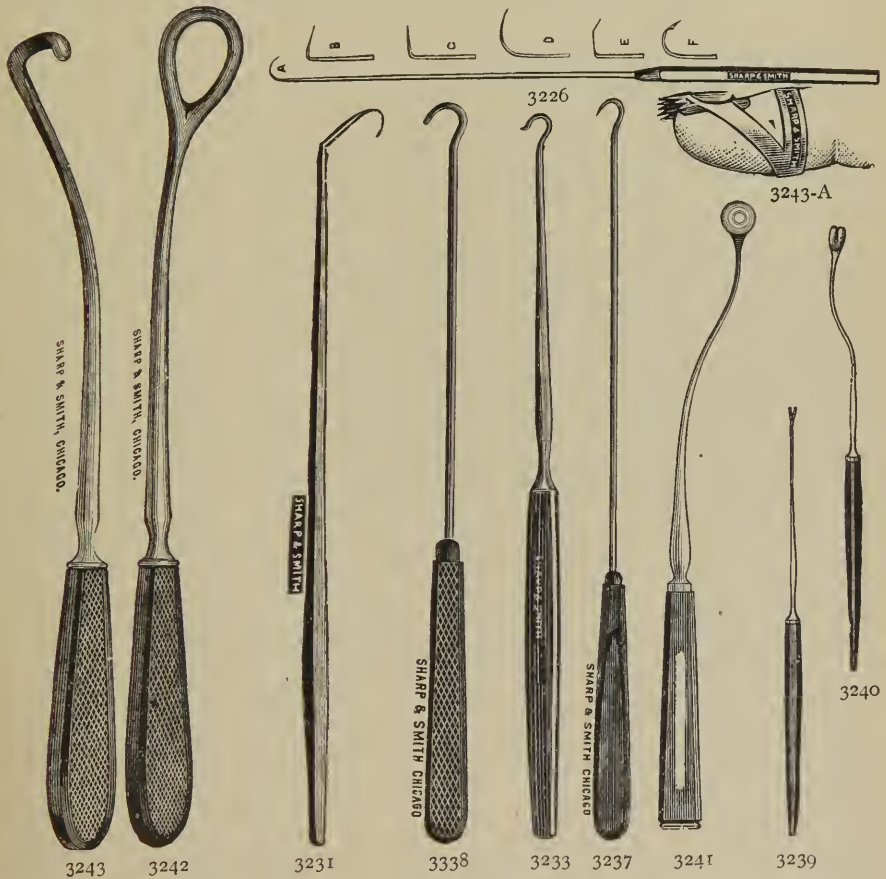
FIG.				
*3218	Sims' Blunt Hook.....	\$	75	
*3219	Byford's Blunt Hook.....	I	00	
*3220	Bozeman's ".....	I	10	
*3221	" Double Hook for exerting traction on the uterus....	I	90	
*3222	Emmet's Counter Pressure Hook.....	95		
*3223	McDonald's " " ".....	I	50	
*3224	Skene's " " ".....	I	15	
*3225	Wylie's " " ".....	I	00	
*3226 A and D	Sims' Uterine Tenaculum.....	75		
3227	Nott's " " wire.....	25		
*3226 F	Perry's Barbed " ".....	I	00	
3228	Skene's Double " ".....	2	00	
3229	Miller's " " wire.....	25		
3230	Nelson's " " ".....	25		
*3226 B, C	Emmet's " ".....	75		
*3231	" " angular.....	90		
3232	Heavy " " for pulling down the uterus.....	I	50	
*3226 E	Bozeman's " ".....	I	15	
*3233	" " with steel shank.....	I	15	



All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—HOOKS.

FIG			
3234	Wylie's Uterine Tenaculum.....	\$	85
3235	Dudley's " ".....		75
3236	Thomas' " ".....		85
*3237	Pratt's " ".....		75
*3238	" " " blunt.....		75
	Double Tenacula and Tenaculum Forceps—see index.		
*3239	Sims' Pulley.....		75
*3240	" Wire Adjuster.....		75
*3241	Bozeman's Wire Adjuster.....	I	50
*3242	Sims' Enucleator.....	2	65
*3243	" " blunt hook.....	3	25
*3243A	Emmet's Enucleator....	I	15



3233. Dr. Hanks' Improved Tenaculum is of the ordinary shape and size, but differs from other instruments of the kind in this respect. The steel shank is so constructed that the steel extends along the back of the handle, on the side opposite to the point or hook. When the latter is buried in the tissues, the direction in which it points will always be indicated by the metal back, as in the case of Simpson's sound, so that the hook can be disengaged immediately.

GYNÆCOLOGICAL—HOOKS.

FIG.			
*3238-A	Dudley's Uterine Tenaculum.....	\$o 75	
3238-B	Byford's " "	1 10	
*3238-C	" " " Blunt	1 10	
*3238-D	Arango's " "	1 15	
*3238-E	Dr. R. B. Talbott's Counter Pressure Needle Forceps.....	3 75	
*3238-G	Harris Counter Pressure Instrument.....	1 50	

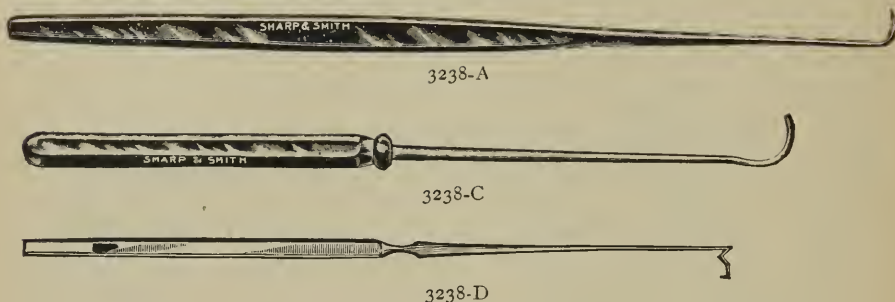


Fig. 3238-D—A NEW UTERINE TENACULUM FOR FORMING SHOULDERS TO WIRE SUTURES.

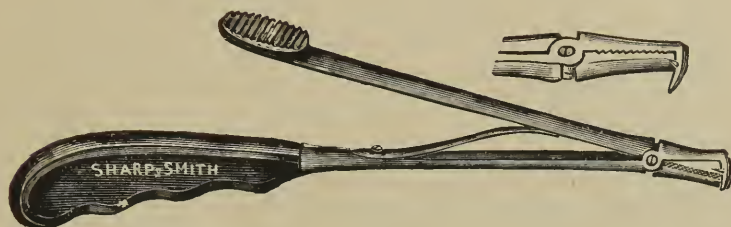
By AUGUSTIN ARANGO, M. D.

Both difficulty and inconvenience are often encountered in gynæcological operations, especially in trachelorrhaphy, in bending the wire over the line of the wound to form the shoulders preliminary to twisting the sutures. The method commonly resorted to by means of the ordinary uterine tenaculum is easily accomplished on one side by bending upward or to the left the wire held by the twister; the hook of the tenaculum being placed above the wire, acts as counter-pressure, and one shoulder is formed. On the other side the procedure is quite awkward, for, in order to make the shoulder here, it is sometimes necessary to cross hands or change the instruments in the hands to bring counter-pressure to bear on the wire.

After experimenting to overcome the difficulty, I have devised an instrument * * * represented in the cut—which materially facilitates this part of the operation. It consists of a solid steel uterine tenaculum, the arm or horizontal portion of which is bent so as to form two angular depressions—the first below, the second above. The first is used for making traction and counter-pressure in forming the shoulder on the left of the operator, or on the upper side of the wound, as the case may be; the second facilitates the forming of the lower shoulder, or that on the right of the operator, counter-pressure being made by *pushing* against the wire while it is properly bent. In all other respects the instrument resembles the ordinary uterine tenaculum, and may be used as such.

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL.



3238-E

The instrument which I exhibit to the Society is one I have recently devised, and find very useful in operations for lacerations of the cervix. It will also be found applicable in *any* operation where the needle must be extricated from dense tissue by the forceps and the aid of counter-pressure. I have called these counter-pressure forceps, as they supply the place of a counter-pressure hook at the time of passing the needle through the tissues; still, in *very dense* tissue we may be obliged to use the counter-pressure hook in drawing the thread through *after* the needle is firmly seized by the forceps. But its usefulness is such that I venture to place it before the profession. The instrument is made something on the principle of an ordinary needle forceps, though lighter; the difference being that it is flat on one side, with a small cross-bar attached to one jaw, passing across and sliding *under* the other jaw, thus forming a counter-pressure loop. Upon this bar is a small spur, which penetrates the tissue and keeps the instrument from slipping when in position for use.—*Dr. R. B. Talbot.*

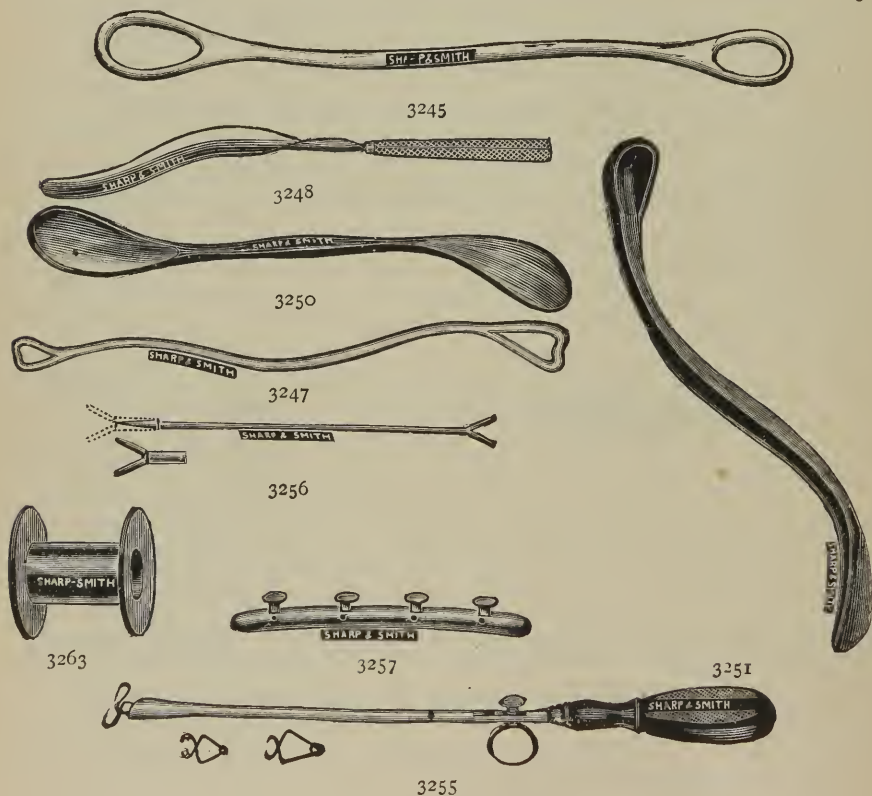


3238-G

Prices in this catalogue strictly net, except
when otherwise stated.

GYNÆCOLOGICAL—DEPRESSORS.

FIG.					\$
3244	Sims'	Vaginal Depressor.....			75
*3245	" Double "	" "			75
3246	Emmet's	" "			75
*3247	Nott's Double "	" "			75
*3248	Bozeman's	" "			1 30
3249	Jackson's	" "			1 50
*3250	Hard Rubber	" "			1 30
*3251	Whitney's	" " Hard Rubber.....			1 30
3252	Hunter's	" "			1 00
3253	Ludlam's	" "			1 25
3254	Peaslee's	" "			1 75
*3255	Hoffman's Automatic Suture Instrument.....				4 25
*3256	Brickell's Perineal Stays.....				60
*3257	Munson's Quill Suture.....	per pair.			60
3258	Thomas' Tampons.....				1 15
3259	Yarrow's Tampon Carrier.....				2 50
*3260	Sims' Tampon Screw.....				1 00
*3261	Hard Rubber Tampon Screw.....				40
*3262	Sharp & Smith's " "				1 10
*3263	Emmet's Glass Button for Cystitis.....				25
*3264	Carroll's Knot Tier.....				1 50
*3265	Dr. Chas. D. Scudder's Knot Tier.....				1 50



GYNÆCOLOGICAL.

The accompanying cut represents an instrument devised by Charles D. Scudder, M. D., New York, to help in making knots, when suturing or ligaturing in cavities.

The instrument consists of a two-pronged steel shaft with a baked rubber handle. Each prong has an eye near its end, and the distance between the eyes is three-eighths of an inch. The form of the prongs has been changed since the drawing was made, and the fork is now lyre-shaped. It can be made curved to any degree desired. The holes are carefully beveled, and three sizes—nine-inch, six-inch, and four-inch length are made.

In ligaturing, the first knot is carried over the hæmostatic forceps, and the ends of the ligature (which should be of good length) are passed through the holes in the fork, as shown in the sketch. The knot is carried down and placed by the knot-tier wherever wished, and suitable traction is made by pulling on the ends of the ligature, which are wrapped around the fingers of either hand, while steadying the handle with the thumbs. The instrument is then removed carefully, in order not to undo the knot; a new hitch, single or double, is made, the ends again threaded through the eyes, the knot placed, and firm traction completes the operation.

In suturing, the needle is detached after the suture is passed through the tissues to be sewn together, and the knot is made and placed as above described.

A little practice will enable the operator to apply knots quickly and surely.



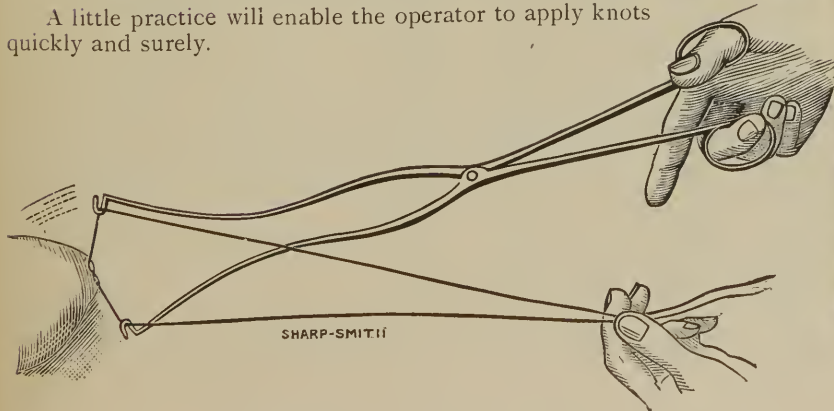
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3260



3264

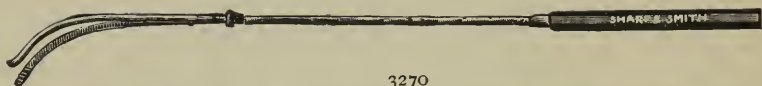
3261

GYNÆCOLOGICAL—SPONGE HOLDERS.

FIG.					
*3266	Sims' Uterine Sponge Holder.....	\$	50		
*3267	Hart's " " "		75		
*3268	Emmet's " " "		50		
3269	Granger's " " "	I	50		
*3270	Fergen's " " "	I	00		
3271	German Silver Uterine Sponge Holder, long.....		55		
3272	Ellsberg's " " "	I	15		
*3273	Husson's " " "		50		
3274	Byrnes' Uterine Fixator.....	I	85		
3275	Perforated Shot.....		per doz.	10	
3276	Shot Punching Forceps.....	2	00		
3277	Marcy's Perineum Pins.....		each.	35	



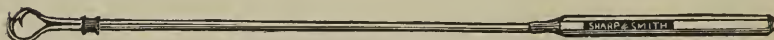
3267



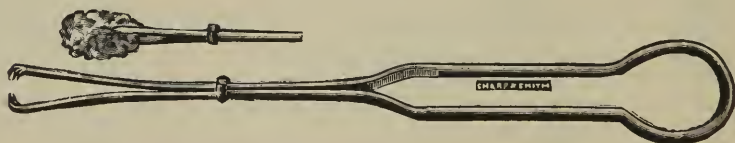
3270



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3266



3273

We call the attention of the profession to an easily cleaned and perfectly aseptic Sponge Holder (Fig. 3273.)

The instrument is nine inches long and made out of a single piece of steel wire, nickel plated. The blades are brought together by a ring of steel, which can be readily slipped off, thus permitting the instrument to be thoroughly cleaned.

The cut represents the instrument so clearly that further explanation is unnecessary.

The advantages claimed for this instrument are :

1. That it is easily cleaned, hence thoroughly aseptic.
2. That it is light, strong and durable.
3. That it is cheap.

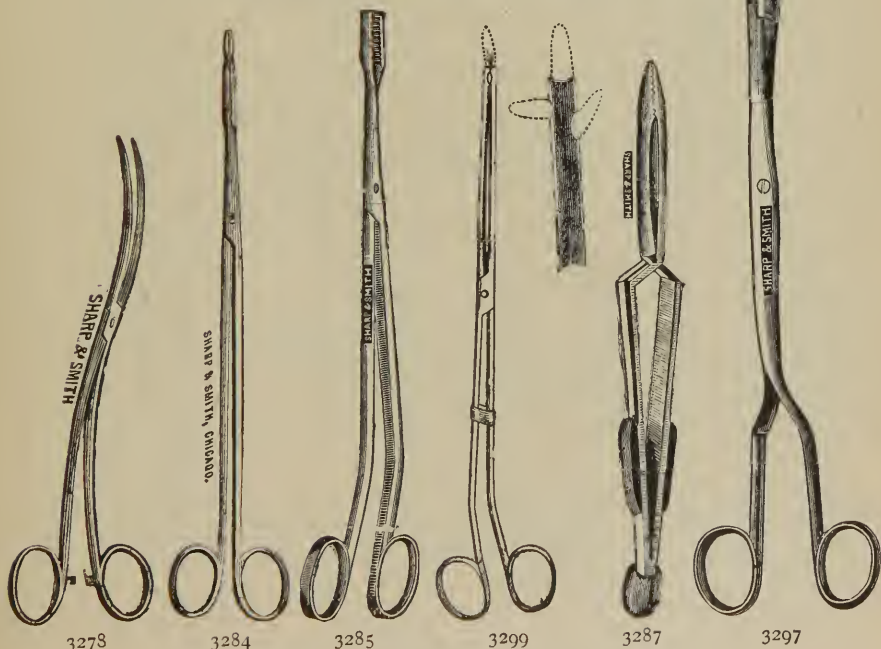
Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—DRESSING FORCEPS.

FIG.						
*3278	Bozeman's Uterine Dressing Forceps, with catch.....					\$1 50
3279	" " " " " without catch.....					1 25
3280	Sims' " " " " " "					1 75
3281	" " " " " with slide "					2 25
3282	Elliott's " " " " " "					1 50
3283	" " " " " without catch.....					1 25
*3284	Plain " " " " " "					1 25
*3285	Byford's " " " " " "					1 35
3286	" " " " " with "					1 50
*3287	Thomas' latest Uterine Dressing Forceps, cross action.....					3 00
3288	Emmet's " " " " " slide catch.....					1 75
3289	Hart's " " " " "					1 85
3290	Leonard's " " " " " with catch.....					1 85
3291	Allen's straight " " " " " "					1 50
3292	" " " " " without catch.....					1 25
3293	Winston's " " " " "					2 60
3294	Buttles' " " " " "					1 75
3295	Wylie's " " " " "					2 25
3296	Shield's " " " " "					1 75
*3297	Emmet's " " " " " "					2 50
3298	Thomas' " " " " " Dilating "					2 00
*3299	Gardner's Uterine Caustic Holding "					2 40
*3300	Sims' " " " " " "					3 00



3300



3278

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3299

3287

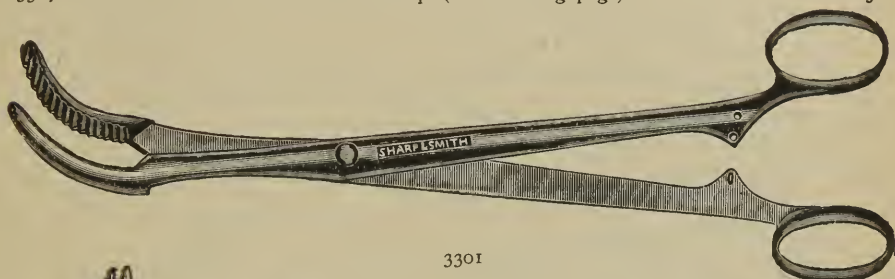
3297

All instruments designated by a * are illustrated,

GYNÆCOLOGICAL—DRESSING AND POLYPUS FORCEPS.

FIG.

*3307-A	Ludlam's Uterine Dressing Forceps, with catch.....	\$1 75
*3307-B	Hartz's Delicate Uterine Dressing Forceps, with catch.....	2 50
*3307-C	Harvey's Uterine Polypus Forceps.....	2 50
*3307-D	Dr. H. T. Hauk's Uterine Tenaculum (see following page).....	2 65
*3307-E	Leavitt's Uterine Tenaculum Forceps (see following page).....	2 25



3301



3307-A



3307-B



3307-C

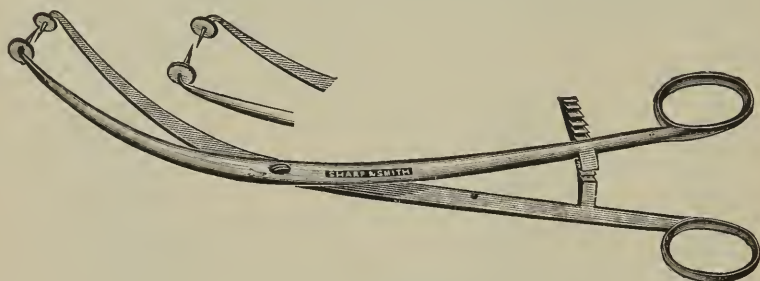
Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—FORCEPS.

Fig. 3307-D A FORCEPS FOR HOLDING AND DRAWING UP THE UTERUS DURING LAPARATOMY.

BY DR. H. T. HANKS.

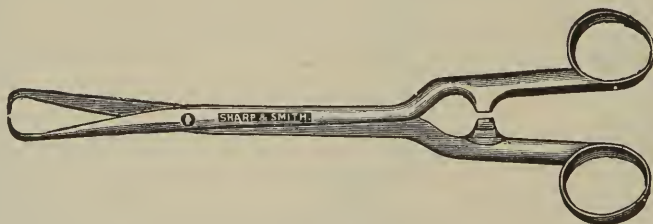
This instrument has been devised because a tenaculum often slips and the two-toothed volsella forceps makes an unnecessary number of wounds. This new instrument consists of two strong-handed tenacula, joining together about two-fifths of the distance from the distal ends. The brads are one-third



3307-D

of an inch in length and bent at right angles, and on each brad is a round, smooth button, which prevents injury to the uterus. The volsella shanks are bent so that the instrument is out of the way during manipulation.

LEAVITT'S MODIFIED BULLET FORCEPS FOR GYNÆCOLOGICAL AND OBSTETRICAL USE.

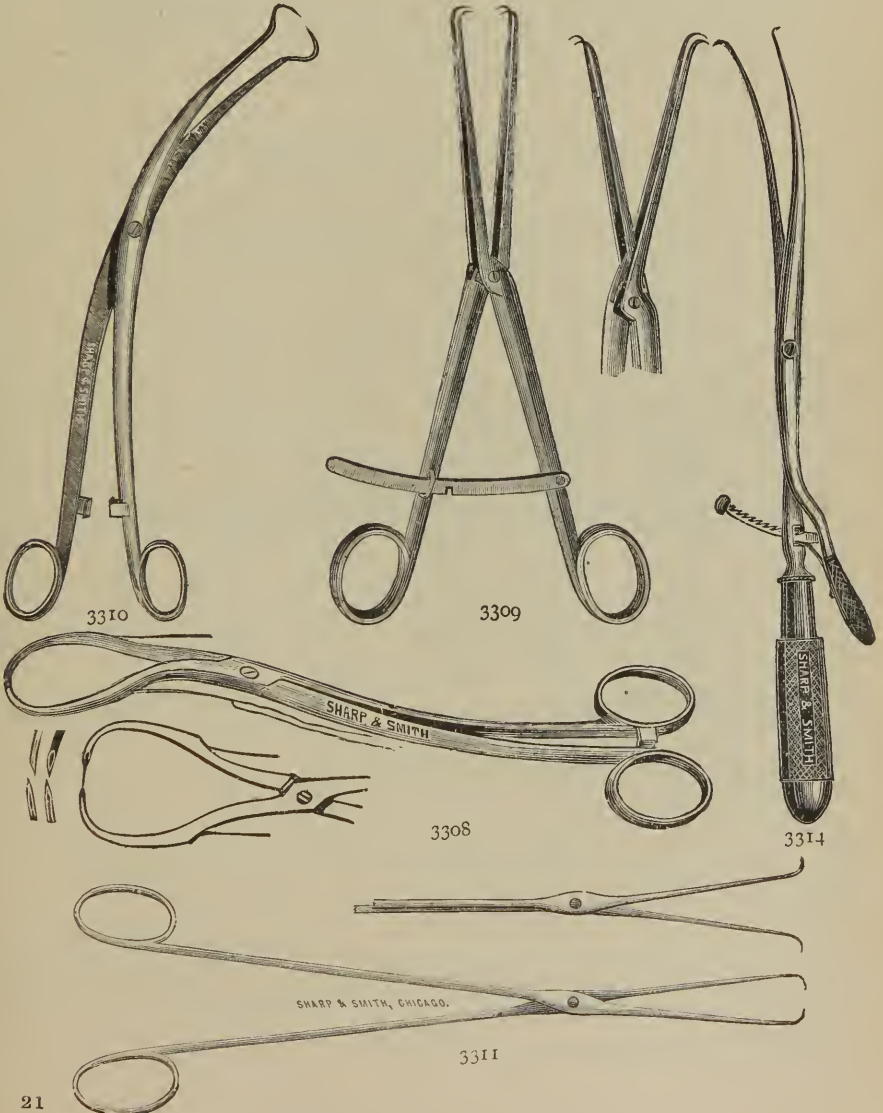


3307-E

It will be observed that this is substantially the American Bullet Forceps, with the addition of graded catches at the handle, by means of which the inclosed tissues can be securely held. It is by far the best double tenaculum in use.

GYNÆCOLOGICAL—FORCEPS.

FIG.				
*3308	Currie's	Double Canulated Forceps	.....	\$ 5 25
*3309	Byrnes' Uterine Tenaculum	"	.....	4 50
*3310	Skenes'	"	"	2 00
*3311	Ball's	"	"	1 85
3312	Hanks'	"	"	2 00
3313	Nott's	"	"	2 25
*3314	Emmet's	"	" for holding together the	
		edges of wounds	.....	3 75
3315	Thomas' Uterine Tenaculum Forceps	for holding together the		
		edges of wounds	.....	3 75



GYNÆCOLOGICAL—FORCEPS.

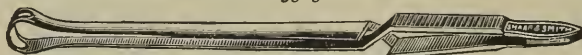
FIG.		
* 3316	Thomas' Shouldering Forceps.....	\$3 50
3317	Sponge Holding and Dressing Forceps.....	2 00
* 3318	Langenbeck's Seizing ".....	1 90
* 3319	Sims' ".....	2 25
3320	Thomas' ".....	3 00
* 3321	Self Grasping ".....	2 25
* 3322	Byrnes' ".....	2 25
* 3323	Whitehead's ".....	3 35
* 3324	Dixon's Applying and Dressing ".....	4 50



3316



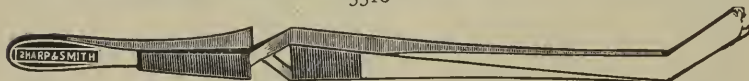
3323



3321



3318



3322



3319

In certain cases in gynæcological practice the ordinary methods of cleaning the part and making application to diseased surfaces have proved so troublesome that there has been devised the following described instrument, in order to facilitate the performance of the process.



3324

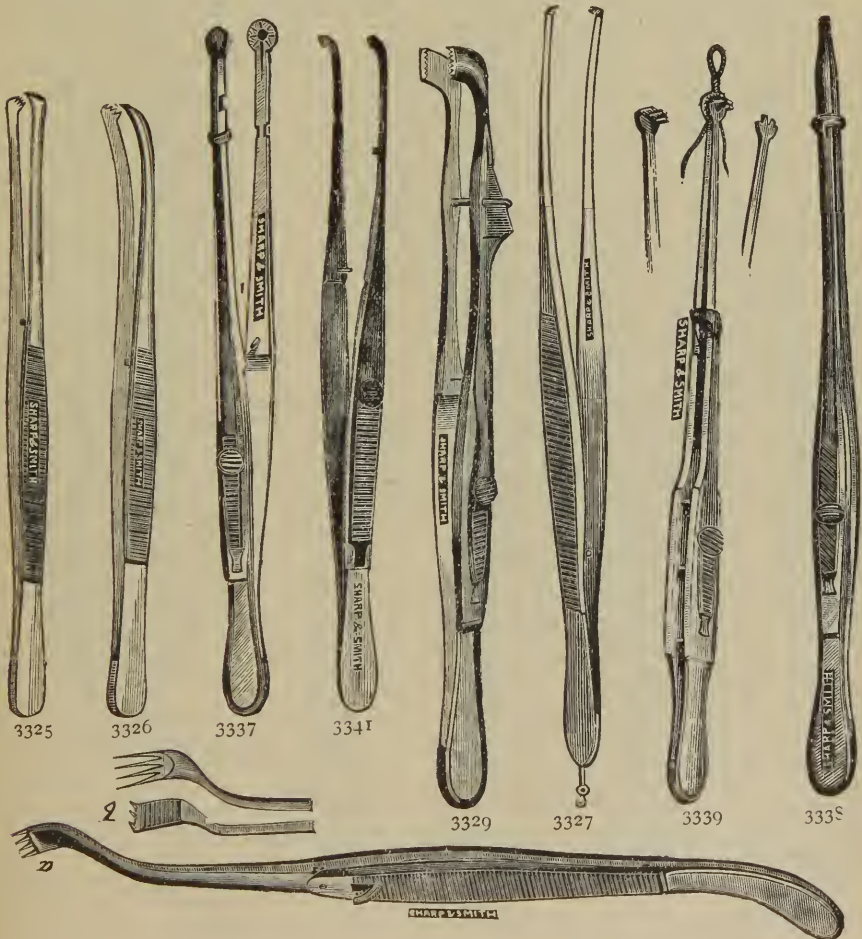
The instrument is a modification of the well-known throat applicator devised by the late Dr. Ellsberg. It is essentially a forceps provided with a lock similar to the lock of an obstetrical forceps, in order that the blades may be separated, to facilitate cleaning.

The method of using the instrument is as follows: A bit of cotton is rolled into a wad of the proper size, leaving a firmly twisted projecting portion, which is grasped between the teeth of the forceps without springing the blades; the cotton is then saturated with the appropriate medicament. Thus armed, the instrument is introduced through a speculum, and the cotton point passed through the ostium into the uterine cavity, and the medicament brought into contact with the parts to be operated upon.

GYNÆCOLOGICAL—FORCEPS.

FIG.

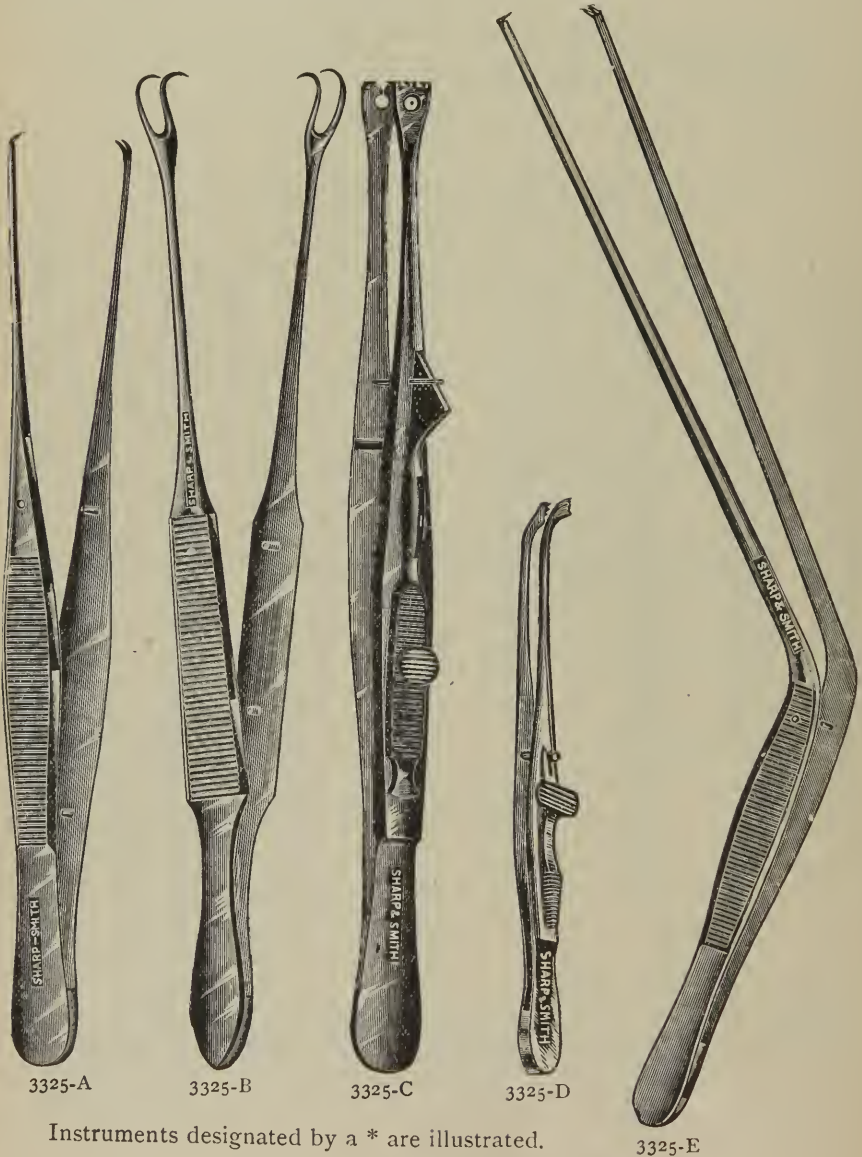
*3325	Plain Tissue Forceps, straight.....	\$1 25
*3326	“ “ “ “ curved.....	1 50
*3327	Agnew's “ “ and adjuster	1 90
3328	Thomas' “ “ straight	3 00
*3329	“ “ “ “ curved.....	3 25
2330	Sims' “ “ “	2 50
3331	“ “ “ “ straight.....	2 25
3332	Scott's “ “ “	2 00
3333	Nott's “ “ “	2 00
3334	Adjustable “ “ with catch	2 50
3335	Curved “ “ “	2 25
*3336	Dr. Geo. Cowan's Tissue or Trachealoraphy Forceps, spring catch	3 00
*3337	Emmet's Wire Twisting Forceps	2 25
*3338	Nott's “ “ “	2 25
*3339	Fitch's “ “ “	3 00
3340	Thomas' “ “ “	2 25
*3341	Sims' “ “ “	2 25
3341A	Emmet's “ Pressing “	1 85



3336

GYNÆCOLOGICAL—FORCEPS.

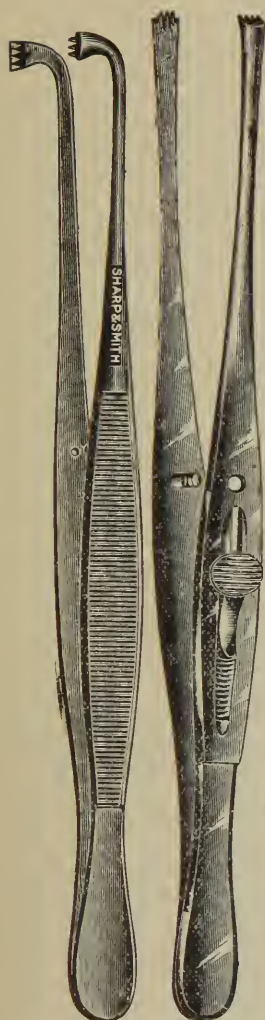
FIG.		
*3325-A	Long Plain Tissue Forceps.....	\$1 50
*3325-B	Emmet's Four Prong Plain Seizing Forceps.....	2 25
*3325-C	Shenstone's Sliding Catch Tissue ".....	3 00
*3325-D	Manton's " " ".....	2 25
*3325 E	Long Angular Plain Tissue Forceps	2 00
*3335-A	Long Curved " " ".....	2 00
*3335-B	Long Straight (catch) " " ".....	2 75
*3362-A	Sharp & Smith's Four Prong Tumor Forceps	3 50
*3362-B	Dr. Henry Banga's Three Prong Heavy Tumor Forceps....	4 50
*3362-C	English Tumor Forceps.....	3 50
*3362-D	Bellamy's Heavy Tumor Forceps.....	5 00



Instruments designated by a * are illustrated.

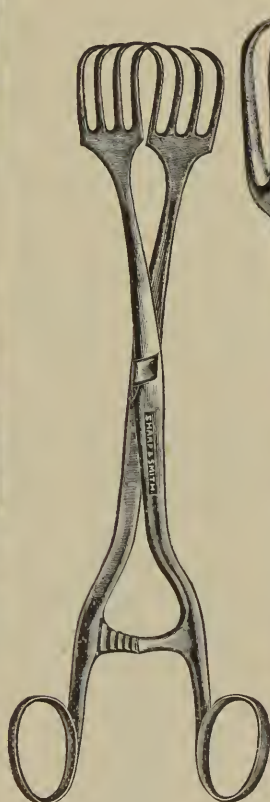
3325-E

GYNÆCOLOGICAL—FORCEPS.



3335-A

3335-B



3362-A



3362-B



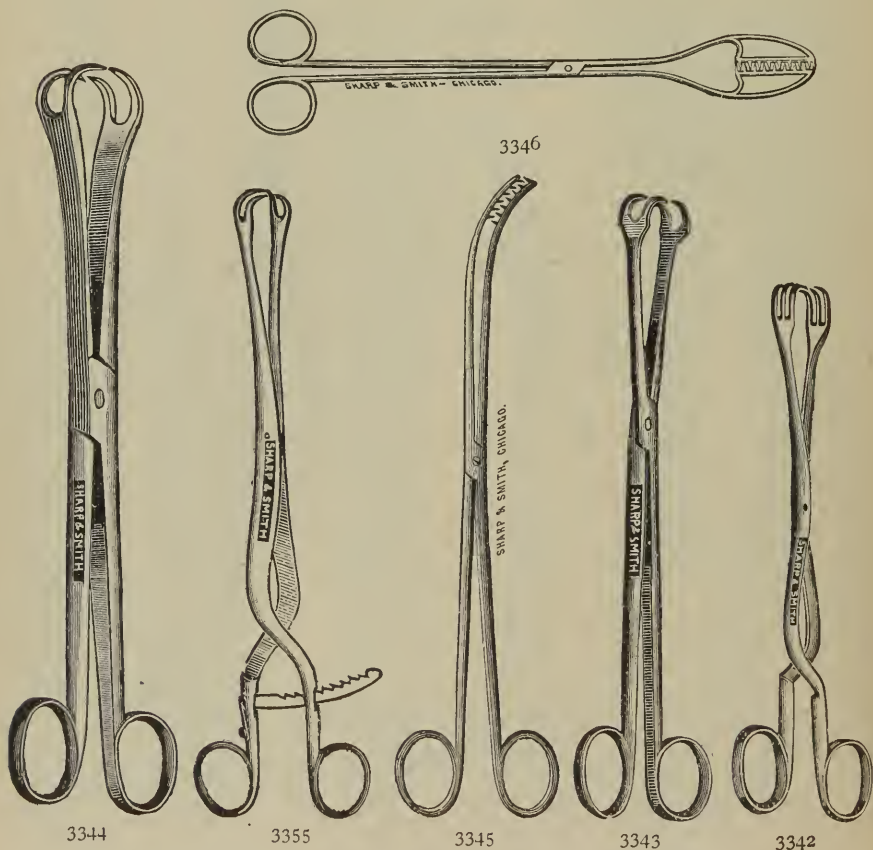
3362-C



3362-D

GYNÆCOLOGICAL—FORCEPS.

FIG.									
* 3342	Byford's Vulsellum Forceps.....	small	\$2	25					
* 3343	" " "	medium	2	50					
* 3344	" " "	large	2	75					
* 3345	Musseaux' " "		1	90					
* 3346	Byrnes' " "		2	25					
3347	Steele's " "		3	00					
3348	Jackson's " "		1	75					
3349	French's " "		2	00					
3350	Plain Regular " " 6 and 7 inch.....	each	1	70					
3351	" " " 8 " 9 "	"	1	85					
3352	" (with catch) Vulsellum Forceps, 6 and 7 inch	"	1	85					
3353	" " " 8 " 9 "	"	2	25					
3354	" with ratchet " " 7½ " "	"	2	25					
* 3355	" " " " 8½ " "	"	2	65					
3356	" " " " 9½ " "	"	3	00					
3357	Side Prong " " 6 " 7 "	"	1	85					
3358	" " " 8 " 9 "	"	2	25					

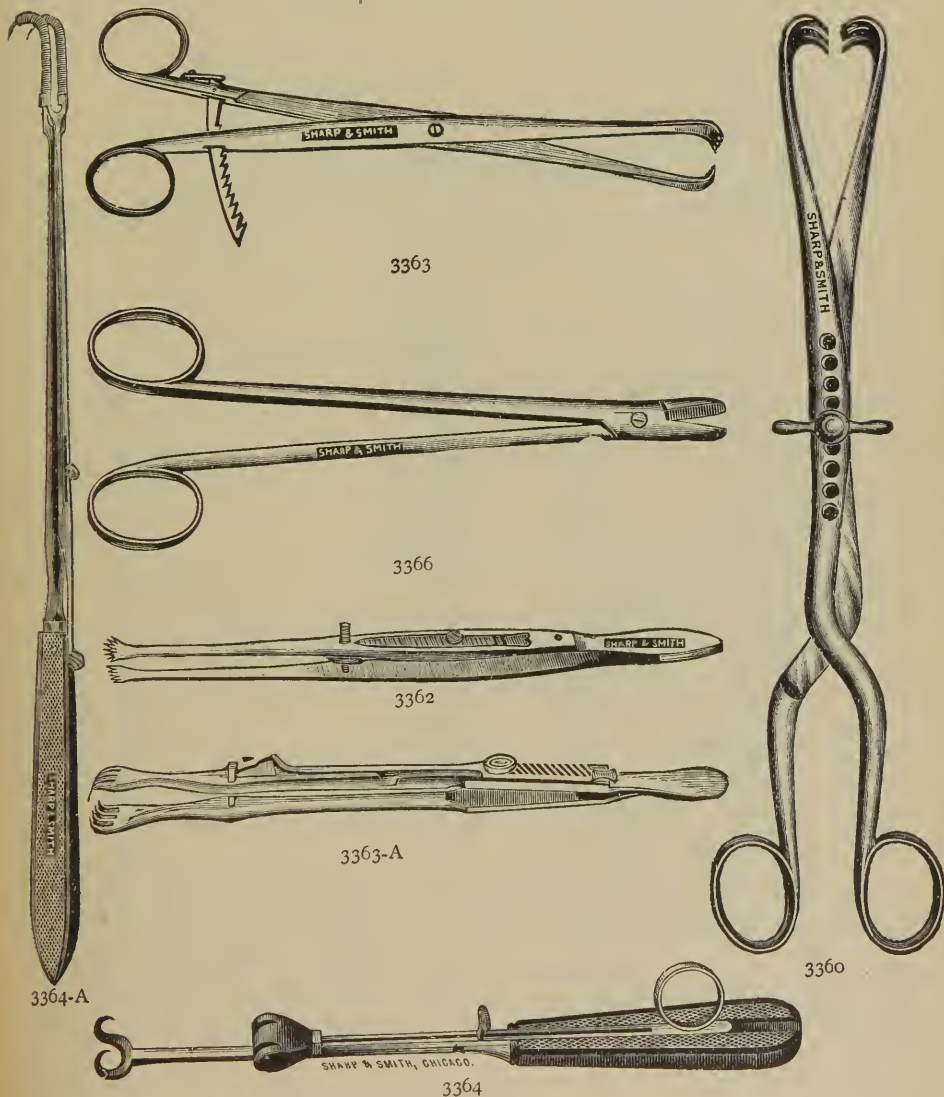


All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—FORCEPS.

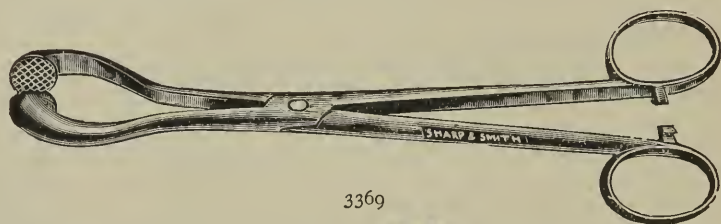
FIG.

3359	Campbell's Uterine Tumor Forceps.....	\$6 00
*3360	Greenhalgh's " " "	3 75
3361	Nelaton's " " "	2 75
*3362	Tumor Forceps with Set Screw.....	2 50
*3363	Byrne's Tumor Forceps with Ratchet.....	2 50
*3363-A	Slide Catch Tumor Forceps.....	3 25
*3364	Sims' Vulsellum Hook.....	4 10
3364-A	Kuechenmeister's Vulsellum Hook.....	3 75
3365	Thomas' Speculum Forceps.....	2 00
*3366	Shot Compressing "	1 75

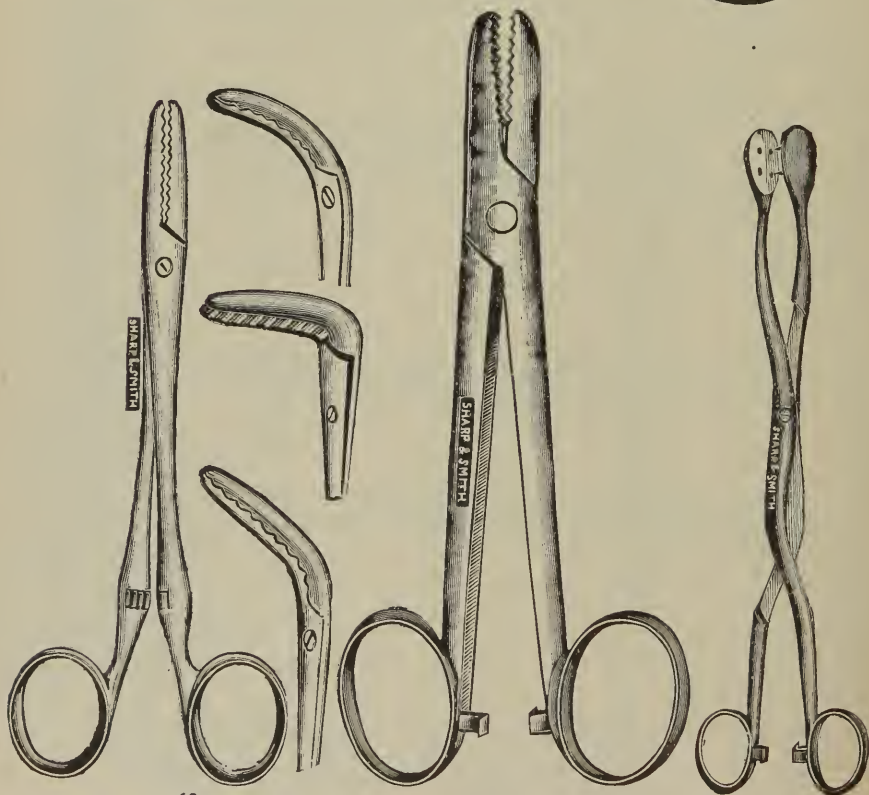


OVARIOTOMY INSTRUMENTS.

FIG.		
*3367	Nelaton's Pedicle Forceps.....	\$ 2 70
*3368	Spencer Wells' Pedicle Forceps, angular.....	3 50
*3368	" " " " straight.....	3 50
*3368	" " " " half curved.....	3 50
*3368	" " " " full.....	3 50
*3369	" " Sac ".....	3 00
*3370	Sidney F. Wilcox's " ".....	4 25
*3371	Thomas' " ".....	2 25
3372	Thompson's Vesico Tumor Forceps.....	4 50
3373	" " " ".....	4 50
3374	" " " ".....	4 50
*3375	Dr. C. M. Wilson's " ".....	4 50



3369

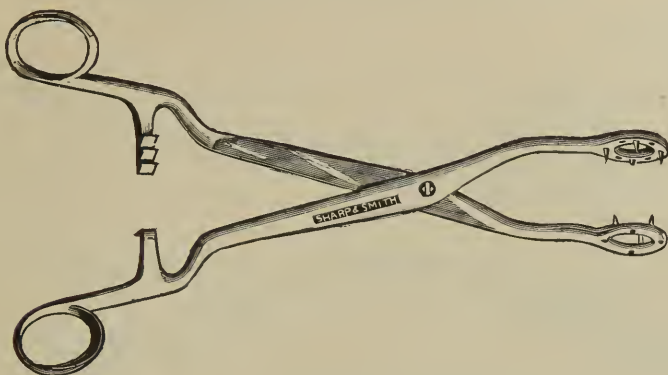


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3367

GYNÆCOLOGICAL—OVARIOTOMY.



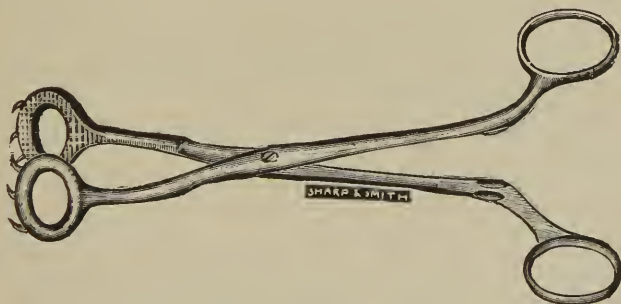
3375

A NEW FORCEPS FOR CATCHING THE SAC IN THE OPERATION OF OVARIOTOMY.

BY SIDNEY F. WILCOX, M. D., New York.

Having on many occasions noticed the difficulty experienced in catching the sac of an ovarian tumor, I devised the forceps represented in the cut, and they have proved in every way a success.

The difficulty usually experienced is that, when the sac is distended, it is difficult to catch hold of it with anything except a large vulsellum forceps, and afterward the sharp teeth are liable to tear a friable sac if traction is made.

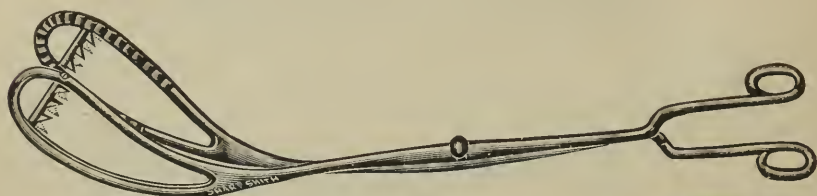


3370

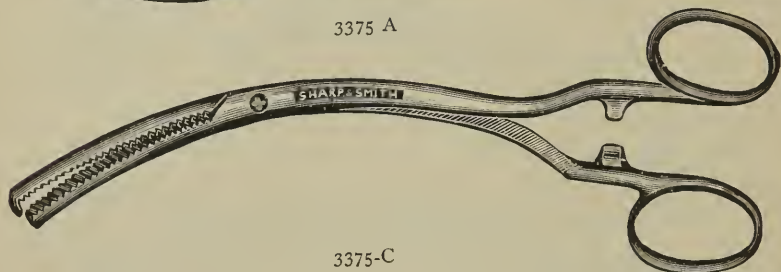
For holding the sac and making traction, a forceps with broad flat blades is necessary, but, with those ordinarily made, it is impossible to seize the sac until it has collapsed.

The forceps shown in the cut is a combination of the vulsellum and the broad bladed forceps. By widely separating the blades the projecting teeth can be fixed into the sac, and as the trocar is plunged in and the sac gradually collapses, the jaws are closed, and the walls are folded in between the broad fenestrated blades. The handles are then locked, thus giving a firm hold on the sac, by which means a great deal of traction can be made without fear of laceration.

GYNÆCOLOGICAL—OVARIOTOMY.



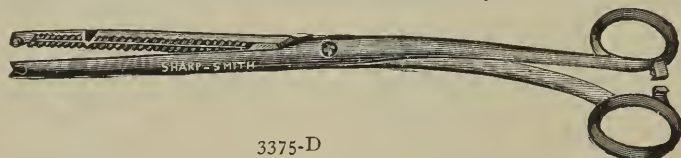
3375-A



3375-C

Fig. 3375-C. DR. HENRY T. BYFORD'S FORCEPS FOR THE BROAD LIGAMENT IN VAGINAL HYSTERECTOMY.

These forceps were designed exclusively for the broad ligament in vaginal hysterectomy. Their peculiarities are that they have a pelvic curve, are a little longer than the ordinary large hemostatic forceps used, while the lower blade is a little longer than the upper one, and has a projection so as to catch over it. I have used them satisfactorily in two cases.

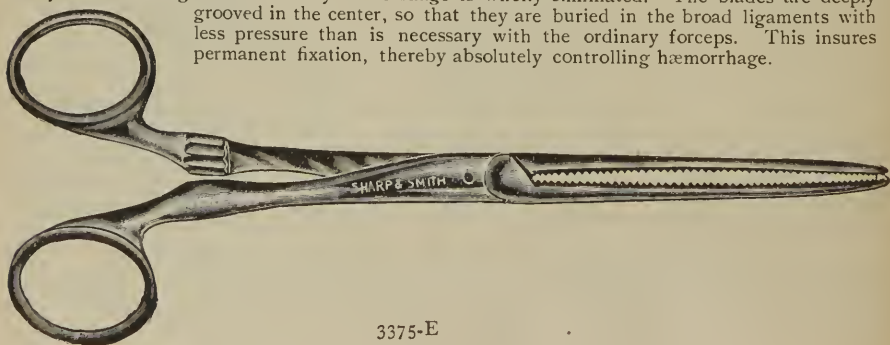


3375-D

Fig. 3375-D. A VAGINAL HYSTERECTOMY FORCEPS.

By WILLIAM H. WATHEN, M. D., Louisville, Ky.

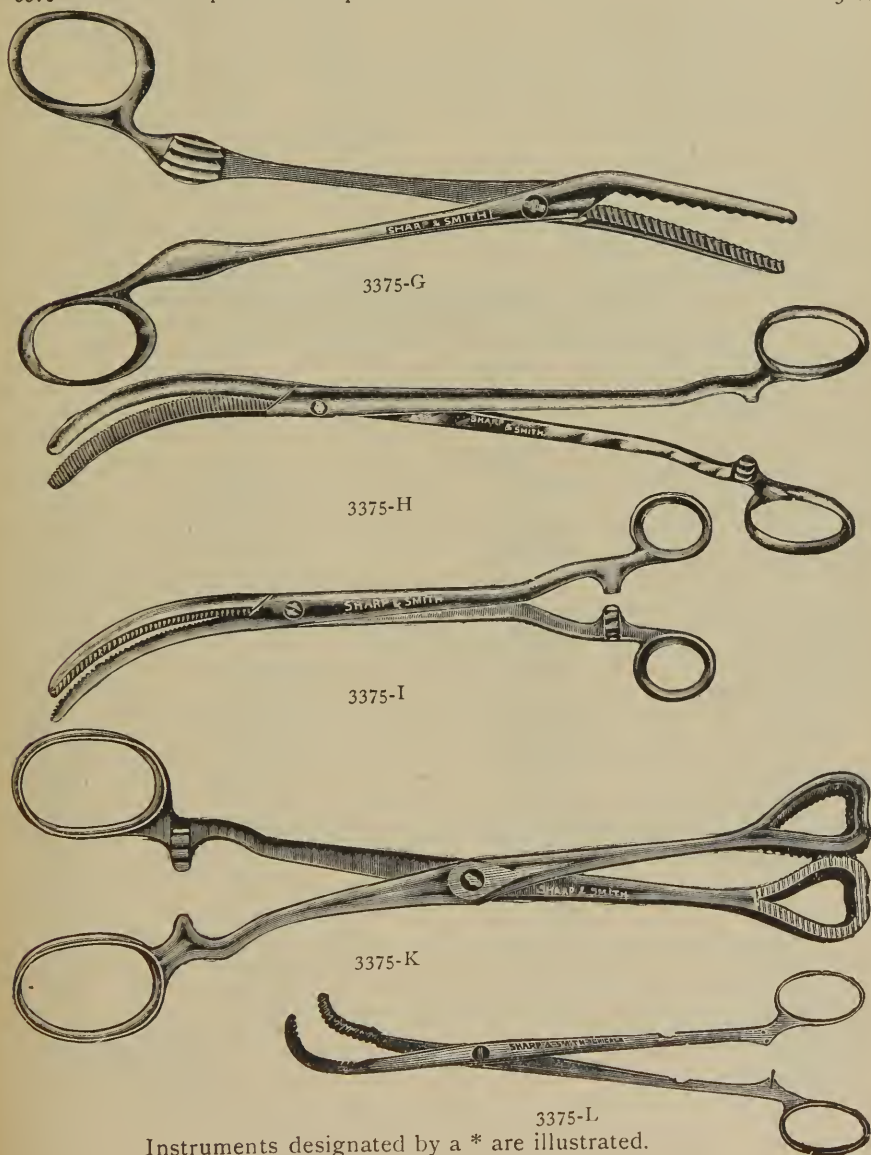
A vaginal hysterectomy forceps should be so constructed that it may include in its blades the entire broad ligament with equal pressure, and absolutely control hæmorrhage, but it should be as small as is consistent with the purpose which it is intended to serve. Some of the heavy instruments devised cause too much local irritation and sloughing of the vagina and vulva, and some of the smaller ones do not insure perfect hæmostasis. Appreciating these defects, I had made for me a forceps that I think overcomes these objectionable features. The forceps are light, compress with equal force at each end of the blades, and will include the ligaments so firmly that the danger of secondary hæmorrhage is wholly eliminated. The blades are deeply grooved in the center, so that they are buried in the broad ligaments with less pressure than is necessary with the ordinary forceps. This insures permanent fixation, thereby absolutely controlling hæmorrhage.



3375-E

GYNÆCOLOGICAL—OVARIOTOMY.

FIG.		
*3375-A	Collins' Tumor Forceps, with cross bar teeth.....	\$6 00
3375-B	" " plain.....	5 00
*3375-C	Byford's Hysterectomy Forceps.....	3 00
*3375-D	Wathen's " ".....	3 40
*3375-E	Pean's Heavy Hysterectomy Forceps.....	3 50
*3375-G	Dr. Henry Banga's Heavy Compression Forceps.....	3 75
*3375-H	Ludlam's Heavy Curved " ".....	3 75
*3375-I	" Light " ".....	3 25
*3375-K	Pean's Wide Hæmostatic Forceps.....	3 00
*3375-L	Skene's Compression Forceps.....	3 00

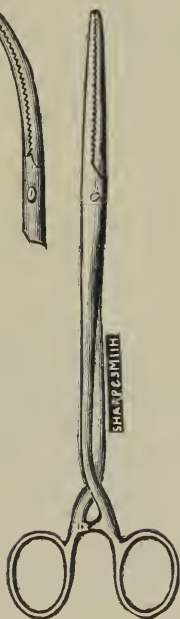
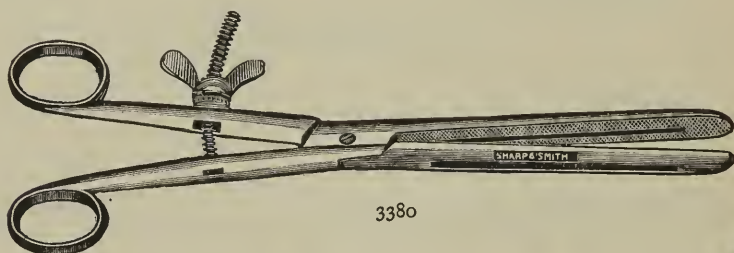


Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—OVARIOTOMY.

FIG.

*3376	Thomas' Hæmostatic Forceps.....	\$ 1 85
*3377	Faenger's large straight Hæmostatic Forceps, 8½ inches.....	2 25
*3377	“ “ curved, “ “	2 25
3378	“ “ small straight “ “	1 75
*3379	Spencer Wells' Torsion Forceps.....	2 25
*3380	“ “ Clamp “	5 00
*3381	“ “ “ “	3 75
3382	Tait's Compression “	1 25
*3383	Thornton's “	2 50
*3384	“ Mod. by Byford's Compression Forceps.....	2 00
*3385	“ “ “ “	2 25
*3386	Pears' Heavy Clamp “each.	3 50



3377



3376



3379

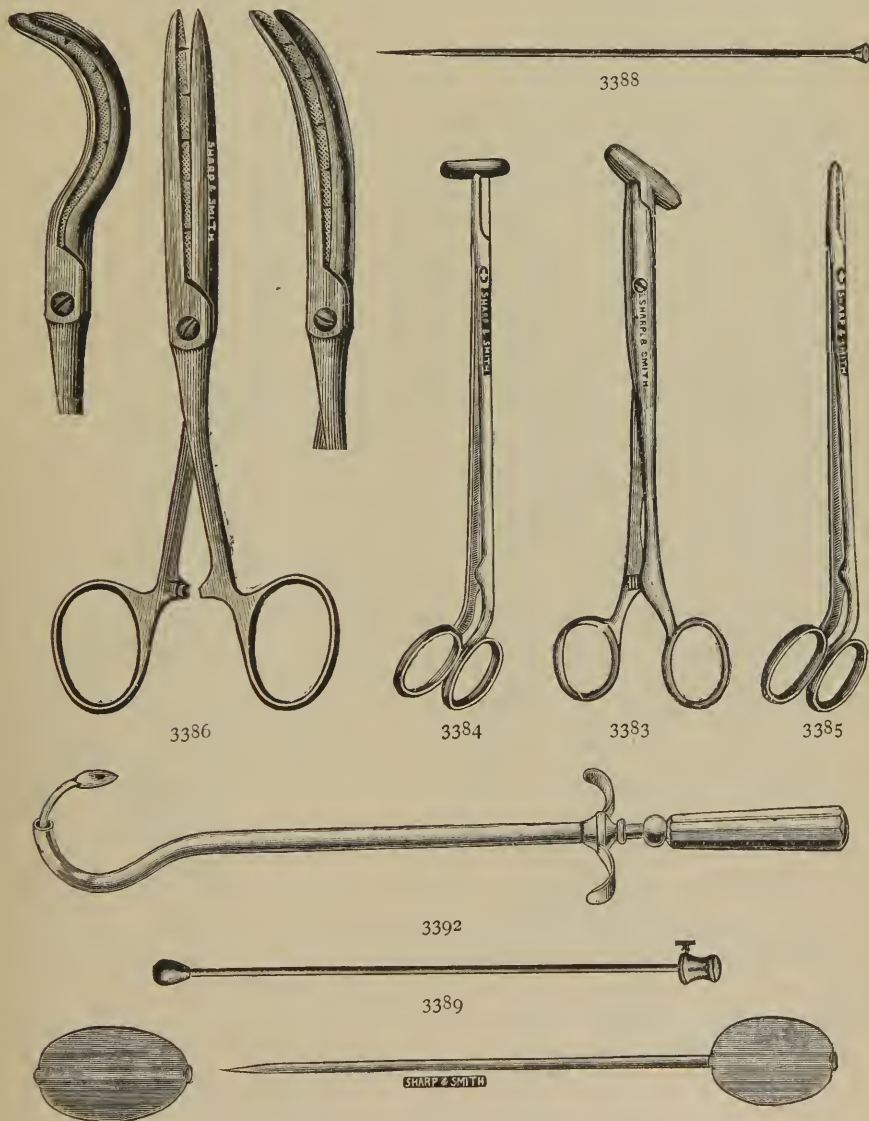


3381

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—OVARIOTOMY.

FIG.				
*3387	Dudley's Ovariotomy Pins.....	each.	\$	75
*3388	Peck's " "	"		30
*3389	Wilcox's " "	"		50
3390	Kellogg's " " Silver.....	per doz.	2	00
3391	" " " Gold.....	"	3	00
*3392	Hunter's Pedicle Needle.....		7	50

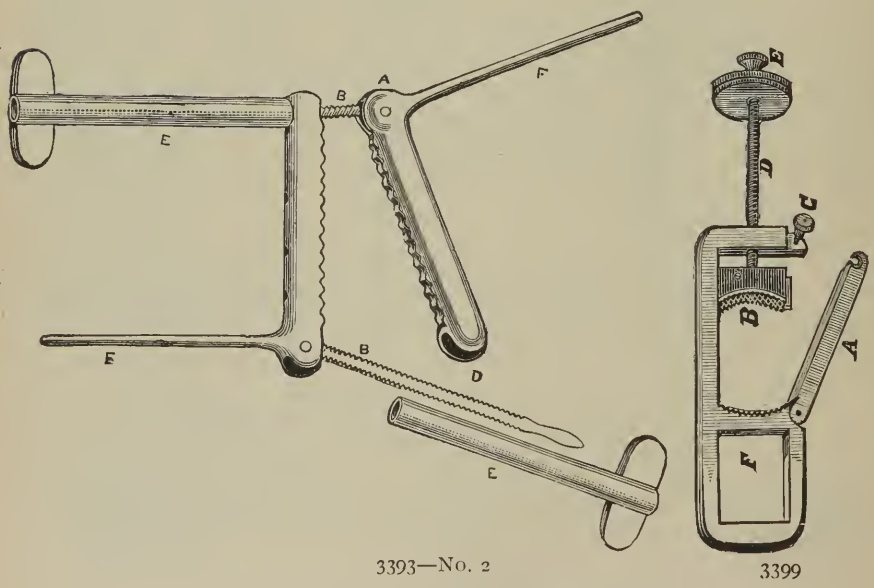
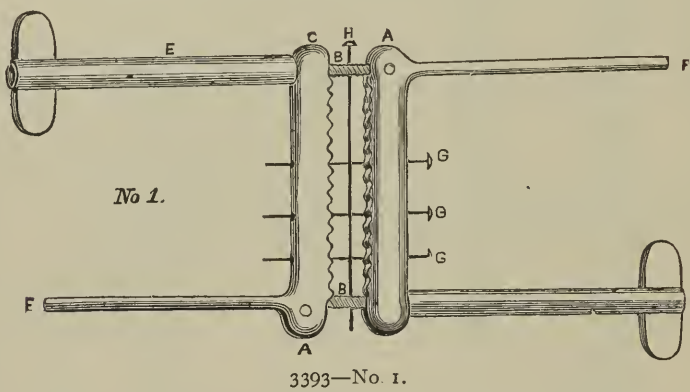


3387

Instruments designated by a * are illustrated.

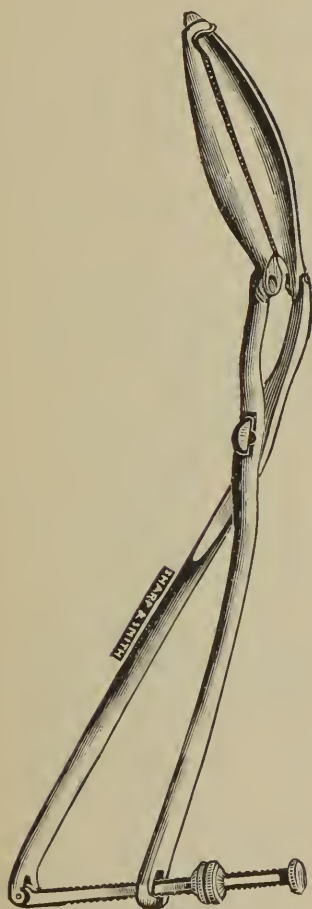
GYNÆCOLOGICAL—OVIARTOTOMY.

FIG.		
* 3393	Atlee's Ovariotomy Clamp.....	\$4 50
3394	Nott's " "	8 00
* 3395	Spencer Wells' Ovariotomy Clamp.....	4 50
* 3396	Storer's " "	8 25
* 3397	Tait's " "	7 00
* 3398	Thomas' " "	3 35
* 3399	Dawson's Modified "	6 00

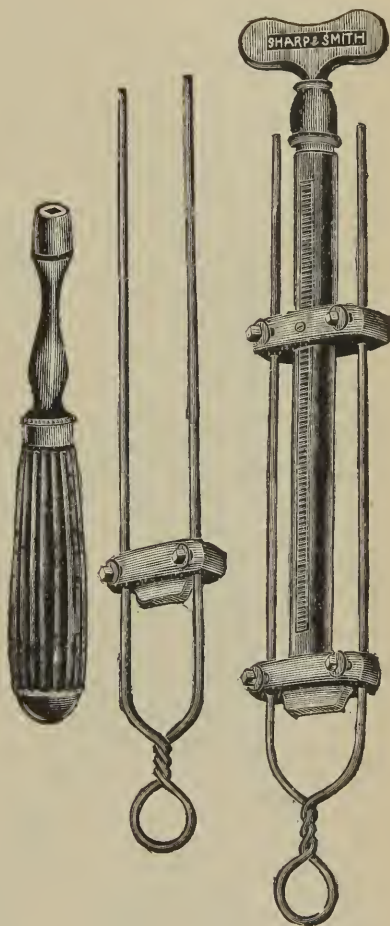


All Instruments designated by a * are illustrated.

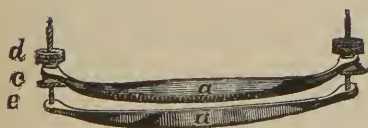
GYNÆCOLOGICAL—OVARIOTOMY.



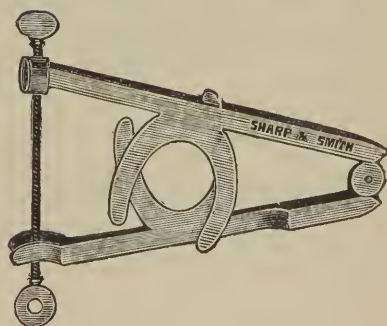
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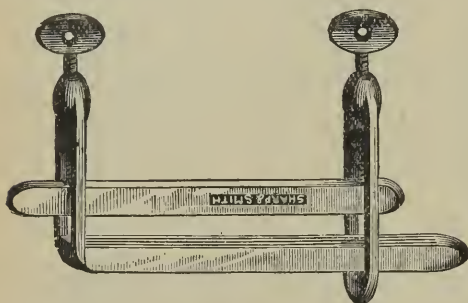
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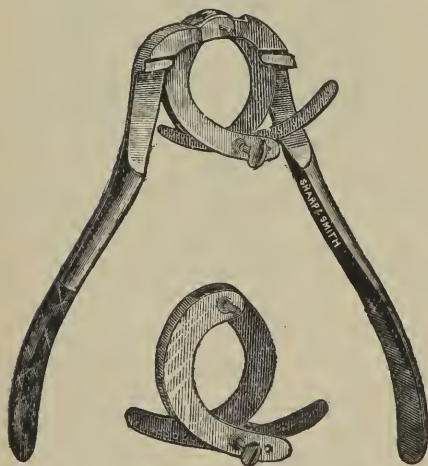
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GYNÆCOLOGICAL—OVARIOTOMY.

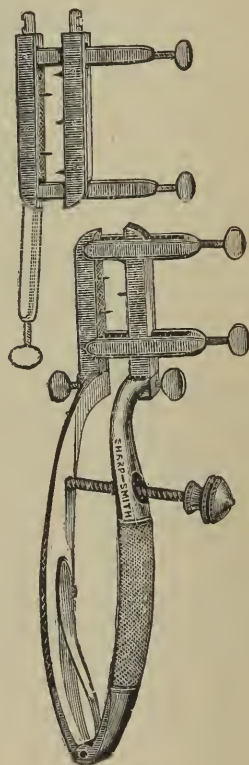
FIG.			
*3400	Gueride's Ovarian Clamp	\$ 3 40
3401	Skene's " " Cautery	11 15
3402	Hard Rubber " "	.....	4 00
3403	Noeggerath's " "	.....	5 25
*3404	Baker Brown's " "	.....	9 00
*3405	Byford's " " consisting of two Clamps and one pair Lever Forceps	.....	11 25
3406	Wilde's Ovarian Clamp	.....	4 50
3407	Lewis' " "	.....	3 00
3408	McLeod's " "	.....	1 85
*3409	Spencer Wells' Pedicle Clamp	.....	18 75



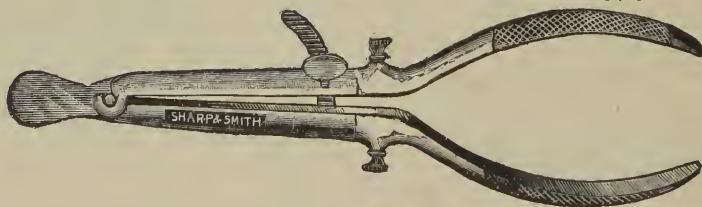
3400



3409



3405



3404

GYNÆCOLOGICAL—OVARIOTOMY.

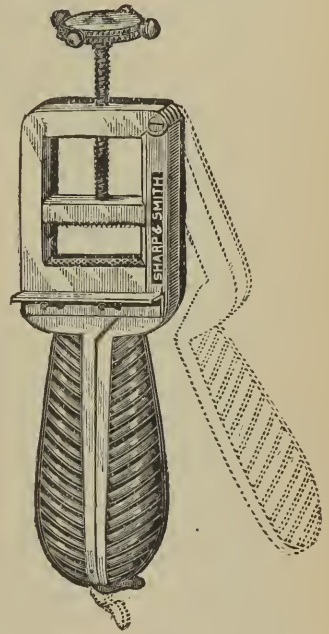
FIG.

*3410	Dr. A. J. Skene's and W. H. Thallon's M. D.'s Cautery Ovari- otomy Clamp	\$11 25
*3411	Thomas' Clamp, for Compressing Vaginal Wounds	4 50
3412	King's Scrotal Clamp	3 50
3413	Henry's " "	6 00
*3414	Wells' Ovariectomy Clamp	4 50
*3414-A	Byford's Vaginal Retractor	per pair, 1 25

Fig. 3410.—This Cautery Clamp was devised by Drs. A. J. Skene and W. H. Thallon. It is essentially a combination of the old-fashioned Cautery Clamp and the Clamp which Dr. Dawson, of New York, devised to leave on the pedicle stump, brought up into the wound. It is very well shown in the accompanying cut.



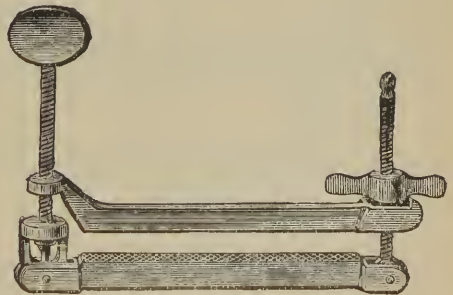
3411



3410



3414-A



3414

All instruments designated by a * are illustrated.

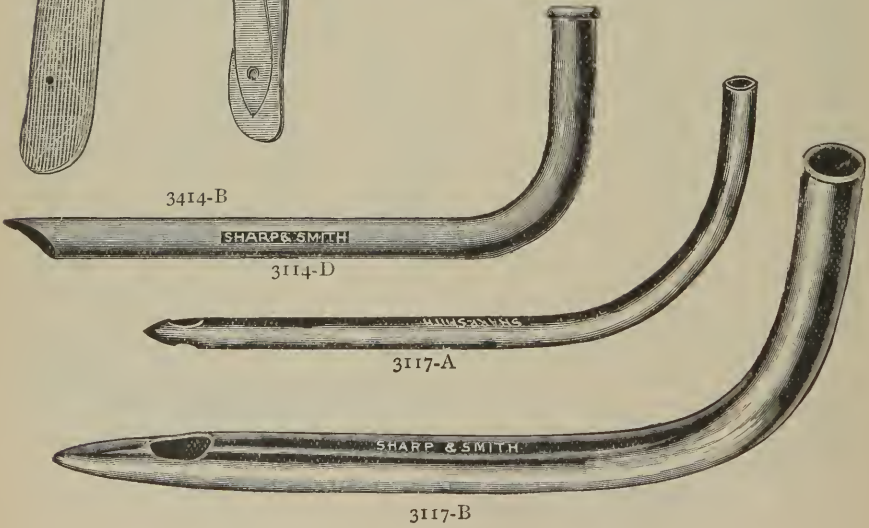
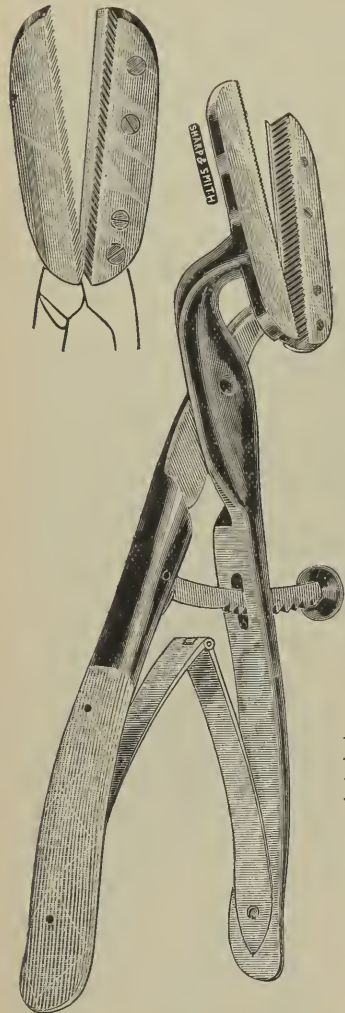
Fig. 3414-B.—DR. C. S. ELDRIDGE'S CUTTING CLAMP.

The following are some of the advantages of this instrument :

- 1st. It cuts and clamps simultaneously.
- 2d. It is a safe haemostatic.
- 3d. This instrument works admirably in operations for cystocele. Its work here, as elsewhere, is accurate, reliable, bloodless, and rapid.
- 4th. As a Clamp in Ovariectomy it is so convenient that it must of necessity become a general favorite.
- 5th. There is no instrument on the market like it ; nor is there one that can be handled so dexterously.
- 6th. This instrument is arranged with teeth that transfix the tissues before cutting, and makes it impossible for them to slip.
- 7th. Of its application for removal of prolapsed and redundant rectal tissues, Dr. E. H. Pratt says : " It is an exceedingly ingeniously contrived Clamp, and is much superior to previous inventions for this purpose. It is more easily managed than other instruments, does its work speedily, and is a valuable contribution to a surgeon's outfit."
- 8th. It is usually desirable to stitch tissues that are clamped. In pedicled strictures, of course the tissues are to be thoroughly choked by ligatures before the Clamp is removed, simply because they are the more easy of access. Where the object is to merely hold in coaption several edges, the ligatures can be placed in position before the Clamp is removed, but not tied until clamp is taken off.

FIG.

*3114-B	Eldridge's Cutting Clamp	\$15 00
*3114-D	Wylie's Ovarian Trocar.....	2 50
*3117-A	Tait's Plain " "	2 00
*3117-B	Byford's " (solid end) Ovarian Trocar..	2 50



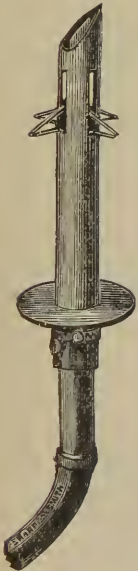
GYNÆCOLOGICAL—OVIOTOMY.

FIG.

*3415	Spencer Wells' Ovarian Trocar, straight.....	\$ 7 50
*3416	" " " " curved, large.....	13 50
*3417	Lawson Tait's " " curved.....	13 50
*3418	" " " " straight.....	12 00
*3419	Dunster's " " ".....	4 00
*3420	Emmet's " " ".....	3 25
*3420-A	" " curved ".....	8 25
*3421	Warren's " " ".....	11 25
*3422	Fitch's Dome " " complete.....	6 00
*3423	Thomas' " " ".....	15 00



3423A



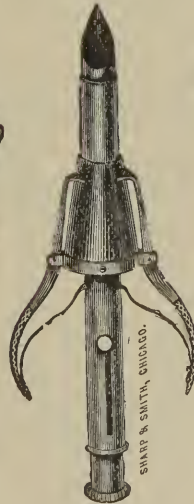
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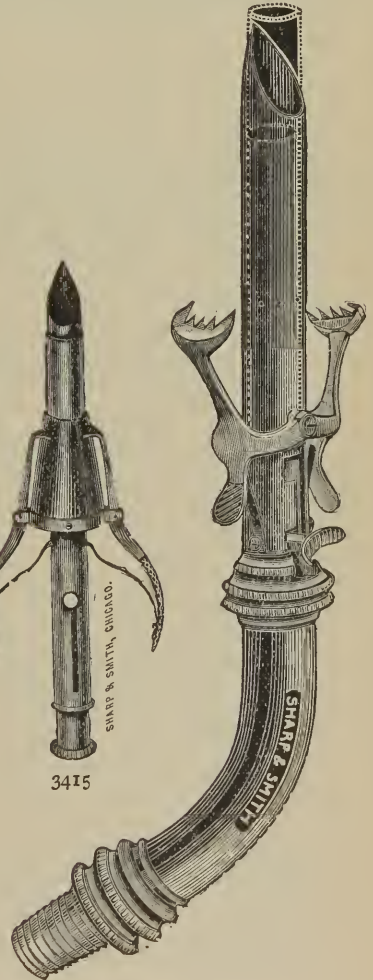
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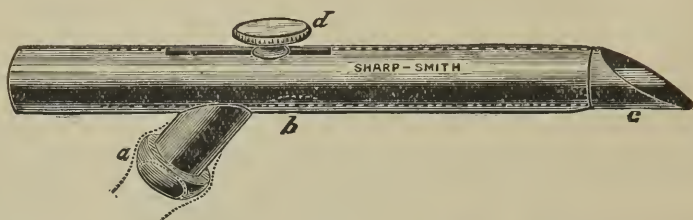


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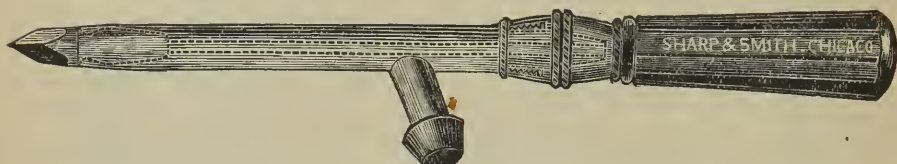


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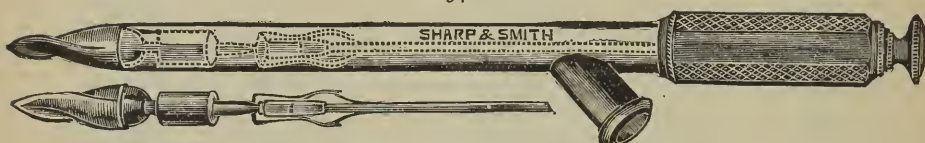
GYNÆCOLOGICAL—OVARIOTOMY.



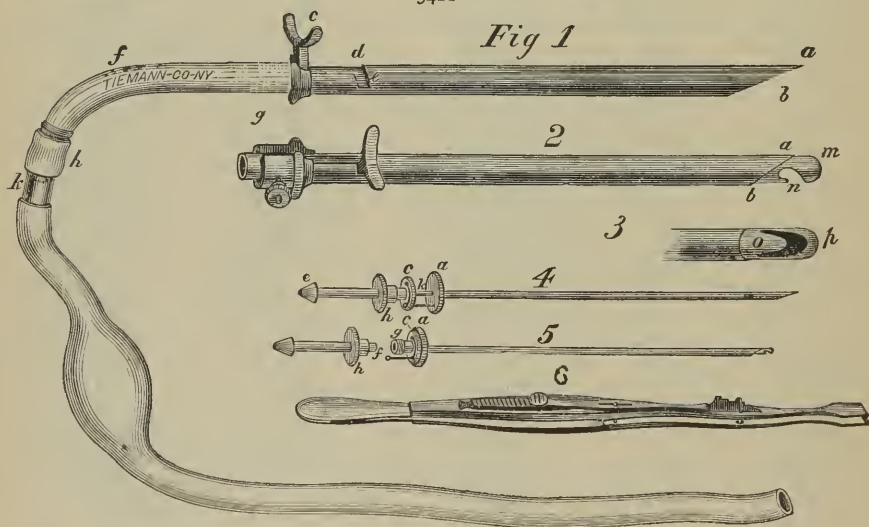
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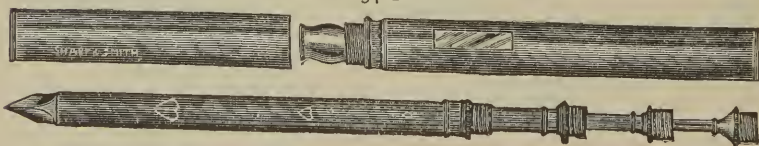
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3421



3422

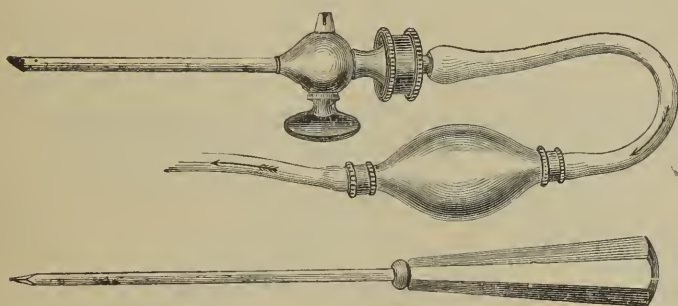


3424

GYNÆCOLOGICAL—OVIOTOMY.

FIG.

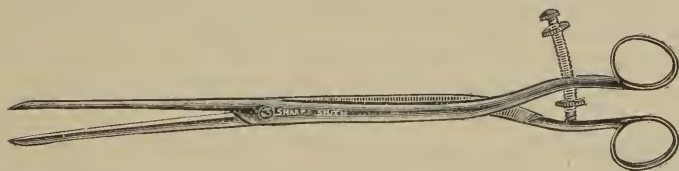
*3424	Set of 4 Nested Trocars in case	\$3 50
3425	" 3 " " "	3 00
*3426	Pean's Trocars	5 25
*3427	Flint's "	3 00
*3428	Cushing's Pelvic Abscess Dilating Forceps and Trocar.....	4 00
*3429	Borck's Cyst Elevator	1 15



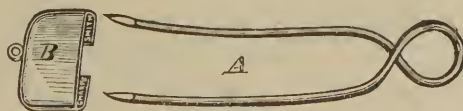
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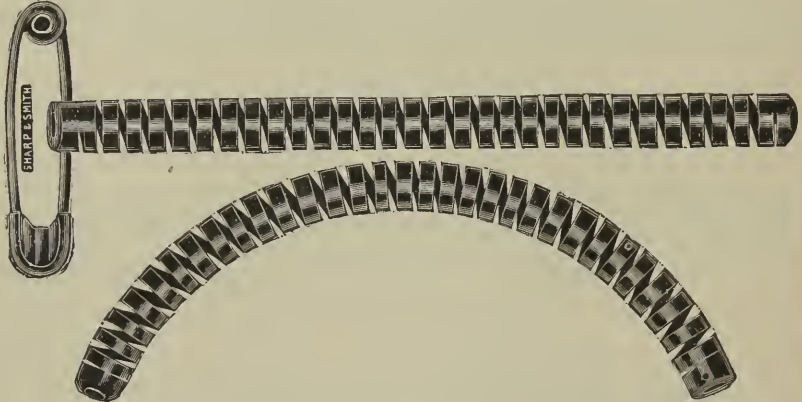


3429

GYNÆCOLOGICAL—DRAINAGE TUBES.

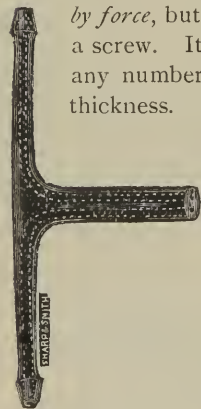
FIG.

*3430	S. & S. Hard Rubber Spiral Drainage Tubes, small.....	\$ 50
3431	“ “ “ “ “ “ large.....	75
*3432	Pure Silver Drainage Tube, 7 inches long.....	75
*3433	Rubber (soft) “ “ per yard.....	30
*3434	Thomas' Glass “ “	25
3435	“ “ “ “ perforated on sides	40
*3436	“ Hard Rubber Drainage Tube double.....	1 75



3430

Regarding the above Drainage Tube we would state that hard rubber being a non-irritant, the drain is more complete than glass or soft rubber. They can be screwed into any wound, no matter how much curved the wound is, and when removing the tube does not need to be *drawn by force*, but only needs to be twisted or turned to the *left* same as a screw. It can be easily cleaned, thereby aseptic, and can be used any number of times. We make them to order any length and thickness.



3436



3434



3432



3433

All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—DRAINAGE TUBES.

FIG.

*3437 to 3445.	Dr. D. A. K. Steele's No. 1 Set of Drainage Tubes....	\$3 00
*3446 to 3451.	" " " " 2 " " " "	4 00

PROF. D. A. K. STEELE'S IMPROVED GLASS DRAINAGE TUBES.

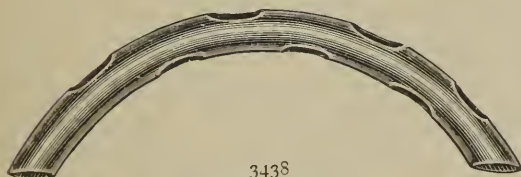
We desire to call the attention of the medical profession to an Improved Glass Drainage Tube, manufactured by us at the suggestion of Prof. D. A. K. STEELE.

They are manufactured from the best double annealed imported glass and possess the ideal requisites for perfect wound drainage.

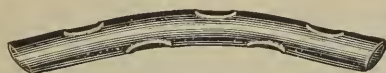
They are absolutely aseptic, non-collapsible, easily removed and reinserted, and durable. We feel confident that they possess many points of superiority over rubber or bone drainage tubes, that will be readily recognized by practical surgeons. The apertures in these tubes are oblong and perfectly smooth.



3437



3438



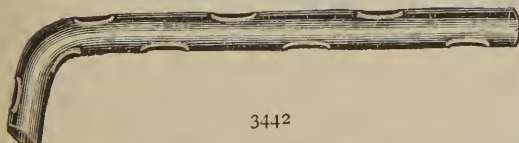
3439



3440



344I



3442



3443

Fig. 3437.

No. 1	Straight.	5 inches long.
" 2	"	4 " "
" 3	"	3½ " "
" 4	"	3 " "

Fig. 3438.

No. 5-A. Curved. $3\frac{1}{2}$ inch. long.

Fig. 3439.

No. 6-B.	Curved.	5 inch. long.
" 7-B.	"	4 " "
" 8-B.	"	3 " "

Fig. 3440.

No.	9-C.	Curved.	3 in.	long.
"	10-C.	"	4 "	"
"	11-C.	"	5 "	"

Fig. 344I.

No.	12-D.	Curved.	3 in.	long.
"	13-D.	"	4 "	"
"	14-D.	"	5 "	"

Fig. 3442.

No. 15-E. Curved. $4\frac{1}{2}$ in. long.

Fig. 3443

No. 16-F. Curved. 4 in. long.

GYNÆCOLOGICAL—DRAINAGE TUBES.

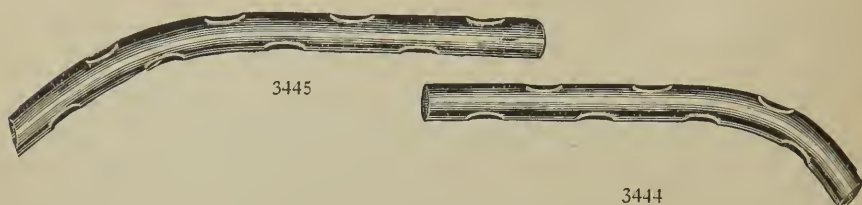


FIG.

- *3444 No. 17-G Curve $3\frac{1}{2}$ inches long.
 *3445 " 18-H " $3\frac{1}{2}$ " "

SET No. 2.

$\frac{3}{8}$ inch Tubing consisting of Nos. 19 to 24 inclusive.

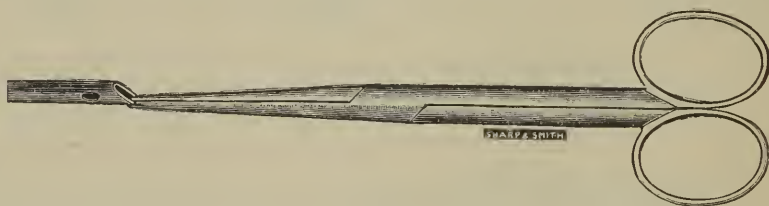
Curves correspond with Set No. 1, as shown by the Letters.

- 3446 No. 19-B Curve 6 inches long.
 3447 " 20-D " 7 " "
 3448 " 21-E " 6 " "
 3449 " 22-G " $6\frac{1}{2}$ " "
 3450 " 23 Straight $5\frac{1}{2}$ " "
 3451 " 24-C Curve 7 " "

Other Curves and Lengths being desired, can be furnished by sending drawing, stating length and size Tubing.

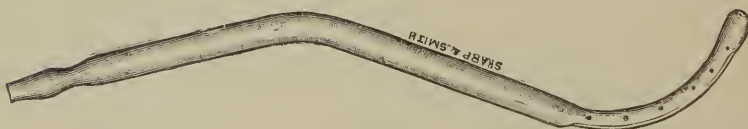
For other Drainage Tubes see index.

Fig. 3452. Sharp & Smith's Drainage Tube Introducing Forceps..... \$2 00



3452

- | | | |
|-------|---|-------|
| 3453 | Chamberlain's Glass Uterine Drainage Tube..... | \$ 85 |
| *3454 | Dr. J. C. Hoag's modification Chamberlain's Glass Uterine Drainage Tube, double curve and grooved, holes in side | 1 00 |
| 3455 | Dr. J. C. Hoag's modification Chamberlain's Glass Uterine Drainage Tube, double curve and grooved, and holes in end. | 1 00 |
| *3456 | Dr. J. C. Hoag's modification Chamberlain's Glass Uterine Drainage Tube, bulbous, with perforations..... | 60 |
| *3457 | Dr. J. C. Hoag's modification Chamberlain's Glass Uterine Drainage Tube, bulbous, with slots..... | 75 |



3454

All Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—DOUCHE TUBES.

FIG.		
*3458	Bozeman's Uterine Douche Tube.....	\$1 25
*3459	Kelly's Modification of Bozeman's Uterine Douche Tube.....	3 00
*3460	Jennison's Uterine Douche Tube.....	1 50
3461	" " " " with Syringe.....	2 00
*3462	" (Wigmore's) " " ".....	1 50
*3463	" modified " " ".....	2 00



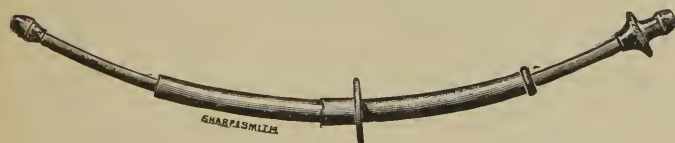
3458



3456



3457



3460



3462



3463

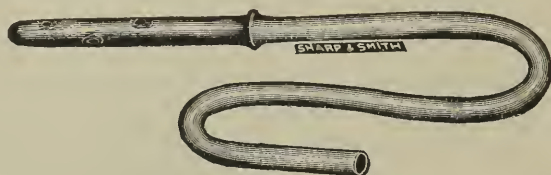


3459

All instruments designated by a * are illustrated.

GYNÆCOLOGICAL.

FIG.	
*3464	Dr. Wm. S. Gardner's Tube for Intra-Uterine Irrigation.....\$ 2 50
*3465	Dr. W. Thornton Parker's Soft Rubber Velvet-Eyed Tube for Injecting and Measuring the Uterus.... 95
*3466	Bozeman's Utero-Vesico-Urethral Drainage Support with Urinal 9 00



3464

PUERPERAL SAPRÆMIA AND A METHOD OF INTRA-UTERINE IRRIGATION.

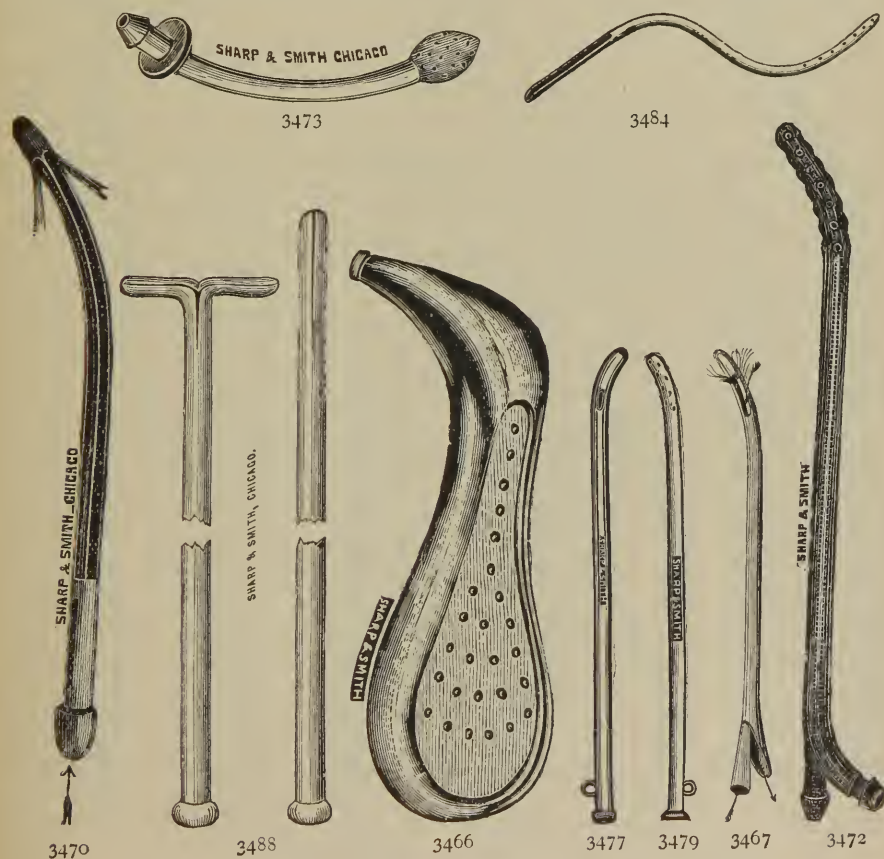
Fig. 3464. For giving vaginal injections a syringe, made on the pattern of a Davidson, with hard rubber finishings, is used. For intra-uterine injections the same syringe, with a soft rubber intra-uterine injection tube, is used. This tube is twelve inches long and seventeen (American) caliber. The point is round, smooth, and closed. Three inches from the point is a slightly raised collar. Between the point and collar, but grouped rather toward the point, are three large lateral velvet-eyed openings. The whole instrument is perfectly smooth and flexible; there is not a rough edge or corner that can scratch the most delicate surface. The smallest nozzle of the syringe being on, the open end of the tube is slipped over it. The syringe and tube are then filled with corrosive sublimate solution, and the tube is introduced into the uterus by grasping the point between the index and middle fingers of the right hand, allowing the remainder of the tube to rest in the palm of the hand; then carry the tube between the fingers up to the external os; reflect the point into the cervical canal; grasp the middle of the instrument between the thumb and the finger of the left hand, and gently push it in until the collar is felt just at the external os. You then know that the end of the tube is well into the cavity of the uterus, and still a safe distance from the fundus. There is some danger from introducing even the softest instrument too far into the puerperal uterus. The solution is then forced into the uterus until it returns clear. About a quart is the quantity usually used, though as much as a gallon is sometimes necessary. The nozzle of the syringe is slipped out of the tube, the latter being left in place to assist in the exit of *all* the injected fluid. When the tube comes out of itself, it is placed in a solution of corrosive sublimate, 1-2000, until wanted.



3465

GYNÆCOLOGICAL.

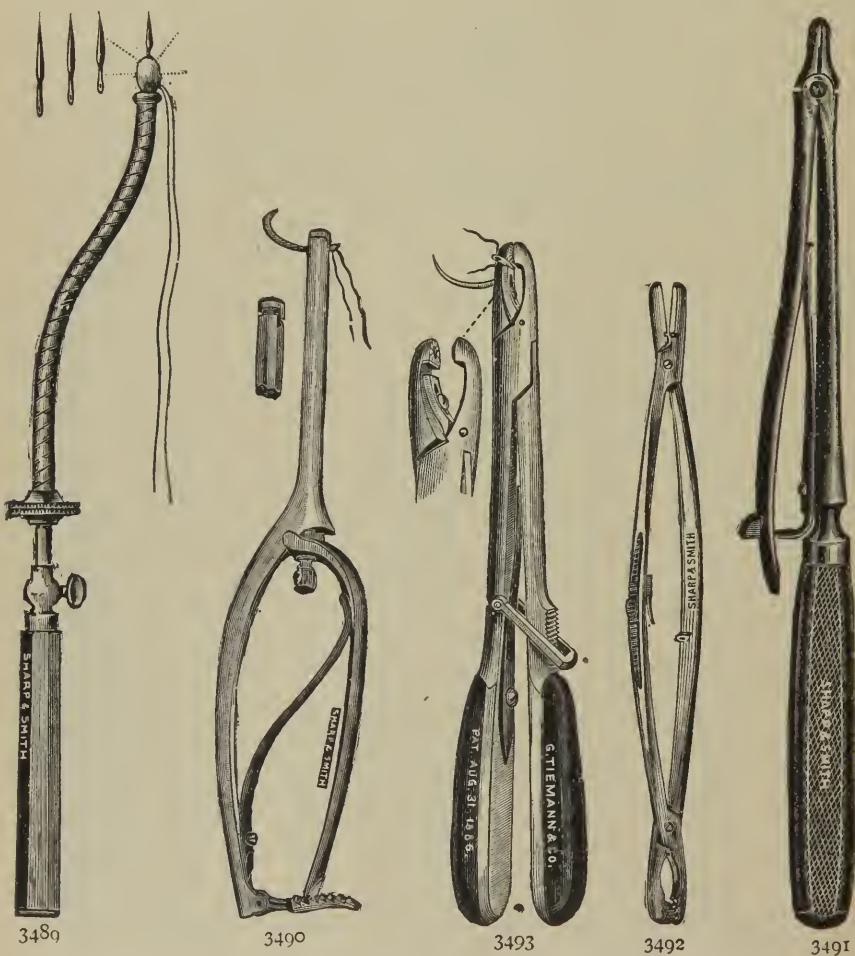
FIG.		
*3467	Nott's Double Current Catheter, silver.....	\$2 75
3468	" " " " plated.....	1 25
3469	Reliquet's Double Current Catheter.....	1 50
*3470	Skene's Reflux Catheter, metal.....	1 50
3471	" " " " hard rubber.....	1 50
*3472	" Double Perforated Catheter.....	1 00
*3473	" Goodman's Self-Retaining Catheter.....	65
3474	Byrne's Reflux Catheter, silver.....	1 85
3475	" " " " rubber.....	3 00
3476	" Catheter Adjuster.....	1 50
*3477	Silver Female Catheter.....	60
3478	Plated " " ".....	40
*3479	" " " " small holes.....	40
3480	Jointed " " ".....	75
3481	Hard Rubber Female Catheter.....	50
3482	Leavitt's Soft Rubber Female Catheter.....	40
3483	Flexible Metal Female Catheter.....	50
*3484	Sims' Sigmoid " " silver.....	1 10
3485	" " " " plated.....	45
3486	" " " " hard rubber.....	45
3487	" Improved Sigmoid Female Catheter.....	75
*3488	Dowse's Self-Retaining Soft Rubber Catheter.....	\$1 00 to 1 25



Instruments designated by a * are illustrated.

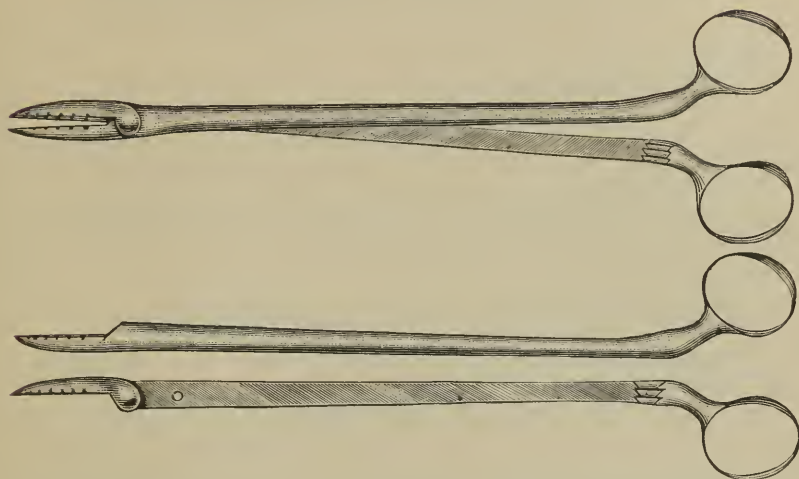
GYNÆCOLOGICAL—NEEDLE HOLDERS.

FIG.		
*3489	Bozeman's Spiral Needle Carrier.....	\$ 3 75
*3490	Ady's Uterine Needle Holder.....	7 50
*3491	Ethridge's Uterine Needle Holder.....	3 75
*3492	Dr. A. J. Skene's Uterine Needle Holder.....	5 50
*3493	Tiemann & Co.'s " " ".....	4 50
*3494	Thiersch's " " " and Spindles.....	6 00
*3495	Abbe's Modification of Hagedon's Uterine Needle Holder....	3 00
*3496	Hanks' Uterine Needle Holder.....	3 00
*3497	Fowler's " " ".....	2 75
3498	Thomas' " " ".....	3 00
3499	Wyeth's " " ".....	3 40

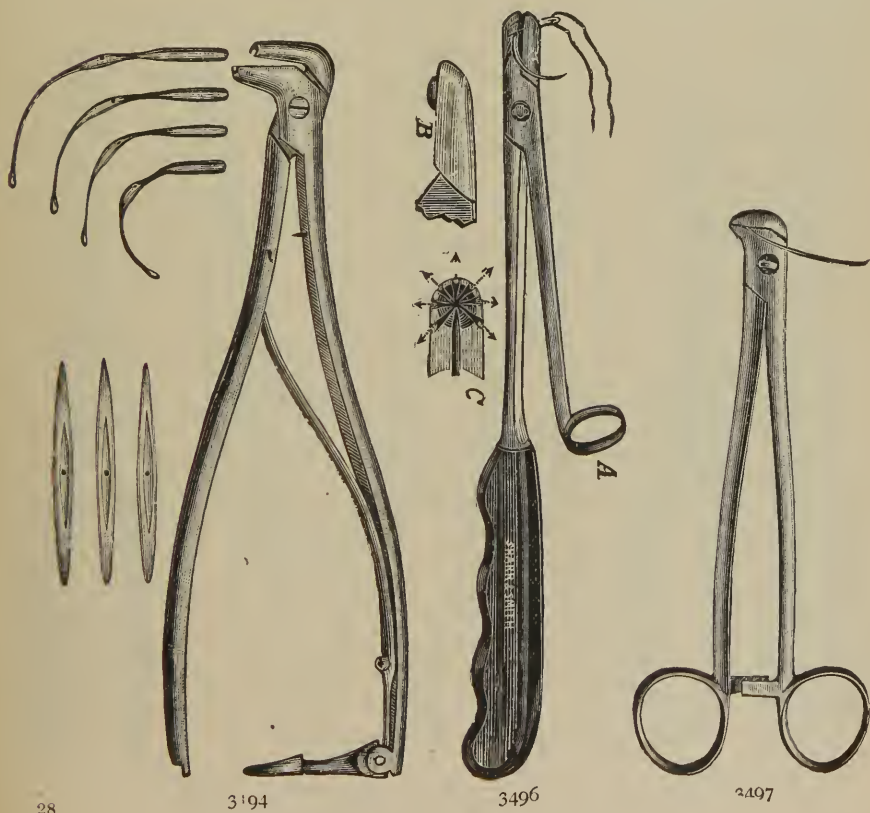


All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—NEEDLE HOLDERS.



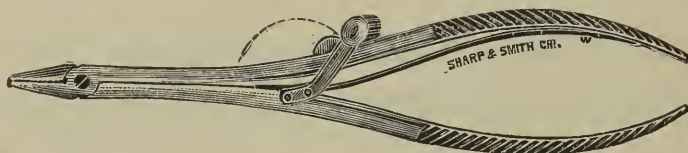
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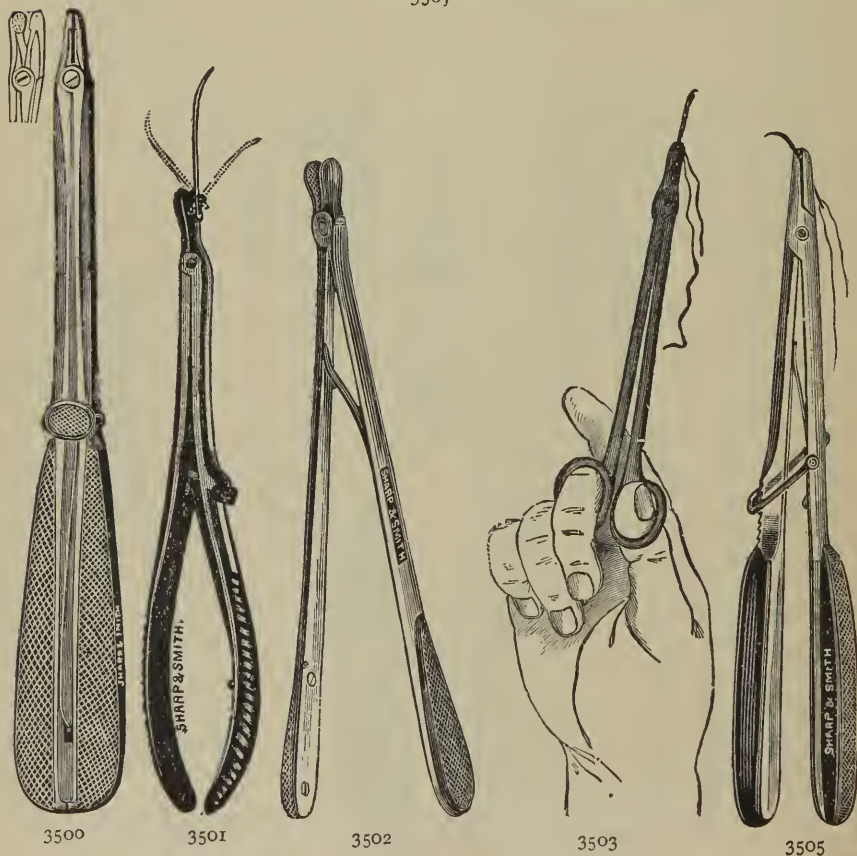
28

GYNÆCOLOGICAL—NEEDLE HOLDERS.

FIG.		
*3500	Philadelphia Uterine Needle Holder.....	\$4 00
*3501	Fritche's or (Paris) Uterine Needle Holder	3 50
*3502	Emmet's Uterine Needle Holder.....	2 25
*3503	Sims' plain " " "	1 75
3504	" catch " " "	2 00
*3505	Russian " " "	3 00
3506	" Improved Uterine Needle Holder.....	3 25
*3507	Reiner's Uterine Needle Holder.....	3 00
*3508	Fowler's " " " with Russian handle.....	2 75
*3509	Gibbon's " " "	4 50
*3510	Hagedorn's " " " small.....	4 50
3511	" " " large	6 00

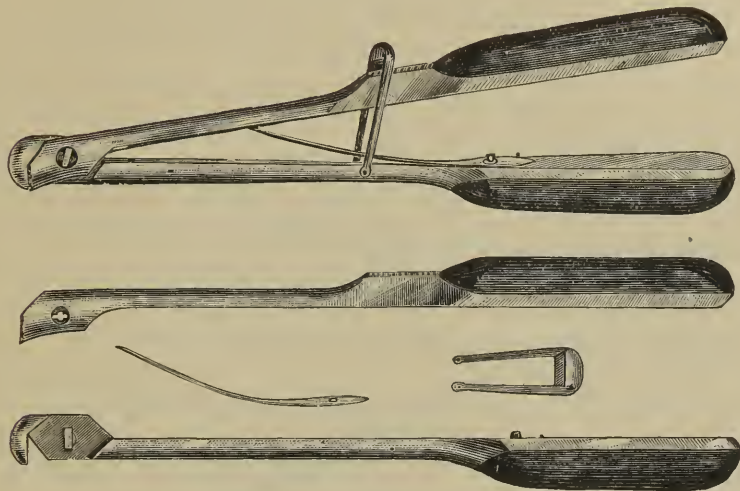


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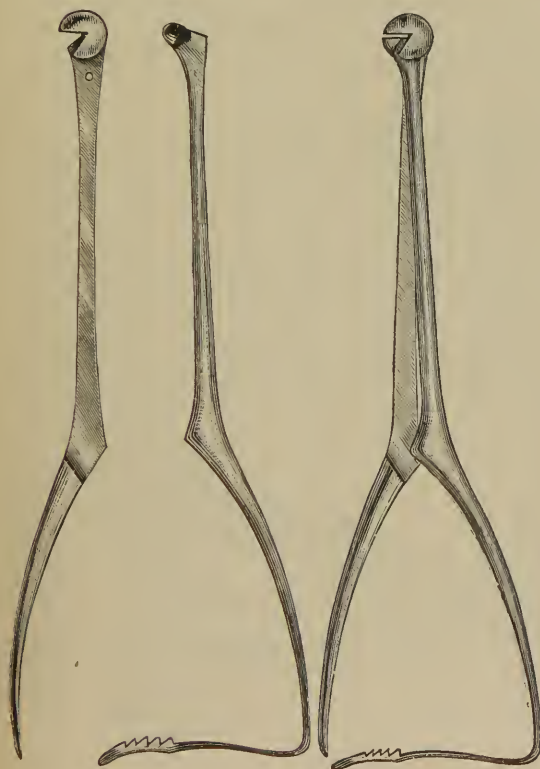


All Instruments designated by a * are illustrated.

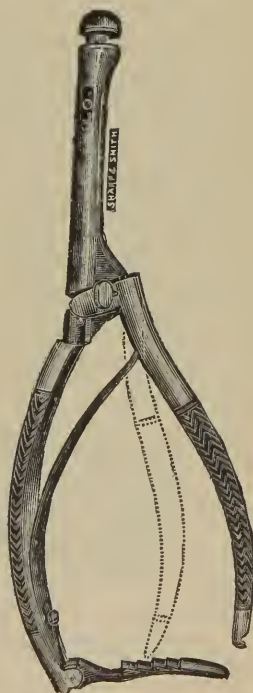
GYNÆCOLOGICAL—NEEDLE HOLDERS.



3508



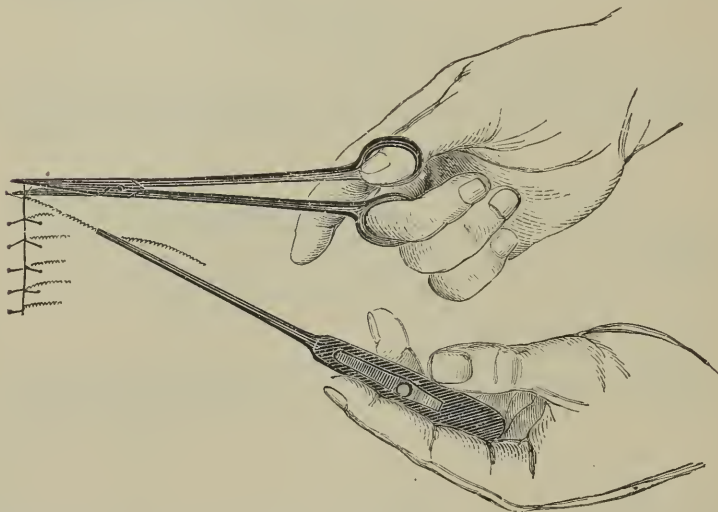
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GYNAECOLOGICAL—NEEDLE HOLDERS.

FIG.		
*3512	Stimson's Uterine Needle Holder.....	\$2 75
*3513	Dr. C. A. Von Ramdohr's Combined Needle Forceps.....	7 00
*3514	Dr. Wm. K. Otis' Aseptic Needle Holder for Hagedorn or Round Needles.....	8 25



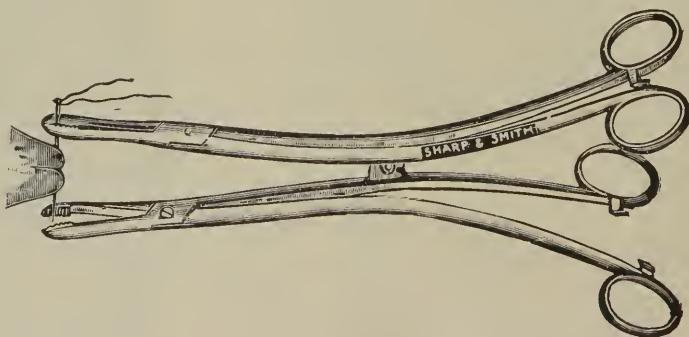
Cut showing the Manner of Operating with Sims' Wire Twisting Forceps and Scissors.

COMBINED NEEDLE FORCEPS.

By C. A. VON RAMDOHR, M. D., Instructor in Gynecology and Operative Midwifery, New York; Post Graduate Medical School.

In operating for lacerated cervix a great deal of time is occupied in passing the sutures. Usually the needle is first passed through one lip, extracted, introduced into the other one, and extracted again. The reason for this manœuver is that it is the harder to catch the point of the needle with the extracting forceps the more it is embedded in the surrounding tissues; and in passing the needle through both lips at the same time, it will always leave the point more or less deeply embedded.

Any simple contrivance enabling the operator to pass a needle through both lips at the same time, and extracting it without difficulty, thereby shortening the time of operation, is well worthy of consideration.



The combined needle forceps answers such a purpose. It consists of a pair of needle forceps which may be united or separated by a pivot and notch lock at their middle.

The *modus operandi* is as follows: A straight needle (Pallen's trocar pointed by preference, longer or shorter according to the thickness of the denuded cervix) is clasped at a right angle in the right hand (pivot) forceps. It is pushed through both lips, then the open left hand forceps (notch) is hooked on the pivot and the open branches are pressed against the cervix until the point of the needle lies, as it always must lie, according to the construction of the forceps, between the branches. The left hand forceps is then closed and the right one opened and withdrawn, and the point of the needle grasped by the left forceps is extracted.

In this way I have been able to pass four sutures in a unilateral laceration inside of four minutes, certainly not very slow time.

AN ASEPTIC HOLDER FOR HAGEDORN AND ROUND NEEDLES.

BY WILLIAM K. OTIS, M. D.

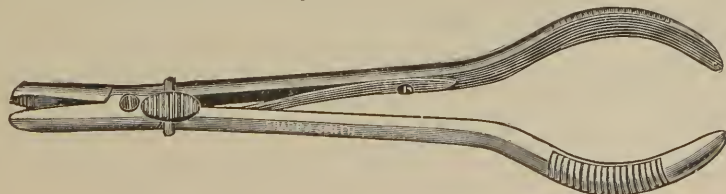
The manifest advantages of the Hagedorn needle and its very general adoption by American surgeons, together with the fact that most of the holders adapted for its use are both cumbersome and difficult to clean, led me, a year or two since, to modify probably the most popular holder ever invented for round needles (that of Dr. Henry B. Sands) in such a manner as to render it capable of firmly holding flat needles, and also of being more easily cleansed, without eliminating any essential feature of the original instrument. This instrument is easily understood by a reference to the illustration. The end for holding round needles is unchanged, except that it is placed at the opposite end of the instrument to that which it originally occupied. The end adapted for flat



3514

needles consists of the solid lower bar, the end of which is turned upward at a right angle; a sliding bar forced down upon this end by the powerful double lever, firmly grasps a needle placed between them. Several notches have been added to the original spring catch, in order to hold needles of different sizes.

For cleaning, by simply turning the little button which holds down the sliding bar, the whole upper portion of the instrument may be raised, swung over on the axis of the joint, opening the round end, and disconnected. The last named joint has been constructed on a novel principle, recently introduced, and is more powerful and more easily manipulated than the old French button-hole joint. This instrument, owing to its compactness, is particularly adapted for its use in the pocket case, and holds a needle very firmly, and considerable practical use in the hands of competent surgeons has proved its efficiency.



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GYNÆCOLOGICAL—NEEDLE HOLDERS.

[Extract from the New York "Medical Journal," May 18, 1889.]

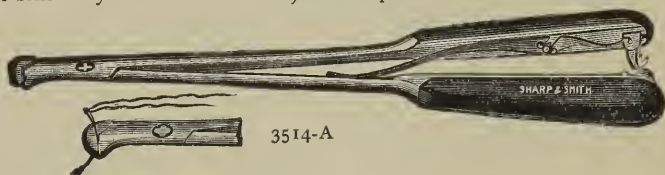
A NEW NEEDLE HOLDER FOR ALL KINDS OF NEEDLES.

By W. W. VAN ARSDALE, M. D., INSTRUCTOR IN SURGERY N. Y. POLYCLINIC; ATTENDING SURGEON EASTERN DISPENSARY.

Presented before the Section in Surgery of the New York Academy of Medicine, April, 1889.

The jaws of the needle-holder represented in the accompanying cut work on the principle of Dr. G. R. Fowler's instrument, of Brooklyn. They are made smaller, however, so as to facilitate the application of buried sutures in small wounds, and the joint being a French lock, straight needles can be retained in proper position by being placed behind the transverse portion of the jaws against the longitudinal surfaces of the shafts. While the needle-holder, therefore, is especially intended for use with the Hagedorn needles, which are every day becoming more popular, it can be used equally well for straight needles, for needles partly or wholly curved on the flat, and for perfectly round needles.

In placing the flat Hagedorn needles in position the same precaution should be taken as in the Hagedorn needle-holder proper—namely, that of placing the portion of the needle which bears the eye in contact with the right side of the shaft of the instrument. (In the cut the needle is figured placed somewhat similarly on the left side.) The point of the needle should emerge at



the point of the beak of the instrument. This position allows of greater freedom of scope, and of easier rotation of the handles. The present instrument holds even the smallest flat needles so firmly, however, that this point of position need not be insisted upon, as is the case with Prof. Hagedorn's holder, which is frequently too weak in its action.

The shafts are sufficiently long to permit of placing sutures inside of cavities, though not too long to preclude delicate work in plastic operations. The instrument can be used for ophthalmic work, as small needles curved on the flat and held between the transverse portions of the jaws can be closely approximated to the organ. The whole instrument is about seven inches in length in the present model. For use with the very largest flat needles made, it should be one or two sizes larger, the present one being intended for general use.

The handles are made of vulcanized rubber conveniently fashioned to fit the hand, and can be made of any desired size to suit the operator. The posterior one is smaller than the anterior one, in order to facilitate rotation in suturing with curved needles; moreover it is flattened on the surface, so that one can tell the position of the holder in the hand by the feel of it alone.

The catch consists of a tongue provided with three angular ratchet teeth, which fit into two retaining side-bars in the opposite handle. When the first tooth is caught, the needle placed between the jaws is held moderately firm, and very firmly indeed when the second tooth operates; the third tooth, however, releases the catch by allowing the tongue to pass between the bars, and the instrument opens, releasing the needle. The action of the catch is in some sort automatic. By closing the handles of the instrument after placing the needle

For other Gynæcological Instruments, see Index.

in position, the blades become locked and remain so until the needle is passed, when simple further pressure upon the handles releases the needle, thus doing away with all difficult thumb movements necessary to release the needles in most other holders. In many holders, the needle can only be released if the catch happens to be opposite the thumb of the operator; the present instrument can be readily opened in every position, even when held upside down.

The instrument is a so-called antiseptic one. It can be instantly taken apart for cleaning. The blades readily come apart by means of the French lock. The two springs which open the blades and work the ratchet tongue respectively, are made in one piece and can be slid laterally out of the pivot-head which retains them. The tongue is moored in cannon bearings provided with side slots, from which it is easily disengaged after removal of the spring.

The hard rubber handles are vulcanized on while the steel is hot, and the whole is afterward finished in one piece, presenting perfectly smooth surfaces. Even the name of the maker does not cause any unevenness of the surface, being made of metal and sunk into the handle so as to permit of a perfect finish while remaining visible to the eye.

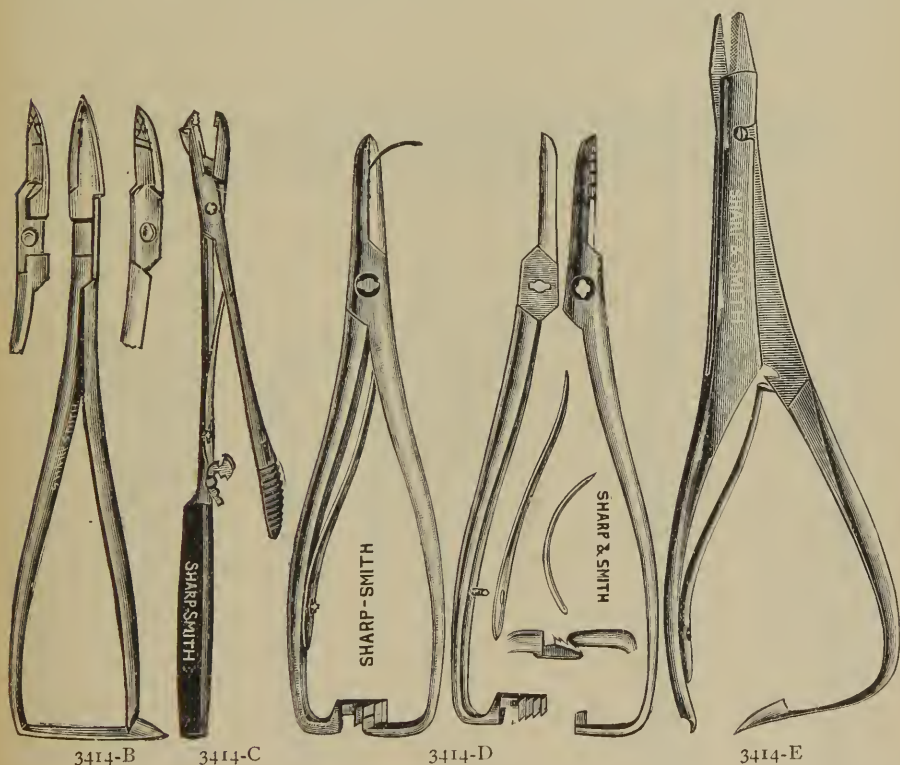


FIG.

*3414-A	Dr. W. W. Van Arsdale's Aseptic Universal Needle Holder.....	\$6 75
*3414-B	Dr. Geo. Edebohl's " " " "	3 35
*3414-C	Dr. Jas. H. Parkinson's " " " "	6 50
*3414-D	Dr. Dixie Crosby's " " " "	3 35
*3414-E	Dr. R. Ludlam's " " " "	4 50

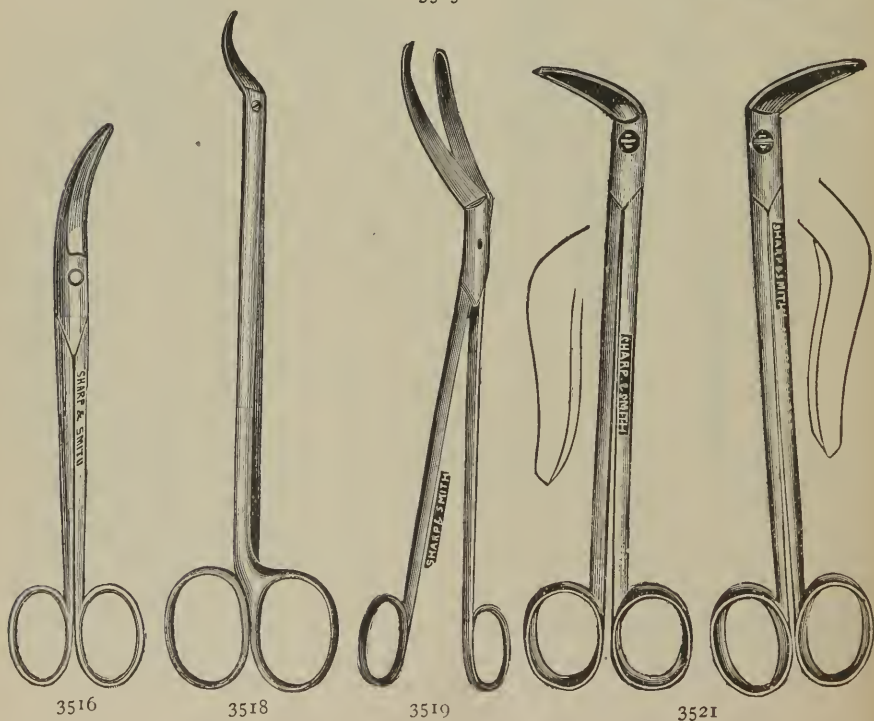
Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—SCISSORS.

FIG.					
*3515	Sims' Straight Uterine Scissors, sharp or blunt.....				\$1 75
*3516	" Curved on Flat Uterine Scissors.....				2 00
3517	" Angular " ".....				2 00
*3518	Emmet's Full Curve " " R. or L.....			each.	3 25
*3519	" Half " " ".....			"	3 25
3520	" Angular " " ".....			"	3 25
*3521	" Lesser Curve " " ".....			"	3 00
3522	" Wire Cutting " " ".....			"	3 35
*3523	Pallen's (A and B) " " ".....			"	3 75
*3524	Bozeman's Angular " " ".....			"	2 00
*3525	" Curved Down Handles, Uterine Scissors.....			"	2 50
*3526	" " Right and Left " ".....			"	2 00
3527	Byford's Sharp Point Uterine Scissors.....				2 00
*3528	" Blunt " " ".....				2 00
*3529	Jenks' Perineum.... " ".....				2 25



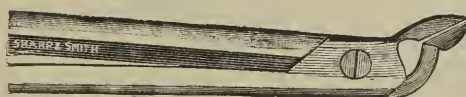
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GYNÆCOLOGICAL—SCISSORS.



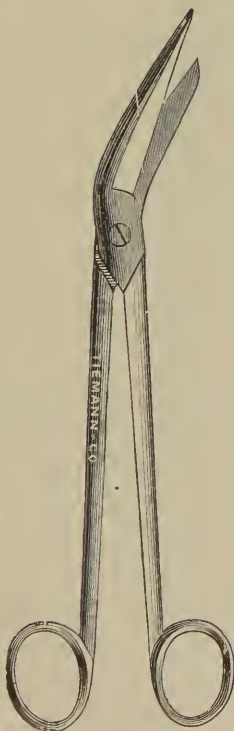
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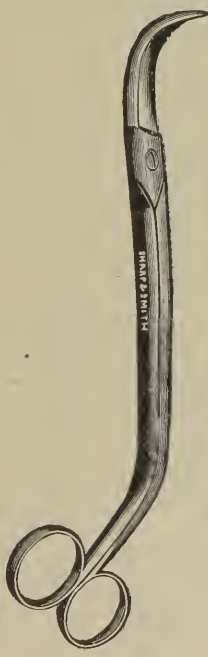
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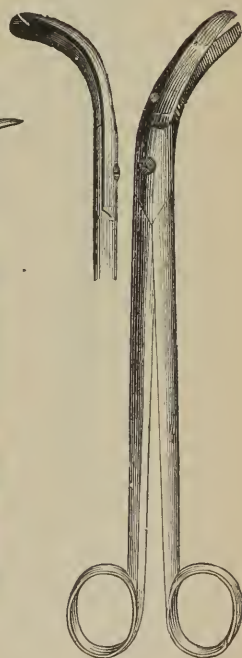
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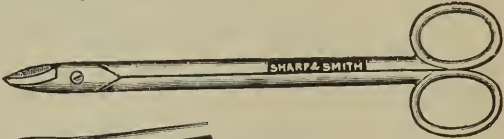
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GYNÆCOLOGICAL—SCISSORS.

FIG.		
3530	Goodell's Uterine Scissors.....	\$3 25
3531	Clark's Saw Tooth Uterine Scissors, straight.....	4 50
* 3532	“ “ “ “ “ curved.....	4 50
* 3533	Cervix Scissors for Amputation of the Cervix.....	5 00
* 3534	Keuchenmeister's Scissors for dividing the Neck of Uterus....	3 00
3535	Dawson's “ “ “ “ “	3 40
* 3536	Smith's Wire Cutting Scissors.....	2 25
* 3537	Heywood Smith's Uterine Scissors.....	9 00



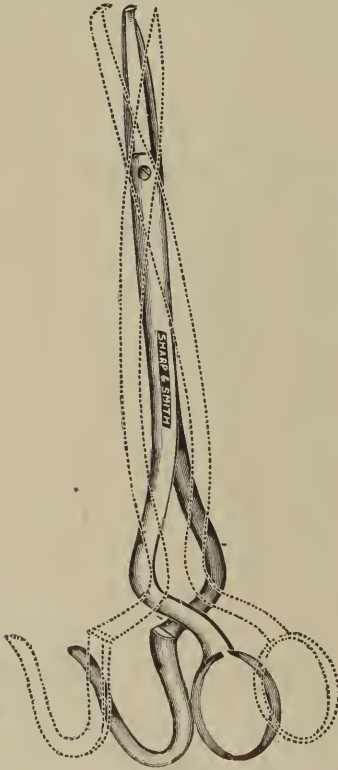
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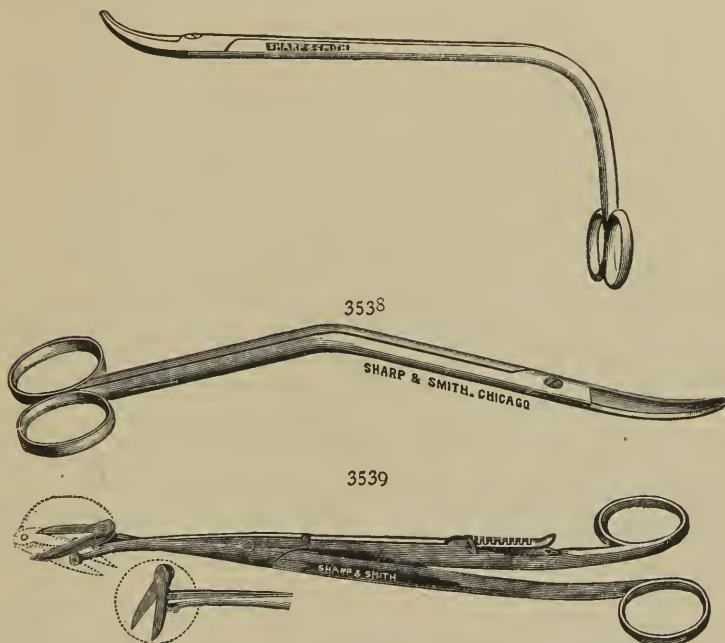


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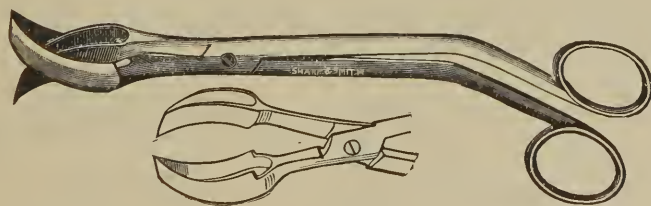
GYNÆCOLOGICAL—SCISSORS.

FIG.

*3538	Wilson's Wire Cutting Scissors.....	\$3 25
*3539	Pratt's Uterine Scissors.....	2 00
*3540	T. & Co.'s Revolving Blade Uterine Scissors.....	6 25
*3541	Skene's (new) Hawk Bill " ".....	7 50



The rotation of the blades is produced by the index finger of the same hand which operates. By depressing the lever near the handles and sliding it forward or backward, the scissors are placed in any required position, and held firmly by allowing the lever to snap into one of the notches; in the same manner the position can be constantly changed at pleasure. The instrument has been frequently used with much success in many operations where no other scissors could have been employed.



The parts of these scissors are made to seize the angle formed by the junction of the two flaps as far as appears necessary. The flaps are brought together by the aid of the forceps on each side, so as to bring the tissues more within the grasp of the scissors. The blades of the scissors are then closed, and a strip is removed from above downward on each flap.

GYNÆCOLOGICAL—NEEDLES.

FIG.

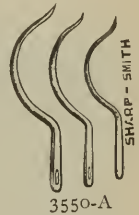
*3550-A	Slayton's Trachelorrhaphy Needles	per doz.	\$2 50
*3550-B	Pratt's Uterine and Rectal "	"	1 00
*3550-C	Dr. Sheldon Leavitt's Uterine and Perineum Needles	"	1 50
*3550-D	Ludlam's New Perineum Needle.....		1 15
*3550-E	Metcalf's " " " in handles.....	each,	1 00

(From "*The New York Journal of Gynecology and Obstetrics*," April, 1894.)

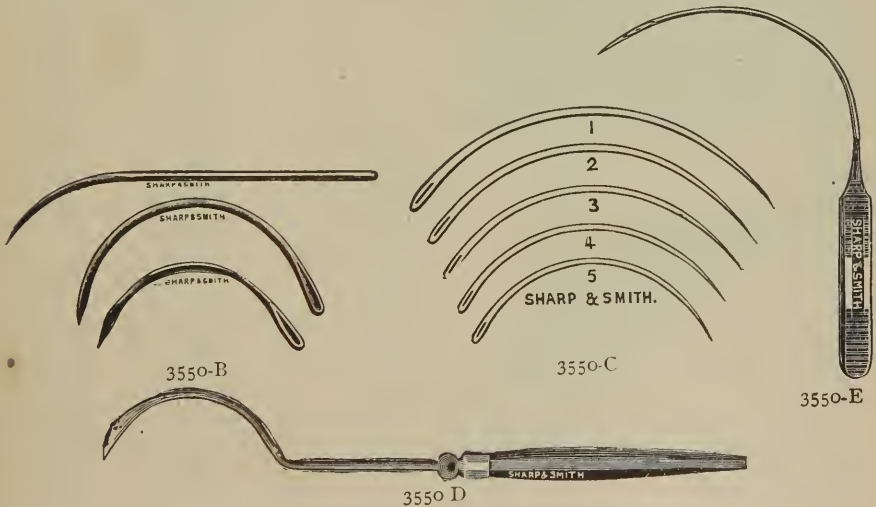
A NEW NEEDLE FOR TRACHELORRHAPHY.

By W. B. SLAYTON, M. D., M. R. C. S., I. R. C. P., of England.

After a fairly large experience in the operation for torn cervix, I have found the only difficulty likely to prolong the operation, and at times make it a failure, is the introduction of the sutures. Of course, in many cases, Emmet's, Hagedorn's or Nott's needles answer well, but from time to time more or less trouble is experienced in getting these needles in at the proper angles, without shifting about the holder in a way unsatisfactory to the operator. I do not know whether others have had the same experience as myself in this matter or not. I presume some have had. To overcome, then, this difficulty in introducing the needle at the right angle; to prevent the annoyance of manipulating the needle-holder in various positions till you hit the right one; and to insure greater accuracy in adapting the clean-cut edges of the cervix to each other, I have devised a needle of the shape shown in the accompanying cut. While the tail of the needle is straight, as in most others, it will be seen that the body is made up of two curves, with the point turning upward or downward as may be required. They are made of various sizes, on the same scale as Hagedorn's—also rights and lefts. They may be used with any needle-holder. In my hands this needle has carried out the indications required, and has made the operation far less troublesome than formerly. As in our profession almost everything may be traced back to the early centuries or the heathen Chinese, it may possibly be found that some worthy of the past or present has already devised a similar contrivance, but I believe this to be a new one.



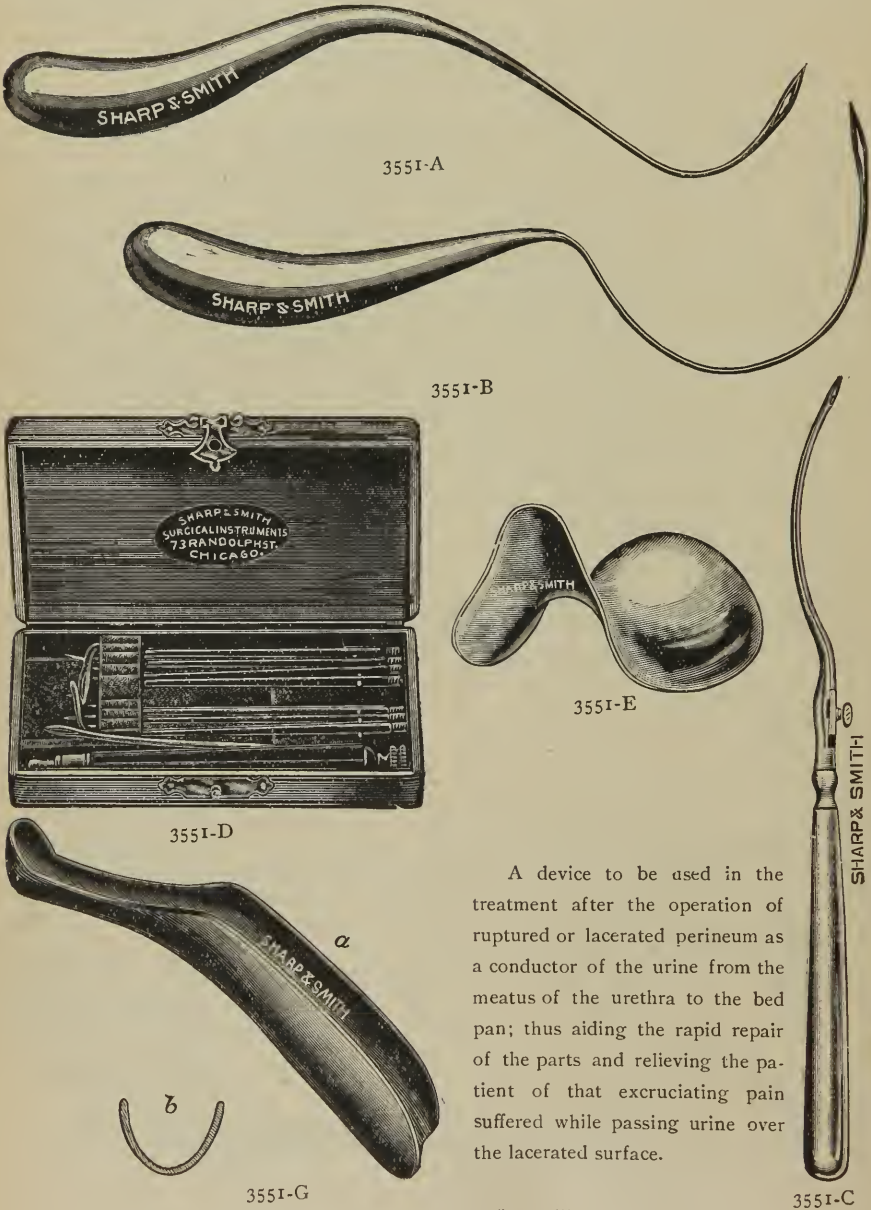
3550-A



Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—NEEDLES.

FIG.	Nelson's Modification of Marcy's Perineum and Pedicle Needles, small.....	\$1 25
*355I-A	“ “ “ “ “ “ “ “ large.....	1 25
*355I-B	Frank's Pedicle Needle.....	3 50
*355I-C	Set of Eight (8) Perineum Needles and Handle, in case.....	7 50
*355I-D	Watkins' Perineum Shield.....	1 00
*355I-E	Henderson's Perineum Shield.....	1 50



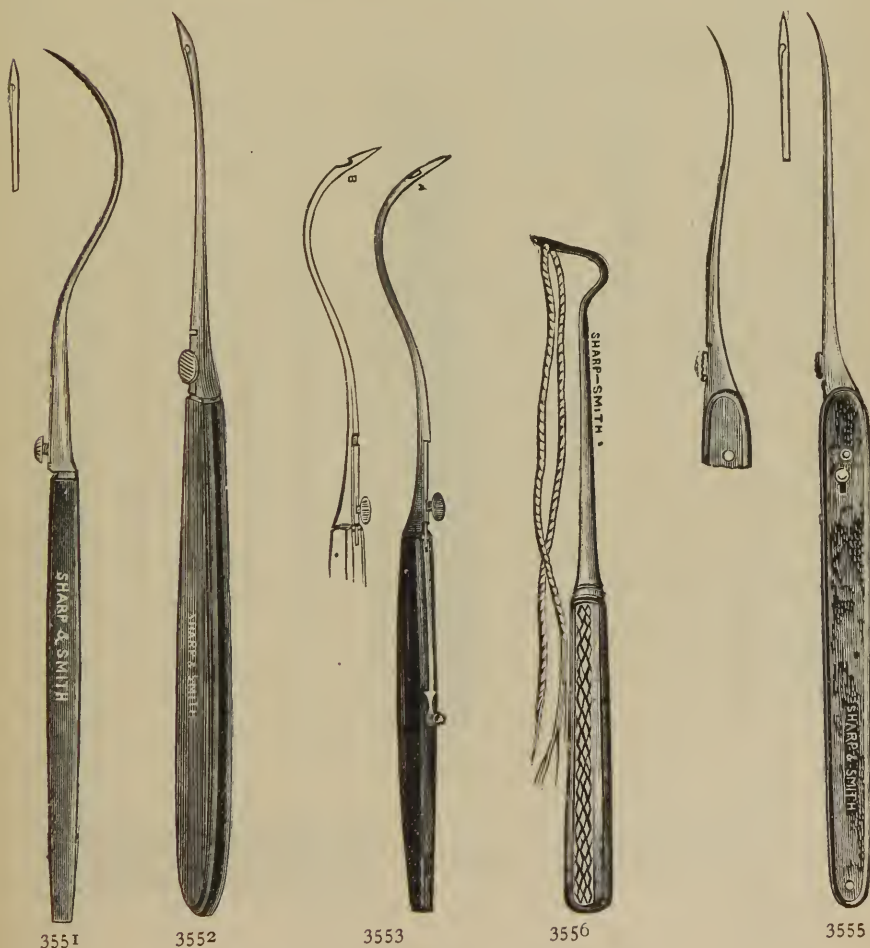
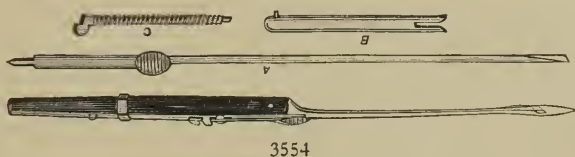
A device to be used in the treatment after the operation of ruptured or lacerated perineum as a conductor of the urine from the meatus of the urethra to the bed pan; thus aiding the rapid repair of the parts and relieving the patient of that excruciating pain suffered while passing urine over the lacerated surface.

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—NEEDLES.

FIG.

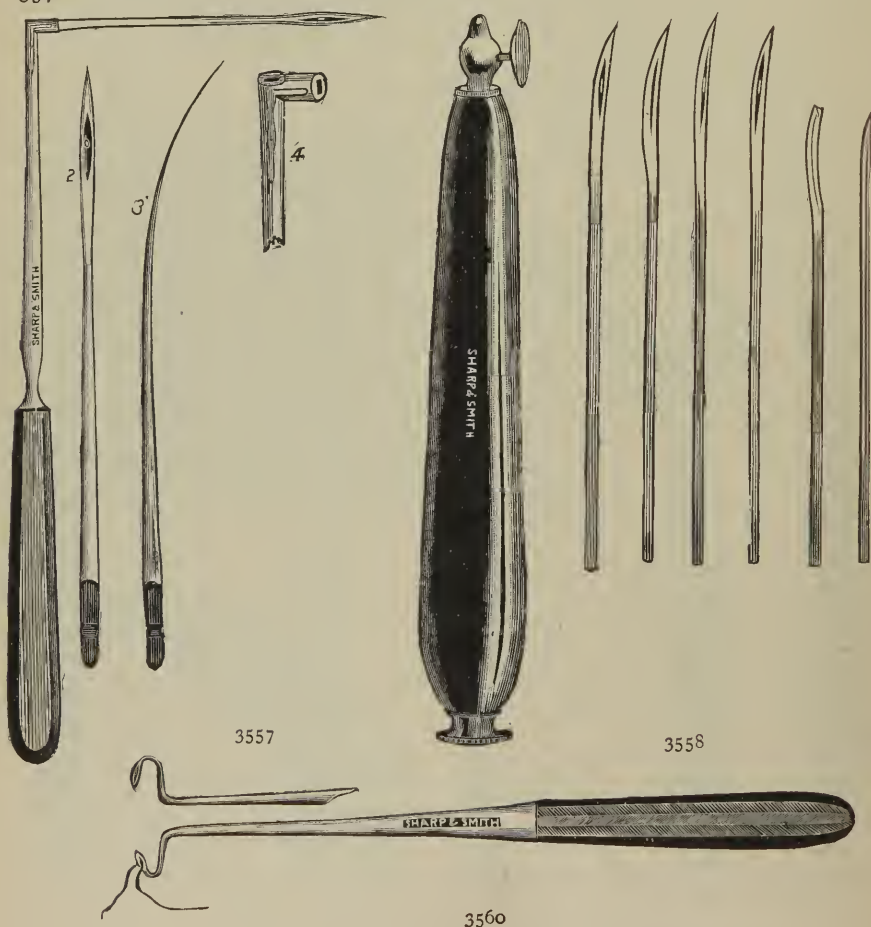
*3551	Rivedon's Perineum Needle, full curved.....	\$2 50
*3552	" " " half curved.....	2 50
*3553	" " " " (modified by Keyes).....	7 00
*3554	" " " straight....(" ").....	7 00
*3555	" " " in folding shell handle.....	3 25
*3556	Whitehead's Helical "	1 30



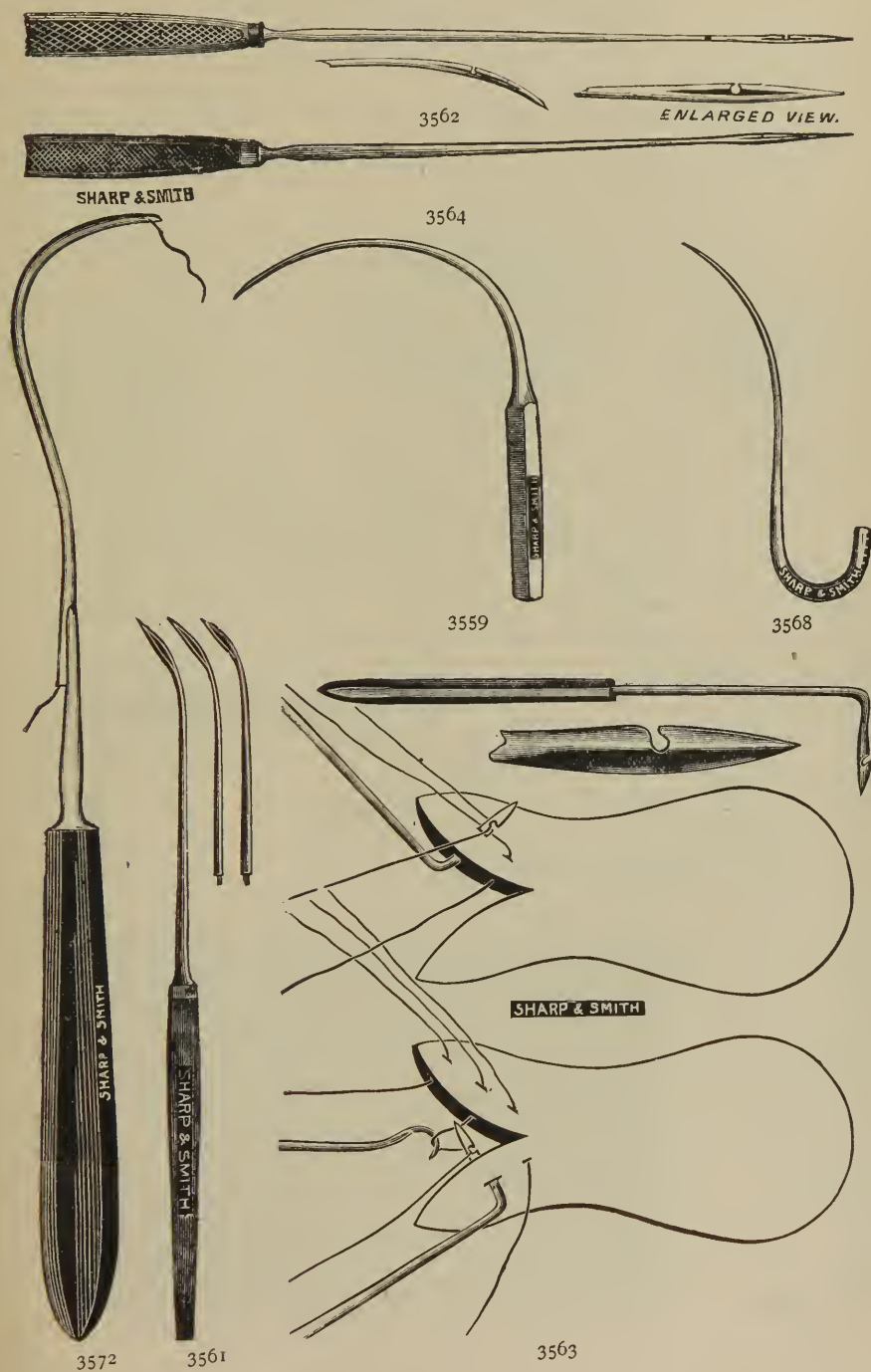
Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—NEEDLES.

FIG.			
*3557	Agnew's Perineum Needle and Needle Holder.....	set \$	3 40
*3558	Parker's " " set of six in handle, handle serves as a case for the needles.....		3 75
*3559	Wilson's Perineum Needle.....		1 00
*3560	" " " right or left.....	each	1 25
*3561	Peaslee's " " set of three.....		2 25
*3562	Skene's " "		1 00
*3563	Jackson's " "		2 25
*3564	Straight " "		55
*3565	Curved " "		55
3566	Stone's " "		1 50
3567	Thomas' " "		75
*3568	Papine's " "		60
3569	Goodell's " "		25
3570	Ashton's " "		75
*3571	Knox's " "		75
*3572	Emmet's Canulated Needle.....		2 00



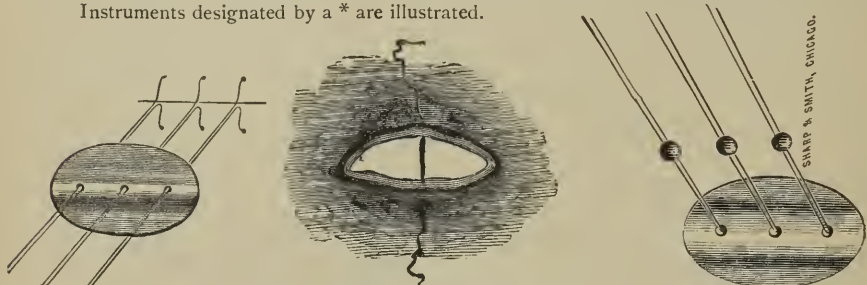
GYNÆCOLOGICAL—NEEDLES.



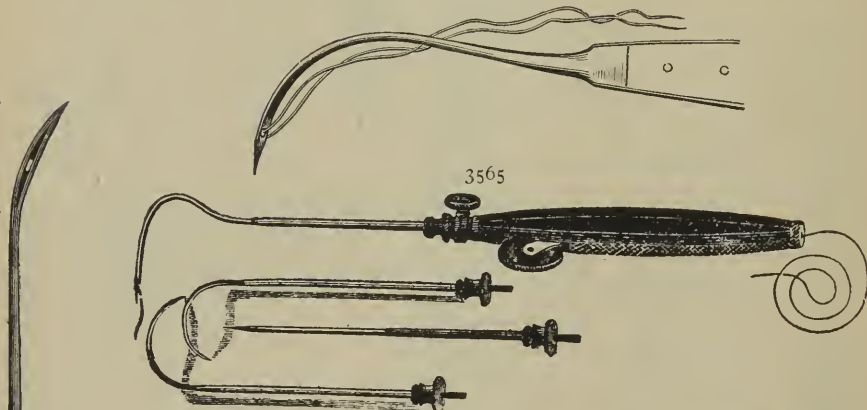
GYNÆCOLOGICAL—NEEDLES.

FIG.		
*3573	Pease's Canulated Needle	\$8 00
3574	McClellan's Canulated Needle ...	1 75
3575	Simpson's " "	1 50
3576	Vandeworke's " "	3 75
3577	Atlee's " "	1 15
*3578	Sharp & Smith's Hollow Wire Needle, 2 Needles	3 00
	" " " " " 3	4 00

Instruments designated by a * are illustrated.



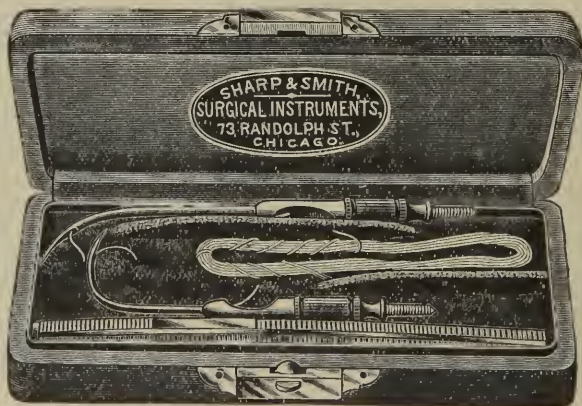
Bozeman's Button Suture.



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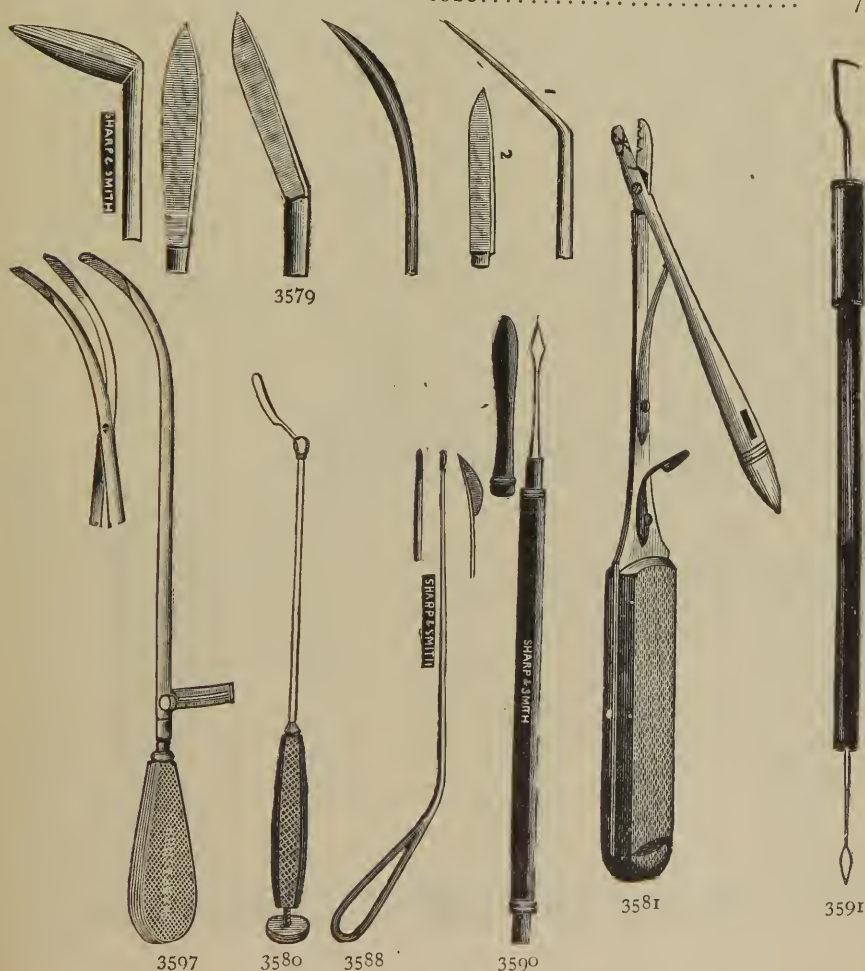
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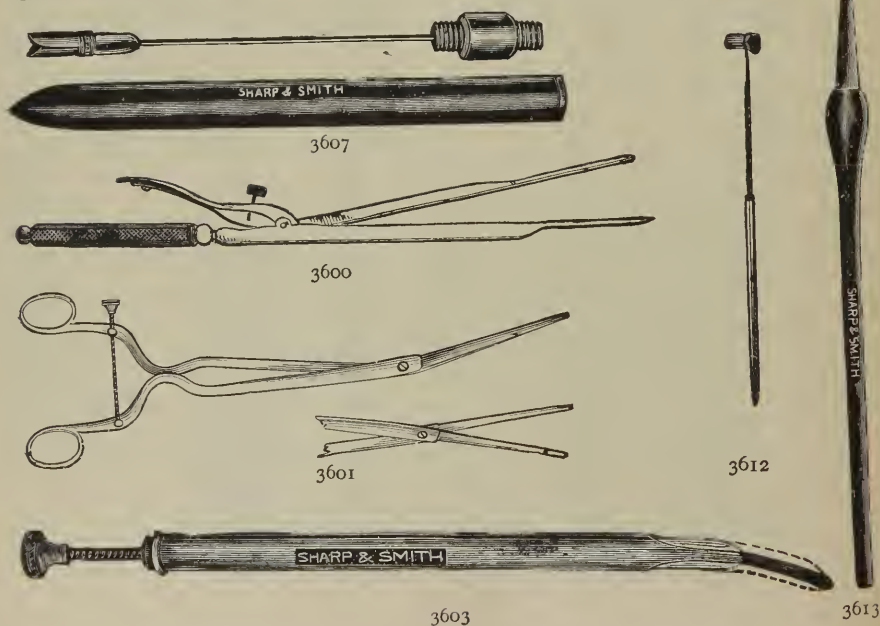
GYNÆCOLOGICAL—UTERINE KNIVES.

FIG.					
*3579	Sims' Straight Uterine Knife, No. 2.....	\$	1	10	
*3579	" Right or Left Uterine Knife No. 1.....	each	1	10	
*3579	" Angular " " " 3.....	"	1	25	
*3579	" Double Edge " " " 4, curved or flat....	"	1	35	
*3579	" Scalpel " " " 5.....	"	1	10	
*3579	" Bent Down " " " 6, double edge....	"	1	50	
*3580	" Revolving " " ".....		3	25	
*3581	" Latest " " 4 blades and holder.....		7	50	
3582	Emmet's " ".....		5	00	
3583	Bozeman's " ".....		1	25	
3584	" Angular " ".....		1	25	
3585	Civiale's Meatus Knife.....		4	50	
3586	Double Edge Uterine Knife.....		1	25	
3587	Right and Left " ".....	each	1	25	
*3588	Skene's Uterine Knife and Probe.....		75		



GYNÆCOLOGICAL—KNIVES AND SCARIFICATORS.

FIG.			
3589	Barker's Uterine Scarifier.....		\$2 25
*3590	Buttles' " " Spear Point.....		1 00
*3591	" " " with Hook.....		1 50
3592	Chapman's " " ".....		1 10
3593	" " " folding.....		2 00
3594	Nott's " " ".....		75
3595	Peaslee's " " ".....		3 50
3596	Storer's " " ".....		4 50
*3597	Skene's " " and Sound.....		4 50
3598	Cutter's " " ".....		
3599	White's Hysterotome.....		9 00
*3600	Simpson's " " ".....		5 00
*3601	Stohlman's " " ".....		5 50
3602	Peaslee's " " ".....		5 00
*3603	Peaslee's Uterotome.....		3 25
3604	" " " two blades.....		5 00
3605	Edwards' Self-Grasping Uterine Caustic Holder.....		1 85
3606	Byford's Platina Cup " " ".....		2 50
*3607	" Silver " " " ".....		1 50
3608	Earle's Jointed " " " ".....		1 85
3609	Gardner's " " " ".....		2 25
3610	Sims' " " " ".....		1 75
3611	Emmet's " " " ".....		1 75
*3612	Lente's Platina Cup for Caustics.....		2 25
*3613	Alum Pencils mounted on handle.....		25
3614	Blue Vitriol Pencils, mounted on handle.....		25
3615	Chloride of Zinc ".....		25
3616	Nitrate of Silver ".....		\$1 00



GYNÆCOLOGICAL—SPECULA.

FIG.			
*3617	Graves' Vaginal Speculum.....	\$	1 35
*3618	Brewer's " " ".....		1 50
	Both of the above are convertible into a "Sims" Speculum		
*3619	Cusco's Vaginal Speculum.....		1 50
3620	" Improved Vaginal Speculum.....		1 50
*3621	Jones' Vaginal Speculum.....		3 00

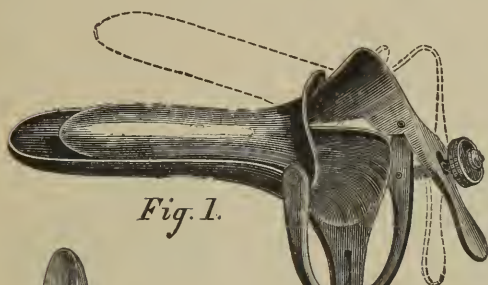
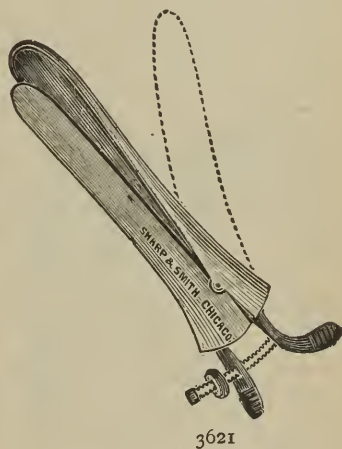


Fig. 1.



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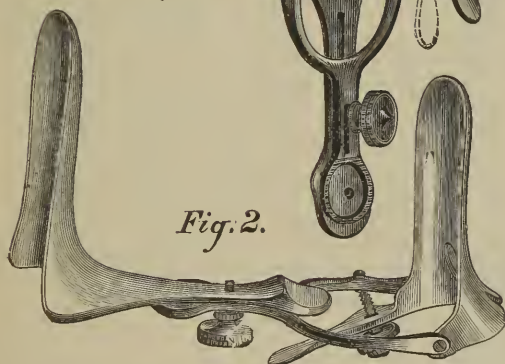
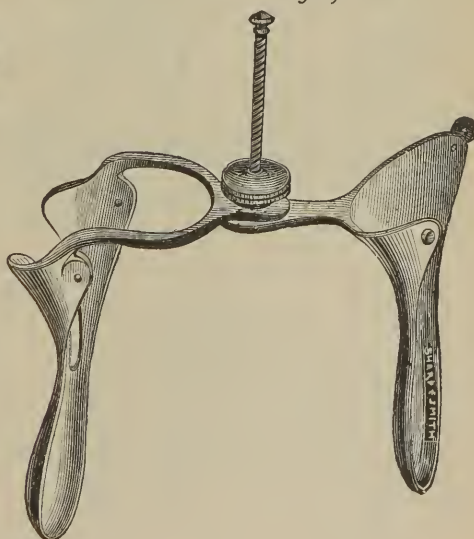
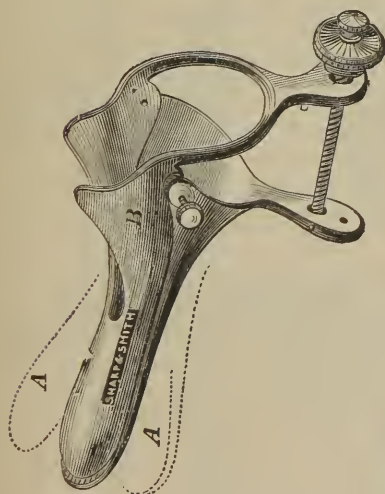


Fig. 2.



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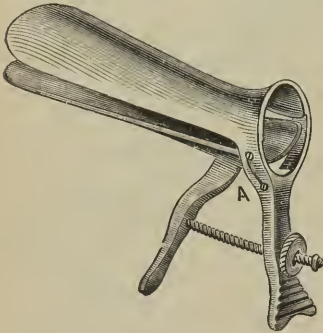


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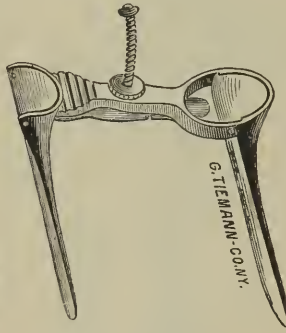
GYNÆCOLOGICAL—SPECULA.

FIG.

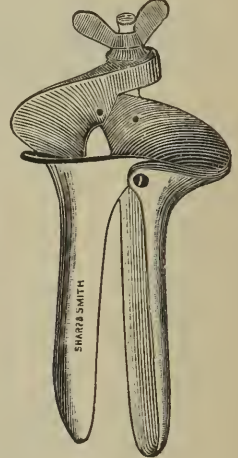
3622	Cuscoe's Vaginal Speculum (modified by Ludlam).....	\$ 2 00
	Figs. 3619, 3620, 3622 and 3623 have folding handles, and are convenient for carrying in the pocket.	
3623	Thomas' Modification of Cuscoe's Vaginal Speculum.....	2 00
*3624	Storer's Vaginal Speculum.....	2 00
*3625	McNutt's " " (Dr. McNutt of San Francisco)	2 50
*3626	Taylor's " "	1 50
*3627	Howard's " "	2 00
*3628	Higbee's " " (3 sizes).....each	1 50



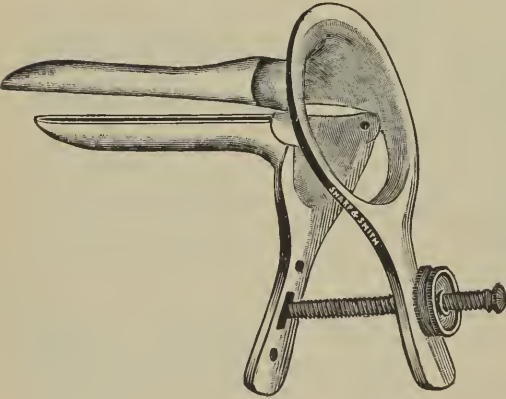
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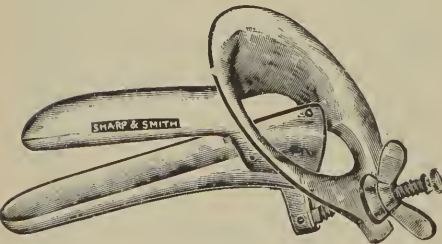
3624—Open.



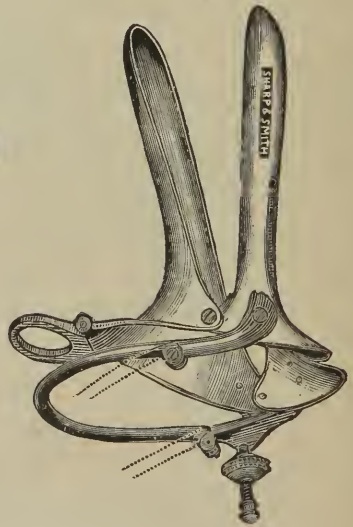
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3625



3628

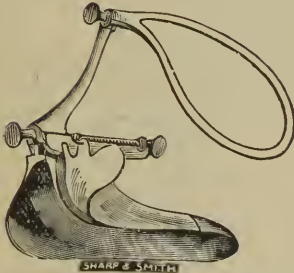


3627

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—SPECULA.

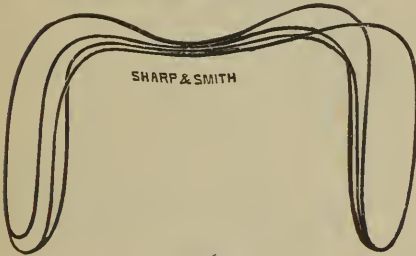
FIG.					
*3629	Sims' Vaginal Speculum	(made in five sizes).....	each	\$1	00
3630	"	"	hard rubber.....	"	1 50
*3631	"	"	wire.....	"	1 50
*3632	"	"	with handle.....	"	1 25
3633	"	"	(virgin).....	"	1 00
*3634	"	"	folding.....	"	4 00
*3635	"	"	modified by Emmet, Dividing Blade..	\$7	50
*3636	"	"	" " Dawson.....	4	50
3637	"	"	" " Hepburn.....	2	50
*3638	"	"	" " Munde.....	2	60



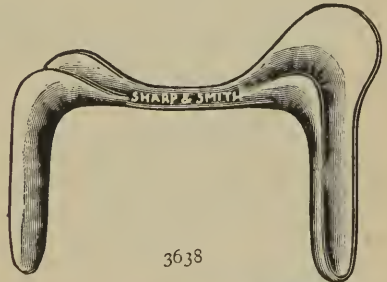
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3629



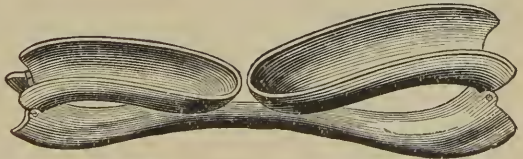
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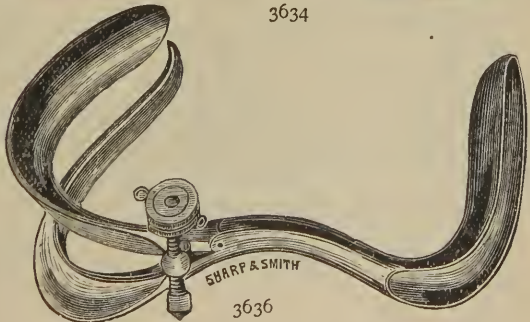
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3632



3634

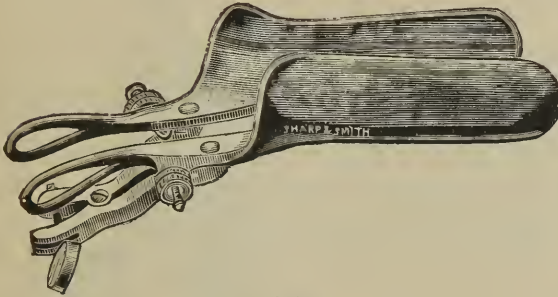


3636

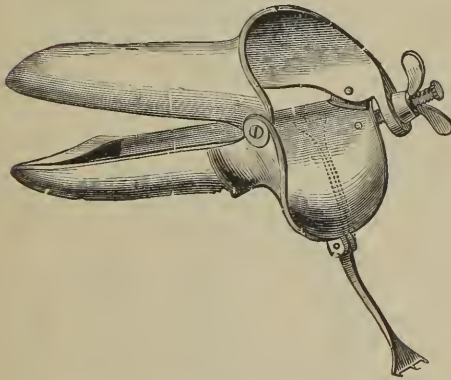
GYNÆCOLOGICAL—SPECULA.

