

Descriptive Catalogue OF SCIENTIFIC INSTRUMENTS,

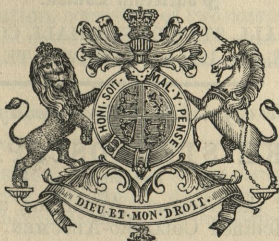
MANUFACTURED AND SOLD BY

HORNE & THORNTHWAITE,
Opticians,

PHILOSOPHICAL & PHOTOGRAPHIC INSTRUMENT MAKERS

IN ORDINARY

TO HER MAJESTY,



BY SPECIAL

APPOINTMENT,

121, 122, & 123, NEWGATE ST., LONDON.—E.C.

PART 2.

PHOTOGRAPHIC APPARATUS AND CHEMICALS.

Messrs. HORNE & THORNTHWAITE beg respectfully to observe, that all orders from abroad, or from country customers, must be accompanied by a remittance or order for payment in London, otherwise they cannot be forwarded. Attention to this particular will ensure their dispatch in the shortest possible time. Should the order be forwarded through an agent, it is particularly requested, to prevent disappointment, that implicit instructions be given that it is to be executed by Messrs. H. & T.; and, in orders from abroad, if the name of the country be also supplied, it will enable them to construct or select instruments that shall not be affected by the climate of the locality for which they are intended.

Messrs. HORNE & THORNTHWAITE beg to state, that by far the greater number of the articles enumerated in the following List are manufactured by their own workmen on the premises, and, consequently, under their own immediate superintendence, and will be found of the best construction, and at prices extremely moderate for first-class instruments. They have also much pleasure in informing their friends and the public, that they have had awarded to them the



GREAT EXHIBITION PRIZE MEDAL FOR PHOTOGRAPHIC APPARATUS.

Every explanation and instruction, both as to the theory and manipulation of the various Photographic Processes, will be given gratuitously to purchasers of apparatus and others desiring information, either by letter or personally, at their Establishment, No. 122, Newgate Street, where they have erected a Glass Room expressly for Photographic Experiments.

AUGUST, 1857.

[EIGHTH EDITION.]

HORNE & THORNTHWAITE'S COMPLETE CATALOGUE OF SCIENTIFIC INSTRUMENTS,
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Fourteenth Edition, just published, price 1s., post-free 1s. 2d.,

A GUIDE TO PHOTOGRAPHY:

CONTAINING SIMPLE AND CONCISE

Directions for obtaining Views, Portraits, &c., by the Action of Light on Prepared Surfaces of Paper and Glass, including Plain Directions for the production of Positive and Negative Collodion Pictures, and for taking Landscapes, &c., &c., by the Calotype and Waxed Paper Process;

ALSO,

Clear Instructions in the Oxymel Process, and Printing Positives on Paper; with the Method of Taking Stereoscopic Pictures.

BY W. H. THORNTHWAITE,

Author of "Photogenic Manipulation," &c.

Fourteenth Edition.

SIMPKIN AND MARSHALL, STATIONERS' HALL COURT; AND HORNE AND THORNTHWAITE, 121, 122, & 123, NEWGATE STREET, LONDON.

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HOW TO TAKE STEREOSCOPIC PICTURES;

INCLUDING

A Detailed Account of the Necessary Apparatus, and a Minute Description of a Modified COLLODIO-ALBUMEN PROCESS.

BY WILLIAM ACKLAND.

HORNE & THORNTHWAITE'S COMPOUND LENSES FOR PHOTOGRAPHY.

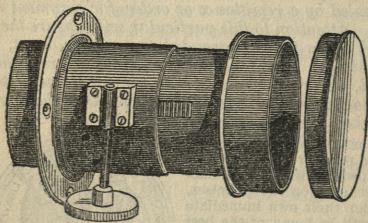


Fig. 1071.

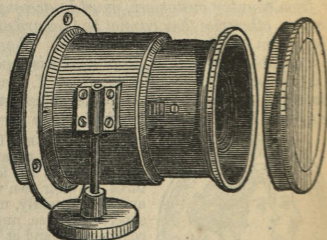


Fig. 1077.

The portrait and landscape combinations of HORNE & THORNTHWAITE'S *own manufacture* are strongly recommended to the photographic public, as possessing a new feature in portrait lenses; viz., that of a *long chemical range*, by which every part of the sitter is in good focus in the pictures produced by them, whilst their rapidity of action is ensured by a peculiarity of the mode of correction in their manufacture, which guards against any of the yellow rays being left uncorrected (as those rays, if not corrected, would make the lens slow

in action). The chemical and optical rays perfectly coincide, and the definition is such as to produce every minute detail with perfect distinctness; indeed, Messrs. HORNE & THORNTHWAITES venture to assert, without fear of contradiction, that the lenses they now manufacture are superior to those of foreign production, and are not to be excelled by those of any maker.

As customers frequently require lenses of good *average quality only*, they have made arrangements to supply two other qualities without maker's name.

PORTRAIT LENSES.

Any purchaser may see any lens of our manufacture tested and a picture produced by it; or, where such is not practicable, a picture taken by the lens will be supplied, if desired, as a guarantee of its qualities, without extra charge.

- 1066 **Portrait Combination**, consisting of two compound achromatic lenses, in handsome brass mountings, with rack and pinion adjustment, the lenses $1\frac{3}{4}$ inches in diameter, for taking pictures $4\frac{1}{4}$ inches by $3\frac{1}{4}$ inches, 14s.
- 1067 Ditto, ditto, superior quality, £1 4s. 6d.
- 1068 Ditto, ditto, HORNE & THORNTHWAITES'S *own manufacture*, £3 13s. 6d.
- 1069 **Portrait Combination**, consisting of two compound achromatic lenses, in handsome brass mountings, with rack and pinion adjustment, the lenses $2\frac{3}{8}$ inches in diameter, for producing pictures $6\frac{1}{2}$ inches by $4\frac{3}{4}$ inches, £2.
- 1070 Ditto, ditto, superior quality, £2 17s. 6d.
- 1071 Ditto, ditto, HORNE & THORNTHWAITES'S *own manufacture*, £7.
- 1071A Ditto, arranged for taking portraits up to $6\frac{1}{2}$ inches by $4\frac{3}{4}$ inches, and views 9 inches by 7 inches, with three variable stops, £8 8s.
- 1072 **Portrait Combination**, consisting of two compound achromatic lenses, in handsome brass mountings, with rack and pinion adjustment, the lenses $3\frac{1}{4}$ inches in diameter, for producing portraits, &c., 8 inches by 6 inches, fig. 1071, £5.
- 1073 Ditto, ditto, superior quality, £8 10s.
- 1074 Ditto, ditto, HORNE & THORNTHWAITES'S *own manufacture*, £15 15s.
- 1074A Ditto, arranged for taking portraits up to 8 inches by 6 inches, and views 12 inches by 10 inches, with three variable stops, £17 17s.
- The front lens of this Portrait Combination may be used for taking views 12 inches by 10 inches; but its great length of focus renders it inapplicable for the production of pictures of a smaller size. Where these are required, one of the landscape lenses, page 92, must be employed.
- 1075 **Portrait Combination** (*Horne & Thornthwaite's own manufacture*), consisting of two compound achromatic lenses, in handsome brass mountings, with rack and pinion adjustment, the front combination $3\frac{1}{4}$ inches diameter and the posterior combination $4\frac{1}{4}$ inches, for producing pictures 9 inches by 7 inches, £22.
- 1076 Ditto ditto, with both lenses $4\frac{1}{4}$ inches in diameter, for pictures 10 inches by 8 inches, £32.

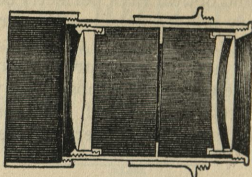


Fig. 1071.*

Whenever the lenses are removed from their cells, in order to be cleaned, it is very important that they be replaced in the same order as regards their position, &c. Instances are not unfrequent of lenses being returned from a distance, with a list of their defects, which are immediately remedied by placing them in their correct positions.

The front lens of a portrait combination is composed of two different kinds of glass, which are joined together by a transparent cement. The convex side of this lens must be towards the sitter. The two back lenses are of different shapes, so that they may easily be recognized; the one with the thick edge must be placed with its convex side towards the sitter, and must be the nearest of the two to the front lens. The back lens is thin at the edge, and its most convex side must be towards the sitter, as shown by the above cut.

The front lens of the portrait combinations 1071 and 1073 can be used for taking pictures of views, monuments, buildings, &c., by being removed from its portrait mounting, and screwed into a brass mounting similar to fig. 1077.

Three stops, with different sized apertures, are supplied with the view mounting and with landscape lenses; but which is to be selected for use in each particular case, must depend on the judgment of the operator. In dull weather, and in copying objects indifferently illuminated, the largest size aperture stop is used; the middle size stop is for general use in moderate light, and the smallest size when the object to be copied is exposed to full sunshine or great sharpness is required; and it may be taken as a general rule, within certain limits, that the smaller the aperture which admits the light, the greater is the sharpness of the picture produced, but the time of exposure must be increased where such small apertures are employed.

LANDSCAPE LENSES, OF HORNE & THORNTWHAITE'S OWN MANUFACTURE,

- 1077 **Landscape Lens**, consisting of one achromatic combination $1\frac{3}{4}$ inches in diameter and 8 inches focal length, mounted in brass, with rack and pinion adjustment, for producing pictures 6 in. by 5 in., £1 15s.
- 1078 **Landscape Lens**, consisting of one achromatic combination 2 inches in diameter and 10 inches focal length, mounted in brass, with rack and pinion adjustment, for producing pictures 7 in. by 6 in., £2 12s. 6d.
- 1079 **Landscape Lens**, consisting of one achromatic combination $2\frac{3}{8}$ inches in diameter and 14 inches in focus, mounted in brass, with rack and pinion adjustment, for producing pictures 9 in. by 7 in., £3 13s. 6d.
- 1080 **Landscape Lens**, consisting of one achromatic combination 3 inches in diameter and 16 inches focal length, mounted in brass, with rack and pinion adjustment, producing pictures 12 in. by 10 in., £5 5s.
- 1080a **Landscape Lens**, 4 inches diameter, for pictures 16 in. by 12 in., £10 10s.
or the prices of unmounted Landscape Lenses, of ordinary make, see No. 1136.

PHOTOGRAPHIC CAMERAS.

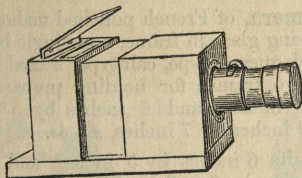


Fig. 1084.

EXPANDING CAMERAS.

