

Optical goods, B. W. M.

Spectacles
Eye Glasses
Opera Glasses
Microscopes
Telescopes
Thermometers
Barometers
Photographic Materials

1888

John Wanamaker

Chestnut, Thirteenth, and Market Streets
and City Hall Square

Philadelphia

Zentmayer's Microscopes are known
the world over as the best made.

Manufactured by
JOSEPH ZENTMAYER,
Optician,
209 S. 11th Street,
Philadelphia, Pa.

American Histological Stand, complete, \$65.00.



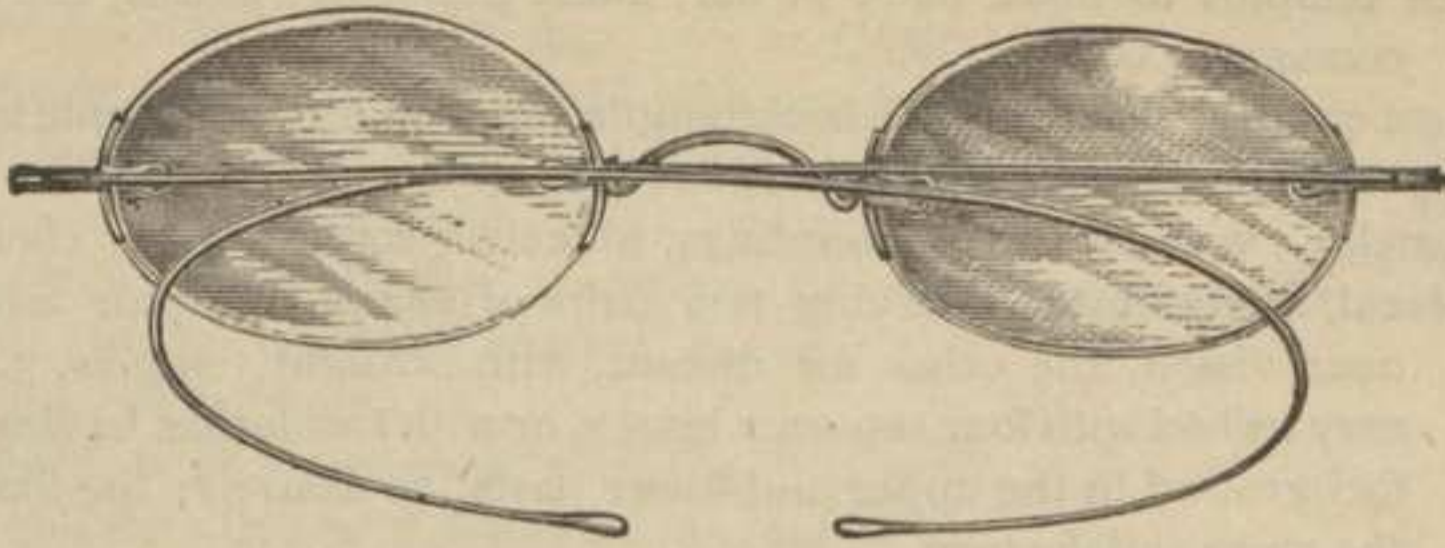
American Student Stand, complete, \$38.00.

Zentmayer's Modified Abbe Condenser.

RYDER'S
AUTOMATIC MICROTOME.

|| Catalogue on Application.

For sale by JOHN WANAMAKER.



All the lenses for spectacles, microscopes, etc., that the world uses are made by a very few manufacturers. Every one who sells the goods must needs go to these same manufacturers. It would be stupid for us to select any but the best. All our goods are the choice of an educated practical expert in this business.

Spectacles, Eye Glasses, etc.

The best way to correct any eye trouble is to consult a physician who makes a specialty of such work. If your eyes are perfect for all ordinary purposes, and you simply find trouble in reading or sewing, and you live at a distance, or where you cannot consult a physician, rather than let your eyes go without help, describe your seeing ability the best you can, and we will send you full directions for measurement. Or send us \$4.00 as a deposit and we will send by return mail a set of trial lenses with full instructions. When you return the lenses your money will be refunded entire. You can then buy spectacles or not as you please.

We make spectacles from physicians' prescriptions, and do all kinds of repairing.

Send 5c for a wooden mailing box to send your glasses for repair.

We can furnish to physicians who wish to make a specialty of diseases of the eye sets of trial lenses, test cards, trial frames, ophthalmoscopes, perimeters, etc. Prices and descriptions will be sent to those interested.

We have facilities for making any special instruments or apparatus to order, we will guarantee the work to be perfect and finely finished.

Spectacles

Steel

with straight temples, five qualities, according to style and finish of frame and quality of lenses, common, 50c; heavy, 1.00; medium, 1.50; light, 2.00; extra light, 2.50

Steel spectacles, continued

- with temples to hook back of ear, finest periscopic lenses, convex, 1.75; concave, 2.00
- finest quality, nickel-plated, hook temples, first quality periscopic lenses, 2.50
- very light, frames set in grooves in lenses, 2.50
- frameless, with fine steel mountings, nickeled, convex, 2.00; concave, 2.25
- bi-focal, finely finished, having two pairs of lenses, one pair adjusted for near vision, the other for distant, with straight temples, 3.00; these may be had with four separate lenses, or with two lenses having different foci ground in the upper and lower parts, as desired; the first style is the more satisfactory
- frames to hook on over distance glasses, with lenses to make a combination suitable for reading, 2.00

Gold

- with straight temples, 8 karat, 3.50 4.50; 10 karat, 4.00 4.50 5.50 6.00; 14 karat, 5.00 5.50 7.00 8.50 9.50 11.00; 14 karat, engraved, suitable for presentation, 9.00 to 14.00
- with sliding temples, 7.00 to 20.00, according to karat and weight
- with temples to hook back of ear, 8 karat, 3.50 4.50; 10 karat, 4.50 5.50 6.50; 14 karat, 5.50 6.50 7.50; with cork nose guard, 50c additional
- with frames set in grooved lenses, hook temples, 6.50
- frameless, with gold mountings, 10 karat, 4.50; 14 karat, 5.50

Eye Glasses



Showing Offset Nose Clamps

Steel

- ordinary, 75c 1.00
- fine quality, cork guards, periscopic lenses, 1.50; with self-adjusting cork nose clamps, 1.75; with offset cork nose clamps, 2.00
- frameless, German silver or nickel mountings, rubber nose clamps, 1.50; finest quality, nickeled, with cork nose clamps, 1.75; with offset cork nose clamps, 2.00; with self-adjusting cork nose clamps, 2.00

Gold

- with cork nose clamps, 10 karat, 4.50 6.00; 14 karat, 5.50 7.00
- with self-adjusting nose clamps, 10 karat, 5.00 6.00; 14 karat, 6.00 7.00
- with offset nose clamps, 10 karat, 5.50 6.50; 14 karat, 6.50 7.50

NOTE: 8 karat is frequently sold for 10 karat; but after wearing it appears lighter in color, owing to amount of alloy; 18 karat is not hard enough to keep shape well in light wire, and is only made in heavy weight, for presentation, etc.

Smoke or blue glasses to protect the eyes from the glare of seashore or snow, steel frames, 50c 75c 1.00; rubber frames, 35c 50c 75c 1.00; without frames, nickel mountings, 1.00 1.50

Spectacle Cases, Guards, etc.

Spectacle cases

leather, open end, 10c ; with flap, 15c ; calf, 35c
papier-maché, 25c 35c 50c ; inlaid with pearl, 75c
chatelaine to hang from belt, with black metal or oxidized silver ornament,
leather, velvet, or plush, 1.00 1.25 1.50

Eye glass cases, flexible leather, short, 10c 15c ; long, holding glasses without
closing, 15c ; for offset eye glasses, 15c 20c

Eye glass guards or chains

silk guard, to go about neck, 5c 10c 15c
finest quality silk guard, hand woven, 25c
silk guard, with plated hook and swivel, 50c
silver plated chain, oxidized, 75c 1.00 1.25
coin silver chain, either bright or oxidized, 1.50
gold plated chain, with hook for glasses and swivel, 90c 1.00 1.25 1.50
solid gold chain, 10 karat, various patterns, 2.75 3.00 3.75 5.50 ; 14 karat,
4.25 5.50 6.50

Eye glass hooks, for hanging glasses on vest when not in use

rubber, small size, 10c each, 1.00 a dozen ;
large, 15c each, 1.50 a dozen

zylonite, more flexible than rubber, 12c
each, 1.20 a dozen

japanned metal, small size, 10c each, 1.00 a
dozen ; large, 15c each, 1.50 a dozen

gold plated, either to fasten like a breastpin
or with safety hook, 15c 25c 30c 35c 50c
75c each

solid gold, plain or engraved, 10 karat, 1.00
1.25 1.50 2.00 each ; 14 karat, 1.50 2.00
3.50 4.25 ; 14 karat, black enamel, 2.50
to 4.50

Students' eye shades, for reading at night, 15c
each, 1.50 a dozen

Silk shades for one eye, 20c each

Lorgnettes

The French fashion of carrying lenses in frames with a
handle and case handsomely carved out of tortoise shell has
become popular among ladies here. They are used principally
at the opera or other assemblage by ladies whose eyes are
imperfect for distant vision, and who find them more convenient
than wearing eye glasses or spectacles.

The carved patterns of lorgnettes come in designs too
numerous to describe ; the prices given are dependent upon
the amount of carving and fineness of shell :

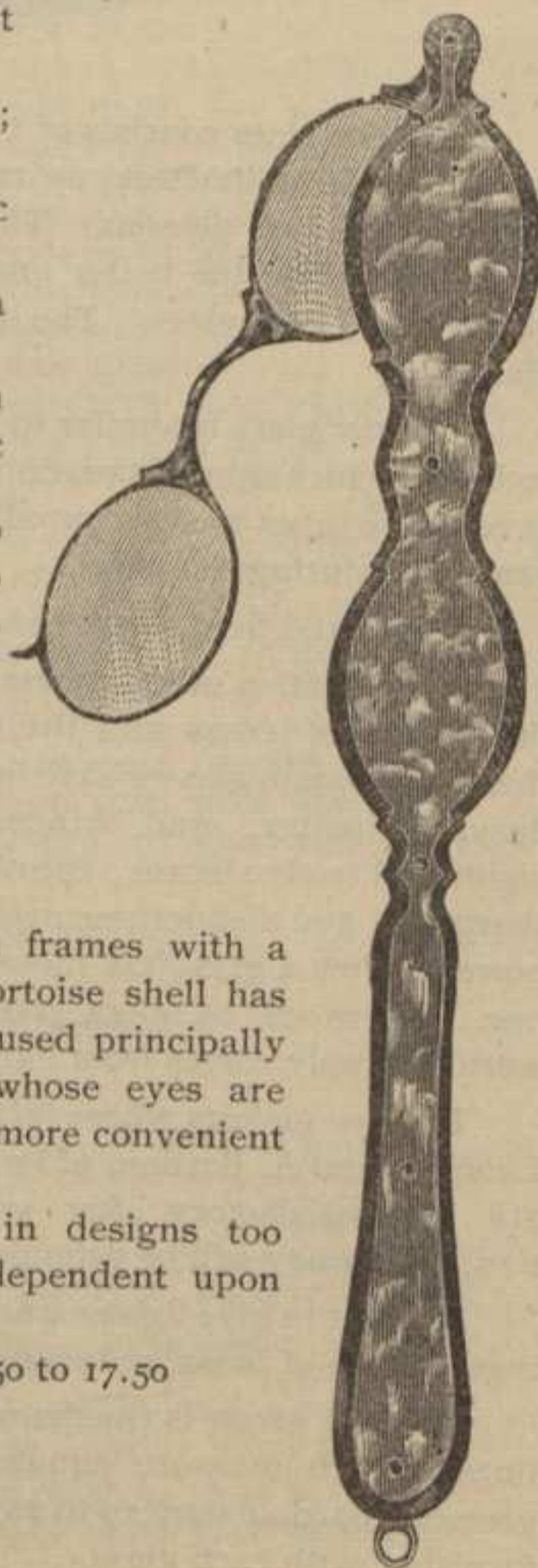
tortoise shell, plain, 4.00 to 8.50 ; carved, 6.50 to 17.50