FIG.

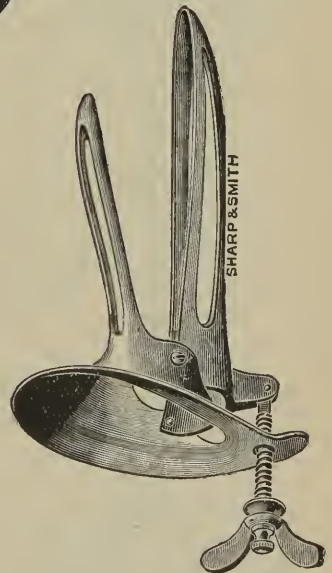
*3646	Goodell's Vaginal Speculum	\$ 3 00
*3647	Hunter's " "	.....	3 50
*3648	Miller's " "	small	1 50
	" " "	medium	1 50
	" " "	large.....	1 50
*3649	Fitch's " "	2 50
*3650	Ethridge's " "	Fenestrated.....	1 75
3651	Byrne's " "	7 00
3652	Baxter's " "	3 75



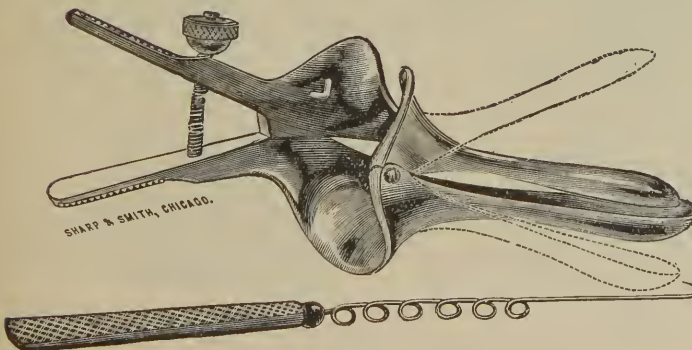
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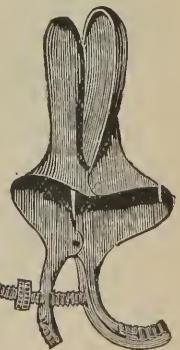
3647



3650



3648

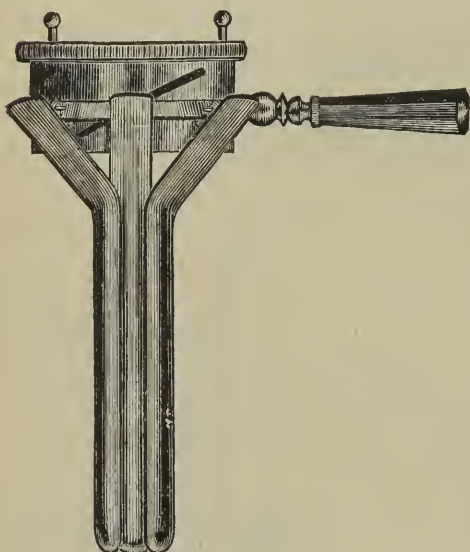


3649

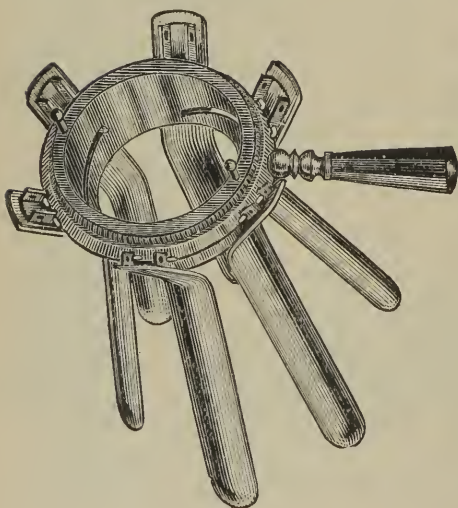
GYNÆCOLOGICAL—SPECULA.

FIG.

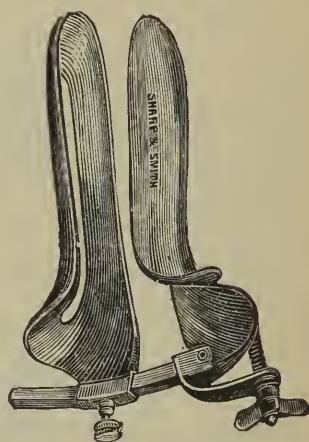
*3653	Universal Vaginal Speculum.....	\$ 7 50
*3654	Leonard's " "	3 25
*3655	Jenks' " "	6 00
3656	Reed's " "	4 50
3657	Meadow's " "	7 50
3658	Byford's " " four blades.....	10 00



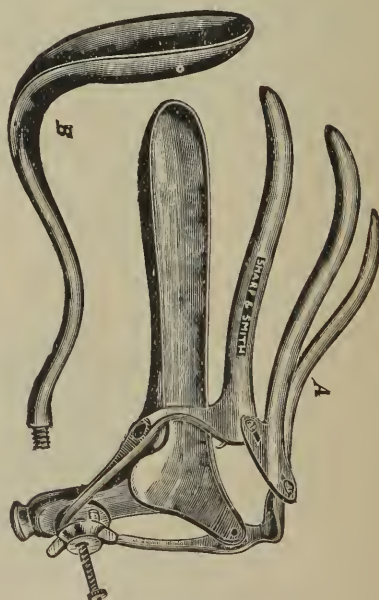
3653—Closed.



3653—Open.



3654

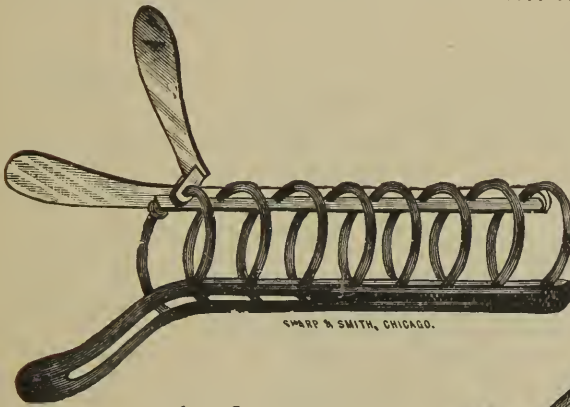


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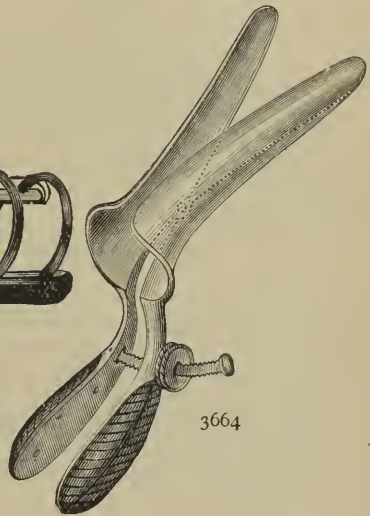
All Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—SPECULA.

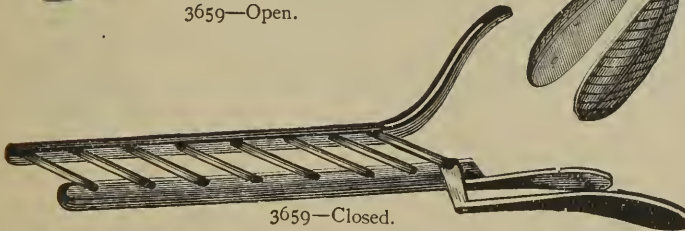
FIG.	Shiland's Vaginal Speculum.....	\$ 3 75
*3659	Siemon's (set) Vaginal Speculum, with two handles and eight blades	15 00
*3660	“ “ “ “ “ four “	8 00
3661	Schlotterbeck's “ “	5 25
*3662	Thomas, latest “ “	15 00
*3663	Ricord's Bivalve “ “	2 00
*3664		



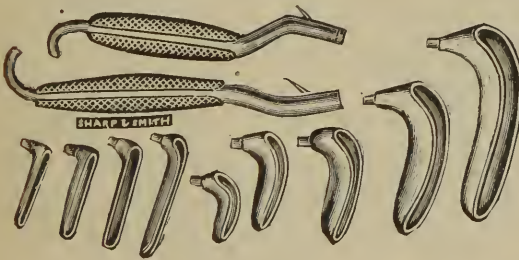
3659—Open.



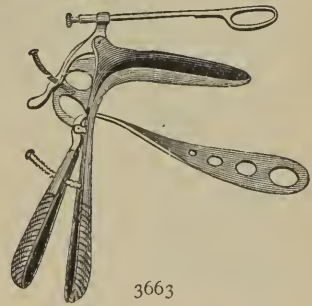
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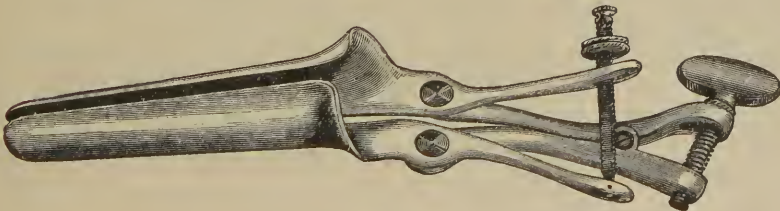
3659—Closed.



3662



3663

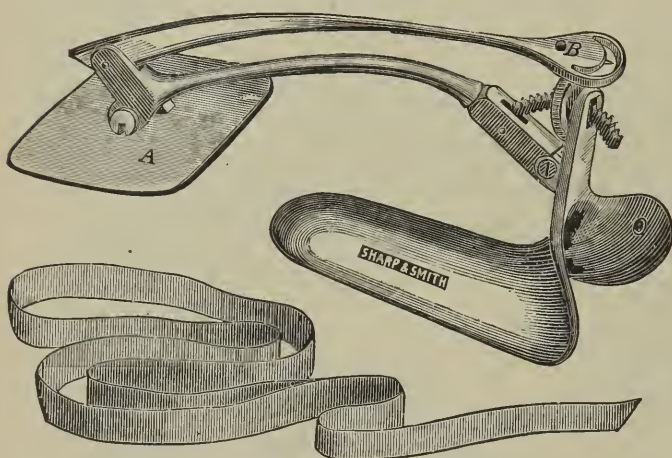


Pat., Feb. 24, 1874.

3662

GYNÆCOLOGICAL—SPECULA.

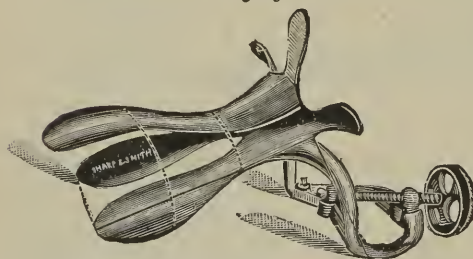
FIG.		
*3665	Erich's Vaginal Speculum.....	\$ 7 00
3666	" " modified by Hunter.....	6 75
*3667	Bozeman's Trivalve Speculum.....	9 00
3668	" Duck Bill " 	1 90
*3669	Neugebauer's Vaginal Specula, set of 4 pieces, making 3 sizes of Sims' Specula	4 50
3670	" " " with screw attachment for making into form of Sims'.....	5 00
*3671	Neugebauer's Vaginal Specula, modified by Barnes	2 00
*3672	Bath " " 	1 50



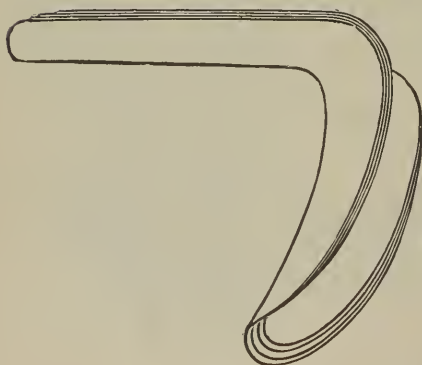
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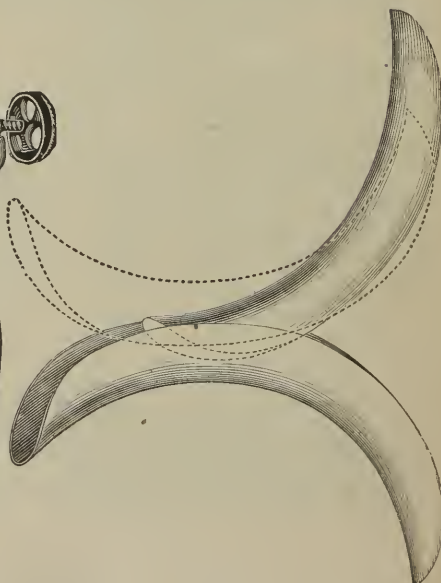
3672



3667



3669



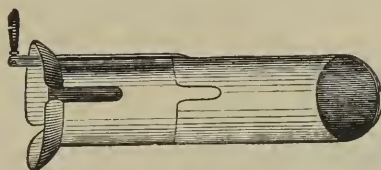
3671

GYNÆCOLOGICAL—SPECULA.

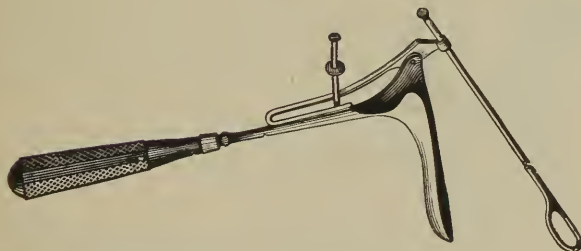
FIG.

3673	Wackerhagen's Vaginal Speculum.....	\$	7	50
*3674	T. & Co.'s Four Blade Vaginal Speculum.....		7	50
*3675	Thomas' " " " ".....		7	50
*3676	" " Telescopic " ".....		3	75
*3677	Ferguson's Glass Mirror " ".....			35
3678	" " Plain " ".....			30
3679	" " Round End " ".....			50
3680	" " Fenestrated " ".....			50
3681	" " Opaque " ".....			40
3682	" " Metal Lined " ".....		1	50
*3683	" " Hard Rubber " ".....			70
*3684	Dr. Jno. Blake White's Modification of Sims' Speculum.....		1	85
*3685	" " " " " " Nott's " ".....		2	00

See following page for description of Figures 3684 and 3685.



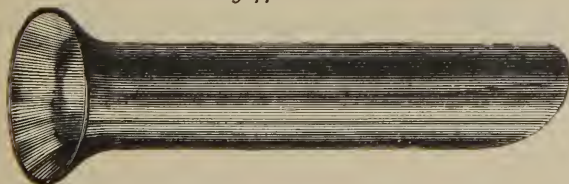
3676



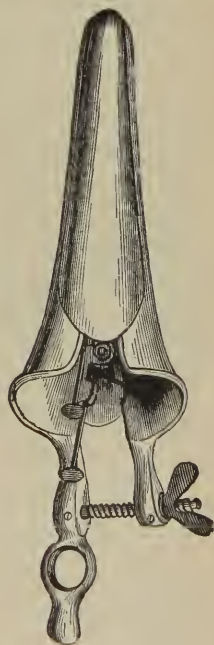
3675



SHARP & SMITH, CHICAGO.



3683



3674

All Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—SPECULA.

BY JOHN BLAKE WHITE, M. D.,

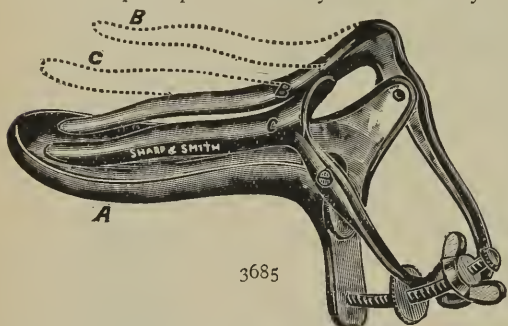
Visiting Physician to Charity Hospital, Blackwell's Island, N. Y.

The speculum we use to-day is a composite instrument, the result of successive improvement at the hands of experts.

Although important features about it have from time to time been added, not one alone of these instruments can be relied upon to the exclusion of the rest. There is, therefore, latitude yet open for the exercise of invention to those who are in the habit of employing the various forms of this essential auxiliary to diagnosis and treatment of uterine diseases.

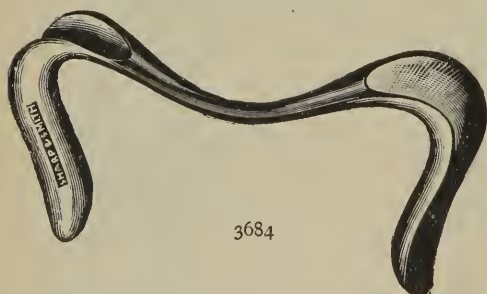
Its success in my own hands, and that of a few of my professional friends, for the past three years, in facility of introduction, in readiness of adaptability and perfect command of the parts to be examined and treated, has been so satisfactorily demonstrated that I have esteemed it a duty I owed to the profession to place it at the option also of those from whom I have, at various times, received similar favors.

The lower blade *A* is so constructed that when introduced it follows the posterior vaginal wall, which, owing to the concavity of the sacrum, is curved, and the cup-shaped extremity rests directly behind the cervix uteri.



If the uterus is displaced, the curved end of the speculum will assist in bringing the cervix into view. By its aid the vagina is more easily distended posteriorly and inferiorly. The two upper blades, *B* and *C*, are concavo-convex, so that full dilatation may be effected superiorly at points where least resistance is offered by the anatomy of the region.

The part of the pelvis through which the vagina courses and admits a speculum, contains no organ or tissues that can possibly suffer by considerable distension of the vagina. This fact is well shown by the act of parturition.



The Sims speculum is rendered far more useful, constructed in accordance with this natural vaginal curve posteriorly.

The cylindrical specula are also more useful when made to conform more fully to this posterior vaginal curve. The improved Nott's speculum has another advantage in that the two upper blades, *B* and *C*, are arranged to admit of independent action, enabling

the operator to lift one or the other lateral half of the vagina. This mechanism facilitates the search for the cervix uteri, especially in displacements.

The introduction of the uterine sound, as well as tents, is rendered more practicable when this curved speculum is used, and local treatment of the endometrium can be far more thoroughly and satisfactorily accomplished. When this instrument is closed for withdrawal, the folds of the vaginal mucous membrane are less apt to be pinched than with the other trivalve specula. A smaller sized instrument than the one presented should be used in nulliparous vaginæ.

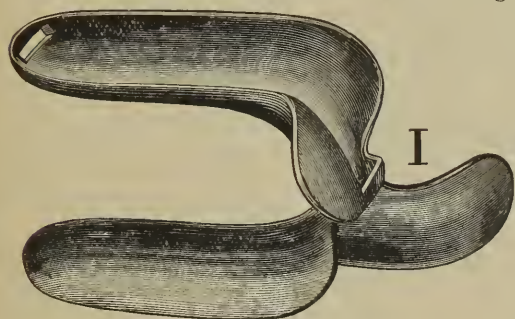
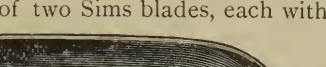
GYNÆCOLOGICAL—SPECULA.

*3686	Cleveland's Vaginal Speculum, Fig. 1	} \$2 50
*3686A	" " " " 3	.....
*3686B	" Speculum Belt " 2	.....

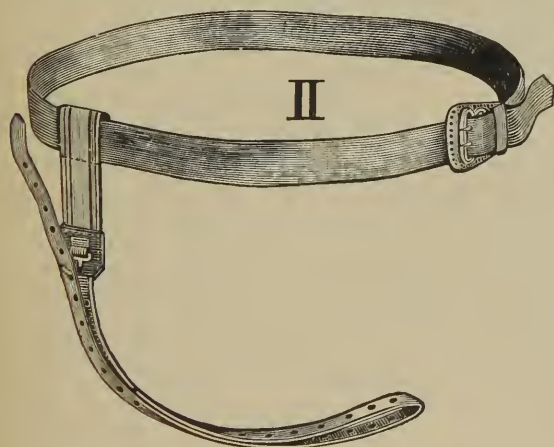
A SELF-RETAINING SPECULUM.

BY CLEMENT CLEVELAND, M. D., New York.

This instrument is designed as a so-called self-retaining speculum. It consists of two Sims blades, each with a flange, and separated by an interval of one inch and three-fourths (Fig. 1). These, though in parallel planes, looking at them from the side, will be seen to be at a slight angle to each other when held with the concavity of either toward the observer, the nearer blade deflected to the right, and the farther one to the left. The object of this will be explained further on.



3686 blades come together, is a narrow metal band. To complete the instrument, there is a belt of webbed material to be applied about the waist. On this is looped, to admit of its being moved readily to any position upon the belt, a piece of the same material. To this is attached a long leather strap, with oblong perforations placed at intervals of half an inch. At the point where this strap and the piece of belting are joined there is a hook, the purpose of which will appear later. (See Fig. 2).



speculum still with the right hand, with the index finger extended along the concavity of the blade, it is introduced, care being taken to pass it back of the cervix. The instrument is then pushed firmly up against the perineum, the outer blade reaching a point just at the bend of the coccyx. I would say here, in parentheses, that I have tried the instrument in over fifty women in my clinic

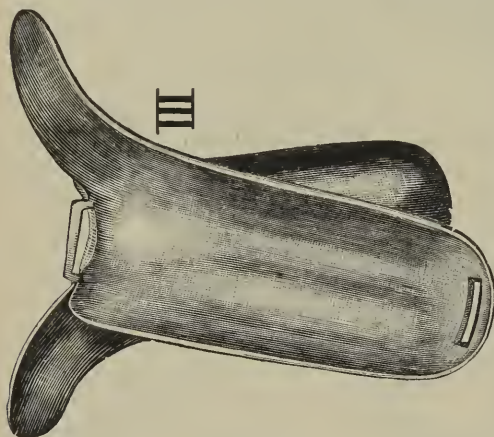
GYNÆCOLOGICAL—SPECULA.

at the Woman's Hospital, and find that the interval of one inch and three-fourths between the blades is enough, even in the stoutest women, to include all tissue between the posterior wall of the vagina and the integument between the nates. In very thin women it will even be found advisable to place a folded towel under the external blade. The next step is to draw the leather strap tight, first through the fenestra and then under the metal band. The perineum is then retracted to the required degree by drawing the strap backward and securing it to the hook provided for the purpose, as here described. By now using the vaginal depressor the cervix is brought at once into view.

When the belt is applied outside the dress it may be necessary to pass the strap through the fenestra at the end of the blade. In many cases the clothing, pushed back from the buttocks, is bunched up so high that it is necessary to have the tension exerted from the two points. If the tension were from the metal band alone the speculum would be more likely to pull out. When the belt is applied merely over the nightdress, as in an operation, then it may be only necessary to pass the strap under the metal band, for then the tension is

directly backward, and the speculum cannot possibly pull out, as the strap presses firmly over the point of the blade. Still I should advise it always being passed through the fenestra. This I will explain below. To remove the speculum, detach the leather strap from the hook. The oblong perforations enable the operator to pull the strap off with the greatest ease. Then the speculum is withdrawn from the vagina and off of the strap at the same time.

I should here explain why the blades are placed at an angle to each other, as above described. The chief fault to be found with all self-retaining specula is that,



3686 B

to see at all satisfactorily, one has to stoop; while with the Sims speculum, held by a nurse, we look directly down upon the cervix as we sit before the patient. This is because the nurse does not pull directly backward upon the perineum, but a little upward, thereby tilting the point of the blade a little downward. This is precisely what is accomplished by giving the aforesaid angle to the blades in this new speculum, the strap pulling the outer blade directly backward, thus tilting the other just enough downward. (See Fig. 3.) If the strap is not passed through the fenestra there is danger that the point of the blade under the strap may slip upward, and especially so in thin women, thus deranging the position of the blade in the vagina.

The instrument seems to possess several advantages which it may be well to mention. In the first place, it consists of two blades of different size. It is simple, having no mechanism about it to get out of order. It can be easily kept clean, being entirely of metal, and in one piece.

It is not claimed that it can take the place of a well-trained nurse, but it certainly does better than an indifferent one. It has been used in several cervix operations at the Woman's Hospital, with entire satisfaction to the operator.

GYNÆCOLOGICAL—SPECULA.

A NEW SPECULUM.

BY ALBERT G. BEEBE, M. D.

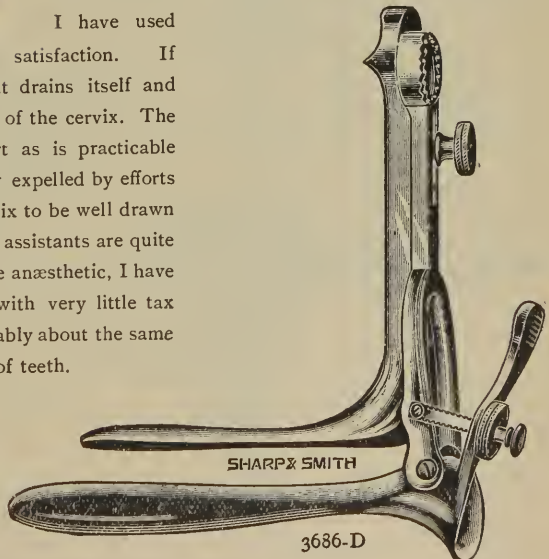


Fig. 3686-C. DR. ALBERT G. BEEBE'S SPECULUM.

For Operations upon the Cervix.

Dr. Beebe writes in explanation: This Speculum which, it is readily seen, is a modification of Nott's, was devised many years ago to meet a demand which I felt at my very first operation upon a lacerated cervix for a self-retaining speculum which could be used in the dorsal position, and would secure the maximum of room for the manipulations of the operator, and at the same time be as simple as possible in construction.

I have used it from that time with great satisfaction. If the patient is properly adjusted, it drains itself and gives the most satisfactory exposure of the cervix. The blades are intended to be as short as is practicable without risk of the speculum being expelled by efforts at vomiting, and so allows the cervix to be well drawn down. With this instrument three assistants are quite sufficient; and by dispensing with the anæsthetic, I have several times operated alone, and with very little tax upon the patient's endurance—probably about the same as that often required in the filling of teeth.

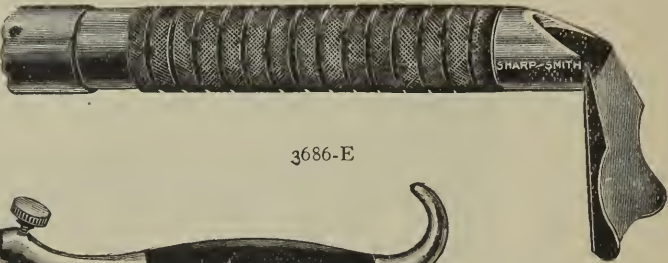


3686-D

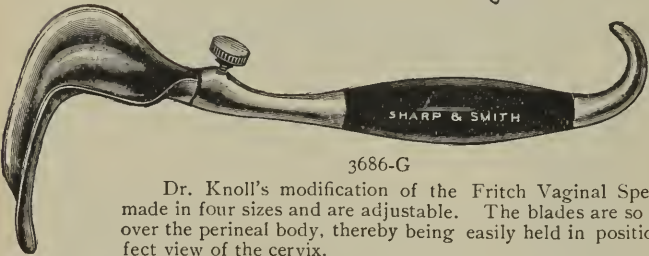
GYNÆCOLOGICAL—SPECULA.

FIG.

*3686-C	Dr. A. G. Beebe's Modified Nott's Vaginal Specula	\$3 50
*3686-D	Dr. J. V. Stevens' Modified Graves'	3 50
*3686-E	Dr. Dan'l T. Nelson's Modified Marcy's Vaginal Specula.	3 00
*3686-G	Knoll's Modification of Fritch's Vaginal Specula.	7 50
*3686-H	Dr. Marie J. Mergler's Bivalve Virgin Specula.	2 50
*3686-I	Cusco's Bivalve Virgin Specula.	2 50
*3686-K	Graves' " " "	2 50
*3686-L	Hale's " " "	3 00

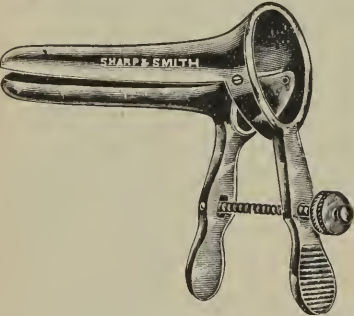


3686-E

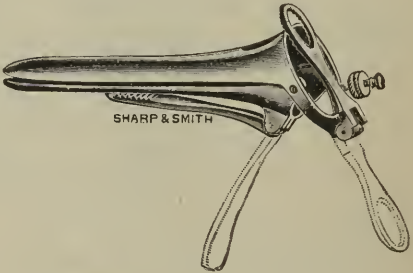


3686-G

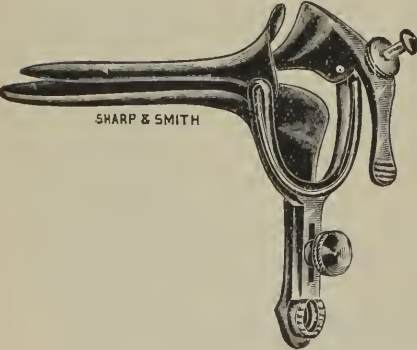
Dr. Knoll's modification of the Fritch Vaginal Speculum. The blades are made in four sizes and are adjustable. The blades are so bent that they fit snugly over the perineal body, thereby being easily held in position, besides giving a perfect view of the cervix.



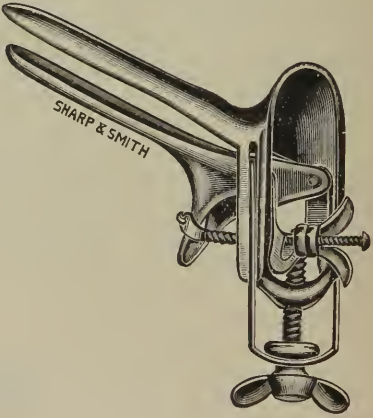
3686-H



3686-I



3686-K



3686-L

Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—PERINEAL CRUTCHES.

- FIG.
 *3687-A Hupp's Improved Clovers Crutch. \$
 *3687-B McBride Packard's Crutch.....

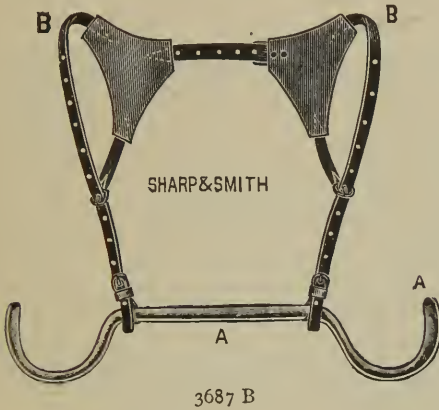
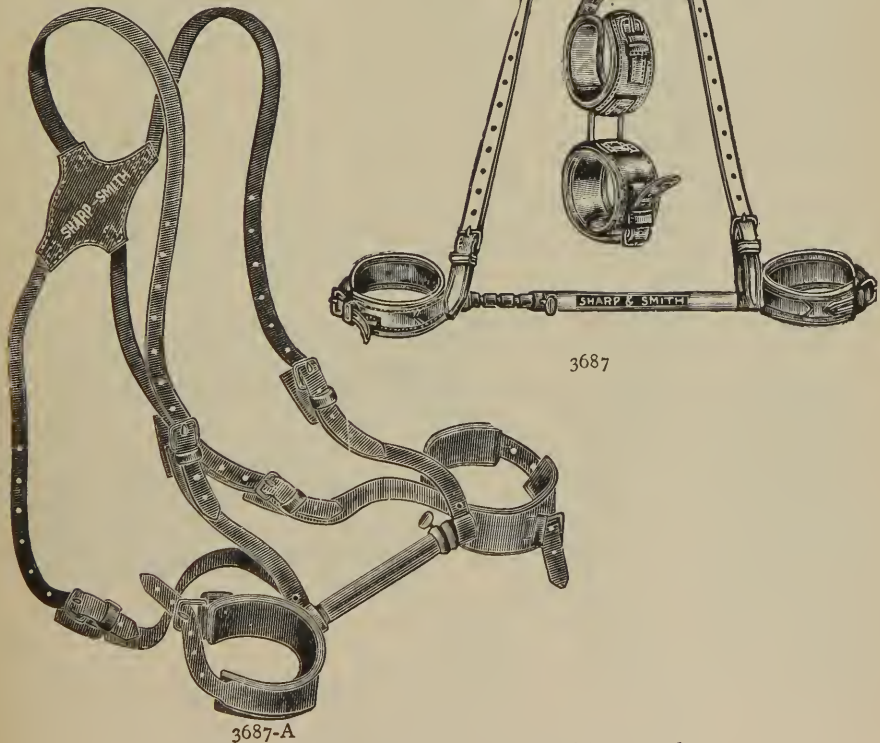


Fig. 3687-B. McBride Packard Yoke.

For Operations in the Dorsal Position upon the Vagina and Cervix.

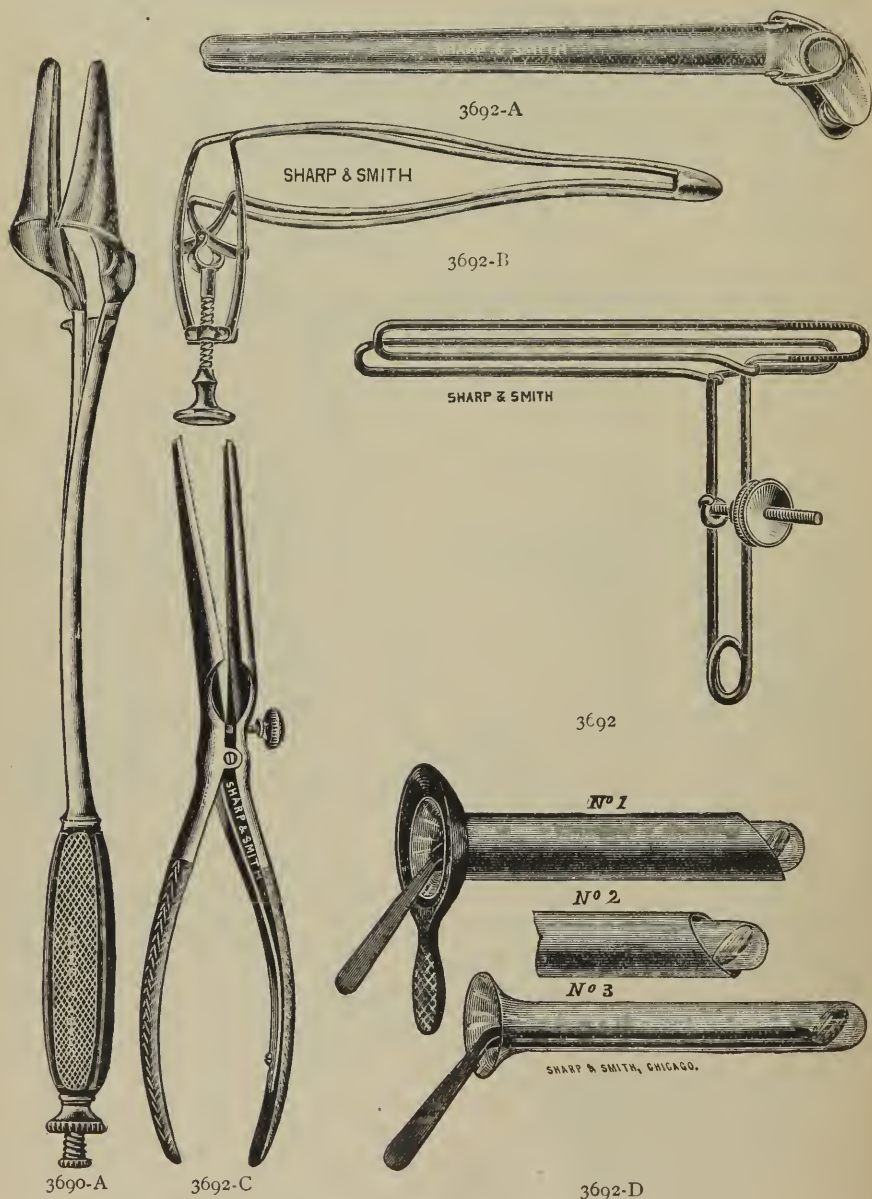
It consists of a strong ash wood yoke "A" and stout leather shoulder caps, "B B", with straps. In using, the services of an assistant are unnecessary. The patient being upon the back, the yoke is placed under the knees, the caps having previously been put upon the shoulders, the desired elevation of the legs and separation of the knees is accomplished easily and quickly by the adjustment of the straps.



Instruments designated by * are illustrated.

GYNÆCOLOGICAL—SPECULA.

FIG.		
*3690-A	Matthieu's Intra-Uterine Speculum.....	\$7 50
*3692-A	Aloes' Patent Bivalve Urethral Speculum.....	2 50
*3692-B	Smith's Urethral Speculum.....	3 00
*3692-C	E. H. Pratt's Bivalve Urethral Speculum.....	3 50
*3692 D	Otis' Endoscopic Tubes.....each,	2 00

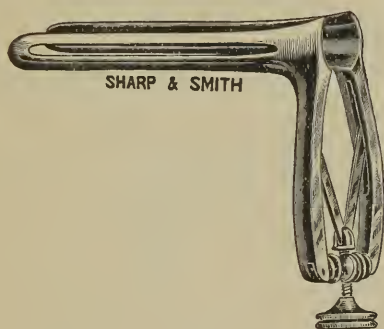


Instruments designated by a * are illustrated.

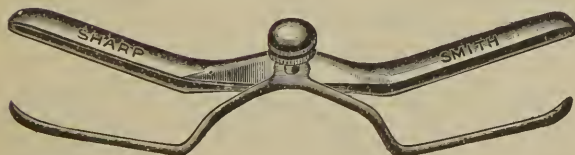
GYNÆCOLOGICAL—URETHRAL.

FIG.

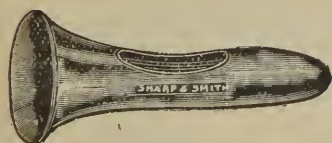
*3687	Clover's Perineal Crutch.....	\$ 9 00
*3688	Elliott's Cervical Speculum.....	4 75
3689	Wire Douche.....	1 50
*3690	Peaslee's Tube and Stem for Intra Uterine Medication.....	2 75
*3691	Skene's Urethral Speculum	1 90
*3692	Folsom s.....	1 00
*3693	Sharp & Smith's Urethral Speculum.....	1 50
*3694	Jackson's Mirror.....	85
3695	Barnes' Pledget Speculum.....	2 40
*3695-A	Simpson's Urethral Speculum.....	2 00



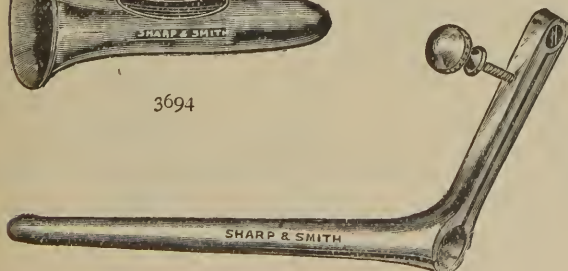
3695-A



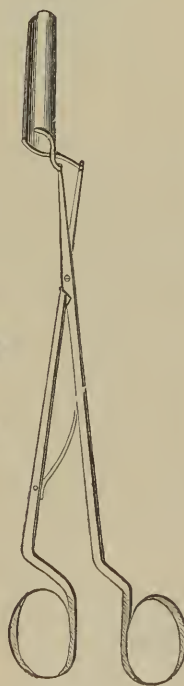
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3694



3693



3688



3695

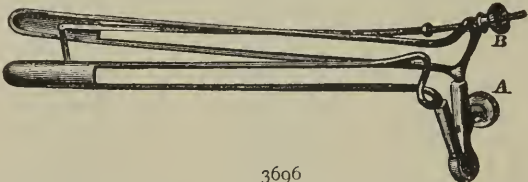
GYNÆCOLOGICAL—URETHRAL.

FIG.

*3696	Brown's Urethral Speculum.....	\$ 3 35
*3697	Jackson's Vaginal Retractor.....	each 1 00
3698	Sims' " ".....	" 2 50
3699	Porter's " ".....	" 2 00
3700	Feig's " ".....	4 00
*3701	Beatty's " ".....	1 85
*3702	Wire Labia " ".....	2 40

A NEW URETHRAL SPECULUM.

This cut shows an instrument first made two or three years ago. At times it is serviceable when those of other designs are not. The fault with many instruments intended for this purpose, is the pain caused by tension of the meatus, especially when this part, as is often the case, is tighter than the parts within. Again, the unsupported tips of a speculum converge, giving a funnel-shaped opening, into which it is difficult to secure a satisfactory view. These two annoyances increase proportionately with the spread of the speculum, by reason of the increased resistance, whether at tip or base, being conveyed to

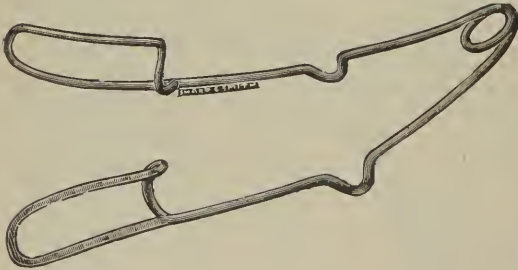


3696

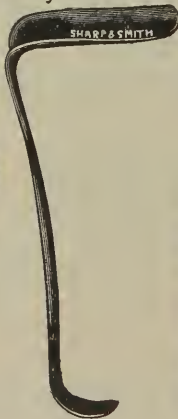
This drawing represents the tips well opened; the base moderately so.

the most yielding part of the arms of the speculum, namely, their free extremities; the increased resistance adding at the same time to the pain.

To obviate these difficulties, a lever is placed similar to that in Dr. Brown's metro-urethrotome, at the distal end of the speculum, its contact with mucous surfaces being prevented by side plates. This lever is controlled by the screws with *B*, running on a thread and bearing against the head of one pair of lateral rods. The spreading of the proximal parts of the speculum is effected as usual, by a screw, *A*, at the base. By this means the tips and base of the instrument are independently controlled, consequently the arms may be spread so as to be parallel or to converge at either extremity. In this way any part of the urethra, to the depth of four inches (the length of the arms) can be distended at will.



3702



3697



3701

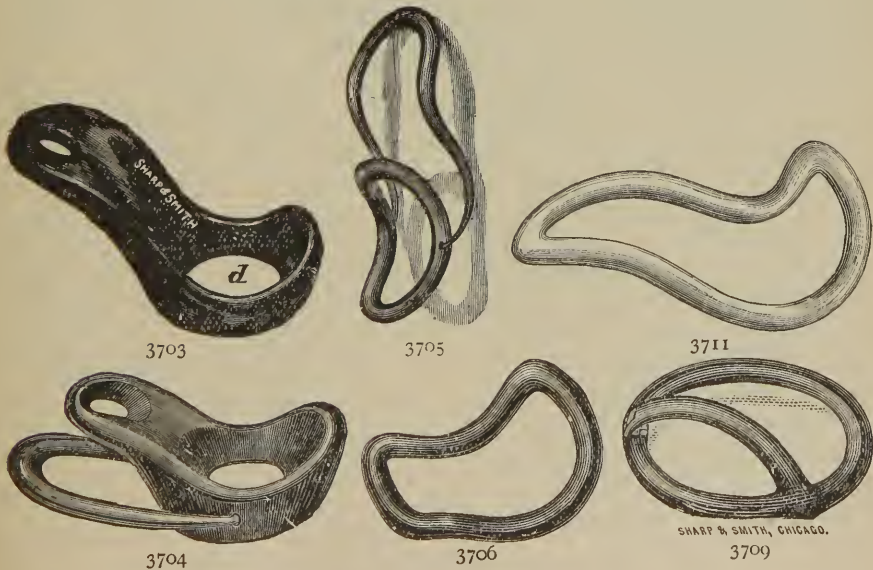
GYNÆCOLOGICAL—PESSARIES.

For the Mechanical Treatment of Prolapsus Uteri, Versions and Flexions.

Much has been written by physicians on the subject of uterine displacements, and very opposite views have been entertained of the proper treatment. Some advocate the use of pessaries, while others condemn them. But we do not see why pessaries should be wholly condemned because they have been used injudiciously. Physicians must acknowledge that great benefits have been derived from the application of the principles of mechanics to the treatment of uterine displacements. Ever since the days of Hippocrates, pessaries of various forms have been used for supporting and elevating the uterus. The first pessary that we read of was a small pomegranate, pierced through the core and placed by Hippocrates in the vagina for the purpose of supporting the womb. This has been imitated by French surgeons, who used for the same purpose unripe oranges and lemons. We keep on hand and manufacture to order every variety of pessary for uterine displacements. At present there seems to be no settled plan of treatment. * While one surgeon prefers a ring pessary, another prefers the stem, another a cup, another a globe, another a disk, another an inflated, another an S, while others discard them *in toto*. We will not assert all the claims of each individual inventor, as each claims his to be superior to all others. We will illustrate the pessaries and leave the physicians to judge of the merit or demerit of each.

FIG.

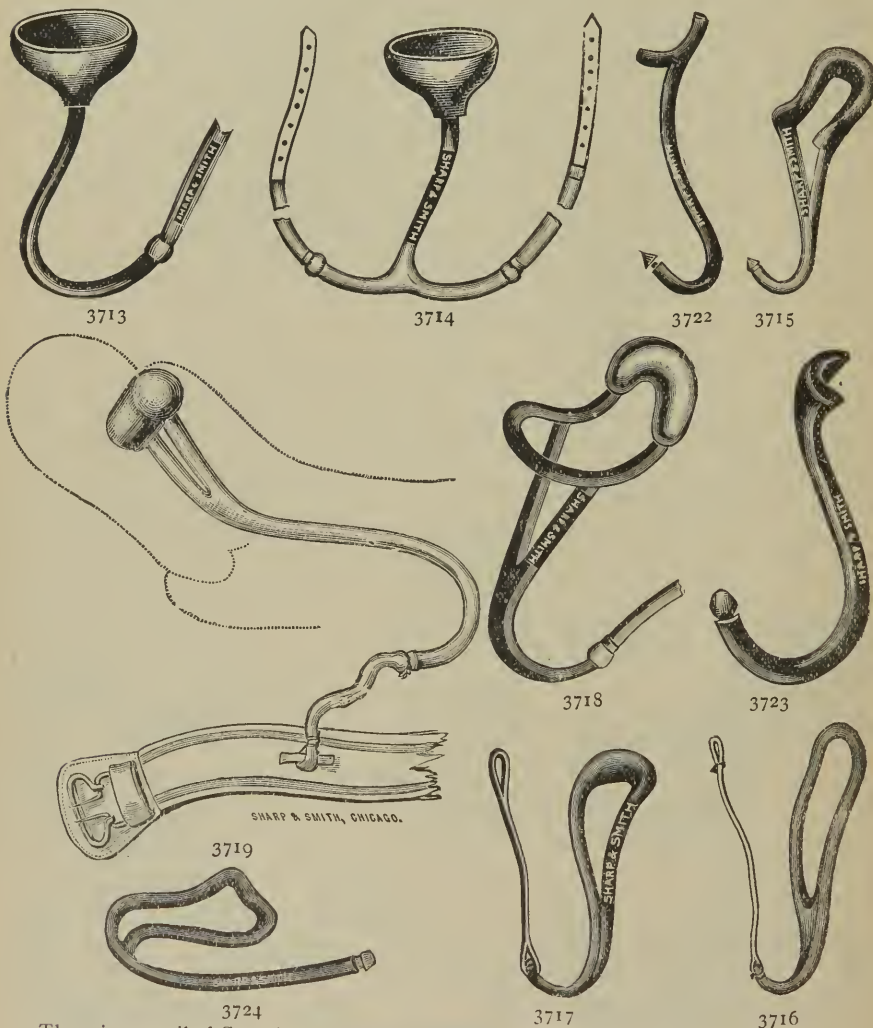
*3703	Fowler's Pessary, three sizes.....	each \$	1 25
*3704	" Bow Pessary.....		1 75
*3705	" Anti-Impaction Pessary.....		1 75
*3706	Hodge's closed ".....		25
3707	" open lever ".....		25
3708	" soft rubber ".....		75
*3709	Hitchcock's Anteversion ".....		60
3710	Sims' Metal ring ".....		35
*3711	Smith's ".....		25
3712	" soft rubber ".....		50



SHARP & SMITH, CHICAGO.

GYNÆCOLOGICAL—PESSARIES.

FIG.		
*3713	Cutter's Prolapsus Pessary	\$ 1 50
*3714	Thomas' Cutter's Prolapsus Pessary	2 00
*3715	Chair Pessary	2 00
*3716	Cutter's Retroversion Pessary	1 25
*3717	Thomas' " "	1 25
*3718	Thomas' Cutter's Retroflexion Pessary	2 25
*3719	" " Retroversion "	1 85
3720	Cutter's Ring Pessary	1 50
3721	" " Anteversion Pessary	1 50
*3722	" " "T" "	1 50
*3723	Thomas' "T" "	1 50
*3724	Scott's " "	1 75

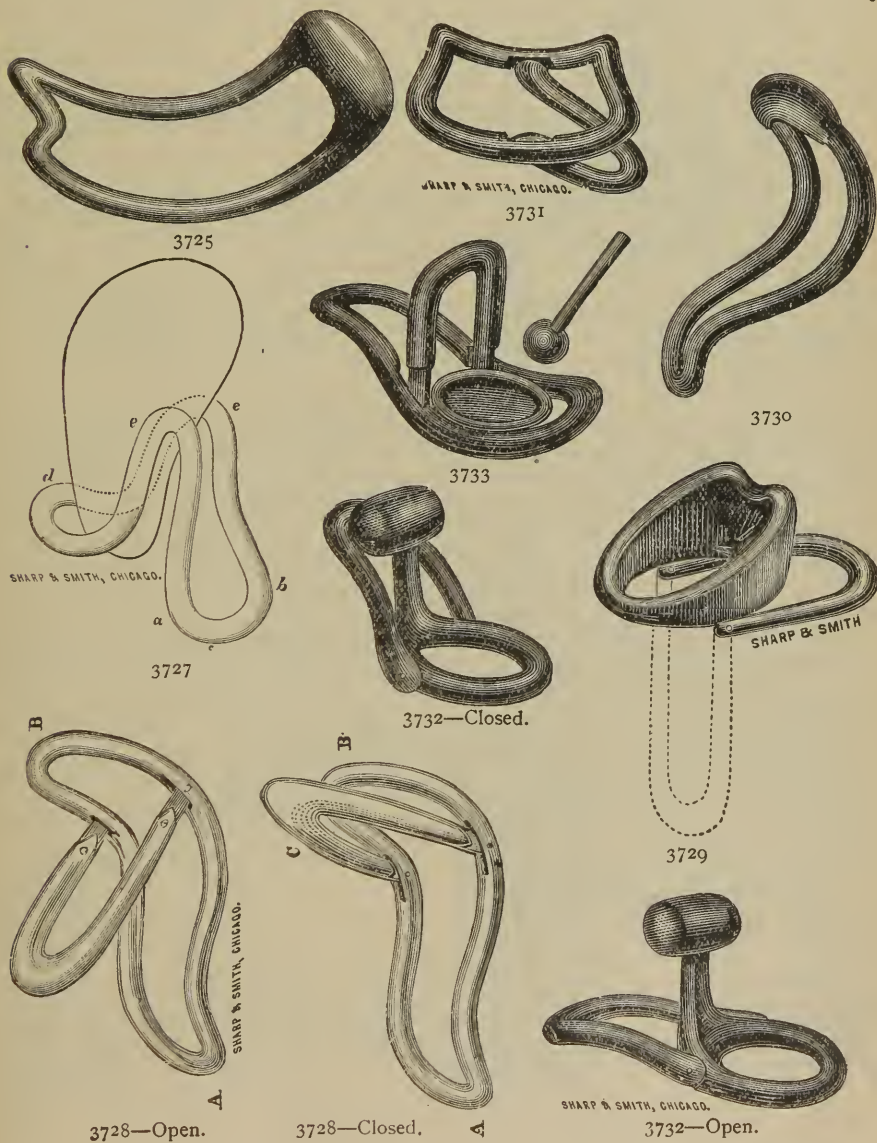


The prices on all of Cutter's and Thomas' Modification Pessaries include a belt, as shown in Fig. 3714.

All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—PESSARIES.

FIG.						
*3725	Thomas' Modification of Noeggerath's Pessary	.....	\$	I	00	
3726	“ “ Smith's	.....			50	
*3727	“ Retroversion Pessary	.....			75	
*3728	“ Anteversion	“ five patterns.	each	\$	75 to	I 20
*3729	“ “	“ old style	each		75	
*3730	“ Retroflexion	“			75	
*3731	“ Antelexion	“			I 00	
*3732	“ “	“			I 50	
*3733	“ Lateroflexion	“			I 75	
3734	“ Cradle	“			85	



GYNÆCOLOGICAL—PESSARIES.

FIG		
*3735	Conant's Intra Uterine Stem Pessary	\$ 1 75
*3736	Dr. Wm. H. Wathen's Intra Uterine Stem Pessary	1 25
*3737	Jackson's Elastic " " " "	35
*3738	" " Hard Rubber " " " "	75
*3739	Hard Rubber " " " "	55
*3740	Peaslees' " " " "	1 00
3741	Galvanic " " " "	1 00
3742	Thomas' " " " "	1 10

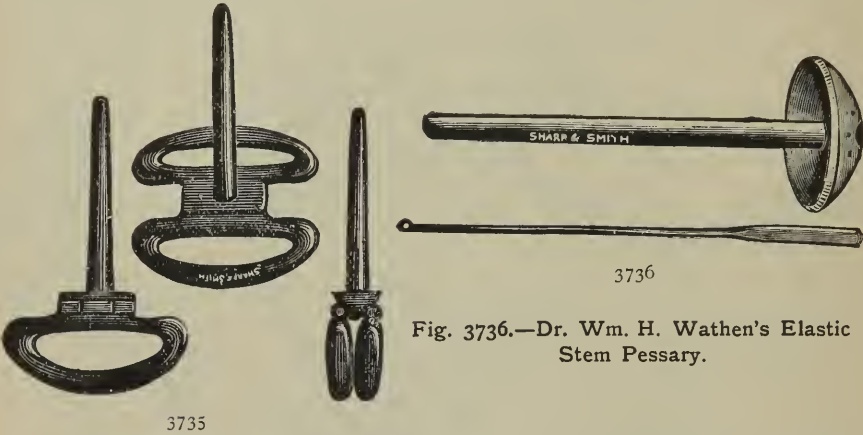
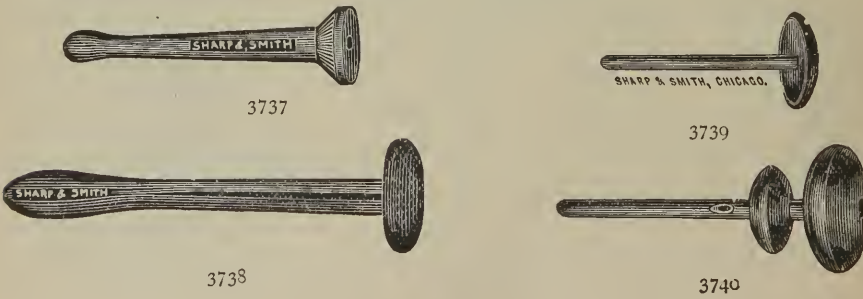


Fig. 3736.—Dr. Wm. H. Wathen's Elastic Stem Pessary.

In treating uterine flexures or curvatures unconnected with great stenosis, one has trouble with a rigid stem pessary, which causes irritation of the part. Elastic pressure being the proper mode of treating those, as well as flexures of other parts of the body, a Pessary, described by the accompanying cut, has been devised by Wm. H. Wathen, M. D., Louisville, Ky.

It is made of soft red rubber, of the same shape as an ordinary simple Stem Pessary, with a flange at the lower end fitting smoothly over the cervix, but perforated so as to allow free discharge of secretions. The stem is hollow, so as to allow the introduction of an elastic stylet of any desired strength the operator may wish, but great force is not necessary. The stylet can be made by any person, whittled out of whalebone or hard rubber, left hard enough at the outer end to tightly fill the stem, exclude the moisture, and retain it in place.

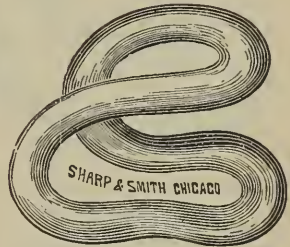
In ordinary cases, the stem can be introduced with the stylet in position, but, when the parts are intolerant, the rubber alone can be worn until a tolerance is established, after which the spring is easily slipped in without the least danger of lacerating or irritating the over-sensitive endometrium. Under elastic pressure applied in this way, curvatures soon disappear. Other Pessaries for retaining the uterus in position, can be worn at the same time without interfering with this one. When the uterus is in normal position, the vaginal walls exert pressure enough to keep the stem in position. When they do not, pledgets of antiseptic wool or cotton should be used. These stems should be made of two lengths and sizes, $2\frac{1}{4}$ and $2\frac{1}{2}$ inches long, and Nos. 6 and 10 in size. The size and length of the stylet can be made to make quite a difference in their size and length. The stylet in the above cut is pictured too long; it should be no longer than the cavity in the stem.



GYNÆCOLOGICAL—PESSARIES.

FIG.

*3743	Curved Hard Rubber Intra Uterine Stem Pessary.....	\$	35
3744	Chambers'		75
*3745	"		25
*3746	Sims'	2	30
3747	Edwards'	1	25
3748	Coxeter's	2	25
3749	Ball's		95
*3750	Munde's Ovarian Pessary.....		95
*3751	Gehring's Anteversion	1	50
3752	" Retroflexion		35
3753	" Antiflexion	1	50
*3754	Graily Hewitt's	1	50
*3755	Hank's Galvanic		75
		1	10



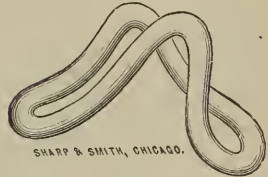
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375I



SHARP & SMITH, CHICAGO.

3743



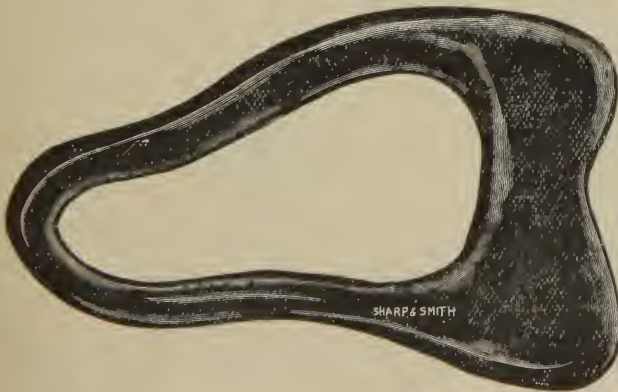
SHARP & SMITH, CHICAGO.

3754



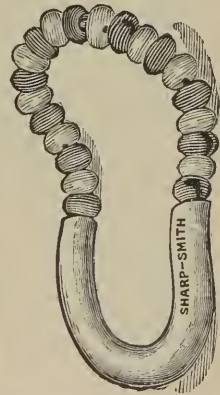
SHARP & SMITH, CHICAGO.

3745



SHARP & SMITH

3750



SHARP-SMITH

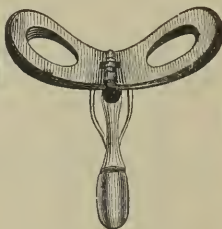
3755

PESSARIES.

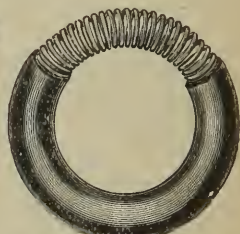
FIG.		
*3756	Dr. H. T. Byford's Retroversion Pessary.....	\$1 00
*3757	Trask's Rubber Dumb-Bell Pessary.....	60
*3758	" Cotton " " Pessary.....	45
*3759	Zwank's Pessary.....	1 10
3760	Hurd's "	1 00
*3761	Buttles "	40
*3762	Hard Rubber Sleigh Pessary.....	55
*3763	Kinloch's Anteversion Pessary.....	1 00
*3764	Hoffman's Anatomical "	\$1 50 to 3 00
*3765	Meigs' Gutta-Percha Ring Pessary.....	50



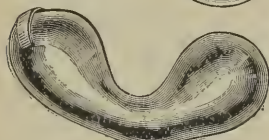
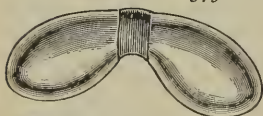
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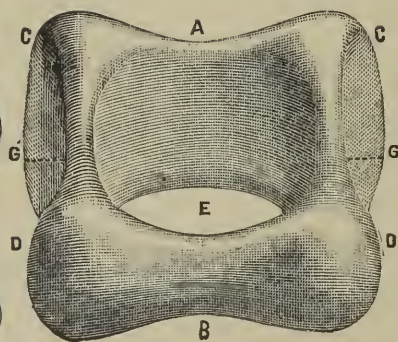
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3765



3757-3758



3764



3762



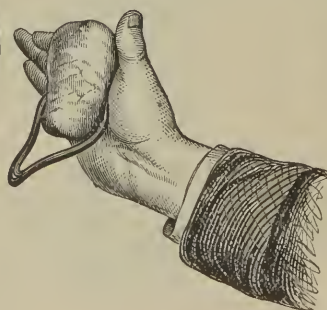
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3761



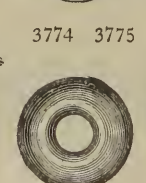
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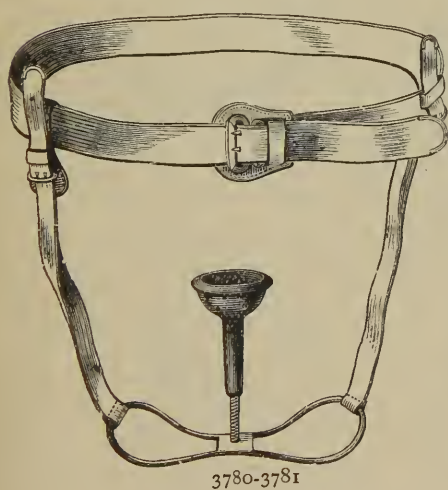
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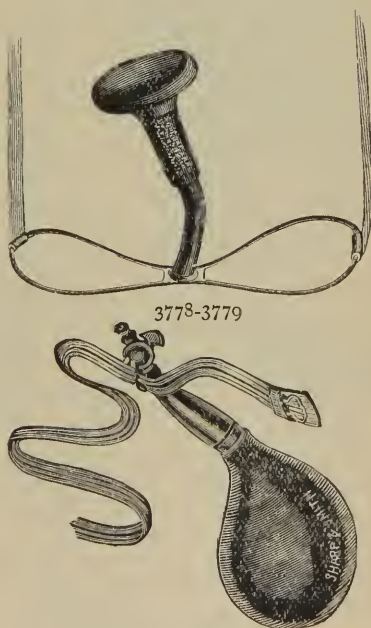
3766 to 3770

GYNÆCOLOGICAL—PESSARIES.

FIG.					
*3766	Peaslee's Ring Pessary	\$	30	
*3767	Block Tin " "		35	
*3768	Copper Wire Ring Pessary, rubber covered	.....		35	
*3769	Spiral " " " "	.....		30	
*3770	Watch Spring " " " "	.....		30	
*3771	Hard Rubber " " " "	.....		25	
*3772	Inflated " " " "	.....		30	
*3773	" " " pure gum	.....		40	
*3773-A	" " " German	.....		50	
*3774	Inflating Stem Pessary	.....		30	
*3775	" " " pure gum	.....		40	
*3776	" " " pear shape	.....		30	
*3777	" " " pure gum	.....		40	
*3778	Hornby's Pessary, with belt, plated	.....	2	25	
*3779	" " " silver	.....	4	00	
*3780	O'Leary's " " " plated	.....	2	25	
*3781	" " " " "	.....	4	50	
*3782	Braun's Colpeurynter with Stop Cock	.....	1	50	
*3783	Woodward's New Pessary	.....		95	
*3784	Glass Concave " "	.....		25	
*3785	Hard Rubber Concave Pessary	.....		25	
*3786	Glass Globe " "	.....		25	
*3787	Hard Rubber Globe " "	.....		75	
*3788	Noeggerath's " "	.....		60	
*3789	Chamberlain's " "	.....	1	00	
*3790	Beebe's " "	.....		50	
*3791	Wilson's " "	.....	6	00	
*3792	Higbee's " "	.....		60	



3780-3781



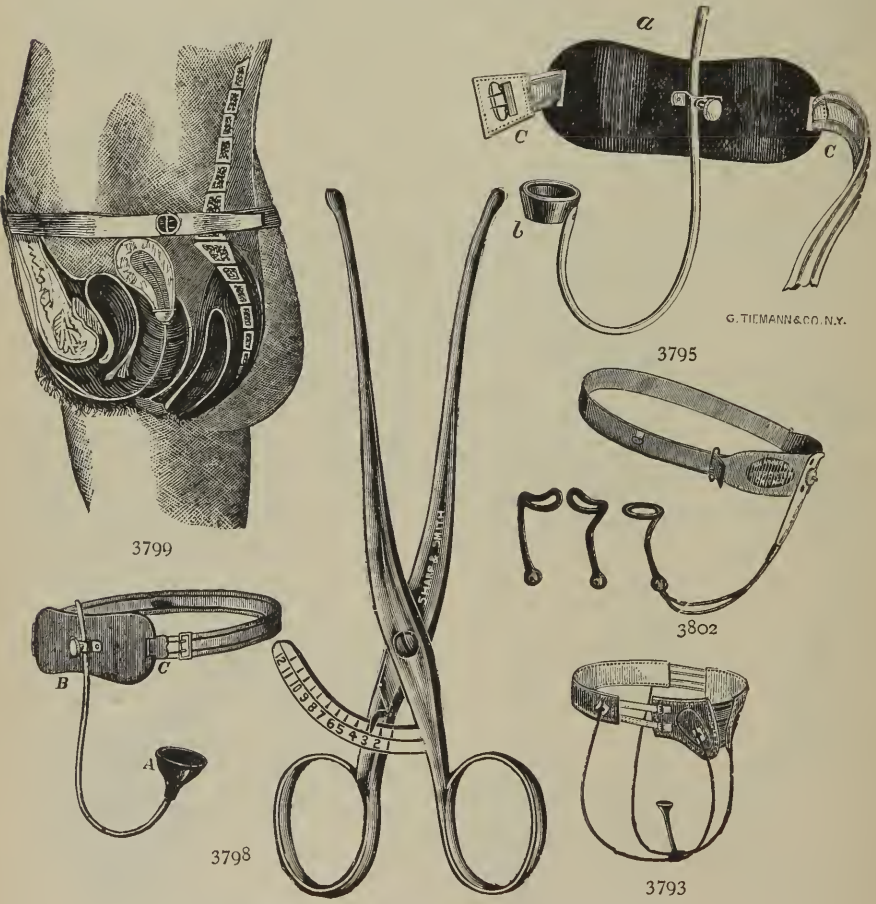
3778-3779

3782—Braun's Colpeurynter.

GYNÆCOLOGICAL—PESSARIES.

FIG.

*3792-A	Vagrometer—for measuring Vagina for size Pessary needed.	\$ 3 00
*3794	McIntosh's Uterine Supporter, with cup and belt	4 25
*3795	T. & Co.'s " "	4 50
3796	Farr's No. 1 " "	5 00
3797	" No. 2 " "	4 00
*3798	James' " "	2 50
*3799	Babcock's Silver Uterine Supporter	10 00
3800	Lutz's " "	4 00
3801	Shannon's Elastic " "	3 75
*3802	" Silver " "	6 00
3803	Wadsworth's " "	5 00



3792-A
All instruments designated by a * are illustrated.

GYNÆCOLOGICAL—PESSARIES.

Fig. 3794-A Bozeman's Vaginal Pessary\$ 1 60

(Extract from "Retroversion in Relation to Lacerations of the Cervix Uteri.")

BOZEMAN'S VAGINAL SUPPORT.

By NATHAN BOZEMAN, M.D., New York.

* * * I have labored long to devise a suitable vaginal support to take the place of the column of carbolized cotton, but it is only within the last year that I have succeeded in bringing the instrument to a degree of perfection which enables me to predict its ultimate success.

This instrument is constructed upon the principle of the parallelogram.

It is elastic, and thoroughly self-sustaining. This instrument is made of steel wires. It has vesical and rectal branches which are covered with thin rubber up to points near the heel of the instrument, where an opening is left for the escape of the menstrual and other discharges.



3794-A

Upon the vesical branch is set a cushion which is to receive and support the vesico-vaginal septum. The covering of the rectal branch is distended with air in order that it may adapt itself uniformly to the recto-vaginal septum. The two upper uneven points are united by a broad elastic apron which, like a chair, is to

receive the cervix uteri, and to a certain extent support the weight of the entire organ. When viewed edgewise the instrument presents somewhat the appearance of a jockey's cap, and a medical friend suggested that it should be called the "jockey cap" pessary. However, to avoid the name of a uterine pessary, I prefer to call it a *vaginal support*. This name is in strict accord with the action of the instrument, for it leaves the uterus and its relaxed ligaments to take care of themselves in their normal relation and position. This is an attainment of the highest aim I can conceive for any form of instrument employed for the latter purpose.

This instrument is not only useful for maintaining the uterus in an elevated position after retroversion and prolapsus have occurred, but it is also a most valuable instrument with which to accomplish the same end after the retroflexed and fixed uterus has been dislodged from the hollow of the sacrum by means of the cotton columns or compresses already described.

After proper preparatory treatment by means of the cotton columns directed obliquely against the vesico-vaginal septum from the perineum or *point d'appui*, the instrument can be used with equally satisfactory results in cases of ante flexion and anteversion of the uterus.

I have numerous illustrations which show in what direction the several forces alluded to operate, both with reference to the oblique cotton columns employed in the preparatory treatment, and the vaginal support used in the curative treatment, but time and space do not permit their description and introduction into the present paper.

Suffice it to say that retroflexion and fixation of the uterus in the hollow of the sacrum constitute, both in the primiparæ and in the multiparæ, the largest class of uterine displacements, and often the most deplorable, which we are called upon to treat. Hitherto, treatment of these cases by means of the uterine sound and stem pessary has been unsatisfactory, and, according to my experience, a more comfortable, safe and effective method is unquestionably a great desideratum. The plan of treatment which I have described is nothing more nor less than an application of some of the principles of orthopedic surgery to uterine distortions, and I think, will accomplish the end desired. * *

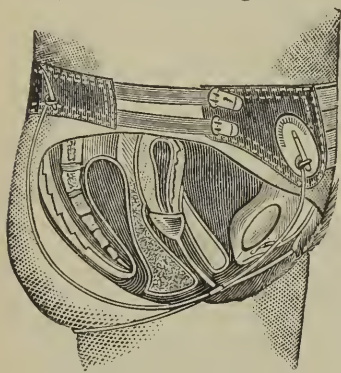
PESSARIES OF ALL KINDS MADE TO ORDER.

GYNÆCOLOGICAL—PESSARIES.

SHARP & SMITH IMPROVED UTERINE SUPPORTER.

METHOD OF APPLICATION.

Have the patient first adjust the belt, being careful not to cause too much pressure by drawing the straps too tight, having previously attached the tubing on each side *at the back*, and threading it through each hole in the stem. The patient should then recline on her side, when the womb can be more readily replaced to *near* its normal position, and the cup is then introduced; draw the tubing up snugly, and then fasten in front. In aggravated cases, where there may be much inflammation or irritation, the cords should, at first, remain quite loose, and be gradually tightened as the case may demand. The belt should fit with the principal pressure at the lower edge only. No corset should be worn, and the nether garments should be supported from the shoulders only.



3793

When any unusual exertion is to be made, it is a wise precaution to wear the belt fitting snugly below. Lastly, the belt also can be laid aside when the patient feels that the healthful tone of the muscles and ligament has been thoroughly restored.

Supporters Complete.....\$2 25
Belt..... 1 50



Cups for 3793

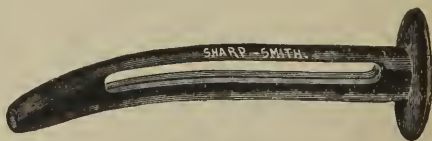
The instruments should be worn until the ligaments are able to support the uterus alone. The cup may be removed during menstruation, if it produces any annoyance. When the ligaments have regained their normal strength, the cup may be removed, and the belt alone worn.

Cups only.\$0 75
Cords..... 25

Fig. 3803-A.—A NEW DRAINAGE STEM PESSARY.

BY W. P. MANTON, M. D., Detroit, Mich.

Following dilatation of the cervical canal, in cases of uterine displacement associated with catarrh of the lining membrane; often after repairs of the cervix while the parts are healing, and in a number of other conditions, thorough drainage is essential to perfect results. The instrument illustrated was devised for this purpose in 1888, and has since been used with the greatest satisfaction (see *Annals of Gynecology*, July, 1889, page 485). It consists of a hollow, hard rubber stem, with open, truncated upper end, and with a narrow slit cut through the hole on either side. Complete and thorough drainage is thus insured. If desired, the stem may be fastened in the canal of the uterus by passing a suture through the cervix and tying to the perforation in the button of the stem.



3803-A. Price \$1.00, net.

The instrument illustrated was devised for this purpose in 1888, and has since been used with the greatest satisfaction (see *Annals of Gynecology*, July, 1889, page 485). It consists of a hollow, hard rubber stem, with open, truncated upper end, and with a narrow slit cut through the hole on either side. Complete and thorough drainage is thus insured. If desired, the stem may be fastened in the canal of the uterus by passing a suture through the cervix and tying to the perforation in the button of the stem.

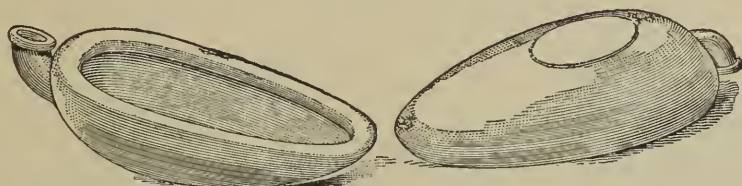
GYNÆCOLOGICAL—BED PANS.

FIG.

*3804-A	Tooker's New Invalid Bed Pan.....	\$1 50
*3804-B	Horn Shape Agate " "	5 50

TOOKER'S NEW INVALID BED PAN.

(PATENTED.)



These Pans are now being used in all the principal hospitals of the country.

The Special Points of Construction are as follows:

This invention is nearly the reverse of that known as the French Bed Pan, being a bed or invalid pan, the sides of which converge toward each other, forming a bottom which sinks into the mattress.

It is so constructed that when in use the top of the pan is nearly level with the mattress or bed.

The surface line of the pan is level its entire length, an oval rim of two inches in width surrounding it, and is equally adapted to male or female.

It combines in service both urinal and bed pan.

Upon application *the patient need not be raised, thus preventing much suffering.*

The proper mode of application of bed pan is to turn the patient on either side, or raise either lower limb.

It can be used by most patients without an attendant.

Its shape renders overflow impossible.

The simplicity and adaptability of this pan will commend it to all.

This new Invalid Bed Pan is already in use in many of the leading hospitals in this country, is very highly commended, and there is not the least doubt when properly known it will entirely supersede any other.

Owing to its capacity for receiving and containing fluid this bed pan is indispensable during surgical operations.



Fig. 3804-B. This Bed Pan is made of *sheet iron* and coated with the well-known **Agate** enamel. The construction is such that its continuous curves render it so *strong* that it can be made of thin material; consequently, it is very light and convenient to handle.

The **Horn**, which is the essential feature of this instrument, coming up between the patient's thighs and covering completely the perinæum (*being thus equally serviceable for male or female patients*), receives, without chance of failure, even with a delirious patient, every particle of both urine and fæces.

(See pages 811 and 814 for other Bed Pans.)

GYNÆCOLOGICAL—DOUCHES.

FIG.		
3804	Frazer's Vaginal Douche.....	\$ 2 75
3805	Frost's " "	2 25
3806	H. Webster Jones' Bed Pan and Douche, complete.....	5 00
*3807	" " " only.....	4 00
*3808	" " Douche "	1 00
3809	Emmet's Rubber Bed Pan.....	3 75
	For other Bed Pans see index.	



Reservoir Capacity, One
Gallon.

"A"—Stop-Cock.

"B"—Hard Rubber
Vaginal Pipe.

3808

DR. H. WEBSTER JONES'

Self-Discharging Bed-Pan

Or UTERINE DOUCHE



3807

This apparatus facilitates the use of Dr. Emmet's plan of Vaginal and Uterine Irrigation, which has done more to restore and to promote health in the pelvic organs than any other device of modern gynæcology.

For the benefit of the uninformed, we state the essentials of success:

1st. The patient must be recumbent during the administration of the douche, and remain so as long as possible thereafter. It is better, therefore, to take it after retiring for the night, and if in the morning, to lie at least an hour afterward in a horizontal position.

2d. The water must be at a temperature of 105° Fahrenheit, and may be gradually increased, day by day, until 120° is reached.

3d. A gallon should be used each time, and about twenty minutes be consumed in its outflow.

4th. If a fountain syringe be used, or other similar instrument, it should not hang higher than eighteen inches above the patient's body. This secures moderate force to the current.

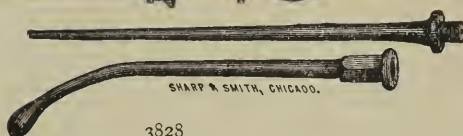
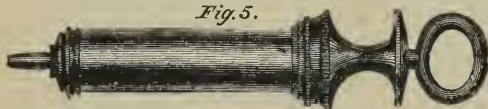
5th. The syringe-point should be directed (after entrance) well to either side, so that the current may flow *around*, not *against* the uterine neck.

6th. The douche thus employed, will unaided, cure many a case of leucorrhœa, painful or excessive menstruation, inflammation of the uterus or ovaris cellulitis, excessive sensitiveness of the organs, irritable bladder and rectum, etc., etc. When used as an adjuvant to other treatment, it will greatly hasten convalescence, and contribute to permanence of health, if persevered in after cure.

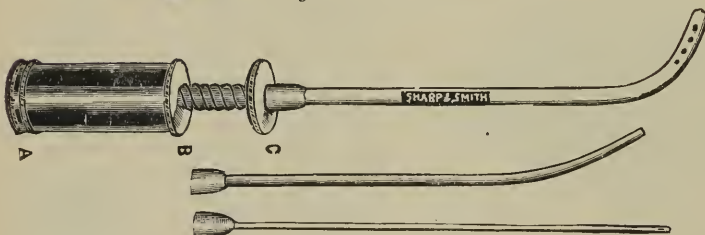
GYNÆCOLOGICAL—SYRINGES.

FIG.			
3820	Braun's Uterine Syringe	.....	\$ 1 25
3821	Taylor's " "	.....	2 25
3822	Rubber Bag " "	.....	2 50
3823	Barker's " "	.....	1 10
3824	Nott's " "	.....	1 85
3825	Buttles' " "	.....	2 00
3826	Essex' " "	.....	1 10
3827	Sims' " "	.....	1 50
*3828	Sharp & Smith's Universal H. R. Syringe	.....	2 75
3829	Universal H. R. Syringe	.....	4 50
3830	Saltz's Uterine Syringe and Sound	.....	3 40
*3831	Thomas' Syringe for Cervical Mucus	1 50
3832	Woodward's Vaginal Syringe	3 00
*3833	Molesworth's " "	1 25

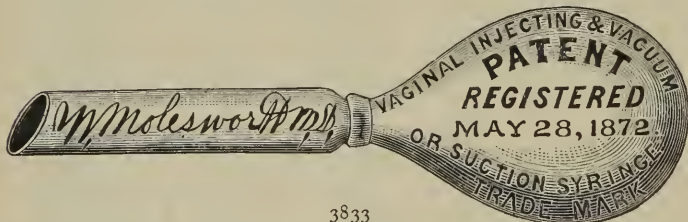
Fig. 5.



3828



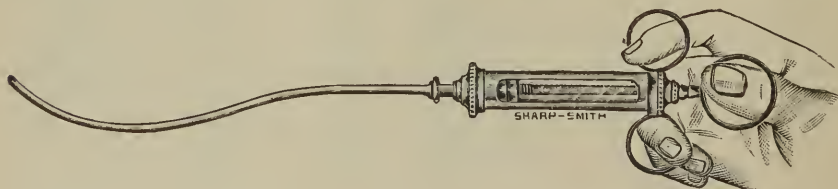
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3833



3831

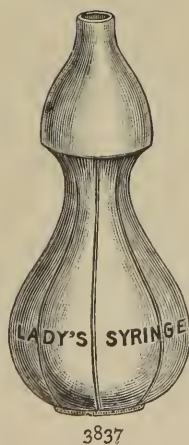
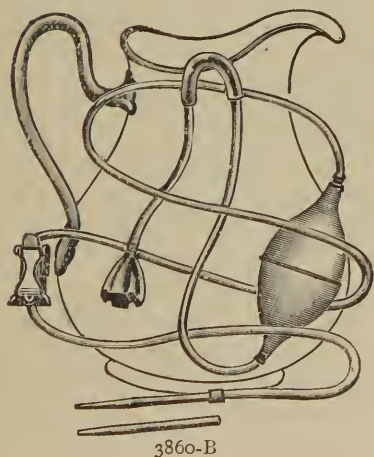


3860-A

All Instruments designated by a * are illustrated.

GYNÆCOLOGICAL—SYRINGES.

FIG.			
3834	Hutchinson's Ointment Syringe.....	\$2 25	
*3835	“ “ “ 3 pipes.....	4 50	
*3836	Tucker's Indispensable Cup Syringe.....	3 00	
*3837	Lady's Bag Syringe.....	2 00	
*3838	Stiles' Vaginal Syringe Tube.....	1 00	
3839	Keyes' Hard Rubber Syringe, Stop Cock.....	1 50	
*3840	“ Metal “ “.....	1 75	
3841	Small Brass “ “.....	50	
3842	Large “ “.....	75	
3843	Small Hard Rubber “ “.....	50	
3844	Large “ “.....	1 00	
*3845	Silk Web Vaginal Tube.....	1 00	
3846	Cutter's Vaginometer.....	5 00	
3847	Hard Rubber Ointment Syringe.....	1 50	
3848	Sharp & Smith's Syphon Vaginal Syringe.....	1 75	
3849	Parker's Caustic Syringe.....	2 65	
3850	Dick's “ “.....	2 75	
3851	Munde's Applying Syringe.....	1 60	
*3852	Buttles' Suppositor, Hard Rubber.....	60	
3853	Hard Rubber Vaginal Tubes.....each.	25	
3854	“ “ “ “ with Stop Cock.....	75	
3856	Glass “ “.....each.	10	
3857	Mattson's Vaginal Irrigator.....\$	80	
3858	Spiral “ “.....	1 25	
3859	Lutz's “ “.....	4 00	
3860	Long's Uterine “.....	7 50	
*3860-A	Stanard's Intra Uterine Syringe.....	3 00	
*3860-B	Bouchard's Irrigating Syringe.....	2 00	



GYNÆCOLOGICAL—SYRINGES.

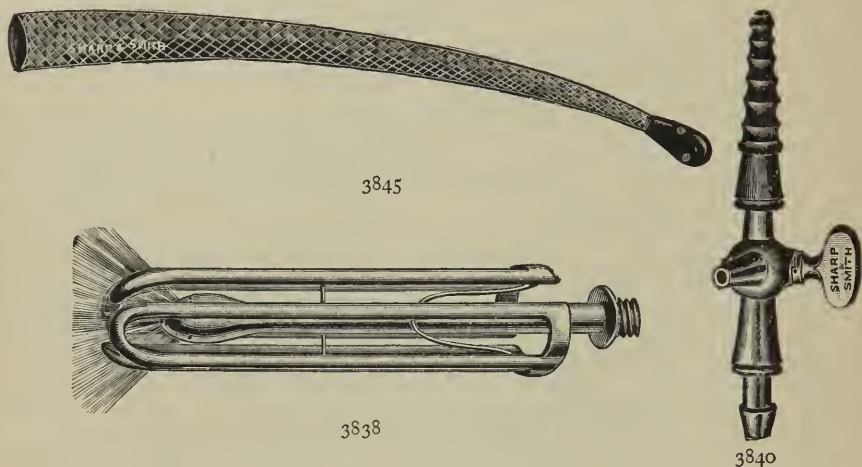


FIG.

3861 Kelly's Silver Applying Syringe.....\$4 50

An Improved Method of Making Applications to the Uterine Mucous Membrane.

By J. D. KELLY, A. M., M. D., Utica, N. Y.



The instrument is, in general terms, a syringe and probe combined, and consists essentially of two parts; the syringe barrel and the probe point. The barrel *A* is made of sterling silver. It is six inches in length, and one-fourth of an inch in diameter. The point *B* is made of virgin silver and is four inches in length, and one-sixteenth of an inch in diameter. It is attached to the barrel by means of a screw-cut cap at *b*, which fastens down closely upon the leather-covered shoulder at *a*. It is made of virgin silver, in order to better resist the action of acids and caustics, and also to secure the flexibility required to adapt it to the varying directions of the uterine cavity. The distal end of the point is perforated by a number of fine pin-holes, for the escape of medicaments upon operating the syringe. At one side of the shoulder *a* is a pin to which is attached a piece of fine silver wire suture or fine surgeon's silk.

GYNÆCOLOGICAL—SYRINGE TUBES—SYMPHYSIOTOMY.

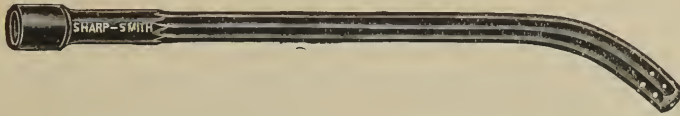


Fig. 3861-A Eldridge's Irrigating Tube.....\$1 25



Fig. 3861-B Leonard's Irrigating Douche Tube.....\$2 00

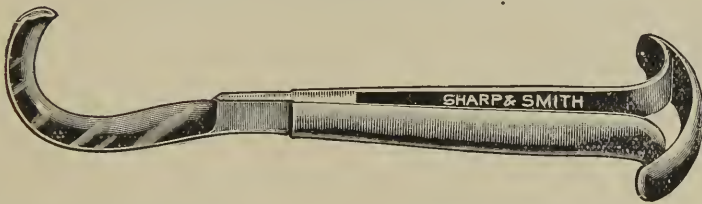


Fig. 3861-C Budin's Uterine Douche Tube.....\$1 00



Fig. 3861-D Bouchard's Irrigating Tube....\$2 00

THE OPERATION OF SYMPHYSIOTOMY.



Galbiati's Knife for Symphysiotomy.....\$2 75

The Mons Veneris is first washed well with carbolized soap, then cleanly shaven, and thoroughly disinfected. An incision is then made through the soft parts, down to the pubis. When the recti muscles are reached, they should be separated at their pubal attachment, sufficiently to allow the finger to be easily inserted. The finger is then passed downward behind the symphysis, and used as a guide to the knife, which follows it until it is well behind the pubic joint, which is then divided by a slight rocking motion. During delivery the pelvis should be supported laterally. After delivery the joint is approximated and sutured—the deeper stitches including the pubic ligaments. The parts are then well protected with antiseptic gauze, the pelvis encircled with broad adhesive strips, and afterward supported by a well applied bandage.

N. B.—The urethra should be carefully held aside, by a bougie, during the operation.

FIG.

3862	Emmet's Gynæcological Case.....	\$64 00
3863	T. Gaillard Thomas' Gynæcological Case.....	30 00
3864	Dr. G. S. Winston's " ".....	40 50
3865	Buttles' " ".....	18 75
3866	U. S. Army " ".....	94 00
3867	A. Reeves Jackson's " ".....	40 00
3868	Byford's " ".....	50 00
3869	Bozeman's " ".....	70 00
3870	Sims' " ".....	35 00

GYNÆCOLOGICAL SETS.

Fig. 3862. Dr. T. A. Emmet's Set of Instruments for Vesico-Vaginal Fistula, contains:

- | | |
|-------------------------------|----------------------------|
| 1 Sims' Hospital Speculum. | 2 Bistouries. |
| 1 " Virgin " | 1 Scalpel. |
| 1 Emmet's Depressor. | 1 Emmet's Needle Forceps. |
| 4 " Sponge Holders. | 1 " Dressing " |
| 1 Sims' Catheter, soft metal. | 1 " Wire Twisting Forceps. |
| 1 Emmet's Uterotome. | 1 Sims' Blunt Hook. |
| 2 " Tenaculums. | 1 " Shield. |
| 1 Perry's Tenaculum. | 1 " Wire Carrier. |
| 6 Emmet's Scissors. | 1 Coil Silver Wire. |
| 1 " Wire Pressing Forceps. | 1 Dozen Emmet's Needles. |

Put up in a fine morocco pouch, lined with red chamois.

Fig. 3863. Dr. T. Gaillard Thomas' Uterine Case, contains :

- | | |
|--------------------------------|-----------------------|
| 1 Thomas Speculum. | 3 Whalebone Rods. |
| 1 Budd's Probe. | 1 Buttles' Scarifier. |
| 1 Sims' Sound. | 1 Long Pipe Syringe. |
| 1 Simpson's Sound. | 3 Bristle Brushes. |
| 1 Sims' Uterine Probe. | 1 Plain Curette. |
| 1 Sims' Tenaculum. | 2 Sponge Holders. |
| 1 Emmet's Dressing Forceps. | 3 1 oz. Bottles. |
| 1 Thomas' Sponge Tent forceps. | 1 Cotton Applicator. |

Put up in a wooden morocco covered case.

Fig. 3864. Dr. G. S. Winston's Uterine Case, contains :

- | | |
|--------------------------------------|------------------------------------|
| 1 Set of 3 Buttles' Glass Specula. | 1 Nott's Uterine Dilator. |
| 1 Gillette's Speculum. | 1 Pair Winston's Dressing Forceps. |
| 1 Hard Rubber Intra-uterine Syringe. | 1 " Sims' Scissors, curved up. |
| 1 Uterine Sound, 1 Silver Uterine | 1 Budd's Hard Rubber Applicator. |
| Caustic Probe, 1 Silver Uterine | 1 " " Probe. |
| Applicator, 1 G. S. Sponge | ½ Dozen Sponge Tents. |
| Holder, to fit into one handle. | 1 " Emmet's Needles. |
| 1 Buttles' Scarifier. | 1 Coil Silver Wire. |
| 1 Set Peaslee's Dilators. | 1 Emmet's Caustic Forceps. |

Arranged in a fine black calfskin case, satchel form, lined with red chamois.

Fig. 3868. Dr. Byford's Gynecological Case, contains:

- | | |
|--|--|
| 3 Higbee's Speculums, large, medium and small. | 2 Curved Serresfins. |
| 1 Sims' Speculum, with 1 broad blade. | 1 Sims' Needle Holder. |
| 1 " Wire Adjuster. | 1 Plain Tissue Forcep. |
| 1 Emmet's Plain Silver Applicator, without sheath. | 1 Emmet's Twisting Forcep. |
| 1 Byford's Blunt Hook. | 1 Byford's Medium Vulsellum Forceps. |
| 1 Sims' Sigmoid Catheter, Hard Rubber. | 1 Uterine Knife. |
| 1 Byford's Curette. | 1 Sims' Probe. |
| 1 Sims' Sharp Curette. | 1 Hard Rubber Probe. |
| 1 Jackson's Retractor. | 1 Byford's Scissors. |
| 1 Nelson's Uterine Dilator. | 1 Fitch's Sound. |
| 1 Byford's Dressing Forcep. | 3 Emmet's Sponge Holders. |
| 1 Straight Serresfin. | 2 Sims' Tenaculums. |
| | 12 Elm Tents, assorted, straight, curved and hollow. |
| | 12 Needles, assorted, for Uterine work. |

The small instruments in a neat roll up pouch, and all in a good quality instrument bag.

GYNÆCOLOGICAL SETS.

Fig. 3866. U. S. Army Gynæcological Set, contains:

- | | |
|---|---|
| 1 Wallace's long Obstetric Forceps. | 1 Bottle, glass stoppered, and glass covered, for sulphate of iron. |
| 1 Brickel's Obstetric Forceps, for premature delivery. | 1 Do. do. Bottle for Ergot. |
| 1 Dr. T. G. Thomas' Perforator. | 1 Dr. Walter R. Gillette's Speculum. |
| 1 Braun's Cephalotribe. | 1 Simpson's Folding Sound. |
| 1 Budd's Blunt Hook and Crochet, guarded. | 1 Each Emmet's Silver Probe and Applicator, with set screw handle. |
| 1 Loomis' Placenta Forceps. | 1 Buttles' Scarifier. |
| 1 Vectis, with handle. | 1 Nott's Tenaculum. |
| 1 Set of Barnes' Dilators. | 1 Sims' Uterine Elevator. |
| 1 Uterine Dilating Catheter. | 1 Pair Sims' Scissors. |
| 1 Small Tampon. | 1 Intra-uterine Suppository Tube, hard rubber. |
| 1 Breast Pump, Penis Congestor, and Transfusion Glass, combined. | 2 English Gum Elastic Catheters. |
| ½ Dozen Sponge Tents. | 1 Fryer's Transfusion Set. |
| 1 " Sea Tangle Tents. | 1 Sims' Sigmoid Catheter. |
| 1 Bottle, Glass Stoppered, and Glass covered, for Little's saline solution. | 1 Goodyear Union Syringe. |
| | 1 Sponge Tent Applicator |

Arranged in a wooden, calfskin covered case, valise form, with lock and key, and German silver catches, and lined with purple velvet; 21 inches long, 8 inches wide, 5 inches deep, inside measurement. Case opens in the center.

Fig. 3867. Dr. A. Reeve Jackson's Gynæcological Case, contains:

- | | |
|---|--|
| 1 Jackson's base expanding Speculum. | 1 Thomas' Blunt Curette, small. |
| 1 Jackson's Perineal Retractor. | 1 Wylie's Large Sharp Curette. |
| 1 Sims' Speculum, with one Broad Blade. | 1 Simon's small Sharp Curette. |
| 1 Sims' Best Uterine Sound. | 1 No. 10 Soft Rubber Catheter. |
| 1 Byford's Dressing Forcep. | 1 Improved Russian Needle Holder. |
| 1 Jackson's Tissue Forcep. | 2 Olive Tip Best Web Bougies. |
| 1 Jackson's small Vulsellum Forcep. | (These are used instead of Sounds in cases of flexions.) |
| 2 Jackson's Sponge Holders. | 1 Long Handle Bistoury. |
| 3 Jackson's Applicators. | 1 Dozen Tupello Tents, assorted. |
| 1 Jenks' Scissors. | 1 Bottle No. 3 Catgut Ligature. |
| 1 Buttles' Scarifier. | 3 Cards Silk, Nos. 10, 12 and 14. |
| 1 Jackson's Cervical Needle. | 1 Doz. assorted Cervical and Perineum Needles. |
| 1 Thomas' Blunt Curette, large. | |

In addition to these the operator should provide himself with absorbent cotton, antiseptic sponges, glycerine, vaseline, Churchill's solution of iodine and a solution of alum in glycerine and water, one part to eight. The small instruments, in a roll up pouch and all in a substantial instrument bag.

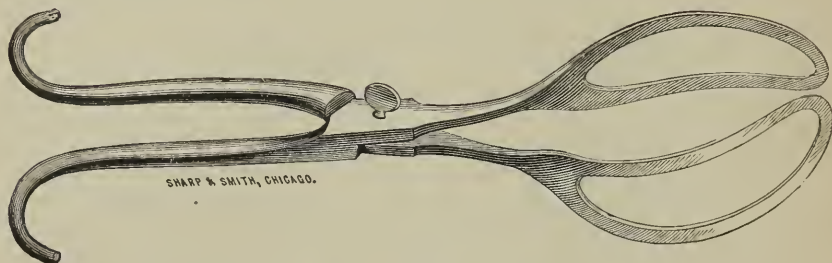
Fig. 3865. Buttles' Set of Uterine Instruments, contains:

2 Glass Specula; 1 Hard Rubber Syringe with two long pipes; (1 Simpson's Sound; 1 Flexible Probe; 1 Sims' Razor Shaped Knife; 1 Sponge Holder; 1 Cotton Expeller; all fitting one handle). 1 Budd's Whalebone Probe; 1 Scarifier and Tenaculum; 1 Vial to carry Caustic. In a Russet Leather Case, with metal hinge and lock, lined with oil dyed velvet.

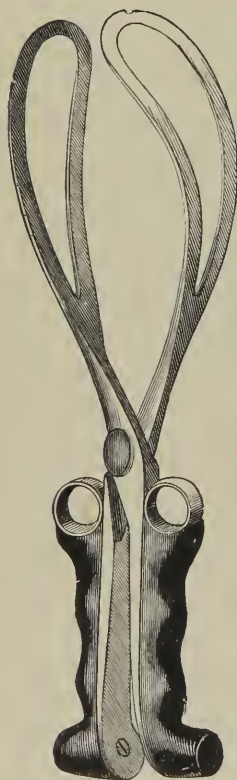
OBSTETRICAL INSTRUMENTS.

FORCEPS.

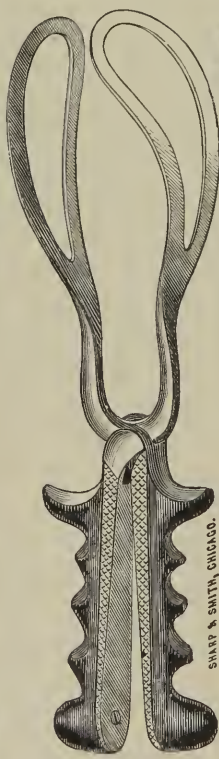
FIG.							
*3900	Bedford's Obstetrical Forceps, nickel plated	.....					\$ 6 00
*3901	Simpson's	"	"	"	"	long	5 00
3902	"	"	"	"	"	short	4 50
*3903	Wallace's	"	"	"	"	5 00
*3904	Hodge's	"	"	"	"	3 50
*3905	Denman's	"	"	"	"	5 25



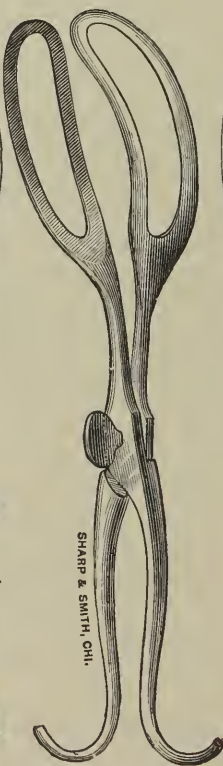
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3900



3901



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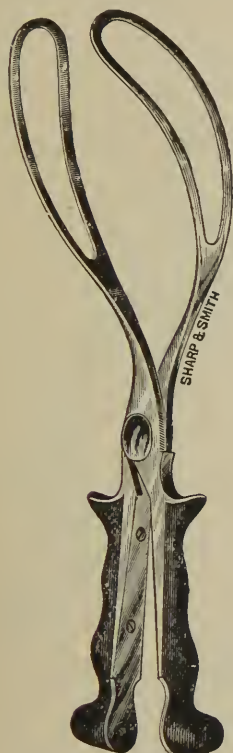


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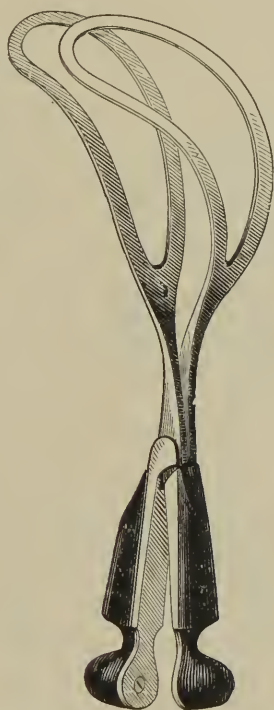
All instruments designated by a * are illustrated.

OBSTETRICAL—FORCEPS.

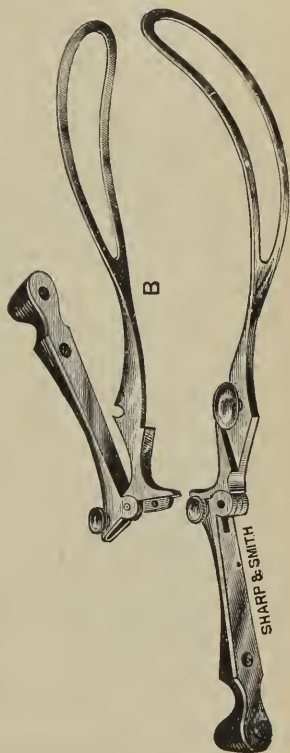
*3906	Elliott's Obstetrical Forceps, with screw, nickel plated.....	\$	4	50
*3907	Roler's " " " " nickel plated.....		6	00
3908	Meigs' " " " " " "		6	00
*3909	Davis' Improved Obstetrical Forceps, nickel plated.....		5	00
*3910	Miller's Obstetrical Forceps, nickel plated.....		5	00
*3911	" " " " jointed, nickel plated.....		10	50



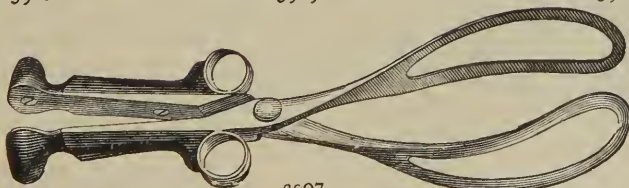
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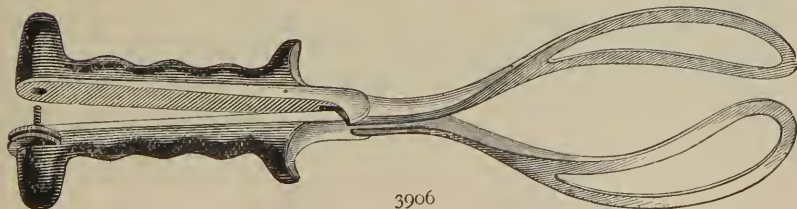
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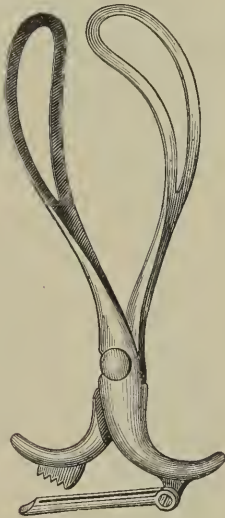
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OBSTETRICAL FORCEPS.

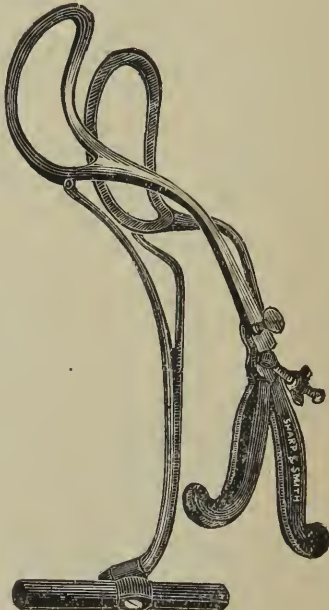
FIG.					
*3912	Hunter's	Obstetrical	Forceps, new, nickel plated.....	\$	6 75
*3913	Clark's	"	" (Chicago).....		5 50
*3914	Sawyer's	"	" new, nickel plated.....		4 00
*3915	Naegeli's	"	" nickel plated.....		6 00
*3916	Tarnier's	"	"		20 00
3917	Knight's	"	" nickel plated.....		6 00
3918	Duncan's	"	" "		5 00
3919	Gillman's	"	" "		6 50
3920	Henrotin's	"	" "		6 25



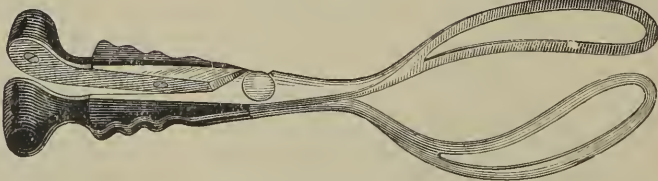
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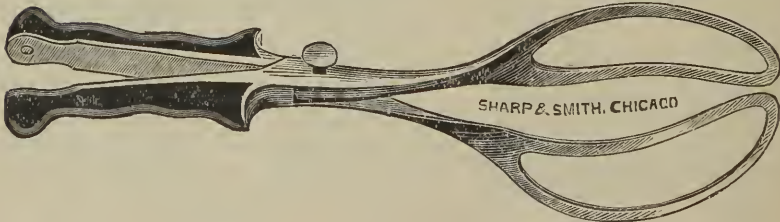
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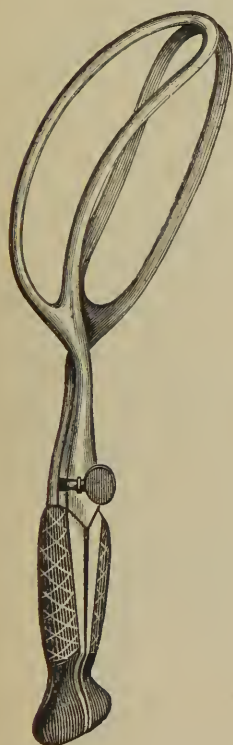
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3913

OBSTETRICAL FORCEPS.

FIG.					
* 3921	Hale's Obstetrical Forceps, short	\$	5	00
3922	" " " long		6	50
* 3923	Jenks' " " "	.....		6	25
* 3924	" " " short	.....		4	50
3925	White's " " nickel plated	.....		5	50
* 3926	Comstock's " " " "	.....		4	75
* 3927	Budd's " " " "	.....		6	00
3928	Newman's " " " "	.....		5	00
3929	Hale's Pocket Obstetrical Forceps, nickel plated	.....		5	00
3930	McLean's " " " "		6	00
* 3931	Robertson's " " " "		6	00
3932	Bond's " " " "		6	00
3933	Quackenbush's " " " "		6	00



3931



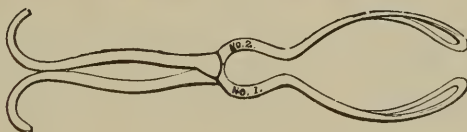
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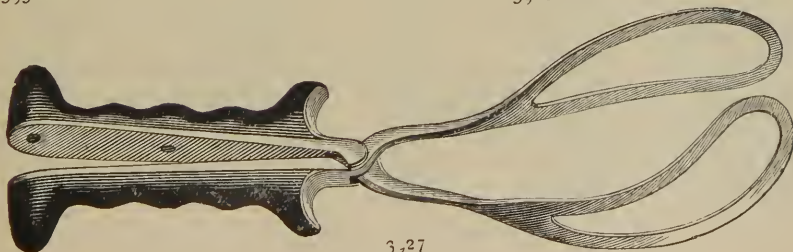
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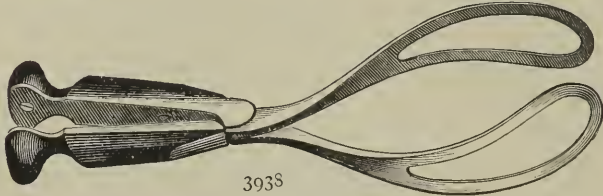
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OBSTETRICAL FORCEPS.

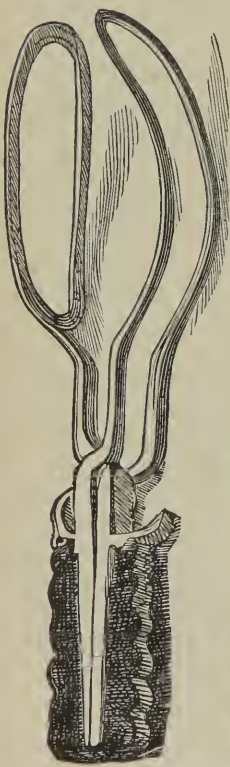
FIG.				
*3934	Dr. Hobbs' New Obstetrical Forceps.....	\$9	00	
*3935	Dr. Adam Miller's " "	9	00	
*3936	Barclay's " "	9	00	
*3937	Thomas' " "	5	25	
*3938	Denman's " "	5	25	



3934



3935



3936



3937



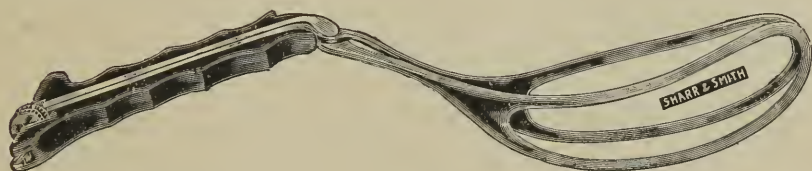
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OBSTETRICAL FORCEPS

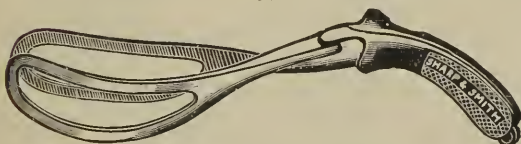
*3939	Reamy's (Cincinnati) Obstetrical Forceps.....	\$ 6 00
*3940	Leavitt's " "	5 50
*3941	Leonard's " "	4 50
*3942	Stone's (St. Paul) " "	4 50
*3943	Dr. J. Suydam Knox's (Chicago) Obstetrical Forceps.....long	5 00
*3944	" " " " " "	4 50
3945	Jaggard's Modification of Simpson's " "	6 00
3946	Brickell's " "	6 00
3947	Burdick's " "	6 75
3948	Scroggs' " "	4 50



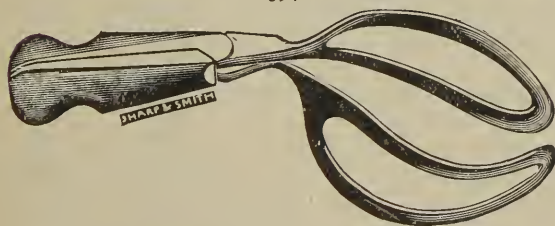
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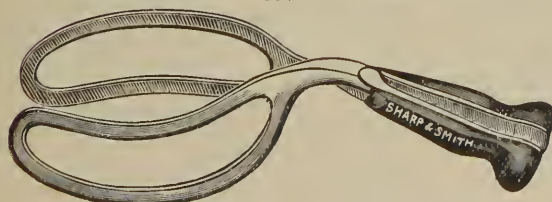
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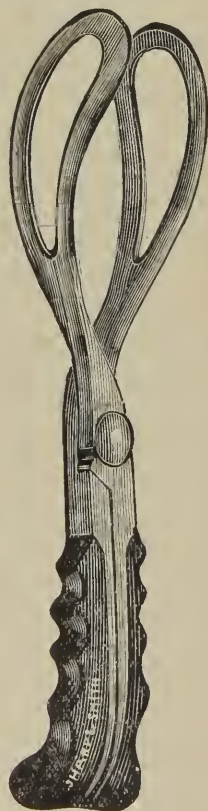
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394I



3942



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All instruments designated by a * are illustrated.

OBSTETRICAL INSTRUMENTS.

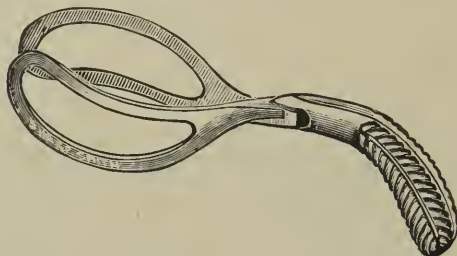


Fig. 3948-A. Hale's New, Small, Short Obstetrical Forceps.

"The measurements of these forceps are as follows: Whole length following the curve of the handle, upper side, 13 inches; length on straight line, 12 inches; length of blade, 6 inches; length of handle, 6 inches; weight, $11\frac{1}{4}$ ounces; greatest width between the blades, $2\frac{3}{4}$ inches; width at end, 1 inch. It has a single English lock. (My first design had a button lock.) The aseptic forceps has a metal handle corrugated. It can be put in boiling water without injury to it. Its slight increase in weight is no disadvantage."

"I have never heard but one objection made to the extreme downward curve of their handles. It was suggested that it would be difficult to apply the forceps with the woman's hips entirely on the bed. Now this objection is untenable, for these forceps were never intended to be used before the child's head was low down, resting on the perineum, and when the forceps are applied at that stage the handles point *upward*, or nearly so. When applied at the proper time the blades are strong enough to allow all necessary traction. To hasten the last stages of labor no other instrument can compare with them."

NEW OBSTETRICAL FORCEPS.

By C. D. PALMER, M. D.,

CINCINNATI, O.

Figs. 3948-B and 3948-C.

DR. C. D. PALMER, Professor of Obstetrics and Gynecology in the Medical College of Ohio, and Gynecologist to the Cincinnati Hospital, has gotten up a new forceps. The following are the points: Long forceps, weight, $18\frac{1}{2}$ oz.; length, 14.5 inches; fenestræ, 4.81 inches; distance between blades, 2.87 inches; distance between tips of blades, .75 inch. They have a good pelvic curve, and a double cephalic curve in blades, and an English lock. The handles have a slight backward curve, equal to forward curve of pelvic blades. There are tractors on the handles, which consist partly of wood, and partly of metal. The short forceps have a weight of only 12 oz., and a length of but 11.27 inches. The fenestræ of the blades are 4.18 inches long. The shanks are like Simpson's, with English lock. The distance between the blades at their widest part and at the tips is about the same as the long forceps. The handles have the backward curve also.

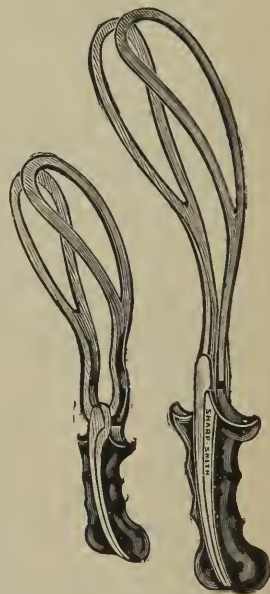


FIG.

3948-C

3948-B

*3948-A	Hale's New Small, Short Obstetrical Forceps.	\$5 00
*3948-B	Palmer's New Long " "	6 00
*3948-C	" " Short " "	5 00
*3948-D	Kline's Obstetric Slippers, per pair, in neat case.	5 00
*3949 A	Stahl's New Cranioclast.	13 00
*3949-B	Dr. W. B. Dewee's New Axis-Traction Obstetrical Forceps.	9 00
*3949-C	Mann's New Placenta Forceps.	2 75

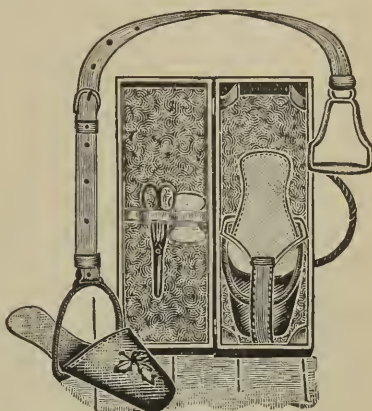
OBSTETRICAL INSTRUMENTS.

DR. KLINE'S OBSTETRIC SLIPPER.

We present for the consideration of the profession, a neat, simple, perfect device, which, as every experienced physician sees at a glance, does away with hand-pulling, and all crude, cumbrous makeshifts, and greatly facilitates labor by providing the means for a good "PULL" thus giving a woman a measure of comfort during the most trying time of her life.

This SLIPPER was invented by an experienced physician, and is the result of his many contrivances to relieve his patients. It consists of a pair of stout slippers connected by adjustable straps to nickeled steel handles; they are easily put on and off, are not in the way if left in the bed, and can be used by the patient in any posture.

The SLIPPERS fit compactly in a handsome case, which also has spaces for scissors, silk, catheter, probe, bottles of ergot, ether, chloroform, etc. One pair will last a lifetime, and as their utility is apparent, no argument is necessary.



3948-D



3949-A



3949-B

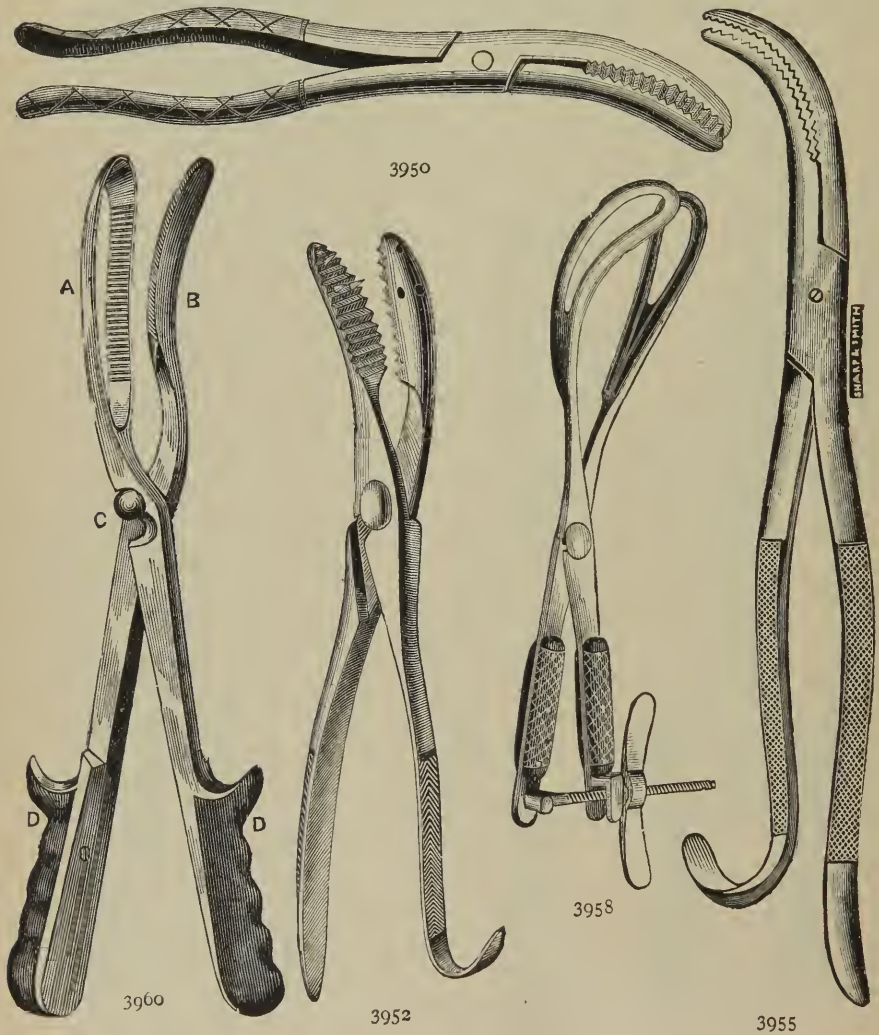


3949-C

CRANIOTOMY FORCEPS.

FIG.

3949	Meigs', straight Craniotomy Forceps.....	\$ 2 25
* 3950	" curved " " 	2 25
3951	Simpson's (Cranioclast) Craniotomy Forceps.....	7 50
* 3952	Thomas' " " 	3 75
3953	Kamsbotham's " " 	4 50
3954	Brickell's " " 	3 00
* 3955	Elliott's " " 	2 50
3956	Budd's " " 	3 75
3957	Taylor's " " 	3 75
* 3958	Lusk's Cephalotrite.....	13 50
3959	Braun's " 	11 25
* 3960	Simpson's " 	7 50

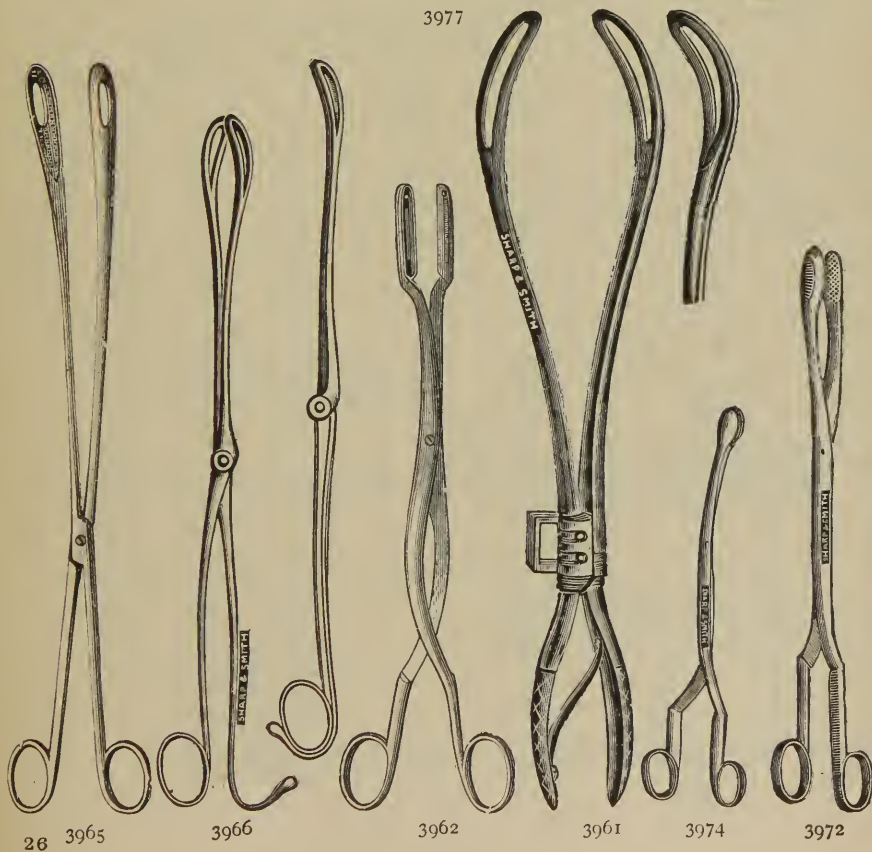


OBSTETRICAL—CRANIOTOMY AND EMBRYOTOMY FORCEPS.

FIG.	
*3961	Batchelder's Embryotomy Forceps.....
*3962	Double Crossing " ".....
3963	Nickel-plated Placenta Forceps.....
3964	Munde's " ".....
*3965	Budd's Nickel-plated Placenta Forceps
*3966	Loomis' " ".....
3967	Tiemann & Co.'s " ".....
3968	Hodge's " ".....
3969	Bond's " ".....
3970	Fenestrated, nickel-plated Placenta Forceps... ..
3971	Double Crossing " ".....
*3972	Chamberlain's " ".....
3973	Clark's " ".....
*3974	Hart's " ".....
3975	Schmetter's " ".....
3976	Carey's Ovum and " ".....
*3977	Dentated " ".....
	\$9 00
	2 25
	1 75
	2 25
	1 90
	4 00
	1 85
	4 50
	1 90
	1 85
	2 25
	3 25
	2 00
	2 25
	4 50
	2 75
	1 85



3977



26 3965

3966

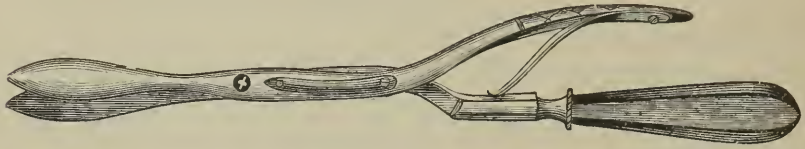
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3961

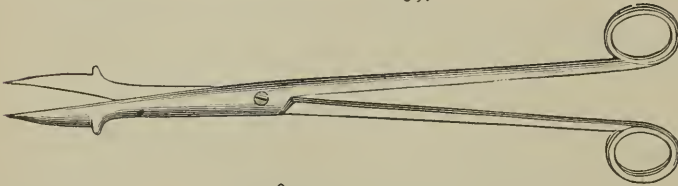
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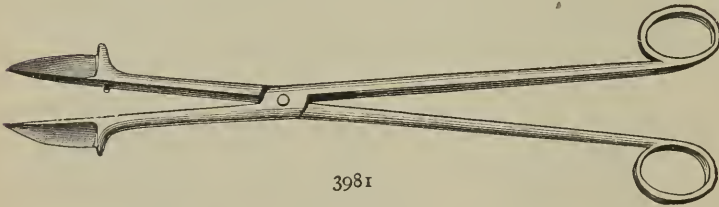
CRANIOTOMY PERFORATORS.



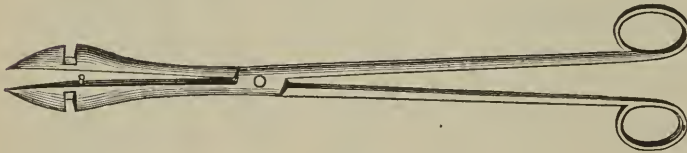
3978



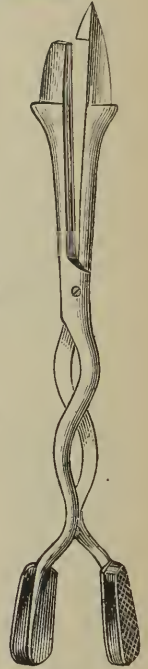
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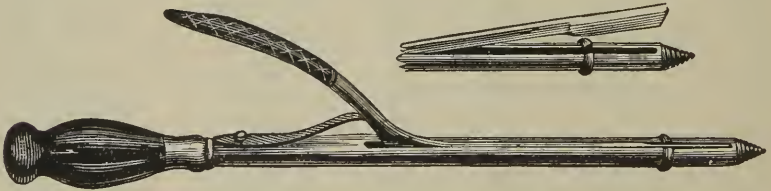
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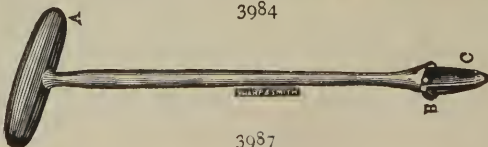
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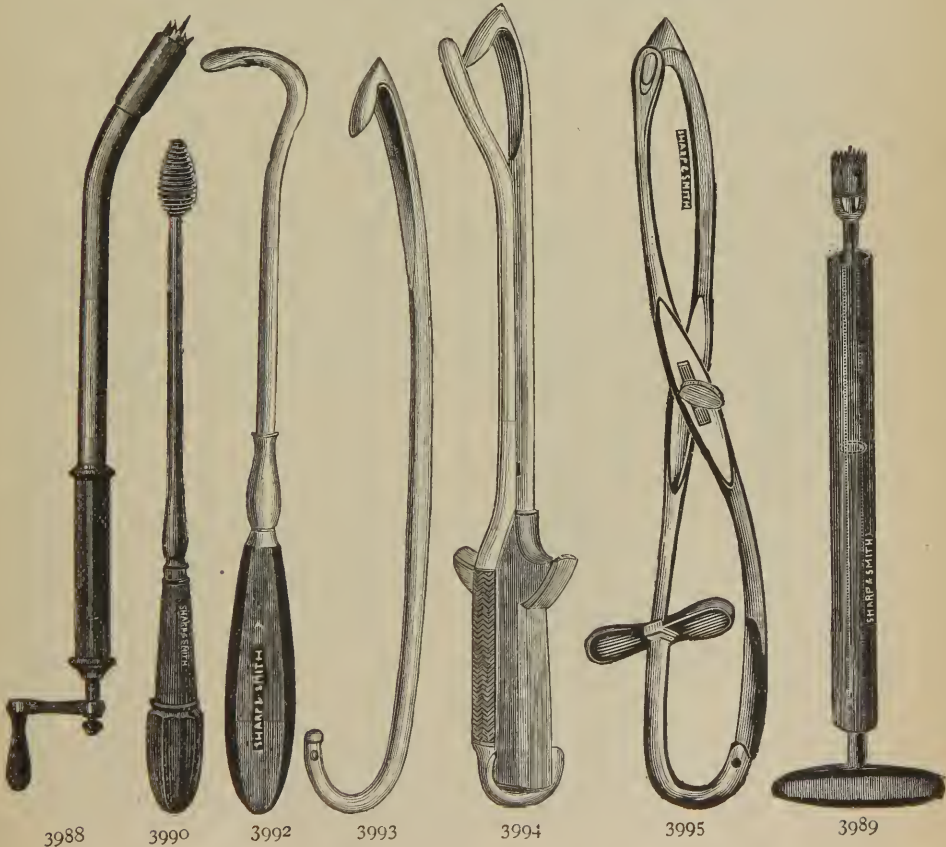


3987

CRANIOTOMY PERFORATORS.

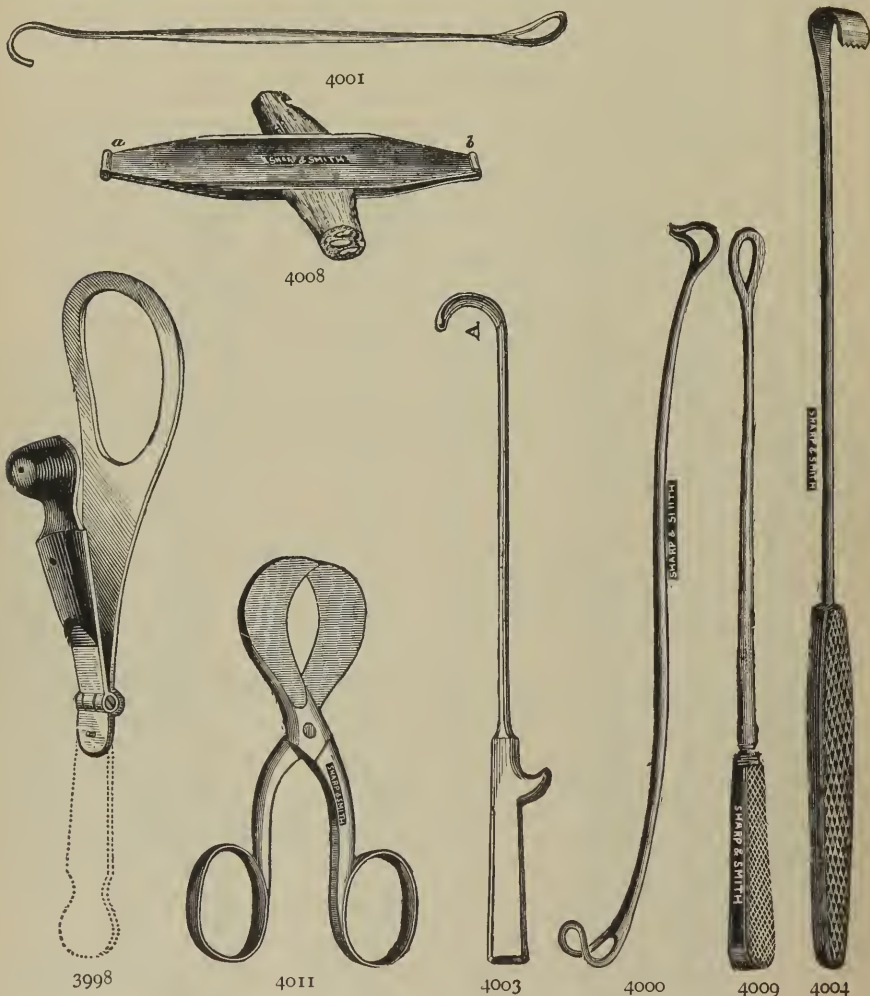
FIG.

*3978	Blot's Cranium Perforator.....	\$	4 50
*3979	Holmes' Double Crossing Perforator.....		3 75
*3980	Bedford's Cranium ".....		2 25
*3981	Smellie's ".....		1 85
*3982	Simpson's ".....		2 25
*3983	Thomas' ".....		5 00
*3984	Naegeli's ".....		3 00
3985	Bachelor's ".....		3 75
3986	Hodges' ".....		3 75
*3987	Garland's ".....		3 00
*3988	Braun's Trephine ".....		1 25
*3989	Truehart's ".....		6 00
*3990	Lucas' ".....		
3991	Plain Ebony Handle, Blunt Hook.....		1 15
*3992	Taylor's " ".....		1 15
*3993	Blunt Hook and Crotchet Combined.....		1 15
*3994	Bedford's " " " ".....		4 50
*3995	Budd's " " " " (guarded).....		3 30
3996	Taylor's " " " ".....		1 25



OBSTETRICAL—CRANIOTOMY HOOKS AND VECTIS.

FIG.		
3997	Ebony Handle Vectis.....	\$1 75
*3998	" " (folding).....	2 65
3999	Ryerson's Improved Vectis.....	5 25
*4000	Leavitt's Placenta Hook.....	1 00
*4001	Dewee's " " and Carey's Lever.....	75
4002	Bedford's " ".....	2 25
*4003	Decapitating " ".....	1 75
*4004	Clark's Placenta ".....	2 50
4005	Ebony Handle Crotchet plain.....	1 15
4006	Taylor's Ebony Handle Crotchet.....	1 25
4007	Elliott's " ".....	1 50
*4008	Pulling's Funis Clamp.....	30
*4009	Munde's Placenta Curette.....	1 50
4010	Robbins' " Spoon.....	2 00
*4011	Sharp & Smith's Placenta Scissors.....	1 25



All instruments designated by a * are illustrated.

OBSTETRICAL.

FIG.

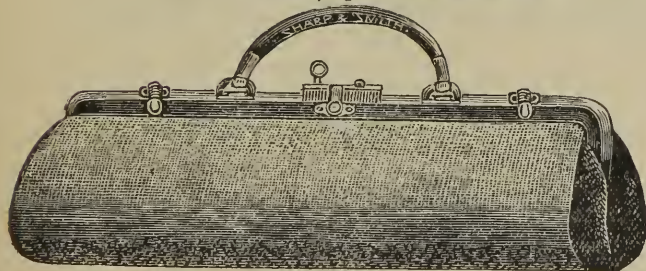
4012	Bandeloque's Pelvimeter.....	\$ 6 00
4013	King's	3 00
4014	Porte Cordon.....	3 00
4015	Leather Covered Manikin and Fœtus, for College use.....	40 00

French Manikins all kinds, imported to order.

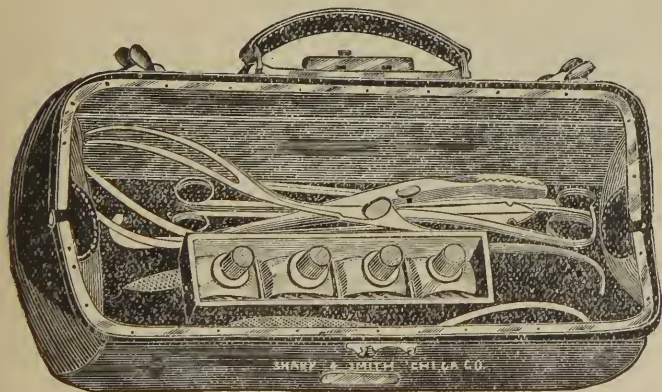
*4015-A	Cabin Obstetrical Bags, 15 inch, \$4.25; 16 inch, \$4.75. With bottles, 50c extra.	
*4016	Obstetrical Bags, 12 inches long, black or brown.....	2 50
*4017	" " 13 " " " " " ".....	2 05
*4018	" " 14 " " " " " ".....	2 80
*4019	" " 15 " " " " " ".....	3 00
*4020	" " 16 " " " " " ".....	3 15
*4021	" " 17 " " " " " ".....	3 30
*4022	" " 15 to 16 " " " " " (empty).....	3 50
4023	" Pouches, Morocco, Chamois-Lined.....	5 00
4024	" Plain.....	3 00



4015-A



4016 to 4021



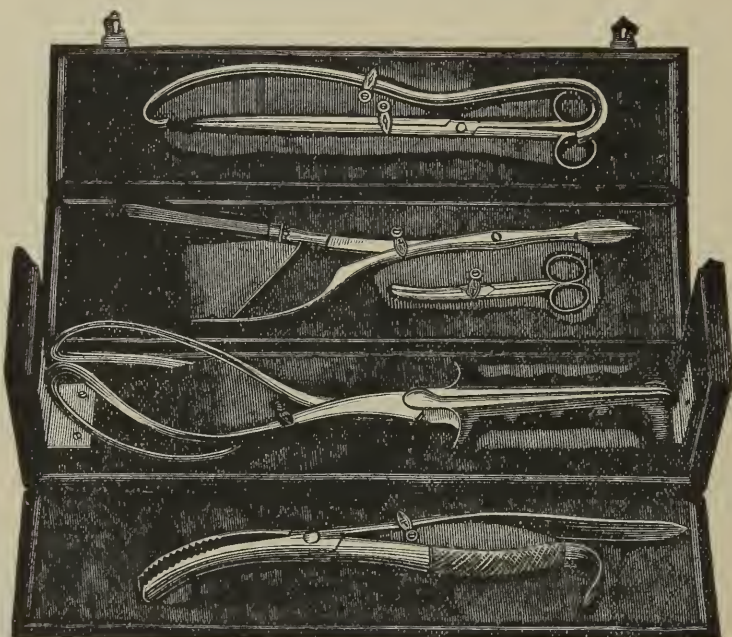
4022

All of our leather bags are made of the best material, lined with Buckskin, and have pockets for holding powders, etc.

To the price of any of these bags add 50c. if you desire to have bottles with them (6).

Fig. 4022. Represents any of our cases open and with bottles blocked in. Price of this case empty with bottles in center, \$4 50

OBSTETRICAL CASES.



4025

Fig. 4025. ELLIOTT'S OBSTETRIC SET, Containing:

- 1 pair Elliott's Long Forceps; 1 Blot's Perforator; 1 Blunt Hook and Crotchet; 1 pair Placenta Forceps; 1 pair Thomas' Craniotomy Forceps; 1 pair flat Curve Scissors.....\$26 25

Fig. 4026. DR. HODGES' OBSTETRIC POUCH, Containing:

- 1 Hodges' Forceps; 1 Smellie's Perforator; 1 Blunt Hook and Crotchet combined, in a leather pouch lined, to roll.....\$11 25

Fig. 4027. DR. BEDFORD'S OBSTETRIC POUCH, Containing:

- 1 Bedford's Forceps; 1 Bedford's Perforator; 1 Placenta Forceps; 1 Blunt Hook and Crotchet combined, in a leather pouch, lined, to roll, \$15 00

Fig. 4028. DR. ELLIOTT'S OBSTETRIC POUCH, Containing:

- 1 Elliott's Forceps; 1 Blot's Perforator; 1 Placenta Forceps; 1 Blunt Hook and Crotchet combined, in a leather pouch, to roll.....\$18 75

Fig. 4029. OBSTETRIC POUCH, Containing:

- 1 pair Hodges' Forceps; 1 Blunt Hook and Crotchet; 1 pair Placenta Forceps; 1 Vectis; 1 Perforator; 1 pair Meigs' Craniotomy Forceps. \$16 25
Obstetrical Pouches, Rolling, best Morocco leather, lined with Chamois Skin 3 00

Obstetrical Cases of any Style made to order.

SHARP & SMITH'S COMBINED OFFICE AND GYNÆCOLOGICAL CHAIR AND OPERATING TABLE.

While we have and can furnish *all* styles of Operating Chairs or Tables, we especially recommend the Chair, etc., known as "Sharp & Smith's Combined Office and Gynecological Chair and Operating Table."

We recommend this because the best physicians and surgeons of Chicago have assured us that, with it, more can be accomplished, practically, than any other device known of in that line. However, if the description of our chair should not be sufficient to warrant an order, and more description is necessary, we will be glad to furnish it. We wish also to say that the "Footstool" and "Pillow" that accompany this "Chair" are ("accidentally") not shown in the cut, but both are furnished with each chair leaving our office.

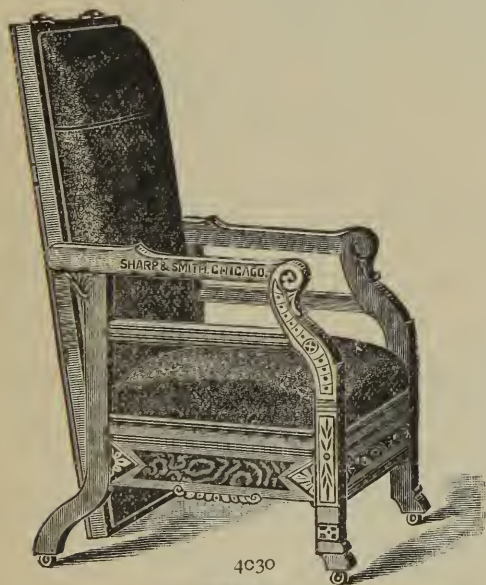


Fig. 4030. No. 1 represents the Chair in simple position, and as it appears in the office or private room.

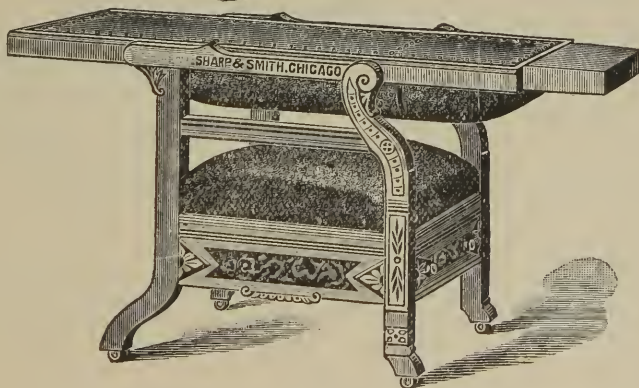
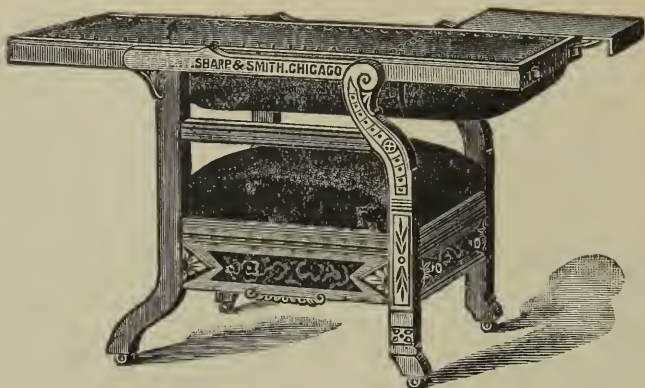


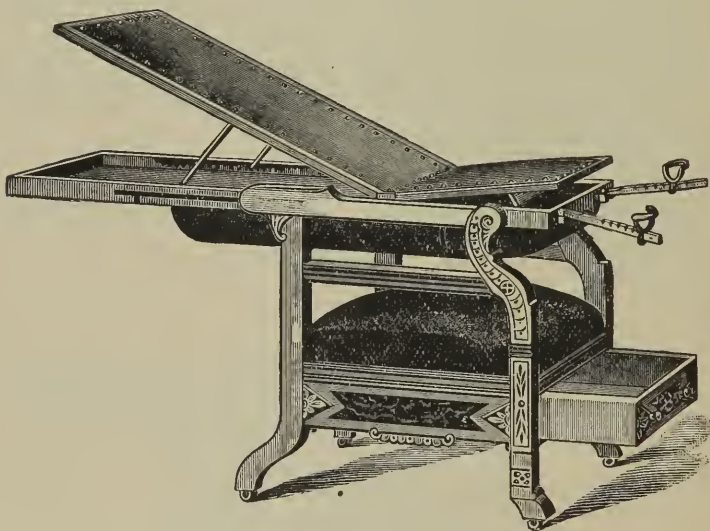
Fig. 4030. No. 2 represents the Chair turned over from the back. It can be so turned with the greatest ease requiring comparatively no exertion. In this cut is also shown an extension which is attached to the foot end, thereby making the chair in table form sufficiently long for any operation.

SHARP & SMITH'S COMBINED OFFICE AND GYNÆCOLOGICAL CHAIR AND OPERATING TABLE.



4030

Fig. 4030. No. 3 represents the Chair with extension removed from the foot of the Chair to the side, for "Sims' Position."



4030

Fig. 4030. No. 4 represents the Chair in the Gynæcological position, with stirrup attachments, which can be placed at any angle or distance from the foot of Chair. Under the seat will be seen a drawer which contains all accessories, including the extension piece and fittings, leaving the Chair when not in use as shown in Fig. 1.

PRICES.

Chair Complete, in fine plush.....	\$55 00
“ “ “ best leather.....	55 00
“ “ “ imitation leather.....	50 00

SHARP & SMITH'S COMBINED OFFICE AND GYNÆCOLOGICAL CHAIR AND OPERATING TABLE.

See preceding pages.

This Chair works without "Cranks," "Levers" or "Ratchets."

Any position can be obtained instantly, and it is movable in any direction with but the strength of one finger. A convenient Ottoman, and a leather-covered Hair Pillow accompany the Chair. In the short space of time that this Chair has been on the market we have had innumerable testimonials as to its superiority over others, and we submit a few herewith.

TESTIMONIALS.

A. C. Cowperthwaite, M. D., LL.D., Prof. Materia Medica and Diseases of Women, State University of Iowa, Iowa City, says in his Textbook on Gynecology :

"The latest design of chair for Gynecological Works, and the one, in my opinion, best calculated for that purpose, at least for the general practitioner, is the 'Combined Office and Gynecological Chair and Operating Table,' recently devised by Sharp & Smith of Chicago. This chair is very simple in its adjustment, is easily operated, and when not in use forms a handsome and comfortable office chair."

Dr. De Laskie Miller, Professor of Obstetrics and Diseases of Children, Rush Medical College, Attending Physician for Diseases of Children and Accoucheurs, Presbyterian Hospital, Attending Obstetrician St. Luke's Free Hospital, Consulting Physician Woman's Hospital, Consulting Physician Home for Incurables, says:

"Messrs. Sharp & Smith:—I have examined your 'Combination Easy Chair,' Gynecological Chair and Operating Table. It certainly excels anything I have ever seen on account of its being so easily and quickly changed from one position to the other, and I failed to find any complicated machinery to get out of order. Its simplicity is a very desirable part of its construction."

S. A. McWilliams, A. M., M. D., Professor of Clinical Medicine, College of Physicians and Surgeons, says:

"Messrs. Sharp & Smith:—I am better pleased with your Gynecological Chair than any other I have seen, on account of its neatness, simplicity, durability and usefulness."

Dr. D. W. Graham, Professor of Surgery Woman's Med. College, Professor of Emergencies Chicago Training School, Attending Surgeon Presbyterian Hospital and Central Free Dispensary, Secretary Illinois State Medical Society, Editor Chicago Medico-Historical Society, says:

"Messrs. Sharp & Smith:—I have examined your Combined Chair and Operating Table. For simplicity and ease of adjustment it has no superior. It has more good features than any chair I know of, and I can highly recommend it."

Dr. E. H. Pratt, Professor of Principles and Practice of Surgery, Chicago Homeopathic Medical College, says among other things in praise of the Chair:

"Your new Chair is a clever invention, and cannot fail to more than satisfy the most critical of operators."

SHARP & SMITH'S COMBINED OFFICE AND GYNÆCOLOGICAL CHAIR AND OPERATING TABLE.

TESTIMONIALS.—Continued.

Dr. D. A. K. Steele, Professor of Orthopedic Surgery (and also Secretary of) College of Physicians and Surgeons, Surgeon Cook County Hospital, says: "It is simply perfection."

P. M. Woodworth, M. D., attending physician Augustana Hospital, says: "Messrs. Sharp & Smith:—The new Surgeon's Chair is the most complete yet simple working chair it has been my privilege to examine, and the omission of cranks and springs is a great advantage. I consider it the best Gynecological Chair that I have seen."

W. F. Knoll, M. D., Surgeon's Department Central Homeopathic Hospital and Free Dispensary; Professor of Minor Surgery, Physiology and Pathology Chicago Homeopathic Medical College, says:

"Sharp & Smith:—I am very much pleased with the construction and operative qualities of your Surgical and Gynecological chair. It is a decided improvement in the right direction, and I am certain that any physician who has the pleasure of using it will bear testimony to its perfection."

Dr. Norval H. Pierce, under date of December 6, 1888, says:

"I consider the Sharp & Smith Operating Chair and Table the most perfect combination of practical usefulness, strength and elegance thus far offered to the surgeon."

We refer also to the following doctors, who appreciate, among many others, the superior qualities embraced in our Chair:

A. L. Clark, M. D., Prof. of Obstetrics and Diseases of Women and Clinical Gynecology at Bennett Medical College, Gynecology Bennett Hospital, Professor Diseases of Women Bennett Free Dispensary, Member State Board of Health.

A. E. Hoadley, M. D., Professor Anatomy College of Physicians and Surgeons, Professor of Surgery, Chicago Polyclinic.

A. L. Cory, M. D., Chicago, Surgeon of L. S. & M. S. R. R.

H. Wardner, M. D., Supt. Illinois Hospital for Insane.

Dr. G. W. Nesbitt, Sycamore, Ill.

Dr. Jno. E. Owens, Professor of Surgical Anatomy and Optical Surgery, Chicago Medical College, Attending Surgeon St. Luke's Free Hospital.

Dr. Charles Gilman Smith, Consulting Physician to Presbyterian Hospital, and Chicago Hospital for Women and Children.

F. L. Wadsworth, M. D., Physician in charge St. Joseph's Hospital, Professor of Physiology Woman's Medical College.

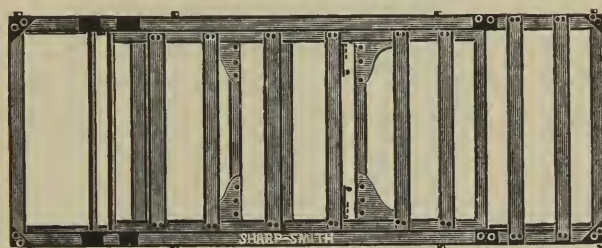
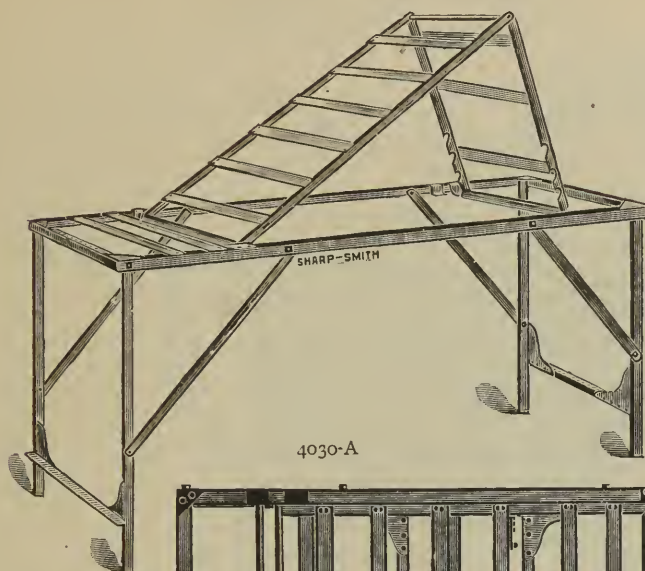
SHARP & SMITH,

MANUFACTURERS, IMPORTERS AND DEALERS IN

SURGICAL INSTRUMENTS AND APPLIANCES,

73 Randolph Street, CHICAGO.

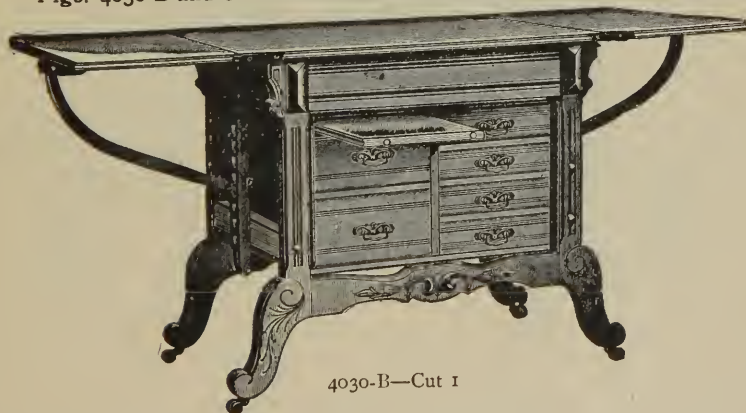
OPERATING TABLES.



4030 A—Closed.

Fig. 4030-A—Represents **Foerster's Portable Gynecological Table**, facilitating the employment of Trendelenburg's posture. This table is made all of metal, and can be folded to a very small size, and is thoroughly Aseptic. Size 60x30x21 ½ inches, entire length when extended 77 inches, weight 48 lbs. Price.....\$35 00

Figs. 4030-B and C—THE COLUMBIA OPERATING TABLE.

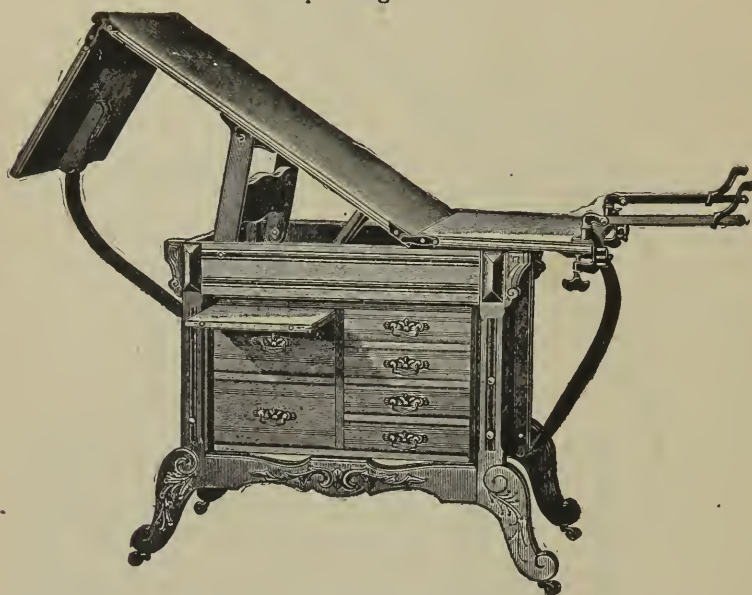


4030-B—Cut 1

In this table the actual wants of the Physician and Surgeon are thoroughly considered, and same has been constructed at a reasonable price. Being simple in construction it is an improved substitute for a common table ordinarily desired by busy practitioners. The above cut (4030-B—Cut 1) illustrates the table with sides extended at full length as an Operating Table; either end can be raised or lowered at any angle. (See following page for different position of Table.)

OPERATING TABLES.

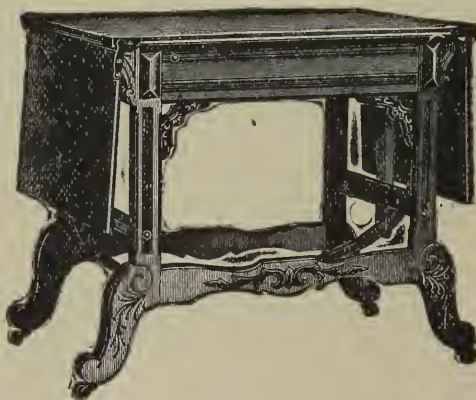
Columbia Operating Table—Continued.



4030-B—Cut 2

Fig. 4030-B—Cut 2 illustrates the Table for Gynecological Operation and Examination. Showing end of top raised, which can be raised to any angle. We call particular attention to our stirrups. They are put on every table, and so constructed that they can stand parallel with seat, or may be carried outward as far as desired.

These tables have two large and four small drawers, which can be drawn out on either side of the table; it also has a sliding board for basin.



4030-C

Columbia Table without Drawers.

Fig. 4030-A and B—Table with Drawers, including Stirrups.....\$30 00

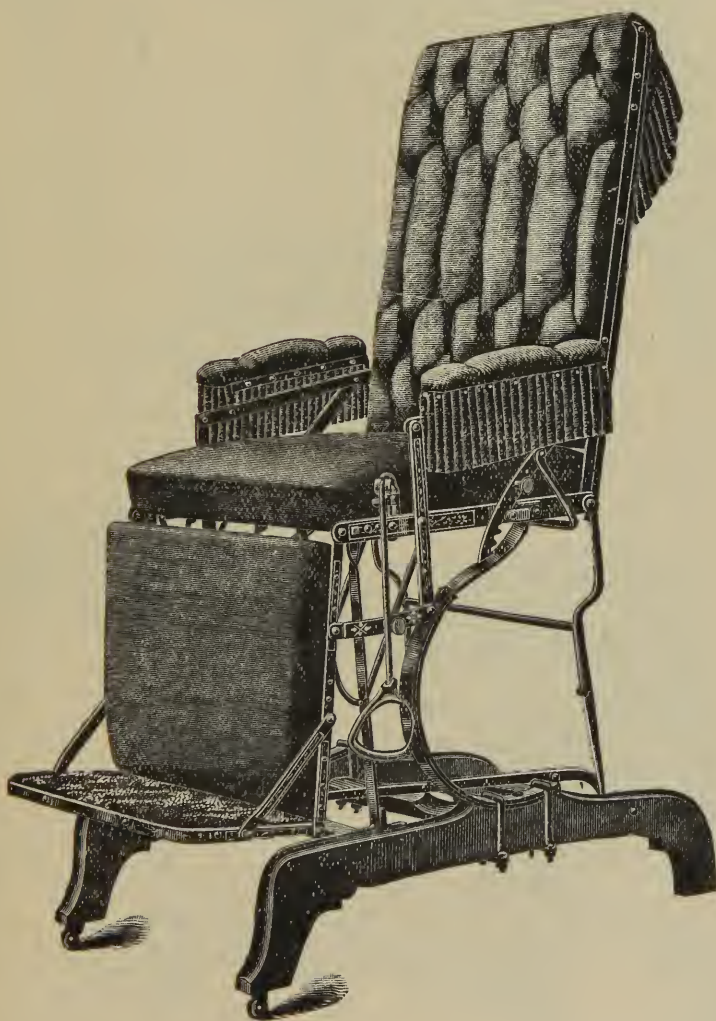
“ 4030-C—Table without Drawers, including Stirrups..... 20 00

Head Pillow in Leather..... 2 00

Height of Table 32½ in. Width of Table 24 in. Length of Table when extended out, 5 ft. 8 in.

DE PEW OPERATING CHAIR.

FIG.					
*4031	No. 1 and 2, DePew Chair Upholstered in best leather.....	\$50	00		
*4031	“ “ “ “ “ in fine mohair plush.....	60	00		



4031

CONVERTIBLE OPERATING CHAIR.

Chair in an Upright position. (Patented.)

DE PEW OPERATING CHAIR.

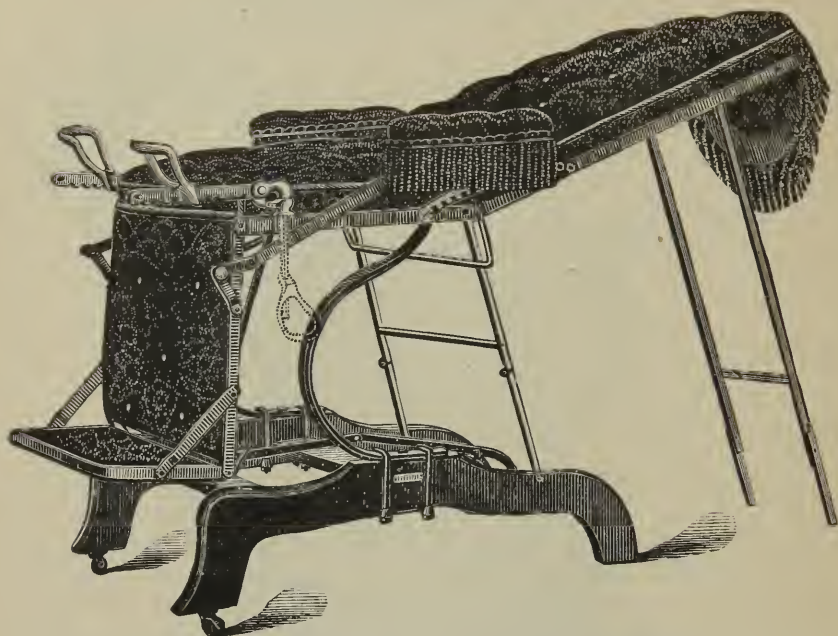


Fig. 403I. CONVERTIBLE OPERATING CHAIR.
In position for Gynæcological Operation.

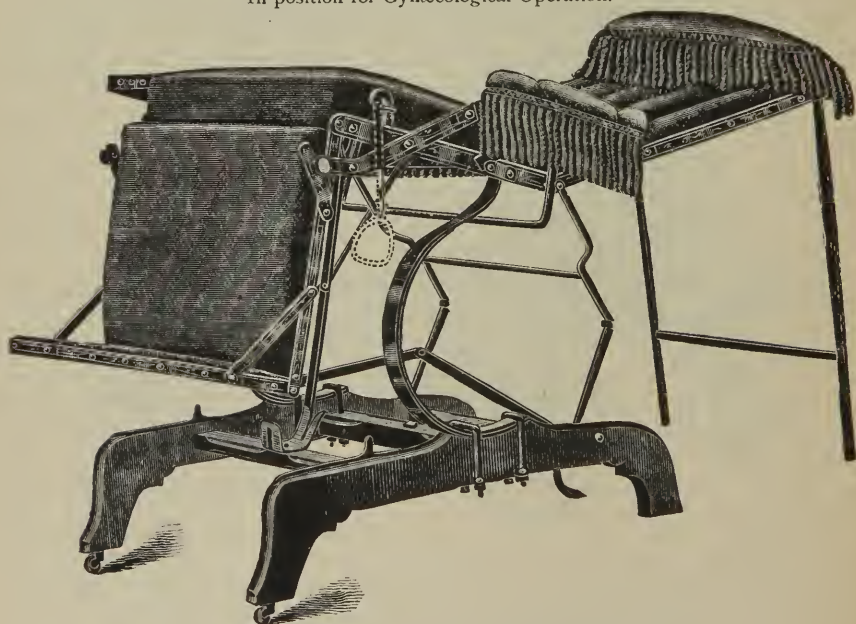


Fig. 403I. CONVERTIBLE OPERATING CHAIR.
Seat raised for Sims' Position.

THE ARCHER GYNÆCOLOGICAL CHAIR.

FIG.

*4032	The Archer Chair complete, with Seat Extension and Platform Step.....	\$ 60 00
4033	Leather Pillow to match, extra.....	5 00
4034	Foot Supports for Lithotomy position, extra.....	5 00
4035	Oculist Head-Rest, extra.....	10 00
4036	The Archer Chair complete, with Seat Extension and platform Step and Head-Rest.	70 00

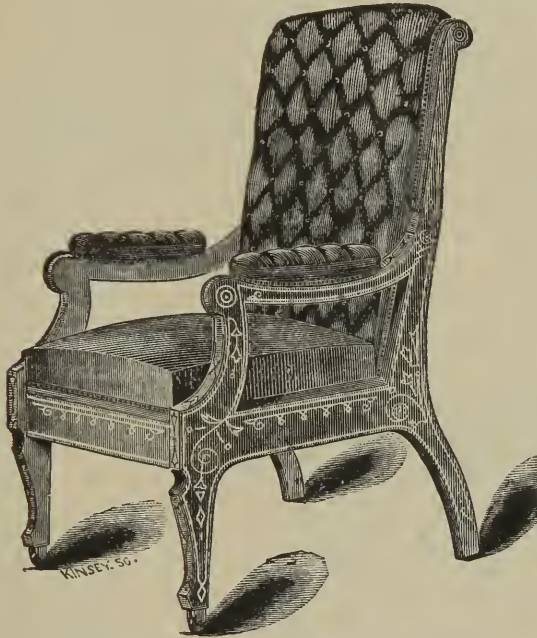


Fig. 4032. THE ARCHER CHAIR.

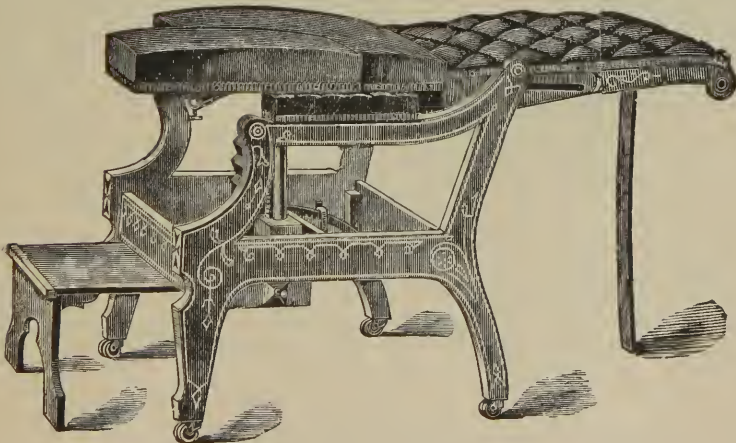


Fig. 4032. THE ARCHER CHAIR, (Sims' position).

GYNÆCOLOGICAL—CHAIRS.—Continued.

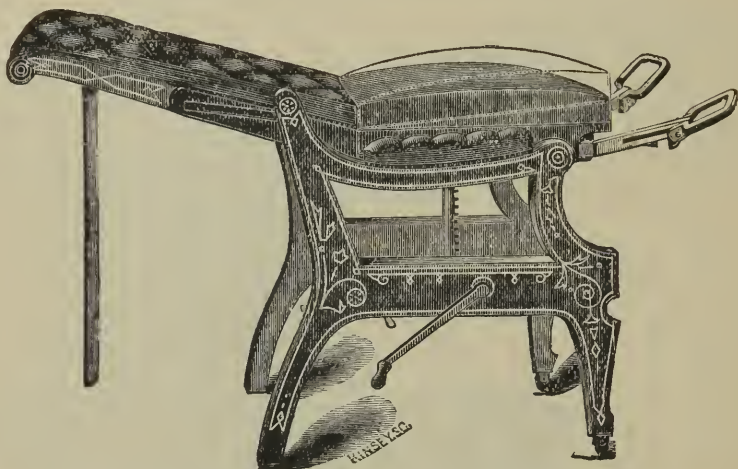
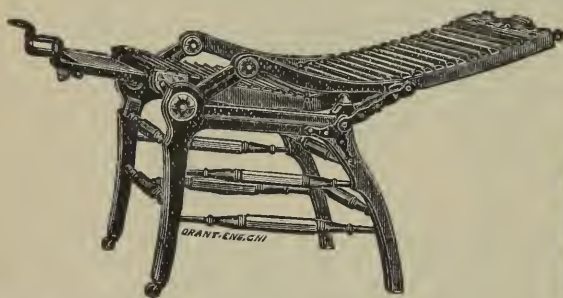
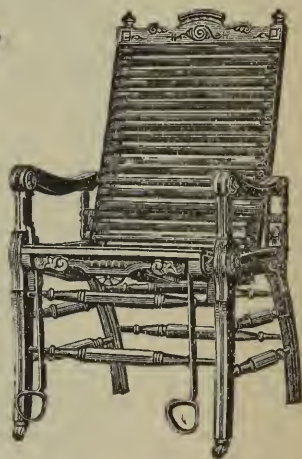


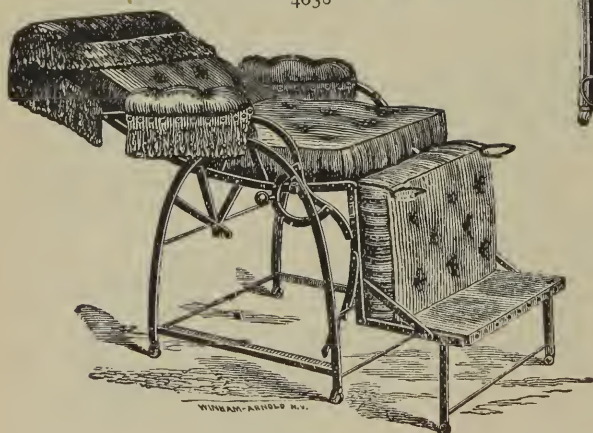
Fig. 4032.—THE ARCHER CHAIR (speculum position).



4038



4038



4037

FIG.		
*4037	Wilson's Surgical Chair, upholstered in rep.....	\$36 00
4037	“ “ “ “ in best leather.....	60 00
*4038	Curtis' Gynæcological Chair.	25 00

GYNÆCOLOGICAL CHAIRS—Continued.

Fig. 4039 THE NEW INDIANAPOLIS SURGICAL AND GYNÆCOLOGICAL CHAIR.

The only chair that can be operated with one hand from either side when the patient is in the chair.

The simplest and easiest to operate. Durable and firm in all its positions, and nothing about it to get out of order.

Meets all the requirements of an operating chair and table combined, having all positions.

Every chair guaranteed to give perfect satisfaction, and built and finished with finest materials. Covered in genuine leather, nickel plated trimmings, quartered oak, and is the handsomest Chair on the market. Price net, \$40 00.

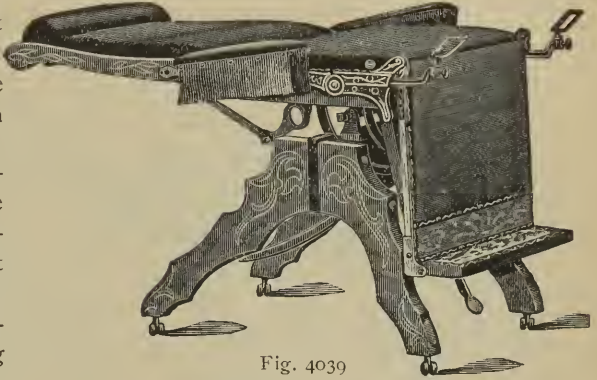


Fig. 4039

DORSAL POSITION.

Fig. 4040 THE NEW TABLE FOR PHYSICIANS, SURGEONS AND GYNÆCOLOGISTS.

For use in Private Practice, Clinics, Hospitals, Sanitariums, Etc. It is Light, Strong, Convenient and Neat.

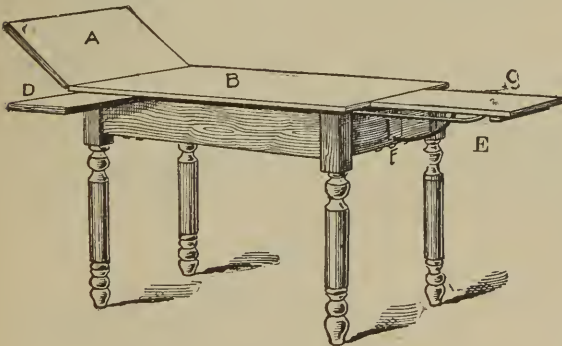


Fig. 4040

(A) represents head leaf which may be lowered to a level with the body (B), or dropped parallel with the legs. (C) is the foot leaf extended. The foot stirrups (E) drawn out diagonally, not straight as appears in the above cut, thus giving ample room for the operator's arms. The leaf is readily dropped out of the way when

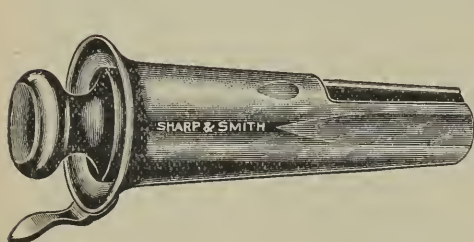
necessary, and the stirrups easily slide under the table. (F) is an armature brace that moves through an iron escutcheon, thus supporting the leaf. (D) is a strong slide leaf. When a hand or arm is not to be operated on, it is convenient to place instruments upon. It moves out from either side of the table. The table is of standard dimensions and well finished.

Price, \$12 00 without casters. \$13 00 with casters.

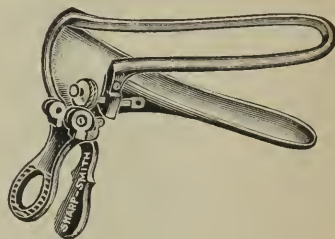
RECTAL SPECULA.

FIG.