- 1081a Expanding Camera of walnut wood, with sliding body, focusing glass in frame, one single back and two plate holders, for taking pictures up to $4\frac{1}{4}$ inches by $3\frac{1}{4}$ inches, 9s.
- 1081b Ditto, for taking pictures up to $6\frac{1}{2}$ inches by $4\frac{3}{4}$ inches, 12s.
- 1081c Ditto, for taking pictures up to $8\frac{1}{2}$ inches by $6\frac{1}{2}$ inches, 18s.
- 1081 **Expanding Camera**, of French polished mahogany, with sliding body, focusing glass in frame, and single back, for taking pictures on glass or paper up to 5 inches by 4 inches, £1.
- 1082 **Expanding Camera**, as described at No. 1081, fitted with single achromatic lens, No. 1077, £2 16s.
- 1083 **Expanding Camera**, as described at No. 1081, fitted with double combination of achromatic lenses, No. 1068, £4 13s. 6d.
- 1084 **Expanding Camera**, of French polished mahogany, with sliding body, fig. 1084, focusing glass in frame, one single back, for taking pictures either by the daguerreotype, calotype, waxed paper, or collodion processes, with two frames for holding prepared plates 4 inches by 3 inches, and $3\frac{1}{4}$ inches by $2\frac{3}{4}$ inches, and capable of taking views 6 inches by 5 inches, £2 12s. 6d.
- 1085 **Expanding Camera**, as described at No. 1084, fitted with single achromatic lens, No. 1077, £4 8s.
- 1086 **Expanding Camera**, as described at No. 1084, fitted with double combination of achromatic lenses, adapted for taking portraits 4 inches by 3 inches, £6 6s.
- 1087 **Expanding Camera**, of French polished mahogany, with sliding body, fig. 1084, with focusing glass in frame, one single back, for taking pictures either by the daguerreotype, calotype, waxed paper, or collodion processes, with two frames for holding prepared plates, 6 inches by 5 inches, and 5 inches by 4 inches, and capable of taking views 7 inches by 6 inches, £3 15s.
- 1088 **Expanding Camera**, as described at No. 1087, fitted with single achromatic lens, mounted in brass, with rack and pinion adjustment capable of taking views 7 inches by 6 inches, £6 8s. 6d.

- 1089 **Expanding Camera**, as described at No. 1087, fitted with double combination of achromatic lenses, handsomely mounted in brass, with rack and pinion adjustment, adapted for taking portraits 6 inches by 5 inches, £10 15s.
- 1090 **Expanding Camera**, of French polished mahogany, with sliding body, fig. 1084, focusing glass in frame, one single back, for taking pictures either by the daguerreotype, calotype, waxed paper, or collodion processes, with two frames for holding prepared plates, for portraits 8 inches by 6 inches, and 6 inches by 5 inches, and capable of taking views 9 inches by 7 inches, £4 4s.
- 1091 Ditto, for portraits 6 inches by 5 inches, and 5 inches by 4 inches, and views 9 inches by 7 inches, £4.
- 1092 **Expanding Camera**, as described at No. 1090, fitted with single achromatic lens, mounted in brass, with rack and pinion adjustment, adapted for taking views 9 inches by 7 inches, £7 13s. 6d.
- 1093 **Expanding Camera**, as described at No. 1090, fitted with a double combination of achromatic lenses, adapted for taking portraits up to 6 inches by 5 inches, and the front lens capable of being used for taking views, 9 inches by 7 inches, by being screwed into a separate mounting, £12 8s.
- 1094 **Expanding Camera**, as described at No. 1090, fitted with a double combination of achromatic lenses, adapted for taking portraits up to 8 inches by 6 inches, £19 19s.
- 1096 **Expanding Camera**, of French polished mahogany, with sliding body, fig. 1084, with focusing glass in frame, one single back for taking pictures either by the daguerreotype or collodion processes, and one double back for taking pictures by the calotype or wax paper processes, with two frames for holding prepared plates 8 inches by 6 inches, and 6 inches by 5 inches, and capable of taking views 12 inches by 10 inches, £11.
- 1097 **Expanding Camera**, as described at No. 1096, fitted with single achromatic lens, mounted in brass, with rack and pinion adjustment, adapted for taking views 12 inches by 10 inches, £16 5s.
- 1098 **Expanding Camera**, as described at No. 1096, fitted with double combination of achromatic lenses, mounted in brass, with rack and pinion adjustment, adapted for taking portraits up to 8 inches by 6 inches, and views 12 inches by 10 inches, the front lens capable of being used for taking views as described at page 92, £28.

N.B.—It should be observed that these prices do not include a double camera back. For prices see Nos. 1131, 1132, 1133.

If any of these cameras are intended for India or other hot countries, it is necessary they should be constructed of Spanish mahogany, and the sides clamped with brass, so as to ensure their withstanding the effects of climate. This will add an extra expense to No. 1084, of £1 10s.; to No. 1087, an extra expense of £1 11s. 6d.; to No. 1090, an extra expense of £2 10s.; and to No. 1096, £3 10s.

HORNE & THORNTHWAITE'S FOLDING CAMERAS.

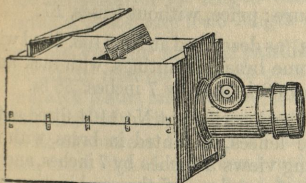


Fig. 1100.

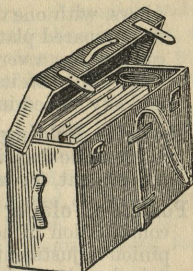


Fig. 1124.

FOLDING CAMERAS.

HORNE & THORNTHWAITE'S **Portable Folding Camera** can be highly recommended for tourists, travellers, and others requiring a most effective instrument for taking views, portraits, &c., combined with the smallest possible bulk and weight. The sides are hinged so as to fold inwards, so that when closed a camera for taking pictures 7 inches by 6 inches, focusing frame and backs, will pack into a case, fig. 1124, external diameter of which is 15 inches long, $9\frac{1}{2}$ inches wide, and 4 inches thick, and is so constructed as to be adapted for both paper and glass processes, and is not liable to any injurious effect of climate.

- 1099 **Portable Folding Camera**, of Spanish mahogany French polished, with one aperture for views only, adapted for taking pictures 7 inches by 6 inches, with one double back, for holding two pieces of prepared paper, and focusing glass in frame, £4 4s.
- 1100 **Portable Folding Camera**, of Spanish mahogany French polished, with two apertures adapted for taking pictures 7 inches by 6 inches—the anterior one for portraits, and the posterior one for views; with one double and one single back, and two frames for holding prepared plates, fig. 1100, without lenses, £5.
- 1101 **Portable Folding Camera**, as described at No. 1099, fitted with single achromatic lens, in handsome brass mountings, with rack and pinion adjustment, for taking views 7 inches by 6 inches, £6 16s. 6d.
- 1102 **Portable Folding Camera**, as described at No. 1100, fitted with double combination of achromatic lenses, mounted in brass, with rack and pinion adjustment, for taking portraits 6 inches by 5 inches, and with single achromatic lens, in brass mountings, with rack and pinion adjustment for taking views, 7 inches by 6 inches, £14 12s. 6d.
- 1103 **Portable Folding Camera**, of Spanish mahogany French polished, with one aperture for views only, adapted for taking pictures 9 inches by 7 inches, with one double back for holding two pieces of prepared sensitive paper, and focusing glass in frame, £4 14s. 6d.

- 1104 **Portable Folding Camera**, of Spanish mahogany French polished adapted for taking pictures 9 inches by 7 inches, with two apertures—the anterior one for taking portraits, and the posterior one for views, with one double and one single back, and two frames for holding prepared plates, focusing glass in frame, fig. 1100, the front of this camera has a vertical and horizontal adjustment, so that it may be used either on its side or bottom, and the proportion of foreground and sky varied in the picture: price, without lenses, £7.
- 1105 **Portable Folding Camera**, as described at No. 1103, fitted with single achromatic lens, in handsome brass mountings, with rack and pinion adjustment, for taking views 9 inches by 7 inches, £8 8s.
- 1106 **Portable Folding Camera**, as described at No. 1104, fitted with double combination of achromatic lenses, mounted in brass, with rack and pinion adjustment, for taking views 9 inches by 7 inches, and portraits 6 inches by 5 inches—the front lens of the combination capable of being used for taking views as described at page 92, £15 8s.
- 1107 Ditto, with double combination lenses, for taking portraits 8 inches by 6 inches, and single lens for views 9 inches by 7 inches, £26 8s. 6d.
- 1108 **Portable Folding Camera**, of Spanish mahogany French polished, adapted for taking pictures 12 inches by 10 inches, with one aperture for views only, one double back for holding two pieces of prepared sensitive paper, and focusing glass in frame—the front of this camera can be moved in an horizontal and vertical direction by sliding adjustment, so as to vary the proportion of the foreground and sky in a picture, £8.
- 1109 **Portable Folding Camera**, of Spanish mahogany French polished, adapted for taking pictures 12 inches by 10 inches, with two apertures—the anterior one for taking portraits, and the posterior one for views, with one double and one single back, and two frames for holding the prepared plates, and focusing glass in frame—the front of this camera has a vertical and horizontal adjustment, so that it may be used either on its side or bottom, and the proportion of foreground and sky in a picture may be varied, £11 12s.
- 1110 **Portable Folding Camera**, as described at No. 1108, fitted with single achromatic lens, handsomely mounted in brass, with rack and pinion adjustment, for taking views of any size up to 12 inches by 10 inches, £13 5s.
- 1111 **Portable Folding Camera**, as described at No. 1109, fitted with double combination of achromatic lenses, in handsome brass mountings, with rack and pinion adjustment, for taking views 12 inches by 10 inches, and portraits 8 inches by 6 inches—the front lens capable of being used, for taking views as described at page 92, £29 9s.
- 1112 Soft leather cases for lenses, 2s., 2s. 6d., and 4s. each.
- 1113 Sling leather cases, with straps for ditto, 10s. 6d., 15s., and 18s. each.

PORTABLE FOLDING AND EXPANDING CAMERAS.

See fig. 24, in THORNTHWAITE'S GUIDE TO PHOTOGRAPHY.

Portable Folding and Expanding Camera, of Spanish mahogany, with hinged sides, the body and sliding part folding inwards, so as to occupy but little space when closed—this form of camera possesses the advantage of its length being so capable of being varied, that lenses of almost any focal length may be used.

- 1114 **Portable Folding and Expanding Camera**, with one single back, for taking pictures 7 inches by 6 inches, with two frames for holding prepared plates, and focusing glass in frame, £6 6s.
- 1115 Ditto, fitted with single achromatic lens, mounted in brass, with rack-work adjustment, for views 7 inches by 6 inches, £8 18s. 6d.
- 1116 Ditto, fitted with double combination of achromatic lenses, for taking portraits up to 6 inches by 5 inches, £13 13s.
- 1117 **Portable Folding and Expanding Camera**, with one single back, for taking pictures 9 inches by 7 inches, with two frames for holding prepared plates, and focusing glass in frame, £7 7s.
- 1118 Ditto, fitted with single achromatic lens, mounted in brass, with rack-work adjustment, for taking views 9 inches by 7 inches, £11 0s. 6d.
- 1119 Ditto, fitted with a double combination of achromatic lenses, adapted for taking portraits 6 inches by 5 inches, and views 9 inches by 7 inches, with one double and one single back, £17 5s.
- 1120 **Portable Folding and Expanding Camera**, with one single back, for taking pictures 12 inches by 10 inches, with two frames for holding prepared plates, and focusing glass in frame, £11.
- 1121 Ditto, fitted with achromatic lens, in brass mountings, with rack and pinion adjustment, for producing pictures up to 12 inches by 10 inches, £16 5s.
- 1122 Ditto, fitted with compound achromatic lenses, for taking portraits up to 8 inches by 6 inches, and views 12 inches by 10 inches, with one double and one single back, £31 9s.

CASES FOR FOLDING CAMERAS.

- 1123 Solid leather case for a folding camera producing pictures 7 inches by 6 inches, fig. 1124, £1 7s. 6d.
- 1124 Ditto for a camera producing pictures 9 inches by 7 inches, £1 12s.
- 1125 Ditto for a camera producing pictures 12 inches by 10 inches, £2 10s.

STEREOSCOPIC CAMERA.

