



How to Make Photographs

LP 470

How to Make Photographs

and a

Descriptive Catalogue
of
Photographic
Materials

Illustrated



New York

THE SCOVILL & ADAMS COMPANY OF NEW YORK
60 AND 62 E. ELEVENTH STREET

1896



HOW TO MAKE PHOTOGRAPHS.

IT is not difficult to make photographs. Anyone of average intelligence, any boy or girl, can easily learn how to make them. The following simple directions are for the beginner: One's own experience is the best teacher after an actual start has been made.

And right here we advise the young photographer to do all his (or her) own work, from the "exposure" of the plate in the field to the "mounting" of the finished picture on a card or in an album. Only in this way does one completely master the subject and get all the pleasure and profit there is in the fascinating pursuit.

Later, you can let some one else "do the rest" if you desire it, and, by the knowledge you will have gained by doing it yourself at first, you will be enabled to make such accurate exposures that your average of good pictures will be very high, even when some one else develops and prints them. But once doing your own "developing" and "printing" you will probably never let it go out of your hands, for all old photographers agree that the greatest pleasure and interest attaches to this part of the work.

Begin right. Don't be satisfied with a toy. Buy a complete outfit, consisting of camera, tripod, plates, chemicals and all, and go at it in a business-like manner. If it is not worth doing well and completely it is not worth doing at all. Begin right!

The following pages contain descriptions of many different cameras and outfits all made by the oldest and most reliable firm in this country, if not in the entire world. You can depend on any camera or piece of apparatus bearing the well-known word, "Scovill," or the firm name, nearly as well known, "The American Optical Company." Examine



the following pages carefully, make your choice and begin work. You will then want a few simple instructions which we will now endeavor to give.

And, first, we must fill the plate-holders with dry-plates, or, if a roll-holder is used, we must insert the reel of sensitive films preparatory to actual work in the field. But we advise the beginner strongly to start with dry-plates. They are easier to work and give better results. This must be done in the dark-room. Any room or closet from which all rays of white light are excluded will answer. At night one's own bed-chamber will serve for a dark-room. A ruby lantern furnishes the proper quality of light.

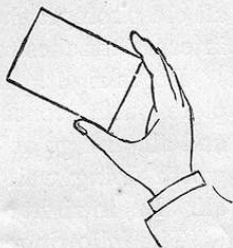
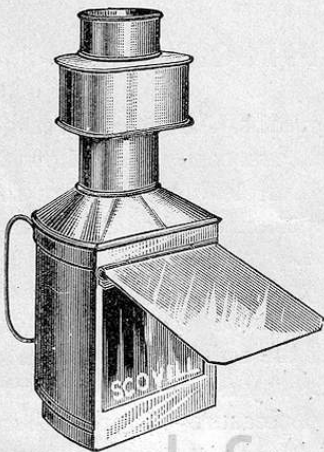
If dry-plates are used, open a package and carefully place them, sensitive (not the glossy) side outward. Handle the plates as shown in the cut, and be careful not to injure the sensitive film. Dust plate-holder and plates carefully with a camel's-hair brush before filling.

Sensitive films are sold on reels, which may be easily inserted in the roll-holder, as shown in the cut.

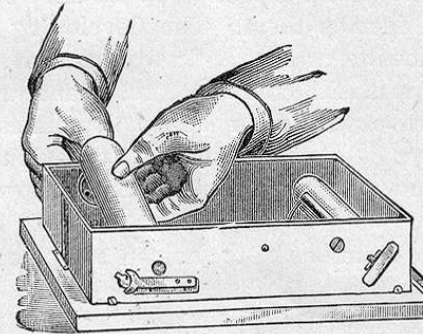
They may also be exposed in film-carriers, and there are special holders, very thin and light, for carrying the New Keystone Films.

Having filled our holders with dry-plates let us venture afield in search of the picturesque.

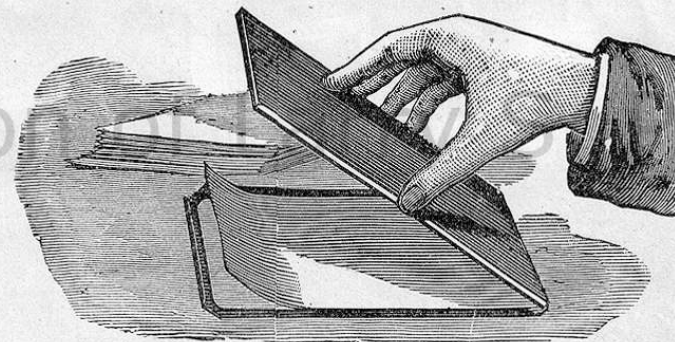
On selecting a desirable view we set up our camera on its tripod and proceed to focus. This is done by moving backward or forward the ground glass under the black focusing cloth until the image reflected appears perfectly sharp in all its details. Of course the picture is inverted, but the eye soon becomes accustomed to that. When focus is obtained affix the plate-holder carrying



the dry-plates to the camera and cap the lens. Of course, when a hand camera with a "fixed" focus is used, no focusing



is necessary, but here again we advise the beginner to start right with a regular tripod camera.



Decide how long an exposure is necessary to sufficiently impress the plate, and then draw the slide from the holder.

Uncap the lens and count the time, or note it on the watch dial. Then re-cap and insert the slide. Reverse the holder, and we are ready for the next exposure. The length of exposure varies with the subject and the

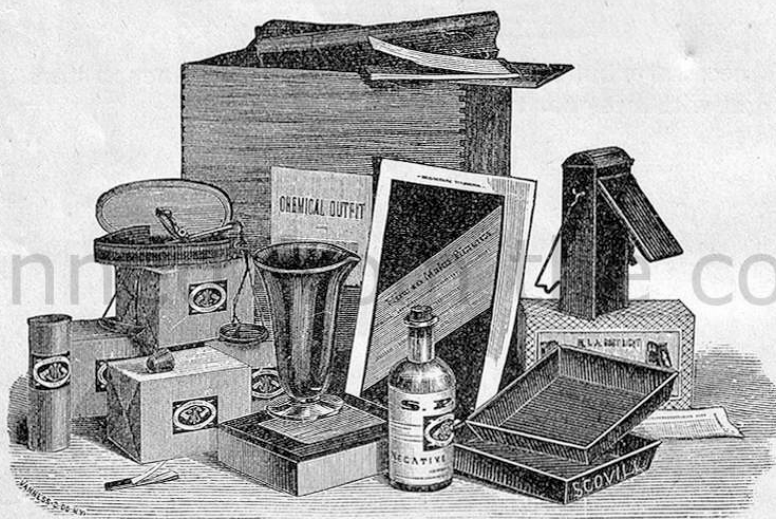
other circumstances, such as light force, time of day and year, sensitiveness of plate, and rapidity of lens, and this can only be determined by experience.

Lens	Morrison C. Group
Stop	$\frac{1}{25}$
Exposure	$\frac{1}{2}$ second
Plate	Keystone Special
Subject	Riverside Park

A record may be taken of the exposure on the patent registering slides supplied with the Scovill holders.

When all the plates are exposed we may return to the dark-room and develop them. The developing outfit comprises the following articles: Two glass trays, a 4-ounce glass graduate, a minim graduate, a ruby lantern, a bottle of S. P. C. negative varnish, 1 dozen dry-plates, an ounce of bromide of potassium, a pound of hyposulphite of soda, 1 pound of alum, and a package of S. P. C. pyro and soda developer.

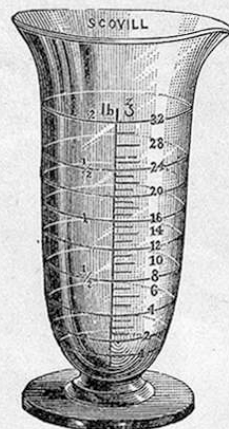
Take a plate from one of the holders and place it first, film



The Developing Outfit.

side up, in a tray of pure water. While it soaks there prepare the developer. In the graduate put 1 ounce of water and 1 dram each No. 1 and No. 2 S. P. C. Pyro and Soda developer. The packages containing them give detailed description of how to use them. Now pour off the water from the tray, and flow over the plate the combined developing solution. The Pyro developer has of late been superseded by many other organic bodies. To those who prefer them, we advise to adopt the S. P. C. Eikoquinol, the Amidol, or the newest developer on the photographic market, "Columbian." If air

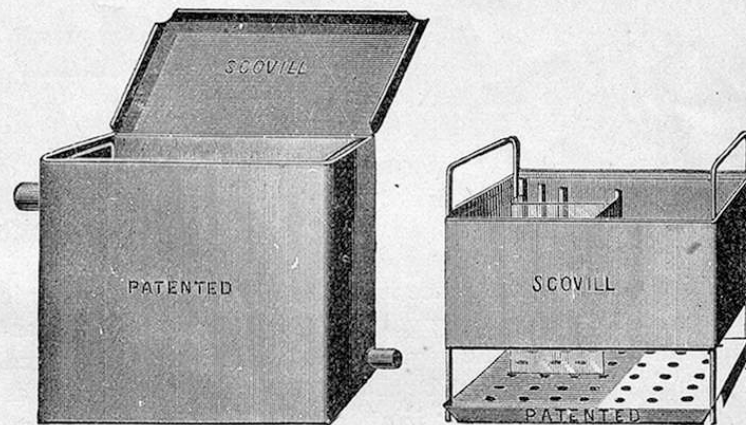
bubbles form on the plate they must be removed by a touch of the finger or by a soft camel's-hair brush. If the plate be correctly exposed traces of the image will appear on the sensitive film in a short time, but in case they do not come,



Graduated Glass.

pour the developing solution back into the graduate and add a little more of the No. 2 solution and reflow the plate with the strengthened developer. In a short time the image will appear, but wait patiently until all the details are out and clearly seen in the deep shadows, and until the milky-white appearance of the plate is changed to a dark gray color. The negative is then fully developed. Wash it in two changes of water and it is ready for the "fixing" bath.

Should the image on the plate flash out suddenly on flowing it with the developing solution, and continue to grow very rapidly, the plate has been over-exposed and must be quickly removed from the developing tray and placed in pure water, while a restraining solution of bromide is made as follows: Dissolve

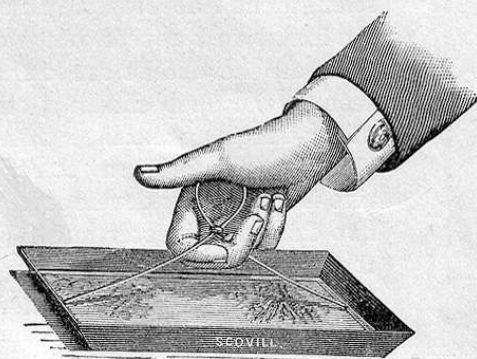


Negative Washing Box.

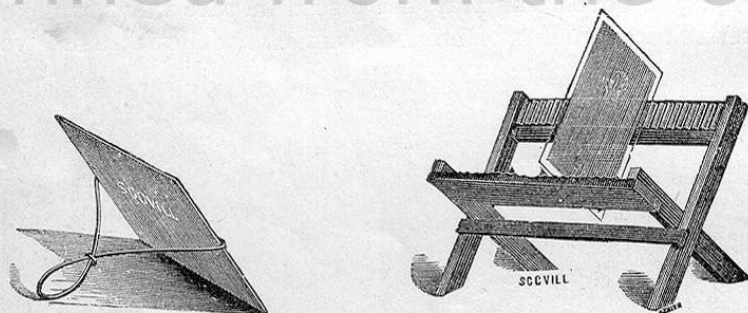
1 ounce of bromide of potassium in 9 ounces of water, and label "Bromide solution." Add a few drops of the bromide solution to the developing tray and replace in it the partly

developed plate. The development will proceed more slowly; but if by an excess of bromide solution the process of developing has been too much retarded, it can be started again by adding carefully a little more of the No. 2 solution.

In the unused tray mix a solution of 4 ounces of hyposulphite of soda and 20 ounces of water. Label this tray "Hypo" and do not use it for any other purpose. After



The Russell Negative Clasp.



washing the negative place it in the hypo bath and allow it to remain there until every vestige of the milky-white appearance has vanished. The negative can then be safely examined by white light. It must be thoroughly washed, however, as the hyposulphite of soda, if allowed to remain in the film, will crystallize and destroy the negative. A negative washing box will be found to be of great assistance.

Meanwhile rinse out the first tray and partially fill it with a solution of alum, two tablespoonfuls of the coarse alum

powder to sixteen ounces (or a pint) of water. Allow the plate to remain in this bath about five minutes and then thoroughly wash it again and set it on edge to dry in a negative rack or in the drying support, as shown in the cut.

The Russell Negative Clasp is also convenient for holding the plate during development and obviates the necessity of putting one's hands into the developing solution.

After the negative is thoroughly dried it is sometimes varnished, but this is not absolutely necessary, especially where only a few prints are desired from the plate. Before applying the varnish to the gelatine plate it should be slightly warmed to expel all moisture.