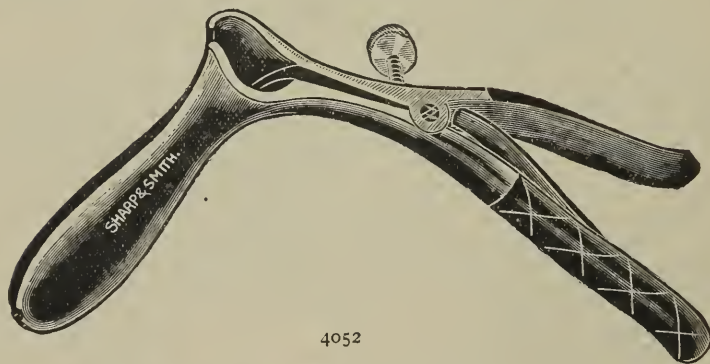
*4050	Dr. Frank B. Ives' Rectal Speculum	\$3 50
*4051	Kelsey's Rectal Speculum.....	2 50
*4052	Dr. A. G. Beebe's Rectal Speculum.....	3 50
*4053	Dr. W. F. Knoll's " "	3 50



4050



4051



4052



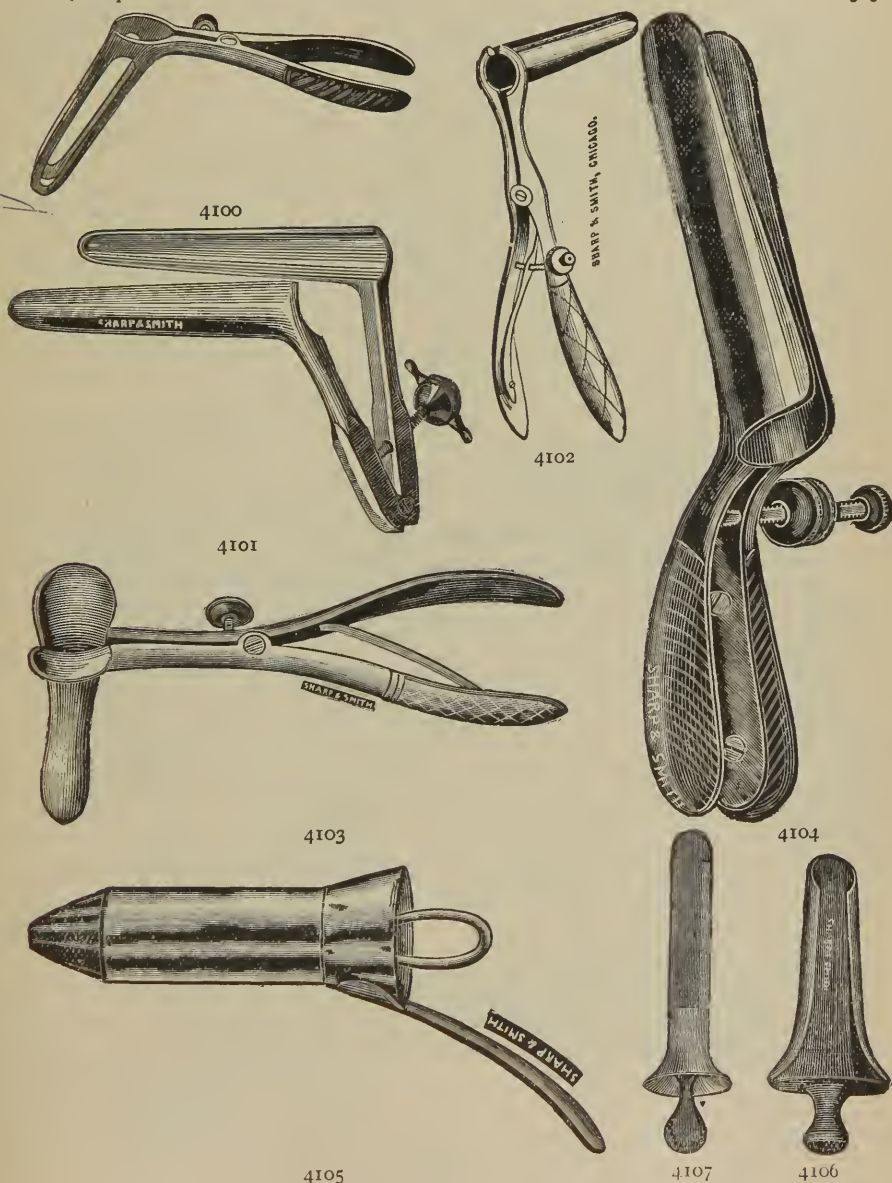
4053

DR. KNOLL'S BIVALVE RECTAL SPECULUM.

In the spring of 1886 this was invented and placed on the market. Several modifications have been made since then, but the original possesses all the good points of the perfect Rectal Speculum. With it the sphincter can be dilated, and through it any operation of the anus or rectum, even to the sigmoid flexure, can easily be made. There are three different sizes made.

RECTAL INSTRUMENTS—SPECULA.

*4100	Sims' Bivalve Rectum Speculum Fenestrated.....	\$1 50
*4101	O'Reilly's Bivalve Rectum Speculum.....	2 00
*4102	Bodenheimer's " " " ".....	1 50
*4103	Leonard's " " " (flange).....	2 00
*4104	Ricord's " " " ".....	2 50
*4105	Dr. E. Andrews' (Chicago), Rectum Speculum.....	2 00
*4106	Allingham's Rectum Speculum.....	2 25
*4107	Squire's " " " ".....	3 50

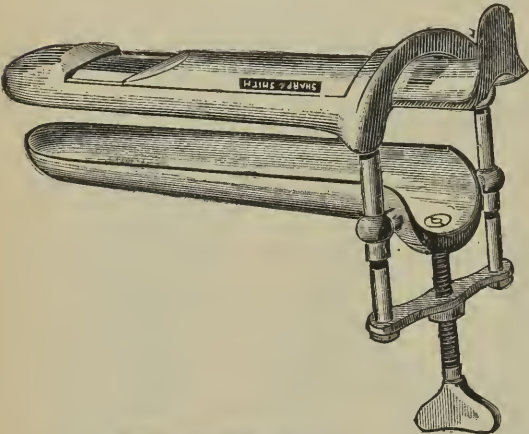


RECTAL INSTRUMENTS—SPECULA.

FIG.		
*4108	Dr. J. B. Pouncey's Rectum Speculum.....	\$10 00
*4109	Haslam's Rectum Speculum	2 00
*4110	Aloe's	5 00
*4111	T. & Co.'s Three Blade Rectum Speculum.....	7 50

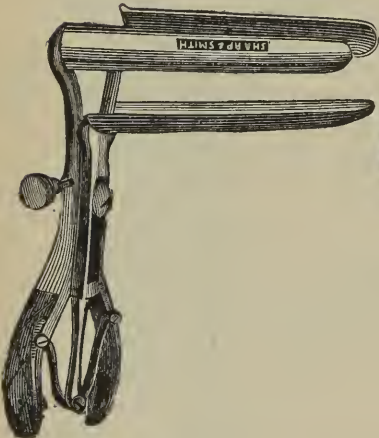
AN IMPROVED RECTAL SPECULUM.

By J. B. POUNCEY, M. D., Birmingham, Ala.

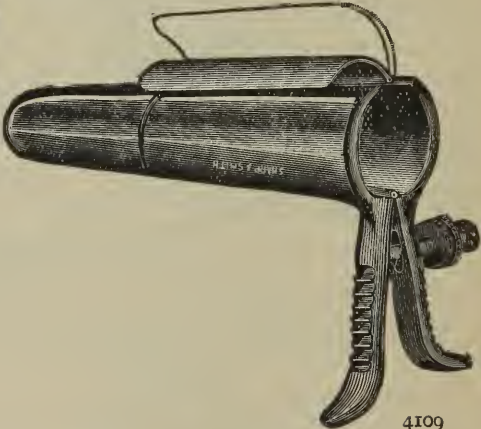


The points of superiority are: 1st. The instrument, as shown in the cut, has two blades, the lower blade fitting into the upper, making it small and compact. 2d. The facility and ease of introducing. 3d. After the introduction of the instrument the rectum can be dilated to any desired extent by running up the screw attached to the blades. 4th. If this is done, any tumors, fistulous tracts, ulcers, etc., are in plain view for treatment. 5th. The blades dilate equally at both the internal and external openings. 6th. There is a wide slot in the upper blade, covered by a slide, which, when withdrawn, exposes the diseased parts fully to view.

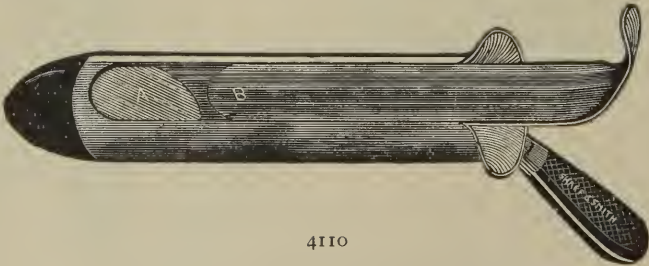
4108



4111



4109



4110

See Pratt's Instruments, beginning page 691.

THE NILES RECTAL SPECULUM.

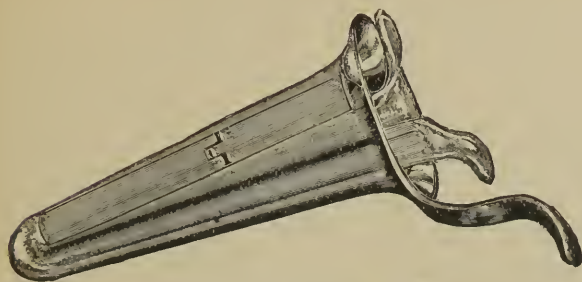


Fig. 1.

Shows the instrument ready for use.

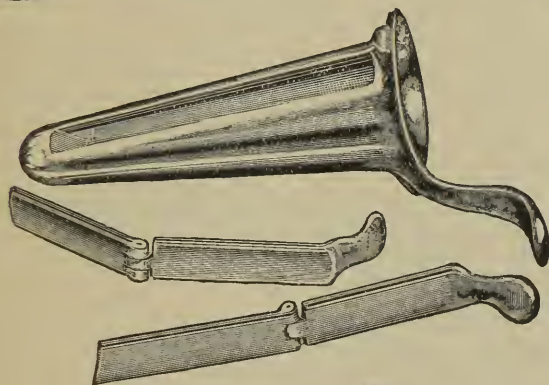


Fig. 2.

Shows the slides withdrawn, and illustrates the character of the milled edges which fit in the grooves of the slots.



Fig. 3.

Shows the slot on each side, giving a full view of their position.

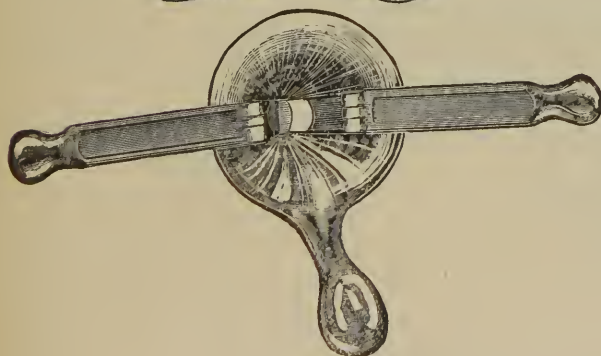


Fig. 4.

Gives a front view of the instrument with the slides half drawn and bent at the joints, exposing the inner half of the slots.

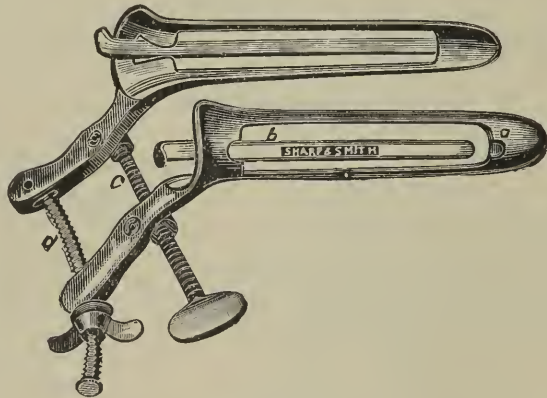
RECTUM INSTRUMENTS—SPECULA.

FIG.	
*4112	Niles' Rectum Speculum (for illustration see preceding page)..\$ 5 00
*4113	O'Neal's Rectum Speculum..... 3 50
*4114	Keen's " " 3 50

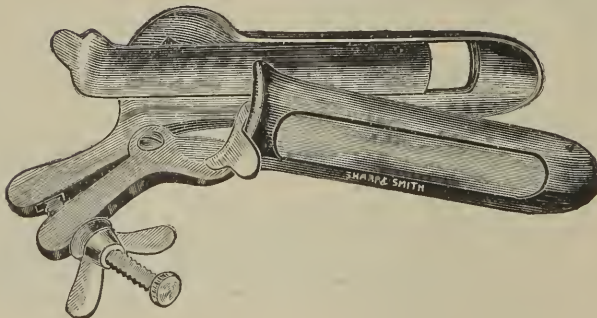
Fig. 4112 (Niles' Rectum Speculum.) Its advantages are : That it is a double inclined plane, and has double slides hinged in the center, the unique character of the milled edges of which make it impossible to wound the mucous membrane, either on the withdrawal of the slides or instrument.

You can expose one-half of the surface on either side, which is necessary whenever acids or caustics are used in treating fissures or ulcers.

It is constructed upon purely scientific principles. It is shaped similar to the index finger, making its introduction easy for the physician, and painless to the patient, even in extremely irritable conditions, and gives a complete view of the parts, thereby facilitating a ready diagnosis of the case.



4114



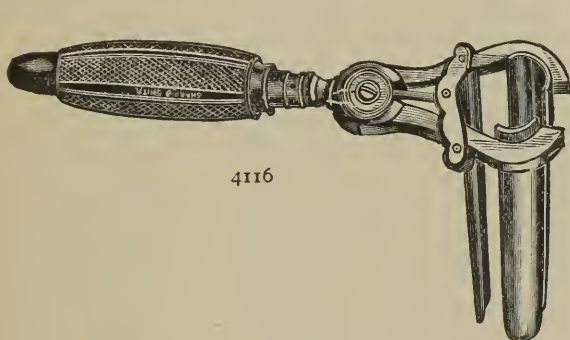
4113

See Pratt's Instruments, beginning page 691.

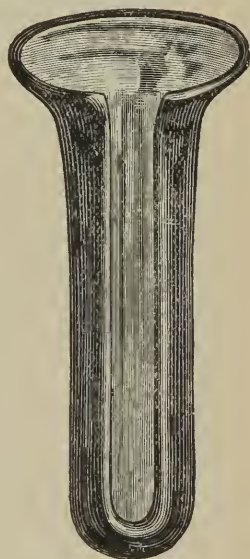
All instruments designated by a * are illustrated.

RECTAL INSTRUMENTS—SPECULA.

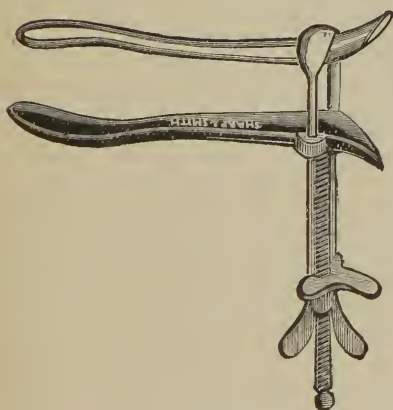
FIG.		
4115	Yount's Wedge End Rectum Speculum.....	\$5 00
*4116	Trivalve Trellis Rectum Speculum.....	12 00
*4117	Thebaud's Sphincter Ani-Dilator.....	7 50
*4118	Ashton's Glass Mirror Speculum.....	75
4119	“ “ “ metal lined.....	1 50
4120	“ Trivalve “	6 00
4121	Ordinary Glass Mirror “	40
*4122	Williams' Rectum “	3 00
4123	Van Buren's “	2 50
4123A	Weiss' three blade Rectum Speculum. . .	9 00
4124	Sass' Bivalve “	1 50
4125	Sharp & Smith's “	2 50
4126	Fenestrated Hard Rubber Rectum Speculum, set of 4	2 50
4127	Lane's three blade “	7 50
4128	Reed's Soft Metal Glass Slide Rectum Speculum	2 50
4129	Kelsey's Rectum Speculum.	2 50
4130	Helmuth's “ “	2 75



4116



4118



4117



4122

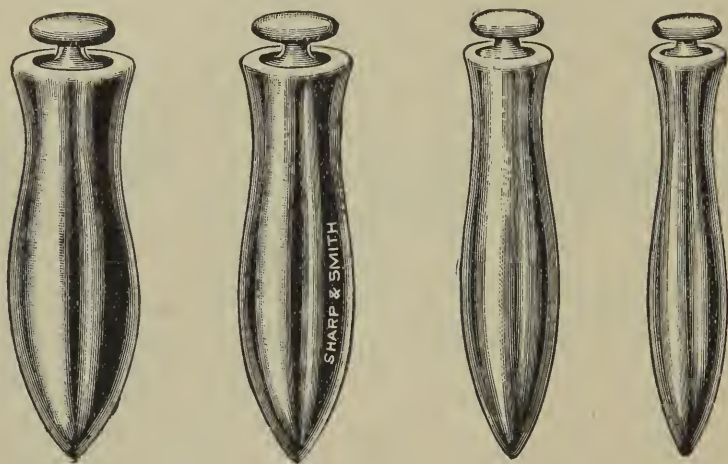
All instruments designated by a * are illustrated.

See Pratt's Instruments, beginning page 691.

RECTAL INSTRUMENTS—DILATORS.

FIG.

- *4130-A Dr. E. N. Chaney's Aluminum Rectal Dilators, set of 4. ...\$5 00
 *4130-A " " " " " each ... 1 50
 *4130-B Ideal Hard Rubber Rectal Dilators, set of 4..... 4 00
 (Fig. 4130 B Dilators sold *only* in sets of 4).
 *4130-C Dr. C. S. Eldridge's Metal Rectal Dilators, 4 sizes, each..... 2 00

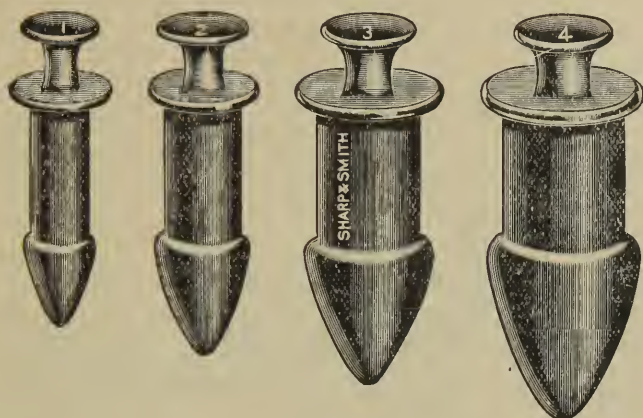


4130-A

We direct the attention of the medical profession to a *Rectal Dilator* (see cuts above, Fig. 4130-A) that was presented to the medical fraternity in the columns of the March, 1893, number of the *Journal of Orificial Surgery* in the article on "Primary Orificial Surgery," by E. N. Chaney, M. D., Chicago.

After radical operations they are indispensable in retaining the normal caliber of the bowel during the process of healing; also patients who may regain their health by primary work can perform the dilatation with this dilator satisfactorily. It has a long point, which makes the insertion remarkably easy. The accompanying cut represents them, and as their conformation indicates they are self-retaining and possess a superior surface, being made of aluminum. This metal, it is said by some physicians has a curative effect on the bowel. To perfect this dilator, it is made hollow and closed by an Eldridge screw cap, thus giving the operator the privilege of raising or lowering the temperature of the instrument by filling it with water.

RECTAL INSTRUMENTS—DILATORS.



4130-B

PATENTED MAY 17, 1892.

Fig. 4130-B THE IDEAL RECTAL DILATORS.**Made of Hard Rubber. Self Retaining.**

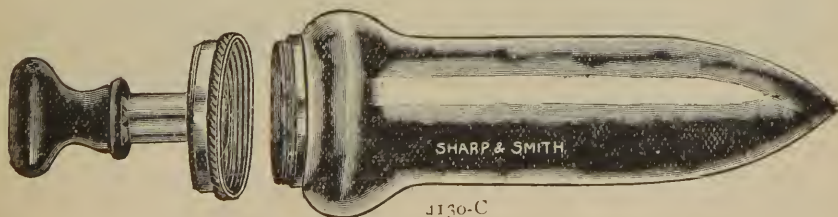
CUTS HALF SIZE.

For patients with any form of chronic or rectal disease, and for treatment after operations. Their use relaxes the sphincter, stimulates the sympathetic nervous system, equalizes the circulation, and in this way, cures piles, prolapsus, fissure, etc., and relieves almost all forms of chronic diseases. It also cures constipation by increasing the peristaltic action.

DIRECTIONS:—The largest size consistent with comfort, should be lubricated and passed well up the rectum and held in place a few moments, after which it will be retained. It should remain from half an hour to two hours according to the effect desired, and may be used as often as necessary.

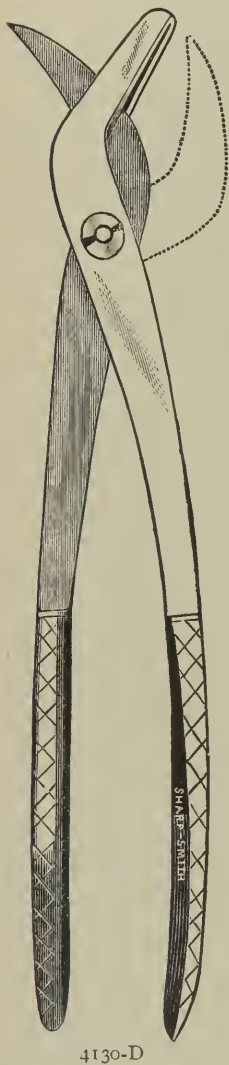
Fig. 4130-C DR. C. S. ELDRIDGE'S MODIFICATION OF PRATT'S RECTAL DILATOR.

As may be seen by accompanying cut, this Dilator is in two parts. It answers all the purposes of a Dilator, and in addition is made hollow, so that it can be filled with hot water or ice and salt, thereby making it an efficient means of treating the prostate and bladder when heat or cold is deemed necessary. It screws together so as to be absolutely water tight.



4130-C

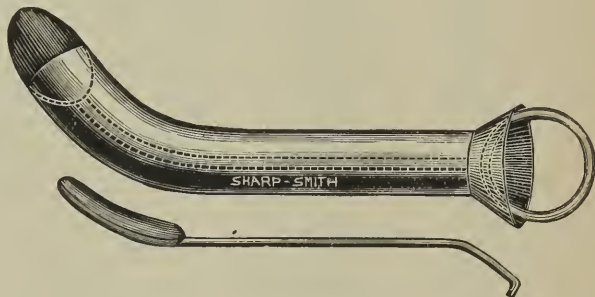
RECTAL INSTRUMENTS—ANDREWS'.



4130-D

Fig. 4130-D—ANDREWS' ECRASEUR FORCEPS.

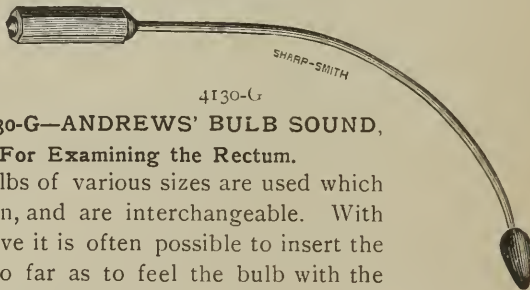
Used as a substitute for the chain ecraseur. One jaw passes loosely through a slot in the other. The edges are blunted so as to crush and not cut the tissues. The dotted line shows the position of the male jaw when the instrument is partly open.



4130-E

Fig. 4130-E—ANDREWS' CURVED RECTAL SPECULUM.

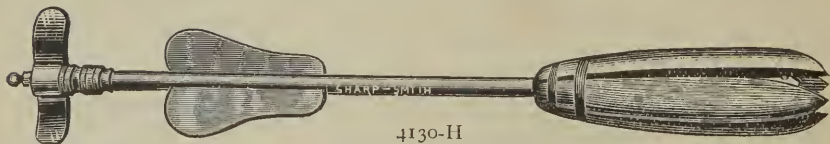
After insertion the core attached to the staff is withdrawn, and the slightly concave mirror shown in the lower part of the cut is inserted, and the wall of the rectum viewed, a little magnified, in the mirror which is inserted for the purpose. A concentrated beam of light is required.



4130-G

**Fig. 4130-G—ANDREWS' BULB SOUND,
For Examining the Rectum.**

Bulbs of various sizes are used which screw on, and are interchangeable. With this curve it is often possible to insert the sound so far as to feel the bulb with the surgeon's hand near the umbilica.



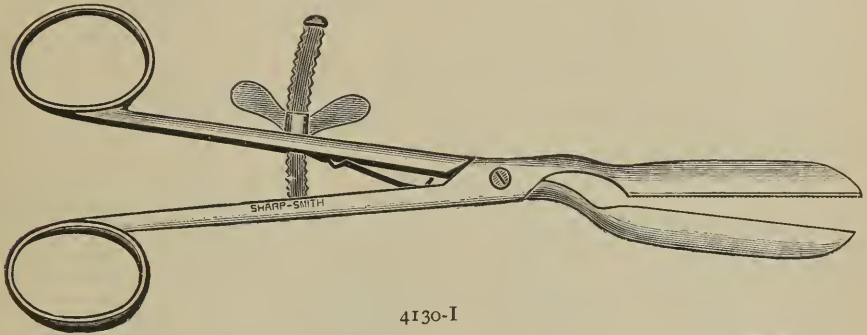
4130-H

**Fig. 4130-H—INSTRUMENT FOR DILATING STRICTURE
OF THE RECTUM.**

The closed blades are inserted, and then spread by turning a screw which passes through the handle.

FIG.

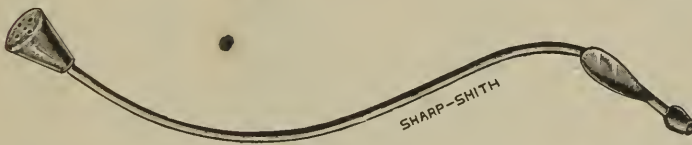
*4130-D	Dr. Edmund Andrews' Rectal Ecraseur	\$3 50
*4130-E	" " Curved Rectal Speculum.....	3 50
*4130-G	" " " " Bulb Sound.....	1 25
*4130-H	" " Instrument for Dilating Stricture of Rectum	15 00
*4130-I	" " Improved Smith's Pile Clamp.....	4 50
*4130-K	Dr. G. A. Hall's Rectal Dressing Forceps.....	2 50
*4130-L	Dr. E. Z. Cole's Rectal Searcher and Irrigator	1 75
*4130-M	Dr. F. Henrotin's Rectal Snare Ecraseur	7 50
*4130-N	Prof. Hoadley's Rectal Fissure Speculum	2 50



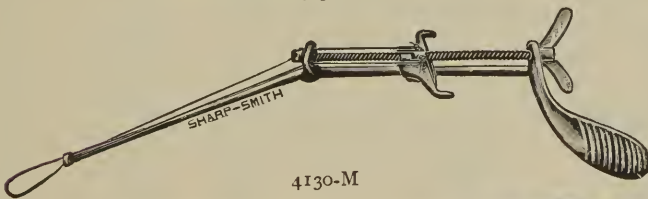
4130-I



4130-K



4130-L



4130-M

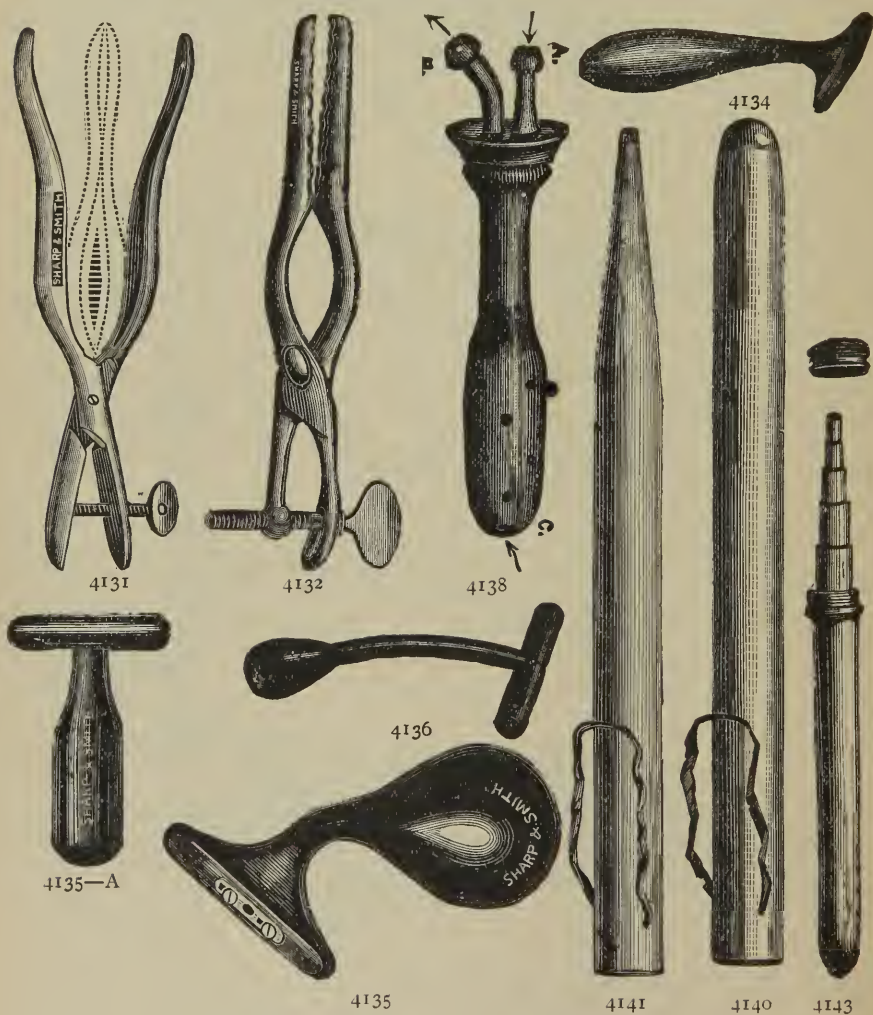


4130-N

Instruments designated by a * are illustrated.

RECTAL INSTRUMENTS—DILATORS.

FIG.		
*4131	Sims' Rectal Dilator.....	\$3 40
*4132	Dupuytren's Enterotome	3 75
4133	Little's Rectal Dilator	9 00
*4134	Bolton's Pile Plug.....	90
*4135	Trosseau's ".....	1 50
*4135-A	Plain H. R. Pile Plug.....	90
*4136	Reed's Pile Plug.....	1 00
4137	Kent's ".....	1 50
*4138	Bodenheimer's Rectal Irrigator.....	2 25
4139	Munde's ".....	1 90
*4140	Cylindrical " Bougies, 1 to 12, each.....	75
*4141	Conical " " 1 to 12, ".....	90
4142	Olive Tip " " 1 to 12, ".....	1 25
*4143	Hard Rubber " " set of six in Hard Rubber Case	3 50
4144	Bodenheimer's Set of 10 Exploring Bougies.....	7 50



See Pratt's instruments, beginning page 691.

RECTAL INSTRUMENTS.—Continued.

FIG.

- 4145 Soft Rubber Rectal Bougies, according to size.....\$1 00 to 2 00
 *4146 Dr. A. H. Meisenbach's Rectal Plug.....

A Rectal Plug for Senn's Method of Insufflation of Hydrogen Gas.

BY A. H. MEISENBACH, M. D., St. Louis, Mo.

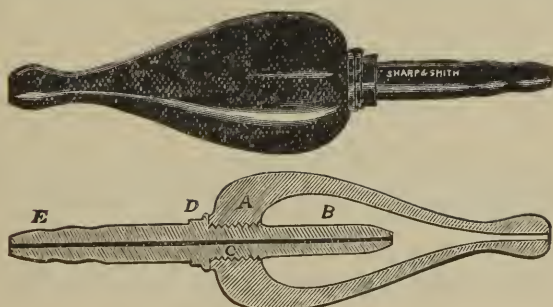
In repeating Dr. Senn's experiments, of insufflation per rectum of hydrogen gas, I found considerable difficulty at times, to prevent the gas from escaping out of the rectum, using the ordinary syringe tip. I found this to be the case in experimenting on dogs, and also on the human cadaver.

Dr. Senn recommends in his paper on "Insufflation of Hydrogen Gas per Rectum," etc., that "an assistant hold the margin of the rectum around the syringe tip."

In order to obviate the inconveniences of an ordinary syringe tip, and do away with the need of an assistant in controlling the margin of the rectum, I devised the herein described rectal plug.

This plug has given great satisfaction, having used it in applying Senn's test in four cases of gunshot wounds of the abdomen which were brought to the City Hospital, and in a case of obstruction of the bowel due to the rupture of a Fallopian pregnancy, where obstruction was produced by an immense coagulum—later case occurring in private practice of Dr. Hornsby, and in which I applied "Senn's Test," demonstrating the value of this measure in diagnosing intestinal obstruction.

In the above applications of Senn's test the plug completely plugged the rectum, and effectually prevented the regurgitation of the gas, and allowed the gas bag and plug to be controlled by one person. The plug is made of hard rubber. The annexed cut shows a half size perspective and sectional view of



4146

plug. "A" represents cone-like plug, with tip similar to ordinary syringe tip. B is a hollow chamber in plug into which extends tip E, on which is a thread which screws into plug as shown at C. At D on tip E is a square shoulder and a round collar. The square shoulder is for the purpose of allowing a wrench to be used to tighten the tip into plug. Between collar on plug and collar on tip at D a washer is used, so as to insure perfect air-tightness. The end of Tip E which projects outside of plug is corrugated, so as to easily and tightly fit into rubber tubing from gas bag.

I have found that pouring a little sweet oil into chamber, through opening in plug into chamber, in a measure prevents the liability to clogging, as the oil lubricates the sides of opening, and facilitates its being readily blown out by pressure from the gas bag.

RECTAL INSTRUMENTS.

FIG.									
*4147	Philip S. Wales Soft Rubber Rectal Bougies, Nos. 3 and 4, each	\$	1	00					
*4147	" " " " " " " " 5 and 6, "		1	25					
*4147	" " " " " " " " 7 and 8, "		1	50					
*4147	" " " " " " " " 9 and 10, "		1	75					
*4147	" " " " " " " " 11 and 12, "		2	00					

The price of Bougies quoted above refers to the style shown in cut No. 7, Figure 4147. The circular cut marked "actual size," will assist greatly in ordering.

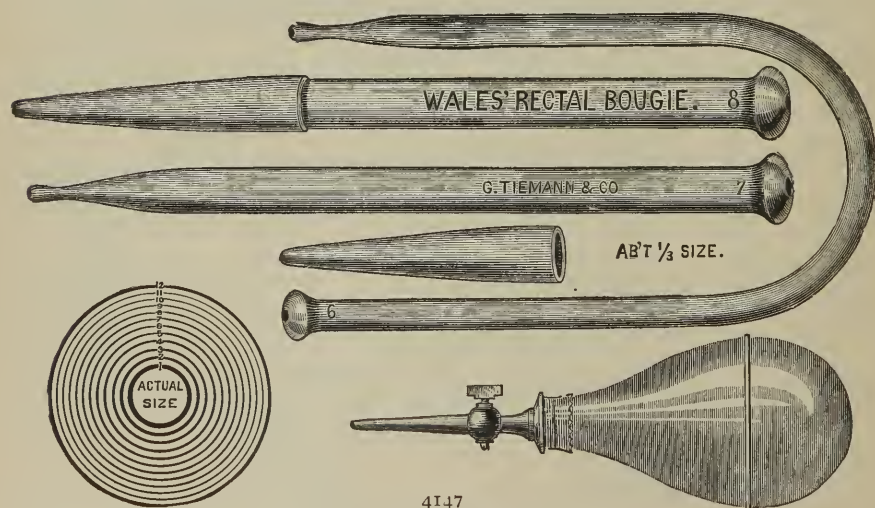
FIG.									
*4148	Sharp & Smith's Hard Rubber Pile Pipe, small.....	\$	60						
4149	" " " " " " " " large		1	00					
4150	" " " " " " " " Ointment, per bottle.....		50						
4151	Seeley's " " " " " " " " Pipe.....		1	50					
4152	" " " " " " " " Ointment, per bottle.....		50						

STRICTURE OF THE RECTUM.

BY PHILIP S. WALES, M. D., Washington, D. C., Surgeon-Gen. U. S. N.

* * * With the view of obviating all possible objections to mechanical dilatation, I devised, for the first time, in 1876, rectal bougies made of *pure gum* (not, as heretofore, of gummed cloth webbing, or other materials), of exceeding flexibility, smoothness and varying in size. A conduit runs through the center, and terminates in the point of the bougie, for the purpose of commanding a stream of water that might be required at any moment to facilitate the introduction of the instrument. The points of the bougies are made in various shapes, spherical, conical, and olivary, with a view of meeting the necessities of special cases. The surface is perfectly polished, which, by reducing friction, increases the facility of introduction, and eliminates the unpleasant sensation of dragging caused by a rough instrument.

The method of introducing the bougie is simple. The patient, after the bowels have been cleaned out by injection, is placed, reclining on his left side,



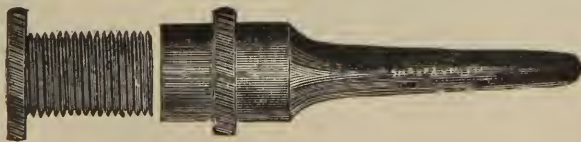
upon an ordinary operating table, the thighs flexed, and the buttocks just overhanging its lower edge. The smallest sized instrument likely to pass the stricture

is smeared with grease, its point inserted into the anus, and gently pushed onward in the following manner: The right hand grasping the bougie close to the anus, the whole perineum is pressed upward, which will advance the point of the instrument; the left hand now steadies it, while the right is slid downward for a lower hold, the perineum, of course settling with it; the bougie is again pushed forward in the same manner until the obstruction is passed. I have occasionally found that this manœuver may be greatly facilitated by sinking the fingers of the left hand deep into the left iliac region, and drawing upward, as though an effort was being made, so to speak, to stretch out the sigmoid flexure, while pressure is made at the same time upon the bougie in the manner described. Another practical point of prime importance is to employ a stream of water, as warm as can be comfortably borne, propelling it through the conduit of the instrument, whenever its point is arrested from any cause. The water, flowing from the distal aperture, will distend the bowel, efface its folds, and break down any hardened fœces which may exist, obstructing the ascent of the bougie. An assistant may manage the syringe, throwing in the water in such quantities as may be needed, while the operator is engaged with the bougie. It must be borne in mind, however, that no great volume should be used at once, otherwise the bowel will be excited to energetic contraction, and compel the instrument to be withdrawn before it has been properly lodged. In preliminary trials, the bougie may be permitted to remain two or three minutes, and afterward, when greater tolerance is established, a longer stay may be allowed. I rarely exceed five minutes in any case, even when the patient makes no complaint of irritation or pain. After several introductions of one size of a bougie, say number seven or eight, the next largest may be taken, and so on until the stricture has been sufficiently dilated.

The application of the instrument may be repeated twice or thrice a week, according to circumstances, such as the irritability of the rectum, temperament of the individual, and inter-current attacks of diarrhœa or other trouble. Twice a week, in my experience, suffices in most cases; a fortunate issue, if attainable, can only be brought about by patient and prolonged treatment.

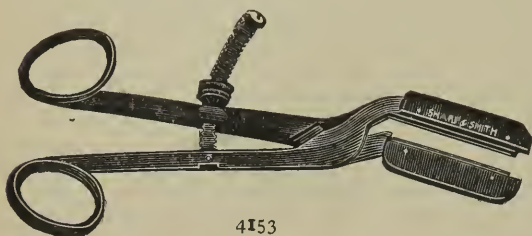
Rudeness or violence inflicted with a view of hastening the case, can effect nothing but harm, and may jeopardize the life of the patient. If the instruments be hastily thrust into the bowel it may be perforated, especially in those cases in which inflammatory softening or ulceration exists; or if it be too large, the rectal mucous membrane may be ruptured, giving rise to smart hemorrhage; or the entire wall of the bowel may be ruptured into the peritoneum, an accident that is pretty sure to be followed by peritonitis, with all of its attendant dangers. But these funest consequences are infinitely less liable to follow the use of India rubber bougies than any other sort, for certainly, *a priori*, nothing could furnish a milder, more equable and less dangerous force than these and experience shows this to be the fact.

It often happens that after the most patient devotion to this method of treatment, the bowels do not regain their functions, even after the largest size bougie has been passed with ease. This result is due in part to long continuance of the expanded condition of the bowel above the stricture, by which its muscular walls have been more or less paralyzed.

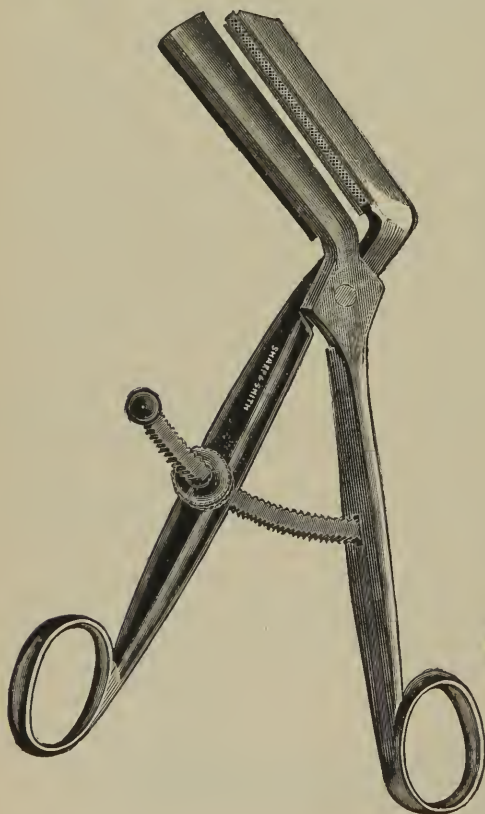


RECTAL INSTRUMENTS—CLAMPS.

FIG.				
*4153	Smith's Hæmorrhoidal	Clamp	.....	\$4 50
*4154	Rockwell's	"	.....	6 50
*4155	Nott's	"	.....	8 00
4156	Amusat's	"	.....	6 00
4157	Jones' Parallel	"	.....	9 00
4158	Langenbeck's	"	.....	3 75



4153



4154



4155

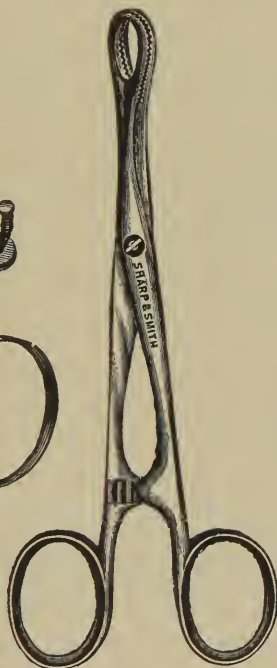
All instruments designated by a * are illustrated.

RECTAL INSTRUMENTS—CLAMPS AND FORCEPS.

FIG.		
4159	Allingham's Hæmorrhoidal Clamp.....	\$ 9 00
4160	Baker Brown's " "	9 00
*4161	Bodenhamer's Curvilinear Forceps for facilitating the ligation of Hæmorrhoids.....	3 40
*4162	Ashton's Pile Clamp Forceps.....	2 25
*4163	" " " " with lock.....	3 25
*4164	Smith's " " " " " "	3 25
*4165	Allingham's Scissors and Director for Fistula in Ano.....	5 25
*4166	Munde's Rectal Irrigator.....	1 15
4167	Bodenhamer's Rectal Irrigator.....	2 25
4168	Mattson's " "	1 00



4161



4164



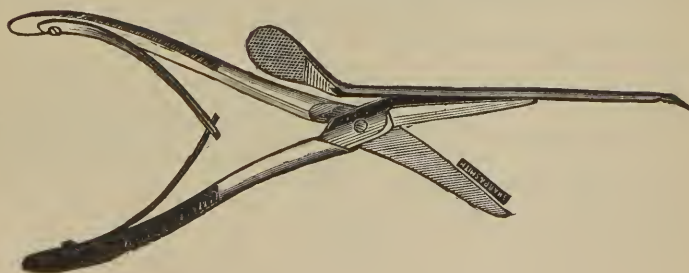
4163



4162



4166



4165

RECTAL INSTRUMENTS.

A Few Instruments Designed by Dr. T. A. Edwards, Denver, Colo.

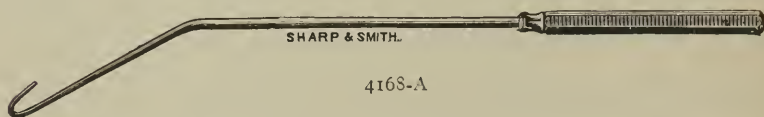


Fig. 4168-A represents an improved angular, smooth, blunt Rectal Hook.

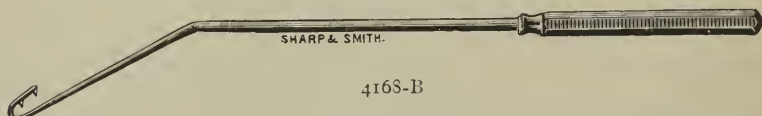


Fig. 4168-B represents an improved angular barbed Rectal Hook.

The advantage of these instruments over previous devices for such work is in the angle, which is of sufficient degree to prevent the hand from obstructing the view in examinations, and in separating the hands of the surgeon while operating on pockets and papillæ with curved scissors.

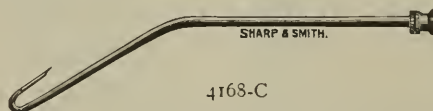


Fig. 4168-C represents a long angular Retrojecting Needle.

Like the angular tenaculum and hooks, this needle has an advantage over other hemorrhoidal needles in its length and angle being such that the syringe and hand of the operator are so far removed from the orifice that the vision is perfect. Its greatest utility is in the fact that the puncture and injection is made from above downward, and with the needle once engaged, no tumor can slip or roll, nor can the contractions of the levator or sphincter ani muscles change its position. Thus the operator is master of the situation, and releases the tumor at his will.

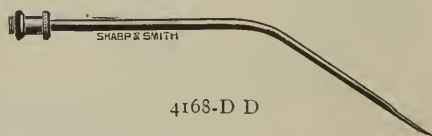


Fig. 4168-D D represents a long Hemorrhoidal Needle, for injecting from below upward.

The only advantage claimed for it is in its length and angle, which gives an unobstructed view in the treatment of either high or low tumors.

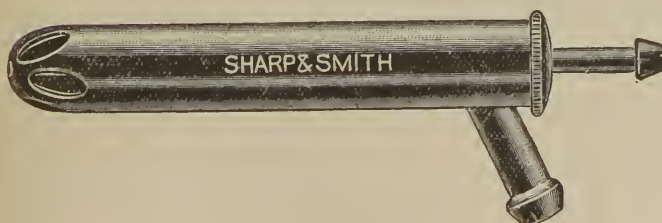
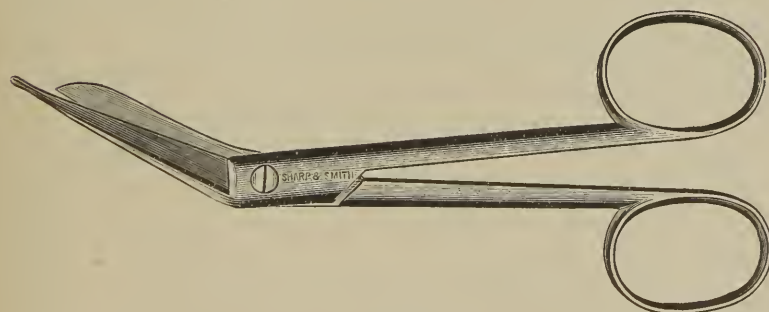
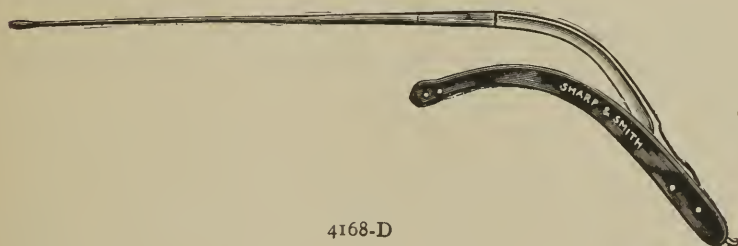
These needles are made to fit a Sharp & Smith syringe.

—T. A. Edwards, M. D.

RECTAL INSTRUMENTS.

FIG.

*4168-A	Dr. T. A. Edwards' Sharp and Blunt Angular Hooks...each,	\$1 00
*4168-B	“ “ Barbed Angular Hooks..... “	1 25
*4168-C	“ “ Long Angular Retrojecting Needle “	1 25
*4168-D	Breslet and Marx' Syringotome.....	3 00
*4168-E	Angular Probe Point Pile Scissors.....	2 50
*4168-G	Martin's Rectal Douche.....	1 25
*4168-H	Pratt's Rectal Knife.....	1 25
*4169-A	Dr. C. S. Eldridge's Rectal Explorer and Applicator (see p. 683C)	1 25
*4169-B	Dr. Robt. C. Block's Rectal Electrode and Searcher, with four sizes bulbs (see page 683C)	set, 4 00
*4169-C	Dr. Louis J. Krouse's Rectal Electrode (see page 683D)....	1 50
*4169-D	Hall's Rectal Elevator and Searcher (see page 683D).....	1 00



4168-G

4168-H

RECTAL INSTRUMENTS.

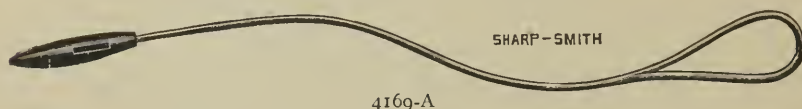


Fig. 4169-A ELDRIDGE'S COMBINED RECTAL EXPLORER AND APPLICATOR.

In treating chronic proctitis and ulcerations in the region of the sigmoid flexure of the rectum, I have not found the surgical paraphernalia usually employed for the purpose just all that could be desired. In several conditions due to pathological changes in the mucus and basement membranes contiguous to and within the sigmoid, the lumen of the canal is in such a state of stenosis as to make the passage of bougies or specula extremely tedious and painful. For exploring and estimating the diameter of the rectum, and for treating locally its many lesions with topical applications I have devised the instrument, an illustration of which is here shown. It is made of steel (nickel plated) and hard rubber, the tip or olivary point being manufactured of the latter material. The handle is constructed by curving a portion of the staff upon itself. It can be held in the right hand, which leaves the left disengaged to guide the point of the instrument through the sphincters and on to the promontory of the sacrum. As the tip is olivary shaped, it is easy of passage through into the sigmoid. I find it almost indispensable for getting through strictures; for detecting their extent from above downward, as well as for putting the parts into a suitable condition for the passage of bougies of large diameter. I think it possesses a meritorious feature in the provision made for its employment as a medicinal applicator. Near where the tip is fastened on to the staff of the instrument a slot is made through the rubber, and into this medicated gauze is drawn, for the purpose of reaching and treating any particular portion of the canal. Where the slot is made the instrument is somewhat smaller than it is a little further toward the end, hence it follows that when the largest part of the smooth lubricated rubber olivary body passes a given narrow portion of the canal, the gauze loaded with medicament follows without difficulty. The use of this instrument gives me greater satisfaction than any non-flexible one I have ever employed.

(See page 683B.)

—C. S. Eldridge, M. D., Chicago, Ill.

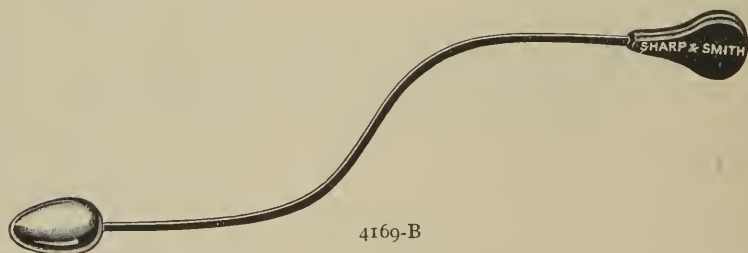


Fig. 4169-B DR. ROBT. C. BLOCK'S RECTAL ELECTRODE AND SEARCHER.

This instrument fills a very useful place in the treatment of diseases of the upper rectum and lower portion of the sigmoid flexure. By its double curve conformation it can be readily introduced its full length, about twelve inches, thereby enabling the operator to apply the Faradic or galvanic currents, recognized agents of great value in the treatment of chronic constipation, strictures, and other pathological conditions common to these parts. At the same time it may be utilized by the physician in replacing through the rectum a retroverted uterus, and in existing strictures it makes known to him the exact location and extent of the constriction (see page 683B).

RECTAL INSTRUMENTS.

A NEW RECTAL ELECTRODE.

By LOUIS J. KROUSE, M. D., Cincinnati, O.

The accompanying cut represents a new rectal electrode (one-half natural size).

Local faradization of the rectum for atony of the bowels would no doubt be more often employed if a more suitable electrode than those ordinarily seen in the surgical stores could be found.

The objection to the ordinary rectal electrode is that the metal end comes into direct contact with the non-sensitive mucous membrane of the gut, and may therefore injure its coats by having a too strong current running through it. To overcome this objection I had constructed for me the above-named instrument.

It is composed of two parts, an inner and an outer portion. The inner portion consists of a hollow metal tube, extending almost the whole length of the instrument, the lower end of which is arranged for the attachment of a Davidson's syringe, as well as for a thumb-screw, to which the cord of a battery can be attached.

The outer portion is made of hard rubber, the distal end of which is perforated by numerous holes through which the water, as well as the electrical current, can pass. The other end is made to screw on to the metal portion.

In using this electrode it is always necessary to inject water through the electrode into the bowels, so as to immerse the perforated end; otherwise the circuit would not be complete, and the patient would not get the benefit of the current.

The advantages of this electrode over those ordinarily used are, first, that the metal end does not come into direct contact with the gut, and therefore cannot injure its membrane by the electrolytic action of the current; and, secondly that a much more powerful current can be used without the fear of injury to the gut, as there is always a layer of water between it and the electrode. The instrument can readily be taken apart and cleaned.

(For prices see page 683B.)



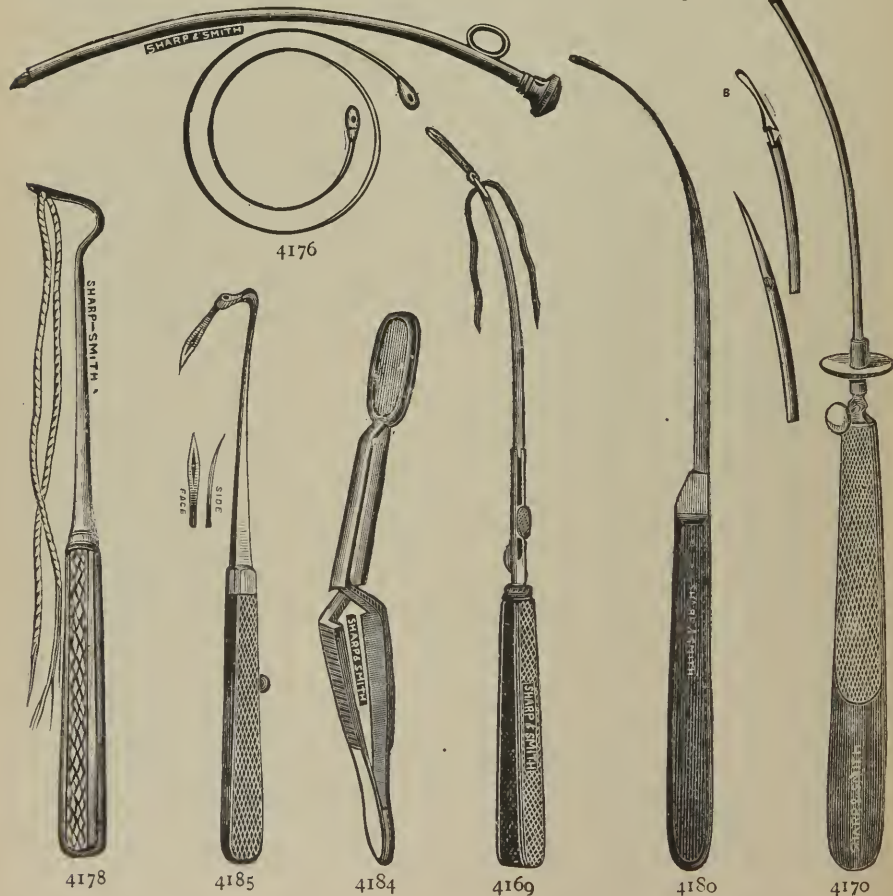
4169-C



4169-D (See page 683B.)

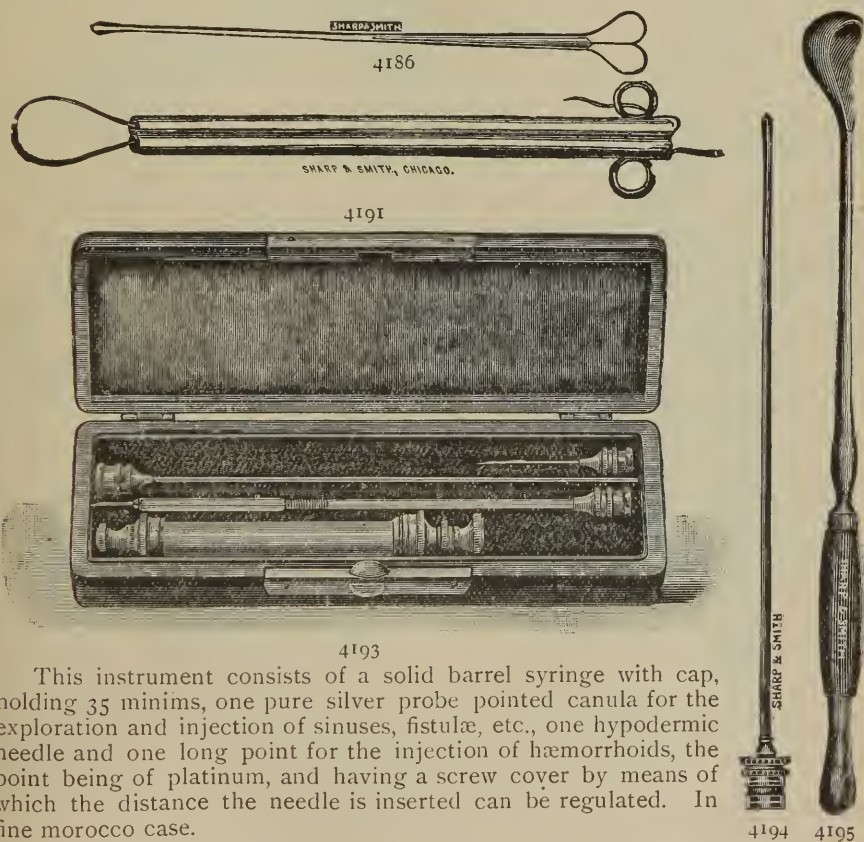
RECTAL INSTRUMENTS.

*4169	Hall's Elastic Ligature Carrier	\$ 3 00
*4170	Allingham's Elastic Ligature Carrier	2 60
4171	Bush's Ligature Carrier	2 40
4172	Lenté's " "	1 00
4173	Plain " "	90
4174	Ostrum's " "	1 50
4175	Helmuth's " "	2 75
*4176	Gibson's Instrument for the Introduction of the Ligature in Anal Fistula	2 25
4177	Hutchinson's Ligating Needle	1 90
*4178	Whitehead's " "	1 30
4179	Bodenhamer's Knife for Anal Fissure	3 75
*4180	Kelsey's " " "	1 85
4181	Blandin's " " "	6 00
4182	Bistoury Caché for Rectal Stricture	5 25
4183	" " " Anal Fistula	\$ 5 25
*4184	Tillaux's Forceps for Recto-Vaginal Fistula ..	3 50
*4185	Bush's Pile Needle—Set	1 75



RECTAL INSTRUMENTS.

FIG.			
*4186	Dr. Larney's Silver Probe and Director for Anal Fistula.....	\$	1 75
4187	Delicate Silver Probe.....		60
4188	Delicate (pure) Silver Probe.....		85
4189	Flexible Silver Director Probe Point		1 10
4190	Wales' Explorer.....		1 60
*4191	Gooch's Plated Double Canula.....		1 00
4192	“ Silver “		2 00
*4193	Sharp & Smith's Hæmorrhoidal Syringe		3 50
4193-A	Adams' Hæmorrhoidal Syringe.....		4 00
*4194	Sharp & Smith's Silver Hæmorrhoidal Needle.....		1 00
*4195	Sharp & Smith's Rectal Curette.....		1 85
4196	Van Buren's Ligator.....		5 00
4197	Rectal Scarificator.....		1 00
4198	“ Insufflators		1 50
4199	Bodenhamer's Rectal Exploring Sound, Set of 10.....		7 50
4200	Vertebrated Recto-Colonic Exploring Sound.....		6 00
4201	O'Berne's Rectal Tubes		1 00
4202	English “		1 15
4203	Soft Rubber Colon Tubes.....		1 15

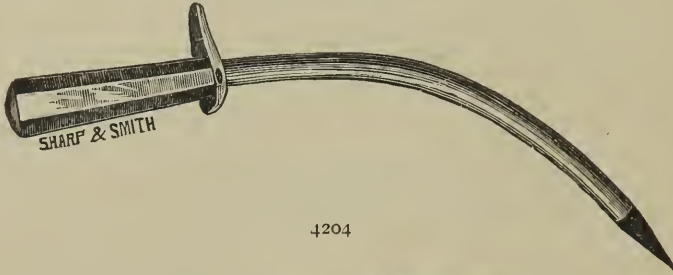


This instrument consists of a solid barrel syringe with cap, holding 35 minims, one pure silver probe pointed canula for the exploration and injection of sinuses, fistulæ, etc., one hypodermic needle and one long point for the injection of hæmorrhoids, the point being of platinum, and having a screw cover by means of which the distance the needle is inserted can be regulated. In fine morocco case.

All instruments designated by a * are illustrated.

RECTAL INSTRUMENTS.

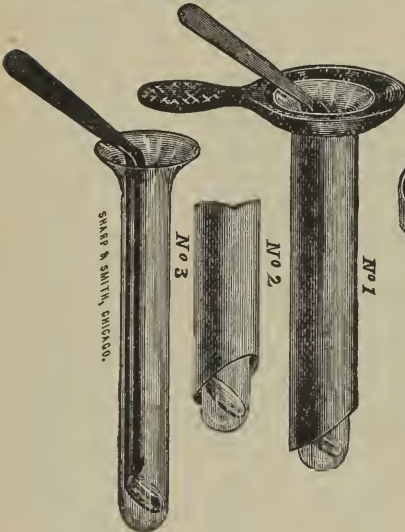
FIG.			
* 4204	Curved Rectal Trocar	.....	\$1 50
* 4205	Buck's " "	.....	2 75
4206	Exploring " "	(see amputating instruments)	
* 4207	Skene's Hard Rubber Endoscopes	..... each	2 00
* 4208	Plain " "	..... "	1 30
* 4209	Prolapsus Ani Truss	.....	3 75
4210	Rectal Porte Caustique	.....	2 00
4211	Pins for transfixing hæmorrhoidal tumors	.....	20
	Enema Pumps, all prices.		



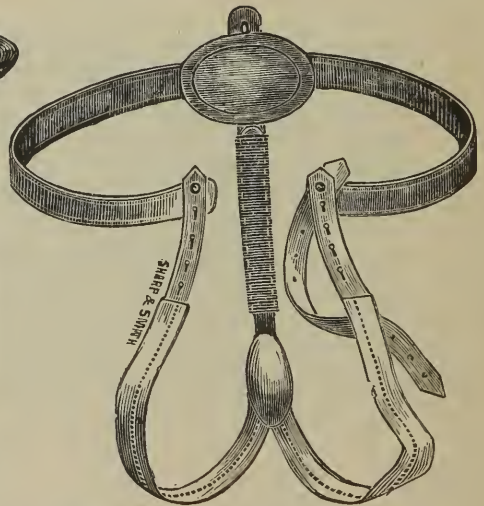
4204



4205



4207



4209



4208

Instruments designated by a * are illustrated.

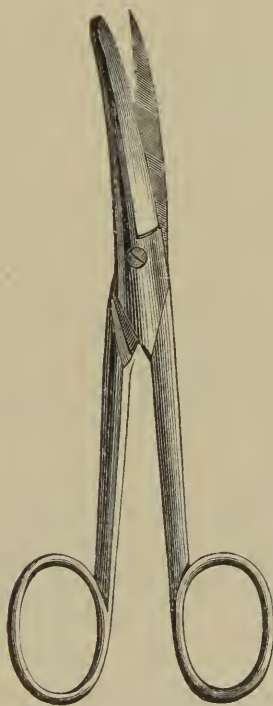
RECTAL INSTRUMENTS.

FIG.

* 4212	Dr. Chas. D. Scudder's Knot Tyer.....	\$ 1 50
* 4213	Carroll's Knot Tyer.....	1 50
4214	Allingham's Scissors.....	3 75
4215	Saw Tooth ".....	4 50
4216	Bush's Pile ".....	1 15
* 4217	Angular ".....	\$1 00 to 2 50
* 4218	Curved on flat ".....	1 00 to 3 00
4219	David's ".....	3 00



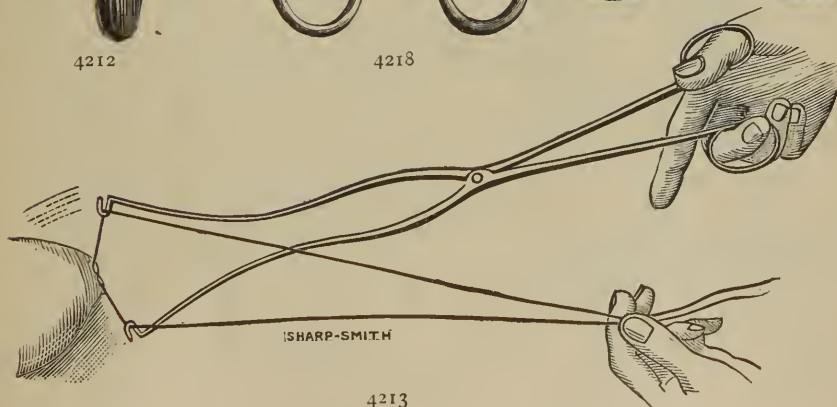
4212



4213



4217

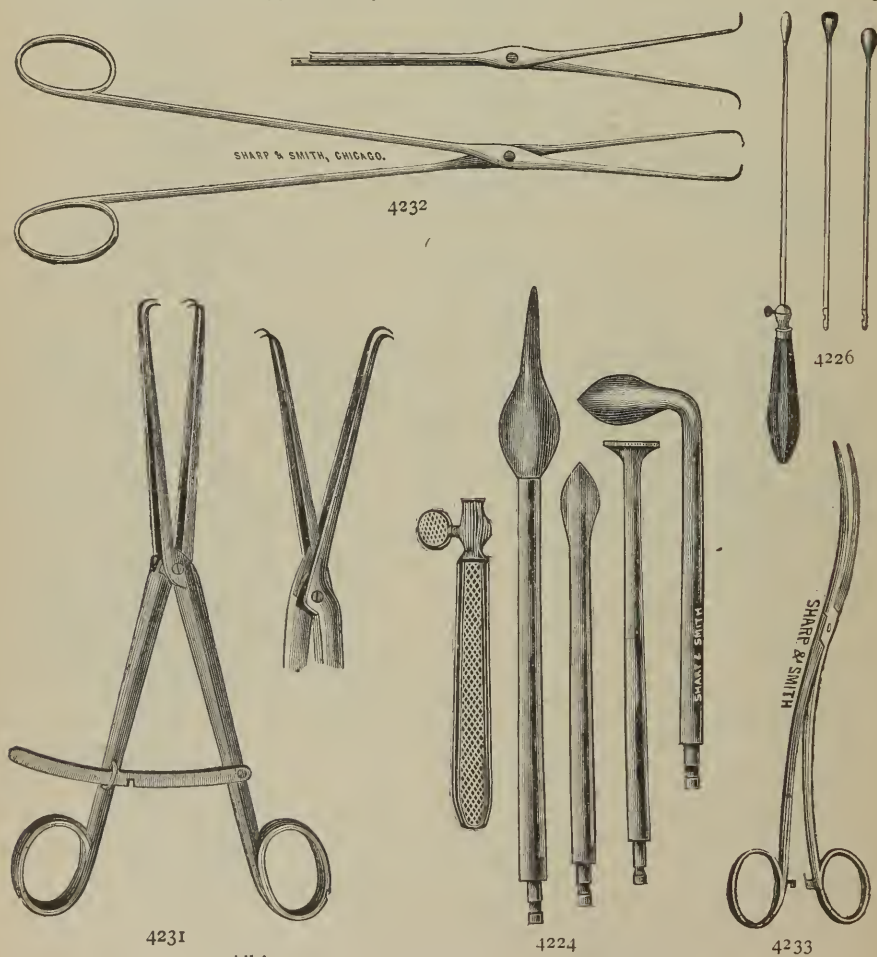


4213

Instruments designated by a * are illustrated.

RECTAL INSTRUMENTS.

FIG.			
4220	Suture Needles, ordinary.....	per doz ,	\$ 50
4221	Self Threading Needles.....	"	1 00
4222	Hagedorn's Needles, flat.....	"	1 00
4223	Silver Wire ".....	each,	20
	For cuts of above, see Amputating Instruments.		
*4224	Cautery Irons, set of 4.....		4 00
4225	" " " 3.....		3 00
*4226	Thomas' Cautery Irons, set of 3.....		3 35
4227	" " " 4.....		4 50
4228	" " " single.....	each,	1 00
4229	" " Handle.....		75
4230	Self Blowing Cautery Iron Lamp.....		3 00
*4231	Byrnes' Tenaculum Forceps, for pulling down the rectum.....		4 50
*4232	Ball's		2 25
	For Other Tenaculum Forceps, see Uterine Instruments.		
*4233	Rectal Dressing Forceps, with catch.....		1 75
4234	" Polypus ".....		4 50
4235	Ashton's Rectal Polypus Forceps.....		2 25



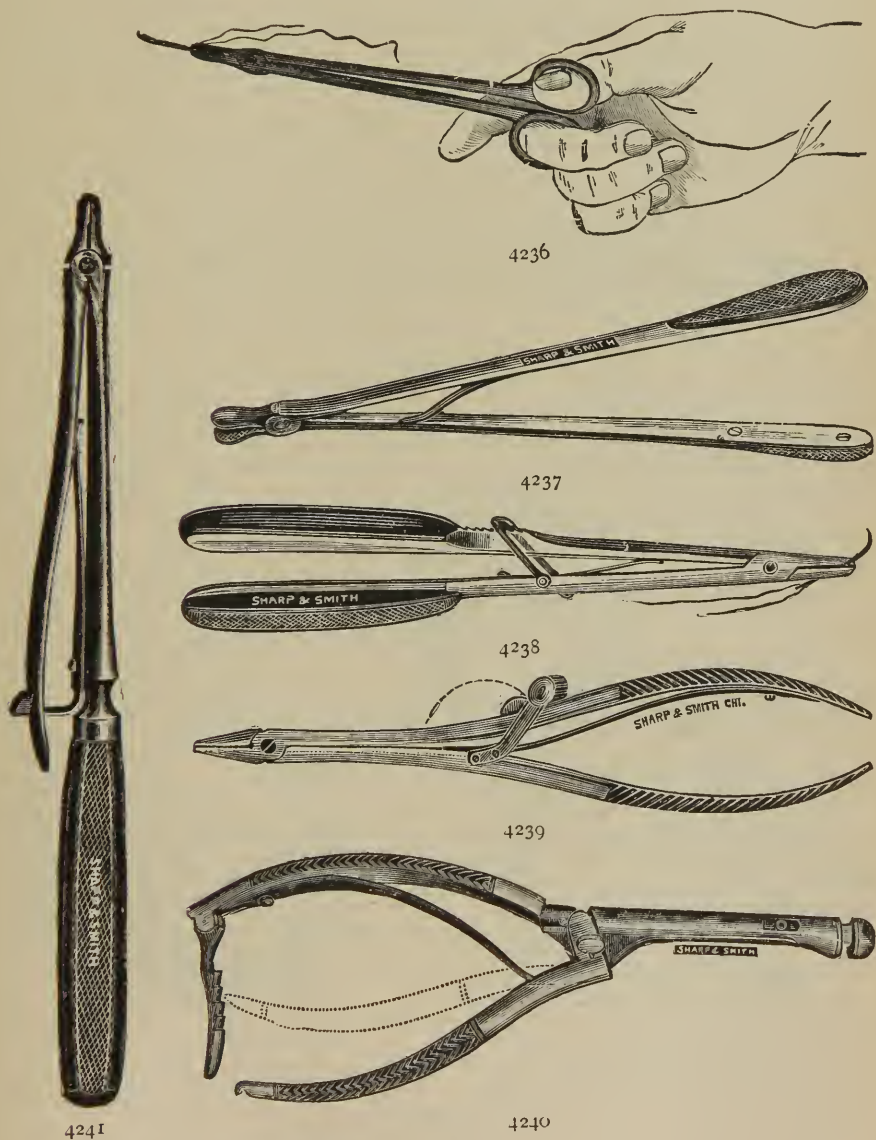
All instruments designated by a * are illustrated.

RECTAL INSTRUMENTS.

A FEW NEEDLE HOLDERS.

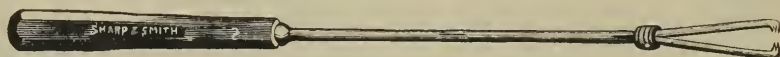
FIG.			
*4236	Sims'	Plain Needle Holder.....	\$1 75
*4237	Emmets'	" " ".....	2 25
*4238	Russian	" " ".....	3 00
*4239	Reiner's	" " ".....	3 00
*4240	Hagedorn's	" " ".....	6.00
*4241	Ethridge's	" " ".....	3 75

For Other Needle Holders see index.



RECTAL INSTRUMENTS.

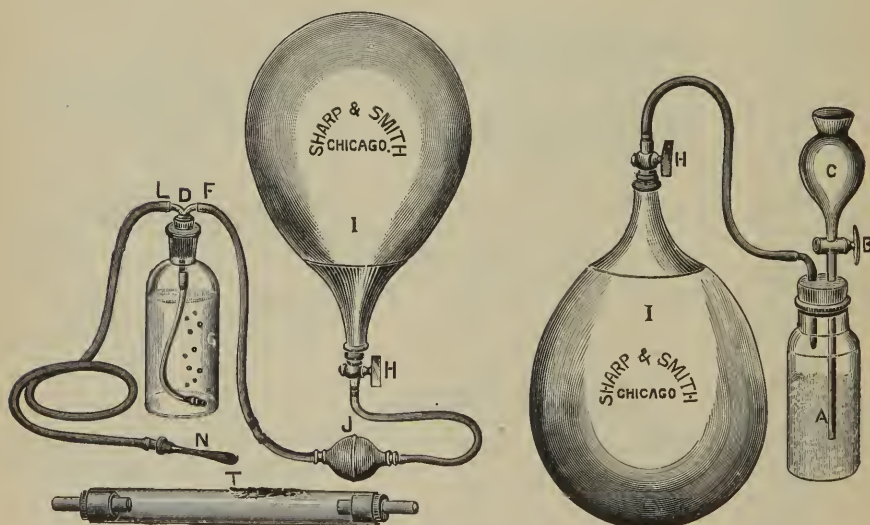
FIG.		
4242	Rectal Sponge Mop Holder.....	\$ 75
*4243	“ “ Holder	75
4244	“ Brush Holder and 1 dozen Brushes.....	1 50
4245	Glass Brushes for making applications.....	each, 20
4246	Hutchinson's Ointment Syringe.....	3 00
4247	“ “ “ 3 pipes	4 50
*4248	Lente's Platina Cup for fusing caustics.....	2 25
4249	Silver Artificial Anus.....	\$5 00 to 10 00
4250	Small H. R. Suppositors.....	40
4251	Large “ “	50
*4252	Sharp & Smith's Gas Apparatus (complete).....	7 50



4243



4248



4252

The Administration of Gaseous Enemata, for Cure of Consumption.

Send for Circular.

On a Few of the Following Pages
We Illustrate

INSTRUMENTS

USED AND INVENTED BY

Prof. E. H. Pratt

. . . IN . . .

ORIFICIAL SURGERY.

NOTICE

CHICAGO, January, 1893.

Having tried different makers of Surgical Instruments for the manufacture of the Instruments used by me in Orifical Surgery, I take pleasure in stating that those invented and designed by me, and made by Messrs. Sharp & Smith, are most satisfactory.

E. H. PRATT, M. D.

ORIFICIAL SURGERY.

TO THE EDITORS OF THE HAHNEMANNIAN MONTHLY:

I have been requested by your Chicago correspondent to give an epitome of "Orificial Surgery," and its application. Although the subject is too extensive to epitomize satisfactorily, I will do the best I can at it referring those who would like to read more on the subject to the brief presentation of it in the proceedings of the American Institute of Homœopathy for 1886, to the work called "Pratt's Orificial Surgery," published by Halsey Bros., 51 and 53 Dearborn street, Chicago, Ill., and to the current homœopathic journals—more particularly "The Journal of Orificial Surgery," edited and published by E. H. Pratt, M. D., Francis D. Holbrook, M. D., and Emmet L. Smith, M. D. A more extensive textbook is in course of preparation, but it will still be some time before it is ready for press. A copy of the lectures and clinics given to the last class in Orificial Surgery, recently held at the Chicago Homœopathic Medical College, at which about one hundred and twenty-five eminent gentlemen were present, can also be had on application and price.

The work seems to be more or less called for in the whole list of so-called chronic diseases, and for this reason: When the incidents and accidents of time derange the human organism, if its reactive power is good, the trouble is soon righted, either spontaneously or with remedial assistance. The mere fact of the long continuance of a disorder, whatever it be, the failure of the system, or part of the system, to rebound spontaneously, or respond properly, to well-prescribed remedial measures, is sufficient evidence of a predisposing nerve waste. In all such cases, where time and other measures have failed to restore lost health, by a careful examination made by one who is a competent judge, there can invariably be found some form of irritation at some or one or all of the orifices of the body, usually the lower ones, for obvious reasons.

I cannot well improve on the language of the closing sentence of the first lecture ever given upon this subject, and I will ask you to insert it here. It is language which, I believe, will be historical in medicine:

In conclusion, let me sum up the entire subject in a single sentence. Bring me an individual with clean lips and nostrils; a palate of proper length and unobtruding tonsils; a rectum that presents neither piles, prolapsus, fissure, ulcer, pockets nor papillæ—an individual whose sexual orifices are smooth and free from all irritation; if it be a man, his foreskin shall be free, the frenum of sufficient length, the urethral passage smooth and normal in size, especially in its prostatic portion; if a woman, her hymen must be smooth and normal, her urethra devoid of caruncles and ulcerations, her internal and external os uteri reasonably patulous, and without undue sensitiveness; bring such an individual, and I will point to the same person, and show you a human being whose digestion is good, whose sleep is sweet and restful, whose capillary circulation is superb, whose very existence is a constant source of uninterrupted delights. Such men

ORIFICIAL SURGERY—Continued.

and women maintain a steady poise of mind and body—they live to the fullness of time, and, unless removed by accident, their dissolution takes place on the principle of the “one-hoss shay”—they settle slowly and peacefully into their last sleep, just because their life’s timepiece has run down.

On the other hand, introduce to me a mortal suffering with passive conjection in various parts, whose blood finds its lazy way back to the heart by slow stages because the peristaltic action of the arteries is tired out—a person whose vitality is low, and whose poor, enfeebled body begins to be the prey of inherited or acquired tendencies—consumption, scrofula, syphilis, organic derangements, of whatever form they may take—show me such an individual, and they are as numerous as withered leaves in autumn, and I will stake the reputation of this idea that I shall be able, without straining a point, to find legitimate fault with the condition of some one or more of the various orifices of the body.

The work of orificial surgery involves the removal of all sources of irritation and the securing of normal tension for all sphincters. It will take a volume to properly describe this work in detail, and do the subject proper justice. The work can have no rival, as it is only recommended for cases in which other measures have failed, and, instead of being frowned down without proper investigation, deserves at least a fair trial. It discloses many things which before were not understood, or at least appreciated. For instance:

1st. The irritation of an organ starts at its mouth. Enlarge the proposition and you have the thought that bodily nerve waste in general begins at the openings of the body.

2d. The smoothing of rough orifices and the securing of proper dilatation of the sphincters guarding them, immediately and permanently (so far as material things can be made permanent) improve capillary circulation in general, and hence in particular.

3d. That in consequence of the increased capillary activity of the nutrition of the body in whole and in part is immediately improved, and its reactive powers increased.

4th. In consequence of the increased reactive powers—in cases where the work unaided is insufficient to restore perfect health, the properly prescribed remedial measures that before were ineffective will now produce their hoped-for results and recovery is possible.

5th. That reaction from orificial work is usually immediate, but may be delayed in certain conditions for several weeks.

6th. That the patient’s sensations are not a safe guide to the existence of these irritations.

7th. That work on the sexual system is ineffectual, and oftentimes harmful if rectal irritation be not first corrected.

8th. That complete orificial work is essential to success, *i. e.*, it must include all the orifices and be prosecuted at intervals until each and all of them are in a normal condition.

9th. That by this work as a basis, fully four-fifths of the cases that are now abandoned as incurable are found to be easily and surely and permanently relieved.

ORIFICIAL SURGERY—Continued.

10th. That the condition of the sympathetic nerve-power has more to do with the health and happiness of the human body than is usually supposed.

11th. That the amount of local trouble present furnishes no index to the nerve-waste involved, or to the necessity for the work, or to the beneficial effects to be expected from it.

12th. That the central principle—of orificial irritation as a predisposing factor in chronic diseases generally—has stood well a continuous and active test, both public and private, in hundreds of cases and by hundreds of doctors, for the last three years, and that, so far as I am aware, no protest has been entered against it, and that the improvement, as experience multiplied, has been confined simply to methods of carrying it out and not to any change in the principle itself.

Such, in brief, is a condensed presentation of this vast subject of the Orificial Philosophy, and its scope. Its successes are marvelously brilliant and numerous; its failures are many times due to incomplete and incompetent work, and its unfortunate use in cases too desperate to be saved by anything short of a resurrection day. It is not a foe to any other measure of healing, but is a help to all of them. As is usual in all human endeavors, those who have opposed its investigation most violently are those who knew the least about it, and were least fitted to speak on the subject. Generally, however, the profession has been kind, and generous, and patient, and I heartily thank them for their fairness and indulgence.

Fraternally,

E. H. PRATT, A. M., M. D., LL. D.,
*Prof. Surgery to Chicago Homœopathic College,
and Consulting Surgeon to Cook County Hospital.
Also founder Lincoln Park Sanitarium. cor. Deming
Court and Lake View Avenue, Chicago.*

PROF. PRATT'S RECTAL INSTRUMENTS.

In introducing to the medical profession the Rectum Speculum, Scissors and Hooks, which I have recently invented, I desire to call attention to some of the peculiar advantages these instruments possess. In the first place, as the most important pathological conditions in a rectum are situated about an inch above the anus, on a level with the upper border of the internal sphincter, none but an expanding valvular instrument will sufficiently smooth out the natural rectal folds so as to render the discovery of these conditions possible.

In the next place the bulbous extremity of the instrument, for the same reason that a fair sized urethral sound passes easier than a small one, can be introduced with the very minimum of discomfort to the parts. This bulb also holds back the expanded part of the rectum above the sphincter and enlarges the field of observation. The Speculum is self-retaining, enabling the operator to work if necessary without assistance, and is so constructed as to secure when so desired sufficient stretching of the sphincter, thus saving the operator much subsequent effort with thumbs or fingers. By partially closing the Speculum it can be revolved at pleasure without withdrawal. Piles, ulcers and fistulæ can also be easier treated through this than through any other devices. Add to these qualifications the remarkably low price of the instrument, and it will be evident that at last a long felt want of the profession is supplied, viz.: a Perfect Rectal Speculum.

The Tenaculum is needed for seizing for removal *papillæ* or other morbid growth, pendulant mucous membrane, etc. The small blunt hook is indispensable in discovering and raising for removal rectal *pockets*. The Scissors are constructed in this peculiar manner so as to remove the hand of the operator from the field of vision.

The original article upon rectal *pockets* and *papillæ* or *fringes*, by Prof. Pratt, also the cut illustrating their situation and manner of detection is appended, as some may still be unfamiliar with them.

Messrs. SHARP & SMITH have made all the above mentioned instruments for me in a very workmanlike manner, and at my request have made the price within the reach of all.

Yours truly,

E. H. PRATT, M. D.,

Central Music Hall, CHICAGO.

RECTAL POCKETS AND FRINGES.

A Paper read before the Illinois State Homœopathic Association, Peoria, in 1885, by PROF. E. H. PRATT, A. M., M. D., LL. D., of the Chicago Homœopathic Medical College.

They are as common as piles; more prolific of mischief than you would believe without a special acquaintance with them, and still they have been hitherto almost unknown to fame, and very much neglected.

Our current literature contains little or no mention of them, and only in a few isolated places in medical lore will you find any indication that they have ever been even discovered; and nowhere, so far as I am aware, are they well described or properly noticed. This paper, therefore, is but an act of justice to a condition which should have received earlier attention, and although in itself but a feeble effort, it is to be hoped that it will inaugurate a line of thought and investigation that will in time place the complaint where it belongs—in the regular index of all standard surgical works.

PROF. PRATT'S RECTAL INSTRUMENTS—Continued.

Your attention is called to the mucous membrane at the upper border of the internal sphincter, just where the enlarged middle third of the rectum is puckered to the smaller limits of the lower third.

Through an expanded trivalve speculum the lower third will appear as a short, straight, smoothly distended canal ending above in a well-defined border, beyond which is seen the plentiful folds of the middle portion crowding into the upper part of the speculum, and completely obstructing a farther view.

This narrow edge is sometimes smooth and unbroken, but sometimes is ornamented with a few thickened prolongations of mucous membrane—cone-shaped, very pointed and sensitive at the apex, which is free—very broad and thick at the attached base. These papillæ vary in number from one to five or six—and in length from a line to one-half inch, and are not unlike in appearance the broken relics of a hymen.

If no one can suggest a better name let us call them a *fringe*. They are always sources of irritation and should be removed. Transfix them one by one with a tenaculum and with a pair of long scissors snip them off at their base. Each one contains a small artery which requires no attention, as the bleeding ceases spontaneously upon the removal of the speculum.

These *papillæ* or *fringes* are not found in every rectum, but are common, and when present should be treated as above. This is the first of the two neglected conditions which it is the object of this paper to introduce.

The second one—the *pockets*—is more important, more unobserved, and consequently more neglected than are the fringes. These pockets are simply small blind canals, from one-eighth of an inch to an inch in depth, and their number varies from one to eight or ten in cases troubled with them. Their mouths are in the same situation at the bases of the papillæ; in fact, there will often be found *two* starting from the base of a papillæ, one on each side, running parallel with each other, but separated always by a partition. Their direction is always toward the anus and they are very superficial, hugging the mucous membrane closely; their caliber is often sufficient to entertain a uterine sound, but they are usually smaller. The bottom of these pockets is usually very sensitive, the patient often flinching, even when partially under ether, as soon as the bent probe touches it. Several times I have entered a pocket with a probe, bent in the shape of a fish-hook, raised it slightly and with a pair of scissors snipped it out. Upon then removing the amputated pocket from the probe, over which it fitted like the finger of a glove, I have carefully turned it inside out, and examined its lining, finding it to resemble ordinary mucous membrane except at the very bottom, where there is usually found a small spot of ulceration. This last fact explains the ease with which, many times, the probe, during an examination of them in situ, will often pierce the bottom of a pocket and passing readily through the loose areolar tissue under the mucous membrane, will burrow to the anus itself. The operation of snipping them out is so simple and slight that ether is unnecessary, except in very nervous patients, or in those who would be poor subjects for the local application of cocaine. Do not confound these pockets with blind, internal fistulæ, as they are not the product of abscesses, are never tortuous, never inclose the sphincter, and their lining is mucous membrane. They doubtless frequently result in fistulæ, but cannot properly be so considered in the state in which we are considering them.

So irritations of the rectum, be they ulcerations, hæmorrhoids, erosions, prolapsus, pockets or fringes, can write their story of distress upon the feet, limbs, back, bladder, uterus, urethra, kidneys, liver, stomach, heart, head, face or coats of the bloodvessels, as suits their pleasure. I do not regard the exam-

PROF. PRATT'S RECTAL INSTRUMENTS—Continued.

ination of a case of insomnia, neuralgia, nervous prostration, general debility or functional derangement of any one or all the organs of the body as thorough or complete, without a careful exploration of the lower two or three inches of the rectum. The conditions of hæmorrhoids, ulcerations, etc., are so fully understood and appreciated, that it seems best in this paper to neglect consideration of them, so that the pockets and fringes could have a little of the attention so long denied them.

Permit for illustration the brief mention of two cases:

1. A bright little lady came clear from Denver, Col., to be relieved of severe congestive headaches occurring once or twice a week, and of a long established habit of constipation. Four papillæ were removed and three pockets laid open soon after her arrival, and to my own delight the habit of constipation was entirely removed, and the headaches improved in two weeks' time; and although medicines were given and suppositories were used, from what I have seen accomplished with them in previous cases, I do not believe I am unfair in ascribing the cure to the operations.

The second case is one of the most remarkable it has befallen me to care for. A prominent lawyer of Chicago, a man standing six feet and two inches, and weighing over two hundred pounds, called to be examined for a life insurance. He appeared well in every particular, except feeling tired, sleeping poorly, and having a heart beat of 94 strokes per minute. He used neither liquor nor tobacco. He was informed that the rate of his heart's action would exclude him from present insurance, and he was referred to his family physician to reduce the rapidity of his pulse. He crowded me so hard to explain the condition that at last I began more thoroughly to investigate his case. The cold hands and feet and the pulse rate pointed to a weakened state of the sympathetic nerve. His mouth and teeth were all right. His tongue showed no signs of distress in stomach or liver—the urine was normal. An exploration of the rectum was then begun, with a view, chiefly, of ascertaining the size of the prostate gland, as he positively denied any rectal irritation or irregularity. Upon the mere introduction of the finger, the man became ashy pale. The prostate was normal, but the speculum revealed a few superficial abrasions of the mucous membrane and a few pockets and papillæ. The spots were carefully touched with 95° carbolic acid and a cotton tampon inserted. Everybody has seen the white *alæ nasi* and mouth caused by pin worms, or other rectal troubles. Imagine this same dead white painted over the whole face and the entire skin surface beaded with drops of cold perspiration, and you will have a fair image of the appearance of the patient as he wearily arose from the operating chair. Suppositories and medicines continued for a space of three weeks failed to reduce the pulse, but improved the color of the rectal mucous membrane, and prepared him for more radical work. Under ether two papillæ were cut off and four pockets slit up and the sphincter thoroughly paralyzed.

In twenty-four hours a report from the attending physician in whose care he was left (as he lived out of town too far for me to care for him) pleased me by recording his temperature as only 99° and his pulse at *sixty* beats per minute. A few days of rest sufficed to heal the wounds and start him well on the road to recovery. His pulse rebounded to 68 or 70, but no farther, when quiet—and he resumed his work with more vigor and life than he had known for years. I have not fairly painted his weakened condition when the case was undertaken. For several years he had been able to work but four or five hours a day, and he spent three months of last summer in Germany in search of health, which he did not succeed in finding, and he was just about abandoning his business for some out of door employment, supposing his case was one of brain-*lag*, which only prolonged rest and change of occupation would cure.

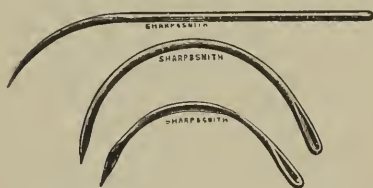
PROF. PRATT'S RECTAL INSTRUMENTS—Continued.



Pratt's Tait's Curved Artery
Forceps. \$2.50, net.

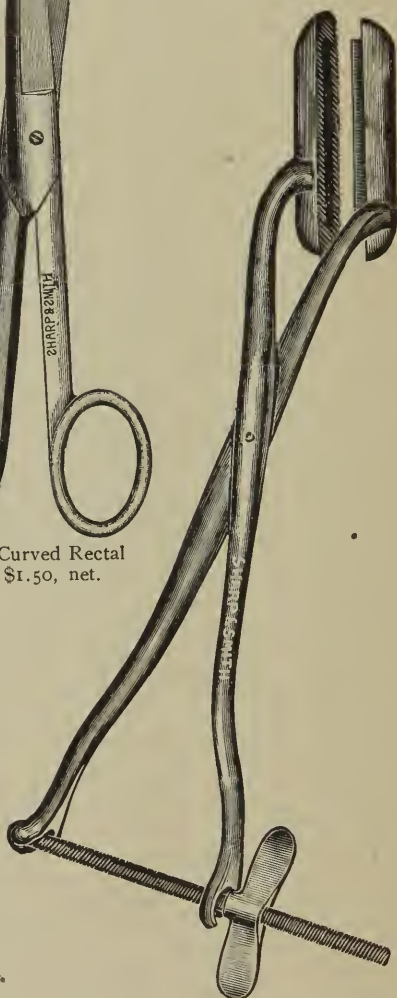


Pratt's Short Curved Rectal
Scissors. \$1.50, net.



Pratt's Rectal and Uterine Needles.
Per dozen, \$1.00, net.

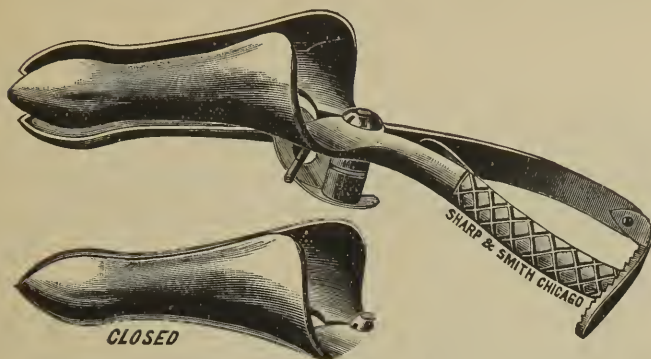
"In the selection of needles for orificial work there is a great variety to choose from. The needle which seems to be the most general favorite for both uterine and rectal work, is a full curved, rather short needle, spear pointed, round, and flattened near the eye so as not to turn when gripped by the holder, and with an eye sufficiently large to hold a No. 2 catgut ligature."



Pratt's Large Clamp. Aseptic. \$8.00, net.

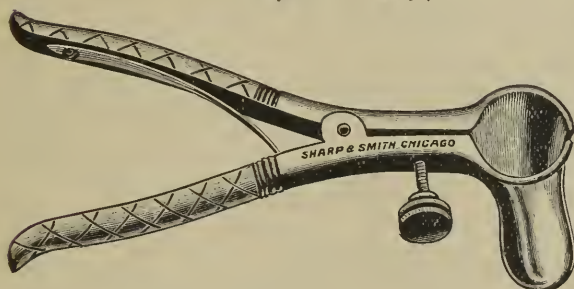
This clamp is a modification of the old Nott Clamp. The blades are increased in length, and the slot and ridge extend throughout their entire length. The handles are widely separated at the blade ends, admitting the free access of scissors; being one-half the weight of the old Nott Clamp, it is more easily handled. The clamp bar being made reversible, operations may be made by the patient being placed on either the right or left side. The instrument is made with a separable lock, and can be taken apart to clean.

PROF. PRATT'S RECTAL INSTRUMENTS—Continued.

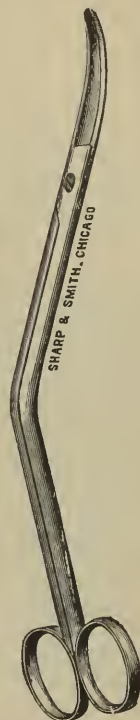


CLOSED

Pratt's Trivalve Speculum. \$2.50, net.



Pratt's Bivalve Speculum.....\$3.00, net.
 " " " small size, 2.50, net.



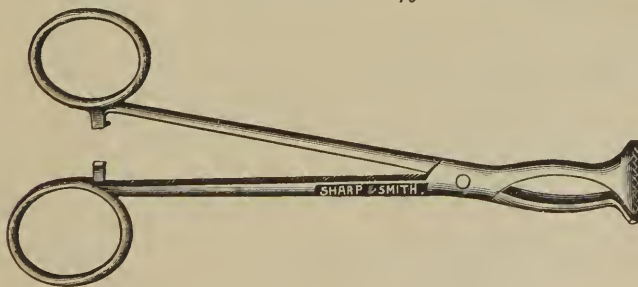
Pratt's Scissors. \$2.00, net.



Pratt's Tenaculum. 75c. net.



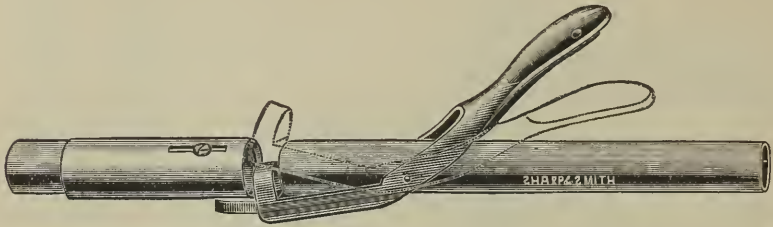
Pratt's Blunt Hook. 75c. net.



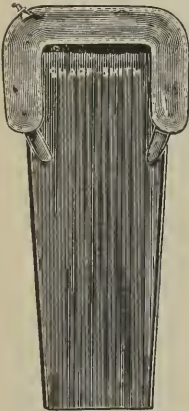
Pratt's "T" Forceps. Aseptic. \$2.00, net.

"Six or eight 'T' forceps are essential to a complete list of orificial instruments, and in selecting them one should pick out those which have symmetrical and closely fitting teeth of considerable length. Many of the 'T' forceps in the market are much too long and heavy, and clumsily made."

PROF. PRATT'S RECTAL INSTRUMENTS—Continued.



Pratt's Modification of the French "Shut Off." \$3.50, net.



Kelly's Operating Aprons \$4.00, net.

"In the after treatment of rectal cases, a double Douche tube will be found serviceable, as will also soft rubber, olive-tipped Bougies. There is a French stop cock, illustrated above, which is convenient in employing irrigation. A small Kelly operating apron is an almost necessary convenience in addition to rubber aprons and douche bags."

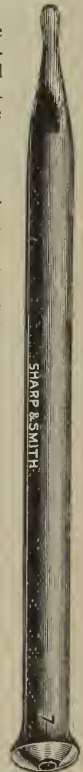
These Cushions are made with an inflatable rim at the top, to prevent the escape of the fluid upon the bedding or clothing, and by the opening and apron this fluid is conducted down into a bucket, placed to receive the same.

The rubber, unlike other Cushions on the market, has a velvety softness that makes them very comfortable to the patient; the color is a clear tan, and they are made with the greatest care to give them durability. They are being largely used in obstetrical, perineal, cervical and general surgical operations, especially where cleanliness and convenience are desired.

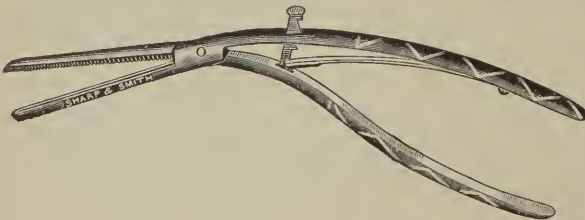


Dr. E. H. Pratt's New Rectal Dilators.

The new Rectal Dilators are intended as an improved shape of what have been called 'The Eggs'; they are much easier handled and do better work. Nature flushes her capillaries daily by a daily dilatation of the sphincter ani. In cases of chronic constipation or chronic diarrhoea, where she fails to do so, the new dilators make a very satisfactory substitute, and have a tendency to re-establish natural habits. The dilators can be used by the patients themselves, and are great adjuvants in the treatment of chronic diseases. These dilators are made in four sizes. Price each \$1.50, net. Per set, \$5.00, net.



Soft Rubber Olive Rectal Bougies. Price \$1.15 to \$2.75, according to size.



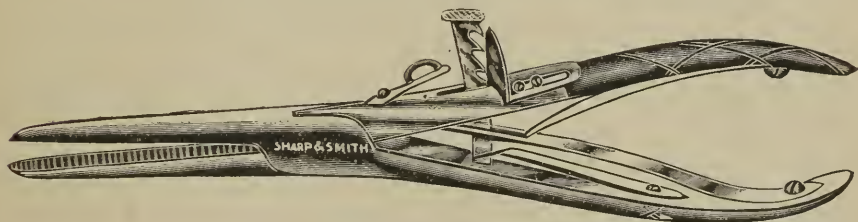
Pratt's Small Clamp. Price \$2.75, net.

An admirable tool for use in large single pile tumors and in amputating the pile bearing circle of mucous membrane in the Whitehead operation, and piles without the membrane in Pratt's modification of the Whitehead operation.

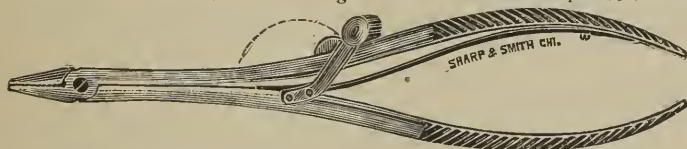
OTHER RECTAL INSTRUMENTS.



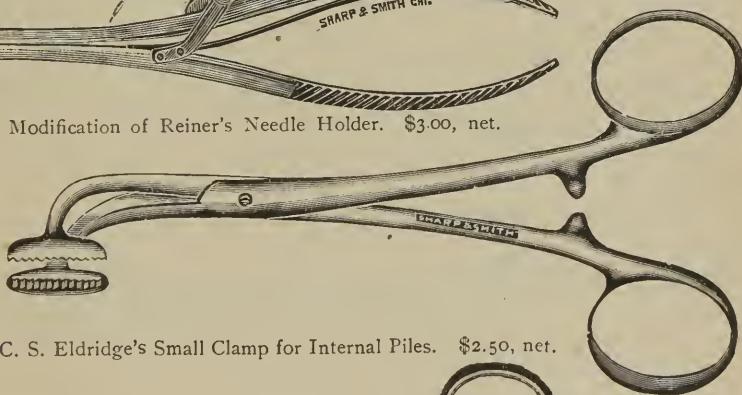
Dr. S. H. Linn's Improved American Clamp. \$6.00, net.



Dr. C. S. Eldridge's Hemorrhoidal Clamp. \$5.50, net.



Pratt's Modification of Reiner's Needle Holder. \$3.00, net.



Dr. C. S. Eldridge's Small Clamp for Internal Piles. \$2.50, net.



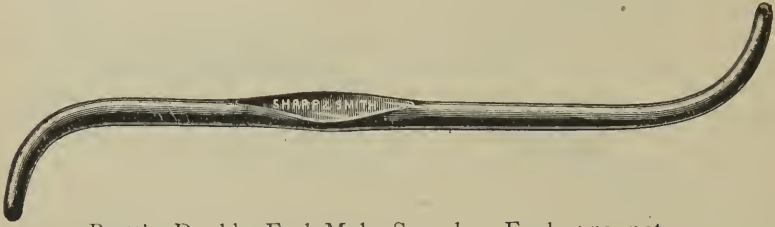
Dr. Emmet L. Smith's Modification of Pratt's T Forceps. \$2.25, net.

Extract from "MEDICAL ERA," April, '92, p. III.

"The advantage claimed for Dr. Emmet L. Smith's T forceps is, that one jaw has a plain surface, and the other has the teeth, so when a delicate membrane is seized, they do not come through, as is often the case when two serrated edges come together. The catch has five teeth, so as to allow the forceps to seize the membrane at any desired tension."

PROF. PRATT'S URETHRAL INSTRUMENTS.

The male sounds are made double after the manner of female sounds already described, so as to economize number and weight of the instruments.



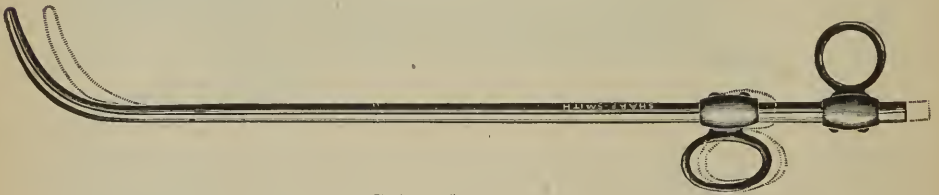
Pratt's Double End Male Sounds. Each 75c. net.

Possibly many of the instruments described may be produced in aluminum or some like metal, thus materially diminishing their weight, but at the present time it would not be justifiable to recommend instruments made of other than the standard metals, as the instruments made of the lighter metals have not been sufficiently tested to deserve mention. There are no patents or royalties on any of the official instruments, and they are manufactured by almost all the leading instrument firms in the United States. As many of the instruments, however, are poorly and carelessly made, it was thought best in this first number of the journal to caution those intending to purchase, of the difference in their manufacture, so those intending to make purchase of instruments at the shops might be enabled to select serviceable ones.

BERGMAN'S PROSTATIC URETHRAL DILATOR.

Dr. Nils Bergman, of the Lincoln Park Sanitarium, has lately invented an ingenious instrument for dilating the prostatic urethra.

The following is a cut of the instrument:



Price \$4.50, net.

The prostatic inch like the internal os uteri is sometimes abnormally contracted and sometimes too patulous. Extreme dilatation is a valuable measure for either condition in either organ, whether it be in the uterus or prostate.

Heretofore, surgeons were compelled to rely solely upon the use of sounds for urethral dilatation. The advantage of Dr. Bergman's instrument lies in the fact that the dilatation can be carefully gauged by the sense of touch and accurately measured, and also can be submitted to alternate dilatation and relaxation by a vibratory motion of the fingers, thus arousing the sluggish organ more surely to a satisfactory reaction.

PROF. PRATT'S UTERINE INSTRUMENTS.

"It is important in surgical work that the surgeon should possess instruments well adapted to the purposes for which they are intended, and therefore a few comments upon instruments may not be out of place in the first number of the *ORIFICIAL JOURNAL*. In the development of orificial surgery it has been necessary, not only to invent many entirely new instruments, but to radically modify many of those already in existence.

'Vaginal speculi were already abundant and entirely satisfactory for all forms of orificial work required within the vagina, so that no modification of vaginal speculi has been attempted. While different operators may have predilections for different speculi, orificialists generally will probably give preference, first, to a broad-bladed Sims' speculum with a retractor, illustrated by the following cuts.



Prof. Pratt's Vaginal Retractor. \$1.00, net

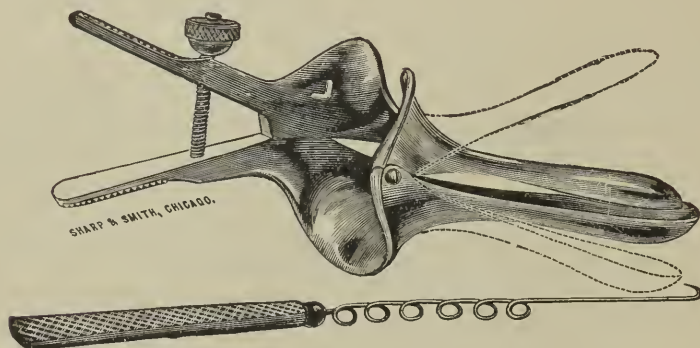


Sim's Vaginal Speculum. \$1.00, net.

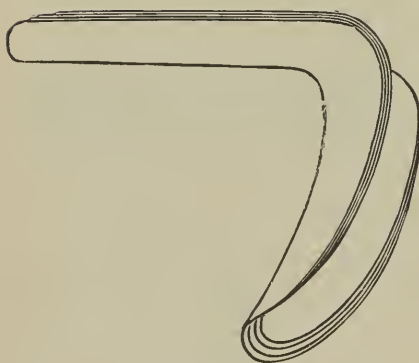
"Second, for Miller's bivalve, as illustrated on following page; and third, in exceptional cases where the walls of the vagina are so redundant and flabby as to more or less completely obstruct the view furnished by the Sims' and Miller speculum, they will find it necessary, in order to successfully expose the cervix uteri and enable them to prosecute their investigations and operate with the desired success, to make use of Neugebauer's speculum, see following page.

"Uterine tenacula and vulselli are indispensable, and for orificial work the best ones are the Pratt tenaculum, page 10, and the double vulsellum, page 17.

PROF. PRATT'S UTERINE INSTRUMENTS—Continued.



Miller's Bivalve Vaginal Speculum. \$1.50, net.



Neugebauer's Set of Specula, \$4.50 net.

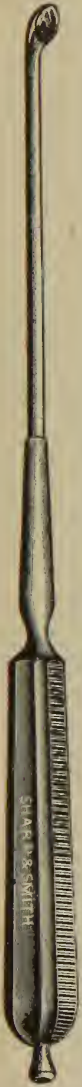
"In the selection of uterine dilators, which are always required in undertaking intra-uterine work, experience soon teaches the operator to dispense with valvular tools, and also with sponge and sea tangle tents, and to rely upon the graded sounds. In order to economize both in weight and number these sounds have been made double, embodying really two instruments in one. The following cut illustrates the double ended sound.



Pratt's Double End Uterine Sound. 75c. net.

"In selecting a set care should be taken to see that the end of one sound is a trifle smaller than the shoulder of the preceding sound, so that no force will be required in effecting an entrance of a sound. In exceptional cases of uterine stricture and fibrous degeneration a valvular uterine dilator will be found necessary, the best ones, the Sims' dilator, a trivalve, and Goodell's bivalve being preferred, as they are less liable to bruise the uterine tissues. Of course a Sims' flexible uterine sound is always indispensable for diagnostic purposes, as is also a long silver probe, which may serve either for uterine work, or in tracing fistulous tracts

PROF. PRATT'S UTERINE INSTRUMENTS—Continued.



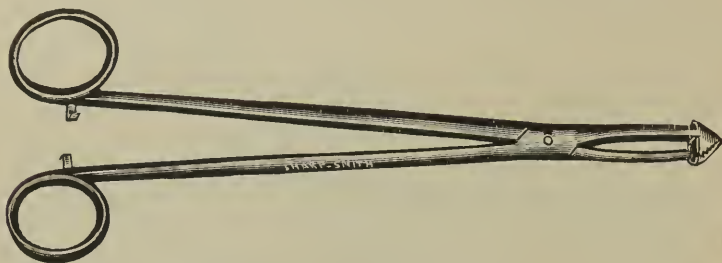
"In selecting a uterine curette there is a new one invented by Dr. F. D. Holbrook, of the Lincoln Park Sanitarium, which is so superior to all other instruments upon the market as to deserve especial mention. After a uterine cavity more or less covered with vegetations has been curetted with apparent thoroughness by an ordinary instrument and the debris washed away, and the cavity dried by thorough swabbing, it will be astonishing to the operator how imperfect has been his work, if he now employs the Holbrook curette. The instrument is sufficiently heavy and well-balanced to adapt it perfectly to the most delicate manipulations, enabling one to employ a much finer sense of touch as the instrument comes in contact with the endometrium, and in this respect is much superior to other instruments. Its chief merit, however, lies in the fact that it serves, not only as a curette, but also as an intra-uterine douche at the same time. The stem is hollow and the uterine extremity of the tube opens in the scoop of the curette so that the water is reflected forward, thus immediately washing away all debris loosened by the curette. The tube of a fountain syringe is to be fastened to the handle, and after the stream is well started and the curette is introduced into the uterine cavity, it is to be handled as any other curette, only this can be done more delicately on account of its happy poise.

"It must necessarily supersede all other curettes, because of its superior qualities. In order to adapt it to all possible conditions the spoon extremity is furnished with two spoon tips of different sizes, which can be fastened at will to the handle by a screw attachment."

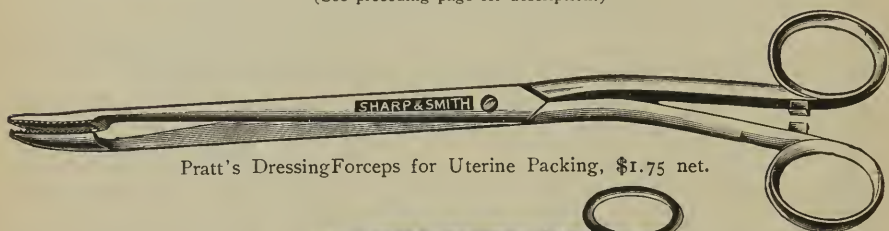
"In operating for laceration of the cervix, the orificial surgeon appreciates more keenly than the average gynecologist the importance of removing the cicatricial plug, as well as simply repairing unhealed rents. See following page for cut of a most valuable instrument for seizing the plug during the process of dissection. There is a great difference in the make of the plug forceps. Be careful to select a pair with well-marked teeth and bulging jaws, so that the instrument may seize a good-sized plug and retain firm hold upon it."

Holbrook's Uterine Douche Curette, \$3.00 net.
Same with two tips, \$3.50 net.

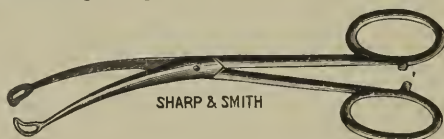
PROF. PRATT'S UTERINE INSTRUMENTS.



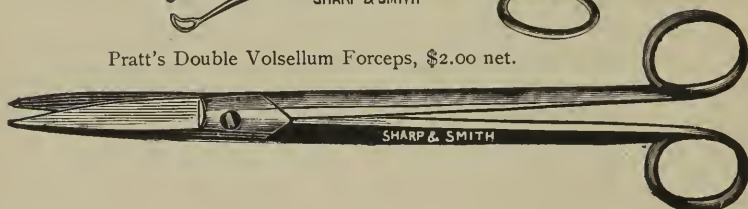
Pratt's "V" Plug Forceps, \$2.25, net.
(See preceding page for description.)



Pratt's Dressing Forceps for Uterine Packing, \$1.75 net.



Pratt's Double Volsellum Forceps, \$2.00 net.



Pratt's Straight Uterine Scissors, \$1.75, net.

The scissors most serviceable in uterine and perineal work are a straight pair curved slightly at the ends of the blades, which are sharp-pointed. A pair of perfectly straight scissors will be found convenient in laying open the cervix for inspection. The accompanying cut illustrates them.



Pratt's Female Urethral Speculum, \$2.50.



Emmett's Double Tenaculum. Price, \$3.75 net.

For spreading the cervical canal for the extirpation of cysts, and for removal of cicatricial plugs and for other cervical work.

PROF. PRATT'S UTERINE INSTRUMENTS.



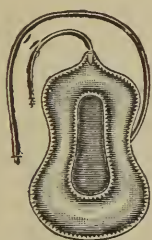
Pratt's Intra Uterine Stems. 75c. net.

Made of hard rubber, and of great utility in overcoming uterine stenosis and correcting flexions and starting nutritive changes.

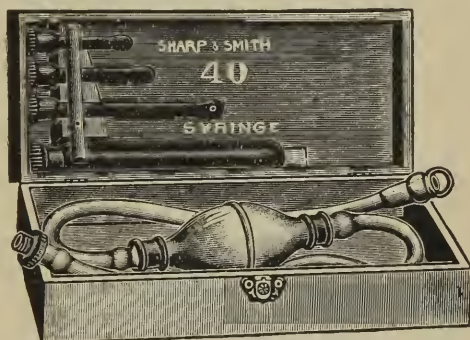


Uterine Douche Recurrent. Price \$1.25, net.

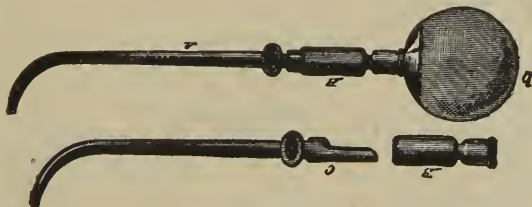
Used in chronic endometritis, sub-involution, etc.



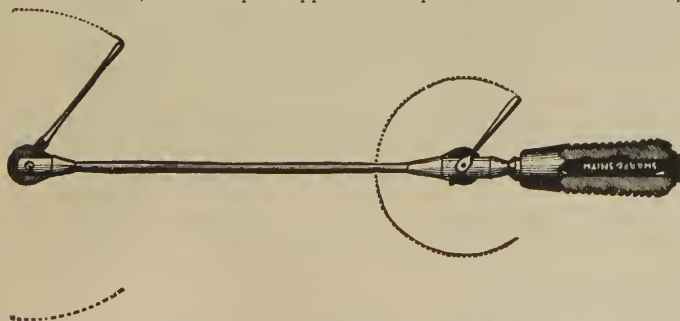
Combination Bed Pan, with Outlet and Inflating Tube. \$3.50, net.



No. 40. Bulb Syringe, with four pipes. 75c. net.



Scoop Powder Blower, for the topical application of powdered medicine. Price 75c. net.



Ludlam's Uterine Respositor. Price \$3.50, net.

For use in restoring the uterus to proper position, previous to adjusting some more permanent means of support.

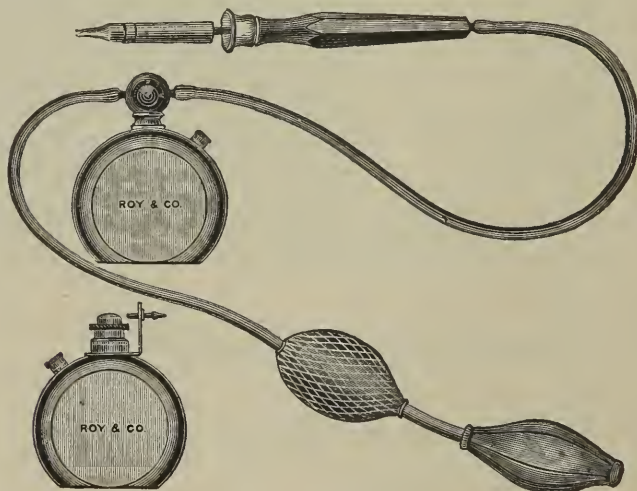
THERMO-CAUTERY.

FIG.

*4268	Pacquelin's Cautery, complete, in neat Morocco Case, Fig. 4269, with two Cautery Points.....	\$25 00	
*4269	Showing Cautery, in Case, as described in Fig. 4268.		
*4270	No. 4—Button Cautery Point	} These two Tips are the ones referred to as be- } } longing to complete Apparatus Fig. 4268. }	10 00
*4271	No. 5—Knife		10 00
*4272	No. 6—Curved Knife, Cautery Point.....		10 00
*4273	No. 7—Small		10 00
*4274	No. 8—Curved Small Knife, “		10 00
*4275	No. 9—Cylindro Conical		10 00
*4276	No. 10—Sharp Point Cautery.....		10 00
4277	No. 11—Very Fine Knife, Cautery Point.....		10 00
*4278	No. 12—Needle Tip.		10 00
*4279	No. 13—Cautery Scissors Straight or Curved.....		18 00

PARTS OF THE CAUTERY.

4280	Metal Reservoir	\$ 3 00
4281	Glass	2 50
4282	Metal Lamp.....	2 50
4283	Glass	2 00
4284	Canulated Handle, with lengthened Tube.....	2 00
4285	Double Bulb Blow Apparatus	3 00



4268

DR. PACQUELIN'S CAUTERY (THERMO-CAUTERY.)

Pacquelin's Cautery is an instrument for the production of permanent and controllable heat, and with slight radiation, it can be raised to the highest temperature. It passes through liquids and organic tissues without losing its activity.

This admirable instrument (without rival) is adapted to all the needs of actual cautery, owing to the variety of its forms. It occupies a privileged rank among the principal instruments indispensable in surgery, where the use of cautery by fire is indicated.

The use of this instrument is desired from the fact that when platinum, as well as several other metals, slightly heated, is brought in contact with hydrocarbon vapors, it gradually becomes incandescent, and retains its heat as long as the vapors are supplied.

It is combined as follows: A combustion chamber of platinum, a canulated ebony handle, a thick rubber tube, a reservoir for the hydrocarbon, a double bulb apparatus for supplying air. A spirit lamp, with blow pipe, is furnished with the above.

NOTICE.—The above described parts are put up in a neat Morocco Case, four inches high, seven inches long, and five inches wide.

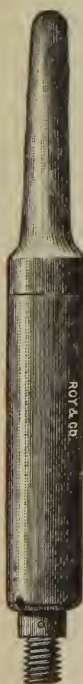
THERMO-CAUTERY.



4270



4278



4271



4272



4273



4274

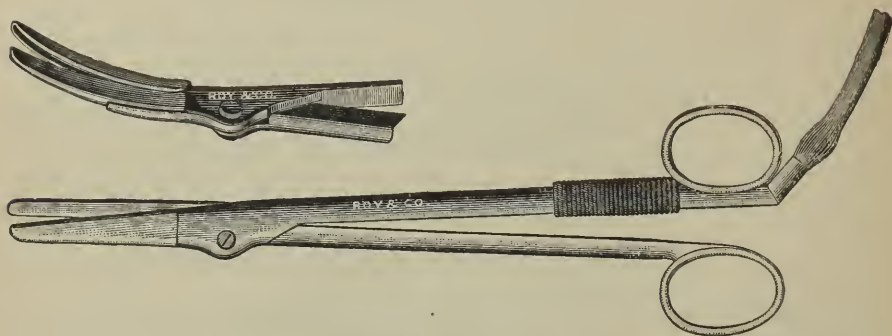


4275

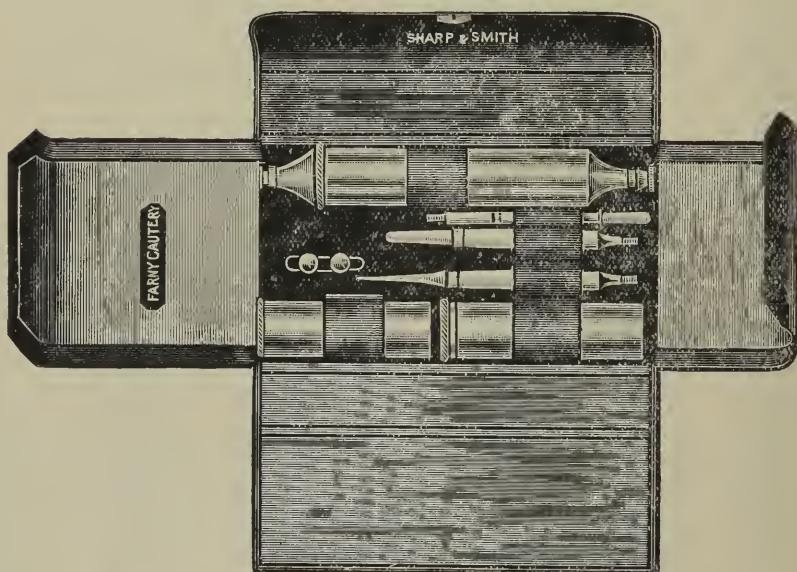


4276

THERMO-CAUTERY.



4279—(see page 698).



4280

Fig. 4280 The Farny Pocket Thermo Cautery, with two platina tipsnet \$25 00

Fig. 4280-A Second Quality Pocket Thermo Cautery 16 50

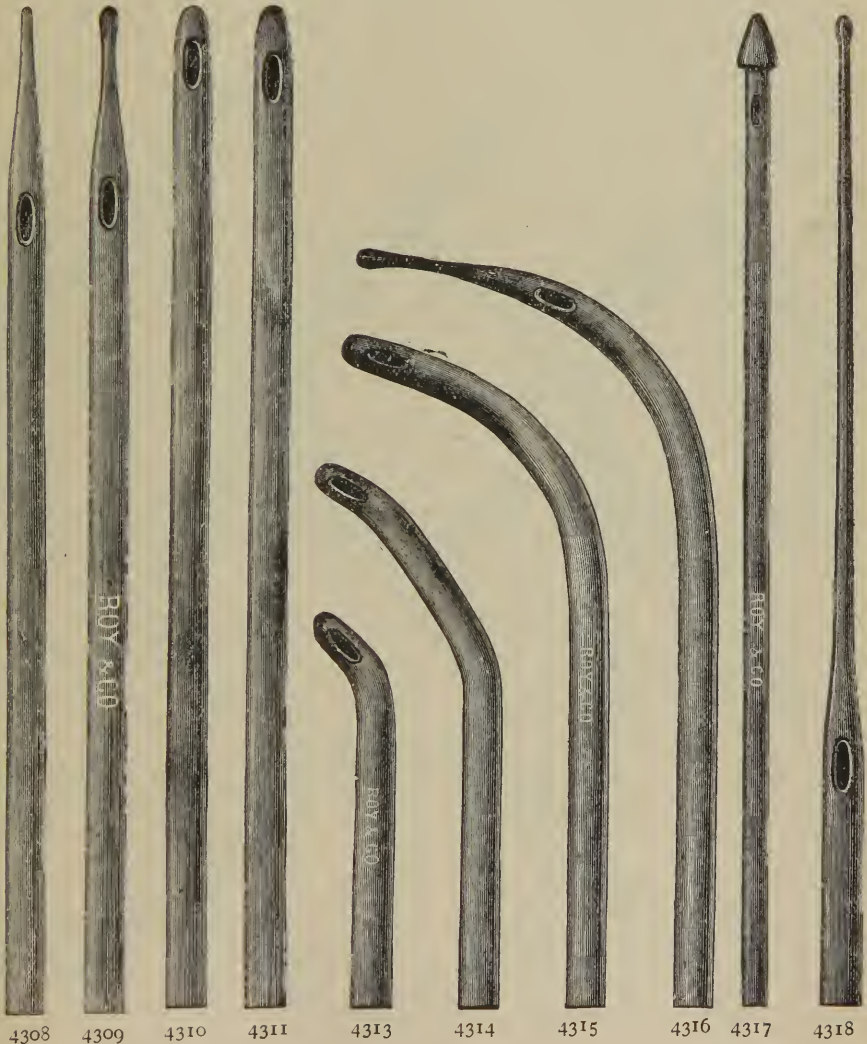
INSTRUMENTS FOR MALE URETHRA, BLADDER AND GENITALS—CATHETERS.

FIG.					
4300	English Web Catheters, sizes 1 to 12.....	each	\$0 15—doz.	\$	1 25
4301	" (Double) Web Catheters, sizes 1 to 12.....	"	0 25—	"	2 00
4302	" " " " " " 12 to 16	"			
4303	" " " " " " 17 and 18	each			35
4304	" (Best) " " " Olive Tip, sizes 1 to 12.....	"			50
4305	" " " " " " " 12 to 18.....	"			50
4306	" " " " " Conical, " 1 to 12.....	"			50
4307	" " " " " " " 12 to 18.....	"			75

CONTINUED ON NEXT PAGE.

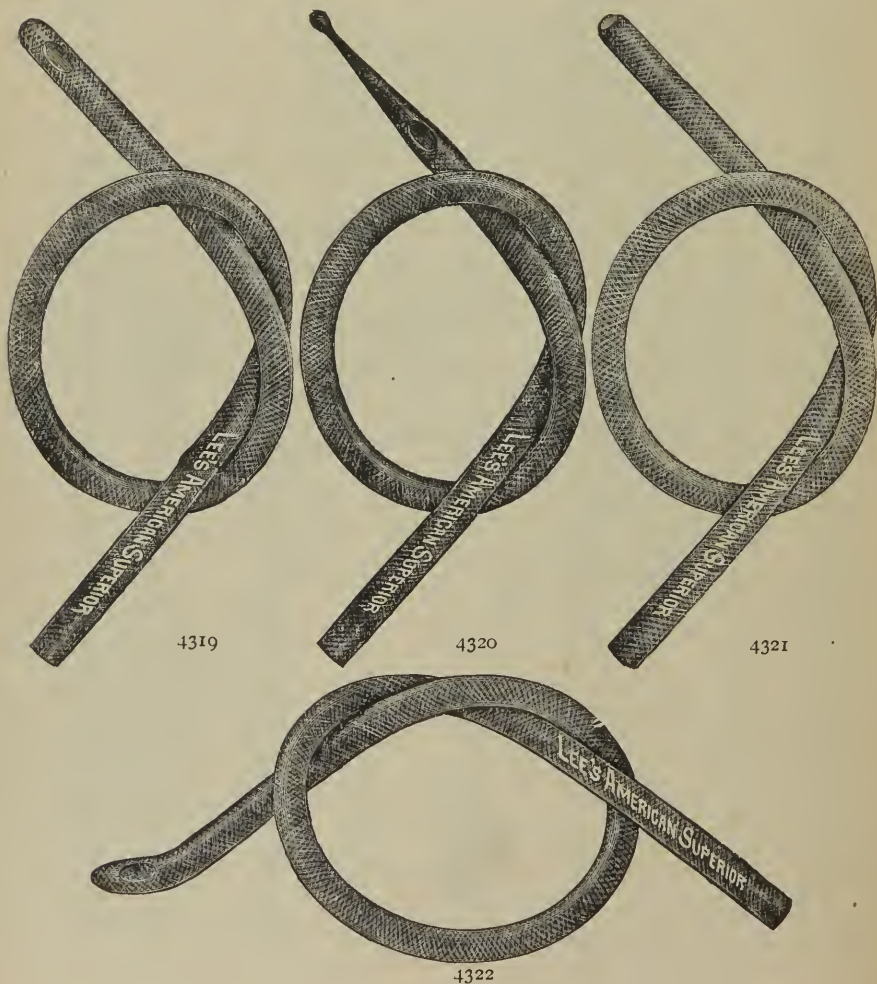
INSTRUMENTS FOR MALE URETHRA, BLADDER AND GENITALS—CATHETERS.

FIG.					
*4308	Sharp & Smith's Improved Catheters,	Conical, all sizes	.....each,	\$o	50
*4309	"	Olive,	"	"	50
*4310	"	Cylindrical, all sizes	.....	"	50
*4311	"	"	hole in end and side	.....	50
4312	"	Prostatic	.....	"	60
*4313	"	Mercier's Elbow	.....	"	65
*4314	"	"	Double Curve	.....	85
*4315	"	Curved Cylindrical	.....	"	60
*4316	"	"	Olive Tip	.....	60
*4317	"	Bulbous	.....	"	60
*4318	"	with long Bougie Tip	.....	"	75



URETHRAL INSTRUMENTS—CATHETERS.

FIG.						
*4319	Lee's Cylindrical half silk Catheter	.....	\$	50		
*4320	“ Olive Point “ “ “	.....		50		
*4321	“ Open End “ “ “	.....		75		
*4322	“ Mercier's “ “ “	.....		65		
4323	Silk Web Cylindrical Catheters	.....		65		
4324	“ “ Olive “	.....		75		
4325	“ “ Mercier's “	.....		85		
*4326	Belfast Linen Web Catheters, Olive Tip	.....		50		
*4327	“ “ “ “ Cylindrical	.....		50		
*4328	“ “ “ “ Mercier's	.....		75		
*4329	“ “ “ “ Olive Metal Tip	.....		90		
*4330	“ “ “ “ Cylindrical Metal Tip	.....		85		
*4331	“ “ “ “ Mercier's “ “	.....	I	10		
*4332	“ “ “ “ Conical “ “	.....		90		



URETHRAL INSTRUMENTS—CATHETERS.

A NEW CATHETER TIP.

Antiseptic—Non-breakable.

Heretofore in all Flexible Catheters, whether with woven or cut eyes, at least one-quarter of the body of the tube is displaced where the eye occurs, and the Catheter is consequently made weakest at the very part where the most strength is required. This general defect has been overcome in the Metal Eye Belfast Linen Catheters, by ingeniously attaching a properly constructed German Silver Eye Piece, which is firmly woven inside the tip of the Catheter, so that it not only thoroughly protects the weak part about the eye, but makes the head of the Catheter perfectly solid and antiseptic.

In the Olive and Conical patterns, additional stability is given to the slender points by means of a catgut inside, which extends from the metal eye to the extreme tip, and makes the points solid and firm.



4326



4327



4328



CYLINDRICAL, WITH METAL TIP INSIDE

4330



OLIVE, WITH METAL TIP INSIDE

4329



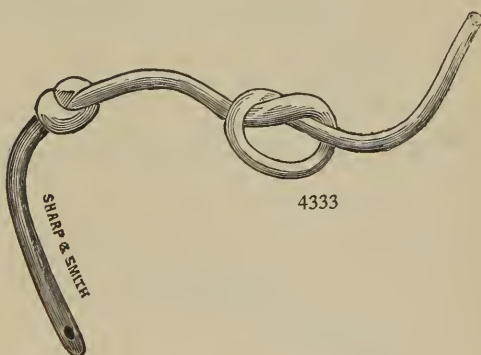
CONICAL, WITH METAL TIP INSIDE

4332



MERCIER, WITH METAL TIP INSIDE

4331



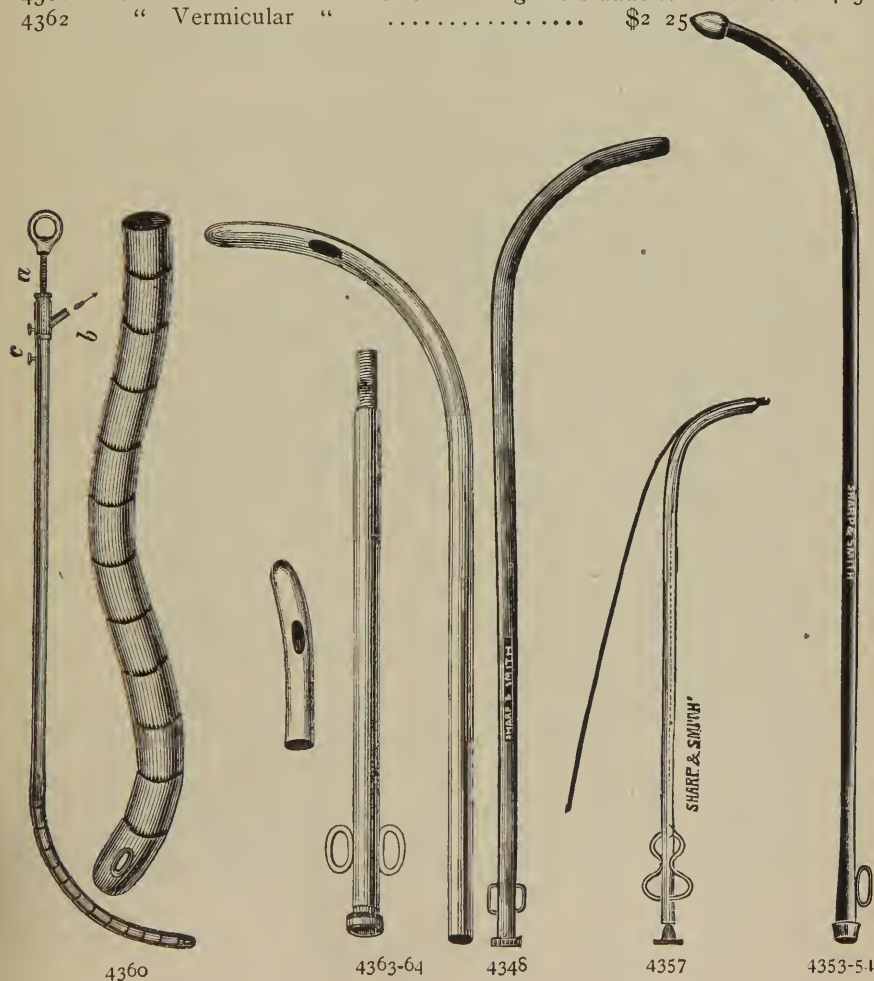
4333



SECTIONAL VIEW OF METAL TIP

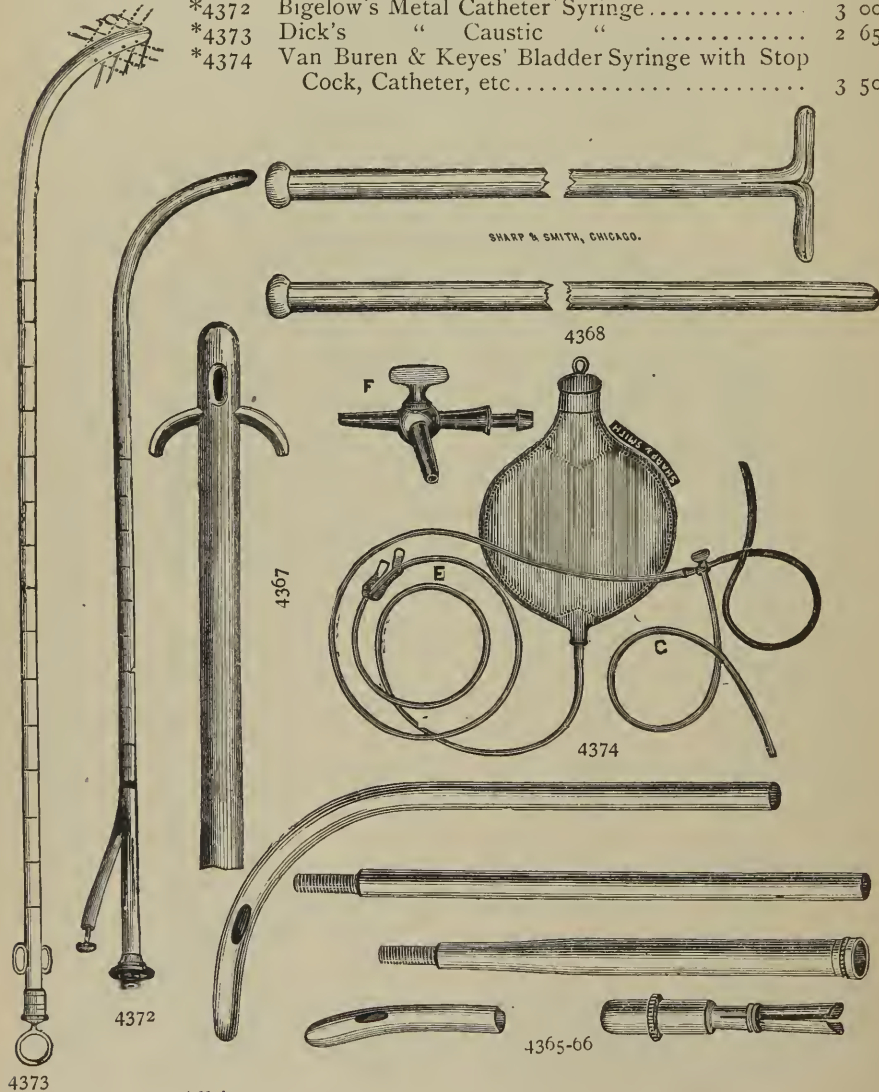
URETHRAL INSTRUMENTS—CATHETERS.

FIG.			
4347	Flexible Metal Catheter.....	\$	75
* 4348	Sterling Silver Male Catheter.....	1	50
4349	Plated " "		65
4350	Pure Silver " "	2	00
4351	Plated Prostatic Male "		90
4352	Silver " "	2	00
* 4353	Barthelow's Silver "	1	50
* 4354	" Plated "		75
4355	Gross' Spiral " Silver.....	2	50
4356	" " " Plated.		75
* 4357	Goulay's Tunneled " and guide.....	1	75
4358	Cowan's Vertebrated "	6	50
4359	Squires' Vertebrated "	2	50
* 4360	" (mod. by Caro), Vertebrated Catheter.....	4	50
4361	Warren's Door Catheter for evacuating the bladder... ..	4	50
4362	" Vermicular "	\$2	25



URETHRAL INSTRUMENTS—CATHETERS.

FIG.						
*4363	Male and Female	Jointed	Silver	Catheter.....	\$	1 85
*4364	"	"	Plated	"		85
*4365	"	"	Silver	" Parker's.....		3 00
*4366	"	"	Plated	"		1 50
*4367	Holt's Self Retaining			"		1 00
*4368	Dowell's			"		3 75
4369	Metal Cooling			"		2 00
4370	Wyeth's Cocaine			"		1 00
4371	Otis' Urethral Haemostatic Tube			"		50
*4372	Bigelow's Metal Catheter			Syringe.....		3 00
*4373	Dick's			Caustic	"	2 65
*4374	Van Buren & Keyes' Bladder			Syringe with Stop		
	Cock, Catheter, etc.....					3 50

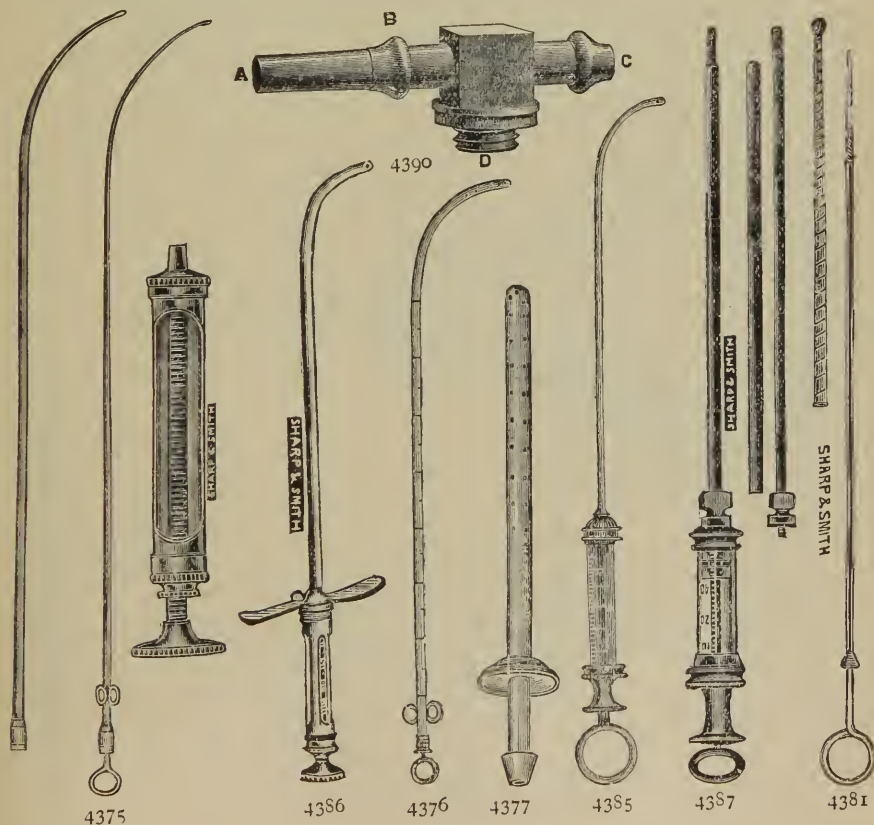


All instruments designated by a * are illustrated.

URETHRAL INSTRUMENTS—SYRINGES.

FIG.

*4375	Otis' Catheter Syringe.....	\$4 50
*4376	Parker's " " (Silver).....	2 60
*4377	Otis' " " Nozzle.....	1 15
4378	Keyes' " Guide.....	60
4379	Gouley's " 12 inch.....	25
4380	" " 24 ".....	45
*4381	Otis' " ".....	75
4382	Taylor's Urethral Syringe.....	2 80
4383	Ultzman' " ".....	3 00
4384	Bumstead's " " Glass Barrel.....	1 85
*4385	Braun's " ".....	1 75
*4386	Keyes' (Ultzman's) Urethral Syringe.....	4 00
*4387	Hard Rubber " ".....	2 00
*4388	Bryce's " " and Applicator.....	4 25
4389	Thornton Parker's " Tube.....	35
*4390	Hosmer's T. for washing out the bladder.....	75
*4391	Van Buren & Keyes' Stop Cock Metal.....	1 50
*4392	" " " Hard Rubber.....	75
*4393	" " " Bladder Syringe.....	1 50
4394	" " " Hot Water Bag for diseased prostate....	3 75
*4395	Peck's Double End Bladder Syringe.....	1 85

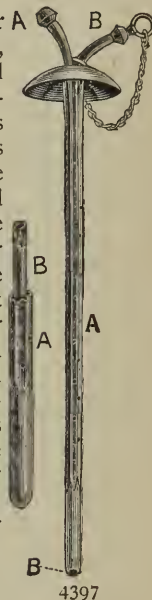


BRYCE'S URETHRAL APPLICATOR AND SYRINGE.

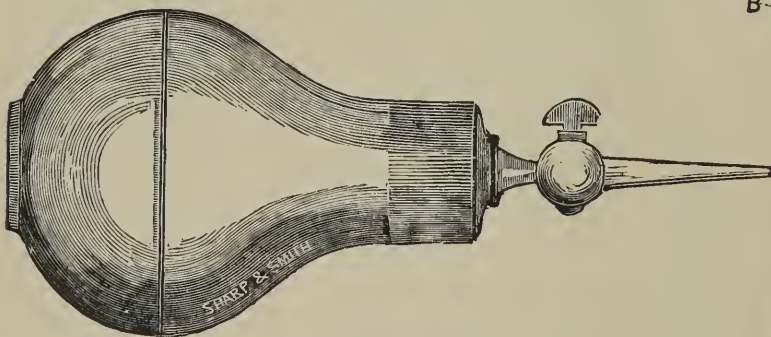


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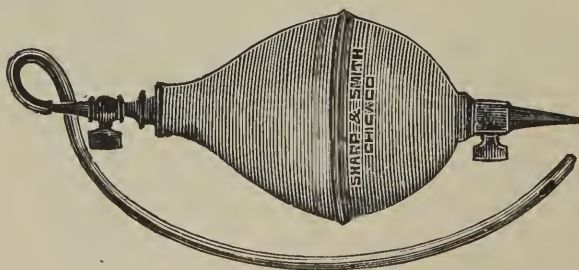
This instrument, known as "Bryce's Urethral Applicator A and Syringe," consists of a silver cylindrical tube, perfectly straight, ten inches long, with a number of perforations near the vesical end; within this tube slides another tube of equal length, provided with a large fenestrum to correspond with the perforations in the outer tube. An air-tight plunger fits accurately in this inner tube. An ointment may be placed in this tube, and the whole encased in the outer one. This instrument is so arranged that when it is carried down to any desired spot, by turning the inner tube and forcing a little gauge pin into a slot in the outer tube, the fenestrum is brought opposite the perforations in the outer tube. By gently forcing the piston rod down, an ointment may thus be applied in any quantity to any particular spot or spots within the urethral tract. The instrument may be used equally as well for a syringe. It is the best one I have ever used for medicating the urethra. The surgeon can with positive certainty know exactly where he is applying his remedies, and has perfect control of such agents, medicating only such spots as he may choose, applying large or small quantities as the case may demand. Any surgeon who is familiar with the anatomy of the parts, knows that a perfectly straight instrument can be readily passed into the bladder.



4397



4393



4395



4391-92

URETHRAL INSTRUMENTS—SYRINGES.

FIG.		
*4396	Zuelzer's Katharaphor.....	\$ 2 25
*4397	Wigmore's Gonorrhœa Tube.....	1 85

ZUELZER'S KATHARAPHOR FOR THE URETHRA.

[From Medical News.]

The above named instrument, designed by Professor Zuelzer, is well adapted to cleanse a diseased urethra of infectious bodies and inflammatory effusions. Its chief use is in cases of acute gonorrhœa, but it also finds application in the chronic state, with accompanying erosions, rents, broad superficial loss of substance and ulceration or croupous infiltration of the mucous membrane.

The customary method of using injections, suppositories and ointments, is undoubtedly deficient in not providing for a preliminary thorough washing of the affected tract, and the want of care and exactness, which lies in applying medicaments over an unremoved layer of inflammatory products, needs hardly to be mentioned as incompatible with our ideas of antiseptic treatment.

By the use of the Katharaphor this indication is fulfilled, and the ingenious and complete manner of construction has led to the belief that it is deserving of notice in America. The accompanying illustrations may serve to explain the instrument:

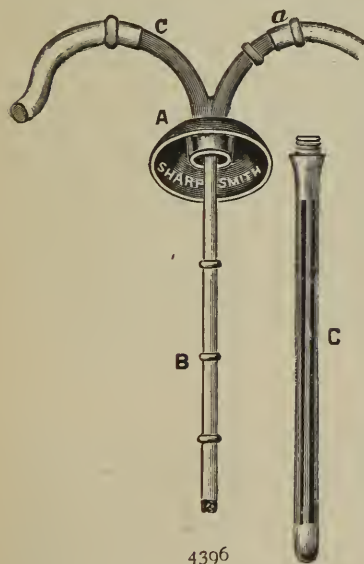
The bell A is of a size to cover the glans penis. The bent tube *a*, distinguished from its fellow *c* by an elevated ring, is connected with an irrigator of water or antiseptic solution, and terminates in the straight tube B. The latter has a length of $4\frac{1}{2}$ – $5\frac{1}{2}$ inches, and ends with a free opening. The outer tube C, encasing B, is screwed into the under surface of the bell and communicates thereby with the outflow tube *c*. The outer tube is of silver or German silver, its lower end is closed and has a tip like a catheter's. Its sides are perforated by four long broad slits. The three elevations on B prevent the outer tube C from bending inward.

The current of fluid in A B escapes at the open extremity. Through the slits in C it

bathes the urethral walls, and the collected washings returning inward again are discharged through *c*. In the treatment of acute gonorrhœa in Zuelzer's clinic, the patient's urethra is irrigated once daily. The liquid is either hot or cold, the latter state being generally preferred on account of the comfortable sensations it produces. The washings are collected in glass vessels until the fluid no longer shows turbidity. By compressing the rubber tube attached to *c* the outflow is arrested. This is done at short intervals and tends to remove particles that would not otherwise come away.

An irrigation lasts from fifteen to forty minutes. It may, of course, when possible, be frequently repeated. Prof. Zuelzer usually combines the use of medicated suppositories, but not with any decided influence on the duration of the purulent discharge. This, as a rule, entirely disappears in from six to eight days, even when pure water is the irrigant.

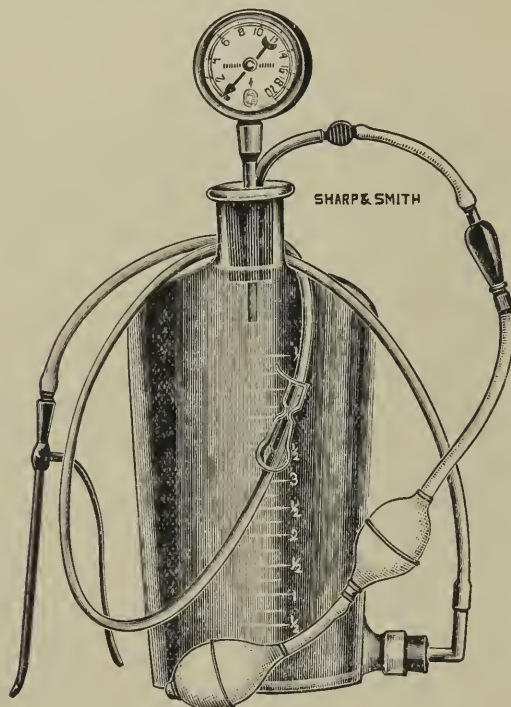
LOUIS KOLIPINSKI, M. D.



URETHRAL INSTRUMENTS.

AN APPARATUS FOR DILATING THE BLADDER.

By DR. H. M. STARKEY, Chicago.



4397-A

This apparatus was devised for the treatment of a case of extreme contraction of the bladder following long continued severe cystitis. The cystitis having subsided under appropriate treatment, the bladder was left with a capacity of only one-half an ounce and the urine could not be retained longer than twenty minutes. Dilatation was practiced a few times by placing a reservoir at a considerable height above the patient, but this proved unsatisfactory because inaccurate. With this simple apparatus all the factors are under complete control, and can be exactly measured and recorded. The temperature of the solution used for dilatation is measured by the thermometer. The pressure under which it is introduced is measured by the air gauge. The time by the watch and the amount injected, by the marking on the bottle.

The apparatus consists of the graduated and tabulated bottle; which is nearly filled with a sterilized normal saline solution, at a temperature of about 110° F. By means of the double hand bulb, the air above the solution can be increased by from three to six pounds to the square inch. The air introduced is filtered by passing through cotton in the receptacle. From the tubule of the bottle the solution passes through a soft rubber tube and a double current catheter to the bladder.



4397-B



4397-C



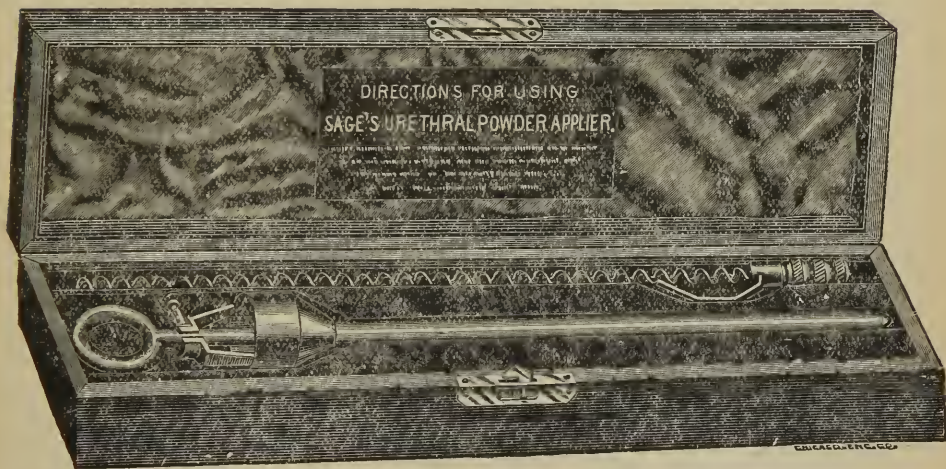
4397-D

URETHRAL INSTRUMENTS.

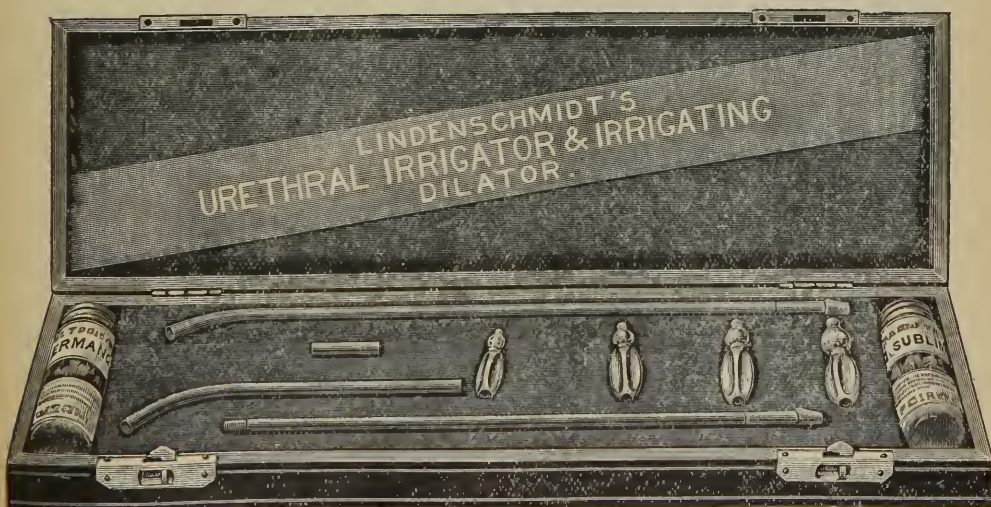
FIG.		
*4397-A	Dr. H. M. Starkey's Apparatus for Dilating the Bladder.....	\$10 00
*4397-B	Otis' Urethral Hemostatic Tube—"Velvet Eye".....	60
*4397-C	Vaughan's Catheter for Irrigating the Urethra—"Velvet Eye".....	60
*4397-D	Nall's Urethral Applicator, or Soft Rubber Cupped Bougie—"Velvet Eye"...	95
*4397-E	Waechter's Improved Catheter for Treating the Urethra.....	3 50
*4397-G	Sage's Urethral Powder Applier ...	7 50
*4397-H	Lindenschmidt's Urethral Irrigator and Irrigating Dilator	5 00



4397-E

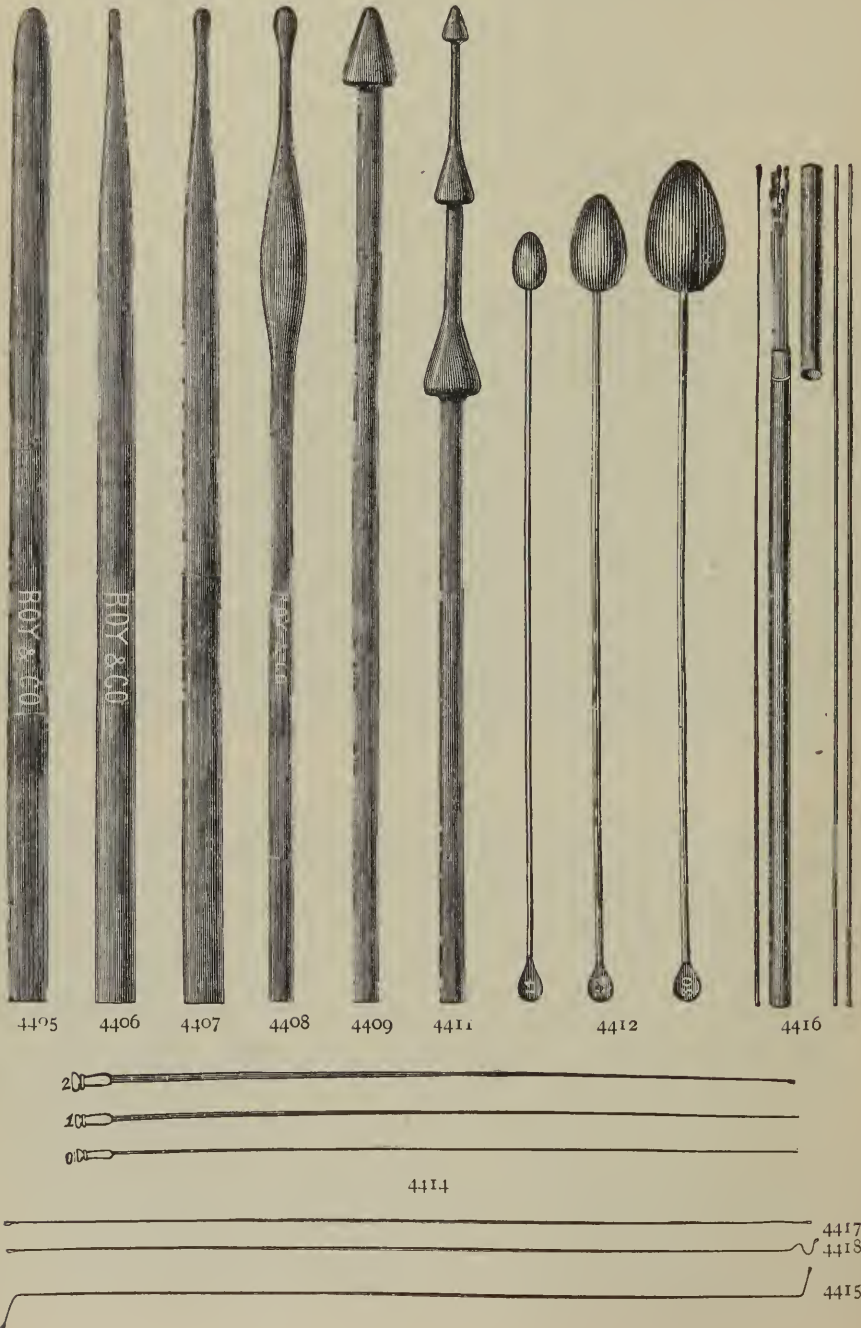


4397-G



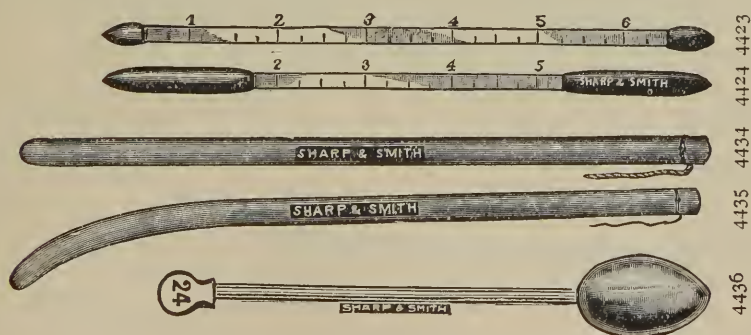
4397-H

URETHRAL INSTRUMENTS—BOUGIES AND GUIDES.



URETHRAL INSTRUMENTS—BOUGIES.

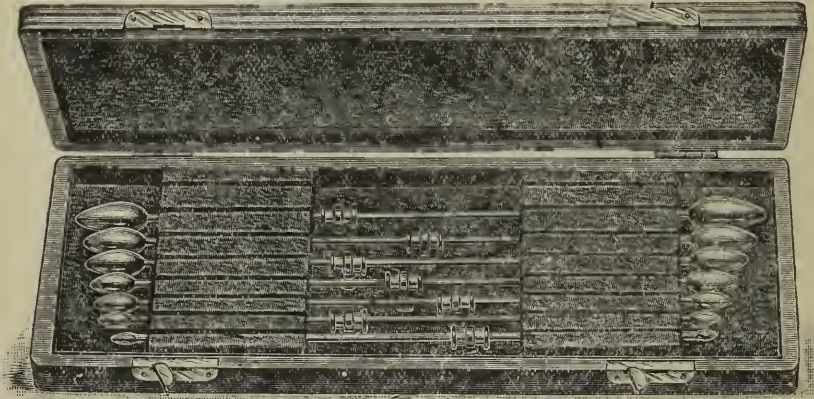
FIG.							
4398	English Web Bougies (Common), sizes 1 to 12.....	\$	15				
4399	" " " " " 1 to 12.....per doz.	1	25				
4400	" " " " " 13 to 16.....each.		25				
4401	" " " " " 17 and 18.....		30				
4402	" " " (Fine) " 1 to 12.....		50				
4403	" " " " " 13 to 16.....		65				
4404	" " " " " 17 and 18.....		90				
*4405	Sharp & Smith's Improved Bougies, Cylindrical.....		50				
*4406	" " " " " Conical.....		50				
*4407	" " " " " Olive Tip.....		50				
*4408	" " " " " Bellied.....		60				
*4409	" " " " " Aboulé.....		75				
*4410	" " " " " Double Aboulé.....	I	00				
*4411	" " " " " Triple.....	I	25				
4412	Otis' Bougies, Aboulé, Nos. 6 to 40, French scale.....		35				
4413	English Filiform Bougies.....		50				
*4414	French " ".....		50				
*4415	Whalebone " ".....		25				
*4416	" " " 1 doz. in box.....per box.	2	50				
*4417	Olive Tip Whalebone Filiform Bougies.....each.		25				
*4418	Goulay's " ".....		25				
4419	Banks' " ".....		75				
4420	Eldridge's Pathfinder.....	26	25				
4421	Modified Eldridge's Pathfinder.....	2	75				
4422	Warren's Exploring Sound.....	I	85				
*4423	Weisse's Bougie Aboulé, with non-flexible, ruled staff.....		75				
*4424	" Urethral Sound, for treating Strictures of the Male Urethra exteriorly to the triangular ligament.....		75				
4425	Belfast Linen Bougies, Olive Tip.....each.		50				
4426	" " " Cylindrical.....		50				
4427	Sea Tangle ".....		75				
4428	Silk Web ".....	I	00				
*4429	Papier Mache and Catheter Box (see Fig. 4416).....		75				
4430	Casper's Rubber, Gonorrhœal Bougie.....	2	00				
4431	Hunter's Filamentous Wedges.....each.		60				
4432	Wax Bougies.....		30				
4433	Flexible Metal Bougies.....		50				
*4434	Straight Elm ".....per doz.	2	00				
*4435	Curved " ".....	2	00				
*4436	Piffard's Bulbous Bougies.....each.		35				



URETHRAL INSTRUMENTS,—BOUGIES AND SOUNDS.

FIG.		
4437	Fowler's modification of Otis' Bulbous Bougies each.....	\$ 65
*4438	" " " " " (in case), Set....	5 00
4439	Leather Rolls for Fowler's Bougies, to hold from 16 to 34 Bougies.....	2 00
	SOUNDS.	
*4440	Wier's Short Curve Steel Sound.....	1 15
*4441	Piffard's Fossil Sound.....	75
*4442	" Meatometer.....	85

DR. FOWLER'S CASE OF OTIS BOUGIES.



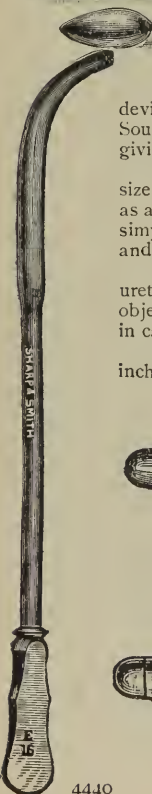
4438

This set of Bulbous Bougies, for locating strictures of the male urethra, was devised by Dr. Geo. R. Fowler, as a companion to Prof. Weisse's Pocket case of Sounds. This set consists of 16 bulbs numbered according to the French Scale, giving every even number from 10 to 40.

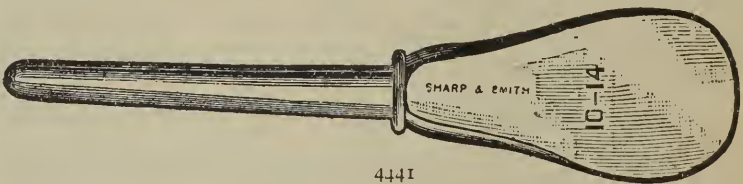
Owing to the small difference between the sizes in this scale, every alternate size is all that is usually thought necessary. The slide attached to the rods serves as a place on which the sizes of the bulbs are stamped, and as an accurate and simple means of measuring the depth of the stricture, by sliding it up to the meatus and fastening it with a turn of the screw, while the bulb is engaged in the stricture.

Owing to the rare occurrence of strictures below the straight portion of the urethra, the rigidity of the stems in these instruments, will very seldom become an objection, and their compactness and arrangement will be found a great convenience in carrying, and in use.

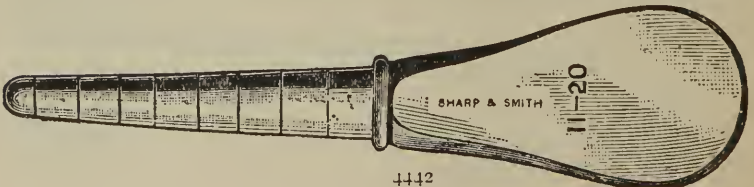
The entire set is contained in a morocco case 3½ inch x 9¾, and less than one inch thick.



4440



4441

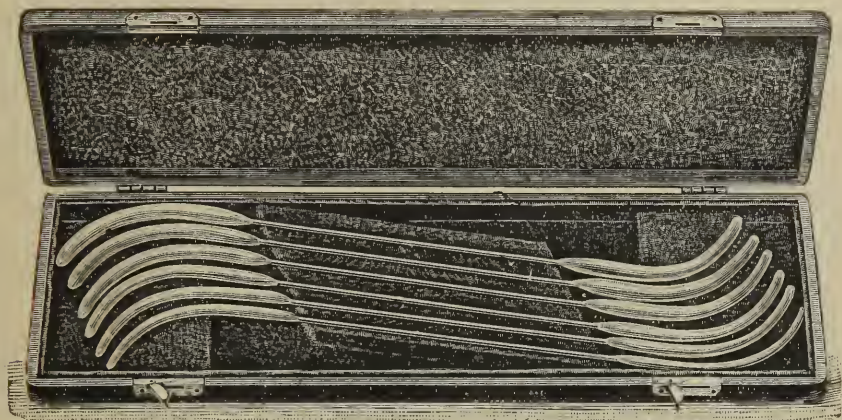


4442

URETHRAL INSTRUMENTS—SOUNDS.

FIG.		
*4443	Fowler's set of 12 sizes curved Sounds in Case.....	\$5 00
*4444	Weisse's " 12 " straight " "	4 00

DR. FOWLER'S SET OF SOUNDS.

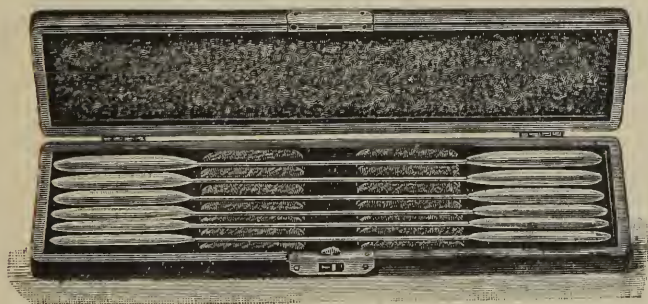


4443

This set of Sounds comprises twelve sizes from No. 9 to No. 20 American Gauge, and while they are as effective as the old style of Sounds, the weight, bulk and expense are reduced nearly one-half.

They have the regular Van Buren curve and taper, and are put in Morocco cases $12\frac{1}{2}$ inches long, 4 inches wide, and 1 inch deep. Weight complete, 20 ounces.

DR. WEISSE'S POCKET SET OF SOUNDS.



4444

This set of Sounds, devised by Dr. Weisse of the University Medical College, New York, comprises twelve sizes, from No. 9 to No. 20 American Gauge. They are well adapted to all purposes for which Sounds are used in the straight portion of the urethra; as almost nine-tenths of the treatment requiring Sounds is confined to this portion of the canal, they will nearly fulfil all the requirements. The absurdity of introducing a curved instrument into the bladder for the purpose of dilating any part of the straight urethra is apparent.

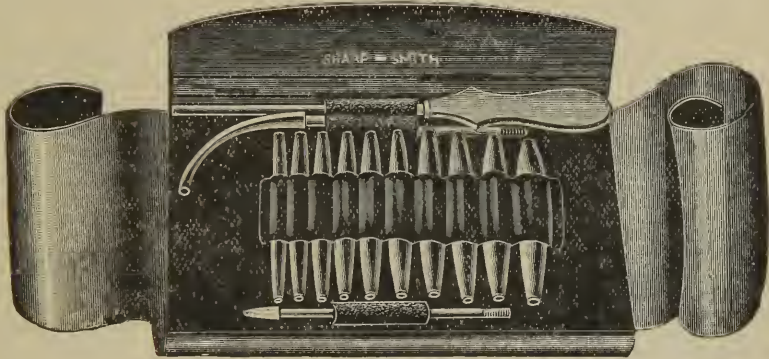
The Sounds are Nickel Plated, and put up in neat Morocco Case, measuring only $8\frac{1}{2}$ inches long, $2\frac{5}{8}$ inches wide, and $\frac{7}{8}$ inch deep, so it can be readily carried in the pocket.

Case and Sounds only weigh ten ounces.

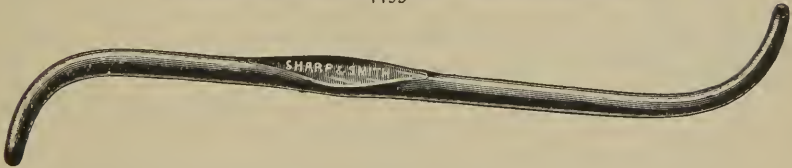
URETHRAL INSTRUMENTS.

FIG.