zylonite (imitation shell), 3.50 to 6.50

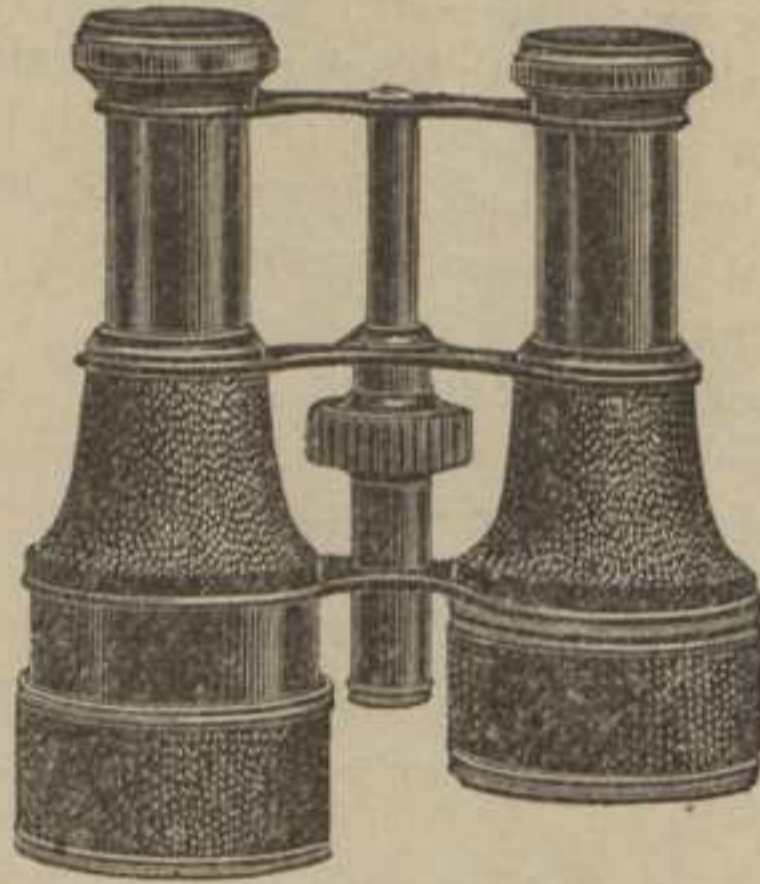
silver, 15.00 to 35.00

silver plated, oxidized, or bright, 2.50 to 4.00

plush cases for lorgnettes, 90c



Opera, Tourist, and Marine Glasses, etc.



Tourist Glass

An opera glass consists of two small telescopes fastened together, usually $2\frac{3}{8}$ inches (60 millimeters) apart, which is the average distance between the eyes of different persons. The cheaper qualities magnify objects about 2 diameters, while the better qualities, such as Lemaire's or Bardou's, magnify from $2\frac{1}{2}$ to 3 diameters. The object lenses are from 1 inch to $1\frac{1}{2}$ inches in diameter.

A tourist glass is similar to an opera glass, but has object lenses from $1\frac{1}{2}$ inches to 2 inches in diameter, and magnifies from 3 to 4 diameters. Some have shade tubes to slide out about the object lenses to prevent the glare of the sun from injuring the view.

Marine and field glasses are larger, and magnify from 3 to 6 diameters.

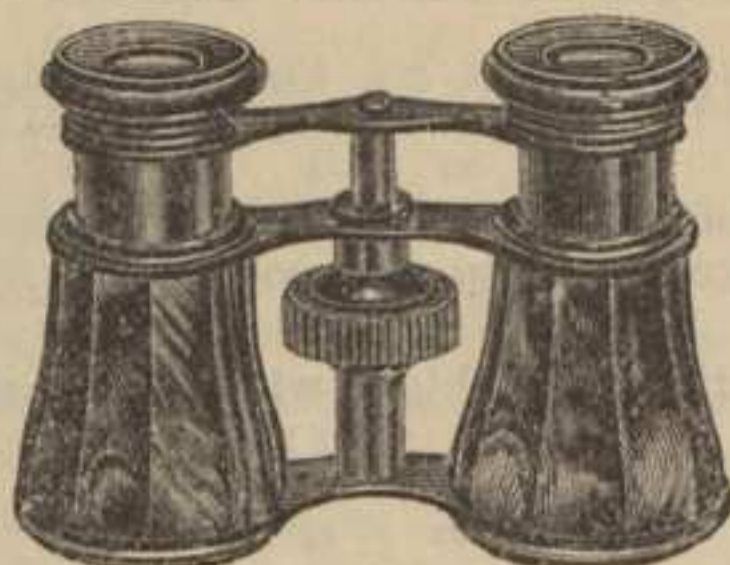
The definition or sharpness of an opera or field glass usually depends upon the number of lenses and the skill of the maker in grinding and arranging them. Common glasses have but four lenses, two in each tube, and the view is hazy, indistinct, and fringed with colors. The best makers put in six, eight, and twelve lenses; the object of the greater number of lenses is to give sharpness and distinctness over the entire field, rather than higher magnifying power; when a glass has more than six lenses it is so engraved on the cross bar. There are no opera glasses made in this country; three-fourths of the world's supply comes from Paris.

The two makers whose glasses are considered the best in the world are Lemaire and A. Bardou, of Paris. We guarantee the glasses of both; if they are not satisfactory after you try them, or if you make a wrong selection, the money will be refunded or another pair furnished.

In order to give lighter weight to a glass, aluminum is used for the mountings instead of brass, reducing the weight about one half.

The size given is the diameter of the object glasses, or larger lenses; 11 lines French measure equals 1 inch. The prices given are for Lemaire's glasses; Bardou's are 10 to 20 per cent. higher. A leather or morocco case is furnished with each glass.

Opera Glasses



Lines	with 6 lenses				with 12 lenses			
	11	13	15	17	11	13	15	17
Black morocco, black mountings	4.50	5.00	6.00	7.00	9.50	10.50	11.00	12.50
Black morocco, gilt tubes . . .	5.25	5.75	6.75	7.75	10.25	11.25	11.75	12.25
Black morocco, gilt mountings . .	6.00	6.50	7.50	8.50	11.00	12.00	12.50	14.00
White pearl, gilt tubes	10.50	11.50	13.00	14.00	15.50	17.50	19.00	21.00
White pearl, pearl tubes	12.00	13.00	14.50	15.50				
Oriental pearl, gilt tubes	11.50	12.50	14.00	15.00	16.50	18.50	20.00	22.00
Oriental pearl, pearl tubes	13.00	14.00	15.50	16.50				
Black pearl, gilt tubes	10.50	11.50	13.00	14.00	15.50	17.50	19.00	21.00
Amber pearl, gilt tubes	13.00	14.00	15.50	16.50				
Rose or purple pearl, gilt tubes . .	13.00	14.00	15.50	16.50				
All white pearl	20.00	25.00	30.00	35.00				
Aluminum, black morocco	15.00	16.50	18.50	22.00	22.00	24.00	26.00	28.00
Aluminum, white or black pearl . .	23.00	25.00	27.00	29.00	29.00	32.00	35.00	37.00
Aluminum, embossed	20.00	22.50	25.00	30.00				
Gold, embossed, black tubes	17.00	20.00	25.00	30.00				
Oxidized silver	14.00	16.00	18.00	20.00				
Enameled painting, gilt tubes . . .	16.50	17.50	19.00	20.50	19.50	23.00	25.00	27.00

With tubes adjustable to width between eyes

Lines	6 lenses				12 lenses			
	13	15	17	19	13	15	17	19
Black morocco, black mountings	10.50	11.50	12.00	13.50	14.00	15.50	17.50	19.50
Black morocco, gilt tubes	11.25	12.25	12.75	14.25	14.75	16.25	18.25	20.25
Black morocco, gilt mountings . . .	12.00	13.00	13.50	15.00	15.50	17.00	19.00	21.00
White pearl, gilt tubes	18.00	21.00	24.00	27.00	25.00	28.00	31.00	
Black pearl, gilt tubes	18.00	21.00	24.00	27.00	25.00	28.00	31.00	
Aluminum, black morocco	25.00	28.00	31.00	34.00	29.00	32.00	36.00	
Aluminum, white or black pearl . .	31.00	34.00	37.50	41.00	36.00	39.00	42.00	45.00

- Morocco cases for opera glasses, 1.25 1.50 2.00
- Morocco cases for tourist glasses, with strap, 1.50 to 3.00
- Heavy leather cases, with strap, 2.50 to 3.50
- Plush bags for opera glasses, best quality, 1.00; large, 1.25

Tourist Glasses

Lines	6 lenses				12 lenses		
	17	19	21	24	17	19	21
Black morocco, black mountings	10.50	11.50	12.50	15.50	13.50	14.50	16.00
Aluminum, black morocco	26.00	28.00	30.00	35.00	30.00	32.00	34.00

With tubes adjustable to width between eyes

Lines	6 lenses				12 lenses		
	17	19	21	24	17	19	21
Black morocco, black mountings	13.00	14.50	16.00	18.50	17.50	19.00	20.50
Aluminum, black morocco	33.00	36.00	39.00	42.00	36.00	39.00	42.00

Field or Marine Glasses

Lines	6 lenses				12 lenses			
	21	24	26	28	21	24	26	28
Black morocco, black mountings	12.50	14.00	15.50	17.50	17.50	20.00	23.00	26.00
Aluminum, black morocco . . .	39.00	42.00	45.00	48.00	40.00	44.00	48.00	53.00

With tubes adjustable to width between eyes

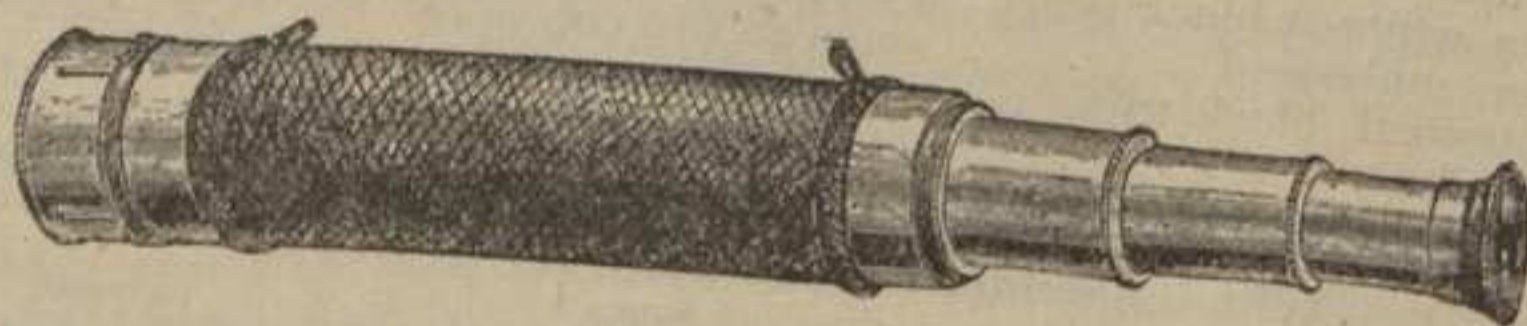
Lines	6 lenses				12 lenses			
	21	24	26	28	21	24	26	28
Black morocco, black mountings	16.00	18.50	20.00	22.00	24.00	26.00	28.00	
Aluminum, black morocco . . .	39.00	43.00	48.00	44.00	48.00	52.00		

Binocular Telescopes

Length from 9 to 18 inches;—adjustable to width between the eyes

Black morocco, black mountings, 11 lines, 32.00; 13 lines, 35.00; 15 lines, 38.00; 17 lines, 45.00; 19 lines, 60.00; 21 lines, 90.00
Aluminum, black morocco, 11 lines, 48.00; 13 lines, 54.00; 15 lines, 60.00; 17 lines, 85.00; 19 lines, 110.00; 21 lines, 150.00

Spy Glasses



Rosewood or morocco body

Diameter, millimeters	Length closed, inches	Length open, inches	No. of draws	Power	Price
25	6	14	3	12	2.00
30	6	16	3	15	3.00
35	8	20	3	20	4.25
40	10	30	3	25	6.25
45	11	35	4	35	10.00
53	11	40	4	40	17.00
60	13	45	4	45	20.00
Clamps to support glass by screwing to window frame or post, 1.25 1.75 2.25					
2.50 3.50					

Astronomical Telescopes

Astronomical telescopes, with one terrestrial and one celestial ocular, sun cap, brass tube and stand, in walnut case

objective 50 millimeters in diameter, will resolve stars of the ninth magnitude, 45.00

objective 55 millimeters, 55.00
60 60.00
65 70.00
75 95.00; with achromatic finder, 115.00
85 165.00; 185.00

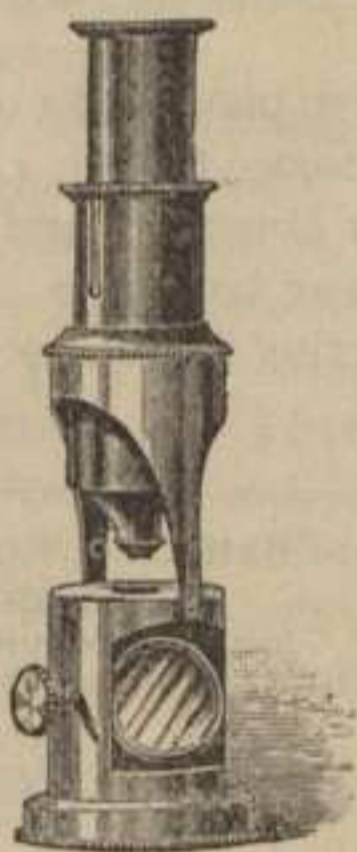
Microscopes and Magnifying Glasses

A microscope should be selected with a view to the use to which it is to be put—amusement, study of medicine, botany, or mineralogy, class demonstration, scientific research, or business purposes. The beginner will be materially aided in his choice of a suitable instrument by "Practical Hints on the Selection and Use of the Microscope," by John Phin (new edition, 231 pages), price \$1.00, or by "Microscopy for Beginners," by the same author (125 pages), price 30 cents. We will send either by mail on receipt of price.