We are now ready to print. The printing and toning outfit consists of a printing frame, two glass pans, some sensitized paper, a glass graduate, some hyposulphite of soda, a

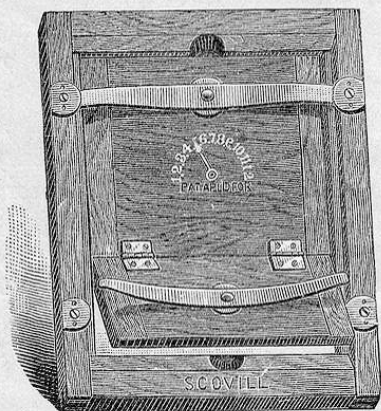


The Printing Outfit.

glass form, a print trimmer, some sheets of fine card-board, a jar of parlor paste, and a bristle brush.

The printing process is simple. Chloride of silver, gelatine and collodion papers have very much taken the place of the formerly used ready-sensitized albumen paper, the general way of handling it being the same, however. Lay a piece of the sensitized paper face downward upon the face of the

negative which rests in a frame. Close the back and secure it firmly by means of the springs. Then carry the frame to a place where the sunlight can fall upon it and leave it there



The Scovill Printing Frame.

until the picture is clearly seen. It should appear a little darker than the finished picture is desired to be, for the subsequent processes of toning and fixing bleach the print considerably. When the desired number of prints are made we are ready for the "toning" and "fixing" processes. The manufacturers of emulsion papers generally prepare toning and fixing baths in separate solution or combined. As these solutions

give presumably the best results with the particular paper, the student should always take them in preference to others.

Prepare a toning-bath sufficient for the number of prints to be toned, in accordance with the directions accompanying the paper and proceed throughout in strict accordance with these directions. Give the pictures a final and effectual washing. After they are dried, lay them out one by one and, using the trimmer, cut them to the desired size.

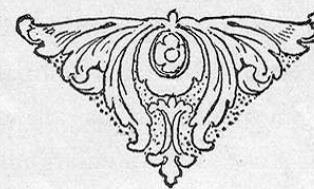
Now spread over the back of each print, in turn, some parlor paste and lay them down on sheets of cardboard or in an album; this is called mounting. Lay a piece of smooth surfaced paper over the print and rub upon it with a paper-cutter or flat ruler from centre to edges until the print lies perfectly flat on the mount beneath.

The prints are now ready for burnishing, but this is not necessary, and in the opinion of many does not add to their artistic value.

The mounting may be done in any light, but the toning process should be conducted in a dimly-lighted room and the prints should be kept in a box or drawer where the strong light will not reach them until ready for the toning process.

Further and more explicit directions for making photo-

graphs and descriptions of the latest and most advanced methods and branches of photography may be obtained by reading "AMATEUR PHOTOGRAPHY," by W. I. Lincoln Adams, Editor of *The Photographic Times*; also "THE PHOTOGRAPHIC INSTRUCTOR," by the same author; "THE PHOTOGRAPHIC NEGATIVE" and "PHOTOGRAPHIC PRINTING METHODS," two books by the Rev. W. H. Burbank; and "ARISTOTYPES AND HOW TO MAKE THEM," by Walter E. Woodbury. (See complete list of THE S. & A. PHOTOGRAPHIC SERIES.) We advise the reader also to subscribe to *The Photographic Times*, an illustrated monthly magazine devoted to the science, art, and advancement of photography.



THE SCOVILL & ADAMS COMPANY.

THE history of the Scovill & Adams Company is, to a great extent, the history of photography in America, for with the introduction of the Daguerreotype process in this country, in 1842, the Scovill Manufacturing Company—whence the Scovill & Adams Company sprang—manufactured the metal plates and other materials necessary for making the Daguerreotype.

The Scovill Manufacturing Company was founded in Waterbury, in 1802, and has been engaged in the manufacture of metals and metal goods since that early date. As photography grew in popularity, and the demands for the necessary supplies increased, the department of the Scovill Manufacturing Company devoted to this branch of the business became more important, and it was apparent that the child had outgrown the necessity for the care of the parent organization. The Scovill & Adams Company was thereupon organized, and began its career as an independent firm, January 1, 1889. It was really an enlargement of the Photographic Department of the Scovill Manufacturing Company managed as an independent company. Mr. W. Irving Adams, who had been the agent managing this department, became the President of the new company, and the management continues as heretofore. It is the oldest and most reliable firm dealing in photographic goods in America, if not in the world.

THE PHOTOGRAPHIC TIMES.

THE PHOTOGRAPHIC TIMES commenced its career twenty-five years ago as a little eight-page monthly, published by The Scovill Manufacturing Co. The sprightly little magazine made such rapid strides that it soon became necessary to make important changes, and J. Traill Taylor, editor of the British Journal of Photography, was engaged to edit it. It rapidly increased its influence and soon became the leading organ of photographers, both professional and amateur, in this country, a position it has held ever since. It has always been abreast the first wave of progress. In 1881, when the Photographers' Association of America held its annual convention in New York, the PHOTOGRAPHIC TIMES appeared regularly every day throughout the entire convention, giving full proceedings of the day previous.

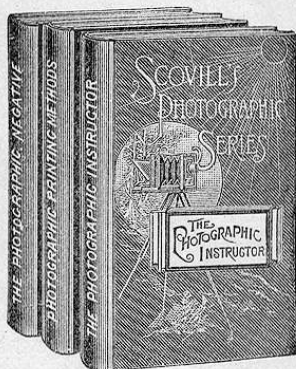
Many other important changes and improvements were made from time to time. With the beginning of the present year (1895) it was converted into a 64-page artistic and scientific magazine of the very highest order. Mr. Walter E. Woodbury—who is well-known in this country and in England as a practical worker, and the author of many books on photographic subjects—became editor.

Each monthly issue of the magazine in its present form is a veritable work of art. It is printed on the finest quality of paper, and besides a beautiful photogravure frontispiece, contains from fifty to a hundred illustrations by the half-tone and other processes. Many of these are reproductions from the choicest photographs of the best known photographic artists. They form valuable guides to pictorial work for the student.

The articles are all by the ablest authors and deal with photography in all ways. All the latest processes and inventions are chronicled.

It is published by The Photographic Times Publishing Association, at 423 Broome Street, New York City, and the annual subscription is \$4.00. It will be sent for six months for \$2.00, or three months for \$1.00. Sample copy, postpaid, for 35 cents.

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(Third edition.) A Collection of Photogravures from the best representative negatives by leading photographic artists on two sides of the Atlantic. Printed on Japan paper; mounted on heavy cardboard; size, 11 x 14 inches; ornamental portfolio and box. Price..... 3 00

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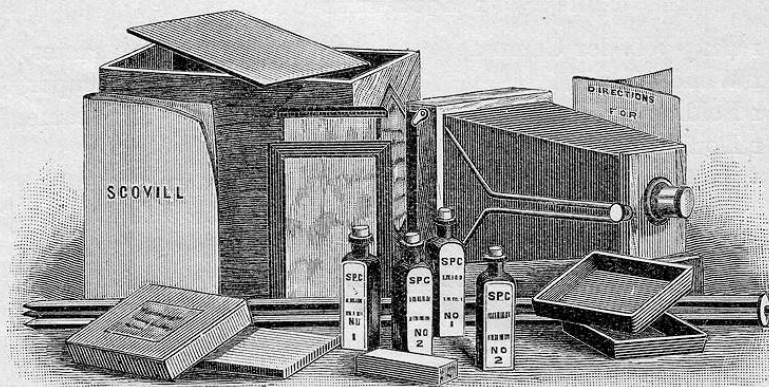
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THE AMERICAN SCHOLARS' COMPLETE EQUIPMENT.



No. 1 SCHOLARS' EQUIPMENT, CONSISTING OF

- 1— $4\frac{1}{4} \times 5\frac{1}{2}$ Camera, fitted with
- 1— $4\frac{1}{4} \times 5\frac{1}{2}$ Dry Plate Holder,
- 1— $4\frac{1}{4} \times 5\frac{1}{2}$ Printing Frame;
- 1—Single Achromatic Lens and
- 1—Tripod;
- 1—dozen $4\frac{1}{4} \times 5\frac{1}{2}$ Gelatine Dry Plates,
- 2— $4\frac{1}{4} \times 5\frac{1}{2}$ Japanned Trays,
- 1—3-ounce bottle S. P. C. Pyro and Potash Developing Solution No. 1,
- 1—3-ounce bottle S. P. C. Pyro and Potash Developing Solution No. 2,
- 1—6-ounce package of Hyposulphite of Soda,
- 1—package 4 x 5 Sensitized Paper,
- 1—bottle Toning Solution,
- 1—sheet of yellow Post Paper, and

Full directions for making photographs with the above, packed securely in a neat wooden box.

No 1, price\$5 00
Extra Holders, each..... 75

No. 2 SCHOLARS' EQUIPMENT

Comprises same apparatus, materials, etc., as above, but of size suitable for $3\frac{1}{4} \times 4\frac{1}{4}$ photographs.

No. 2, price\$4 50
Extra Holders, each..... 65

THE SCOVILL WONDER EQUIPMENTS.

THE NO. 1 EQUIPMENT CONSISTS OF

- | | |
|-------------------------------|---|
| 1 4 x 5 Wonder Camera, | 1 package 4 x 5 Dry Plates, |
| 1 Wonder Lens, | 1 package Sensitized Paper, |
| 1 Folding Tripod, | 1 4 x 5 Flat Printing Frame, |
| 1 Double Plate Holder, | 1 jar Paste, |
| 1 package S. P. C. Developer, | 1 package Mounts, round corners (Primrose), |
| 2 Japanned Iron Trays, | 1 bottle Toning Solution, |
| 1 package Hyposulphite Soda, | 1 Ounce Graduate, |
| 1 Ruby Lantern, | 1 Manual. |
| 1 Rubber Focus Cloth, | |

No. 1, for 4 x 5 pictures.	Price.....	\$7 50
" 2, " 4½ x 6½ "	"	10 00
" 3, " 5 x 7 "	"	12 00

NE PLUS ULTRA OUTFITS.

4 x 5 NE PLUS ULTRA OUTFIT, PRICE \$9.00, COMPRISES

A 4 x 5 Ne Plus Ultra Camera, which has Single Swing, Rubber Bellows, Removable Front and Folding Platform.

- 1 Patent Double Dry Plate Holder.
- 1 Taylor Folding Tripod.
- 1 No. A Waterbury Achromatic Lens with Revolving Diaphragm.
- 1 Wooden Carrying Case.

5 x 8 NE PLUS ULTRA OUTFIT, PRICE \$10.00, COMPRISES

A 5 x 8 Ne Plus Ultra Camera, which has Single Swing, Rubber Bellows, Removable Front and Folding Platform.

- 1 Patent Double Dry Plate Holder.
- 1 Taylor Folding Tripod.
- 1 No. B Waterbury Achromatic Lens with Revolving Diaphragm.
- 1 Wooden Carrying Case.

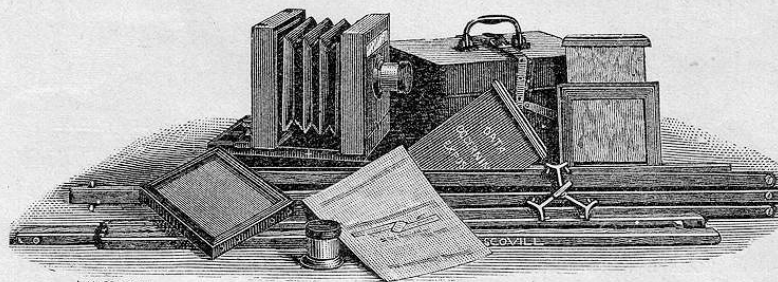
6½ x 8½ NE PLUS ULTRA OUTFIT, \$14.00.

FAVORITE APPARATUS OUTFITS,

ALL ARTICLES OF WHICH ARE WARRANTED ACCURATE IN EVERY RESPECT.

These Outfits are lighter, more compact, far handsomer and more accurate than any which are offered at the same price. Many professional photographers have bought them and use them constantly.

FAVORITE OUTFIT A, Price \$10.00, Comprises



A FAVORITE VIEW CAMERA to produce 4 x 5 inch pictures, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously.

1 Scovill Double Dry Plate Holder (Reversible), with *patent Registering Slides*.

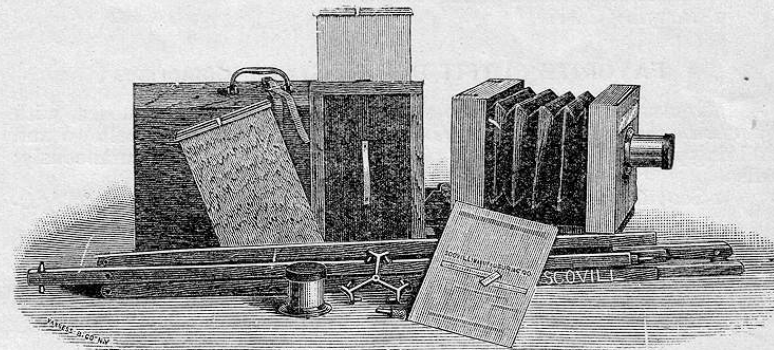
1 Taylor Improved Folding Tripod.