*4453-A	Rhodes' Case of Straight and Curved Sounds.....	\$7 50
*4453-B	Pratt's Double End Male Sounds..... each,	75
*4474-A	Otis' Improved Stone Searcher.....	4 50
*4497-A	Dr. W. T. Belfield's (Chicago) Urethral Dilator.....	5 00
*4497-B	Bergman's Urethral Dilator.....	4 50
*4497-C	Gouley Prostatic Gland Dilator.....	12 00
*4497-D	Andrews' Double Channel Evacuator, with Syphon Strainer and 2 Evacuating Tubes.....	15 00
*4497-E	Lydston's Urethral Irrigator.....	1 25
*4497-G	Pratt's Retrojector.....	1 75
*4497-H	Mussey's Bladder Curette.....	2 25



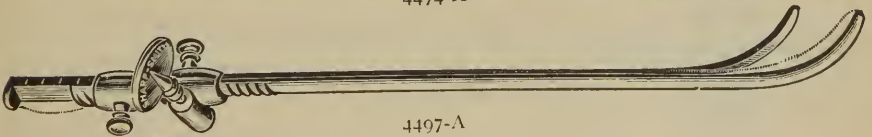
4453-A



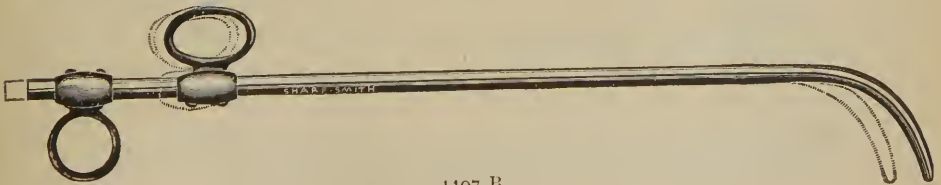
4453-B



4474-A



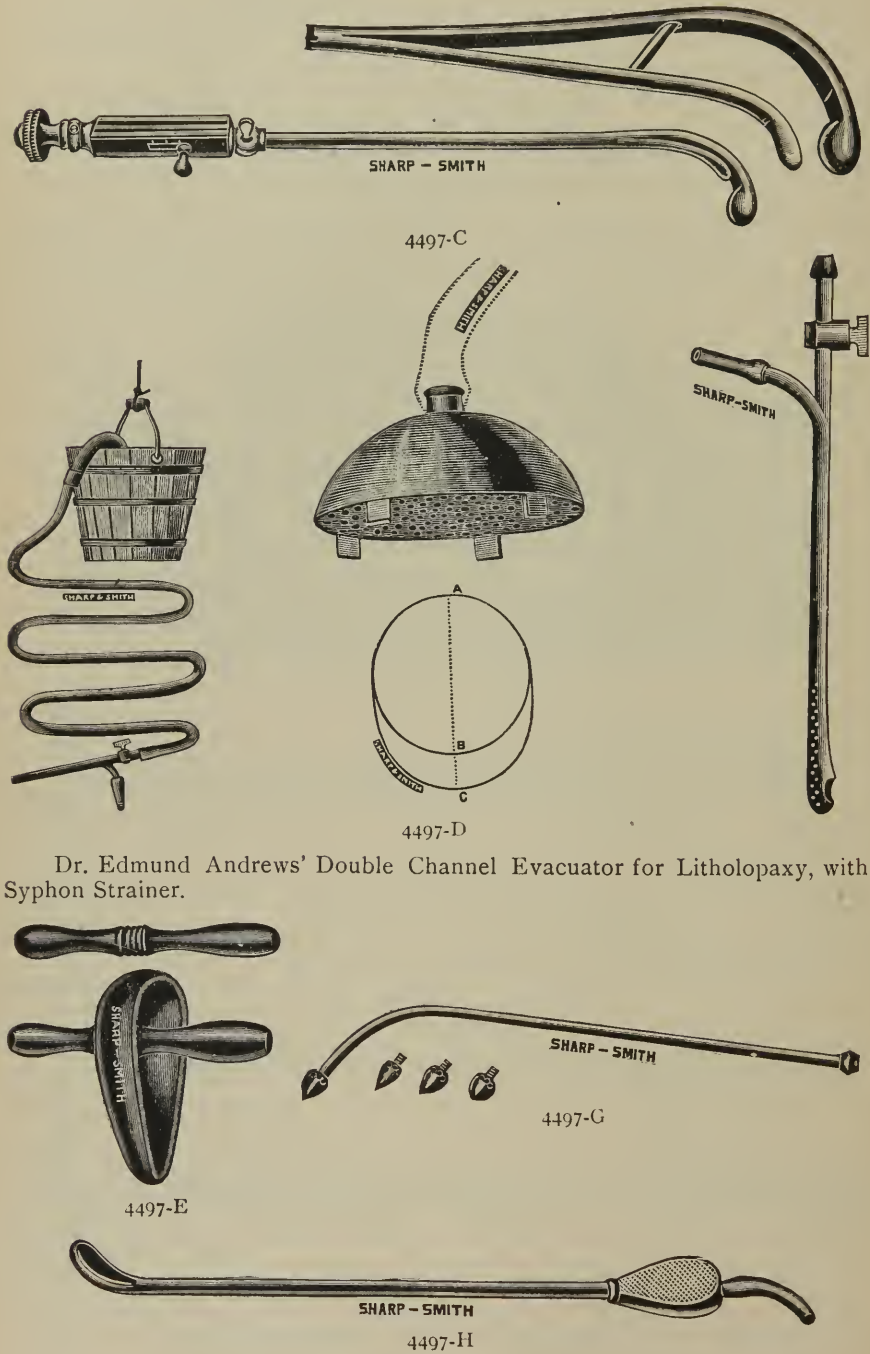
4497-A



4497-B

Instruments designated by a * are illustrated.

URETHRAL INSTRUMENTS.



URETHRAL INSTRUMENTS.

FIG.

4454	Teft's Sound for Strictures exteriorly to the Triangular Ligament	\$ 95
4455	Flexible Metal Sounds.....	40
4456	“ “ “ double curved.....	60
4457	Goulay's Sounds.....	1 00
4458	Otis' “.....	1 00
4459	Straight Steel Sounds.....	75
4460	Double End Steel Sounds.....	75
4461	Pratt's “ “.....	75
4462	Winternitz's Cooling “.....	3 00
4463	Piffard's Fossil “.....	75
4464	Goulay's Tunneled “.....	1 25
4465	Lawrence's “.....	1 25
4466	Hale's Sound for Involuntary Emissions.....	1 25
4467	Benique's Sound.....	1 00
4468	Bumstead's “.....	1 00
4469	Hollow Sounds for Cold Water.....	1 75

STONE SEARCHERS.

*4470	Andrews' Stone Searchers, complete.....	\$ 1 25
*4471	Thompson's “ “.....	2 50
*4472	Goulay's “ “.....	1 15
*4473	Little's “ “.....	2 00
*4474	Otis' “ “.....	4 00
4475	Plain “ “.....	1 50
4476	Mercier's Prostatic Gland Dilator.....	7 50
4477	Goulay's “ “ “.....	12 00
4478	Walker's “ “ “.....	27 00
4479	Harrison's “ “ “.....each.	1 10

DILATORS.

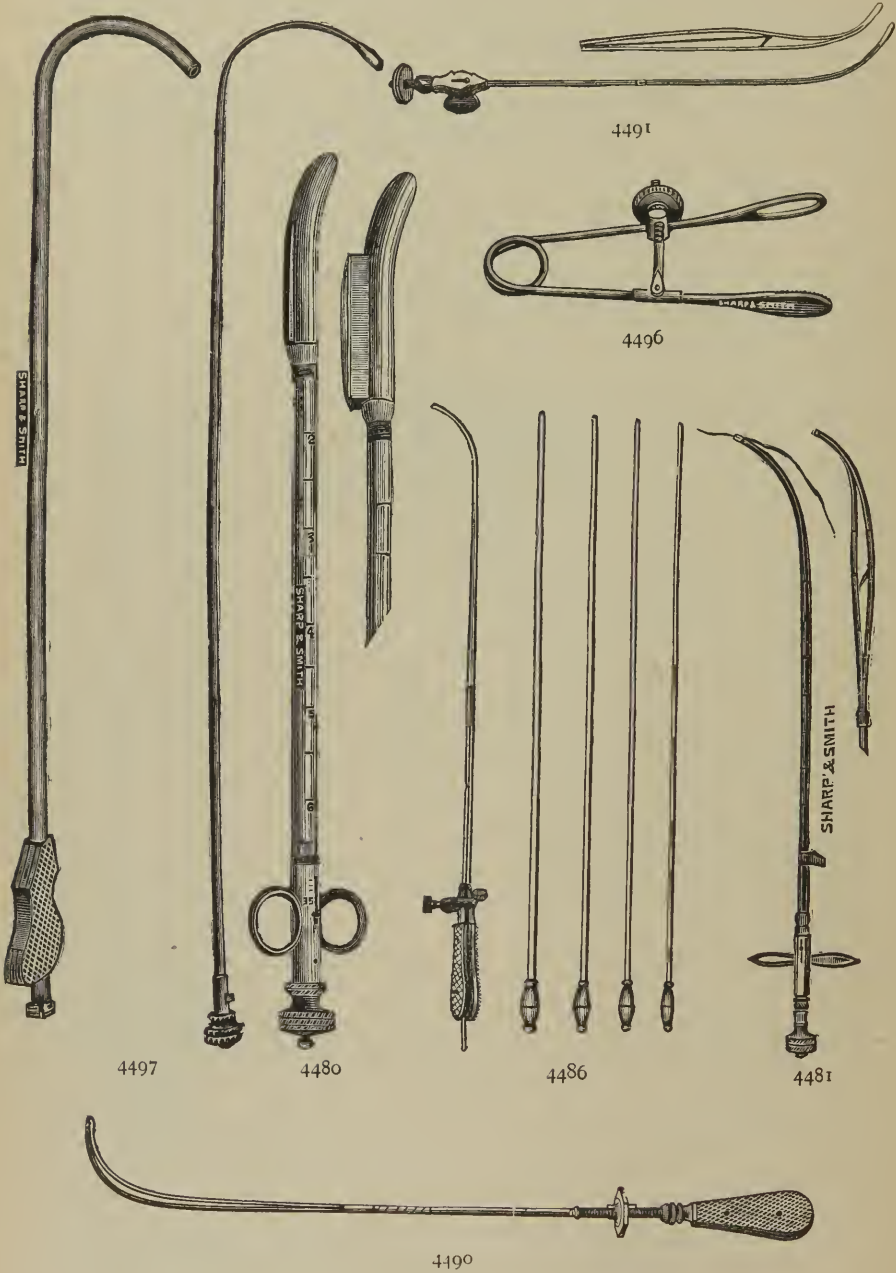
*4480	Schweig's Urethral Dilator.....	\$ 7 50
*4481	Goulay's “ “ for over-distension.....	9 00
4482	Thompson' “ “.....	7 50
4483	“ “ “ in case.....	9 00
4484	Goulay's (“ “ “.....	9 00
4485	Gross' “ “.....	10 00
*4486	Holt's “ “.....	13 50
4487	“ (Bumstead's) Urethral Dilator.....	10 25
4488	Dolbean's “ “.....	18 00
4489	Bigelow's “ “.....	11 50
*4490	Stearns' “ “.....	3 75
*4491	Priestley's “ “.....	9 00
4492	Thebaud's “ “.....	7 50
4493	Powell's “ “.....	26 25
4494	Steurer's “ “.....	6 00
4495	Voillerner's “ “.....	16 50
*4496	Otis' Meatus “.....	1 15
*4497	Thompson's Prostate Sound and Tube—Sound, \$2 25. Tube..	3 75



4471

See preceding and following pages.

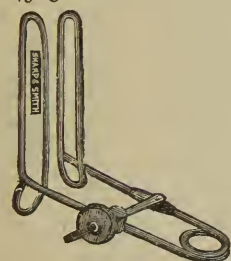
URETHRAL INSTRUMENTS—DILATORS.



See preceding page for prices

URETHRAL INSTRUMENTS.

FIG.		
4498	Desormeaux's Endoscope.....	\$35 00
* 4499	Skene's ".....	2 00
* 4500	Otis' ".....	1 00
4501	Laveur's ".....	15 00
* 4502	Glass Mirror Urethral Speculum.....	35
4503	Sharp & Smith's Bivalve Urethral Speculum, 3½ inches long...	1 50
4504	Meatus " " ".....	3 50
* 4505	Skene's Folsom's " " ".....	1 00
* 4506	" " ".....	1 85
* 4507	Brown's " " ".....	3 35
* 4508	Lallemand's Silver Porte-Cautic.....	3 00
4509	Gross' " " ".....	3 00
4510	Wier's Meatoscope.....	1 00
4511	Porcelain ".....	50
4512	Silvered Glass Meatoscope.....	35
4513	Smith's Urethroscope.....	2 50



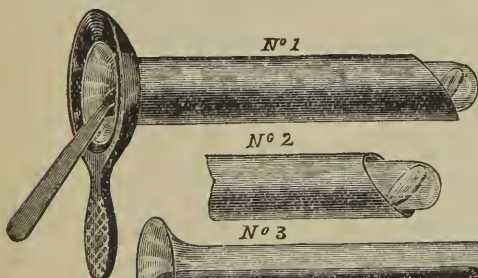
4505



4502



4506

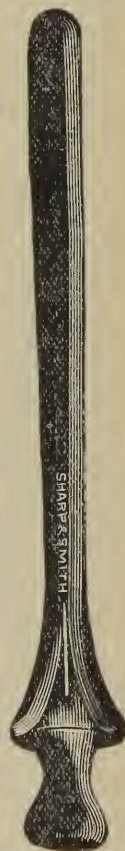


SHARP & SMITH, CHICAGO.

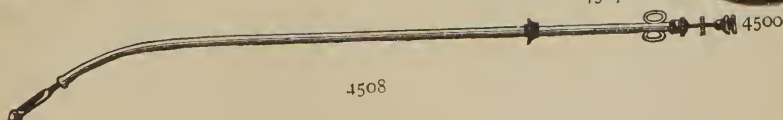
4499



4507



4500



4508

URETHRAL INSTRUMENTS—URETHROTOMES.

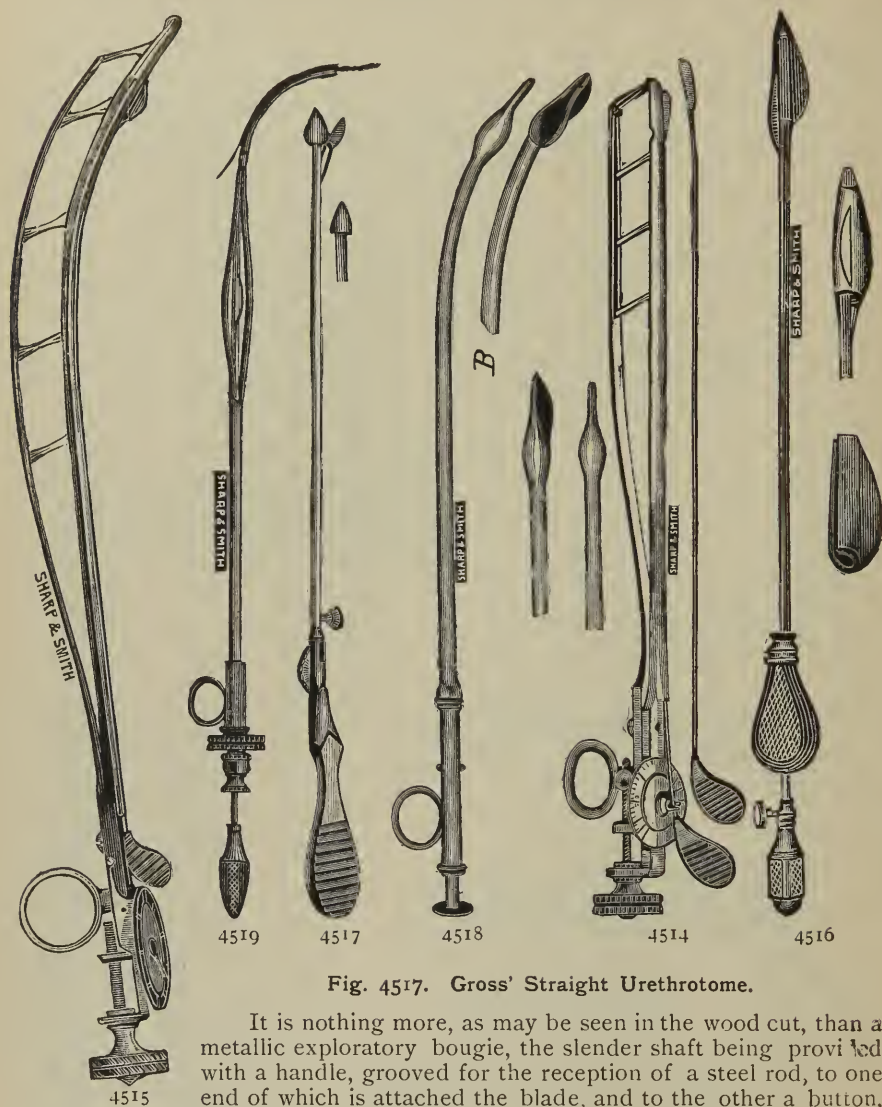
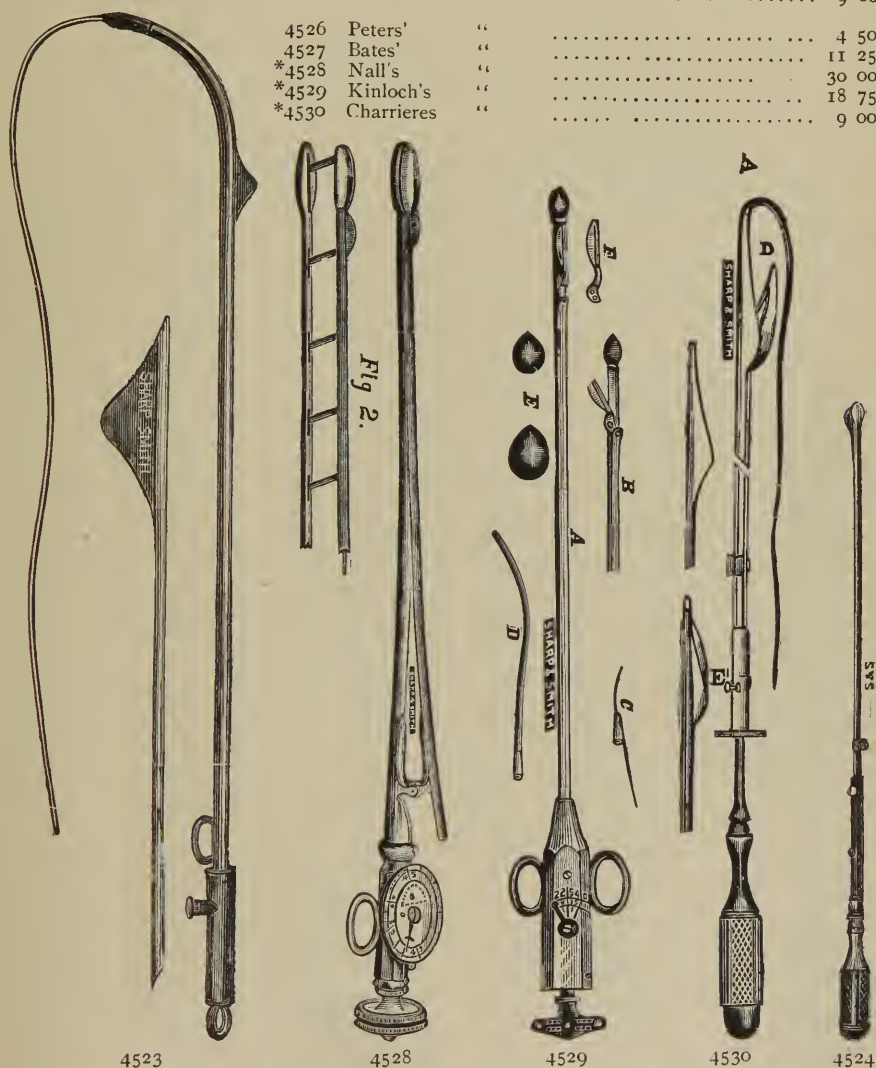


Fig. 4517. Gross' Straight Urethrotome.

It is nothing more, as may be seen in the wood cut, than a metallic exploratory bougie, the slender shaft being provided with a handle, grooved for the reception of a steel rod, to one end of which is attached the blade, and to the other a button, through the retraction of which the former is thrown out of the under surface of the bulb, so that the incision may be made along the floor of the urethra. The extent to which the blade can be projected is regulated by a lateral screw near the handle. The length of the contrivance is eleven inches, of which three are taken up by the handle, button and screw. In actual practice I have found two such instruments to be all that are required. In one, which is intended for strictures of moderate caliber, the bulb is equal to No. 15 of the French catheter scale; while in the other the bulb corresponds with No. 23, which suffices to define coarctations of much larger size. In exceptional cases, still larger bulbs may be demanded.

URETHRAL INSTRUMENTS—URETHROTOMES.

FIG.				
*4514	Otis' Straight Urethrotome (latest pattern).....	\$20	00-	
*4515	" Curved " (" ""	20	00-	
*4516	" Bulbous ""	13	50	
*4517	Gross' Straight ""	3	50	
*4518	" Curved ""	3	50	
*4519	Gouley's Dilating ""	11	25	
4520	" Tunneled Urethrotome"	9	00	
4521	Maisonneuve's ""	9	00	
4522	Teevan's " with guide and tunnel.....	9	00	
*4523	Bumstead's ""	10	50	
4524	Civiale's ""	9	00	
	4526 Peters' ""	4	50	
	4527 Bates' ""	11	25	
*	4528 Nall's ""	30	00	
*	4529 Kinloch's ""	18	75	
*	4530 Charrieres ""	9	00	



All instruments designated by a * are illustrated.

URETHRAL INSTRUMENTS—URETHROTOMES AND URETHROMETERS.

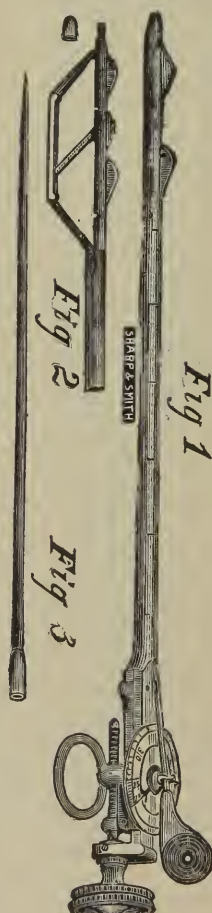
FIG.		
*4531	Mastin's Diagnosing Urethrotome.....	\$11 25
*4532	" Instrument for Subcutaneous Urethrotomy	4 50
4533	Pritchett's Rotating Urethrotome.	18 75
4534	Westmoreland's Urethrotome	9 00
4535	Peters' "	4 50
4536	Banks' "	15 00
*4537	Otis' (modified by J. Blake White's), Urethrotome.....	30 00
*4538	Dr. J. Blake White's "	15 00
4539	Milnes' Dilating Urethrotome.....	12 75
4540	Stearns' Dilating Urethrotome.....	9 00
4541	Wyeth's "	20 00
4542	Hunter's "	26 25
4543	Brown's "	19 50
4544	Young's "	37 50
4545	Rogers' " and Urethrometer.....	30 00
4546	Walker's External Urethrotome.....	1 35
*4547	Otis' Urethrometer.....	13 50
4548	Weir's "	13 50
4549	Gross' "	5 00



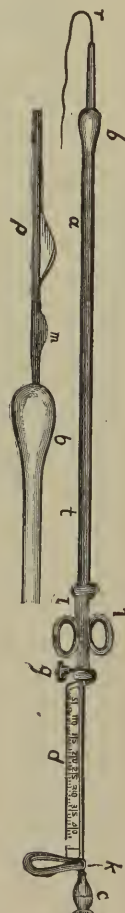
4531



4532



4537



4538



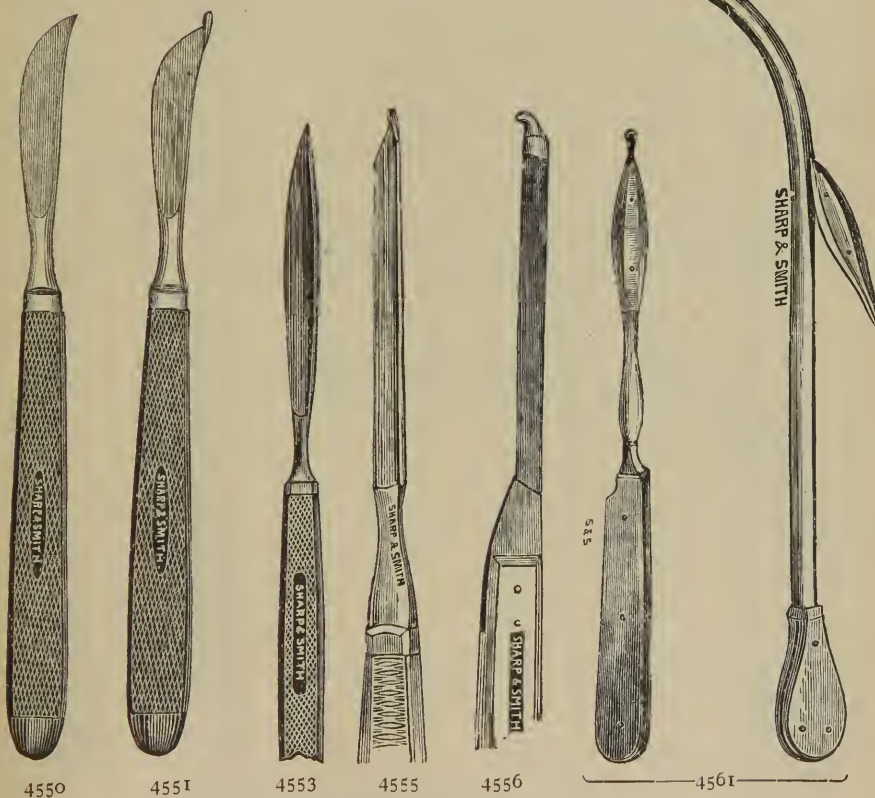
4547

URETHRAL INSTRUMENTS—STRICTURE CUTTERS.

FIG.			
*4550	Sharp Point Lithotomy Scalpel.....	\$	1 25
*4551	Probe " " ".....		1 25
4552	Dupuytren's " " ".....		1 40
*4553	Little's Sharp Point Lithotomy Bistoury.....		1 15
4554	Gouley's Beaked " " ".....		1 20
*4555	Blizzard's Probe Pointed Bistoury American.....		1 25
*4556	" " " " English.....		1 25
4557	Wyeth's Sharp " " ".....		1 50
*4558	Piffard's Fossil Stricture Cutter.....		7 50
4559	Civiale's Bistoury Caché.....		2 50
4560	Dupuytren's Double Bistoury Caché.....		18 00
*4561	Wood's Bisector.....		3 40
4562	Hutchinson's Lithotome.....		5 25



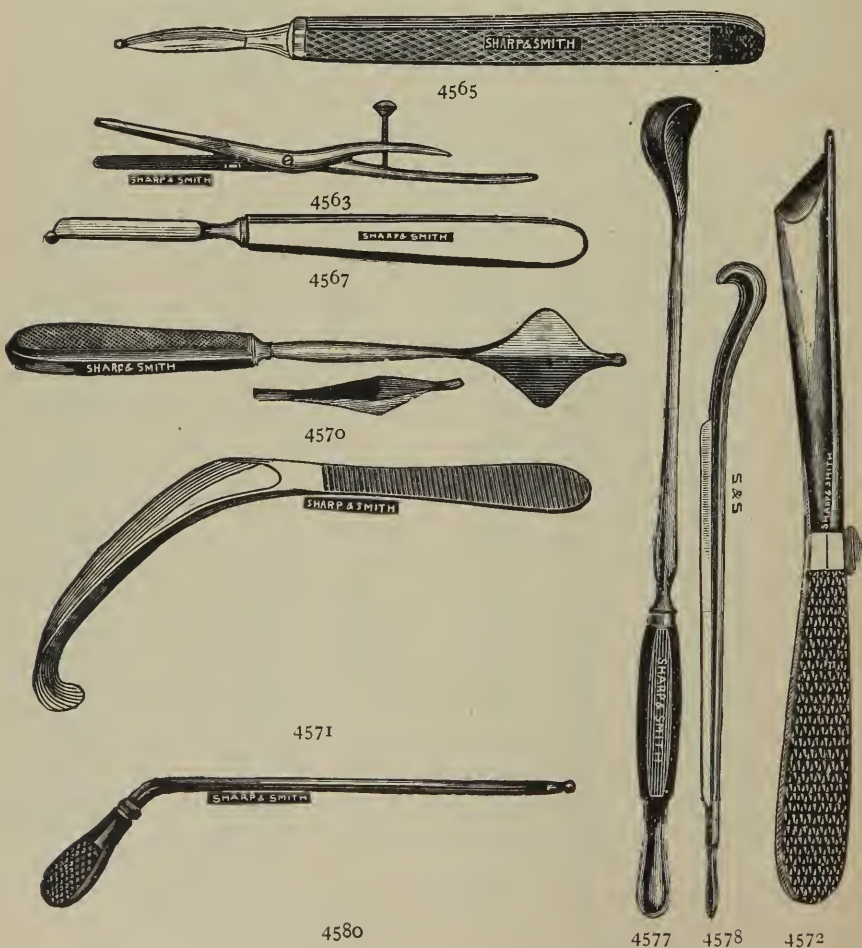
4558



All instruments designated by a * are illustrated.

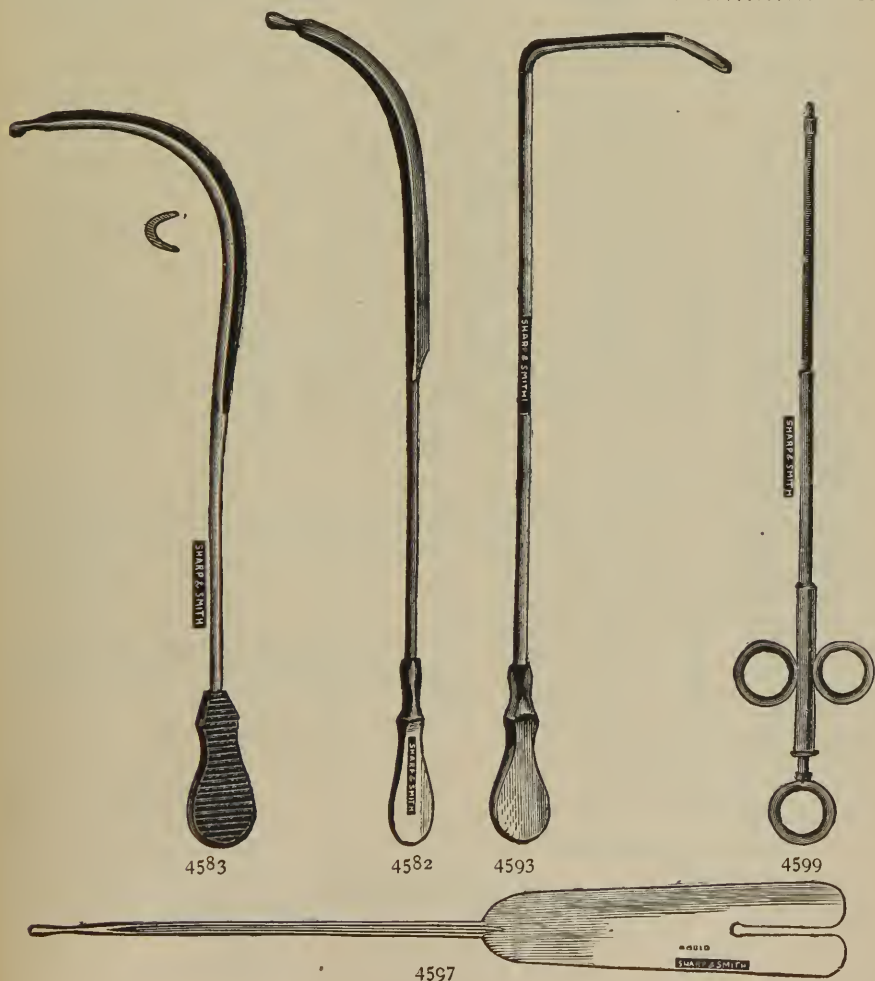
URETHRAL INSTRUMENTS—MEATOTOMES.

FIG.		
*4563	Gouley's Meatotome.....	2 25
4564	Mitchell's ".....	16 50
*4565	Otis' ".....	1 30
4566	Civiale's ".....	3 75
*4567	Piffard's ".....	1 00
4568	Simpson's ".....	5 25
4569	Piffard's Meatometer.....	85
*4570	Bush's Gorget.....	3 40
*4571	Hooked Gorget.....	2 25
*4572	Physick's " two blades... ..	4 85
4573	Ordinary " Blunt.....	1 90
4574	Keyes' Blunt Gorget.....	1 85
4575	Scoop and Gorget.....	1 85
4576	Sims' Scoop.....	1 50
*4577	Luer's ".....	1 85
*4578	Scoop and Conductor.....	1 75
4579	Dowell's Gorget and Staff.....	4 25
*4580	Little's Lithotomy Director.....	1 15
4581	Gouley's ".....	1 15

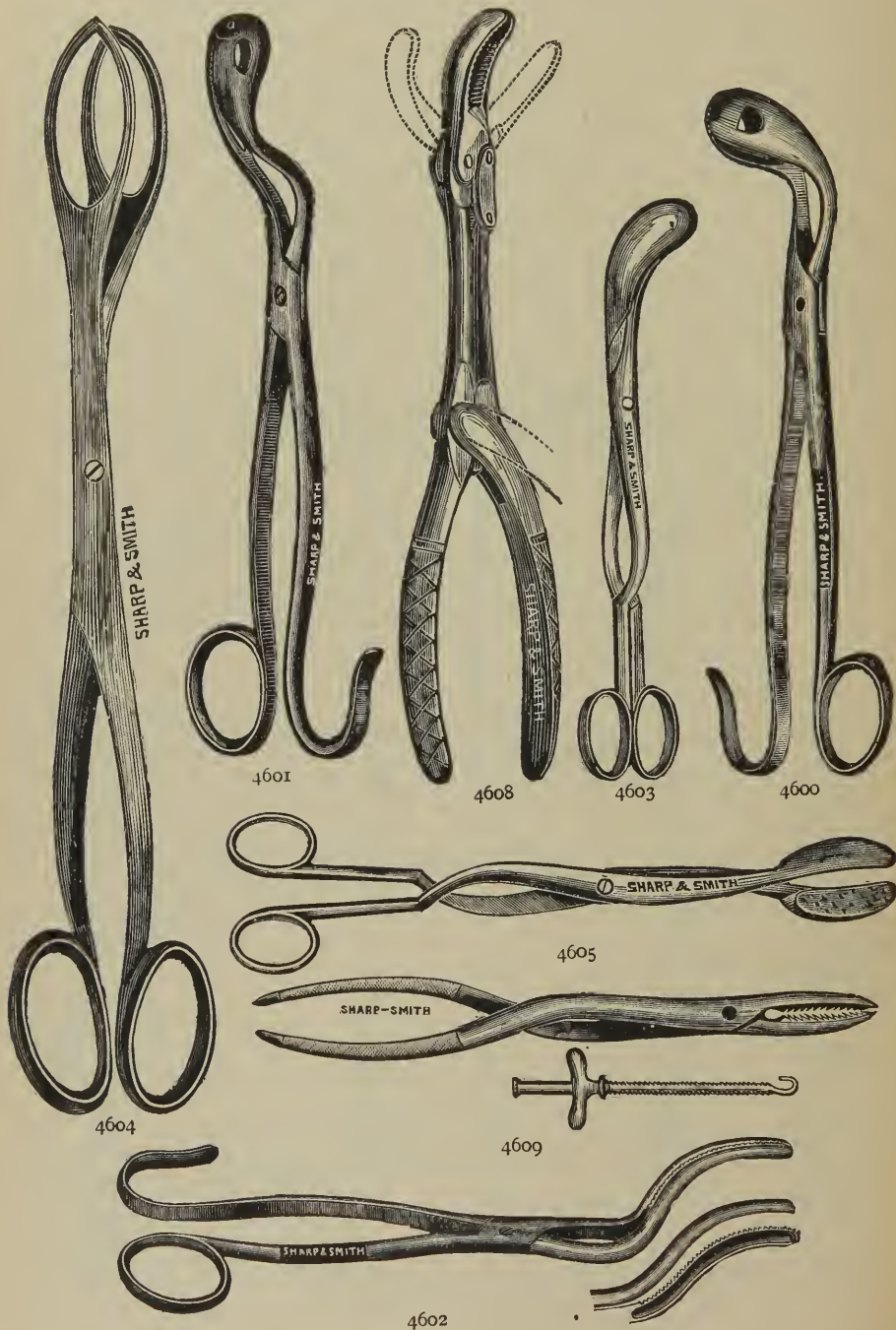


LITHOTOMY STAFFS.

FIG.			
*4582	Markoe's Lithotomy Staff	.....	1 50
*4583	Little's " "	.....	1 50
4584	Lateral " "	.....	1 50
4585	Rectangular " "	.....	1 90
4586	Plain Steel " "	.....	1 35
4587	Walker's " "	.....	1 50
4588	Buck's " "	.....	2 25
4589	Whitehead's " " and Knife	.....	9 00
4590	Woods' " "	.....	1 75
4591	Hewitt's " " and Knife	.....	3 00
4592	Syme's " "	.....	1 35
*4593	Buchanan's Rectangular Lithotomy Staff	.....	1 85
4594	Wheelhouse's " "	.....	1 50
4595	Single Edge Circumcision Knife	.....	1 60
4596	Double " "	.....	2 00
*4597	Circumcision Probe and Spatula	.....	75
4598	Silver Urethral Applicators	.....	1 50
*4599	McCoy's " "	.....	2 00



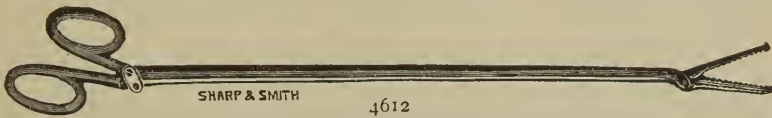
URETHRAL INSTRUMENTS—FORCEPS.



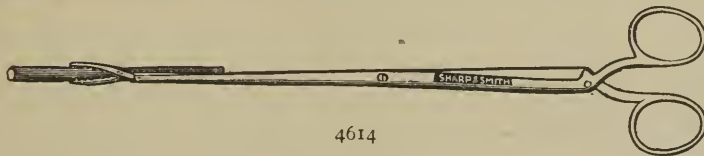
URETHRAL INSTRUMENTS—FORCEPS.

FIG.

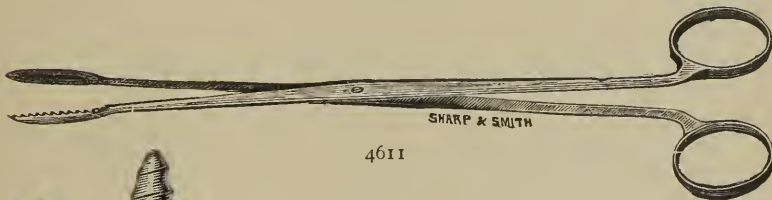
*4600	Curved Bladder Forceps	\$3 75
*4601	Double "	3 75
*4602	Thompson's Bladder Forceps	3 75
*4603	Curved Lithotomy Forceps	2 00
*4604	Teevan's " " fenestrated	2 25
*4605	Little's " " straight	2 00
4606	Stone Crushing Forceps	4 50
4607	" Extracting "	2 25
*4608	Gouley's Double Lever Lithoclast ..	6 00
*4609	Dolbeau's Lithoclast ..	5 25
*4610	" Lithotomy Guide	2 65
*4611	Thompson's Urethral Forceps	1 50
*4612	Alligator " " straight	4 00
46 3	Mathieu's " " curved	4 50
*4614	Collins' " "	4 00
*4615	Hutchinson's Prepuce "	1 75



4612



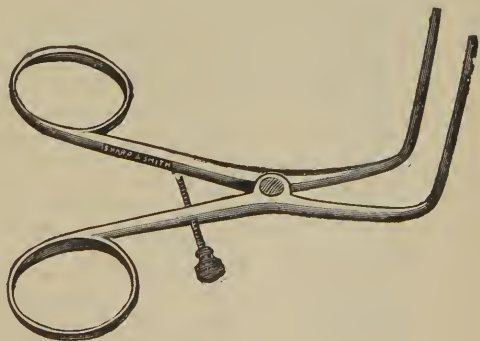
4614



4611



4610



4615

All instruments designated by a * are illustrated.

URETHRAL INSTRUMENTS—Lithotrites and Evacuators.

FIG.

*4616	Bigelow's latest Lithotrite.....	\$25 00
4617	Ferguson's ".....	18 75
4618	Teevan's ".....	26 25
*4619	Thompson's ".....	22 50
4620	Mathieu's ".....	11 25
4621	Jacobson's ".....	22 50
4622	Heurteloup's " and Mallet.....	18 75
4623	Gouley's ".....	26 25
4624	Keyes' ".....	26 25
4625	Chismore's Evacuating Lithotrite.....	18 00

LITHOLAPAXY.

Rapid Lithotrixy with Evacuation.

By HENRY J. BIGELOW, M. D.

The following are the chief points connected with the modification in lithotrixy which I have described, and for which I propose the above name.

1. The calculus, although not necessarily pulverized, is crushed as rapidly and completely as is practicable. The dust and fragments are immediately evacuated, and a serious source of irritation is thus removed.

2. This can be generally effected in a single operation.

3. The operation—performed of course under ether—may be if necessary, of one or two hours' duration, or even longer.

4. The method applies to larger stones than have been hitherto considered to lie within the province of the lithotritist. It also applies to small stones, nuclei, phosphatic deposits, and foreign substances.

5. Evacuation is best accomplished by a large tube, preferably straight with a distal orifice, the extremity of which is shaped to facilitate its introduction, and, during suction, to repel the bladder wall—and by an elastic exhausting bulb, which acts partly as a siphon. Below the latter is a glass receptacle for debris.

6. The best size for the tube is the largest the urethra will admit.

7. Such a tube is usually introduced with facility, if passed vertically as far as it will go toward the anus before changing its direction, and afterward directed almost horizontally, and passed by rotation through the triangular ligament. The first part of this rule applies also to the introduction of a lithotrite, and even a curved catheter. A free injection of oil is im-



4616.

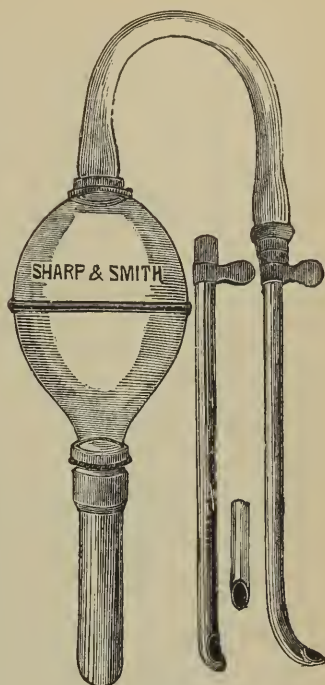
Bigelow's Lithotrite. portant.

8. A small meatus should be enlarged, or a stricture divulsed, to allow the passage of a large tube.

9. If the bladder be not small, a large and powerful lithotrite is always better than a small one.

10. That this may have room for action, the escaping water should be replaced occasionally, through a tube inserted a few inches into the urethra by the side of the lithotrite. But the bladder should not be over distended.

11. To save time, and also to prevent undue dilatation of the vesical neck, a non-impacting lithotrite is desirable. The jaws of a non-fenestrated instrument will not impact, if the male blade is furnished with alternate triangular notches by which the debris is discharged laterally, and also with a long thin spur at the heel fitted to a corresponding slot in the female blade—provided the floor of the female blade, especially at the heel, be made nearly on a level with its rim. To repel the bladder, the female blade should be longer and a little wider than is usual. It should have also low sides easily



4627.

Bigelow's Evacuating Apparatus. relying for strength less upon these than upon a central ridge below the heel. In the male blade of such a lithotrite the apices of the triangles should be a little blunted. Lastly, a non-fenestrated female blade protects the floor of the bladder, during a long sitting. A fenestrated instrument directs sharp splinters against it. The latter also delays the process of disintegration, by delivering through its opening the same fragments many times.



Stand for Bigelow's Evacuating Apparatus.

12. In locking and unlocking a lithotrite repeatedly in a long operation, it takes less time and is easier to turn the right wrist, as in my instrument, than to displace the thumb of either hand in search of a button or lever, as in previous instruments.

FIG.			
*4626	Bigelow's latest Evacuating Apparatus (see page 728).....	\$20 00	
*4627	Bigelow's old style " " and Stand.....	12 00	
4628	Otis' " "	18 00	
4629	Thompson's " "	11 25	
4630	Nelaton's " "	22 50	
4631	Clover's " "	10 50	
4632	Walker's " "	16 50	
4633	Keyes' straight Evacuating Tube with Obdurator.....	6 00	
4634	" curved " " " "	6 75	

NEW OPERATION FOR PHIMOSIS.

By P. G. SKILLERN, M. D.

Fig. 4646.

I wish to invite the attention of the profession to a method of performing the operation of circumcision which I originally proposed and have since performed upon several cases of phimosis. The object sought to be obtained is to excise both prepuce and mucous membrane at the same time, so that when the forceps are removed the glans penis will be at once entirely clear of both. In the ordinary manner of operating, it frequently occurs that the lining membrane of the prepuce covers and entirely surrounds the glans after the foreskin is removed, so as to necessitate slitting it up afterward. This is a real annoyance, and also protracts the healing considerably.

In performing this operation, the foreskin is to be retracted until the junction of skin and mucous membrane is reached, or as nearly so as may be desired; then three small hooks attached to a chain—somewhat similar to those contained in postmortem case, but smaller—are inserted from within outward, at



4646

equidistant points, first through the mucous membrane, then through the skin, thus fixing the two in their new relation to each other, so that when traction is made the mucous membrane is put upon the stretch. A grooved director is then passed around the glans, so as to break up any existing adhesions. Now the chain being kept taut, the forceps (see figure) are applied, and a threaded needle passed twice through the fenestra of the forceps, so as to leave two long threads passing through both skin and mucous membrane. The prepuce is then divided close to the blade of the forceps, and the latter removed. After ligaturing the small vessels, if necessary, the threads are raised on a director from the center between the remaining prepuce, and divided so as to leave four separate and distinct sutures, which, when tied, will leave both skin and mucous membrane nicely coaptated.

This is the operation as done with the author's forceps. The results obtained by it in several cases in which it has been used, have been all that could be desired.

48 SOUTH BOND STREET, PHILADELPHIA.

A NEW PROCEDURE IN THE OPERATION FOR PHIMOSIS.

Fig. 4649.

By R. J. LEVIS, M. D., Surgeon to the Pennsylvania Hospital, and to the Jefferson College Hospital.

The object of the instrument illustrated in the cut is to facilitate the entire excision of the inner inelastic mucous membrane of the prepuce, without removing any, or more than may be required, of the outer normal skin. In some cases of phimosis total circumcision is necessary, but in a considerable proportion only a partial ablation of preputial integument is essential, and the inconvenience may be readily overcome by the method I suggest, without causing disfigurement, or indeed, making much change from the normal appearance of the organ. In most instances only the inner lamina of the preputial fold is morbidly involved, and the excessive removal of the outer layer is an error which is liable to be committed in the usual manner of operating.

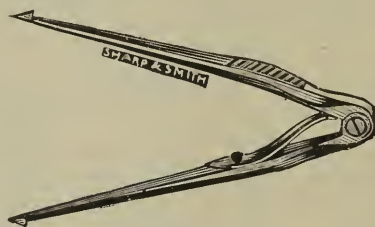
LEVIS' OPERATION FOR PHIMOSIS—Continued.

In general form the instrument somewhat resembles the ordinary mathematical compasses or dividers. The limbs, or blades, terminate in blunt points, and are deeply serrated on their outer surfaces, with points or teeth set backward, like fine saw teeth, for the purpose of firmly holding the mucous membrane, without the risk of slipping when traction is made. The blades are forced apart by a thumb screw.

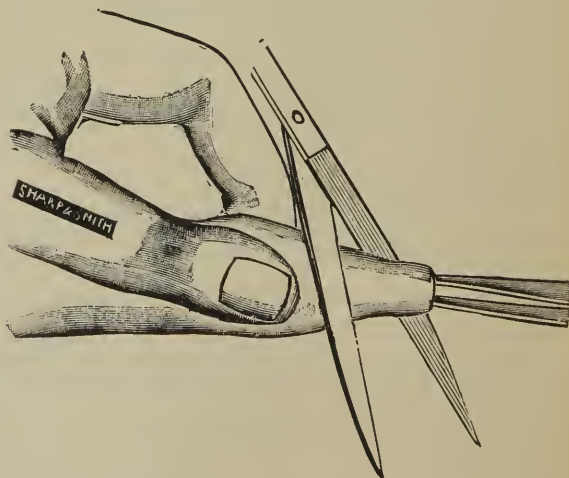
In operating, the blades, closed to a point, are introduced within the prepuce up beyond the corona of the glans. They are then, by turning the thumb screw, strongly separated, so as to render the mucous membrane tense. Traction is then made, and the outer elastic skin is drawn back fully, so as to be away from the portion to be excised, and excision is effected by transfixing the prepuce through the middle with a bistoury, and cutting laterally in both directions toward the blades of the instrument. Any remaining portion of inelastic tissue may be removed with the scissors, and the operation is completed by attaching the cut edge of skin to the edge of mucous membrane remaining around the cervix by a few stitches. In this manner the inner inelastic mucous membrane may be removed, while all the normal outer integument remains.



4649



4651



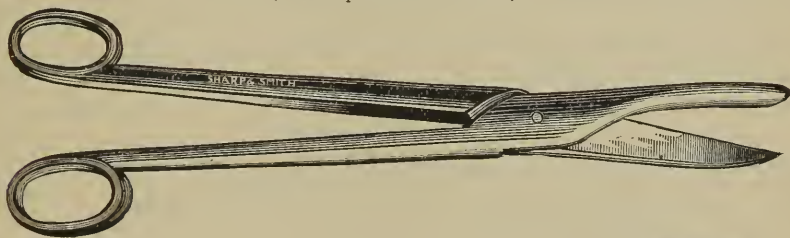
4651.—Showing Girdner's Method of Operation.

Figure 4651. This instrument is introduced *closed* into the preputial opening, then, relaxing the spring, causes the barbs to transfix, first the mucous membrane, and then the skin.

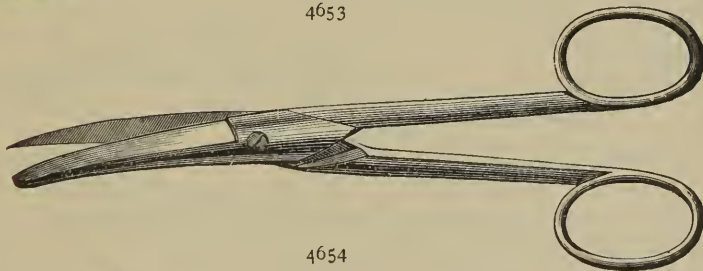
URETHRAL INSTRUMENTS—PHIMOSIS, VARICOCELE.

FIG.		
4652	Baruch's Circumcision Scissors	2 00
*4653	Taylor's "	3 75
*4654	Curved on flat "	1 00
*4655	Lewis Varicocele Clamp	3 00
4656	Sayre's "	3 00
*4657	Andrews' "	4 00
4658	Wood's "	1 85
*4659	Henry's Scrotal "	6 00
*4660	" "	6 50
*4661	" Cartilage Scissors	3 75
4662	Masturbation Clamp.....	75
4663	Keyes' Varicocele Needle	1 00
4664	Whitfield's "	1 00
4665	Wyeth's Cocaine "	1 00
4666	Milano's Scrotal Compressor	1 25
4667	Carroll's "	1 35
4668	Howe's "	2 25

(See Suspensories in Index).



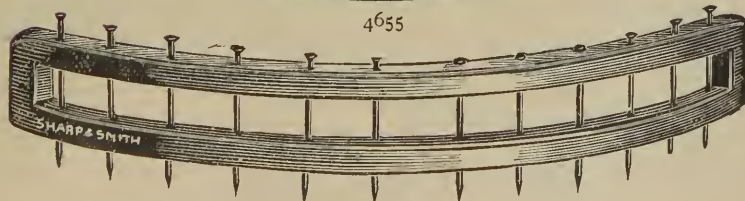
4653



4654



4655



4657

URETHRAL INSTRUMENTS—VARICOCELE.

[Extract from the "Medical Record," May 28th, 1881.]

(Read before the New York Academy of Medicine, April 21st, 1881.)

REMARKS ON AMPUTATION OF REDUNDANT SCROTUM FOR THE RELIEF OF VARICOCELE.

Illustrated with New Instruments to Facilitate the Operation.

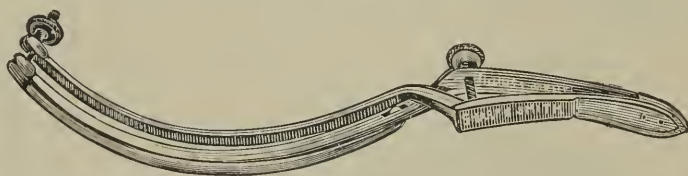
By M. H. HENRY, M. A., M. D., Late Surgeon-in-Chief State Emigrant Hospitals, Ward's Island, New York, Etc., Etc.

* * * In the removal of a redundant scrotum in the manner I shall describe, for the relief of varicocele, no more than ordinary skill is called for. The success of any delicate surgical operation depends mainly on the care and management before, during, and subsequent to the operation. I have ventured to allude to many little details because I am fully impressed that they bear a most important relation to the chances of success.

Success in any operation depends on attention to details. Failures are too frequently the result of neglect of these so called trifles. Cases of minor surgery have frequently—by neglect of details—been converted into cases of major importance.

DESCRIPTION OF INSTRUMENTS.

This instrument, which I have called scrotal forceps or clamps, consists of two parts (Fig. 1.) The main part of the instrument has two double curved



4659—Fig. 1.

blades, made of steel, about ten inches long, sufficiently heavy to give strength and admit of pressure without injury when in contact with the tissues. The handles are large enough to admit of a good grasp without cramping. That part of the instrument below the joint is curved as nearly as possible according to the natural lines of the raphæ, from the upper anterior part of the scrotum down to and under the scrotum, so that it embraces, when placed in front of the scrotum the entire and exact portion which it is desired to remove. The coating surfaces are evenly notched to prevent the tissues from slipping, affording a more secure hold on the soft parts, with less pressure and less injury than smooth surfaces. The blades are only thick enough to give strength, without leaving too much tissue in front.

The handles are curved so that while they maintain a direct median line, they do not interfere or press on the genital parts. The double spring, besides giving additional security and compactness, renders them, to a great extent, self-acting, easy of manipulation, and that, at times, of very great consequence, ability on the part of the operator to perform the operation without the aid of additional assistance.

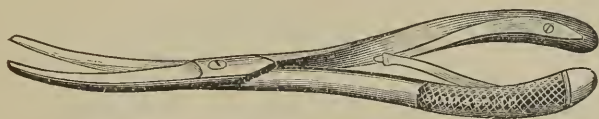
The screws in the handle and at the end of the blades afford a complete and perfect hold of the parts to be removed. They are not adjusted until the operator is perfectly satisfied that he has embraced the exact portion to be removed in front of the blades.

URETHRAL INSTRUMENTS—VARICOCELE.

The extra blade is made of steel, nickel plated, and is maintained in the right anterior surface of the clamp by two small pins that fit in grooves cut in the clamp. It is easily inserted with a little pressure, and removed as easily by pressing downward and forward; it is then dislodged by slightly raising the extreme end. The extra blade, when in position, leaves a fenestra to afford the surgeon the facility of inserting all his ligatures, should he prefer it, before dividing the parts. The thickness or amount of the tissue left in front of the main blade and between that and the extra blade, which is the guide for the part to be removed, is ample to assist union, and if the division is a clean one, and the stitches are close and evenly inserted, the pressure and tension are so slight or rather, so divided over the entire cut surfaces, that there is little probability of ulceration through the stitches before union has taken place.

When the part has been removed, the extra blade is displaced, leaving a free border exposed in front of the main blade about a quarter of an inch in thickness. In a few minutes the whole wound can be stitched without any inconvenience. The clamp is, of course, not removed until this is accomplished.

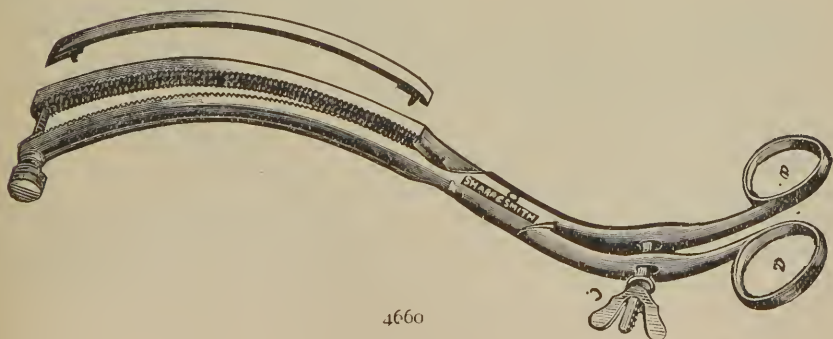
Besides the clamp, the only instruments necessary are the scissors or scalpel, needles, with either silk or fine silver wire for sutures, a few acupressure needles, a few *serres-fins*, silver pins and some adhesive plaster.



4661—Fig. 2.



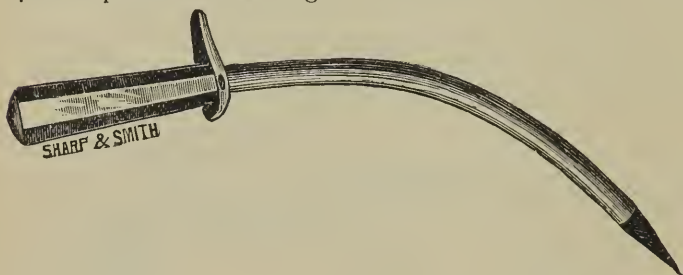
4658-A King's Varicocele Clamp.....net \$4 50



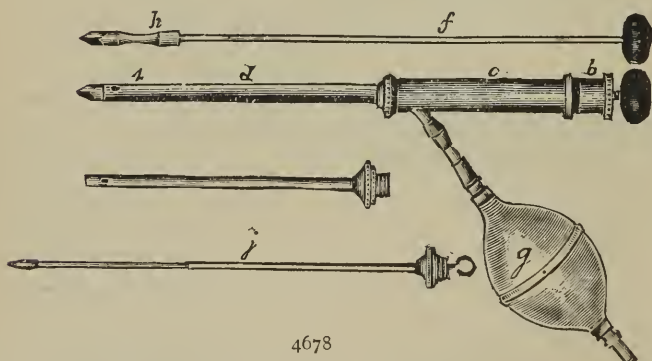
4660

URETHRAL INSTRUMENTS.

FIG.					
4669	Aspirators.	See pages 540 to 548.....	\$		
4670	Harrison's Bladder Trocar.....			8	25
4671	German Silver Hydrocele Trocar.....			1	00
4672	Set of 4	" " metal case....		3	50
4673	" 3	" " " "		3	00
*4674	Curved	" "		1	50
4675	Reversible	" "		1	00
4676	" (with set screw) Hydrocele Trocar....			1	00
4677	Cock's Instrument for tapping the bladder per rectum....			11	25
*4678	Getz' Trocar and Aspirator in case.....			6	40
4679	Bumstead's Insufflator.			3	75
4680	Mallez	"		1	40
*4681	Straight Tube	"		1	00
*4682	Spermatorrhœa Ring.....				50



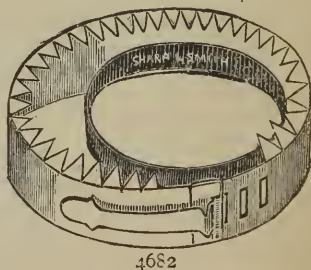
4674



4678

For description, see pages 548 and 549, and below.

NOTE.—A convenient and perfect female catheter is formed by the parts *a*, *b*, *c*, *e* and *f*, and the largest size canula and a catheter tip (instead of trocar tip) attached to *f*. If the bladder is to be injected or washed, the instrument is used as when washing any other cavity. To use the instrument for washing or injecting the male bladder use parts *b*, *c*, *e*, *i* and *g*, with such size of canula attached to *c* as the end of will slip tightly into the opening of the male catheter.



4682

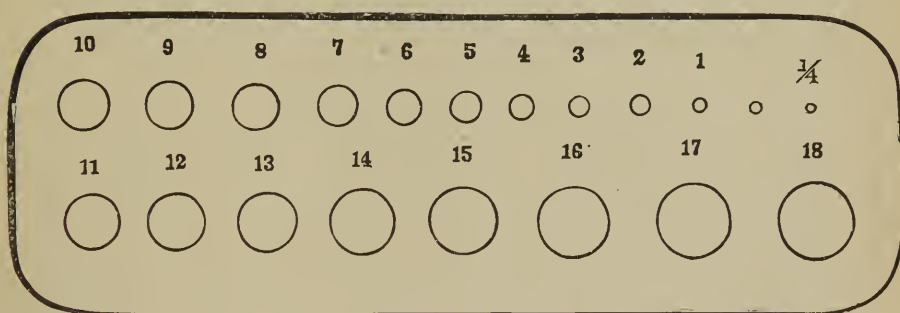


4681

URETHRAL INSTRUMENTS.

FIG.

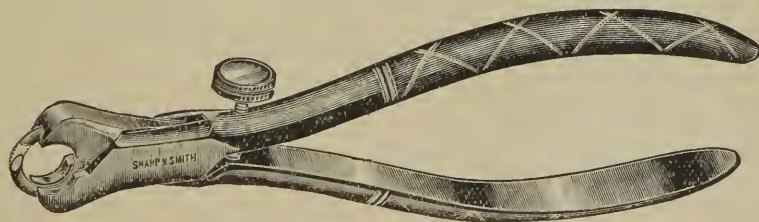
4683	Hunter's Urethral Tourniquet.....	\$ 4 50
4684	Dolbean's Lithotomy Dilator.....	18 00
4685	Walker's Prostatic Divulsor	1 50
4686	Penis Congester.....	2 00
4687	Bumstead's Lamp.....	2 40
4688	Hard Rubber Caustic Holder.....	40
4689	Dick's Caustic Catheter Holder.....	2 65
4690	Debris Tube and Obdurator.....	1 85
4691	Circumcision Spatula.....	40
4692	Mussey's Bladder Curette.....	2 25
4693	Gouley's Sharp Hook.....	1 00
4694	Brown's Air Tampon for Hæmorrhage.....	3 00
	Pasteboard Catheter Scales. No charge.	
	Metal Catheter Scales, all Gauges.....each.	3 00



4696

A NEW INSTRUMENT FOR PREVENTING MASTURBATION.

By S. T. FERGUSON, M. D., Joliet, Ill.



DIRECTIONS FOR USING THE ANTI-MASTURBATING RINGS.

First put small ring in instrument with the opening in ring looking from the instrument, then slip the large ring through the opening in small ring; now put the prepuce slightly on the stretch, then insert the opening in small ring on to the middle of upper side of prepuce, say a quarter of an inch, and press together the handles; then by forcing the sharp points of the small ring together through the prepuce and bringing the points together; the other two are put on in the same way, dividing the distance about equal. Leave them on for three or four months, or until you are sure the patient will not fall back into the habit.

Price of Clamp Forceps, \$3.75. Silver Rings, small, 35c. each; large, 50c. each.

APPLIANCES FOR DEFORMITIES AND DEFICIENCIES, CONGENITAL OR ACQUIRED.

PRICES QUOTED ARE TO PATIENTS.

The period when the mechanical treatment of deformities was chiefly a question of brute force is not so remote that the remembrance of it should have altogether escaped from the minds of the medical professors. Formerly surgeons sought to compel by violence, directly or indirectly applied, a distorted spine to resume its normal position. An idea of the primitive method is to be found in the practice, now extinct, of constructing apparatus for the treatment of spinal curvature upon an ideal type of a symmetrically formed spine, and exercising force with the intention of causing the curves of the distorted spinal column to approximate to those of the instrument. The mechanist now recognizes the fact that the laws of nature must be set in operation. Hence he applies himself diligently to study those laws by which the symmetry of the human frame is maintained, as well as the mode of action of the different causes which lead to a deviation from the normal standard. Anticipating these causes, he seeks to check the further progress of the disease, and to remedy its sure results. He no longer seeks to secure his object by a mere empirical use of mechanical force, but he seeks to attain it by a just adaptation of the means at his command, founded upon a careful appreciation and accurate calculation of the kind, direction and amount of force required. The evils of an empirical system of mechanical appliances were shown not only by the inefficiency or actual unfitness of the apparatus made for a given purpose, but also by the imperfection of their construction. They were commonly made either more complex than was necessary, or so simple as to be worthless, or so heavy and cumbersome as to weary the body, and so act as to constrict the muscles, or so light as to yield to the distension. Lightness of an instrument is too often sought at the expense of more important properties.

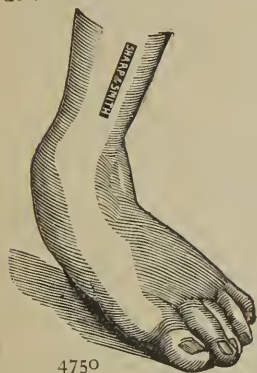
These evils are the result of an insufficient knowledge of the lesions to be created. The scientific mechanist constructs his appliances from an accurate estimate of the character and arrangement of the force needed, and of the strength of material required to meet the object he has in view. Thus he avoids on the one hand too great complexity, and on the other a deceptive simplicity of construction. He thus combines durability with the greatest attainable lightness consistent with efficiency. This branch of mechanical surgery needs a special training, and cannot be acquired without a certain amount of surgical education.

We pay special attention to the careful and correct fitting of braces.

Surgeons residing at a distance whose patients cannot visit us for adjustment, will have their orders promptly attended to by sending us the particulars found accompanying each illustration.

DEFORMITY APPARATUS.

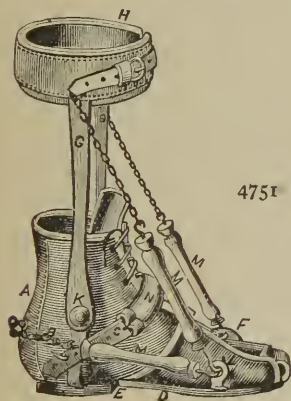
We manufacture a variety of shoes to meet every form which the foot can assume. There are four varieties of primary club foot, viz. Talipes Valgus, Equinus, Varus and Calcaneus. Two or more of these varieties may exist together, forming sub-varieties. Talipes Valgus, or lateral yielding of the ankle joint outward, combined with extension and sometimes obliteration of the arches which compose the plantar surface, or sole of the foot, is among the most common of these deformities of the lower extremity, which calls for mechanical treatment.



4750

ing flexion and eversion, and an elastic strap in front to secure heel in position; the upper leather laces neatly over the foot, adapting itself more perfectly than if arranged with straps and buckles.

Fig. 4750 exhibits diminution of the niced arches of the foot; the toes are diverted, and the external malleolus buries its contours in the external tarsal fossa. In every case it should first be decided whether divisions of the tendons be advantageous, or per contra. In severe cases of Valgus there can be but little doubt that as the peroneal muscles aid in raising the external margin of the foot, divisions of their tendons will often materially lessen the period of mechanical treatment by instantly removing one of the main obstacles, by tenotomy. But a large portion of cases recover without operation by using Dr. L. A. Sayre's Club Foot Shoe, (Figs. 4751 and 4751-A.) The shoe pictured below is arranged for valgus or varus. This simple but ingenious shoe, contrived by Dr. Sayre, is so constructed that it can be applied and secured accurately to the deformed foot, before the elastic force is attached, instead of adjusting the foot to the shoe. This shoe is made with two lateral rods of steel running up to the calf of the leg, with a joint for its ankle, and it has in the sole opposite the medio-tarsal articulation, a ball or socket or universal joint, and three elastic muscles for the purpose of making flexion and eversion, and an elastic strap in front to secure heel in position; the upper leather laces neatly over the foot, adapting itself more perfectly than if arranged with straps and buckles.



4751

Figs. 4751, and 4751 A. Sayre's Club Foot Shoes.

In ordering these shoes, send the following Measurements.

INCHES.

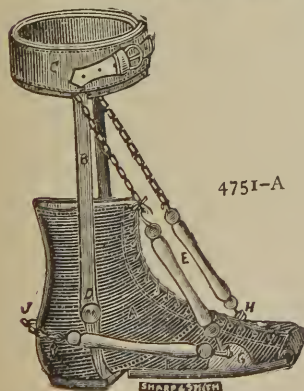
- 1 Length of sole of foot.....
- 2 Circumference of calf.....
- 3 Circumference of instep.....
- 4 Circumference of ball of foot.....
- 5 Circumference above ankle.....
- 6 Length from floor to garter.....
- 7 Right or left foot?.....
- 8 Talipes—varus or valgus?.....

Price to patients, Single Shoe \$10 00 to \$14 00

“ “ per pair 20 00 “ 28 00

(According to size.)

In ordering Club Foot Shoes please send outline of foot on paper.



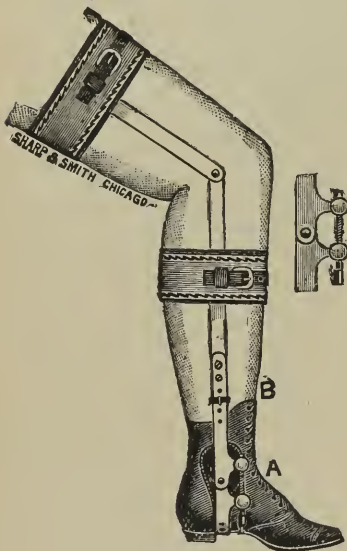
4751-A

Fig. 4751-A is same as 4751, except that pressure in front to keep heel in position is of "leather," and directly next the foot inside of shoe.

DEFORMITY APPARATUS.—TALIPES VARUS.

This deformity is, in a majority of instances, of congenital origin. Its distinguishing features are retraction of the heel, an inversion of the toes, and a rotation upward of the entire foot, the inner lateral margin of which very often holds a position rectangular to that of the normal position of the limb. The foot, as is shown, is longitudinally turned, so that the external margin stands on the floor, whereas the internal margin is uppermost. The foot touches the ground anteriorly from the external malleolus; the back of the foot has a forward and the plantar surface a backward direction, which, of course, implies inversion of the toes.

Fig. 4752. PROF. GUNN'S APPARATUS FOR TALIPES VARUS.



4752.

Directions for Measurement.

1. Patient's name (or sex).
2. Which leg (or both). Inches.
3. Length from floor to ankle joint.
4. Length from floor to knee joint, inner inside.....
5. Length from floor to knee joint, outside.....
6. Length from floor to upper third of thigh.....
7. Circumference of ankle.....
8. Circumference of calf.....
9. Circumference of upper third of thigh.....

It is necessary that we should have the shoes to fit the brace to, when making.

Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

- | | |
|------------------------------------|---------|
| Length of sole of foot..... | Inches. |
| Circumference of ball of foot..... | " |
| " of instep..... | " |
| " above ankle..... | " |

This apparatus is especially useful in cases of children one year and upward. Steel bars pass up on each side of the leg, having joints at knee and ankle, which allows motion of joints and at the same time prevents heel from drawing up. The part extending to upper third of thigh prevents brace from turning on leg, holding the foot in natural position. We have found by experience that all short appliances extending only to garter will turn on leg, and thus allow foot to turn. In all cases where the foot cannot be held straight with the hands without pain the tendons should be cut, so the foot can be placed in a straight shoe. The operation should not be done until apparatus is ready to apply at once.

To apply the brace the screw at ankle-joint should be removed to enable you to get heel well down in shoe. The shoe must be laced tightly before placing brace in position on leg. Put screw in place after brace is adjusted.

This apparatus can be lengthened as child grows, and new shoes put on as often as required. Full tension of screw at ankle should not be put on tendo Achilles directly after operation, but should be gradually tightened for the first three or four days.

Fig. 4752 Price to Patients for Apparatus for one leg.....\$15.00 to 20 00
 " " " " " both legs..... 30.00 to 40 00

(According to size.) Shoes extra.

DEFORMITY APPARATUS.

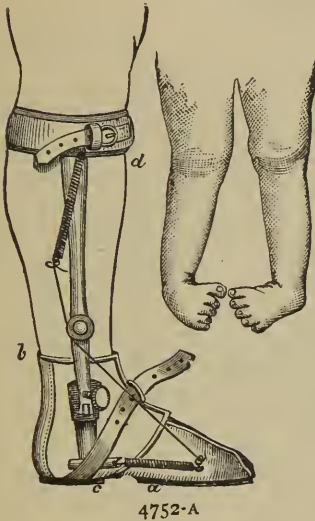


Fig. 4752-A. IMPROVED SHOE FOR TALIPES VARUS.

Directions for Measurement.

1. Length of foot.
2. Circumference of calf.
3. " of instep.
4. " of ball of foot.
5. " above ankle.
6. Length from floor to garter.
7. Right or left foot.

Price to Patients, one shoe (according to size).....\$10 00 to 14 00

Price to Patient, two shoes (according to size).....\$20 00 to 28 00

TALIPES EQUINUS.

The chief anatomical characteristic is a permanent contraction of the tendo Achilles, by which the os calcis, the posterior pier of the plantar arch, is raised to such an extent as to cause the whole weight of the body to pass through the front of the foot only, thus destroying the natural heel and toe action during progression. Fig. 4753 shows Talipes Equinus. The plantar arch is materially increased, and the toes, more especially the large ones, are drawn back. The Achilles tendon is found to be extremely tense, and is rendered still more so by any attempt to flex the foot.

Fig. 4754. SHOE FOR TALIPES EQUINUS.

Directions for Measurement.

SHOES EXTRA.

1. Patient's name (or sex.)
2. Patient's age.
3. Weak ankle, resembling varus or valgus?
4. Right, left, or both feet?
5. Tendo achilles contracted?
6. Length from floor to ankle joint.....Inches.
7. Length from floor to garter.....
8. Circumference of calf

It is necessary that we should have the shoes to fit the braces to when making.

Patients will furnish their own shoes (which should be laced ones) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

Length of sole of foot.....In.

Circumference of ball of foot... "

" of instep..... "

" above ankle.... "

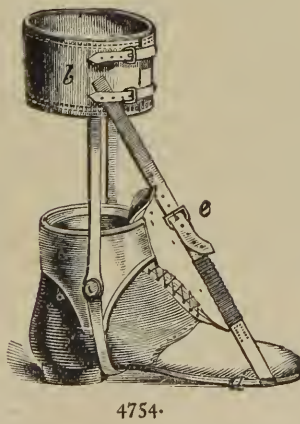
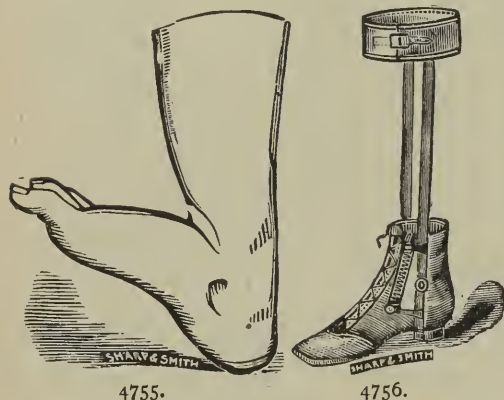


Fig. 4754 Price to Patients for one brace (according to size) ..\$8 00 to 12 00
 " " " two braces " ..16 00 to 24 00

DEFORMITY APPARATUS.

TALIPES CALCANEUS.

The patient walks on the heel with the toes uplifted without much lateral distortion (see Fig. 4755); the plantar arch is contracted, by which occurrence the outer extremities of the metatarsal bones and the os calcis will be approximated, and the sole of the foot is almost invariably contracted in its long axis. These are the distinguishing features of this deformity. In such cases, shoe figure 4756 is most efficient.



Directions for Measurement.

1. Patient's name.
2. " weight.
3. " age.
4. Right or left foot.
5. Length from sole to ankle joint.
6. Length from sole to calf.
7. Circumference of calf.

(Shoes extra.)

Fig. 4756 Price to patients for brace for one leg.....\$10.00 to 20 00
 " " " " two legs..... 20.00 to 30 00

It is necessary that we should have the shoes to fit the braces to when making. Patients will furnish their own shoes (which should be laced ones) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

Length of sole of foot.....Inches.

Circumference of instep....."

Circumference of ball of footInches.

" above ankle."

Fig. 4758 represents an Apparatus for Weak Ankle, and after treatment of Talipes, which will retain the limb in correct position in cases where there is a tendency to Club Foot. The instrument is attached to an ordinary laced boot, has two lateral rods connected at the calf, with padded band, and fastened with straps and buckles, has an ankle joint, a stud above and below for the purpose of applying a strap of stout leather to hold the ankle in position. This strap is used only in Weak Ankles. In after treatment of Talipes the same mechanism is used, but furnished with a stop ankle joint, the object of which is to maintain the plantar surface in a horizontal position, especially where it manifests any tendency to obliquity. Since the stems are riveted to the sole of the shoe, and connected at the calf by the padded band, they compel the bottom of the foot to remain at right angles with themselves. It is impossible for the sole to become oblique without a shortening of one of the perpendicular bars.

See following page for illustration of Weak Ankle Braces.

DEFORMITY APPARATUS.

WEAK ANKLE BRACE.

Directions for Measurement.

- 1 Patient's name (or sex).
- 2 Patient's age.
- 3 Weak ankle, resembling varus or valgus?
- 4 Right, left, or both feet?
- 5 Tendo Achilles, contracted?
- 6 Length from floor to ankle joint.....Inches.
- 7 Length from floor to garter....."
- 8 Circumference of calf....."

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoes worn, or following measurements if they wish us to furnish shoes.

- Length of sole of foot.....Inches.
 Circumference of ball of foot....."
 " of instep....."
 " above ankle....."

WEAK ANKLE BRACE.

Directions for Measurement.

- 1 Send laced shoe to fit foot, or give size of foot.
 - 2 Patient's name (or sex).
 - 3 Length from floor to ankle.....Inches.
 - 4 Length from floor to garter....."
 - 5 Circumference of ankle....."
 - 6 Circumference of garter....."
 - 7 Which foot, right or left.
 - 8 Which way ankle bone tips, in or out.
- *4758 Price to Patients, for single brace according to size.....\$8 00 to \$10 00
 *4759 Price to Patients, for two braces, according to size.....\$16 00 to \$20 00

Shoes Extra.

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

- Length of sole of foot.....Inches.
 Circumference of ball of foot....."
 " of instep....."
 " above ankle....."

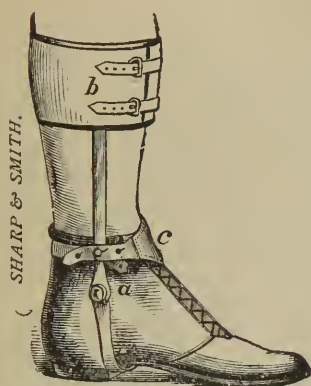
Fig. 4760—BICGS' BUNION APPARATUS.

This apparatus consists of a delicate lever of spring steel, with an oval ring in the center which is provided with hinges at its anterior and posterior margin. The apparatus is attached to the instep by a laced band, and the toe to the extremity of the spring by a piece of webbing. It affords the articulation freedom of motion in the natural plane, whilst the malposition of the toe is gradually rectified by constant lateral traction. It can be worn in a shoe.

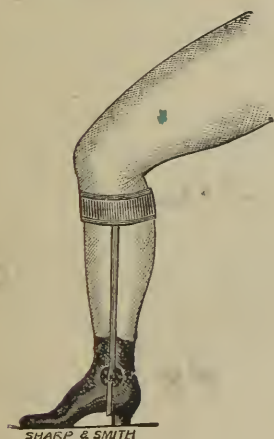
Directions for Measurement.

- 1 Place the foot on paper and trace with pencil.
- 2 Circumference of ball of foot.....Inches.
- 3 Circumference of instep....."

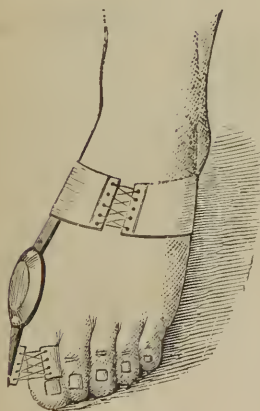
Price to Patients, single.....\$ 8 00 to 12 00
 Price to Patients, double.....16 00 to 24 00



4758



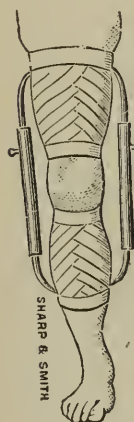
4759



4760

DEFORMITY APPARATUS.

Fig. 4761 represents an instrument for extension of the Knee Joint. It is constructed in the following manner: Two bands or collars of stout sheet iron, about one inch wide, embrace the limb, the one just above the ankle, the other at the upper third of the thigh. The bands are hinged posteriorly, and in front slide together like a dog collar. They are connected on either side by a firmly riveted steel rod, in the center of which works a screw, which can be retained at any given point by a small thumb screw working in its slide, and fastening to the thread of the larger screw. To apply this instrument the Canton flannel adhesive plaster is required. It is applied from the ankle to a point just below the knee, and from a point just above the knee to the top of the instrument upon the leg perpendicularly. The plaster strips are secured in their place by a roller bandage. The connecting rods are extended, the articulating surfaces of the tibia and femur separated, and the limb brought nearly straight again. Sponge is used to absorb the deposits that generally form in and around the joints in this condition of chronic inflammation. If this instrument is applied in the manner above described, and when extension is exerted, the patient will be enabled to bear almost the entire weight of the body upon the limb. With this instrument and the aid of a pair of crutches, the patient will be enabled to exercise in the open air with perfect comfort.



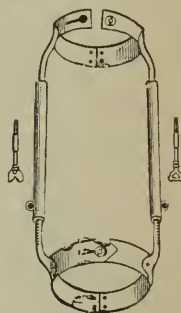
4761 Applied.

SAYRE'S KNEE EXTENSION APPARATUS.

The necessary measurements in ordering this apparatus are as follows:

1. Circumference of Thigh.... Inches.
2. Circumference of Leg above Ankle.. “
3. Circumference of Knee..... “
4. Length from above Ankle to upper third of Thigh..... “

Price to Patients.....\$20 00



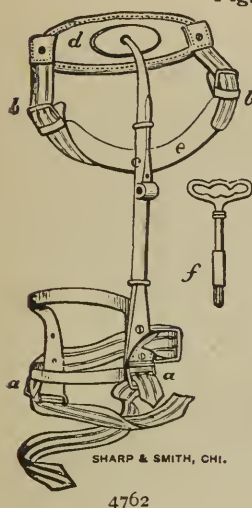
4761.

Fig. 4762 represents a splint for Morbus Coxarius. The instrument consists of a flange of steel three or four inches long and about one inch wide (according to the size of the patient), slightly curved, and which, when cushioned, fits directly under the crest of the ilium. At each extremity is a buckle to secure the perineal band, made of buckskin, filled with bran or stuffed with hair, and with ends of web (non elastic) to attach to the buckles. On the outer side of the flange is a ball and socket, or universal joint, to receive the head of the splint which runs down the thigh to within three or four inches of the extremity of the femur, and is capable of being made longer or shorter by a ratchet worked with a key. Near its lower extremity is attached a branch, which, curving over the thigh, extends as far down as the main splint, and both terminate in broad ends with a roller, over which a webbing attached to the adhesive plaster plays, and is secured to the splint by the means of buckles near each lower extremity.

See next page for description of Fig. 4762.

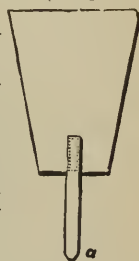
DEFORMITY APPARATUS.

Fig. 4762.—SAYRE'S HIP APPARATUS.



The Application of the Splint.

The application of the splint is as simple as its construction. Take strong adhesive plaster, spread on twilled muslin; cut two fan-shaped pieces (shape of accompanying cut), one large enough to reach from the perineum to within two or three inches of the condyle of the femur, on the inner side of the thigh, the other from the trochanter major to a point directly opposite the end of the inner plaster. Sew on the narrow end of each (a) one of the webbings represented (aa) [not on the sticky side.] Apply them to their places, and after pressing them with the warm hand, to obtain a firm adhesion, secure them further by a well adjusted roller. The instrument contracted, is now laid over the thigh, the webbing (a) firmly fastened over the rollers, the buckles (aa) and the remaining one around the thigh. The perineal band is now adjusted rather



firm, and the instrument extended with the key, just enough to make the patient comfortable, and then locked by pulling the slide down over the spring.

In order to prevent the limb from swelling below the bandage, Dr. Sayre recommends the use of an elastic stocking or knee-cap.

Price to Patients.....\$15 00 to 18 00

Fig. 4763.—SAYRE'S IMPROVED HIP APPARATUS.

Dr. Sayre has improved his first device in many respects, and the instrument now employed by him is a short thigh splint, as shown in Fig. 4763.

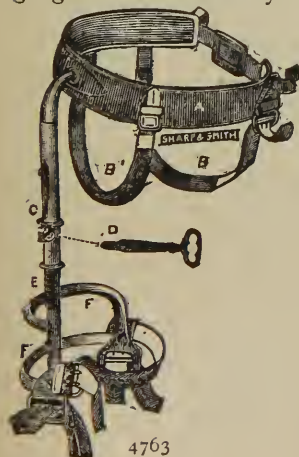
It consists of a pelvic band passing partly around the body under the crest of the ilium, well padded on its inner surface, to which usually two perineal straps are fastened for counter-extension; its outer surface holds a ball and socket joint, from which runs a steel bar or rod down the outer side of the thigh to within about two inches of the lower end of the femur. This outer bar is divided into two sections, one running within the other, and gauged or controlled by a ratchet and key, which can make it longer or shorter.

At the lower extremity of this outer bar is a projecting branch going over to the inner surface of the thigh to receive the attachments of the plaster. Both of the lower extremities terminate in a cylindrical roller, over which the tags of the plasters are attached to the two buckles placed at the lower ends of the apparatus.

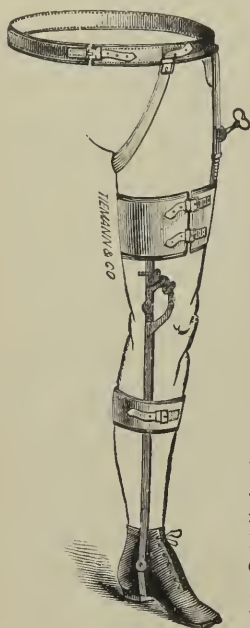
Directions for Measuring Figures 4762 and 4763.

1. Circumference of body between crest of Ilium and Trochanter Major.....Inches.
2. Distance from same point to center of Knee-joint....."
3. Circumference of Thigh two inches above Knee-joint....."
4. Circumference of middle of Thigh...."
5. Mention if for right or left Hip.
6. Sayre's or Sayre's Improved Splints.

Price to Patients.....\$17 00 to 20 00



DEFORMITY APPARATUS.



4764

Fig. 4764.—Hutchinson's Hip joint Apparatus.

DIRECTIONS FOR MEASUREMENT.

1. Name of patient.
2. Age of patient.
3. Weight of patient.
4. Right or left leg.
5. Length from floor to ankle joint Inches.
6. Length from floor to knee-joint..... "
7. Length from floor to trochanter major.... "
8. Length from floor to crest of illium..... "
9. Circumference of calf..... "
10. Circumference of thigh..... "
11. Circumference of pelvis..... "

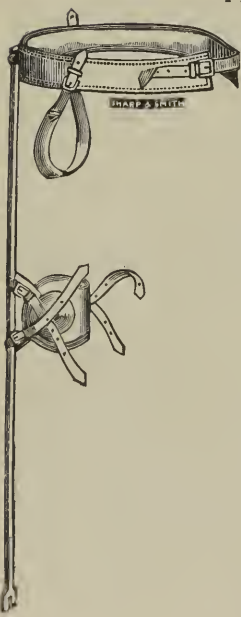
It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

Length of sole of foot.....In. Circumference of ball of foot..In.
Circumference of instep..... " " above ankle... "

Price to Patients, small size..... \$25 to 30 00
" " large size..... 30 to 40 00

Shoes Extra.

Fig. 4765.—Washburn's Hip-joint Splint.



4765

This is a simple, straight bar of steel, jointed to a pelvic band. It is intended for poor patients, and has neither racks, pinions, nor screws. Extension is made, after fastening the lower end with adhesive strips, simply by the degree of tensi-ty to which the perineal straps are adjusted. A knee-cap assists in keeping the splint in place.

DIRECTIONS FOR MEASUREMENT.

1. Length from ankle to dorsum illi.Inches.
2. Circumference of pelvis "

Price to Patients.....\$7 00

Fig. 4766.—Hyde's Hip Apparatus.

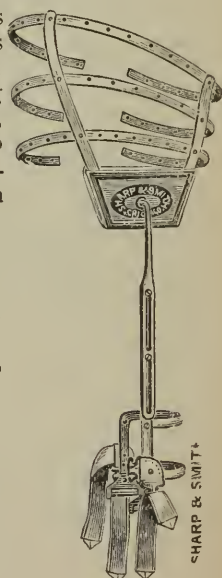
DIRECTIONS FOR ORDERING.

Length from trochanter to knee-joint.

Circumference of thigh above knee.

Which leg, right or left?

Price to Patients...\$17 00 to 20 00



4766

DEFORMITY APPARATUS.

Fig. 4767 shows Dr. Louis A. Sayre's Long Extension Splint for Hip Joint disease. This Splint extends from the crest of the ilium to the sole of the foot, and turned under it, from which position extension is made. Adhesive straps are applied to both sides of the whole leg in the usual manner, the inside strap terminating in a buckle at the waist belt, and the outside strap terminating in a short piece of webbing, which is passed through a slit in the apparatus, thence under the foot, and through another slit at the end of the foot piece, and buckled at the inside strap just above the internal malleolus. Thus extension is made from the bottom of the foot. Thus, also, when the patient attempts to walk it is the instrument which strikes the ground and sustains his weight without the least increasing the strain on the adhesive straps.

In fact, it is an ever present crutch, allowing motion of the joint, but not allowing weight to be borne on it. Extension is kept up continually, more surface is allowed for adhesive straps, and only the legitimate strain is ever thrown upon it, never the weight of the body. There is one other advantage which this instrument has over others. Usually the physician has to depend much upon the care and judgment of others. With the splint terminating in the middle of the leg, there is no definite point where it should be. Hence there is no need of getting the most definite directions and calling in the aid of others to know if it is acting well, but the patient *himself* can tell if anything is wrong. The least slipping or relaxing of the straps he must feel, and will have them readjusted.

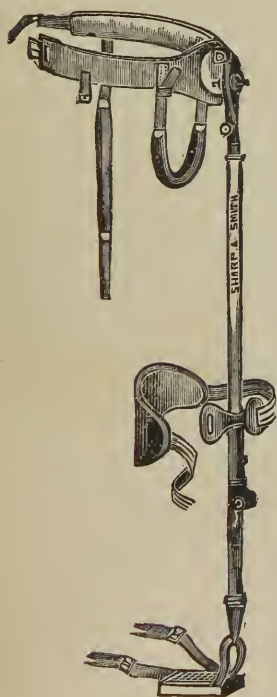


Fig. 4767. DR. LOUIS A. SAYRE'S LONG SPLINT FOR HIP-JOINT DISEASE.

Directions for Measurement.

1. Name of Patient.
2. Age of Patient.
3. Weight of Patient.
4. Right or left Leg.....Inches.
5. Length from sole to crest of Ilium..... "
6. Circumference of Pelvis at Iliac Crests... "

Price to Patients, \$25 00 to 45 00, according to size and finish.

Directions furnished for applying these Apparatuses

DEFORMITY APPARATUS.



4768

Fig. 4768 represents Dr. Bauer's latest improved Instrument for Extension (in a vertical line), which is attached to a well fitting laced boot, thus appropriating the foot for extension and the tuber ischii for counter-extension. The ratchet and key are the moving power, and do away with adhesive plaster. This apparatus needs no further explanation; its construction speaks for itself.

Directions for Measurement.

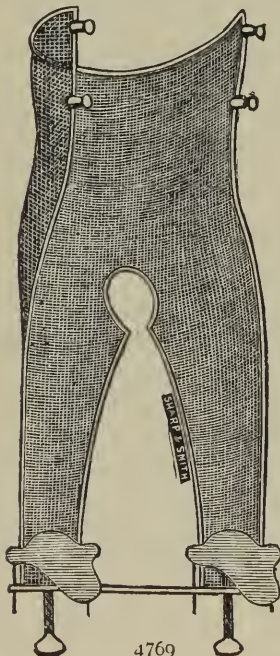
1. Patient's name.
2. Patient's age.
3. Patient's weight (estimated).
4. Right or left leg.
5. Length from the sole to the tuber ischii (sound leg)..... Inches.
6. " " " " (diseased leg)..... "
7. Circumference of calf..... "
8. Circumference of thigh..... "

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

Length of sole of foot.....Inches. Circumference of ball of foot.....Inches.
Circumference of instep..... " " above ankle.... "

Price to Patients, \$25 00. Shoes extra.

Fig. 4769 shows Dr. Bauer's Wire Breeches. In the second stage of Hip Disease, where rest and an unchanging position is required this instrument is resorted to for the accomplishment of so important an object. It is also used in cases where the hip joint has been exsected. A semicircle is cut away to admit of applying dressings to the wound. The apparatus consists of a heavy wire frame fitting the posterior part of the body, and reaching from the axillary cavity to the sole of the feet. The foot plates are movable by means of screws and bands. There is an opening for the arms. To protect it from the corroding influences of urine or of fæces, that part of the apparatus most exposed, is covered thickly with varnish. It is lined with cotton batting. The Patient is placed in the apparatus while under the influence of chloroform, and fastened by means of bandages, body and limbs, so securely as to insure his position. If extension is desired, for the greater security of rest and position, longitudinal and circular, straps of Canton flannel adhesive plaster should be applied and fastened, the former to the foot-board. With this apparatus direct extension can be exercised, while the counter extension rests with the healthy extremity, on the same principle we employ in having our boot pulled off. In this position and rest are insured. The patient can pass his fæces with perfect ease by raising the lower end of the apparatus and placing a bed pan under it. You can carry the patient from one place to another, put him in a carriage, draw or drive him in the open air, and thus meet all the objections that have been raised to confinement.



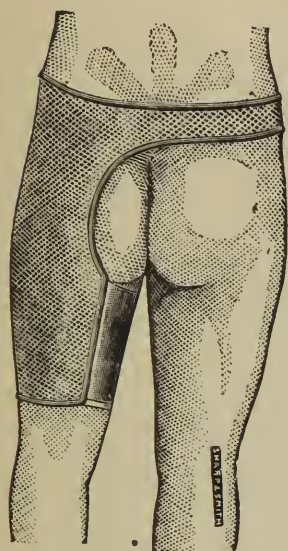
4769

Directions for Measurement.

1. Patient's name.
2. Patient's age.
3. Patient's weight.
4. Length from sole of foot to axilla.....Inches.
5. Length from sole of foot to perineum..... "
6. Circumference of calf..... "
7. " " knee..... "
8. " " thigh..... "
9. " at the nates..... "
10. " of pelvis at iliac crests..... "
11. " of waist..... "
12. " of chest under axillæ..... "

Price to Patients, \$15 00 to 25 00.

DEFORMITY APPARATUS.



4770.

Fig. 4770. Hamilton's Wire Gauze Splint. This consists of an iron wire frame, moulded to the outside or back of the pelvis and thigh, covered with wire gauze. It is kept in place by a pelvic and a broad thigh band, and secured with buckles. Dr. Hamilton advises its use whenever it is desired to secure immobility of the joint, together with exercise in the open air.

DIRECTIONS FOR MEASUREMENT.

- | | |
|--|---------|
| 1. Name of patient. | |
| 2. Age of patient. | |
| 3. Weight of patient (estimated). | |
| 4. Right or left side. | Inches |
| 5. Crest of ilium to the condyles of the femur..... | " |
| 6. Circumference of the pelvis at iliac crest. | " |
| 7. Circumference at the nates..... | " |
| 8. Circumference of the upper part of the thigh..... | |
| 9. Circumference of the thigh above the knee..... | |
| Price to patients..... | \$15 00 |

Fig. 4771. DR. L. A. SAYRE'S WIRE CUIRASS.

See following page for illustration.

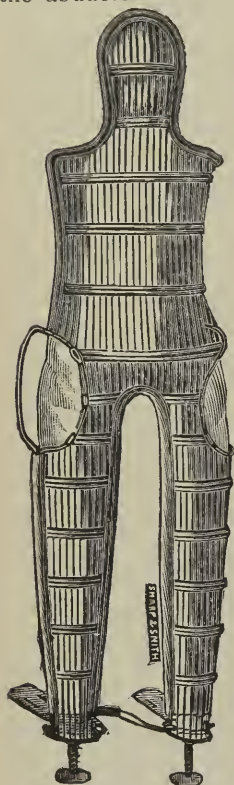
This is used in cases of hip-joint disease of the third stage and excision of the neck of the femur. It consists of strong wire netting, well padded inside.

The cuirass being properly prepared and well padded, the patient is laid in it so that the anus is opposite the opening and free from any possibility of obstruction, when the well leg is the first to be dressed, by making it perfectly straight and screwing up the foot rest until it is brought firmly against the heel of the patient; having a pad between the foot and the rest to absorb the perspiration; the instep is then well padded with cotton or a blanket; and a roller is carried firmly round it and the foot rest, running up over the limb; but before going over the knee a piece of pasteboard, or leather, or several pieces of folded paper, are placed over the leg, knee and thigh, and the roller carried firmly over this extemporized splint for the purpose of preventing the slightest bending of the knee, when the roller is carried up the entire length of the thigh, around the perineum and over the outer arm of the instrument, and several times back through the perineum, and then across the pelvis, by which means the well limb is made a firm counter-extending force.

Two strips of adhesive plaster from two to four inches in width, according to the size of the patient, are then placed upon either side of the operated limb, and secured with a nicely adjusted roller over the foot and up the limb and thigh, as far as the abscesses on it or the wounds will permit, being careful to leave a sufficient length of the plasters at the lower extremity, free for the purpose of applying them to the foot rest when extension is made, and firmly secured by a well adjusted roller. The foot rest is then screwed up to meet the heel of the shortened limb, and these strips of adhesive plaster are brought down around the foot rest and securely fastened. The foot rest is then extended by the screw, slowly and gradually, at times waiting a few moments for the muscles to yield, which have been so long contracted, until the limb is brought

DEFORMITY APPARATUS.

down to its full extent. It sometimes happens that, from long contraction of the abductors and the tensor vaginae femoris, subcutaneous section of those tendons and fascia will be requisite before the limb can be brought to its proper position, even after the head of the femur has been removed. After the limb is brought into this position a roller is carried from the foot over its entire surface; a large wad of oakum is plaited around the wound to absorb the discharge, and the roller is carried firmly over the wound, inner surface of the thigh, and around the pelvis. I place great importance upon this latter part of the dressing, as we thereby compress the tissues, and prevent the burrowing of pus, the oakum, which has already been placed in the wound, allowing of free drainage, no matter how tight the roller may have been applied.



4771

ankle, knee and hip, otherwise we may ankylose them, although they are not diseased. The wire cuirass should be used from a month to two months, according to necessity, after which the patient can be put upon the long splint and allowed to exercise, thereby increasing his prospects of perfect motion of the new joint.

MEASUREMENTS REQUIRED:

- | | |
|--|---|
| 1 Sex of patient. | 10 Circumference of body at nates. |
| 2 General appearance of patient. | 11 Length from axillæ to perineum (back). |
| 3 Distance between base of neck, from one side to the other, passing over the ears and head. | 12 Length from vertebra prominens to perineum. |
| 4 Circumference of head at the eyes. | 13 Length from perineum to sole of foot inside. |
| 5 " " neck. | 14 Length from crest of ilium to sole. |
| 6 Length from top of skull to the vertebra prominens. | 15 Circumference of thigh at perineum. |
| 7 Circumference of body under axillæ. | 16 " " midway between perineum and knee-joint. |
| 8 " " at the waist. | 17 Circumference of calf. |
| 9 " " between crest of ilium and trochanter major. | 18 " " ankle. |
- Price to patients \$20 to \$45, according to size.

DEFORMITY APPARATUS.

Fig. 4772. APPARATUS FOR HEMIPLEGIA.

(Paralysis of one limb.)

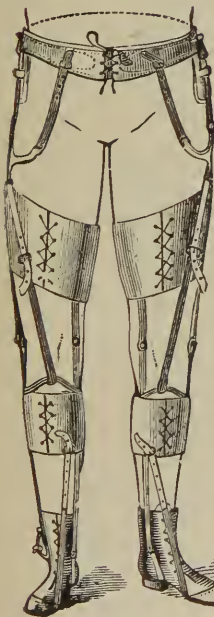


4772.

The apparatus represented by Fig. 4772 is for hemiplegia, affecting the limb to the hip joint. We have often had occasion to make it, and found it to answer a good purpose, both as a support, and in aiding the restoration of the mobility of the muscles. It answers to the same description as Fig. 4774, but is carried up to the pelvis. On to a broad steel pelvic band we fasten the artificial muscles for flexion or extension, as the case may require. It may also be worn with good results after treatment of hip joint disease, when, by adding a perineal band, the weight of the body is borne by the apparatus.

SEND THE FOLLOWING MEASUREMENTS.

- | | |
|---|---------|
| 1. Patient's name and description of the case. | |
| 2. Patient's age. | |
| 3. Right or left leg. | Inches. |
| 4. Length from sole of foot to ankle joint..... | " |
| 5. Length from sole of foot to knee joint..... | " |
| 6. Length from sole of foot to trochanter major.. | " |
| 7. Length from sole of foot to crest of ilium.... | " |
| 8. Circumference of calf..... | " |
| 9. Circumference of knee..... | " |
| 10. Circumference above knee..... | " |
| 11. Circumference of thigh..... | " |
| 12. Circumference of pelvis one inch below iliac crests | " |



4773.

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

Length of sole of foot.....	Inches.
Circumference of ball of foot.....	"
" of instep.....	"
" above ankle.....	"

Price to patients, apparatus for one leg, \$30 to \$40.
Shoes extra.

Fig. 4773. APPARATUS FOR PARAPLEGIA.

(Paralysis of both limbs.)

The apparatus for paraplegia answers to the same description as the one for hemiplegia, except that it is double. It is used when both the lower extremities are affected. A general description of the case is necessary to guide us in placing the artificial muscles in the right spot. The directions for measurements are the same as for the apparatus for hemiplegia, Fig. 4772.

Price to patients \$35 to \$70. Shoes extra.

DEFORMITY APPARATUS.

Fig. 4774.—APPARATUS FOR PARTIAL PARALYSIS OF THE LEG OR THIGH.

This cut shows an apparatus in every way applicable in cases of wasting palsy, or when certain groups of muscles become atrophied, losing the power to perform their proper functions.

With this apparatus, the muscles are excited into action, and, aided by artificial substitutes, made of elastic rubber or steel, placed on the instrument so as to gently exercise the affected parts, will recall them to a sense of duty.



Fig. 4774.—Directions for Measurement.

- Patient's name and age.
Right or left leg.
Length from sole of foot to ankle-joint Inches
Length from sole of foot to knee-joint..... "
Length from sole of foot to upper third of thigh. "
Circumference of calf..... "
Circumference of knee..... "
Circumference above knee "
Circumference of thigh "

It is necessary that we should have the shoes to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

- Length of sole of foot.....Inches. Circumference of ball of foot....Inches.
4774 Circumference of instep..... " " above ankle..... "

If both legs are of equal length, the above apparatus is sufficient ; but if the affected limb is shorter than its fellow, the extension apparatus, Fig. 4776, must be combined with it. This will add \$8 00 to the price stated below.

- Price to Patients, Single Apparatus, full length.... \$25 00 to 30 00
" " Double " " 30 00 to 60 00
(Shoes extra).

Fig. 4775.—SHORT LEG EXTENSION.

We make an Extension Apparatus, Fig. 4775, to correct the Patient's limp, and to guard against the danger of spinal curvature, induced by the result of infantile paralysis, when the bones have not kept pace in growth with those of the corresponding extremity.

It consists of a steel sole and pillars. The steel sole is underlaid with leather, which is riveted to it.



Fig. 4775.—EXTENSION FOR A SHORT LEG. STEEL SOLE AND PILLARS.

Directions for Measurement.

1. Have the patient (both feet bare) stand up ; place books or blocks of wood under the short foot until the shoulders and pelvis are in horizontal plane; then measure these books or blocks, which will be the height required for extension.

2. Send us a well-fitting shoe.

3. Right or left leg.

If we are to furnish shoes, send the measure as directed.

4775. (We make several patterns.) Price to Patients for Extension.....\$9 00

DEFORMITY APPARATUS.

Fig. 4776 Represents a Cork or Willow Wood Soled Shoe, to be Applied to a Limb that is Shorter than its Mate.

The importance of this Shoe is that it gives stability. It thus allows of the Patient's body being sustained with ease in walking. The cork or willow sole is made of such height as to correspond with the length of the other leg.

In measuring for this Shoe, please observe same directions as with Fig. 4775.

FIG.

- *4776 Price to Patients, Willow Extension\$2.50 to \$5.00
 *4776 Price to Patients, Cork Extension, \$10.00



Fig. 4777.—BRACE FOR PARALYSIS AND SHORTENING OF LIMB.

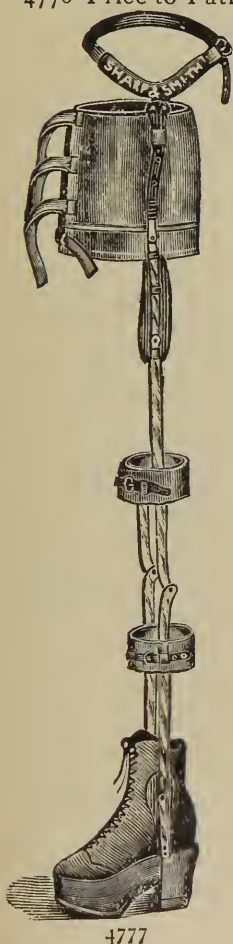
Price to Patients.....\$30 00 to 50 00
 (Corset and Shoes extra.)

This illustration shows a Brace devised for Patients having hip-joint disease, together with partial paralysis and slight spinal curvature, and consequent shortening of the limb. The Brace is provided with a leather-covered cork sole extension, giving the proper length to the deformed limb, as well as assisting in giving proper and even support to the spine. This Brace gives power and force to the paralyzed limb, allowing the physical force to control the parts more effectively than could be otherwise done, thereby assisting nature to more fully perform its functions, thus preventing the wasting away of the limb. When desired, we furnish either a special Corset made to order, or one of the perforated leather ones, shown by Figs. 4705 and 4706, page 767.

Measurements Required.

Sole of shoe to ankle-joint.....	Inches.
Ankle to knee-joint.....	"
Knee to hip-joint.....	"
Hip-joint to iliac crest.....	"
Iliac crest to axilla.....	"
Circumference at ankle.....	"
Circumference at calf.....	"
Circumference at thigh.....	"
Circumference at hip-joint over iliac crest.....	"
Circumference of body at axilla.....	"

Send shoe, giving full particulars of case, that we may be assisted in making a correct fitting, as well as acting brace.



DEFORMITY APPARATUS.

Fig. 4778 represents an Apparatus for cases of Shortening. It is most useful when there is a permanent shortening of the limb resulting from ankylosis. It consists of a padded thigh band, secured to the limb with straps and buckles. The band is attached to a strong metal stem by a hinge. The stem is open in the center for lightness, and has a foot plate fastened below, into which is sunk a tube with a rubber bottom, which fills up the space between the foot and the ground. A strong knee cap passes over the patella, and, with the foot and ankle straps, secures the leg firmly to the apparatus. When this instrument is worn the weight is received by the thigh band and transmitted thence to the ground, so that the knee is guarded from all strain, while the tendency to spinal deformities is arrested, which is always the result of a shortened lower limb.

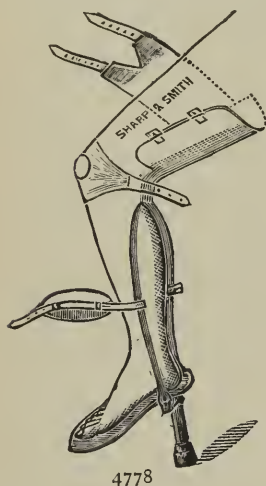


Fig. 4778. Directions for Measurement.

1. Patient's name.
2. Right or left Leg.
3. Length from Sole of Foot to Knee-joint.. Inches.
4. Length from Knee-joint to upper third of Thigh..... " "
5. Circumference of the Thigh..... " "
6. Circumference of the Calf..... " "
7. Degrees of the angle of flexion..... " "
8. Distance from the heel of the Patient's Shoe to the ground when standing erect " "

Price to Patients.....\$35 00

Fig. 4779 represents Sharp & Smith's Apparatus for Ankylosis. There are many cases where the joint is free from disease, but where at the same time, it assumes a distorted condition. In these cases a mechanical extension of the contracted muscles is so clearly indicated as a means of curative treatment, that anything which tends to facilitate this action may be considered a boon. This instrument consists of two lateral rods connected with thigh and calf bands, and a joint at the knee, a screw connecting the calf and thigh bands, hinged so as to admit of extension. By examining the drawing, it will be seen that the greatest amount of resistance must be found just at the anterior surface of the knee, over which the knee cap passes; secondly, against the calf; and thirdly, at the thigh. The center joint becomes the fixed point of rotation for the thigh, and by levers thus diminishing the angle of the knee but, as the tibia is acted upon by the lower band and knee cap in such a manner that it acquires a disposition to rotate backward around its own center, and as the same thing cannot occur at the thigh because it is firmly fixed to the pelvis, posterior laxation of the head of the tibia must take place, although this is generally of so small an extent as to be hardly noticeable. For illustration see next page.

DEFORMITY APPARATUS.

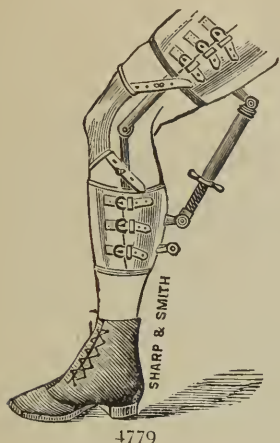


Fig. 4779.—SHARP & SMITH'S APPARATUS FOR ANCHYLOSIS. (We make several Patterns.)

(For description of this Apparatus, see preceding page.)

Directions for Measurement.

1. Right or left Leg.
2. Patient's name.
3. Patient's age.
4. Length from floor to Ankle-joint.....Inches.
5. Length from floor to Knee-joint....."
6. Length from floor to upper third of Thigh....."
7. Circumference above Ankle....."
8. Circumference of Calf....."
9. Circumference of Knee....."
10. Circumference above Knee....."
11. Circumference of Thigh....."

When long apparatus, extending to bottom of foot is wanted, and you wish us to furnish shoe, send the following additional measures: Inches.

- a. Length of sole of foot....."
- b. Circumference of ball of foot....."
- c. Circumference of instep....."
- d. Circumference above ankle....."

Price to Patients for Apparatus as shown in cut\$20 00
 " " " " extending to shoe 25 00

Fig. 4780.—MARKLEY'S PATELLA SPLINT.

This splint is intended for the treatment of fractures of the patella and dislocations of the knee joint, and may be utilized in cases of fractures either just above or below the knee.

It consists of two well padded iron troughs connected with hinges and circle stop so that it may be used straight, or flexed to any desired angle.

Traction on the pads may be made by means of the two long screws, which are shown on the under side of the splint, and turned by a wrench. Each screw is provided with a sliding nut, which moves in a slot cut in the trough and to which is attached the traction bands *CC*. The bands *BB* assist in holding the pads firmly in place, while the bands *AA* hold the splint to the limb. As this splint can be made useful in many ways it should be in the hands of every practitioner.



Fig. 4780. Directions for Measurement.

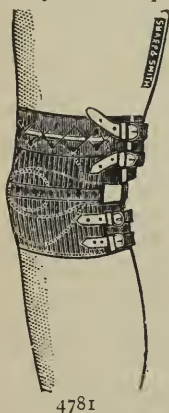
1. Length from above Ankle to upper third of Thigh. Inches.
2. Right or left Leg....."
3. Circumference of Thigh....."
4. Circumference of Calf....."

Price to Patients.....\$12 00

DEFORMITY APPARATUS.

Fig. 4781.—KNEE-CAP FOR AFTER-TREATMENT OF FRACTURED PATELLA.

Authorities on surgery say that great care must be taken not to rupture the ligaments of the newly formed union, which so often happens after recovery of the patient from fractured patella. For the purpose of guarding against such a recurrence, we make the apparatus shown, Fig. 4781. It consists of a knee-cap made of buckskin or satin jean, which is adjustable to the knee by buckles or laces. It is provided with a pair of coaptation pads, to retain the newly united patella in place. These pads are arranged to approximate by drawing on laces, as shown in the upper border of the cap, represented by Fig. 4781. It affords the patient exercise of the knee-joint, the best guard against the danger of ankylosis at the same time preventing any undue strain on the newly united upper fragment of the patella.



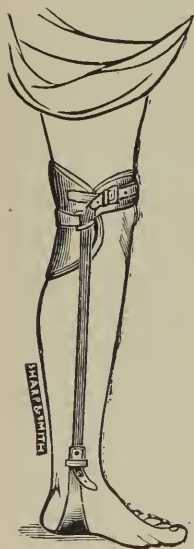
4781

Directions for Measurement.

1. Circumference above Knee.....Inches.
2. Circumference of Knee..... "
3. Circumference below the Knee..... "

Price to Patients.....\$5 50

Fig. 4782.—LEWIS' APPARATUS FOR TREATMENT OF FRACTURE OF THE PATELLA.



4782

This apparatus consists of a broad pad, resting on the popliteus, to keep the knee extended, and a narrow pad, fitting the upper border of the patella. A strap connected with the latter one is first passed through a ring attached to the popliteal pad, then continued down the leg on each side, being finally buckled to a lined foot pad. This makes the foot a fixed point for extension, and the ring through which the strap passes gives it also a direction backward, maintaining a firm hold of the upper fragment of the patella, whilst the lower fragment is readily kept in place by a strip of adhesive plaster.

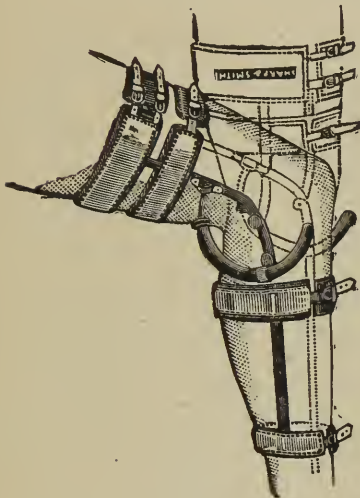
Directions for Measurement.

1. Circumference above Knee.....Inches.
2. Length from sole of Foot to Knee..... "

Price to Patients.....\$6 00

DEFORMITY APPARATUS.

Fig. 4783.—HOOPER'S KNEE EXTENSION APPARATUS.



4783

This apparatus consists of a band encircling the thigh, of another for the calf, and of one above the ankle. These are fastened to two lateral shafts provided with joints at the knee. Two semi-circular brass tubes, fastened to the lower calf shafts, contain each a spiral spring, acting on bows fastened to the thigh shaft, thus exerting constant elastic extension, which is sure to overcome muscular contraction soon.

Directions for Measurement.

Circumference above knee.....	Inches.
“ at knee.....	“
“ below knee.....	“
“ above ankle.....	“
Length from above ankle to knee..	“
“ knee to upper third of thigh.....	“

Price to Patients.....\$35 00

Fig. 4784 represents our Apparatus for Knock Knee (*Genu-Valgum*). This deformity, when occurring in young children, is attended with very grave consequences, inasmuch as it rarely happens that both legs yield in the same ratio, or present the same angle of inversion. This deformity is commonly complicated with *Talipes Valgus*. Sometimes the latter appears as the pre-existing impediment, Knock Knee having been superadded in time. A careful examination of the trouble, under a proper degree of extension and counter-extension of the extremity, will disclose, as the direct cause of Knock Knee, a marked contraction of the external duplicature of the vagina femoris inserting at the capilalum fibulæ, and occasionally a contraction of the biceps femoris, which involves a disturbance of the normal perpendicular position of the entire leg, resolving it into an angle. In cases of simple ligamentous weakness, instruments furnished with knee joints are very useful, as they aid in sustaining the perpendicular position of the limb; but where there is deflection to any serious extent, nothing will be able to overcome the deformity but an apparatus without a joint at the knee, extending from the pelvis to the ground, as represented in Fig. 4784. It consists of two lateral stems, secured to the boot by copper rivets. A padded band encircles the body, and a knee cap secures the knee to the lateral stems, and padded straps above the ankle and around the calf and thigh combined, direct the force outward. This instrument is exceedingly light, and, as it admits of free muscular motion, answers admirably in these cases.

For illustration of Fig. 4784, see following page.

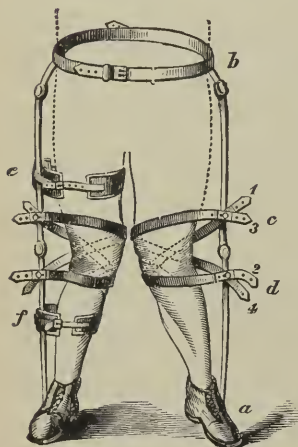
DEFORMITY APPARATUS.

Fig. 4784.—APPARATUS FOR KNOCK-KNEES. (GENU-VALGUM.)

(For description of these Braces, see preceding page.)

Directions for Measurement.

1. Patient's name.
2. " age.
3. Length 'rom floor to ankle joint....Inches.
4. " " " knee joint.... "
5. " " " hip joint..... "
6. " " " iliac crests.... "
7. Circumference of pelvis one inch below " iliac crests..... "
8. Circumference of thigh at *c*..... "
- 9 " leg at *d*..... "
- (A stick to be placed on the outside of the limb, and the above two measures taken around both.)
10. Right, left, or both feet?
If you wish us to furnish shoes, send the following additional measurements (shoes extra:)
11. Length of sole of foot.....Inches.
12. Circumference of ball of foot..... "
13. " instep. "
14. " above ankle..... "



4784

Price to Patients for pair Braces (according to size).....\$30 00 to 40 00

Fig. 4785 represents Sharp & Smith's Apparatus for Bow Legs. Few distortions are more common, and yet they do not receive that attention which they demand. Parents, not understanding the cause of the deformity, think it will disappear as the child advances in years. Those who consider what influence one class of deformities will exert in the production of others, know that an incurvation of the tibia may, if neglected, lead to a loosening of the ligamentous attachments of the knee joint, disturbance of the functions of the hip joint, and even deflection of the spinal column.

The direction assumed by the tibia may be lateral, anterior, or a combination of both.

This deformity is primarily due to a softening of the bones, the result of a change in the chemical properties of the component ingredients of the osseous structure, viz., a diminution of earthy matters.

This deformity requires constitutional as well as mechanical treatment.

From the softened condition of the bones, the legs are unable to bear the weight of the body, unaided by artificial means.

Our instrument is fastened to the sole of the shoe, consisting of two lateral rods extending above the knee, with joints at ankle and knee, and two round pads for the condyles to bear against the rods. The bars are connected by padded bands above and below the knee. On the side of the concavity we establish an artificial base, with two studs on the lateral bar, to which are attached elastic straps with buckles and sliding pad. These straps and pad are placed inside of the lateral bar, on the side of the convexity, and buckled on the concave side of the limb; by this means we get an extension of the tibia and fibula, and a depression of the arc by the elastic pressure, until the limb has been brought into a normal shape.

For illustration of Fig. 4785, see next page.

DEFORMITY APPARATUS.

Fig. 4785—BOW LEG APPARATUS.

(For description of this apparatus, see preceding page.)

Directions for Measurement.

- 1 Patient's name (or sex).
- 2 Which leg (or both)?
- 3 Length from floor to ankle joint.....Inches.
- 4 " " to knee " inner side..... "
- 5 " " to " " outside..... "
- 6 " " to upper third of thigh..... "
- 7 Circumference of ankle..... "
- 8 " calf..... "
- 9 " upper third of thigh..... "

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn or following measurements if they wish us to furnish shoes.

- Length of sole of footInches.
Circumference of ball of foot..... "
" of instep..... "
" above ankle..... "



4785

Price to Patients, per pair Braces. (Shoes extra)\$20 00

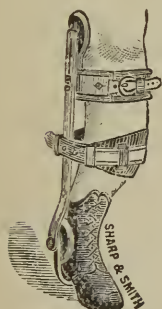
Fig. 4786—SHORT BOW LEG APPARATUS.

Directions for Ordering.

- 1 State which leg, right or left, or both?
- 2 Distance from floor to ankle joint.
- 3 " " " knee "
- 4 Circumference at calf.

Send laced shoe to fit, or give size of foot. The measurement for length of brace should be taken inside of limb.

Price to Patients, per pair Braces. (Shoes extra)\$15 00



4786

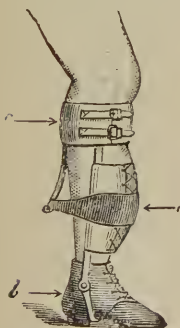
Fig. 4787—APPARATUS FOR ANTERIOR CURVATURE OF THE TIBIA.

Directions for Measurement.

- 1 Patient's name (or sex).
- 2 " age.
- 3 Anterior curvature of the tibia.
- 4 Which foot?
- 5 Length from floor to ankle joint.....Inches
- 6 " " " garter (c)..... "
- 7 Circumference at calf..... "

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be laced ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish them.

- Length of sole of footIn. Circumference of ball of foot ...In.
Circumference of instep..... " " above ankle..... "

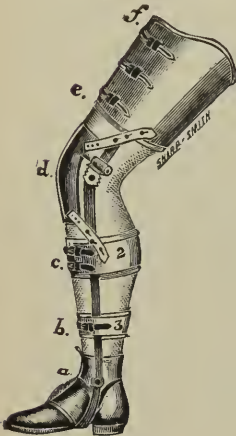


4787

Price to Patients, single Brace. (Shoes extra)\$12 00 to 18 00

DEFORMITY APPARATUS.

Fig. 4787-A—LONG ANCHYLOSIS APPARATUS.



This apparatus is for overcoming muscular contractions of the knee joint and for favoring the re-establishment of motion in cases of false ankylosis.

It consists of metal troughs 1, 2, 3, for the reception of the thigh and leg united by two lateral shafts, provided with joints at the knee and ankle, and attached to a shoe. A knee cap, adjusted to buttons on the lateral shafts with strong elastic straps, exerts pressure on the patella, whilst the instrument may be flexed and extended by means of a key (g) and ratchet joint, opposite the knee.

"It is an admirable apparatus for the gradual extension of contracted muscles, and for favoring the re-establishment of motion in cases of false ankylosis, and of remaining stiffness and dryness after treatment of joint disease. By persistent and daily passive exercise a flexible and pliable joint may be restored without confining the patient to bed or room. The mechanism is powerful and may be moved swiftly, adapting it to the forcible breaking up of adhesions as well, should the surgeon prefer this to gradual extension. If desired, the instrument can be made to detach from the shoe, for the greater comfort of patients who are obliged to wear the apparatus continually, but wish to remove the shoe at night. It is also the best guard against malposition, for should it be deemed impossible to effect a cure, the limb may be placed in a situation (to ankylose) most conducive to its future usefulness."

Directions for Measurement same as for the apparatus extending to bottom of foot, Fig. 4779, page 753.

Price to patients.....\$35 00 to \$40 00

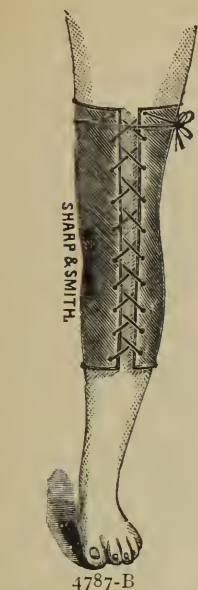
DEFORMITY APPARATUS.

Fig. 4787-B—HUTCHISON'S KNEE JOINT SPLINT.

To secure fixation of the knee joint, I use splints of hatter's felt. It consists of seven layers of cotton cloth, saturated with shellac, and well rolled together while hot. That ordinarily sold consists of but five layers of cloth, which, for most cases, is not firm enough. To give effectual rest to the joint, the splint should be of sufficient length and wide enough to nearly surround the limb; it should extend half way up the thigh, and to a corresponding point below the knee. A shorter splint, merely wide enough to cover the posterior part of the limb does not secure the complete immobility which I have insisted upon in the treatment of diseases of the joint where absolute rest is demanded. The splint having been cut of the proper length and width, with a sharp knife, and the limb covered with a stocking, the felt, made pliable by dry heat in an oven or before an open fire, or by immersion in very hot water, is applied to the limb and covered quickly and firmly with a bandage from below upward, so as to mould it to all the equalities of the surface. While the splint is being applied, an assistant should make extension from the foot, so as to straighten the limb as much as possible in cases where the joint is flexed, but no violent effort should be made to reduce the malposition. So soon as the splint regains its inflexibility it may be removed, trimmed up and holes punched an inch or an inch and a half from the front edges for lacings. The object in punching the holes a little way back from the edges is to permit the splint to be made smaller by cutting off the edges, so that pressure may be kept up as the knee diminishes in size. The weight of the body is removed from the diseased joint by the use of elevated shoes and crutches.—*Hutchison.*

Price to patients..... \$15 00

Fig. 4708 Represents Sayres' Suspension Apparatus suspended from the wall. For prices see page 768.



DEFORMITY APPARATUS.

Fig. 4788 represents Dr. Lewis A. Sayre's instrument for extension of the Ankle Joint. This instrument consists of a firm steel or hard rubber plate, shaped to the sole of the foot, with a hinged joint at the heel, attached to a rod slightly curved at the bottom, and extending up the back of leg to a point near the knee.

Over the instep is an arch like the top of a "Stirrup" with a hinged joint at its summit, from which springs another rod, which runs up the front of the leg, and is of the same length as the other.

These rods are made with ratchet and cog, for extension, and connected at the top by a band of sheet iron, on one side of which is a hinge, and on the other a lock like that of a dog collar.

The instrument is applied with Canton flannel, adhesive plaster (made expressly for extension purposes), cut in strips about one inch in width, long enough to reach from the ankle to a point near the tuberosity of the tibia, and placed perpendicularly all around the limb.

The plaster is secured in its position, to within an inch of its upper extremity, by a well adjusted roller bandage.

The instrument is then applied, and the foot firmly secured by a number of strips of adhesive plaster to prevent its slipping, and the ends of the plaster at the top of the instrument turned over the collar, which has been previously locked just tight enough to be comfortable, and secured by a turn or two of the bandage. A roller should be carefully applied over the foot to prevent the plaster from slipping.

This Apparatus was applied in the presence of the class at Bellevue Hospital by Dr. Sayre, on the 24th of February, 1864, in the manner above described. The patient was a sixteen year old girl; as soon as the instrument was properly adjusted, she stood upon her feet, without the aid of crutch or cane, for the first time in two years, and without any pain whatever, but the instant the screws were shortened, the pain was intense.

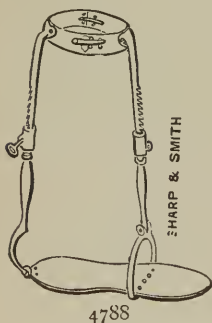


Fig. 4788. SAYRE'S ANKLE EXTENSION
APPLIANCE.

Directions for Measurement.

1. Length of the sole of the foot.....Inches.
2. Height from sole to two inches below knee... “
3. Circumference of calf..... “
4. “ instep..... “

Price to Patients.....\$22 00

DEFORMITY APPARATUS.

APPARATUS FOR WEAK LIMBS.

Directions for Measurement.

1. Patient's name.
2. " age.
3. Length from floor to ankle joint. Inches.
4. " " " knee " "
5. " " " hip " "
6. " " " iliac crests. "
7. Circumference of pelvis 1 inch below iliac crests "
8. Circumference of thigh. "
9. " calf "

It is necessary that we should have the *shoes* to fit the braces to when making. Patients will furnish their own shoes (*which should be lace ones*) or send us the number of shoe worn, or following measurements if they wish us to furnish shoes.

Length of sole of foot. In. Circumference of ball of foot. . In.
Circumference of instep. " " above ankle. "

Price to Patients, adult's size (shoes extra) \$35 00 to 70 00
" " children's " " 25 00 to 35 00

Fig. 4790.—APPARATUS FOR OVER-RIDING TOES.

The apparatus for over riding, or "hammer toes," consists of a steel sole, arranged with slits corresponding to the spaces between the toes. A strap of webbing is passed through these slits and over the contracted toe (or over each and all, as the case may require), and buckled or tied under the sole, tense enough to straighten the toe. This apparatus is kept in place by a thin silk, linen, or cotton covering, laced to the instep, and may be worn in an ordinary shoe.

Directions for Measurement.

Place the foot on paper and trace with pencil.

Circumference of ball of foot.
" instep.



Fig. 4790 Price to Patients, Apparatus for one foot. \$ 7 00 to 15 00
" " " " " two feet. 14 00 to 30 00

Fig. 4791.—ECLIPTING SPRING FOR FLAT FOOT.

Consists of a spring tempered steel sole, constructed of the exact shape of the arch of the foot in its normal position. This sole is placed in the shoe and fastened at the heel by a screw, having the anterior portion free to move as the weight of the body is thrown upon it.

Directions for Measurement.

1. Send a well fitting strong laced shoe.
2. Send a plaster cast of the foot with its arch elevated to the normal position.

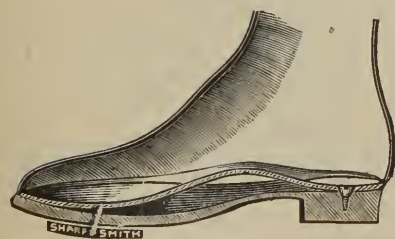
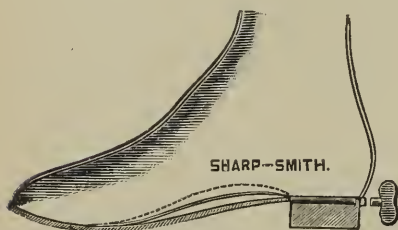


Fig 4791 Price to Patients. \$4 50 to 6 00

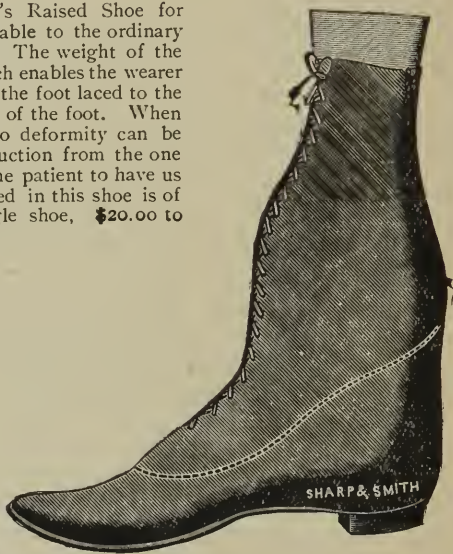
DEFORMITY APPARATUS.

Sharp & Smith's Raised Shoe for Shortened Limbs.

Fig. 4791-B represents Sharp & Smith's Raised Shoe for Shortened Limbs. This apparatus is preferable to the ordinary form of iron stirrup and cork soled shoe. The weight of the body is equally distributed to both limbs, which enables the wearer to stand firmly on his feet. The cut shows the foot laced to the extension. The dotted line shows the outline of the foot. When this apparatus is covered by the trousers, no deformity can be noticed, as the shoe does not differ in construction from the one worn on the normal foot. It is better for the patient to have us take the measurements here. The leather used in this shoe is of the best quality. Price to patients, for single shoe, \$20.00 to \$25.00



4791-C

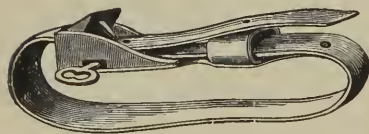


4791-B.

Fig. 4791-C represents a steel sole for flat feet. This sole consists of a double steel sole, so arranged that the height of the convexity of the upper one may be regulated at will. A screw, terminating in a square head, is turned with a key, so that the shape of the upper sole may be regulated to meet the changing demands of the patient. Send shoes that are one or two sizes too wide, so they will accommodate the extra space necessary for the double sole. Price to patients without shoe, \$9.00.

RESTRAINTS FOR THE HUMANE CARE OF THE VIOLENT INSANE.

These buckles and straps are unequalled for simplicity, durability and neatness of appearance. Only the best materials are used. Each article is first pressed into shape wet, dried, and afterward lined and stitched, thus securing permanence of shape, and preventing the wrinkling of lining.

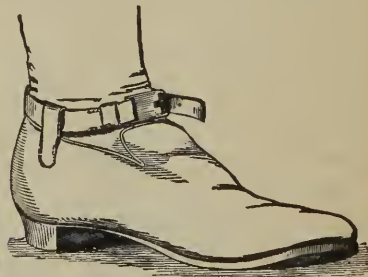


The Lynch Restraint Buckle, for Muffs,
Waist Straps and Wristlets.

Buckle, with waist strap of best
russet belting..... \$2 50 net.
Buckle only..... 2 00 "



Shoe and
Clothing
Buckle.

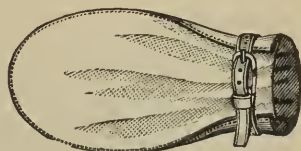


Slipper, Showing Buckle Attached.
Buckles, with straps and loops
ready to attach to slippers.
Per doz.....\$9 00 net.
Buckles only.....per doz., 8 00 "

RESTRAINTS FOR THE HUMANE CARE OF THE VIOLENT INSANE.

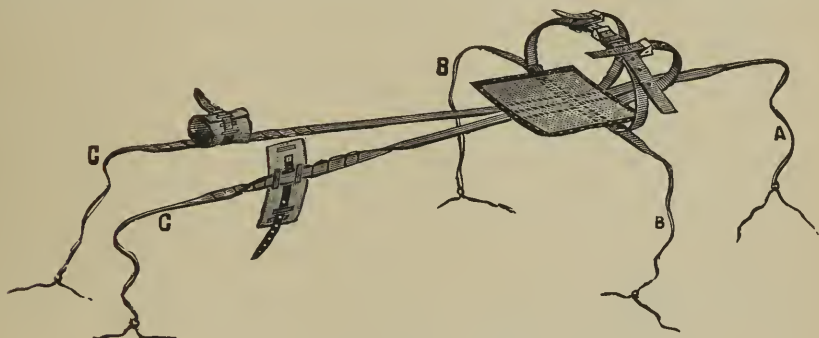


Canvas Muff.



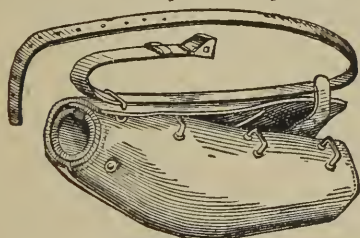
Canvas Mitt.

The above Mitts and Muffs are made of drab canvas, and are in general use in hospitals. They are neat, light, durable and washable. The use of the small, long buckle on the wristlet renders it impossible to obstruct circulation in the hand by too tight buckling. In the muff, the hands are separated by a thickness of the canvas. Price of each complete, with waist strap and buckles, \$5.00 net.



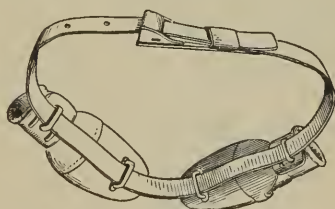
The Lynch Bed Strap.

This apparatus is for keeping delirious persons in bed. It is simple, practical and durable. It is quickly and easily attached to any bed, adjustable to persons of any size, and made of strong hemp web. The anklet is of soft, pliable woven material, which will not chafe. Sufficient freedom of motion is allowed to permit the patient to lie on either side. Price \$10.00 net.



The Lynch Muff.

Price with waist strap and patent lock buckle, \$8.00 net.



Mitts.

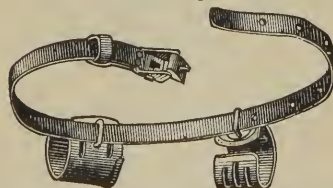
Price per pair, with waist strap and patent lock buckle, complete, \$8.00 net.



Anklets.

There are two styles of Anklelet, one with small and one with large buckle. Those with small buckles do not become separated when detached from the patient, but are always together when required for use. They are adjustable to any ankle, and are especially designed for day use.

Price of either, complete with straps and buckles, \$6.00 net.



Wristlets. Price complete with waist strap and patent lock buckles, \$5.50 net.

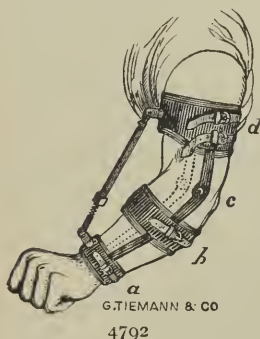
DIRECTIONS FOR USING BUCKLE.

To UNLOCK.—Push in the key straight.

To LOCK.—Press down small pin in end of bolt with the forefinger of the right hand, then push in the bolt with thumb of same hand. The pin is to prevent locking till ready. When not in use slip in the bolt.

DEFORMITY APPARATUS.

Fig. 4792.—APPARATUS FOR PARTIAL ANCHYLOSIS OF ELBOW JOINT.



This consists of a broad band at the upper portion of the arm, a band just below the elbow joint, and one at the wrist; connected with these is a steel bar running parallel with the arm, having a joint at the elbow. Connected with the wrist band and the upper arm band is a screw extension attachment; by gradually turning this screw, the adhesions are broken up, and patient soon acquires the full use of the ankylosed member.

Apparatus for Ankylosis of the Elbow Joint.

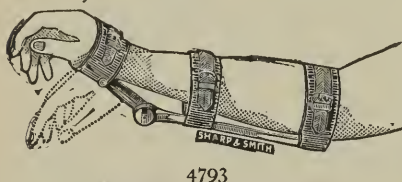
DIRECTIONS FOR MEASUREMENT.

1. Right or left arm ?
2. Length from wrist to elbow joint (*a* to *c*) Inches.
3. Length of wrist to axilla (*a* to *d*) "
4. Circumference of wrist (*a*) "
5. Circumference of forearm (*b*) "
6. Circumference of elbow joint (*c*) "
7. Circumference of arm (*d*) "

Price to Patients \$18 00

Fig. 4793 represents an Apparatus for Contracted Wrist. It is intended for correcting cases of flexed wrists, caused either by contraction of the muscles or by partial ankylosis.

The cut fully shows the manner in which force is applied, and, if well fitted, good results can always be obtained.



Directions for Measurement.

1. Circumference of arm just below the elbow.
2. Circumference of arm between wrist and elbow.
3. Circumference of hand between wrist and thumb joint.
4. Length of forearm to wrist.
5. Length from wrist to thumb joint.

Price to Patients (according to size) \$20 00 to 30 00



Fig. 4794.—Darrach's Patent Wheel Crutch.

\$50 00 to 85 00.

DIRECTIONS FOR MEASUREMENT.

Width of body in *direct* line from arm-pit to arm-pit; distance from arm-pit to floor. To measure width of body correctly, place a stick under each arm, close to the body, projecting in front *parallel*, and take distance between (not including curve of breast.)

Prices of Crutches (Fig. 4794), designated by distance from arm-pit to floor.

16 to 25 inches	\$50 00
25 to 35 "	60 00
35 to 45 "	70 00
45 to 55 "	85 00

Sunshades and Fixtures, from \$6 00 to \$12 00.

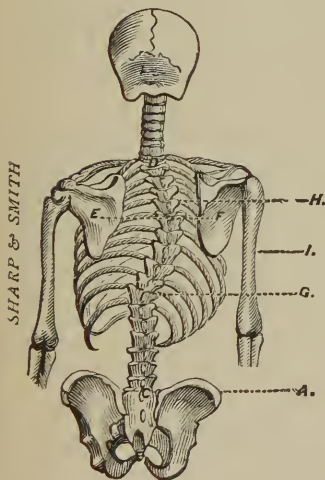
SPINAL DEFORMITIES AND APPARATUS.

In cases of Spinal Disease, when we cannot have the patient for the proper adjustment of the instrument, if practicable, a plaster of Paris cast of the trunk would be desirable to model the apparatus from, in order to obviate the liability to error, and to insure a proper application and save the medical attendant much alteration and manipulation. In order to show the deformity, the attendant may place a plate of glass upon the spine of the patient, and so adjust it as to cover the whole trunk, taking care 'hat the patient stands with his spine in the medial line of the plate as straight as possible (heels together). By means of a delicate brush and some paint the contour may be accurately drawn upon the glass. By this means the curved lines of the spine and its deviation can be marked. This done, a large sheet of paper must be placed on the glass and the lines of the body transferred thereto. With the above contours, together with a description of the case, the following measurements are required, viz.: Circumference of the body at the crest of the ilium and under the axillæ, and the length from the crest of the ilium to the axillæ.

Inasmuch as the human body is purely mechanical in the formation and arrangement of all its parts, from the largest organs to the finest cells, it follows that any variation from the primitive arrangement of any one of these must involve corresponding morbid manifestations, not only in the parts immediately concerned, but also in those which are associated with them, either by juxtaposition, continuity or function.

The equilibrium of the spine is constantly being disturbed by the irregular distribution of weight, or from habit or indolence, an indisposition to sit erect, and the constant strain unduly exercised against the weakened ligaments, added to the gravital weight of the head and shoulders, finally induce a permanent change of form.

Directions for Measuring for Figs. 4796, 4797, 4798, 4799 and 4793.



4795

1. Patient's name (or sex).
2. " age.
3. " weight (estimated.) Inches.
4. Distance from sacro-lumbar articulation to vertebra prominens... (C to D)
5. Distance from sacro-lumbar articulation to first vertebra involved. (C to G)
6. Distance from sacro-lumbar articulation to last vertebra involve.. (C to D)
7. Distance from crest of ilium to axilla, right side..... (A to H)
8. Distance from crest of ilium to axilla, left side..... (A to H)
9. Distance from the center of one scapula to the center of the other. (E to F)
10. Horizontal (transverse) diameter of the protuberance.
11. Circumference of the chest under axilla..... (H)
12. Circumference of pelvis, one inch below the iliac crests.

In addition to the above measures, please state if the *Convexity of the Curve is to the right or left side.

*In the Figure of the accompanying Skeleton it is to the right.

WE MAKE A SPECIALTY OF DEFORMITY APPARATUS.

DEFORMITY APPARATUS.

SPINE BRACE FOR LATERAL CURVATURE.

(SCOLIOSIS.)

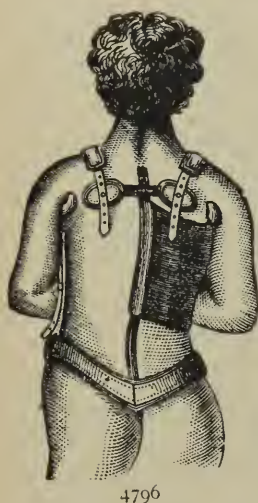


Fig 4796. To the pelvic belt are attached laterally two elastic crutches, as in the Brace for Pott's disease, to relieve the spine of the weight of the trunk, posteriorly a single strong, upright bar, holding a couple of adjustable pads for the scapulæ, and just below, a leather band of proper width (attached by a number of small brass buttons), terminating in a strong, elastic India rubber webbing. This band is passed around the protuberance obliquely, and buttoned to the pelvic belt in front an inch or two beyond the lines alba, and will be found to exercise a gentle, but continuous elastic pressure, at the same time rotating the ribs around their vertebral axes, thus unfolding the helical curve.

Directions for measuring, see Fig. 4795, page 761.

Price to Patients.....\$35 00

SPINE BRACE FOR POSTERIOR CURVATURE.

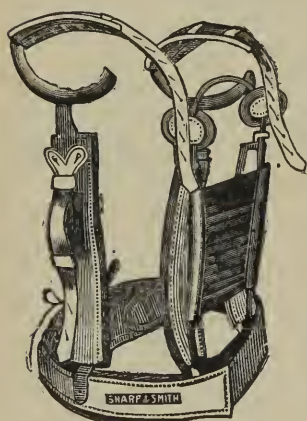


Fig. 4797. "It is intended to afford an entirely elastic continuous and gentle pressure to the parts to which it is applied, giving to the patient, along with adequate support, an easy and comfortable feeling. It is made of light tempered springs, and softly padded wherever it comes in contact with the body.

"The belt below passes around the pelvis, and the principal weight is thrown upon the gluteal region. The front portion is broad, so as to compress the protruding abdomen. Two upright parallel bars pass on each side of the posterior elevation, having a portion of silk elastic rubber between them, which gives a constant pressure upon the protuberance. If the latter is inflamed, a portion cut out of the elastic material prevents direct pressure upon the extremity of the bone.

Upon these side bars are attached two elliptic and padded springs, yielding to every pressure, and adapting themselves to the sides of the spinal column and keeping the body in an erect position. These are removed or applied by a very simple process. The two padded crutches are elastic, and elevate the body by pressing mostly under the margin of the scapula, thus obviating any tendency to pressure upon the axillary veins. They are constructed in such a manner that the equilibrium of the body can be restored in case one shoulder is depressed."

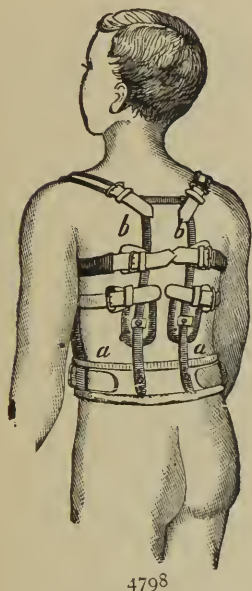
Directions for measuring, see Fig. 4795, page 761.

Price to Patients.....\$35 00

DEFORMITY APPARATUS.

WASHBURN'S BRACE FOR POSTERIOR CURVATURE OF THE SPINE.

(Potts' Disease.)



4798

Fig. 4798. This Brace was designed and first used in the St. Luke's Hospital, New York, by Dr. Charles Washburn, and has since, as then, been very successful.

"Success with this apparatus depends entirely upon the faithfulness with which it is kept adjusted to the spine of the patient. It is only necessary that a gentle pressure should be maintained if it is constant. As the spine approaches its normal shape the curve of the brace will require to be altered from time to time. The steel has a soft temper, so that it will take the form in which it is bent when considerable power is applied, but will be sufficiently elastic for the purposes of this apparatus. With children's braces the necessary bending is readily accomplished by hand.

"In the accompanying figure *aa* is a steel band which passes half way around the pelvis, just above the trochanters, *bb* are two flat bars of steel, parallel to each other, and curved upon their flattened sides to the form of the spine to which the apparatus is fitted. These bars are curved a little less than the spine, so that when secured in position their elasticity will constantly operate to rectify the spinal curve. The cross bar at the upper ends of the parallel ones is firmly riveted to them, and is to cross the back just above the spines of the scapulæ. At the ends of this bar are affixed buckles to receive the shoulder straps; *cc* are two movable pads which slide upon the bars to which they are attached—these are best stuffed with chopped cork. These compresses are to be brought one upon each side of the projecting knuckle of spine and secured firmly by means of the screws provided for that purpose. Buckles are attached to various parts of the brace, by means of which it is secured to the front part of the apparatus, which consists, as shown, of a piece of twilled muslin, or other strong material, which covers the chest and abdomen, and is provided with straps. Such parts as are in contact with the body are carefully padded."

Directions for measuring, see Fig. 4795, page 761.

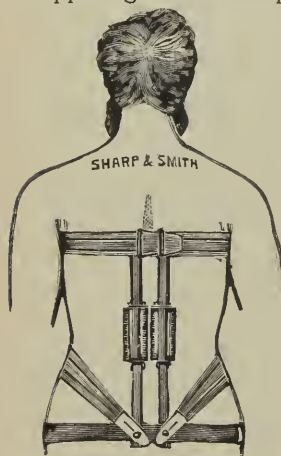
Price to Patients.....\$15 00 to 20 00

DEFORMITY APPARATUS.

Fig. 4799 —DAVIS' APPARATUS FOR CRIES OF THE SPINE.

[Extracted from Hamilton's Principles and Practice of Surgery.]

"The principles which ought to govern the construction and application of mechanical supports, in cases of caries of the spine, are the greatest degree of lightness, compatible with the requisite firmness, accurate adaptation; pressure in opposing directions upon the spinal column, sufficient to insure support and steadiness, and to transfer, in some degree, the weight of the spinal column from the affected vertebræ to their corresponding oblique processes, while at the same time these vertebræ shall not separate from each other in a manner to defeat the end desired, namely, their final union and consolidation by callus; the pressure being so applied on either side of the spinous processes, and not upon the processes themselves, so that it shall cause the least pain and not endanger ulceration or excoriation, giving support to the tumid or pendulous belly; interfering in no way with the free motions of the arms or legs. These indications we find more or less completely fulfilled in the apparatus of Davis, Bigg or Taylor.



4799

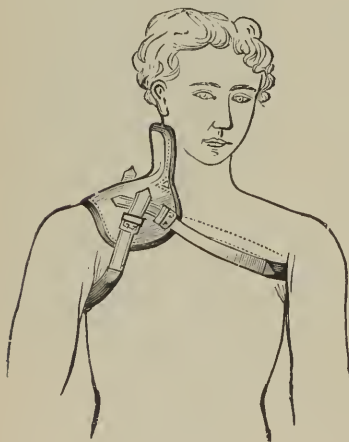
band; to this are attached two upright parallel bars of thin, well tempered steel, shaped to fit the spine and curvature, and having two pads placed in a proper position to exert a gentle pressure on the protuberance. The tops of these bars are held in place by a band passing around the chest, to which is attached a strong piece of cloth which forms the front of the brace.

Directions for measurement the same as for Tiemann's brace, No. 4795.

Directions for measurement, see Fig. 4795, page 761.

Price to Patients.....\$20 00

SHARP & SMITH.



4700

Fig. 4700—WRY NECK APPARATUS.

(We make several patterns.)

Directions for Measurements.

1. Patient's name (or sex).
2. " age.
3. Head leans to *right* or *left* side.
4. Circumference of the neck.....Inches.
5. Length of the neck at side, from
clavicle to mastoid process..... "
6. Circumference of chest under axilla "

Price to Patients.....\$5 00

DEFORMITY APPARATUS.

Fig. 4701.—Dr. Chas. Taylor's Apparatus for Potts' Disease of the Cervical Vertebrae and Chin Rest Attachment Applied.



4701

In this apparatus we have direct pressure on the transverse processes of the spinal column, with the additional suspension necessary in the mechanical treatment of such diseases. The object of this arrangement is, that the parts may be directly acted upon, and that the pressure shall be made directly upon the parts where most needed, and where the disease can be best controlled.

Pads are made of chamois skin, filled with hair, making them at once soft, durable and flexible. If desired these pads can be made of rubber, especially molded to the parts involved, which presents at once a smooth and easy acting surface. To the brace is attached by buckles (as seen in cut), a broad, substantial belt crossing the abdominal parts and chest, assisting in holding the apparatus in a proper position.

Directions for Measurement.

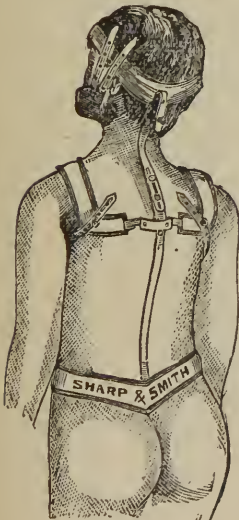
Give as full particulars of the case as is possible, whether the curve is to the right or left, and if convenient, a plaster cast of the patient's back; if not possible, take a piece of soft lead, mould it to the back, being particular to give all of the indentations or prominences caused by the disease, covering the full length of the spine, and trace the curves on a paper to be sent with order; circumference of the body between crest of ilium and axilla.

Circumference of body one inch below crest of ilium. Distance from center of one scapula to center of the other.

For the additional attachments controlling the cervical portion of the spine, give the following measurements:

Vertebrae prominens to base of head. Circumference from vertebrae prominens around chin, giving particulars as to formation of inferior maxillary.

Fig. 4701. Price to Patients.....\$30 00 to 50 00



4702

Fig. 4702.—Dr. Thomas M. Markoe's Brace for Torticollis.

DIRECTIONS FOR MEASUREMENT.

1. Patient's name (or sex)
2. " age.
3. " weight.
4. Distance from sacro-lumbar articulation to vertebra prominens..... Inches.
5. Distance from sacro-lumbar articulation to base of skull..... "
6. Circumference of pelvis one inch below iliac crest..... "
7. Circumference of chest under axilla..... "
8. Circumference of the head..... "

Price to Patients.....\$35 00 to 45 00

DEFORMITY APPARATUS.

Sharp & Smith's Corset Brace for Posterior and Early Stages of Lateral Curvature.



Fig. 4703—Front View.



Fig. 4703—Back View.

Directions for Measuring, see Fig. 4795, page 761.

Price to Patients. \$25 00

In the above illustrations, Fig. 4703, we show the application of our "Corset" Style Brace for Posterior and early stages of Lateral Curvature of the Spine.

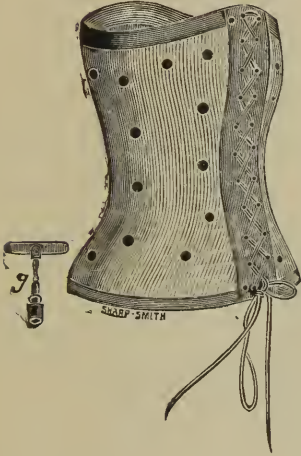
The brace consists of a "Corset" accurately shaped to the body, and properly strengthened with well-tempered steel stays, shaped to conform to the contour of the body when in a normal condition, thus furnishing special support to the vertebræ involved.

Owing to its funnel shape above the waist and by means of crutches placed under the arms, it produces partial suspension, which not only prevents the further spread of the disease, but completely controls the disposition to inflammation so common to these cases.

Figs. 4703 give a front and back view of the Brace after application. These braces are considered by some to be an improvement over the plaster Paris jackets, being much lighter, more comfortable, more easily adjusted and removed. We have applied a large number of them within the past ten years with most satisfactory results.

DEFORMITY APPARATUS.

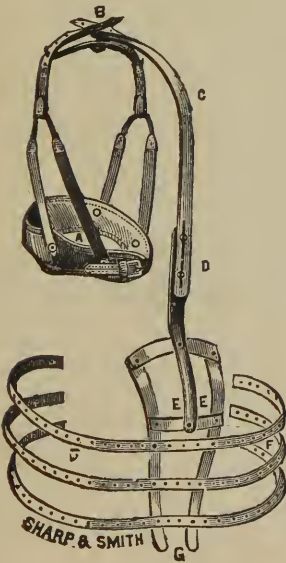
POROUS AND RUSSIA FELT JACKETS.



Felt Jackets are applicable to either lateral, posterior or anterior curvatures. Any portion of the jacket can be made quite soft, so as not to press on projecting parts of the spine, hips and breasts. The advantages are lightness, ease, rigidity, facility of removal for ablution, exercise, etc., economy—the same jacket being capable of remoulding as the case progresses.

We need a mould as follows: A plaster of Paris jacket is applied, and as soon as this hardens it is split down in the median line in front, removed from the body, and the cut edges placed and held in apposition by a bandage carried around, and over the entire jacket. This shell is greased on its inner surface, placed upon the floor, and filled with stiff plastic mortar.

When this hardens the shell is removed, leaving an exact cast of the thorax, upon which the jacket is built. Price to patients, \$25.00 to \$40.00.



SAYRE'S JURY MAST.

Directions for Measurement.

- 1 Bend a flexible strip of lead to the contour of the back, commencing at the top of the head; carry along the spine to the sacrum. Carefully remove and trace on paper; mark the position of the scapulæ, iliac crests and disease.
- 2 Circumference; top of head around chin...Inches.
- 3 " around cranium..... "
- 4 " pelvis, below iliac crests. . "
- 5 " neck "
- 6 " neck and chin..... "

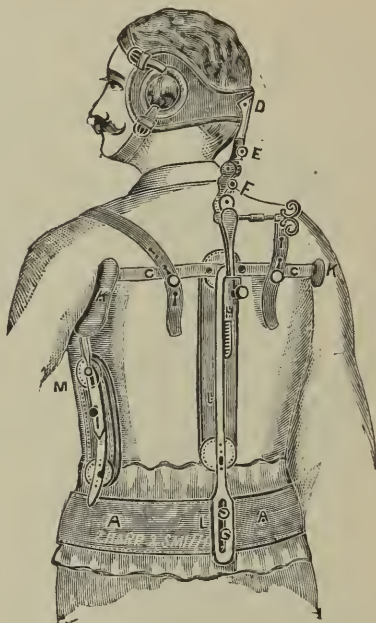
Price to Patients.....\$12 00

DEFORMITY APPARATUS.



4707-A—Sharp & Smith's Corset Brace with Sayres' Jury Mast attached. Measurements required same as for Fig. 4703 and also 4707.

Price to patients, \$35 00

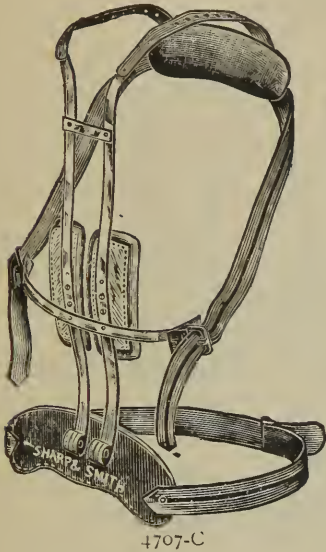


4707-B—Torticollis Brace.

Fig. 4707-B—TORTICOLLIS BRACE.

This apparatus is principally the same as the Markoe's Brace, Fig. 4702, page 765. It consists of a well padded pelvic band, *a*, to which an upright steel bar is attached at *l*, passing upward along the spine to the upper dorsal region. A crossbar, *c*, is attached to its upper end, passing from one axillæ to the other and fastened to two crutches, *k*, fitting well under the arms. These are connected to the pelvic band by two lateral bars, *m*, which by means of a slot and screw can be raised and lowered somewhat at will. The parts of the apparatus so far described are applied firmly to the trunk by means of straps passing over the shoulder and fastened to the axillary crossbar at *c*. A firm hold of the head is secured by a pad sheet steel inside, reaching almost from eye to eye backward around the skull, with apertures for the ears, and fastened to the head by straps over the forehead, and under the chin. To its back part a steel bar is riveted, *d*, which connects the upper part of the apparatus with that applied to the trunk. The lower end of this steel bar is ratched and adjusted in a slide to the upper end of the steel rod, passing up along the spine and held in position by a thumb-screw shown near the letter *h*. This connecting bar is intercepted by three different joints, *e*, *f* and *g*, by which flexion can be made in any direction when worked with the key. At the joint *g*, flexion can be made to the right or left, at *f* forward and backward, and at *e* rotation. The advantage of this apparatus over many others is, that firstly a firm hold is effected to the head and trunk, and that then the head can be brought in a proper position by a true and irresistible mechanism. The apparatus when worn is almost entirely hidden under the clothing, and patients cannot very easily withdraw themselves from its action. Measurements required same as for Markoe's Torticollis Brace, Fig. 4702, page 765. Price to patients. \$80 00 to \$90 00

DEFORMITY APPARATUS.



4707-C

Fig. 4707-C—PROF. A. E. HOADLEY'S SPINAL APPARATUS.

This is the brace that has been adopted by Prof. Hoadley. It is very simple in construction, durable and economical. The lower pad that rests across the back is secured to the uprights by a hinge joint, which permits the pad to adjust itself to the back. The pads that are placed on each side opposite the deformity are adjustable to height, and are sufficiently flexible to permit of being changed in shape to conform to the changing shape of the back. The upper ends of the uprights are secured by straps that pass over the shoulders to a pad, long and narrow, which rests on the upper front part of the chest. It has a lumbar joint which provides for the up and down movements of the hips, which effectually prevents the brace from climbing in straight backed cases. Where there is much deformity and

the pads are properly secured partially under the projection of the deformity, this lumbar joint in the brace is unnecessary. The measurements required are the circumference of the chest, and the hips just below the crest; the distance in straight line between this latter line and the top of the shoulder at the point of its union with the neck, and finally the shape of the back about an inch to the outside of the spinous processes.

Price to patients. \$25 00

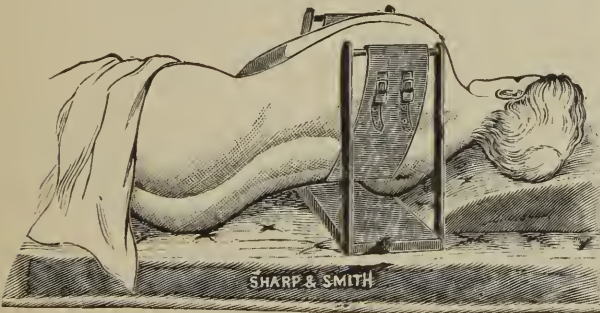
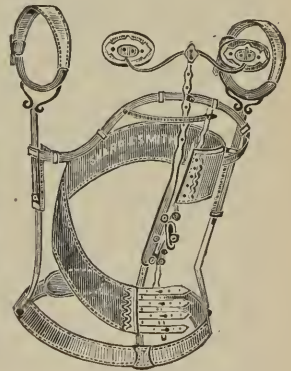


Fig. 4707-E—WOLFF'S SPINAL CRADLE.

In reclining the body should be placed in such a position that the offending muscles are put upon the stretch. The deformity is temporarily overcome by the employment of Wolff's Cradle (Fig. 4707-E). The belt passes over the projecting ribs and shoulder-blade, thus bringing the weight of the trunk upon these parts, while gravity aids in overcoming the curvature in the lumbar region. Price to patients. \$10 00 to \$15 00



4707-D—Scoliosis Brace, same as Fig. 4796, page 762, extra light and fine. Same measurements required as for Fig. 4796, p. 762. Price to patients. . \$40 00

DEFORMITY APPARATUS.

THE HOADLEY SCOLIOSIS BRACE.

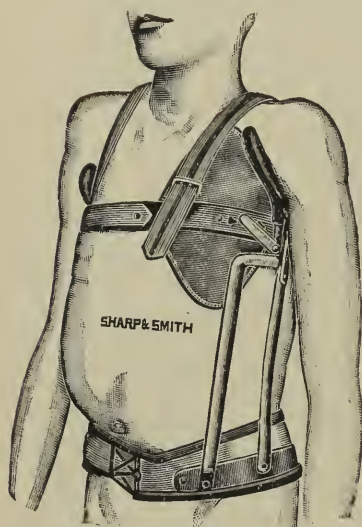


Fig. 4707-G Front View.

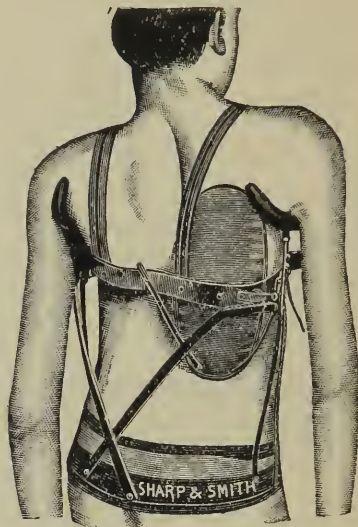
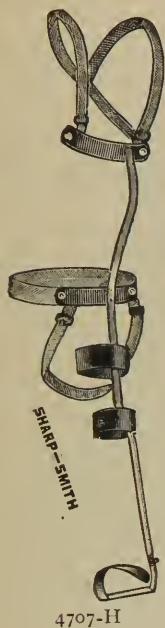


Fig. 4707-G Back View.

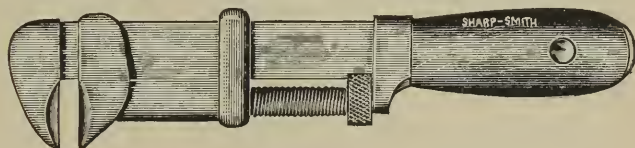
Fig. 4707-G Dr. A. E. Hoadley's Scoliosis Brace. This spinal curvature brace is adapted to cases of curvature where the principal curve is in the middle of the dorsal region. The apparatus is constructed in two sections: One, the pelvic belt, is composed of heavy leather, reinforced with steel, to make it very strong and it is molded to the crest of the ilium, so that it is a perfect fit and makes it impossible for the belt to turn around on the pelvis. To this belt on each side are supported the crutches and a frame which is made rigid and firm to the belt. This frame corresponds in height to the prominent portion of the deformity. The upper edge of this frame, which at the top is a segment of a circle and tends to go around the body, is notched so as to form a ratchet. There is a clasp on the crutch bar which surrounds this ratchet bar. The crutch bar is loose on the belt and can play back and forth on the rigid ratchet bar. Between the clasp and crutch bar there is a dog which locks the crutch to the ratchet at any desired place. This mechanism is the same on both sides except that they are reversed in action.

The second section consists of chest belt of thin steel which supports two pads each on a swivel joint or a joint that will permit motion in all directions. The pads are made of thin brass and hammered to fit, one is adjusted immediately behind and rests over the most prominent portion of the deformity. The other pad which will be more flat is adjusted to the front of the chest just below the clavicle and as near the shoulder joint as possible. This chest belt and pads are supported and held in position by straps over the shoulders like suspenders. By means of little strips of steel supporting buttons, this chest belt is attached to the crutch bar, one reaching from the crutch bar forward and the other from the crutch bar backward. Now with the instrument in place and coupled up, the body can be made to twist in the direction of correction and retained at any point by simply shoving one crutch bar forward and the other one backward and fastening them there by means of the ratchet and dog. Any desired degree of twist can be given to the body and maintained, the tension can be varied at will. The crutches are also adjustable so that the shoulders may be carried as high as desired. This apparatus is readily taken off at night, and its adjustment is simple. This is the only curvature brace that is adjustable to the body that can forcibly twist the body, and maintain it in its twisted condition without otherwise distressing the patient. Price to patients, \$45.00.

DEFORMITY APPARATUS—HOADLEY'S LEG APPARATUS.**THE HOADLEY HIP SPLINT.**

4707-H

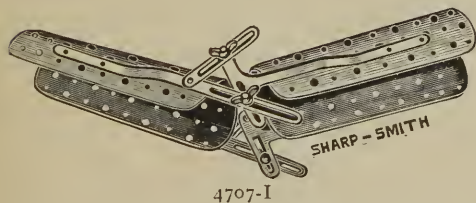
Fig. 4707-H This instrument is adapted to the purpose of fixing the hip joint at any desired angle. It is adapted to any case, acute or chronic, where there are no abscesses or open sores to interfere. When it is properly adjusted it does not interfere with the patients in bed while lying either on the back or sides. In severe and very painful cases the upright above hip should be bound to the body, either with a wide bandage pinned, or a regularly constructed band with straps and buckles. In moderate cases the upper end of the splint need not be held very firm to the chest. The patient, in turning or moving, when it is required, will immediately take hold of the upright and hold it against his chest, or use it as a kind of a lever, and thus at all times insure the greatest security to the joint. The extension portion below the knee can pass either to the inside or outside of the foot and take either the shoe or the adhesive strap traction and it can be removed at will, which at night is especially desirable, and if continued traction is necessary, the night traction is best accomplished by weight and pulley. If the patient is moving around on crutches, the upper end of the splint should be left loose. Price to patients, \$25.00.



4707-K

THE HOADLEY ORTHOPÆDIC WRENCH.

Fig. 4707-K The same as a common Coe wrench or monkey wrench, which is constructed smooth and round upon all outward portions of the jaws. The inside of the jaws are also slightly rounded and the corners entirely removed. This wrench is constructed for the purpose of adjusting apparatus, bending, twisting, etc., while on the patient. There are no corners to bruise the flesh, nor corners to mark the instrument on which the wrench is used. They are designed to be used in pairs. They have ebony handles and are nickel plated, making a very beautiful as well as a useful instrument,

HOADLEY'S KNEE SPLINT.

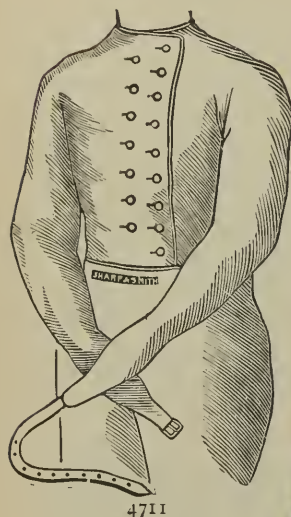
4707-I

Fig. 4707-I The advantages of the Hoadley Knee Splint are, that the thigh and leg segment can be adjusted or bound to the parts independent of each other by first loosening the side set screws or thumb nuts. After the upper and lower segments of the knee splint have been properly bound to the respective parts, any adjustment of the parts can be made

and retained permanently, or changed from day to day. This Splint is capable of maintaining perfect fixation of the knee joint at any angle and with such lateral deviation as may be desired. The readjustment of the limb segments to each other with this Splint is very simple and easy, which makes it very desirable for the slow correction of bad positions. It also fulfills all indications for fixation in resections of the knee, as it may be kept in position, maintaining all necessary fixation sufficiently long for the bones to unite, and at the same time permit examinations and redressings of the wound. It is made in two forms: Wide, for the fixation of joint operation upon, and close, for the fixation of chronic joint diseases. The thumb nuts are also made large, for the easy adjustment with the fingers, or short and small, to be adjusted with small wrench.

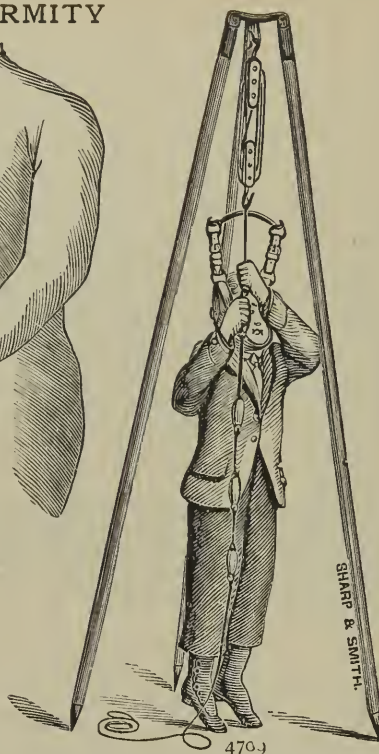
Price to patients, \$20.00.

DEFORMITY

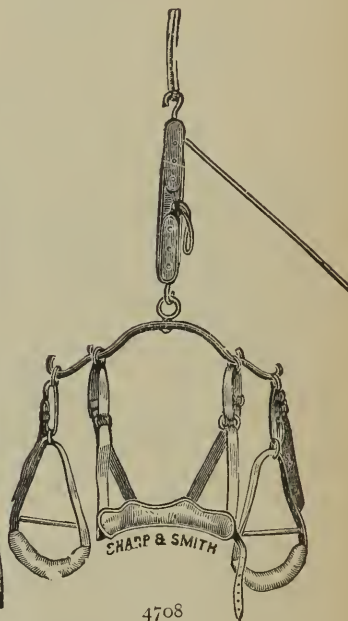


4711

APPARATUS.



4703



4708

Fig. 4708.—Sayre's Suspension Apparatus.

DIRECTIONS FOR MEASUREMENT.

1. Age of patient.
2. Circumference of head around chin.
3. " of head around occiput.

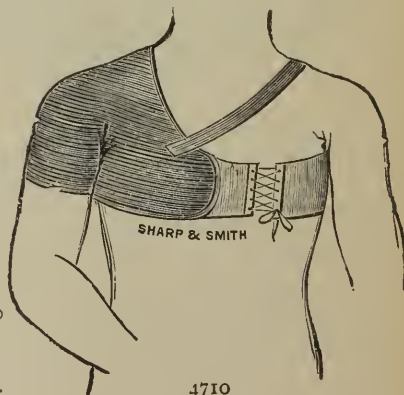
FIG.

*4708	Price of apparatus with plain pulleys.....	\$ 6 00
	With brass compound pulleys (as shown in cut).....	11 00
*4709.	Tripod (only).....	\$6 00
	Seamless Shirts...	\$1 50 to 3 00
*4711.	Price to Patients.....	Short, \$8 00; Long, 10 00

Fig. 4710.—Apparatus for Preventing the Dislocation of the Shoulder Joint.

DIRECTIONS FOR MEASUREMENT.

1. Name.
 2. Weight (estimated).
 3. Right or left shoulder.
 4. Circumference of the arm.
 5. " axilla to acromion.
 6. " of chest under axilla.
- Price to Patients.....\$6 00 to 9 00



4710

Pages 736 to 768, are prices to Patients.
Special prices to Physicians, and the Trade.

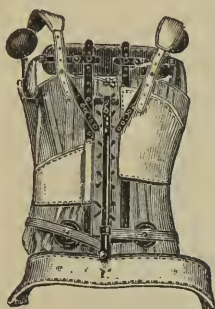
ORTHOPÆDIC.

SPINAL DISEASES AND DEFORMITIES.

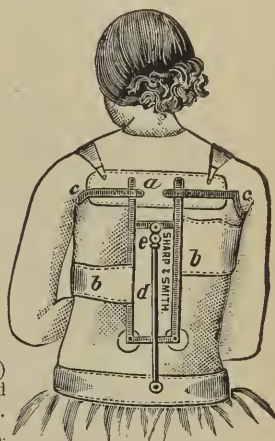
Scoliosis, Lateral Rotary Curvature, Braces.



Illustrating Curvature when
Patient has no Support.



4712-A Stillman's (Chicago)
V-Lever Brace, combined
with Corset (posterior view).
Price to Patients, \$50.00.



Showing Principal Features
of Stillman's Brace.

"It is my opinion, based upon many cases of this deformity, that the best results are obtained by the conjoined use of an active brace and proper exercise upon curved frames.

"A brace alone is of but little use, serving merely to hold the body erect; but to exert any curative power it should be made to fit the patient accurately and be readjusted often, so as to exert its active effects through all the stages of improvement; and, in addition, the patient should be obliged to take systematic exercise, and, if necessary, should receive the benefit of massage, electricity and other tonics. The diet and habits of life should be regulated carefully, and all work avoided which tends to increase the deformity."—Chas. F. Stillman, M. D., in *The Medical Record*, May 21, 1887.

Measurements required, same as directed on page 768C for "Round Shoulders."

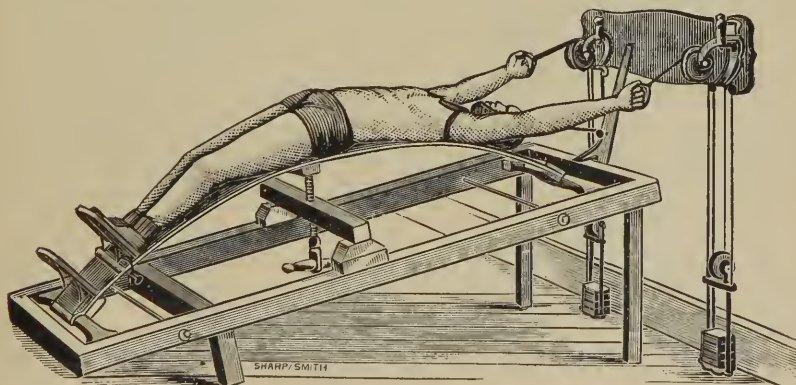
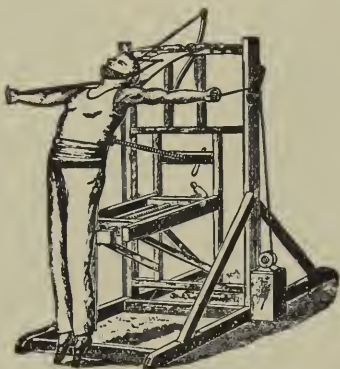


Fig. 4712-B Stillman's Horizontal Frame for Backward Curved Extension of the spine
During Exercise..... \$50 00

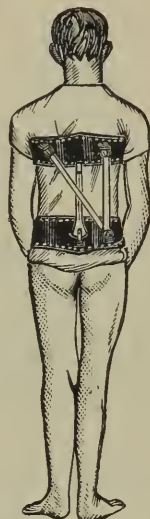
ORTHOPÆDIC.