- 1126 **Stereoscopic Camera**, fig. 1126, mounted on base board, with parallel rulers and camera back, for taking stereoscopic pictures, and fitted with double combination of achromatic lenses, with stops, taking either views or portraits, £6 10s.
- 1126a **Box Stereoscopic Camera**, with view lens, arranged to carry six prepared plates: price with stand complete, and very portable, £8 8s.

CAMERA BACKS, OR EXPOSING FRAMES.

All our camera backs and the openings of the cameras are now made to standard sizes, so that, in case a purchaser who may possess one of our cameras should require additional backs, he can obtain them without sending us the camera to have them fitted.

- 1127 **Single Camera Backs or Exposing Frames**, to fit cameras producing pictures 6 inches by 5 inches, with two frames for holding prepared plates, 17s.
- 1128 Ditto, to fit cameras producing pictures 7 inches by 6 inches, £1.
- 1129 Ditto, to fit cameras producing pictures 9 inches by 7 inches, £1 5s.
- 1130 Ditto, to fit cameras producing pictures 12 inches by 10 inches, £1 10s.

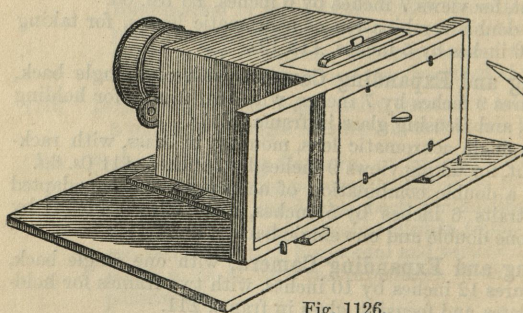


Fig. 1126.

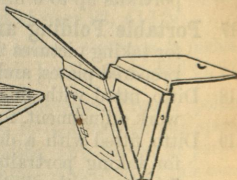


Fig. 1131.

DOUBLE CAMERA BACKS.

HORNE & CO.'S double back is so constructed that two pieces of sensitive paper can be laid into it, back to back, and is furnished with a sliding cover to each. When a camera is arranged to take a view, with the double back in its place, the anterior sliding cover is drawn out so as to expose one sheet of the sensitive paper to the action of light. After the necessary exposure has taken place, the sliding cover is pushed down, the double back withdrawn from the camera, and if a second picture is required of the same object or view, the back is turned round and replaced in its position in the camera; but now, having the other sensitive sheet next the lens, the anterior sliding cover is withdrawn, and the paper exposed the necessary time to the action of light; when this has taken place, the sliding cover is pushed down so as to guard the paper from the influence of light in the usual manner.

This form of back offers the advantage of affording the means of taking two pictures without any increase in size over the old form of single back, in which one picture only could be taken without changing, and can be applied to any form of camera.

- 1131 **Double Camera Backs**, to fit cameras producing pictures 7 inches by 6 inches, fig. 1131, £1 2s.
- 1132 Ditto, to fit cameras producing pictures 9 inches by 7 inches, £1 10s.
- 1133 Ditto, to fit cameras producing pictures 12 inches by 10 inches, £1 15s. 6d.

1134 **Parallel Mirrors**, mounted in brass frame, to attach to the front of the camera, for taking pictures in a correct position for $\frac{1}{4}$ -plate lenses, £1 10s.

1135 Ditto, $\frac{1}{2}$ -plate ditto, £2 12s. 6d.

Photographic Landscape Lenses, unmounted, of ordinary achromatic construction, suitable for taking views by the waxed paper or collodion process.

Our own manufacture of landscape or portrait lenses are not sold except in a mounted state, as described at page 91.

1136	1 $\frac{3}{4}$ inch diameter, about 7 inches focus	...	...	...	£0 10 0
1137	2 " " 9 " "	...	...	...	0 14 0
1138	2 $\frac{1}{4}$ " " 10 " "	...	...	...	0 18 0
1139	2 $\frac{3}{4}$ " " 12 " "	...	...	...	1 5 0
1140	3 " " 14 " "	...	...	...	1 16 0

Plano-convex, crossed, meniscus, and every other description of lens required in photographic experiments.

1141 **Claudet's Focimeter**, for ascertaining the amount of separation existing between the optical and chemical foci of lenses, £1 10s.

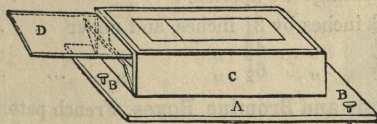


Fig. 1147.

IODINE AND BROMINE PANS.

Iodine and Bromine Pans, of glass, with air-tight ground glass covers.

1142	For plates up to 4 $\frac{1}{2}$ inches by 4 $\frac{1}{4}$ inches	...	...	...	£0 8 6
1143	" " 6 $\frac{1}{2}$ " 4 $\frac{3}{4}$ "	...	...	...	0 12 0
1144	" " 8 $\frac{1}{2}$ " 6 $\frac{3}{4}$ "	...	...	...	1 5 0

1145 Wood frames for holding the plates of any size for No. 1142 Iodine and Bromine pans, 1s. each.

1146 Ditto, for 1143 or 1144 pans, 1s. 6d. each.

Iodine and Bromine Boxes, single, of walnut wood, with delf pans, ground air-tight glass covers, and frames for holding the plates.

1147	For plates up to 4 $\frac{1}{4}$ inches by 3 $\frac{1}{4}$ inches	...	...	...	£0 13 0
1148	" " 6 $\frac{1}{2}$ " 4 $\frac{3}{4}$ "	...	...	...	0 16 0
1149	" " 8 $\frac{1}{2}$ " 6 $\frac{3}{4}$ "	...	...	...	1 1 0

Iodine and Bromine Box, single, of French polished mahogany, with glass pan, ground air-tight glass cover, frames for holding plates, and mirror for viewing the plate while under the influence of the vapour.

1152	For plates 4 $\frac{1}{4}$ inches by 3 $\frac{1}{4}$ inches	...	...	...	£1 4 0
1153	" " 6 $\frac{1}{2}$ " 4 $\frac{3}{4}$ "	...	...	...	1 11 6
1154	" " 8 $\frac{1}{2}$ " 6 $\frac{3}{4}$ "	...	...	...	2 12 6

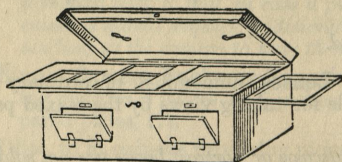


Fig. 1155.

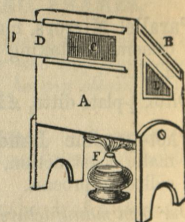


Fig. 1161.

IMPROVED IODIZING AND BROMINE APPARATUS.

Double Iodine and Bromine Boxes, consisting of two stout glass pans, enclosed in mahogany or walnut wood case, with spring bottoms and air-tight glass covers, and set of frames for holding the plates. Two mirrors are placed on one side for viewing the plate while being prepared; and on the other two, apertures for the admission of light. The great advantage of this form of apparatus for preparing plates, consists in the facility and certainty with which the sensitive coatings are applied.

1155	For plates $4\frac{1}{4}$ inches by $3\frac{1}{4}$ inches, and under	...	...	£2	5	0
1156	" $6\frac{1}{2}$ " $4\frac{3}{4}$ " " "	...	...	3	0	0
1157	" $8\frac{1}{2}$ " $6\frac{1}{2}$ " " "	...	...	5	0	0

Double Iodine and Bromine Boxes, French pattern, of walnut wood, with delf pans, ground air-tight glass cover, and set of frames, without mirrors.

1158	For plates up to $4\frac{1}{4}$ inches by $3\frac{1}{4}$ inches	...	...	£1	6	0
1159	" " $6\frac{1}{2}$ " $4\frac{3}{4}$ " " "	...	...	1	12	0
1160	" " $8\frac{1}{2}$ " $6\frac{1}{4}$ " " "	...	...	2	2	0

MERCURY BOXES.

Mercury Box, of polished mahogany, with window of yellow glass for viewing the picture during the action of the mercury, shifting legs, cast-iron cistern, and frames, complete, fig. 1161.

1161	For plates $4\frac{1}{4}$ inches by $3\frac{1}{4}$ inches	...	...	£1	1	0
1162	" $6\frac{1}{2}$ " $4\frac{3}{4}$ " " "	...	...	1	10	0
1163	" $8\frac{1}{2}$ " $6\frac{1}{2}$ " " "	...	...	1	15	0

Mercury Box, French pattern, walnut wood, with thermometer.

1164	For plates $4\frac{1}{4}$ inches by $3\frac{1}{4}$ inches	...	...	£0	12	0
1165	" $6\frac{1}{2}$ " $4\frac{3}{4}$ " " "	...	...	0	16	0
1166	" $8\frac{1}{2}$ " $6\frac{1}{2}$ " " "	...	...	1	2	0

1167 **Thermometers**, with ivory scales to mercury boxes, 7s. 6d. each.

1168 **Frames** for the above mercury box, any size, 1s. 6d. each.

Silvered Plates for the Daguerreotype, of English manufacture.

1169	Size	$2\frac{1}{2}$ inches by 2 inches	...	...	...	per dozen	£0 12 0
1170	"	$2\frac{3}{4}$ " $3\frac{1}{4}$ "	...	...	...	"	0 18 0
1171	"	4 " 3 "	...	...	...	"	1 8 0
1172	"	$4\frac{1}{4}$ " $3\frac{1}{4}$ "	...	...	...	"	1 12 0
1173	"	5 " 4 "	...	...	...	"	2 5 0
1174	"	$6\frac{1}{2}$ " $4\frac{3}{4}$ "	...	...	...	"	3 5 0
1175	"	$8\frac{1}{2}$ " $6\frac{1}{2}$ "	...	...	...	"	5 10 0

Silvered Plates for the Daguerreotype, best French manufacture.

	Size.			No. 40.			No. 30.			Electro-plated.		
				£	s.	d.	£	s.	d.	£	s.	d.
1180	$2\frac{1}{2}$ inches by 2 inches,	per dozen		0	3	6	...	0	4	0	...	0 5 6
1181	$2\frac{3}{4}$ " $3\frac{1}{4}$ "	"		0	5	6	...	0	6	0	...	0 8 9
1182	4 " 3 "	"		0	8	0	...	0	9	0	...	0 10 6
1183	$4\frac{1}{4}$ " $3\frac{1}{4}$ "	"		0	8	6	...	0	9	6	...	0 11 0
1184	5 " 4 "	"		0	12	0	...	0	13	6	...	0 16 0
1185	$6\frac{1}{2}$ " $4\frac{3}{4}$ "	"		0	17	6	...	0	18	6	...	1 1 0
1186	$8\frac{1}{2}$ " $6\frac{1}{2}$ "	"		1	14	0	...	1	16	6	...	2 0 0

Plate Boxes, of polished mahogany, for holding one dozen daguerreotype plates.

1187	For plates	$2\frac{1}{2}$ inches by 2 inches	...	£0 3 0
1188	"	$3\frac{1}{4}$ " $2\frac{3}{4}$ "	...	0 3 6
1189	"	4 " 3 "	...	0 4 0
1190	"	$4\frac{1}{4}$ " $3\frac{1}{4}$ "	...	0 4 3
1191	"	5 " 4 "	...	0 4 6
1192	"	$6\frac{1}{2}$ " $4\frac{3}{4}$ "	...	0 5 6
1193	"	$8\frac{1}{2}$ " $6\frac{1}{2}$ "	...	0 6 6

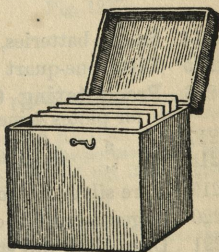


Fig. 1187.