1 No. A "Waterbury" Achromatic Lens, with *revolving diaphragm*.

1 Carrying Case.

5 x 7 Favorite Outfit.....Price, \$12 00

FAVORITE OUTFIT B, Price \$12.00, Comprises



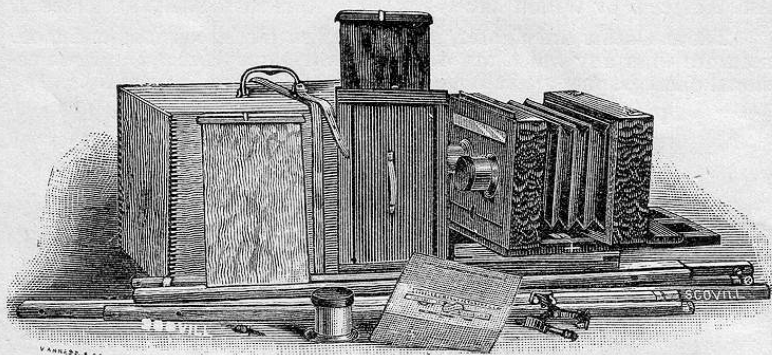
A FAVORITE VIEW CAMERA, to produce pictures 5 x 8 inches, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously; also

1 Scovill Double Dry Plate Holder (Reversible), with *patent Registering Slides, and with Kits*.

1 Taylor Improved Folding Tripod.

1 No. B "Waterbury" Achromatic Lens with *revolving diaphragms*.

1 Carrying Case.

FAVORITE OUTFIT C, Price \$18.50, Comprises

A FAVORITE VIEW CAMERA, to produce 5 x 8 inch pictures, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously.

This Camera is constructed so as to make either a *Picture* on the full size of the plate (5 x 8 inches), or, by substituting the extra front (supplied with the outfit) and using the pair of lenses of shorter focus, it is admirably adapted for taking *stereoscopic negatives*. Included in this outfit are also

- 1 Scovill Double Dry Plate Holder (Reversible), with *patent Registering Slides, and with Kits.*
- 1 B "Waterbury" Achromatic Lens, *with revolving diaphragms.*
- 1 pair "Waterbury" Achromatic Matched Stereoscopic Lenses.
- 1 Taylor Improved Folding Tripod.
- 1 Carrying Case.

FAVORITE OUTFIT D, Price \$15.00, Comprises

A FAVORITE VIEW CAMERA to produce pictures 6½ x 8½ inches, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously; also

- 1 Scovill Double Dry Plate Holder (Reversible), *with patent Registering Slides, and with Kits.*
- 1 Taylor Improved Folding Tripod.
- 1 No. BB "Waterbury" Achromatic Lens *with revolving diaphragms.*
- 1 Carrying Case.

FAVORITE OUTFIT E, Price \$25.00, Comprises

A FAVORITE VIEW CAMERA to produce pictures 8 x 10 inches, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously; also

- 1 Scovill Double Dry Plate Holder (Reversible), *with patent Registering Slides, and with Kits.*
- 1 Taylor Improved Folding Tripod.
- 1 No. C "Waterbury" Achromatic Lens *with revolving diaphragms.*
- 1 Carrying Case.

EQUIPMENT A-A-A.—Price \$20.00.

COMPLETE IN EVERY REQUISITE FOR MAKING THE HIGHEST CLASS PICTURES.

—LACKING NOTHING FOR VIEW TAKING, DEVELOPMENT AND THE PRINTING AND MOUNTING OF PHOTOGRAPHS.

Consisting of *Favorite Apparatus* Outfit A.....\$10 00
 Also 1 *Developing* Outfit 4 x 5 (see page 26)..... 5 25
 " 1 *Printing and Toning* Outfit 4 x 5 (see page 27)..... 4 87
 5 x 7 *Favorite Equipment*..... 24 00

EQUIPMENT B-B-B.—Price \$24.50.

COMPLETE IN EVERY REQUISITE FOR MAKING THE HIGHEST CLASS PICTURES.

Consisting of *Favorite Apparatus* Outfit B.....\$12 00
 Also 1 *Developing* Outfit 5 x 8 (see page 26)..... 6 50
 " 1 *Printing and Toning* Outfit 5 x 8 (see page 27)..... 6 38

EQUIPMENT C-C-C.—Price \$30.00.

COMPLETE IN EVERY REQUISITE FOR MAKING THE HIGHEST CLASS PICTURES.

Consisting of *Favorite Apparatus* Outfit C.....\$18 50
 Also 1 *Developing* Outfit 5 x 8 (see page 26)..... 6 50
 " 1 *Printing and Toning* Outfit 5 x 8 (see page 27)..... 6 38

EQUIPMENT D-D-D.—Price \$28.00.

Consisting of *Favorite Apparatus* Outfit D.....\$15 00
 Also 1 *Developing* Outfit 6½ x 8½ (see page 26)..... 7 00
 " 1 *Printing and Toning* Outfit 6½ x 8½ (see page 27)..... 7 00

EQUIPMENT E-E-E.—Price \$40.00.

Consisting of *Favorite Apparatus* Outfit E.....\$25 00
 Also 1 *Developing* Outfit 8 x 10 (see page 26)..... 8 50
 " 1 *Printing and Toning* Outfit (see page 27)..... 8 50

4 x 5 HAND CAMERA DEVELOPING AND PRINTING OUTFIT.

- | | |
|-------------------------------|---|
| 1 4 x 5 Glass Pan. | 1 dozen 4 x 5 Sensitized Paper. |
| 1 4 x 5 Glossy Rubber Tray. | 1 bottle Toning Solution. |
| 1 4 x 5 Japanned Tray. | 1 package Primrose Cards, No. 9. |
| 1 bottle Columbian Developer. | 1 jar Parlor Paste. |
| 1 pound Hyposulphite of Soda. | 1 Paste Brush. |
| 1 W. I. A. Ruby Lantern. | 1 4 x 5 Printing Frame. |
| 1 package 4 x 5 Dry Plates. | 1 copy "The Knack" (a book of simple instructions). |
| 1 two-ounce Glass Graduate. | |

Price, complete.\$5 00

THE SCOVILL DEVELOPING OUTFIT, FOR MAKING NEGATIVES.



We offer for use with any Outfit to make pictures 4 x 5 inches, the following goods packed securely in a wooden case :

4 x 5 DEVELOPING OUTFIT.

1 package S. P. C. Carbonate Soda Developer,	1 pound Alum,
2 4 x 5 Glass Pans,	1 bottle S. P. C. Negative Varnish,
1 4-ounce Graduate,	1 dozen 4 x 5 Dry Plates,
1 Minim Graduate,	1 Scovill Focusing Cloth,
1 ounce Bromide Potassium,	1 Ruby Lantern,
1 pound Hyposulphite Soda,	1 Russell Negative Clasp.
Price, complete	\$5 25

For use with any Outfit we supply the same goods, with the exception of the substitution of Pans and Plates for the size ordered.

Price, 5 x 7 Developing Outfit	\$6 35
" 5 x 8 "	6 50
" 6½ x 8½ "	7 00
" 8 x 10 "	8 50

THE SCOVILL PRINTING OUTFIT, For PRINTING, TONING, FIXING and MOUNTING 4 x 5 PICTURES.

1 4 x 5 Flat Printing Frame,	2 dozen Collins' Cards,
2 4 x 5 Glass Pans,	1 jar Parlor Paste,
2 dozen 4 x 5 Sensitized Paper,	1 Bristle Brush,
1 2-ounce Graduate,	1 4 x 5 Glass Form,
1 pound Hyposulphite Soda,	1 Straight Trimmer.
1 bottle Toning Solution,	

Price, complete\$4 87

Securely packed in a box, which serves also for a Fuming Box.

S. P. C. OUTFIT, For PRINTING, TONING, FIXING and MOUNTING 5 x 8 PICTURES.



This Outfit is like the above, but with Printing Frame, Glass Tray, Sensitized Paper and Cardboard adapted for 5 x 8 Pictures.

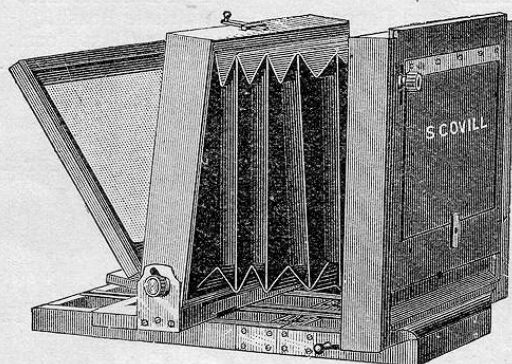
Price, complete.....\$6 38

Securely packed in a wooden box.

6½ x 8½ Printing and Toning Outfit. Price.....	\$7 00
8 x 10 " " " " "	8 50

WATERBURY OUTFITS,

With DOUBLE FILM HOLDERS, or with GLASS PLATE HOLDERS.



THE WATERBURY CAMERAS are made of mahogany, and well polished, have rubber bellows, folding platform, *patent latch* for making bed rigid instantaneously, single swing, vertical shifting front, and are as light and compact as substantial cameras can be constructed.

4 x 5 Waterbury Outfits, complete.\$12 00

CONSISTING OF

- 1 Single Swing Camera, described above.
- 1 Light-Weight Double Dry Holder, with *Patent Registering Slides*.
- 1 Wooden Carrying Case.
- 1 Improved Taylor Tripod.
- 1 No. A Waterbury Lens with *Revolving Diaphragm*.

LATEST SIZES INTRODUCED :

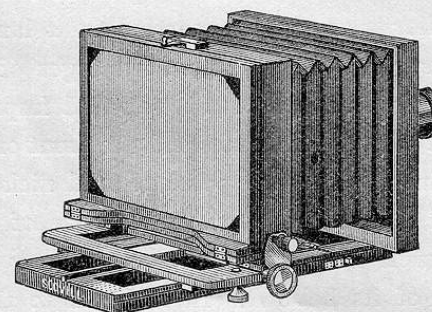
4¼ x 5½ Waterbury Outfit, complete.\$13 00
 4¼ x 6½ " " " " 14 00
 5 x 7 " " " " 16 00

5 x 8 Waterbury Outfits, complete.\$16 50

CONSISTING OF

- 1 Single Swing Camera, described above.
- 1 Light-Weight Double Dry Holder, with *Patent Registering Slides*.
- 1 Wooden Carrying Case.
- 1 Improved Taylor Tripod.
- 1 No. B Waterbury Lens with *Revolving Diaphragm*.

ELITE VIEW OUTFITS.



AN ELITE VIEW OUTFIT COMPRISES :

One Single Swing Mahogany-polished Camera, with Vertical Shifting Front; Rubber Folding Bellows and Rack and Pinion Focusing Adjustment.

By means of the side plate the Camera may be reversed when vertical views are desired. To this Camera, which is very light and compact, is fitted one of the incomparable Light-Weight Holders, with Patent Registering Slides. The Outfit also comprises

A SCOVILL EXTENSION TRIPOD,

A WATERBURY ACHROMATIC LENS

WITH REVOLVING STOPS,

AND A CARRYING CASE.

PRICE LIST IS AS FOLLOWS :

Size of View.

4¼ x 6½\$17 00
 5 x 7 17 50
 5 x 8 18 00
 6½ x 8½ 22 00

THE FLANDREAU OUTFITS.

THE FLANDREAU CAMERA folds up in so compact a form that the smaller size may be carried in a large overcoat pocket. In fact, it embodies the advantages of the Scovill Tourist Camera with much that is new and improved. The rods which are used to move forward the front of the camera are nicely adjusted, and are polished and nickel-plated, so that they add to the handsome appearance of the camera, and contrast well with its polished mahogany surface and the dark hue of its bellows. In addition to this portable arrangement, the Flandreau box is reversible, has a liberal swing-back and front and rising front board. The bellows is cone-shaped and focuses by the forward movement. When closed for carrying, the bed becomes a closing front board which is firmly secured at the top by a spring. The tripod head is fastened to this board so that, in adjusting, all that is necessary is merely to lower the front and fasten the tripod legs to the top, which is already secured beneath the board. The swing is held in any position by a new and very clever device. The ground glass is hinged, as in English cameras, to throw over the top of the instrument.

4 x 5 FLANDREAU OUTFIT CONSISTS OF 4 x 5 FLANDREAU CAMERA, WITH

- 1 Daisy Double Dry Plate Holder, with *Patent Registering Slides*.
- 1 Scovill Adjustable Tripod No. 1.
- 1 Canvas Carrying Case.

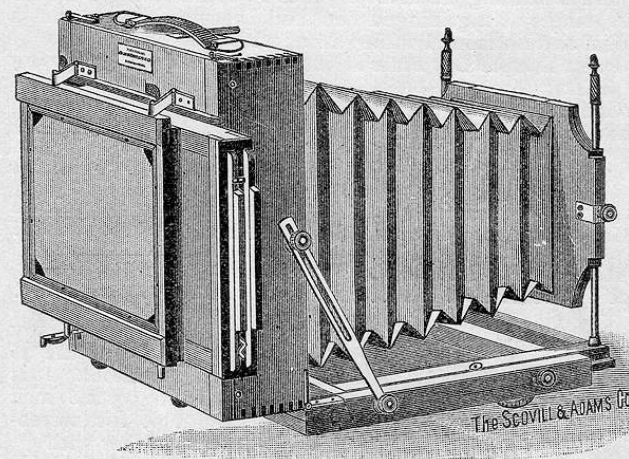
Price, complete.....\$20 00

5 x 7 FLANDREAU OUTFIT CONSISTS OF 5 x 7 FLANDREAU CAMERA, WITH

- 1 Daisy Double Dry Plate Holder, with *Patent Registering Slides*.
- 1 Scovill Adjustable Tripod No. 2.
- 1 Canvas Carrying Case.