SPINAL DISEASES AND DEFORMITIES.

Spinal Apparatus.



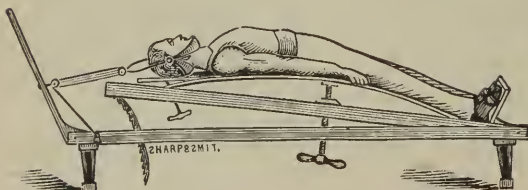
4713 Stillman's Vertical Frame for producing backward curved extension of the spine during exercise.
Price \$70.00.



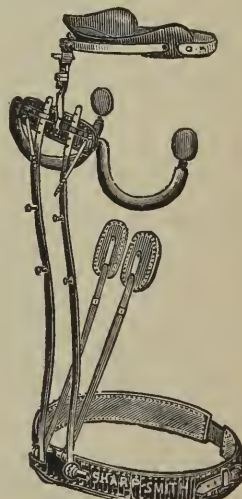
4713-B Stillman's Vertical Extension Brace, for rotary lateral curvature.
Price to patients, \$30.00 to \$40.00.
Directions for measurement, page 768-C.



4713-A Stillman's Vertical Elastic Extension Derrick. Price \$25.00.



4714 Stillman's Recumbent Spinal Extension Frames for Pott's Disease. Price to patients, \$50.00.



4713 C Stillman's Brace for Torticollis.
Price to patients, \$50.00.

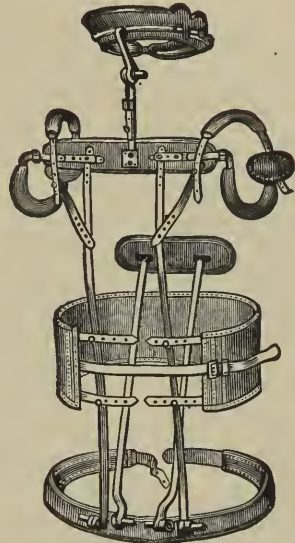
ORTHOPÆDIC.

SPINAL DISEASES AND DEFORMITIES.

Braces for Round Shoulders.



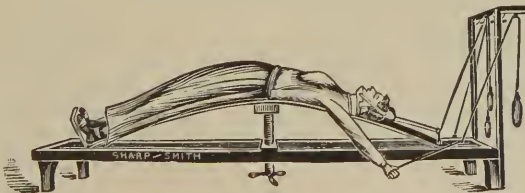
4714-B Stillman's Antero-Posterior Brace.
Price to patients, \$35 00.



4714-C Stillman's Antero-Posterior Brace,
with head rest. Price to patients, \$60.00.

Measurements Required for Dr. Chas. F. Stillman's Spinal Braces.

1. Sex of patient.
2. General appearance of patient.
3. Lay a soft piece of lead wire along the back, moulding it exactly to the spine, from the seventh cervical vertebra to the middle of the sacrum. With this pattern trace carefully the shape of the spine on a piece of paper, marking the points opposite the upper and lower borders of the scapula and the crest of ilium.
4. Circumference of body between crest of ilium and trochanter major. Inches.
5. Circumference of body at waist, "
6. Circumference of body under axillæ, "
7. Distance between the upper borders of the scapulæ, "
8. Distance between the lower borders of the scapulæ, "



4714-A Stillman's Horizontal Frame for Backward Curved Traction
during Exercise. Price to patients, \$50.00.

ORTHOPÆDIC.

SPINAL DISEASES AND DEFORMITIES.

Posterior Curvature Braces.

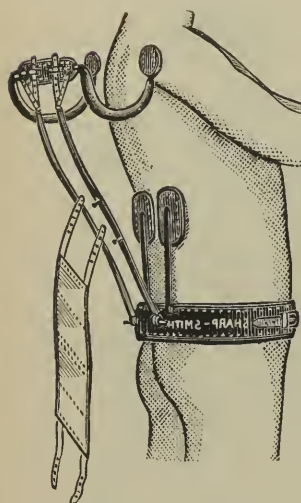


Fig. 4715. Stillman's brace for lower dorsal region partially applied. Price to patients from.....\$30 00 to 35 00

"Nature's indications for the treatment of Pott's disease is to put a splint on the back of the patient which will maintain this erect position; for, since the tendency of the disease is to curve the affected portion of the spine forward, the center of this curve being anteriorly, our corrective force should be applied to produce exactly an opposite curve to the diseased one, the center of such a corrective curve being posterior to the column. In other words, we must follow nature's lead and hold the spine erect and slightly curved backward."

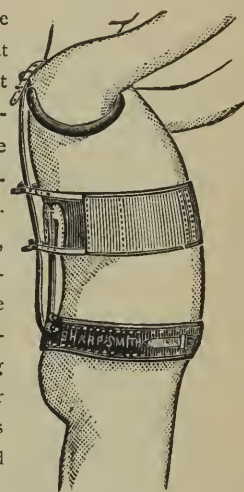


Fig. 4715. The same applied.

"The brace is constructed so as to embody a lever with a short and a long arm; the short arm extending from the site of the disease to the sacrum, and the long arm from the neck to the sacrum—the two being there connected by an adjustable clamp, and together forming a V-shaped lever, which automatically acts to press forward the deformity and yet holds the spine firmly in the erect position. The force is so graduated that, if leaning forward is attempted, the shorter arms press firmly over the transverse processes adjacent to the kyphos, and exert a forward pressure which prevents the spine yielding at the seat of disease."

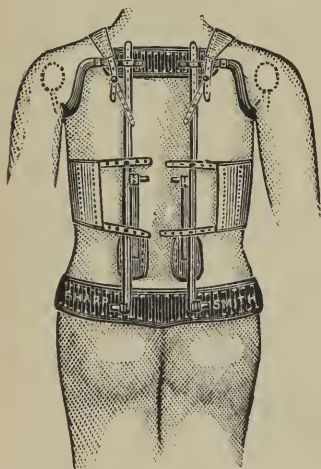


Fig. 4715-A. Brace for caries of the lower lumbar vertebrae. Price to patients ..\$30 00 to 35 00

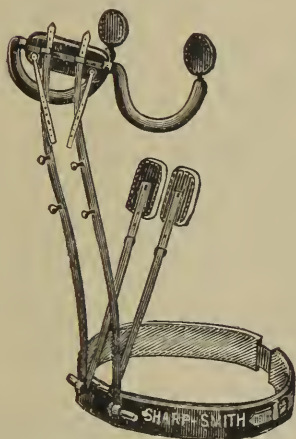
The angle at which this back frame or long arm of the lever is set out from the body determines whether the brace shall act as a lever brace or as a simple fixation brace. If adjusted and secured to the body this brace forms a V-shaped spring lever, which produces backward extension of the bodies of the vertebrae, and thus tends to arrest the disease and improve the deformity, while it maintains the spine firmly in the erect position at the same time.

For measurements required see "Round Shoulders"—page 768-A.

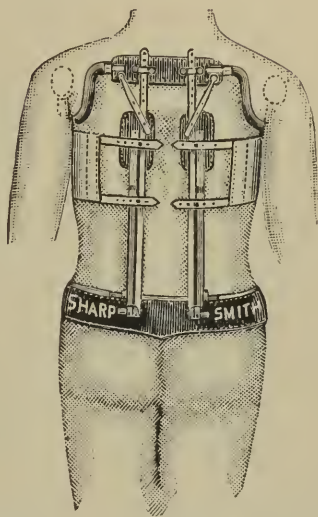
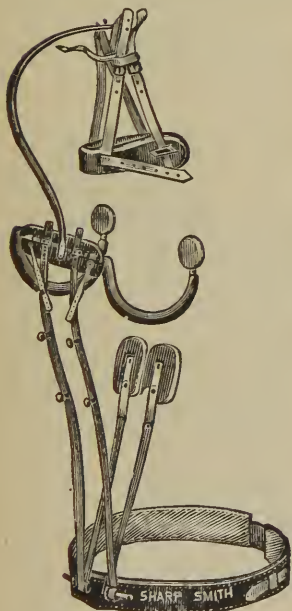
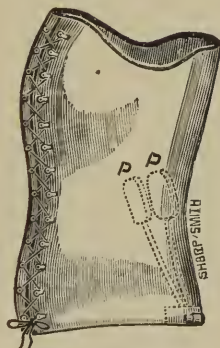
ORTHOPÆDIC.

SPINAL DISEASES AND DEFORMITIES.

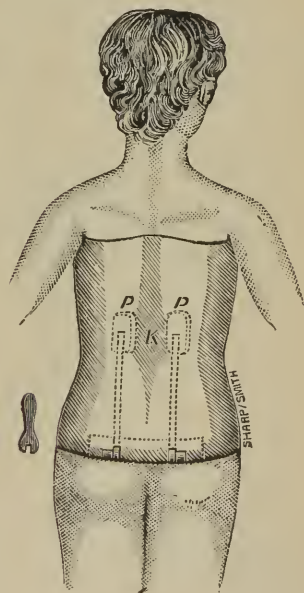
Posterior Curvature Braces



4716 Brace for middle dorsal region.

4716 The same applied (rear view.)
Price to patients, \$35.004716-B Brace for cervical region
with jury mast attached. Price
to patients, \$45.00.

4717

4717 The Spinal Jacket provided
with V springs. Price to
patients, \$20.00.

Dr. Charles F. Stillman's (Chicago) Braces for caries of the spine. For measurements required see "Round Shoulders," page 768-A.

ORTHOPÆDICS.

SPECIAL DISEASES AND DEFORMITIES.

Braces for Posterior Curvature.

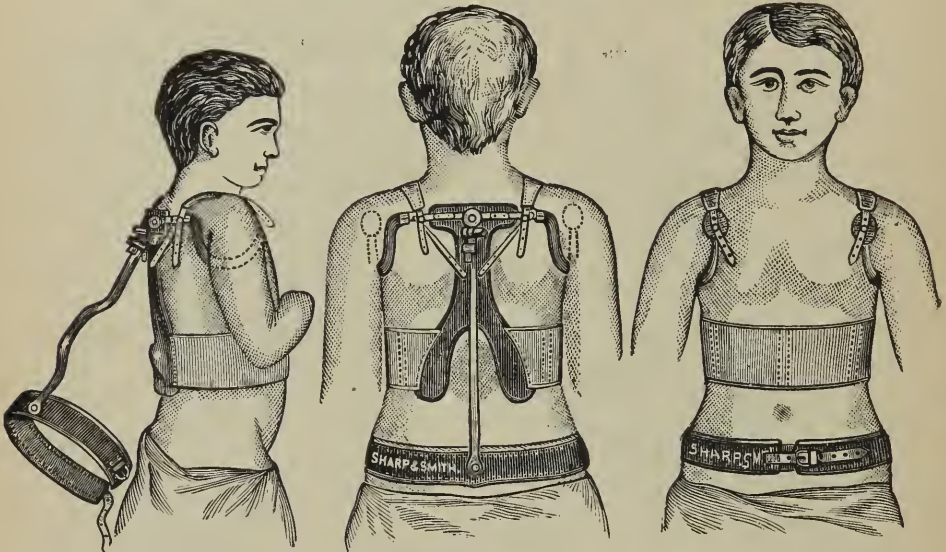


Fig. 4717-A. Stillman's brace for upper lumbar region, partially applied.

Fig. 4717-A. The same applied (rear view).

Fig. 4717-A. The same (front view.)

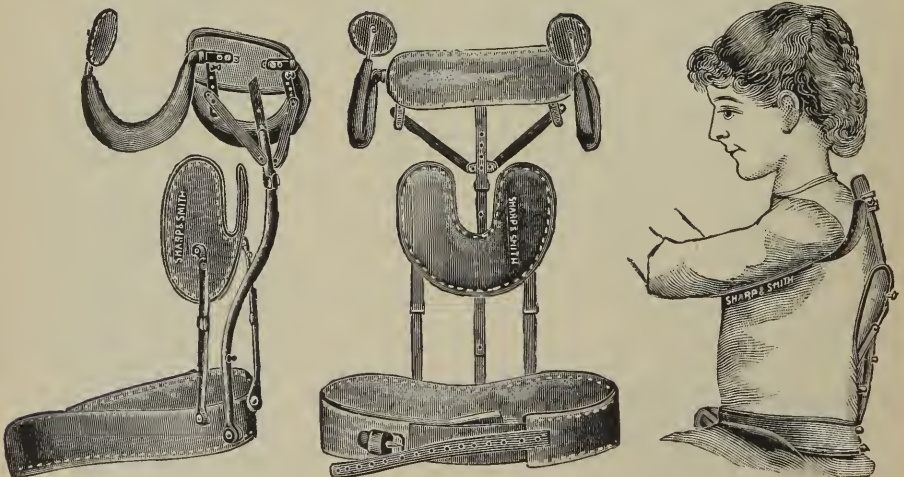


Fig. 4718. Stillman's brace for dorsal caries (advanced stages.)

Front view of Fig. 4718.

Effect of brace Fig. 4718 properly applied.

Price to patients.....\$40 00.

(From photograph).

For measurements see Round Shoulders, page 768C.

ORTHOPÆDICS.

Diseases of the Joints—Hip Joint Apparatus.

Dr. Chas. F. Stillman's (Chicago) Sector Joint Brackets and Splints. Price to patients, each, \$10 00
When properly applied are capable of the following combination without removal from the limb:

1. Extension at any angle with motion.
2. Extension at any angle with fixation.
3. Fixation at any angle.
4. Motion, complete or limited, constant or occasional.
5. Exposure of surface about the joint, admitting compression, elastic or otherwise, hot and cold applications, blisters, dressings, and easy inspection.
6. Motion, extension, and elastic tension by the addition of appropriate rubber cords.

This splint may be inserted into any form of brace attachment known. But when it is desired that the splint should remain upon the limb for any length of time, or, as in acute inflammation of joints where it is used to reduce the contractile antagonism of the muscles, I prefer to use it in the form of a bracket, which is to be attached to the affected part by some immovable dressing, which will be sufficiently inflexible to prevent unequal pressure upon the soft parts.

The sector bracket consists of two terminal plates of thin copper, perforated upon the upper side, connected with each other by a sector bridge raised to any desired distance from the surface. This bridge consists of two overriding slotted steel strips, connected by three clamps, which may be either thumb-screws or key-clamps.

For the Hip Joint.

(Extracts from "*The Hip and Its Diseases*," by V. P. Gibney, A. M., M. D.

"The aim of the apparatus is extension, *with or without* motion, and at any desired angle. It furthermore seeks to overcome the compensatory lordosis."

A sector splint, Fig. 4719, is placed on the outer side of the thigh over the hip, and is employed either as

a "bracket" or a "brace"—the difference being that the bracket is to be secured by plaster of Paris, or some inflexible bandage, which does not admit of removal, while the brace can be removed at pleasure.

The sector splint, it will be seen from the figure, is composed of two plates of perforated tin that partially encircle body and thigh, of two slotted arms connected at one end by means of a clamp, and each attached at the other end to one of the perforated plates—near which a sharp curve is seen to prevent undue pressure over prominent parts, and of a slotted sector attached to the slotted arms by three clamps.

To apply this bracket, *first*, several strips of moleskin adhesive plaster are wound tightly around the thigh, just below the hip, and around the pelvis above the hip.

Second, thigh, pelvis and waist are encircled by plaster of Paris bandage, which is allowed to partially set.

Third, the bracket is applied over this plaster, the angle being fixed as desired, the clamps having been previously loosened, and the slotted strips shortened as much as possible.

Fourth, the bracket is now fastened by a few turns of the plaster bandage, and this is covered by a dry muslin roller to insure cleanliness.

By means of the clamps on the sector, fixation may be secured, or motion may be allowed, and extension be maintained at the same time. Dr. Stillman combines this plan with the crutches and high shoe. The advantages, he claims, for this splint are:

1. Local extension of the joint diseased.
2. Fixation at any angle, with or without extension.
3. Motion, with or without extension.
4. Gradual reduction of the flexion.
5. Opportunity for local injections and topical applications.

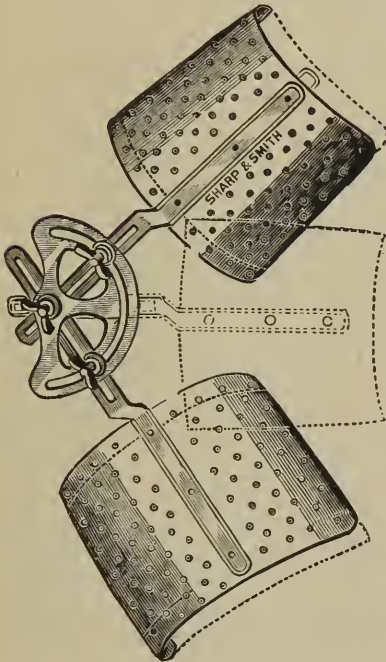


Fig. 4719.



ORTHOPÆDIC.

DISEASES OF THE JOINTS.

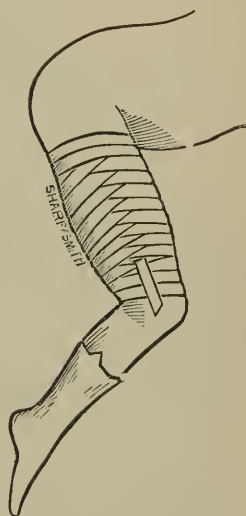
Hip Joint Apparatus.



4719-D



4719-C

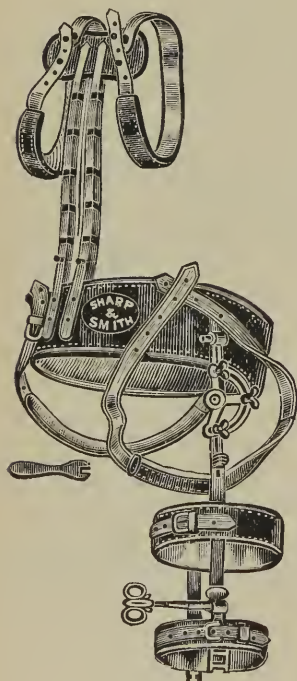


4719-E

When a brace can be afforded, and, because of the uncleanliness of the plaster, it is desirable to use a brace instead of a bracket, a removable apparatus may be used. This may be of several forms, depending upon the fancy of the surgeon. In each a back frame is provided—and fastened to the body with suitable straps and bands—to prevent the compensatory lordosis which ensues as a feature of the hip disease. This is a feature not found in any other American hip brace, although the English surgeons consider it a necessary feature.

Fig. 4719-B shows one form of hip brace provided, *first*, with the back frame; *second*, with sector at the hip; *third*, with a clamp above the sector fixing the angles of abduction and adduction, and one below, for fixing the angle of rotation. These are changed by the wrench, shown in the illustration. The sector is operated by thumb-screws, and is provided with a removable clamp, by which motion in the hip may be limited to any given arc. With extension ratchets, operated by a key, the brace terminating just above the knee in rollers and buckles, to which the attachment to the thigh is made.

APPLICATION.—Two square pieces of moleskin adhesive plaster should be cut, as shown in in Fig. 4719-C, and two tabs of strong webbing sewed to the center of each. These are placed one on either side of the thigh, the ends interlacing, as shown in Fig. 4719-D.

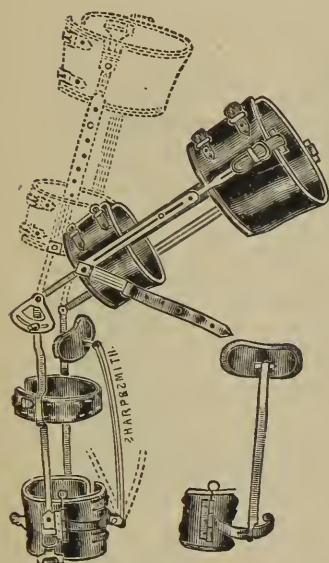


4719-B

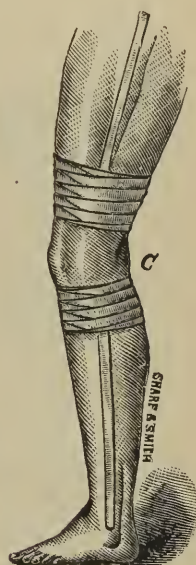
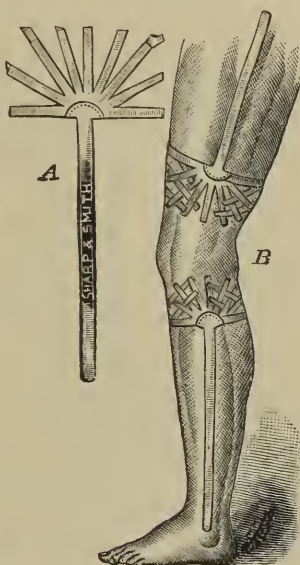
4719-B Stillman's Hip Brace. Price to patients. . . \$45 00

ORTHOPÆDIC. DISEASES OF THE JOINTS.

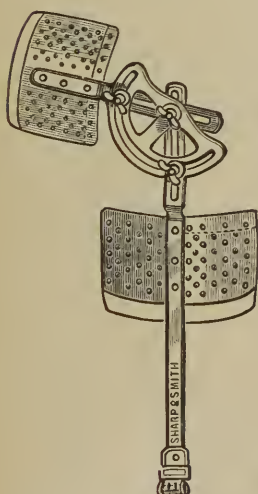
Knee Joint Apparatus.



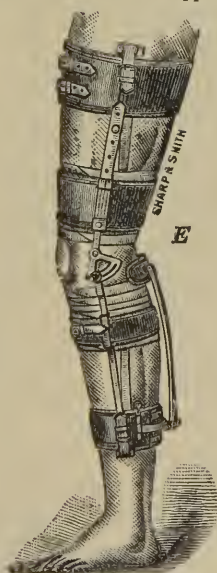
4720 Stillman's Knee Extension
Brace. Price to Patients,
\$35.00 to \$40.00.



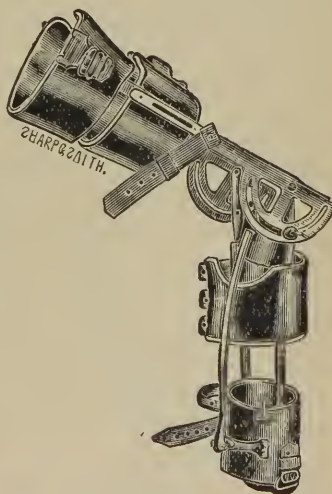
Application of Plasters to Effect Traction.



4720-A Stillman's Sector
Knee Bracket with leg
attachment. Price to
patients, \$12.00.



4720 Stillman's Knee
Splint, applied.



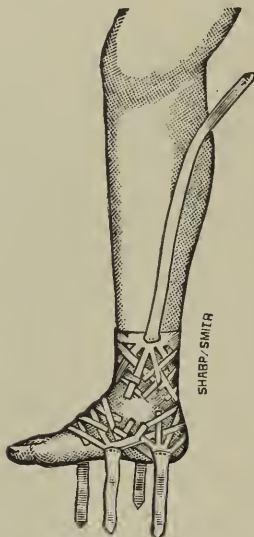
4720-B Stillman's Knee Splint,
with large Sectors. Price to
patients, \$40.00.

ORTHOPÆDIC. DISEASES OF THE JOINTS.

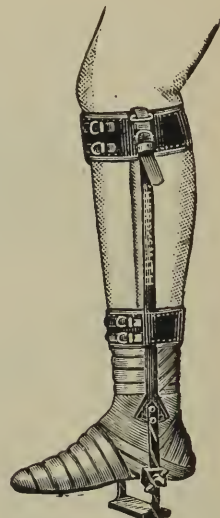
Ankle Joint Apparatus.



Fig. 4721. Stillman's Ankle Splint. Price to patients, \$15.00 to \$20.00.



Application of Plasters.



Stillman's Ankle Splint Applied.

MEASUREMENTS REQUIRED :

1. Trace the outlines of the sole on a piece of paper, and mail to us with
2. Length from sole to ankle, - - - - - Inches.
3. Length from sole to garter, - - - - - " "
4. Circumference at garter and around lower portion of leg, - - - - - " "

For the Ankle Joint.

For the ankle the splint is constructed as shown. It is attached inferiorly to a sole of leather or felt moulded to the plantar surface of the foot, and bound down with some firm dressing. It allows motion, and yet removes all undue pressure from the articular surfaces, and will be found of use in all varieties of injury or inflammation in or about this joint.

For the elbow the sectors are somewhat smaller than for the knee, and in general the same form, made small in proportion, is used for the smaller articulations.

MEASUREMENTS REQUIRED :

1. Trace the outlines of the sole on a piece of paper and mail to us.
2. Length from sole to ankle.
3. Length, sole to garter (below knee).
4. Circumference at garter (below knee).

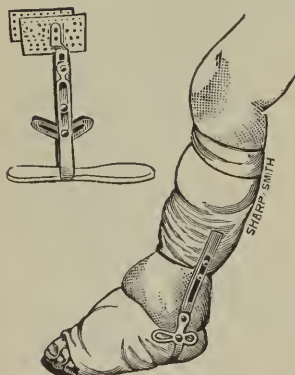


Fig. 4721A. Sector Joint Bracket applied to the ankle joint. Side view.

Price to patients, \$20.00 each.

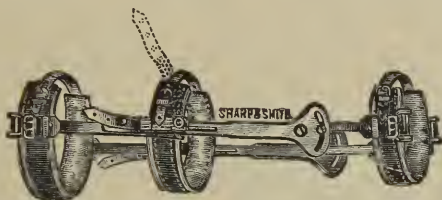


Fig. 4721B. Sector Joint Bracket applied to the ankle joint. Front view.

ORTHOPÆDICS.

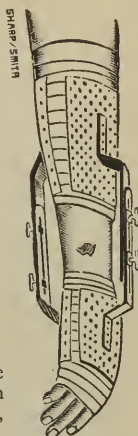
DISEASES OF JOINTS AND DEFORMITIES.

Wrist Joint and Club Foot Apparatus.



4722 Stillman's Wrist Splint. Price to patients \$25.00.

By means of the *sector* this splint allows the hand to be *fixed* at any angle with the arm. By means of adhesive strips (shaped and cut like those shown on Stillman's ankle splint and Stillman's knee splint), applied to the hand and arm, traction upon the wrist may be produced.



4722-A Stillman's Wrist Bracket.

Dr. Chas. F. Stillman's Single Ankle Springs with Clamps.

Price to patients, from \$13.00 to \$16.00.

For Weak Ankles when associated with Inverted Feet, for the less severe forms of Talipes Varus, especially when due to Infantile Paralysis, and for the After treatment of such cases as have been subjected to operation.

(Extracts from Dr. C. F. Stillman's article, "A Contribution to the Treatment of Clubfoot," in *N. Y. Medical Journal*, of October 20, 1883.)

These consist of a single side bar placed on the outer side of the leg; it is jointed at the ankle, riveted to the shoe under the heel and buckled to the leg by two girths, one just below the knee and the other above the ankle.

In order to antagonize the three tendencies in the deformity, namely:

1. Adduction or local inversion at the ankle.
2. Supination or turning under of the foot, the ankle giving way externally; and
3. Contraction of the posterior muscles by which the os calcis is drawn upward, thus forcing the astragalus forward and causing prominence of the metatarsal bones on the sternum of the foot, the single side bar above described, is fitted with two ratchets and an elastic webbing strap.

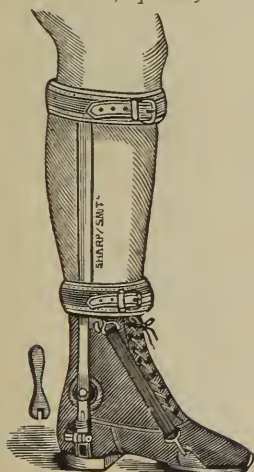
These ratchets are clamps, as shown in figures 4722-B and C; they admit either fixation at any angle or free motion.

One ratchet is placed just below the ankle for rotation (see figure 4722-A), and allows that part of the brace below it to be thrown out and fixed at any angle with the part above; for when so fixed, and the brace secured to foot and leg, any inversion tendency is combated by the entire brace, which thus acts as a powerful spring to keep the foot rotated outwardly. The second or pronation ratchet is to be placed where the side strip passes under the shoe or insole.



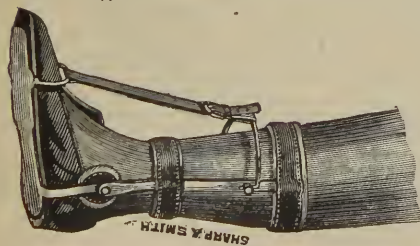
4722-B

4722-C



4722 A

Dr. Charles F. Stillman's Night Brace for Clubfoot.



4722-D

Measurements Required for Clubfoot Apparatus.

1. Send us a well-fitting and very light shoe or shoes to lace.
2. Length from sole to ankle joint.
3. Length from sole to garter (below knee.)
4. Circumference above ankle-joint.
5. Circumference at garter (below knee.)
6. Mention if for right, left, or both feet.

PRICES.

According to size, each.....\$13.00

ORTHOPÆDIC. DEFORMITIES.

Club-Foot and Bow-Leg Apparatus.

Dr. Stillman's Single Ankle Spring for the after treatment of Infantile Club-Foot

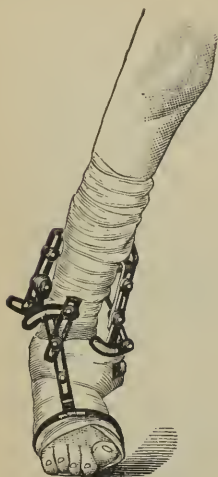


Fig 6.

4724—Applied. Price to patients, \$5.00.

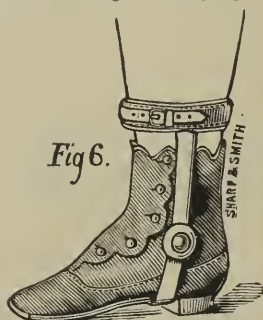


Fig 8.

4724B—Pulling Spring. Price to patients, \$5.00.

4723—Stillman's Club-Foot Twister. Price to patients, \$20.00. Directions for measurement for Club-Foot Apparatus, same as for Bow-Leg, except omit measurement 4, 7 and 8.

DIRECTIONS FOR MEASUREMENT FOR BOW-LEGS.

1. Length from sole to ankle joint, Inches.
2. Length from sole to garter (below knee) "
3. Length from sole to center of knee joint, "
4. Length from sole to perineum, "
5. Circumference above ankle joint, "
6. Circumference at garter (below knee) "
7. Circumference at middle of thigh, "
8. Circumference of thigh at perineum, "
9. Send us a pair of well-fitting lace shoes.

Fig 5.

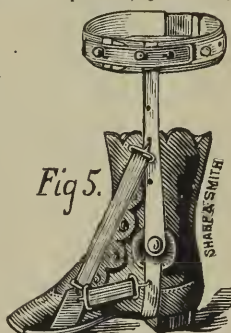


Fig 7.

4724C—The same with elastic. Price to patients, \$6.00.

4724A—Pushing Spring. Price to patients, \$5.00.

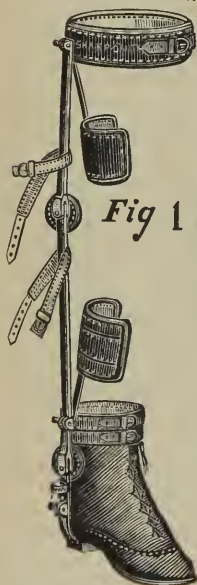
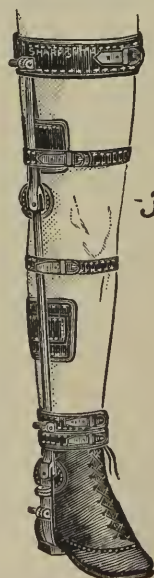


Fig 1



-2.



-3.



4723-A—Stillman's Brace for Club-Foot. Price per pair to patients, \$20.00 to \$25.00.

4724D—Stillman's Bow-Leg Brace. Per pair, without shoes, \$30.00 to \$40.00.

OUR ARTIFICIAL LIMBS.

We wish to call the attention of the medical profession, and all those who are interested in the latest and most useful improvements in mechanical surgery, to the merits of our LIMBS, illustrated on the following pages.

After having made and sold these limbs with unvarying success during a period of over twenty years, and upon their adoption by leading surgeons, and the favorable testimonials of hundreds who are wearing them, we feel justified in making the declaration, that for all the purposes for which artificial limbs are intended, they are without a rival.

Practical experience and the scientific adoption of mechanical principles to answer anatomical purposes have resulted in the production of these, the most durable and successful imitations of the natural limb ever yet attained.

Heretofore inventors, in their attempts to imitate nature, have lost sight of the fact that an artificial limb is simply a machine, and that its merits are based entirely upon the superiority of its internal mechanism. In external appearance we claim nothing original, while internally they are unlike any other limb made. In contour and symmetry of motion they as closely resemble nature as is possible, and retain the elements of comfort (to the wearer) and durability.

The materials used in their construction are English willow, steel, rawhide and car spring rubber. We use but one cord, which is made of silk or linen, covered with buckskin, making it very strong and durable. This cord is removable from both ends.

Our limbs are not complicated, consequently are not liable to get out of order. They can easily be taken apart for the purpose of cleaning and greasing joints. Our knee joints are made in our own factory, and will outwear most joints in use by other manufacturers. They will not work loose and rattle, and are shaped to fit limbs so that they do not show through pants when in a sitting position. The spring that regulates the flexing of foot is made of spiral steel, carefully tempered and so arranged that it can be easily removed and a new spring substituted in case of breakage, without the necessity of sending limb to our factory. We seldom hear of one breaking, and no charge is made for them when wanted to replace a broken one. We also use a rubber spring which is considered equal to the spiral steel.

The toe spring is so arranged that the motion can be regulated to suit by simply turning a nut on inside of foot.

Our laces are made of substantial leather, covered inside and out with buckskin, stitched with silk and fastened with patent hooks or eyelets.

The weight of these limbs is from $2\frac{1}{2}$ to $4\frac{1}{2}$ pounds, according to the weight of the patient.

Our artificial foot is fully explained in the cuts. We also construct apparatus for the extension of shortened limbs.

PREPARATION OF THE STUMP PREVIOUS TO THE APPLICATION OF AN ARTIFICIAL LEG.

As soon as sufficiently healed to admit of it, without pain or danger of irritation, the stump should be kept tightly bandaged, from the end up to the knee, if the amputation be below, or up to the body, if the amputation be above the knee. The bandaging will diminish and solidify the stump, leaving it in a much more desirable condition for fitting, and rendering the successful use of a leg more a matter of certainty. If neglected, the chances are that a soft, flabby stump will be the result, which will rapidly reduce after the patient begins the use of a leg, and a re-fitting, or an uncomfortable amount of filling up in the socket to compensate for the shrinkage of the stump, will be necessary.

ARTIFICIAL LIMBS.

The remaining joints, particularly the knee joint, should be kept in motion as much as can be conveniently, every day; this will prevent their becoming stiff and inflexible. Should this warning come too late, and the joint is already ankylosed, it should be gently and gradually exercised, and oily relaxing applications employed until straightened and flexible. A free daily use of the cold water bath and a brisk rubbing will prove beneficial. An application of a solution of tannin and alcohol will toughen the skin, and in many cases it would be an excellent thing to continue the use of this solution after an artificial leg has been applied.

LENGTH OF TIME AFTER AN AMPUTATION THAT A SUBSTITUTE CAN BE SAFELY APPLIED.

Upon this point there is diversity of opinion. Many surgeons strongly urge that an artificial leg cannot be safely fitted for several months after cicatrization occurs, and, on the other hand, some manufacturers of artificial limbs claim that a leg can be satisfactorily fitted just as soon as the stump has healed, no matter if it be but five or six weeks after the amputation.

Much, of course, depends upon the condition of the patient. It many times occurs that while the edges of the flaps have united and cicatrization appears, ossification at the sawn end of the bones has not taken place; consequently the necessary pressure and tension on the surrounding integuments and other adjacent parts, in wearing a leg, will unavoidably cause inconvenience, irritation and pain. It is therefore our opinion that, in the generality of cases, an artificial leg should not be fitted within *three months* after amputation, and that if the edges of the wound have thoroughly united at the end of that time, it is *unnecessary to wait longer*, except to harden and reduce the stump by bandaging, if this has not previously been done; and there are many good reasons why a leg should be applied as soon as practicable after this time (providing, as above stated, that the stump has healed), the chief one being that there is nothing that will discipline and strengthen a stump and remaining joints as quickly and as effectually as the use of a properly fitted artificial leg.

FITTING.

These limbs are fitted by a thoroughly experienced person, and their construction is under our personal supervision. We guarantee entire satisfaction in every case, and as regards our responsibility, we refer you to physicians and druggists generally.

Parties desiring a limb should write for blank measurements, which must, when received, be filled as per instructions accompanying them. When returned to us the limb will be put in form, and the patient notified when to come to the factory, have it fitted, and give it a trial.

It is possible in some cases to make a limb from measurements only. If after measurements and a detailed statement of the case are received, we conclude that your presence is unnecessary, you will be so informed.

Twenty-five per cent. of the price must (except on special contract) accompany each order.

For parties coming from a distance we will procure board and lodging at the most reasonable rates, if desired.

Firemen, engineers, conductors, brakemen, and men pursuing all sorts of business and trades who have met with the loss of either extremities, have been restored, and enabled to resume their labors by the use of artificial limbs.

We make but one quality, which is the very best that material and workmanship can produce. It will be necessary for the patient to come here and

ARTIFICIAL LIMBS.

one day for the purpose of having stump properly fitted, which cannot generally be done from measurement and description in a satisfactory manner, either to the patient or ourselves.

The fitting and hanging of an artificial leg are of the utmost importance to the wearer. We warrant our leg against any defect in either materials or workmanship, for any length of time, and will cheerfully make good any defect promptly and without charge.

We spare no pains or expense in making our limbs equal, if not superior, to any in the market, regardless of price. We use every effort in our power to give entire satisfaction to our customers.

We repair all kinds of artificial legs. We also keep a supply of stump socks, leg suspenders, etc.

We have made artificial limbs here for over twenty years. By giving your order to us, an old established house, you avoid the risk of not finding us in business only for a few months, as is the case with a great many leg makers. We have a very large surgical instrument and apparatus business, aside from our leg manufactory, and are better prepared to make a good leg at a low price than any other house in the trade.

PRICES.

With many persons the price of an artificial limb is an important consideration; at the same time it should not be the only one. Deal with a reliable establishment that has age, character, and a good financial foundation, and you are pretty sure to get the worth of your money, no matter what the price agreed upon may be.

DESCRIPTION OF LIMBS AND THEIR DIFFERENT PARTS.

"Of course all the artificial legs manufactured to-day are the outcome of invention, and take the place of the primitive wooden 'peg.' The first improvement on this 'peg' was made in England, and was only a slight advance. The first artificial leg which made any pretence of flexibility and imitation of the contour of the limb was the Anglesea leg, so called from the fact that it was made for the Marquis of that name, and worn by him. It must have been very crude, however, although it was a step in the progress of the art. Now, the art has reached a great degree of perfection, and the intricate movements which pertain to the natural limb are counterfeited with astonishing fidelity. Still, the artificial limb has been the subject of a kind of evolution, and we are now, as we have been, constantly studying to bring it closer to perfection."

We use two kinds of Ankle Joint, one with universal motion (see Fig. 775), and one without the lateral or side motion (see Fig. 776). In other ways they are precisely the same. We employ these two kinds of ankle joints for the reason that either one alone would not be so well adapted to the lengths and conditions of all stumps, or suitable to the occupation of all wearers. But in the majority of cases one or the other can be safely and successfully applied, and with guaranteed comfort and satisfaction.

The universal motion joint, as shown in foot, Fig. 775, is generally made with a steel spiral spring, while that of Fig. 776 we make with either railroad car spring rubber or with steel spiral springs.

If undecided which leg would be best adapted to your particular case, and it is left to our judgment to select, we will, on receipt of measurements and a full description of the case, construct the one that we believe will give the best and most lasting service.

ARTIFICIAL LIMBS.

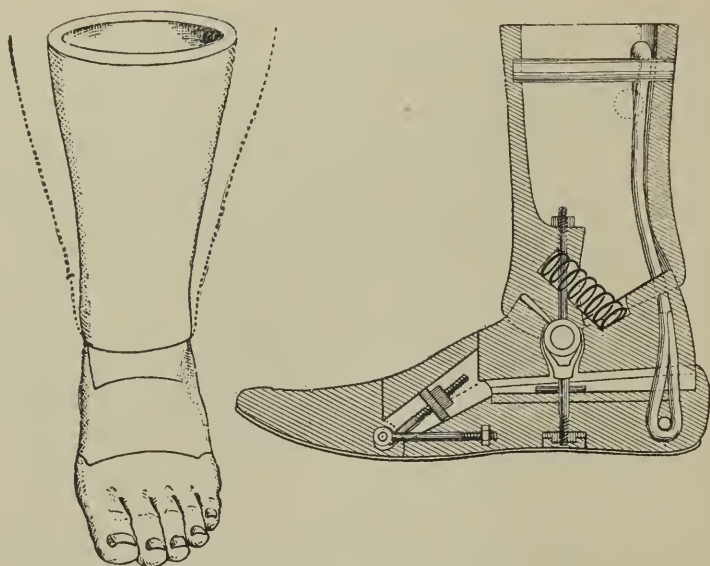
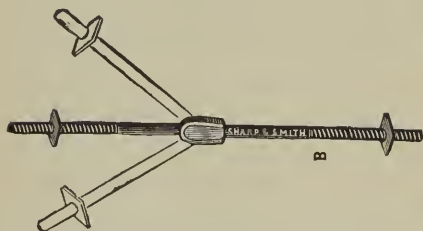
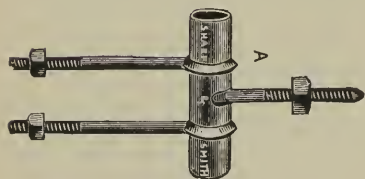


Fig. 775



Ankle Joint and Ankle Spring Connection for Fig. 776

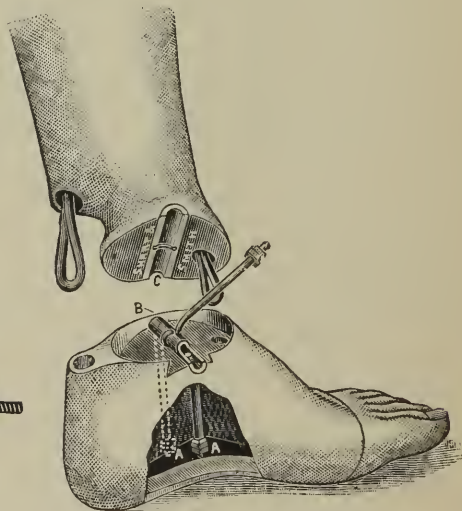


Fig. 776

STEEL STRAP KNEE JOINTS FOR AMPUTATION BELOW THE KNEE.

Fig. 777 shows the details of the Steel Strap Knee Joint Heads and their bearings: 1 shows the joint put together; 2 is the upper part of the joint which is riveted to the leather thigh band; 3 is the lower part which is riveted to the socket; 4 is the axis or bolt upon which the joint turns; 5 is the set screw which keeps the bolt in place.

The large amount of wearing surface on the joint heads, and the ease with which they may be tightened in case they become loose, make a very lasting and serviceable joint.

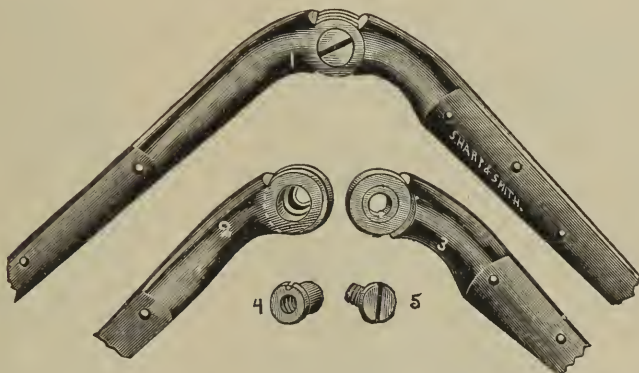


Fig. 777 Knee Joint for Amputation below Knee.

Figs. 778 and 778-A show the knee joint we use for thigh amputation. It is formed by the axial bolt, 3, plying in two segments of a circle. The straps, 6, 6, are riveted to the lower part of leg. The axial bolt, 3, has a thread at 4, which screws into the head of right hand strap, 6, and a tapered end which enters a countersunk hole in head of left hand strap, 6. The set screw, 5, is then inserted in the end of the bolt, drawing it into place and holding it firmly and securely.

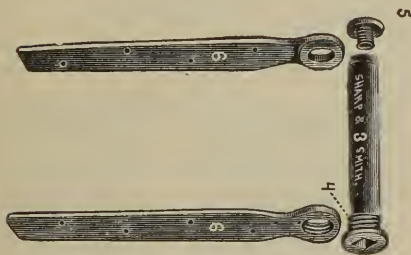


Fig. 778



Fig. 778-A

The bolt shown, Fig. 778-A, is a part of the knee joint and fastens to a cross piece on the upper part of leg parallel to the knee cord.

The motion of the knee joint is limited and controlled by the knee cord, which takes the place of the crucial ligaments of the natural knee joint; consequently, there is no unpleasant or painful jar caused by the solid parts coming in contact to limit the motion, as in some legs made by other manufacturers.

ARTIFICIAL LIMBS.

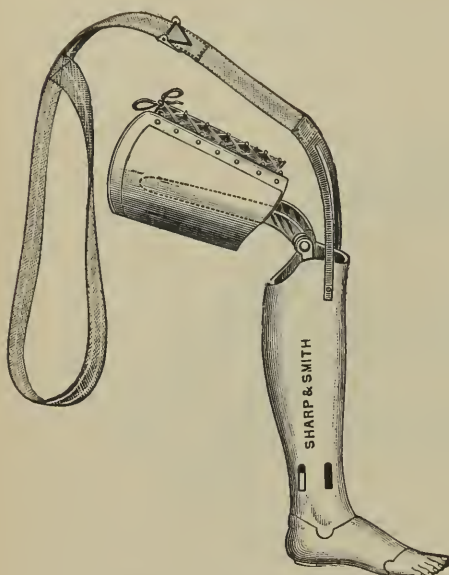


Fig. 779 Artificial Leg for Amputation Below the Knee.

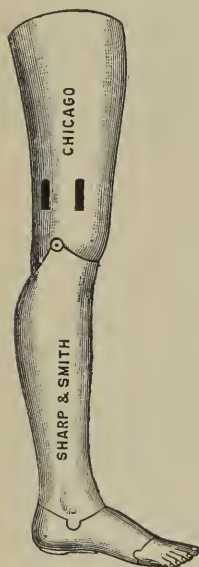


Fig. 780 Artificial Leg for Thigh Amputation.

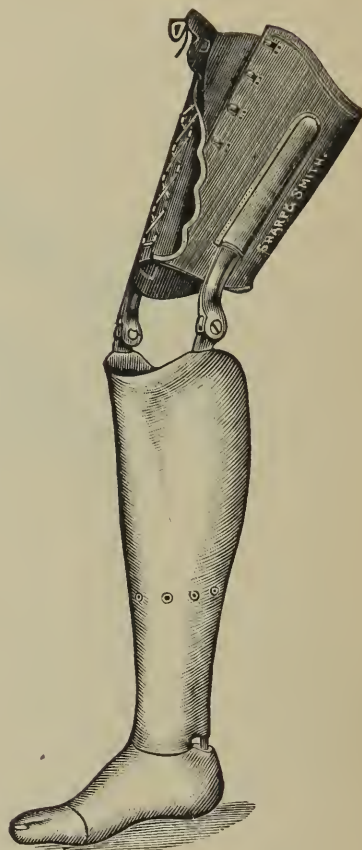


Fig. 781 Artificial Leg for Amputation Below the Knee.



Figs. 782 and 783 Showing Different Styles of Lacing Thigh Bands.

Fig. 781 represents a style of leg made with heel cord exposed, which is by some people frequently preferred although we have no claim for it in preference to our other styles.

Figs. 779, 780 and 781 legs can be furnished with either ankle joints as shown in cuts 775 and 776

ARTIFICIAL LIMBS



Fig. 784

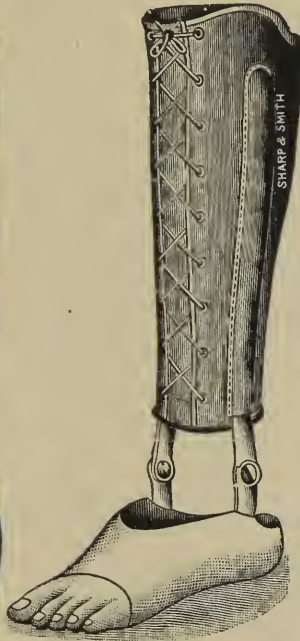


Fig. 784-A

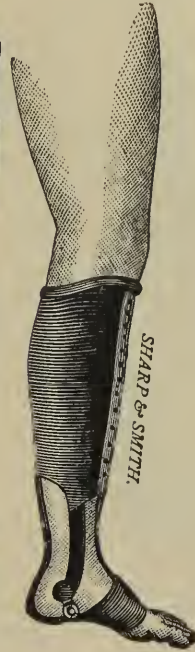


Fig. 785

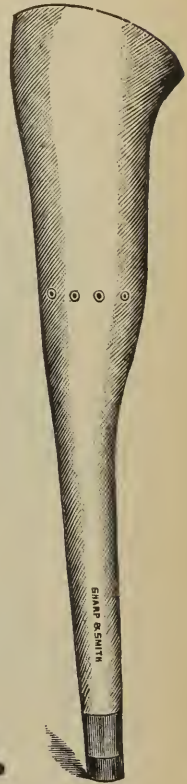


Fig. 786

Fig. 784 This cut represents a foot or apparatus for amputation at the instep known as the Chopart's operation. The foot is usually made of hard wood; sometimes, however, it is necessary to make the back part of it of metal, on account of the little space left under the stump, in order to make the height the same as the sound foot.

Figs. 784-A and 785 These cuts represent other styles of appliance for the Chopart's operation.

Fig. 786 Straight peg leg for thigh amputation. The socket is carefully and comfortably fitted, is covered with rawhide and waterproof enamel, and furnished with shoulder straps, etc.

We also make a peg leg for thigh amputation, with knee joint. It is made so that when standing the knee will lock itself automatically, making it stiff and inflexible. By simply pushing a spring on the outside of the leg the knee can be made flexible, and the lower part of the leg brought back at a right angle with the thigh. This will be found wonderfully convenient and comfortable in sitting down. Socket carefully fitted and covered with rawhide and waterproof enamel.

ARTIFICIAL LIMBS.

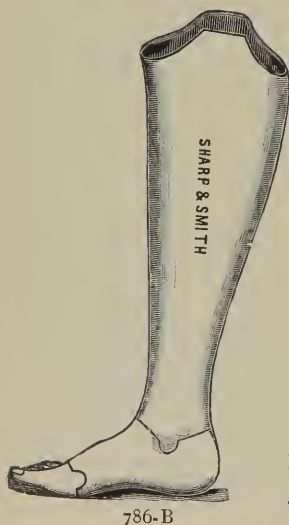
SHARP & SMITH'S DOUBLE SHOE.

Fig. 786-A—Represents a double shoe, calculated to be worn by a woman. It is rarely made, only in cases where very strong ankle movement is retained, or the ankle anchylosed with the foot at right angles to the shaft of the leg. The foot of the shortened leg enters the upper shoe (made to order); it is there buttoned or laced securely. Beneath this, and at the required distance from it, a wooden foot with ankle and toe joint, is secured firmly. This foot is dressed by an ordinary shoe, a mate to the one worn on the other foot. It will be seen readily that this foot is only desirable for women, as with them it can be concealed by their long dresses.

Fig. 786-B—Represents an Artificial Leg for Amputation below the Knee (with ankle and toe joint), without thigh support. Such, of course, can only be worn with long and well cushioned stump. If the irregularities of the stump will not hold the leg sufficiently secure, straps are attached, to either pass around the thigh or pass over the shoulder, or both, as may be desired. Notwithstanding some persons wear legs without thigh support, we are not prepared to favor them only in exceptional cases. The danger of straining the knee or injuring the stump by side strain and contractile forces makes it more prudent to use the thigh support as shown in Fig. 781.



786-A



786-B

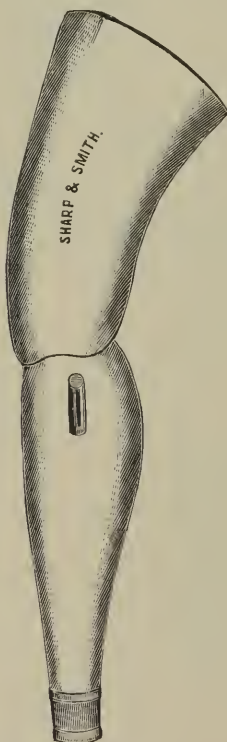


Fig. 786-C—Represents a peg leg for amputation above the knee. It has a knee joint, and will bend in walking or sitting as required.



Fig. 786-D—Represents a peg leg for amputation below the knee, with side joints and thigh piece.

ARTIFICIAL LIMBS.

STUMP SOCKS.



Fig. 790

When the stump is perfectly fitted into a smoothly polished socket, and covered with a light woolen sock, it is usually all that is required to make the stump comfortable, and is as much padding as is necessary. When the stump has reduced by the use of the leg, as is often the case, the shrinkage can be compensated for by covering the stump with extra socks until a new socket is fitted.

In ordering, state whether amputation is above or below the knee. Give length from body to end of stump, also circumference at points every four inches from end of stump to body.

PRICES OF STUMP SOCKS.

Number.	Length.	Circumference at the largest end.	Price each.	Price per doz.
0.....	1 to 10 inches.....	Less than 15 inches.....	\$0 40	\$ 4 00
1.....	10 to 15 ".....	" 15 ".....	50	5 00
2.....	10 to 15 ".....	Over 15 ".....	60	6 00
3.....	15 to 20 ".....	Less than 15 ".....	60	6 00
4.....	15 to 20 ".....	Over 15 ".....	70	7 00
5.....	20 to 25 ".....	Less than 15 ".....	70	7 00
6.....	20 to 25 ".....	Over 15 ".....	80	8 00
7.....	25 to 30 ".....	Less than 15 ".....	80	8 00
8.....	25 to 30 ".....	Over 15 ".....	90	9 00
9.....	30 to 35 ".....	Less than 15 ".....	90	9 00
10.....	30 to 35 ".....	Over 15 ".....	1 00	10 00

ARTIFICIAL ARMS.

It is not necessary for a patient needing an Artificial Arm to visit our factory for the purpose of having an arm made or fitted. Unlike the leg, there is not the great amount of pressure on the stump occasioned by the whole weight of the body bearing on it. Consequently the same inequalities in the surface of the socket do not produce the same effect on the stump.

Our arms weigh from twelve ounces to two pounds, according to the style of arm and the weight and vocation of the patient.

ARTIFICIAL LIMBS.

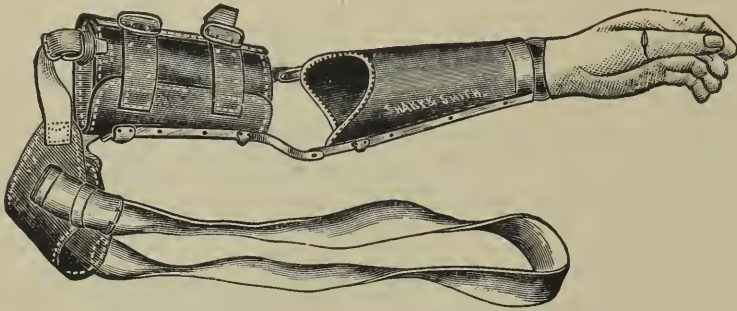


Fig. 800 Arm for Amputation below the Elbow.

Fig. 800 shows an Artificial Arm for amputation below the elbow. This arm is made with joint in the thumb, thereby enabling the wearer to hold in position a pen, knife, fork, and other useful articles. At the wrist joint the hand can be removed, and in its place can be inserted numerous useful articles, such as hooks, brushes, knives, rings, claw-hooks, etc., etc., that could not be held firmly enough in the artificial hand. See the following illustration for the method used in changing.

Special implements can be made to order for attaching to the arm at wrist.

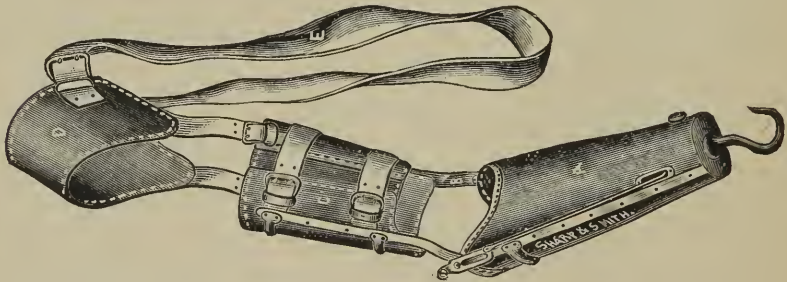


Fig. 801 Arm for Amputation below the Elbow.

Fig. 801 shows the same style of arm as Fig. 800, showing the arm changed from the hand to the hook, or other devices.

The socket "A" which receives the stump is lined with a very soft leather, and is surprisingly comfortable to the most sensitive stumps. The socket is connected with the lacing attachment "C" by steel elbow-joint straps. The shoulder cap "D" is kept in place with the strap "E," which greatly relieves and supports the stump while the arm is being used in rough work, or in lifting heavy weights. The strap "E" passes around the body underneath the sound arm, and buckles in front. This arm is made of a fine quality of specially prepared leather, mounted and supported with nickel plated steel bands.

Fig. 802 represents an arm for amputation above the elbow, to which can be attached a hand, or any other of the devices mentioned on preceding page. It is made of light, tough wood, and covered with rawhide. The arm is attached to the body by means of a belt passing around the body under both arms and over both shoulders, and fastened in front. By motion of the shoulder and stump, the forearm can be brought up to any desired degree of flexion, and automatically locked.



Fig. 803

Fig. 803 represents a patent hand which we sometimes put on our Artificial Arms.

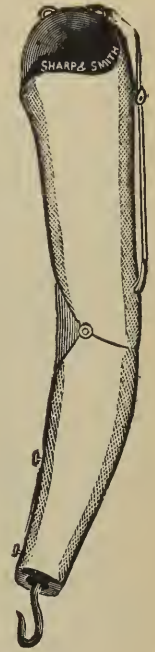


Fig. 802

The strip of steel at the level of and upon the outer side of the elbow is articulated with the aid of a metal slide working for its whole length upon a tenon or projecting pin; the upper end of the slide is connected to the webbing or leather strap going to the shoulder—the object of this arrangement is to change the direction of the force when the arm is bent. The mechanical arrangement for moving the fingers is inclosed in a cavity hollowed in the substance of the hand, as shown in Fig. 803. It consists of a number of levers of different kinds, arranged in such a manner as to apply the force exercised by the traction-cord to the best mechanical advantage in moving the fingers. From the end to the long arm of the second lever a bar projects upward to the extent of an inch and a half, and connected by a short coupling by its proximate end to an oblique bar fixed to the base of the thumb. A spiral spring runs along each side of the hand and, acting upon each couple of fingers, keeps them in position of approximation to the thumb. The fingers are connected with the hand by a transverse bolt; the index and middle fingers, and the ring and little fingers, are coupled together, possessing the first phalangeal joints. As the mechanism thus far described provides only for the extension of the first phalanges, an additional lever, working by an eccentric, is placed in the first phalanges, and acts upon the second and third phalanges.

A COMBINED KNIFE AND FORK.

For Persons Having the Use of but One Hand.

PATENTED MARCH 13, 1886.

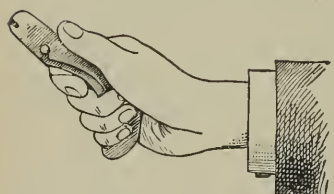


Fig. 1 The Knife folded as carried in the pocket.

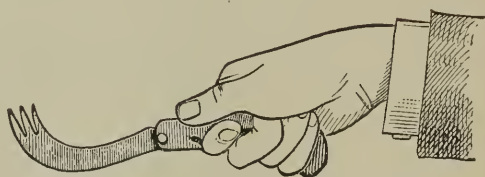


Fig. 3 Knife open in position for cutting.

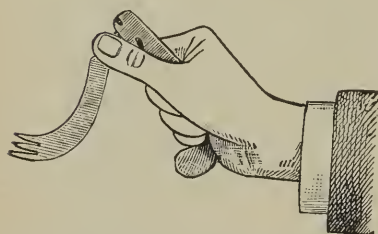


Fig. 2 Knife partly opened, showing the manner in which the operation is performed.

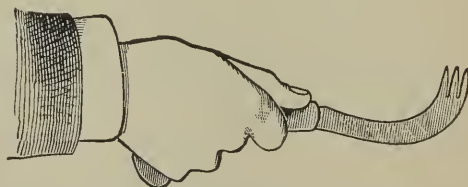


Fig. 4 Knife inverted, and Fork brought into position.

The preceding engravings represent a new device for the convenience of those who have either temporarily or permanently lost the use of one of their hands, and who do not use an artificial hand in eating. It consists of a knife and fork combined, capable of being folded and carried in the pocket. The knife blade is of a crescent shape, which by a rolling movement and a slight pressure given to it by the wrist, will cut meat or any article of food, without danger of moving on the plate. By rotation of the wrist the fork can be brought into position and the morsels conveniently carried from the plate to the mouth, all accomplished with but one hand, with little exertion, and without attracting attention. The knife blade, in either the opened or closed position, is firmly secured by a locking arrangement, which is under control of the thumb, thus the danger of closing on the fingers when in use, or of opening or cutting or piercing the clothing when carried in the pocket, is obviated. This contrivance is without springs or complication, is simple and effective. The blade and handle are made of steel, and heavily nickel plated. The knife can be immersed in hot or cold water for cleansing without danger of cracking or rusting. Price \$2.00.

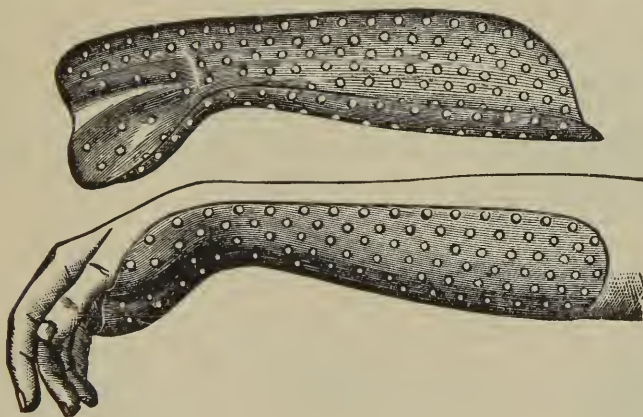
SPLINTS.

LEVIS' METALLIC SPLINTS.

The copper used in the manufacture of these Splints being less than one-eightieth of an inch in thickness, makes them very light and readily conformable by bending so as to suit the peculiarities of any limb, and yet the Splints when applied are as firm as the heaviest wooden appliances. They fit so accurately that but little padding is required; a piece of woven lint or of cotton or woollen flannel, is all that is necessary for their lining. A slight roughness is left on the outside of the Splints by perforations to prevent the bandage from slipping. They are nickel-plated to prevent oxidation.

They are invaluable when the parts are lacerated. As the perforations allow ventilation, and secretions are not confined and liable to be absorbed, as in every other kind of splints, but readily pass off through the numerous orifices, they do not become offensive like those made of porous materials.

These Splints are cooler, and lighter in weight, thinner in material, more correct in shape and more perfect in fit than any other Splints offered to the profession. They are all made in two sizes—one for adults, and one for children, and all, except the radius, fit the same on either the right or left limb. The following comprise a complete set, and are ample to apply to any fractures that may occur.



4750-X

No. 1. Radius Splints—Right and Left.

For Fracture of Lower end of the Radius. Four in each set. For each piece.....\$1 00

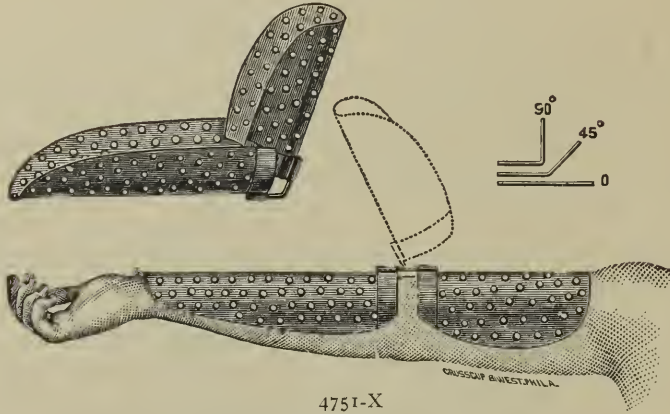
In the treatment of fracture of the lower end of the radius it is essential that proper allowance be made for the curvature of the anterior or palmar surface of this part of the bone. This is insured in this Splint, which follows directly the radial curvature; and the fixing of the thenar and hypothenar eminences of the hand in their moulded beds, maintains the splint immovably in its correct position with reference to the radial curve.

To neglect of complete primary reduction of the displacement of the lower fragment, and to inefficient restoration and retention of the normal radial curve, are due the frequent unfortunate sequences of this fracture.

No dorsal splint is needed, but a small pad will in most cases be required over the dorsal surface of the lower fragment. For retention of the Splint an ordinary bandage, two inches and a half to three inches wide, is all that is necessary.

This Splint has the merit of being applicable to all cases of fracture of the lower end of the radius, and also to many other injuries involving the forearm and wrist.

SPLINTS—LEVIS' METALLIC.



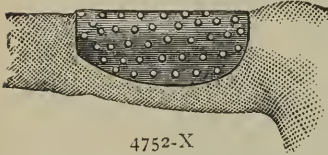
No. 2.—ADJUSTABLE ANGULAR SPLINT.

For all fractures of the elbow joint, and of the arm and forearm, excepting those at the lower end of the radius.

Two in each Set. each \$1 50
This Splint can be applied either anteriorly or posteriorly, and is comfortable and adjustable to any angle.

The pieces are detachable, and can be used separately.

This Splint is also applicable to diseases, and to resections, of the elbow joint.



No. 3.—HUMERUS SPLINT.

For Fractures of the Humerus.

Two in each set. each 50 cents.



No. 4.—PHALANGES SPLINTS.

For Fractures of Fingers or Toes.

Three in each set. each piece \$0 15

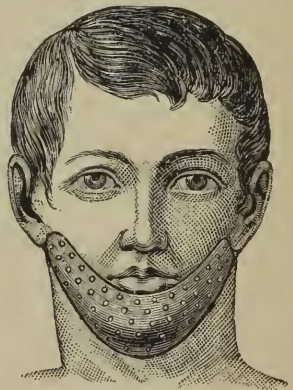


No. 4.—IMPROVED PHALANGES SPLINT.

For Fractures of Fingers and Toes.

Three in each set...per piece \$0 15

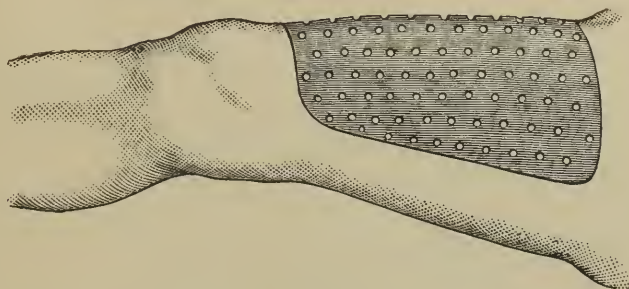
We have made a great improvement in these Finger Splints by adding the extension which runs up on the palm of the hand. This tip also makes them adaptable to H. A. Wilson's Metacarpal Splints.



Two in each set. each \$0 75

Fig. 4755.—No. 5.—Clavicle Splint.—This Splint forms a cap for the shoulder, and can be applied to fractures of the clavicle and humerus.

Fig. 4756.—No. 6.—Maxilla Splint.—This Splint forms a complete cap or covering for the entire chin and lower maxillary bones, and keeps the fractured parts rigidly in the correct position.

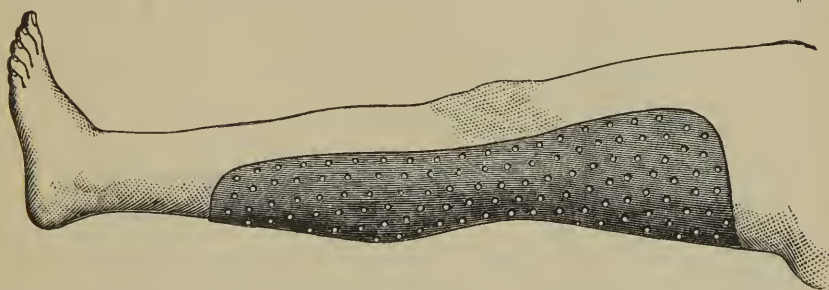
SPLINTS—LEVIS' METALLIC.

4757-X

No. 7. FEMUR SPLINT.

For fractures of femur, ribs and hip-joint.

Two in each set.....each \$ 50

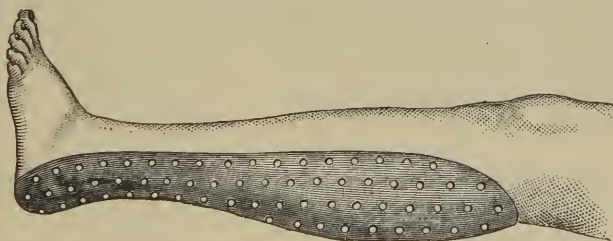


4758-X

No. 8. PATELLA SPLINT.

Two in each set.....each \$1 00

This Splint can be applied to all fractures from middle of femur to middle of tibia and fibula, and is particularly well adapted for fractures of the patella and all other fractures occurring near the knee joint, either above or below it.



4759-X

No. 9. TIBIA AND FIBULA SPLINT.

For all fractures and other injuries of the leg below the knee, and especially adapted for those at or about the ankle joint.

Two in each set.....each \$1 00

The complete set consists of the twenty-one pieces just described, in a neat, compact case. \$15 00 per set.

SPLINTS—LEVIS' METALLIC.

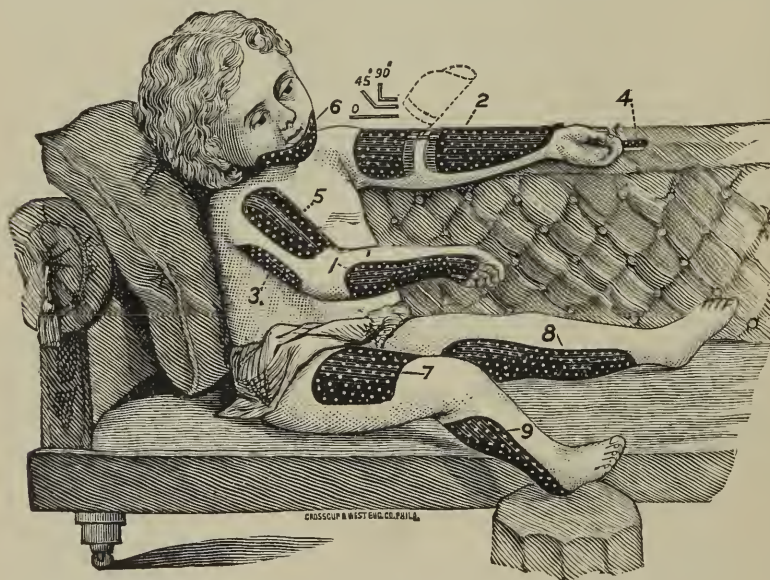
No. 10.—Two in a Set.—Splint for Treatment of Club Foot. Price, 75 Cents Each.

Made of perforated and nickel-plated copper, in two sizes, for infants from three months to three years of age. They are made so as to fit the same on either limb, and are especially adapted to have shoes made over them, or to be fastened to the inside of ordinary shoes. The leg part can be trimmed off at the top of the shoe, unless needed for support.

They are much lighter in weight, and better in fit than iron braces can possibly be made. They support, strengthen and straighten the limbs by a very gradual and uniform pressure throughout. This is owing to the large surface of the limb which they incase.

Set for Infants. The only Set of Infant Splints in the Market.

This set consists of ELEVEN PIECES, and is only intended for infants of three years of age and under. They are made in the same shapes as the large sets, No. 1 being made in Rights and Lefts, and all the other shapes made to fit the same on either limb.



4760-X

Prices of the Different Pieces.

No. 1.....each	\$o 75	No. 4.....each	\$o 10	No. 7.....each	\$o 25
No. 2.....“	1 00	No. 5.....“	50	No. 8.....“	75
No. 3.....“	25	No. 6.....“	50	No. 9.....“	75

Above set (Fig. 4760-X) contains eleven pieces, put up in Walnut Case. Price, \$5.00.

This Infant Set will never be included in the regular Adult and Children Set, unless so specified in the order.

The regular set of twenty-one pieces, and this Infant Set of eleven pieces combined, thirty-three pieces in all, put up in one case. Price \$18.00.

SPLINTS—LEVIS' METALLIC.

NEW HAND SPLINT DEvised BY H. AUGUSTUS WILSON, M. D., OF PHILADELPHIA.

No. II.—H. A. Wilson's Metacarpal Splint, Four in each Set. Price, 75 Cents for Each Piece. Finger Splints, 15 Cents for each Piece Extra



4761-X

The usefulness of the above Splint is fully illustrated in the above cut. It is made in *Rights and Lefts* for *Adults and Children*, of thin, flexible, perforated and nickel-plated copper, which can be readily moulded to the parts as desired. It is indestructible by use, and can be thoroughly and easily cleansed by simply immersing in hot water—a very important consideration in this age of antiseptic surgery. It has been found very useful in the treatment of all kinds of injuries to the hand, where support and immobility are desired. In the treatment of fractures of the metacarpal bones, it meets every requirement, and at the same time permits of the judicious use of the fingers, thereby avoiding the troublesome ankylosis that is so apt to follow injuries to the hand.

It is made adaptable for the adjustment of *Levis' Metallic Splint, No. 4, (Phalanges)* so that one or more of which may be used at a time, as the exigencies of the case require. The injured fingers are given full support in their adjusted position, leaving the sound one free for limited use, so as to avoid ankylosis.

NEW COMBINED FOREARM AND HAND SPLINT.

Made in two forms, as shown in the Figs. 4583 and 4584. These Splints are designed to fill a long-felt want for a Splint that could be universally used for all fractures and injuries to the forearm, hand and fingers. Thus, the bandage can be applied (if necessary) above and below the injury, leaving it open or exposed for treatment. In addition to their "Antiseptic" qualities, our Splints retain the members in their correct and normal position; these are very important and essential features, not possessed by any other Splints in the market.

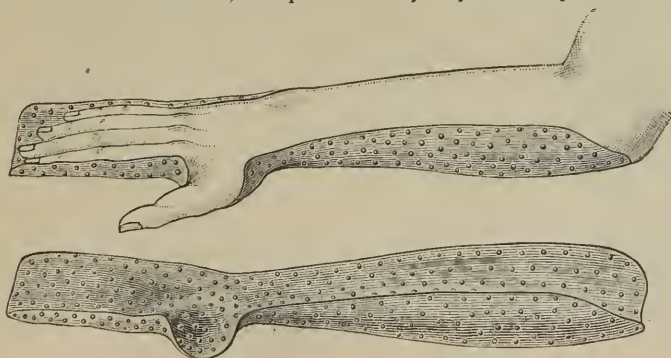


Fig. 4762X No. 12 each \$1 00
Combined Forearm Splint. Rights and Lefts. Adults and Children. Four in each Set.
For all fractures and injuries of forearm, hand and fingers

SPLINTS—LEVIS' METALLIC.

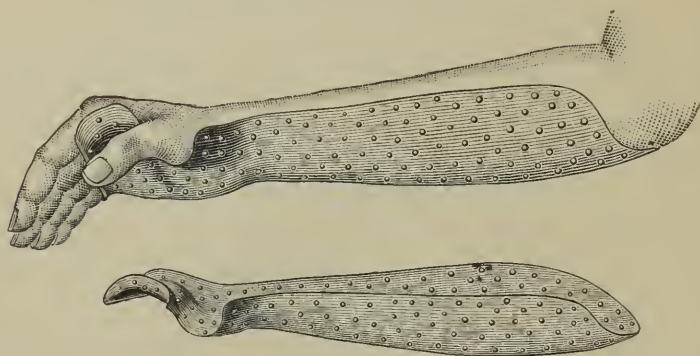


Fig. 4763X No. 13.....each \$1 00

COMBINED FOREARM SPLINT (IMPROVED BOND'S SPLINT.)

RIGHTS and LEFTS. ADULTS and CHILDREN. FOUR IN EACH SET.

For all Fractures and Injuries of the Forearm and Hand.

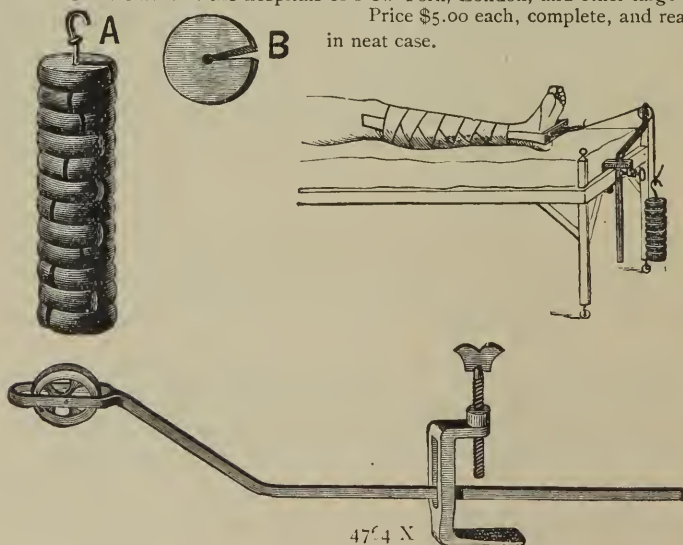
LEVIS' EXTENSION APPARATUS.

Designed by R. J. LEVIS, M. D., Surgeon to the Pennsylvania Hospital, and to the Jefferson College Hospital.

The application of the principle of weight-extension to the treatment of fractures, and in diseases and deformities of joints, is of such importance as to require more effectual and convenient apparatus than is ordinarily used. It is desirable that the mechanical appliances for this object should be convenient and inexpensive, portable, not cumbersome, and readily and securely applicable to various forms of bedsteads and couches. It is also important that the amount of tension by weight can be estimated, and varied to the requirements of the case.

All these requisites are secured in an accurate and mechanical manner by the Apparatus devised by Dr. R. J. Levis, which has been used for a number of years in the Pennsylvania Hospital, and also to some extent in the hospitals of New York, London, and other large cities.

Price \$5.00 each, complete, and ready for use, in neat case.



4764 X

SPLINTS—LEVIS' METALLIC.**NEW SPLINTS.—LEE'S METALLIC SPLINTS.—ANTISEPTIC,
PERFORATED AND NICKEL PLATED.**

PATENTED OCTOBER 30TH, 1888.

Having numerous inquiries from time to time for Anterior Splints, to match our Posterior ones, we have decided to manufacture the four following new and useful forms:

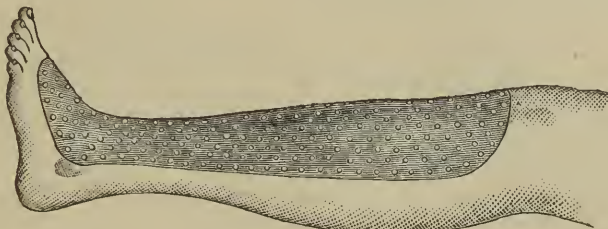


Fig. 4765-X. No. 14. Anterior Tibia Splint. Two in each set. Adults and children. Can be used separately or in combination with No. 9 (Fig. 4759-X) Splint.each, \$1 00

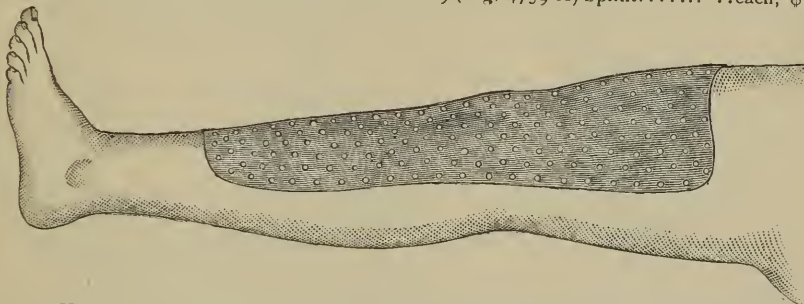


Fig. 4767-X. No. 15. Anterior Patella Splint. Two in each set. Adults and children. Can be used separately or in combination with No. 8 (Fig. 4758 X) Levis' Splint. . . .each, \$1 00

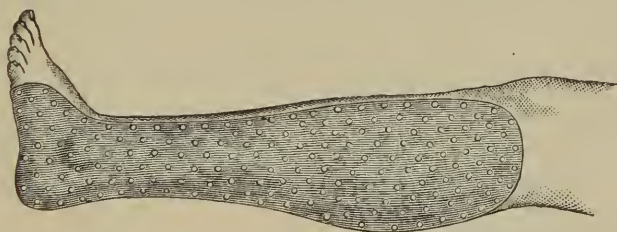


Fig. 4768-X. No. 16. External Ankle Splint. Four in each set. Rights and lefts. Adults and children. This is designed to replace the old-fashioned wooden Splint. . . .each, \$1 00

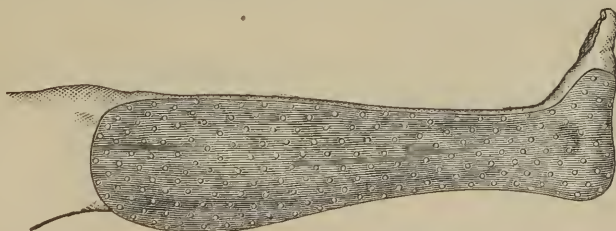


Fig. 4769-X. No. 17. Internal Ankle Splint. Four in each set. Rights and lefts. Adults and children. This is designed to replace the old-fashioned wooden Splint. . . .each, \$1 00

SPLINTS—LEVIS' METALLIC.

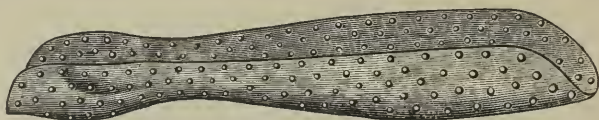
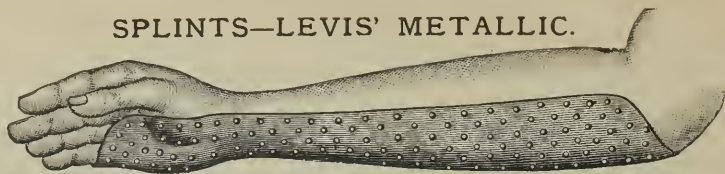


Fig. 4770-X. No. 18. Ulna or Fore-arm Splint, four in each set, rights and lefts, adults and children. each, \$1 00
For Fractures and Sprains of the Fore-arm and Dislocations at the Wrist Joint.

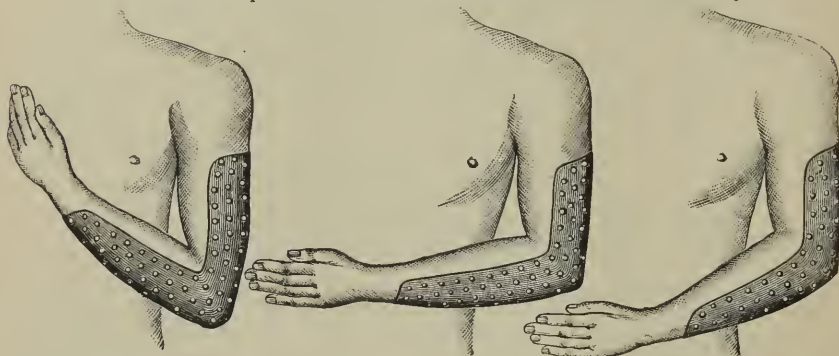


Fig. 4771-X. No. 19.

Fig. 4772-X. No. 20.

Fig. 4773 X. No. 21.

Fig. 4771-X. No. 19. Posterior Elbow Splint, acute angle, two in each set, adults and children each, \$1 00

Fig. 4772-X. No. 20. Posterior Elbow Splint, right angle, two in each set, adults and children. each, 1 00

Fig. 4773-X. No. 21. Posterior Elbow Splint, obtuse angle, two in each set, adults and children. each, 1 00

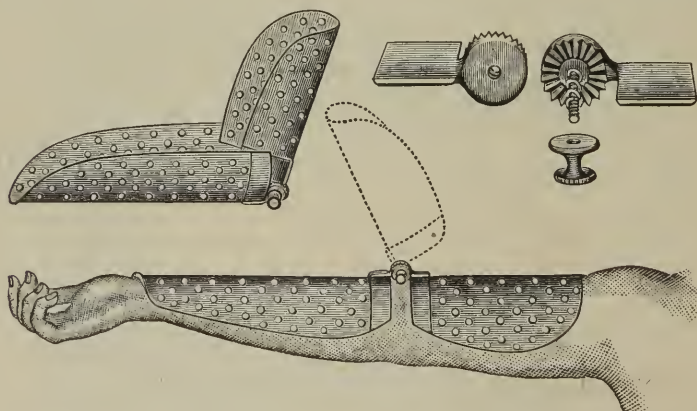


Fig. 4774-X. No. 22. Adjustable Angular Splint, two in each set, one each, adults and children. For fractures of the elbow joint, and of the arm and fore-arm near the joint; each, \$1 50
This Splint can be applied either anteriorly or posteriorly, and is comfortable and adjustable to any angle.

SPLINTS—LEVIS' METALLIC.

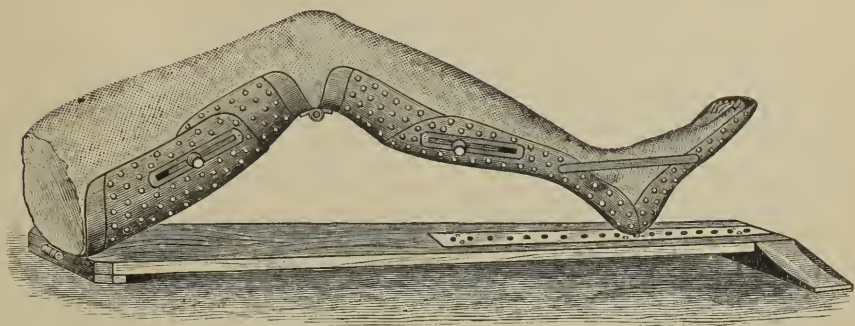


Fig. 4775 X. No. 23. Double Inclined Plane Splint, two in each set,
one each, adults and children.....each, \$5 00

These Splints can be lengthened or shortened to fit any ordinary size adult or child very quickly and easily, and any desired angle can be obtained at the knee joint.

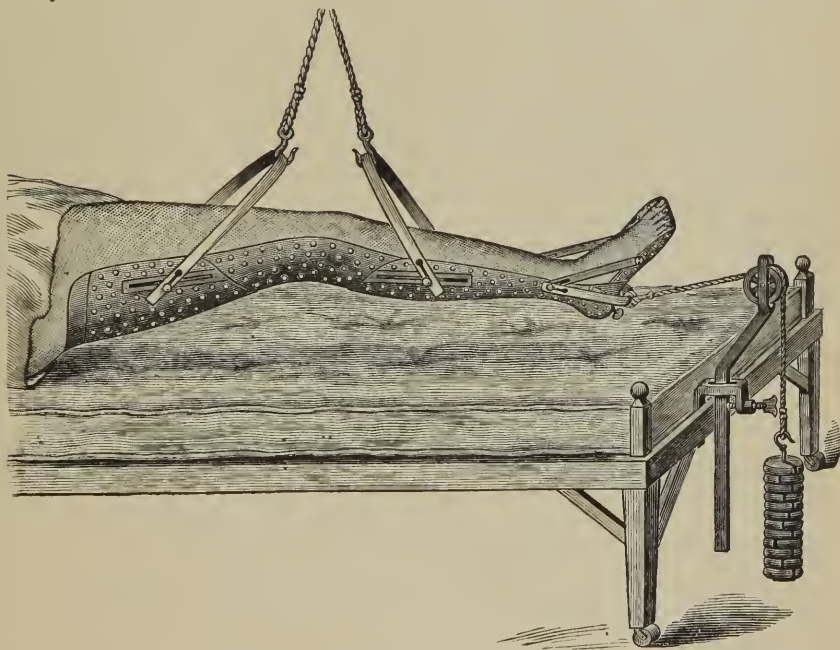


Fig. 4776-X. No. 24. Levis' Combined Extension and Suspension Splint,
2 in each set, 1 each adults and children.....each, \$5 00
Levis' Suspension Apparatus (shown in cut) (see page 778) each, extra, 5 00

These Splints can be lengthened or shortened to fit any ordinary size adult or child. They can be used either with or without foot piece. They can be used for extension in connection with ANY extension apparatus, and suspension and extension can both be applied at the same time (if necessary), as represented in cut.

LEVIS' SET OF 11 PIECES FOR INFANTS.

Put up in neat walnut case, 8 inches long, 4½ inches wide, 3 inches deep, and weighs packed, 2 pounds. The set consists of the following Splints for infants under four years of age :

No.....1	2	3	4	5	6	7	8	9	Total
Infants ....2	1	1	2	1	1	1	1	1	11 pieces.

Price complete.....\$5.00.

LEVIS' SET OF 21 PIECES FOR ADULTS AND CHILDREN.

Put up in handsome cherry case, 17 inches long, 6 inches wide, and 6 inches high. Total weight packed, 9 pounds ; consisting of the following Splints :

No.....1	2	3	4	5	6	7	8	9	Total
Adults. ....2	1	1	2	1	1	1	1	1	11
Children...2	1	1	1	1	1	1	1	1	10

Price complete, \$15.00.

Total number of pieces in set, 21

LEVIS' SET OF 32 PIECES, FOR ADULTS, CHILDREN AND INFANTS.

This set consists of the first two combined and put up in cherry case, 17 inches long, 6 inches wide, and 6 inches deep, and weighs packed, 10 pounds ; consisting of the following pieces :

No.....1	2	3	4	5	6	7	8	9	Total
Adults. ....2	1	1	2	1	1	1	1	1	11
Children...2	1	1	1	1	1	1	1	1	10
Infants ....2	1	1	2	1	1	1	1	1	11

Price complete, \$18.00.

Total number of pieces in set, 32

LEE'S SET OF 40 PIECES, FOR ADULTS, CHILDREN AND INFANTS.

Put up in neat cherry case, 18 inches long, 9 inches wide, and 9 inches deep. Total weight packed, 14 pounds, consisting of the following splints :

No.....1	2	3	4	5	6	7	8	9	13	14	15	18	20	22	Total
Adults. ....0	0	1	2	0	1	1	1	1	2	1	1	2	1	1	15
Children...0	0	1	2	0	0	1	1	1	2	1	1	2	1	1	14
Infants ....2	1	1	2	1	1	1	1	1	0	0	0	0	0	0	11

Price complete, \$25.00.

Total number of pieces in set, 40

This set can be had without the Infant Set, if wanted that way; this will leave 29 pieces (15 for adults and 14 for children). Price for set without Infants, \$20.00.

SPLINTS—LEVIS' METALLIC AND AHL'S FELT.**LEE'S SET OF 75 PIECES.**

FOR ADULTS, CHILDREN AND INFANTS.

Put up in a neat cherry case, 38 inches long, 13 inches wide, and 13 inches deep. Total weight, packed, 42 pounds, consisting of the following Splints:

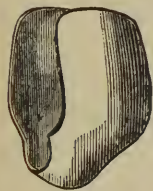
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
Adults	2	1	1	2	1	1	1	1	1	0	2	2	2	1	1	2	2	2	1	1	1	1	1	1	31
Children	2	1	1	2	1	1	1	1	1	0	2	2	2	1	1	2	2	1	1	1	1	1	1	1	31
Infants	2	1	1	2	1	1	1	1	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	13

Total number of pieces in set. . . . 75

Price, complete, \$60.00.

AHL'S ADAPTABLE POROUS SPLINTS.**Detailed Description of the Sets—What Constitutes a Complete Set.**

The complete set of Adaptable Porous Splints contains twenty-five (25) pieces for adults, and twenty-five (25) pieces for children, making in all fifty (50) pieces. They weigh altogether not quite five pounds, and are neatly packed in nests in a light wooden box with a firm fastening. This allows them to be conveniently transported in the physician's carriage.



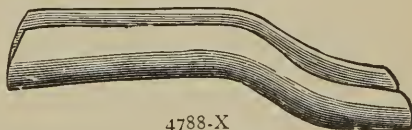
4786-X

Lower Maxillary Splint (Fig. 4786.) This splint embraces the entire chin, and forms a complete support to the fractured part while at the same time it allows, by its flexibility, sufficient motion to open the mouth slightly, to take food and drink. They are more comfortable than the gutta-percha splint. Retain it by Barton's bandage.

Adults' size, 75c. Children's size, 50c.



4787-X

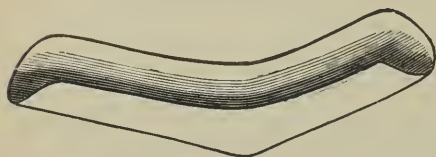


4788-X

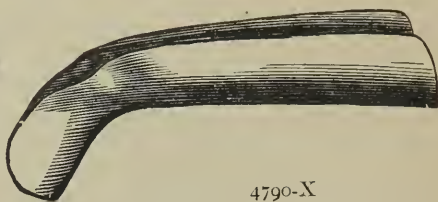
Inferior Forearm Splint for the Ulna (Fig. 4787) and **Superior Forearm Splint for the Radius** (Fig. 4788.) These two splints are intended for all fractures of the forearm, and also for sprains and dislocations at the wrist joint complicated or not with fracture. Very often actual fractures of the head of the radius or ulna are diagnosed as sprains, and result in semi-anchylolysis. These cases, even when of several months' duration, can be treated with complete success with these splints. They are also admirably adapted to treating Barton's fracture, fulfilling every indication as well as Bond's Splint, requiring no pads or compresses, and being less likely to be followed by stiffness of the joint. They may be used either in combination or alone. As the radius and ulna are more liable to fracture than any other bones, ready-made splints are very convenient.

Adults' size, each, 75c. Children's size, each, 50c.

SPLINTS—AHL'S FELT.



4789-X



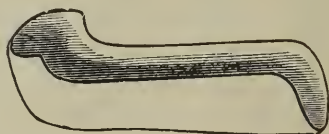
4790-X

Elbow Splint (Fig. 4789.) This is for fractures and dislocations of the radius, ulna and humerus, at or near the elbow joint. In combination with the Inferior and Superior forearm splints, it is adapted to all fractures of the ulna and radius at the middle or upper third, or compound comminuted fractures of the same bones. Where both radius and ulna are fractured, bring the parts into contact, then apply splints, Figs. 4787, 4788 and 4789, and bandage over all from the hand to the shoulder. If the fracture is comminuted, cut a part or parts out of the splints, corresponding to the points of comminution, and bandage around them. The wounds can easily be dressed without disturbing the splints or bandages. As the swelling is reduced, tighten the bandages as the splints accommodate themselves to the reduction. The Elbow Splint is at an obtuse angle, to prevent the lapping of soft parts, and as being most natural to sling. Adults' size, 75c. Children's size, 50c.

Anterior Tibia Splint (Fig. 4790.) This splint is intended for fractures of the tibia proper, and especially for fractures, either simple or compound, in the vicinity of the ankle-joint. It reaches from the knee-joint to the instep, and embraces the ankle-joint perfectly. Fractures of the malleoli will be readily treated by combination of this and the following pieces. There are two splints of this kind to each set.



4791-X

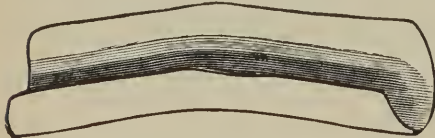


4792-X

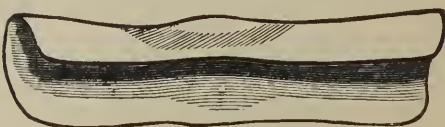
Posterior Fibula Splint (Fig. 4791.) This splint is suited to treating fractures of the fibula proper, and also in the vicinity of the ankle joints, either simple, compound or comminuted. Figs. 4790 and 4791 are combined for a complete apparatus for treating bad compound fractures of the tibia and fibula, either of the upper, middle or lower third, and at the ankle joints. There are two splints to each set, one for the left and one for the right limb.

Adults' size, \$1.00. Children's size, 75c.

Shoulder Splint (Fig. 4792.) Any fracture of the humerus can be successfully treated by a combination of the shoulder and elbow splints. The shoulder splint fits over the exterior face of the shoulder, and it is to be used with the short, slightly curved piece to be applied to the opposite surface. Adults' size, 75c. Children's size, 50c.



4793-X



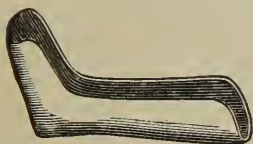
4794-X

SPLINTS—AHL'S FELT.—Continued.

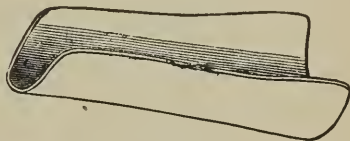
Anterior Knee-Joint Splint (Fig. 4793).—This splint is adapted to treat fractures of the tibia, fibula and femur near the joint, and also in connection with the anterior and posterior tibia and fibula splints, to treat all fractures of those bones. There are two splints to each set, one for the right and one for the left knee-joint.

Posterior Knee-Joint Splint (Fig. 4794).—This splint, in connection with the anterior knee-joint splint, treats fractures of the tibia, fibula and femur near the knee-joint, and also the upper third of the fibula and tibia, and the lower third of the femur; and also in connection with the anterior and posterior tibia splints, treats all fractures of those bones. There are two splints to each set, one for the right, and one for the left limb. These splints can be used for the tibia and fibula also, when fractured about the middle of the shaft. Figs. 4793 and 4794 are used also for fracture of the patella, and are admirably adapted to keep it in position.

Adults' size, Figs. 4793 and 4794, \$1.00. Children's sizes, 75c.



4795-X



4796-X

Club-Foot Splint for Children (Fig. 4795).—This splint is intended for treating the club-foot of children, after operation, or without operation, which it does very successfully. There are two club-foot splints for each set.

If the application of these splints be commenced soon after birth, where this deformity is present, and so adapted (by the foot being bent sidewise at an angle to the leg portion) that they exert a constant yet moderate pressure toward the normal line of the limb, the deformity may, in some instances, be remedied without an operation.

Fig. 4795 Splint, 75c. Mention age of child.

Fig. 4796 Splint, adult size, 75c. Children's size, 50c.

Femoral Splints (Fig. 4796).—These splints are intended to treat fracture of the lower third and middle of the femur, and upper third, in combination with anterior and posterior knee-joint splints, as represented in Figs. 4793 and 4794. They encase the fractured limb perfectly.

Price of a complete set, embracing fifty pieces, put up in a neat box, with handle on top.....\$26 36



4797-X

Fig. 4797. **Palmar and Dorsal Splint** (in position) Obviates the necessity of compresses or pads, and insures extension and position.

Adults' and children's size, each piece, 75c.

SPLINTS—AHL'S FELT.

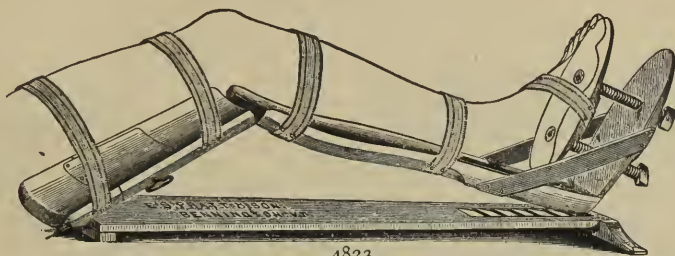
FIG. No.	NAME AND CHARACTER OF SPLINTS NOT INCORPORATED IN A REGULAR SET—RIGHT OR LEFT.	Adult, per Piece.	Child's per Piece.
479SX 15—	Levis-Johnstone, Palmar.....R.	\$ 0 75	\$ 0 75
	Levis-Johnstone, Palmar.....L.	0 75	0 75
4799X 16—	Levis-Johnstone, Dorsal.....R.	0 75	0 75
	Levis-Johnstone, Dorsal.....L.	0 75	0 75
4800 17—	Combined Arm and Forearm, Anterior Rt. Angle.....R.	2 00	These Splints are not made in Children's Sizes.
	Combined Arm and Forearm, Anterior Rt. Angle.....L.	2 00	
4801 18—	Combined Arm and Forearm, Posterior, Rt. Angle.....R.	2 00	
	Combined Arm and Forearm, Posterior, Rt. Angle.....L.	2 00	
4802 19—	Combined Arm and Forearm, Anterior, Obt. Angle.....R.	2 00	
	Combined Arm and Forearm, Anterior, Obt. Angle.....L.	2 00	
4803 20—	Combined Arm and Forearm, Posterior, Obt. Angle.....R.	2 00	
	Combined Arm and Forearm, Posterior, Obt. Angle.....L.	2 00	
4804 21—	Forearm Condyle, Anterior.....R.	0 75	
	Forearm Condyle, Anterior.....L.	0 75	
4805 22—	Forearm Condyle, Posterior.....R.	1 00	These Splints are not made in Children's Sizes.
	Forearm Condyle, Posterior.....L.	1 00	
4806 23—	Straight Splint for Elbow and Lower Third of Humerus, Anterior, R.	1 50	
	Straight Splint for Elbow and Lower Third of Humerus, Anterior, L.	1 50	
4807 24—	Straight Splint for Elbow and Lower Third of Humerus, Posterior, R.	1 50	
	Straight Splint for Elbow and Lower Third of Humerus, Posterior, L.	1 50	
4808 25—	Right Angle Elbow, Anterior.....R.	1 00	
	Right Angle Elbow, Anterior.....L.	1 00	
4809 26—	Right Angle Elbow, Posterior.....R.	1 00	
	Right Angle Elbow, Posterior.....L.	1 00	
4810 27—	Obtuse Angle Elbow, Anterior.....R.	1 00	These Splints are not made in Children's Sizes.
	Obtuse Angle Elbow, Anterior.....L.	1 00	
4811 28—	Obtuse Angle Elbow, Posterior.....R.	1 00	
	Obtuse Angle Elbow, Posterior.....L.	1 00	
4812 29—	Metacarpal, Index and Middle Fingers.....R.	0 50	
	Metacarpal, Index and Middle Fingers.....L.	0 50	
4813 30—	Metacarpal, Little and Ring Fingers.....R.	0 50	
	Metacarpal, Little and Ring Fingers.....L.	0 50	
4814 31—	Metacarpal Thumb.....R.	0 50	
	Metacarpal Thumb.....L.	0 50	
4815 32—	Malleolus, Internal.....R.	1 00	1 00
	Malleolus, Internal.....L.	1 00	1 00
4816 33—	Malleolus, External.....R.	1 00	1 00
	Malleolus, External.....L.	1 00	1 00
4817 34—	Fixation Splint, Hip Joint, Anterior.....R.	5 00
	Fixation Splint, Hip Joint, Anterior.....L.	5 00
4818 35—	Fixation Splint, Hip Joint, Posterior.....R.	5 00
	Fixation Splint, Hip Joint, Posterior.....L.	5 00
4819 36—	Femur Perineal and Hip Support.....R.	3 00
	Femur Perineal and Hip Support.....L.	3 00
4820 37—	Hinged Pelvis and Splint (Male).....	7 50
	Hinged Pelvis and Splint (Female).....	7 50
4821 38—	Johnstone's Laced Splint for Knee (any size).....	10 00
4822 39—	Johnstone's Felt Jacket for Spinal Curvature.....	25 00

When no prices are given, the numbers referred to are made in one size only.

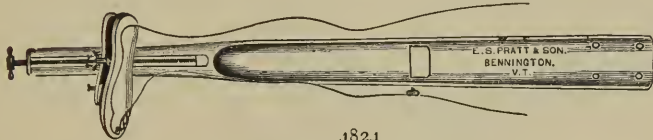
Nos. 34, 35, 37, 38 and 39, are made to order only, and in any size desired.

Orders for No. 39 MUST be accompanied by plaster cast of subject.

SPLINTS—DAY'S OR PRATT'S CARVED WOOD.

4823
DOUBLE INCLINE PLANE.

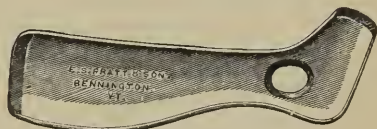
Small.....	\$3 00
Medium.....	3 75
Large.....	4 50

4824
EXTENSION BAR.

Small.....	\$5 00
Large.....	5 00

4825
RIGHT ANKLE SPLINT.

No. 0.....	\$0 60	No. 2.....	\$0 80
No. 1.....	0 70	No. 3.....	0 95

4826
LEFT ANKLE SPLINT.

Sizes and prices of Left Ankle Splints
are the same as those of Right Ankle.

4827
Jointed Patella Splint.—With Screw.

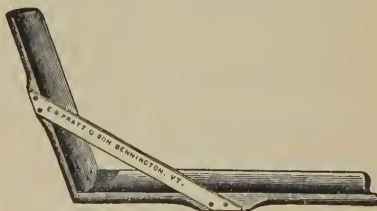
No. 1.....	\$1 50	No. 3.....	\$1 80
No. 2.....	1 70	No. 4.....	2 00

4828
Patella Splint.

No. 1.....	\$0 60	No. 3.....	\$0 80
No. 2.....	0 70	No. 4.....	0 95

4829
Joint Arm Splint.—With Screw.

No. 1.....	\$1 50
No. 2.....	1 70
No. 3.....	1 85

4830
Condyle and Humerus Splint.

No. 1.....	\$0 60
No. 2.....	0 80
No. 3.....	0 95

SPLINTS.

DAY'S OR PRATT'S CARVED WOOD.



4831



4832



4833

Dressing Splints.

Per set of five.....\$ 40

Squire's Forearm Splint.

No. 1.....	\$1 00
No. 2	1 10
No. 3.....	1 20
No. 4.....	1 30
No. 5	1 40
No. 6	1 50

Jointed Condyle and Humerus Splint.

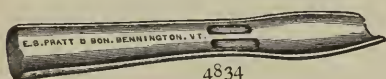
No. 1.....	\$ 60
No. 2.....	75
No. 4.....	95

The Squire's Jointed Forearm Splint, the Jointed Condyle and Humerus Splint, and the Jointed Patella Splint, are not in the regular set of Splints.

The following comprise the Complete Set of Splints:

- 1 Extension Bar, small.
- 1 " " large.
- 1 Double Incline Plane, small.
- 1 " " medium.
- 1 " " large.
- 8 Radius or Crooked Hands, set.
- 6 Forearm or Straight Hands, set.

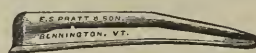
- 5 Interosseous, set.
- 3 Jointed Arms, set.
- 8 Ankles (new), set.
- 4 Patella, set.
- 3 Condyle and Humerus, set.
- 5 Dressing Splints.



4834

Forearm Splint.

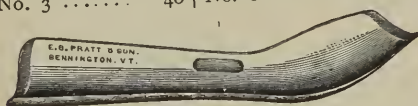
No. 1.....	\$0 30	No. 4.....	\$0 50
No. 2.....	35	No. 5.....	65
No. 3.....	40	No. 6.....	75



4835

Interosseous Splint.

No. 1.....	\$0 30	No. 4.....	\$0 55
No. 2.....	40	No. 5.....	60
No. 3.....	50		



4836

Right and Left Radius Splints.

No. 1.....	\$0 35
No. 2.....	40



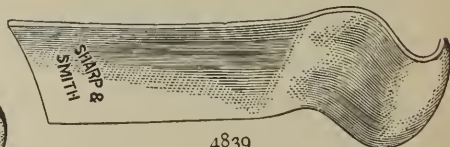
4837

No. 3.....	\$0 50
No. 4.....	60

Pratt's Splints, complete, per set, \$35 00



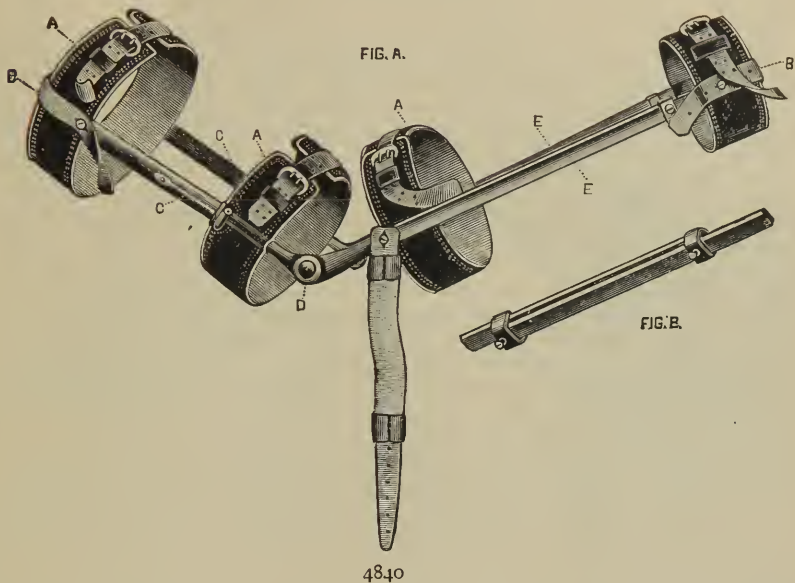
4838



4839

- *4838 Coover's Forearm Splint for fingers, flexed\$1 00
- *4839 Coover's Forearm Splint for fingers, straight.1 00

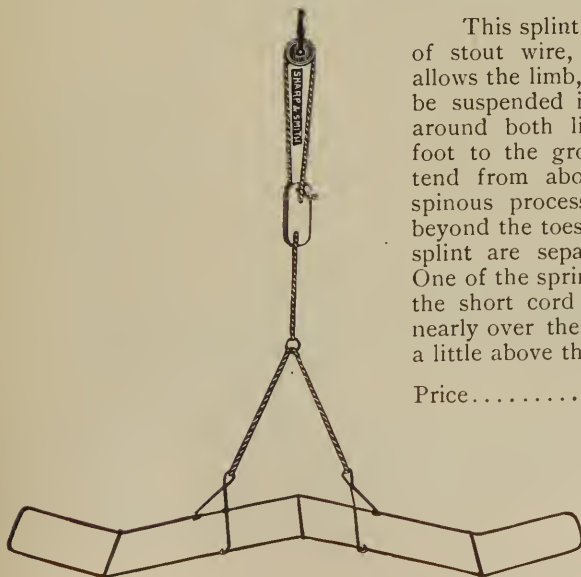
SPLINTS.



4840

Fig. 4840—Bryant's Splint for Extension of Elbow at any angle, price \$18 75

Fig. 4841.—Dr. Nathan R. Smith's Anterior Splint and Suspending Apparatus for Fractures of the Leg and Thigh.



4841

This splint is simply a frame composed of stout wire, which, being suspended, allows the limb, fastened to it by rollers, to be suspended in turn, the rollers passing around both limb and splint, from the foot to the groin. The splint should extend from above the anterior superior spinous process of the ilium to a point beyond the toes. The lateral bars of the splint are separated about three inches. One of the spring double hooks fastened to the short cord for suspension ought to be nearly over the seat of fracture, the other a little above the middle of the leg.

Price.....\$2 50

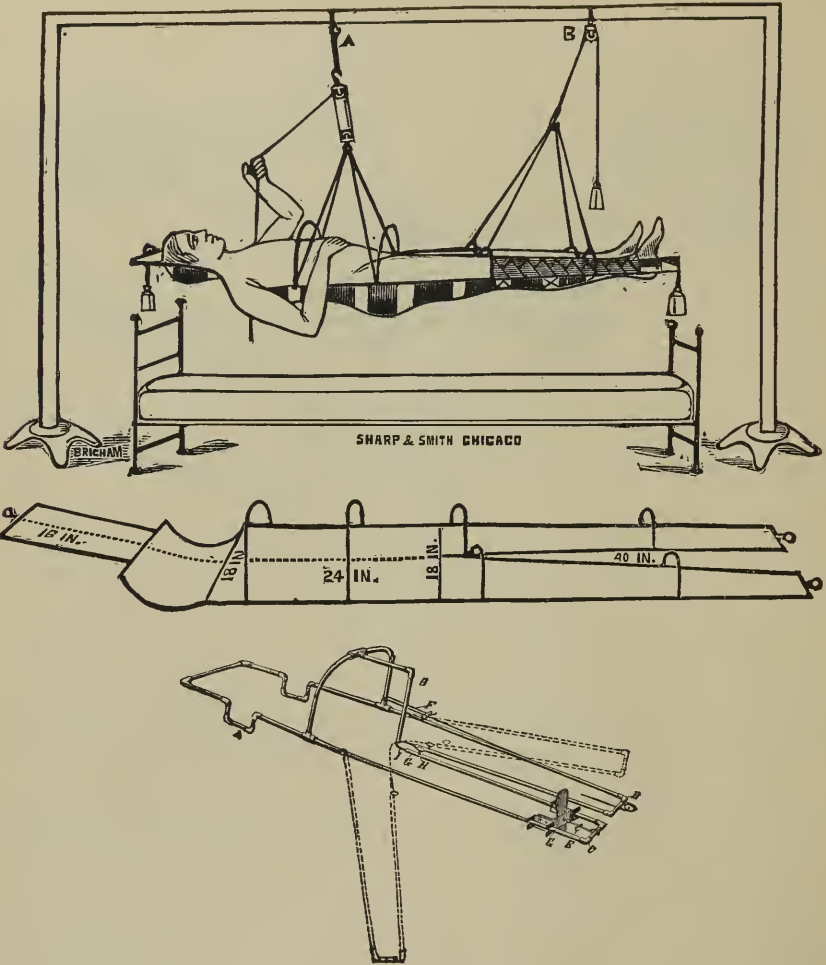


Fig. 4842—Dr. Verity's Splint complete \$12 00

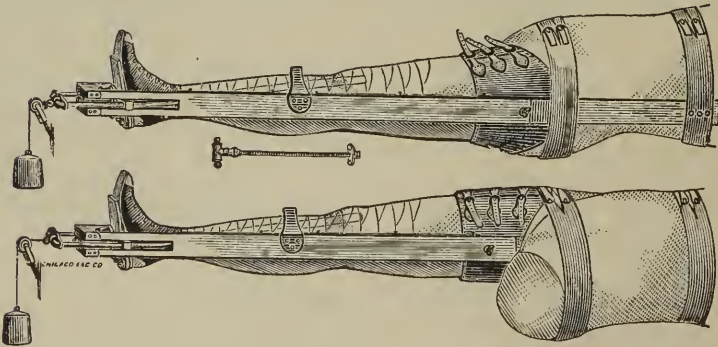


Fig 4843—Staples' Fracture Apparatus \$40 00

SPLINTS AND SPLINT MATERIAL.

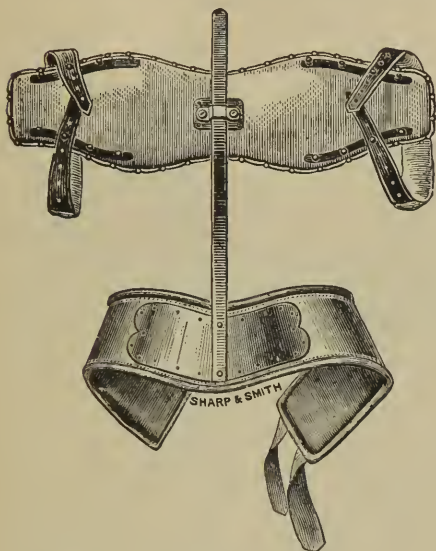


Fig. 4844—Staples' Clavicle Apparatus.
\$15 00.



Fig. 4844—Staples' Apparatus for Fractured Clavicle, Applied.

4845	Plain Fracture Boxes.....	each,	\$3 00
4846	Gutta Percha Splint Material.....	per lb.,	2 00
4847	Binders' Board.....	per sheet,	10
4848	Koehler's Adaptable Splint Material.....	"	1 50
4849	Russian Felt Splint Material.....	per sheet, \$1 50 to	4 00
4850	Gilbert's Patent Set Splints.....		1 00
4851	" " " Flannel Lined.....		1 25



Fig. 4875—McCurdy's Fracture Bed—See next page.

FRACTURE BED.

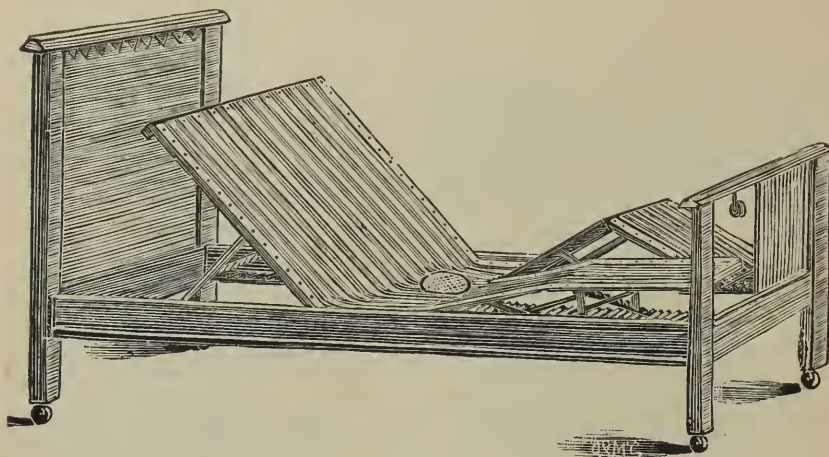


Fig. 4875.—McCURDY'S FRACTURE BED—See Preceding Page.

In presenting this page giving a brief description of the McCurdy Fracture Bed to the medical profession, we feel that we have shown something well worthy the attention of all interested surgeons trying to contrive a method by which fractures, amputations, injuries of the spine, pelvis, large joints and severe wounds, may be treated scientifically without shifting or moving the patient about when undesirable, besides preserving the invalid in any decubitus required, thereby aiding instead of retarding nature in her process of repair.

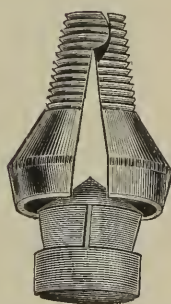
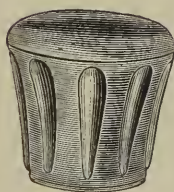
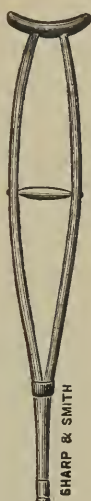
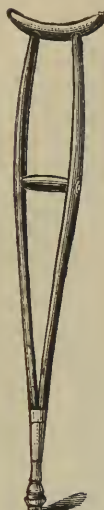
Every medical man who has had any experience in surgery, knows that the difficulty in the successful treatment of grave injuries arises from being unable, at will, to place the patient in a desirable position. This dreaded hindrance can be overcome in every respect by the features found in our bed, which the accompanying illustration will partly explain. Before entering into a separate description of the applicability of each part, it will be well to state concisely that the outside or basic frame measures $6\frac{1}{2}$ feet long, 3 feet wide, 4 inches deep, and contains several adjustable frames operated with ratchet work (see cut) upholstered with the best of canvas material, strengthened at intervals of a few inches with webbing. In the center opposite the point where the nates rest is a circular opening in the canvas, subject to the use of drop trap.

FIG.	
*4875	No. 1. Bedstead made of Poplar Frame, Ash or Oak, upholstering of good material.....\$35 00
*4875	No. 2. Bedstead, Walnut or Cherry, with Panels same, or Ash or Chestnut, Frame, Oak or Ash, upholstering of best material... 40 00
*4875	No. 3. Same as No. 2, with Bedstead highly ornamental..... 45 00
*4875	No. 4. Frame made adjustable to any Bedstead, of best material throughout..... 20 00
*4875	No. 5. Bedstead and Frame same as No. 2, made without the lower extremity inclines, for Paralytics, Fevers, etc..... 32 00
*4875	No. 6. Frame without Bedstead or adjustable lower extremity inclines..... 18 00

The frame in all cases is made of the best material throughout, the difference in price being based upon the material and style of Bedstead.

The above prices are for Bed packed for shipping, and placed on board cars.

CRUTCHES.

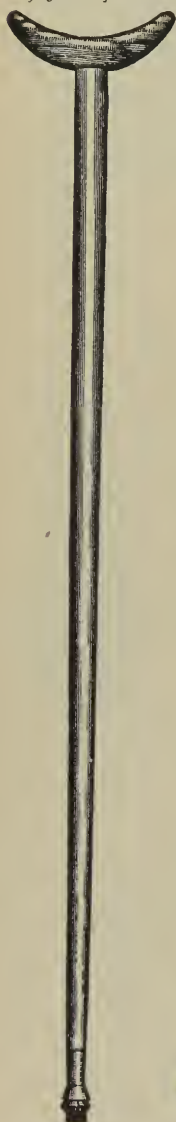


	4907—No. 7.	4908—No. 8.	4909—No. 9.
*FIG. 4900	Malacca, Full Nickel Plated Trimmings.....		per pair, \$15 00
*4901	No. 1. Rosewood, Elastic Top, full Nickel Plated Trimmings....		" 10 00
*4901-A	No. 1. Rock Maple, " " " "		" 8 00
	Genuine Russia Tops will add \$1 50 per pair net to either of above.		
*4902	No. 2. Rock Maple, Rosewood Tops, Nickel Trimmings.....		" 10 00
*4902-A	No. 2. Rock Maple, Cherry Tops, Nickel Trimmings.....		" 7 00
*4903	No. 3. Maple, Two Sticks, with Nickel Plated Bottoms, (Fig. 4907).....		4 00
*4904	No. 4 " " " " Ferrules.....		2 50
*4905	No. 5. " " " " Bottoms (Fig. 4907). padded tops		5 00
*4905-A	No. 5. " " " " Ferrules.....		2 00
*49-6	No. 6. Plain Split Maple or Ash.....		1 50
*4907	No. 7. S & S. Bottom, Nickel Plated, large.....	per pair,	1 50
*4907-A	No. 7. " " " small.....		1 50
4907-B	Large Rubbers for above.....		" 40
4907-C	Small " " " " " " " " " " " "		" 40
*4908	No. 8 Slide Rubbers.....		" 25
*4909	No. 9. Patent Bottoms, Nickel Plated small, \$2 00; medium, \$2 50; large..		3 00
4910	Large Rubbers for above.....	per pair,	40
4911	Small " " " " " " " " " " " "		" 20

CRUTCH APPLIANCES.

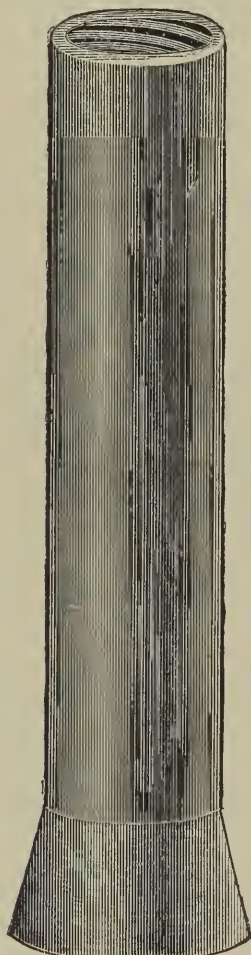
PATIENTS' PRICES.

FIG.			
*4912	Long Extension for Crutches, small.....	per pair, \$1 75	
*4913	" " " medium.....	" 2 00	
*4914	" " " large.....	" 2 25	
4915	Adjustable Ice Spur.....	" 50	
	4916 Conical Ice Spur.....	" 15	
	4917 Plain Steel Point Ice Spur.....	" 10	
	*4917-A Single Stick Crutches.....	from \$1.00 to 5 00	



No. 9

Fig. 4917-A



No. 40

Fig. 4914



No. 41

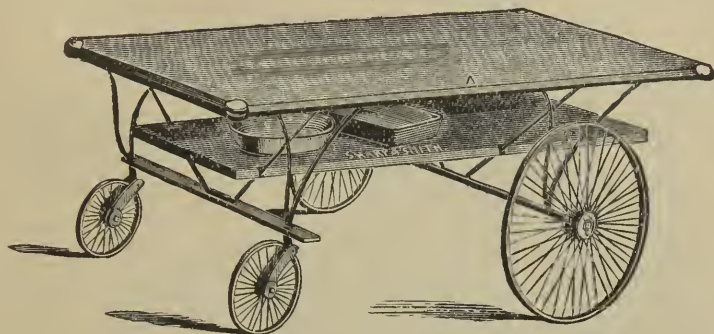
Fig. 4913



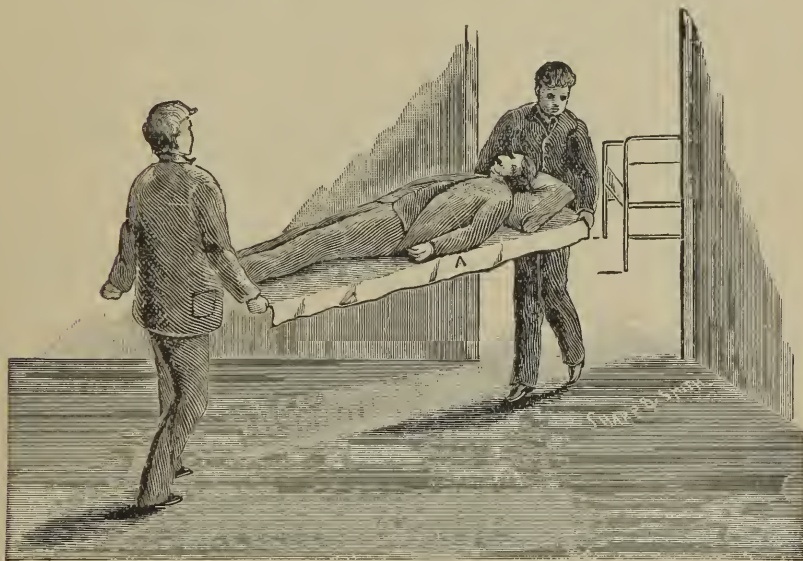
No. 42

Fig. 4912


SHARP & SMITH'S HOSPITAL WHEEL STRETCHER.



Cut No. 1



Cut No. 2.

 We take pleasure in presenting to the medical profession and hospitals of this country our "HOSPITAL WHEEL STRETCHER," which was originated and first used in the Presbyterian Hospital of this city, and is now in general use in other hospitals.

steel wheels, 2 1/2 inches in diameter, at one end, and two smaller malleable iron wheels, 10 inches in diameter, at the other end. The smaller wheels are attached by a "swivel" which allows the stretcher to be moved in any direction.

Between the axles and the top of stretcher is a shelf extending the entire length and width, which is intended to hold Pans, Instruments, Dressings, Anæsthetics, etc., etc.

The top marked "A" in Cut No. 1 is removable from the stretcher, by means of handles, as shown in Cut No. 1, this being one of the most desirable features. The height of the apparatus is generally that of the ordinary Operating Table, so that after or before the operation the patient can be transferred from one to the other *without the slightest pain*. The top "A" is also removed and lowered to the level of the bed or couch, so that the patient can be transferred with the same satisfactory results as described concerning the Operating Table. These Apparatus we make to order (in a very short time) to conform to the sized doorway or elevator through which they are to pass. In cases where the entire stretcher cannot pass through a small doorway, the top "A" is removed, as shown in Cut No. 2.

"A" in Cut No. 2 represents the patient being carried from the stretcher to the couch on the removable top
"A" in Cut No. 1, the top being covered with a sheet.

This Stretcher, while being stout and serviceable and capable of holding 600 or 700 lbs., is very neatly put together, and is as easily wheeled with a heavy weight upon it as a baby carriage. With it a patient can be carried from the lower to the top floor on an elevator without the slightest exertion. It is also used for carrying food from ward to ward.

Price of Stretcher	\$30 00	net.
“ “ with Rubber Tires	35 00	“

STRETCHERS, ETC.



Fig. 4920 Sharp & Smith's Folding Stretchers. Net Price \$6.00.

The bars of these stretchers are made from selected hardwood, while the cross-pieces are of wrought iron, firmly fastened at their ends with bolts. These cross-pieces are constructed so they will fold up, thus securing great compactness for storage or transportation. The canvas is of a heavy quality, firmly secured to the side-bars. We can furnish these made from an endless piece of canvas, passing around and across both side-bars, at an additional cost of 35 cts. each. This allows its removal for washing, and its use as a wrapper for the side-bars and cross-pieces.

Other Styles of Stretchers from \$5 to \$10.

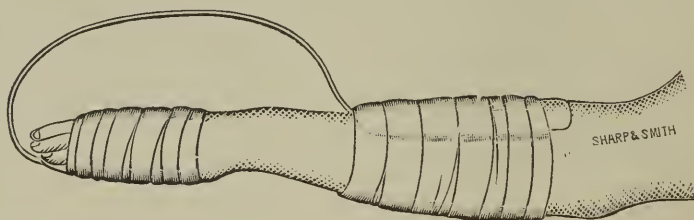


Fig. 4921 Esmarch's Interrupted Splint, for Excision of Wrist. \$3.00

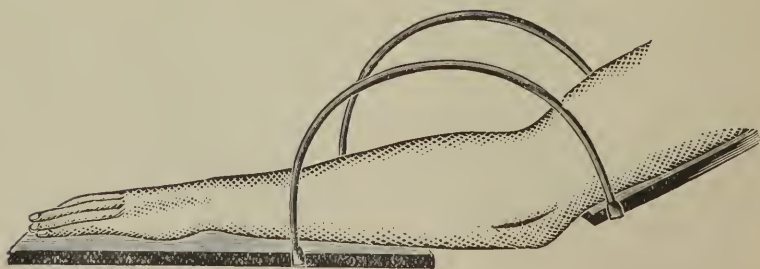
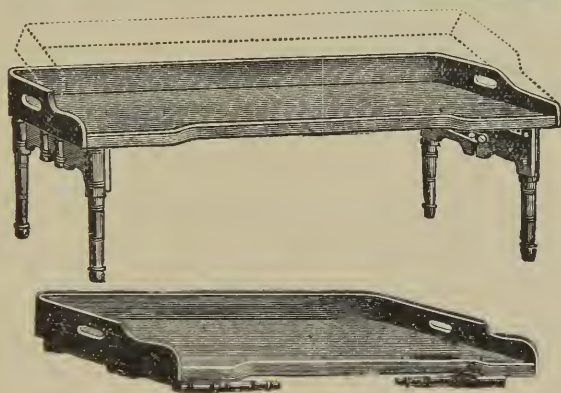


Fig. 4222 Esmarch's Interrupted Splint, for Excision of Elbow. \$3.00


FOLDING BED-TRAY.



Our Folding Bed Tray is an article of incalculable value to every household, hospital or hotel. To appreciate it one need not be a confirmed invalid, for even in a case of temporary indisposition, or where one has occasionally to take a meal in bed, the comfort derived from its use far exceeds the trifling consideration of its cost. But to those subjected to a long sickness or to the invalid, the Folding Bed Tray is a boon of priceless value. It should form a part of the furniture of every household as much as a dining table. No family can be so exempt from the ills of life as not to find it a convenience. They are constructed with a rim around the sides and back, and a narrow strip in front to keep the dishes from slipping.

The legs are made to fold when not in use. The folding legs are much stronger than the old fashioned permanent ones, as well as being handsomer and lighter, and also having the decided advantage of greater portability.

With the Folding Tray used in connection with our Solid Comfort Back Rest, described and illustrated in engravings (see page 20), a person can partake of a meal as comfortably as though sitting at a dinner table.

 A SPECIAL FEATURE OF THE BED TRAY is in its construction. It can be changed into a Book Rest by simply raising the top which can be held at various angles by a wire brace which works in notches.

No. 1.—Size $13\frac{1}{2} \times 25$ inches, 8 inches high, in Solid Ash.....Price, \$4.00

SOLID COMFORT BACK RESTS.

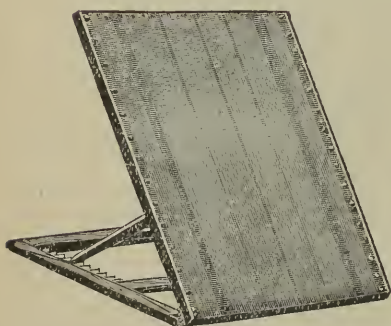


Fig. 1.

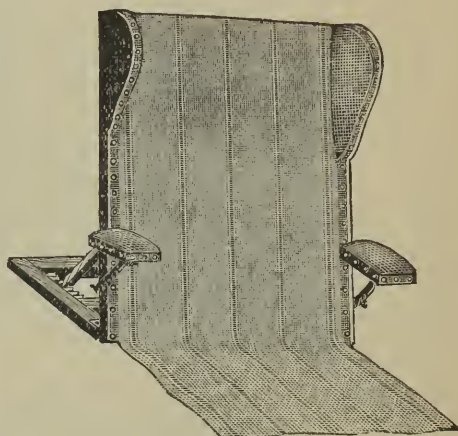


Fig. 2.

The "Solid Comfort" Back rest is a convenience which one having once enjoyed would never think it possible to do without. The possession of one is an insurance against much of the discomfort of even a temporary illness, while to such as are compelled to endure a prolonged siege of sickness or to invalids who have to spend much of their time in bed, it is simply indispensable.

To the attendants in the sick room it does away with much arduous as well as unnecessary labor. It can be used with or without a pillow, or can be placed under the mattress if preferred.

In the construction of the Solid Comfort Back Rest, everything conducive to the comfort of the sick has been considered. It is made of a stout ash frame, with ratchets underneath the back, which support the patient at any inclination, and the back, unlike any others hitherto constructed, has no cross rail at the bottom, but being tastefully covered with a stout linen duck, is cool and elastic to the back. It will be seen by the accompanying illustrations that we make them in a variety of styles. Fig. 1 represents simply a plain back rest. Fig. 2 with arms, head rest and an apron. The arms are so arranged that they can be always level, regardless of the inclination of the back, and they fold down flat if not wanted. The advantage of the apron is, that when sitting on it, the weight of the user holds the Back Rest in place. Arranged with the apron, the back rest is an excellent thing for the beach or lawn and is very popular as such.

The Head rests are designed for the use of such as are unable to support themselves in a sitting position, and will be found useful when it is desirable to sleep with the back in an upright or partly reclined position.

- No. 1.—Without Arms and Head Rests.....Price, \$4.00
 " 2.—With both Arms and Head Rests, Ash Frame.....Price, \$6.00

WE present in the following pages a list of **INVALID** and other **CHAIRS**, intended for the use of Cripples and Invalids in general. Our Chairs are made of the best material in every respect and are sufficiently strong to carry persons of heavy weight, the wheels and axles being constructed in the same manner as those used on traveling carriages, and are so put together that anyone strong enough to sit up, can propel them with little or no extra exertion.

Our experience of several years in dealing with Invalids and the sale of **Invalid Furniture and Apparatus of all kinds**, has given us an opportunity to study the wants of invalids, and, we think, from the variety offered in this Catalogue, it will be an easy matter to select a chair or other articles adapted to any special want. We will be pleased to give estimates on any goods not specified in the Catalogue, requiring to be specially made.

The illustrations have all been prepared from photographs made of the articles illustrated, and great care has been taken by the engraver to bring out the details, so that everything pertaining to their construction may be clearly understood. For the benefit of those who have not the opportunity of inspection before purchase, we have endeavored in the descriptive matter to convey as correct an idea of the goods as possible.

Do not throw away this Catalogue. Read it carefully, and if you find nothing in it that particularly interests you, pass it along; there are articles described therein that are of inestimable value to the sick and helpless. It will cost you but a trifle, and may be of benefit to others.

In ordering be as explicit as possible as to styles, numbers, kinds of woods, finish, colors, upholstery, &c,

We have but **ONE PRICE**.

Our terms are **NET CASH**.

FREIGHT SHIPMENTS.—We will ship by express, **C. O. D.**, if desired; but express charges for returning will be saved by remitting with order.

SHIPPING.—The shipping of goods by freight is equally as safe, and the cost of transportation will not average more than one-third that of express charges. Where no shipping directions are given we use our own discretion, always trying to secure the shortest time in transit and the lowest rate. We make no charge for packing or cartage.

REMITTANCES may be made by Bank Draft, P. O. Money Order or Registered Letter.

INVALID ROLLING CHAIR.



The above represents the old style of Invalid Chair, set up on strong, substantial wheels, propelled by means of an outside rim to save hands from contact with dirt; the occupant can thereby propel himself easily from place to place at pleasure. The wheels are made of the very best of material and have heavy welded tires. The axles of steel, connections of malleable iron, well braced and bolted together.

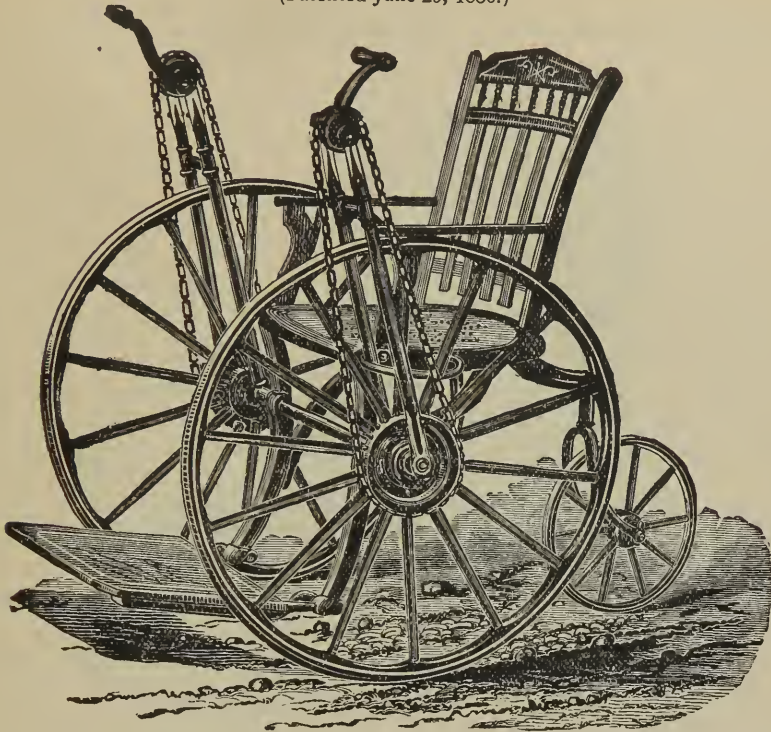
No. 10 B.—Full size Invalid Rolling Chair, constructed in the manner as represented in above cut; the seat is similar to a roomy office chair. Has 28-inch front wheels and 14-inch hind wheel, made of the very best material. All connections are of malleable iron, the axles of steel, quite strong enough to carry a weight of 500 pounds. Will pass through a 28-inch doorway.....Price, \$20.00

No. 9 B.—Child's Rolling Chair, designed for children up to 14 years of age; has 24-inch front and 12-inch hind wheels. Seat frame measures 16 x 15, substantially made of oak, with perforated veneer seat; back is 20 inches high, and is supplied with comfortable arm rests. The connections are of malleable iron, the axles of steel, and wheels have welded oval tires. Will pass through a 26 inch doorwayPrice, \$16.00

N. B.—We make the above with three styles of Wheels—Wooden, Steel Suspension, and Rubber-Tire Suspension Wheels. Unless specially mentioned by purchaser that Wooden Wheels are preferred, will send Steel Suspension Wheels, the price being the same. Rubber-Tire Suspension Wheels to fit above style of chair, \$15.00 extra.

SELF PROPELLING INVALID CHAIR.

(Patented June 29, 1880.)



Persons with weak or paralyzed lower limbs will find this machine the most convenient and practicable one of any yet introduced. It is perfectly safe and easily propelled by means of cranks and endless chains running over sprocket wheels, as shown in above cut. Each wheel moves independently of the other, thereby enabling the operator to turn on the spot, as well as move in any direction. This chair will prove a most valuable companion to invalids, not only on the street, but far more so in the house. The foot rest can be swung up so as to facilitate easy access to the seat. The motion of the cranks being transmitted by its sprocket wheels of but three inches in diameter to those on the front wheels of six inches in diameter, the working power is doubled, so that weak persons can propel it with ease. The machine will work comparatively well on a rough or sandy road, when ascending a moderate inclination; its speed is that of an ordinary walk.

No. 7 B.—Full Size Self-Propelling Invalid Chair. Also constructed in the manner as represented in above cut. The seat is similar to a roomy office chair. The front wheels are 28 inches in diameter, hind wheels 14 inches, and are made of the very best material. All connections are of malleable iron, the axles of steel, sufficiently strong to carry a weight of 500 lbs. Will pass through a 28-inch doorway.....Price, \$25.00.

No. 8 B.—Child's Self-Propelling Invalid Chair, has 24-inch front and 12-inch hind wheel; the seat frame measures 16 x 15, substantially made of oak with perforated veneer seat. The back is 20 inches high and has comfortable arm rests. The connections are of malleable iron, the axles of steel, and the wheels have welded oval tires. Will pass through a 26-inch doorway.....Price, \$21.00.

N. B.—We make the above with three styles of Wheels—Wooden Wheels, Steel Suspension Wheels, and Rubber Tire Suspension Wheels. Unless specially mentioned by purchaser that Wooden Wheels are preferred, will send Steel Suspension Wheels, the price being the same. Rubber Tire Suspension Wheels to fit above style of chair, \$15.00 extra.

CANE SEAT INVALID SELF PROPELLER.



Is the same in construction as No. 7 B, with the exception of seat, which is of cane, with roomy rattan back and comfortable arm rests, thus making it a very cool, and at the same time a strong and substantial chair. We make this chair in two sizes.

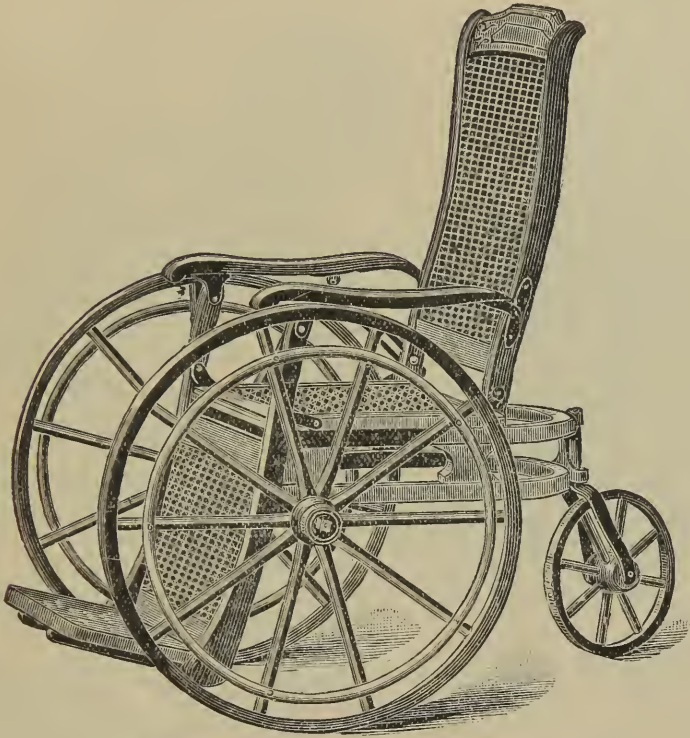
No. 4 B.—Full size Self-Propelling Chair, size and construction same as No. 5 B, 28-inch front and 14-inch hind wheels, made of steel spokes, hollow steel rims, round rubber tires Price, \$50.00

No. 5 B.—Full size Self-Propelling Chair, as represented in above cut. Front wheels 28 inches, hind wheels 14 inches, seat and back roomy enough for a large person. Will pass through a doorway not less than 28 inches. Price, \$35.00

No. 6 B.—Child's Self-Propelling Chair, general appearance same as above cut, wheels same as No 8 B; axles and seat in same proportion. Will pass through a doorway not less than 26 inches Price, \$30.00

We make the above with three styles of Wheels—Wooden Wheels, Steel Suspension Wheels, and Rubber Tire Suspension Wheels. Unless specially mentioned by purchaser that Wooden Wheels are preferred, will send Steel Suspension Wheels, the price being the same. Rubber Tire Suspension Wheels to fit above style of chair, \$15.00 extra.

INVALID'S RECLINING ROLLING CHAIR.



No. 97 G.—INVALID'S RECLINING ROLLING CHAIR. The body of this chair is rigid and is of exceedingly comfortable proportions. The back is shaped to conform to the form of the body, and sufficiently high to rest the head. The sides, which extend continuously from the back to the foot rest, are of bent oak, forming a most comfortable arm, and at the same time combine grace with lightness and strength. The under frame is also of bent oak, finished in the natural color of the wood, with caned seat, back and leg rest.

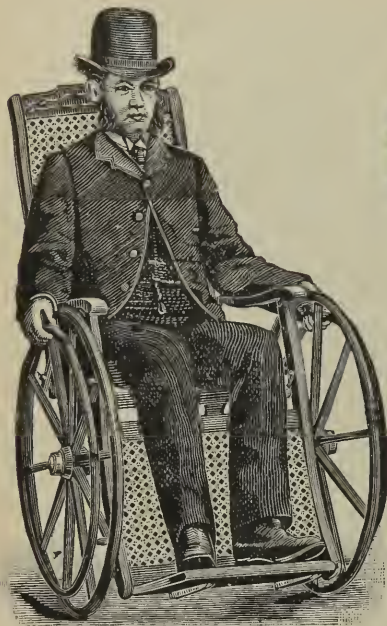
The dimensions of No. 97 G are as follows :—

Width over all	28 inches
Diameter of Side Wheels.....	28 "
Diameter of Swivel Wheels.....	10 "
Height of Seat from Floor	19½ "
Height of Seat from Foot-rest.....	17 "
Height of Arms from Seat.....	9 "
Width of Seat between the Arms.....	18½ "
Depth of Seat	19 "

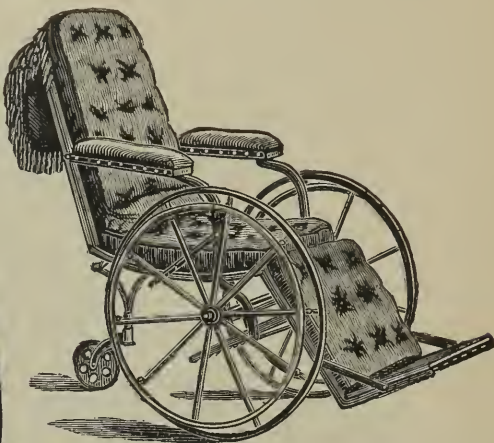
Weight, from 45 to 50 pounds.

PRICES.

Oak, Caned, with outside Hand Rims.....	\$27.00
Oak, Caned, without Outside Hand Rims.....	25.00
Black Walnut, to order	extra, 3.00
Tempered Steel Elliptic Springs placed between the seat and gear	" 3.00



No. 97 G.—(See preceding page.)



WILSON'S UPHOLSTERED (Rep) RECLIN-
ING INVALID CHAIR, with hand rims
.....\$40.00



No. 97 G.—RECLINING POSITION.
(See preceding page.)

We also furnish chair exactly like No. 97 G, for child's use. Price, \$1.00 less for either style.

INVALID'S RECLINING ROLLING CHAIR.



No. 20 G.—This Chair has a stationary body, similar in construction to No. 97 G, page 5, so arranged that the arms may be lifted out of the way. It is mounted on low wheels to facilitate lifting a helpless person in and out of the chair.

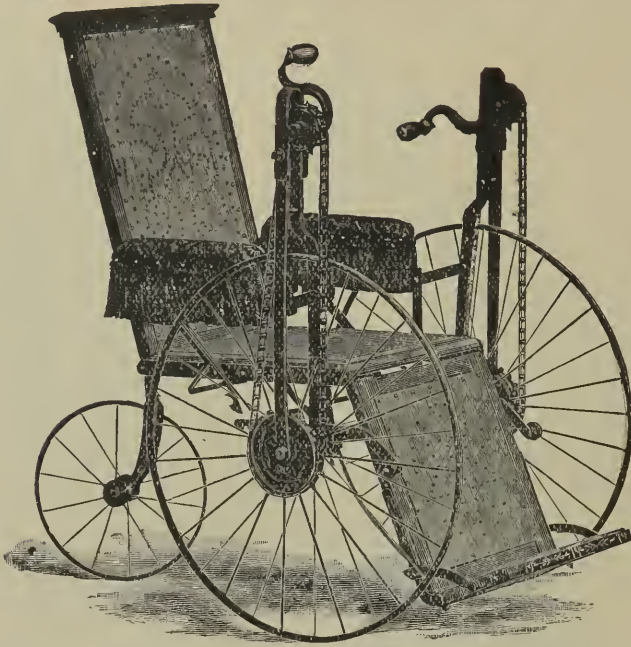
DIMENSIONS.

Height of Back from seat.....	28 inches
Height of Seat from Foot Board....	17 "
Height of Seat from floor.....	20 "
Height of Arms from Seat.....	9½ "
Width of Seat between Arms.....	18 "
Depth of Seat from front to back.....	19 "
Diameter of Side Wheels.....	22 "
Diameter of Caster Wheel.....	10 "

Weight, 45 pounds.

PRICE, Oak, Caned.....\$31.00

IMPROVED SELF-PROPELLING INVALID CHAIR.



Above cut shows a New Style Self-Propelling Chair for Invalids, which is convertible at pleasure to a reclining or sitting position. It is intended especially for persons with weak or paralyzed lower limbs, and is constructed with a view to practical convenience and safety. It is easily propelled by means of cranks and endless chains, as shown in cut, running over sprocket wheels. Each wheel moves independently of the other, thereby enabling the operator to turn on the spot, as well as move in any direction. The foot rest can be swung up so as to facilitate easy access to the seat. The motion of the cranks being transmitted by its sprocket wheels of but three inches in diameter to those on the front wheel of six inches in diameter, the working power is doubled, so that weak persons can propel it with ease.

The machine will work comparatively well on a rough or sandy road, or when ascending a moderate inclination; its speed is that of an ordinary walk. This chair is intended for use both on the street and in the house. The chair is so balanced that the occupant may adjust it to any position and retain the same by means of a ratchet.

The back and foot rest work either independently or together. The latter is so made as to be adjustable to the length of the occupant, thus adding to the comfort.

No. 20 B.—Adult's size, as above style, frame is made of wrought iron, neatly japanned and ornamented, with perforated seat, back and leg rest. Height of back, 32 inches; width of seat, 17 x 18; steel suspension wheels, 28-inch front and 14-inch hind wheels. Will pass through a 28-inch doorway.....Price, \$35.00

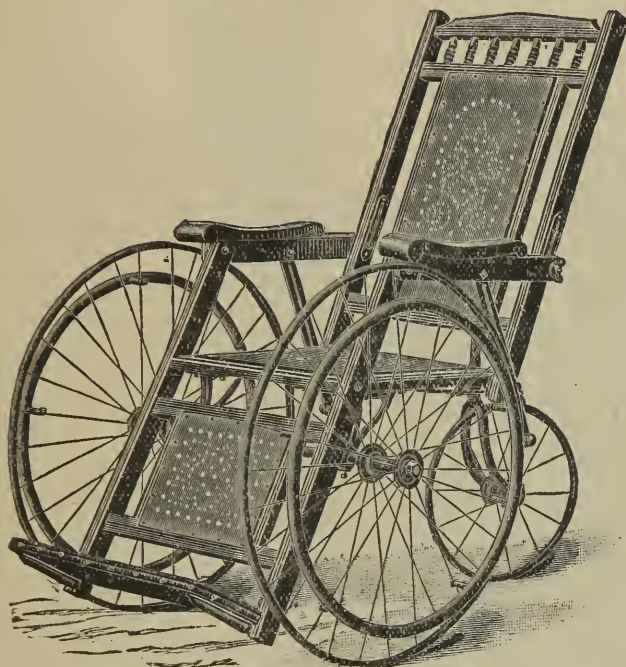
No. 21 B.—Adult's size, same as above, cane seat, back and front fitted into the frames, upholstered arms.....Price, \$40.00

No. 22 B.—Adult's size, back, seat and leg rest upholstered in raw silk or remie cloth, and stuffed with curled hair.....Price, \$45.00

No. 23 B.—Adult's size, back seat and leg rest upholstered in morocco leather, filled with curled hair, with Rubber-Tire Wheels.....Price, \$60.00

We make the above Chairs with three styles of Wheels—Wooden Wheels, Steel Suspension Wheels, and Rubber-Tire Suspension Wheels. Unless specially mentioned by purchaser that Wooden Wheels are preferred, will send Steel Suspension Wheels, the price being the same. Rubber-Tire Suspension Wheels, to fit above chair, \$15.00 extra.

RECLINING INVALID ROLLING CHAIR.



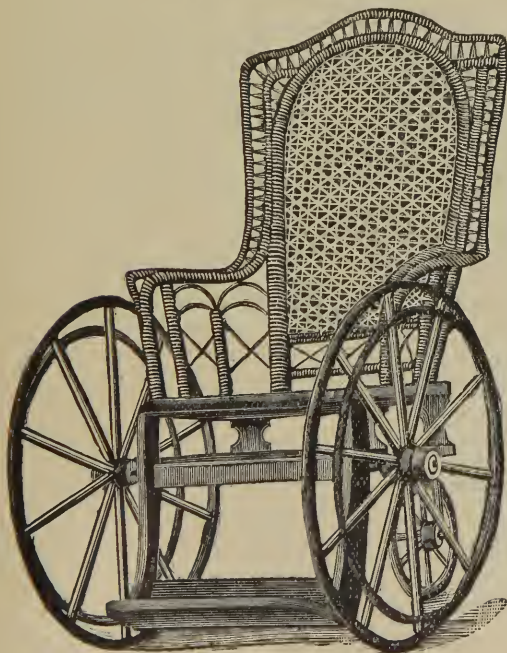
The cut herewith represents a new style of Reclining Invalid Chair. The occupant can propel himself easily from place to place by means of outside rims, and is so balanced that the occupant can assume any desired position by simply turning a thumb-screw. Frame of chair is same in construction and material as our No. 9B Propeller. It has steel suspension wheels.

No. 35 B.—Child's Reclining Invalid Rolling Chair, seat 16x15 back 19 inches high, front wheels 24 inches, hind wheels 12 inches; will pass through a 26-in. doorway.

Price, **\$17.00**

No. 36 B.—Adult's Reclining Invalid Rolling Chair, seat 18x17 in. back 19 in. high, front wheels 28 inches, hind wheels 14 inches; will pass through a 29-in. doorway.

Price, **\$20.00**



No. 75 G.

BEST GRADE RATTAN BODY.

For beauty and comfort this style of chair is unexcelled; being pliable it suits the form, and it can be handsomely trimmed. The top back is adapted in shape for pushing.

Height of back 29 inches.

“ seat from floor 20 “

“ seat from foot-board, 17 “

“ wheels 26 “

“ arms above seat ... 10 “

Width of seat 18 “

Depth of seat, front to back. 18 “

Caster wheel, diameter 10 “

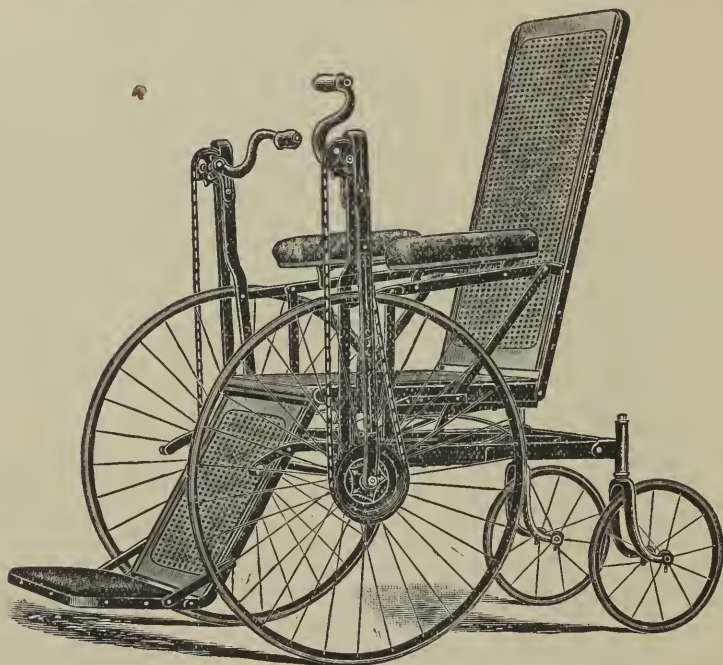
Weight of chair, about 40 lbs.

Will pass through a doorway not less than 28 inches wide.

Light Wood \$25.00

Less for Hand Rim, if not wanted 2.00

FOUR WHEEL ADJUSTABLE PROPELLING CHAIR.



Above chair is especially gotten up for invalids suffering from paralysis or spinal affections, for whom it is desirable. The seat and frame rests on elliptic springs, otherwise it is the same in construction as our No. 20 B Propeller; chair frame is made of wrought iron, has 28-inch front and 14 inch hind steel suspension wheels.

No. 44 B.—Adult's chair with perforated seat, back and leg rest. Height of back, 33 inches, width of seat, 17 x 18 inches, upholstered arm rests, back and leg rest... Price \$50.00

No. 45 B.—Adult's chair with caned seat, back and leg rest... " 55.00

No. 46 B.—Adult's chair, upholstered in remie cloth throughout... " 60.00

No. 47 B.—Adult's chair, upholstered throughout in genuine morocco leather " 70.00

Rubber tire suspension wheels to fit these styles of chairs, \$15.00 extra.



No. 3 Invalid Chair with adjustable foot rest and hand rims... Price, \$25.00
Same, child's size... " 15.00

INVALID'S OUT-OF-DOOR ROLLING CHAIR.

No. 90 G.—Invalid's Out-of-Door Rolling Chair.—In order to meet the frequent demand for an out-of-door rolling chair that affords the simplest facilities for getting in and out, this chair is specially designed.

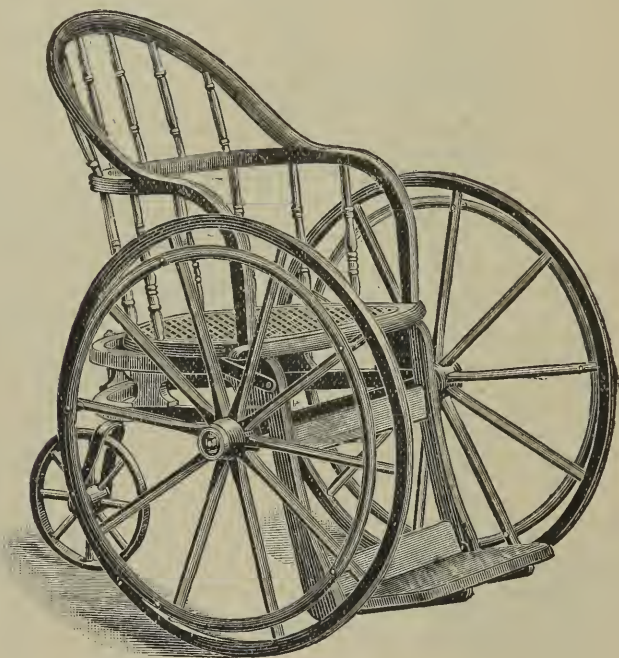
By folding back the foot-rest it is as easy to sit down in as any ordinary chair. The body of the chair is very comfortable to the occupant, the back being curved to conform to the body, and sufficiently high to rest the head. The seat has a gentle pitch, and the arms, which are of bent wood, have a graceful curve, which give rest to the arms as well as add an attractive, light and substantial appearance to the chair. It is mounted on steel elliptic springs, and adapted to going over crossings and curbs.

DIMENSIONS.

Height of back from Seat.....	29 inches
Height of Seat from Floor.....	21 "
Height of Seat from Foot-rest	16 "
Height of Arms.....	9 "
Width of Seat.....	19 "
Depth of Seat.....	18 "
Diameter of Large Wheels.....	24 "
Diameter of Small Wheels	10 "
Width over all.....	28 "

PRICE, Oak, Caned.....\$28.00,

INVALID'S ROLLING CHAIR.



No. 50 G.—Invalid's Rolling Chair.—This chair has a rigid back, of circular shape, with woven cane seat, bent frame, supported by turned spindles, and made entirely of oak. The under frame is also of bent wood, of the same construction and running gear as No. 97 G (page 5.)

DIMENSIONS.

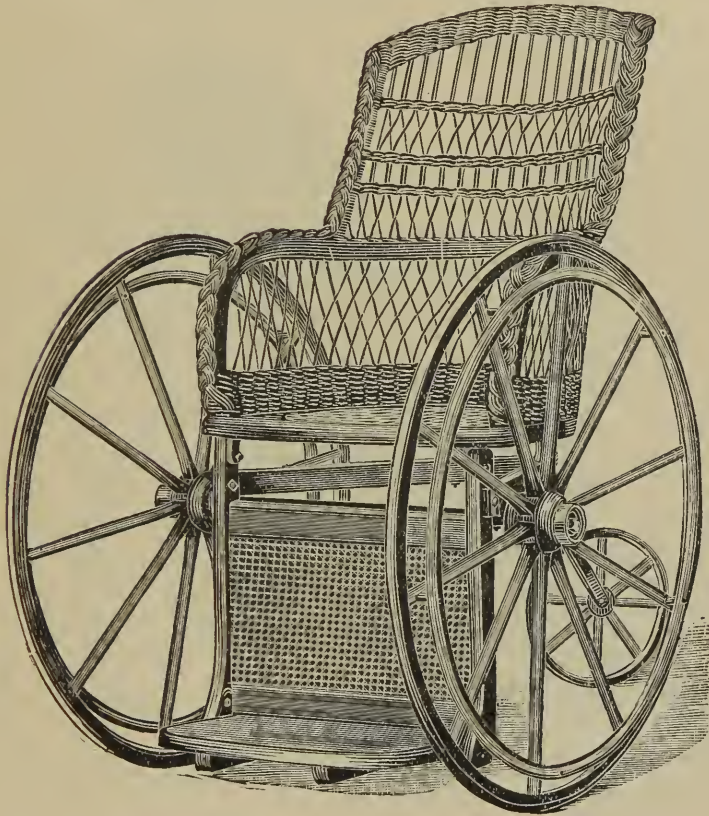
Height of Back from Seat.....	21 inches
Width of Seat.....	18 "
Weight of Chair, about.....	40 lbs.
Height of Seat from Floor.....	20 inches
Height of Seat from Foot-board.....	17 "
Diameter of Side Wheels.....	28 "
Diameter of Swivel Wheel.....	10 "
Width over all	28 "

PRICE.

With Outside Hand Rims (see above cut).....	\$18.00
Without Outside Hand Rims.....	16.00

INVALID ROLLING CHAIR.

(WITH REED BODY AND CANE SEAT.)

**No. 18 G.**—Invalid Rolling Chair, with Reed Body and Cane Seat.

Following is description of same:

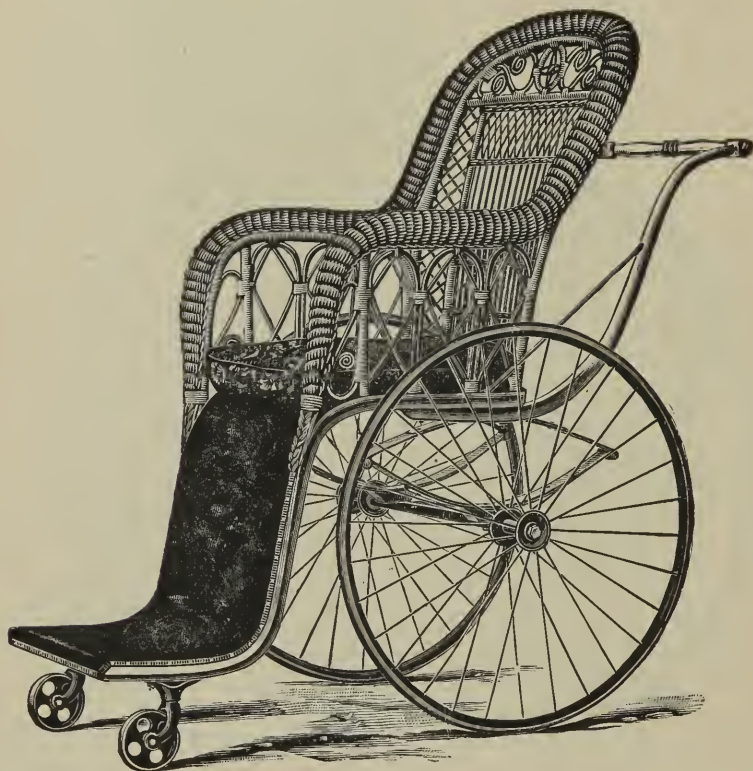
DIMENSIONS.

Height of Back from Seat	24 inches
Height of Wheels from Floor.....	28 "
Height of Arms above Seat.....	8½ "
Height of Seat from Floor.....	20 "
Height of Seat from Foot-board.....	17 "
Width of Seat.....	18 "
Depth of Seat front to back.....	18 "
Weight of Chair, about	40 lbs.
Diameter of Castor Wheel.....	16 inches

Will pass through a doorway not less than 28 inches wide.

PRICE, with hand rim on wheels, each\$22.00

COLUMBIA ROLLING CHAIR.



No. 33 B.—Adult's size—style used at the Centennial “TO ORDER”—phaeton body, made of rattan, back 28 inches high, width of seat, $17\frac{1}{2}$ inches, depth of seat, 19 inches, arm rests 11 inches high, seat covered with loose cloth cushion stuffed with curled hair, carpeted leg and foot rest, 4-inch front wheels, vulcanized flat rubber tired and bracketed on foot-rest frame, swiveling independent of each other, rear steel suspension wheels, 28 inches high, $\frac{1}{2}$ -oval iron tire, steel elliptic springs—altogether a handsome and comfortable chair. Will carry any weight. Will pass through a 28-inch doorway.....Price, \$40.00

Rubber Tire Hind Wheels on above chair, \$15.00 extra.

INVALID ROLLING AND CARRYING CHAIR COMBINED.

(See following page.)

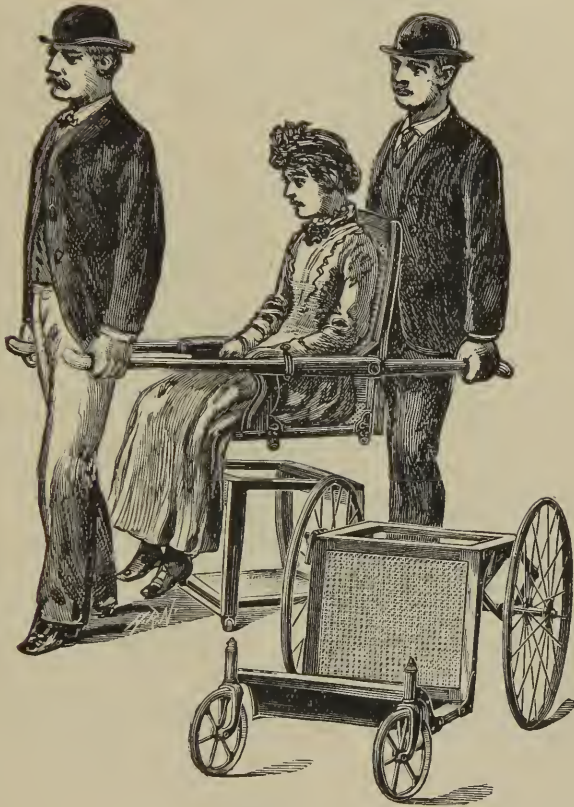


Fig. 1.

No. 187 G.—These chairs form a combination. The trucks and the leg base are so constructed that one body is interchangeable with each. The design of this combination is that a helpless invalid may either be carried or wheeled without the necessity of change.

Fig. 1 represents body of the chair, with its occupant as having just been lifted from the leg base and about to be placed on the truck of the rolling chair. Fig. 2 represents the 187 G rolling chair complete, with the carrying bars detached. Each chair is complete in itself, but to meet the purpose intended, it is necessary to combine with either one or both of the rolling chairs the leg base of the carrying chair.

INVALID ROLLING AND CARRYING CHAIR COMBINED.

(See preceding page.)

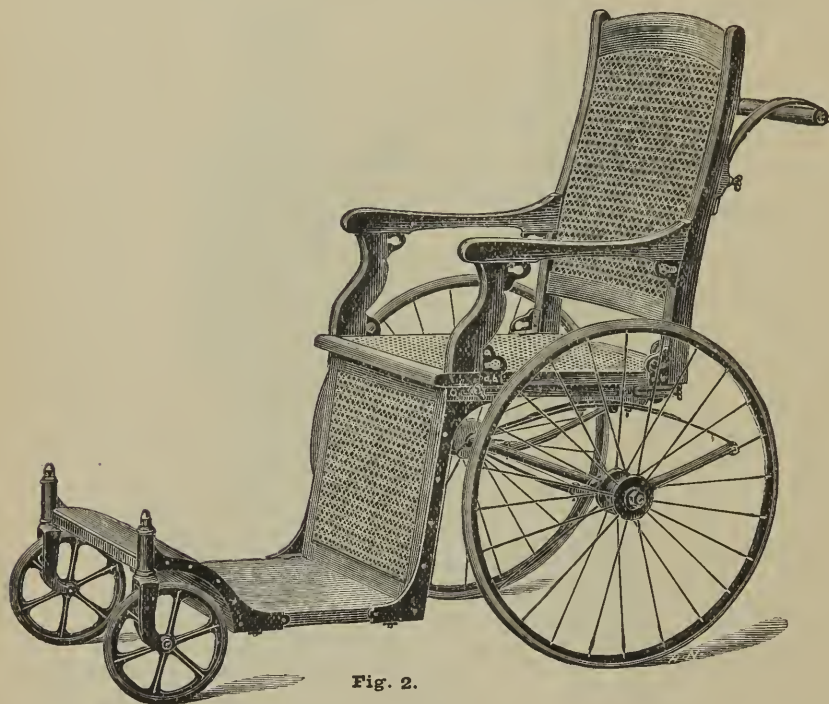


Fig. 2.


No. 187 G.—Invalid Rolling and Carrying Chair, Combined (see preceding page.)

DIMENSIONS.

Height of Back.....	24 inches
Height of Arms.....	9 "
Height of Seat from Foot-board.....	16 "
Height of Seat from ground.....	21 "
Height of Foot-board from ground.....	5 "
Depth of Seat.....	19 "
Width of Seat.....	18 "
Diameter of Rear Wheels.....	24 "
Diameter of Swivel Wheels.....	7½ "

PRICES.

Chair complete, with large wheels rubber tired and small wheels wooden.....	\$96.00
" " " all four wheels wooden.....	86.00
" " " all four wheels rubber tired.....	108.00

 Prices of different parts given on application.

ONE ARMED SELF-PROPELLING CHAIR.



The above cut represents a self-propelling chair for an invalid who has but the use of one arm. The chair is guided in any direction with the back of the occupant, by bringing a little pressure to bear against the back of the chair, which is connected to the hind wheel by a cog. Should the occupant want to steer to the right, he simply presses his back to the right side of the back of the chair, and vice-versa. The crank and endless chain can be attached to either front wheel as desired. It can be made to go at a reasonable speed.

No. 50 B.—Child's One-Armed Self-Propeller, has 24-inch front and 12-inch hind steel suspension wheels. Width of seat 16 inches. Back of chair is upholstered in leather, and can be adjusted to any height. The chair frame is substantially made of oak, with perforated veneer seat and has comfortable arm rests. The connections are of malleable iron, the axles of steel, and the wheels have welded oval tires; will pass through a 26-inch doorwayPrice, \$25.00

No. 51 B.—Adult's One-Arm Self-Propeller, is same in construction as No. 50 B; height of front wheels, 28 inches; height of hind wheel 14 inches; will pass through a 28-inch doorway..... Price, \$30.00

IMPROVED CARRYING CHAIR.



No. 17 B. represents a chair for carrying an invalid up and down stairs or on a level; it also makes a comfortable arm chair; handles on front and back of chair, which can be extended out or lowered at leisure; oak frame, well riveted; figured Brussels carpet on seat and back; back 31 inches high, width of seat 20 inches, depth of seat, 18 inches; strong enough for the heaviest personPrice, \$12.00

TRUSSES—HERNIA.