POLISHING APPARATUS, &c.

- 1194 **Lathe**, complete, with collar, mandrel, iron wheel and treddle, wood frame and bed, mounted with two circular velvet buffs, 9 inches diameter, and two plate holders, for sixth or quarter plates, from £5 5s.

PLATE-HOLDERS.

Metal Plate-holders, for use with circular buffs in the lathe, or for securing the plate while buffing by hand, of superior make.

1195	For plates,	$2\frac{1}{2}$ inches by 2 inches	...	...	...	£0 6 0
1196	"	$3\frac{1}{4}$ " $2\frac{3}{4}$ "	...	...	...	0 7 0
1197	"	4 " 3 "	...	...	...	0 8 0
1198	"	5 " 4 "	...	...	...	0 10 0

- 1199 **Hard Wood Handle**, with steel pin for use with ditto ... 0 1 0
- 1200 **Plate-holders**, of wood, with brass corners and cramp to fix to table while cleaning or polishing, for any size of plate from $2\frac{1}{2}$ inches by 2 inches to $8\frac{1}{2}$ inches by $6\frac{1}{2}$ inches, 2s. to 4s.

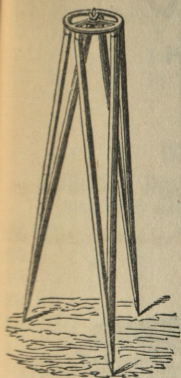


Fig. 1232.

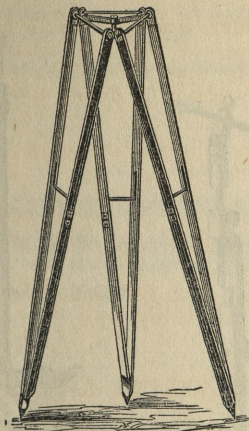


Fig. 1234.

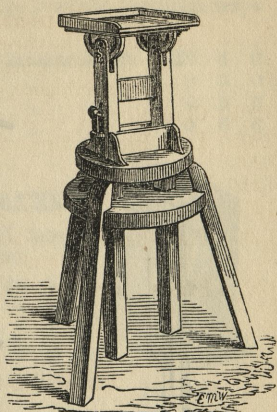


Fig. 1237.

CAMERA STANDS.

In order to keep the camera steady when taking views or portraits, and to raise or depress it as may be required, a camera stand is absolutely essential. If for the operating room only, where weight or bulk is no consideration, the table-stand, fig. 1237, is the most useful; but where the object is to take views, &c., as in travelling, the portability of the stand becomes of equal importance with its steadiness. The forms of fig. 1232 or 1234 answer well, and will be found suitable for the purposes intended.

- 1232 **Camera Stand**, fig. 1232, with double tripod legs and circular wooden top, with plate to be fixed to the bottom of camera, and tightening screw, small size, 4 feet high, 10s. 6d.
- 1233 **Camera Stand**, with double tripod legs and metal top, *very light and steady*, admirably adapted for supporting a small size camera, 21s.
- 1234 **Camera Stand**, fig. 1234, with double tripod legs with brass stretchers, triangular brass top, with plate to be fixed to the bottom of camera, and tightening screw—this form of stand will be found very convenient for use, and, from its construction, remarkably firm and portable, and suitable for any sized camera, £1 5s.
- 1235 **Camera Stand**, with brass top and ash legs, *very light and steady*, £1 11s. 6d.
- 1236 **Camera Stand**, with jointed legs, capable of being packed in an ordinary portmanteau, £1 11s. 6d.
- 1237 **Table Stands**, with all the required adjustments, particularly adapted for the operating room, in white wood, with brass screws, fig. 1237, £1.
- 1238 Ditto, in oak, £1 6s.

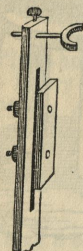


Fig. 1239.



Fig. 1240.

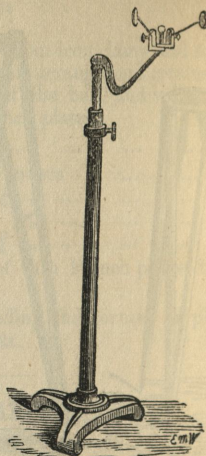


Fig. 1240a.

HEAD RESTS.

Head rests are necessary in order to keep the head of the sitter perfectly steady whilst a portrait is taken.

1239 **Head Rest**, to attach to the back of a chair, of the simplest construction, fig. 1239, 2s.

1240 **Head Rest**, to attach to the back of a chair, with joints, so that the head piece can be raised, depressed, or placed at any required angle, fig. 1240, 5s.

1240a **Universal Head Rest**, mounted on heavy foot, with sliding adjusting tube for steadying the head, when the person is either standing or sitting, without the aid of a chair, fig. 1241, £3 3s.

WASHING PANS.

Porcelain Pans, with flat bottoms; shallow, for preparing calotype or positive paper, and deep, for washing, &c.

1241	Shallow, suitable size for paper, 5 inches by 4 inches	...	£0	0	9
1241a	Deep " " 5 " 4 "	...	0	0	11
1242	Shallow " " 7 " 6 "	...	0	1	4
1242a	Deep " " 7 " 6 "	...	0	1	7
1243	Shallow " " 9 " 7 "	...	0	1	7
1243a	Deep " " 9 " 7 "	...	0	1	10
1244	Shallow " " 11 " 9 "	...	0	2	9
1244a	Deep " " 11 " 9 "	...	0	3	4
1245	Shallow " " 12 " 10 "	...	0	3	6
1245a	Deep " " 12 " 10 "	...	0	4	10
1246	Shallow " " 15 " 9 "	...	0	6	0
1246a	Deep " " 15 " 9 "	...	0	7	3
1247	" " 17 " 12 "	...	0	12	0

Glass Dishes, possessing the great advantage over the porcelain trays of not absorbing chemical solutions.

1249	10 inches by 8 inches, by 1 inch deep, inside measurement	£0 4 0
1250	10 " 8 " 1 " " "	... 0 5 0
1251	12 " 10 " 2 " " "	... 0 5 6
1252	12 " 10 " 2 " " "	... 0 6 6

COLLODION DIPPING BATHS.

Collodion Dipping Baths, of glass, fitted into a mahogany stand, with glass dipper, fig. 1256.

1256	For plates 4 inches by 3 inches	... £0 2 8
1257	" 5 " 4 " "	... 0 3 6
1258	" 6 " 5 " "	... 0 5 3
1259	" 8 " 6 " "	... 0 9 0
1259a	" 9 " 7 " "	... 0 10 6

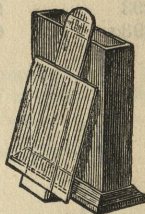


Fig. 1256.

Collodion Dipping Baths, of gutta percha, with support and glass dippers, fig. 1260.

1260	For plates 4 in. by 3 in., and dipper	£0 2 3
1261	" 5 " 4 " "	... 0 3 0
1262	" 6 " 5 " "	... 0 4 0
1263	" 8 " 6 " "	... 0 6 3
1264	" 9 " 7 " "	... 0 7 6

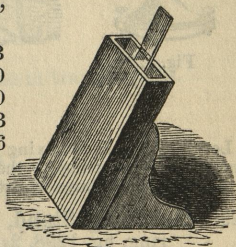


Fig. 1260.

- 1265 **Travelling Bath**, with water-tight top, for plates, 9 in. by 7 in., with dipper, 13s.
 1266 Ditto, for plates 10 in. by 8 in., ditto, 16s.
 1267 Ditto, for plates 12 in. by 10 in., ditto, 18s. 6d.
 1267a Ditto, for plates stereoscopic size, 9s. 6d.

Glass Plates for the Collodion Process.

Best Flatted Crown Glass.						Best Patent Plate, with Ground Edges.			
Size		per dozen		s.	d.	per dozen		s.	d.
1268a	2½ inches by 2 inches,	0 2		...	...	0 9		...	...
1268	" 3¼ " 2¾ " "	0 3		...	...	1 2		...	...
1269	" 4 " 3 " "	0 5		...	...	1 7		...	...
1270	" 4½ " 3½ " "	0 6		...	...	1 8		...	...
1271	" 5 " 4 " "	0 9		...	...	2 6		...	...
1272	" 6 " 5 " "	1 3		...	...	3 8		...	...
1272a	" 6¾ " 3¼ " "	1 0		...	...	3 0		...	...
1273	" 6½ " 4¾ " "	1 4		...	...	3 8		...	...
1274	" 7 " 6 " "	1 8		...	...	5 2		...	...
1275	" 8 " 6 " "	2 2		...	...	5 8		...	...
1276	" 8½ " 6½ " "	2 6		...	...	6 9		...	...
1277	" 9 " 7 " "	3 3		...	...	7 6		...	...

10 in. by 8 in., 12s. doz.; 12 in. by 10 in., 18s. 6d. doz.; and larger sizes to order.

Sizes not in this list charged proportionately dearer.

Plate boxes for glass plates, see next page.

Plate Boxes, of white wood, for holding one dozen glass plates, fig. 1278.

				s.	d.					s.	d.				
1278	For plates	$3\frac{3}{4}$ in.	by	$2\frac{3}{4}$ in.	1	3	1294	For plates	7 in.	by	6 in.	2	6		
1279	"	4	"	3	"	1	5	1295	"	8	"	6	"	3	0
1290	"	$4\frac{1}{4}$	"	$3\frac{1}{4}$	"	1	5	1296	"	$8\frac{1}{2}$	"	$6\frac{1}{2}$	"	3	0
1291	"	5	"	4	"	1	8	1297	"	9	"	7	"	3	4
1292	"	6	"	5	"	1	10	1297 ^a	"	10	"	8	"	4	6
1293	"	$6\frac{1}{2}$	"	$4\frac{3}{4}$	"	2	0	1297 ^b	"	12	"	10	"	5	6
1293 ^a	"	$6\frac{3}{4}$	"	$3\frac{1}{4}$	"	2	6								

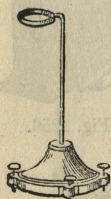


Fig. 1298.

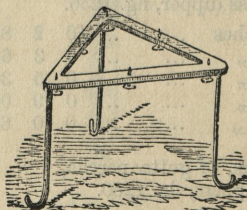


Fig. 1299.

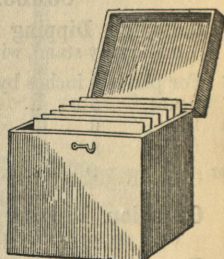


Fig. 1278.

LEVELLING STANDS.

Levelling stands for fixing glass plates perfectly level, so that developing or other solutions may be poured on to them without fear of its running off, and for use in supporting Daguerreotype pictures whilst being fixed by the solution of gold.

- 1298 **Levelling Stand**, iron foot, with adjusting screws, vertical rod, and ring, fig. 1298, 2s.
- 1299 **Levelling Stand**, triangular form, of bronzed brass, with three feet and six adjusting screws, for supporting any size plate up to $6\frac{1}{2}$ inches by $4\frac{3}{4}$ inches, fig. 1299, 5s.
- 1300 Ditto, for supporting the larger size plates, 7s.

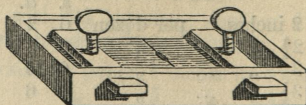


Fig. 1303.

Horne & Co.'s Reversing Frames, suitable for obtaining positive pictures from both glass and paper negatives, with jointed back, allowing the progress of the picture to be observed without disturbing its position.