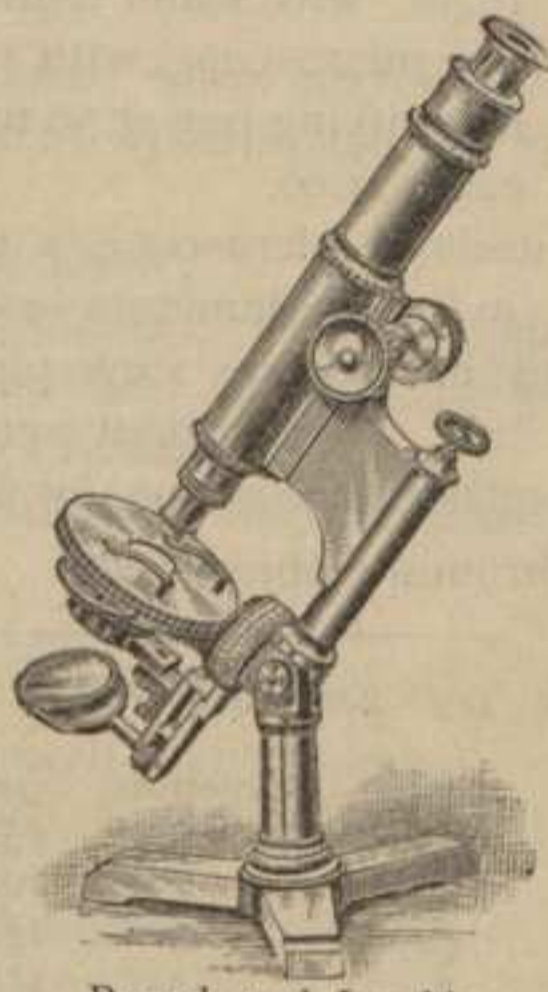
Microscopes



Zentmayer's
Histological Microscope



Boys' Microscope



Bausch and Lomb's
Professional Microscope

Zentmayer's U. S. Army Hospital microscope, binocular, with 4 eye pieces, 2 objectives, 8-10 inch focus 32° aperture, 1-5 inch focus 90° aperture, camera lucida, stage micrometer, and mahogany case, 182.00; stand, case, and eye pieces only, 140.00

Same, monocular, 2 eye pieces and other accessories as above, 140.00; with 2 eye pieces and case only, 102.00

Zentmayer's Histological microscope, binocular, with 1 pair of eye pieces, 1 8-10 inch objective 24° aperture, 1 1-5 inch objective 75° aperture (which easily resolves the diatom known as *Pleurosigma Angulatum*), and walnut case, 81.00; without objectives, 62.50

Same, monocular, with objectives as above, 60.00; without objectives, 42.00

Zentmayer's Student microscope, fine and coarse adjustment, with 1 eye piece, 1 one-inch objective 19° aperture, 1 1-5 inch objective 75° aperture, and walnut case, 42.50; without objectives, 27.50; with objectives, but without rack-and-pinion coarse adjustment, 35.00; without rack-and-pinion adjustment or objectives, 20.00; extra eye pieces, 4.50

Bausch & Lomb's Professional microscope, with 4 eye pieces, 4 objectives (2, $\frac{3}{4}$, $\frac{1}{2}$, and $\frac{1}{8}$ inch focus), camera lucida, eye piece micrometer, pliers, and slides, in polished cherry case, 162.00; with 2 eye pieces and case only, no accessories, 115.00

Microscopes, continued

- Bausch & Lomb's Investigator microscope, latest model, 2 eye pieces, 2 objectives ($\frac{3}{4}$ and $\frac{1}{2}$ inch), camera lucida, eye piece micrometer, pliers, slides, and covers, in walnut case, 74.00; with 1 eye piece and case only, no accessories, 51.00
- Bausch & Lomb's Physician's microscope, with 2 eye pieces, 2 objectives ($\frac{3}{4}$ and $\frac{1}{2}$ inch), camera lucida, micrometer, pliers, slides, and covers, in walnut case, 60.00; with 1 eye piece and case only, no accessories, 37.00
- Model microscope, with 1 eye piece, 2 objectives ($\frac{1}{4}$ and 1 inch), and camera lucida, in walnut case, 41.50; with 1 eye piece and case only, no accessories, 23.00
- Harvard microscope, with 1 eye piece and case, no objectives or accessories, 18.50; with stand jointed for inclination, 20.00
- Library microscope, with 1 eye piece, 1 divisible objective, and camera lucida, magnifying power 50 to 125 diameters (2,500 to 15,000 times), in walnut case, 11.00
- Household microscope, with 1 eye piece and 1 objective, magnifying power from 30 to 100 diameters (900 to 10,000 times), 4.50
- Boys' microscope, 1 eye piece, 1 objective, and condensing lens, in mahogany box, 3.75; without condensing lens, 2.50
- Excelsior microscope, for dissecting flowers, 2.25
- Achromatic objectives

Zentmayer's			Bausch & Lomb's Professional			Bausch & Lomb's Student		
focus	aperture	price	focus	aperture	price	focus	aperture	price
1 $\frac{1}{2}$	inch 23°	15.00	4	inch 10°	13.00	4	inch 6°	6.00
$\frac{3}{8}$	26°	10.00	2	15°	13.00	3	9°	6.00
$\frac{1}{8}$	32°	15.00	1	36°	15.00	2	12°	6.00
$\frac{1}{10}$	32°	18.00	*	65°	18.00	1	20°	6.00
$\frac{1}{10}$	60°	22.00	†	110°	22.00	3	27°	8.00
* $\frac{1}{10}$	80°	30.00	†	165°	23.00	4	42°	9.00
* $\frac{1}{5}$	120°	35.00	†	170°	25.00	10	70°	13.00
$\frac{1}{5}$	90°	18.00	†	170°	28.00	10	100°	14.00
3, 4, & 5 in. comb'd,		10.00	†	175°	30.00	10	115°	18.00
			†	175°	35.00	12	130°	24.00

*Adjustable †Immersion

Accessories

- adapter for fitting objectives to sub-stage, 1.00
- blue glass, Hopkins' graduated, 3.15
- camera lucida, in rubber mounting, 1.35; prism, 6.00; with lens to magnify pencil, 7.75
- compressor, Wenham's, 1.40
- condenser, lens $1\frac{1}{2}$ inches, on brass stand, 1.85; with universal joint, 3.60; lens $2\frac{1}{4}$ inches, on brass stand, with universal joint, 6.50; lens 3 inches, on brass stand, with universal joint, 9.00; sub-stage, 5 diaphragms and blue glass, in morocco case, aperture 1.42, 16.50
- Holman's life slide, with cover, 1.35
- syphon slide, without bottles, 3.75
- live cage, 1.85
- maltwood finder, in case, 3.15
- nose piece for holding extra objectives, for two objectives, 5.50; for three objectives, 11.75; for four objectives, 22.00

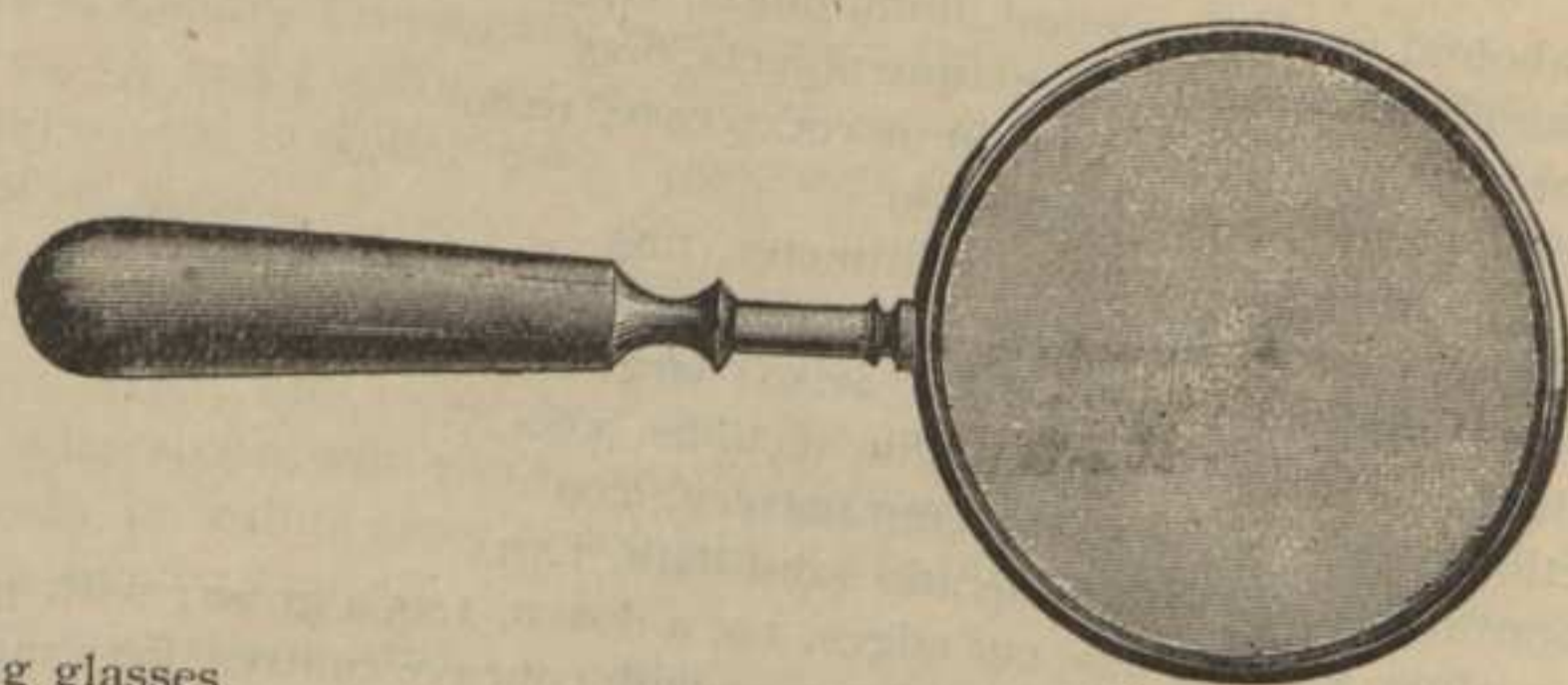
Microscopical accessories, continued

- paraboloid for dark ground illumination, 6.75
parabolic illuminator for opaque objects, 8.25
polarizer with one selenite, in morocco case, 10.80
stage forceps, 1.50 2.50 3.00 4.50
stage micrometer, $\frac{1}{10}$ to $\frac{1}{100}$ millimeter, 1.85
laboratory microtome, with knife, small size, 37.50
Student microtome, with knife, 21.50; large size, 45.00
Valentine's knife for making thin sections, 5.60
section cutter, Medical Museum pattern, 9.00
mounting stand, with lamp and sand-bath, 1.75
glass slips, 3 x 1 inches, cut edges, 12c a dozen, 1.25 a gross; with ground edges, 25c a dozen, 2.25 a gross; with concave centres, for examining liquids, 90c a dozen
thin glass for covers, in sheets, 60c to 1.50 an ounce; cut in circles, 20c 25c 30c a dozen, 1.75 2.25 3.00 an ounce; cut in squares, 18c 20c 25c a dozen, 90c 1.75 2.25 an ounce
rings for cells, rubber, 15c a dozen; glass, 90c a dozen
zinc cement, Canada balsam in benzole or chloroform (for use without heat), glycerine jelly, oil of cloves, damar and balsam mounting medium, marine glue, or Bell's cement, 45c a bottle
asphalt, Brunswick black, gold size, aniline staining fluid (any color), aniline oil, or liquor potassæ, 25c a bottle
dropping tubes, 10c each; dropping bottles, 25c 30c
dissecting instruments (knives, needles, forceps, scissors, etc.) in case, 6.00
watch glasses, 50c a dozen; Syracuse solid, 10c each, 1.00 a dozen
turn table, 2.80; centring, 3.50; with rests, 4.00; Zentmayer's centring, 3.75 5.00
portable cabinets, for holding 36 to 500 mounted objects, 2.00 to 4.00