(See pages 802 and 803 for Net Prices of Trusses)

The term Hernia, when used simply, is considered equivalent to the English word Rupture, and as applied to the abdomen only. Rupture, according to the common acceptation of the term, is a disease consisting in the passage of any part or parts naturally contained in the abdomen, out of that cavity.

Hernia has been divided into true and false, or spurious.

The former are those protrusions of the abdominal contents in which the parts carry before them a portion of the serous membrane lining the cavity. The latter are the cases where the parts pass into a neighboring serous cavity, as in Congenital Diaphragmatic Rupture. Various affections of the testes, their coats and vessels, have been denominated false in contradistinction to those above defined as True Hernia. The former diseases are attended with swellings in the groin and scrotum, the seat of the most frequent kind of Hernia.

Hernial difficulties have also been divided into external and internal. The former is a protrusion of the abdominal contents with an obvious tumor. The latter are instances of strangulation, caused by certain internal changes not indicated by external swellings, as when the bowels pass through an opening in the diaphragm, or into a preternatural cavity formed in either of the peritoneal duplicatures, or when they are confined by preternatural cords or adhesions. Since the protruded parts may become strangulated in these various cases, as in common Ruptures, they have been regarded as a species of Hernia. When the protruded parts remain in the opening without showing themselves externally, the Hernia is called incomplete. If they come through entirely, and form an external swelling, it is called complete. Although visible external tumors exist in most instances it is not a universal symptom. Inguinal, Femoral or Umbilical Ruptures may be so small, and so deeply seated, as not to be recognizable externally, especially in fat persons.

Fig. 4950 represents a patent truss that we were one of the first to adopt. It is adjustable right to left, and to any desired angle. It is made in three styles, consisting of the French, hard (oval) and soft (oval) shaped pads, and combines all of the advantages of the "French," "Chase" and "Imperial" Trusses.

We have very satisfactory results in the application of these trusses, and we recommend them highly to parties who cannot come to us to be fitted.

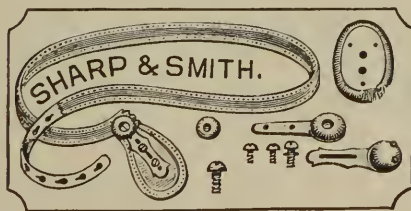


Fig. 4950

We pay personal attention to the careful fitting of Trusses.

TRUSSES.

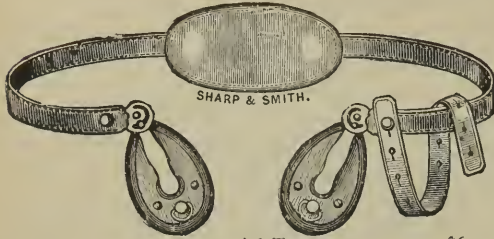


Fig. 4954—Double Imperial Truss \$6 00

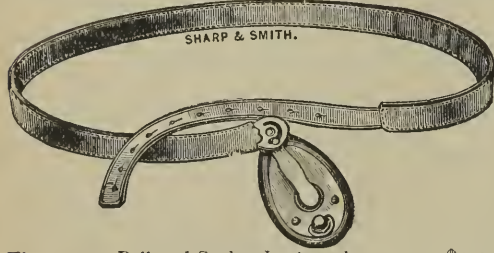


Fig. 4953—Ball and Socket Lock Pad \$5 00

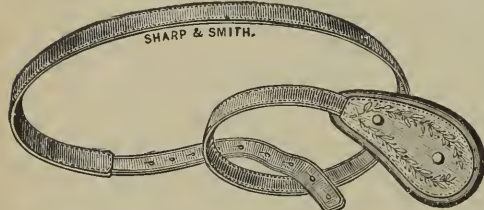


Fig. 4955—Single French Truss \$3 00

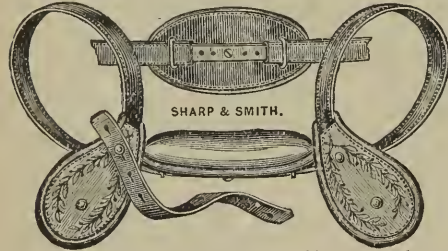


Fig. 4956—Best Double French Truss \$5 00

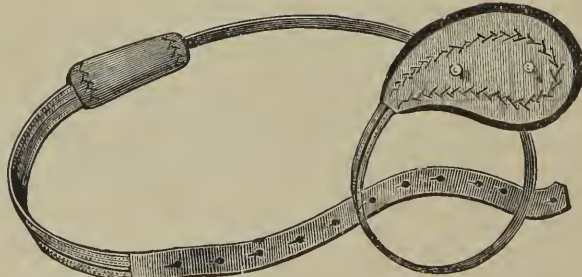


Fig. 4959—Extra Fine French Truss \$5 00



Fig. 4957—Child's or Youth's Single Truss, Fine French. \$1 50 to 2 50.



Fig. 4958—Child's or Youth's Double Truss Fine French. \$3 50.

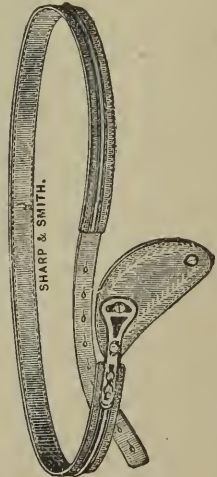


Fig. 4960—Improved French Truss \$4 50

See pages 802 and 803 for additional Prices and Trusses.

TRUSSES.

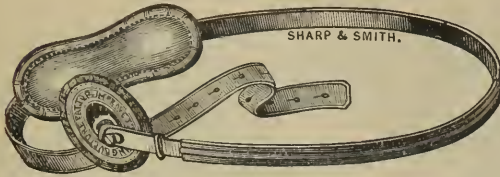


Fig. 4961—Self-Adjusting Truss, Single. ...\$4 00

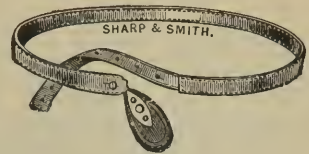


Fig. 4969—Child's Truss, Single, Ebony Pad... \$1 50

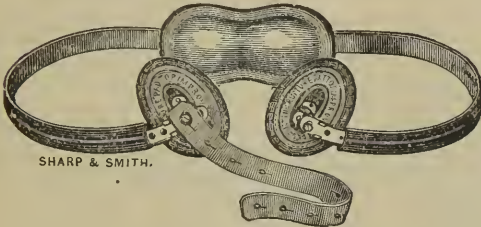


Fig. 4962—Self-Adjusting Truss, Double...\$6 00

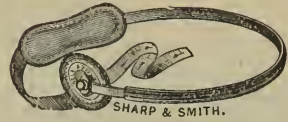


Fig. 4963—Infant's Self-Adjusting..... \$2 50

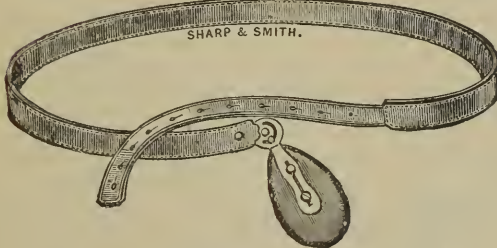


Fig. 4967—Chase's Extension Cedar Pad...\$3 50

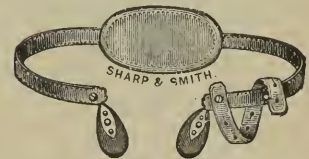


Fig. 4970—Child's or Youth's Truss, Double Ebony Pad \$3 00

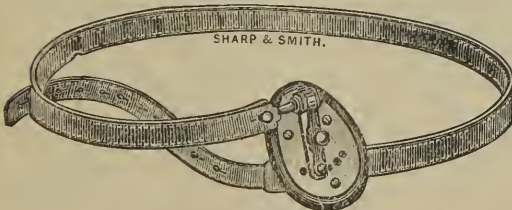


Fig. 4971—Ratchet Truss, Single ...\$5 00

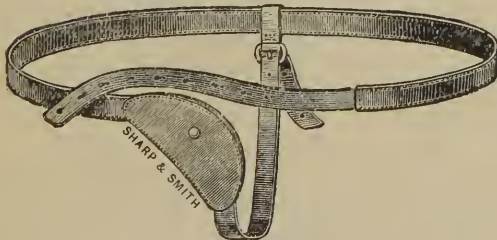


Fig. 4974—German Truss, with Under Strap, \$4 00

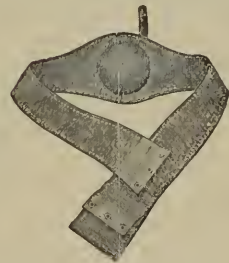


Fig. 5004—Soft Rubber Umbilical Child's Truss,\$1 50 to 2 00

Fig. 5005—The Empire Umbilical Truss is made of the same material, and possesses the same merits as the Empire Elastic Bandage and Empire Abdominal Supporter, and is pronounced by all who have seen it to be the best \$1 00

See pages 802-803 for additional prices and trusses.

TRUSSES AND ABDOMINAL SUPPORTERS

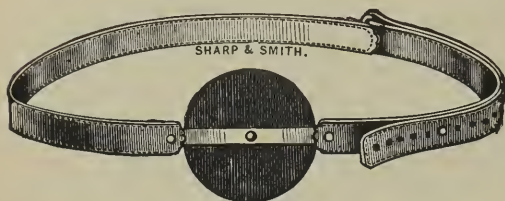


Fig. 4998—Bow (spring) Umbilical Truss..... \$4 00



Fig. 4999—Child's Bow Umbilical Truss....\$2 00 to 2 50

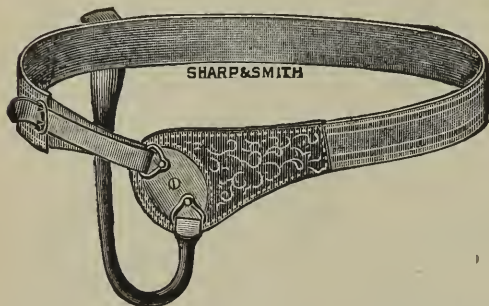


Fig. 4975—New York Elastic, Enamel Pad Truss, \$3 00

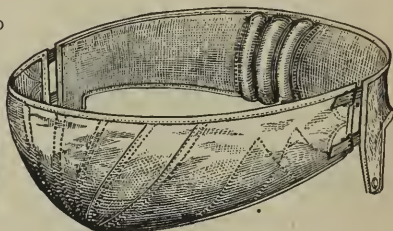


Fig. 5010—Gray & Foster's Abdominal Supporters, \$2 50

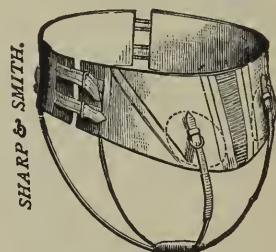


Fig. 5018--Noeggerath's Abdominal Supporter..... \$5 00



Fig. 4976—New York Elastic Enamel Pad, Double Truss \$5 00

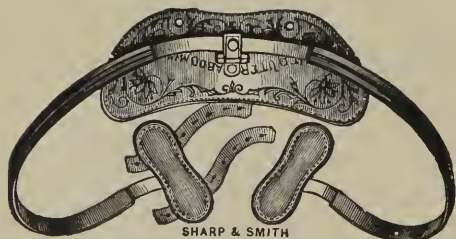


Fig. 5017—Improved Spring Supporter, \$5 00 and 6 00

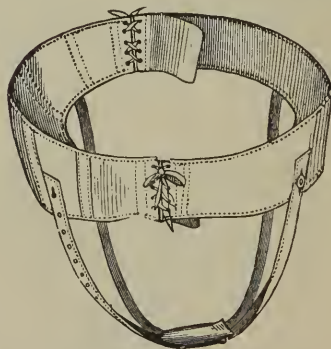


Fig. 5019—Thomas' Abdominal Supporter..... \$6 00

See pages 802 and 803 for additional Prices and Trusses.

ABDOMINAL SUPPORTERS.



5013

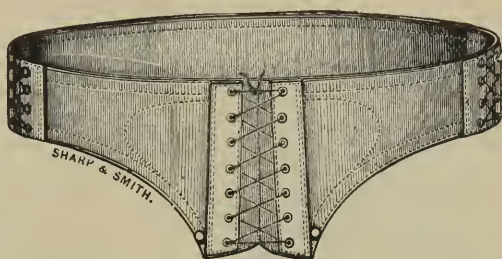


Fig. 5011.—Mrs. Betts' Supporter.....\$5 00

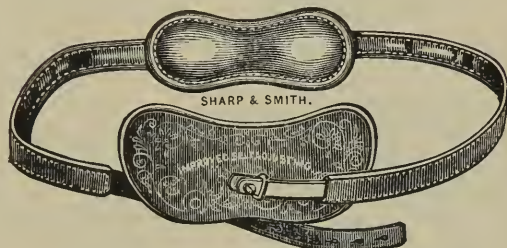


Fig. 5020.—Spring Self-Adjusting Supporter..\$4 00

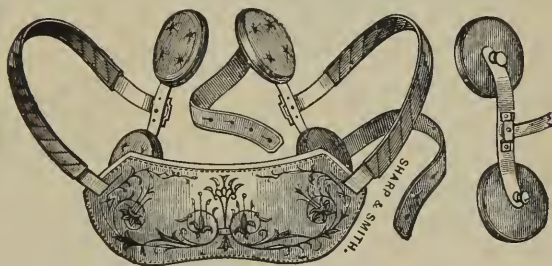


Fig. 5015.—Fitch's Supporter.....\$4 00

Fig. 5013 The Empire Abdominal Supporter.....\$2 50

We make a specialty of the careful fitting of
Trusses, Supporters, etc., etc.

See page 274 for Directions for Measuring in ordering
Abdominal Supporters.

See page 803 for additional Prices and Supporters.

ABDOMINAL SUPPORTERS.

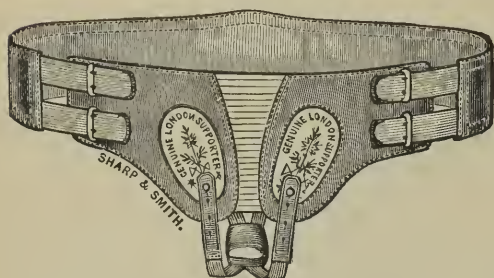


Fig. 5009.—London Supporter.... \$3 00 to 6 00

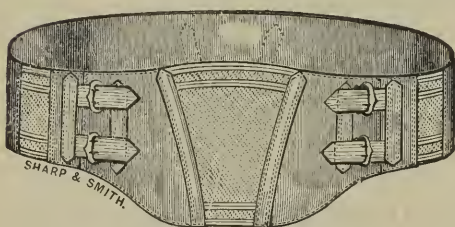
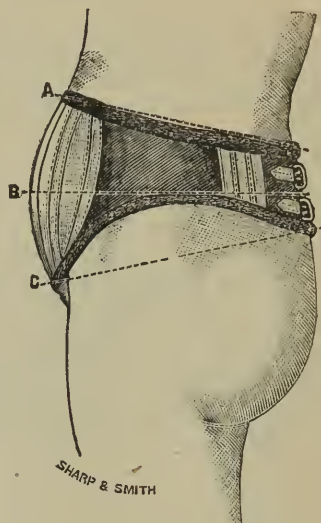
Fig. 5007.—Fine French Supporter, Silk Front.
\$5 00 to 6 00

Fig. 5007.—Silk Front Supporter—Applied. \$5 00 to 6 00

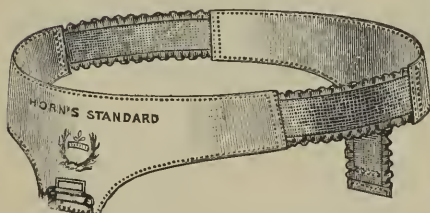
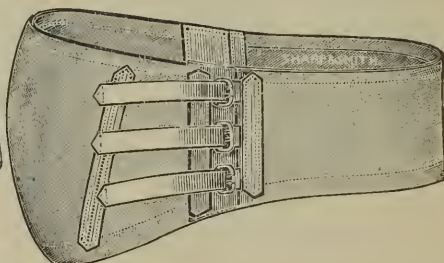


Fig. 5021.—Doily Belt for Menstrual Period .. \$0 75

Fig. 5006.—All Silk Elastic
Abdominal Supporter... \$10 00
Cotton..... 8 00Fig. 5022.—Sanitary Pads for Menstrual Period,
per doz \$1 00

Directions for ordering and measuring Abdominal Supporters, see page 274.

We keep on hand, and make to order, other styles of Abdominal Supporters.

See page 803 for additional Prices and Supporters.

SUSPENSORY BANDAGES.

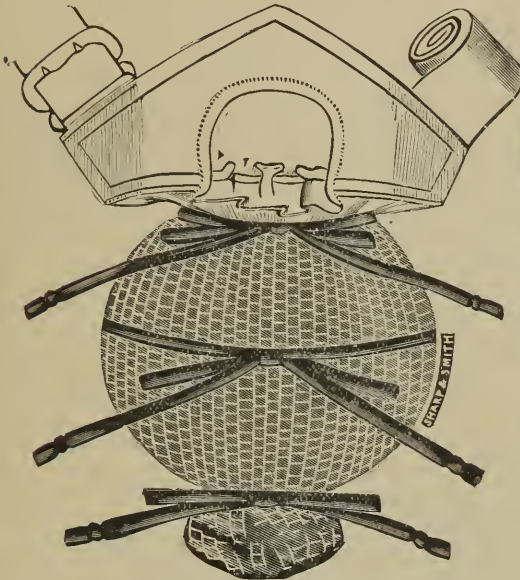


Fig. 5025.—Miliano's Scrotal Compressor \$2 00

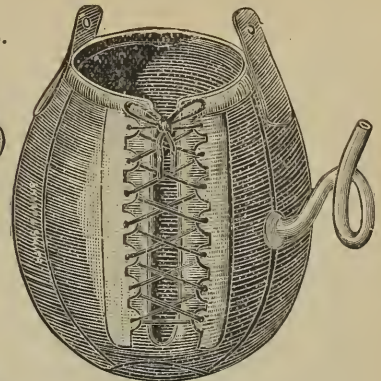


Fig. 5026.—Howe's Scrotal Compressor \$3 25

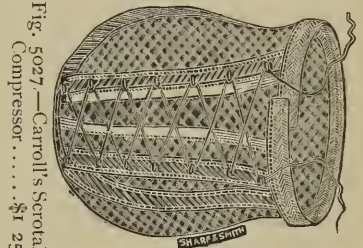


Fig. 5027.—Carroll's Scrotal Compressor \$1 25

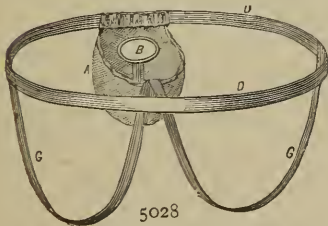


Fig. 5028.

Rawson's Patent
Elastic Self-Ad-
justing
Suspensory.

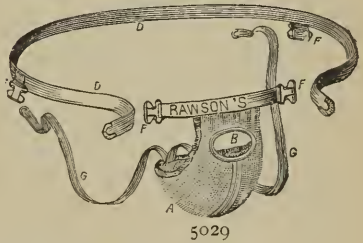
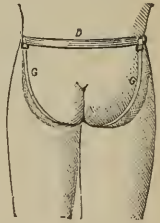
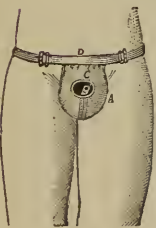


Fig. 5028.—Price List (Patients'). Sizes—Large, Medium Small.

No. 1. Ordinary quality of Elastic, no buckles	\$1 50
No. 1½. " " " " with buckles at each	
side of Sack.....	1 75
No. 2. Fine quality of Elastic, no buckles	2 00
No. 3. " " " " with buckles at each side	
of Sack.....	2 50
No. 4. Fine quality of Elastic, with buckles at each side	
of Sack, at each end of Strap.....	3 00
No. 5. Silk Sack, Elastic, with buckles at each side of	
Sack, and at end of each Strap.....	3 50
No. 6. Silk Sack, Elastic, and Silk Elastic Straps, with	
buckles at each side of Sack, and at end of	
each Strap	4 00



Explanation of the Cuts.—Fig. 1.—*a*, Sack of silk, linen or cotton net, which will not interrupt the action of the respiratory organs of the skin; *b*, An opening with an elastic ring, or band *c*, which keeps the material of the sack closed around the penis and exterior portions of the testicles; *d*, An elastic band which encircles the body and passes around the hips downward toward the penis, is made either with or without buckles, as in Fig. 2, or permanently, as in Fig. 1; *g g*, Elastic straps, passing over the buttocks and attached to sack, *a*, beneath, which keeps the sack, *a*, in position, so as not to pinch the testes; and in whatever position the person may put himself, the sack will remain in place—the straps only yielding, and accommodating themselves to the movements. See page 803 for additional Prices and Bandages.

NET PRICES OF TRUSSES, SUPPORTERS, Etc.

(Illustrated on pages 796 to 801.)

FIG.		PHYSICIANS.	
*4950	Patent Adjustable Truss, Single French Pad, Adults.....	\$ 3 50	
4950	“ “ “ “ Enamel “ “	3 50	
4950	“ “ “ “ Soft Oval Pad “	3 50	
4951	“ “ “ “ Double (any of above style) Pad, Adults.....	5 01	
4952	“ “ “ “ Single “ “ “ Children's.....	2 00	
4952	“ “ “ “ “ “ “ Patient's Price for		
	Children's	3 50	
*4953	Imperial Adjustable (Ball and Socket) Truss, Single, Adults.....	2 00	
*4954	“ “ “ “ Double, “	3 50	
*4955	Fine French Truss, Single, Adults	1 75	
*4956	“ “ “ “ Double, “	2 75	
*4957	“ “ “ “ Single, Infants	1 00	
*4957	“ “ “ “ Youth's	1 00	
*4958	“ “ “ “ Double, Infants.....	1 50	
*4958	“ “ “ “ Youths.....	1 75	
*4959	Extra Fine French Truss, Single, Adults.....	2 75	
*4960	Improved Fine French Truss, Single, Adults.....	2 25	
*4961	Self Adjusting Cross Body, Ball and Socket Truss, Single, Adults.....	2 00	
*4962	“ “ “ “ “ “ Double, “	2 50	
*4963	“ “ “ “ “ “ Single, Infants.....	1 50	
{ 4964	“ “ “ “ “ “ Double, “	2 25	
{ 4964	“ “ “ “ “ “ “ (Patients) \$3 50		
{ 4965	“ “ “ “ “ “ Single, Youths.....	2 00	
{ 4965	“ “ “ “ “ “ “ (Patients) \$3 00		
{ 4966	“ “ “ “ “ “ Double, “	2 50	
{ 4966	“ “ “ “ “ “ “ (Patients) \$4 00		
*4967	Chase's Extension Cedar Pad Truss, Single, Adults.....	1 50	
{ 4968	“ “ “ “ “ “ Double, “	2 00	
{ 4968	“ “ “ “ “ “ “ (Patients) \$5 00		
*4969	“ “ “ “ Enamel Pad “ Single, Infants.....	1 25	
*4970	“ “ “ “ “ “ Double, “	2 25	
*4970	“ “ “ “ “ “ Youth's.....	2 25	
{ 4971	“ “ “ “ “ “ Single, “	1 50	
{ 4971	“ “ “ “ “ “ “ (Patients) \$2 50		
*4972	Foster's Ratchet Adjustable Enamel Pad Truss, Single, Adults.....	2 00	
{ 4973	“ “ “ “ “ “ Double, “	4 00	
{ 4973	“ “ “ “ “ “ “ (Patients) \$8 00		
*4974	German Truss, Single, Adults, with under strap.....	2 00	
*4975	Elastic Band Enamel Pad Truss, Single, Adults.....	1 50	
*4976	“ “ “ “ “ “ Double, “	2 00	
{ 4977	“ “ “ “ “ “ Single, Youths.....	1 25	
{ 4977	“ “ “ “ “ “ “ (Patients) \$3 00		
{ 4978	“ “ “ “ “ “ Double, “	1 50	
{ 4978	“ “ “ “ “ “ “ (Patients) \$4 00		
{ 4979	“ “ “ “ “ “ Single, Infants.....	1 25	
{ 4979	“ “ “ “ “ “ “ (Patients) \$3 00		
{ 4980	“ “ “ “ “ “ Double, “	1 50	
{ 4980	“ “ “ “ “ “ “ (Patients) \$3 50		
*4981	Best Common Chamois Pad Truss, Single.....	1 00	
{ 4982	“ “ “ “ “ “ Double.....	1 50	
{ 4982	“ “ “ “ “ “ “ (Patients) \$3 00		
		PATIENTS.	PHYSICIANS.
4983	Hard Rubber Truss, any style Pad, Single, Adults.....	\$ 4 00	\$2 50
4984	“ “ “ “ “ “ Double, “	6 00	4 50
4985	“ “ “ “ “ “ Single, Infants	2 50	1 50
4986	“ “ “ “ “ “ Double, “	3 00	2 00
4987	“ “ “ “ “ “ Single, Youths.....	2 50	1 50
4988	“ “ “ “ “ “ Double, “	3 00	2 00
4989	Celluloid Truss, any style Pad, Single, Adults.....	5 00	3 50
4990	“ “ “ “ “ “ Double, “	8 00	5 00
4991	“ “ “ “ “ “ Single, Infants.....	2 50	1 75
4992	“ “ “ “ “ “ Double, “	3 50	2 50
4993	“ “ “ “ “ “ Single, Youths.....	3 00	2 25
4994	“ “ “ “ “ “ Double, “	4 00	3 00
4995	Fry's Patent Truss, Single, Adults	5 00	3 75
4996	S. & S. Radical Cure Truss, Single, Adults.....	6 00	4 00
4997	“ “ “ “ “ “ Double, “	10 00	7 50

(Illustrated on pages 796 to 801.)

UMBILICAL TRUSSES.

FIG.		PATIENTS.	PHYSICIANS.
*4998	Bow (spring) Umbilical Truss, Enamel Pad, Adults	\$4 Co	\$2 50
*4999	" " " " Youths	3 00	2 00
*4999	" " " " Infants	2 00	1 00
5000	Elastic Umbilical Truss, Celluloid Pad, Adults	4 00	3 00
5001	" " " (extra large) Celluloid Pad, Adults	5 00	3 75
5002	" " " Celluloid Pad, Youths	3 00	2 00
5003	" " " Infants	2 50	1 00
*5004	Soft Rubber Umbilical Truss, 10 to 18 inches, Infants	1 00	75
*5004	" " " Youths	1 00	75
5005	Empire Umbilical Truss	1 00	75

ABDOMINAL SUPPORTERS.

ABDOMINAL SUPPORTERS.		PHYSICIANS.
*5006	All Silk and Rubber Abdominal Supporters.....	Silk, \$7 50 Cotton, \$6 00
*5007	Fine French (Silk Front) " " " "	2 50
{ 5008	" (Linen Front) " " " "	2 00
{ 5008	" " " " " "	2 00
*5009	London Abdominal Supporter.....	(Patients) \$4 00
*5010	Gray & Foster's Abdominal Supporter.....	1 50
*5011	Mrs. Bett's " " " "	1 50
{ 5012	Linquist's " " " "	3 50
{ 5012	" " " " " "	2 00
*5013	Empire " " " "	.. (Patients) \$3 00
{ 5014	Livingston's " " " "	1 50
{ 5014	" " " " " "	2 50
*5015	Fitch's " " " "	.. (Patients) \$4 00
*5016	Frictional " " " "	2 00
*5017	Improved Spring " " " "	1 85
*5018	Noeggerath's " " " "	3 75
*5019	Thomas' " " " "	3 50
*5020	Spring Self Adjusting Abdominal Supporter.....	4 00
*5021	Doily Belt (for Menstrual Period)	3 00
*5022	Sanitary Pads " " " "	50
		per doz. 60

SUSPENSORY BANDAGES.

SUSPENSORY BANDAGES.				
*5025	Miliano's	Scrotal Compressor.....		\$ 25
*5026	Howe's	"	"	2 40
*5027	Carroll's	"	"	1 00
*5028	Rawson's	No. 1 Suspensory Bandage.....		85
*5029	"	No. 1½	"	1 00
*5029	"	No. 2	"	1 15
*5029	"	No. 3	"	1 35
*5029	"	No. 4	"	1 50
*5029	"	No. 5	"	1 75
*5029	"	No. 6	"	2 50
5030	Schnoter's	Silk	"	1 10
5031	"	Linen	"	75
5032	"	Cotton	"	60
*5033	Syracuse	No. 10	"	30
*5033	"	No. 16	"	40
*5033	"	No. 21	"	60
*5033	"	No. 26	"	75
*5033	"	No. 31	"	75
*5033	"	No. 36	"	95
5034	Sharp & Smith's	Hand Made Silk Suspensory No. 1.....		2 25
5035	"	" No. 2.....		75
5036	"	" Cotton " No. 5		60
5037	"	" Silk, Extra Small Suspensory.....		38
5038	"	" Silk, Extra Large Suspensory		60

SHOULDER BRACES.

			\$
*540	Laced Back Shoulder Brace, Ladies.....		1 06
*5041	Steel " " " "		1 00
*5042	Fancy Laced Back Shoulder Brace, Ladies		2 00
*5043	G. & F. " " " (4 sizes).....		1 13
*5144	" " " Mens.....		1 90
*5044	" " " Youths.....		1 65
*5044	" " " Boys.....		1 50
*5045	London Shoulder Brace, all sizes.....		75

SHOULDER BRACES.

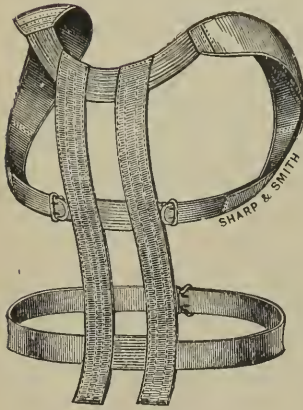


Fig. 5041.—Steel Back
Shoulder Brace.....\$2 00



Fig. 5043.—G and F Ladies' Laced Back
Shoulder Braces.....\$1 50

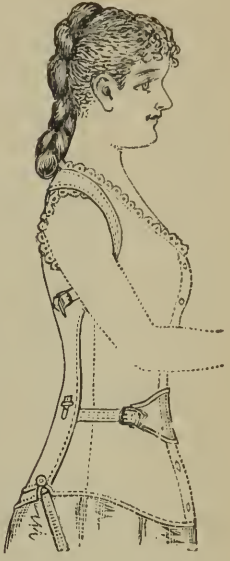


Fig. 5040.—Steel Lace Back
Shoulder Brace....\$2 50



Front view.



Back view.

Fig. 5044.—G and F Laced Back Brace.
Men's \$2 50. Youth's \$2 25. Boys' \$2 00

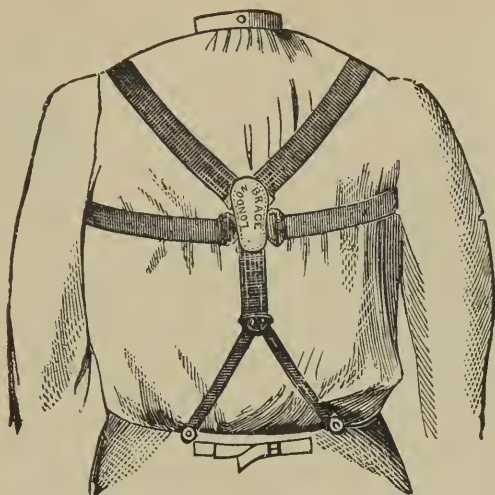


Fig. 5045—London Shoulder Brace, \$1.25.

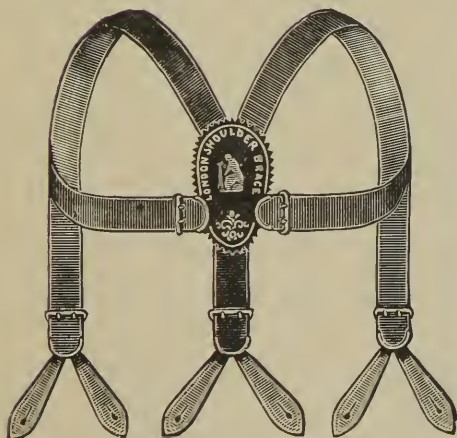


Fig. 5045-A London Shoulder Brace.....\$1 25



Fig. 5045-B Paris Shoulder Braces for Men.....\$1 50

Knickerbocker Shoulder Braces, No. 1, silk.	\$1 25
“ “ “ No. 2, mixed.	1 00
“ “ “ No. 3, plain.....	85

Discount on above braces to physicians and the trade.

MISCELLANEOUS RUBBER GOODS—BANDAGES.

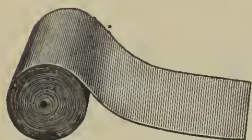


Fig. 5050

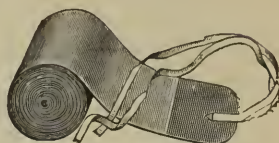


Fig. 5051

Fig. 5051—Physicians' Net Prices.

2 inch x 6 feet.....	\$o 40	2 1/2 inch x 12 feet.....	\$o 95
2 " x 9 "	50	2 1/2 " x 15 "	I 15
2 " x 10 1/2 "	60	3 " x 6 "	60
2 " x 12 "	70	3 " x 9 "	75
2 " x 15 "	90	3 " x 10 1/2 "	90
2 1/2 " x 6 "	50	3 " x 12 "	I 10
2 1/2 " x 9 "	60	3 " x 15 "	I 25
2 1/2 " x 10 1/2 "	75		

All of our Bandages are of Pure Gum, and the Prices quoted are on the *medium weight* bandage, which is generally used.

The Empire Elastic Bandage, Specially Adapted for Varicose Veins.

Fig. 5052.

THE ADVANTAGES OF THIS BANDAGE ARE:

1st. Its Porosity—It never causes itching, rash, or ulceration under the bandage.

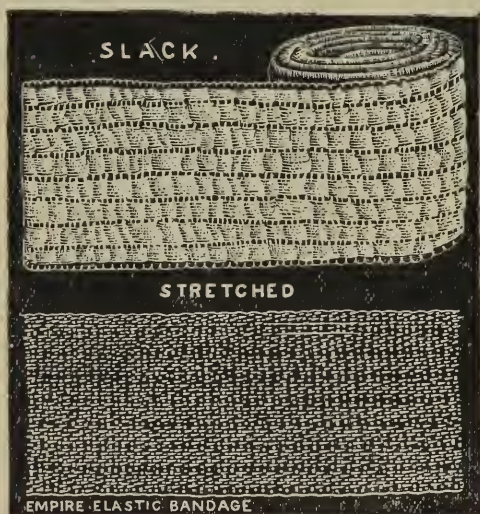
2d. Its Elasticity, which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, a feature unknown to any other bandage.

3d. Its Absorbent Properties.

4th. Its Easy Application to any part of the body, not being necessary to fold it over, as with other bandages, as it follows itself with equal uniformity around any part of the anatomy.

5th. Its Self-holding Qualities. No bother with pins, needles and thread, or strings, so tiresome to surgeons, as simply tucking the end under the last fold insures its permanent stay, until its removal for purpose of cleanliness.

6th. The only bandage that is Superior to the Elastic Stocking for varicose veins.



5052

PRICE LIST OF EMPIRE ELASTIC BANDAGES.

2 in. x 3 yds. (stretched).....	\$o 50	2 in. x 5 yds. (stretched).....	\$o 65
2 1/2 in. x 3 yds. "	60	2 1/2 in. x 5 yds. "	75
3 in. x 3 yds. "	75	3 in. x 5 yds. "	I 00

MISCELLANEOUS RUBBER GOODS.

SITWELL'S WATER BANDAGES.—Hot or Cold.

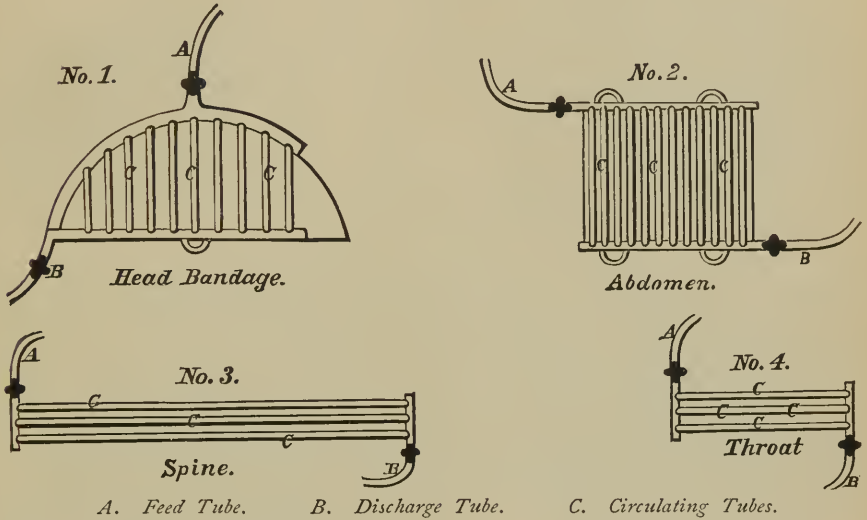


Fig. 5053	No. 1, for the Head	.....	\$ 7 50
" 5054	No. 2, for the Abdomen	..... 10x7 in. \$5 50 10x12 in.	6 00
" 5055	No. 3, for the Spine	.....	4 00
" 5056	No. 4, for the Throat	.....	3 00

The above bandages will be found invaluable in the treatment of Brain Fever, Concussion of the Brain, Sun Stroke, Typhoid Fever, Puerperal Fever, Diphtheria, and any ailments where the temperature requires to be diminished, sustained, or heightened.

DWIGHT ROBERTS' PATENT HOT WATER BAGS.

These bags are made of fine white rubber, vulcanized under the Goodyear Process, have nickel-plated stoppers, and are warranted perfect. The face bag (see Fig. 5057) is oval shaped, to use around the nose or face.

The Throat Bag (see Fig. 5058) for HOT WATER is curved to fit the neck, with a rubber band and buckle that holds the heat closely to the throat, opening the pores, and softening the skin.

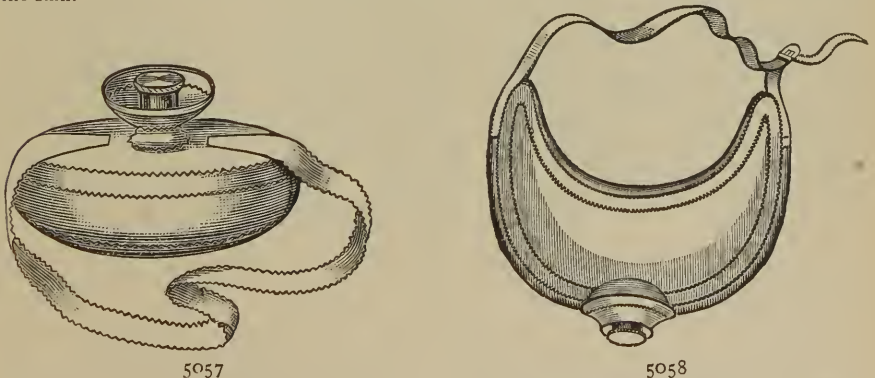


Fig. 5057	Roberts' Face Bag	.....	\$0 75	Fig. 5058	Roberts' Throat Bag	....	\$1 10
" 5059	Ice Bags, either of the above patterns	.....	each	1 10			

WATER COILS.

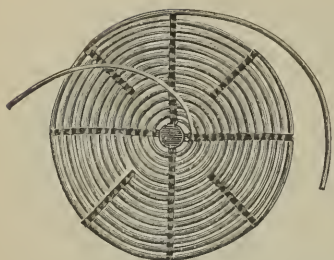


Fig. 5060—Round Water Coils.

Diameter	5 inch	.....	\$ 1 15
"	7 "	.....	1 50
"	9 "	.....	1 85
"	11 "	.....	2 25
"	13 "	.....	2 65
"	15 "	.....	3 00

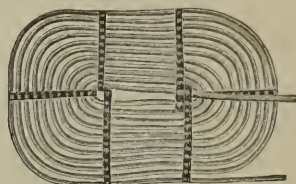


Fig. 5061—Oblong Water Coils.

5x3 inches	.....	\$ 1 15
7x4 "	.....	1 50
9x5 "	.....	1 85
10x6 "	.....	2 25
11x7 "	.....	2 65
11x8 "	.....	3 00

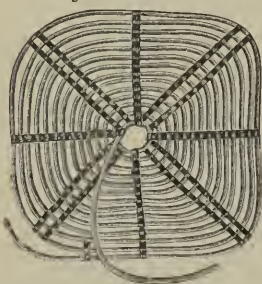


Fig. 5062—Square Water Coils.

6x6 inches	.....	\$ 1 85
8x8 "	.....	2 25
10x10 "	.....	3 00
12x12 "	.....	3 75
14x14 "	.....	4 50

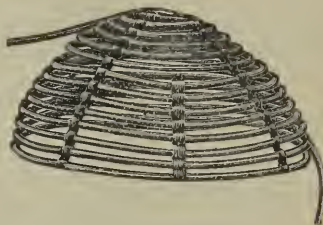


Fig. 5063—Head Coils.

7 in. diameter, 4 in. deep	.....	\$ 2 25
7 " " 5 " " "	.....	2 65

These coils (Fig. 5063) are made of extra heavy tubing, which will stand a reasonable amount of pressure without stopping the flow of water.

Fig. 5063-A—Throat Coils.

9 in. x3 in.	.....	\$ 1 25
10 " x3 "	.....	1 50
11 in. x3 in.	.....	\$ 1 80
12 " x3 "	.....	2 10

These coils (Fig. 5063 A) are finished with rings at each end, and can be easily adjusted by means of a tape or string.

These Ventilated Water Coils are for increasing, sustaining or reducing the temperature as may be desired. They are made (with the exception of the head coil, Fig. 5063) of light pure gum, steam cured tubing which gives water enough to produce the desired effect, reduces the weight and at the same time makes a coil which has a free passage through it, and is not liable to get clogged or stopped up. By leaving a space between each coil of the tubing, a free circulation of air is insured, the weight of the coil is reduced, and they will affect the temperature quicker than coils made without the air space. In addition to the cement used in putting the coils together, they are stitched with silk which increases the strength, and adds greatly to their durability.

Coils of any shape or size made to order, of light or heavy tubing.

MISCELLANEOUS RUBBER GOODS.

*5065	Rubber Ice Cap, double	.....	\$2 50 to \$ 3 00
*5068	Spinal Ice Bags	.....	1 50 to 2 00
*5069	No. 1, Spinal Ice Bag	.....	50
*5070	No. 2, " "	.....	50
*5071	No. 3, Head " "	.....	75
*5072	No. 4, " "	.....	75
*5073	Oval Gas Bags	.....	\$ 3 00 to 8 00
*5076	Air Beds, with or without Pillow	.....	25 00 to 50 00

CONTINUED ON NEXT PAGE.

MISCELLANEOUS RUBBER GOODS.

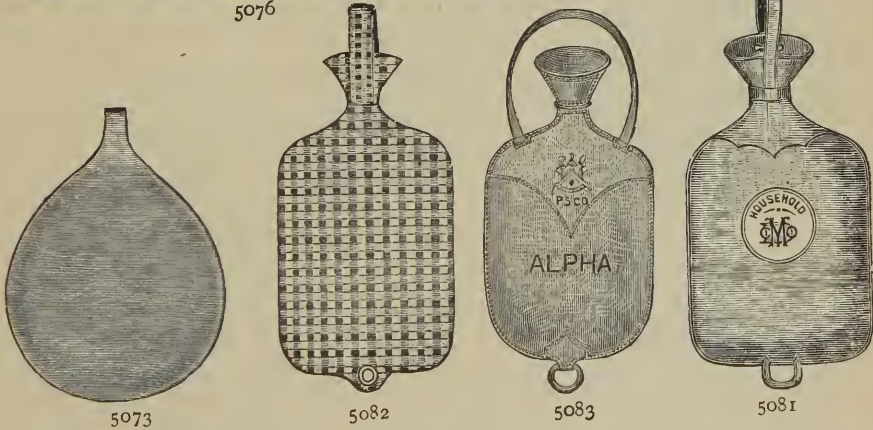
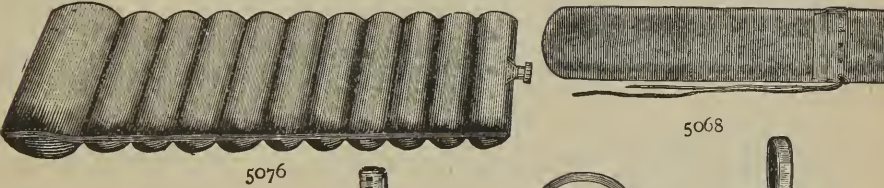
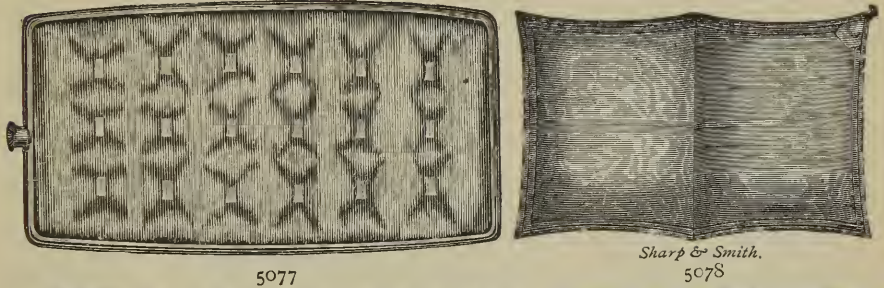


FIG.					
*5077	Water Bed.....	\$15	00 to	50	00
*5078	Air Pillow.....	2	00 to	3	50
*5080	Water Bags	4	00 to	6	00
*5081	Water Bottles, from 1 quart to 1 gallon ..	1	50 to	3	00
*5082	Flannel Covered Water Bottles, from 1 quart to 1 gallon.....	1	75 to	3	50
*5083	Alpha Water Bottle.....	1	50 to	3	00

See pages 812 and 813 for further Prices and Description.

MISCELLANEOUS RUBBER GOODS.

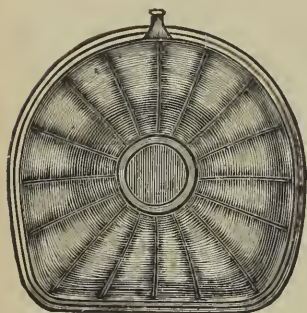


Fig. 5092—Half Round Chair Cushion.....\$5 00

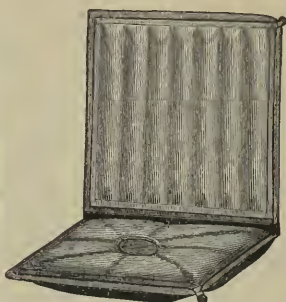


Fig. 5089—Chair Cushion, \$4 00 to 6 00.

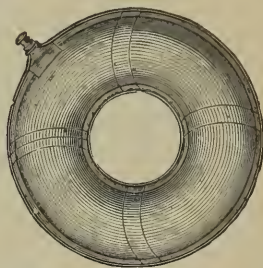


Fig. 5086—Invalid Cushion, \$2 00 to 4 00.

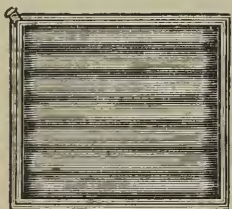


Fig. 5090—Square Reeded Chair Cushion.....\$2 50 to 4 00



Fig. 5084—Goodyear Crown Water Bottle, \$1 75 to 3 00.

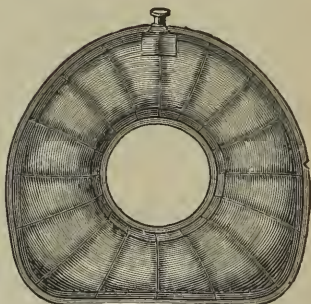


Fig. 5093—Hospital Cushion, \$5 00.

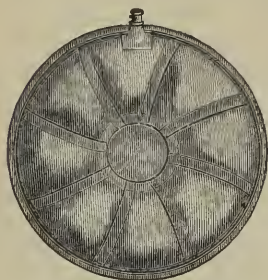


Fig. 5087—Chair Cushion, \$3 50 to 4 00.

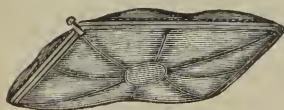
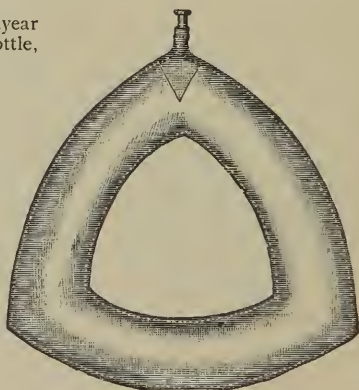


Fig. 5091—Center Reeded Chair Cushion.....\$2 50 to 4 00



5094

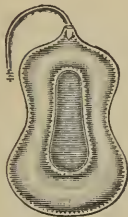
*Fig. 5094 Alpha Triangular Invalid Cushion.....\$2 00 to 3 50
 Fig. 5095 Alpha Ventilated Invalid Ring..... 2 00 to 4 50

See Page 813 for further Prices and Descriptions.

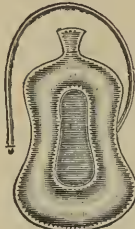
MISCELLANEOUS RUBBER GOODS,



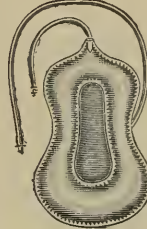
5098—No. 1.



5099—No. 2.



5100—No. 3.



5101—No. 4.

*Sharp & Smith.*

5113—No. 6.

FIG.

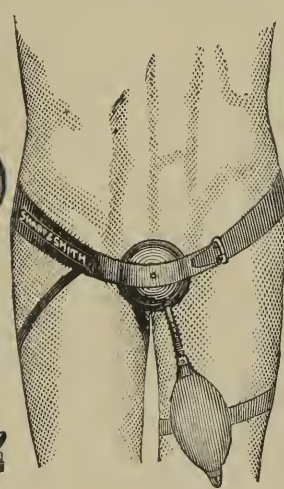
5098—No. 1—Combination Bed Pan, with Funnel.....	\$5 00
5099—No. 2—Combination Bed Pan with Funnel and Inflating Tube.....	5 00
5100—No. 3—Combination Bed Pan with Funnel and Outlet Tube.....	6 00
5101—No. 4—Combination Bed Pan with Inflating and Outlet Tube.....	6 00
5113—No. 6—Female Day Urinal.....	2 50



DAVIDSON RUBBER CO.

5109—No. 4. 5106—No. 1-A.
SHARP & SMITH.

5110—No. 5.

Sharp & Smith.

5114-B



SHARP & SMITH

Fig. 5114-A.
Hard Rubber
Urinal . \$5 00

5108—No. 3.

Fig. 5109—No. 4—Male Urinal (French Style).....	\$3 50
5106—No. 1-A—Male Urinal (large size).....	1 75
5110—No. 5—Male Urinal, Day and Night.....	4 50
5108—No. 3—Long Male Urinal.....	2 00
5114-B—Instrument for Extrophy of the Bladder.....	

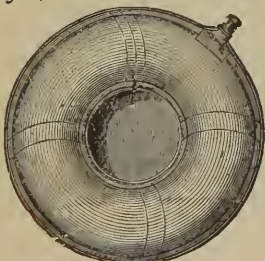
*Sharp & Smith.*

Fig. 5096—Bed Pan.. \$4 00

*Sharp & Smith.*

Fig. 5112—Long Female Urinal.....\$2 50

*Sharp & Smith.*

Fig. 5105—No. 1—Male Urinal.....\$1 50

See page 814 for further Prices and Descriptions.

MISCELLANEOUS RUBBER GOODS.—Net Prices.

ICE CAPS.

FIG.						
*5065	White	Helmet	Shape	Ice	Cap, No. 1	\$ 1 50
*5065	"	"	"	"	No. 2	1 75
*5065	"	"	"	"	No. 3	2 00
5066	Pure	Gum	Flat	Shape	Ice Cap, No. 4	1 50

ICE BAGS.

5067	Pure	Gum	Throat	Ice	Bags, No. 1, 7 inches long	\$ 60
5067	"	"	"	"	No. 2, 8 "	65
5067	"	"	"	"	No. 3, 9 "	70
5067	"	"	"	"	No. 4, 10 "	70
5067	"	"	"	"	No. 5, 11 "	1 00
*5068	White	Spinal	Ice	Bags, No. 11, 12 inches long		80
*5068	"	"	"	"	No. 12, 14 "	80
*5068	"	"	"	"	No. 13, 16 "	80
*5068	"	"	"	"	No. 14, 18 "	1 00
*5068	"	"	"	"	No. 15, 20 "	1 00
*5068	Pure	Gum	Spinal	Ice	Bags, No. 21, 12 inches long	1 00
*5068	"	"	"	"	No. 22, 14 "	1 00
*5068	"	"	"	"	No. 23, 16 "	1 10
*5068	"	"	"	"	No. 24, 18 "	1 20
*5068	"	"	"	"	No. 25, 20 "	1 20
*5069	"	"	"	"	No. 1	30
*5070	"	"	"	"	No. 2	35
*5071	"	"	Head	"	No. 3	40
*5072	"	"	"	"	No. 4	50

GAS BAGS.

*5073	Pure	Gum	or	Slate	Color	Oval	Gas	Bags, 3 gallon	\$ 2 00
*5073	"	"	"	"	"	"	"	5 "	2 50
*5073	"	"	"	"	"	"	"	8 "	3 25
*5073	"	"	"	"	"	"	"	10 "	5 25
5074	Slate	Color	Oblong	Gas	Bags	18x24	15	gallon	7 50
5074	"	"	"	"	"	20x30,	25	"	8 50
5074	"	"	"	"	"	24x30,	35	"	11 25
5074	"	"	"	"	"	30x40,	55	"	14 00
5075	Brass	Stop	Cocks	for	Gas	Bags		each—\$0 75 to	1 00

AIR BEDS.

*5076	Air	Beds, No. 1, 32x80—with	Pillow, \$30.00; without	Pillow		\$25 00
*5076	"	No. 2, 42x80—	"	38.00; "	"	33 00
*5076	"	No. 3, 52x80—	"	47.00; "	"	42 00
*5077	Water	Beds, No. 1, 24x36				16 00
*5077	"	No. 2, 32x80				25 00
*5077	"	No. 3, 42x80				33 00
*5077	"	No. 4, 52x80				42 00

AIR PILLOWS.

*5078	Air	Pillows, No. 1, 9x13				\$ 1 50
*5078	"	No. 2, 10x16				1 85
*5078	"	No. 3, 12x18				2 25
*5078	"	No. 4, 14x23				2 50
5079		(for Neck)				3 00

WATER BAGS.

*5080	Water	Bags, No. 1, 13x15				\$ 2 75
*5080	"	No. 2, 14x14				2 75
*5080	"	No. 3, 14x18				3 25
*5080	"	No. 4, 16x16				3 25
*5080	"	No. 5, 17x19				3 75
*5080	"	No. 6, 18x18				3 75

MISCELLANEOUS RUBBER GOODS.—Net Prices.

WATER BOTTLES.

FIG.						
*5081	Rubber Cloth-Lined Water Bottle, No. 1, 1 quart.....	\$	1	00		
*5081	" " " " No. 2, 2 "		1	25		
*5081	" " " " No. 3, 3 "		1	35		
*5081	" " " " No. 4, 4 "		1	50		
*5081	" " " " No. 5, 5 "		1	60		
*5081	" " " " No. 6, 6 "		1	80		
*5082	Rubber Cloth-Lined Flannel Covered Water Bottle, No. 1, 1 quart.....		1	25		
*5082	" " " " No. 2, 2 "		1	50		
*5082	" " " " No. 3, 3 "		1	75		
*5082	" " " " No. 4, 4 "		1	85		
*5082	" " " " No. 5, 5 "		1	90		
*5082	" " " " No. 6, 6 "		2	00		
*5083	The Alpha Rubber Water Bottle, 1 quart		1	10		
*5083	" " " " 2 "		1	35		
*5083	" " " " 3 "		1	65		
*5083	" " " " 4 "		1	95		
*5083	" " " " 5 "		2	25		
*5084	The Goodyear Crown Rubber Water Bottle, 2 quart.....		1	25		
*5084	" " " " 3 "		1	50		
*5084	" " " " 4 "		1	75		
5085	Fountain Syringe Attachment for Water Bottle.....set		75			

INVALID CUSHIONS.

*5086	Invalid Cushion, White or Slate Color, No. 1, Diameter, 9 inch	\$	1	25		
*5086	" " " " No. 2 " 10 "		1	50		
*5086	" " " " No. 3 " 11 "		1	75		
*5086	" " " " No. 4 " 12 "		1	75		
*5086	" " " " No. 5 " 13 "		2	00		
*5086	" " " " No. 6 " 14 "		2	00		
*5086	" " " " No. 7 " 15 "		2	25		
*5086	" " " " No. 8 " 16 "		2	25		
*5086	" " " " No. 9 " 17 "		2	50		
*5086	" " " " No. 10 " 18 "		2	75		

CHAIR CUSHIONS.

*5087	Round Chair Cushion, Rubber and Cloth, No. 1, Diameter, 15 inch	\$	2	25		
5088	" " " " No. 2, " 17 "		2	75		
*5089	Invalid " " " " No. 1, with Back and Seat, 16x16 each		5	00		
*5089	" " " " " " (16x16) " 16x18. "		5	50		
*5089	" " " " " " No. 3, " " (16x18) " 18x18. "		6	00		
*5089	" " " " " " No. 4, " " (18x18) " 18x20. "		6	25		
*5090	Chair Cushion, Square Reeded, No. 1, 12x16.....		1	75		
*5090	" " " " No. 2, 14x16.....		2	00		
*5090	" " " " No. 3, 16x16		2	25		
*5090	" " " " No. 4, 16x18.....		2	50		
*5091	" " " " Center Reeded, No. 5, 12x16.....		1	75		
*5091	" " " " " " No. 6, 14x16.....		2	00		
*5091	" " " " " " No. 7, 16x16		2	25		
*5091	" " " " " " No. 8, 15x18		2	50		
*5092	" " " " Half Round		3	50		
*5093	Hospital Cushion		3	00		
*5094	Alpha Invalid Cushion, No. 1, 13 inch.....		1	50		
*5094	" " " " " " No. 2, 15 "		1	75		
*5094	" " " " " " No. 3, 17 "		2	00		
5095	Alpha Ventilated Invalid Cushion, No. 1, 9 inch diameter.....		1	25		
5095	" " " " " " No. 2, 10 " "		1	40		
5095	" " " " " " No. 3, 11 " "		1	50		
5095	" " " " " " No. 4, 12 " "		1	60		
5095	" " " " " " No. 5, 13 " "		1	75		
5095	" " " " " " No. 6, 14 " "		1	85		
5095	" " " " " " No. 7, 15 " "		1	95		
5095	" " " " " " No. 8, 16 " "		2	00		
5095	" " " " " " No. 9, 17 " "		2	10		
5095	" " " " " " No. 10, 18 " "		2	25		

MISCELLANEOUS RUBBER GOODS,—Net Prices.

BED PANS.

FIG.					
*5096	Plain Round Bed Pan.....			\$	2 50
5097	“ “ “ “ with Discharge Tube.....				3 00
*5098	Combination Bed Pan, No. 1, with Funnel, old style				3 00
*5099	“ “ “ “ No. 2, Inflating Tube, new style				3 00
*5100	“ “ “ “ No. 3, with Funnel and Outlet Tube.....				3 50
*5101	“ “ “ “ No. 4, with Inflating and Outlet Tube				3 50
5102	Emmet's Bed Pan.....				3 75
5103	Drakely's Bed Pan.....				3 75
5104	“ “ “ “ and Douche.....				5 00
5104-A	Earthen Bed Pan.....				1 00
	Jones' Bed Pan and Douche, see page 644.				

URINALS.

*5105	Pure Gum Male Urinal, No. 1, for day use.....			\$	1 00
*5106	“ “ “ “ No. 1-A, for day use (large size).....				1 15
*5107	“ “ “ “ No. 11, for day use (child's).....				1 00
*5108	“ “ “ “ No. 3, for day and night use				1 25
*5109	“ “ “ “ No. 4, for day use.....				2 00
*5110	“ “ “ “ No. 5, for day and night use.....				2 75
5111	“ “ “ “ No. 15, for day and night use. Style of No. 5 (child's size).....				2 50
*5112	Pure Gum Female Urinal, No. 2, for day use.....				1 25
*5113	“ “ “ “ No. 6, for day use				2 00
5114	“ “ “ “ No. 16, for day use				2 00
*5114-A	Hard Rubber Urinal.....				3 75
5114-B	Instrument for Extrophy of the Bladder.....				

RUBBER TUBING

5115	Pure Gum Black Rubber Tubing, $\frac{3}{8}$ inch.....	per foot	\$	0 15
5116	“ “ “ “ $\frac{1}{2}$ “			10
5117	“ “ “ “ $\frac{3}{4}$ “			10
5118	“ “ “ “ $\frac{1}{2}$ “			08
5119	“ “ “ “ $\frac{3}{8}$ “			04
5120	White Rubber Tubing, 1 inch.....			30
5121	“ “ “ “ $\frac{3}{4}$ “			25
5122	“ “ “ “ $\frac{1}{2}$ “			15
5123	“ “ “ “ $\frac{3}{8}$ “			12
5124	“ “ “ “ $\frac{1}{4}$ “			10
5125	“ “ “ “ $\frac{1}{8}$ “			10
5126	“ “ “ “ $\frac{1}{16}$ “			06
5127	“ “ “ “ $\frac{1}{32}$ “			04

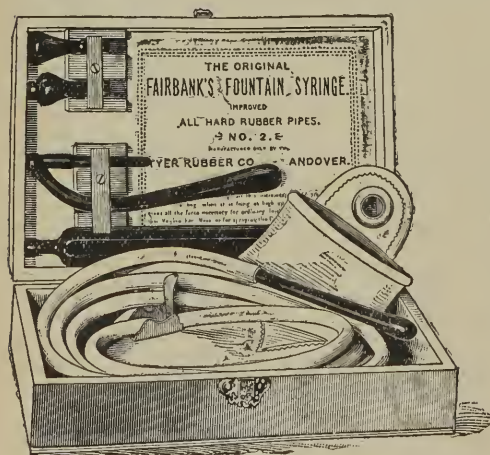
Rubber Drainage Tubes and Tubing, see “ Miscellaneous and General Surgical Necessities,” and “ Index.”

Fig. 5128.—Fairbanks' Improved Fountain Syringe.

This Syringe, like all of our Fountain Syringes, has all Hard Rubber Tubes. The Tubes fit in a “rack” in top of case, and include a Vaginal Irrigator Tube in addition to the other tubes which go with all Fountain Syringes.

These Syringes are put up in fine Polished Wood Cases.

Price.....\$1 25 to 2 25



5128

FOUNTAIN SYRINGES.

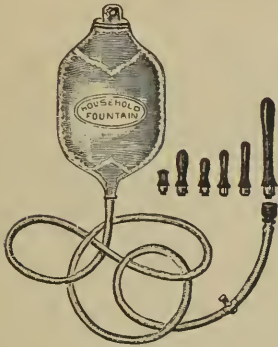


Fig. 5133—Household Fountain Syringes, \$1 25 to 2 25.

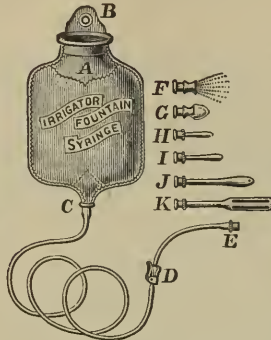


Fig. 5134—Mattson's Irrigator Fountain Syringe, \$2 00 to 3 00

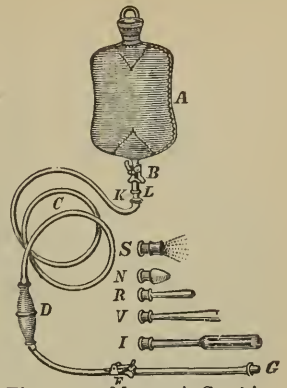


Fig. 5135—Mattson's Combination Fountain Syringe, showing Water Bag ready for use.

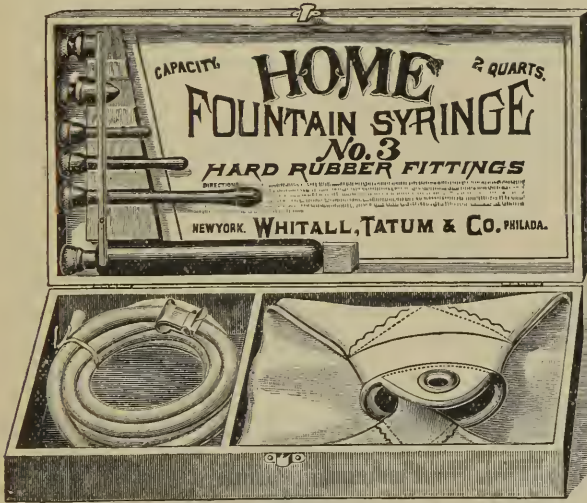


Fig. 5136—The Home Fountain Syringe..... \$2 00 to to 3 50

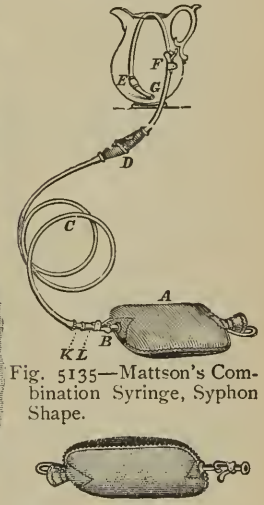
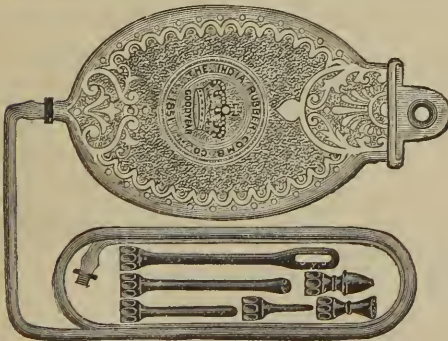
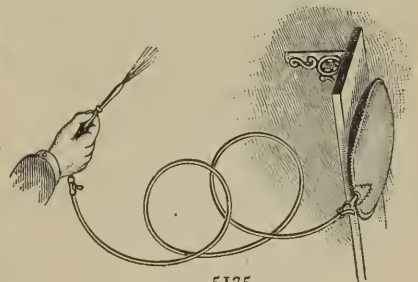


Fig. 5135—Mattson's Combination Fountain Syringe, Syphon Shape.



5140

Fig. 5135—Mattson's Combination Fountain Syringe. Bag detached from Syringe, to be used as a water bottle.



5135

Fig. 5135—Mattson's Combination Fountain Syringe. Bag on shelf ready for use.
 Fig. 5135—Mattson's Combination Syringe..... \$2 50
 Fig. 5140—Goodyear Crown Fountain Syringe \$1 75 to 2 50

FOUNTAIN AND BULB SYRINGES.

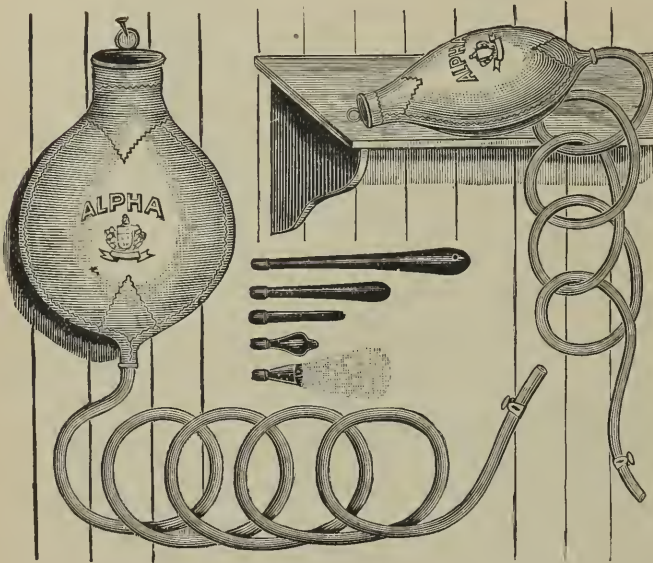


Fig. 5137.—Alpha Fountain Syringe.....\$1 50 to 2 50



Fig. 5157.—Magnum Syringe, No. 2, 75c.



Fig. 5168.—Davidson Syringe, No. 1, \$2 50

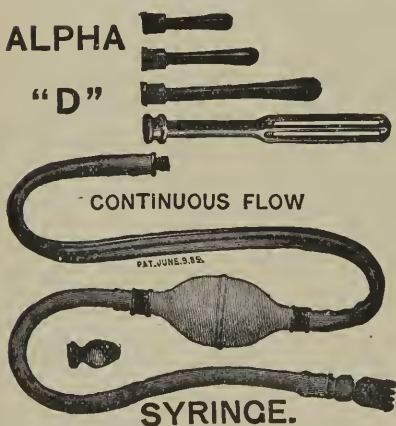


Fig. 5152.—Alpha "D", continuous flow Syringe... ..\$2 00

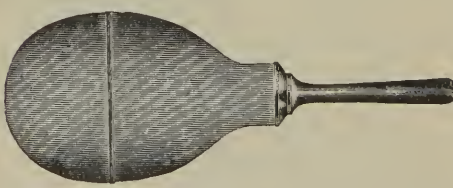


Fig. 5170.—Large Bag Rectum Syringe.. \$2 50

See page 818 for other prices and descriptions.

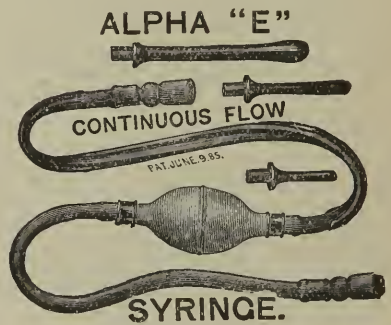


Fig 5153.—Alpha "E", continuous flow Syringe..... \$1 50

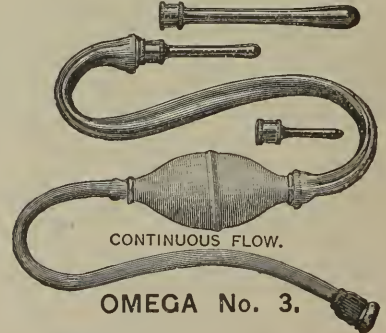
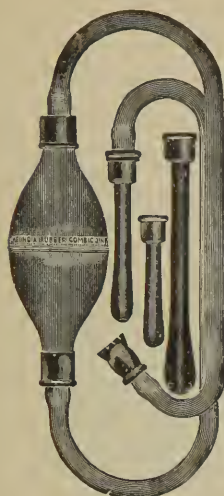
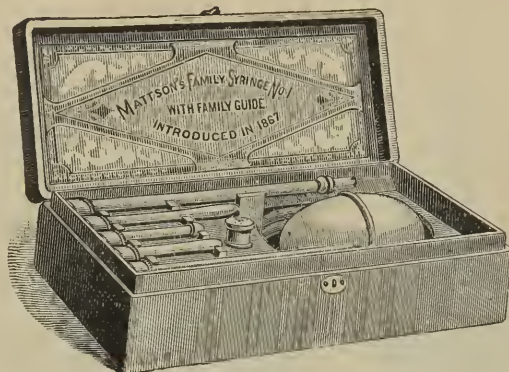


Fig. 5155.—Omega "No. 3", continuous flow Syringe..... \$1 50

BULB SYRINGES.



5169



5166

- FIG.
 *5166 Mattson's No. 1, Family Bulb Syringe.....\$2 50
 *5169 Goodyear Crown Bulb Syringe, No. 513.....1 25

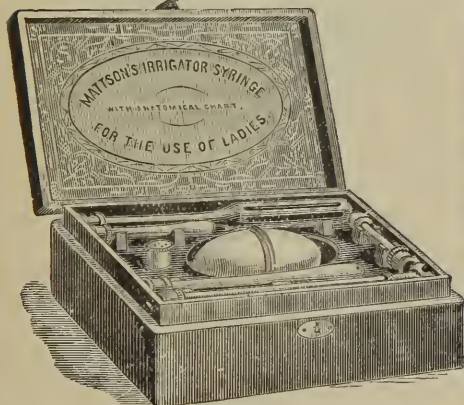


Fig. 5163. Mattson's No. 1, Irrigator Bulb Syringe.....\$2 50



Fig 5167. Physicians' Companion Syringe.....\$2 50

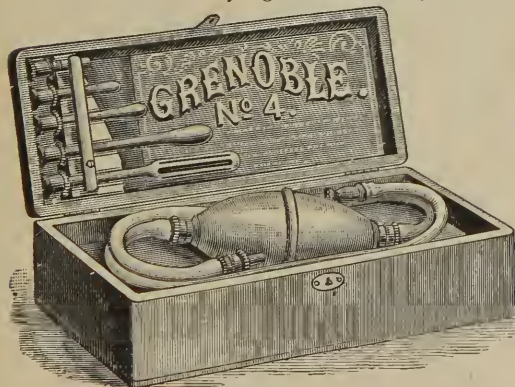


Fig. 5171. Grenoble Syringe, No. 4.....\$2 00

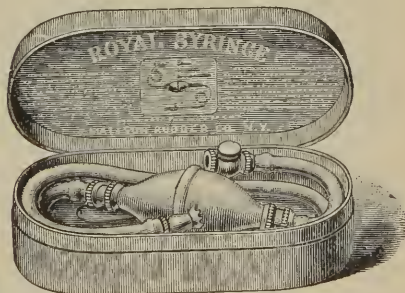


Fig. 5161.—Mattson's No. 1, Royal Bulb Syringe.....\$1 50

See Page 819 for other Prices and Descriptions.

SYRINGES AND BULBS.

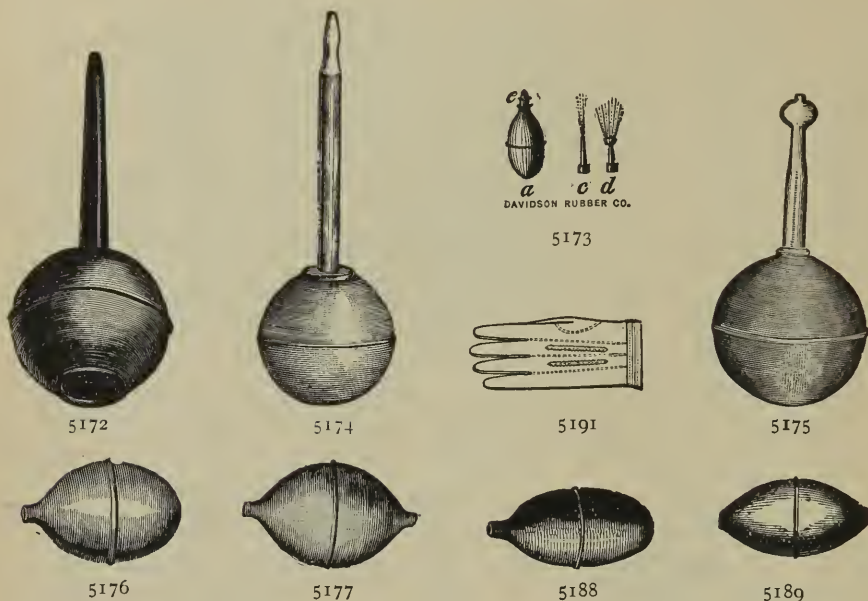


FIG.

*5172	Pure Gum Ulcer and Ear Syringe.....	\$ 75
*5173	Eye and Ear Syringe.....	1 00
*5174	Bulb Urethral Syringe, Glass Tip.....	1 00
*5175	Bulb Ear Syringe, Glass Tip.....	85
*5176	Single Neck Atomizer Bulb.....	25
*5177	Double Neck Atomizer Bulb.....	25
*5188	Single Neck Syringe Bulb.....	25
*5189	Double Neck Syringe Bulb.....	25
*5191	Dissecting Gloves, per pair ..	\$1 25 to 1 50

FOUNTAIN SYRINGES

*5128	Fairbanks Fountain Syringe, No. 1, 1 pint.....	\$ 75
*5128	" " " " 2, 1 quart.....	1 00
*5128	" " " " 3, 2 ".....	1 25
*5128	" " " " 4, 3 ".....	1 50
5129	Climax " " " " 1, 1 pint.....	1 00
5130	" " " " 2, 1 quart.....	1 20
5131	" " " " 3, 2 ".....	1 55
5132	" " " " 4, 3 ".....	1 70
*5133	Household " " " " 11, 1 pint.....	1 50
*5133	" " " " 12, 1 quart.....	1 25
*5133	" " " " 13, 2 ".....	1 35
*5133	" " " " 14, 3 ".....	1 50
*5133	" " " " 15, 4 ".....	1 75
*5134	Mattson's Irrigator Fountain Syringe, No. 1, 2 quart.....	1 50
*5134	" " " " 2, 3 ".....	1 75
*5134	" " " " 3, 4 ".....	2 00
*5135	" " Combination " " 3 ".....	1 50

FIG.		
*5136	The "Home" Fountain Syringe, No. 2, 1 quart	\$1 50
*5136	" " " " " 3, 2	1 75
*5136	" " " " " 5, 3	2 00
*5137	The "Alpha" " " " 2,	1 25
*5138	" " " " " 3,	1 75
*5139	" " " " " 4,	2 00
*5140	Goodyear Crown " " " 2, 1 quart	1 45
*5140	" " " " " 3, 2	1 50
*5140	" " " " " 4, 3	1 75
5141	Fountain Syringe Attachment for Water Bottle Set	75
5142	Glass Vaginal Syringe Tubes	each, 15
5143	Hard Rubber Vaginal Syringe Tubes	25
5144	Glass Rectal Syringe Tubes	10
5145	Hard Rubber Rectal Syringe Tubes	15

BULB SYRINGES.

5146	The "Lady's" Syringe	\$2 00
5147	Molesworth's Vaginal Syringe No. 1	1 25
5147	" " " " " 2	1 25
5147	" " " " " 3	1 25
5148	"Atlas" Hard Rubber Vaginal Syringe	1 25
5149	"Alpha" "A" continuous flow	1 50
5150	" " "B" " " " "	1 50
5151	" " "C" " " " "	1 50
*5152	" " "D" " " " "	1 35
*5153	" " "E" " " " "	1 25
5154	" " "I" " " " "	1 00
*5155	"Omega" No. 3	75
5156	Indispensable Cup Vaginal Syringe	3 00
5157	Hawley's Vaginal Syringe	2 50
5158	Magnum, No. 1, Bulb Syringe	60
*5159	" " 2, " "	50
5160	Chamberlain's Vaginal " "	1 75
*5161	Mattson's No. 1 Royal " "	1 00
5162	" " 2 " "	1 25
*5163	" " 1 Irrigator " "	1 75
5164	" " 2 " "	1 25
5165	" " 3 " "	1 00
*5166	" " 1 Family " "	1 25
*5167	The Physician's Companion Syringe	2 50
*5168	" Davison Bulb Syringe No. 1	1 50
*5169	" Goodyear Crown Syringe No. 513	75
*5170	Large Bag Syringe for Rectum Injections	1 75
*5171	Grenoble No. 4 Bulb Syringe	1 00

MISCELLANEOUS SYRINGES AND TUBES.

*5172	Pure Gum Ulcer and Ear Syringe	\$ 20
*5173	Eye and Ear Syringe, Metal Pipes	25
*5174	Bulb Urethral Syringe Glass Tips	15
*5175	" Ear " "	15

BULBS.

*5176	Single Neck Atomizer Bulb	\$0 25
*5177	Double " " "	25
*5188	Single " Syringe " "	25
*5189	Double " " "	25
5190	Dissecting Sleeves, per pair	1 25
*5191	" Gloves, Gents', per pair	1 50
*5191	" " Ladies', " "	1 25

RUBBER SHEETING.

5193	1 yard wide Rubber Sheeting, per yard	\$ 75
5195	1½ " " " "	1 00

HARD RUBBER SYRINGES.

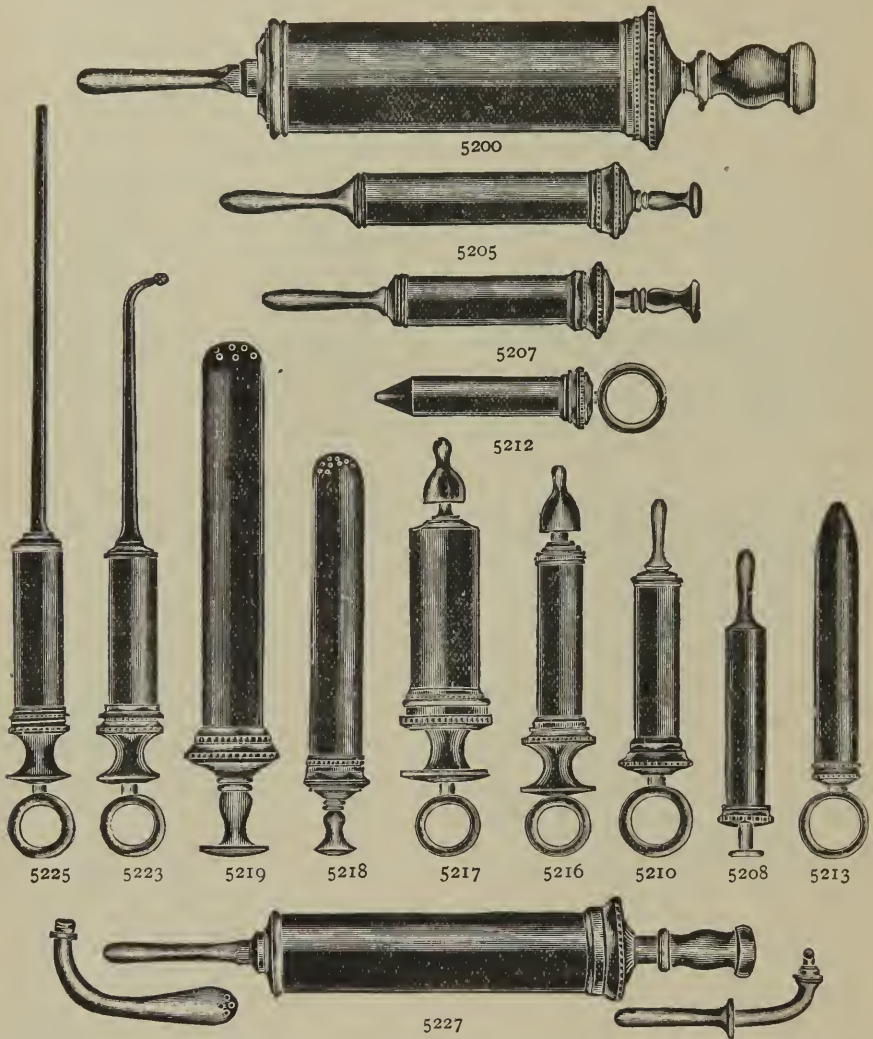


FIG.	No.	5, Straight Pipe Syringe, H. R.,	6 oz.	\$1	35
*5200	"	0, " " " "	"	12	"
5201	"	0, " " " "	"	1	75
5202	"	4, " " " "	"	3	"
5203	"	4-B, " " " "	"	4	"
5204	"	3-A, " " " "	"	2	"
*5205	"	3, " " " "	"	1	"
5206	"	30, " " " "	"	3/4	"
*5207	"	2, " " " "	"	1/2	"
*5208	"	10, " " " "	"	1/4	"
5209	"	8, " " " "	"	1/8	"
5210	"	1-B, " " " "	"	1/2	"
5211	"	1, " " " "	"	3/8	"
*5212	"	1-C, Penis Syringe,	"	3/8	"
*5213	"	1-D, " " " "	"	1/2	"
5214	"	1-A, " " " "	"	1/4	"
5215	"	00, " " " "	"	1/8	"
*5216	"	1, Ear " " " "	"	1/4	"
*5217	"	2, " " " "	"	1	"

FIG.	No.	2, Vaginal Syringe, H. R.,	1 oz.,	\$0	45
*5218	"	3, " " " "	"	2	"
*5219	"	1, " " " "	"	1/4	"
5220	"	2, " (with shield)	"	1	"
5221	"	3, " " " "	"	1/2	"
*5222	"	1, Catarrhal Syringe,	"	3-10	"
5223	"	1, Dental " " " "	"	1/2	"
*5224	"	3-L, Uterine " " " "	"	1/4	"
5225	"	4-L, " " " "	"	1/2	"
*5226	"	4-P, Straight Pipe Syringe, H. R., 3	"	1	25
*5227	"	oz., with Straight Rectal, Bent Rectal,	"		
		and Vaginal Pipes.....			1 25
5228	"	26, Glycerine Syringe, H. R., with			
		Straight and Bent Tubes.....			75

Instruments designated by a * are illustrated

DESCRIPTION OF THE McINTOSH COMBINED GALVANIC AND FARADIC BATTERY.

Fig. 5259, No. 1, shows the hard rubber plate of a section (on the under surface of which is cemented a sheet of soft vulcanized rubber) and binding posts which project through the hard and soft rubber, and screw into the brass piece holding the zinc and carbon couples. The rubber plate on which the couples are clamped project over one side enough to cover the cells when the zinc and carbon plates are placed in the drip-cups. When the cells are not in use, and the lid of the Battery box is closed, it presses on the *spring handle* of the section (5259, No. 1) and holds the soft rubber firmly over the cells and drip-cup. By this arrangement the hydrostat is made water-tight.

Fig. 5260, No. 2, shows a section of six cells and a drip-cup, made of one piece of hard vulcanized rubber. The drip cup is to receive the zinc and carbon couples when not in use.

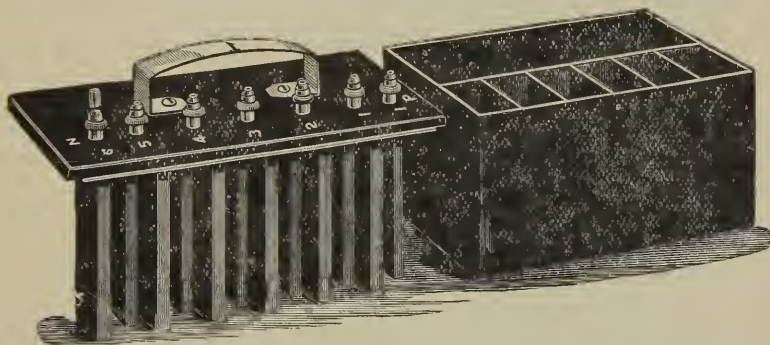


Fig. 5259, No. 1.

Fig. 5260 No. 2.

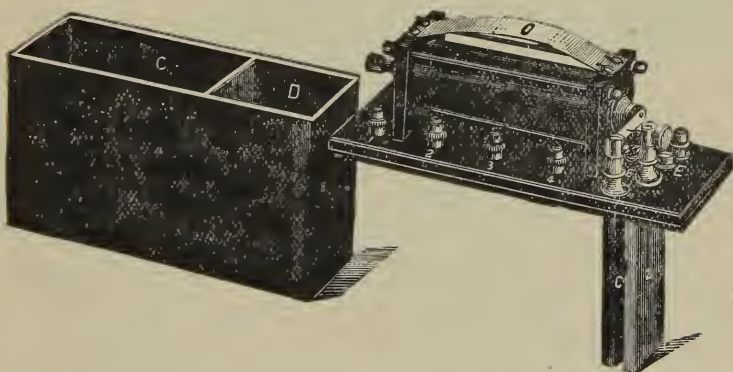


Fig. 5261, No. 3.

Fig. 5262, No. 4.

An extra cell of large size is added to the combined Battery for the purpose of running the Faradic Coil (Fig. 5261, No. 3). This renders the Battery more perfect than any yet offered to the profession. This extra cell gives sufficient power for the Faradic current, and the operator is not obliged to connect and exhaust the current from the galvanic cells. If greater strength is ever needed in an emergency than the extra cell gives, the galvanic cells can be connected with the coil. (See directions). The Faradic Coil (Fig. 5262, No. 4) is securely fastened on a plate of polished hard rubber, which serves for a cover to the large cell and drip cup, and to hold the elements. Soft rubber is cemented on the under side of this plate, which is securely clamped over the cell and drip-cup, when the lid of the Battery box is closed, by means of pressure on the spring fastened on the coil. Each Battery is furnished with a hard rubber Electrode box, which is placed in the cover of the Battery. This Combined Battery gives greater quantity and intensity than any ever offered to the profession. It weighs less, occupies less space, and is perfectly portable.

ELECTRIC BATTERIES AND APPARATUS.

McINTOSH BATTERIES—Discount 25 per cent.

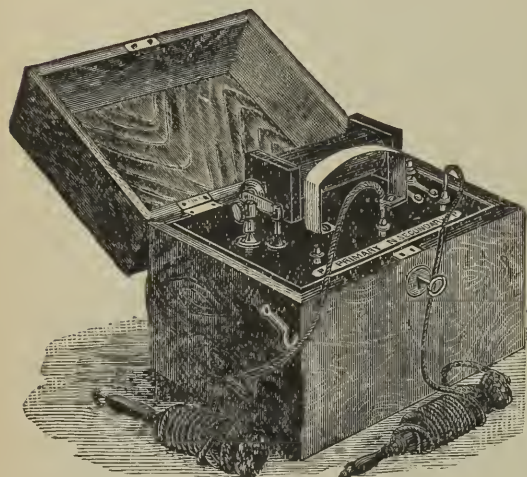


Fig. 5250.—McIntosh Family Faradic Battery ...\$10 00

There is a constant demand for a low priced Faradic Battery, not a mere toy, such as is offered to the public, but one made of good material, in a substantial manner, and that will give a smooth, even current, suitable for family use. This has induced us to make the above battery, which we believe will meet this want.

It is made on the same principle as our higher priced Faradic Batteries, and is portable. It is not intended to take the place of the physician's battery, but for domestic use.

It is put up in a neat black-walnut case $6\frac{1}{2}$ inches long, 6 inches high, and 5 inches wide, with lock and handle, and furnished with electrodes and conducting cords, all the metal is finely nickel plated.

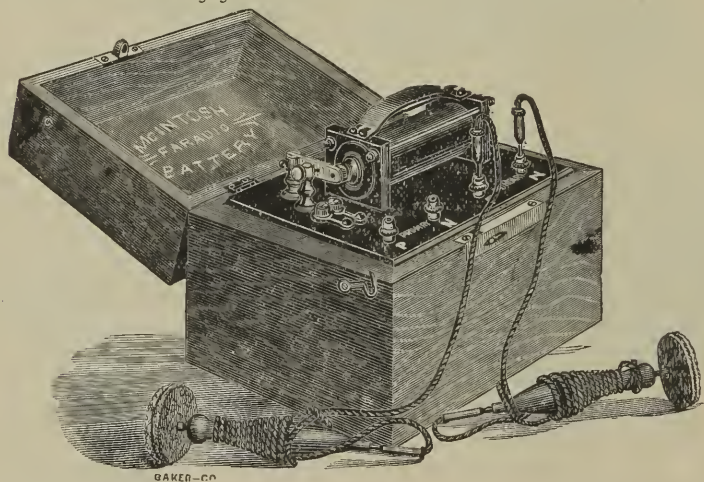


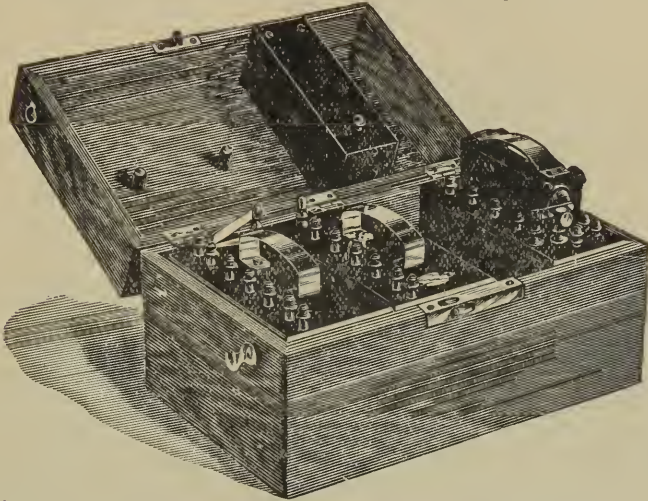
Fig. 5251.—McIntosh Physicians' Faradic Battery.

It has a hard rubber cell and drip-cup. First-class induction coil, with polished hard rubber ends and cover. The coil, binding posts and rheotome are placed on the upper surface of a polished hard rubber plate, the under surface of which is covered with soft rubber and also holds the zinc and carbons. When the elements are removed from the cells and placed in the drip-cup, this plate is securely clamped over them, and makes them water tight. The connections of the coil with the zinc and carbons are permanent.

To use this battery, it is only necessary to loosen the thumb-screws and raise the elements from the drip cup and place in the cell, and the battery will commence to work at once; connect one end of the conducting cords with the binding posts, and the others with the sponge electrodes, and it is ready to use.

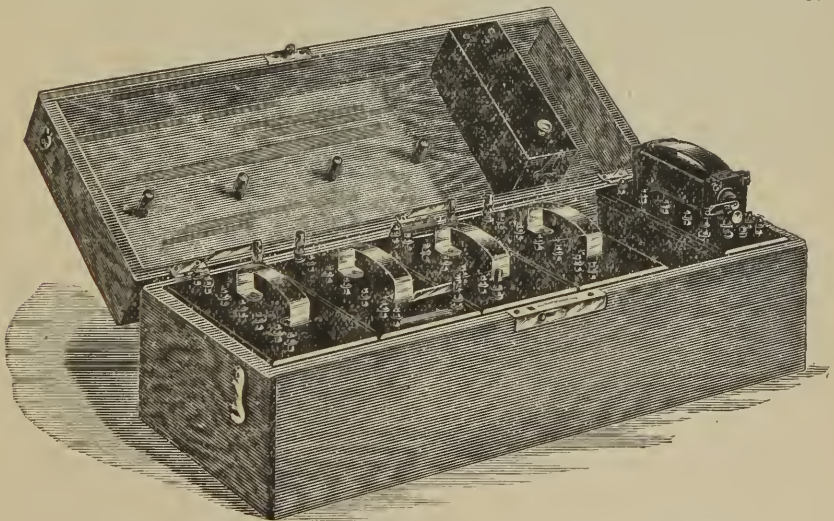
It is very convenient for a physician's visiting battery, or family use, as it is light and perfectly portable, and gives sufficient strength to treat any case where the Faradic or induced current is needed.

Price of battery with first-class sponge electrodes, and our new cable conducting cords...\$18 00

ELECTRIC BATTERIES AND APPARATUS.**McINTOSH BATTERIES —Discount 25 per cent.****Fig. 5253 Twelve-Cell Combined Galvanic and Faradic Battery.**

Same style of case and finish as the above, 13½ inches long, 8¼ inches wide, 7¼ inches high, with first-class Faradic Coil, polished hard rubber ends and cover, extra large cell to run the coil electrodes, our new cable conducting cords and hard rubber electrode box. This Battery gives a galvanic current same as above described, and a Faradic current of sufficient strength to treat any case. Price \$40 00

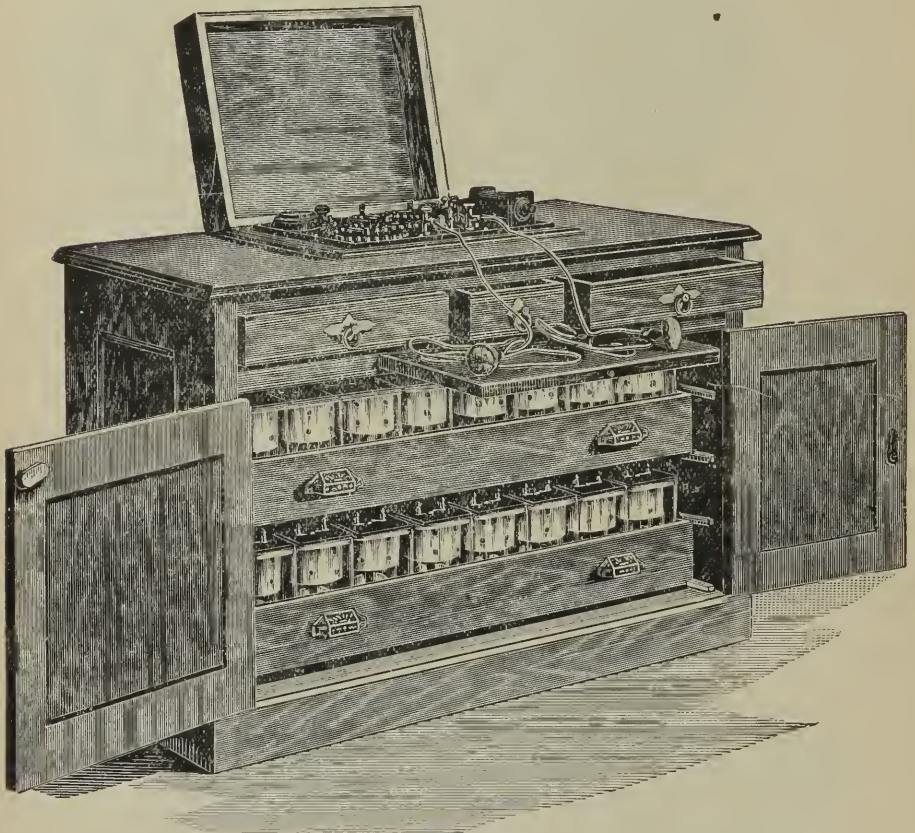
FIG.			Price,	FIG.			Price,
5252	12	Cell Galvanic	\$30 00	5255	18	Cell Combined	\$52 50
5254	18	" "	40 00	5256	24	" Galvanic	55 00

**Fig. 5257 Twenty-four Cell Combined Galvanic and Faradic Battery.**

Same style of case and finish as the above, 20¾ inches long, 8¼ inches wide, 7¼ inches high, with first-class Faradic Coil, polished hard rubber ends and cover, extra large cell to run the coil, sponge electrodes, cable conducting cords, and hard rubber electrode box. This battery gives same intensity of galvanic current as the above, and a Faradic current of sufficient strength to treat any case. It weighs only 24 pounds, and is perfectly portable. Price.....\$67 50

ELECTRIC BATTERIES AND APPARATUS.

McINTOSH BATTERIES.—Discount 25 per cent.



McIntosh No. 1 Cabinet Battery.

This apparatus has the same table plate as shown on page No 44. The case is in polished black walnut or antique oak, with drawers for electrodes and a sliding shelf. The cell-drawers can be drawn out for examining their contents without disconnecting or disarranging the connections between cells and table plate; they will hold 48 Diamond carbon cells; 48 "Gonda Leclanche"; 42 "Law"; or 42 McIntosh Laclede cells. The connecting wires which convey the current from the cells to corresponding parts of the table plate, are gathered in a bunch and pass down inside the case and behind the drawers. The square of the top is 22x40 inches; height 3 feet. Any desired number of cells can be furnished.

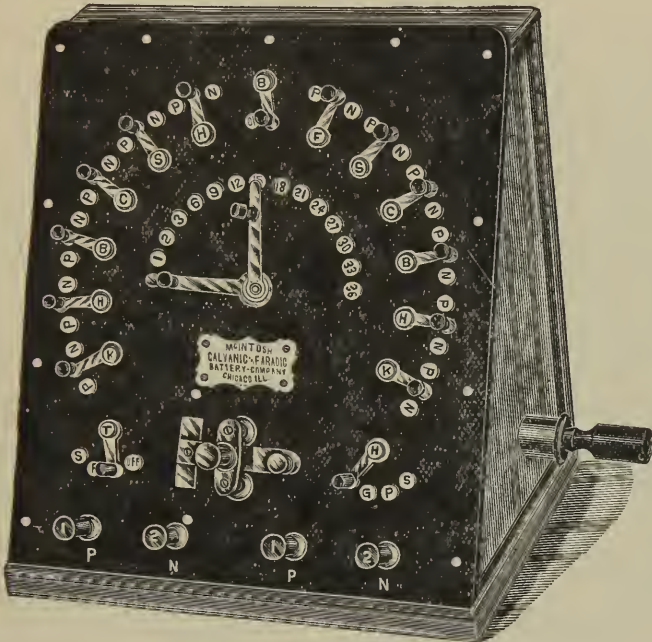
This battery is so desirable an acquisition to the office outfit of the Electro-Therapeutist, and is so far superior in point of utility to the No. 2 Cabinet Battery shown on page 47, that a comparison between the two can scarcely be drawn. The addition of the Milliampere-meter patented Coil Rheostat of twenty-five coils, and Graduated Automatic Rheotome, make of this battery just what it is designed to be, a complete Combined Galvanic and Faradic Office Battery.

Price, without cells.....	\$150 00
Price of McIntosh No. 2 Cabinet-Battery, without cells.....	55 00

Any form of Special Wall or Table Plate furnished to order.

ELECTRIC BATTERIES AND APPARATUS.

McINTOSH BATTERIES.—Discount 25 per cent.



McIntosh Combined Galvanic and Faradic Bath Apparatus No. 2.

This apparatus is made on the same plan as our No. 1, but less expensive. The coil is inclosed in a triangular, polished black walnut case, the front of which is made of polished black rubber. The switches, binding posts, rheotome, etc., are all nickel plated and neatly arranged on the sloping front. It is arranged to connect with any number of galvanic cells. The coil is run with a special cell, and has the same bath tub and electrodes as No. 1.

We furnish with each apparatus a large and very powerful special cell to operate the Faradic coil. This cell will run for months with very little attention. The tub electrodes are highly finished and nickel plated. The tub is usually made six feet four inches long, four feet six inches on the bottom, sixteen inches wide at the foot, and twenty-one inches at the head, with a slight taper toward the bottom. It is of wood, but if desired, we can furnish tubs made of soapstone for \$25.00 additional, net.

Price, complete as above described, without cells..... \$140 00

Price of Plate only..... 100 00

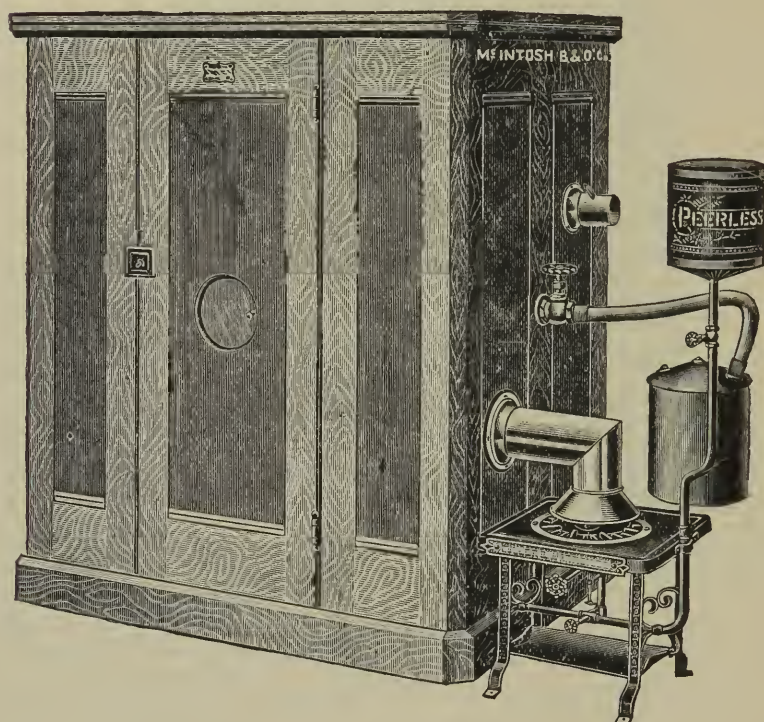
If Soapstone Tub is desired, add \$25.00 net to prices named above.

If the Indurated Fibre Tub is desired, add \$15.00 net to prices named above.

Price of No. 1 Bath Apparatus, without cells..... \$214 00

Price of No. 1 Plate only..... 175 00

McINTOSH COMBINED ELECTRO-THERMAL BATH CABINET.



Price Complete without Battery, \$150.00

The Thermal Bath Cabinet is designed for the application of hot air or vapor with any form of electrization. By its use the physician can avail himself, at a trifling expense, of all the remedial advantages to be obtained in the most expensive Turkish or vapor bath establishments.

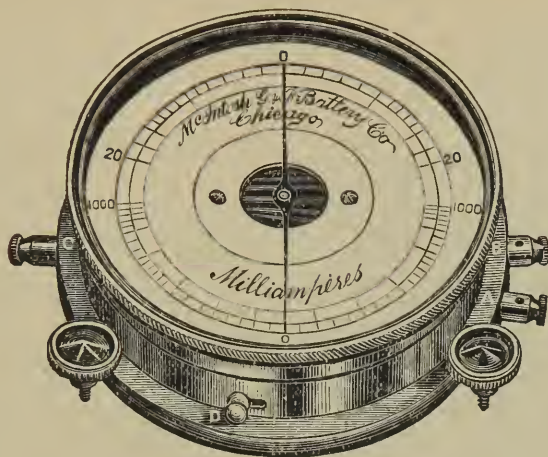
This apparatus is simple, neat and convenient, occupies little space, and can be used in an office where it is not possible to furnish the conveniences for the water bath. It is not necessary that a dressing-room be provided, and only a small amount of water is required.

Dry heat is supplied by passing hot air from a gasoline or gas stove through a 3-inch copper pipe connected with funnel tube (as shown in cut). In the vapor bath both the heat and vapor are supplied from a small copper boiler, which is placed over the gasoline or gas stove and connected by means of a flexible hose with the bath cabinet. By placing the heating apparatus outside the cabinet, all danger to the patient is avoided.

We always send gasoline stove, unless special request is made for a gas stove.

For full instructions as to method of using, see accompanying illustrations and directions on pages 62 and 63 of the McIntosh Catalogue.

Price of the McIntosh Electro-Thermal Bath Cabinet, elegantly finished in highly polished antique oak or black walnut, with electrodes and heating apparatus complete (without battery), \$150.00. Discount 25 per cent.



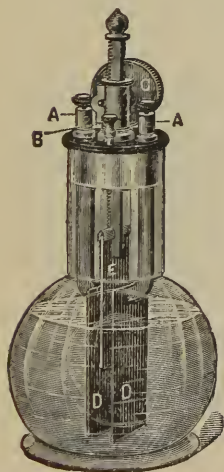
(PATENT APPLIED FOR.)

Fig. 5385 MCINTOSH MILLIAMPERE METER.

Diameter of base, 5½ inches. Price \$25 00. Discount 20 per cent.

It is now conceded that the Milliampere Meter is one of the most important factors in the treatment of diseases by electricity, as with it the exact amount or "dosage" of the current that passes *through* the patient is determined. Our instrument is absolutely correct, as it is graduated by standard measurements, and the greatest care is taken in the manufacture. There are two separate scales; the upper one is graduated from ½ to 20, and the lower one from 1 to 1000 milliamperes, so any range of current can be obtained.

Full directions accompany each instrument.

MCINTOSH HYDRO-PLATINUM RHEOSTAT.

(PATENT APPLIED FOR.)

The Rheostat figured in the cut is one devised for the special object of rendering it possible of increasing or decreasing the strength of the current in absolute gradual gradations, from zero, to the full current strength and back again. Between two small, thin sheets of platinum (DD) suspended in water, with suitable attachment (A) for one pole of the battery, is suspended a third piece of platinum (E) with pointed end, that can be lowered or elevated gradually in the water between the other two sheets (DD), by means of a delicate ratchet combination (BC) above. This plate is connected with the other pole of the battery by one of the binding posts (A). When plate E is elevated so that its pointed lower end is out of the water, no current can pass the instrument, but as it is gradually lowered into the water, the resistance becomes gradually less and less, until the desired current strength is reached, or until the full capacity of the battery is obtained. Thus by elevating or lowering this central sheet, a current of great strength can be perfectly controlled in gradual gradations, no shock being possible.

Price.....\$25 00
Discount 25 per cent.

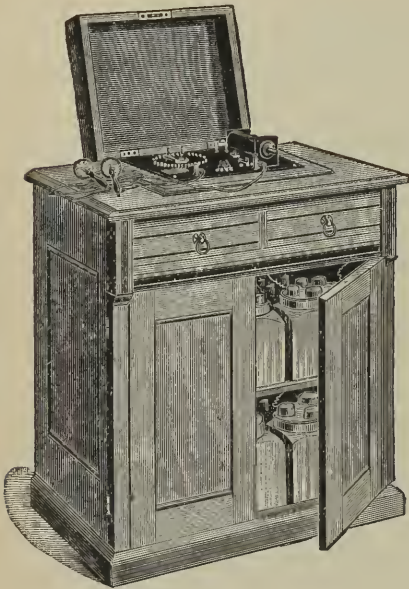


Fig. 5384

Fig. 5384 McIntosh No. 2 Cabinet Battery.

This cabinet has the No. 2 table plate shown on preceding page, and is the most elegant and complete office battery in the world, for the same money.

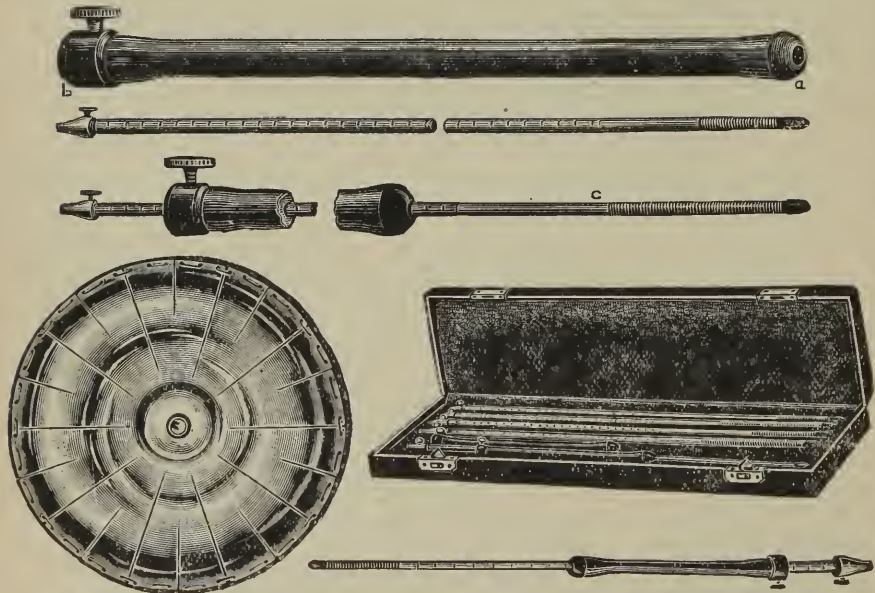
In this cabinet we use the celebrated Diamond Carbon or La Clede cells, the fluid of which is a solution of muriate of ammonia; the elements are zinc and carbon rods. The cells are so nearly perfectly sealed that evaporation is measurably prevented, a feature that in itself highly recommends any cell for office purposes. These cells have the following advantages :

- 1. Perfect cleanliness.
- 2. High electro-motive force—1.50 volts.
- 3. Small internal resistance.
- 4. Great power of recuperation.

After this battery has been put in operation it requires *no attention* for many months.

With the cabinet complete, we furnish insulated wire for connecting the cells to the table plate, and muriate of ammonia for charging, sponge electrodes and cable conducting cords

Price, complete with 36 Diamond Carbon Cells \$100 00
Price, complete with 30 La Clede Cells. 85 00



Martin's Flexible Intra-Uterine Electrodes.

For treatment of Fibroid Tumors of the uterus by the "Apostoli" method.

Set of four in plush lined morocco case. \$20 00
Price one only 6 00
Abdominal Electrode—Spongio Piline. 3 00

THE McINTOSH SECONDARY OR STORAGE BATTERIES.

Discount 25 per cent.

An electrical accumulator consists of a containing jar or cell, a liquid consisting of dilute sulphuric acid, called the *Electrolyte*, and an assemblage of lead plates called the *Pile*, together with a number of vulcanite forks, called separators, for keeping the plates the proper distance apart. The positive plates are generally light brown when new, while the negative plates have a grayish color.

These batteries when charged from an electric light current, or from gravity cells, give a current of large amperage and high electro motive force per cell, especially adapting them for the use of the surgeon in all operations where cautery is required.



Galvano Cautery Handle, with Ecraseur Attachment, price complete, \$10 00.



The Medium Size Storage Battery, price \$45 00
The Large Storage Battery, " 60 00



Galvano-Cautery Cords. Price \$4 00.



No. 1.



No. 2.



No. 3.



No. 4.



No. 5.



No. 6.



No. 7.



No. 8.



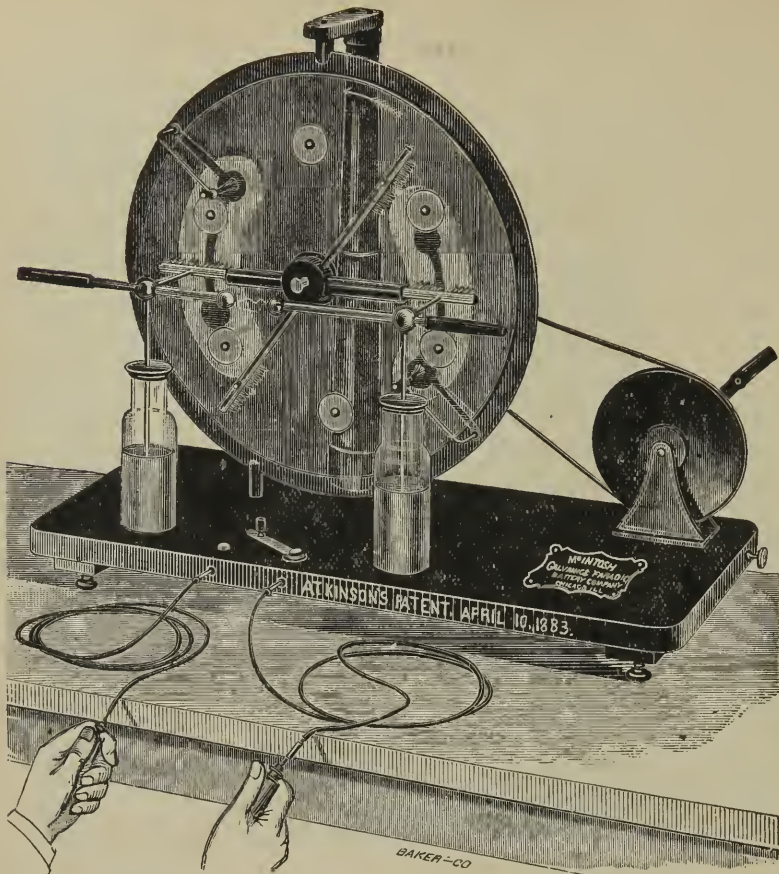
No. 9.

Figs. 5388 to 5399

Galvano-Cautery Electrodes

Price each, \$2 00

Special forms of Galvano-Cautery Electrodes made to order.



ATKINSON'S TÖPLER ELECTRIC MACHINE.

Machine with Glass Plates, 16 and 18 inches in diameter	\$ 70 00
Machine with four Glass Plates 16 and 18 inches in diameter.....	110 00
Machine with Glass Plates, 25 and 28 inches in diameter.....	150 00
Machine with four Glass Plates, 25 and 28 inches in diameter.....	250 00

Each machine is furnished with a pair of nickel plated handles, two conducting cords, each five feet long, composed of twelve fine copper wires double wound with wool and enveloped in silk, and furnished with tips.

Since STATIC ELECTRICITY has great tension, special electrodes are required for its therapeutic application, which are represented by the following cuts.



1 Point Electrode (long, hard rubber handle).....	\$3 00
2 Rubber Insulating Handle and Ring	2 50
3 Ball Electrode (long, hard rubber handle).....	2 50
4 Roller Electrode (long, hard rubber handle).....	5 00
5 Pistol Electrode for electro-diagnosis.....	10 00
Insulating Platform, carpeted, 24x36 inches, with hard rubber Insulators.....	10 00

McINTOSH'S BATTERY ELECTRODES.

Discount 25 per cent.

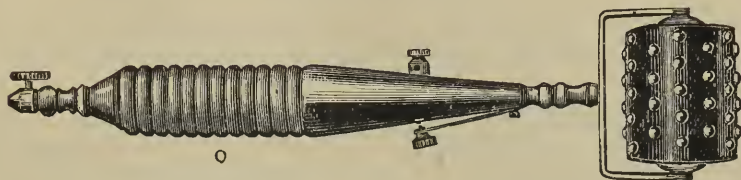


Fig. 5300—Wheel Electrode of Hard Rubber, set with metallic points for muscular Faradization; universal hard rubber handle with current interrupter
 Handle, without wheel..... \$2 00

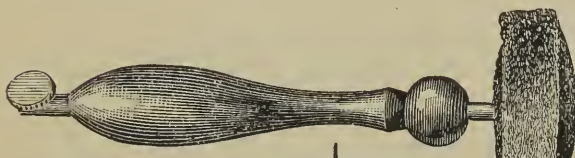


Fig. 5301—Universal Handles, with Sponge-covered Disks,.... per pair \$1 50

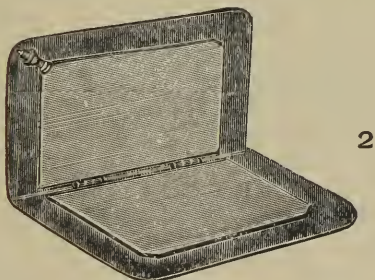


Fig. 5302 Folding Foot Plate, with movable flannel cover, insulated on one side with soft rubber to prevent wetting carpet..... \$4 00



Fig. 5302A—Sponge-covered Electrode, Insulated with Soft Rubber, for general application with hand, \$1 50.

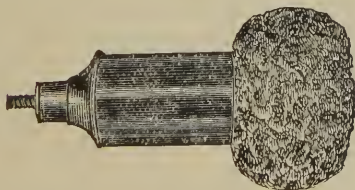


Fig. 5303—Sponge Cup, with Universal handle, \$1 00
 without..... 50



Fig. 5304—Holder for large Sponge, with Universal Handle, \$1 50; without, \$1 00.

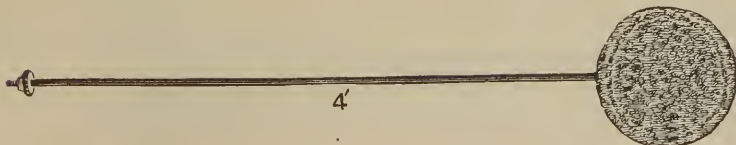


Fig. 5305—Sponge-covered Electrode, with long handle, to be used under the clothing, \$1 50

McINTOSH BATTERY ELECTRODES.

Discount 25 per cent.

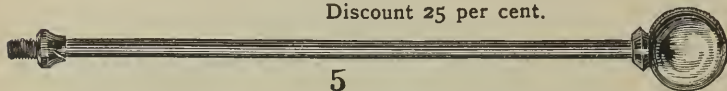


Fig. 5306.—Ball Rectal Electrode, Insulated, \$1 25

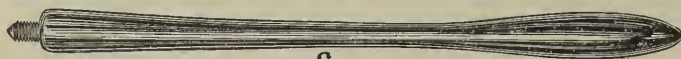


Fig. 5307.—Rectal Electrode, Nickel Plated, \$1 25



Fig. 5308.—Rectal Electrode, Insulated with Polished Hard Rubber, \$2 00



Fig. 5309.—Rectal Electrode, large, Nickel Plated, \$1 40



Fig. 5310.—Vaginal Electrode, Nickel Plated, \$1 50



Fig. 5311.—Vaginal Electrode, Insulated with Polished Hard Rubber, \$2 50

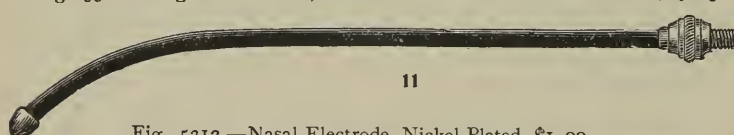


Fig. 5312.—Nasal Electrode, Nickel Plated, \$1 00

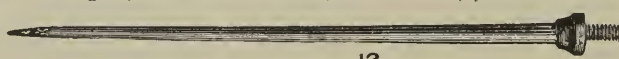


Fig. 5313.—Small Aural and Nasal Electrode, 75c.

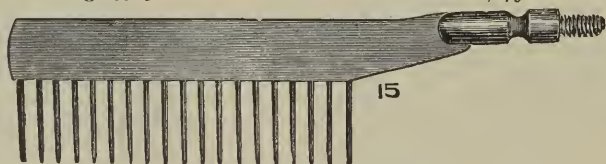


Fig. 5316.—Comb Electrode, Nickel Plated, \$1 50

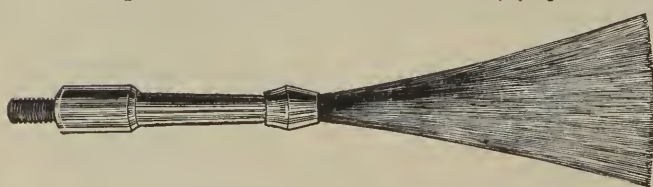


Fig. 5318.—Metallic Brush, \$1 00



Fig. 5314.—Tonsil Electrode, Nickel Plated, \$1 00

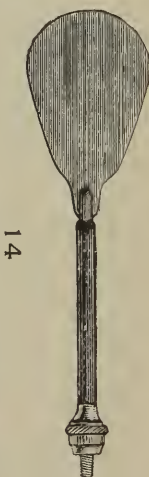
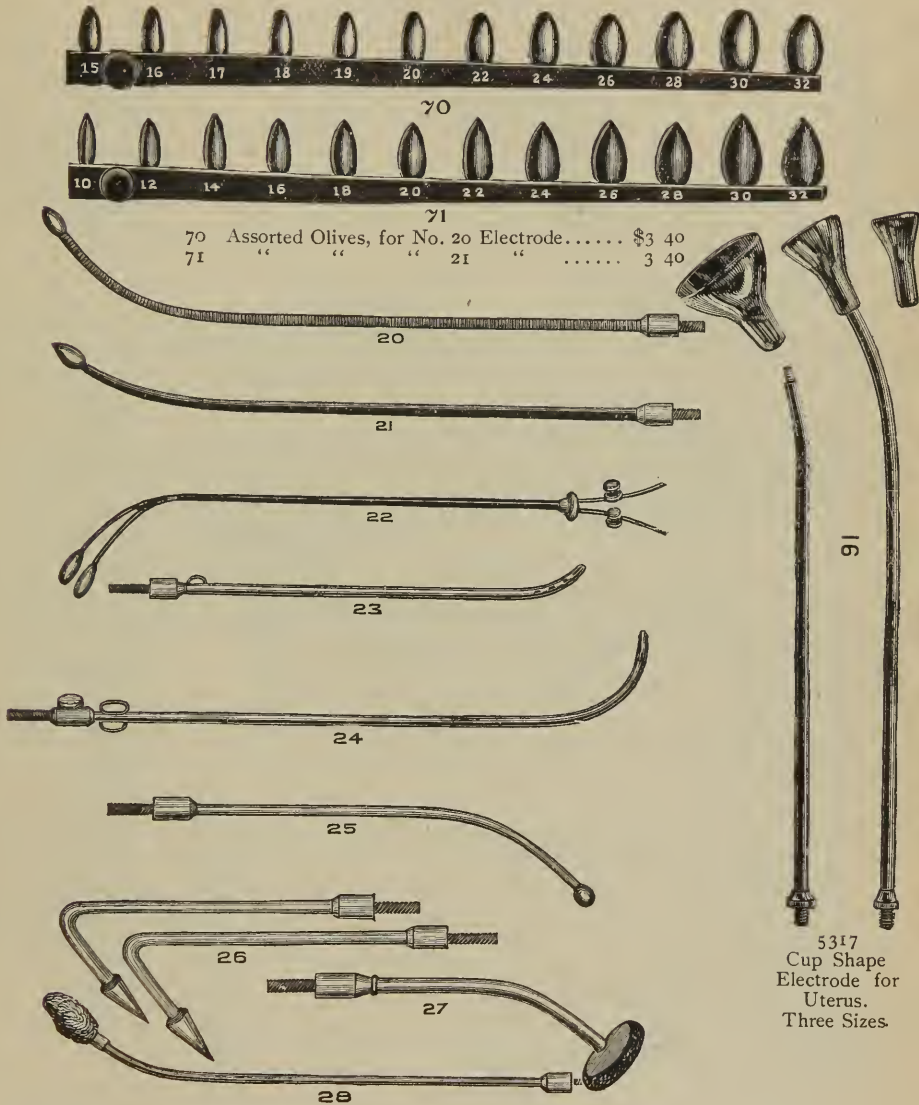


Fig. 5315.—Tongue Plate Electrode, Insulated, \$1 00

McINTOSH BATTERY ELECTRODES.

Discount 25 per cent.



70 Assorted Olives, for No. 20 Electrode..... \$3 40
 71 " " " 21 " 3 40

5317
 Cup Shape
 Electrode for
 Uterus.
 Three Sizes

FIG.

- | | | | |
|----------------|---|-----------|---------|
| *5319 and 5320 | Olives, different sizes, which may be attached to Nos. 20, 21, 22, for Uterus or Urethra..... | each | \$ 0 20 |
| *5321 (cut 20) | Spiral Flexible Uterine or Urethral Electrode..... | | I 25 |
| *5322 (cut 21) | " " " " Insulated..... | | I 25 |
| *5323 (cut 22) | Elastic Electrode, for conveying both currents to the Uterus or Urethra..... | | 3 00 |
| *5324 (cut 23) | Metallic Catheter, Silver..... | | 2 50 |
| *5325 (cut 24) | Metallic Catheter, Silver..... | | 2 50 |
| *5326 (cut 25) | Laryngeal Electrode, Nickel Plated..... | | I 00 |
| *5327 (cut 26) | Duchenne's Metallic Points, for Muscular Faradization, Gold Plated..... | per pair, | 2 50 |
| *5328 (cut 27) | Small Sponge Electrode, for external application to the larynx..... | | I 50 |
| *5329 (cut 28) | Laryngeal Electrode, with Sponge Tip..... | | 50 |

McINTOSH BATTERY ELECTRODES.

Discount 25 per cent.

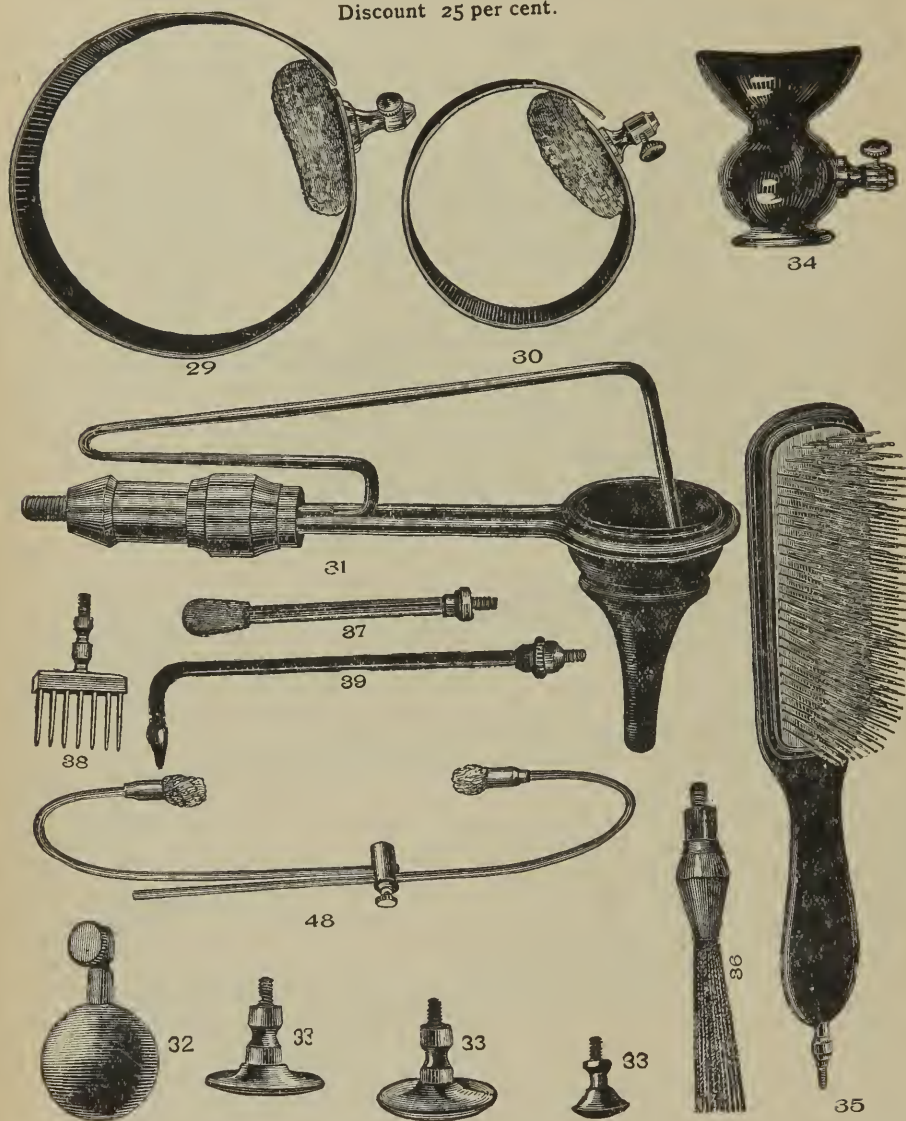


FIG.			
*5330	(cuts 29 and 30)	Neck and Arm Electrode.....	\$2 00
*5331	(cut 31)	Ear Electrode.....	2 75
*5332	(cut 32)	Ball Electrode.....	75
*5333	(cut 33)	Disk Electrodes, three sizes.....each,	50
*5334	(cut 34)	Eye Cup Electrode, new style.....	2 00
*5335	(cut 35)	Hair Brush Electrode.....	2 50
*5336	(cut 36)	Metallic Scourge, Nickel Plated.....	75
*5337	(cut 37)	Small Eye Electrode.....	75
*5338	(cut 38)	Metallic Points for Faradization.....	1 00
*5338	(cut 38)	Metallic Points for Faradization.....	1 00
*5339	(cut 39)	Dental Electrode.....	2 00
*5339	(cut 48)	Double Ear Electrode, insulated.....	2 00

McINTOSH BATTERY ELECTRODES.

Discount 25 per cent.

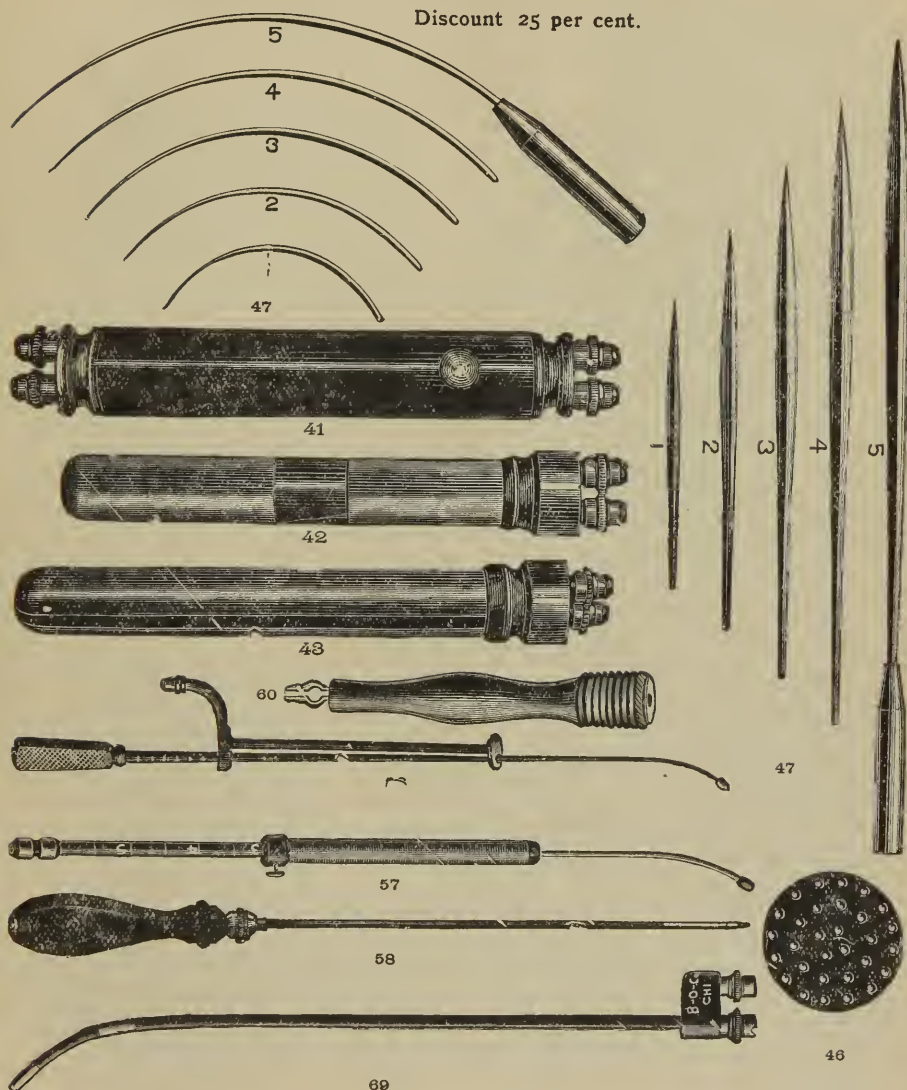


FIG.

5340	Metallic Handles.....	per pair, \$1 50
*5341	(cut 41) Pole Changer, Handle of Hard Rubber.....	5 00
*5342	(cut 42) Vaginal Electrode, for both currents, insulated in the center, Nickel Plated.....	4 00
*5343	(cut 43) Vaginal Electrode, for both currents, insulated in halves.....	4 00
5344	Sponge Holder and Current Breaker, Handle Hard Rubber.....	4 00
	“ “ without Handle.....	1 00
5345	Sponge Cup, Nickel Plated.....	50
*5346	(cut 46) Disk Electrode, with Insulated Points.....	1 00
*5347	Needles for Electrolysis. Straight, half-curved, full-curved, flattened needles (shown in cut full size). Extra heavy triple Gold Plated (Insulated), price of Nos. 1, 2, 3, 4, 5, each, Platinum Needles.....	each from \$2 00 to 1 00
(cut 56)	Dr. Rockey's Double Uterine Electrode.....	6 00
(cut 57)	Dr. Martin's Intra Uterine Electrode.....	8 00
(cut 58)	“ “ Fibroid Needle.....	2 50
(cut 60)	Hard Rubber Needle Holder.....	1 50
(cut 69)	“Apostoli” Bi-Polar Electrode.....	8 00

ELECTRIC BATTERIES AND APPARATUS.

THE CLIMAX.

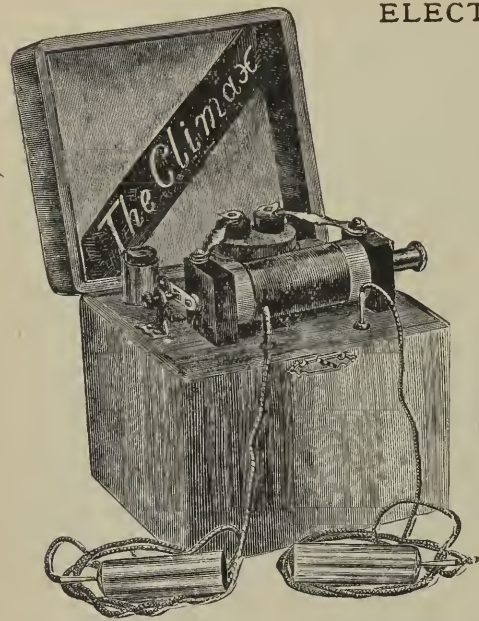
A Portable Faradic Battery.

Pat. July 4, 1871. Pat. Aug. 13, 1885.

This battery is encased in a neatly finished box, polished cover. Its construction is very simple, yet the manufacturer has retained many improvements that have heretofore been employed only on more expensive machines. One very essential feature of this battery is, that it can be carried about without spilling any of the fluid, the cell being closed by means of a soft rubber stopper of the best quality. Into this stopper are fitted acid proof stoppers, to which are attached the elements; these can easily be removed, as well as the soft rubber stopper, the latter being removed only when the jar is to be filled.

Price.....\$3 50 net.

Fleming's Batteries Discount 20 per cent.



5265

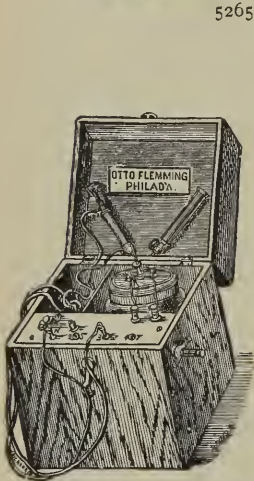


Fig. 5266. No. 0.



Fig. 5267. No. 1.



Fig. 5268. No. 2.

No. 0 FARADIC BATTERY.

Nickel plated, polished case with carrying handle, cotton covered cords, one regular sponge electrode, and one tubular tin handle,

Price.....\$12 00

No. 1 FARADIC BATTERY.

Very complete, and highly finished; specially adapted for application in muscular paralysis.

Price.....\$15 00

No. 2 FARADIC BATTERY.

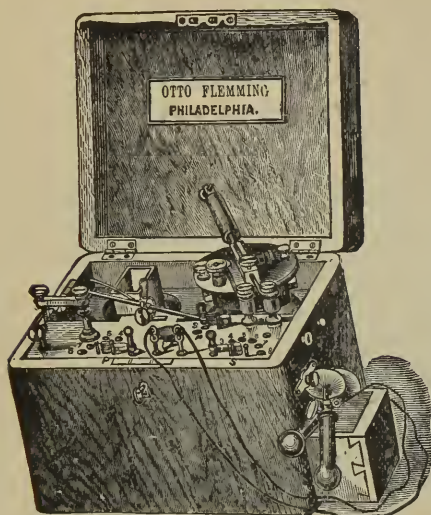
Finished as well as the No. 1 Battery, but coil one inch longer, and therefore more powerful, with the addition of a Commutator.

Price.....\$20 00

FLEMMING'S BATTERIES.—Discount 20 per cent

No. 3.—FARADIC BATTERY.

This Battery is the finest and most complete of its kind ever manufactured. It is provided with a slow and a rapid Rheotome, or current interrupter; a Commutator, or polarity changer; Scales, by which the primary and secondary currents may be graduated to the utmost delicacy or the greatest power; and with our new patent Galvanic Cell. This cell, which is charged with a solution of bi-chromate of potassium, is so made that when not in action, the zinc is taken out of it altogether, and placed in a vulcanite cell provided for the purpose. The aperture through which it passes is covered by a rubber hydrostat, making the cell perfectly fluid-tight, and saving both the fluid and the zinc from the effect of splashing in transportation, or of immersion in case of upsetting. By this plan also, the cell can be filled nearly to the top and the zinc be made twice the usual length; it will thus produce a stronger current, and last a longer time. This Battery is inclosed in a handsome walnut case, $7\frac{1}{4} \times 7\frac{1}{2} \times 8\frac{1}{2}$ inches, has all its metallic parts finely nickel plated, and weighs, when charged, only ten pounds.



5269

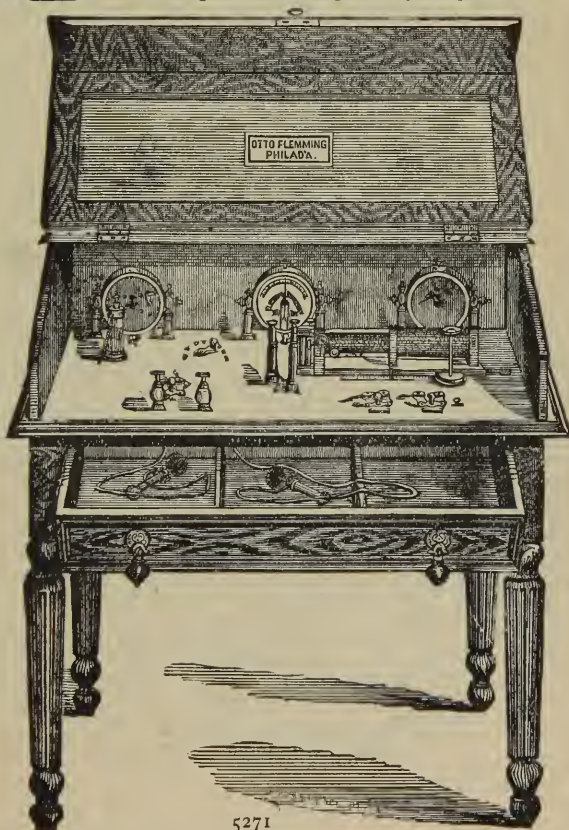
Fig. 5269.—No. 3 Flemming's Faradic Battery, \$30 00



5270

Cell for Faradic Battery, \$3 00

48

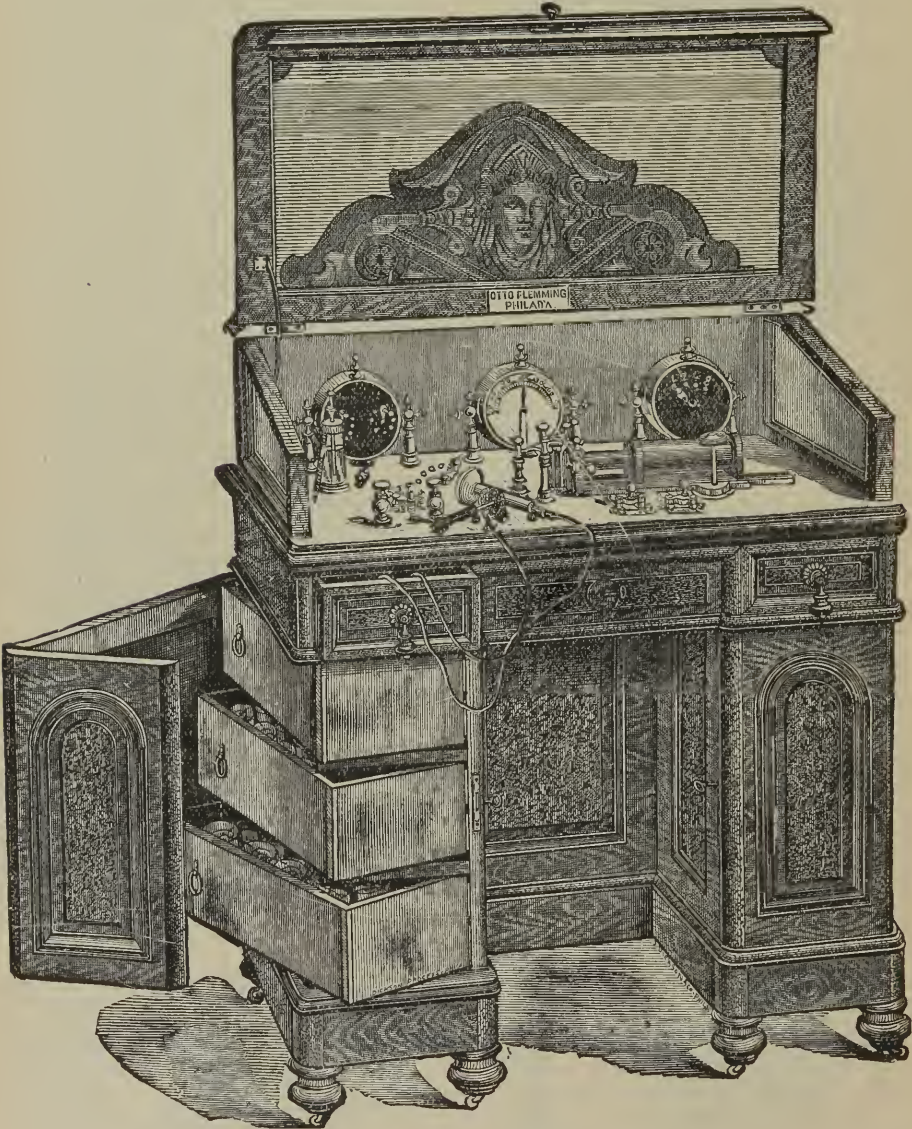


5271

Flemming's Table Battery, \$200 00 to \$250 00

ELECTRIC BATTERIES AND APPARATUS.

Flemming's Batteries Discount 20 per cent. ,



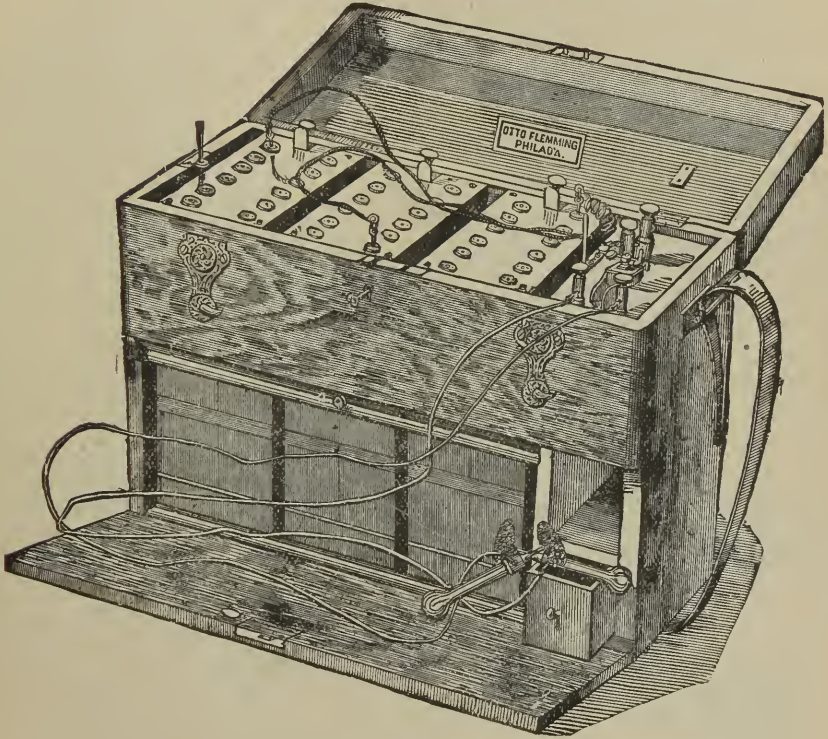
5272

Fig. 5272.—Flemming's Cabinet Battery..... \$300 00

ELECTRIC BATTERIES AND APPARATUS.

FLEMMING'S NEW IMPROVED PORTABLE CONSTANT GALVANIC
CURRENT BATTERY

Discount 20 per cent.



5273

Price, 10 Cell Battery.....	\$25 00	Price, 60 Cell Battery... ..	\$100 00
" 20 " "	45 00	Galvanoscope.....	5 00
" 30 " "	65 00	Automatic Rheotome.....	10 00
" 40 " "	80 00		



5274

Fig. 5274.—AUTOMATIC RHEOTOME.

For interrupting the constant current once, twice, four, and eight times a second. It can be attached to any form of Galvanic Battery.

Price..... \$12 00

ELECTRIC BATTERIES AND APPARATUS.

FLEMMING'S BATTERIES—Discount 20 per cent.

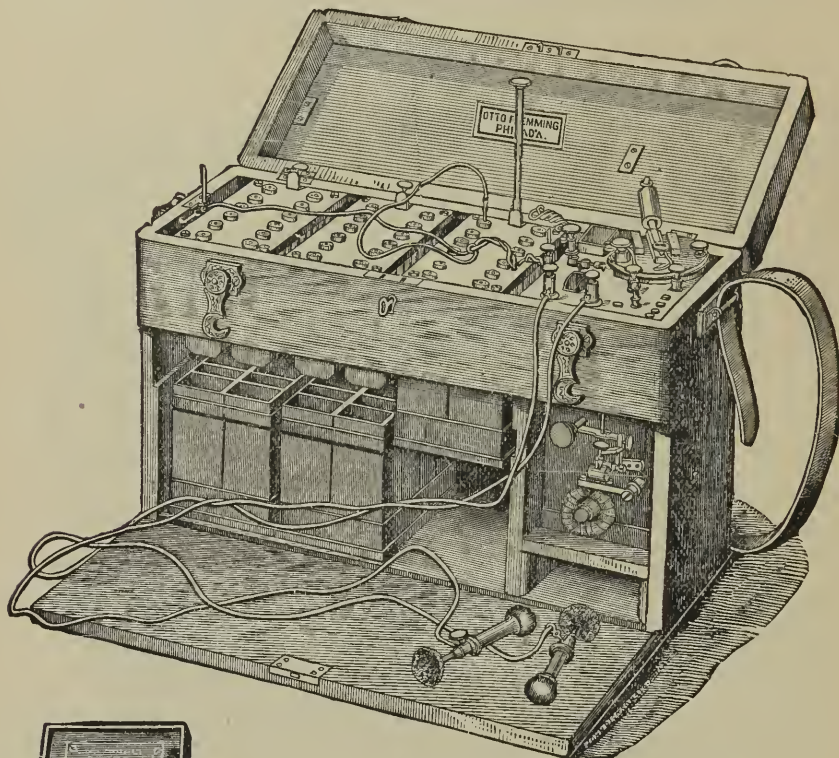
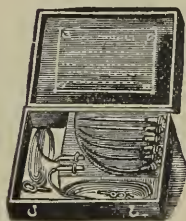


Fig. 5275.—Flemming's Constant Battery, \$90 00.

Fig. 5276.—ELECTROLYTIC NEEDLE.

Case containing six Electrolytic Needles, gilt points, straight and curved, with conducting cords. Price \$7 00. Single Needle \$1 25.



5276

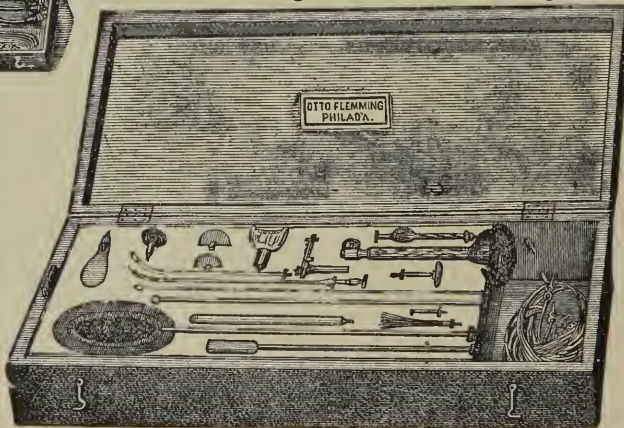
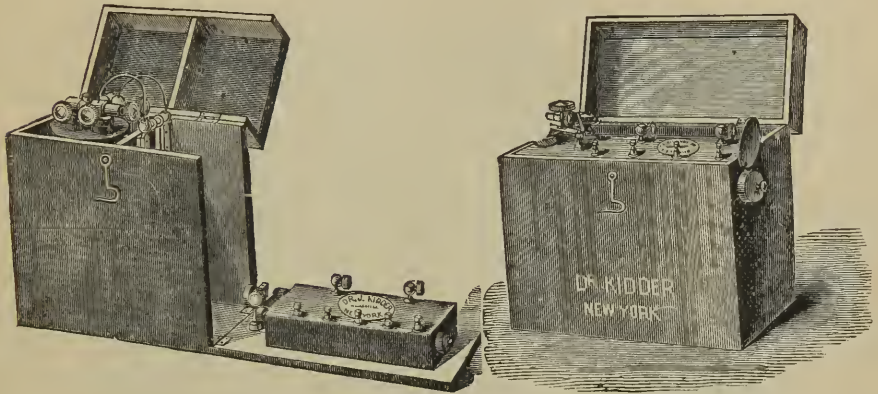


Fig. 5277.—Electrodes. Case containing 20 Electrodes and Conducting Cords.....\$20 00

ELECTRIC BATTERIES AND APPARATUS.

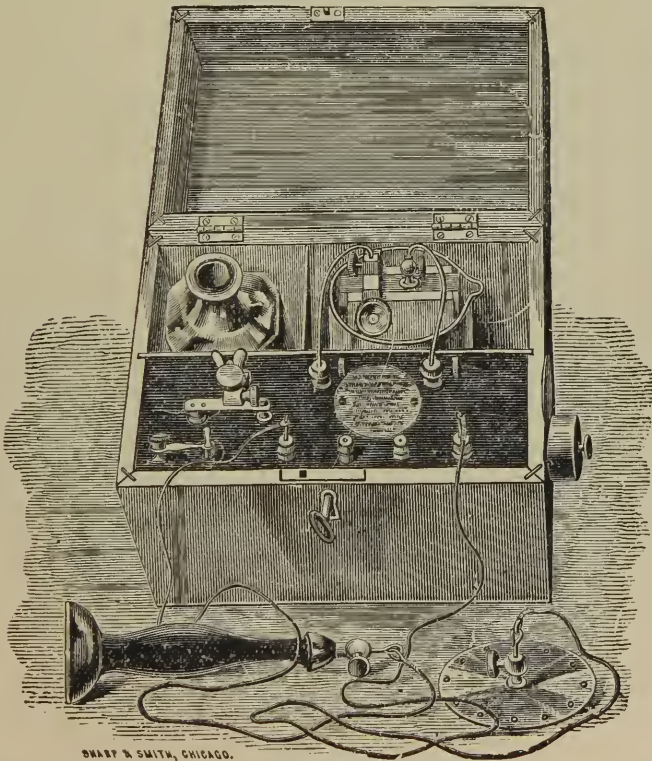
KIDDER'S BATTERIES—Discount 20 per cent.



5278

5279

FIG.									
*5278	Kidder's Physicians' Visiting Battery, No. 2.	....	\$27 00.	Nickel-Plated.....	\$30 00				
*5279	" " " " " 3.....		27 00.	"	30 00				



SHARP & SMITH, CHICAGO.

Fig. 5280.—Kidder's Office Battery\$20 00

ELECTRIC BATTERIES AND APPARATUS.

KIDDER'S BATTERIES—Discount 20 per cent.

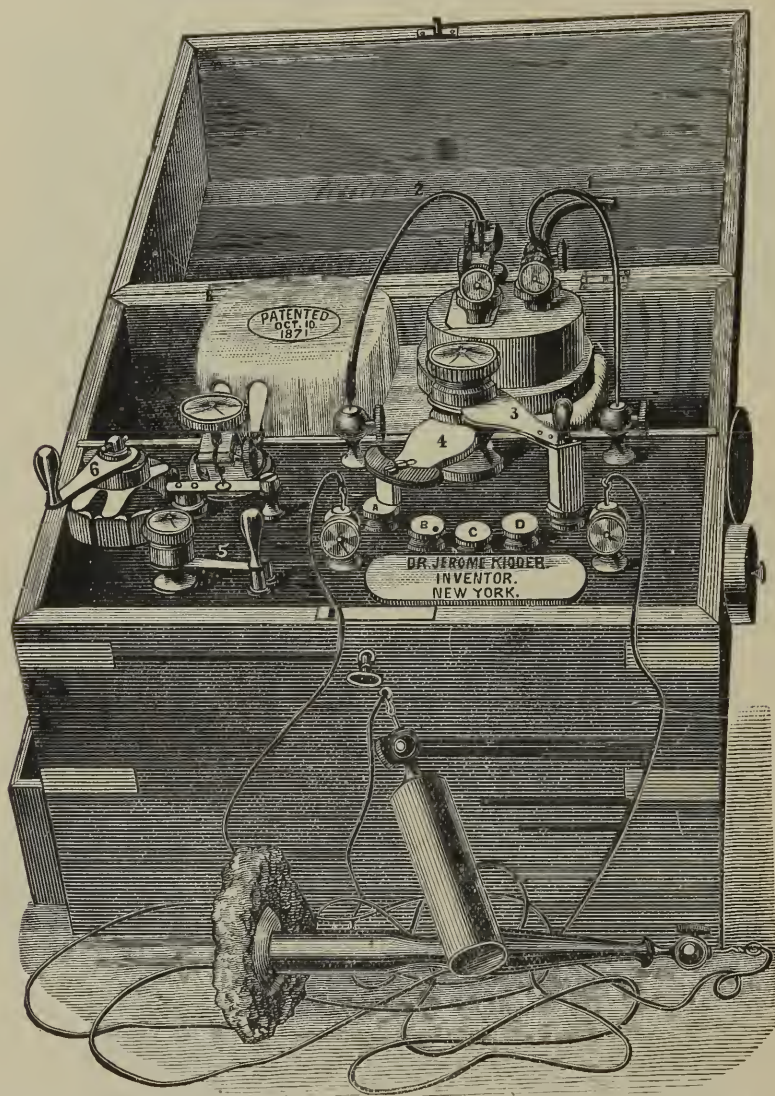


Fig. 5281.—Kidder's No. 1, Physicians' Office Apparatus, large size, \$50 00.

SHARP & SMITH,

Western Agents,

73 RANDOLPH STREET,

CHICAGO, ILL.

ELECTRIC BATTERIES AND APPARATUS.

KIDDER'S BATTERIES—Discount 20 per cent.



Fig. 5282.—Kidder's Improved Tip Battery.....\$27 00

SHARP & SMITH, Western Agents, 73 Randolph St., Chicago, Ill.

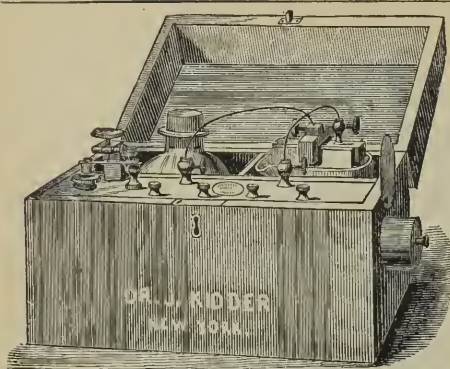


Fig. 5283.—Kidder's Family Six-Current Electro Medical Apparatus, in more compact form, for family use. Price, with Handles and Sponge Holder, \$14 40, net.

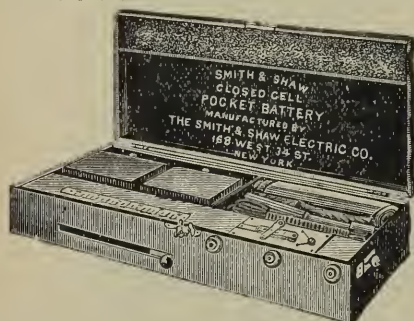
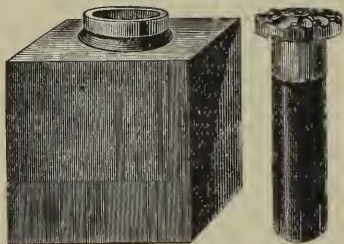


Fig. 5285.—Smith & Shaw Battery, 1 cell, \$7 50; 2 cells, \$10 00. Discount 20 per cent.



Acid-tight Cell, for Smith & Shaw Battery.

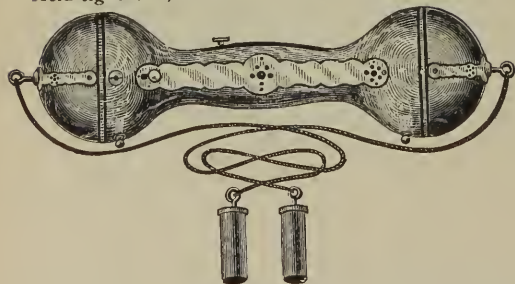
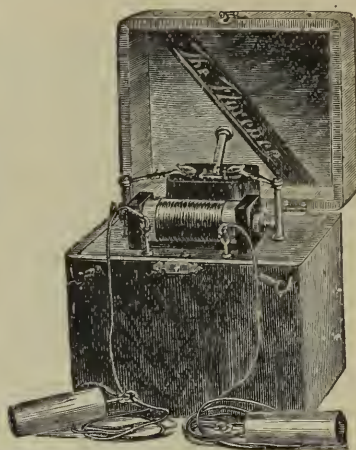


Fig. 5286.—Electric Dumb Bell, \$9 00, net, pair.—5286. In use.

ELECTRIC BATTERIES AND APPARATUS.



5284

Fig. 5284.—FLORENCE FARADIC BATTERY.

Hinged Rod, patented Feb. 1, 1870; Hydrostat, patented July 18, 1871; Perforated Spring Connection, patented Aug. 18, 1885.

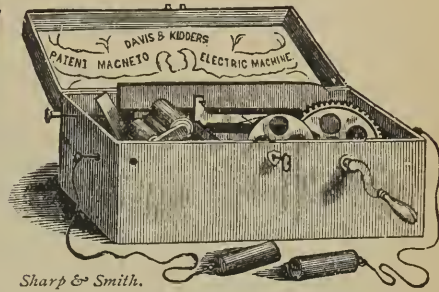
This battery is manufactured with the special view of producing a machine adapted to family use. It has been the object of the manufacturers to simplify as much as possible, retaining at the same time all the latest improvements which make our Electric Apparatus so famous. All metal parts nickel-plated, with "Drescher's" patent Hard Rubber Hydrostat, silk covered conducting cords, etc., it represents a battery of at least three times its cost. The object of the manufacturers has been to keep the price within such limits that the machine is within the reach of all. \$6 00, net.



ELECTRIC BATTERIES AND APPARATUS.



Fig. 5287.—Sharp & Smith Pocket Battery, \$6 00, net.



Sharp & Smith.

Fig. 5288.—Davis & Kidder's Crank Battery, \$7.50, net.

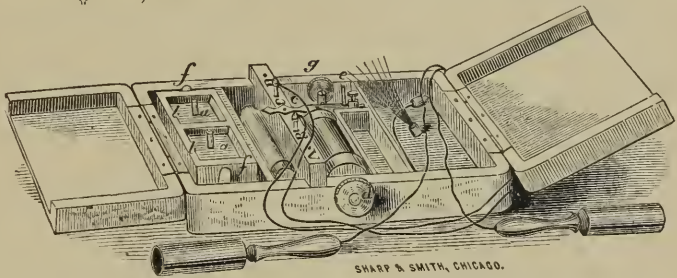


Fig. 5289.—Gaiffe's Battery, \$6.50, net.

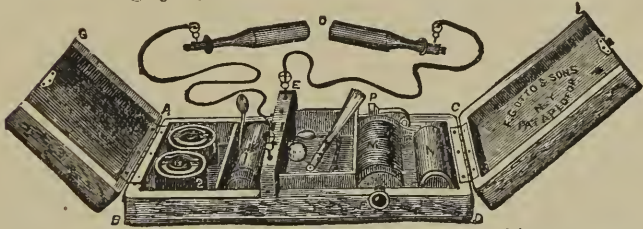


Fig. 5290.—Drescher's Pocket Battery, No. 3, \$9 00. Discount 25 per cent.

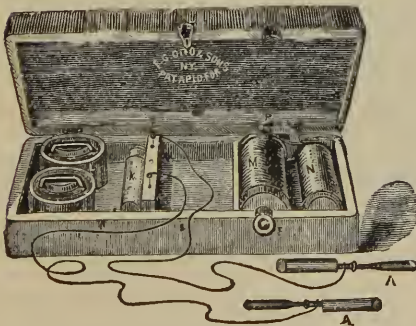


Fig. 5291.—Drescher's Pocket Battery No. 2, \$7 50. Discount 25 per cent.



Fig. 5292.—Drescher's Pocket Battery, No. 1, \$5 00. Discount 25 p.c.

KIDDER'S SUPERIOR ELECTRIC BATTERIES.

DISCOUNT 20 PER CENT.

SHARP & SMITH,

WESTERN AGENTS,

73 RANDOLPH STREET, CHICAGO, ILL.

There are Large batteries, and Small batteries; Strong batteries, and Weak batteries; and Batteries that are Batteries only in name.

Investments are usually made with an eye to profit. To purchase an article, simply because it may appear pleasant to the eye, is an error.

To fully appreciate a good piece of work, give it a thorough critical examination, and ascertain if it is possible for you to replace parts, when repairs are necessary. If so, you will avoid delay and cost of forwarding to the maker.

In selecting an instrument, carefully consider the following points: Original Investment; Cost of maintenance and construction.

IMPORTANT. "DE LA RUE" OR CHLORIDE OF SILVER CELLS.

Great claims have been made, for certain "sealed cells," as superior to ordinary fluid cells.

Let us consider a few points as to the relative merits of both forms.

POLARIZATION.—All cells when short circuited become polarized.

If the cells are so constructed that it is impossible to replace the fluid, the purchaser is compelled to forward the cells to the maker for repairs, paying transportation both ways, and loss of time. With cells so constructed as to admit of having new fluid replaced at home, time and money are saved, as the only expense is the trifling cost of new fluid.

The following is a comparison of cost of maintenance:

SEALED CELL.		"SMEE" FORM OF CELL.	
Cost of apparatus	\$20.00	Cost of apparatus	\$20.00
100 hours' work at 2 hours per day,		100 hours' work at 2 hours per day,	
2 months. Cost of maintaining,		2 months. Cost of maintaining,	
at 1½ c. per hour.	\$1.50	4-10 of a cent per hour,	.40
Or 7½ per cent. of original cost.		Or 2 per cent. of original cost.	
To maintain for 12 months,	\$9.00	To maintain for 12 months,	\$2.25
(45 per cent. of cost.)		(11¼ per cent. of cost.)	

For our repairs we allow new plates each year, which is exceedingly liberal.

The prices herewith quoted for our goods are catalogue prices on apparatus and for repairs.

Advanced scientific practitioners recognize the fact, that, to obtain the best results, it is necessary that the coil be constructed upon certain scientific principles. As the coil is the important factor in the production of the desired current, it also governs the size of the case.

We have not based our calculations upon the assumption that every practitioner is an expert electrician, and therefore submit these points for your consideration, as they cannot be remedied after the purchase has been made.

KIDDER'S CELEBRATED BATTERIES.-Continued.**CAUTION.**

The following cut, (Fig. 1.) illustrates the character of the TRICK of tapping a coil at different points, from which wires are led to several posts

THE TRICK

OF THE
FIG. 1.
COUNTERFEIT.

THE TRICK

FIG. 1.
OF THE
COUNTERFEIT.

to have the *outward appearance* of being similar to Dr. Kidder's genuine manifold coil apparatus. The practitioner who desires not to be deceived, will do well to avoid all such spurious apparatuses, no matter by whom recommended.

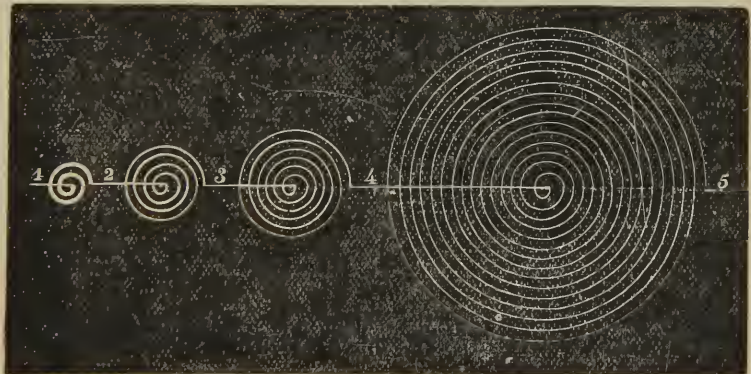
Coils of wire different in their proportions as to length, thickness and number of convolutions, etc., are so different as mediums, for the electrical

FIG. 2.



FIG. 2.

vibrations that the electricity from each produced different effects. The coils, (Fig. 2) though here shown distinct, are interposed one upon another so as all to be influenced by the electrical excitator; and by varying the combination by electing any two of the points 1, 2, 3, 4, etc., in each case, as the combination is varied, a different medium is used as a closed circuit, *each different medium producing a different quality of electricity.*



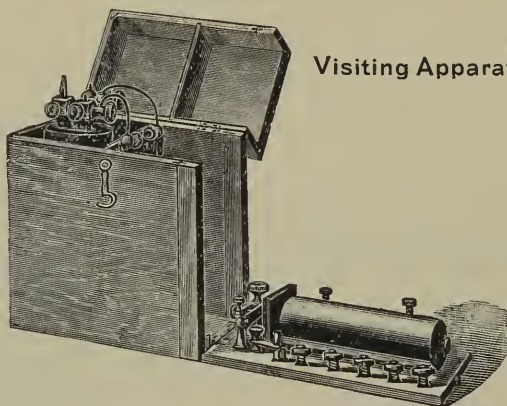
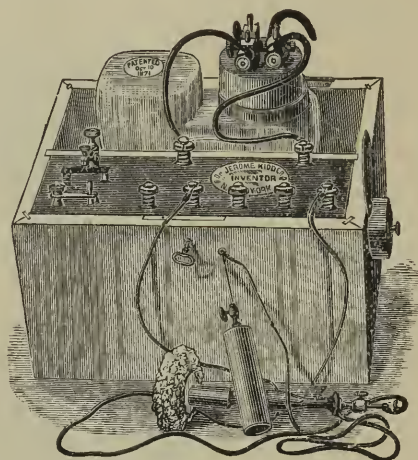
The above illustration, Fig. 3, shows, in a degree, the differences in the physical conditions of the several coils of the four coil apparatus. The diagram represents the coils apart, to present their differences more plainly to the eye; but in the compound helix they are superposed in a manner so that each and all of them are mediums for the development of electricity from the influence of voltaic magnetism. Though on four coils, there can be ten variations of the qualities of the currents, by electing the different poles, 1-2-3-4-5, yet there are four principal variations, using (1-2), (1-3), 1-4, or (1-5).

KIDDER'S CELEBRATED BATTERIES.-Continued.**Apparatus, No. 5.***(Shown without Cover.)*

Has four differently conditioned coils, arranged to be used in various combinations, producing ten different qualities of electricity.

With Hydrostat Tip Battery which is always ready for use, and supplies a want long felt by physicians. It can be conveyed from place to place in a buggy, without danger of spilling the fluid. With one pair of conductors, one pair of metallic cylinders, and sponge electrode. Price complete, \$27.00.

With open battery, similar to the battery operating No. 4 machine, \$24.00.

**Visiting Apparatus No 2,,**

Is a four-coil apparatus, producing ten currents of electricity, of compact form, with an upright stopper battery and a form that is constantly ready for use, many weeks without any attention.

The coil-box stands upright in one end of the case, where it is hinged. Underneath the hinges that fasten the coil-box to the case are springs so arranged as to connect the battery to operate the coils when the coil-box is turned down to a horizontal position, as seen in the figure. If ever desired, the coil-box can be detached from the case and operated by connecting a battery to the two screw cups, or binding posts, on the back part of the machine. The case or box is about 6 inches long, $3\frac{1}{2}$ inches wide and 6 inches deep, and has a metallic handle on the lid for carrying.

It costs more to put the qualities of the ten currents in a small apparatus than in a large one.

With this form of apparatus we furnish one upright stopper battery, in jar $2\frac{1}{2}$ inches square and about 5 inches deep; one pair of conductors, one pair of metallic cylinders for the hand, and one sponge electrode.

Price complete,

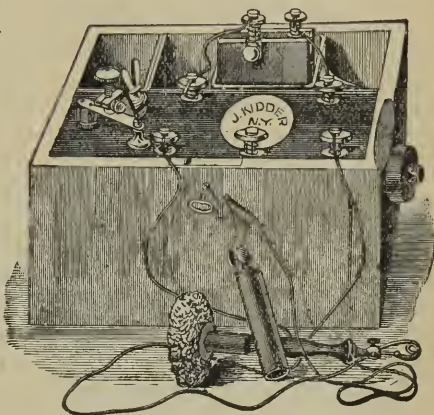
\$27.00

KIDDER'S CELEBRATED BATTERIES.-Continued.**Apparatus No. 6.***(Shown without Cover.)*

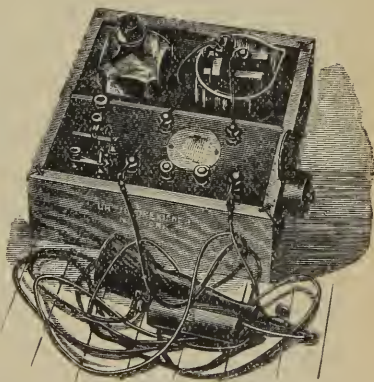
We also make a small apparatus with two coils, and three variations in the qualities of current (see cut herewith). This is somewhat smaller than the No. 4 apparatus, but is a far better machine than any other in the market at the same price.

Polished Walnut case $7\frac{1}{2}$ inches long, $5\frac{3}{4}$ wide, and $7\frac{1}{2}$ deep. It is operated by an open narrow Jar Battery, with a small drip cell, for resting elements into when raised out of the solution. Battery Jar measure $5\frac{1}{4}$ deep, $1\frac{3}{4}$ wide, 5 inches long at centre, and $2\frac{3}{8}$ long at the mouth.

Complete with cords, handles, and one sponge electrode.
Price \$15.00

**Apparatus, No. 4.***(Shown without Cover.)*

No. 4 has three coils and six variations of the qualities of the currents, and is operated by one open battery, which is for weeks and months constantly ready for use, without changing the fluid, and a bottle accompanies, into which the fluid can be poured whenever desired. Polished walnut case $8\frac{3}{4}$ inches long, $8\frac{1}{4}$ wide, and 7 inches deep. Switch arranged to use the second coil in the primary circuit when desired.