1303	Size of glass	6 inches	by	5 inches	...	...	...	...	£0	5	6
1304	"	$7\frac{1}{2}$	"	$6\frac{1}{2}$	"	...	...	...	0	7	0
1305	"	$9\frac{1}{2}$	"	$7\frac{1}{2}$	"	...	...	...	0	8	0
1306	"	$11\frac{1}{2}$	"	$9\frac{1}{2}$	"	...	...	...	0	12	0
1306a	"	$12\frac{1}{2}$	"	$10\frac{1}{2}$	"	...	...	...	0	15	0

BRUSHES.

- 1307 **Camel's Hair Brushes**, for spreading solutions on paper, &c., small size, round form, in quill handles, 3*d.*
- 1309 **Camel's Hair Pencil**, flat form, fitted to wooden handles, without tin or other metal, for rapidly coating paper, &c., with solutions, 1 inch wide, 10*d.*
- 1310 Ditto, 1½ inch wide, 1*s.* 3*d.*
- 1311 Ditto, 2 inches wide, 1*s.* 8*d.*
- 1312 Buckle's brushes for applying solutions to paper, as recommended in *Thornthwaite's Guide to Photography*, consisting of a glass handle, silver wire hook, and a supply of cotton wool, 1*s.* 9*d.* each.
- 1316 **Glass Stirring Rods**, for mixing liquids, 6 inches long, 2*d.* each.
- 1317 Ditto, 9 inches long and stouter diameter, 3*d.*
- 1317*a* Ditto, 12 inches long and stouter diameter, 4*d.*
- 1318 **Glass Rods**, with bent handles, for spreading solutions evenly on paper, without fear of contamination from impurities that sometimes arise from using hair brushes.
- 1319 For use to cover paper, 9 inches square, 9*d.*
- 1320 For use to cover paper, 7 inches square, 9*d.*
- 1321 **Spirit Lamps**, in brass, with screw cap, for use in travelling, 3*s.*

SCALES AND WEIGHTS.

Balances, with steel beam, and sets of weights from two drams down to half a grain, in a box.

- 1323 Common beam, brass pan, in oak box, 2*s.* 6*d.*
- 1324 Superior beam, brass pan, in mahogany box, 3*s.* 9*d.*
- 1325 Superior beam, glass pans, in oak box, 6*s.*
- 1326 Oval box end beams, with brass pans, in mahogany box, 6*s.*
- 1327 Oval box end beams, with glass pans, in mahogany box, 8*s.* 6*d.*
- 1328 Oval box end beam balance, with brass pillar and glass shifting pan with drawer for weights and packing, £1 16*s.*
- 1329 **Filterer**, in stoneware, for purifying and preserving water, half-gallon size, with brass tap, &c., complete, 9*s.*

Glass Mortars and Pestles.

- 1331 Contents, ¼ pint, 2*s.* 6*d.*
- 1332 Contents, ½ pint, 3*s.* 9*d.*
- 1333 Contents, 1 pint, 5*s.* 9*d.*
- 1335 **Glass Funnels**, for filtration and decanting.
2 inches diameter, 4*d.*; 3 in., 6*d.*; 4 in., 8*d.*

- 1336 **Gutta Percha Funnels.**
3 in., 6*d.*; 3½ in., 9*d.*; 4½ in., 1*s.*; 5 in., 1*s.* 3*d.*

- 1337 **Filters**, ready cut, in packets of 100, for 2-in. funnel, 6*d.*
- 1338 Ditto, for 4 in. funnel, 1*s.* 1*d.*

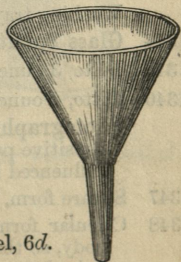


Fig. 1335.

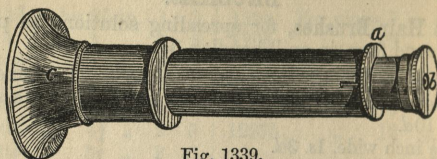


Fig. 1339.

1339 Focusing Eye-pieces, in brass, fig. 1339, 12s.

In order to obtain that extreme sharpness of outline so necessary in photographic pictures, it is absolutely essential that the focusing the object on the ground glass focusing frame be performed with extreme accuracy. The unassisted eye is of itself not sufficient to effect this, and the focusing eye-piece must be employed in the following manner:—Adjust the eye-piece so that it shall exactly focus the roughness of the focusing glass. To do this, carefully note the side of the focusing glass that is outwards when the frame is in its position in the camera, and take the focusing frame in the right hand, so that this side shall be nearest you; then take the focusing eye-piece in the left hand, having previously unscrewed the clamping screw *a*, and fix its broad end on the focusing glass, and observe if the roughness of the surface of the focusing glass appears sharp and defined to the eye looking into the eye end *b*. If such is not the case, shift the sliding tube up or down until the greatest amount of clearness is produced, and then tighten the clamping screw, so as to prevent any shifting taking place, and to insure the eye-piece remaining in perfect adjustment. To use it, the broad end *c* is placed on the ground focusing glass, and the lens or body of the camera shifted in or out until the greatest amount of sharpness of the picture is produced. At the suggestion of Mr. Horne, many persons use a focusing glass with a central polished spot about the size of a shilling, and having arranged the camera so that the principal object shall occupy the required position, the base of the eye-piece is placed over the central polished spot, and the body of the camera or the lens is shifted in or out until the maximum amount of sharpness of the picture when viewed through the eye-piece is produced. This central polished spot is of essential use where a focusing eye-piece is used, as, the image being received on a polished surface, and there viewed by the eye-piece, the indistinctness caused by the irregular refraction of the ground glass is entirely obviated. But it must be borne in mind, that the image viewed through the central spot by the *naked eye* cannot be used to determine when the best focus is obtained, and that this central spot is only useful when the focusing eye-piece is used.

1340 Focusing glass in japanned tin, 2s.

1341 Instrument to count Seconds, with bell, £1 10s.

1343 Glass Carboy, enclosed in wicker basket work, for holding distilled water, 2 gallons, 4s. 6d.

Washing trays, see No. 1242.

1344 Glass Spirit Lamps, 2 ounces, fig. 1344, 1s. 2d.

1345 Ditto, 3 ounces, with screwed wick holder, 2s.

1346 Ditto, 4 ounces, ditto, 3s. 6d.



Fig. 1344.

Photographic Lanterns, glazed with yellow glass, for use in preparing sensitive papers, &c., so as to protect the sensitive coating from being influenced by the light.

1347 Square form, with three sides glazed, and folding handle, 3s. 6d.

1348 Circular form, bull's eye front, with yellow glass circle and rotating body, so that the light may be partially or completely shut off if required, 9s. 6d.



Fig. 1349.

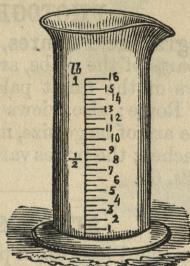


Fig. 1352.

Graduated Glass Measures, conical form, accurately divided.

	Contents	s.	d.		Contents	s.	d.
1349	2 drams	...	0 9	1352	4 ounces	...	1 6
1350	" 1 ounce	...	0 11	1353	" 6 "	...	1 10
1351	" 2 ounces	...	1 0	1354	" 10 "	...	2 3

Graduated Glass Measures, cylindrical form.

	Contents	s.	d.		Contents	s.	d.
1358	1 dram	...	0 9	1363	8 ounces	...	1 11
1359	" 2 drams	...	0 9	1364	" 16 "	...	2 8
1360	" 1 ounce	...	1 0	1365	" 20 "	...	3 4
1361	" 2 ounces	...	1 0	1366	" 32 "	...	4 6
1362	" 4 "	...	1 6	1367	" 40 "	...	5 8

Preparing Boards, on which paper is pinned, in order to apply sensitive coatings by a brush.

- 1369 Size for preparing paper 7 inches by 6 inches, 2s.
 1370 Size for preparing paper 9 inches by 7 inches, 2s. 6d.
 1371 Size for preparing paper 10 inches by 8 inches, 3s. 6d.
 1372 Size for preparing paper 12 inches by 10 inches, 4s.

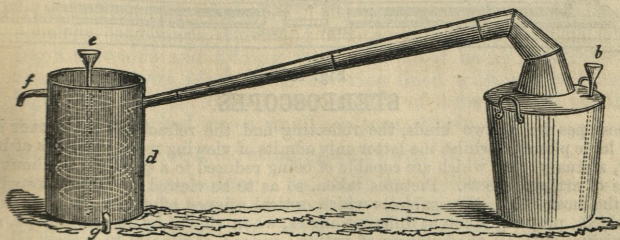


Fig. 1374.

Still, with refrigerator, for the distillation of water with the aid of a common fire, fig. 1374.

- 1375 1-gallon size, in tin, 18s.
 1376 2-gallon size, in tin, £1 3s.
 1377 1-gallon size, body of copper, £1 18s.
 1378 2-gallon size, body of copper, £2 14s.

PHOTOGRAPHIC PICTURES.

- 1379 **Photographic Pictures**, comprising a great variety of views taken in all parts of the globe, architectural elevations, details and perspective views of the finest palaces, churches, &c., in Venice, Russia, France, and Rome; also, views in Egypt, Syria, and the East, &c. Some of these are of large size, measuring 18 inches by 14 inches, 14 inches by 12 inches; the prices vary according to size and excellence, from 3s. 6d. to 12s. 6d.

STEREOSCOPIC PICTURES.

- 1380 **Stereoscopic Pictures**, on paper, taken by photography, embracing views taken from some of the most remarkable places in Europe, 10d.
 1381 Ditto, of superior character, having finest detail, and taken by superior artists, 1s. 2d.
 1382 **Transparent Stereoscopic Pictures**, on glass, taken from albumen or collodion negatives, 2s. 6d.
 1383 Ditto, of a very superior character, having the minutest detail exquisitely represented, and the general picture artistically produced, 4s. 6d.

The value of stereoscopic pictures taken by photography depends so much on the minute detail being preserved, and the careful selection of such spots as afford artistic pictures, the productions of superior artists always command a higher price than those of a mediocre character. This remark may tend to explain the variation in price of somewhat similar articles.

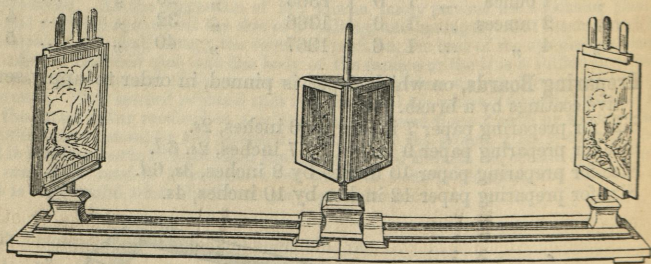


Fig. 1386.

STEREOSCOPES.

Stereoscopes are of two kinds, the reflecting and the refracting; the former is used to exhibit large pictures, whilst the latter only admits of viewing representations of buildings, scenery, statuary, &c., which are capable of being reduced to a small size without suffering any loss of artistic effects. Pictures taken, so as to be viewed by the stereoscope, afford one of the most interesting subjects which optical science affords, as two pictures of the same subject, properly taken at different angles, when viewed by the stereoscope, stand out as one picture with all the boldness of nature; indeed, it appears to possess all the attributes of solidity, viz., length, breadth, and thickness. If the pictures are taken from life, the faithfulness of the representation is so complete, that no description can convey a just idea of its perfection. The effect must be seen to be appreciated.