Price, complete..... \$25 00

THE COMPACT VIEW OUTFITS.



These Outfits comprise a Compact View Camera—which is a polished mahogany box—with patent reversible swing-back, with turn-table on platform, and with raising front which can be set back on platform when Camera is used with a short focus lens.

One Canvas Carrying Case for Camera.

One Scovill Adjustable Tripod.

PRICE LIST.

5	x	7	Compact View Outfit.....	\$20 00
5	x	8	“ “ “	22 00
6½	x	8½	“ “ “	25 00
8	x	10	“ “ “	30 00

CENTENNIAL OUTFITS.

(INTRODUCED IN 1876.)

CENTENNIAL OUTFIT No. 202, consists of a Mahogany Polished Camera for taking pictures 4×5 inches, with *Folding Bellows Body*, single swing, hinged bed, and brass guides. It has a vertical and horizontal sliding front with

1 Daisy Double Dry Plate Holder, with *Patent Registering Slides*; also

1 Canvas Carrying Case,

1 No. 1 Scovill Extension Tripod. Price.....\$22 00

CENTENNIAL OUTFIT No. 202, with Instantaneous Lens. Price.... 32 00

CENTENNIAL OUTFIT No. 202A. The same as No. 202, but with Camera for taking pictures $4\frac{1}{4} \times 5\frac{1}{2}$ inches. Price..... 24 00

CENTENNIAL OUTFIT No. 202B. For pictures $4\frac{1}{4} \times 6\frac{1}{2}$ inches. Price..... 26 00

CENTENNIAL OUTFIT No. 203, consists of a Folding Mahogany Camera, well known as the '76 Camera (see illustration). It is adapted for taking 5×8 inch pictures, and also for stereoscopic views—together with

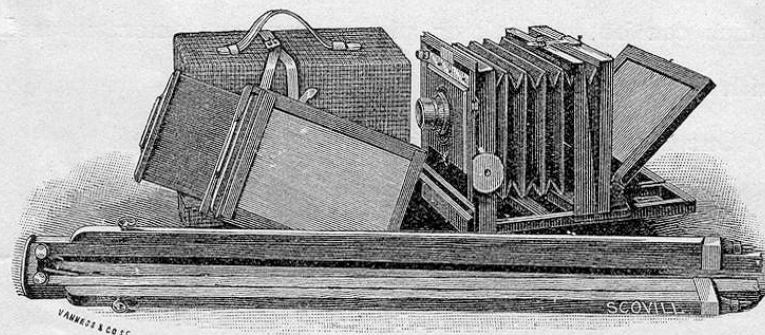
1 Daisy Double Dry Plate Holder, with *Patent Registering Slides*; also

1 Canvas Carrying Case.

1 No. 1 Scovill Extension Tripod.

Price 30 00

CENTENNIAL OUTFIT No. 204, Consists of a Folding Mahogany Camera, of finest style and finish, for taking $6\frac{1}{2} \times 8\frac{1}{2}$ inch pictures, with



1 Daisy Dry Plate Holder, with *Patent Registering Slides*; also

1 Canvas Carrying Case.

1 No. 2 Scovill Extension Tripod. Price.\$36 00

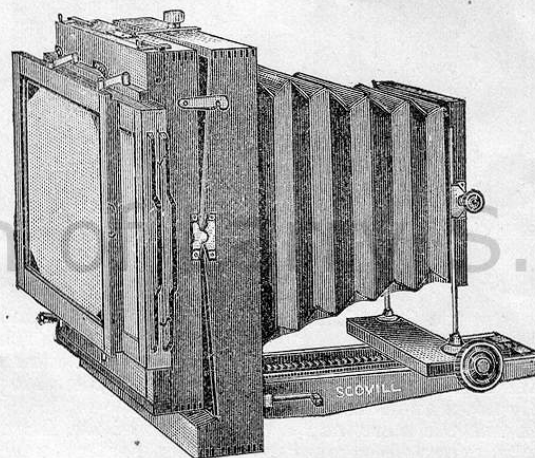
For Developing and Printing Outfits to be used with the above, refer to pages 26 and 27.

AMERICAN OPTICAL CO.'S STAR VIEW CAMERAS.

(PATENTED.)

The Star Reversible-Back Cameras have the patent reversible back, with automatic latch, which allows Holder to be inserted without holding back the ground-glass frame, the rack and pinion movement, and the *patent latch* for making the bed rigid instantaneously.

Each Camera is supplied with one Light-weight Holder with *patent Registering Slides* and canvas case.



STAR REVERSIBLE-BACK CAMERAS

No.	For View.	Single Swing-back.	Double Swing back.
No. 110—	4 x 5	\$25 00	\$29 00
" 111—	$4\frac{1}{4} \times 5\frac{1}{2}$	26 00	30 00
" 112—	$4\frac{1}{4} \times 6\frac{1}{2}$	30 00	34 00
" 113—	5 x 7	32 00	35 00
" 114—	5 x 8	34 00	38 00
" 115—	$6\frac{1}{2} \times 8\frac{1}{2}$	36 00	40 00
" 116—	8 x 10	40 00	44 00
" 117—11	x 14	60 00	64 00

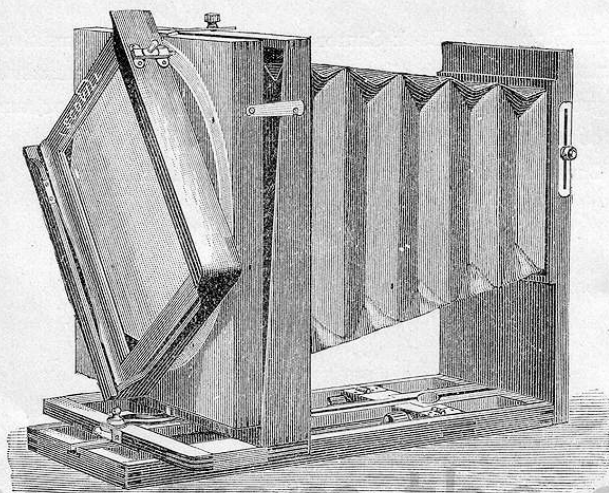
Not made above 11x14 size.

Canvas cases to contain Camera with more than one Holder made to order at extra price.

REVOLVING-BACK CAMERAS.

(PATENTED.)

EACH INCASED IN A CANVAS BAG, WITH HANDLE.



(BACK FOCUS PATTERN.)

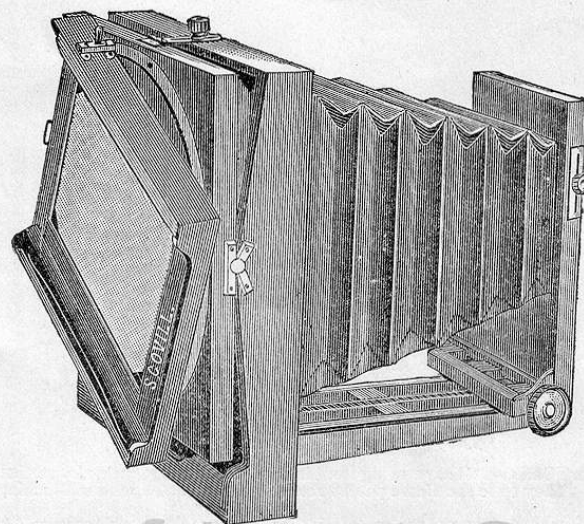
"These are the finest View Cameras ever constructed!" so says every photographer who has examined any of them, and this exclamation is not merely a tribute to the beauty and grace of their design, for invariably the desire has at the same time been expressed to possess one of these truly novel and substantial Cameras.

Wherein lies the merit and attractiveness of the Revolving-Back Camera, that photographers want to cast aside cameras now in use and procure one of this new pattern? Briefly stated, it enables the view taker to secure either an upright or a horizontal picture without changing the plate holder after it has been slid into the carriage. No other camera can, with such wondrous ease and celerity, be changed from the vertical to the upright or *vice versa*. The carriage is simply turned about in the circle and automatically fastened. By this latter provision the carriage may be secured at either quarter of the circle. Ordinarily, the slide will be drawn out of the holder to the right; but in certain confined situations, the ability to withdraw the slide to the left enables the photographer to obtain a view which he could not get with the usual provision in a camera. The photographer of experience is well aware of the difficulty, when taking an upright picture with a large camera without the revolving-back feature, of reaching up to draw out the slide at the top, and, what is more essential, of getting out the slide without fogging the plate in the holder.

Grace and strength are combined in the Revolving-Back Camera, and its highly-desirable features are gained without the sacrifice of steadiness or any other essential principle in a good camera. Indeed, its merit is such that out-door photography has been advanced and made more attractive by its introduction.

REVOLVING-BACK CAMERAS—Continued.

(PATENTED.)



(FRONT FOCUS PATTERN.)

REDUCED PRICE LIST.

Revolving-Back Cameras, each incased in a canvas bag, with handle, and above 14x17 size, with two handles.

REVERSIBLE.				Single Swing.	Double Swing.
No. 120.	For View 4	x 5 in.	.....	\$27 00	\$32 00
" 121.	"	4 1/4 x 5 1/2 "	.....	29 00	34 00
" 122.	"	4 1/4 x 6 1/2 "	.....	31 00	36 00
" 123.	"	5 x 7 "	.....	33 00	38 00
" 124.	"	5 x 8 "	.....	35 00	40 00
" 125.	"	6 1/2 x 8 1/2 "	.....	40 00	45 00
" 126.	"	8 x 10 "	.....	45 00	50 00
" 127.	"	10 x 12 "	.....	60 00	65 00
" 128.	"	11 x 14 "	with detachable revolving back.	65 00	70 00
" 129.	"	14 x 17 "	" " "	75 00	80 00
" 130.	"	17 x 20 "	" " "	85 00	90 00
" 131.	"	18 x 22 "	" " "	95 00	100 00
" 132.	"	20 x 24 "	" " "	115 00	120 00

With
Revolving
Back and
Reversible
Back and
Holders
for Each
Back.

These Cameras are fitted with Light-weight Dry-plate Holders.

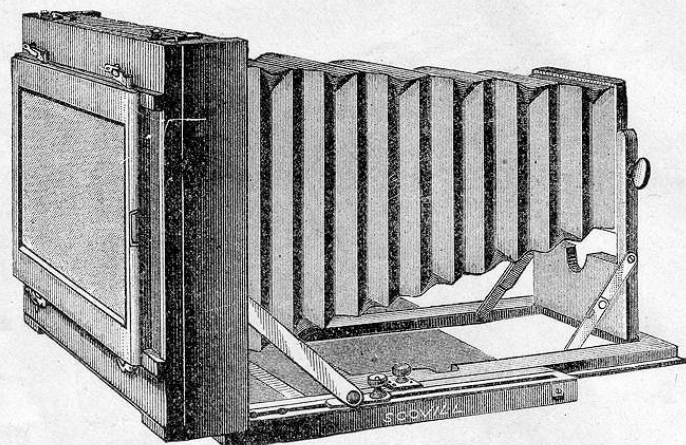
Please state, when ordering any size below 10x12, whether front or back focus is desired.

Revolving-Back Cameras, front focus, not made above 8x10 size.

Canvas cases to contain Camera with more than one Holder made to order at extra price.

IRVING VIEW CAMERAS.

The IRVING Camera recently introduced by the American Optical Co. was awarded the highest prize by the judges at the American Institute Fair. They expressed themselves as unable to see how a more complete, compact, light handsome and serviceable camera could be made.



The Irving Cameras all have swing front in addition to swing back, also vertical shifting front board. They have the Howe patent reversible back, fitted with self-locking ground-glass frame.

One of the best features of the camera is the absence of detachable screws. An idea of this is conveyed by the illustration showing the camera when extended.

These Cameras can be focused with either the ordinary Rapid Rectilinear or the Wide-Angle Lenses.

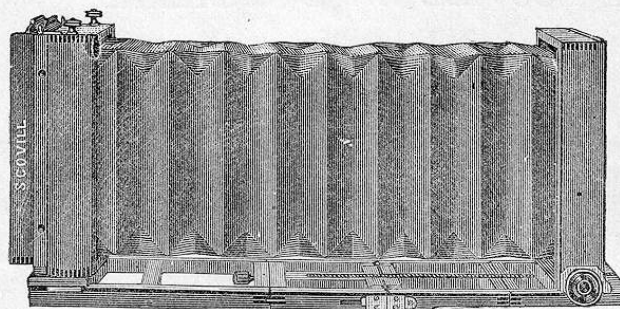


A superb canvas case, the finest ever made, is supplied with each one of the Irving Cameras.