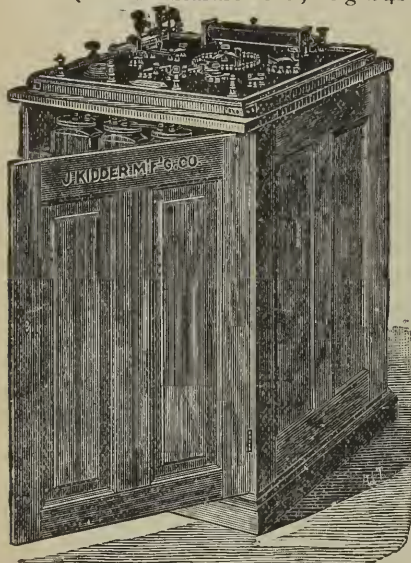
Family Apparatus, without switch arrangement, to use the second coil in primary circuit, Price, complete, \$18.00

Office Apparatus, with switch arrangement, to use the second coil in primary circuit. \$20.00

Office Apparatus, with switch arrangement, and placed in same size case as No. 5, and supplied with a **Tip Battery.** Price complete, \$24.00

KIDDER'S CELEBRATED BATTERIES.-Continued.**CABINET APPARATUS.**

(Outside measurements, height 41 in., width 23 in., depth 23 in.)



Elegant in design, complete in manipulation of currents, and constructed in best workmanship-like manner. The trays containing the cells can be withdrawn from the cabinet without disturbing a wire. All possible short circuiting of cells by uniting wrong wires from circle to cells is absolutely avoided.

The difficult task of selecting, in their order, the wires from the circle, and attaching same to the proper cell, as it occurs in the series, is absolutely avoided in our form of cabinet apparatus. We furnish each cabinet with 40 cells of the Improved "Law" form; each cell having an electro-motive force of 1.5 volts with an internal resistance of .5 of an ohm and never greater. Requiring no attention whatever in from two to three years, and then only for renewal of zincs and sal-ammoniac, which can be supplied at a nominal cost.

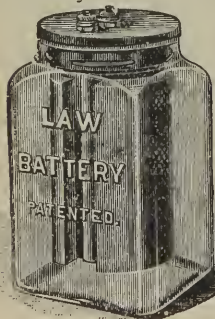
All parts of the cells guaranteed everlasting, except the zincs. For operating coil and automatic interrupter we supply three additional cells of "Smee" form. The automatic interrupter for galvanic currents does not assist in polarizing the galvanic cells.

The cabinet is supplied with a compound circle for 40 cells (electing singly without shock), Polarity Changer, Automatic Interrupter, Cut Out, Galvanoscope, necessary Switches and Cord Posts; also a fine Faradaic Coil (10 current), Circle Switch for selecting currents, Polarity Changer, necessary Switches and Cord Posts.

A Handsome Piece of Cabinet Work for the Physician's Office.

A Cabinet without a cell selector is imperfect, as a defective cell in the series cannot be cut out, and prevents the passage of the current, rendering the Cabinet useless. With Cell Selector this is impossible.

Considering the many advantages in the construction of our goods, and the various devices we furnish for the absolute control of the currents, allow us to ask you to carefully compare our prices with others before purchasing.



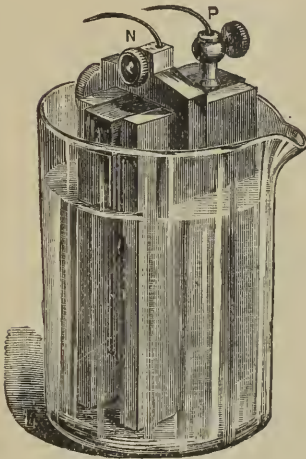
Improved Double Cylinder "Law" Battery.

Neat, clean, handsome, high efficiency. The top is of composition, and seals the cell by locking down against a rubber ring or cushion.

This positively prevents evaporation, and creeping of salts, and preserves a neat and clean appearance to the cell. Both binding posts are permanently and hermetically attached to the cover, and absolutely protected against corrosion. The stub of an old zinc can be removed, and a new zinc attached without discarding or disturbing any part of the binding post.

Size of cell outside, $4\frac{1}{4} \times 4\frac{1}{4} \times 7\frac{1}{2}$ inches.

SUPPLIES FOR KIDDER'S CELEBRATED BATTERIES.



OPEN BATTERIES.

PLATINAS.				Each.
4 inches long,	2 1/4 inches wide.			\$1.50
4 1/4 " "	2 1/4 " "			1.75
5 1/2 " "	2 3/4 " "			2.50
5 1/2 " "	1 3/4 " "			1.50

ZINCS.				Per Pair.
4 1/2 in. long,	2 1/4 in. wide,	1/4 in. thick.		\$0.75
5 " "	2 3/4 " "	1/8 " "		1.00
5 3/4 " "	3 1/2 " "	3/8 " "		1.50
6 " "	1 3/4 " "	1/8 " "		.75

JARS.				Each.
Round 4 1/2 in. deep,	3 1/4 in. diameter.			\$0.50
" 5 " "	3 3/8 " "			.75
Round and heavy,	6 in. deep,	5 1/4 in. diameter.		1.25
Flat 5 1/2 in. deep,	5 in. long, and	1 3/4 in. wide (mouth	2 3/8 x 1 1/2 in.)	.50

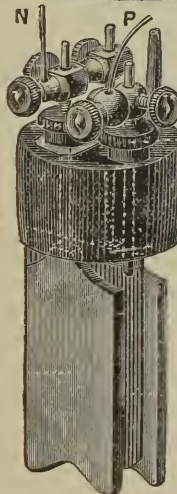
RUBBER STOPPER BATTERIES.

PLATINAS.				Each.
3 1/2 in. long,	1 3/4 in. wide,	(Tip Battery)		\$1.75
3 1/4 " "	1 1/2 " "			1.75

ZINCS.				Per Pair.
4 in. long,	2 in. wide,	5/16 in. thick,	(Tip Battery)	\$0.80
4 " "	1 1/2 " "	1/4 " "		.60

JARS.				Each.
Round 5 1/4 in. deep,	3 1/4 in. diameter.			\$0.75
Square 5 1/4 " "	2 1/2 in. square			.50
Glass jar for Tip Battery				1.00

Stopper element complete, ready to place into jar, and consisting of the following: 2 zinc plates, 1 platina plate, 1 stopper, 3 vulcanite nuts, 1 vulcanite tube, 1 set metallic clamps, and one pair flexible metallic connecting cords.



FARADAIC BATTERY SUPPLIES.

Rubber stopper,	1 1/2 in. thick,	2 1/4 in. diameter.	\$1.00
Metallic clamps for stopper battery,	per set.		.50
Vulcanite nuts	" " "	each.	.08
" tube, (small)	" " "	"	.08
Metallic spring and stand for supporting Tip Battery			.75
Metallic clamp for binding elements together of open battery.			.40

GALVANIC BATTERY SUPPLIES.

Battery Jars.	Hard Rubber,	4 1/2 in. deep,	2 1/2 in. long,	1 3/8 in. wide.	\$0.35
Carbons.	5 1/4 in. long,	1 1/2 in. wide,	1/4 in. thick.		.40
Zincs.	5 1/4 in. long,	1 1/2 in. wide,	1/8 in. thick.		.20
Cords.	Best quality, silk covered copper strands,	5 1/2 ft. long,	per pair		1.00

CORDS.

These Cords are thoroughly insulated with cotton, which is covered with pure Balata gum and then finished in silk or cotton. Perfect insulation against moisture.

				Per Pair.
Best quality, copper conductor,	silk covered,	each	5 1/2 ft. long.	\$1.00
" " "	" cotton " "	"	5 1/2 " "	.80
Best insulated (copper conductor) flexible metallic cords for connecting the Tip Battery with the helix.				.25

APPLIANCES FOR KIDDER'S CELEBRATED BATTERIES.

WHEN ORDERING PLEASE SPECIFY NEW LIST
EXTRA APPLIANCES, ETC.

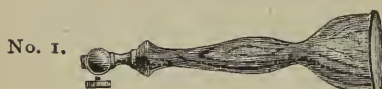
EXTRA APPLIANCES

FOR

ELECTRO-THERAPEUTIC USES.

Entered according to Act of Congress, in the year 1871,
By JEROME KIDDER, M.D.,
In the Office of the Librarian of Congress, at Washington, D. C.
Copyright, 1878,
By JEROME KIDDER, M.D.
[All Rights Reserved.]

Many of these Electrodes are improved inventions, secured by
Letters Patent.

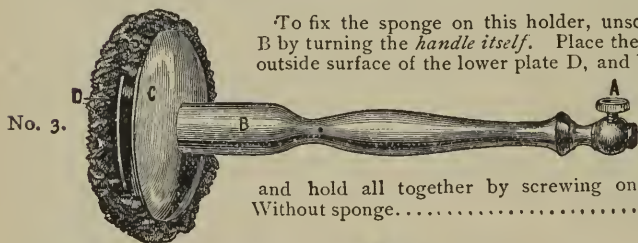


To put on the sponge, unscrew the screw cup at the end, remove the wooden handle, place the sponge on the outside surface of the metallic disc, and bend the edges over to clasp by replacing the wooden handle. Without sponge, \$1.25.



Sponge Holder, with brass cylinder for convenience of localizing one pole while the other pole is in both hands for large surface.\$1.75.

IMPROVED SPONGE HOLDER.



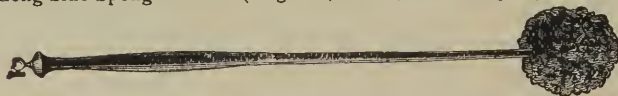
To fix the sponge on this holder, unscrew the handle B by turning the *handle itself*. Place the sponge on the outside surface of the lower plate D, and bring the edges of the sponge over the edges of the plate, clasp it with the plate C, and hold all together by screwing on the handle B. Without sponge.\$1.50



Side Sponge Holder, to use under a loose gown. \$1.75.

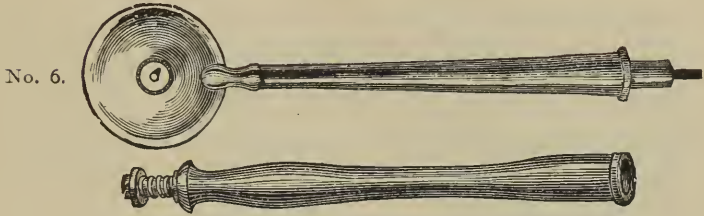


Long Side Sponge Holder (length 14 inches) without sponge. \$2.00.



The same shown with sponge attached.

**APPLIANCES FOR
KIDDER'S CELEBRATED BATTERIES.—Continued.**



No. 6. Long Side Sponge Holder (same as No. 5), in two parts, for convenience of packing. \$2.25.



No. 7. Side Sponge Holder, with interrupter and binding screw, covered with hard rubber. \$3.00.



No. 8. Side Sponge Holder. \$1.75.

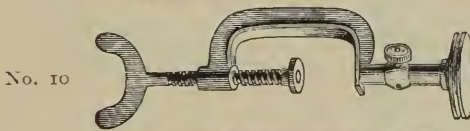


Sponge Holders for Pocket Machine, hollow handle, to receive the other handle, for compactness.

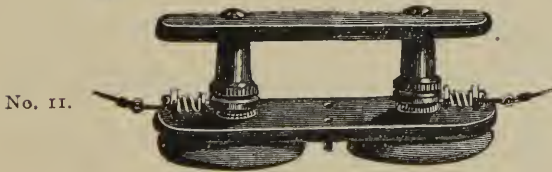
Handle, \$1.00. Oblong clasp, \$1.00.



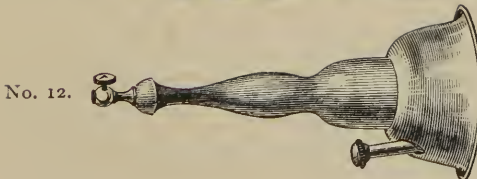
No. 9A. Sponge Holder to be inserted in Hard Rubber Hollow Sponge Holder, No. 9. \$1.00.



No. 10. Clasp for Sponge, to be attached to a table. \$1.50.

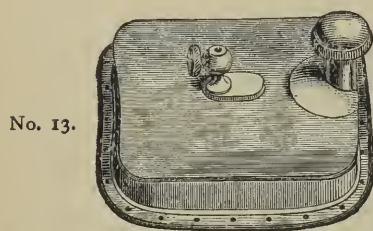


No. 11. Carbon Sponge Holders, for both the positive and negative electrodes. \$3.00.



No. 12. Reservoir Sponge Holder, for containing warm water, with clasp for holding the sponge;—also holes to sew on a sponge. Diameter, $4\frac{1}{2}$ in. \$3.00.

**APPLIANCES FOR
KIDDER'S CELEBRATED BATTERIES.—Continued.**



No. 13.

Reservoir Chest Electrode, 8 inches square and curved, made from copper and finely nickel plated. Price, \$3.50.

13A.—Flat Reservoir Electrode for the feet, 12 inches long, 9 inches wide, and 1 inch deep, made from copper and finely nickel plated, not figured. \$5.00.

SPONGE CLASPS.



A. 2½ and 3 inch. \$1.00.



B. 1½ and 2 inch. 75c.



C. 1 inch. 60c.



D. ½ inch. 50c.



E. Small pointed. 50c.



F. Small conical. 50c.



No. 14.

Handle to fit the above Clasps. 75c.



No. 15.

Handle with interrupter to fit the above Clasps. \$1.50.



No. 16.

Massage Roller Electrode. To be covered with chamois skin. \$3.00.



No. 17.

Metallic Handles, nickel plated. Per pair, \$1.00.

Ordinary Tin Handles, per pair, 50c.



Metallic Cylinder to fit Handle No. 9. Per pair, 75c.



No. 18.

Metallic Hollow Ball Electrode. 75c.




No. 19.

Universal Handle, with ring and screw clasp for extra appliances specially arranged for it. 1.00.

APPLIANCES FOR KIDDER'S CELEBRATED BATTERIES—Continued.

- No. 20.  Universal Handle, with ring and screw clasp and interrupter. \$2.00.

- No. 21.  Ear-Electrode with holes at point to sew on small sponge. \$1.50.

- No. 22.  Eustachian Ear-Electrode. \$1.75.


- No. 23.  Another form of Ear-Electrode, with rubber funnel-shaped insulator. \$3.00.

- No. 24.  Eye-Electrode, with glass cup to be filled with water, or fine sponge thoroughly moistened. \$1.75.

- No. 25.  Metallic Brush for Anæsthesia. \$1.50.


The same, shown with brush pushed within its cylinder for protection when not in use.

- No. 26.  Scourge, with fine tinsel brush for Anæsthesia. \$1.50.


- No. 27.  Metallic Wire Brush Electrode, with detachable handle \$2.00
Same without detachable handle, as per cut..... \$1.75

- No. 28.  Insulated Throat Electrode. \$1.50.

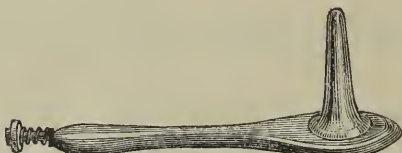


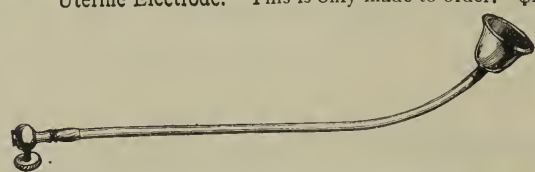

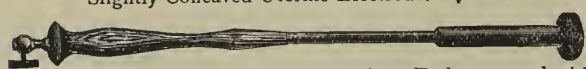
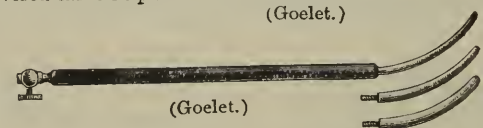
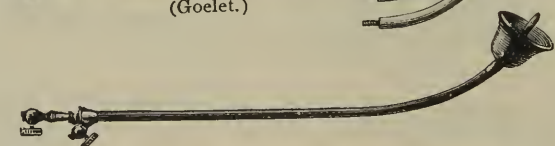




- No. 29.  Tongue Electrode. \$1.50.

- No. 30.  Oblong Concave Tongue Electrode. \$2.00.

- No. 31.  Rectal Electrode. \$1.50.

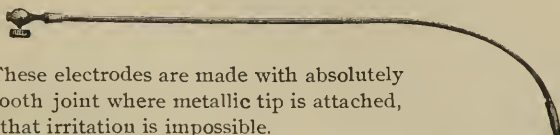
- No. 32.  Rectal Electrode, insulated with hard rubber. \$2.00.

**APPLIANCES FOR
KIDDER'S CELEBRATED BATTERIES.—Continued.**

- No. 33.  Another form of Rectal Electrode. \$1.50.
- No. 34.  Uterine Electrode. \$1.50.
- No. 35.  Uterine Electrode. This is only made to order. \$1.50.
- No. 36.  Bell-shaped Uterine Electrode. \$2.00.
- No. 37.  Slightly Concaved Uterine Electrode. \$2.00.
- No. 38.  Uterine Electrode, with removable carbon tip. To be covered with clay for currents of high intensity. When using currents of 60 milliampères or more, dip clay covered carbon tip into a solution of bicarbonate of soda. \$3.00
(Goelet.)
- No. 39.  Uterine Electrode, with tips for negative pole. \$3.00.
(Goelet.)
- No. 40.  Intra-uterine (bi-polar) Electrode; can also be used as separate instruments. \$4.00.
- No. 41.  Vaginal Electrode. \$1.75.
- No. 42.  Vaginal Electrode. Insulated transversely with hard rubber. Price, \$2.25.
- No. 43.  Vaginal Electrode. Insulated longitudinally with hard rubber. Price, \$3.25.
- No. 44.  Vaginal Electrode (rubber cylinder).
Fasten sponge over ball end and draw sponge into cylinder; then insert cylinder, and press the sponge forward to locate. Price, \$2.00.

APPLIANCES FOR KIDDER'S CELEBRATED BATTERIES.—Continued.

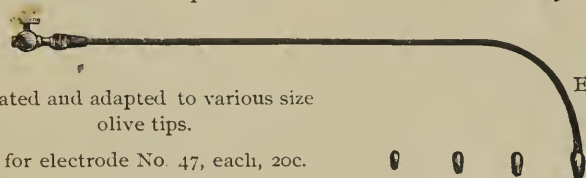
No. 46.



These electrodes are made with absolutely smooth joint where metallic tip is attached, so that irritation is impossible.

Urethral
Electrode.
Price, \$1.75

No. 47



Insulated and adapted to various size olive tips.

Urethral
Electrode.
Price,
\$2.00.

Olives for electrode No. 47, each, 20c.

When ordering, give number and scale of olives desired.

ABDOMINAL PLATES.

FINELY NICKEL PLATED.

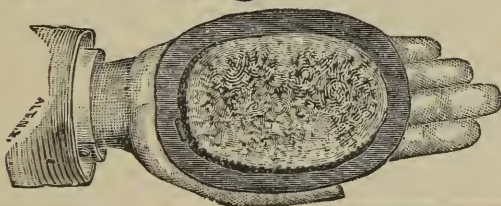
To be used with sponge, absorbent cotton, or clay.



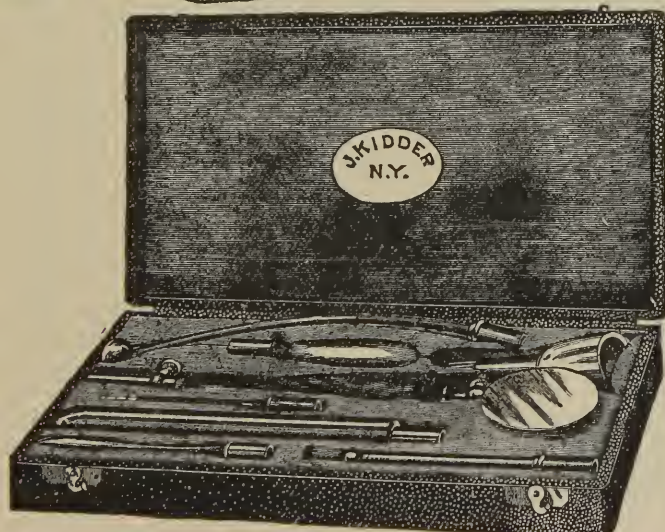
3x5 inches, curved 75c

4x6 " " 75c

5x7 " " 75c



Sponge Pad Electrode
Insulated with soft rubber.
\$1.00.



Case of Instruments, comprising Handle (19), Ear (21), Eye (24), Brush (25), Tongue (29), Rectal (31), Uterine (34), Vaginal (41), and sponge clasp B. All to fit universal handle, and in neat velvet lined case. \$15.00

**APPLIANCES FOR
KIDDER'S CELEBRATED BATTERIES.—Continued.**

ELECTRO-SURGICAL APPLIANCES

MANUFACTURED BY

JEROME KIDDER M'F'G CO.,

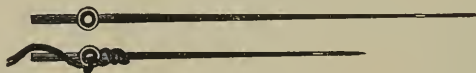
820 BROADWAY,

NEW YORK, N. Y.,

U. S. A.

NEEDLES FOR ELECTROLYSIS TO DISCUSS TUMORS, Etc.

Insulated with Vulcanized Rubber.



These needles have a round head to be inserted by the thumb, and an eye to receive small metallic cord. Are so constructed as to be used with or without handles.

STEEL POINTED.

For Negative Pole.

1 $\frac{3}{8}$ inches long.....	\$1.50
1 $\frac{7}{8}$ " "	1.50
2 $\frac{1}{8}$ " "	1.50
2 $\frac{3}{8}$ " "	1.75
2 $\frac{5}{8}$ " "	1.75
2 $\frac{7}{8}$ " "	1.75
3 $\frac{1}{8}$ " "	2.00

PLATINA POINTED.

For Positive Pole.

1 $\frac{3}{8}$ inches long.....	\$2.00
1 $\frac{7}{8}$ " "	2.00
2 $\frac{1}{8}$ " "	2.00
2 $\frac{3}{8}$ " "	2.25
2 $\frac{5}{8}$ " "	2.25
2 $\frac{7}{8}$ " "	2.25
3 $\frac{1}{8}$ " "	2.50

Abdominal Needles, 6, 8 and 10 inches long, with heavy platina points, on hand.

Needles of any size, length and shape made to order, insulated or not insulated as desired.

STEEL BROACHES.

Cut full size.

Large shank, finely tempered and very flexible..... Each, 25c.

STEEL NEEDLES.

Not Insulated, of various lengths; on hand and to order. All needles are arranged to be used with or without handles, Nos. 50 and 51.

**VARIOUS FORMS OF HOLDERS OF NEEDLES
FOR ELECTROLYSIS.**

No. 50.







Needle Holder, of hard rubber
with interrupter.....\$1.50

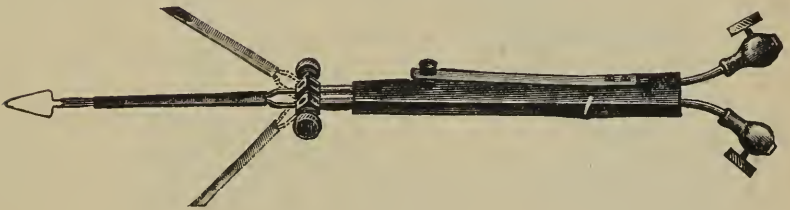
No. 51.



Needle Holder, of hard rubber
without interrupter.....\$1.00

**APPLIANCES FOR
KIDDER'S CELEBRATED BATTERIES.—Continued.**

	PRICES.
	No. 55.....£2.50
	" 56..... 2.50
	" 57..... 3.00
	" 58..... 3.00
No. 63.	" 59..... 2.50
No. 64.	" 60..... 3.00
No. 65.	" 61..... 2.50
No. 66.	" 62..... 3.00
	" 63..... 3.00
	" 64..... 2.50
	" 65..... 2.50
	" 66..... 3.00












No. 67.

Handle with spring for Closing and Interrupting the circuit. Adjusted for Heavy Platinum Cutters and Burners, also for Throat and Nasal Electrodes. .\$.4.00.

THROAT AND NASAL CAUTERY ELECTRODES.



No. 68.

	PRICES.
	No. 68...\$2.00
	" 69... 2.00
	" 70... 2.00
	" 71... 2.00
	" 72... 2.00
	" 73... 2.00
	" 74... 2.50
	" 75... 2.00
	" 76... 2.00
69	" 77... 2.00
70	
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With Flexible Insulated Rods, that can be formed to any curve or angle desired. Adapted to handle No. 67.

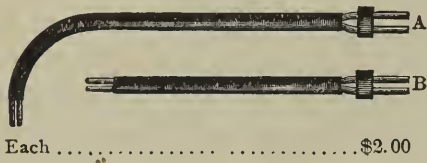
CAUTERY CONDUCTORS.

Six Feet long; Double Braided Insulation, and finished in silk. Very Flexible, and specially adapted for Cautery work. Price per pair.....\$3.00.

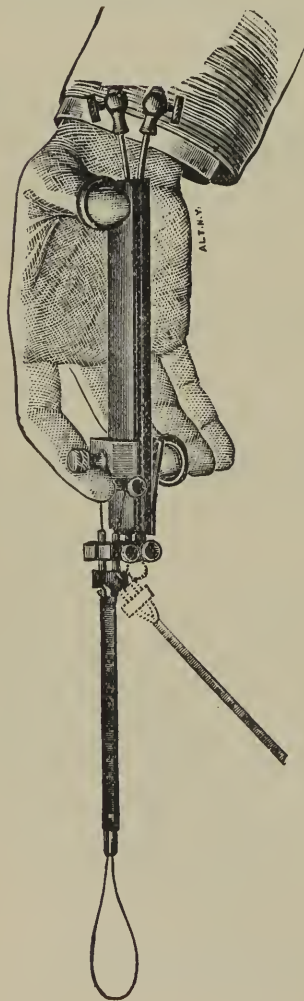
APPLIANCES FOR
KIDDER'S CELEBRATED BATTERIES—Continued.

FORMS OF CANNULA FOR HANDLES

Nos. 78 & 79.

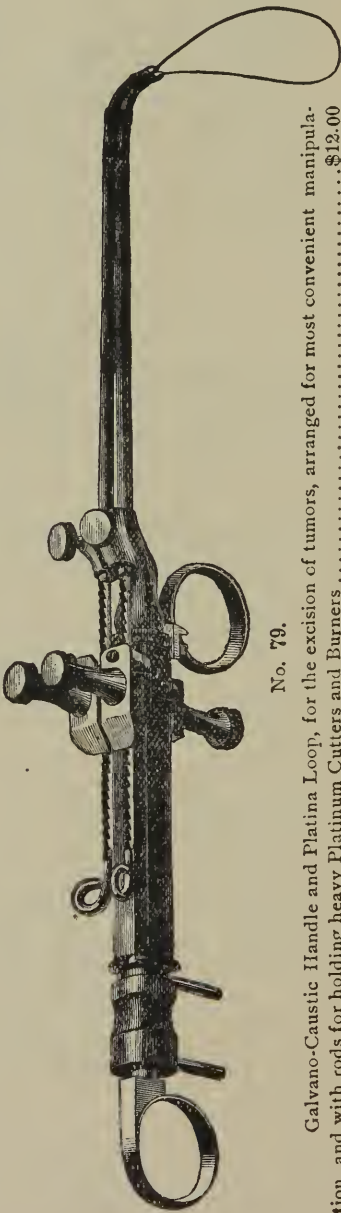


Each \$2.00



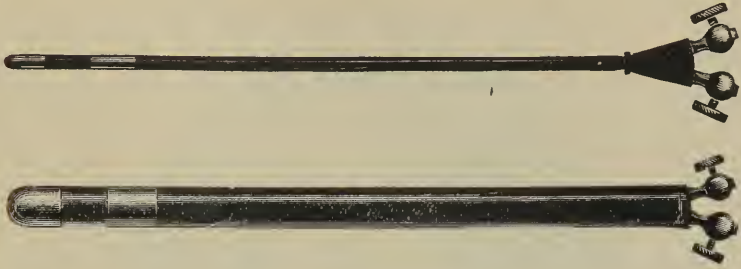
No. 78.

Handle with slide, for drawing incandescent Platina Loop for Excising Tumors without bleeding (Erasaur).....Price \$7.00



No. 79.

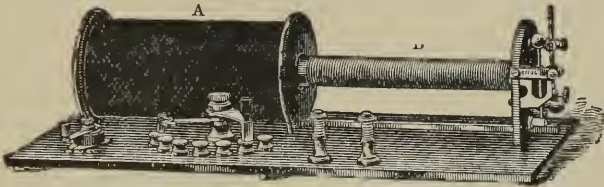
Galvano-Cautic Handle and Platina Loop, for the excision of tumors, arranged for most convenient manipulation, and with rods for holding heavy Platinum Cutters and Burners.....\$12.00

KIDDER'S ELECTRODES—HIGH TENSION COILS.

Bi-Polar Vaginal and Intra-Uterine Electrodes. Constructed in many forms and lengths. Also Flexible Bi-Polar Intra-Uterine Electrodes. Price, \$4.00 each; 20 per cent. discount.

HIGH TENSION COILS.

FOR SEDATIVE EFFECTS.



Constructed of compound coils having different lengths and diameters of wire, to be used in various combinations. The length of fine wire is about 8,000 feet, which can be used in many combinations of lengths. The current can be started from absolutely nothing. A vibrator for medium, and very rapid interruptions, together with a slow automatic interrupter. Operated by one or more cells. The coils contain a length of wire, the combinations of which are greater than any other apparatus constructed, and such as now recommended by Apostoli, Rockwell, Tripier, Goelet, and others. Price, \$50.00.

Various high tension coils constructed. Price according to length and diameter of wire and finish.

JEROME KIDDER MFG. CO.,

820 BROADWAY, NEW YORK.

For Sale by • SHARP & SMITH • CHICAGO.

THE "MASSEY" CURRENT CONTROLLER.



Its function is to vary the current at will by rapidly increasing or decreasing the resistance of the circuit, from a fraction of a milli-ampere to the full strength of the battery without shock. It consists of a porcelain plate, provided with a sickle-shaped conducting area of graphite (soft pencil) broadening and thickening up to the terminal, where the graphite unites with a metallic surface, which is in direct contact with the battery without any material resistance. When the crank C (Fig. 1) is placed to the right of the hard rubber bridge, the contact comb of the crank rests entirely on the porcelain and the circuit is broken; moving it slightly forward, it soon touches the sickle-point and the graphite mark permits the least amount of current to pass through, since the current must pass over the whole area of graphite. By turning the crank slowly and steadily onward, there is a gradual increase of current without shock, until finally the metallic surface is reached, when the whole power of the battery is turned on. A reversed action turns the current off. If the motion is made slowly, the increase and decrease is exceedingly gradual and the meter-needle points constantly to the exact current strength of the moment without oscillation. By its use a more economical wear of the cells results, as all cells are worked alike. It may be used with a small or large number of voltaic cells, or in connection with an incandescent light circuit for medical galvanic work, but cannot be used for actual cautery.

Special attention should be paid to the following points in using this instrument :

1. Always place the turning crank on the bare porcelain, as shown in the engraving, before applying the electrodes to the patient, so as to be sure that the full resistance is interposed; otherwise an unpleasant or even dangerous shock to the patient might result.
2. After the electrodes are in place, turn the crank down and toward the broader end of the graphite slowly, until the meter shows the desired strength of current.
3. If using an incandescent current, never bring the metallic parts of the conducting cords or electrodes together, unless the crank is on the thinnest part of the graphite.
4. Keep the apparatus free from dust.
5. Renew the graphite covering on the porcelain plate as often as marks of wear are visible by rubbing graphite over the circumscribed area from a *very soft pencil*. If the current is too strong at the very point of the graphite, rub some off and recoat it more lightly.

Price.....\$7 50 net.

FLEMMING'S BATTERY ELECTRODES.

Discount 20 per cent.

Physicians selecting and ordering Electrodes from our list can have them fitted in velvet-lined morocco cases, at a cost of from \$2.00 to \$5.00 each.

We can furnish Electrodes in cases to order, from \$15.00 to \$50.00, and we also keep the following described cases in stock.

The selections are made so as to give as complete a set for the price as possible.

Fig. 5354. Electrode Case, No. 1—Containing:

- 1 Wheel Electrode with Universal Handle of Polished Rubber, Wheel of the same material, set with Metallic Points, for Muscular Faradization.
- 1 Holder for large Sponge, Nickel Plated.
- 1 Rectal Electrode, Insulated with Polished Hard Rubber.
- 1 Vaginal Electrode. 1 Tongue Electrode.
- 1 Cup-Shaped Uterine Electrode. 1 Metallic Brush.
- 1 Uterine or Urethral Electrode, Insulated with Polished Hard Rubber.
- 1 Spiral Flexible Uterine or Urethral Electrode, Insulated.
- 1 Laryngeal Electrode, with Sponge Tip, insulated with Polished Hard Rubber.
- 1 Ear Electrode, Insulated with Polished Hard Rubber.
- 1 Eye Cup Electrode, new style. 1 Hair Brush Electrode.
- 1 Needle Holder for Electrolysis, with two needles.

Price..... \$30 00

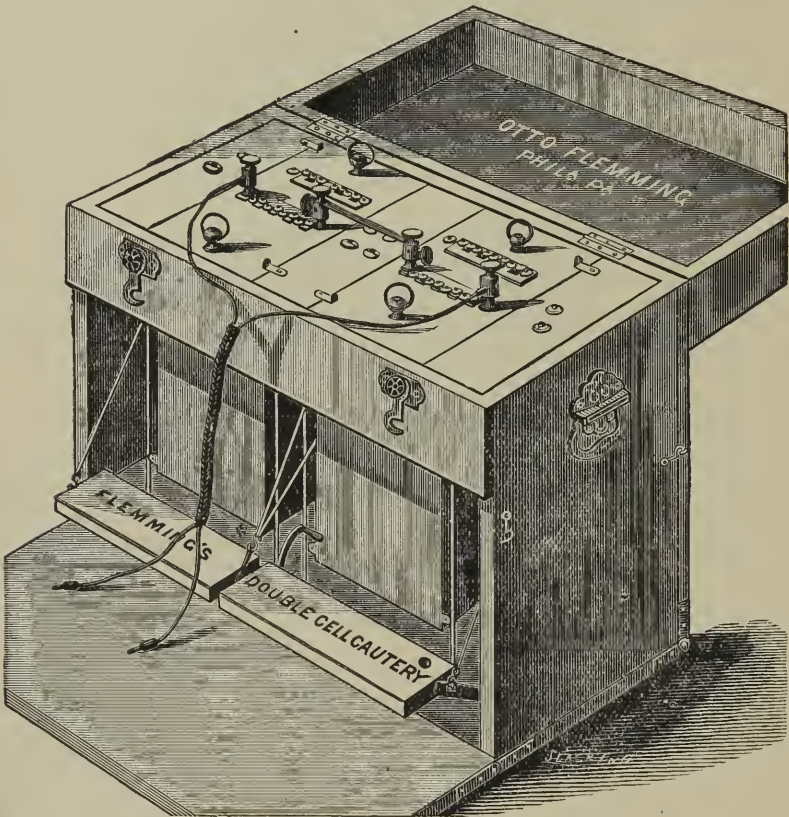
Fig. 5355. Case No. 2—Containing:

- 1 Universal Sponge Holder, Nickel Plated.
- 1 Rectal Electrode, Nickel Plated. 1 Vaginal Electrode, Nickel Plated.
- 1 Nasal Electrode, Insulated with Polished Hard Rubber.
- 1 Cup-Shaped Uterine Electrode, Insulated with Polished Hard Rubber.
- 1 Spiral Flexible Uterine or Urethral Electrode, Insulated.
- 1 Duchenne's Points, Nickel Plated.
- 1 Ball Electrode, Nickel Plated.
- 1 Metallic Brush. 1 Disk Electrode.
- 1 Needle Holder for Electrolysis, with one Needle.

Price..... \$15 00

GALVANO CAUTERY BATTERIES.

FLEMMING'S—Discount 20 per cent.



5380

DOUBLE CELL CAUTERY BATTERY.

FOR OFFICE USE.

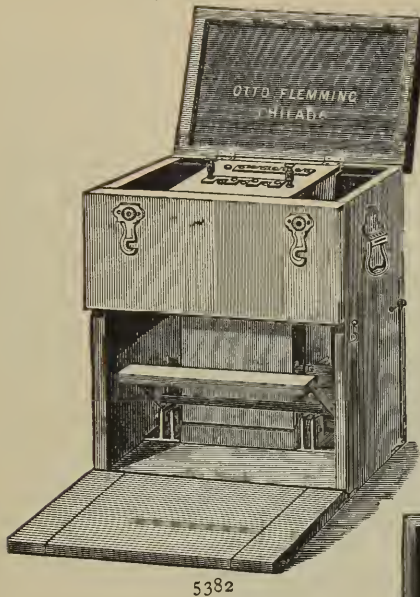
Consisting of two systems of 10 pairs zinc carbon plates each, with treadle, two rubber cells and conducting cords.

Fig. 5380. Price..... \$50 00

The same, provided with two Commutators for converting the Cautery into a 20 cell continuous Galvanic Current Battery.

Fig. 5381. Price..... \$95 00

GALVANO-CAUTERY BATTERIES AND ELECTRODES.



FLEMMING'S—Discount 20 per cent.

Fig. 5382.—SINGLE CELL CAUTERY BATTERY.

For office use, consisting of one system of 10 pairs zinc-carbon plates, and a treadle arrangement, by means of which the rubber cell (containing 3 quarts of bi-chromate solution), is raised or lowered.

Price of Single Cell Cautery Battery, including Conducting Cords..... \$30 00

The same, provided with a Commutator for converting the Cautery into a 10 Cell Continuous Galvanic Current Battery..... 50 00



5383

Fig. 5383.—CAUTERY INSTRUMENTS FOR NASO-PHARYNGEAL OPERATIONS.

Price, Complete in Morocco Case.....\$25 00

CONSISTING OF

The Universal Hard Rubber Handle with Circuit Closer, to which any of the instruments below may be attached.....	5 00
The short, straight Electrode or Knife, for use in the anterior part of nares.....	2 00
The Post-Nasal Electrode, for introduction behind the soft palate.....	2 00
The long Knife Electrodes for introduction through the nares to posterior ends of turbinated bones and pharynx.....	2 00
The Spiral or Moxa Electrode.....	2 00
The Sharp pointed Electrode	2 00
Dr. J. Solis-Cohen's Pharyngeal Electrode, to protect the vault of the pharynx.....	3 50
One set of 3 Rubber Nasal Specula.....	1 50
Universal Rubber Handle, with platinum wire loop and windlass (Ecraseur)	10 00

CAUTERY STORAGE BATTERIES.

Fig. 5390—SHARP & SMITH'S CAUTERY STORAGE BATTERY, with one pair Heavy Conducting Cords. Net, \$37.50.

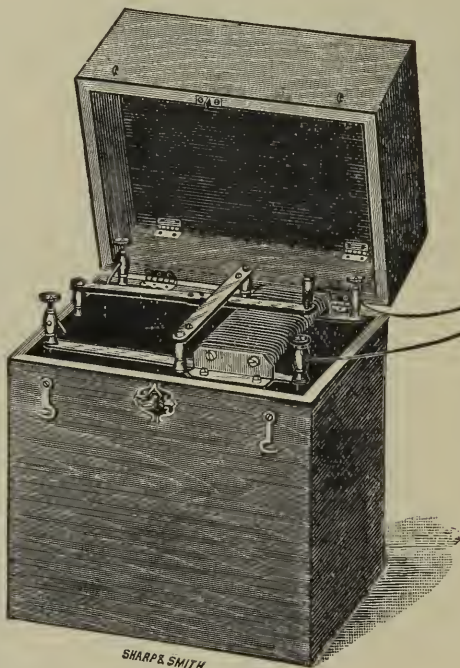
DIRECTIONS FOR CHARGING THE BATTERY.

This Storage Battery can be charged either from primary cells or the incandescent current. In charging storage cells several methods are employed. One is with a gravity or blue stone battery, coupled up in series and connected to the storage cell as follows: From 8 to 12 gravity cells are used, the latter number being the best, are connected together alternately, the copper of one cell to the zinc of the next, leaving a copper and zinc terminal, which are connected to storage battery; the copper terminal is connected to *P* and zinc to *N* of storage battery.

A Rheostat is placed in each battery to control the current. It consists of a coil of German silver wire, wound round

an asbestos core, and the amount of resistance to be employed is regulated by means of a lever. The Rheostat provided with each battery is calculated to throw in sufficient resistance to enable the operator to use the lightest electrodes without fear of destroying them.

It is perhaps well to state here that this storage battery is not intended for Galvanic or Faradic application, or for the purpose of Electrolysis, but is strictly a battery for Electro-Cautery, driving of small motors for Nasal and Dental Surgery, and lighting of small incandescent lamps used for diagnostic illumination.



SHARP & SMITH

5390

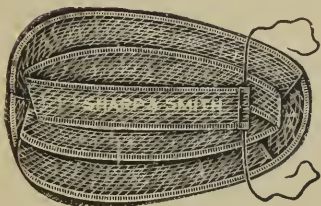
CAUTERY STORAGE BATTERIES—ELECTRODES.

FIG.

- *5391 Dr. O. T. Freer's Flexible Electrodes from \$1 50 to \$4 00
 *5392 Dr. E. R. Bennett's Regulating Electrodes..... 3 50

A NEW FLEXIBLE ELECTRODE.

BY DR. O. T. FREER, Chicago.

Extract from *Medical Record*, March 11, 1893.

5391

Fig. 5391 I wish briefly to call attention to my new method of making the common electrodes used on the surface of the body.

At present sheets of metal are used as backs for the sponge, felt, or other material for conveying the current to the skin.

For these stiff sheets of metal I have substituted the common "gold" or silver cloth used for trimming uniforms, regalia, and the like.

The cloth is woven of cotton or silk threads spun around with a minute ribbon of metal, gilded copper for the gold, and pure silver for the silver cloth.

The best kind has all the threads covered with silver. I have found this material a perfect conductor, equal to sheet metal.

Sheet metal, even when very thin, is stiff, and refuses to follow the hollows and prominences of the body.

Gold and silver cloth is as flexible as any other cloth, and does not prevent the felt or sponge from lying smoothly on any surface of the body, as the axilla, knee and ankle joints.

If desired, one could easily make electrodes that would evenly encase an extremity or the trunk. They can be made in the form of long bandages, or be bound down with a roller.

In using the galvanic current I have often been annoyed by having the stiff metal electrode bridge over hollows and concentrate the force of the current unmercifully on a few points of the skin. Of course a flexible electrode, if made long enough, can follow up any anatomical structure, such as the spine, or sciatic nerve, or the brachial plexus.

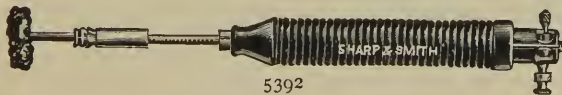
Respectfully,

Chicago, Ill.

O. T. FREER, M. D.

A NEW PRESSURE REGULATING ELECTRODE.

BY E. R. BENNETT, M. D., Chicago.

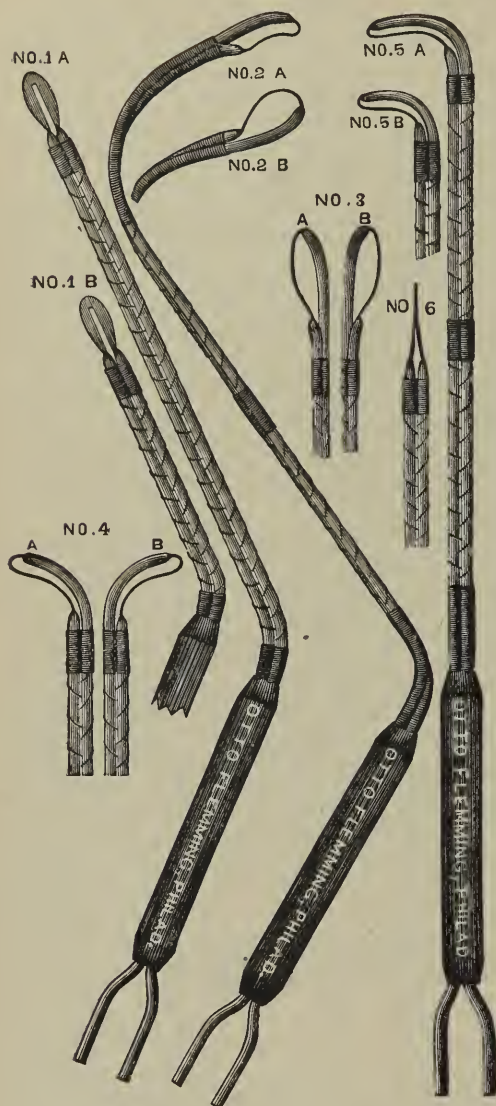


5392

This electrode is constructed with a coil of wire in the inside so that to make the circuit, pressure is made, which is gauged entirely with a stout wire connection at its upper part, which moves up and down, but is rendered stationary at any height by a set screw, so that when you find the amount of pressure necessary to register the milliamperes on one side, it is left at the same point and will require only the same pressure to complete the circuit and produce the reaction on the opposite side. This instrument, which I term the pressure regulating electrode, is made with a hollow hard rubber handle, inclosing a shaft and spiral spring.

Upon one side of the shaft there is a projection or lug. At the upper part of the handle is a straight wire parallel with the shaft, playing in a groove, attached to the fixture with a set screw so that it may be made to complete the circuit by contact with the lug at any point in range of the shaft allowed by the spiral spring. This allows the completion of the circuit with any desirable amount of pressure by fastening set screw at the top.—See *Chicago Medical Recorder*, July, 1893.

CAUTERY ELECTRODES.



- 1-A Long Spatula Burner, for hypertrophy of turbinated bones.
- 1-B Short Spatula Burner, for anterior hypertrophy of turbinated bones.
- 2-A Lateral "S" Burner, for growths on post-nasal walls.
- 2-B "S" Burner, for growths on post-nasal roof.
- 3-A Lateral Burner, for right nostril, for hypertrophy of turbinated bones.
- 3-B The same, for left nostril.
- 4-A Scythe Burner, for right nostril, for posterior hypertrophies of turbinated bones.
- 4-B The same, for left nostril.
- 5-A Post-Nasal Scythe Burner, for growths in post-nasal space.
- 5-B The same, of smaller size, for children.
- 6 Pointed Burner, for puncturing anterior hypertrophies.

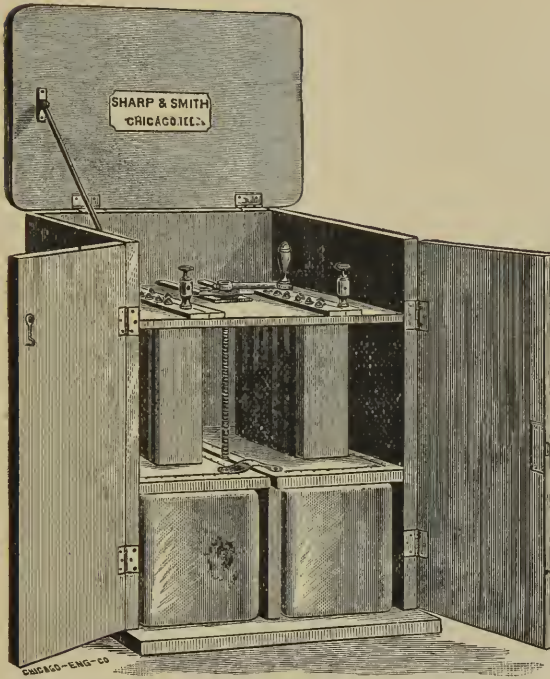
DR. F. B. EATON'S NASO-PHARYNGEAL CAUTERY ELECTRODES.

(The above cut represents natural sizes.)

One Complete Set (11 Burners) in case.....	\$25 00
Each Single Burner	1 75
Heavy Conducting Cord, complete.....	2 00
Clamp Attachment, to fasten to any suitable Cord.....	75
20 per cent. Discount.	

For other Electrodes, see Index.

GALVANO CAUTERY BATTERIES, Etc.



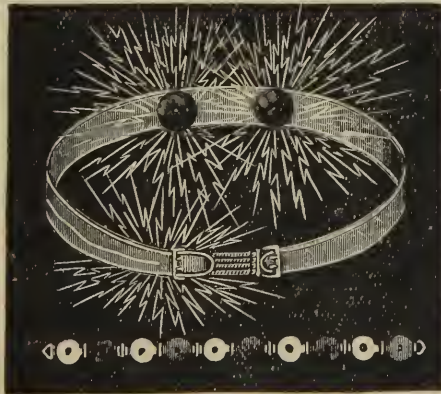
5406

Fig. 5406.—Ingals' Cautery Battery.....Net, \$50 00

This Battery, Fig. 5406, has been before the profession now for several years, and the recent improvements have made it the best and strongest Cautery Battery in the market. There are two large cells, and the elements consist of large zinc and carbon plates, which are depressed by a screw to any desired depth, regulating the strength of the current perfectly. The cells hold a large amount of fluid which requires less frequent changing. The Battery needs very little care. Some of them have been in constant use a number of years. The Battery is inclosed in a neat Black Walnut case, 12x15x22 inches high.

For Electrodes for "Ingals'" Cautery Battery, see page 445.

THE SENSIBLE ELECTRIC BELT.



Price to Physicians.....net \$2 25

BARRETT'S DRY CELL BATTERIES.

NOTE.—In ordering any of the batteries listed below it might be noted that the Nos. 1 and 2 are intended for general medical use, and are capable of treating every case, no matter what its nature—from those requiring the mildest to the strongest galvanic current; the No. 2, of course, having the additional advantage of the induction coil. The No. 3 batteries, however, containing a small number of cells, are adapted to treatment of cases needing a mild current, and to the electrolyses of small growths. They have full power for the work for which they are intended, but of course will not embrace so wide a field as the others. The Two-Cell Faradic No. 5 needs only a passing notice, as its power is equal to any case, and will create the most delicate as well as a most intense current.

Each and every metal part of the following apparatus and electrodes is most carefully polished and nickel-plated, and each will be found even in the smallest detail, made and finished in the very best manner, and second to none in respect to every quality that goes to make up a first-class instrument.

No. 1.—GALVANIC BATTERY.

This is a constant-current Battery, designed especially for physicians' use. It is put up in a very handsome, light, hardwood box, 6 x 7 x 10 inches. Metal parts are all finely finished and nickel-plated, and each is provided with a hard rubber switch-board for making and breaking the current and changing the poles; a water rheostat, one plain and one interrupting handle, conducting cords and best quality sponge electrodes.

FIG.

5409	24-Cell	Price, \$38 00 Net.
5410	32 "	" 45 00 "
*5411	50 "	" 65 00 "
5412	60 "	" 75 00 "
5413	84 "	" 95 00 "

Batteries of same style, with fewer or more cells, made to order at short notice.

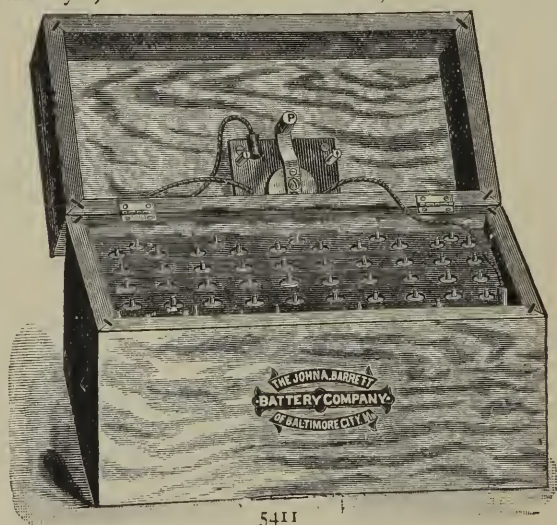


Fig 5411.—50-Cell (No. 1) Galvanic Battery.—Case open, ready for work.

The capacity of these Batteries is 720 hours of actual work. The cost of operating the 50-Cell is $2\frac{1}{2}$ cents per hour. The others proportionately more or less, according to number of cells.

Charge for Renewing and Restoring, per cell, 30 cents.

BARRETT'S DRY CELL BATTERIES.

Fig. 5416.—No. 2.—COMBINATION BATTERY.

This Combination Battery, so far as the galvanic part is concerned, is precisely the same in every particular as the No. 1 preceding, but it contains in same box a Compact Faradic Coil and Cell, capable of producing the most delicate as well as the most intense and powerful induction current.

FIG.			
5414	24	Cell.....	\$58 00 Net.
5415	32	"	65 00 "
*5416	50	"	85 00 "

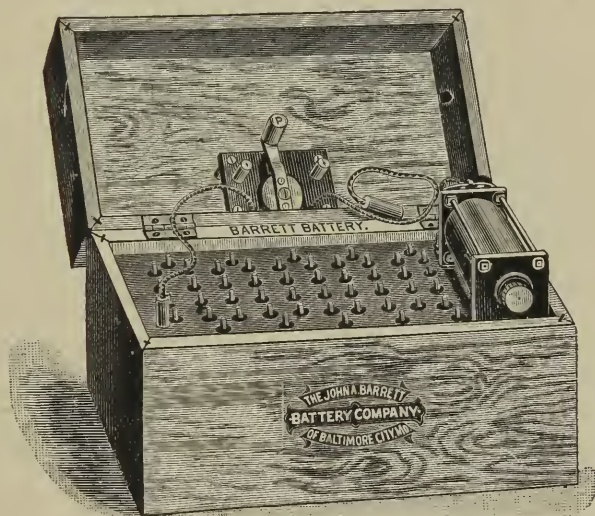


Fig. 5416—No. 2.

The galvanic part of these Combination Batteries will work 720 hours continuously. The Faradic Cells have a capacity of 100 hours.



Fig. 5418—No. 3.

Fig. 5418.—No. 3.—GALVANIC BATTERY.

This is a smaller and less complete constant-current Battery than the No. 1, and is intended for family as well as physicians' use, for electrolysis of small growths, hairs, etc.; in general, for the treatment of cases which do not need, or could not stand, a very powerful current. Put up in strong, well-finished walnut boxes, with conducting cords and sponge electrodes.

FIG.			
5417	6	Cell—size $4\frac{1}{2} \times 4\frac{1}{2} \times 5$..	\$10 00 Net.
*5418	12	" — " $5\frac{1}{2} \times 5\frac{1}{2} \times 5$..	15 00 "
5419	16	" — " $5\frac{1}{2} \times 5\frac{1}{2} \times 5$..	20 00 "

BARRETT'S DRY CELL BATTERIES.



Fig. 5420.—No. 7.—POCKET FARADIC BATTERY.

This instrument is designed for the use of families as well as physicians, and is extremely handy, compact, durable and simple, in its mechanism. It is put up in a handsome hardwood box—8½ inches long by 4½ inches wide, and two inches deep—and furnished with a pair of conducting cords, one pair ebonite handles, and one pair hollow metal electrodes. The induction coil, giving three currents,—primary, secondary and combined,—is of superior make and finish, and has no equal anywhere in the uniformity and smoothness of its current.

The cells of this Battery will work 100 hours continuously, and cost 1½ cents per hour to operate. Each cell is secured in position on floor of its box by a vertical pin passing through it, and held there by the large set screw shown in cut.

Price of Battery complete.....	\$10 00 Net.
Charge for renewing and restoring cell-block.....	1 50 "

In this Battery we have met the want which every physician recognizes—an instrument of the type commonly known as the Pocket Battery—of beautiful finish, and low price, with every quality satisfactory to the user, and with all the trouble and nastiness of the wet cell entirely banished. This Battery is a genuine triumph in this direction, combining perfection in every detail, together with a permanently closed Dry Cell, which, in the use of the Battery, does not have to be touched or treated in any way. To set the Battery in operation, open the cover and turn the switch; closing the cover breaks the circuit. We are sure these points will appeal to the experience of every one who has used, or desires to use, a Pocket Battery.

DRY CELL BATTERIES.



**Fig. 5421—THE "LORD BALTIMORE"
FAMILY FARADIC BATTERY,
No. 7A. Price, \$8.00.**

A smaller instrument than the No. 7, but made with equal care. The current is not quite so strong as that supplied by the No. 7, but the same number of currents are furnished.

This instrument is put up in a finely-finished mahogany case, 5 x 4 x 2 inches.

The cost of operating this battery is a trifle less than 2 cents for each hour of actual service.

Fig. 5422—SHARP & SMITH'S NEW No. 73 ELECTRO-MEDICAL APPARATUS, WITH DRY BATTERY.

No Acids, Chemicals or Liquids. Complete, excellent and ALWAYS READY.

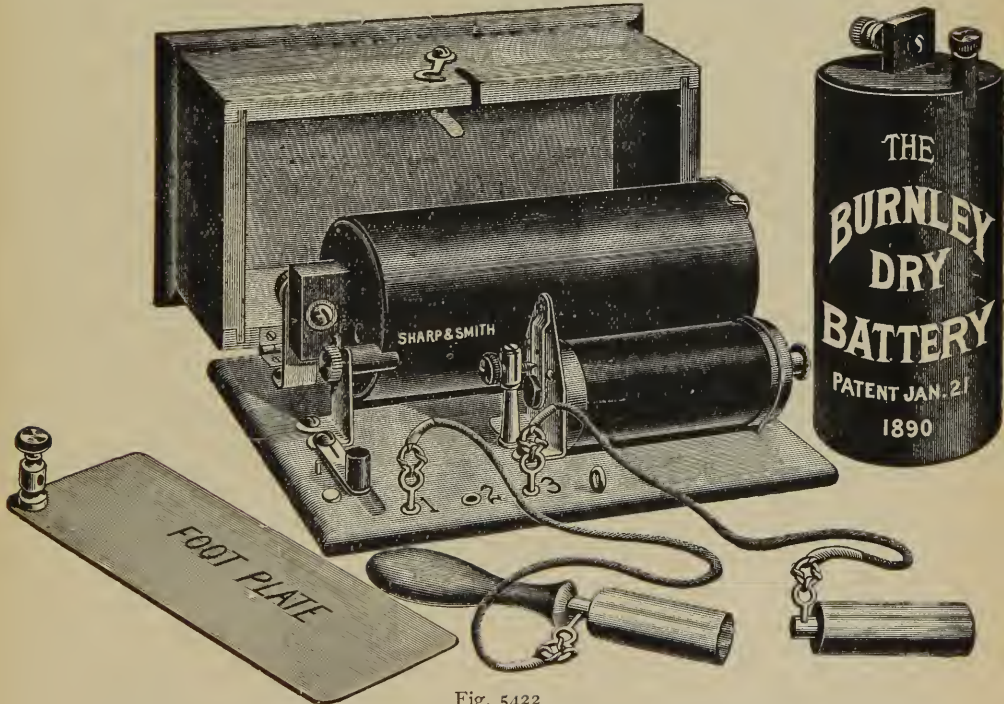


Fig. 5422

For doctor or patient this Electro-Medical Apparatus is the most convenient and reliable of any of the hundreds of forms ever introduced. It is reliable, because with its Dry Battery so much less care is necessary to avoid getting it out of order than is required with any other known form. The entire absence of acids, liquids or salts will be appreciated by any one who has ever had occasion to use a Medical Battery. The box when closed up may lie in any position on a table or shelf, or in the bottom of a carriage, without harm. *(Continued on next page.)*

DRY CELL BATTERIES.

(Continued from preceding page.)

The strength of the various currents ranges from those which are so mild as to be scarcely perceptible, to the most powerful that can be endured by a strong man.

The appliances furnished with the apparatus consist of 2 Metallic Tube Hand Electrodes, 2 Conducting Cords with tips, 2 Improved Sponge Electrodes, 1 Foot Plate Electrode, 2 Insulating Wood Handles for attachment to the two metallic hand electrodes, or to the two sponge electrodes, or to one of each. Moisten the sponges to use them, and have them as nearly dry as possible when put away in the box to close it.

Physicians prescribing applications of the Faradic Current for patients, personally, at home, or by nurse, under specific directions, will find much satisfaction in using this form of apparatus, inasmuch as from its simplicity and entire absence of acids or liquids it is peculiarly suited to the use of those who are entirely unfamiliar with the care and precautions necessary for handling the ordinary acid batteries.

The unusually complete and excellent set of Electrodes furnished with this instrument make it very convenient in a great variety of applications for the patient with or without assistance; for instance, in the use of the two Sponge Electrodes, one in each hand, or, having one of them clasped against any part of the body by means of an elastic, while the other attached to its insulating handle can be applied wherever desired. Or, when the foot-plate is used, and the Sponge Electrode applied from the other pole of the battery, and in a great many other combinations which would naturally suggest themselves from the fact of having the electrodes with which to make them.

PRICES.

No. 4 Apparatus, with Battery and Electrodes complete.	net, \$10 00
Extra Battery, per Cell	" 90
Sponge Electrodes, with 2 handles per pair,	" 1 25
Tube Hand Electrodes, with 1 handle	" " 90
Connecting Cords, 4 feet, with tips.	" " 50
Foot Plates. each,	" 50
Hair Brush Electrodes (extra)	" " 1 25

(The latter are much used for Headache)

The Burnley Dry Battery, which is used with this apparatus, being a standard staple commercial article made only in one size and shape, is easily obtainable at any Electrical Supply Store, or from us.

MICROSCOPES.

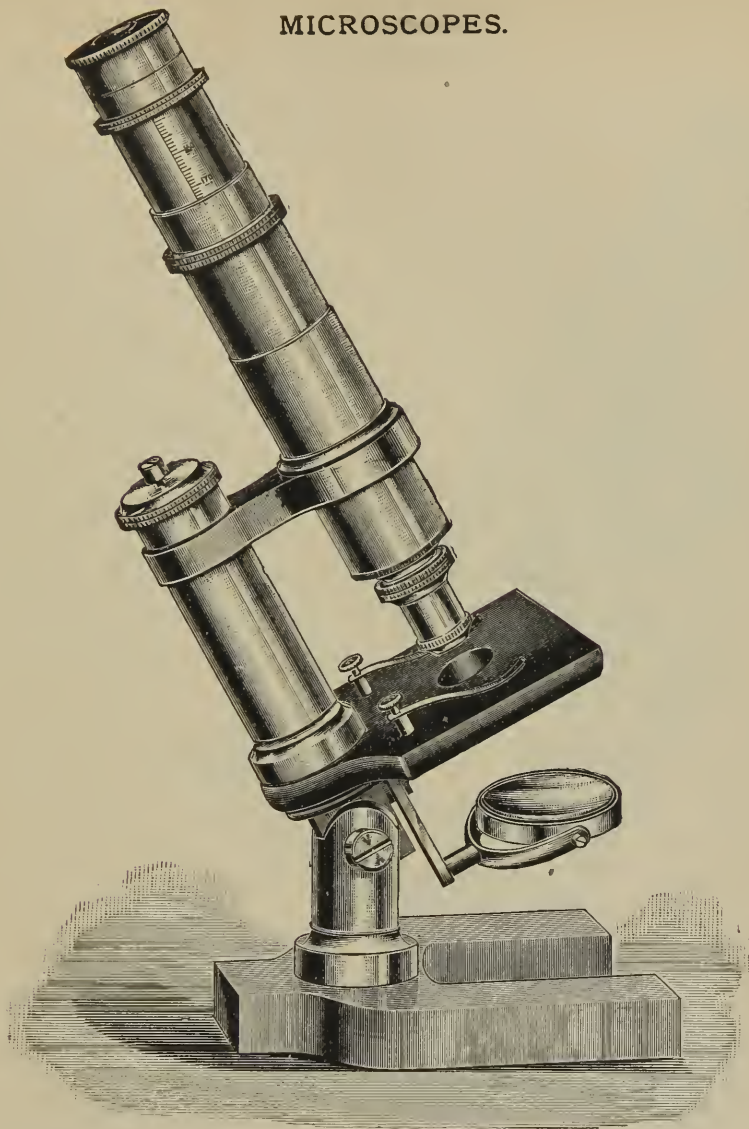


Fig. 5457

A—CONTINENTAL MICROSCOPE. (SMALL.)

The base of this stand has the horseshoe form, and is of japanned iron. Pillar is of brass; the stage is square and has spring clips, which are readily removable; a revolving diaphragm is attached to the under side of the stage, having four different size apertures. The mirror-bar is secured to the arm, and can be swung to any obliquity below the stage; the mirrors are plane and concave. Coarse adjustment is by sliding tube, and fine adjustment by micrometer screw acting on triangular bearing of the arm. Main tube is provided with draw-tube, which will allow extension of tubes to the long standard. - *Continued on following page.*

MICROSCOPES.

Continued from preceding page.

The instrument is made in two forms :

A With solid pillar and arm.

AA With joint for inclination.

Eyepieces are the Continental, objectives of Series I.

Upright polished case with receptacles for eyepieces and objectives accompanies the outfit.

A Stand with 1 eyepiece, any power \$18 00

A1 Stand with 1 eyepiece and $\frac{3}{8}$ in. objective 25 00A2 Stand with 1 eyepiece and $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 40 00A3 Stand with 2 eyepieces and $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 43 00A4 Stand with 2 eyepieces and 2 in., $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 49 00

AA Stand with 1 eyepiece, any power 20 00

AA1 Stand with 1 eyepiece and $\frac{3}{8}$ in. objective 27 00AA2 Stand with 1 eyepiece and $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 42 00AA3 Stand with 1 eyepiece and 2 in., $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 48 00AA4 Stand with 2 eyepieces and $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 45 00AA5 Stand with 2 eyepieces and 2 in., $\frac{3}{8}$ in. and $\frac{1}{2}$ in. objectives 51 00

Double nosepiece, brass finish, extra . . . 5 00

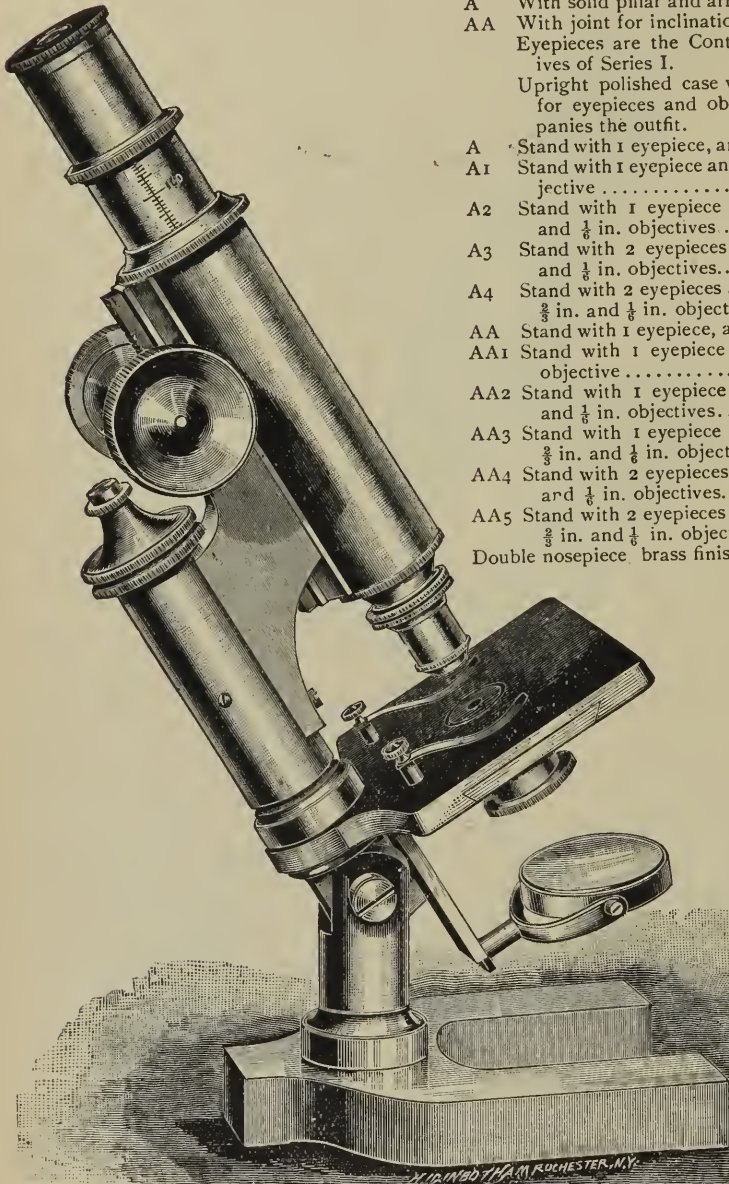


Fig. 5448

B B—CONTINENTAL MICROSCOPE.—See following page.

MICROSCOPES.

B—CONTINENTAL MICROSCOPE.—See preceding page.

(MEDIUM.)

This microscope is made of brass throughout, highly polished and lacquered. The base is of larger dimensions than any of the foreign instruments, and therefore more firm, particularly when the body is inclined. The stage is also of large size, thus allowing the use of culture slides without the danger of tilting; a groove is provided on its lower surface for the slide with cylinder diaphragms, for convenience called slide A. This slide may be replaced by another (slide B), carrying standard size sub-stage, arranged to be centered, provided with our dome diaphragm. To this may also be fitted any of our regular sub-stage accessories, particularly the series of sub-stage condensers. Fine adjustment is by large micrometer screw and works on the triangular bearing of the arm. The main tube has a draw-tube which, when contracted, gives short standard of tube length with double nosepiece. The draw-tube may be extended and is graduated in millimeters.

The instrument is made in two forms :

- B With joint for inclination and sliding tube for coarse adjustment.
 BB With joint for inclination and rack and pinion for coarse adjustment.

Eyepieces are the Continental, objectives of Series I.

Upright polished case, with receptacles for eyepieces and objectives, accompanies the outfit.

B	Stand with 1 eyepiece (any power).....	\$25 00
B1	Stand with 1 eyepiece and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives	47 00
B2	Stand with 1 eyepiece and 2 in., $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives	53 00
B3	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	50 00
B4	Stand with 2 eyepieces and 2 in., $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	56 00
B5	Stand with 2 eyepieces and $\frac{2}{3}$ in., $\frac{1}{8}$ in. and $\frac{1}{12}$ in. oil immersion objectives.....	95 00
B5	Stand with 2 eyepieces and 2 in., $\frac{2}{3}$ in., $\frac{1}{8}$ in. and $\frac{1}{12}$ in. oil immersion objectives..	101 00
BB	Stand with 1 eyepiece (any power).....	35 00
BB1	Stand with 1 eyepiece and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives	57 00
BB2	Stand with 1 eyepiece and 2 in., $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	63 00
BB3	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	60 00
BB4	Stand with 2 eyepieces and 2 in., $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives	66 00
BB5	Stand with 2 eyepieces and $\frac{2}{3}$ in., $\frac{1}{8}$ in. and $\frac{1}{12}$ in. oil immersion objectives	105 00
BB6	Stand with 2 eyepieces and 2 in., $\frac{2}{3}$ in., $\frac{1}{8}$ in. and $\frac{1}{12}$ in. oil immersion objectives..	111 00
	Slide B, carrying standard sub-stage ring, with dome diaphragm, extra	4 00
	Abbe condenser, 1.20 N. A., in mounting, No. 1678.....	14 00
	Abbe condenser, 1.42 N. A., in mounting, No. 1678.....	16 00
	Double nosepiece, brass finish, extra	5 00
	Triple nosepiece, brass finish, extra	9 00

For Table of Magnifying Powers, refer to page 856L.

MICROSCOPES.

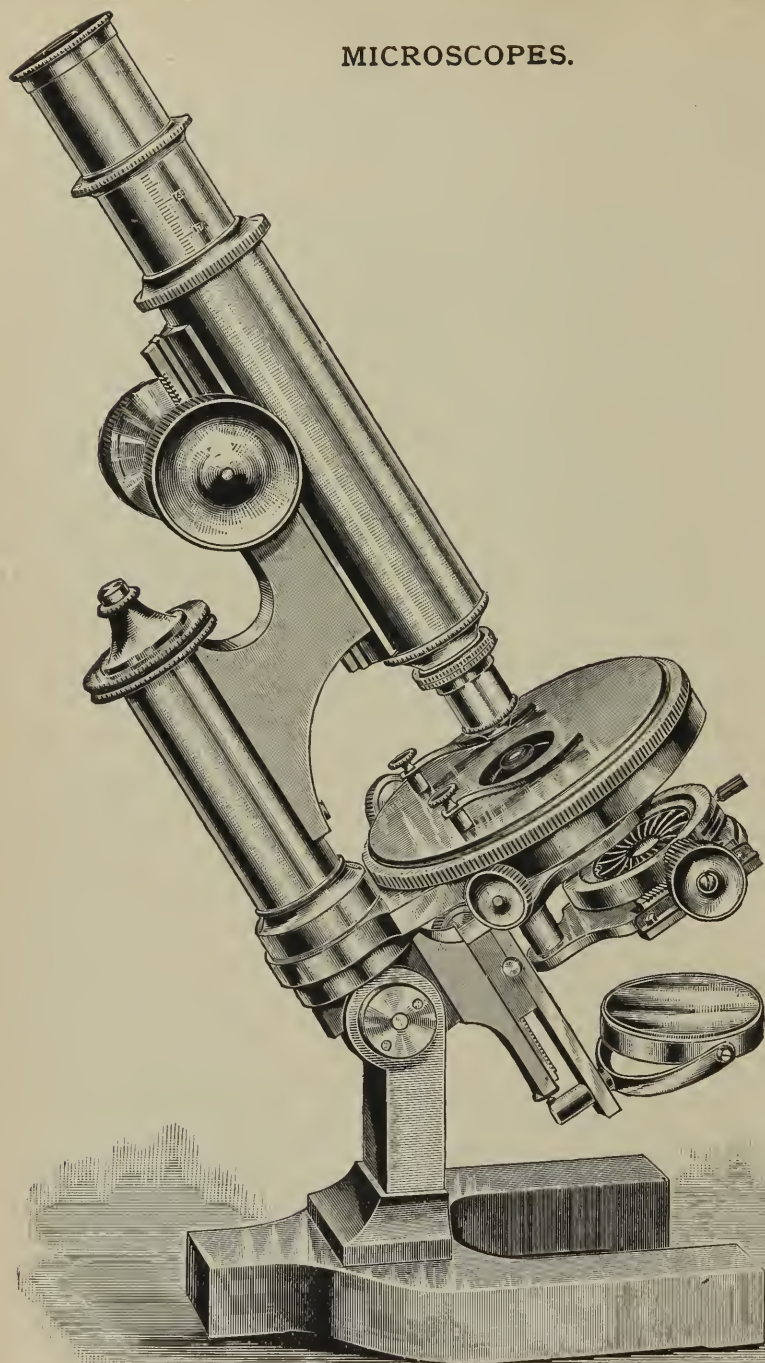


Fig. 5449

C C—CONTINENTAL MICROSCOPE.—See following page.

MICROSCOPES.

C—CONTINENTAL MICROSCOPE.—See preceding page.

(LARGE.)

This instrument is made entirely of brass; the base is of large dimensions and heavy, to secure extreme steadiness under manipulation in an inclined, upright or horizontal position; coarse adjustment is by rack and pinion; fine adjustment by large micrometer screw working on the triangular bearing of the arm; the head of the micrometer screw is graduated to 100 parts; an index point is provided. The main tube has a draw-tube which is graduated. When contracted, the tubes give short standard tube length with double nosepiece.

This instrument is made up in five forms:

- C Plain square stage with groove, fitted with slide and cylinder diaphragms. Swinging mirror-bar with adjustable plane and concave mirrors.
- CA Plain square stage as in C; sub-stage attachment, complete, No. 1684.
- CB Revolving stage with centering arrangement; swinging mirror-bar with adjustable plane and concave mirrors.
- CC (As in cut.) Revolving stage with centering arrangement; sub-stage attachment, complete, No. 1684.
- CD Mechanical stage, revolving, with graduations and vernier; rectangular movements with graduations; centering arrangement; sub-stage attachment, complete, No. 1684.

Eyepieces are the Continental, objectives of Series I. Upright polished case, with receptacles for eyepieces and objectives, accompanies the outfit.

C	Stand with 1 eyepiece (any power).....	\$ 55 00
C1	Stand with 1 eyepiece and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	77 00
C2	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	80 00
CA	Stand with 1 eyepiece (any power).....	80 00
CA1	Stand with 1 eyepiece and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.	102 00
CA2	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	105 00
CA3	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. objectives.....	111 00
CA4	Stand with 2 eyepieces and $\frac{2}{3}$ in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. oil immersion objectives.....	150 00
CA5	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in., $\frac{1}{8}$ in. and $\frac{1}{16}$ in. oil immersion objectives.....	156 00
CB	Stand with 1 eyepiece (any power).....	65 00
CB1	Stand with 1 eyepiece and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.	87 00
CB2	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.	90 00
CB3	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. objectives.....	96 00
CB4	Stand with 2 eyepieces and $\frac{2}{3}$ in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. oil immersion objectives.	135 00
CB5	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in., $\frac{1}{8}$ in. and $\frac{1}{16}$ in. oil immersion objectives.....	141 00
CC	Stand with 1 eyepiece (any power).....	90 00
CC1	Stand with 1 eyepiece and $\frac{2}{3}$ in., and $\frac{1}{8}$ in. objectives.	112 00
CC2	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.	115 00
CC3	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. objectives.....	121 00
CC4	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. oil immersion objectives.	160 00
CC5	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in., $\frac{1}{8}$ in. and $\frac{1}{16}$ in. oil immersion objectives.....	166 00
CD	Stand with 1 eyepiece (any power).....	130 00
CD1	Stand with 1 eyepiece and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	152 00
CD2	Stand with 2 eyepieces and $\frac{2}{3}$ in. and $\frac{1}{8}$ in. objectives.....	155 00
CD3	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. objectives.....	161 00
CD4	Stand with 2 eyepieces and $\frac{2}{3}$ in., $\frac{1}{2}$ in. and $\frac{1}{8}$ in. oil immersion objectives.....	200 00
CD5	Stand with 2 eyepieces and 2 in., $\frac{1}{2}$ in., $\frac{1}{8}$ in. and $\frac{1}{16}$ in. oil immersion objectives.....	206 00

For Table of Magnifying Powers refer to page 856L.

MICROSCOPES.

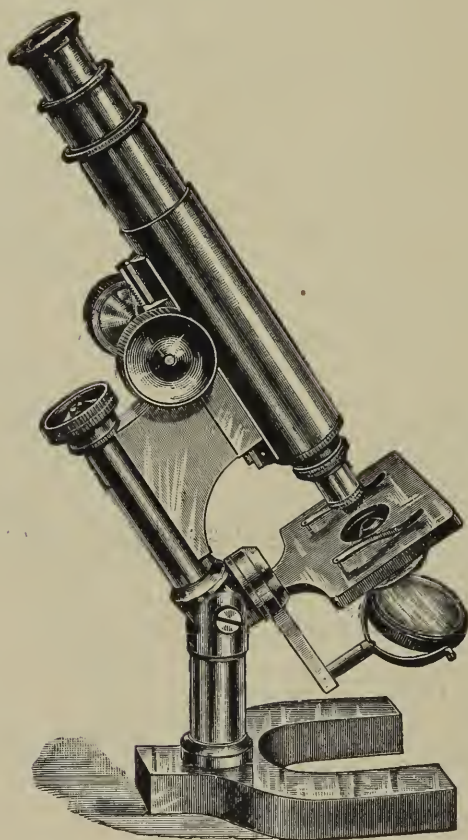


Fig. 5450

E E—HARVARD MICROSCOPE.

MICROSCOPES.

E—HARVARD MICROSCOPE.

The stand is made entirely of brass, with bronze pillar and arm. Although compact so as to allow its convenient use in an upright position on an ordinary table, it still gives sufficient range of adjustment for all ordinary work. The base is of the horseshoe form, with a projection at the back to give it steadiness when the body is inclined. Coarse adjustment is by a sliding tube in a cloth-lined sleeve, which gives an exceedingly smooth and firm movement; fine adjustment is by micrometer screw, with milled head of more than ordinary size, acting on our patent movement. The main tube also has a cloth lining, and is provided with a draw-tube graduated in millimeters, and with a mark indicating standard length. The stage is large, and provided with spring clips; our dome diaphragm is attached to its lower surface by a sub-stage. The mirrors are plane and concave, of large size, and swing with the mirror-bar to any obliquity below the stage, and above it for the illumination of opaque objects; they also have adjustment on the mirror-bar.

E Is arranged with joint for inclination of the body.

EE Is provided with rack and pinion for coarse adjustment, as well as with joint for inclination of the body.

Eyepieces are the Huyghenian, objectives of Series II. unless otherwise stated.

Polished case, with receptacle for eyepieces and objectives, with handle and lock, accompanies the outfit.

With every complete outfit (stand and objectives) we supply eyepiece micrometer No. 1734 free; this cannot be used on powers less than C or 1 in.

E	Stand with 1 eyepiece (any power).....	\$27 00
E1	Stand with 1 eyepiece and $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	50 00
E2	Stand with 1 eyepiece and 2 in., $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	56 00
E3	Stand with 2 eyepieces and $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	54 00
E4	Stand with 2 eyepieces and 2 in., $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives....	60 00
E5	Stand with 2 eyepieces and $\frac{3}{4}$ in., $\frac{1}{2}$ in. and $\frac{1}{4}$ in. oil immersion (Series III) objectives.....	99 00
EE	Stand with 1 eyepiece (any power).....	35 00
EE1	Stand with 1 eyepiece and $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	58 00
EE2	Stand with 1 eyepiece and 2 in., $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	64 00
EE3	Stand with 2 eyepieces and $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	62 00
EE4	Stand with 2 eyepieces and 2 in., $\frac{3}{4}$ in. and $\frac{1}{2}$ in. objectives.....	68 00
EE5	Stand with 2 eyepieces and $\frac{3}{4}$ in., $\frac{1}{2}$ in. and $\frac{1}{4}$ in. oil immersion (Series III) objectives.....	107 00
EE6	Stand with 2 eyepieces and 2 in., $\frac{3}{4}$ in., $\frac{1}{2}$ in. and $\frac{1}{4}$ in. oil immersion (Series III) objectives.....	113 00
	Abbe condenser, 1.20 N. A., in mounting, No. 1678, extra.....	14 00
	Abbe condenser, 1.42 N. A., in mounting, No. 1678, extra.....	16 00
	Double nosepiece, brass finish extra.....	5 00
	Triple nosepiece, brass finish, extra.....	9 00

For Table of Magnifying Powers refer to following page.

LINEAR MAGNIFYING POWERS OF OBJECTIVES AND EYEPIECES.

STANDARD TUBE LENGTH, 8.5 in., 216 mm.								
OBJECTIVES.		3 in.	2 in.	1½ in.	1 in.	¾ in.	½ in.	¼ in.
EYEPIECES	2 in. (A)	15	25	33	40	50	70	176
	1½ in. (B)	21	35	42	55	70	102	247
	1 in. (C)	30	50	66	80	100	140	353
	¾ in. (D)	42	70	84	110	140	205	495
	½ in. (E)	60	100	132	160	200	280	705

STANDARD TUBE LENGTH, 8.5 in., 216 mm.							TUBE LENGTH, 160 mm.			
OBJECTIVES.		⅓ in.	⅕ in.	⅜ in.	½ in.	⅞ in.	2 in.	⅝ in.	⅓ in.	1½ in.
EYE-PIECES	2 in. (A)	210	265	360	450	570	690	18	29	135
	1½ in. (B)	295	385	540	660	845	1025	26	42	260
	1 in. (C)	420	530	720	900	1140	1380	37	58	370
	¾ in. (D)	590	770	1080	1320	1690	2050	52	84	520
	½ in. (E)	840	1060	1440	1800	2280	2760	74	116	740

INSTRUCTIONS FOR USING EYEPIECE MICROMETER.

As the eyepiece micrometer is not compared directly with the object itself, but only with the image of it formed in the focus of the eyepiece, it is only when the exact proportion between the size of the object and that of its image is known, that measurements of the object can be readily determined by the eyepiece micrometer.

This proportion depends upon : 1st, the focus of the objective ; 2d, the distance of the image from the object ; 3d, the focus and the place of the field-lens when the latter is situated between the objective and the image.

As these relative conditions are not of equal value in all microscopes, and consequently the relative sizes of the images, as formed by different objectives of the same rating, are not always the same, these sizes have to be ascertained for each microscope and objective separately.

To reach this result, a reliable stage micrometer should be used as an object, and its image accurately measured with the eyepiece micrometer.

The figures designate the proportion of the linear measure of the object, the latter being taken as 1.

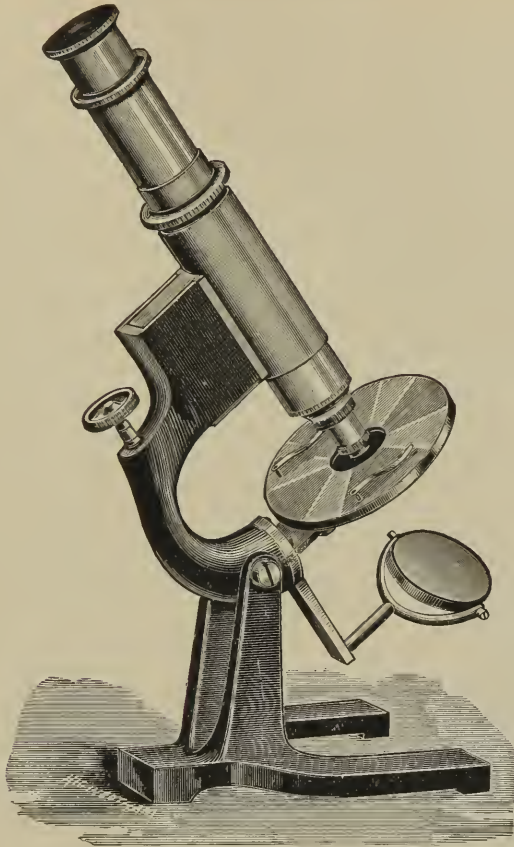
The actual size of any object is therefore obtained when the size of its image, which is obtained by direct measurement by means of the eyepiece micrometer, is divided by the figures so obtained.

For adjustable objectives, the figures are intended for close adjustment.

In instruments having draw-tube, make measurements when tube is at standard length.

25.4 mm.=1 in.

MICROSCOPES.



(Cut one-third of actual size.)

Fig. 5451.—No. 505-A.—BAUSCH & LOMB'S STUDENT MICROSCOPE.

This Microscope is the result of an effort to reach the utmost efficiency and simplicity at an exceedingly low price. Everything pertaining to it is well made and finished, and we feel sure will fill a popular demand.

In order to make up a complete low-priced outfit, we have given special attention to the optical parts, and as a result have devised two "Special" objectives, 1 inch 15° and $\frac{1}{4}$ inch 65°, which, although low priced, may be relied upon as giving as good results as can be obtained with such angular aperture. They are perfectly achromatic, with penetration and good resolving power, the $\frac{1}{4}$ showing the lines on *P. Angulatum*, while it has very long working distance. Where price, however, is not the principal consideration, we would invariably recommend the selection of our higher grade objectives.

The stage has spring clips; on its lower surface is attached a revolving diaphragm, and it is also provided with a screw, to which a sub-stage may be attached. The mirror is concave and is attached to a bar, the axis of which lies in the plane of the stage, so that illumination may be brought on the object from any point below or above the stage. The mirror-bar is also provided with sliding adjustment for mirror, so that proper illumination of the object may be obtained.

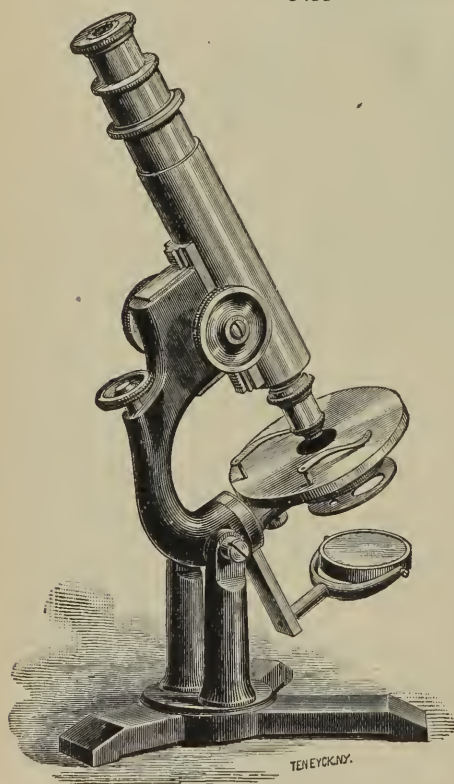
In No. 505-A the coarse adjustment is by sliding tube in cloth-lined sleeve. No. 505-B has a well made and delicate rack and pinion for coarse adjustment. The fine adjustment in both instruments is by delicate micrometer screw acting on our patent fine adjustment. The main tube has cloth lining, and is provided with draw tube, by which means standard optical tube-length may be used.

See following page for prices of above.

MICROSCOPES.

FIG.		NET.
*545 ¹	No. 505 A, Stand with one eye-piece, in cherry case.....	\$16 00
*545 ¹	No. 505 B, Stand as above with rack and pinion for coarse adjustment.....	23 00
*545 ¹	No. 506 A, No. 505 A with 1 inch and $\frac{1}{4}$ inch "Special" objectives; magnifying power 80 to 375 diameters.....	30 00
*545 ¹	No. 506 B, No. 505 B with 1 inch and $\frac{1}{4}$ inch "Special" objectives, magnifying power, 80 to 375 diameters.....	37 00
*545 ¹	No. 507 A, with No. 505 A with 1 inch (No. 604) and $\frac{1}{4}$ inch (No. 608 or 609) magnifying power, 80 to 375 diameters.....	38 00
*545 ¹	No. 507 B, No. 505 B with 1 inch (No. 604) and $\frac{1}{4}$ inch (No. 608 or 609) magnifying power, 80 to 375 diameters.....	43 00
545 ²	Sub-stage ring, to receive any sub-stage accessories, extra.....	1 00
545 ³	Sub-stage with revolving diaphragm, extra.....	2 00
545 ⁴	Glass stage and slide carrier, extra.....	5 00

No. 5455.—MODEL MICROSCOPE.



(Cut one-third actual size).

Fig. 5455—No. 520.—Bausch & Lomb's Model Microscope.

We have constructed this microscope in compliance with a generally expressed demand for a simple, low-priced and well-made instrument, which is adapted to every grade of work, and claim that in it we have a model which possesses, in an eminent degree, these qualities. It is of chaste design, its parts are all calculated to bear the strain of every day work, and on this account, and because of its simplicity, it may be used by inexperienced hands without detriment or injury to it.

This microscope especially recommends itself by requiring a smaller pecuniary outlay than any of similar construction, and may be supplied with valuable additions, such as our revolving and glass stages, mirror bar with adjustable mirror and sub-stage, all of which greatly increase the efficiency, and add but little to the price of the instrument.

The tripod base, pillars and arm, are neatly japanned; the axis is arranged with strong bearings to allow inclination of the body to any angle. Coarse adjustment is by perfect rack and pinion, provided with tightening screws; fine adjustment by a delicate micrometer screw, acting on our patent movement.

MICROSCOPES.

The stage is of brass, circular in form, very thin to allow great obliquity, but of sufficient strength to be firm under manipulation, with detachable spring clips. Attached to its lower side is a sub-stage ring and revolving diaphragm, both of which may be removed.

The main tube has a draw tube, which is provided with the society screw to receive low power objectives, amplifier or analyzer of polariscope. Plane and concave mirrors are adjustable on the mirror bar, which is a feature possessed by few low-priced instruments, although it is of considerable importance, from the fact that a change in the distance of the light requires a corresponding adjustment of the mirrors. The mirror bar swings on a large bearing (the axis of which lies in the plane of the stage) to any obliquity below and above the stage, the latter for the illumination of opaque objects.

Fig. 5455, No. 520. Stand, with any of our Huyghenian eye-pieces, in upright polished case, with handle and lock, drawer for accessories, and receptacles for eye-pieces and objectives	\$25 00 net.
Fig. 5455, No. 521. The above with two objectives, 1 inch, (No. 604), and $\frac{1}{4}$ inch (No. 608 or 609), and camera lucida, pliers, slides and covers.....	45 00
Revolving stage, with removable spring clips, extra.....	5 00 "
Improved glass stage with slide carrier, which slips over either plain or revolving stages, extra.....	5 00 "
Graduated mirror bar, with mirror and sub-stage (both adjustable) same as that used on Investigator, in place of that accompanying stand, extra.....	5 00 "

Fig. 5456—No. 530.—PHYSICIANS' MICROSCOPE.

This instrument has enjoyed a popularity since its first introduction. It has from time to time been improved, and within a year has been entirely remodeled, although its original features are all retained. Under all these improvements it has remained at the same price, and even now, although considerably more valuable than formerly, we have decided to make no change. We believe that we are therefore in a position to claim that no instrument of equal efficiency is offered for the price. It is firm, compact, and will give the various adjustments, and will permit the use of such accessories as modern examinations require.

The base is japanned and of neat design. Pillar and arm of bronze, connected by a well fitting joint, for inclination of the body to any angle. Coarse adjustment is by rack and pinion, giving a long range; fine adjustment by micrometer screw acting on our patent movement; main tube has drawn tube provided with society screw.

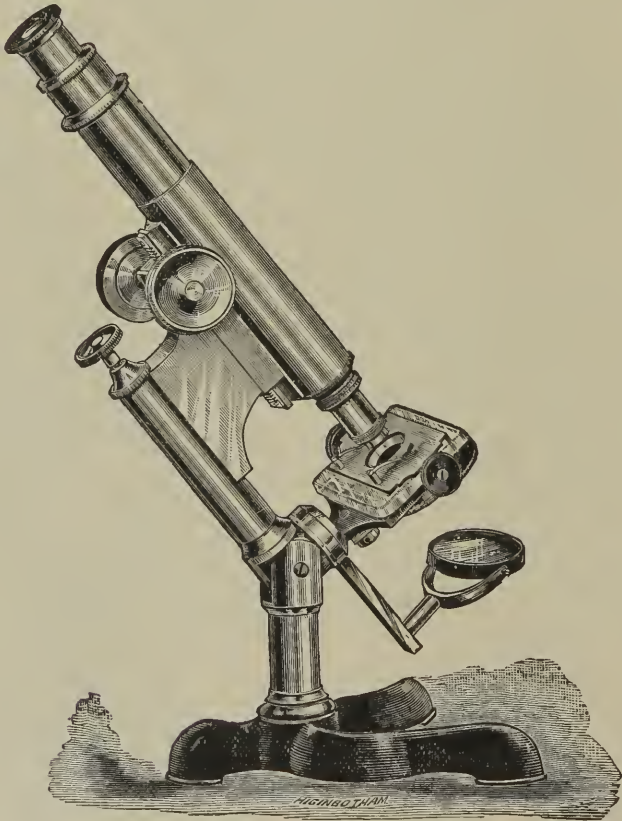
The stage consists of our *square glass* stage and slide carrier attached to a firm projecting fork, to which is also attached the sub-stage. The latter may be centered or entirely removed, and receives the revolving diaphragm and accessories. The plane and concave mirrors are adjustable on the mirror bar, and this swings to any obliquity below the stage and above it for the illumination of opaque objects, on a center in the plane of the slide carrier.

We furnish with this instrument, at the choice of the purchaser, either the base described above or the brass base of the Harvard microscope; unless especially mentioned however, we always send the japanned base.

MICROSCOPES.

PHYSICIAN'S MICROSCOPE.

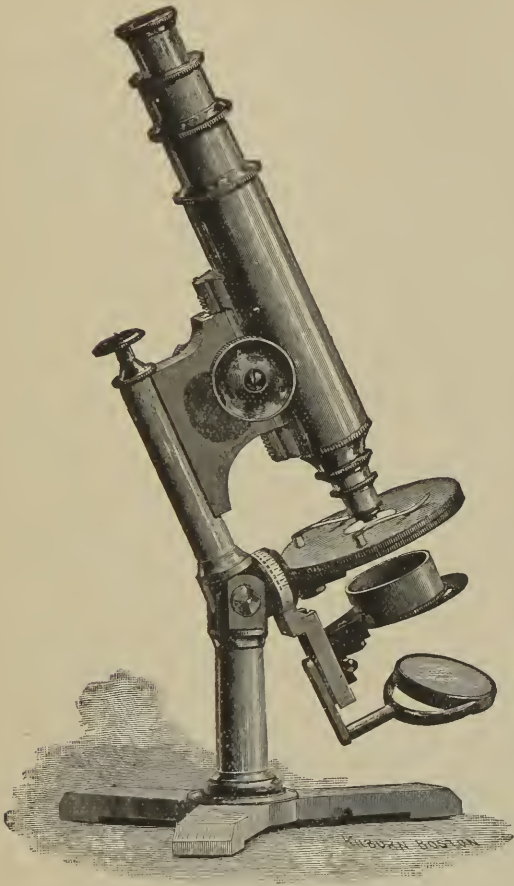
- FIG.
5456 No. 530—Stand with any of our Huyghenian eye-pieces, in upright polished case, with handle and lock, drawer for accessories, and receptacles for eye-pieces and objectives.....\$40 00 Net.
- 5456 No. 531 { The above with eye-pieces A (No. 700) and C (No. 702), the latter arranged with slot for micrometer.
Objectives $\frac{3}{4}$ inch (No. 605), and $\frac{1}{8}$ inch (No. 610 or 611).
Camera lucida, eye-piece micrometer, pliers, slides and covers.
Magnifying powers, with tube at full length, 50 to 485 diameters..... 65 00 "
The above, when double nose-piece is ordered with it, extra..... 5 00 "



(Cut one-third actual size).

Fig. 5456—No. 530—Bausch & Lomb's Physician's Microscope.

MICROSCOPES.



(CUT ONE-THIRD ACTUAL SIZE).

Fig. 5457.—No. 540.—Bausch & Lomb Investigator Microscope.

Fig. 5457.—No. 540.—INVESTIGATOR MICROSCOPE.

In this stand we confidently claim to have reached a higher degree of perfection than is possessed by any other approximating it in price. It combines, in a moderate-priced instrument, the features of a first class and high priced stand, at no sacrifice of its working qualities. The different parts are ingeniously combined, are firm and strong, and in the parts subject to friction we have introduced, as much as possible new compensating bearings, which enable the instrument to endure any amount of work and still retain smooth and reliable movements. Working microscopists will understand the value of this quality. When contracted, it stands but eleven inches high, but can be extended to eighteen inches.

The base is of brass, and has the tripod form; pillar and arm of brass, connected by a solid joint, which allows inclination of the body to any angle; rack

and pinion for coarse adjustment, fine adjustment by our patent frictionless motion; main tube with two draw-tubes, which is an entirely new feature in microscopes and is an unquestionable improvement. It permits the use of standard length of tube for quick adjustment in outside tube, same as in instruments without rack and pinion adjustment; the same for any low power objective and the use of amplifier in either combination. The outside tube has a broad gauge screw, and adapter with society screw. The stage lies in the same plane as center of movement for mirror, is of brass and has concentric, revolving motion with removable clips. It is thin to allow great obliquity, and as it rests upon a strong projecting arm, is perfectly firm under any manipulation

CONTINUED ON FOLLOWING PAGE.

MICROSCOPES.

The mirror bar swings with a perfectly easy but firm motion, upon one bearing to any obliquity below, and above the stage for the illumination of opaque objects, and has affixed to it a secondary bar, to which the mirror is attached, and which allows the separate use of the latter in any position of the sub-stage. It is provided with a sliding arrangement, whereby the mirror may be moved to and from the object. The mirrors are plane and concave, and of large size. The sub-stage is adjustable along the mirror bar and entirely removable. It contains a diaphragm which may be brought directly under the stage. The ring is of standard size, and is easily centered by a set screw. Steel pin for centering stage and sub-stage accompanies the instrument.

- Fig. 5457 No. 540.—Stand, with any of our Huyghenian eye-pieces, in upright polished case with handle and lock, drawer for accessories, and receptacles for eye-pieces and objectives.....\$45 00 net.
- 5457 No. 541. { The above with eye-pieces A (No. 700) and C (No. 702) the latter arranged with slot for micrometer.
- Objectives $\frac{3}{4}$ inch (No. 605) and $\frac{1}{2}$ inch (No. 610 or 611).
- Camera lucida, eye piece, micrometer, pliers, slides and covers
- Magnifying powers 35 to 600 diameters.... 70 00 net.
- The above with improved glass stage and slide carrier, extra..... 5 00 "
- The above when double nose piece is ordered with it, extra..... 5 00 "

Fig. 5458. No. 545.—UNIVERSAL MICROSCOPE.

In this instrument we have followed the general construction of the Investigator, as this has proved exceedingly popular. It is however larger and heavier, with a number of new features which are enumerated in the description. The various compensating bearings which obviate friction and retain smooth movements under the most severe usage, have also been applied to it. It was made in answer to a popular demand, is elegant in design, and of the best possible work and finish. It is, as its name implies, an instrument which is universal in its application to all microscopic work.

The base is of a tripod form, and made of brass; it has on its lower surface three soft rubber pads, and is sufficiently heavy to sustain the instrument firmly at any inclination of the body. The brass pillar is large and heavy, and connected by joint for inclination of the arm. The coarse adjustment is by rack and pinion and of sufficient range to admit of the use of the lowest power objectives; the fine adjustment is by micrometer screw acting on our patent frictionless motion. The main tube has two draw tubes, by which a considerable range in length may be attained; they may be contracted to less than the standard, to decrease the height of the instrument when used in an upright position, and may be extended beyond it to increase the magnifying power; both draw tubes have society screw, and the main tube has broad gauge screw and adapter for society screw. The stage has concentric revolving motion with removable spring clips, and its upper surface lies in the same plane as center of mirror bar movement and joint for inclination; it is thin to allow the greatest obliquity, but firm under any manipulation.

MICROSCOPES.

The mirror and sub-stage bars move independent of one another or together, and while the mirror bar swings to allow the use of the mirror at any possible angle below or above the stage, the sub-stage bar revolves completely around it and may be placed between the stage and the arm, where various illuminating accessories may be used; in this position the sub-stage may also be entirely removed, which leaves the mirror alone in its relative position to the stage; the mirrors are of large size, and both these and the sub-stage are adjustable on their respective bars; the circular bearings of these are large, and are graduated to degrees and silvered. A steel pin for centering stage and sub-stage accompanies the instrument.

Fig. 5458—No. 545.

Stand, with any of our Huyghenian eye-pieces, in polished case, with handle and lock, drawer for accessories and receptacles for eye-pieces and objectives, net, \$55 00.

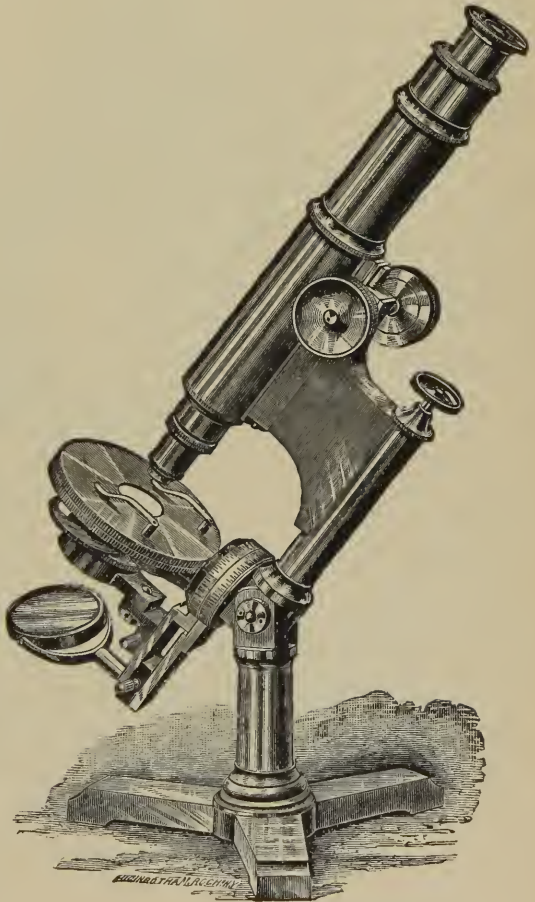
Fig. 5458—No. 546.

The above with eye-pieces A (No. 700), and C (No. 702), the latter with slot for micrometer. Objectives $\frac{3}{4}$ inch (No. 605), and $\frac{1}{2}$ (No. 610 or 611). Camera lucida, eye-pieces, micrometer, pliers, slides and covers. Magnifying powers, 35 to 600 diameters, net, \$80 00.

The above with improved glass stage and slide carrier, which fastens to the brass stage extra, net, \$5 00.

The above with rack and pinion adjustment to the sub-stage, extra, net, \$15 00.

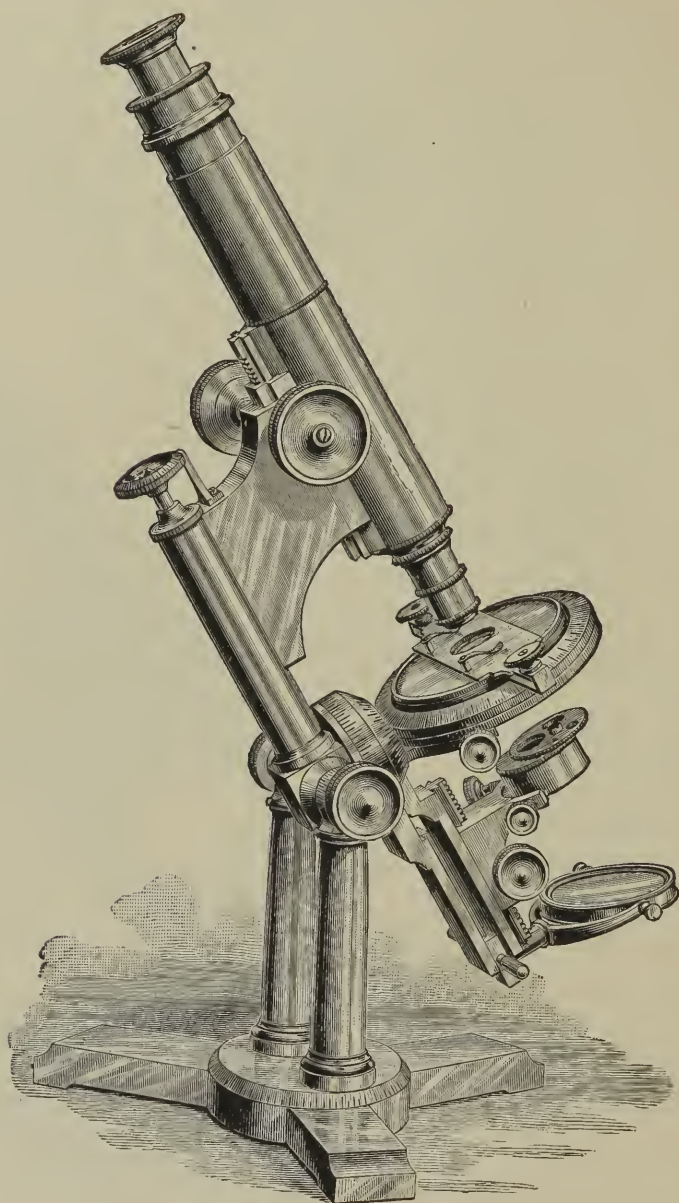
The above with centering adjustments by micrometer screws to either stage or sub-stage, extra for each, net, \$15 00.



(CUT ONE-THIRD ACTUAL SIZE.)

Fig. 5458. No. 545.—Bausch & Lomb Universal Microscope.

MICROSCOPES.



5459

(Cut one-third actual size.)

Fig. 5459.—No. 560. Bausch & Lomb Professional Microscope.

MICROSCOPES.

Fig. 5459.—No. 560.—PROFESSIONAL MICROSCOPE.

The design of this instrument is the result of studies covering a long period, and possesses all the features which our experience and knowledge of the wants of the public have been able to suggest. It is chaste and elaborate in all its details, and possesses a number of new features which enhance its value and which we believe entitle us to the claim that it is superior to any instrument designed for the same purpose.

It is constructed entirely of brass and stands about 18 inches high, when ordinarily in use. The upper part of one pillar is graduated and forms a valuable index for the point of illumination, when the body must be brought to the upright position, in changing immersion objectives. The coarse adjustment is by rack and pinion, the latter having specially large milled heads; the fine adjustment, by our patent frictionless motion; the milled head of the micrometer screw is graduated. The main tube has draw-tube and is provided with adapter having society screw; it has the same diameter as the sub-stage, and thus permits the use of eye-pieces as condensers.

The mirror and sub-stage bar are separate and move independent of one another. Their axis, as well as the axis for inclination, are in the plane of the stage, so that when the body is inclined to the horizontal position, the center of the stage is in the axis of all the revolving parts. Both bars move freely in a circle around the stage and above it as far as the arm, and are provided with large graduated circles reading to degrees. They are arranged with stops which act when they are in line with the body, and move simultaneously when the arm on the mirror is placed in a recess in the sub-stage bar provided for it. The mirrors are plane and concave, of large size, and are adjustable along the mirror-bar, two milled heads being provided for convenience. The mirror frame may be replaced by a candle holder, for measuring the angular aperture of objectives. The sub-stage is of standard size, and is supplied with our patent Iris diaphragm; its distance from the object may be varied by rack and pinion movement, and may be entirely removed. *It is provided with new centering adjustment.*

The stage is $4\frac{1}{2}$ inches in diameter and is graduated to degrees on its beveled edge. It revolves upon a strong ring, which in turn is firmly held by a projecting arm. Three steel springs give it tension and insure its durability. These springs are arranged with slots, by which, after they are withdrawn from their recess, the stage may be removed. It is as thin as is consistent with firmness to allow great obliquity. The glass stage and slide-carrier is attached by a bayonet catch after removing the stage-plate. The centering adjustment of the stage as well as the sub-stage is effected by a new device which overcomes the difficulties of the methods hitherto used. Two screws, acted upon by two milled heads, promptly carry the stage to any point, where it is firm without requiring the use of binding screws.

This instrument is furnished in polished case, with drawer, receptacles for eye-pieces and objectives, handle, lock and key.

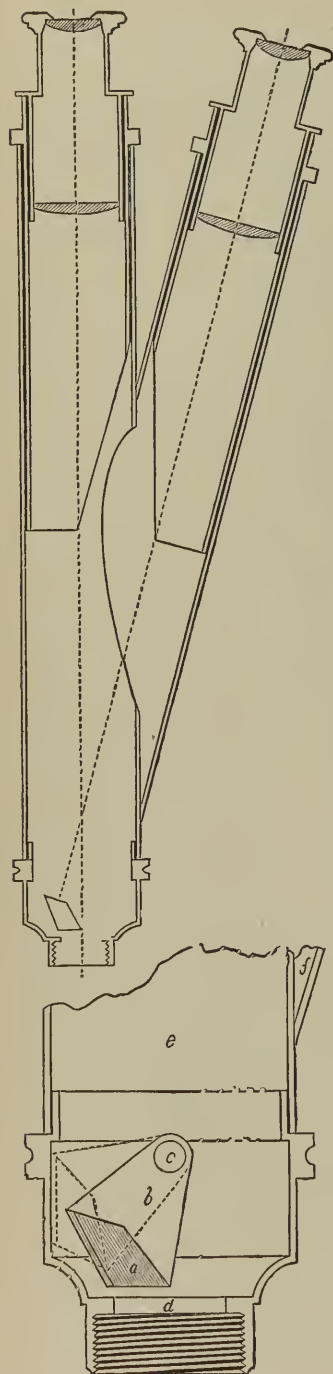
Fig. 5459, No. 560 Stand, with any two of our Huyghenian eye-pieces ^{NET.} \$135 00

Fig. 5459, No. 561	{	Stand, with eye-pieces A (No. 700), B (No. 701), C (No. 702), D (No. 703) either of the latter two with slot for micrometer.	
		Objectives 2 inch (No. 602), $\frac{3}{4}$ (No. 605), $\frac{1}{2}$ (No. 610 or 611), $\frac{1}{8}$ (No. 612).	
		Camera Lucida, eye-piece micrometer, pliers, slides and covers.....	185 00

MICROSCOPES.

BINOCULAR MICROSCOPES.

(PATENTED FEB. 12, 1884)



The purpose of the binocular microscope is to give a stereoscopic vision of objects whereby their form, relative distance and position of the various parts are most plainly seen. The effect is striking and is so totally different from the image in the monocular, that it can only be fully appreciated after it has been observed. Different methods for accomplishing the same purpose have been used, but the one in most general use is that devised by Mr. Wenham; by this plan the rays coming from the objective are equally divided, one-half of them passing through the vertical tube without alteration, while the other half is reflected by the interposing prism, thus giving almost equally illuminated field in both eye-pieces. The prism is mounted in a sliding box which is fitted to the nose-piece, and by which it may be put in its proper position or partially withdrawn. The great advantage of this system is that the instrument may be used as a monocular by withdrawing the prism; but in this respect it is open to serious criticism, especially of late years, in that the size of the prism and its mountings are limited by the internal diameter of the nose piece and so decreases the opening for the passage of rays, that many of the advantages of good objectives have been lost. Provision has lately been made to remove the nose-piece altogether when used as a monocular, and replace it with one which is free from obstruction; this however consumes time, and is not always practical.

For some time it has been our purpose to obviate these difficulties, and we have succeeded in devising a number of improvements of which we have adopted the one described below; it is at once the most simple and effective. It is contained in the nose-piece which is attached to the tube; the prism, instead of being mounted in a sliding box, is fixed in a swing carriage, *b* of which the axis is in *c*. The carriage *b* is fixed to the steel spindle *c*, which in turn passes through a sleeve in the nose-piece, and is provided with a milled head,

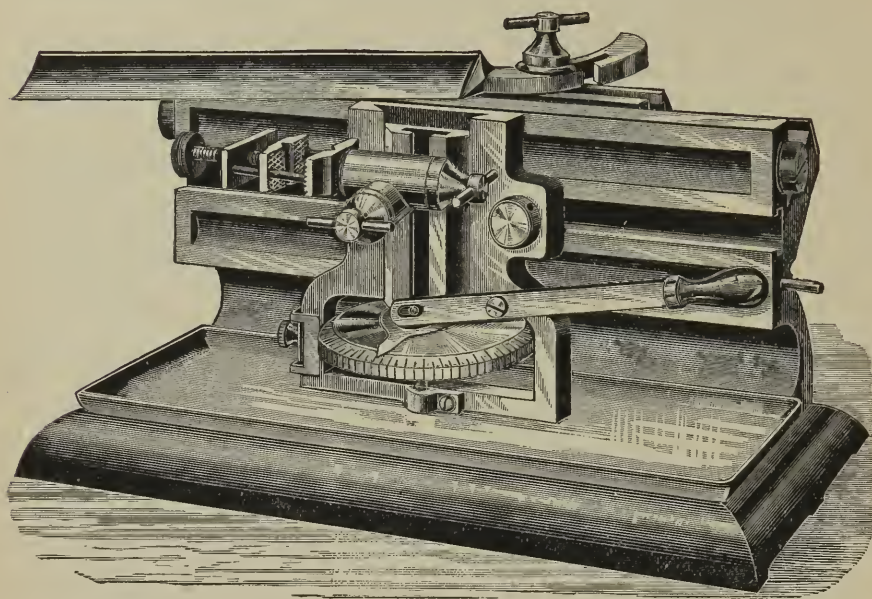
by which it is turned; the spindle and sleeve are arranged with stop-pin to limit the motion of the prism; e is the vertical, and f the oblique tube. As the posterior system of any objective with society screw does not exceed 15 m. m., we have made the opening d in the nosepiece of this size. When the prism a is in position for binocular vision, as shown in full lines, all the rays coming from the objective will be utilized, whereas when the instrument is used as a monocular and the prism is swung to the side of the tube, as shown in dotted lines, the opening d is left without obstruction. In addition to this advantage, the fittings are all close, so that there is no opportunity for the dust to enter, and being cylindrical, there is practically no wear. The draw-tubes are provided with adjustment which works them simultaneously, and accommodates eyes different distances apart. A tightening screw is also provided, whereby the tubes may be fixed at any point at which they are set.

Beside the above advantages, this form of binocular and the arrangements of the prism permit the use of higher power objectives than is the case in others. Thus a $\frac{1}{4}$ inch objective gives an excellent stereoscopic effect, while a $\frac{1}{8}$ may be made to do so, with some practice. This is of considerable importance in all cases where the above powers are required.

FIG.			NET.
5455	No. 520 B	Model Stand, with binocular body, one pair of eyepieces.....	\$45 00
5455	" 521 B	Model Microscope complete, with binocular body, one pair of eyepieces.....	65 00
5456	" 530 B	Physician's Stand, with binocular body, one pair of eyepieces.....	60 00
5456	" 531 B	Physician's Microscope complete, with binocular body, two pairs of eyepieces.....	90 00
5457	" 540 B	Investigator Stand, with binocular body, one pair of eyepieces.....	65 00
5457	" 541 B	Investigator Microscope complete, with binocular body, two pairs of eyepieces.....	95 00
5458	" 545 B	Universal Stand, with binocular body, one pair of eyepieces.....	75 00
5458	" 546 B	Universal Microscope complete, with binocular body, two pairs of eyepieces.....	105 00
	550 B	American Concentric Stand, with binocular body, one pair of eyepieces.....	115 00
	551 B	American Concentric Microscope complete, with binocular body, two pairs of eyepieces.....	145 00
5459	" 560 B	Professional Stand, with binocular body, adjustment by rack and pinion, one pair of eyepieces..	175 00
5459	" 561 B	Professional Microscope complete, with binocular body, adjustment by rack and pinion, two pairs of eyepieces, and extra C. and D., one arranged with micrometer.....	225 00

Send for our Pamphlet describing Objectives and Eyepieces, and Microscopes in general.

MICROSCOPIC DISSECTING INSTRUMENTS.



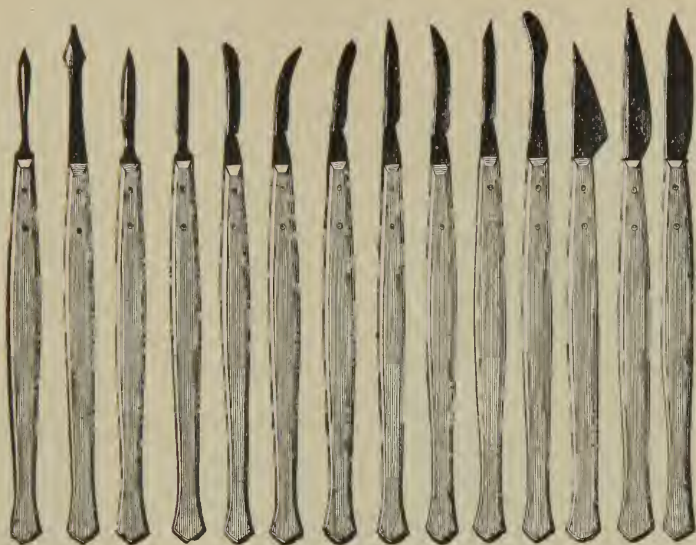
(Pat. September 8, 1885.)

Fig. 5460.—No. 1243.—LABORATORY MICROTOME.

No. 1243	Laboratory Microtome, small, without knife, as described...	\$32 50
" 1244	Knife for same, in morocco case.....	8 00
" 1245	Both, when taken together.....	40 00
" 1246	Laboratory Microtome, large, without knife, as described...	38 00
" 1247	Knife for same, in morocco case.....	10 00
" 1248	Both, when taken together.....	47 50
.	Polished Case, with lock and key, strap for carrying, and removable cover, for either size, extra.....	2 50

Improvements in the methods of cutting accurate and reliable sections have, for a long time, engaged the attention of workers and manufacturers, and of late a fresh impetus has been given the subject in the new principles which are involved in those recently constructed at several prominent seats of learning in Europe. They have been made of various forms, and great ingenuity and skill have been shown in their construction. Our first endeavor in this direction was the independent construction of an instrument which has now been generally adopted, and which forms the basis of our present form. At an early date it was, however, noticed that it was open to a number of serious objections. Since then we have given the subject considerable study, and with the assistance of several prominent histologists, we have succeeded in perfecting an instrument which combines the approved advantages of the various styles, and possesses new and important improvements not contained in others. A large number are now in use.

MICROSCOPIC DISSECTING INSTRUMENTS.



5461

FIG.		
*5461	Dissecting Knives, each.....	\$0 75
5462	“ Needles, straight or bent.....	15
5463	“ Needle-holder, with clamp.....	50



5464



5469



5470

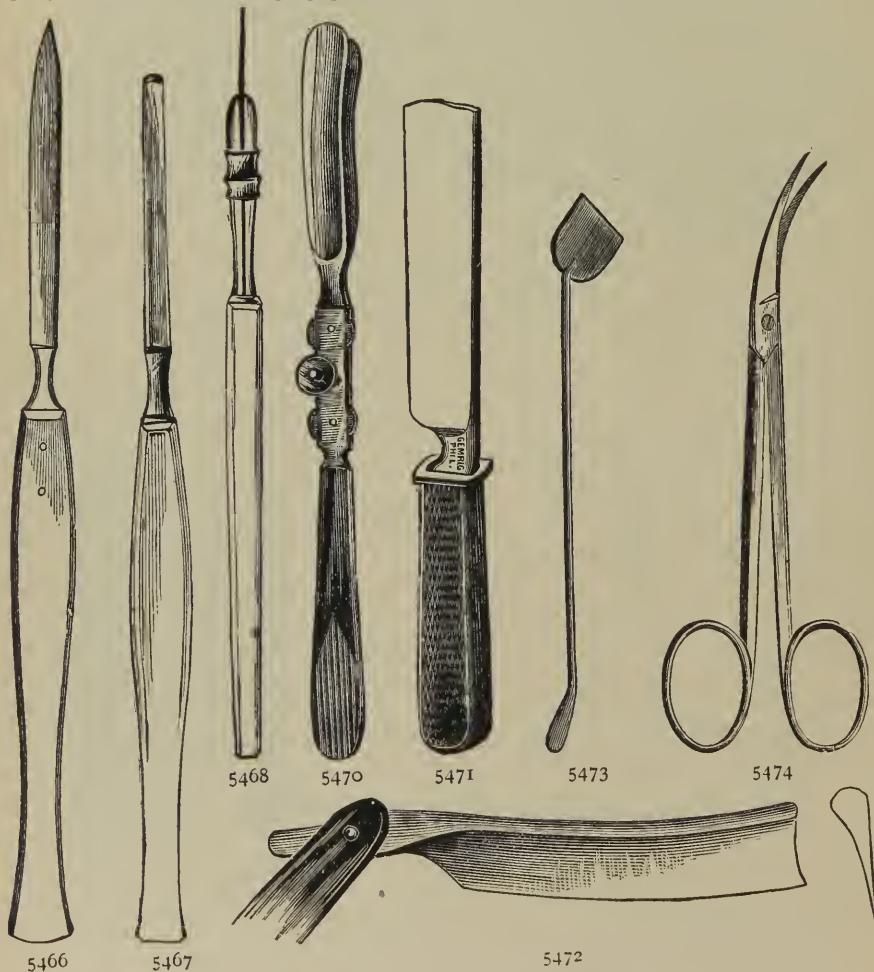
FIG.		
*5464	Dissecting Scissors.....	\$0 50 to \$0 75
*5469	Dissecting Forceps, Fine Steel.....	each 75
*5470	“ “ “ “	“ 1 00

MICROSCOPIC DISSECTING INSTRUMENTS.

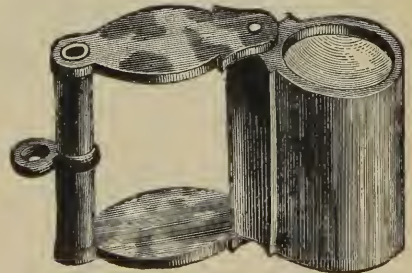
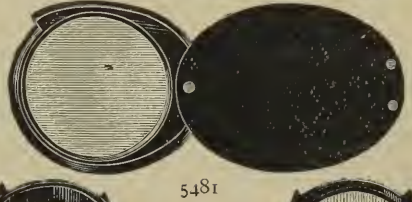
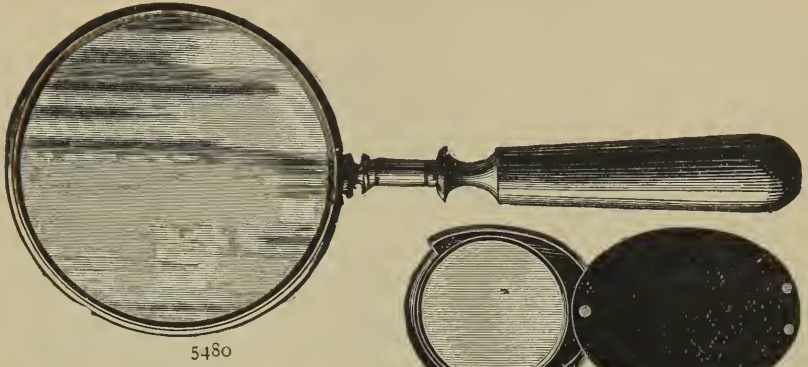
FIG.		
*5466	Sharp Pointed Microscopic Knife, ivory handle.....	\$ 1 00
*5467	Blunt " " " " " ".....	1 00
*5468	Microscopic Needle Holder " ".....	1 00
*5469	See preceding page.	
*5470	Valentine's Section Knife.....	6 00
*5471	Section Knife, ebony handle, in Morocco case.....	3 25
*5472	Microscopic Section Razors.....	\$1 50 to 3 00
*5473	Nickel Plated Trowel or Lifter.....	50
*5474	Very Fine Microscopic Scissors.....	1 10

SLIDES AND COVER GLASSES.

5475	Glass Slides, ground edges, 3x1, per gross.....	1 75
5476	" Covers No. 2 (circles), $\frac{3}{4}$ inch, per oz.....	1 25
5477	" " " " $\frac{1}{2}$ " ".....	1 50
5478	" " No. 3 " $\frac{5}{8}$ " ".....	1 25
5479	Boxes for holding 25 glass slides.....each	10



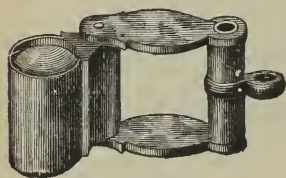
HAND AND POCKET LENSES.



*5380	Hand Lens, Metal Rimmed.....	\$0 75 to \$1 75
*5481	Single Hard Rubber Pocket Lens, $\frac{3}{4}$ inch diameter	30
*5481	" " " " I " $\frac{1}{4}$ " "	40
*5481	" " " " I " $\frac{1}{2}$ " "	50
*5481	" " " " I " $\frac{3}{4}$ " "	60
*5481	" " " " I 1 " $\frac{1}{2}$ " "	90
*5482	Double " " " " I " $\frac{3}{4}$ " "	60
*5482	" " " " I " " "	75

HAND AND POCKET LENSES.

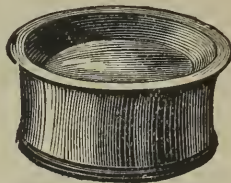
FIG.									
*5482	Double Hard Rubber Pocket Lens,	1 1/4	inch diameter	.....	\$	90			
*5482	"	"	"	1 1/2	"	1 25			
*5482	"	"	"	1 3/4	"	1 50			
*5483	Single	"	"	same size as Fig. 5481	.....	from \$0 50 to 1 00			
*5484	Double	"	"	"	5482	60 to 1 25			
*5485	Triple	"	"	"	"	75 to 1 25			
*5486	Round Metal Frame Lens	.....				1 50 to 2 25			
*5487	Metal Frame and Handle Lens	.....				75 to 1 00			
*5488	Lens with Stand	.....				50			
*5489	Coddington Lens, 1/2 inch Focus, Metal Mounted	.....				1 50			
*5490	"	1	"	"	"	2 00			



5489



5488



5486



5487

PHYSICIANS' POCKET MEDICINE CASES.

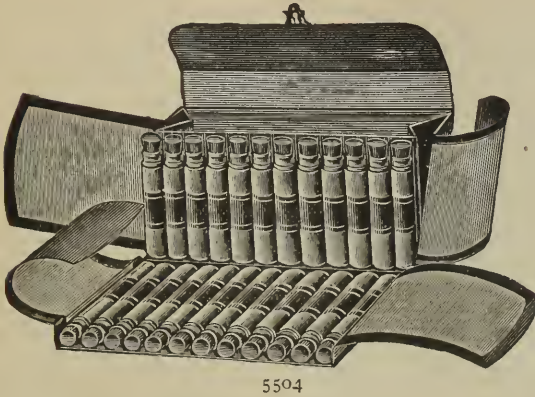
Fig. 5500 Black Morocco covered, chocolate leather lined. Contains 8 4-dr. vials, 12 1 1/2-dr. vials, pocket in back. Size, 7 3/4 x 3 3/4 x 2. Price, \$3.00.

Fig. 5501 Made on same principle as Fig. 5500; drop case, vials upright. Contains 1 row 10 4-dr. vials, 1 row 18 1 1/2-dr. vials. Price, \$2.35.

Fig. 5502 Made same as Fig. 5500; imitation Seal Grain, chocolate lined. Contains 10 4-dr. vials, 14 2 1/2-dr. vials, pocket in back. Size, 7 1/4 x 3 1/4 x 1 3/4. Price, \$1.88.

Fig. 5503 Made same style as Fig. 5500; black sheep covered, red leather lined. Contains 2 rows, 9 each, 2 1/2-dr. vials, 1 large pocket. Size, 6 x 4 x 1 7/8. Price, \$1.50.

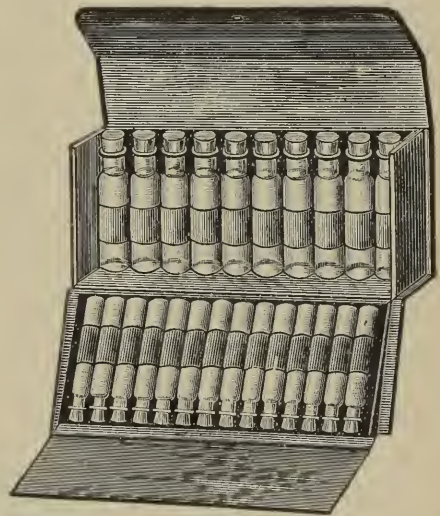
PHYSICIAN'S POCKET MEDICINE CASES.



5504

lined flaps. Contains 2 rows, 12 each, 2 dram. vials. Price\$2 35

Fig. 5506 Red Buffing covered, black leather lined, padded cloth flap. Contains: 10 three dr. vials, 14 two dr. vials. Size, $9 \times 3\frac{3}{4} \times 2$. Price.....\$2 50



5506

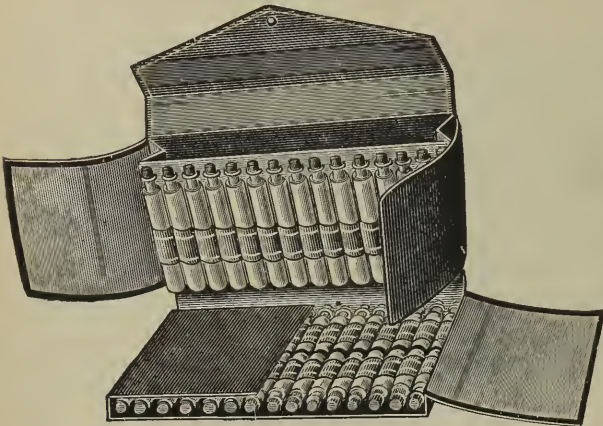


5507

Fig. 5507 Black or Red Russia Calf covered, chocolate leather lined, fall front. Contains: 12 three dr. vials, pocket back of vials. Size, $9 \times 3\frac{3}{4} \times 1\frac{1}{4}$. Price.....\$3 00

Fig. 5508 Same as Fig. 5507, covered with black pebbled sheep. Price.\$1 88

PHYSICIAN'S POCKET MEDICINE CASES.



5510 lined flaps. Contains 2 rows, 15 each, two dr. vials. Size, $8\frac{3}{4} \times 3\frac{1}{2} \times 1\frac{1}{2}$. Price...\$3 35

Fig. 5509 Black Seal Grain Leather covered, chocolate lined, satin lined soft flaps, outside pocket for memorandum book. Contains: 2 rows, 12 each, two dr. vials, full size pocket. Size, $7\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$. Price.....\$3 35

Fig. 5510 Black Imitation Grain covered, chocolate leather lined, red watered satin lined flap. Contains: 1 row 10 two dr. vials, 2 rows, 12 each, one-half dr. vials. Size, $6\frac{1}{4} \times 4 \times 1\frac{1}{2}$. Price.....\$2 75

Fig. 5511 Water Grain Buffing covered, chocolate leather lined, satin

FLEXIBLE POCKET VIAL CASES.

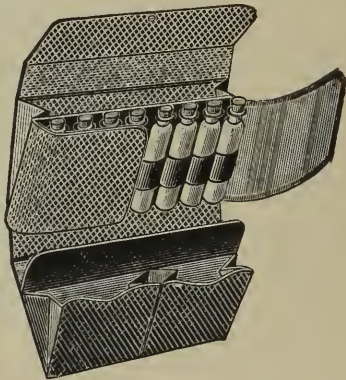
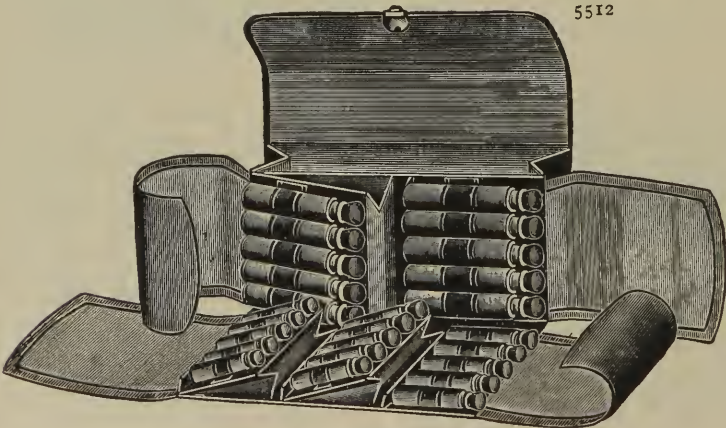


Fig. 5512 Red Buffing or Imitation Seal covered, red skiver lined, soft satin lined flaps. Contains: 8 three dr. vials, 2 powder pockets on bottom fold, 1 large pocket back of vials. Size, $6\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$. Price.....\$2 50

Fig. 5513 Black Seal Grain covered, chocolate lined, red watered satin lined flaps, with catch. Contains: 2 rows, 5 each, four dr. vials, 3 rows, 6 each, one dr. vials, pocket on back under large vials. Size, $7\frac{1}{4} \times 4\frac{1}{2} \times 1\frac{5}{8}$. Price.....\$4 00



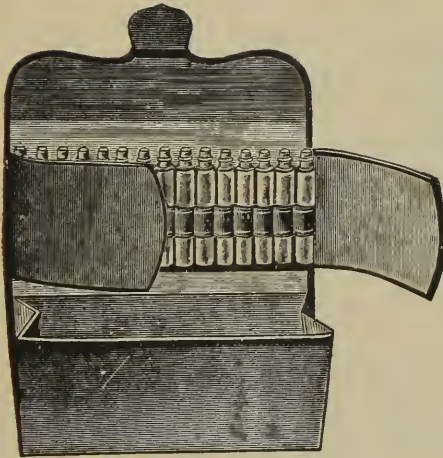
5513

PHYSICIANS' POCKET MEDICINE CASES.

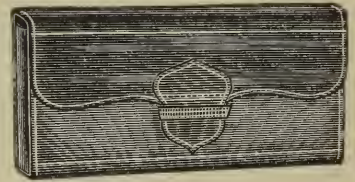


5514

Fig. 5514 Dark Water Grain Morocco, with catch. Contains 12 two dr. vials.
Price.....\$2 35



5515

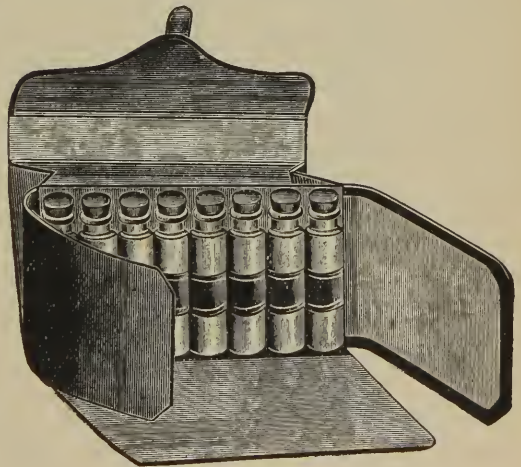


5515—Closed

Fig. 5515 Red Water Grain covered and lined, red satin lined flaps. Contains 15 $1\frac{3}{4}$ dr. vials. Pocket on front flap. Size, $8\frac{1}{2} \times 3\frac{1}{2} \times \frac{7}{8}$.
Price.....\$2 35

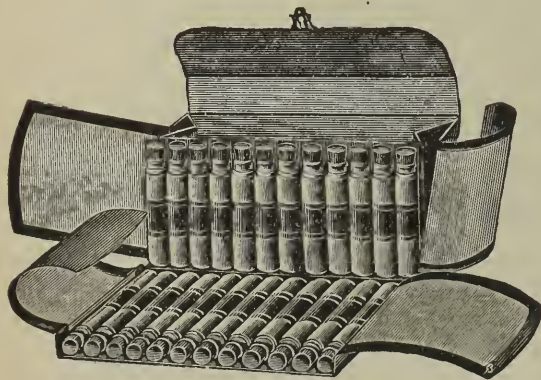
Fig. 5516 Black Skiver covered and lined, red watered silk lined flaps, tongue fastening. Contains 12 three dr. vials. Full size pocket.
Price.....\$2 10

Fig. 5517 Same as Fig. 5516. Contains 10 four dr. vials.
Price.....\$2 10



5516

PHYSICIANS' POCKET MEDICINE CASES.



5518

Fig. 5518 Red Morocco Wrapper Case, stiff ends, two fold. Contains: 10 three dr. vials, 14 one and one half dr. vials. Price.....\$2 75

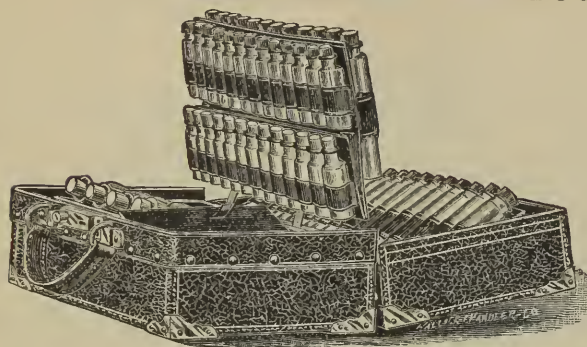
Fig. 5519 is Russia leather covered, 3 fold. Contains: 10 four dr. vials, 28 two. dr. vials. An elegant case. Price..... \$3 50

Fig. 5520 Same style as Fig. 5519. Black Imitation Seal Grain, chocolate lined, watered satin lined flaps. Contains: 9 four dr. vials, 10 two and a half dr. vials, and pocket. Price..... 3 00

Soft Pocket Black Boarded Leather Vial Cases, chocolate lined, long flaps, lined (no catch); the numbers from 5521 to 5541 are the same case, each number denoting but a change in the size and quantity of vials.

FIG.	CONTENTS.	SIZE.	PRICE.
5521.....	6 1/2 dr. vials.	3 1/4 x 2	\$0 50
5522.....	6 1 " "	3 7/8 x 2 1/4	75
5523.....	12 1 " "	8 1/8 x 2 1/2	1 25
5524.....	9 1 1/2 " "	5 1/4 x 3 1/2	1 20
5525.....	12 1 1/2 " "	6 3/4 x 3 1/2	1 50
5526.....	6 2 " "	4 5/8 x 2 1/2	85
5527.....	9 2 " "	5 1/4 x 3 3/4	1 20
5530.....	10 2 " "	6 1/4 x 3 1/2	1 25
5531.....	12 2 " "	7 x 3 3/4	1 50
5532.....	14 2 " "	8 1/2 x 3 3/4	1 70
5533.....	6 3 " "	4 1/2 x 3 3/4	1 15
5534.....	9 3 " "	6 3/4 x 3 3/4	1 50
5535.....	12 3 " "	8 3/4 x 3 3/4	2 00
5538.....	6 4 " "	5 1/4 x 3 1/4	1 40
5539.....	8 4 " "	6 3/4 x 3 3/4	1 60
5540.....	9 4 " "	8 x 3 1/2	1 70
5541.....	10 4 " "	8 1/2 x 3 3/4	1 90

PHYSICIAN'S HAND AND BUGGY CASES.

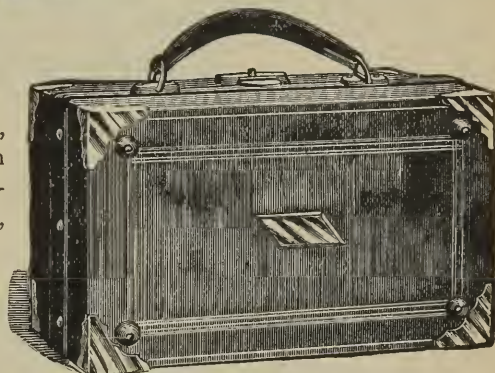


5550—Open

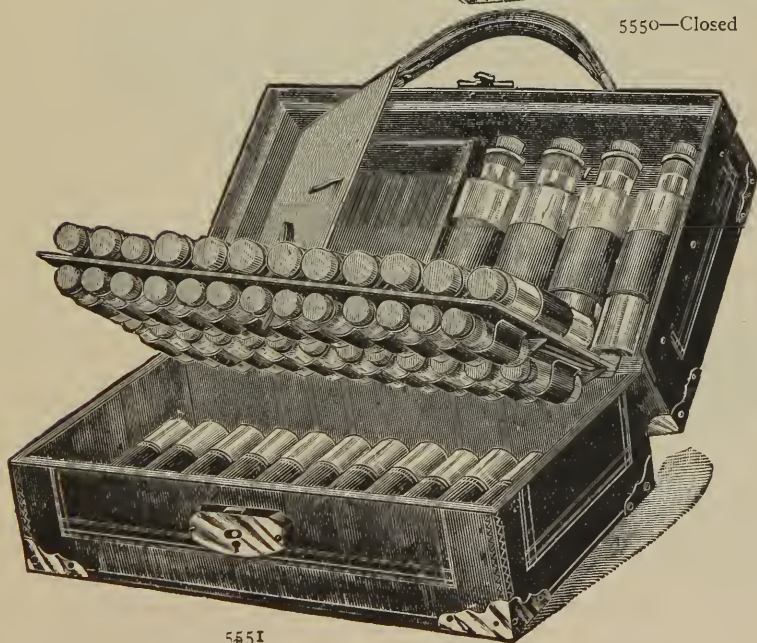
Fig. 5550 Black or Red Boarded Leather, stitched, lined with red box leather, satchel handles, nickel trimmings. Contains: 26 three dr. C. S. bottles, 26 one oz. C. S. bottles, 4 three oz. C. S. bottles, and space for powders, instruments, etc. Size, 12 x 7½ x 5¾. Price.....\$10 00

Fig. 5551 Same as Fig, 5550, Black Imitation Seal Grain Leather covered, glued, otherwise same as No. 5550. Size, 12 x 7½ x 5¾.

Price.....\$10 00

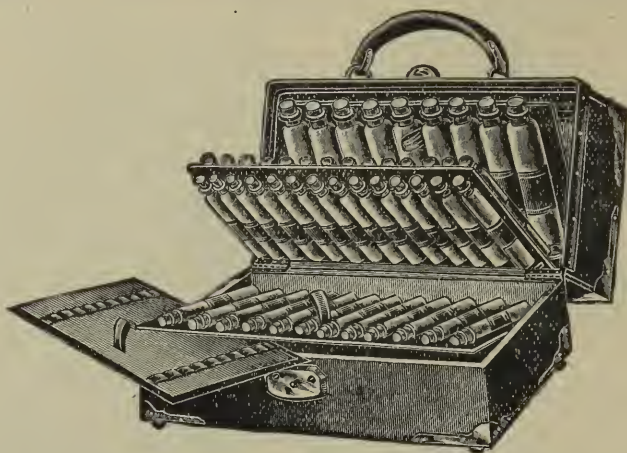


5550—Closed



5551

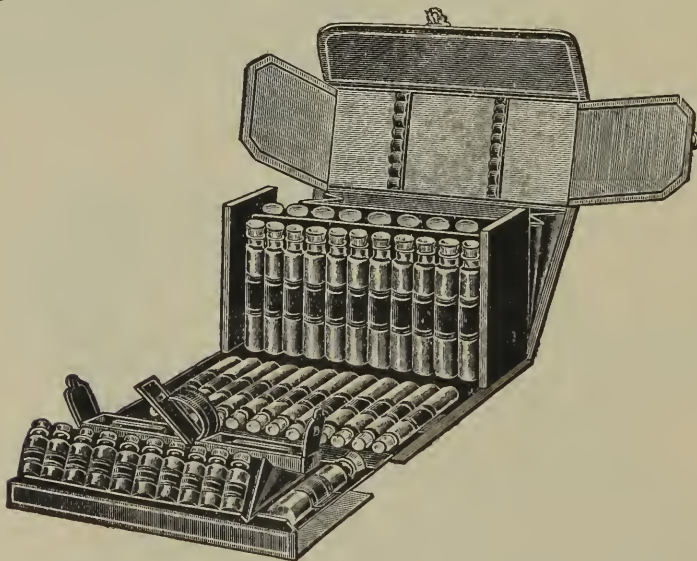
PHYSICIAN'S HAND AND BUGGY CASES.



5552

Fig. 5552 Seal Grain Buffing covered, red leather lined, dark loops, nickel trimmed. Contains: Space for sundries, loops for instruments on one leaf, 12 four dr. C. S. vials, 9 one oz. C. S. vials, 28 two dr. C. S. vials. Size, $10\frac{1}{2} \times 5\frac{3}{4} \times 5$. Price..... \$10 00

Fig. 5553 Same as Fig. 5552, made of cheaper material. Price 8 50



5554

Fig. 5554 Black Grain Leather covered. Contains: 9 one oz. vials, 24 four dr. vials, 10 two dr. vials, 1 space for graduate; loops for instruments under cover with flaps, large pocket and boxes for hypodermic syringes. A neat and compact case. Size, $9\frac{1}{2} \times 6 \times 4$. Price..... \$10 00

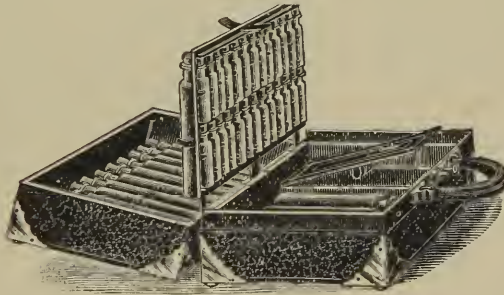
PHYSICIAN'S HAND AND BUGGY CASES.



5554

Fig. 5554 Black Imitation Seal Grain covered, chocolate leather lined on front and back cover and flaps, folded handle, four feet or buttons on bottom. Contains: 1 row 8 one oz. vials, 1 row 10 four dr. vials, 1 row 12 two dr. vials, pocket in drop front for powders, two rows of loops for instruments in cover (not shown in cut) without flaps. Size, $9\frac{3}{8} \times 5\frac{1}{4} \times 3\frac{1}{2}$. Price.... \$4 50

Fig. 5555 Same style as Fig. 5554. Seal Grain covered, chocolate lined, drop front and back. Contains: 1 upright row of 9 one oz. vials, 1 upright row of 11 five dr. vials, 1 row on flap of 12 three dr. vials, pocket on back flap, loops for instruments under cover with flaps. Price..... \$7 50



5556

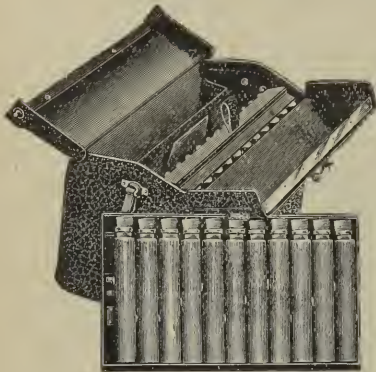
Fig. 5556 The Improved Leader is fitted with PATENT SILVER PLATED SPRINGS for holding bottles, to prevent corrosion; CAPTAIN IMPROVED COMBINATION CORNERS (Patented August 16, 1892); metal covered flanges at head of corks, preventing same from coming out and spilling contents; nickel binder around center partition, adding finish and durability to case; nickel spring lock and key, and nickel name plate.

Is thoroughly dust proof. Is made of EXTRA HEAVY black grained WATERPROOF leather (cowhide), stitched around the edges and lined with thoroughly durable material.

The Leader contains 5 two and one-half oz. bottles, 26 three dr. and 26 one oz. vials, and space for powder papers, loops for instruments, etc. Dimensions 12 inches long, $6\frac{1}{2}$ inches high, 5 inches wide.

Price each..... \$10 00

PHYSICIAN'S HAND AND BUGGY CASES.



5557

Fig 5557 Cabinet Medicine Bag. Dimensions, 5½ inches wide, 6 inches high, and eleven inches long. Made of best Black Seal Grain Bag stock, leather covered steel frame with nickel trimmings. Contains: 22 one ounce and 22 three drachm vials, pocket for powder papers, and space 2x6x11 inches for sundries. The advantages of this bag are that the partitions holding the vials are entirely removable, thus allowing the bag to be used for traveling, or for carrying instruments, when so desired. It is also the most genteel looking Physician's Case, being devoid of all nickel trimmings, such as corners, etc., ordinarily found on medicine cases. Above all, it is substantially made, and with

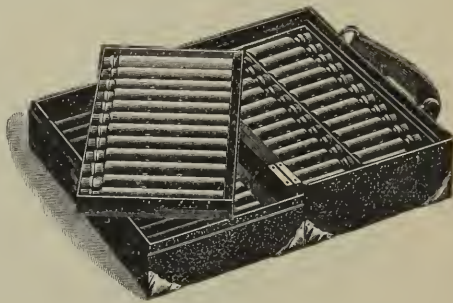
ordinary care will last a good many years, answering, as above stated, for several purposes—a feature highly to be appreciated by the physician. Price each\$10 75

Fig. 5558 Same as Fig. 5557, but 10 inches long, and containing 26 four drachm and 26 two drachm vials, and space for sundries, 2x6x10 inches. Price each.....\$10 75

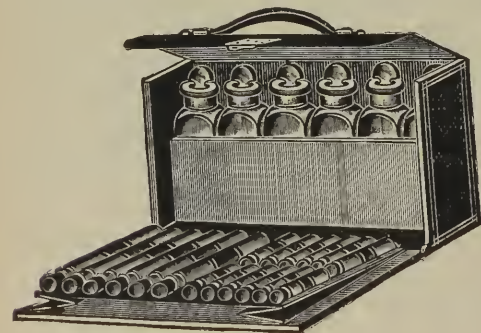
The vials in both cases are held by Patent Silver-plated Springs.

Fig. 5559 Columbia Aseptic Buggy Case.

PATENT SILVER PLATED METAL SPRINGS FOR HOLDING BOTTLES, cut from continuous strip of spring brass, silvered and lacquered, patented September 2, 1890. CAPTAIN CORNER, solid foot, and socket for same in one piece, patented August 16, 1892. Dimensions, 10¾ inches long, 6½ inches high, 4½ inches wide. Contains 24 one oz. and 24 three dr. vials, also space for sundries, 10x5½x7⅞ in. The outside is made of extra HEAVY black grained leather (waterproof), stitched around the edges, and is fitted with the Captain Patent Improved Combination Corners, nickel spring lock and key, and substantial handle. The inside consists of metal trays, to which are securely riveted the Patent Metal Springs for holding the vials, also metal flanges at head of corks. All are SILVER PLATED and lacquered to PREVENT CORROSION. Price each, complete.....\$12 00



5559



5560

Fig. 5560 Black Morocco covered, black glazed leather lined flaps, black BB muslin in body, purple velvet panel on drop front and cover. Contains: 6 one and a half oz. square G. S. vials, 12 one dr. C. S. vials, 6 three dr. C. S. vials, pocket on drop front under vials. Size, 8½ x 4¾ x 2¼. Price.....\$4 50

PHYSICIAN'S HAND AND BUGGY CASES.

Fig. 5561 Genuine Seal Skin covered. Contains :

2 1½ oz. square G. S. vials.

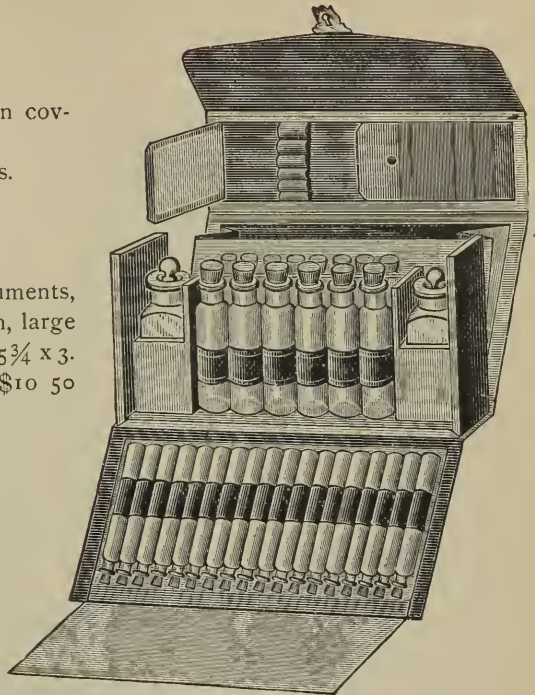
6 1 oz. C. S. vials

8 4 dr. vials.

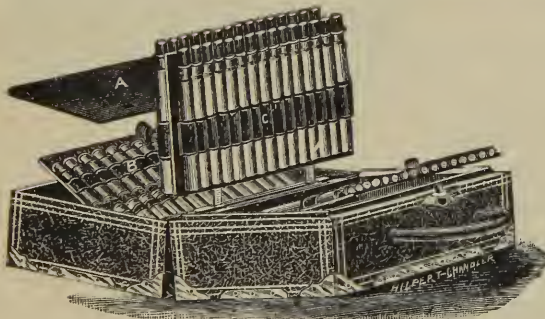
15 3 dr. vials.

Loops in cover for instruments, with flaps to fasten down, large size pocket. Size, 9¼ x 5¾ x 3.

Price\$10 50



5561



5562

Fig. 5562 75 Vial Case, has double rows of one drachm vials on one partition, the other partitions have three drachm vials ; case complete has 30 one drachm, 45 three drachm vials.

Price each (red or black),
\$11 00

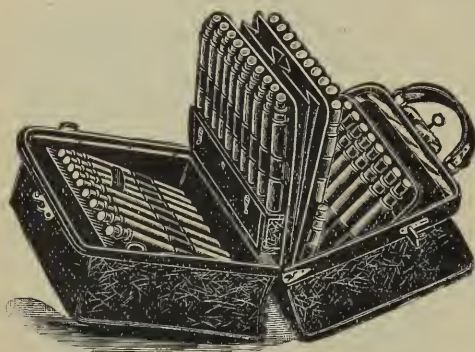
Fig. 5563 is a 90 Vial Case, has double rows of one drachm vials on two partitions ; the other partitions have one row on each side of three drachm vials ; case complete has 60 one drachm, 30 three drachm vials. Price each (red or black)\$11 25

Fig. 5564 54 Vial Case, has one row of one ounce vials, the other partitions have three drachm vials ; case complete has 9 one ounce, 45 three drachm vials. Price each (red or black)..... 10 75

Fig. 5565 51 Vial Case, has one row of one ounce vials, the other partition four drachm vials, center partition one row on each side of three drachm vials ; case complete has 9 one ounce, 12 four drachm and 30 three drachm vials. Price each (red or black)..... 10 75

PHYSICIANS' HAND AND BUGGY CASES.

SACHEL BUGGY CASES.



5566

loops for instruments, pockets for powders, and hypodermic syringe box.
Price.....\$10 00

Fig. 5566 Satchel style, made of black bag leather, 10 in. frame, covered, nickel spring lock and key, name plate, etc. Contains: 20 one oz. vials, 11 four dr. vials, 20 three dr. vials, pockets, loops for instruments, box for hypodermic syringes, etc. Size, 10x7x4. Price.....\$11 50

Fig. 5567 Bag made same as 5566, 8 inch, with three movable flaps, Contains: 2 rows, 7 each, one oz. vials, 1 row, 9 each, three dr. vials, 1 row, 9 each four dr. vials,

Fig. 5568 Bag made same as 5566, 8 inches. Contains: 3 rows, 9 each, five dr. vials, 1 row, 7 each, one oz. vials, loops for instruments.

Price.....\$9 50

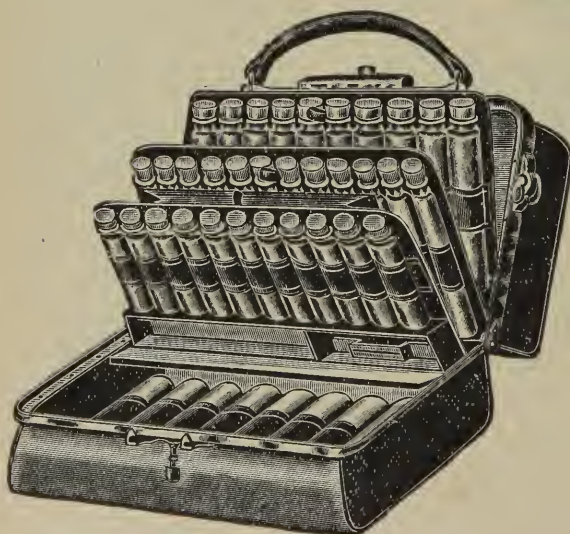
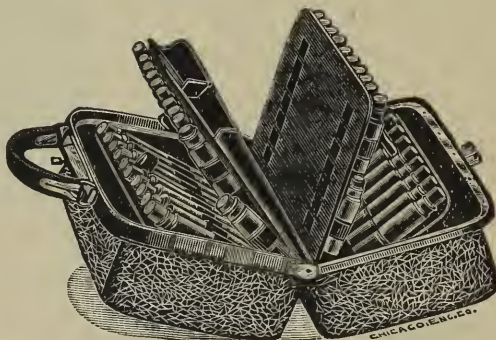
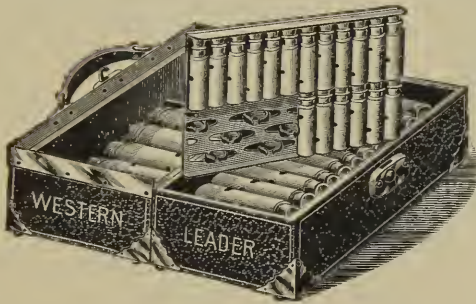


Fig. 5569 Satchel Style, black bag leather, 10 inch frame, covered, nickel spring lock and key, name plate, etc. Contains: 1 row 10 one oz. C. S. vials, 1 row 12 five dr. C. S. vials, 1 row 11 four dr. C. S. vials, 1 row 8 one oz. short C. S. vials. With box full depth of one side of bag, and box for hypodermic syringes.
Price.....\$11 50

PHYSICIANS' HAND AND BUGGY CASES.

"THE LATEST IMPROVED WESTERN LEADER MEDICINE CASE."



5570

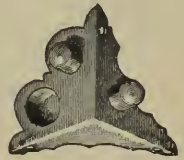
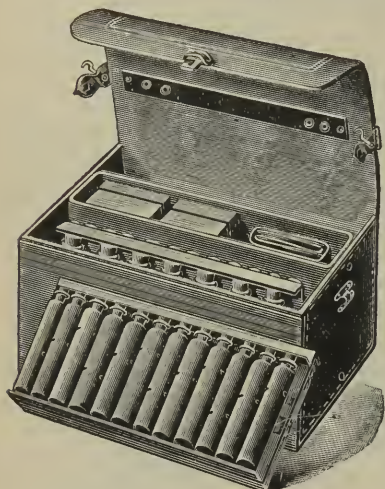


Fig. 5570 The Latest Improved Western Leader Medicine Case. The bottles in this case are held by our Comstock patent springs which are cut from a plate of spring brass, silvered and lacquered, all metal bottle holders. The centre partition is done away with entirely with its leather or cloth covering, hinges, etc. The cleanable feature of these bottle holders is one of the chief merits of the case. The sides, bottom and top of the cover are cut from one piece of our specially prepared morocco grain, oil filled, waterproof, solid leather, which laps over extra strong brass hinges and forms double hinges for the case. It contains our patent Captain corners, extra heavy, wide mouth, annealed bottles, and is made strong and durable in every way. By making them in large quantities and by our improved methods we are able to reduce their cost to the minimum. The size and weight of the case has been reduced about 20 per cent. with the contents essentially the same as the former Leader. This is attained by utilizing all the waste space in these former cases. Dimensions of case $10\frac{1}{2}$ inches long, 6 inches high, $4\frac{1}{2}$ inches wide; contains 4-3 oz., 24-1 oz., 24-3 dr. and space for sundries $5\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{3}{8}$ inches.

Price.....\$5 50

PHYSICIANS' HAND AND BUGGY CASES.
THE "COMMON SENSE" BUGGY MEDICINE CASE.



5571-Open.



5571-Closed.

This Case is made especially for Country Practice with a view to DURABILITY, CLEANLINESS, COMPACTNESS, PRACTICABILITY, SIMPLICITY and CHEAPNESS.

The dimensions are 11 in. long, 6 in. wide and 6 in. high. Fitted with a strong leather handle reinforced with a metal band on the inside of same which is bent around the rings forming a loop, preventing the ends of handle from tearing out and coming loose heavy nickel lock with key, besides two extra heavy hinge hasps at the ends, so that when closed and carried by the handle the strain is evenly distributed. Five solid metal feet are securely riveted to the bottom. The outside of case is made of extra heavy, oil filled black sole leather hand stitched, and all the trimmings are riveted securely with copper or tinned burrs.

The inside consists of three partitions, divided by solid leather pieces securely riveted. The center partition is intended for sundries, and its dimensions are $10\frac{1}{2} \times 6 \times 2$ inches; the other two partitions contain two removable metal bottle holders, to which are securely riveted our **Western Comstock Patent Springs**, the holders and springs being silver plated and lacquered to prevent corrosion.

The bottles contained in this case are 7-2½-oz., 24-1-oz. and 24-3-dram.

We can make cases of the same construction containing any combination of bottles, and adapted to any school.

This case will outwear any two cases made in the ordinary way. **Will stand the hardest knocks and roughest handling.** The main part of the case is made of one piece of leather, lapping over in front and having no opening on top. Can be easily cleaned with a **blacking brush** and sponge.

Should repairs ever become necessary, the construction of the case is so simple that any harness maker can do it, thus saving the annoyance, expense and time of sending it to the manufacturers.

ESPECIALLY ADAPTED TO COUNTRY PRACTICE AND ROUGH USAGE.

**Only Extra Heavy Oil Filled Sole Leather and Metal
 USED IN ITS CONSTRUCTION.**

**No Wood, No Thin Leather, No Hinges, No Paste, No Glue,
 No Cardboard, No Strawboard, No Muslin, No
 Cloth, No Paper, No Machine Stitching.**

Unaffected by Rain, Snow, or Mud.

PRICE,

-

-

\$8.00.

MARSHALL'S PATENT CONVERTIBLE SADDLEBAGS HAND CASE.

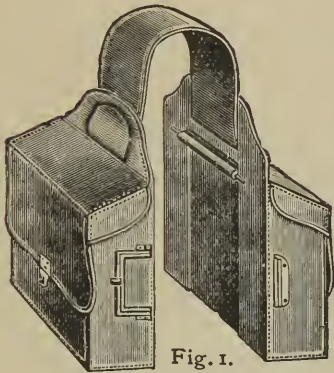


Fig. 1.

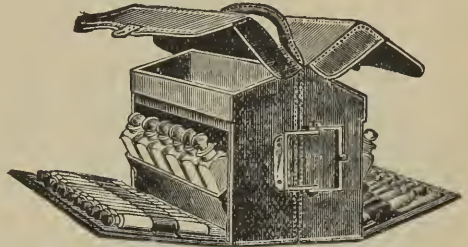


Fig. 2.

Fig. 1 is Fig. 2 in Saddlebags Form.

Fig. 2 is Fig. 1 in Hand Case Form.

Original and Only Perfectly Convertible Hand Case Saddlebags in the World.

Has two trays, one on either side, $7\frac{1}{2}$ in. long, $2\frac{1}{4}$ in. deep, by $2\frac{1}{2}$ wide, 12 $1\frac{1}{2}$ oz. G. S. Bottles, 16 6-dram and 8 2-dram cork stoppered vials. Total, 36 bottles. Spaces between round and square bottles for papers.

Sent prepaid, to your nearest express office on receipt of price.

Nos. 36 or 59 A Grade or Russet Leather.....\$16 00
 " " " B " Black " 15 50

A and B Grades are exactly alike in every respect except color of Leather.
 Size of case, 6 x 8 wide x 8 high.

No. 36. Price of the Pat. Top or Coverlid.....\$12 50

The size of the regular make, either A Grade—Russet; B Grade—Black, or "The Leader" Casebags is 6x8x8.

They all convert equally well, joining perfectly by a hinge device, thus swallowing up the piece that crosses the saddle when it is desired to use it as a Buggy case. Fine maroon colored leather lining. (No tin to rust.)

They are perfect, and excel all other cases in the market, either as a first class Buggy Case, or Saddlebags, and shift instantly to either form or article as needed.

The "Leader" is as fine in appearance as either A or B Grades, having same internal arrangement, and has same silver trimmings, but patent leather instead of leather flap or cover lid, and the lid projects (at ends) instead of bow-cap.

When case is open the whole interior is in full view, and any article can be removed, as wanted, without disturbing another. Every case warranted.

In ordering please designate by grade—A, B, or Leader—as desired.

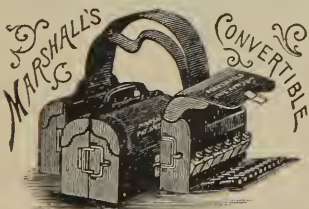
ONE ARTICLE IN TWO FORMS.

Box Pattern, No. 33. \$10.00.

Cut No. 33 converts by same hinge device as Nos. 36 and 59. Here bags are shown arched over the respective Buggy-case into which they convert. Contents: 1 sundries space, 11 1-oz. screw top; 11 6-dr. 11 5-dr. cork stoppers.

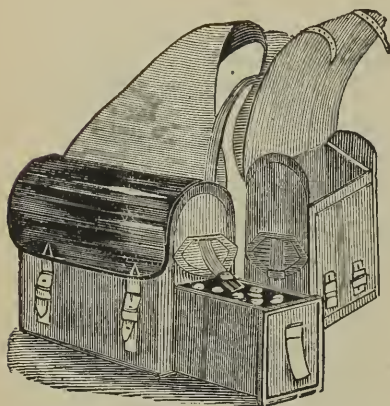
The No. of case indicates the bottles and vials contained. When ordering do not allow any dealer to put you off with, or substitute any other case.

See that each Case-bag is branded with registered number, and bears the name Marshall, with date of patent.



BUGGY-CASE-SADDLE-BAGS

MEDICAL SADDLE BAGS.



5679

MEDICAL SADDLE BAGS.

MADE OF

BEST RUSSET BRIDLE LEATHER,

PATENT LEATHER COVERS.

Space under Covers for Instruments, etc.
 Pattern Mahogany Drawers in the end of
 lower part.

Solid Leather Drawers one Dollar extra.

Fig. 5679	No. 1, containing	20 1 oz., 4 1 1/2 oz. bottles, ground stoppers	\$10 60
	Ex. No. 2, "	20 1 oz., 4 1 1/2 oz. " " "	" " "
		and pockets	... 11 50
	No. 3, "	16 1 oz., 4 1 1/2 oz. " " "	9 75
	No. 4, "	16 1 oz., bottles, glass stoppers	8 75
	No. 5, "	16 1 oz., " cork " "	7 65

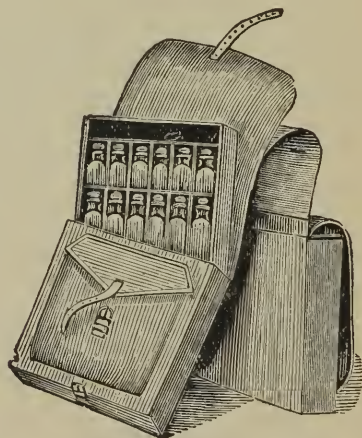
MEDICAL SADDLE BAGS.

MADE OF

BEST RUSSET BRIDLE LEATHER,

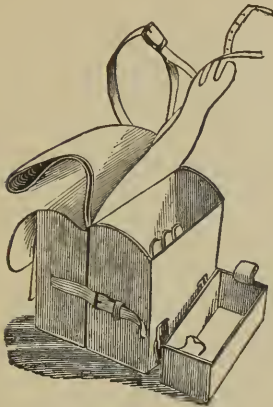
PATENT LEATHER COVERS.

DRAWERS OF POLISHED MAHOGANY,
 VELVET LINED.



5680

Fig. 5680	No. 6, containing	12 1 1/2 oz., 12 3/4 oz., 24 bottles	\$10 20
	No. 7, "	10 1/2 oz., 10 3/4 oz., 20 "	9 35
	No. 8, "	8 1 oz., 8 3/4 oz., 16 "	8 50
		FLAT PATTERN—TWO FLAPS.	
	No. 9, containing	10 1 1/2 oz., 10 3/4 oz., 20 bottles	\$ 9 75
	No. 10 "	12 1 1/2 oz., 12 3/4 oz., 24 "	10 60



5681

MEDICAL SADDLE BAGS.

BOX PATTERN.

Fig. 5681.

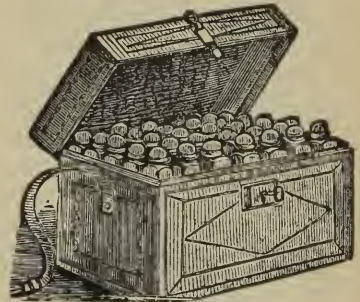
- No. 11, containing 20 ground stoppered bottles.....\$9 35
- No. 12. Plain Saddle Bags, containing 20 cork stoppered vials. 7 25
- No. 13. Plain Saddle Bags, containing 24 cork stoppered vials. 7 90

MEDICINE CHESTS FOR PHYSICIANS,

MADE OF

BEST RUSSET LEATHER,

Containing the following Square
Glass stoppered Bottles:



5682

IN MAHOGANY TRAYS, MORTARS, GRADUATED MEASURE.

Four Jars, Tray for Scales, and Space for Instruments under Bottles.

THE SIZE IS BY INCHES.

No.		oz.	oz.	oz.	oz.	Bottles.	Price.	Length.	Width.	Height.
Fig. 5682.	1, containing	4..4	16..2	18..1	6..½	44	\$17 85	14	9¼	9¼
	2, "	1..4	16..2	19..1	....	37	15 75	12¾	8½	9¼
	3, (see above cut)	2..4	14..2	16..1	....	32	16 00	11	8¼	9¼
	4, containing	2..4	12..2	13..1	....	27	13 25	9¾	8¼	9¼

The following without Mortars, Measures or Jars:

5, containing	15..½	\$3 50	8½	5¾	7½
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Tray in front of Bottles:

6, containing	10..2	4..1	14	\$3 10	9	6¼	5¾
7, "	5..4	7..2	6..1	...	18	9 75	10	7¾	5¾
8, "	4..4	9..2	12..1	6..½	31	11 90	13	9¾	5¾

(ALL THE ABOVE WITH LOCKS).

CLASTIC ANATOMICAL MODELS OF DR. AUZOUX.

FIG.

- 5700 Complete model of a male human body, 5 feet 10 inches high, composed of 92 parts that may be detached, and exhibiting over 2,000 details of the viscera, muscles, nerves, blood-vessels, etc.; that is all that may be embraced in a complete treatise of anatomy....\$1200 00

FIG.

- 5701 Model of a man $3\frac{1}{2}$ feet high, consisting of the same pieces and exhibiting the same details as the large model..... 600 00

- 5702 Female pelvis, with internal and external organs of generation, lumbar vertebræ, diaphragm, muscles, aponeuroses of the perineum, vessels and nerves..... 150 00

- 5703 Eight uteri, containing the product of conception at the 1st, 2d, 3d, 4th, 8th and 9th months, with examples of tubular and ovarian pregnancy. 150 00

- 5704 Dura mater, with a portion of the basis of the cranium, half again as large as life, exhibiting its folds, venous sinuses, Pacchionian glands, etc. 40 00

- 5705 Adult heart, separable into two parts, showing the right and left cavities, muscular fibers, vessels, nerves, orifices and valves..... 25 00

- 5706 Heart of fœtus, large size, separable into two parts, showing the right and left cavities, the foramen ovalis, the Eustachian valve, the arterial canal, etc..... 25 00

- 5705 Eye, complete, greatly enlarged. Improved model, on which is exhibited—not only the muscles, vessels, nerves, membranes, vitreous body and crystal lens, in separable parts; but also the different microscopic strata of the re



Dr. Auzoux' Models, Male or Female,
(Manikin) Mounted on Stand
(imported to order only).