- 1386 **Reflecting Stereoscope**, for large views, with adjustment, so that either the pictures or mirror may be raised, depressed, or moved horizontally, as may be required, £1 15s.
 1387 **Photographic Pictures**, in pairs, to be viewed by the refracting stereoscope in great varieties, 10s. per pair.

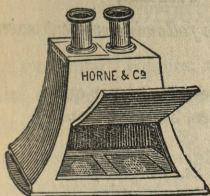


Fig. 1390.

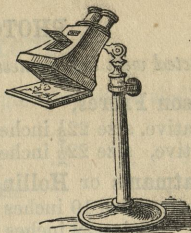


Fig. 1393.

- 1388 **Refracting Stereoscope**, in japanned tin, with one dozen printed diagrams, in box, serving to illustrate the optical facts displayed by this instrument, 4s. 6d.
- 1389 **Refracting Stereoscope**, in body, covered with paper, 2s. 10d.
- 1390 **Refracting Stereoscope**, in polished mahogany, with brass eye-pieces, 6s.
- 1391 **Refracting Stereoscope**, in polished mahogany, with brass eye-pieces, glass bottom, and hinged flap, 13s.
- 1392 **Refracting Stereoscope**, in polished mahogany, with highly finished eye-pieces, glass bottom, and hinged flap, best make, of very superior appearance, 16s.
- 1393 **Refracting Stereoscope**, of the best construction, mounted on massive brass stand, capable of being raised, depressed, or inclined to any angle, so as to admit of the exhibition of stereoscopic pictures to a number of persons consecutively, without fear of any derangement of the instrument, £1 8s.

PORTABLE TENTS.

- 1394 **Portable Tent**, for operating in the open air with collodion or other sensitive compounds, consisting of a tripod stand 6 feet high, supporting a moveable and folding table, capable of being fixed 3 feet from the ground, with black cloth covering lined with yellow linen—the legs jointed so as to fold into lengths of 3 feet, which enables the whole to be packed into a small compass, £2 10s.
- 1395 **Ditto**, with waterproof covering, square form, £5 10s.
- 1396 **Pneumatic Plate-holder**, fig. 1396, for holding glass plates whilst being cleaned, or during the application of collodion or albumen: to use it, the point of the forefinger is pressed on the brass top, and whilst the pressure of the finger is continued, the other end *a* is pressed on the glass plate; on removing the finger, the plate will be found to adhere and may be cleaned, or a sensitive compound applied; the application of the pressure will detach the plate from the holder: 2s. each.
- 1396A **Ditto**, larger size, with lever, 4s.



Fig. 1396.

PHOTOGRAPHIC PAPER,

Selected with the greatest care from the following eminent makers.

Canson Freres,

- 1397 Negative, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 2s. 3d. per quire.
 1398 Positive, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 3s. per quire.

Whatman's or Hollingsworth's.

- 1399 Negative, size 19 inches by 15 inches, 2s. 6d. per quire.
 1399a " size 22 inches by 18 inches, 4s. per quire.
 1400 Positive, size 19 inches by 15 inches, 2s. 6d. per quire.
 1401 " Towgood's, size 19 inches by 15 inches, 2s. 2d. per quire.

Turner's Photographic Paper.

- 1404 Negative, size 15 inches by 9 inches, 2s. 2d. per quire.
 1405 Positive, size 15 inches by 9 inches, 1s. 2d. per quire.

German Paper.

- 1406 Negative, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 2s. 3d. per quire.
 1407 Positive, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 3s. per quire.

1408 **Horne & Co.'s Waxed Paper**, size $17\frac{1}{2}$ in. by $11\frac{1}{4}$ in., 5s. 3d. per qu.

1409 **Horne & Co.'s Waxed Paper, Iodized**, size $17\frac{1}{2}$ inches by $11\frac{1}{4}$ inches, 11s. 6d. per quire.

1410 Portfolios for waxed paper, &c., $11\frac{1}{2}$ inches by $9\frac{1}{2}$ inches, 2s.

1411 Ditto, $17\frac{1}{2}$ inches by $11\frac{1}{4}$ inches, 3s.

1412 **Horne & Co.'s Waxed Paper rendered sensitive**, and ready for use, to keep ten days, size $11\frac{1}{4}$ inches by 9 inches, 9s. per dozen.

1413 **White Bibulous Paper**, prepared free from impurities, 1s. per quire.

1414 **Papier Joseph**, 10d. per quire.

IODIZED PAPER.**Horne & Thornthwaite's Iodized Paper.**

- 1416 Size 7 inches by 6 inches, 2s. 3d. per dozen.
 1417 Size $9\frac{1}{2}$ inches by $7\frac{1}{2}$ inches, 3s. 9d. per dozen.
 1418 Size 10 inches by 8 inches, 6s. per dozen.
 1419 Size 15 inches by 12 inches, 9s. per dozen.
 1420 **Salted Paper**, prepared and ready for exciting, 11 inches by 9 inches, 2s.
 1421 Ditto, 17 inches by 11 inches, 4s.
 1422 Ditto, 22 inches by 17 inches, 8s.

ALBUMENIZED PAPER.

- 1423 **Horne & Co.'s Albumenized Paper**, for printing positives in a very superior manner, by the use of which greater depths of tone and finer detail can be obtained than by any other paper hitherto introduced—size $11\frac{1}{4}$ inches by 9 inches, with direction for use, 2s. 9d. per quire.
 1424 Ditto, $17\frac{1}{2}$ inches by $11\frac{1}{4}$ inches, 5s. 6d. per quire.
 1424A Ditto, $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 11s. per quire

Thin Albumenized Paper for stereoscopic pictures, same sizes and prices.

PHOTOGRAPHIC PAPER,

Selected with the greatest care from the following eminent makers.

Canson Freres,

- 1397 Negative, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 2s. 3d. per quire.
 1398 Positive, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 3s. per quire.

Whatman's or Hollingsworth's.

- 1399 Negative, size 19 inches by 15 inches, 2s. 6d. per quire.
 1399 α " size 22 inches by 18 inches, 4s. per quire.
 1400 Positive, size 19 inches by 15 inches, 2s. 6d. per quire.
 1401 " Towgood's, size 19 inches by 15 inches, 2s. 2d. per quire.

Turner's Photographic Paper.

- 1404 Negative, size 15 inches by 9 inches, 2s. 2d. per quire.
 1405 Positive, size 15 inches by 9 inches, 1s. 2d. per quire.

German Paper.

- 1406 Negative, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 2s. 3d. per quire.
 1407 Positive, size $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 3s. per quire.

- 1408 **Horne & Co.'s Waxed Paper**, size $17\frac{1}{2}$ in. by $11\frac{1}{4}$ in., 5s. 3d. per qu.

- 1409 **Horne & Co.'s Waxed Paper, Iodized**, size $17\frac{1}{2}$ inches by $11\frac{1}{4}$ inches, 11s. 6d. per quire.

- 1410 Portfolios for waxed paper, &c., $11\frac{1}{2}$ inches by $9\frac{1}{2}$ inches, 2s.

- 1411 Ditto, $17\frac{1}{2}$ inches by $11\frac{1}{4}$ inches, 3s.

- 1412 **Horne & Co.'s Waxed Paper rendered sensitive**, and ready for use, to keep ten days, size $11\frac{1}{4}$ inches by 9 inches, 9s. per dozen.

- 1413 **White Bibulous Paper**, prepared free from impurities, 1s. per quire.

- 1414 **Papier Joseph**, 10d. per quire.

IODIZED PAPER.**Horne & Thornthwaite's Iodized Paper.**

- 1416 Size 7 inches by 6 inches, 2s. 3d. per dozen.

- 1417 Size $9\frac{1}{2}$ inches by $7\frac{1}{2}$ inches, 3s. 9d. per dozen.

- 1418 Size 10 inches by 8 inches, 6s. per dozen.

- 1419 Size 15 inches by 12 inches, 9s. per dozen.

- 1420 **Salted Paper**, prepared and ready for exciting, 11 inches by 9 inches, 2s.

- 1421 Ditto, 17 inches by 11 inches, 4s.

- 1422 Ditto, 22 inches by 17 inches, 8s.

ALBUMENIZED PAPER.

- 1423 **Horne & Co.'s Albumenized Paper**, for printing positives in a very superior manner, by the use of which greater depths of tone and finer detail can be obtained than by any other paper hitherto introduced—size $11\frac{1}{4}$ inches by 9 inches, with direction for use, 2s. 9d. per quire.
 1424 Ditto, $17\frac{1}{2}$ inches by $11\frac{1}{4}$ inches, 5s. 6d. per quire.
 1424A Ditto, $22\frac{1}{2}$ inches by $17\frac{1}{2}$ inches, 11s. per quire

Thin Albumenized Paper for stereoscopic pictures, same sizes and prices.

PHOTOGRAPHIC COLOURS.

1425	Box containing 7 colours, with brushes, gold and silver shell	£0	6	0
1426	Ditto, containing 14 colours	...	...	0 8 3
1427	Ditto, „ 21 „	...	...	0 12 0
1428	Separate colours, of all tints, 6d. per bottle.			
1429	Camel's hair brushes, 1s. per dozen.			
1430	Sable ditto, 6s. 6d. per dozen.			
1431	Elastic bottle, for removing dust from the plate, small size, 2s.			

FRAMES FOR MOUNTING PHOTOGRAPHIC PICTURES.

The gilt mats or openings of the ormolu frames, the papier maché frames, the morocco cases and frames, and passe partouts, are of three shapes: the dome, similar to fig. 1434; the oval, similar to fig. 1438; and the cushion-shape, like fig. 1442. Our customers are recommended to state which shape they prefer when giving their orders for this article.

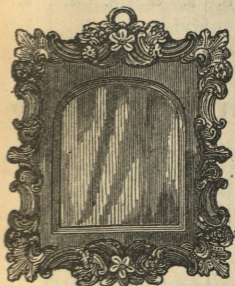


Fig. 1434.

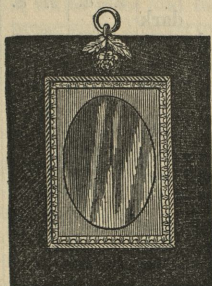


Fig. 1438.

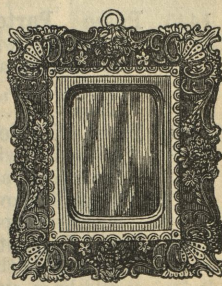


Fig. 1442.

ORMOLU FRAMES.

The frames are made of a metal closely resembling gold, in the Louis XIV. style of pattern, with either dome, oval, or cushion-shaped gilt mats, with best white glass and suspension ring, fig. 1434, and are intended for holding pictures either on metal, glass, or paper.

434	For holding pictures	2 $\frac{1}{2}$ inches by 2 inches	...	...	£0	0	10
435	"	3 $\frac{1}{4}$ "	2 $\frac{3}{4}$ "	...	0	1	3
436	"	4 $\frac{1}{4}$ "	3 $\frac{1}{4}$ "	...	0	1	
437	"	5 "	4 "	...	0	2	3
437*	"	6 "	5 "	...	0	3	6

BLACK PAPIER MACHE FRAMES.

These frames are made of papier maché with a black ground, having an ormolu or imitation gold chased opening, with dome, oval, or cushion-shaped mats and suspension ring, fig. 1438, and are well adapted for receiving Daguerreotype or collodion pictures.