	Single Swing.	Double Swing.		Single Swing.	Double Swing.
4 x 5	\$27.00	\$32.00	10 x 12	\$60.00	\$65.00
5 x 7	33.00	38.00	11 x 14	65.00	70.00
5 x 8	35.00	40.00	14 x 17	75.00	80.00
6½ x 8½	40.00	45.00	17 x 20	85.00	90.00
8 x 10	45.00	50.00	18 x 22	95.00	100.00

In order to convey an idea of the lightness of these cameras, it is sufficient to say that the 5 x 8 size camera weighs only 3 lbs.

THE SCOVILL MANIFOLD CAMERA.

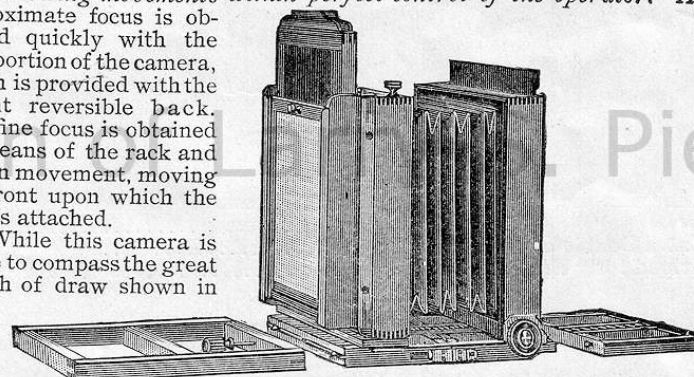


While this camera serves manifold purposes, as its name indicates, nothing could be more simple or more easily manipulated. The Manifold Camera has

special advantages peculiar to itself and possesses the greatest number of desirable features which can be combined in a camera without sacrificing lightness and compactness, or having complicated adjustments. The unique device which controls the horizontal and vertical swings was invented by Mr. W. J. Stillman, of the editorial staff of THE PHOTOGRAPHIC TIMES. To this has been added a central latch for the purpose of bringing the swing movements within perfect control of the operator. An

approximate focus is obtained quickly with the rear portion of the camera, which is provided with the patent reversible back. The fine focus is obtained by means of the rack and pinion movement, moving the front upon which the lens is attached.

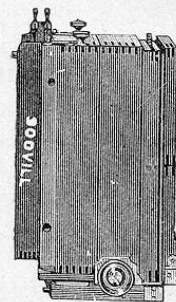
While this camera is made to compass the great length of draw shown in



the first illustration, the rear portion of the bed may be wholly detached, and, when desired, one-third of the remaining portion of the platform; a great advantage when photographing interiors, when an obtrusive tail-board renders focusing almost an impossibility. With one-half of the

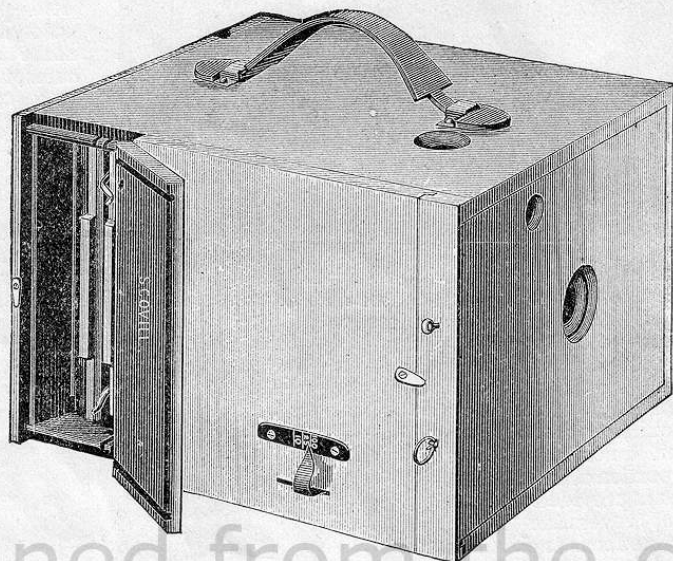
bed taken off, this camera is still of the usual length of draw. The ground-glass, when not in use, is displaced, *not detached*, by having the plate holder slid in front of it. This arrangement of ground-glass and plate holder is shown in the second view. Still another noticeable feature is the absence of clamping screws from the front boards, to move which one needs but to press firmly against the lens. The bed folds in front of and behind the camera, and has the patented latch.

PRICE LIST, including Canvas Case for Camera and one Holder.



No.		No.		No.	
140.	3¼ x 4¼ size \$30 00	143.	4¾ x 6½ size \$38 00	145.	6½ x 8½ size \$45 00
141.	4 x 5 size. . . 32 00	144.	5 x 7 size . . . 38 00	146.	8 x 10 size . . . 50 00

THE SCOVILL HAND CAMERAS. THE EMPIRE.



PRICE LIST.

The "Empire" Camera, No. 1 (finished in antique oak stain).....	\$5 00
" " " 2 (leather covered)	7 50
Extra Double Holders for "Empire"..... each,	1 00
Tripod for "Empire" Camera (Taylor).....	2 25

THE "EMPIRE" DEVELOPER OUTFIT

CONSISTS OF

1 Bottle Developer.	1 Minim Glass Graduate.
1 Package Hyposulphate Soda.	1 2-ounce Glass Graduate.
1 Package 4 x 5 Dry Plates.	1 Dark-Room Lantern.
2 4x5 Developing and Fixing Trays.	

Price, \$2.00.

THE "EMPIRE" PRINTING OUTFIT

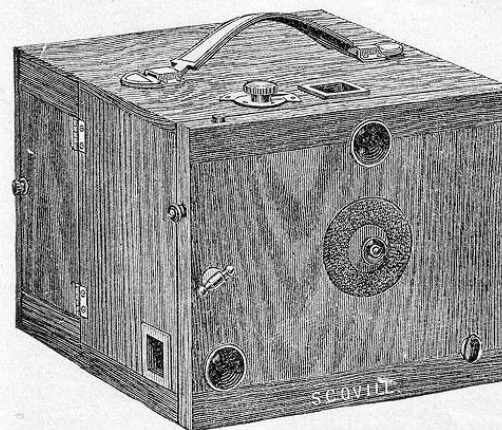
CONSISTS OF

1 Package 4 x 5 Printing Paper.	1 Package Mounts.
1 Bottle Toner and Fixer.	1 Jar Paste.
1 4 x 5 Printing Frame.	1 Ounce Glass Graduate.
2 4 x 5 Toning and Fixing Trays.	1 Manual.

Price, \$2.00.

THE PHOTOGRAPHIC TIMES, an Illustrated Monthly Magazine, reduced to \$4.00 per year. Single numbers, 35 cents each.

OUR NEW ANTIQUE OAK DETECTIVE CAMERAS.



To meet the demand for a cheap Detective Camera within the reach of the youth, and of those who want to make but a moderate investment in photographic appliances, we have introduced the

NEW ANTIQUE OAK DETECTIVE CAMERA,

which is made in two styles, *i.e.*, finished in Antique Oak or covered with leather. The whole front of this Camera is hinged, which is a great convenience. The Camera has a Recessed Finder, an Instantaneous and Time Shutter with Speed Regulator Cap for timed exposures, and one Double Dry Plate Holder, and

IS CERTAINLY LIGHTER AND MORE COMPACT THAN ANY OTHER CHEAP DETECTIVE CAMERA IN THE MARKET, AND, WHAT IS STILL MORE IMPORTANT, HAS A MUCH MORE EXPENSIVE AND MORE PERFECT LENS.

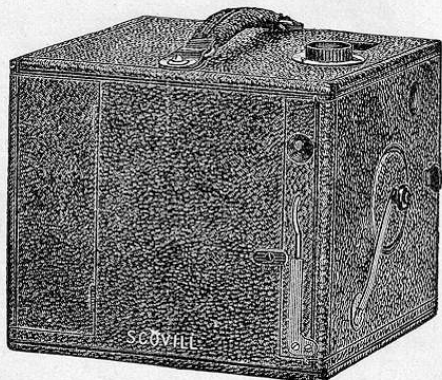
This Double Combination Instantaneous Lens, with interchangeable Stops, when bought separately costs as much as the whole camera. We are enabled to make a low price on the complete Camera, because the Cameras and Lenses are produced in such large quantities.

We would invite the attention of all parties interested in detective work to the sample pictures made by this camera, which are on exhibition in every Photo Stock house in this country.

Price, No. 1—4 x 5 Antique Oak Camera.	\$10 00
" " 2—Leather Covered.....	12 50
Extra Double Plate Holders..... each,	1 00
*Developing and Printing Outfit for the above	5 00

*Described on page 25.

THE WATERBURY DETECTIVE CAMERAS.



POINTS OF SUPERIORITY.

TIMED AND INSTANTANEOUS PHOTOGRAPHS. This is the only Detective Camera which is as well adapted for making views as for photographing quickly moving objects. The negatives produced are of such sharpness that they may be enlarged to almost any size. It is, in fact,

THE ONLY DETECTIVE CAMERA made with plate for tripod, and ground-glass the full size of the plate, just as in an ordinary view camera. This ground-glass is where it cannot easily be broken.

THE RECESSED FINDER is fitted to the WATERBURY CAMERA, and it differs from finders ordinarily supplied in that it shows *the same image* as is included on the ground-glass, though diminished in size. It is

THE LEAST TROUBLE of any hand camera, because you can have the negatives developed and the finished pictures delivered directly after making the exposures by sending them to a photographic printer. Where there is no waiting and uncertainty there will be no worry.

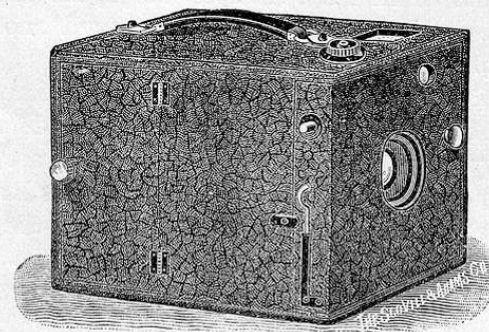
THE INSTANTANEOUS LENS in this Camera is not of the "universal focus," distorting, nondescript character, but works with such rapidity and is of such uniform excellence that it has added greatly to the popularity of this Camera.

THE FOCUSING ADJUSTER is beside the Finder.

PRICE LIST.

4 x 5 Waterbury Detective Camera, with 2 Double Plate Holders..	Leather Covered. \$25 00
Double Film Holders are substituted for Plate Holders where desired.	
5 x 7 Waterbury Detective Camera, with 2 Double Plate Holders..	40 00
5 x 7 Extra Holders.....each,	1 30
4 x 5 Extra Double Plate Holders.....	1 25

THE WATERBURY TRIAD CAMERAS.



When a discovery in photography is announced, it is claimed that the new article will displace everything then in use. These claims are seldom justified. There is generally found a place for the new article, if it has any value, and for the old as well.

For commercial purposes, for instance, such as the reproduction of photographs for illustration, it has been demonstrated that collodion "wet" plates are better than dry plates. For the use of the amateur, on the other hand, dry plates are much better than wet plates. Though many new supports have been tried, the sale of glass dry plates is larger now than ever before. Where only a few pictures are to be made on one day's outing it is likely that the experienced photographer will always use dry plates or cut films.

If he is going away for a summer vacation, or for a trip abroad, and expecting to make a large number of pictures, he will procure a roll holder loaded with continuous films. This will save him the bother of developing while he is away from home, and of changing plates; but he cannot well know what results he has secured until he has exposed the entire roll and has had it developed.

For those who want to use celluloid instead of glass plates, and are not willing to trust to good luck in the exposure of the complete roll of film, we offer with the "TRIAD" camera a *double* film holder which is very light. If the amateur carries six of these holders (loaded with twelve films) he is well supplied for one day; that is, if he is prudent and aims to get only really good pictures. At night, either in a photo-

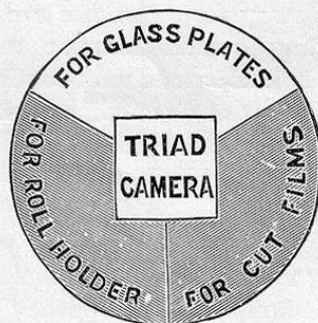
THE TRIAD CAMERAS—Continued.

graphic studio or in his own hotel room, the exposed films may be put away into safe receptacles, and another lot of unexposed films substituted for them.

The TRIAD Camera is fitted with the latest improved Roll Holder for continuous films, two double holders for glass plates, or two double film holders, if the latter are preferred.

This Camera is fitted with an Instantaneous Rapid Group Lens with easily interchangeable diaphragms—the most satisfactory detective camera lens ever made. It has a finder so constructed that the image is the same as that on the ground-glass, though of course it is proportionately diminished in size. Usually the finder in a Detective Camera shows simply the image on the plate, but not its relative size and proportions. The Instantaneous Shutter in this camera is provided with a speed adjuster which works from the outside, and the focusing device and scale are conveniently near the finder. This is very important when one is trying to photograph rapidly-moving objects.