FIG.	tina, choroid and iris, as they are described by modern anatomists.....	\$ 35 00
5706	Eye, divided by a vertical section, and representing its inner half with all the foregoing details and the disposition of the anterior and posterior chambers; and in addition, a portion of the orbit, the conjunctiva, the structure of the eyelids, the Meibomian glands, the lachrymal canals and points; the muscles of Horner, etc.....	35 00
5707	Temporal Bone, 2 feet long, showing the internal, middle and external ear, in their most minute details; the expansion of the auditory nerve, the fenestra ovalis, fenestra rotunda, membranous canals, endolymph, perilymph, double spiral of the cochlea, infundibulum, etc. All parts of this model are separable, and by its means the mechanism of audition may be clearly explained and understood.....	60 00
5708	Temporal Bone, half the size of the preceding, showing the ear in the same manner.....	40 00
5709	Gigantic Larynx, 12 inches long. On this preparation each muscle and cartilage may be separately removed, and its action demonstrated; also the action of the vocal chords and the mechanism of the voice.....	75 00

COLLECTION OF ANATOMICAL MODELS OF PLASTER PARIS.

THEY APPEAR IN THEIR NATURAL COLORS AND ARE NOW RECOMMENDED
BY A NUMBER OF PROMINENT COLLEGES.

FIG.

(A.) MAGNIFIED MODELS.

5710	No. 1.—Human heart, front part to be taken off, showing the four chambers of the heart, together with their respective openings and valves.....	\$ 8 50
5711	No. 2.—Human eye, the upper part of the pupil (with a microscopic illustration of the retina) to be taken off, so as to show the cornea, iris, the vitreous body and crystalline lens.....	7 00
5712	No. 3.—Human ear, showing the drum and membrana tympani, the ossicles, labyrinth, and the cochlea half open...	8 50
5713	No. 4.—Human skin, vertical section, showing the sudoriferous glands, the organism of the hair, the pigment granules, and the organs of feeling.....	4 50
5714	No. 5.—Human teeth, showing a section of left lower jaw, development and structure of the teeth.....	4 50

(B.) MODELS, NATURAL SIZE.

5715	No. 6.—Human brain:	
	<i>a.</i> Upper view.....	\$ 4 00
	<i>b.</i> Under view.....	4 00
	<i>c.</i> Vertical section from front to back.....	4 00
	<i>d.</i> Horizontal section, showing the cavities.....	4 00
	<i>e.</i> Skull, the brains to be taken into sections.....	14 00
5716	No. 7.—Human head, with part of the neck, various sections:	
	<i>a.</i> Outer view, showing the muscles, bloodvessels and nerves.....	7 25
	<i>b.</i> Inner view, showing the cavity partially opened, position of the eye, the upper and lower jaw..	7 25
	<i>c.</i> Sections showing the brain and the cavity of the nose, mouth, larynx and pharynx.....	7 25

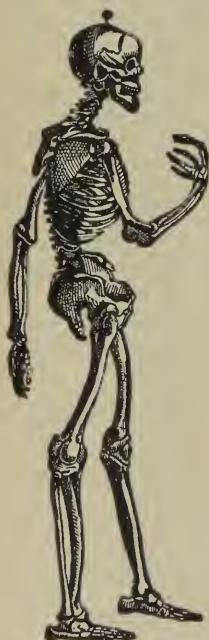
FIG.

- 5717 No. 8.—Human Lungs, Heart and Larynx:
a. Anterior view of the lungs and heart, the pericardium being laid open; the anterior portion of the left lung is removed in order to show the bronchial ramifications.....\$ 4 50
b. Posterior view of the lungs and heart with a representation of the bronchial ramifications, air cells and bloodvessels..... 4 50
- 5718 No. 9.—The organs of respiration. Air passages, lungs and heart: The anterior part of both lungs, with the heart, can be taken off, laying open the ramifications of the windpipe within the lungs, the connections of the pulmonary bloodvessels with the heart.... 14 00
- 5719 No. 10.—Human Larynx:
a. Larynx, front view, with hyoidean bone and thyroid gland..... 3 50
b. Back view, showing the glottis and its ligaments.. 3 50
c. Larynx, in connection with the lungs and pharynx, open behind..... 4 50
- 5720 No. 11.—Human joints, laid open with their bones and ligaments:
a. Shoulder.....\$3 00 *e.* Hip, open..... 3 50
b. Elbow, front view 3 00 *f.* Knee, open..... 3 50
c. Elbow, side view. 3 00 *g.* Foot..... 4 50
d. Wrist and hand.. 4 00
- 5721 No. 12.—Human Trunk (torso), with the viscera of the thorax and abdomen (lungs, liver and stomach to be removed) 35 00
- Charts. Cutter's (set of 10)..... 12 00

HUMAN OSTEOLOGY.

The cause in the difference in price of these preparations will be found to exist in the quality of the same, whether the bones contain in their extremity more or less grease, or none at all.

- FIG.
*5722 No. 1. Articulated Skeleton (Male or Female), \$25 00 to \$65 00
5723 No. 2. Disarticulated Skeleton.... 30 00 to 40 00
5724 No. 3. Skeleton, articulated according to Beauchene, with support..... 300 00
*5725 No. 4. Disarticulated Skull (in box with compartments)..... 12 00 to 18 00
*5726 No. 5. Skull, with teeth, lower jaw fastened by elastic wire 6 50 to 9 00
*5727 No. 6. Skull, with one horizontal cut..... 8 50
*5728 No. 7. Skull with one horizontal cut, and one vertical cut. 10 50
*5729 No. 8. Skull, sawed into seven sections, exhibiting the sinues—the bones can be disarticulated, so as to show the middle and interior ear.... 22 50
5730 No. 9. Internal and Median Ear, with bloodvessels and nerves..... 32 00
*5731 No. 10. Hands or feet, each..... 3 00
5732 No. 11. Arm, mounted according to Dr. Duchesne, for the demonstration of the action of the muscles, 55 00
5733 No. 12. Leg, the same..... 55 00
5734 No. 13. Male and female pelvis, with ligaments, each, 14 00 without ligaments 7 50
5735 No. 14. Foetal Skulls..... 2 50
5736 No. 15. Foetal and Embryo Skeletons (under glass shades) 18 00
*5737 No. 16. Skull and Cross Bones..... 6 50
*5738 No. 17. Spinal Column..... 6 00
5739 No. 18. Femurs..... 1 85



5722 French Skeleton, Articulated, and Disarticulated.

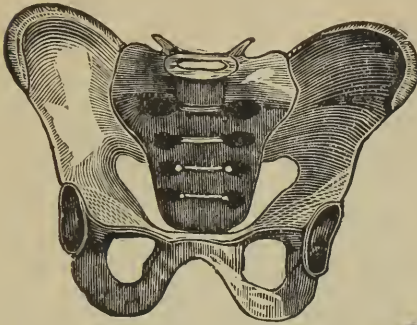


Fig. 5734—Female Pelvis, without Ligaments.

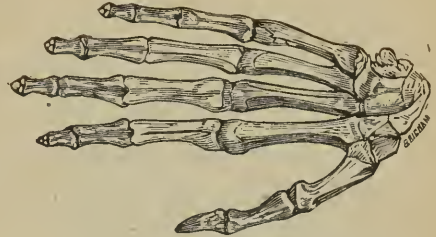
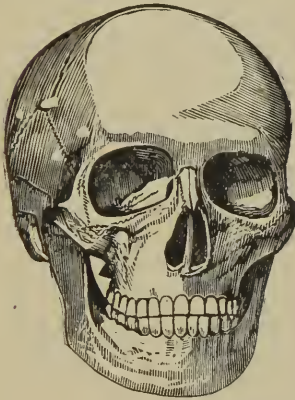


Fig. 5731—Hand, Strung on Catgut



Figs. 5725 to 5729—Skulls.

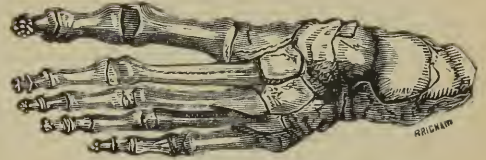
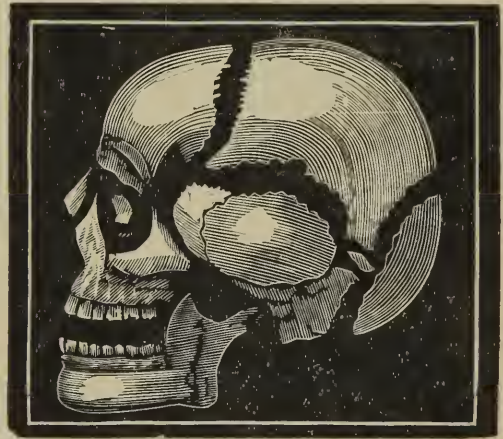


Fig. 5731—Foot, Strung on Catgut



Figs. 5725 to 5729—Separated Skulls on Stands or in Boxes, divided into Compartments.



Fig. 5737—Skull and Cross Bones.



Fig. 5738—Spinal Column.



Fig. 5739—Femurs.

PHYSICIAN'S CABINET.

We desire to call attention to our new styles of Physician's Cabinet, as shown in cuts. It is a very tasty and convenient piece of furniture for office use, specially manufactured for the use of the gynecologist, surgeon, oculist, dentist, and the general practitioner. It comprises a desk top, five drawers, four revolving shelves, a towel rack, and a sliding table. The revolving shelves are so arranged when open, the operator has his instruments conveniently within reach. (See cut). Trimmings are in silver or brass (stylish patterns) mounted on boxwood casters. We make them in antique oak and solid walnut.

Height of cabinet, including desk top, to railing, 63 inches. Height of cabinet, without desk top, to railing, 40 inches. Width of cabinet, 28 inches. Depth of cabinet, 16 inches.

See next page for illustration of cabinet with desk top open; also prices of cabinets.

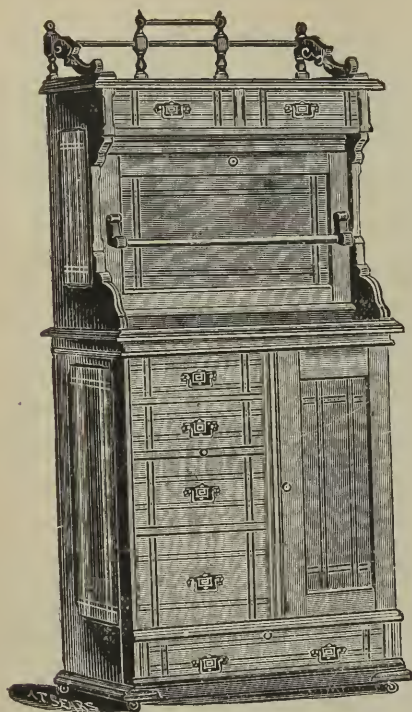
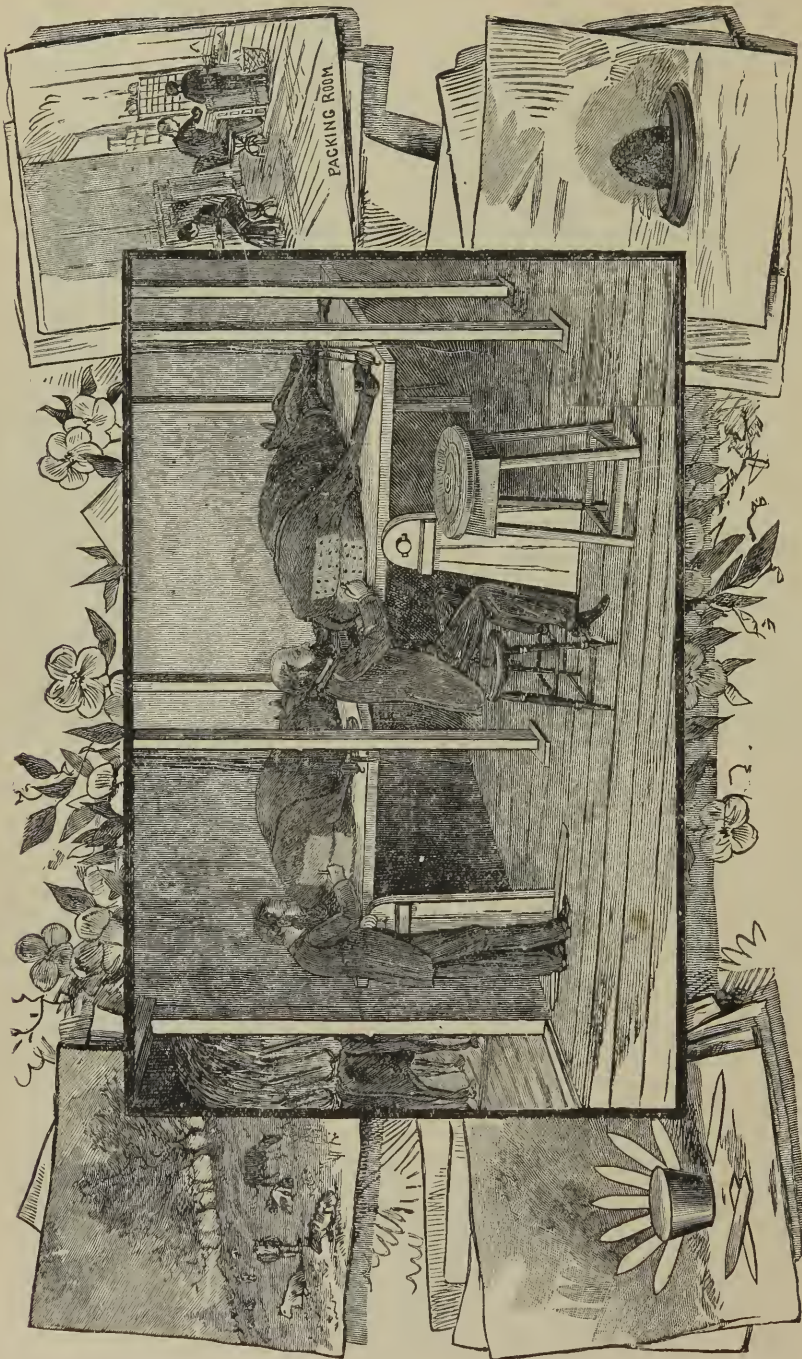


Fig. 5750—Cabinet, with desk top closed.



NON-HUMANIZED VACCINE VIRUS.



Ten Ivory Points, heavily charged.\$1 00

LIGATURE SILK.

FIG.	SILK.									
*5775	Assorted, 3 sizes	Carbolized (6 per cent.)	White Braided Silk.....	per bottle	\$	60				
*5776	" 3	" " " "	Iron Dyed Braided Silk....	" "		60				
*5777	" 3	" " " "	White Twisted Silk.....	" "		50				
*5778	" 3	" " " "	Iron Dyed Twisted Silk....	" "		50				
*5779	" 3	" " " "	White Braided Silk, (17 yds.,	" "		I 65				
5780	" 4	Turner's Silk, White	Braided.....	per reel		50				
5781	" 4	S. & S. " "	" " " " " " " " " "	" "		45				
*5782	" 4	" " " "	Iron Dyed.....	" "		50				
*5783	" 4	" " " "	White Twisted.....	" "		25				
5784	" 4	" " " "	Iron Dyed.....	" "		30				
5785	Sharp & Smith's one Size	White Braided Silk Tablets.....				30				
5785	" " " "	Iron Dyed Braided Silk Tablets..				30				
5786	Turner's " " "	White " " " " " " " " " "				30				
5787	Sharp & Smith's " "	Braided Silk, White or Iron Dyed, in skeins	per skein			I 15				
5788	Morgan's (6 sizes)	Assorted White Braided Silk on ivory Pins.....	per set	I		25				
*5789	White Twisted Silk, single reels.....					10				
5790	Iron Dyed Twisted Silk, single reels.....					10				
5791	Cable Twist, in skeins.....					25				
5792	Carbolized Kangaroo Tendons, in bottle.....					25				
5793	Chinese Beaded Silk (very fine) for eye operations.....					25				
5794	Knoll's Glass Reels for winding on silk, to be thrown into a solution.....					15				
5795	Solid " Spools " " " " " " " " " "					05				
5796	Hollow " " " " " " " " " "					05				
5797	Hard Rubber Reels in Glass Tube, for silk or catgut, 3 reels small.....					60				
5798	" " " " " " " " " " 3 " med.....					75				
5799	" " " " " " " " " " 3 " large.....					I 00				
5800	S. & S.'s, Hard Rubber Reels in Glass Tube for silk or catgut, 3 reels ..				I	25				
5801	Hard Rubber Reels in Hard Rubber Tube, for silk or catgut, 6 reels, small.....					60				
5802	" " " " " " " " " " large.....					70				

CATGUT LIGATURE.

*5803	Sharp & Smith's 3 sizes assorted Catgut in 6 per cent. carbolized solution, per bottle.	\$	60
5804	S. & J.'s Catgut Ligature (in any solution) Nos. 0 and 1	" "	30
5805	" " " " " " " " 2, 3, 4	" "	35
5806	" " " " " " " " 3 assorted sizes.	" "	50
5807	J. & J.'s " " " " (8 feet, in any solution) Nos. 1, 2, 3 and 4.	" "	25
5808	Schorse's " " " " (10 feet), fine, med. and large.	" "	75
5809	Meyer's " " " " 1 yard, 2 spools in each bottle	" "	25
5810	" " " " " " " " 3 spools ass'd sizes " "	" "	75
5811	" " " " " " " " 1 dozen skeins ass'd " "	" "	1 00

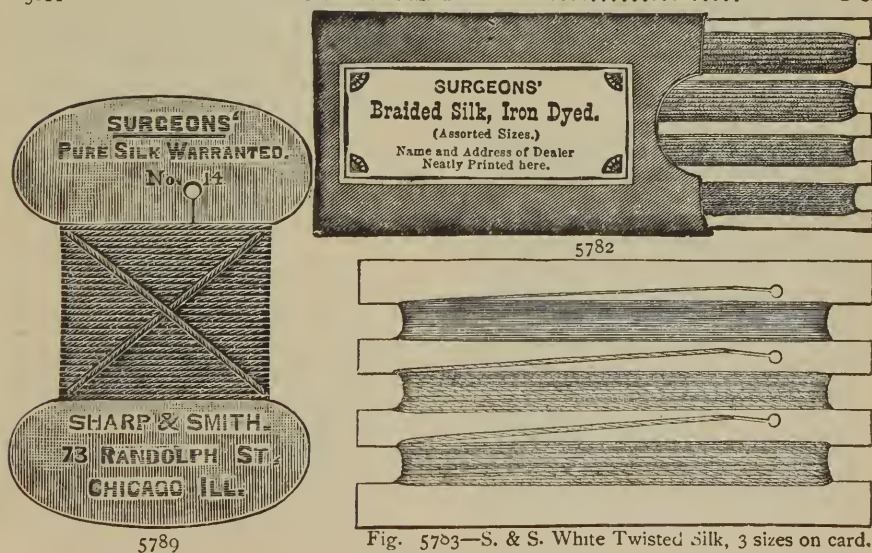
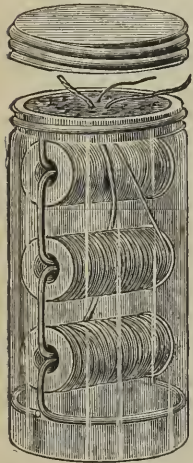


Fig. 5783—S. & S. White Twisted Silk, 3 sizes on card.

RAW ANIMAL LIGATURE.

FIG.

5812	Five yard Coils Raw Animal Ligature in 8 sizes per coil of each size from 10c. to \$	40
5813	Elastic Ligature.....	per string 25



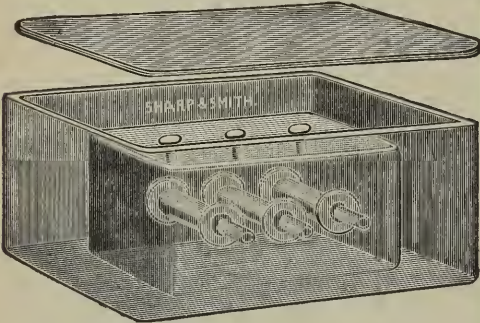
5775 to 5779 and 5803.

SUPERIOR SURGICAL LIGATURES.

Put up on Glass Spools, three spools (assorted sizes), in a neat bottle, with a nickel-plated screw cap. The spools are so arranged, on a metal frame in the bottle, that the ligatures may be drawn out through the cork, as they are wanted for use. The cork, being elastic, closes tightly around the ligatures, thereby pressing all of the surplus solution out of them and back into the bottle. The metal frames are all coated or enameled, which fact renders them impervious to the solutions in which they are placed. This will be found a great improvement over the old way of putting up these goods.

Three sizes in a bottle, on Glass Spools, with nickel-plated screw cap. Put up in plain or dry state, or in

Carbolized 6 per cent. Chromatized, 1 to 2,000, preserved in 5 per cent. carbolized solution. Sublimatized, 1 to 2,000, preserved in 5 per cent. of carbolized solution. Juniper oil, or any special solution desired.



Hagedorn's Glass Ligature Box.

With Inside Cover, perfectly Aseptic... \$ 6 00
Assorted Sizes Ligature Boxes (Aseptic) each, \$2 50 to 12 00



Fig. 5821 Silk Worm Gut Ligature

Best, put up 100 ligatures in box..... \$ 75

See pages 305, 306 and 307 for prices on Surgeons' Needles.



Fig. 5814 Pure Silver Wire Ligature.

In small skeins, any size per skein \$.30
In 1-ounce coils, any size.....per oz. 2 25

Sizes—22, 23, 24, Heavy.
25, 26, 27, Medium.
28, 29, 30, Fine.

We can also furnish heavier wire in sizes ranging from 21 to 16.

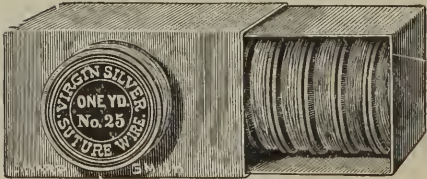


Fig. 5815 Pure Silver Wire.

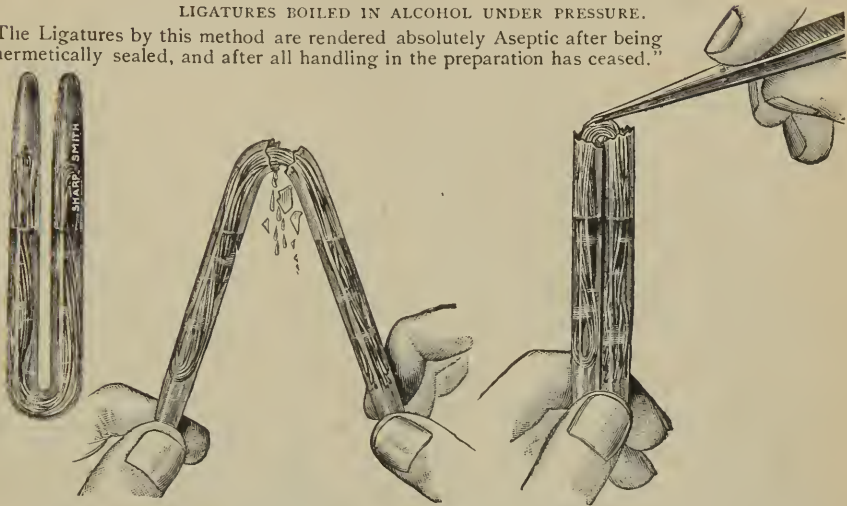
Put up 6 spools (assorted sizes from 21 to 30) in box, each spool containing 1 yard of wire....\$1 20

LIGATURES.

DR. G. R. FOWLER'S ASEPTIC LIGATURE TUBE.

LIGATURES BOILED IN ALCOHOL UNDER PRESSURE.

"The Ligatures by this method are rendered absolutely Aseptic after being hermetically sealed, and after all handling in the preparation has ceased."



No Antiseptic Remedies required or employed. Each tube contains from 6 to 10 Ligatures, according to size, each Ligature being 12 inches long. Each tube is wrapped in sheet cotton and packed in a slide box—1 dozen of them in a neat outside box.

Fig. 5823-A	Dr. Fowler's Tubes, Aseptic Catgut	each,	\$o	25
"	" " " " Silk Worm Gut	"	"	25
"	" " " " Twisted Silk	"	"	25
"	" " " " Braided Silk	"	"	25
"	" " " " Cable Twist	"	"	25

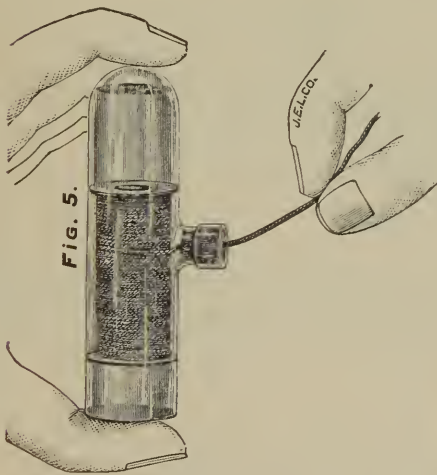


Fig. 6.



Fig. 7.

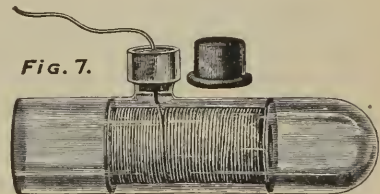


Fig. 5823-B—NEW PATENTED LIGATURE PACKAGES.
In Three Styles. Patented January 17, 1893.

- Fig. 5823-B 1st. The Single Spool Patented Tank Package.—See above cuts, Figs. 5, 6, 7.
 " 5823-C 2d. The Three Spool Patented Vertical Package.—See following page.
 " 5823-D 3d. The Three Spool Patented Tank Package.—See following page.

All these packages are entirely new in principle and design. They are the result of constant study and scientific experiments on a very exhaustive scale, in order to obtain all the requirements in one compact package. **The Tank Packages** in particular possessing the following combination of advantages.—(Continued on following page.)

LIGATURES.

NEW PATENT LIGATURE PACKAGES—Continued. (See preceding page.)

Any Ligature selected can be wound on the spools, such as **Catgut**, **Braided and Twisted Silk**, **Cable Twist**, etc. Any Ligature wanted will be supplied. Prices as follows :

Fig. 5283-B	{	Tank Package, No. 1, Fig. 6, regular size.....each,	\$o 30
		“ “ “ 2, Fig. 7, hospital size	“ 75
		“ “ “ 3, Fig. 5, extra hospital size ...	“ 1 75

They are absolutely aseptic ; all glass except ligatures.

The ligatures cannot get tangled.

The spools adjust themselves opposite their respective openings.

They are perfectly air-tight, and can never leak.

Ligatures, being preserved in alcohol, can be re-sterilized at any time.

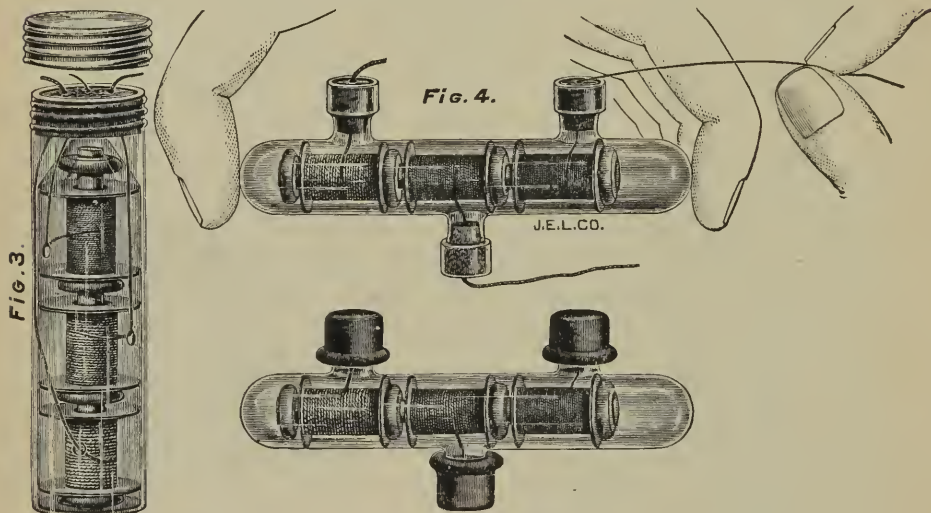


Fig. 5823-C
Pat. Feb. 7th, 1893.

Fig. 5823-D
Pat. Jan. 17th and Feb. 7th, 1893.

Fig. 5823-D	Three Spool Tank Package, No. 4, Fig. 4, regular size, each,	\$o 75
“ 5823-C	“ Vertical “ Fig. 3, regular size	“ 50

This Vertical Package is put out to meet some of our competitors' similar goods. It does not contain quite as much ligatures as our patented package, nor is it intended to replace that package, as it can never do it.

“CABLE TWIST” SURGEON'S SILK.



5823-E

We make it in six sizes, to correspond to our regular Nos. 4, 6, 8, 10, 12 and 14, and in large skeins ; each skein weighs just $\frac{1}{12}$ of an ounce, there being 12 skeins in each ounce. Price per skein, 30c.

LIGATURES—DRAINAGE TUBES.**Prices in Tablet Bottles.**

Fig. 5823-G	Twisted Silk, one skein.....each,	\$o 20
" "	Braided Silk, "	" 20
" "	Catgut, 10 foot coil.....	" 20

The Aseptic method will hereafter be employed by us in filling all orders, unless Medicated Ligatures are specified on the order.

PURE RUBBER LIGATURES.

Made in five sizes, as follows: Nos. 3, 4, 5, 6, 7, American Catheter Scale. Price 5 cents per foot, or 60 cents per box of 12 feet, assorted sizes.



5823-H Getchell's White Metal Buttons....per doz. \$o 40

PERFORATED SHOT.

Made in Nos. 6, 7, 8, 9, American Scale.....per hundred, \$o 50

DRAINAGE TUBES.

Fig. 5834 Pure Gum Perforated Drainage Tubing, any size....per yd. \$o 25



Fig. 5834-A Dr. Joseph L. Hancock's Irrigation Drainage Tube, for Empyema, and the drainage of other abscesses. Price..... \$o 50



5831

(See following pages for other Drainage Tubes.)

Miscellaneous and General Surgical Necessities.

FIG.	
*5814	Pure Silver Wire, assorted sizes, from 18 to 32 Stubbs Gauge.....per coil \$ 30
*5815	Pure Silver Wire, 6 different sizes (1 yard each), on spools in case..... 1 20
5816	Pure Silver Wire, 6 different sizes, in ounce coils. ....per oz. 3 00
5817	Pure Copper Wire, silver plated.....per coil 25
5818	Iron Wire....." 10
5819	Lead Wire....." 20
5820	Silk Worm Gut, per doz. strings..... 20
*5821	" " " bunch..... 75
5822	Dr. Penny's Adjustable Elastic Adhesive Strips, 12 in each box....each 50
5823	Farny Suture, from 1 to 7 in box.....per box 1 50
5823	" " in one yard lengths.....per yard 1 00

DRAINAGE TUBES AND TUBING.

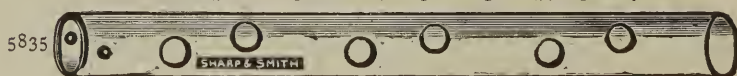
5824	Decalcified Bone Drainage Tubes, assorted lengths....per inch 10
5825	" " " " 2 inches long, in bottle.... 30
5826	" " " " 2 $\frac{1}{3}$ " " " 35
5827	" " " " 4 " " " 40
5828	" " " " 2 " "each 25
5829	" " " " 2 $\frac{1}{2}$ " " 35
5830	" " " " 3 " " 40
*5831	Andrews Suction Drainage Tubes..... 50
5832	Purified Rubber " " 9 inches long.....each 10
*5833	Maroon " " 6 assorted sizes, in bottle 7 inches long.....per bottle 75
*5834	Pure Gum Rubber Drainage Tubing.....per yard 25

GROSS' GLASS ANTISEPTIC DRAINAGE TUBES.

*5835	Gross' Glass Drainage Tube, No. 1, 4 holes.....each 10
*5835	" " " " " 2, 4 " " 10
*5835	" " " " " 3, 5 " " 12
*5835	" " " " " 4, 6 " " 12
*5835	" " " " " 5, 7 " " 15
*5835	" " " " " 6, 8 " " 18
*5835	" " " " " 7, 9 " " 20
*5836	Pure Silver " " in any length.....per inch 15
*5837	Lister's Forceps for introducing Drainage Tubes..... 2 25



ANTISEPTIC DRAINAGE TUBES.—Glass.



Made after Patterns furnished by Prof. S. W. Gross.

These Tubes have large holes, one-half inch apart, arranged alternately on opposite sides.

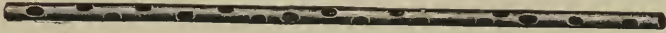
They are carefully finished, especial care being taken to make them smooth.

In addition to the drainage holes, each tube has at one end two smaller holes for the insertion of Safety Pin, through which it is prevented slipping into the wound. For other Drainage Tubes see Index.

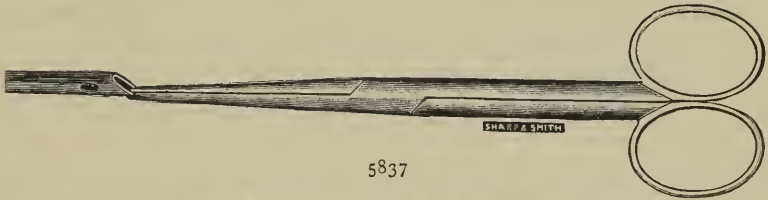
Miscellaneous and General Surgical Necessities.



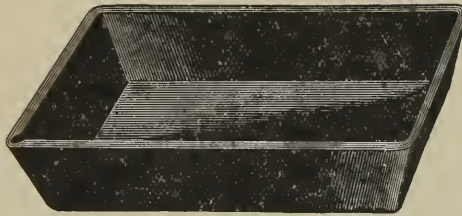
5833



5836



5837



5838

PAPIER MACHE INSTRUMENT TRAYS, FOR HOLDING ANTISEPTIC SOLUTION AND INSTRUMENTS.

Papier Mache is well known as an exceedingly tough substance, and articles made of it are almost indestructible.

This material is being used in Europe in the construction of photographic trays, and they are now offered for the first time in the United States as anti-septic trays for surgical operating instruments.

The trays are most desirable on account of their durability, and being finished with a hard and polished black surface, are thoroughly adapted for surgical and chemical purposes.

SIZE OF TRAYS. (Inside Bottom).		PRICES.
FIG.		
*5838	12 $\frac{1}{4}$ x 10 $\frac{1}{4}$ inches.....	each \$ 1 50
*5838	14 $\frac{1}{2}$ x 12 $\frac{1}{4}$ "	" 2 00
*5838	16 $\frac{1}{2}$ x 20 $\frac{1}{2}$ "	" 3 50
*5838	19 x 24 "	" 5 50

We also have these in "Agate" Ironware (seamless, Fig. 5839) which are also indestructible. The "Agate" trays have "handles" for convenience in carrying.

*5839	14 inch.....	\$ 80
*5839	15 "	90
*5839	16 "	1 00
*5839	17 "	1 10
*5839	18 "	1 25

MISCELLANEOUS AND GENERAL SURGICAL NECESSITIES.

DR. C. S. ELDRIDGE'S FLEXIBLE TRAY OR BATH FOR SURGICAL INSTRUMENTS.



Fig. 5839-A (PATENT APPLIED FOR.)

We offer in this article, something that we feel confident will commend itself to surgeons. Its superiority consists in the fact that its sides and ends can be so distended by air as to make it meet all the requirements of a solid metal or rubber tray, whereas it is made of Maroon Rubber and very durable. After being used, the contents are removed and a valve at one end allows the air to escape and the tray is rolled up in a very compact manner and placed along side of sundry articles in a surgeon's bag, and is apparently an indispensable article in a surgeon's outfit. The "Tray" or "Bath" is sufficiently large to accommodate most any size knives, forceps, etc.

Price of Tray, net.....\$4.50

BLUE AND WHITE ENAMEL ASEPTIC TRAYS.

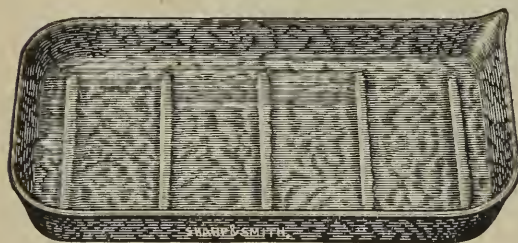


Fig. 5839-B

Price.....\$2.50

For the Immersion of Instruments in an Antiseptic Solution during Operations, etc.

This article is made of sheet iron, pressed into shape without seam or joint, and provided with corrugations in the bottom facilitate the picking up of instruments. The coating is a pure vitreous enamel, which for tenacity and power of resisting the action of acids has no equal. The surface is smooth and as easily cleaned as china, while the article is LIGHT and PRACTICALLY INDESTRUCTIBLE. Size, 15 x 9 x 1 3/4.

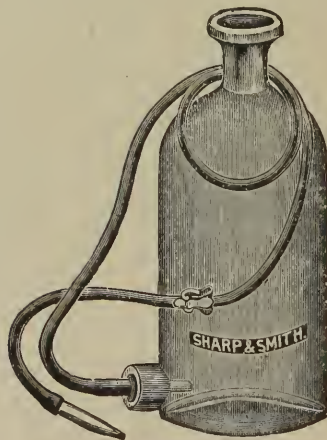


Decalcified Bone Chips.

Senn's Decalcified Bone Chips,
per bottle.....\$1.00
Senn's Decalcified Bone Plates,
per pair.....\$2.00
Senn's Bone Pins, each.. .10

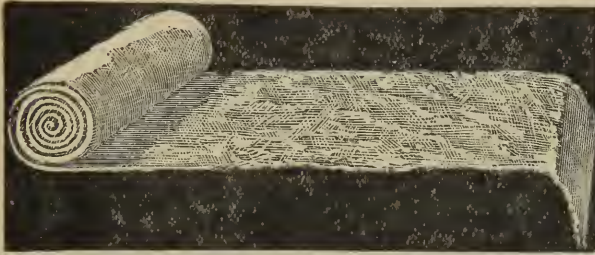
Irrigating Jars, complete with
tubing, shut-off and irrigat-
ing point.

1	gallon.....each,	\$1 50
2	"	2 50
3	"	3 50
5	"	6 00



Irrigating Jar

MISCELLANEOUS AND GENERAL SURGICAL NECESSITIES.



SHARP & SMITH'S ABSORBENT COTTON.

In even sheets, interlaid
with tissue paper to prevent
felting.

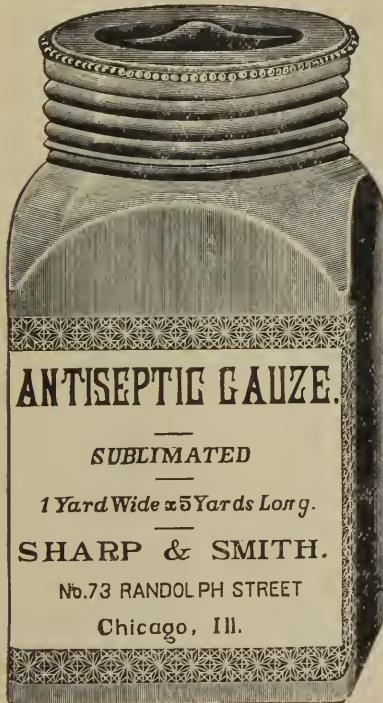
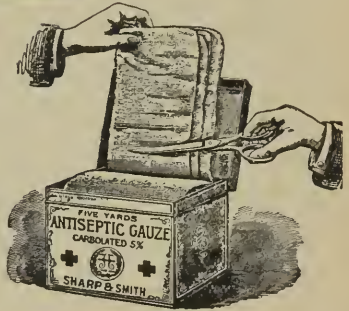
Figs. 5861 to 5886. See page 894 for prices.

SHARP & SMITH'S ANTISEPTIC GAUZE.

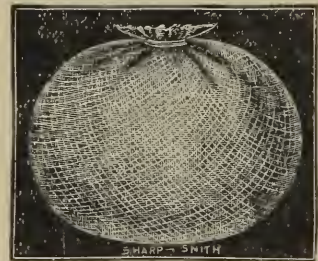
This Gauze is in a continuous roll, and can be unwound
and as much as needed cut off without removing from the
box, and is put up 5 yards in each box.

Carbolated, Borated and Sublimated.....per can, \$0 50
Iodoform, 10%....." 1 10
25 yard Rolls Carbolated or Sublimated Gauze... 1 25
25 yard Rolls Plain Absorbent Gauze..... 1 75

This Gauze is guaranteed to be one of the best in the
market, which we have found out by long experience in
its use.



In Glass Jars, 6oc. 5 yards.



Antiseptic Absorbent Cotton Mop.

ANTISEPTIC ABSORBENT COTTON MOPS.

For all uses in which sponges may be employed.
They consist of a ball of absorbent cotton, covered
with antiseptic gauze. They are put up one dozen
in a box.

PRICE PER DOZEN.

	1 in. diam.	1½ in. diam.	2 in. diam.
Plain.....	\$0 20	\$0 30	\$0 35
Carbolated.....	25	35	40
Sublimated	25	35	40
Iodoform.....	50	65	80

MISCELLANEOUS AND GENERAL SURGICAL
NECESSITIES.

NEW PATENTED GLASS BOX JARS.

FOR MEDICATED GAUZE, IN FIVE YARD ROLLS. AN ABSOLUTE ASEPTIC AIR-TIGHT CONTAINER.

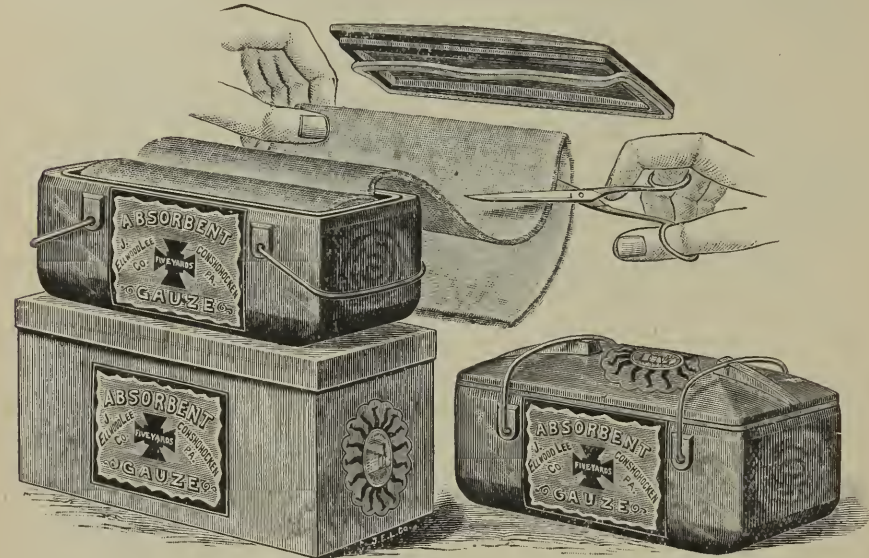


Fig. 10.

Patented January 10, 1893.

As shown in the above illustration, the gauze can be drawn out of the jar without removing the roll. This container, while a little more expensive than those generally employed, is the most perfect and convenient ever placed on the market.

ANTISEPTIC GAUZE IN PATENTED GLASS BOX JARS.

Double Bale Top, Fig. 10.	1 yd. x 5 yds.	Double Bale Top, Fig. 10.	1 yd. x 5 yds.
Plain Sterilized Aseptic.....	\$ 65	Iodoform, 10 per cent	\$1 50
Sublimated, 1 to 2000.....	65	" 20 "	1 75
Borated, 10 per cent.....	65	" 25 "	2 00
Carbolated, 10 per cent.....	65	" 33 1/3 "	2 50
Iodoform, 5 per cent.....	30		
Price of Empty Jars, with outside packing box.....	each		35

ANTISEPTIC GAUZE—NEW AIR-TIGHT CARTON.

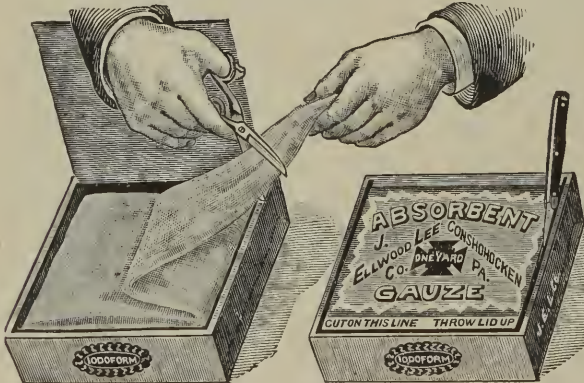


Fig. 7.



Fig. 8.

See opposite page for description and prices of Figs. 7 and 8.

MISCELLANEOUS AND GENERAL SURGICAL NECESSITIES.

ANTISEPTIC GAUZE IN AIR-TIGHT CARTONS.—See cut on opposite page.

	1 yd. x 1 yd.	1 yd. x 5 yds.	Retail. 1 yd. x 25 yds.
Plain Absorbent, Sterile.....	\$ 13	40	\$1 50
Sublimated, 1 to 2000.....	15	55	1 60
Borated, 10 per cent.....	17	60	1 60
Carbolated, 10 per cent.....	15	55	1 60
Iodoform, 5 per cent.....	24	1 00	4 25
“ 10 per cent.....	26	1 25	5 25
Dermatol, 10 per cent.....	26	1 25	5 25

Fig. 7 represents New Air-Tight Carton, made in 1 yard and 5 yard packages. The Gauze is wrapped in parchment, packed in cartons, then sealed up and dipped in boiling paraffine. This form presents the most practical plan by which a fresh package may be opened for each and every dressing. Large rolls and large containers, such as “Wooden Tubs” and 100 yard cartons, should be avoided, alike by hospitals and private practitioners, as the gauze gets stale from opening long before it is used up. Lee’s 1 yard and 5 yard air-tight cartons are the best for all hospitals.

ANTISEPTIC GAUZE IN GLASS JARS. WITH SCREW CAPS.

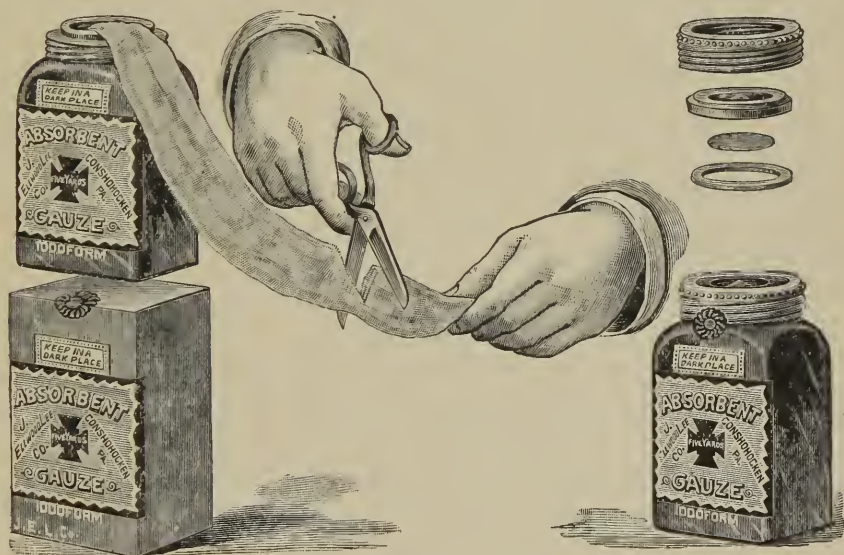


Fig. 9.

Fig. 8 (see opposite page).
1 yd. x 1 yd.Fig. 9.
yd. x 5 yds.

Plain, Sterilized, Antiseptic.....	\$ 18	\$ 65
Sublimated, 1 to 2000.....	18	65
Borated, 10 per cent.....	20	75
Carbolated, 10 per cent.....	18	65
Iodoform, 5 per cent.....	28	1 30
“ 10 per cent.....	30	1 50
Eucalyptol, 5 per cent.....	25	75
Thymol, 5 per cent.....	25	75
Naphthaline 5 per cent.....	25	75
Salicylated, 5 per cent.....	25	75
Oxide of Zinc.....	25	75
Dermatol, 5 or 10 per cent.....	30	1 50

FIG.

MEAD'S ADHESIVE PLASTER.—On Tin Spools.

5840	3	inch strips, 10 yards long,.....	per spool \$	65
5841	2 1/2	" " " " " " " " " " " "	" "	55
5842	2	" " " " " " " " " " " "	" "	50
5843	1 1/2	" " " " " " " " " " " "	" "	40
5844	1	" " " " " " " " " " " "	" "	30
5845	1/2	" " " " " " " " " " " "	" "	25
5846	7	" " " " " " " " " " " "	" yard	25
5847	12	" " " " " " " " " " " "	" box	25
5848		Mead's Dressing Paper, 24 inches and 25 yards.....	per roll	75

ADHESIVE PLASTERS AND BANDAGES.

5849		Rubber adhesive plaster on cotton cloth, 7 in wide, per yard..	\$	50
5850		Emp. " " " " Swansdown 17 in. wide, per yard..		65
5851		" " " " " " Moleskin 17 in. wide, per yard ...	1	00
5852		" " " " " " Shirting, per yard		25
5853		Belladonna adhesive plaster, 7 inches wide per yard.....		60
5854		Camphorated blister plaster 7 inches wide per yard.....		60
5855		Isinglass plaster on fine silk, per yard.....		40
5856		" " " " strong muslin, per yard.....		30
5857		10 yards adhesive bandage, 1/2 inch wide, in tin boxes....	each	30
5858	10	" " " " " " " " " " " "	"	35
5859	10	" " " " " " " " " " " "	"	50
5860	10	" " " " " " " " " " " "	"	70

SHARP & SMITH'S COTTON.

5861	Absorbent,	1 lb.	packages.....	each \$	40
5862	"	1/2 "	" " " " " " " " " " " "	"	25
5862	"	1/4 "	" " " " " " " " " " " "	"	20
5863	"	2 oz.	" " " " " " " " " " " "	"	15
5864	"	1 "	" " " " " " " " " " " "	"	10
5865	Borated	1 lb	" " " " " " " " " " " "	"	45
5866	"	1/2 "	" " " " " " " " " " " "	"	30
5867	"	1/4 "	" " " " " " " " " " " "	"	25
5868	"	2 oz.	" " " " " " " " " " " "	"	15
5869	"	1 "	" " " " " " " " " " " "	"	10
5870	Carbolated	1 lb	" " " " " " " " " " " "	"	50
5871	"	1/2 "	" " " " " " " " " " " "	"	35
5872	"	1/4 "	" " " " " " " " " " " "	"	30
5873	"	2 oz.	" " " " " " " " " " " "	"	20
5874	"	1 "	" " " " " " " " " " " "	"	15
5875	Sublimated	1 lb	" " " " " " " " " " " "	"	45
5876	"	1/2 "	" " " " " " " " " " " "	"	30
5877	"	1/4 "	" " " " " " " " " " " "	"	25
5878	"	2 oz.	" " " " " " " " " " " "	"	15
5879	"	1 "	" " " " " " " " " " " "	"	10
5880	Salicylated	1 lb	" " " " " " " " " " " "	"	50
5881	"	1/2 "	" " " " " " " " " " " "	"	35
5882	"	1/4 "	" " " " " " " " " " " "	"	30
5883	"	2 oz.	" " " " " " " " " " " "	"	20
5884	"	1 "	" " " " " " " " " " " "	"	15
5885	Iodoform		" " " " " " " " " " " "	"	25
5886	Styptic		" " " " " " " " " " " "	"	20

SURGEONS' LINT.

5887	Absorbent Surgeon's Lint, per lb.....	\$	55
5888	Taylor's " " " " " " " " " " " "		75
5789	" Superior quality Surgeon's Lint per lb.....	1	50
5890	" " " " " " " " " " " "	"	20

FIG.

PURE LAMB'S WOOL.

5891	Plain Antiseptic Lamb's Wool, pound pkgs.....	\$ 1 90
5892	" " " " $\frac{1}{2}$ " "	1 00
5893	" " " " $\frac{1}{4}$ " "	50
5894	Binoidide of Mercury, 1-8000 Lamb's Wool, 1 pound pkgs.....	2 00
5895	" " " " $\frac{1}{2}$ " "	1 00
5896	Carbolated 1-8000 Lamb's Wool, $\frac{1}{4}$ pound pkgs.....	65
5897	Iodoform " " " $\frac{1}{4}$ " "	75
5898	Sublimated " " " $\frac{1}{4}$ " "	65

JUTE.

5899	Carbolized Jute, in 1 lb. tin boxes.....	\$ 30
5900	Plain "	per lb. 20
5901	Tarred " in 1 lb. tin boxes.....	35
5902	Oakum.....	per lb. 20

PROTECTIVES.

5903	Oiled Muslin.....	per yard\$ 50
5904	" Silk, 30 inches wide.....	" 95
5905	" " 28 " "	" 70
5906	Green Silk Protective Cloth.....	1 50
5907	Gutta Percha Tissue, best quality.....	" 50
5908	McIntosh Black Rubber Cloth.....	" 60
5909	" Pink " "	1 50

RUBBER SHEETING.

5910	Rubber Sheeting, white, $\frac{1}{4}$ yds.....	\$ 75
5912	" " " $\frac{1}{4}$ "	1 00

ROLLER BANDAGES.

5913	One lb. Boxes, assorted.....	per lb. 65
5914	1 inch wide by 1 yard long, }	For fingers and toes, and hands and feet.
5915	1½ inches " 3 " " }	
5917	2 " " 3 " " }	
5918	2 " " 8 " " }	
5919	2½ " " 3 " " }	For forearms, arms and head of adults.
5920	2½ " " 8 " " }	
5921	3 " " 4 " " }	For lower extremities, clavicle, etc., for adults.
5922	3 " " 8 " " }	
5923	3½ " " 5 " " }	
5924	3½ " " 8 " " }	For the body or trunk.
5925	4 " " 6 " " }	
5926	4 " " 8 " " }	

ANTISEPTIC GAUZE.

5927	S. & J.'s 10 per cent. Carbolized Gauze, 5 yard roll in can, per can\$	65
5928	" 5 " Iodoform " 5 " " " " "	1 50
5929	" 10 " " " 5 " " " " "	1 75
5930	" 1-2000 Corrosive Sublimate " 5 " " " " "	65
5931	" 5 per cent. Hydronaphthol " 5 " " " " "	1 00
5932	" 5 " Naph. " 5 " " " " "	75
5933	J. & J.'s Carbolized " 5 " " " " "	55
5934	" 10 per cent. Iodoform " 5 " " " " "	1 10
5935	" Corrosive Sublimate " 5 " " " " "	55
5936	Meyer's 10 per cent. Carbolized " 5 " " " " "	55
5737	" 5 " " 5 " " " " "	50
5938	" 1-2000 Corrosive Sublimate " 5 " " " " "	50
5939	" 5 per cent. Iodoform " 5 " " " " "	1 25
5940	" 10 " " " 5 " " " " "	1 25

ANTISEPTIC GAUZE AND BANDAGES—Continued.

5941	Schorse's	5 per cent. Carbolyzed Gauze, in 5 yd. rolls, per roll \$	50
5942	"	10 " " " " " " " " " "	55
5943	"	1-2000 Corrosive Sublimate " " " " " " " " " "	55
5944	"	5 per cent. Iodoform " " " " " " " " " "	1 25
5945	"	10 " " " " " " " " " "	1 25
5945	Lister's	1-1000 Corrosive Sublimate " " " " " " " " " "	60
5946	"	Carbolyzed " " " " " " " " " "	60
5947	"	Iodoform " " " " " " " " " "	1 10
5948	25	Yard Rolls Plain Absorbent " " " " " " " " " "	1 25
5949	25	" " Corrosive Sublimate " " " " " " " " " "	1 60
5950	25	" " Carbolyzed " " " " " " " " " "	1 60

BEST WHITE MUSLIN BANDAGES.

5951	in.x1	yard Best White Muslin Bandages.....per doz \$	10
5952	1	in.x3 " " " " " " " " " "	35
5953	2	in.x3 " " " " " " " " " "	45
5954	2	in.x8 " " " " " " " " " "	1 00
5955	2½	in.x3 " " " " " " " " " "	65
5956	2½	in.x8 " " " " " " " " " "	1 50
5957	3	in.x4 " " " " " " " " " "	90
5958	3	in.x8 " " " " " " " " " "	1 30
5959	3½	in.x5 " " " " " " " " " "	1 70
5960	3½	in.x8 " " " " " " " " " "	1 80
5961	4	in.x6 " " " " " " " " " "	1 70
5962	4	in.x8 " " " " " " " " " "	2 25

WHITE OR RED FLANNEL BANDAGES.

5963	1½	in.x3 Yards White or Red Flannel Bandages.....per doz.\$	1 25
5964	2	in.x3 " " " " " " " " " "	1 50
5965	2	in.x8 " " " " " " " " " "	3 75
5966	2½	in.x3 " " " " " " " " " "	1 75
5967	2½	in.x8 " " " " " " " " " "	4 45
5968	3	in.x4 " " " " " " " " " "	3 00
5969	3	in.x8 " " " " " " " " " "	5 00
5970	3½	in.x5 " " " " " " " " " "	4 00
5971	3½	in.x8 " " " " " " " " " "	5 50
5972	4	in.x6 " " " " " " " " " "	5 00

PLASTER PARIS BANDAGES.

5973	1	in.x3 Yards Best Plaster Paris Bandages.....per doz.\$	70
5974	1½	in.x3 " " " " " " " " " "	75
5975	1½	in.x5 " " " " " " " " " "	1 00
5976	2	in.x3 " " " " " " " " " "	90
5977	2	in.x6 " " " " " " " " " "	1 25
5978	2½	in.x3 " " " " " " " " " "	95
5979	2½	in.x6 " " " " " " " " " "	1 40
5980	3	in.x3 " " " " " " " " " "	1 00
5981	3	in.x6 " " " " " " " " " "	1 50

GAUZE BANDAGES.

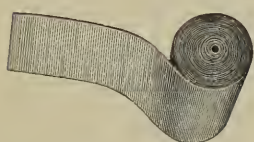
Carbolyzed, 1	in. x 5 yds.	\$ 40	Hygroscopic, 1	in. x 5 yds., per doz. \$	20
"	1½ in. x 5 yds.	60	"	1½ in. x 5 yds., " "	25
"	2 in. x 5 yds.	80	"	2 in. x 5 yds., " "	40
"	2½ in. x 5 yds.	1 00	"	2½ in. x 5 yds., " "	50
"	3 in. x 5 yds.	1 20	"	3 in. x 5 yds., " "	60
"	3 in. x 10 yds.	2 00	"	3 in. x 10 yds., " "	1 00
"	6 in. x 15 yds.	4 50			

MISCELLANEOUS AND GENERAL SURGICAL NECESSITIES.

UNBLEACHED MUSLIN BANDAGES.

1-lb. Boxes, assorted					per lb.	\$ 65
1	inch wide by 1 yard long,			For fingers and toes, and hands		
1 1/2	inches	3	"	and feet.....		
2	"	3	"	For forearms, arms, head and legs		
2	"	8	"	of children.....		
2 1/2	"	3	"	For forearms, arms and head of		
2 1/2	"	8	"	adults.....		
3	"	4	"	For lower extremities, clavicle,		
3	"	8	"	etc., for adults.....		per lb. \$ 65
3 1/2	"	5	"			
3 1/2	"	8	"			
4	"	6	"	For the body or trunk.....		
4	"	8	"			

PURE GUM BANDAGES.



2 in. x 9 ft.....	\$ 50	2 1/2 in. x 9 ft.....	\$0 60
2 in. x 10 1/2 ft.....	60	2 1/2 in. x 10 1/2 ft.....	75
2 in. x 12 ft.....	70	2 1/2 in. x 12 ft.....	95
2 in. x 15 ft.....	90	2 1/2 in. x 15 ft.....	1 15
3 in. x 9 ft.....	75	3 in. x 12 ft.....	1 10
3 in. x 10 1/2 ft.....	90	3 in. x 15 ft.....	1 25

See pages 289A to 290 for Bandage Rollers.

PHYSICIANS' SOAP.

5 per cent. Boracic 'cid Soap, in tin boxes.....	each,	\$0 25
5 " Salicylic Acid ".....	"	25
1 " Hydronaphthol ".....	"	25
5 " ".....	"	25

ANTISEPTIC TABLETS.

Corrosive Sublimate Tablets, 25 in bottle.....	per bottle,	\$0 25
" " 50 ".....	"	40
Hydronaphthol " 100 ".....	"	35

IODOFORM SPRINKLERS.



Small Iodoform Sprinklers, hard rubber (see cut)....	\$0 50
Medium " ".....	75
Large " ".....	1 00

TAMPONS.

Wood's Wool Tampons.....	per doz.	\$1 25
Anderson's Vaginal Capsules.....	"	60

LINTINE.

J. & J. Lintine, in 1 ounce packages.....	per package,	\$0 10
" " ".....	per lb.	85

LINTON COMBINED DRESSING.

Plain, 2, 3 or 4 inches wide.....	per lb.	\$0 70
Bi-Chloride 1-2000, 2, 3 or 4 inches wide.....	"	75
Carbolated 5 per cent. 2, 3 or 4 inches wide.....	"	75

HARTMANN'S WOOD WOOL PREPARATIONS.

Wood Wool, in bags of 1 lb.....	\$0 40
Wood Wool Wadding, in packages of 1 lb.....	per pkg. 60
" " 1/2 lb.....	35
" " 1/4 lb.....	20

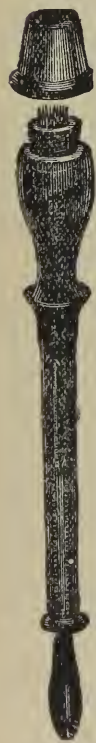
This preparation is a perfect absorbent, invaluable for suppurating wounds. Will absorb discharges of every description.

Wood Wool Tissue, in sheets, 18 x 72 inches, consisting of layer of Wood Wool Wadding between two pieces of Sublimate Gauze; always ready for use; any size pad or bandage can be made from it in a moment. In packages of 1 lb.....	\$0 75
Wood Wool Tissue, same as above, in 2 lb. packages, size 36 x 72 inches.....	per pkg. 1 50
" " (thin), size 18 x 72 inches, in packages of 1/2 lb.....	" 50
" Accouchment Sheets, for accouchment, bed sores, operations, etc., 32 x 32 inches, \$1.00 each; 26 x 20 inches, 75c. each; 24 x 18 inches, 50c. each.	



MISCELLANEOUS GOODS.

FIG.			
*6000	Baunscheidt Instrument.....	\$	1 85
6001	“ Oil.....(per bottle)	1	35
6002	Minim Graduates.....	each	20
6003	One and two drachm Graduates.....	“	15
6003	“ ounce “	“	20
6003	Two “ “	“	25
6003	Four “ “	“	35
6003	Eight “ “	“	40
6004	Glass Mortars and Pestles, from	25c. to	1 00
*6005	Wedgewood Mortars and Pestles, from.	40c. to	3 50
*6006	Specimen or Museum Jars, one pint.....		50
*6006	“ “ “ one quart.....		75
*6006	“ “ “ half gallons.....	1	00
*6006	“ “ “ gallon.....	1	50
*6006	“ “ “ two gallon.....	2	00
*6007	Screw Neck Tube Vials, with nickel plated tops, per doz.,	25c. to	50
*6008	Papier Maché, in funnels, plain.....	each 20c. to	95
*6009	“ “ “ with ridges.....	“ 25c. to	1 00
6010	Glass Funnel.....	“ 10c. to	35
6011	“ Feeding Dishes.....	per doz.	3 00



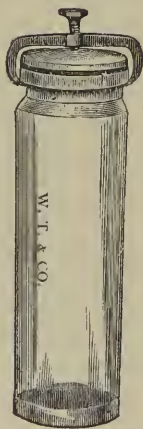
6000



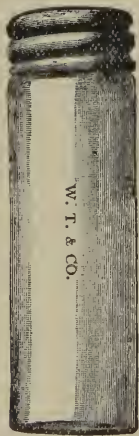
6008—Plain.



6009—With Ridges.



6006



6007



6005

MISCELLANEOUS GOODS—SPONGES.



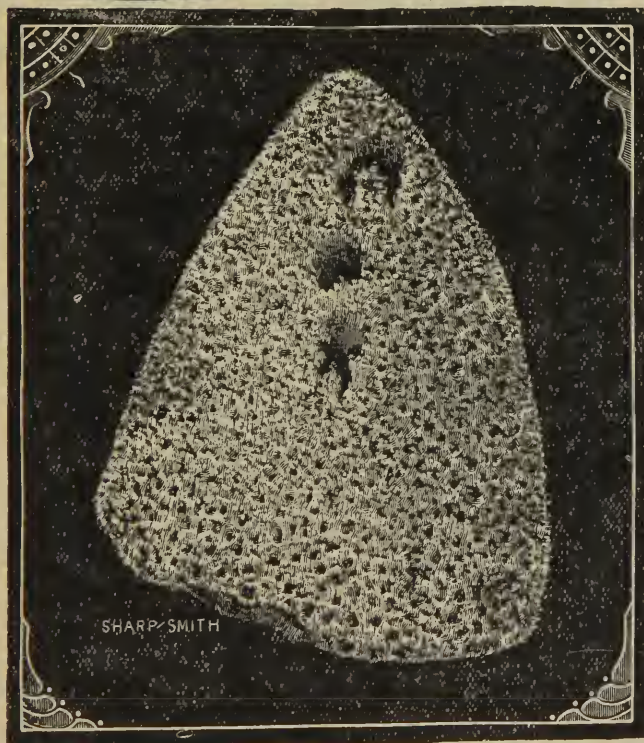
ANTISEPTIC ABDOMINAL SPONGES.

These Abdominal Sponges are of the *finest quality*, thoroughly bleached and sterilized.

No 1	Abdominal Sponges,	6 to	9 sq inches	each,	\$o 20
" 2	"	"	16 to 22	"	60
" 3	"	"	30 to 40	"	95
" 4	"	"	45 to 55	"	1 40
" 5	"	"	50 to 100	"	2 25

ANTISEPTIC ZIMOCCO SPONGES.

1 dozen in nickel plated, screw cap bottle, 75 cents per bottle (see cut).



ANTISEPTIC SPONGES.

Bleached and Medicated for Surgical and Gynecological Purposes.

These sponges, although small, are of the finest quality. The cuts show their respective sizes—No. 1 being the smaller and No. 2 the larger. They are thoroughly washed, cleansed, bleached and softened. We make the price so low that they are but little higher than absorbent cotton, and are much superior.

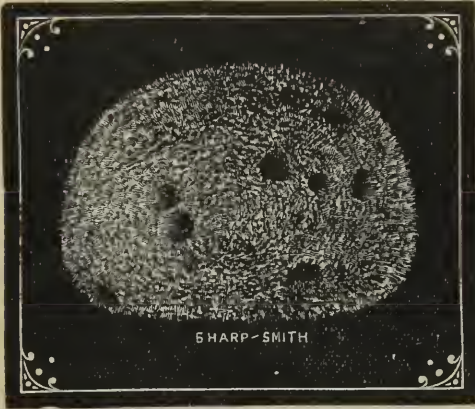
PRICES.

No. 1, put up in dry state, per doz. \$0.40
 No. 2, put up in dry state, per doz. \$0.60
 No. 3, put up in dry state, per doz. \$1.00
 No. 4, put up in a dry state, per doz. \$2.00
 Nos. 3 and 4 Sponges are corresponding sizes larger, as Nos. 1 and 2.

No. 2

See following page for additional Sponges.

MISCELLANEOUS GOODS—SPONGES, BAGS, BOTTLES.



No. 1
SPONGE BAGS.



Sponge Bag

The outside finish of these Sponge Bags is of cambric, in fancy patterns, lined on the inside with rubber, and finished in the best manner.

PRICES AND SIZES OF SPONGE BAGS.

6 x 7 inches.....each,	\$o 45	7 x 8 inches.....	each, \$o 50
8 x 9 “.....“	50	9 x 10 “.....“	55
10 x 11 “.....“	60	11 x 12 “.....“	65
12 x 13 “.....“	75		

METALLIC COVERED BOTTLES.

FOR PHYSICIANS' USE.

Drawn from Solid Metal with Locking Ring on each Bottle, for the Purpose of Perfect Protection of Bottles Containing Liquids.

These cases are made in a variety of sizes, for bottles of one, two, four and eight ounce capacity each; each case, however, is made adjustable to bottles of different lengths, so that duplicates for the cases are easily obtained, besides being of great value to physicians, thus enabling them to transport liquids with absolute safety. They are handsomely double plated in nickel and gold, and beautifully finished for bureau toilet sets. For travelers they are indispensable for carrying liquids, oils, pomades, powders, etc., while special patterns are made for soaps, sponges, etc.

They are very light, the corrugations strengthening them so that they resist crushing, admitting of their being packed in any position.

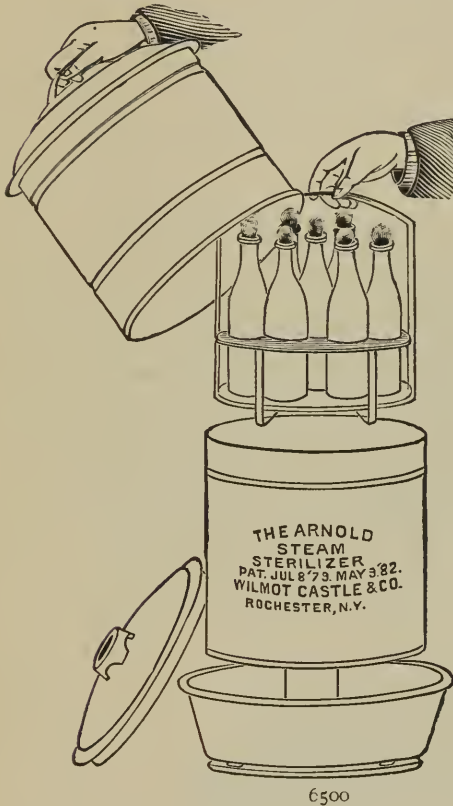


	SIZES.	EACH.
No. 1	Furnished with 1 oz. bottle....	\$o 50
	Diam. 1 3/4 in., length 3 1/2 in., weight 4 1/2 oz.	
No. 2	Furnished with 2-oz. bottle.....	65
	Diam. 1 3/4 in., length 4 in., weight 5 1/4 oz.	
No. 3	Furnished with 4 oz. bottle.....	75
	Diam. 2 in., length 5 1/2 in., weight 7 1/2 oz.	
No. 4	Furnished with 8 oz. bottle.....	1 00
	Diam. 2 1/2 in., length 7 in., weight 12 oz.	

DIRECTIONS.—Screw the cover down until it rests upon the cork, then turn back the locking ring on to the cover, which will securely lock the case.

MISCELLANEOUS GOODS—STERILIZERS.

THE ARNOLD STEAM STERILIZERS FOR STERILIZING MILK.



It is simple, effectual, convenient and inexpensive. It can be used effectively over the oil stove, the gas stove, an alcohol lamp or the ordinary kitchen fire. While so simple and inexpensive as to be within the reach of all, it is also absolutely the best means known for sterilizing milk. No other apparatus, however elaborate or expensive, accomplishes the work so well. It is used already by thousands of families and in the prominent laboratories and hospitals of the country, and wherever used it supersedes all other methods. No failures are possible with this device, nor is it necessary to employ a physician or a person of great skill to operate it. Any one who will observe the few simple directions given can secure as perfect results as can be obtained by the practiced chemist.

Family Sizes.

FOR STERILIZING MILK.

- | | |
|---|--------|
| No. 1. Including rack holding 7 bottles and cleaning brush, heavy tin, copper bottom..... | \$3 00 |
| No. 2. Heavy tin, copper bottom, with rack and 8 bottles..... | 3 50 |
| No. 1. All copper..... | 7 00 |
| Extra Bottles, per dozen..... | 75 |
| Croup Attachment with 10 inch tube..... | 30 |
| Additional lengths, each..... | 10 |

☞ Larger sizes for hospitals, laboratories and physicians' offices.

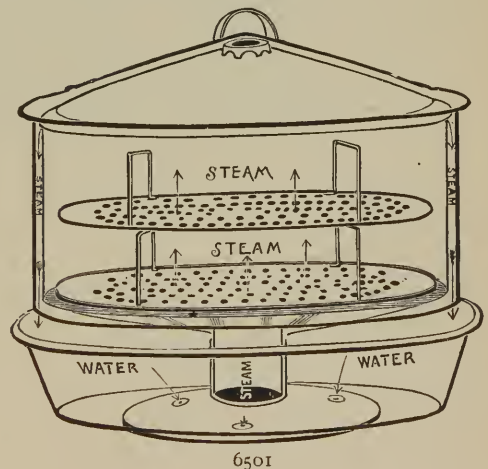
ARNOLD'S STEAM STERILIZER.

FOR SURGICAL INSTRUMENTS.

Special Instrument Sterilizer.

Oval in shape. Size of Chamber, 14 inches long, 9½ inches wide, 6 inches deep, with two racks for Instruments.

Heavy Tin, Copper Bottom\$ 5 00
All Copper..... 12 50



6501

MISCELLANEOUS GOODS—STERILIZERS.

FIG.		
*6502	Van Heusen's Milk Sterilizer and Pasteurizer.	\$4 00
*6503	“ “ Compress Heater and Sterilizer, No. 2, 8 by 16 inches, full copper, controllable new triple forced flame lamp, nickel trimmings.	14 00
*6503	Van Heusen's Compress Heater and Sterilizer, No. 3, 12 by 24 inches, full copper, controllable new triple forced flame lamp, nickel trimmings.	25 00
	Apparatuses with two or more drawers, or special sizes may be had. These apparatuses are all adapted for the use of Bunsen Burner. The trays to above apparatuses are of finest quality Craig Steel.	
	Handsome portable Physician's Case for No. 2 apparatus.	1 50

VAN HEUSEN'S MILK STERILIZER AND PASTEURIZER.

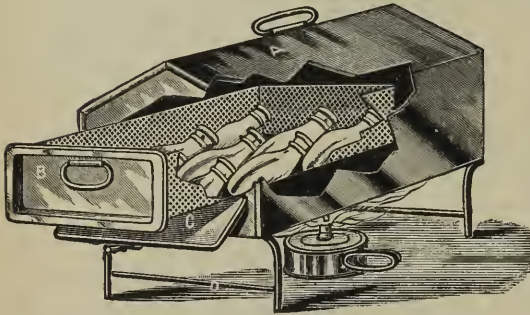


Fig. 6502

In the cut, A represents box of finely polished tin or specified material; B, sliding perforated metallic drawer in which are placed bottles containing liquid to be sterilized or pasteurized; C, outer door, which is closed in operation and prevents escape of steam; D, legs or supports which fold closely to the bottom, thus securing compactness and portability. In bottom of box A is a small tank containing water.

THE VAN HEUSEN COMPRESS HEATER AND INSTRUMENT STERILIZER.

PATENTED. DECEMBER 27TH, 1892.

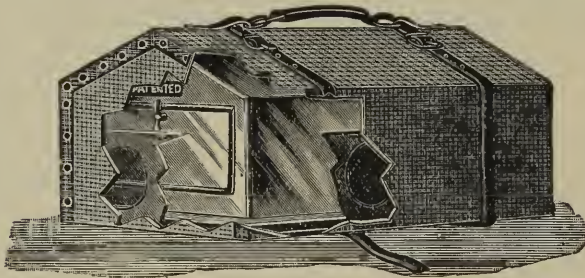


Fig. 6503

THE ONLY STERILIZER

Which will render instruments, dressings, etc., absolutely dry when cold, after having been subjected to steam.

That is portable.

That is simple and economical.

That is available in bedside operations.

In which steam is generated and fully condensed at the same time.

In which there is no surplus condensation on contents.

From which there is no escape of steam in operation.

THE ONLY APPARATUS

In which compresses, etc., may be medicated by the application of volatile disinfectants, soporifics or drugs.

For the preparation and steaming of poultices, plasters, etc.

THE ONLY METHOD

That does away with moistening and wringing of hot cloths, etc.

Of heating cloths, etc., that are moist when hot, and dry when cold.

Of producing aseptic compresses, etc.

MISCELLANEOUS GOODS—STERILIZERS.

PHYSICIANS' STERILIZING OVENS.

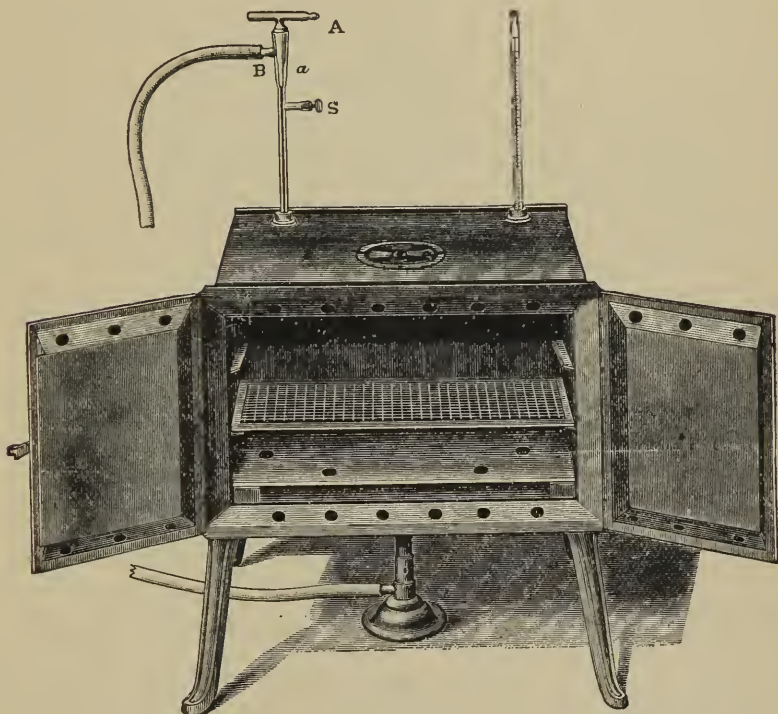


Fig. 6504

These Ovens are made for sterilizing instruments, bandages, etc., in dry heat. It has been the aim of the makers to construct an oven to produce the most uniform heat all over the inside of the oven. They are made of the best Russia iron, with double walls, through which the heat circulates, having a register on top. In order to secure a perfectly even circulation of the heat all around, there are connecting openings between the double doors.

The heat is furnished by a powerful Bunsen Burner, which is placed below the funnel-shaped opening in the center of the bottom of oven, circulating through the double walls, and escaping through the register in the center of the top.

These ovens are made in three sizes :

- | | | |
|-----------|--|--------------|
| Fig. 6504 | Inside measure, 9x9x12, including Bunsen Burner, Gas Regulator and Thermometer | net, \$16 50 |
| Fig. 6504 | Inside measure, 9x9x15, including Bunsen Burner, Gas Regulator and Thermometer | net, 18 00 |
| Fig. 6504 | Inside measure, 9x9x18, including Bunsen Burner, Gas Regulator and Thermometer | net, 20 00 |

COMMODOES.


PRICES OF HIGH GRADE COMMODOES.

(See description and illustrations, page 11, in Earth Closet Catalogue.)

EITHER PULL-UP OR SELF-ACTING.

No. 1	Hardwood, oil finish	\$32 50
No. 1A	Hardwood, antique finish	35 00
No. 2	Imitation Walnut, Mahogany, or Cherry, Cabinet Polish	40 00
No. 3	Walnut, oil finish, Cabinet Polish	48 00
Crating and Packing free. If specially packed in case		1 50
Size, 42 inches high, 30 inches deep, 24 inches wide.		
Weight when crated, Self-acting, 150 lbs., Pull-up, 125 lbs.		

REMARKS.

 **SPECIAL.**—To have a PERFECTLY INODOROUS Commode, the “URINE SEPARATING RECEPTACLE” is INDISPENSABLE, only one-third the deodorant is then necessary, and the Excrement Pail will not require emptying so often. The “HEAP’S PATENT” is the ONLY COMMODOE in which this ESSENTIAL and SPECIAL FEATURE is to be had.


Extra Seat for Children	\$2 00
Rim Seat for Children	1 00
Supply Box	3 00

EXTRA PAIL.—It will be found very convenient to have an additional excrement pail with a cover. An empty pail can then be placed in Commode when full one is removed; the cover prevents the ashes spilling and causing dust when being carried through the house. See No. 9 Pail, page 17, Earth Closet Catalogue.


COMMODOES FOR INVALIDS, WITH PATENT ADJUSTABLE ARMS.

The arms slide back against the side of the Commode, so that a patient can be lifted bodily onto the seat, or the arm nearest the bed can be put back to allow the patient to slide out of the bed onto the Commode. These arms can be attached to any Commode at an extra cost, viz.: If attached to Nos. 1, 1A and No. 2, \$2.50; No. 3, \$4.00; Nos. 4, 4A, 5 and 5A, \$2.00.

CHILD’S COMMODOE—See next page.

 **NOTE.**—We make a *cheaper line* of Commodes. See next page.

SPECIAL NOTE.—A small sieve is supplied with each Commode. For a better article see our Patent Cinder Sifter, page 19, Earth Closet Catalogue.

 Send for our 24 page Earth Closet Catalogue.

INODOROUS COMMODES.

(SELF-ACTING OR PULL-UP.)

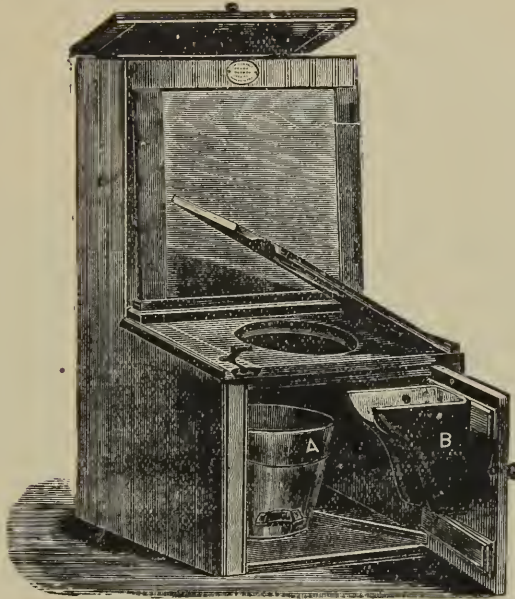


Fig. 6525, No. 8—Showing Pull-up and Children's Seat.

This cut represents *the cheapest* Commode ever offered to the public; our No. 5 A is equal to those for which other makers usually charge \$30.00. It being our aim to place them within the reach of all classes, we have placed them at *as low a figure* as would be *consistent with a good, substantial though plain article*. In this cut the PULL-UP mechanism is shown, also the extra seat for children, put please note they can be had self-acting if desired, and the children's seat is *not included* in the following prices:

SIZE—43 inches high, 24 inches wide, 30 inches deep. Weight packed, Self-acting 155 lbs., Pull-up 130 lbs.

PULL-UP OR SELF-ACTING.

No. 4.	Hardwood, beaded sheeting, plain finish.....	\$25.00
" 4 A.	The above with best fittings and well finished.....	28.00
" 5.	SOFT WOOD, beaded sheeting, plain finished and stained.....	18.00
" 5 A.	The above with best fittings and well finished.....	21.00

Crating and packing free. If packed in a case, \$1.50 extra.

CHILD'S SEAT, fitted to above,	extra, \$2.00
RIM SEAT for Children.....	1.00

CHILD'S COMMODE.

No. 5 B.	A similar Commode to No. 5, only for children.....	\$12.00
Height 27¼ in., depth 22 in., width 17¼ in., height of seat 14¼ in.		

COMMODOES.

THE "BEDROOM SANITARY CONVENIENCE."

NO HOUSE SHOULD BE WITHOUT IT.

A most useful piece of furniture. Perfectly inodorous. Is simply invaluable in cases of sickness.

COMFORT FOR THE AGED
AND INFIRM.

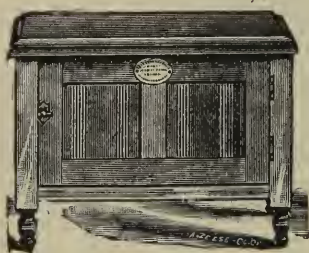


Fig. 6526, No. 9—No. 22—Closed.

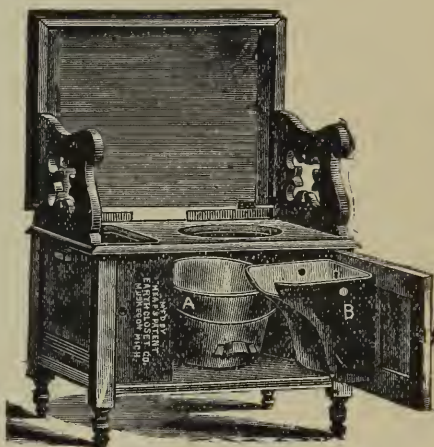


Fig. 6527, No. 10—No. 21 with Arms—Opened.

In No. 10 the lid is raised to show Arms, Seat, and Reservoir, in which to keep a supply of dry earth or ashes. The door is open to show the Excrement Pail "A." Hooked on inside of door is our Patent Enameled Urine Separating Receptacle "B," which, when the door is closed, comes into position under the seat and intercepts the urine, thus preventing any noxious gases being generated.

The Bedroom "Sanitary Convenience" will be readily appreciated for its usefulness in case of sickness, or emergencies. It is the Earth Closet *WITHOUT any mechanism* for distributing the deodorant, the person using it having merely to take a scoop full of the earth or ashes out of the reservoir and throw it over the deposit before putting down the lid.

FEMALES can use it as a urinal, the "Urine Separating Receptacle" answering the purpose of the usual chamber.

 PRICES see next page; Nos. 21 and 22.

Send for our 24 page Earth Closet Catalogue.

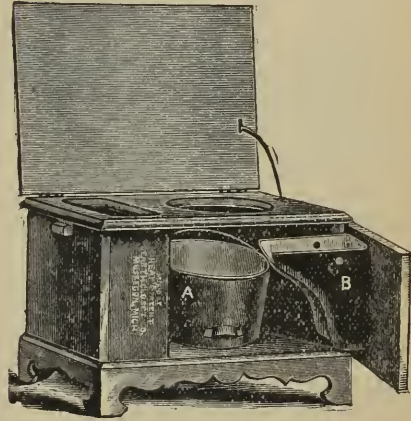
COMMODOES.

BEDROOM "SANITARY CONVENIENCE."

PRICES WITHIN THE REACH
OF ALL.



Fig. 6528, No. 11—Closed.



Nos. 23 and 24.

Fig. 6529, No. 12—Open.

SIZE—Length 24 inches, width 18½ inches, height 18 inches.

WEIGHT—55 pounds.

PRICES OF BEDROOM SANITARY CONVENIENCES.

ORDER NO.

21	Hardwood, with arms as in Fig. 10, well finished	\$14 00
22	Hardwood, <i>without</i> arms, Fig. 9, well finished	12 00
23	Soft wood, as Fig. 11, plain finish, stained	9 50
24	The above with "B" <i>Galvanized</i> iron instead of Enameled	8 00

No charge for crating and packing.

THE SUPPLY BOX.

This invention is simple and effectual in supplying dry earth, etc., to the reservoirs of Bedroom Commodes without causing dust, for unless the greatest care is taken, the earth, etc., is scattered.

The supply box is 20 inches long by 14 deep, and 6 inches wide, and when filled it is placed on the top of the Commode, and the valve plate pulled out, which allows the earth to fall into the reservoir. (Not required for the Sanitary Conveniences.



No. 1, for Commodes, fine finish \$3 00

We issue a Special 24 page Earth Closet Catalogue. Same will be mailed on application.

INODOROUS COMMODES.

Fig. 6530—No. 1 COMMODE.

Walnut, solid square legs, oil finish, rubbed and carved, with top covered in brussels carpet, pocket for paper, porcelain pan and hardwood lid passing through seat and fitting pan tight, a great improvement on the old style.

Size, 16 x 16 inches. Height, 17 inches. Price, \$6.50

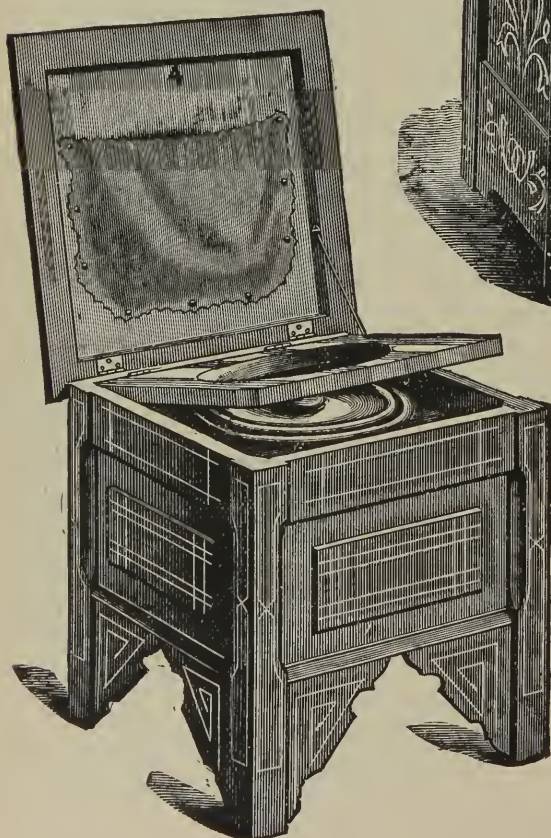
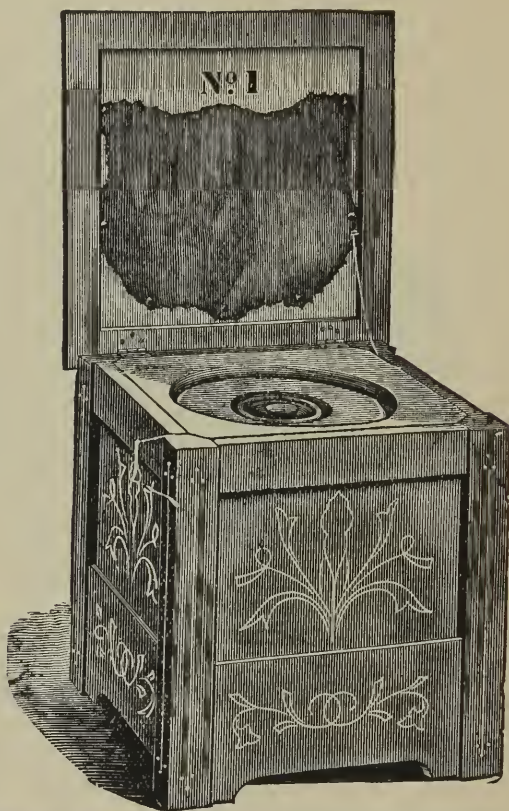


Fig. 6531—No. 4 COMMODE.

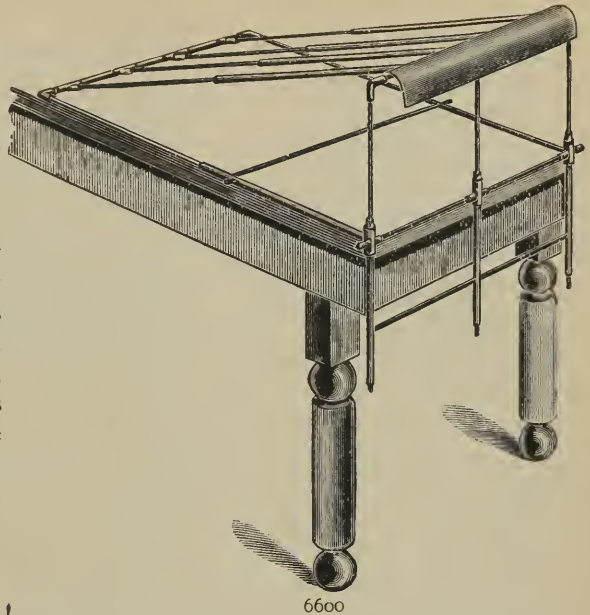
Walnut, solid legs, with paneled sides and brackets, oil finished, rubbed and carved. Top covered in body brussels, patent odorless porcelain pan with cover, pocket for paper. Size, 16 x 16 inches, height, 18 inches. Price, \$8.75

Fig. 6600—REEVES' ADJUSTABLE APPLIANCE

For Maintaining the Trendelenburg Position.

This appliance can be adjusted to any table for the purpose of elevating the body while patients are undergoing surgical operations. Its simplicity, lightness and cheapness commend it to every one who has examined it.

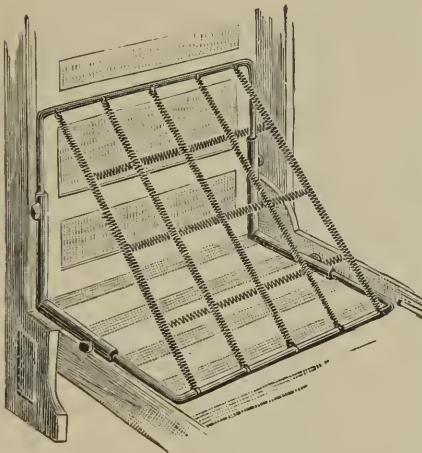
Price, net, \$12 00



6600

Fig. 6601—REEVES' SPIRAL HEAD REST—For Beds.

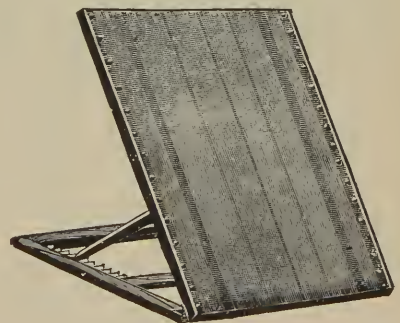
This invention is simple, easily arranged, and having a soft spring back, it is adapted to give comfort in changing the invalid's position, and is adjustable at any angle from a slight incline to the upright posture. It is composed entirely of metal, and its sanitary arrangements are perfect. Indorsed by physicians. Price, net, \$6 00



6601

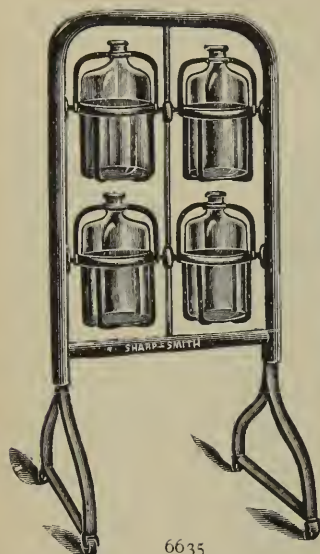
Fig. 6602—SHARP & SMITH'S CANVAS HEAD RESTS.

Each\$1 50 net.

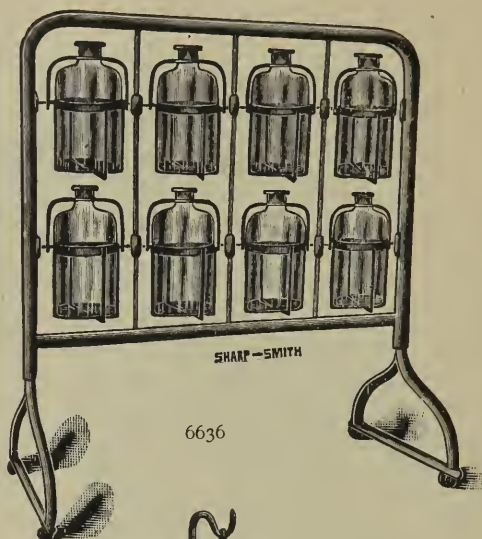


6602

MISCELLANEOUS—HOSPITAL SUPPLIES.

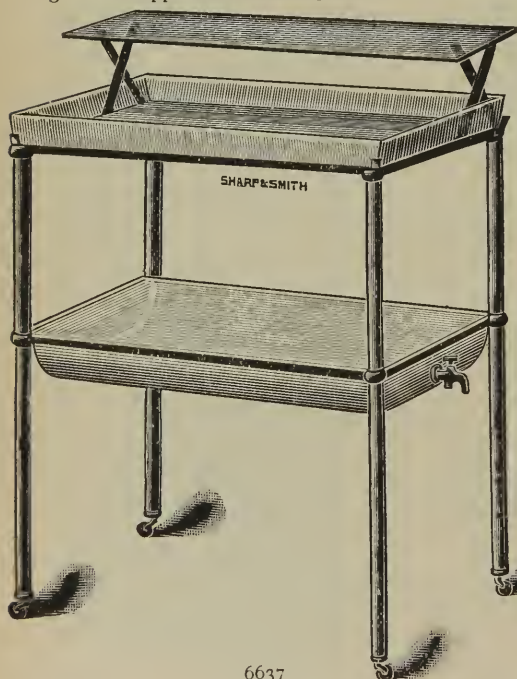


6635

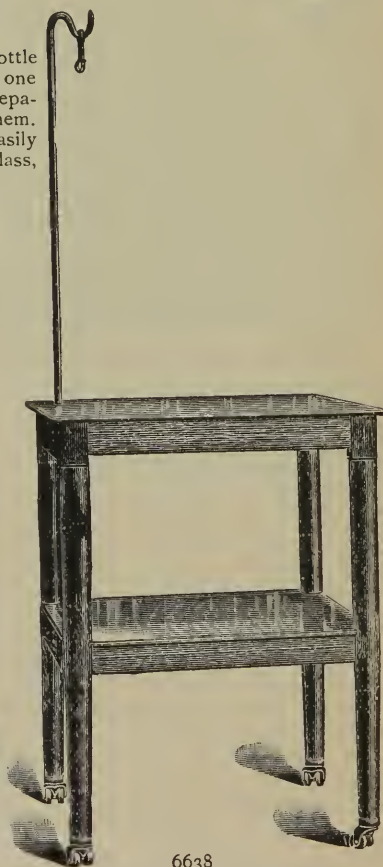


6636

Figs. 6635 and 6636—Prof. Esmarch's Iron Frame Bottle Stands. With these stands fluids can be transferred from one part of the Hospital to another. The bottles are hinged separately so that contents can be emptied by simply tipping them. The bottles are securely fastened; also can be released easily and new ones supplied when necessary. The bottles are glass, ground stoppers, and hold 2 gallons each.



6637



6638

MISCELLANEOUS—HOSPITAL SUPPLIES.

FIG.

*6635—Esmarch's Bottle Stands, with 4 Bottles	\$40 00
6635-A— " " " " 2 "	25 00
6635-B— " " " " 6 "	55 00
*6636— " " " " 8 "	70 00
*6637— " Instrument Table, with Glass Tray on top. Size 21x17 in., Tin Tray in center	35 00

*6638—Oak Instrument Table, with
Glass Top and Irrigating Rod 20 00

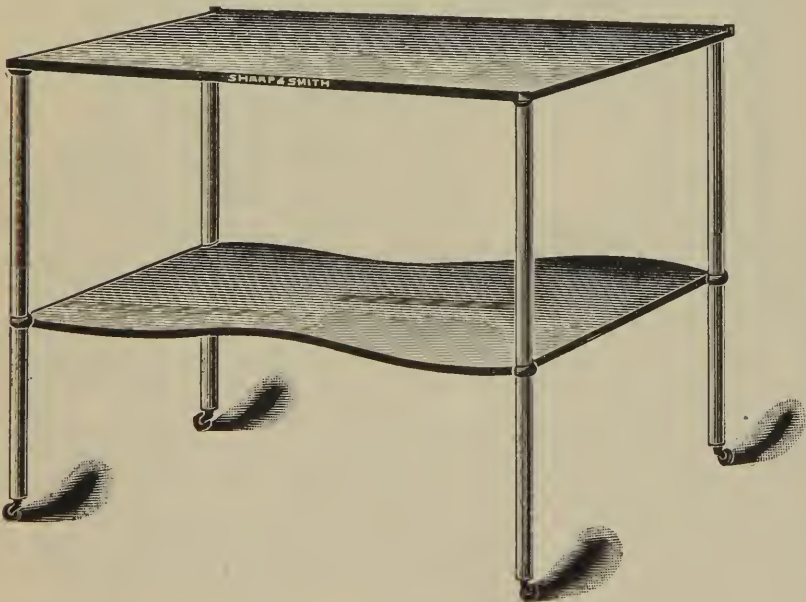
*6639—Roosevelt Hospital Ward
Tables with Glass Top and
Metal Shelves $8\frac{3}{4} \times 14\frac{3}{4}$ in... 15 00

*6640—Large Dressing and Instru-
ment Table with plate glass
top $32 \times 24 \times 34$ in. high, and
one sheet iron shelf..... 25 00



6639

These tables are made of Wrought Iron
with joints Aseptic, Enamel finish, and can
be furnished with or without Casters.



6640

MISCELLANEOUS—HOSPITAL SUPPLIES AND OFFICE.

FIG.

*6641	—	Large Instrument Closets, 60x18x18 inches deep, Enamel finish.....	\$175 00
*6641	—	“ “ “ “ “ “ Nickel plate.....	225 00
*6641	—	“ “ “ “ 36x16x18 “ “ Enamel finish.....	140 00
*6641	—	“ “ “ “ “ “ Nickel plated.....	185 00
*6642	—	Stand or Wall Case Instrument Closets, 45x25x20 inches deep, Enamel finish...	60 00
*6642	—	“ “ “ “ “ “ Nickel plated...	80 00
*6642	—	“ “ “ “ “ “ 30x20x16 “ “ Enamel finish...	50 00
*6642	—	“ “ “ “ “ “ “ “ Nickel plated...	70 00

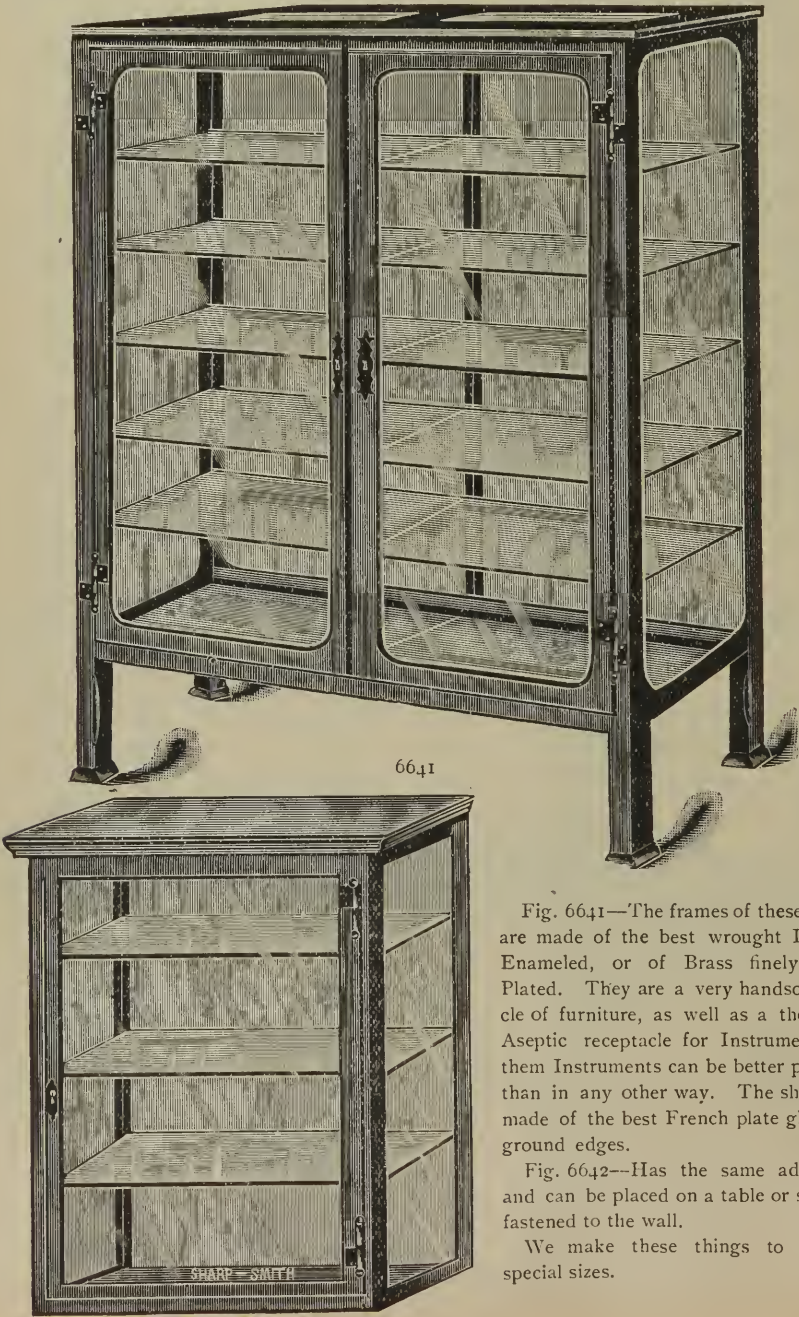


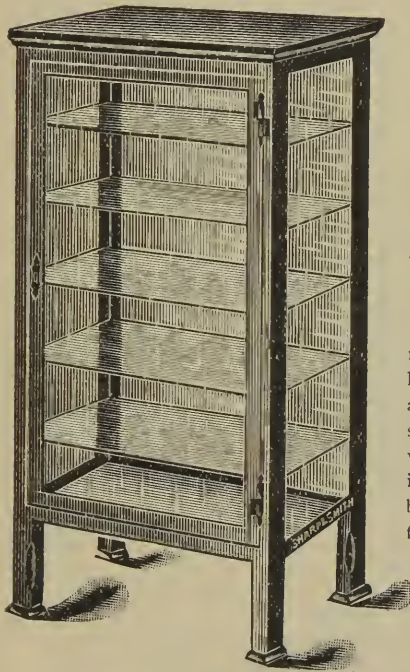
Fig. 6641—The frames of these Closets are made of the best wrought Iron and Enameled, or of Brass finely Nickel Plated. They are a very handsome article of furniture, as well as a thoroughly Aseptic receptacle for Instruments. In them Instruments can be better preserved than in any other way. The shelves are made of the best French plate glass with ground edges.

Fig. 6642—Has the same advantages and can be placed on a table or stand, or fastened to the wall.

We make these things to order in special sizes.

MISCELLANEOUS—HOSPITAL AND OFFICE SUPPLIES.

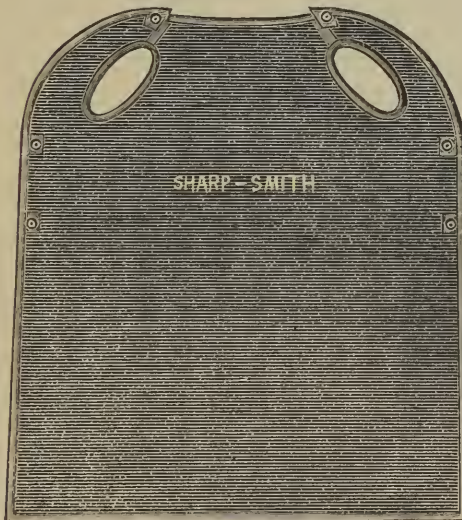
- FIG.
 *6643 The Berlin Instrument Closet, 60 in. high x 27 in. wide x 18 in. deep, plain enamel finish.....\$115 00
 *6643 The Berlin Instrument Closet, 60 in. high x 27 in. wide x 18 in. deep, nickel plated..... 150 00
 *6643 The Berlin Instrument Closet, 54 in. high x 20 in. wide x 16 in. deep, enamel finish..... 100 00
 *6643 The Berlin Instrument Closet, 54 in. high x 20 in. wide x 16 in. deep, nickel plated..... 135 00
 *6643 The Berlin Instrument Closet, 48 in. high x 28 in. wide x 16 in. deep, enamel finish..... 90 00
 *6644 The Randolph Surgical Apron, 59 in. long..... 6 50
 *6645 Baxter's Surgical Apron, 40 in. long, \$4.00; 46 in. long..... 4 25



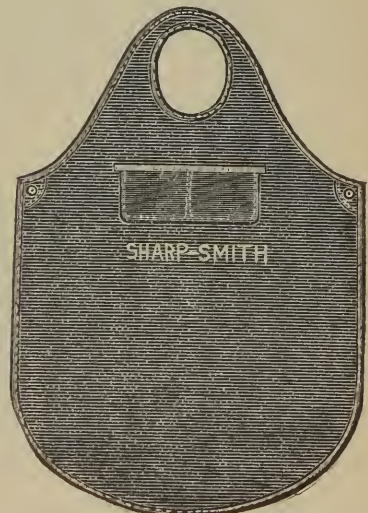
6643

Fig. 6643 The Berlin Instrument Closet, as represented in cut, contains 5 plate glass shelves for holding Instruments, and has the same advantages as those shown on preceding page. It is a handsome addition to any office or surgical room and, with the other apparatus of similar kind, is coming into rapid use. The metal part of these closets can be furnished of wrought iron with plain enamel finish, or of brass nickel plated.

We especially recommend our \$90.00 apparatus (48x28x16) as the cheapest for the money. This style we make only of wrought iron, enamel finish.



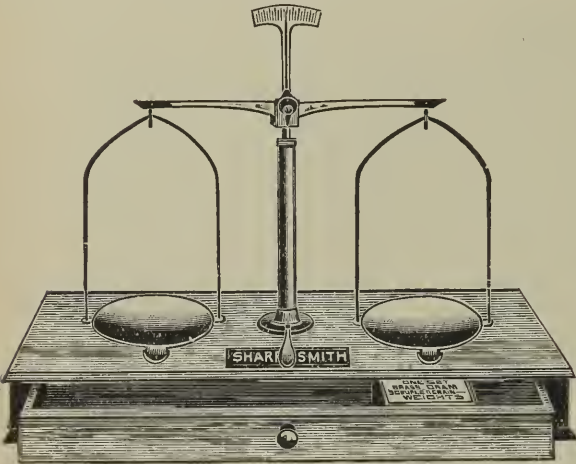
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6645

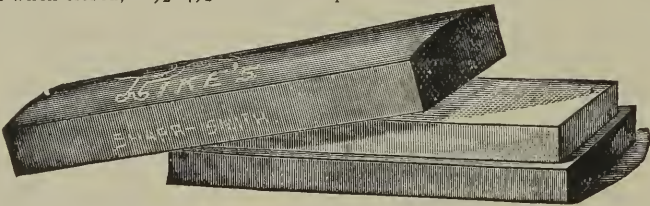
MISCELLANEOUS HOSPITAL AND OFFICE SUPPLIES.

FIG.		
*6646	Sharp & Smith's Office or Pocket Scales, with set of weights.....	\$3 50
*6647	“ “ Bulb Test Tube. Per doz	1 20
*6648	Oil Stone. (Pike's) with H. R. Case	75
*6649	Sanitary Spit Cups, with five papers, per doz... ..	1 75
*6649	“ “ “ covers. per doz.....	2 50
*6649	“ “ cup papers, per 100.....	1 00



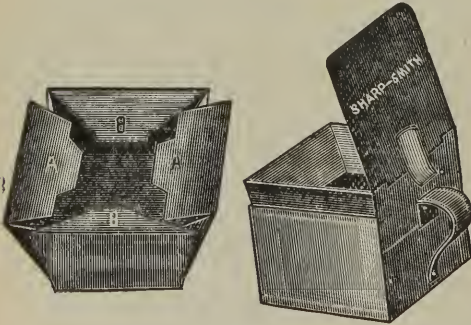
6646

Sharp & Smith's Office or Pocket Scales, the most complete and substantial scales in the market—and the cheapest. The whole scales can be taken apart, easily cleaned, and are carried in side of the bottom—and the whole can be carried in the pocket or valise. Size when closed, 10½x4½x2 inches deep.



6648

The Sanitary Spit Cup, with cover.



6649

Board of Health, Drs. Prudden, Biggs and Loomis, say, referring to the prevention of contagion, etc., "Pasteboard Cups with covers should be always at hand for the reception of sputum."

Put up in boxes containing one frame and five papers.

Fig. 6647 Sharp & Smith's Bulb Test Tube. The object of the bulb is to prevent the overflow of fluid while boiling. It can be laid down without the fluid running out, and can be turned up-side down in the hole of a Test Tube rack with-out using a pin.



6647

MISCELLANEOUS HOSPITAL AND OFFICE SUPPLIES.

Fig. 6650—SHARP & SMITH'S EMERGENCY ACCIDENT CASE.

For Railroads, Steamers, Miners, Rolling Mills, Factories and Tourists. This Case is very compact, and substantially made of heavy tin, neatly enameled with slide catch. The Case measures 11 inches long, 8 inches wide, $4\frac{1}{4}$ inches high, and weighs complete, 6 pounds.

LIST OF ARTICLES IN THE CASE:

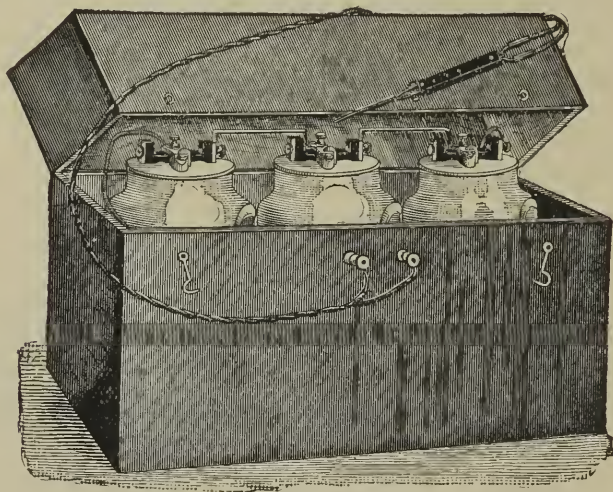
- 1 **Heavy Rubber Bandage.**—For stopping Hemorrhage.
- 2 **Twelve Assorted Muslin Bandages.**—For holding dressings in place, assist in stopping hemorrhages, and hold splints upon fractured limbs.
- 3 **Five Yards Sublimate Gauze.**—A prepared dressing for open wounds.
- 4 **One Ounce Absorbent Lint.**—To be used instead of a sponge in bathing wounds.
- 5 **One Ounce Styptic Cotton.**—This cotton is permeated with a substance which stops small hemorrhages.
- 6 **One-Quarter Pound Absorbent Cotton.**—This is for making compresses, and to assist in covering a large wound.
- 7 **25 Corrosive Sublimate Tablets.**—These small tablets are to be dissolved in clean, warm water, in the proportion of *one Tablet to a pint of water*, in order to disinfect a wound and keep it free from infection. THEY ARE POISONOUS IF SWALLOWED OR THE SOLUTION BE DRANK.
- 8 **Two Ounces Bicarbonate of Soda.**—For burns and scalds. One tablespoonful to a quart of water, saturate a piece of gauze and apply over a burn or scald.
- 9 **Four Surgical Needles.**—To be used in closing *small* cuts or jagged wounds.
- 10 **Pair of Scissors.**—Used in cutting dressings, bandages, clothing, etc.
- 11 **Pair of Forceps.**—Used for removing bits of gravel, and to seize a bleeding artery while it is being tied.
- 12 **Case of Carbolized Silk.**—To be used in tying arteries and closing wounds.
- 13 **One Roll Rubber Adhesive Plaster.**—For closing small torn or cut wounds after they are cleansed with the sublimate solution. It needs no heat; apply directly to the skin, which must be perfectly dry, however.
- 14 **One Dozen Safety Pins.**
- 15 **One Pyramid of Pins.**
- 16 **One Esmarch's Tourniquet.**—To stop bleeding from large wounds.
- 17 **One Ounce of Iodoform.**—In a glass jar.
- 18 **One Case for Scissors, Forceps, Needles, etc.**

The above articles are almost invaluable in case of an accident, and this case should always be kept handy wherever accidents are liable to occur, rendering the use of the said articles necessary. Ambulances and Patrol wagons should be equipped with the Case, and every Surgeon should have one in his carriage.

Price Complete, = \$6.50 Each.

A COMPLETE CAUTERY OUTFIT FOR \$25.00.

One Charge Will Last One Year,
With absolutely no attention.



Size 25x17x10 inches.

Price complete, includes 3 Edison-Lalande Cells, Type P, contained in a Handsome Case.

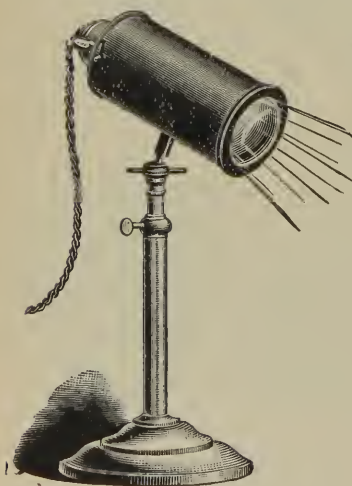
1 Pair Cautey Cords, 1 Edison Cautey Handle, 1 Edison Cautey Knife,
\$25.00.

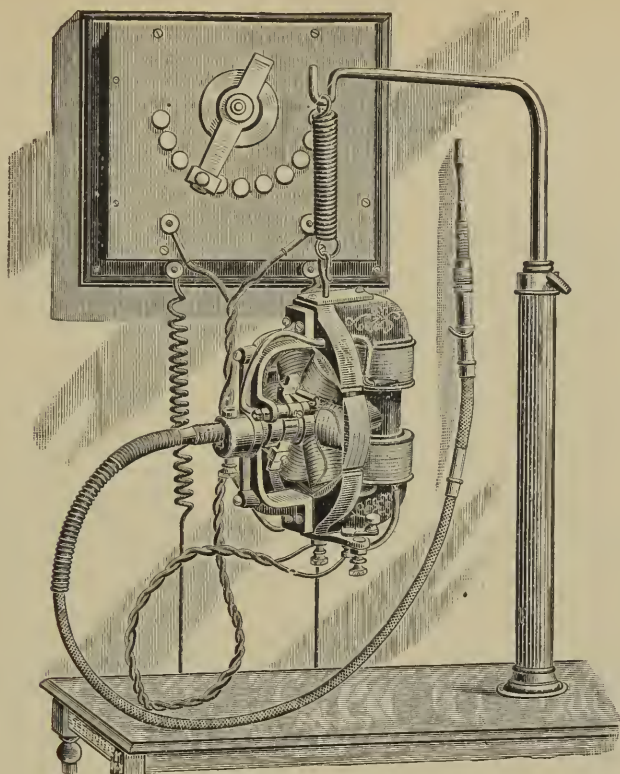
This is the most complete, economical, and efficient Cautey Battery in the market.

THE DELAVAN ELECTRIC LARYNGOSCOPIC CONDENSER.

This condenser is fitted with a ball and socket attachment that allows the light to be thrown at any angle, and casts absolutely no shadow.

Price complete, including condenser, stand, 32 candle power lamp, 10 feet flexible cord and plug to fit Edison socket.....\$18 00





THE Edison Surgical and Dental Motor Outfit

COMPRISING

Motor with Suspension Spring and Coupling.

Flexible Shaft with Extra Flexible Extension and Hand-Piece.

Regulating Motor Rheostat and Connecting Cords to Motor.

Adjustable Standard with Bent Arm.

COMPLETE PRICE, - - \$42.00.

PRICES OF SEPARATE PARTS.

Motor with Coupling and Suspension Spring	\$15.00
Flexible Shaft, with Extra Flexible Extension and Hand-Piece	17.00
" Hand-Piece but without Extra Flexible Extension	15.00
Adjustable Standard with Bent Arm	6.00
Regulating Motor Rheostat	6.00

Battery of six Edison-Lalande Cells, porcelain jars, type P, with charge for same, which will run motor 200 hours with absolutely no attention, \$29.00.

This Battery is also suitable for Cautery work when used with a regulating Cautery rheostat made specially for this purpose, which could be supplied together with heavy leads and cautery cords at an extra cost of \$16.00.

Battery of 6 K cells, do., do., which will run motor 100 hours, \$17.00.

L. ROSENBUSH.

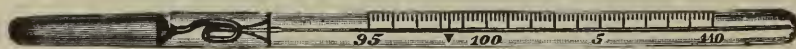


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THE R. HOEHN CO.

MANUFACTURERS AND IMPORTERS OF

*Standard Thermometers,
Hydrometers, Barometers,
ETC., ETC.*



OUR PATENT TWIST FEVER THERMOMETER.



OUR PATENT DOUBLE BULB FEVER THERMOMETER.

Largest Stock of GERMAN ARTIFICIAL HUMAN EYES.

Sole Agents for the GUMBERT EYE.

125 Fulton St., - - NEW YORK

..... FOR SALE BY

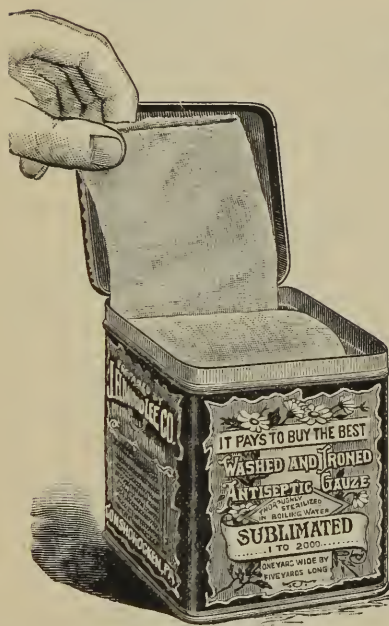
SHARP & SMITH, - - AGENTS,
CHICAGO, ILL.

J. ELLWOOD LEE CO.,

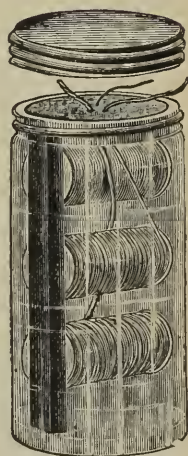
CONSHOHOCKEN, PA.,

MANUFACTURERS, IMPORTERS AND EXPORTERS

SURGICAL SPECIALTIES



Antiseptic Gauzes,
Absorbent Cotton,
Lambs' Wool,
Ligatures of every Kind,
Levis' Metallic Splints,
Catheters and Bougies of
every description.
Surgeons' Needles,
Hypodermic Syringes,
Thermo-Cauteries, etc.



Patented July 10, 1883.

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"LEE'S" WOVEN EYE SILK
CATHETERS.



Most durable ever manufactured.

RECEIVED THE ONLY GOLD MEDAL AWARDED AT NEW ORLEANS CENTENNIAL COTTON EXPOSITION, AND NORTH, CENTRAL AND SOUTH AMERICAN EXPOSITION, A. D. 1885-6, AGAINST ALL COMPETITORS.



R. BOERICKE & CO.,

MANUFACTURERS OF

The Depew Convertible Operating Chair,

Physicians' Cabinets,

Sanitary Arm Commodes,

Rolling Chairs,

New Patent Crutches,

Carrying Chairs,

Nursery Chairs,

Comfortable Back Rests,

Folding Bed Trays,

Invalid Self-Propelling Chairs,

AND ALL KINDS OF MECHANICAL APPLIANCES FOR THE ALLEVIATION OF THE SUFFERING.



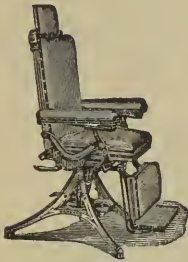
FACTORY AND WAREROOMS:

495, 497, 499, 501 and 503 Wells Street, - CHICAGO, ILL.

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For Sale by **SHARP & SMITH.**

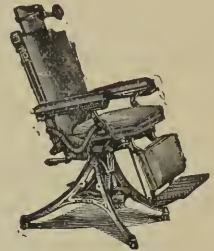
❖ THE HARVARD ❖
 PHYSICIANS' AND SURGEONS' CHAIR.



A—Normal adjustment.



C—Full length reclining position.



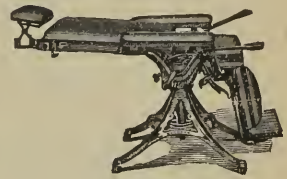
B—For operations upon the eye, ear or throat.



D—Reclining, with head lowered.



E—Sims' position.



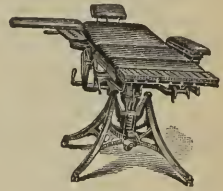
F—Dorsal position.



G—For elevating the hips.



H—Three-quarter length reclining.



I—For operation on hand or arm.

The Harvard is capable of backward and lateral motion and rotation; can be easily raised or lowered, and rigidly set in any position. It perfectly balances with or without a patient upon it, and is noiseless in its operation. It is capable of every position desirable to the surgeon, gynaecologist, or oculist. It is the least complicated, the strongest, the easiest operated, most useful and ornamental surgical chair made, and with all its advantages, in price most reasonable. Send for descriptive catalogue D. Address

OR ~~~~~

SHARP & SMITH,

78 Randolph Street, CHICAGO, ILL.

THE HARVARD CO.,

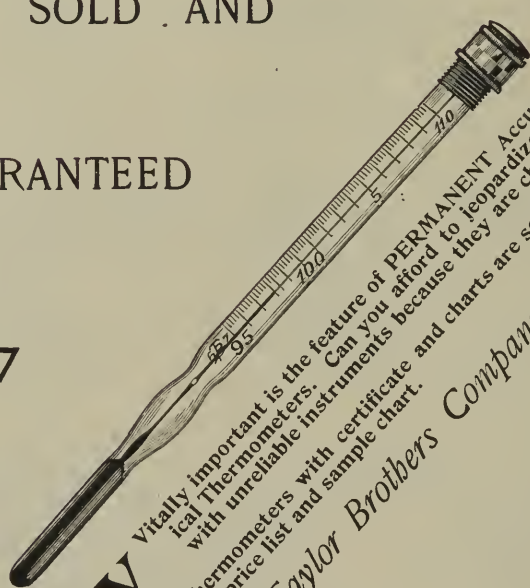
Canton, Ohio.

..... TAYLOR'S

CLINICAL THERMOMETERS

ARE SOLD AND

GUARANTEED



how

TAYLOR'S Thermometers with certificate and sample chart. Send for price list and sample chart.

Vitality important is the feature of PERMANENT Accuracy in Clinical Thermometers. Can you afford to jeopardize your practice with unreliable instruments because they are cheap (?)?

Taylor Brothers Company, Rochester, N. Y.



—BY—

SHARP & SMITH

CHICAGO, ILL.

EVERY PHYSICIAN

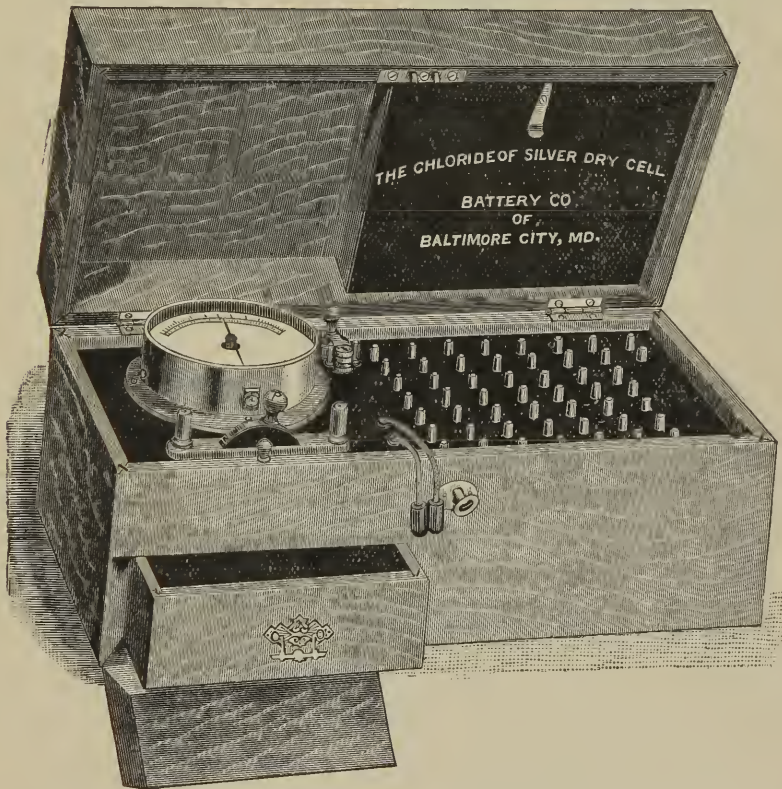
In general practice, as well as the specialist, should purchase a

Chloride of Silver Dry Cell Battery Owing to their **absolute constancy of electro-motive force.** They are the only batteries now used in Electrical Laboratories for making scientific tests.

This constancy of electromotive force fully proves their **superiority over the now antiquated fluid batteries offered to the Medical Profession**, for such as, the removal of **Electrolytic Work,** ^{superfluous hair, naevi, strictures, etc., etc., as well as Dermatic work in general.}

No real improvement has been made in **Medical batteries for more than 20 years,** when this wonderful little **Chloride of Silver Dry Cell,**

"THE DOCTOR'S VADE MECUM"



was introduced to the Medical Profession, and it has now reached the **highest state of perfection.** It combines cleanliness, durability, economy, never-failing promptness of action, **is only one-sixth the size and weight of any fluid battery,** will not waste when not in use, and has been serving many Doctors in their daily practice **FOR MORE THAN THREE YEARS WITHOUT** requiring any **REPAIRS** whatsoever.

FOR SALE BY ALL INSTRUMENT DEALERS OF STANDING.

SEND FOR CATALOGUE.

READ INDORSEMENTS.

THE CHLORIDE OF SILVER DRY CELL BATTERY CO., of Baltimore City, Md.

Dr. Gray's Back-Supporting Shoulder Brace.



"As the twig is bent so is the tree inclined." The truth of this old adage is forcibly brought to mind when one sees a man or woman disfigured by a crooked spine or stooping shoulders, and one mentally exclaims, "If that person had only had proper care when young, that awkward figure might have been avoided."

For the purpose of correcting this evil, the **Back-Supporting Shoulder Brace** has been devised, and so effectual is it in accomplishing its purpose, that it is rapidly growing in favor with all who have worn it, and it is spoken of in the highest terms of praise by all physicians who have seen and examined it.

Attention is called to the general construction, by which a perfect strengthening support is given to the back, at the same time drawing the shoulders back so as to expand the chest and throw the body into an erect, graceful position. All tendency to round shoulders is thus avoided, and this to the young, at the period when the bones and muscles are growing and hardening, is a most important item.

Provision is made for attaching skirts and stocking supporters, thus relieving the hips entirely from the drag of both

PRICE, 1.50.

Sold by Druggists and Dry Goods trade, or sent by mail, postage prepaid, on receipt of price. In ordering give waist measure outside dress.

Address:

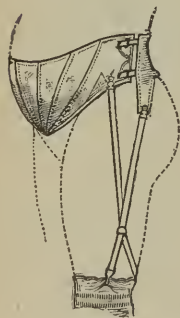
CEO. FROST CO., Sole Manufacturers,

31 Bedford Street, BOSTON, MASS.

DRS. GRAY & FOSTER'S

ABDOMINAL SUPPORTER,

WITH HOSE SUPPORTER ATTACHED.



This Abdominal Supporter is adapted both to Ladies and Gentlemen, and is without question the best and cheapest thing of the kind on the market. It can be worn with ease at all times, and is especially indispensable for ladies, both before and after confinement. Gentlemen who are troubled with corpulency or weakness in the abdominal regions will also derive much benefit from their use. Physicians speak of it in the highest terms of praise. The Hose Supporter may be worn or dispensed with entirely, as suits the pleasure of the wearer.

Price of Hose Supporter, 50 cents. The Abdominal Supporter is made in two widths of front. Price for regular width, \$2.50; extra width, \$3.00. (Made in sizes 22, 24, etc., to 42, inclusive, on even numbers. Above No. 42 we will make them to order at a rise of 25 cents per extra size.) In stating size, give us a snug measure taken under clothing, around full part of abdomen. Orders sent by mail, postage prepaid, to any part of the United States, on receipt of price. Liberal discount to the Trade and Physicians. Send for circulars.

CEO. FROST CO., Sole Manufacturers,

31 Bedford Street, BOSTON, MASS.

For Sale by SHARP & SMITH, CHICAGO.

WEINHAGEN'S

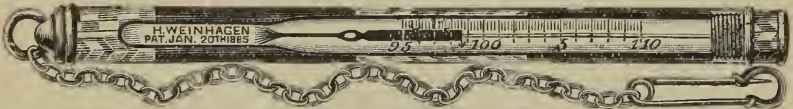
Magnifying Lens Front Fever Thermometers.



3½, 4 or 5 inch, No. 301 A Thermometer, Hard Rubber Case, Price,
each \$1 25



3½, 4 or 5 inch, No. 301 A Thermometer in Heavy Gold Plated Case,
Chain and Pin, each..... \$1 50



3½, 4 or 5 inch, No. 301 A Thermometer in Enamel and Gold Plated
Case, Chain and Pin, each..... \$1 50

4 inch, No. 301 A Thermometer in Enamel Case having Solid Sterling
Silver Ends, Chain and Pin, each..... \$2 00

Minute Thermometers can be furnished at an additional cost of 50 cents
each.

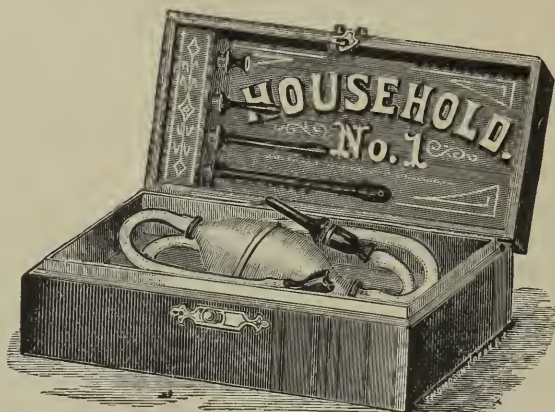
We guarantee these Thermometers to be the highest grade in the market,
and equal in every respect to the best goods manufactured in this country or
abroad.

These Thermometers are subjected to a process which effectually pre-
vents all shrinkage in the glass, and consequently increased readings.

They have our name, trademark and "301" engraved on them.

For Sale by SHARP & SMITH, CHICAGO.

Best in the World.



THE HOUSEHOLD SYRINGE.

WITH HARD RUBBER TUBES.
PATENTED.

. . . Trade Mark—"HOUSEHOLD"—Registered. . . .

RECOMMENDED BY THE MEDICAL FRATERNITY.

Made from PURE RUBBER in every part, are conceded to be the best, cleanest, and most perfect Syringes on the market, as they have no screw threads or washers to get out of order, and thus become defective, nor any metal fittings to become corroded, and which are so dangerous in use. The Jet Injection Tubes are non-conductors of heat, and do not chill the injured parts, but are soothing and agreeable in use. The valves are secured, and cannot be lost, thereby insuring efficiency at all times.

THE CELEBRATED

MAGIC ATOMIZERS.

(CONTINUOUS SPRAY.)

Pat. May 1, 1883, July 24, 1883, May 26, 1885.

For Toilet, Throat and Nasal applications, and Employment in the Arts. Metal and Hard Rubber Sprays.

Are unequalled for Quality, Efficiency and Durability, great care being taken in their manufacture to have a first-class instrument in every respect.

Mould Work at Short Notice, and of every Description
SPECIAL GOODS TO ORDER.



Fine Rubber Goods for the Druggists', Surgical, and Stationery Trade.

DAVOL RUBBER COMPANY, - PROVIDENCE, R. I.

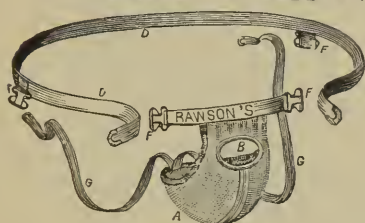
FOR SALE BY SHARP & SMITH.

RAWSON'S U. S. ARMY

Patent Elastic Self-Adjusting

SUSPENSORY BANDAGE.

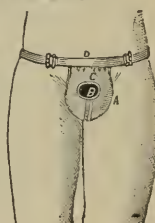
A Marvel of Support, Relief, Comfort and Durability.



IT IS RECOMMENDED BY THE
Most Noted

SURGEONS & PHYSICIANS
In the United States.

IT IS ORDERED BY THE
U. S. ARMY SURGEONS
For the Regular Army.



Automatically Adjustable, Rendering Displacement Impossible.

THE ONLY PERFECT ARTICLE EVER OFFERED TO THE PUBLIC.

It is cut in the exact form of the testicle, in different sizes, and fits as perfectly as any other article of gentleman's attire. In quality of material, manner of construction and style of Manufacture, it is far superior to any testicle supporter in the world.

DESCRIPTIVE AND PRICE LIST.

The Different Numbers are made Regularly in 3 Sizes, Large (L.) Medium (M.) Small (S.) and Specially in any Desired Size and Shape. Every Bandage, in the Several Styles, is Trimmed and Finished with Silk.

STYLES.	RETAIL PRICE.
No. 1 —Frilled Elastic Waistband and Buttock Straps, made whole (without buckles.) Bags of German or American material, soft and durable, trimmed and finished in silk.....	\$ 1 50
No. 1½ —Frilled Elastic Waistband and Buttock Straps, with 2 adjusting buckles at abdomen. Bags of German or American material, soft and durable, trimmed and finished in silk.....	1 75
No. 2 —Fine plain Elastic Waistband and Buttock Straps, made whole, without buckles. Bags of extra fine quality German or American material, soft and durable, trimmed and finished in silk....	2 00
No. 3 —Superfine plain Elastic Waistband and Buttock Straps, with two adjusting buckles at abdomen. Bags of French material, very soft and durable. Extra quality silk trimmings and beautifully finished.....	2 50
No. 4 —Superfine plain Elastic Waistband and Buttock Straps, with two adjusting buckles at abdomen, and two Buttock Strap adjusting buckles. Bags of finest French material, very soft and durable. Extra quality silk trimmings, and beautifully finished.....	3 00
No. 5 —Silk Bag. Superfine Elastic Waistband and Buttock Straps, with two adjusting buckles at abdomen, and 2 Buttock Strap adjusting Buckles. Bags of fine English Silk netting in white or flesh color. Superfine quality Silk trimmings, beautifully finished.....	3 50
No. 6 —All Silk—Superfine Silk Elastic Waistband and Buttock Strap, with 2 adjusting buckles at abdomen, and 2 Buttock Strap adjusting buckles. Bags of fine English or French silk netting in white or flesh colors. Superior quality Silk trimming and artistically finished.....	5 00

Each Bandage is put up in a Tinted Box, and 1 doz. of these Boxes are packed in a Carton, Labeled with No. and Size, making them the Neatest and Most Satisfactory Stock among Druggist's Sundries.

IMPORTANT TO THE TRADE.

Dealers will confer a favor by returning to us any of Rawson's U. S. Army Suspensory Bandages in which the Elastic has deteriorated or the Bandage has in any way become imperfect while in stock, and we will replace them with new goods. We make this request as it is our aim to keep only first-class goods, perfect and superior in every particular, on the market of our manufacture.

S. E. G. RAWSON.

CAUTION.—Be sure that "Rawson's Patent Elastic Self-Adjusting U. S. Army Suspensory Bandage," together with the *No. and Size* of the Bandage are printed on the Waistband; also on the label of the box which contains it.

For Sale by all the Leading Wholesale Drug and Surgical Instrument Houses in the U. S.

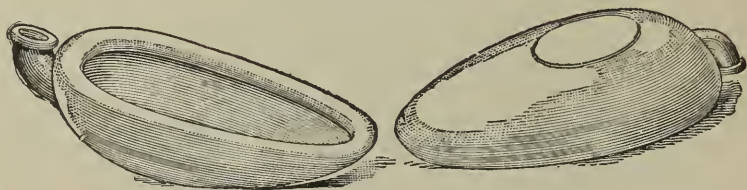
Orders received and promptly executed by the Patentee and Sole Mfr., **S. E. G. RAWSON, Saratoga Springs, N. Y.**

TRADE SUPPLIED BY
SHARP & SMITH.

SEND IN YOUR ORDERS.

Tooker's New Invalid Bed Pan

(PATENTED)



These Pans are Now Being Used in all the Principal Hospitals of the Country.

THE SPECIAL POINTS OF CONSTRUCTION ARE AS FOLLOWS :

This invention is nearly the reverse of that known as the French Bed Pan, being a bed or Invalid Pan, the sides of which converge toward each other, forming a bottom which sinks into the mattress.

It is so constructed that when in use the top of the Pan is nearly level with the mattress or bed.

The surface line of the Pan is level its entire length, an oval rim of two inches in width surrounding it, and is equally adapted to male or female.

It combines in service both urinal and Bed Pan.

Upon application *the patient need not be raised, thus preventing much suffering.*

The proper mode of application of Bed Pan is to turn the patient on either side, or raise either lower limb.

It can be used by most patients without an attendant.

Its shape renders overflow impossible.

The simplicity and adaptability of this Pan will commend it to all.

This New Invalid Bed Pan is already in use in many of the leading hospitals in this country, is very highly commended, and there is not the least doubt when properly known it will entirely supersede any other.

Owing to its capacity for receiving and containing fluid, this Bed Pan is indispensable during surgical operations.

PRICE, - - - - - \$2.00.

FOR SALE BY

SHARP & SMITH, AGENTS,

MANUFACTURERS OF

SURGICAL AND VETERINARY INSTRUMENTS AND APPLIANCES.

**Antiseptic Dressings, Artificial Limbs, Elastic
Hosiery, Etc., Etc.**

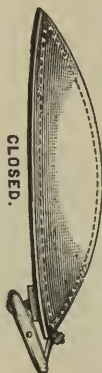
73 Randolph Street, - - - CHICAGO, ILL.

Sardy Head Band No. 1.

Combined Head Band and Protector.



IN USE.

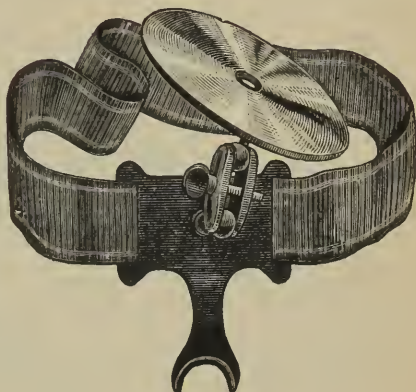


CLOSED.

Folds over the face of mirror, and protects the glass from breakage. Is self-adjustable to the forehead, and rests more comfortably than any other head band. The mirror can be held in any desired position.

Head Band No. 1 is made of steel, and No. 2 of brass. Both are finely finished, and supplied with the best English silk bands. At wholesale by the makers.

Sardy Head Band No. 2.



Can be used either with or without nose rest. Is lighter than any other head band with nose rest, and can be folded closely to back of mirror. The nose rest is pliable, and conforms to shape of forehead.

SARDY & COMPANY.

5 Cedar St., NEW YORK.

Sold by SHARP & SMITH. (See Prices in this Catalogue.)

Belfast Linen Catheters and Bougies.



BELFAST LINEN.
CYLINDRICAL



BELFAST LINEN
MERCIER

LONDON MAKE.

The original Linen Catheter — Smooth, Flexible, and Durable.

The makers have an experience of over three-quarters of a century in manufac-



BELFAST LINEN.
OLIVE

Trade Mark Belfast Linen. Registered at home and abroad.

turing Gum Elastic Surgical Instruments, and any so-called Linen Catheter or Bougie not stamped

Belfast Linen, is an imitation.

At wholesale by the sole importers:

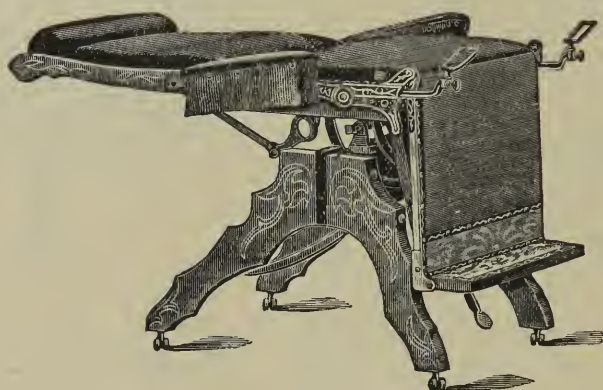
SARDY & COMPANY,

No. 5 Cedar St., NEW YORK.

Sold by SHARP & SMITH. (See Prices in this Catalogue.)

THE NEW INDIANAPOLIS

Surgical and Gynecological Chair.



DORSAL POSITION.

The only Chair that can be operated with one hand from either side when the patient is in the chair. The simplest and easiest to operate. Durable and firm in all its positions, and nothing about it to get out of order.

Meets all the requirements of an Operating Chair and Table combined. Having all positions. Every Chair guaranteed to give perfect satisfaction, and built and finished with finest materials. Covered with genuine leather, nickel plated trimmings, quatered oak, and is the handsomest Chair on the market.

. . . ADDRESS . . .

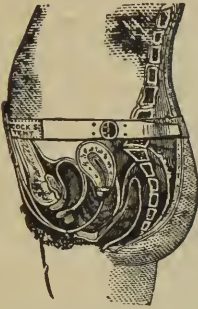
DRAKE & WOOD CO.,
INDIANAPOLIS, INDIANA.

. . . FOR SALE BY . . .

SHARP & SMITH,

73 Randolph Street, = = = = CHICAGO.

Dr. L. A. Babcock's Pure Silver Uterine Supporter.



Is the best Instrument now in use for any displacement of the womb, because it is perfectly simple in its structure, and made to fit the parts exactly. It has no straps or strings to hold it in its place, and does not have to be taken off every time there is a movement of the bowels or micturition. It has no rubber to bend by the natural heat of the body, or to chafe and irritate the parts, producing Leucorrhoeal discharge and weakness. It is made of pure coin silver, cup and stem, which makes it flexible, and can be changed in shape to suit any form. The solid pure silver is an



absolute necessity if a radical cure is sought for, because no other metal can be used with any degree of success, if you wish to produce a current of electricity: if the aim is to *cure* the patient, then the best and purest instrument should be used. With fair usage, this instrument will last for years, and after a cure is effected, and it is no longer required for that purpose, there is still value remaining in it.

We claim and believe that DR. BABCOCK'S SILVER UTERINE SUPPORTER will work a *radical cure* in most cases of displacement of the womb, if used thirty or sixty consecutive days as directed, because its direct action is to *contract* and *tone* the relaxed muscles and ligaments of the womb, overcoming the worst cases of Retro and Ante-version, and Flexions in a few days, and reducing the womb to a normal condition.

Over 1,000 testimonials from the most eminent Physicians have been *voluntarily* given, in proof of the above stated facts, that THE SILVER UTERINE SUPPORTER has proved a *radical cure* to thousands of ladies who have been confined to their rooms and beds for years, and who are now *well and happy*.

Full proof will be furnished to all who wish to test the truth of the matter here stated.

Price to Physicians, - - - \$10 50.

✠N. F. TAYLOR✠

(Successor to Dr. L. A. Babcock in the Manufacture and Sale of the Silver Uterine Supporter.)

204 NEPONSET AVE., - BOSTON, MASS.

For sale by Sharp & Smith.

THE J. C. SCHNOTER KNITTED SUSPENSORIES

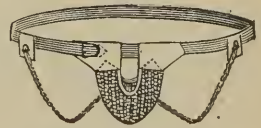
Are the only perfect ones in the market. The bag being seamless is elastic, easily adjusted, and perfectly comfortable. See that the inventor's initials (J. C.) are before the name of Schnoter on every box and bandage.

BEWARE OF IMITATIONS.



IMPROVED.

ESTABLISHED 1870.



ARMY AND NAVY.

These bandages are highly indorsed by the medical profession as a sure preventive against "Varicocele" and "Rupture in the Scrotum." They have been before the public for the past 22 years, and are the most reliable suspensories made.

J. C. SCHNOTER CO., - - - NEW YORK.

Sole Manufacturers.

The Trade supplied by **SHARP & SMITH, 73 Randolph Street, CHICAGO.**

A QUESTION . . .

. . . FOR YOU TO DECIDE.



ARE YOU interested in having a **HEALTHY HOME?**

ARE YOU anxious to keep away **CHOLERA, TYPHOID FEVER, DIPHTHERIA?**

ARE YOU troubled because you have no **SEWER CONNECTION OR WATER WORKS?**

ARE YOU disgusted and wanting to get rid of your **FEVER-BREEDING PRIVY VAULT?**

YOU CAN solve these important questions, and

YOU CAN HAVE all the comforts and convenience of a **FIRST-CLASS WATER CLOSET** by getting one of

Heap's Patent Earth Closets.

There is **NO WATER, NO SEWERS** needed.

SPECIAL FEATURE

SEPARATION OF URINE FROM EXCRETA.

NATURE'S OWN DISINFECTANT.

Sick People

Well People

Old People

} Should use a **DRY EARTH CLOSET.**
It aids recovery, prevents infection, does away with all odor, and is the only way to be healthy and clean.

Heap's Pat. Earth Closet

Awarded 13 first prize medals for excellence.

Is indorsed by the most eminent Sanitarians and has been adopted by the U. S. Government.

Send five two-cent stamps for 36 page pamphlet of hygienic hints "Healthy Homes, How to Have Them," and 24 page fully illustrated catalogue of Earth Closets, Bedroom Commodes, etc.

Heap's Patent Earth Closet Co.,

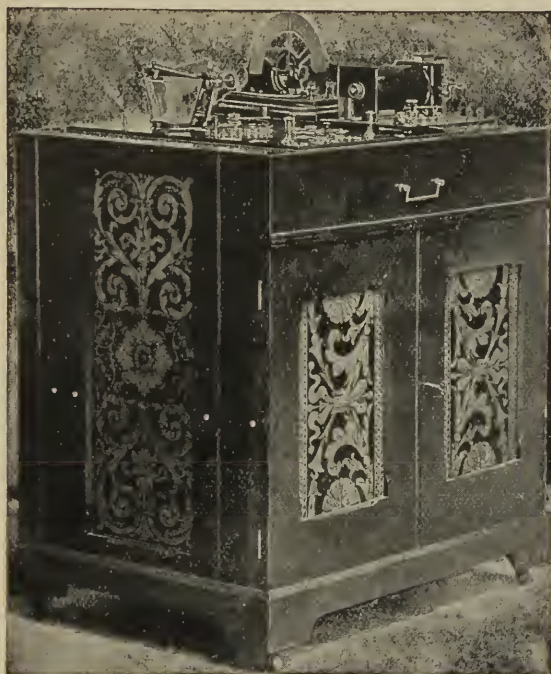
MUSKEGON, MICH.

Depots in Principal Cities

— FOR SALE BY —

SHARP & SMITH, - CHICAGO.

KIDDER'S CELEBRATED BATTERIES.



COMPLETE CABINET APPARATUS.

The mechanical devices for the absolute control of the currents are perfect.

The Cabinet is provided with 43 Muriate of Ammonia (Sal-Ammoniac) Cells that will remain active from two to three years.

The cells are placed in trays that can be removed from the cabinet without disturbing a wire, *a feature not found in any other make except the devices are copied.*

A drawer underneath the key-board for electrodes. Complete, with current controller, milliampere meter, necessary switches, pole changers, high tension coils, etc. A handsome piece of cabinet work for the physician's office.

Constructed in a variety of forms to suit the wishes of the profession.

JEROME KIDDER MFG. CO.,

820 Broadway,

- - - - -

NEW YORK.

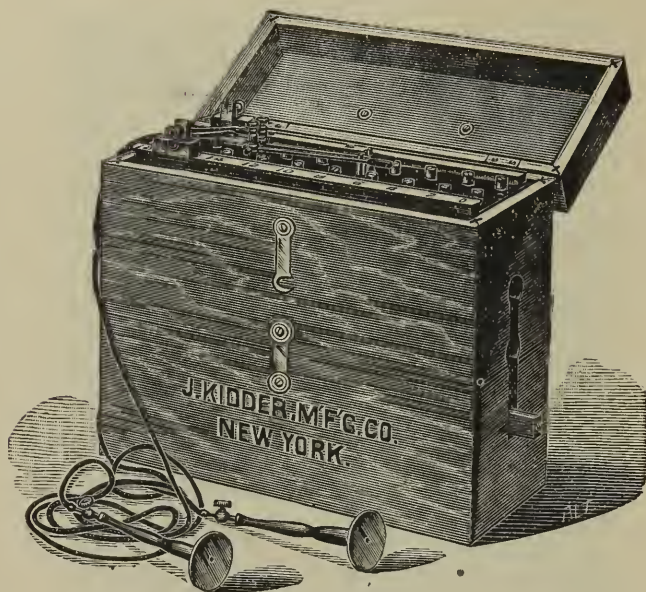
. . FOR SALE BY . .

SHARP & SMITH,

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CHICAGO.

Kidder's Celebrated Batteries.

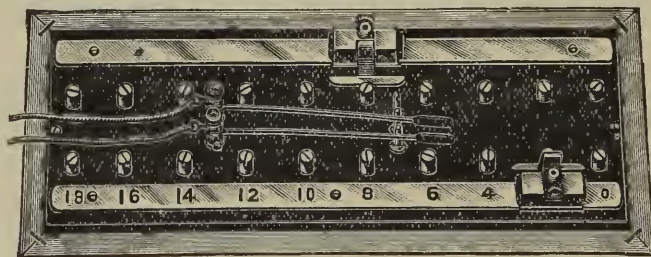


Portable Galvanic Apparatus

With Patented Improved Attachments for Electing various Cells without Interrupting the Circuit when the slide is moved; a most important feature. By moving one of the levers the current is alternately closed and interrupted, also thrown rapidly in opposite directions, Zinc and Carbon Plates. Each measure $5\frac{1}{4}$ inches long, $1\frac{1}{2}$ inches wide.

Jars are of Hard Rubber, and single. No expensive apartment cells to replace. Top section of case can be tipped backward, allowing the immediate removal of tray to any convenient place for refilling.

Larger Amount of Element Surface than any other make. Hydrostal for covering cells when carrying or not in use, preventing evaporation and spilling. Amount of square surface of plates represents volume of current.



Top Plate of Galvanic Apparatus.

JEROME KIDDER MFG. CO., NEW YORK, N. Y.

820 Broadway.

For Sale by SHARP & SMITH, CHICAGO.

ERGOTOLE,

S & D.,

is preferred by Physicians, because it is
 2 $\frac{1}{2}$ TIMES THE STRENGTH OF
 FLD. EXTRACT ERGOT,

Hence the dose is smaller—5 to 30 minims.

It keeps well, is palatable, reliable and

NEVER NAUSEATES

the patient. No irritation or abscess follows its hypodermic use.

Dose hypodermically, 5 to 20 minims.

Sole Manufacturers of
WEBBER-PEPSIN S. & D.,
 GUARANTEED STANDARD

1 TO 6,000.

No Mucus. No Peptone. No Odor.

SAMPLES AND
 LITERATURE
 UPON APPLICATION.

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SHARP & DOHME,

(Established 1860.)

MANUFACTURING
 CHEMISTS.

Laboratories, Baltimore.

GENERAL OFFICES:

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CHICAGO HOUSE:

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Chas. E. Matthews & Bros., Managers.

THE

MYRON E. MEYER MFG. CO.,

MANUFACTURERS OF

ANTISEPTIC MATERIALS,

PLASTER PARIS BANDAGES, ETC.,

TRADE
RED LABEL BRAND.
MARK.

MILWAUKEE, WIS.

ORIGINATORS OF THE

STERILIZED, BLEACHED, MOIST, AND ABSORBENT
ANTISEPTIC GAUZE.

RECOMMENDED BY ALL THE

Leading Surgeons and Hospitals in the Country.

CORRESPONDENCE SOLICITED.

A Full Line of these Goods constantly on Hand at
SHARP & SMITH'S.

The Hastings Truss Co.

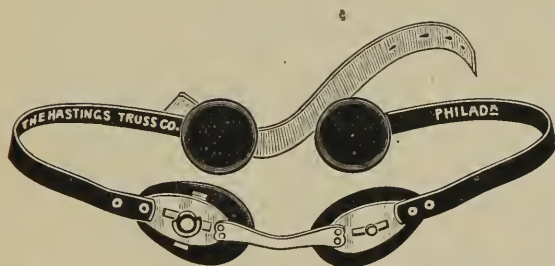
Manufacture and sell in every country the sun shines on, a line of
Indestructible Hard Rubber, Leather Covered, and Elastic

Trusses, Shoulder Braces,

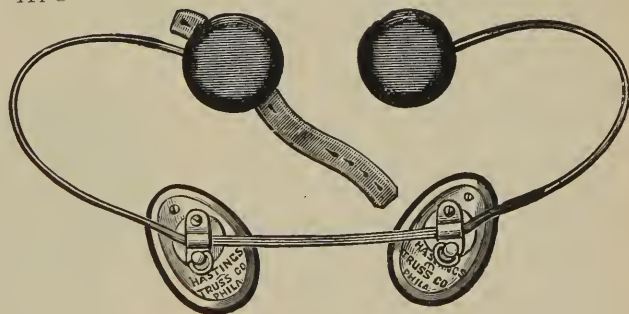
Abdominal Belts,

Elastic Hosiery, Etc., Etc.,

The acknowledged superior in material and workmanship of any on the market. Compare our Hard Rubber Springs. No sharp edges. Best Para Rubber. Producing in large quantities, our prices are cheap. The two specialties, cuts of which are here shown, are meeting with great favor with the trade.



114-C



114-A

Soliciting comparison orders,

The Hastings Truss Co ,

224 South Ninth St., PHILADELPHIA.

For Sale by SHARP & SMITH, CHICAGO.

HOFMANN'S Perfected ANATOMICAL PELVIC PESSARY.

I claim that this Pessary is infinitely superior to any Pessary ever brought to the attention of the profession; that it is, in fact, the only Pessary ever devised with strict reference to anatomical conformity. It is very nearly a miniature copy of the bony pelvis, and its advantages are self-evident.

The superior posterior elevation being CONCAVE, fits the CUL DE-SAC. The posterior and anterior concavities bridge, respectively, the rectum and the bladder. The lateral grooves support the broad ligaments. The lateral concavities receive the soft parts which help to secure the Pessary against FRICTIONAL ROTATION. The contraction-pressure of the vagina upon the sloping inferior section of the Pessary holds it firmly in position. I am confident that the PERFECTED ANATOMICAL PELVIC PESSARY will commend itself to the approving judgment of the enlightened practitioner.

N. B.—It is my earnest advice to employ at first the SMALLEST of the sizes PERMISSIBLE in ANY GIVEN CASE, and to advance to the use of the larger sizes only as the CASE MAY ACTUALLY INDICATE THAT NECESSITY.

I have seldom found it needful to advance beyond No. 2. Nos. 0 and 1 will be found large enough in a considerable majority of cases.

The Pessary is made of both SOFT and HARD RUBBER. Size "00" is the smaller and measures two inches, and is the *only size* having the RUBBER SACK ATTACHMENT, and is made of *soft rubber only*. It is invaluable in the treatment of ULCERATIONS and INFLAMMATIONS, the sack being the vehicle for the local applications. It is very effective, also, in sterility, and does not interfere with COITION.

Exact Measurement of Transverse Diameter of the Perfected Anatomical Pelvic Pessary.

No. 00, with sack over lower opening.	INCHES.
" 0, without sack	2 4-16
" 1	2 7-16
" 2	2 10-16
" 3	2 13-16
" 4	3

Physicians supplied, Soft Rubber.....each,	\$1.50
" " Hard " " " "	3 00
A single Pessary (for trial), Soft Rubber.....	1 00
" " Hard " " " "	2 00

Dr. Hofmann solicits the attention of the profession, in connection with his Pessary, to his "PERFECTED ADJUSTABLE ABDOMINAL SUPPORTER," on *measurement orders*, at \$6.00. Take the measurement around the hips, just below the *Crest of the Ilium*.

Beware of unscrupulous dealers giving you the "Old Style" for the PERFECTED.

NO PESSARIES GENUINE except those bearing my full name and date of patents; and no Adjustable Abdominal Supporter genuine excepting those having my trade mark. ERNST F. HOFMANN, M. D.

The Pessary or Supporter will be sent *by mail on receipt of price*.

Address communications and remittances, and mention this list to

ERNST F. HOFMANN, M. D.,
45 West Twenty-fifth Street, New York.

A descriptive illustrated circular sent on application. For sale at all Drugstores and Surgical Instrument Makers, and by

SHARP & SMITH.

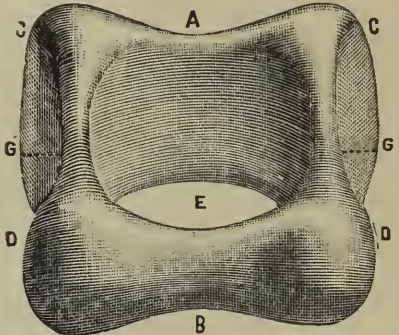


PLATE 1. Size 1. Superior Anterior View.—A, Superior and posterior concavities. B, Anterior and superior concavities. E, Central orifice. G, Lateral concavities.

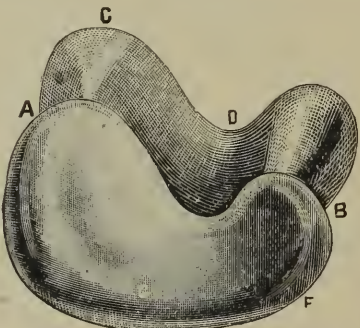


PLATE 2. Size 1. Right Lateral View.—A, Superior and posterior concavities. B, Superior and anterior concavities. C, Superior posterior elevation. D, Lateral grooves. F, Slope of inferior-anterior surface. G, Lateral concavities.

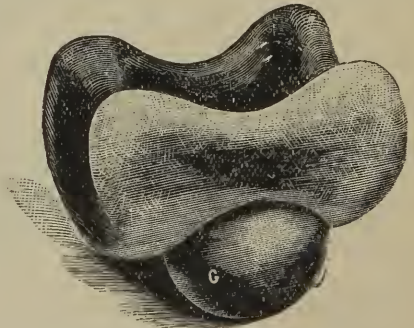
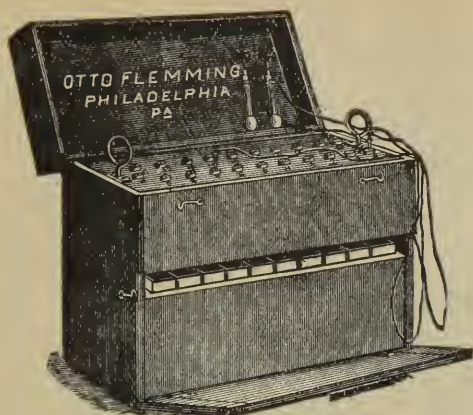


PLATE 3. Size 00. Anterior-Inferior View. Showing a thin India rubber sack enveloping the inferior opening of the central orifice.



Flemming's
Galvanic Family Battery.

Flemming's superior portable galvanic physicians' batteries, put up of the very best material by most solid and elegant workmanship, very effective and durable, are offered either as simple galvanic batteries, or as such combined with a first-class Faradic induction coil, with rapid, or with rapid and slow interruptions, at the following prices:

10	Cell Galvanic Physicians' Battery.....	\$25 00
10	“ “ “ “ with combination	35 00
10	“ “ “ “ and slow interrupter	45 00
12	“ “ “ “	30 00
12	“ “ “ “ with combination	40 00
12	“ “ “ “ “ “ and slow interrupter	48 00
18	“ “ “ “	40 00
18	“ “ “ “ with combination	50 00
18	“ “ “ “ “ “ and slow interrupter	58 00
20	“ “ “ “	45 00
20	“ “ “ “ with combination	55 00
20	“ “ “ “ “ “ and slow interrupter	63 00
24	“ “ “ “	55 00
24	“ “ “ “ with combination	65 00
24	“ “ “ “ “ “ and slow interrupter	73 00
30	“ “ “ “	65 00
30	“ “ “ “ with combination	75 00
30	“ “ “ “ “ “ and slow interrupter	83 00



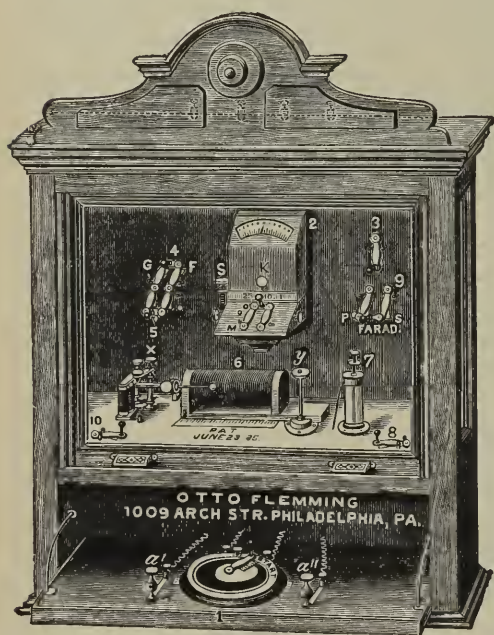
Flemming's Portable Faradic Batteries.

No.	00	Family Faradic Battery.....	\$10 00
"	0	" " " "	12 00
"	1	" " " "	15 00
"	1	Physicians " " with rapid and slow interrupter.....	22 50
"	2	Physicians' Faradic Battery, with commutator	20 00
"	3	Physicians' Faradic Battery, with rapid and slow interrupter, commutator, etc.....	30 00
"	4	Physicians' Faradic Battery, with rapid and slow interrupter, commutator, etc. and three interchangeable Du Bois-Reymond induction coils of different tensions,	45 00

For Sale by **SHARP & SMITH, Chicago.**

Flemming's No. 3 Faradic Battery.

FLEMMING'S Electro-Therapeutic Gynæcological Apparatus



Flemming's Electro-Therapeutic Gynæcological Wall cabinet, containing the following accessories, aiding in eliciting or modifying galvanic or Faradic induction currents, or both currents combined, at pleasure:

The Massey-Flemming current controller, for varying the galvanic current derived from voltaic cells, or from an incandescent light circuit.

The Fleming Milliammeter for measuring galvanic currents.

The DeWatteville Current Combiner for the use of galvanic and Faradic currents simultaneously, or independent of each other.

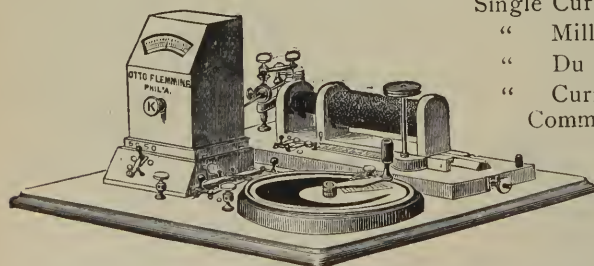
The commutator or pole changer.

The Du Bois-Reymond Induction Coil, with rapid and slow interrupters and graduator.

The liquid rheostat for varying and softening the Faradic current, and regulating switches.

Price, complete without any galvanic cells.....\$125 00
 " of Leclanche cells, each, net..... 1 25

Flemming's Electro-Therapeutic Table Plate, comprising the Massey-Flemming Current Controller, Milliammeter, Current Combiner and Commutator, and Du Bois-Reymond Coil.



Mounted on pol. walnut base, \$80 00
 Including walnut cover 85 00
 Single Current Controller..... 10 00
 " Milliammeter 25 00
 " Du Bois-Reymond Coil. 30 00
 " Current Combiner and Commutator..... 10 00



FOR SALE BY **SHARP & SMITH, CHICAGO.**

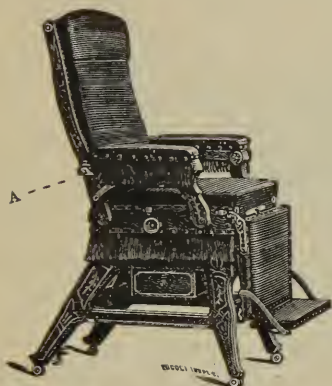
OFFICE FURNITURE

... MANUFACTURED BY ...

W. D. Allison Co., INDIANAPOLIS, IND.

THE "ALLISON" PHYSICIAN'S CHAIR.

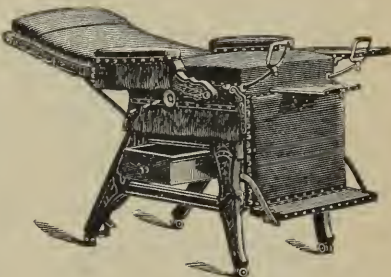
Price rom \$45 to \$80.



NORMAL POSITION

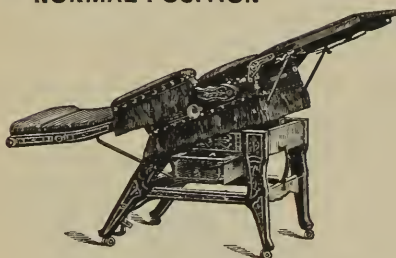
THE chair in the Normal position makes a very comfortable chair to sit in; is a nice piece of office furniture and takes up but very little room in the office.

Each chair has a drawer in which to keep instruments, the stirrups to the chair, etc., which can be pulled out on either side.



DORSAL POSITION.

Showing side table, adjustable stirrups and shelf in front.



ANÆSTHESIA POSITION.



SIMS POSITION.

This chair can be instantly adjusted to any desired position. It is simple in construction, convenient to the operator, and comfortable to the patient, the Dorsal position, Anaesthesia position and all the different positions known to the profession can be easily obtained without any inconvenience to operator or patient.

The adjustable stirrups, the large drawer for instruments, the little shelf in front, the movable pillow which goes with each chair and the step for mounting the chair are special features of importance.

The "Allison" Combination Instrument Cabinet.

PRICES \$40.00 TO \$65.00.

The cabinet is made perfectly aseptic, and proof against dust and dampness. The upper section is a glass case which revolves on the lower section. It has adjustable glass shelves and the doors close against small cushions, making the case almost air-tight. The cabinets are made in a number of different styles.



The "Allison" Invalid Rolling Chair.

PRICES \$20.00 TO \$65.00.



They are made in a number of different styles and sizes. The chair can be reclined to any desired angle by raising the caps on the arms,

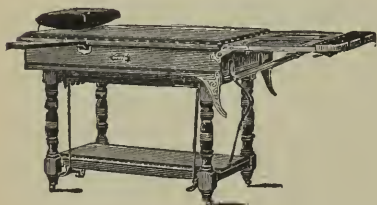
For Sale by SHARP & SMITH, Chicago.

OFFICE FURNITURE

... MANUFACTURED BY ...

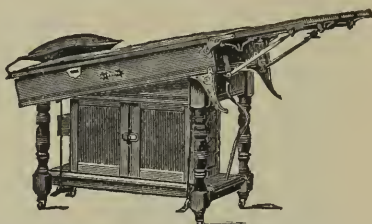
W. D. Allison Co., INDIANAPOLIS, IND.

"ALLISON" OPERATING TABLE.



SURGICAL POSITION.

Upholstered top without cabinet.



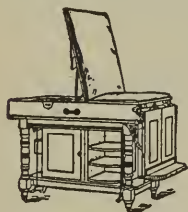
ANÆSTHESIA NARCOSIS POSITION.

Removable cushion and pillow, cabinet closed.

Made of oak, walnut or cherry; material and workmanship first-class; elegant finish; hand polished. The top on all tables is hinged at a point 14 inches from front edge, so that top can be raised to an upright position, answering the purpose of a chair. The top is made plain upholstered, or with movable cushion and pillow.

The patented cross-bar, on which upper portion rests, enables the operator, by use of the two foot-treadles at side of table, instantly to adjust it with perfect ease, and with the heaviest patient on it, to any desired position.

The adjustable stirrups, divided leg-rest, revolving cabinet, removable cushion and the adjustable arm-rest, are some of the desirable features of the table.

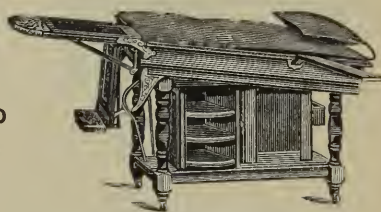


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PRICES FROM \$50.00

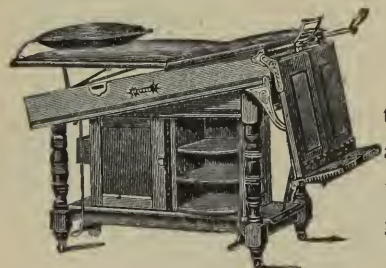
TO \$90.00.

Position as a chair, step in front to assist patient in mounting table.



SIMS POSITION.

Showing arm-rest and divided leg-rest.



DORSAL POSITION.

Hips elevated, revolving cabinet open.

TRENDELENBERG FOLDING TABLE.

We make a table, for Trendelenberg position, which can be used on any table or bed, and can be compactly folded and carried under the arm. For use in abdominal surgery it has no equal.

Tables for hospitals, colleges or special practice, made to order.

For Sale by SHARP & SMITH, = = Chicago.



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HEALTH.

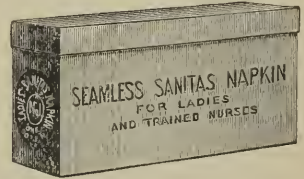
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(SMITH'S PATENT.)

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Is displacing an article that has not been improved upon for ages, affording **increased comfort** to the wearer, **cleanliness**, **diminution of risk of disease**, great advantage in traveling, cheaper than washing. Highly recommended by prominent physicians.



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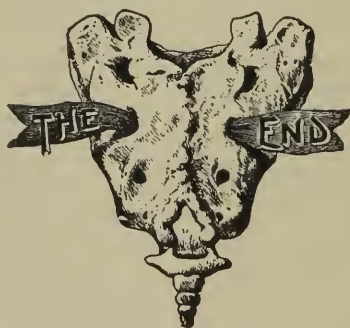
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