Microscopic Preparations

- Common objects for boys' microscopes, eyes, feet, wings, etc., of flies, bees, wasps, etc., French, 15c each, 1.25 a dozen; next quality, greater variety of objects and better prepared, 25c each, 2.50 a dozen
- Sets for students or schools
- 24 preparations, illustrating the structure of the higher orders of plants, adapted from Bessey's Botany, in case, 11.00
24 pathological specimens in case, sections of diseased organs, 14.00
24 anatomical specimens in case, 17.00
- Various stained and prepared vegetable objects by the best American and foreign preparers, 55c each, 5.50 a dozen
- Prepared specimens of protozoa, molusca, radiata, algæ ferns, mosses, fungi, etc., selected and test diatoms, 55c each, 5.50 a dozen
- Parasitic insects, feathers, hairs, scales, diatoms, chemical crystals, micro-photographs, parts of insects, etc., 45c each, 4.50 a dozen
- Injected and stained pathological specimens, sections of various organs as affected by different diseases, lung, heart, brain, kidney, muscles, skin, eye, stomach, liver, spleen, etc., 70c each, 7.00 a dozen
- Textile
- 12 specimens of vegetable and animal fibres, in box, 5.00
24 specimens of wools, silks, and animal fibres in case, 11.00

Magnifying Glasses



Reading glasses

German silver frames, 2 inch diameter, 75c; 2 $\frac{3}{8}$ inch, 1.00; 2 $\frac{5}{8}$ inch, 1.25; 3 inch, 1.50; 3 $\frac{1}{2}$ inch, 2.00; 4 inch, 2.50; 4 $\frac{1}{2}$ inch, 3.00
gold plated frame, pearl handle, 2 inch diameter, 2.00; 2 $\frac{3}{8}$ inch, 2.75; 2 $\frac{5}{8}$ inch, 3.25; 3 inch, 3.50; 3 $\frac{1}{2}$ inch, 4.00; 4 inch, 4.75; 4 $\frac{1}{2}$ inch, 5.50

Watchmakers' glasses, in hard rubber frames

with 1 double convex lens, $\frac{3}{8}$ to 1 $\frac{1}{4}$ inch diameter, various powers, 40c each
with 2 lenses (giving high power) separable (to give low power and larger field), 75c each

Engravers' glasses, in horn or rubber frames

with 1 double-convex lens, 1 $\frac{3}{8}$ inch diameter, 60c each
with 2 plano-convex lenses, $\frac{3}{4}$ to $\frac{7}{8}$ inch diameter, 60c; 1 $\frac{3}{8}$ inch diameter, 1.75; 1 $\frac{7}{8}$ inch diameter, 2.50

Pocket glasses, in hard rubber cases

oval shape, with 1 lens, $\frac{3}{4}$ inch diameter, 25c; 1 inch diameter, 35c; 1 $\frac{1}{4}$ inch diameter, 50c; 1 $\frac{7}{16}$ inch diameter, 60c; 1 $\frac{3}{4}$ inch diameter, 75c; 2 inch diameter, 1.00

oval shape, with 2 lenses, $\frac{7}{8}$ and 1 inch diameter, 65c; 1 and 1 $\frac{1}{4}$ inch diameter, 85c; 1 $\frac{1}{4}$ and 1 $\frac{1}{2}$ inch diameter, 1.00; 1 $\frac{1}{2}$ and 1 $\frac{3}{4}$ inch diameter, 1.15

bellows shape, with 1 lens, $\frac{5}{8}$ inch diameter, 30c; $\frac{7}{8}$ inch diameter, 40c

bellows shape, with 3 lenses, $\frac{1}{2}$ to $\frac{5}{8}$ inch diameter, 75c; $\frac{1}{2}$ to $\frac{3}{8}$ inch diameter, 1.00

Thread counters

$\frac{1}{4}$ inch square, brass frame, 35c; German silver frame, 50c; with large lens and 1 inch opening, brass or hard rubber frame, 1.50

Collector's pocket microscope, lens in brass frame, with glass cover forming a sort of live box, in which the object is placed, power about 25 diameters, 75c

Coddington lenses

brass frame, medium size (1 $\frac{1}{8}$ inch focus), 1.00; large size (1 $\frac{1}{2}$ inch focus), 1.50

nickel frame, wire handle, ($\frac{3}{8}$ inch focus), 1.75; with cover, 2.00; larger (1 inch focus), 3.25

Small microscopes

with glass cage for seeds or live insects, 25c 50c

on 3 legs, all brass, screw focal adjustment, 50c; nickel plated, 75c; larger brass, 75c

Magic Lanterns

Single lantern, for lodge, society, church, or parlor exhibitions
 cherry or walnut, Russia-iron body, with compound oil lamp, 35.00; with
 jet and accessory apparatus for using gas instead of oil, 75.00
 mahogany, Russia-iron body, finer finish, with compound oil lamp, 55.00;
 arranged for gas, 95.00

Pair of lanterns mounted on same base for dissolving views, with metal dis-
 solver, compound oil lamps, 75.00; with oxy-hydrogen jets instead of
 lamps, gas bags 30 x 40 inches, lime cylinders, dissolving key, apparatus
 and materials for making oxygen, etc., 135.00

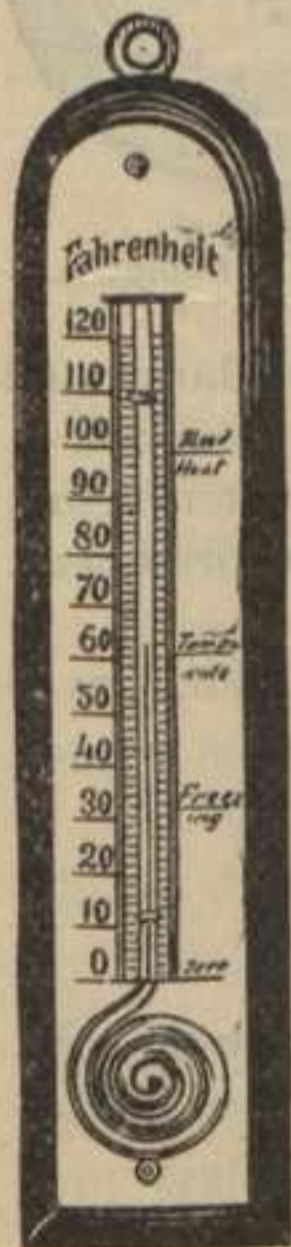
Lantern pictures

photographs on glass, various subjects, 45c each, 40.00 a hundred
 hand-painted or colored photographs, 1.40 each, 16.50 a dozen
 comic pictures, with movable glass slides, 70c each, 7.00 a dozen
 Screens, with rings, without ropes or poles, 7 feet square, 2.25; 12 feet, 6.50;
 15 feet, 9.00; 18 feet, 11.00; 24 feet, 16.50; other sizes at proportionate prices
 Apparatus for making gas, gas bags, tanks, lime cylinders, iron gas cylinders,
 and other accessories furnished at lowest rates

Achromatic objectives for magic lanterns, diameter 4 mm. focus 90 mm.
 4.50; diameter 50 mm. focus 115 mm., 12.00; diameter 55 mm. focus
 175 mm., 16.00

Condensing lenses for magic lanterns, 102 mm. diameter, 3.00; pair mounted
 in metal cell, 7.50; 112 mm. diameter, 3.50; pair mounted in metal cell,
 9.00; 125 mm. diameter, 5.00; pair mounted in metal cell, 12.00

Thermometers



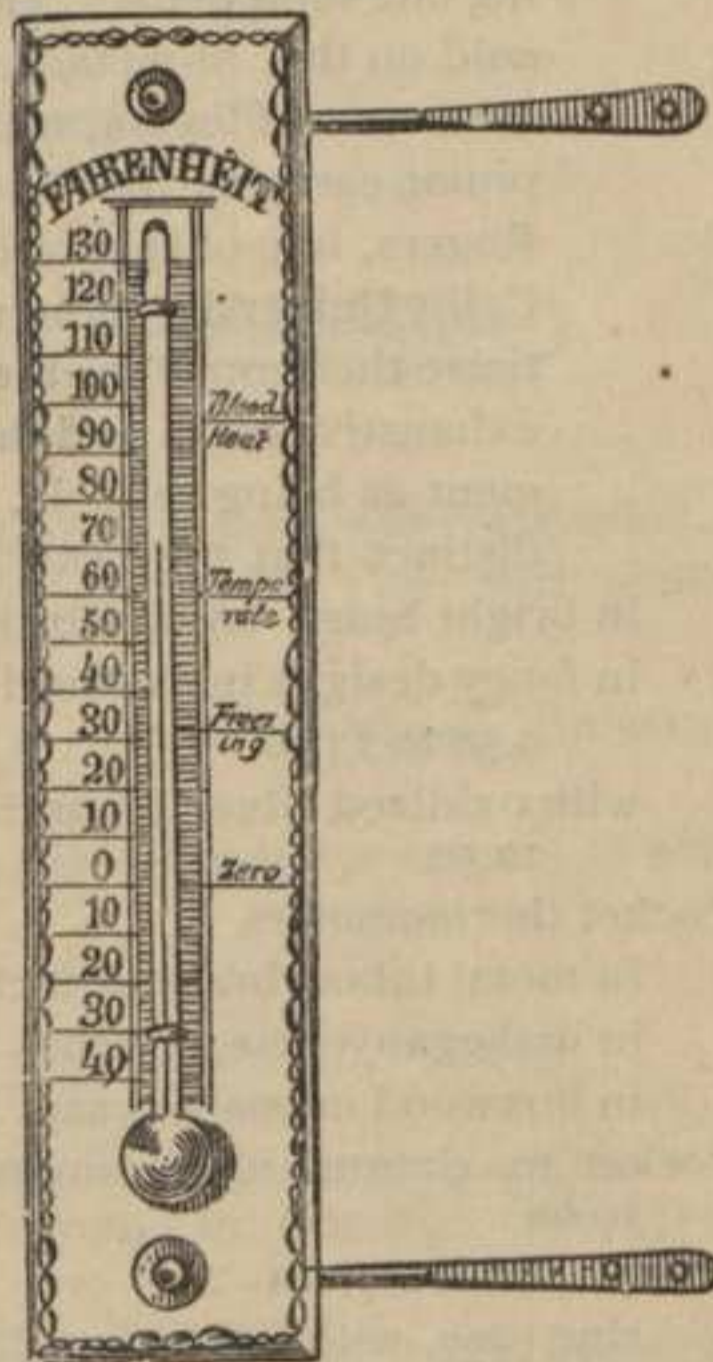
Polished oak, with
 porcelain scale



Boxwood



Pearwood



All glass, for
 outside window

Thermometers, continued

Black japanned tin case

each mark on scale representing two degrees, 7 inch, 20c; 8 inch, 30c; 10 inch, 40c; 12 inch, 50c

scale divided from 20° below zero to 212° above (temperature of boiling water), 8 inch, 40c; 10 inch, 60c; 12 inch, 80c

same, finer finish and more carefully graduated, 8 inch, 60c; 10 inch, 90c; 12 inch, 1.25

Boxwood, 8 to 15 inch, 50c 75c 1.00 1.50 2.00, according to size and finish

Pearwood, 40c 60c 75c

Walnut case, with metal scale, 50c 80c 1.00 1.25 1.50 2.00 2.50

Polished oak, with metal scale, 2.00 3.00 4.00

Polished rosewood, with metal scale, 2.00 2.50 3.00

Polished oak or ebony, with porcelain scale, 2.00 2.50 3.00 4.00; with white glass scale, 2.50 3.00 4.00