For timed exposures use a tripod (easily adjusted to the camera by the plate underneath), open the door at the back, so that the image on the ground-glass can be easily seen, set the shutter with the opening opposite the lens, and bring into use the cap which fits the opening in front of the camera. By complying with these simple requirements you have a complete camera for timed exposures



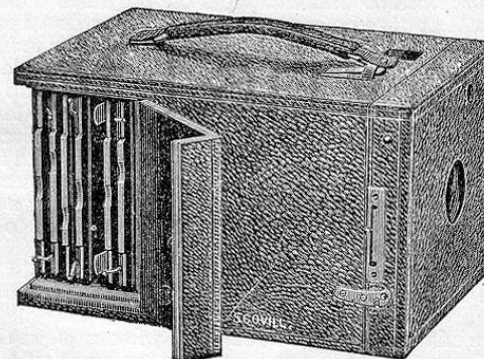
TRADE MARK.

	Price complete.	Price without Roll Holder.
4x5 Triad Camera, with Roll Holder, two Double Dry Plate Holders, or two Cut Film Holders.....	\$35 00	\$25 00
5x7 Triad Camera, with Roll Holder, two Double Dry Plate Holders, or two Cut Film Holders.....	55 00	40 00
5x7 Holders, each.....		1 30
Extra 4x5 Triad Double Dry Plate Holders, each.....		1 25
Holders for Cut Films, same prices as above.		

THE NEW WATERBURY CAMERA.

This 4 x 5 Camera is made of well seasoned wood, covered with good leather, and finely finished throughout in every respect. It contains three (3) Double Light Weight Holders in the back; is fitted with a self-adjusting Ground Glass and Frame; Cone Bellows; Two Finders, and a specially fine Single Lens with a metallic (Safety) Shutter for both timed and instantaneous exposure. The Shutter is made on a detachable front, thus allowing easy access to the lens and shutter any time. A carefully adjusted focusing scale is conveniently located on the top of the camera.

The dimensions of the box, including three holders, are $8\frac{3}{4}$ in. long; 7 in. wide and 6 in. high. It weighs only 3 lbs. and in a general way presents a similar appearance to the well-known and time-honored Waterbury Detective Camera.



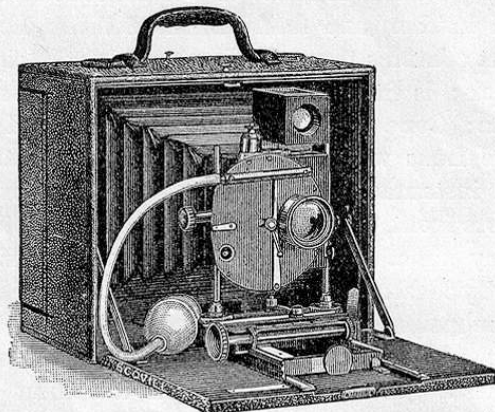
DIRECTIONS.

- 1st. Move the indicator on the top of the camera until it points to the mark on the focusing scale corresponding to the distance the camera is from the object to be photographed.
- 2d. Set the shutter by placing the tension spring lever in the first notch of the ratchet plate for slow speed, in the second for medium, and in the third for high speed. As the above is a safety shutter, it is immaterial whether the tension spring lever is moved to the right or left.
- 3d. For timed exposure give one pressure to the upper button on the right hand side of the camera for exposing, and a second (pressure) for closing. Instantaneous exposures are made by giving one pressure only to the lower button.

Price, including three holders, only \$15.00.

THE HENRY CLAY REGULAR CAMERA.

THIS IS THE ONLY DOUBLE SHIFTING AND SWING-FRONT HAND CAMERA.



The case is leather-covered, and when closed there is no finder visible, or openings elsewhere, to indicate that the Camera mechanism is concealed inside.

To open the front of Camera, press on the knob at the top of the Camera. It will at once be apparent how the lens board may be racked outward until the front end of it is over the lines which indicate the focus for various distances. The figures on the focusing scale indicate the focus. The finder of the Camera is placed on the top of the front board, and is, therefore, always at the same angle as the lens; the finder is a reversible one, which may be turned when the Camera is fastened to a tripod, or is held, not with the handle upward, but with the handle on the side, in order to secure a vertical instead of a horizontal view. The front board is arranged to slide upward when taking a tall building, church spire, or any high object, and it is also arranged to swing, to still further aid in that endeavor.

By an ingenious arrangement the swing and vertical sliding adjustments may be made to work when the Camera is turned over and used horizontally.

One of the advantages of this Camera, when used in the hand, is in the taking of street scenes from an elevated position and having the lines of the building straight while the subjects taken may be near by.

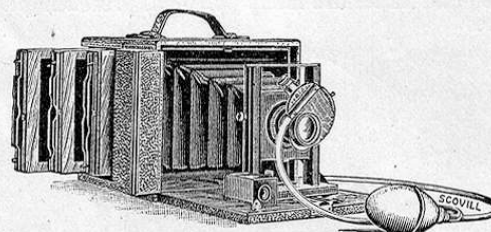
On the same principle, objects situated above the Camera level may be taken by reversing the position of lens and finder.

The back of Camera may be opened like the front and then used on a tripod like an ordinary View Camera.

PRICE LIST.

		Usual length of Bed and Bellows Less Lens and Shutter.
4x5 Henry Clay Camera, with pneumatic release shutter.....	\$50 00	\$35 00
5x7 Henry Clay Camera, with pneumatic release shutter.....	55 00	40 00
6½x8½ Henry Clay Camera.....		50 00
4x5, as above, with 4x5 roll holder, \$12.50 additional.		
5x7, as above, with 5x7 roll holder, \$15.00 additional.		
6½x8½, as above, with 6½x8½ roll holder, \$20.00 additional.		
Either of the above Cameras, with space for roll holder but without the roll holder. \$1.00 additional.		
There has been no H. C. lens and shutter made for the 6½x8½ size. For that size we recommend a Swift & Sons' 6½x8½ Rapid Paragon lens, fitted with a Prosch Triplex Shutter; we can furnish the camera fitted in this way for.....		
These Prices include one Plate Holder only.		\$110 00

THE HENRY CLAY, Jr.



Partly owing to the march of progress, and partly to the present tight state of the money market, there has long been a demand for a hand camera which should possess all the necessary requirements for good work, but at the same time be obtainable at a reasonably moderate price. That we have successfully met this with our new Henry Clay Junior camera we think all will readily admit on seeing that apparatus.

The Henry Clay Junior is now made in the two sizes, 4 x 5 and 4 x 7, and differs from the ordinary camera of these dimensions in certain points which we shall specify. It contains space for three holders, or six plates. A novel arrangement has been added by which the holders can be slipped into place without the usual inconvenience attached to such proceeding. The lens is a perfect little beauty, and does very fine work. The front portion has a sliding up and down movement for the lens and double swing. The camera front can be fitted into position with the greatest ease. The movement is the work of a second; by pressing the catch the front of the box falls down, a piece of brass is caught hold of, the camera comes forward to the scale and, with one-quarter turn, it is fixed as firmly as a rock into position. The instrument is fitted with revolving diaphragms, reversible finder and an admirable little shutter, which can be used for time or instantaneous work. When closed the dimensions of the 4 x 5 camera are 5¼ x 7 x 9, including the three holders contained therein. Altogether, we can thoroughly recommend this instrument to all who require a first-class camera at a moderate price.

It is manufactured in the works of the famous American Optical Company.

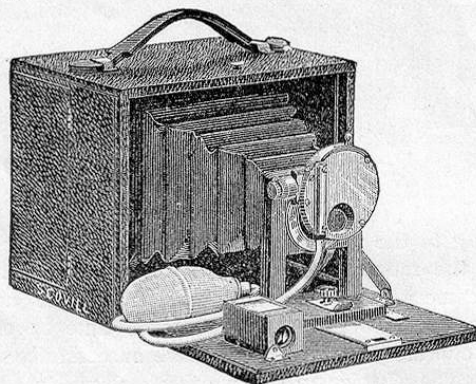
PRICE.

With one Holder, 4 x 5 size.....	\$30 00
“ “ 5 x 7 “	38 00
Extra Holders for 4 x 5 “	each, 1 25
“ “ “ 5 x 7 “	“ 1 30

(Send for Henry Clay Pamphlet.)

THE HENRY CLAY, 2d.

This 4 x 5 Camera is made of solid mahogany throughout, covered with the best morocco leather and finished with the greatest care. The front board, bed and finder are finely polished, presenting a very handsome appearance.



It is an easily adjusted folding Camera (as will be seen from the illustration), containing three (3) double light weight holders in the back.

It is fitted with a self-adjusting ground glass and frame, cone bellows, adjustable view finder, so that it can be used in either a horizontal or upright position, and contains a finely adjusted rising front board with single swing.

The lens is a single achromatic objective, specially made for this Camera, and is capable of doing the very finest work.

It is fitted with metallic (safety) shutter with pneumatic release, for making both timed and instantaneous exposures, and also a set of rotary diaphragms.

The outside dimensions of this Camera when closed are, 7 in. long, 5 3/4 in. wide and 6 in. high. It weighs only 3 1/2 lbs.

DIRECTIONS.

- 1st. Open the front by pressing the button on the top of Camera, thus placing the bed in position.
- 2d. Draw out the bellows until the indicator points to the mark on the focusing scale corresponding to the distance the Camera is from the object to be photographed.
- 3d. Set the shutter by placing the tension spring lever for timed exposures or slow speed in the first notch of the ratchet plate, in the second for medium speed and in the third for high speed. As the above is a safety shutter, it is immaterial whether the tension spring lever is moved to the right or left.
- 4th. For timed exposures give one quick pressure of the bulb for exposing and a second (pressure) for closing with tension lever, as above directed. Instantaneous exposures are made by giving one continuous pressure to the bulb.

Price, including three Holders with single lens, as described above, \$15.00.

The same, with double combination lens, \$20.00.

THE 5 x 7 HENRY CLAY STEREOSCOPIC CAMERA,

FOR TRIPOD AND HAND USE.



It is commonly known that of all pictures, those which are arranged to give the stereoscopic effect when viewed in a stereoscope, convey the true impression of perspective and solidity. It seems strange, indeed, that of the myriads of instantaneous pictures made, so few are taken with

reference to their future use in connection with the stereoscope, *for it is only by that means that the idea of perspective and solidity can be conveyed.* We can only assign as the reason the present almost universal use of hand cameras, and that none of them have, up to this time, been arranged for stereoscopic pictures.

There is a much over-worked phrase—"the long felt want," but we think that just that, literally, will be met by the new hand camera which the American Optical Company have just finished.

The first illustration shows one of these cameras closed, and you will observe there is no external opening for finder, lens or anything to indicate that the leather-covered case contains the appliances which go to make up an instantaneous camera.

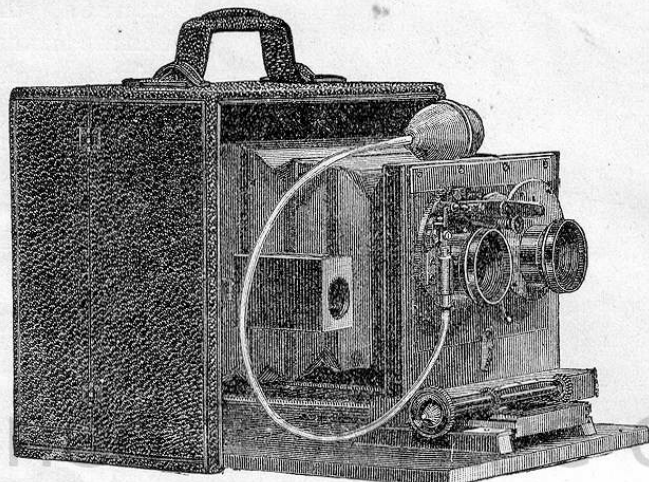
This camera measures eight inches high, nine inches long and five inches wide; its weight is about five pounds. It has a screw plate underneath, so that it may be used with a tripod. It has a door in the back of the case, and through that opening the image thrown by the lenses may be seen on the ground-glass focusing screen.

The second illustration shows the appearance of the camera

HENRY CLAY STEREOSCOPIC CAMERA—Continued.

when open. The pair of Optimus Lenses is fitted with a triplex stereoscopic shutter with pneumatic release, made by the Prosch Manufacturing Company.

The camera is furnished with a focusing scale and a reversible finder. Either half of the stereo negatives when cut in two are of a size suitable for making lantern slides from.



This camera may also be used to take a single picture of the size of the ground-glass focusing screen (5x7 inches), either vertical or horizontal. In the former case the reversible finder comes into use. The septum which divides the camera inside is arranged so that it may be easily taken out, the stereo lenses are mounted on a removable front, and an extra front is furnished on which may be placed any lens of not over seven and a half inches equivalent focus.