1438	For holding pictures	$2\frac{1}{2}$ inches by 2 inches	...	...	each £0 1 9
1439	"	$3\frac{1}{4}$ " $2\frac{3}{4}$ "	...	...	0 2 6
1440	"	$4\frac{1}{4}$ " $3\frac{1}{4}$ "	...	...	0 3 3
1441	"	5 " 4 "	...	...	0 3 9



Fig. 1445.

PASSE PARTOUTS.

These are frames made of cardboard, covered with glass, coloured or ornamented in a variety of patterns. Fig. 1445 is a representation of the article; the ground in one kind is dark brown, with an edge of dead gold around the opening, surrounded by a thin circlet of burnished gold; in another kind, the ground is white enamel, the opening of dead gold, surrounded by a rim of black, and around the whole a circlet of burnished gold; in a third kind the ground and opening are of dead gold, with an inner fillet and outer circlet of burnished gold.

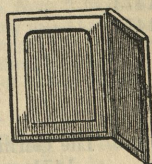
	PER DOZEN.	For holding Pictures on Plates.							
		$2\frac{1}{2}$ by 2	$3\frac{1}{4}$ by $2\frac{3}{4}$	$4\frac{1}{4}$ by $3\frac{1}{4}$	5 by 4	$6\frac{1}{2}$ by $4\frac{3}{8}$	$8\frac{1}{2}$ by $6\frac{1}{2}$		
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		
1445	Passe Partouts, dark ground, with bronze mountings, and gold line, oval, dome, or cushion shape	1 9	2 3	2 11	5 0	6 0	10 9		
1451	Passe Partouts, white ground, with bronze mountings, and gold and black line, oval, dome, or cushion shape	2 8	3 4	4 0	6 9	8 6	16 0		
1452	Passe Partouts, dead gold ground, with burnished gold lines, oval, dome, or cushion shape	7 0	7 8	8 6	13 6	18 0	38 0		
1453	Passe Partouts, white cardboard ground, with white bevel and gilt mats, extra wide margins, exceedingly neat	4 0	5 2	6 3	8 0	9 6	14 6		
1454	Passe Partouts, English make, of white cardboard, with shallow gold bevel, and gilt edges, extra wide margin ... ..	...	...	18 0	24 0	30 0	60 0		
1455	Passe Partouts, stereoscopic size, dark ground, with gold line, for mounting either transparent positives or negatives on glass, 4s. per dozen.								

FRAMES FOR PASSE PARTOUTS.

PER DOZEN.	For holding Passe Partouts that contain pictures of the following sizes.					
	2½ by 2 s. d.	3¼ by 2¾ s. d.	4¼ by 3¼ s. d.	5 by 4 s. d.	6½ by 4¾ s. d.	8½ by 6½ s. d.
1456 Rosewood frames, renaissance pattern, square form	4 6	5 0	5 10	7 3	8 0	12 6
1457 Rustic oak, richly ornamented, square shape ...	11 3	11 9	12 9	16 3	23 6	33 9
1458 Rustic oak, richly ornamented, oval shape ...	11 9	12 9	14 3	18 0	27 0	36 0
1459 Gilt frames, richly carved, cushion or oval shape ...	27 0	32 6	37 0	43 6	53 6	69 0
1442 Oval black frames, highly polished	11 0	13 0	15 0	22 0	30 0	50 0
1443 Stonepaste frames, black colour, well finished, durable and neat	7 6	8 0	8 6	12 6	14 6	16 0

MOROCCO CASES.

Morocco Leather Cases, fig. 1464, are lined with silk or cotton velvet, fitted with dome, oval, or cushion-shaped gilt mats, best white glass and hinged cover, for receiving and preserving Daguerreotype, Talbotype, and collodion pictures.



	Sizes to receive Plates.					
	2½ by 2 s. d.	3¼ by 2¾ s. d.	4¼ by 3¼ s. d.	5 by 4 s. d.	6½ by 4¾ s. d.	
1460 Morocco leather Cases, fig. 1464, with embossed leather top, lid lined with embossed cotton velvet, fitted with mats and glasses per doz.	2 9	4 9	7 6	14 0	25 0	
1461 Ditto, gilt edges to rim, per doz.	3 3	5 6	8 3	15 0	27 6	
1462 Morocco leather Cases, with embossed leather top and bottom, lid lined with embossed silk velvet, gilt edges to rim, mats and glasses, per doz.	6 3	9 6	14 3	25 0	40 0	
1463 Morocco leather Cases, <i>extra best quality</i> , with mats and glasses per doz.	9 0	12 6	19 0	33 0	48 0	
1464 Morocco Leather Cases, double, for holding two pictures, best quality, gilt edges to rim, mats and glasses complete ...	7 6	10 6	16 0	33 0	48 0	

MOROCCO FRAMES.

Morocco Leather Frames, fig. 1475, lined with velvet, gilt edges, fitted with dome, oval, or cushion-shaped gilt mats, and glasses, for containing Daguerreotype, Talbotype, or collodion pictures.

1465	For plates	$2\frac{1}{2}$ inches	by	2 inches	...	per dozen	£0	1	8
1466	"	$3\frac{1}{4}$	"	$2\frac{3}{4}$	"	"	0	2	0
1467	"	$4\frac{1}{4}$	"	$3\frac{1}{4}$	"	"	0	3	9
1468	"	5	"	4	"	"	0	6	6
1469	"	$6\frac{1}{2}$	"	$4\frac{3}{4}$	"	"	0	11	0



Fig. 1475.

GILT MATS.

Gilt Mats, of superior quality, of oval, dome, or cushion shapes, for fitting into morocco cases or frames.

1471	For plates	$2\frac{1}{2}$ inches	by	2 inches	...	per dozen	£0	0	5
1472	"	$3\frac{1}{4}$	"	$2\frac{3}{4}$	"	"	0	0	7
1473	"	$4\frac{1}{4}$	"	$3\frac{1}{4}$	"	"	0	0	11
1474	"	5	"	4	"	"	0	2	0
1475	"	$6\frac{1}{2}$	"	$4\frac{3}{4}$	"	"	0	4	0

GERMAN MATS.

The German Mat is an elegant improvement on the common mat, No. 1471, consisting of highly gilt metal, with an ornamental border and exterior deep chased corner pieces.

		Price per doz.			External Size.	Size of opening.	Shape of opening.
		£	s.	d.			
1481	German Mats,	£0	2	9	...	$2\frac{1}{2}$ by 2	...
1482	Ditto	...	0	2	9	...	$2\frac{1}{2}$ by $1\frac{5}{8}$... dome.
1483	Ditto	...	0	5	6	...	$3\frac{1}{4}$ by $2\frac{3}{4}$... oval.
1484	Ditto	...	0	6	0	...	$3\frac{1}{4}$ by $2\frac{3}{4}$... dome.
1485	Ditto	...	0	5	6	...	$3\frac{1}{4}$ by $2\frac{3}{4}$... oval.
1486	Ditto	...	0	5	6	...	$3\frac{1}{4}$ by $2\frac{3}{4}$... oval.
1487	Ditto	...	0	6	9	...	$4\frac{1}{4}$ by $3\frac{1}{4}$... cushion.
1488	Ditto	...	0	7	6	...	$4\frac{1}{4}$ by $3\frac{1}{4}$... dome.
						...	$3\frac{1}{4}$ by $2\frac{3}{4}$... oval.

- 1480 **Preservers.** These are frames composed of thin gilt metal, having an elegantly chased beading on the edge, and are employed for the purpose of keeping the glass plate of the case, the mat, and the glass plate on which the picture is taken, in close contact; this prevents the admission of dust, and forms a chaste ornament when the picture is fitted into a morocco case.

Size.	$2\frac{1}{2}$ by 2in.	$3\frac{1}{4}$ by $2\frac{3}{4}$	$4\frac{1}{4}$ by $3\frac{1}{4}$	5 by 4in.	$6\frac{1}{2}$ by $4\frac{3}{4}$
Price per dozen...	s. d. 0 5	s. d. 0 7	s. d. 0 11	s. d. 1 8	s. d. 4 0

ESTIMATES OF SETS

OF

PHOTOGRAPHIC APPARATUS.

FOR THE COLLODION PROCESS ONLY.

- 1498 **A Complete Set of Photographic Apparatus for taking Portraits and Views**, $4\frac{1}{4}$ inches by $3\frac{1}{4}$, and under, price, in a packing case, £3.

This set is adapted for taking positives on glass as described in the tenth edition of *Thornthwaite's Guide to Photography*, at page 25, and consists of a double achromatic lens (tested), mounted in brass, with rack and pinion adjustment; expanding camera with camera back; two plate holders and focusing glass, in frame; mahogany tripod stand, with brass top and screw to fix the camera; box of scales and weights, from 2 drams to 1 grain; porcelain washing tray; gutta percha bath and dipper; filtering paper and glass funnel; graduated measure; one dozen glass plates in box; bottles containing 6 oz. of nitrate of silver solution, ready prepared for the bath, 3 oz. positive collodion, 1 oz. iodizing solution, 1 pint of developing solution, 1 oz. cyanide potassium, and 1 oz. of crystal varnish; and directions for use.

- 1499 **A Complete Set of Photographic Apparatus for taking Pictures**, $6\frac{1}{2}$ inches by $4\frac{3}{4}$ inches and under, price in a packing case, £5 5s.

This apparatus is of a similar character to No. 1498, but capable of taking larger pictures and more effective in dull weather.

- 1500 **A Complete Set of Photographic Apparatus for taking Portraits and Views**, 4 inches by 3 inches and under, price, in a travelling case with lock and key, £7 7s.

This set is adapted for taking portraits and views either by the positive process on glass, as described in *Thornthwaite's Guide to Photography*, "tenth edition," page 25, or by the negative process described at page 38, and for the printing of positives from such glass negatives as described at page 63. The lenses in this set are of *Horne & Thornthwaite's own make*, No. 1068, in this list, the camera is of mahogany, French polished, and the apparatus generally of a superior character.

- 1501 **Set of Photographic Apparatus**, same as No. 1499, but fitted with a *portrait lens*, No. 1071, of *Horne & Thornthwaite's own manufacture*, £10 10s.

- 1502 **A complete set of Photographic Apparatus**, adapted for taking portraits or views up to 5 inches by 4 inches, with best French polished expanding camera and double combination of achromatic lenses of *our own make*, mounted in brass, with rack and pinion adjustment, camera stand, and all the requisite apparatus and chemicals, £15 15s.

CONTENTS:—Of a similar character to No. 1501, but the camera is of the best manufacture, and constructed after the latest improvements. The double combination of achromatic lenses is *our own make*, having its chemical and visual rays perfectly coincident. The apparatus is of a superior quality, and the chemicals in larger quantities.

FOR THE COLLODION AND PAPER PROCESSES.

- 1503 **A complete set of Photographic Apparatus**, adapted for taking portraits by the collodion process, of any size up to 5 inches by 4 inches, and views by either the waxed paper and calotype process, up to 7 inches by 6 inches, with best make folding camera and leather knapsack for holding it, double combination of achromatic lenses for portraits and single lens for views, *of our own make*, mounted in brass, with rack and pinion adjustment, camera stand, and all the requisite apparatus and a supply of chemicals, positive and negative papers, &c., packed in a strong travelling case, £21.