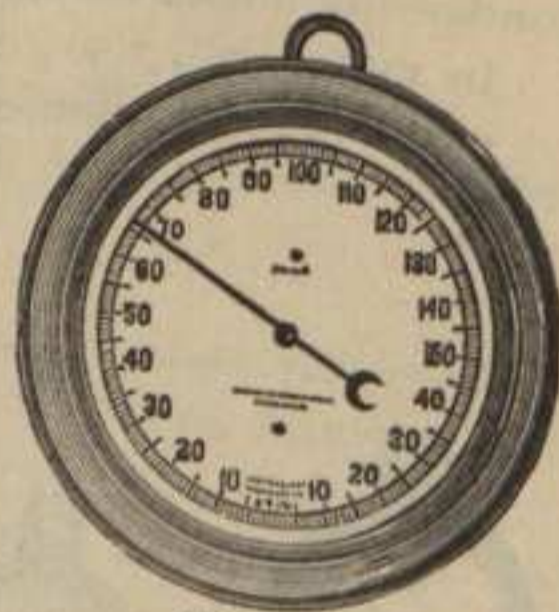
All glass, with beveled edges and brass arms for fastening outside window, 1.50 2.00 2.50 3.00; with glass cut or engraved in fancy design, 2.00 2.50 3.00 3.50 4.00

Window thermometer, inclosed in glass tube, with wood or metal arms, 1.50 2.00 3.00

Corner thermometer, with wood cut in triangular shape to fit in corner of room or window frame, 90c 1.25 1.75

Fairbanks' dial thermometers

In these instruments thin plates of two metals which have different powers of expansion and contraction are soldered together, forming one solid plate. The action of heat and cold on this bi-metallic plate is multiplied by means of levers, which connect with the pinion carrying the hand. Prof. William A. Rogers, late of Harvard University, now of Colby University, Waterville, Me., has given these thermometers the most thorough and exhaustive tests, and they have his indorsement as being reliable. The figures upon the dial are so large and distinct that they can readily be seen from all parts of the room. in bright brass, bronze, or ebony case, 4, 5, or 8 inches in diameter, 2.50 9.50 to 13.50 in fancy designs in oxidized silver mountings, to stand as mantel ornament, with oxidized silver mountings, various designs, to hang on wall, 5.75 to 12.50



Fairbanks' Standard Thermometer

Pocket thermometers

in metal tubes, brass or nickel, 75c 1.00

in mahogany case, 4 inches long, 90c; 6 inches long, 1.25

in boxwood or maple case, with ivory scale, 1.00

Pocket maximum and minimum thermometers, in mahogany or morocco case, 10.00

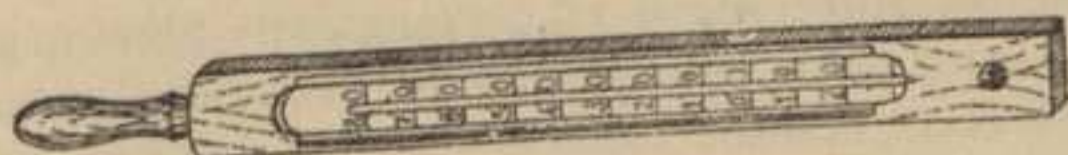
Dairy thermometers

zinc case, with boiling, scalding, cheese, and churning marks, 20c 30c 50c

all glass, with boiling, scalding, cheese, and churning marks, 50c 65c

simple cheese thermometer, with churning mark only, 15c

Thermometers, continued



Bath Thermometer

Bath thermometers

all glass, 40c 60c 75c

all glass in wooden tube with handle, to float while bath is filling, 40c 60c 90c

Self-registering minimum garden thermometers, 75c 1.00 1.25 1.50

Self-registering minimum thermometers, with boxwood or mahogany backs and metal or porcelain scales, 2.00 to 10.00

Self-registering maximum thermometers, 2.00 to 8.00

U. S. Signal Service maximum thermometer, 5.00

Six's self-registering maximum and minimum thermometers, with boxwood scales, 8 inch, 3.00; 10 inch, 5.00; 12 inch, 6.50; with porcelain scales, 8, 10, 12, and 14 inch, 6.00 to 11.00

Combined maximum and minimum thermometers, elbow form, mahogany back, opal scales, 15.00

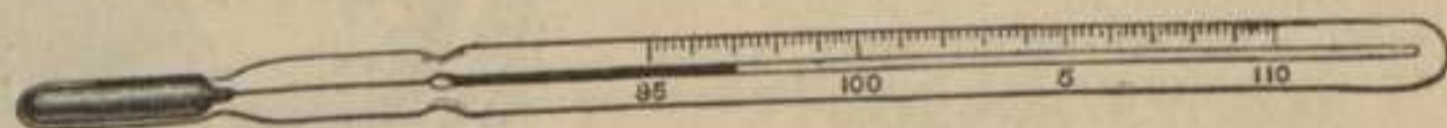
Bakers' and confectioners' thermometers, in polished copper cases, 2.00 3.00 4.50; every cook or baker should have one

Chemical thermometers

all glass, paper scale inside, 100° C., 90c; 200° C., 1.00; 360° C., 1.25; 400° F., 1.00; 600° F., 1.25

all glass, porcelain scale, 100° C., 1.00; 200° C., 1.25; 360° C., 1.50; 212° F., 1.00; 400° F., 1.25; 600° F., 1.50

all glass, graduated on the stem, single degrees, 100° C., 1.25; 200° C., 1.50; 360° C., 2.00; 212° F., 1.25; 400° F., 1.50; 600° F., 2.00



Clinical Thermometer

Clinical or fever thermometers, 3½, 4, 5, and 6 inches long, self-registering, in ebony or boxwood case, 1.50; with patent lens front, 3.00; with syphon tube, in morocco case, 3.00

NOTE: For 50c additional we will furnish with any clinical thermometer certificate of accuracy from Yale College Observatory.

Hygrometer, or wet and dry bulb thermometer, to tell relative amount of vapor in the air, 2.00 to 15.00

Damp detector, circular form, 3.50

U. S. Standard thermometer, 12 inches long, 5.00

Taylor's Standard thermometer, 12 inches long, 3.50

Standard thermometer, graduated in 1-5 degrees, in morocco case, 11.00; graduated in 1-10 degrees, 25.00

Thermometers for sugar houses, vats, drying pans, boilers, bake ovens, gas holders, and other special purposes made to order and the accuracy guaranteed

Barometers

Mercurial form

with vernier reading to 1-100 inch

walnut case, 6.00

oak or ebony case, ivory scale, 8.00 9.00 12.00 15.00 20.00 25.00, according to finish

carved oak frame, finely finished, with thermometer, 35.00 45.00 55.00 75.00

miners' barometer and thermometer, scale reading to 34 inches, 10.00 to 15.00

marine barometers, mounted on gimbals, vernier reading to 1-500 inch, 16.50; on Kew principle, 35.00

mountain barometers, with tripod, in leather case, 50.00; with two verniers, 65.00; reading to 2,000 feet, Gay Lussac form, 50.00

standard barometer, vernier reading to 1-500 inch, 60.00

standard Smithsonian barometer, vernier reading to 1-1000 inch, 45.00

Aneroid barometers

in brass or nickel, French

with card dials, 4 to 8 inches in diameter, 3.50 4.50 6.00 8.00 10.00

with letters and scale on beveled plate glass, front open to show mechanism, 11.50 13.50 20.00

with enamel dial and curved thermometer, 5 to 8 inches in diameter, 7.50 8.50 10.00 13.50 15.00

with silvered metal dial, 13.50 15.00 17.50 20.00 25.00

in fancy carved wood, with porcelain thermometer, whole about 20 inches long, 20.00

pocket, for scientific use, mining engineers, tourists, etc.

plain, 12.50 15.00

with thermometer, 15.00

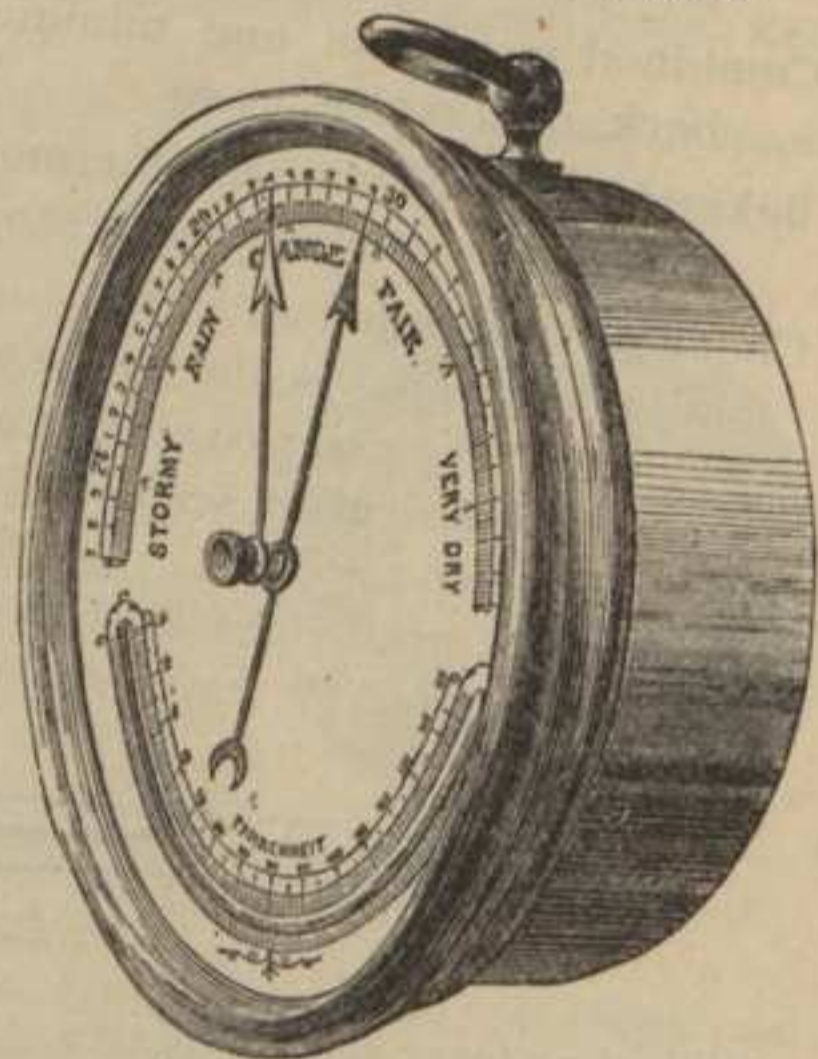
with thermometer, compass, and altitude scale in feet, 17.50

mountain aneroid, in morocco case, compensated for temperature, with altitude scale to 5,000 feet, 18.50; 10,000 feet, 20.00; 15,000 feet, 22.50; 20,000 feet, 25.00

geological aneroid, compensated for temperature, with silvered dial, 5 inches diameter, set in mahogany case with leather shoulder strap, altitude scale to 5,000 feet, 30.00; 10,000 feet, 32.50; 15,000 feet, 35.00

same with thermometer, 5,000 feet, 32.50; 10,000 feet, 35.00; 15,000 feet, 37.00

mining aneroid, same as preceding, but with scale reading from 2,000 feet below sea level to 4,000 feet above, 45.00



Aneroid Barometer

Aneroid barometers, continued

- surveying aneroid, compensated for temperature, silvered dial, 5 inches diameter, graduated to hundredths, with vernier and magnifier reading to single feet in elevation, scale to 5,000 feet, 45.00; 10,000 feet, 50.00; 15,000 feet, 55.00
- Sympiesometers, or baro-thermometers, used to compare with other thermometers for accuracy, 20.00 25.00
- Storm glass or cottage barometer, with thermometer, 35c
- Large storm glasses, opal, on oak or ebony back, 1.50 to 15.00