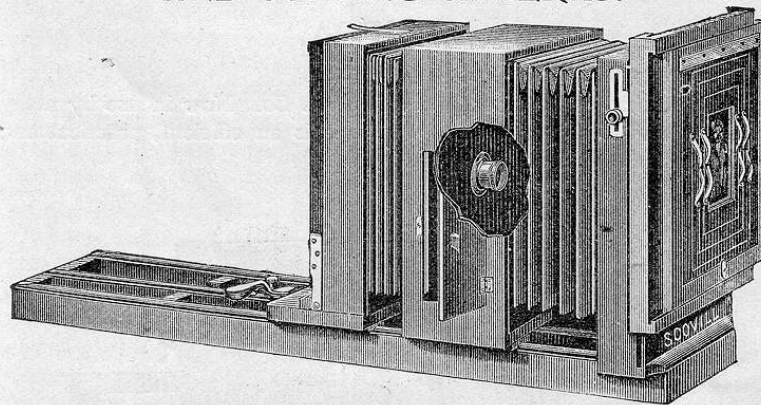
Price, with a pair of Rapid Rectilinear Lenses and Prosch Stereoscopic Shutter with Pneumatic Release.....\$75 00

This camera can also be made with vertical sliding and swing front. By means of the former the proportion of sky and foreground may be adjusted; the latter permits the taking of subjects which may be either above or below the level of the camera and still preserve the lines vertical.

Price, with a pair of Rapid Rectilinear Lenses and Prosch Stereoscopic Shutter with Pneumatic Release, and with vertical sliding and swing front.....\$80 00

Same, with double swing front.....\$5 00

A 5x7 Roll Holder for Transparent Films can be furnished with either of the above forms of this camera for \$15.00 additional. This addition would make the case about two inches wider and one-quarter inch higher.

THE SCOVILL ENLARGING, REDUCING AND COPYING CAMERAS.

When ordering, please specify number and sizes of kits, also style of Holder wanted.

No.	Size,	6 1/2 x 8 1/2	4 foot bed.	Price,	\$30 00
61.	8x10...	5	"	"	35 00
62.	10x12...	5	"	"	48 00
63.	11x14...	5	"	"	60 00
64.	14x17...	6	"	"	72 00
65.	17x20...	7	"	"	90 00
66.	18x22...	7	"	"	100 00
67.	20x24...	7	"	"	110 00

Special sizes and styles made to order.

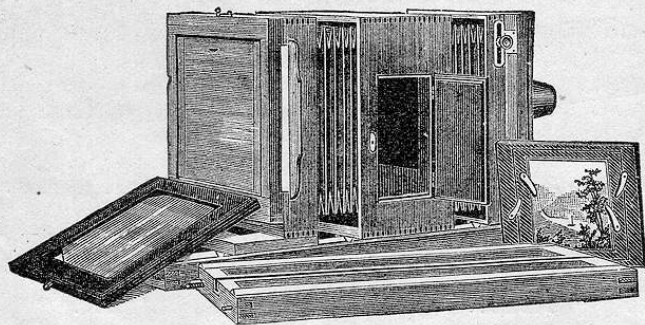
The form of construction of this new Camera is made apparent by the illustration here shown. The experienced copyist will not need any such simple directions for use as we append.

DIRECTIONS FOR USE.

To copy a negative in the natural size, place it in the kit on the front of Camera and button it in. Attached to the centre frame of the Camera is a division upon which, on the side toward the Camera front, a Lens is mounted. Suppose this to be a quarter-plate Portrait Lens, the focal length of which we will suppose to be 4 inches—draw back the centre frame and the Lens twice the focal length of the Lens (8 inches); slide the back frame with ground glass the same distance from the centre frame. To enlarge with the same Lens to eight times the size of the original, the centre of the Lens must be 4 1/2 inches from the negative, and the ground glass be 36 inches from the centre of the Lens. To reduce in the same proportion, reverse and have 36 inches from the centre of the Lens to the negative, and from the centre of Lens to ground glass 4 1/2 inches.

THE WALMSLEY PHOTO-MICROGRAPHIC CAMERA.

Manufactured by the American Optical Co. Now in use by many colleges and leading microscopists, and is an efficient, practical and cheap instrument for the purpose.



It is made in three sizes: the cheaper, No. 1 (selling for \$18.00), is adapted only to the making of negatives on plates $3\frac{1}{4} \times 4\frac{1}{4}$, or $4\frac{1}{4} \times 5\frac{1}{2}$, as may be necessary. The complete form, No. 2 (costing \$30.00), is also a miniature enlarging, reducing, and copying camera, admirably adapted to the production of lantern transparencies from any size negative up to $4\frac{1}{4} \times 5\frac{1}{2}$.

The Camera (of mahogany) is square, carrying a Flammang single plate-holder for $4\frac{1}{4} \times 5\frac{1}{2}$ plates; usable vertically or horizontally, and with kits of $3\frac{1}{4} \times 4\frac{1}{4}$ plates. The bellows are in two sections, with a central division of mahogany, which carries a removable partition, to which a suitable rectilinear photographic lens can be attached, for enlarging, reducing or copying. A light-tight door on one side of this wooden section gives ready access to the lens for inserting or removing diaphragms, or other necessary manipulations, while a milled head, accessible from the same opening, clamps the lens-bearing section firmly to the bed of the camera at any desired point.

The bellows have an extension of two feet in addition to the length of the box, sliding very smoothly upon V-shaped ways, which for greater convenience are made in two sections, firmly attached to each other by wooden dowels, and a solid brass screw, worked by a milled head.

The bellows are firmly held at any desired point of extension by a cam, operated by a lever conveniently placed at the rear of the focusing-

screen, which latter is hinged at the bottom, and, when not in use, lies out of the way upon the extension bed. The screen itself is of the very finest ground-glass, but is used only for arranging the portion of the object to be photographed properly in the centre of the plate, as no surface can be ground finely enough to permit the sharp focusing of any delicately-lined object. For this purpose, a circle or disk of thin microscopic covering glass is attached with balsam to the centre of the ground-glass screen, which clears away all the inequalities of the latter, and leaves an exquisitely fine surface to receive the image, which, by using an ordinary focusing-glass, may be as sharply defined as in the eye-piece of the microscope.

The front of the Camera (which is double-shifting, for the purpose of centreing) carries a cone-shaped tube, which receives the tube of the microscope when the latter is inclined to a horizontal position, and conveys the image-bearing rays of light therefrom into the body of the Camera. This cone is removable, and in its place may be inserted kits, carrying negatives from quarter to half size, for enlargement or reduction to lantern slides, as may be desired. Or a front-board, bearing a lens, may be inserted in its place, converting the Camera into a copying one. Indeed, a more complete instrument for all the purposes for which it was devised could scarcely be conceived or desired.

In use, the Camera is attached to a solid platform (which also carries the microscope and lamp) by a screw such as is used with an ordinary tripod. By this means any jar or tremor produced by a passing vehicle or other means is communicated to microscope and Camera alike, preventing any diminution of sharpness in the negative. By this arrangement, also, the whole apparatus is so compact that, with the bellows closed, the operator can easily see the image upon the ground-glass, and at the same time reach the milled heads upon the microscope controlling the stage and focusing movements, permitting the arrangement of the subject with the greatest nicety. But when the bellows are extended to their full length, some appliance becomes necessary to operate the fine adjustment of focus, while the eye can discern the changes upon the screen. This is most simply effected in the employment of a fine cord passing in a groove around the periphery of the milled head of the fine adjustment-screw, and thence through a series of hook-eyes to the rear of the camera bed, where it is held taut by a couple of leaden weights. The slightest pull upon either cord moves the fine adjustment screw with the utmost nicety.

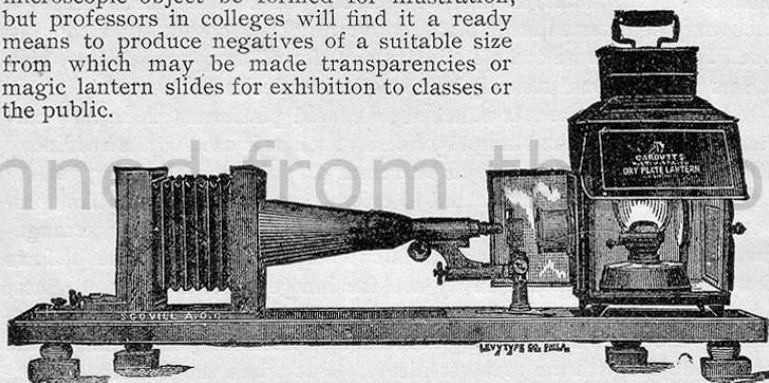
PRICE.

Walmsley Micro-Camera.....	\$18 00
$4\frac{1}{4} \times 5\frac{1}{2}$ Walmsley Micro-Camera, enlarging, reducing and copying pattern.....	30 00
$6\frac{1}{2} \times 8\frac{1}{2}$ Walmsley Micro-Camera, E. R. & C.....	35 00

THE SCOVILL PHOTO-MICROSCOPIC OUTFIT.

Photographing with the microscope has hitherto been accomplished by the aid of elaborate and costly apparatus, and been applied chiefly to making illustrations for scientific magazines. The process used, that of wet collodion in connection with sunlight, involved the procurement of an expensive heliostat to produce a steady illumination, for with any less powerful light the exposure would necessarily be so prolonged that the coating of the plate would dry and become useless. Now all this is changed, for with the modern improvements in photography which are the result of the introduction of gelatine dry plates, the photographing of microscopic objects becomes as easy of accomplishment as the photographing of the beautiful and visible in nature is with the popular amateur outfits.

The scientist and microscopist, instead of spending hours in making imperfect drawings, aided by the camera lucida, may in a few minutes, with the assistance of photography, produce a more perfect representation of a minute object than it is possible for the hand of man to, working conjointly with the eye. Not only can an enlarged image of a microscopic object be formed for illustration, but professors in colleges will find it a ready means to produce negatives of a suitable size from which may be made transparencies or magic lantern slides for exhibition to classes or the public.



If this is done in the daytime, a room from which all white light is excluded should be selected; but if used at night, as in most cases it would be, the operations may all be performed in the midst of a family group for their interest and amusement, and to impart to them knowledge of the minute life or organisms of the world which the microscope alone can reveal.

THE SCOVILL PHOTO-MICROSCOPIC EQUIPMENT, consisting of

- 1 Scovill Special Half Plate Camera.
- 1 Multum in Parvo Lantern, with Double Condenser.
- 1 dozen $4\frac{1}{4} \times 5\frac{1}{2}$ size B Keystone Plates to make Negatives; also
- 1 dozen $3\frac{1}{4} \times 4\frac{1}{4}$ size A Plates for Transparencies.

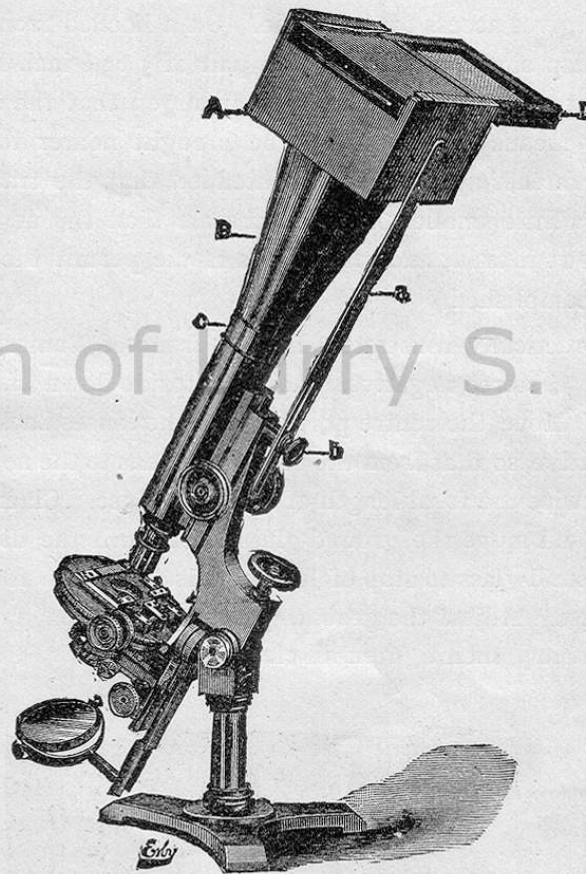
Price, complete... \$18 00
The Camera, alone... 9 00

The presumption is that you are provided with a microscope. If not, we recommend the purchase of one from a regular dealer in microscopical goods.

Circular containing directions for use sent with each outfit.

THE MERCER PHOTO-MICROGRAPHIC CAMERA.

SIZE, $2\frac{3}{4} \times 3\frac{1}{4}$. PRICE, \$7.50.



MERCER CAMERA, SHOWN WITH MICROSCOPE TO ILLUSTRATE WORKING.

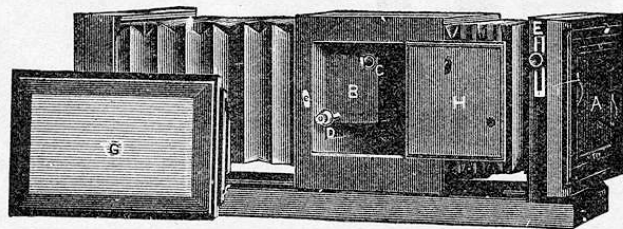
This Camera is provided with a brass cone and plate holder, with ground-glass attached, to slide back and forth in the carriage as desired.

THE STEREO TRANSPARENCY CAMERA.

A new copying camera for making stereoscopic transparencies from stereoscopic negatives without cutting the negative is now manufactured by the American Optical Company.