CONTENTS:—A folding camera, of the best construction, with adjusting front, and one single back or exposing frame, for taking collodion pictures, 5 inches by 4 inches, and 4 inches by 3 inches, and one double back for paper, 7 inches by 6 inches; A double combination of achromatic lenses, *of our own make*, mounted in brass, with rack and pinion adjustment, and single lens for taking views; Leather knapsack for containing the camera; Camera stand, of the best construction; Buckle's brush; Set of scales and weights; Tripod levelling stand; Gutta percha bath, mounted on mahogany foot, with glass dipper; One dozen glasses of each size, 5 inches by 4 inches, and 4 inches by 3 inches, and boxes to hold them; Reversing frame, for printing positives from negative impressions; Two graduated glass measures; Glass rod; Preparing board, on which to pin salted paper whilst applying nitrate silver solution; Two porcelain washing trays; A good supply of negative, positive, albumenized, and filtering papers, and of the following chemicals, &c.: nitrate silver, iodide potassium, gallic acid, acetic acid, ammonia, negative varnish, cyanide potassium, iodized collodion, chloride of barium, hyposulphite of soda, pyrogallie acid, empty bottles for solutions, and packing-case to contain all the apparatus.

- 1504 **A complete set of Photographic Apparatus**, adapted for taking portraits by the collodion process, of any size up to 6 inches by 5 inches, and views by the calotype or waxed paper process, 9 inches by 7 inches, with best make folding camera, double and single backs, double combination of achromatic lenses *of our own make*, mounted in brass, with rack and pinion adjustment, the front lens capable of being used for views as described at page 92, camera stand, and all the requisite apparatus and chemicals, packed in a strong travelling case and leather knapsack to contain the camera and backs, £26.

CONTENTS:—Portable folding camera, of Spanish mahogany French polished, with two apertures, the anterior one for taking portraits, and the posterior one for views, with one double and one single back or exposing frame, focusing glass in frame. The front of this camera has a double adjustment to vary the proportion of the foreground and sky in a picture; a double combination set of achromatic lenses *of our own make*, mounted in brass, with rack and pinion adjustment; Leather knapsack, for holding the camera; Buckle's brush; Balance and set of weights; Two glass rods and preparing board; Reversing frame; Two porcelain washing trays; Two graduated glass measures; Glass funnel; Levelling stand; Gutta percha bath, on mahogany foot, and glass dipper; Gutta percha dish; One dozen glasses of each size, 5 inches by 4 inches, and 4 inches by 3 inches, and boxes to hold them; Tripod camera stand, and a good supply of positive, negative, albumenized, and filtering paper, and of the following chemicals: nitrate of silver, hyposulphite soda, distilled water, iodide potassium, gallic acid, pyrogallie acid, acetic acid, ammonia, cyanide of potassium, iodized collodion, iodide silver, protosulphate iron, negative varnish, and empty bottles for solutions—The apparatus and chemicals packed into a strong packing case.

- 1505 **A complete set of Photographic Apparatus**, adapted for taking portraits by the collodion process, of any size up to 8 inches by 6 inches, and views by the calotype or waxed paper process, 9 inches by 7 inches, with best make folding camera, double and single backs, &

FOR THE COLLODION AND PAPER PROCESSES (*continued*).

double combination of achromatic lenses, of full size for portraits, and a single achromatic lens for views, *both of our own make*, mounted in brass, with rack and pinion adjustment, best camera stand, all the requisite apparatus, positive and negative paper, and chemicals, packed in a strong travelling case and leather knapsack to contain the camera and backs, £36.

CONTENTS:—A folding camera of the best construction, with focusing glass in frame; One single back and frames for collodion plates, 8 inches by 6 inches, 6 inches by 5 inches, and 5 inches by 4 inches, and one double back for views of paper, 9 inches by 7 inches; a full size double combination of achromatic lenses for portraits, and single achromatic lens for views, *both of our own make*, mounted in brass, with rack and pinion adjustment, leather cases, for containing the camera; Buckle's brush; Set of scales and weights; Two glass rods; Reversing frame, for printing positive pictures from negative impressions; Two porcelain washing trays; Preparing board, on which to pin salted paper, to apply nitrate silver solution; Two graduated glass measures; Glass funnel; Tripod levelling stand; Gutta percha bath, mounted on mahogany stand, and glass dipper; One dozen each size glass plates, 8 inches by 6 inches, 6 inches by 5 inches, and 5 inches by 4 inches, and boxes to contain them; One gutta percha washing tray; Folding camera stand; and a full supply of negative, positive, albumenized, and filtering papers, and of the following chemicals: nitrate silver, iodide potassium, gallic acid, pyrogallie acid, glacial acetic acid, negative varnish, cyanide of potassium, ammonia, iodized collodion, muriate of ammonia, proto-sulphate iron, iodide silver, hyposulphite soda, &c.—The whole of the apparatus and chemicals packed in a strong packing case.

FOR THE PAPER PROCESS ONLY.

- 1506 **A complete set of Photographic Apparatus**, for taking pictures on paper by the calotype or waxed paper process, of any size up to 5 inches by 4 inches, and containing all the necessary apparatus and chemicals, £5 5s.

CONTENTS:—A mahogany camera, French polished; Focusing glass in frame, and exposing frame; Achromatic lens, mounted in brass, with rack and pinion adjustment; Porcelain washing tray; Set of scales and weights; Reversing frame, for producing positive pictures from negative impressions; Graduated glass measure; Two photographic brushes; Tripod stand, for supporting the camera; Glass funnel; Preparing board; Glass rod; A supply of negative, albumenized, filtering, and waxed paper; and the following chemicals: nitrate silver, acetic acid, iodide silver, gallic acid, hyposulphite soda, ammonia-nitrate of silver, chloride of barium, and bottles for solutions—The whole enclosed in a strong packing box.

- 1507 **A complete set of Photographic Apparatus**, for taking pictures on paper by the calotype and waxed paper process, of any size up to 7 inches by 6 inches, and containing all the necessary apparatus and materials, £10 10s.

Contents same as No. 1506, but with camera of more perfect construction and of larger size, the lens of larger diameter, and apparatus and chemicals of a more extensive character.

- 1508 **A complete set of Photographic Apparatus**, for taking pictures on paper of any size up to 9 inches by 7 inches, and containing all the requisite apparatus and materials, £17 17s.

THE SET CAN BE HIGHLY RECOMMENDED. The Camera is of the most perfect construction, the lens of our own construction, and the whole is conveniently arranged for travelling.

Sets of Daguerreotype Apparatus, from £10 to £100.

PURE CHEMICALS AND PREPARATIONS FOR PHOTOGRAPHIC PURPOSES.

Acid, acetic, glacial, pure, for the paper process, 1s. per ounce.
 „ acetic, glacial, for the collodion process, 6d. per ounce, 6s. per lb.
 „ acetic, for ditto, 3d. per ounce.
 „ formic, 4d. per ounce.
 „ gallic, 1s. per ounce.
 „ pyrogallie, 7s. per oz., 1s. per dram.
 „ sulphuric, pure, 1d. per oz., 1s. per lb.
 Ammonia, pure, 1d. per ounce, 1s. per lb.
 „ muriate, free from iron, 2d. per oz.
 Ammonium, bromide, 4s. 6d. per ounce.
 „ iodide, variable, 3s. per ounce.
 Barium, chloride, 2d. per ounce, 2s. per lb.
 „ iodide, variable, 3s. 6d. per ounce.
 Baryta, nitrate, pure, 3d. per ounce.
 Bromide of cadmium, 4s. per ounce.
 Bromide of lime, 2s. 6d. per bottle.
 Bromine, in 1-ounce bottles, 2s. 3d.
 Cadmium, bromide, 4s. 6d. per ounce.
 „ iodide, 3s. 6d. per ounce.
 Calcium, bromide, 4s. 6d. per ounce.
 „ iodide, 4s. per ounce.
 Charcoal, animal, pure, 6d. per ounce.
 „ prepared, for polishing plates, 1s. per packet.
 Collodion, 7d. per ounce.
 „ iodized, 7d. per ounce.
 Cotton wool, best, 3d. per oz., 2s. 3d. per lb.
 Dextrine, 3d. per ounce.
 Ether, sulphuric, rectified, 5d. per ounce.
 Gold, chloride, in bottles, $\frac{1}{2}$ -dram, 3s.
 „ „ $\frac{1}{2}$ -dram, 5s.
 „ „ 1-dram, 8s.
 Gold, salt of, Sel d'or, 3s. per bottle.
 „ solution, for darkening positives, 1/6 oz.

Honey, purified, 4d. per ounce.
 Iodine, chloride, 4s. per ounce.
 „ pure, re-sublimed, 1s. 6d. per oz.
 Iron, iodide, 10d. per bottle of $\frac{1}{4}$ dr.
 „ protosulphate, pure, 1d. per oz., 8d. lb.
 Lamp black, prepared for buffing, 1s. per pkt.
 Magnesia, nitrate, 5d. per ounce.
 Mercury, pure distilled, 3d. per ounce, 2s. 6d. per lb.
 Naphtha, for lamp, 1s. 6d. per pint.
 Oxymer, 4d. per ounce.
 Potassa, nitrate, powdered, 10d. per lb.
 Potassium, bromide, pure, 2s. per ounce.
 „ cyanide, 3d. per ounce.
 „ fluoride, 2s. per ounce.
 „ iodide, variable, 1s. 6d. per ounce.
 Rottenstone, prepared, 6d. per ounce.
 Silver, ammonio-nitrate, 10d. per ounce.
 „ chloride, 6s. per ounce.
 „ iodide, 6s. per ounce.
 „ iodide, in iodide of potassium, 1s. 6d. per ounce.
 „ nitrate, crystallized, 4s. per ounce.
 „ nitrate, fused, 4s. 6d. per ounce.
 Soda, hyposulphite, 8d. per lb., 1d. per oz.
 Sodium, chloride, pure, 2d. per ounce.
 „ fluoride, 1s. per ounce.
 Solution for iodizing waxed paper, 4s. pint.
 Solution for rendering waxed paper sensitive, 8s. per pint.
 Sugar of milk, 3d. per ounce.
 Test paper, Clark's, 6d. per book.
 Tripoli, prepared, for polishing, 3d. per oz.
 Varnish, chloroform, 10d. per oz.
 Water, distilled, pure, 6d. per gallon.
 White wax, 3s. per pound.

The foregoing prices are subject to variation.

Horne & Thornthwaite's Crystal Varnish, for protecting collodion positives from injury affording an extremely hard and *transparent* covering, which dries in a few seconds, and is very easily applied—price, with directions, 4 ounces in bottle, 1s.

Horne & Thornthwaite's Negative Varnish, for protecting glass negatives from injury during printing, &c., 1s. 6d. the 4oz. bottle.

HORNE & THORNTWHAITE'S POSITIVE COLLODION.

This collodion, when iodized with the positive iodizing compound, yields positives on glass which possess the strongest contrasts of light and shade. The whites are of a pearly hue, without metallic lustre; the middle tints finely delineated; and the deep shades clear and transparent. Price 7d. per ounce; Iodizing Solution for ditto, 7d. per ounce; or 11s. 6d. per pint of 20 ounces, bottles included.

HORNE & THORNTWHAITE'S NEGATIVE COLLODION.

This collodion when iodized with the negative iodizing compound, is adapted for the production of negative pictures on glass; it possesses extreme toughness, yields deep-toned negatives, with well-developed middle tints, and is extremely sensitive and constant in its action. Price 7d. per ounce; Iodizing Solution for ditto, 7d. per ounce; or 11s. 6d. per pint of 20 ounces, bottles included.

As collodion, when iodized, does not keep good for more than three weeks or a month, it is advisable to have the iodizing solution separate in those cases where the whole stock ordered would not be used in that time; when separate, these compounds keep any length of time.



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