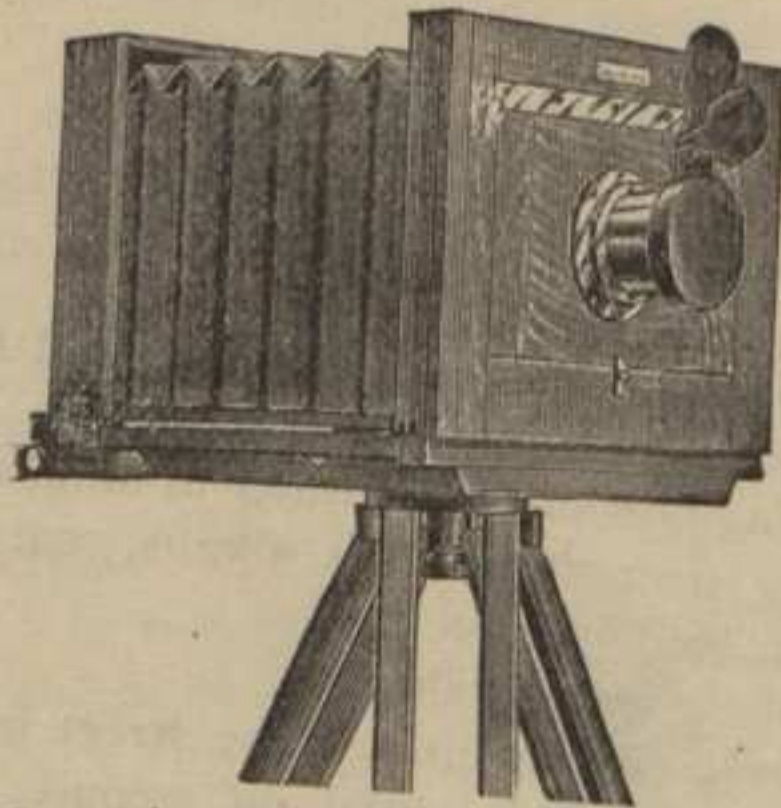
Miscellaneous

- U. S. Signal Service rain gauge, galvanized iron, 2.50
- Smithsonian rain gauge, 5.00
- Cream gauges, for obtaining percentage of cream, and for comparing different milks, set of 6 tubes in graduated wood stand, 75c
- Lactometer, for obtaining percentage of water in milk, 65c
- Hydrometer, for testing strength of acids, alkalis, coal oil, cider, spirit, sugar and syrup, vinegar, etc., 65c each
- Urinometer, with specific gravity scale, 1.00
- Window mirrors, to see the door step, and the street in both directions, while sitting at the window; can be used on second, third, or fourth floor:
German glass, 3.00; French plate, 5.00; French plate, beveled edges, 6.00
- Sand glasses (hour glasses or egg boilers)
white wood, 3 minute, 35c; 15 minute, 75c; 30 minute, 90c; 60 minute, 1.40
- Scotch tartan mountings, 3 minute, 75c; 15 minute, 1.00; 30 minute, 1.50; 60 minute, 2.00
- Graphoscopes, for viewing large pictures, parlor table ornament, in ebony, rosewood, mahogany, or French maple, lenses from 3 to 7½ inches in diameter, 4.00 to 40.00
- Kaleidoscopes, for studying colored designs and for amusement, on tripod wood stand, revolving front, 2.25
- Ear trumpets, London horns, 3.25 4.25 5.00
- Shoulder braces for weak spine, for boys, 1.50; for girls, 2.50
- Ankle braces from 4.50 to 8.00
- Medical batteries, 4.50 to 20.00
- Stethophones (stethoscopes), Polyclinic Hospital pattern, recommended very highly by Dr. Mays, of Philadelphia, 1.25
- Apparatus for physiological research, tambours, recording cylinders, etc., made to order
- Pedometers, similar to a watch in shape, for measuring distance walked, nickel case, 5.00; with two dials, 7.00
- Cyclometers, for measuring distance traveled by carriage or bicycle, 6.00 to 20.00
- Anemometers, Biram's, for measuring velocity of currents of air in coal mines, ventilators, flues, etc., 6 inches in diameter, reading to 10,000,000 feet, 37.50
- Compasses
pocket, in brass case, 50c to 1.50; in nickel case, 75c to 2.00; with agate centres, 1.00 to 3.50; with agate centres, in gilt case and morocco box, 3.75 to 6.00

Compasses, continued

- pocket, with sun dial, in wood box, 50c ; watch form, in nickel case, 3.75 5.00
- surveyors', with folding sights, scale graduated in degrees for plotting, in nickel case, 4.00 to 7.00 ; with level, 6.00 to 9.00
- geological, with pendulum to ascertain the angle of dip in rocks, in brass case, 4.25 ; in nickel case, 5.00
- Sun dials, for lawn, made to order for any latitude

Amateur Photography



Previous to 1880 the amateur photographer either had a wagon with a dark closet or carried a dark tent, in addition to numerous bottles of chemicals. To take a picture meant to mix the proper chemicals in the dark, coat a glass plate with them, and quickly, before it dried or crystalized, expose it in a camera, mix other chemicals, develop, wash, and dry it on the spot, with perhaps a picture, perhaps not. Much judgment, skill, and practice were required to obtain success, and amateurs were few.

Now, most of the judgment and skill part is done in a factory, and plates need not be fresh made for every picture. They're sold in dozen packages, ready any instant, and will keep for years. Chemicals are sold already mixed, and any boy or girl of 10, with average intelligence, can use them. The first step is to buy or borrow a camera. First select the size of picture you want to make ; next the total amount of money you are willing to spend—the rest is easy. A camera, lens, tripod, plate-holder, and case together are called an outfit, and are included in the following prices—

	To make plate of 4 x 5 inches	5 x 7 inches	5 x 8 inches	6½ x 8½ inches
Camera of stained wood, swing back, Waterbury lens	8.00	.....	9.50	.....
Camera of butternut or ash, swing back, Favorite	9.00	10.80	10.80	12.60
Camera of polished maple or whitewood, New Model, single swing	10.80	12.60	12.60	14.40
Camera of polished mahogany with rack, New Model Improved	12.60	16.20	16.20	19.80
Camera of polished mahogany, Waterbury lens	10.80	14.40	15.25	18.00

To take stereoscopic pictures choose a 5 x 7 or 5 x 8 camera and add \$6.50 for extra pair of matched lenses

To take the picture and have a photographer develop and finish it for you, the foregoing will be all you will need. If you want to see the fun all the way through, the following developing outfit, containing only what is absolutely necessary, will be needed—

	4 x 5 inches	5 x 7 or 5 x 8 inches	6 1/2 x 8 1/2 inches
Ruby lantern . . . . .	.50	1.25	1.25
Focusing cloth . . . . .	.50	.50	.75
1 dozen sensitive plates . . . . .	.60	1.15	1.50
Graduated glass . . . . .	.25	.35	.50
3 japanned trays . . . . .	.75	.90	1.50
Developing solution . . . . .	.55	.55	.55
1 pound hyphosulphite of soda . . . . .	.06	.06	.06
1 pound powdered alum . . . . .	.10	.10	.10
1 ounce bromide of potassium . . . . .	.14	.14	.14
Book of instruction . . . . .	.25	.25	.25
Canvas traveling case . . . . .	.50	.75	1.00
	<u>4.20</u>	<u>6.00</u>	<u>8.60</u>

For printing and mounting on cards, the materials below named will be needed—

	4 x 5 inches	5 x 7 or 5 x 8 inches	6 1/2 x 8 1/2 inches
Printing frame . . . . .	.45	.55	.60
2 dozen sheets sensitive paper . . . . .	.36	.75	.90
15 grain bottle chloride of gold . . . . .	.55	.55	.55
2 ounce bottle acetate of soda . . . . .	.15	.15	.15
Porcelain, rubber, or glass tray . . . . .	.40	.80	1.00
2 dozen cards . . . . .	.30	.50	.50
1 sheet litmus paper . . . . .	.05	.05	.05
Jar of paste . . . . .	.20	.20	.20
Brush . . . . .	.15	.15	.15
	<u>2.61</u>	<u>3.70</u>	<u>4.10</u>

Cameras and Lenses

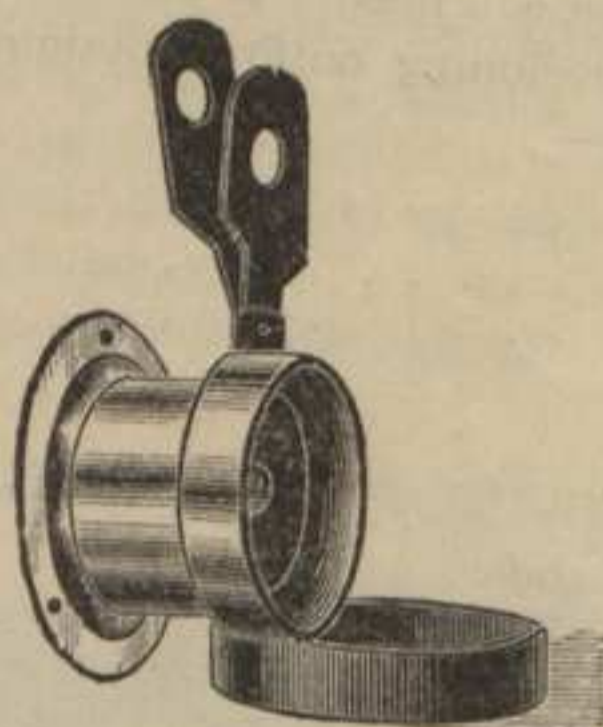
Fine cameras of polished mahogany with various adjustments, one holder and case included in price (no lens or tripod)—

	4 x 5 inches	5 x 7 inches	5 x 8 inches	6 1/2 x 8 1/2 inches
Scovill's St. Louis double swing	27.00	31.50		36.00
Scovill's Flammang, revolving back	32.50	36.00	36.00	45.00
Blair's reversible back single swing	21.00	28.00	31.00	31.00
Blair's latest English model	40.00	45.00	45.00	50.00
Eastman's latest model, double swing		29.00		32.50
Scovill detective camera, for plates only, in small morocco box, 45.00				
Scovill detective camera, with roll holder for carrying 24 or 48 exposures, 58.00				
Scovill's Waterbury detective camera, for plates only, 22.50				
Nash's detective camera, for carrying 12 plates, 3 1/4 x 4 1/4 inches (in morocco box 4 x 5 inches,) 24.00				

Gray's vest camera for concealing under the vest, the lens passing through the buttonhole, taking 6 circular pictures on one circular plate, 5 3/8 inches in diameter, 13.50; circular plates for same, 1.15 a dozen; films for same, package of 2 dozen, 1.65; film carrier, 45c; larger size vest camera, taking 4 pictures on circular plate 6 3/8 inches in diameter, in morocco case, 22.50; plates for same, 1.50 a dozen; films for same, package of 2 dozen, 2.35; film carriers, 70c

Horsman's "Eclipse" photographic outfit, complete, 2.50

Lenses



NOTE: The lenses fitted to the cheaper cameras are what are termed single achromatic—that is, two separate lenses of different curvatures are cemented together with transparent balsam in such a way that the defects of one are partly corrected by the opposite defects of the other. These do very well for landscapes. For taking portraits and pictures of buildings or objects having many straight lines, a double combination of lenses is necessary to make the lines of the picture as straight and uniform as the original. Such a combination also permits using a larger diaphragm or hole of light in proportion to the size of the lens than the single achromatic, and consequently requires shorter exposure. It is, therefore, called "rapid rectilinear." The mathematical formula for this combination was first worked out by Prof. Petzval. All the makers use this same formula,—some with slight modifications. The formula being the same, the difference in lenses is in the makers' skill in reproducing exactly the curves and density of the glass indicated by the formula and in fine polishing and setting.

For general work and portraits

	4 x 5 inches	5 x 7 inches	5 x 8 inches	6½ x 3½ inches	8 x 10 inches
Bausch & Lomb's Universal	26.00	32.00	32.00	40.00	55.00
Beck's Autograph	30.00	35.00	35.00	50.00	60.00
Dallmyer's rapid rectilinear	37.00	45.00	45.00	57.00	74.00
Darlot's rapid rectilinear	15.00	25.00	25.00	35.00	50.00
Gundlach's rapid rectilinear	30.00	38.00	38.00	50.00	64.00
Leverrier rapid rectilinear	17.50	28.00	28.00	37.50	48.00
L'Etoile rapid rectilinear	10.00	13.50	13.50	21.00	27.00
Ross' rapid symmetrical	34.00	42.00	46.00	52.00	68.00
Steinheil's, Series III.	25.00	32.00	32.00	44.00	57.00
Voigtländer's Euryscope, Series IV.	27.00	45.00	45.00	52.00	65.00

Single achromatic view lenses

Waterbury or R. O. Co.	3.50	4.50	4.50	6.00	8.00
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Wide angle lenses, for interiors or buildings

Abendroth's	15.00	20.00	20.00	25.00	25.00
Darlot's	12.50	15.00	20.00	25.00	25.00
Morrison's	25.00	25.00	25.00	25.00	30.00
Roettger's	15.00	20.00	20.00	25.00	25.00
Steinheil's, Series II.	28.00	37.00	37.00	48.00	60.00
Zentmayer's	20.00	24.00	24.00	24.00	33.60

The "Leverrier" and "L'Etoile" rapid rectilinear lenses are made for us in Paris by makers of long experience; without boasting of their qualities we simply state that they are equal in rapidity and definition to other makes one-third higher in price. The lower price is not due to any lack of skill or care in making: it is so placed to introduce the lenses.

Photographic Materials and Accessories

	For plate	4 x 5 inches	5 x 7 inches	5 x 8 inches	6½ x 8½ inches	8 x 10 inches
Albums for mounting photographs						
plain surface		1.08	1.30	1.30	1.85	2.10
prepared surface, needs no paste		1.25	1.62	1.62	2.58	2.80
with gilt lines		1.55	1.75	1.75	2.30	2.58
removable cards, to permit burnishing		1.05	1.25	1.25	1.75	2.20
Bromide paper		.37	.60	.70	1.00	1.40
Cards for mounting photographs						
white, gray, primrose, maroon, chocolate, or olive, in boxes of 25		.28	.52	.52	.85	. .
same with gold beveled edge		.48	.82	.82	1.25	. .
same with gold serrated edge		.68	.95	.95	1.45	. .
plain white, per 100		.95	1.50	1.65	2.15	2.50
plain white, heavier, per 100		1.25	1.65	2.00	2.50	3.10
Dry plates, per dozen						
Carbutt's, Cramer's, Eagle, Harvard, Ripley, Seeds', Stanley, etc.		.60	1.00	1.15	1.50	2.25
Carbutt's Orthochromatic		.75	1.30	1.40	1.85	2.80
Transparency "A"		.75	1.30	1.40	1.85	2.80
on ground glass		.93	1.65	1.75	2.45	3.55
on opal glass		.60	1.00	1.15	1.50	2.25
on ground opal		.75	1.30	1.45	1.90	2.80
Argentico, (ferrotype) box of 2 dozen		1.25	2.00	2.25	3.75	4.50
Finders, for instantaneous views						
Anthony's		1.40	1.40	1.40	1.40	. .
Scovill's Waterbury		2.80	2.80	2.80	2.80	. .
Magic		1.40	1.65	1.65	2.10	2.55
Film carriers, for holding paper negatives						
in plate holders		.28	.33	.33	.37	.47
Glass forms for trimming prints		.47	.62	.72	.95	1.40
Ground glass						
plain, for transparencies		.10	.12	.15	.20	.25
etched border		. .	.40	.42	.47	.60
extra fine, for camera backs		.20	.34	.40	.45	.68
Kits, for reducing size of plate holder		.25	.28	.28	.37	.42
Negative boxes, to hold 24 plates		.62	.80	.85	.95	1.04
with lock and key		1.60	1.75	1.80	1.90	2.00
Negative preservers (envelopes of stout paper), per 100		.40	.55	.57	.65	.80
Negative films, Eastman's						
package of 2 dozen		.93	1.65	1.87	2.65	3.75
on spools for roll holder, 2 dozen		1.00	2.00	2.08	2.80	4.25
Negative paper, 2 dozen sheets		.83	1.45	1.65	2.30	3.25
on spools, 2 dozen		.93	1.80	1.85	2.55	3.75
Negative washing boxes		1.65	1.95	2.00	2.10	2.30
adaptable for all sizes		3.25
Opal glass, for trans-ferrotype paper		.06	.10	.12	.17	.24
Plate holders						
Scovill's New Style		1.65	1.95	2.05	3.55	4.65
Light Weight		.95	1.20	1.30	1.60	1.85
Daisy		1.85	2.15	2.30	3.90	5.60
Anthony's Novel		1.85	2.10	2.10	3.75	. .
Blair's Feather Weight		.95	1.15	1.25	1.50	1.75
Combination		1.40	1.85	1.85	2.30	2.55
Eastman's, for hinged back camera		. .	2.35	2.35	3.95	5.50
Rochester New Model		1.40	1.85	1.85	2.80	3.75
Printing frames		.38	.48	.52	.60	.75
Printing pads, felt		.05	.08	.10	.15	.25
Rubber plates for drying films		.10	.17	.18	.28	.37

Photographic materials and accessories, continued

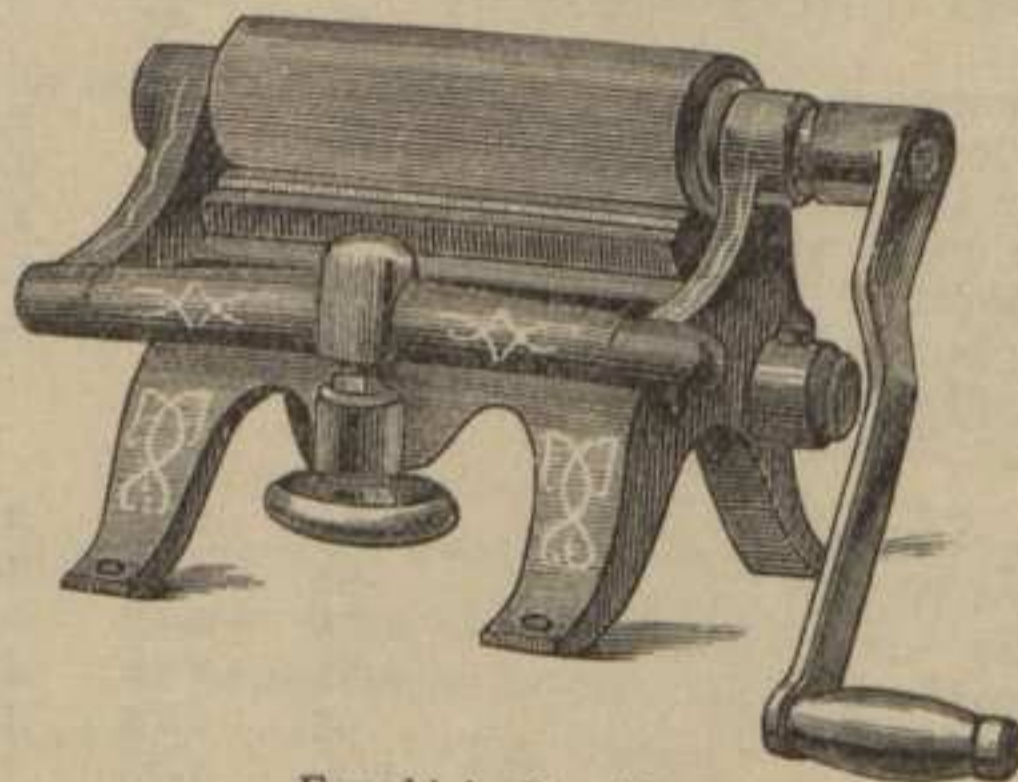
	For plate	4 x 5 inches	5 x 7 inches	5 x 8 inches	6½ x 8½ inches	8 x 10 inches
Registering slides for plate holder . . . . .		.20	.32	.37	.52	.70
Roll holders for paper negatives or films		9.50	11.75	11.75	15.00	18.50
Sensitized albumen paper, 2 dozen . . . . .		.37	.65	.70	.95	1.40
Sensitized blue paper (ferro prussiate) . . . . .		.20	.36	.40	.50	.65
Safety box for sensitized paper . . . . .		.95	1.05	1.05	1.15	1.40
Shutters for instantaneous exposures						
Prosch's Duplex		11.00	12.50	12.50	13.50	14.00
Prosch's Duplex, with rotary stops and slow exposing motion (latest)		14.00	15.50	15.50	16.50	17.00
Prosch's Eclipse		6.50	7.00	7.00	7.50	8.00
Packard exposor		3.75	3.75	3.75	3.75	. . .
Instantograph		7.50	8.00	8.00	10.00	11.50
Hoover		14.00	14.00	14.00	16.00	20.00
Kellogg		4.60	4.60	4.60	4.60	4.60
Nickeled metal drop		2.30	2.80	2.80	2.80	. . .
Mahogany wood drop		1.20	1.40	1.40	1.60	1.60
Scovill's Universal		2.75	2.75	.75	2.75	. . .
Trans-ferrotype paper . . . . .		.37	.60	.70	1.05	1.40
Transparency frames . . . . .		.26	.30	.32	.36	.45
Trays						
agate ware, shallow . . . . .			.75	. . .	.95	1.15
agate ware, deep . . . . .			.95	. . .	1.15	1.50
japanned iron . . . . .		.18	.23	.23	.30	.38
glass . . . . .		.36	.52	.65	.65	.95
glossy rubber . . . . .		.20	.50	.50	.65	.80
heavy rubber . . . . .		.62	.75	.97	1.05	1.55
porcelain, shallow42	.63	.63	.78
porcelain, deep60	.78	.78	.95
wood sides with glass bottom and reservoir at end95	1.10	1.15	1.20
Vignettors, McDonald's . . . . .		.50	.50	.50	.60	.60

Adt print mounter, 1.40

Albumen paper, not sensitized, 85c a dozen

Bristle brushes for paste or varnish, 15c

Camel's-hair brushes, flat, 20c to 40c ; round, 10c to 50c



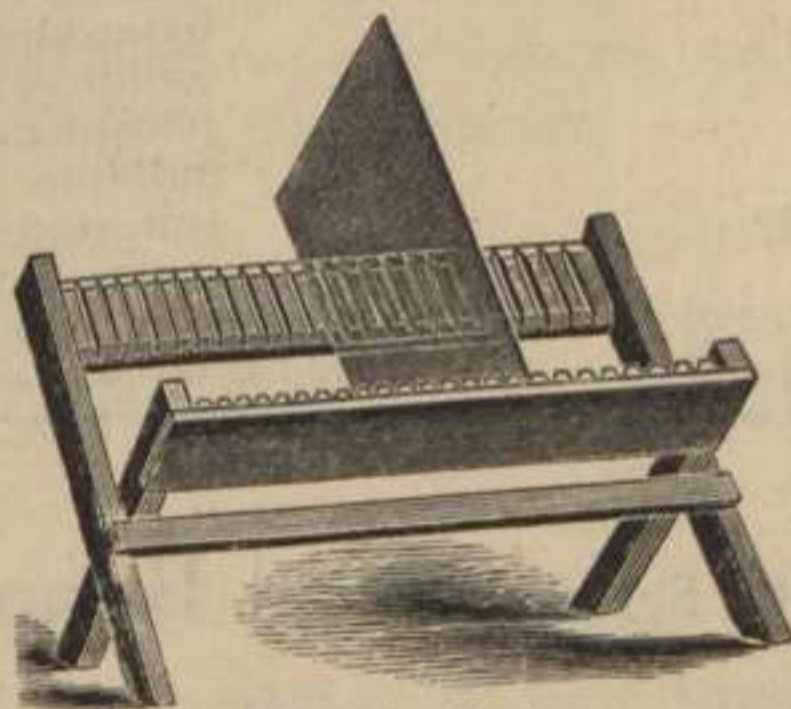
Entrekin's Burnisher

Burnisher, Entrekin's Eureka, 6-inch roll, 11.75 ; 10-inch roll, 18.00

lubricator for burnisher, 20c a cake

Developer : Carbutt's, 55c ; Seeds', 50c ; Blair's, 50c

- Enlarging easels, for spools up to 11 inches, 7.00; 16 inches, 9.50; 22 inches, 11.75; 25 inches, 14.00; extra spool holders, for spools up to 11 inches, 1.85; 16 inches, 2.30; 22 inches, 2.80; 25 inches, 3.75
- Fractional exposur, for making a number of exposures on same plate, 1.50
- Gihon's opaque, for stopping out spots on negatives, 45c
- Glass funnels, 12c 15c 25c
- Glass graduates, for measuring fluid, minim, 25c; 1 ounce, 20c; 2 ounces, 25c; 4 ounces, 33c; 8 ounces, 47c
- Glass rods, for stirring, 10c 15c 20c
- Lanterns for developing, ruby glass: Carbutt's, 5.60; Peerless, 2.30; Blair's, 2.55; Tisdal's traveling, 1.25; Petite, 1.15; gas burner, 2.30
- Lantern slide dry plates, Carbutt's, 60c; cover glass, 37c; mats, 1.00 a hundred; binding paper, 20c
- Lightning flash powder, for taking pictures at night, 60c 70c a package



Negative Rack

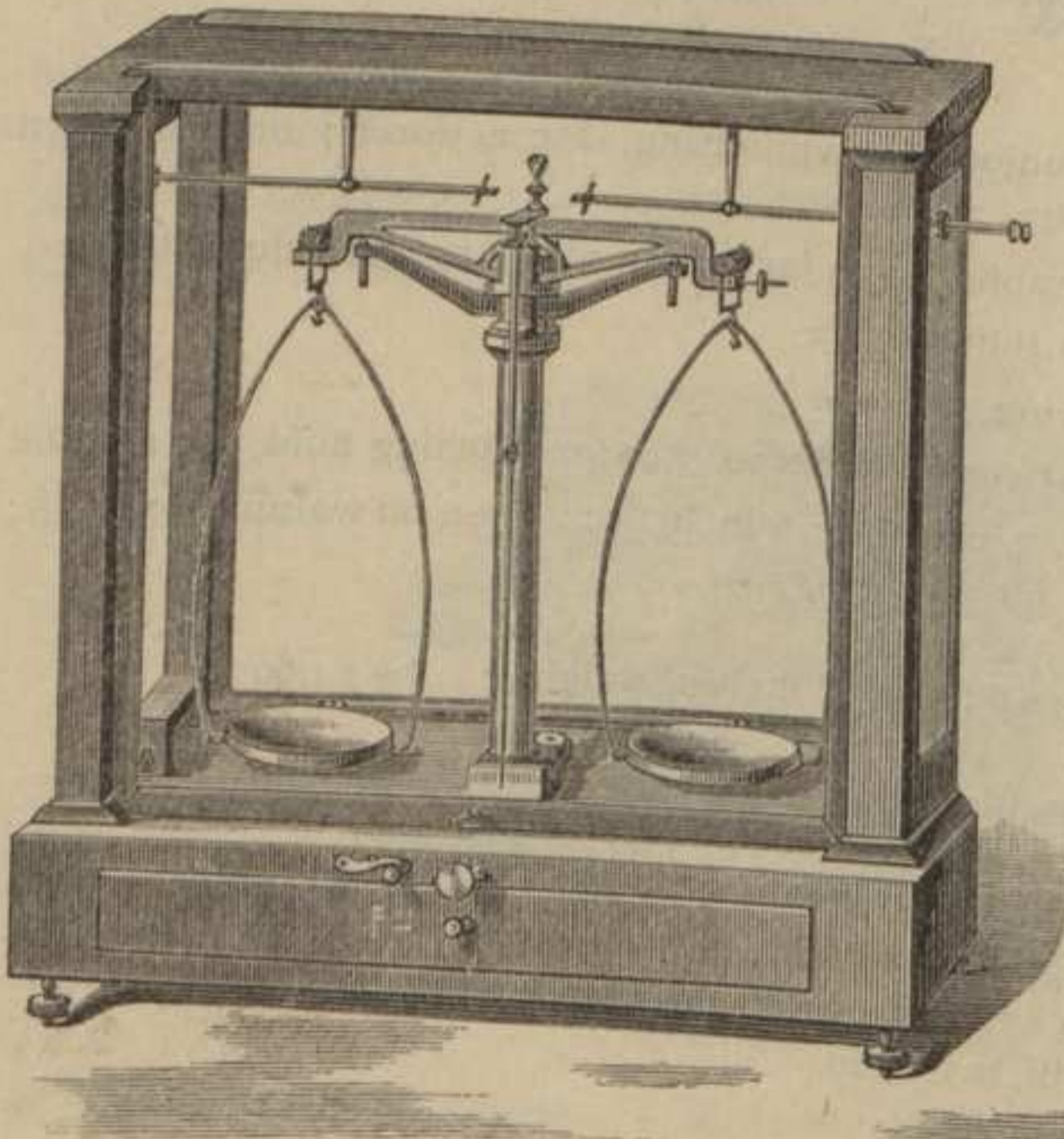
- Negative racks, 45c
- Paper: litmus, 5c a sheet; onion, for vignetting, 25c a dozen; orange, 4c a sheet, 25c a dozen; ruby, 25c a sheet
- Paste for mounting photographs, 20c a jar; 40c a pint jar; 55c a quart bottle
- Plate lifter, Russell's, 15c; thimble, 15c
- Print trimmer, 45c; revolving, 95c
- Retouching frame, for negatives up to 8 x 10, 3.40; retouching fluid, 25c a bottle
- Scales and weights (small), 5 inch, 65c; 6 inch, 85c; finer, on walnut box, 3.75; with graduated beam, nickel pans, 7.50
- Tripods
 - Scovill's Daisy, length folded 16½ inches, weight 2 lbs., 4.60
 - Mignon, 17 2½ 4.60
 - jointed adjustable, 22 in canvas bag, 4.40
 - extension, for 4 x 5, 2.80; 5 x 8, 3.00; 8 x 10, 4.60
 - Anthony's Fairy, length folded 16½ inches, open, 52 inches, 4.60
 - Telescoping, 3.25
 - Blair's Compact, for 4 x 5, 3.75; 5 x 8, 4.20; 6½ x 8½, 4.60
 - Feather Weight, 3.75 4.20
 - Folding, ordinary form, 2.00
 - Vignette papers, 1.00 for set of 15

Chemicals for Photographic Use

Bottles included where necessary

Acids	
acetic, 4 oz., 15c	
1 lb., 25c	
citric, 1 oz., 20c	
gallic, 1 oz., 14c	
oxalic, ½ lb., 15c	
pyrogallic, 1 oz., 33c	
Schering's, 1 oz., 38c	
salicylic, 1 oz., 25c	
Alum, powdered, 1 lb. pkg., 10c	
Ammonia water, 4 oz., 15c	
bromide, 1 oz., 15c	
iodide, 1 oz., 50c	
Cadmium bromide, 30c	
iodide, 50c	
Calcium chloride, ½ lb., 25c	
Chloroform, 1 oz., 20c	
Collodion, 47c	
Ether, 4 oz., 35c	
Gelatine, ½ lb., 50c	
Glycerine, 4 oz., 20c	
Gun-cotton, 1 oz., 45c	
Hydrokinone, 1 oz., 1.30	
Iron iodide, 1 oz., 50c	
sulphate, 1 lb. box, 12c	
Lithium bromide, 1 oz., 45c	
iodide, 1 oz., 1.00	
Magnesium bromide, 1 oz., 55c	
iodide, 1 oz., 75c	
Mercury bichloride, 1 oz., 15c	
Negative varnish, 8 oz., 45c	
Potassium bromide, 1 oz., 15c	
bichromate, 1 lb., 20c	
carbonate, ½ lb., 20c	
cyanide, 4 oz., 30c	
iodide, 1 oz., 35c	
oxalate, 8 oz. pkg., 20c	
sulphide, 8 oz., 25c	
Silver chloride, 1 oz., 1.30	
nitrate, 1 oz., 80c (variable)	
Sodium acetate, 2 oz., 15c	
bromide, 1 oz., 14c	
bicarbonate, ½ lb. pkg., 7c	
carbonate, ½ lb. pkg., 18c	
citrate, 1 oz., 15c	
hyposulphite, 1 lb. pkg., 6c	
iodide, 1 oz., 45c	
phosphate, 1 oz., 14c	
sulphite, 8 oz., 25c	
tungstate, 1 oz., 15c	
Tannin, 1 oz., 30c	
Translucine, 4 oz., 35c	
Zinc bromide, 1 oz., 35c	
iodide, 1 oz., 55c	

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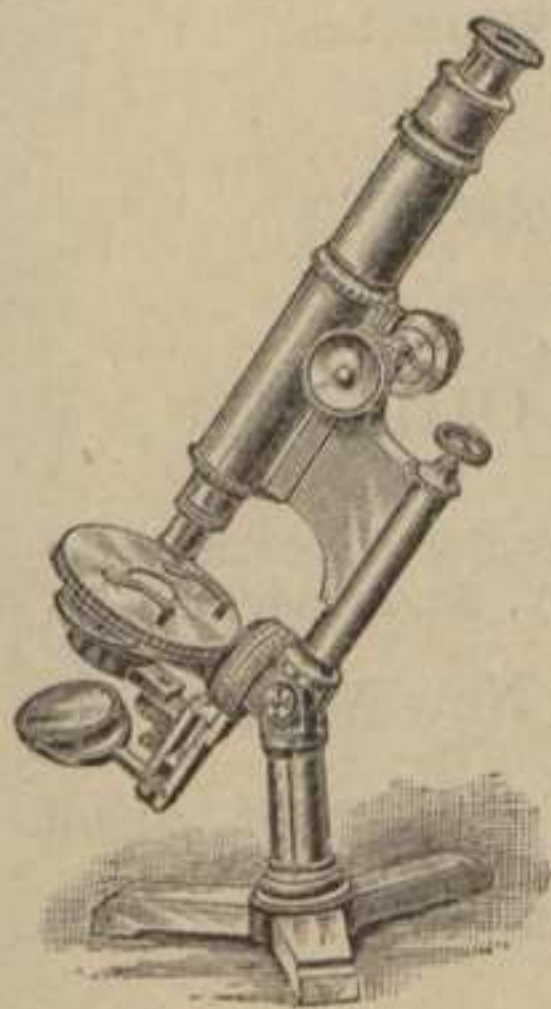
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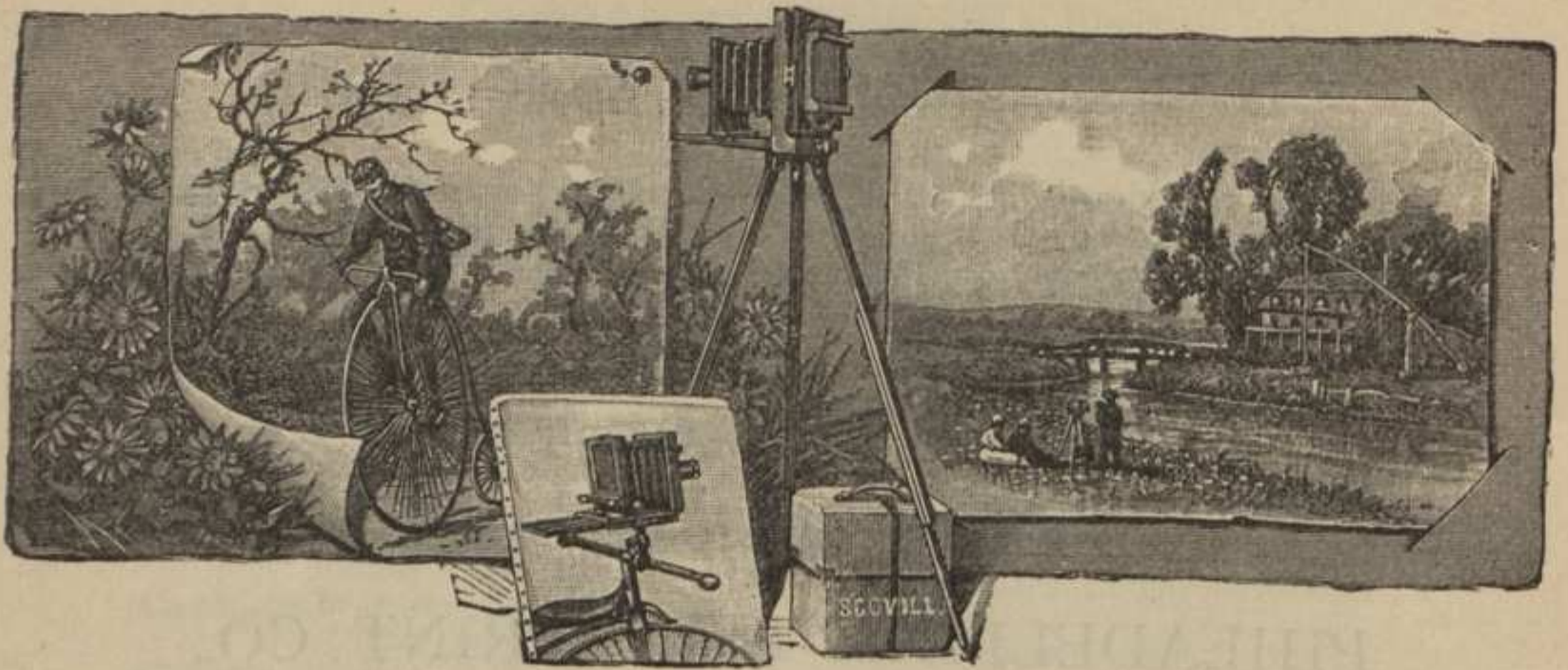
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