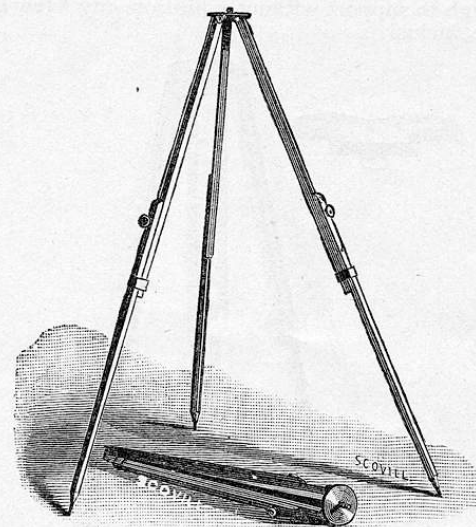
Midway between the ends of the Camera is a frame which divides the body of the Camera in two parts. A door at the side (H) gives access to the inside. On a hooded front (B), with a flap shutter, is screwed a pair of 5 or 6 inch lenses. The front carrying the lenses is so arranged that the lenses may, by means of screws (D), be brought nearer to each other or farther apart. If it is intended that the transparency be a little smaller or larger in scale than the negative, the bellows in front and rear of this frame permit the same to be accomplished.

To practically illustrate: In the front of Camera (A), button a $\frac{5}{8}$ stereo negative, placing it upside down and film side in. Move the centre portion with the lenses back from the negative, so that from the stop of the lens to the negative will be twice the focal length of the lens in use. Clamp this section, and move the ground-glass back until the distance from ground-glass to stop of lens equals twice the focus of lens in use. Adjust the ground-glass until the image on the same is sharp, then tighten all clamp-screws.



A, Stereo negative. B, Hooded front, covering lenses. C, Mill-head for raising flap-shutter. D, Screw for moving right hand lens. E, Set-screw for vertical sliding-front. F, Ground-glass. G, Holder. H, Door.

THE SCOVILL EXTENSION TRIPODS.



This Tripod possesses special advantages. It can be set up, ready for use, quicker than any other, and with less trouble. By turning the brass buttons shown in the accompanying illustration, the legs may "in a twinkling" be extended to the desired length, and fastened. When this Tripod is placed on uneven ground, the camera it supports may be brought to the proper level by simply adjusting the length of the Tripod legs. Another commendable feature of the Scovill Extension Tripod is, that it has no detachable parts to be misplaced or lost. Combining as it does firmness, strength and lightness, this Tripod must at once find favor with the professional view taker, who very often wastes valuable time, or loses opportune moments in placing the Tripod legs and changing their position to include just what is wanted in a picture, and to level the camera. The artist for a sketching trip finds the top of this Tripod a very convenient place to fasten his easel, as well as his camera.

No. 1,	for 1-4 and 4x5 Cameras	..... each,	\$3 00
" 2,	" 5x8 Cameras	..... "	3 25
" 2½,	" " "	..... "	3 50
" 3,	" 6½x8½ Cameras	..... "	5 00

THE ALBION TRIPOD.

This is the most elegant Tripod ever introduced. It is adapted to and is firm enough to support without vibration any View Camera from 5x7 to 10x12 size, inclusive.



The Legs of this Tripod are adjustable as to length, and may be quickly folded. As the binding straps are attached, they are always in place when wanted.

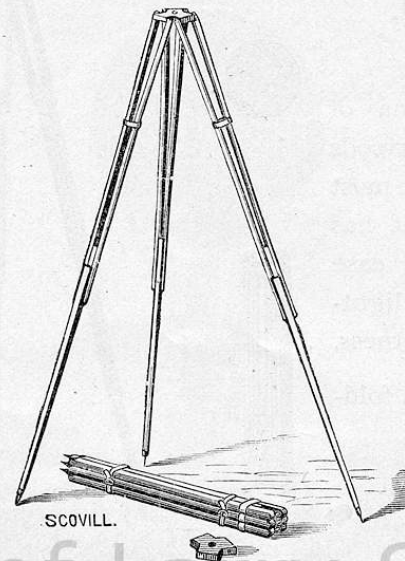
The artistic design and faultless finish of every portion of this Tripod cannot be realized without seeing one, and to use an ALBION TRIPOD means to be fully satisfied, and wish for none other.



- | | |
|--|--------|
| No. 1, Cherry wood..... | \$4 50 |
| No. 2, " " | 6 00 |
| No. 3, Spruce (very light), price..... | 6 00 |

THE SCOVILL ADJUSTABLE TRIPOD.

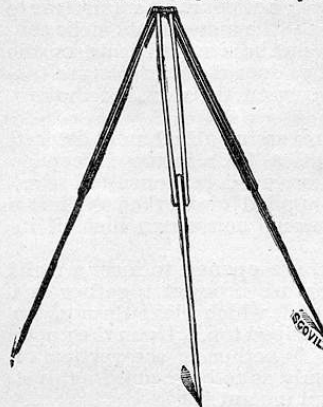
FEATHER WEIGHT.)



Nothing more compact, certainly nothing as graceful in appearance and light in weight as the new Tripod for out-door Photography, just produced by the American Optical Company, has yet made its appearance. Because so readily adjusted to the utmost irregularity of the earth's surface, it was decided to call it the "Adjustable Tripod." Lady amateurs prefer it to any other pattern on account of its lightness and beauty. The top is covered with billiard-cloth to prevent marring the fine polish on our cameras, and the clamping screws are not detachable.

SCOVILL ADJUSTABLE TRIPOD.

- | | |
|--|---------------------|
| No. 1..... | Price, each, \$3 50 |
| " 2..... | " " 5 00 |
| SCOVILL ADJUSTABLE JOINTED TRIPOD, to fold and pack in a | |
| 22-inch Valise..... | \$4 00 |
| Do. with Canvas Bag and Handle.. | 5 25 |



THE IMPROVED TAYLOR TRIPOD.

The illustration here presented makes an extended description unnecessary. Suffice it to say that this tripod is very firm when set up, and folds up compactly by simply pressing together the two upper joints of each leg, thus unsetting them from the pins on the brass top and then doubling them over on to the third joint. This movement is naturally reversed when placing the tripod in position to support the camera.

Price, with metal disc and non-detachable screw.....\$2 25 each.
Adapted for cameras from 1-4 to 8x10 size.

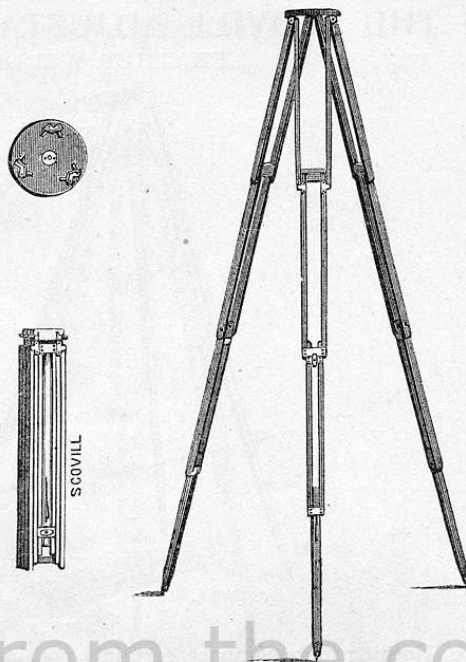
THE DAISY TRIPOD.

An inspection of one of these Tripods will convince the most skeptical that it has no superior for ease of adjustment, lightness and compactness.

Length, when folded, 16½ inches.

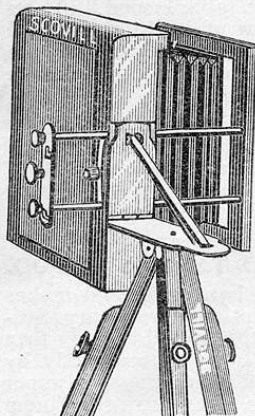
Weight, 2 lbs.

PRICE, \$5.00.



PATENT CAMERA REVERSING ATTACHMENTS.

ADAPTED ONLY TO SCOVILL
EXTENSION TRIPODS.



- No. 1, with No. 1 Extension Tripod, and
Camera Bed Plate..... \$4 50
No. 2, with No. 2 Extension Tripod..... 5 00

"When the means for the reversal of a camera are brought into notice, it is a fair test to ascertain how quickly the movement can be consummated; is the mechanism intricate or the reverse; and, finally, does it aid in picture-taking, or, per contra, impair the worth of the production.

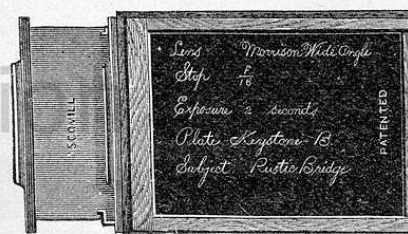
"When the new reversing attachment devised at the American Optical Co.'s factory is seen, no manual of instruction need be consulted to ascertain how it is applied or worked. This is obvious. A cut does not convey an idea of its merit thus readily.

"Two brass plates, hinged at the end, are opened to form a right angle, and held rigidly in that position, or are brought together and tightly clamped by a rod with a hooked end, which plays through an opening in the brass plate secured fast to the tripod top. Upon the upper plate the camera is set or unset at pleasure. Whether in the vertical or horizontal position, the camera is held so firmly as to be secured against vibration. The reversal can be effected in an instant."

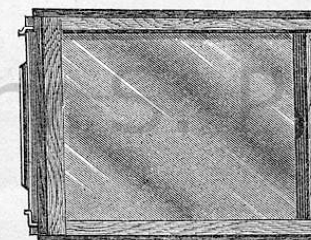
LIGHT-WEIGHT DOUBLE HOLDERS.



Patented November 15, 1887, and January 24, 1888.



SHOWING
PATENT REGISTERING SLIDE.



WITH FRONT SLIDE
TAKEN OUT.

Substantial, serviceable and accurate double holders cannot be made smaller or lighter than the Scovill Light-weight Holders, and though so thin kits may be used in them. The Light-weight Holders yield a negative *the full width of the plate*, and, what is equally important, the plate may be placed in these holders or removed therefrom *without touching the sensitive surface and without danger of breaking it*. Observe the means shown in illustration for locking the slides. The Light-weight Holders are made with solid frame so that they *will not come apart, leak light, or warp*. Every holder has the *patent Registering Slides* described on page 61.

If you want to secure *accurate focusing*, use the Light-weight, or any of the other Scovill Plate Holders.

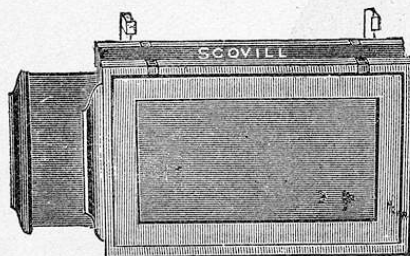
Price Light-weight Double Holder; also Scovill Double Film Holder:

3¼ x 4¼	\$1 10	5 x 7	\$1 30
4 x 5	1 25	5½ x 7	1 40
4¼ x 5½	1 25	5 x 8	1 40
4¼ x 6½	1 25	6½ x 8½	1 70
4¾ x 6½	1 30	8 x 10	2 00

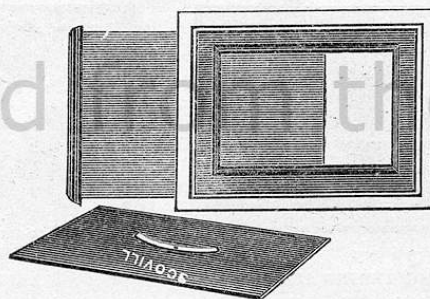
Light-weight Holders can be fitted to any American Optical Co. Camera or Scovill Outfit.

THE DAISY DRY PLATE HOLDER.

"This holder is a Daisy!" The frequent repetition of this exclamation fixed the name by which this holder is designated. It has the great merit of being lighter and of occupying less space than any other substantial holder that has ever been devised. The DAISY HOLDER opens like a book when the dry plates are being put into or taken out of it, and is so arranged that light cannot penetrate through from one side to the other. There are no projecting screws on this holder. What supplies their place is simple and more effective. The slides have no catches, as they are unnecessary.



THE FLAMMANG SINGLE DRY PLATE HOLDER.



(Patented.)

ARRANGED TO TAKE KITS OF LESSER SIZE.

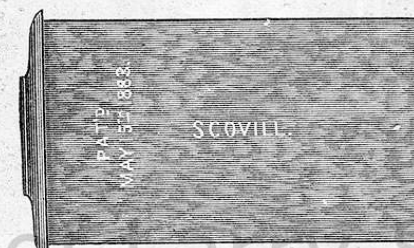
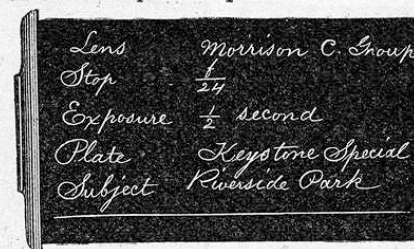
When making Dry Plate Holders of our patented designs to fit cameras not made by us, we are obliged to add 25 per cent. to the list price, as such holders must be made singly, not in quantity. Even with the addition to the list, we cannot expect to get more than the cost.

Size.	Daisy Double Dry Plate Holder. Kits extra.	Flammang's Single Dry Plate Holder. With Kits.	Albion Holders.
3 1/4 x 4 1/4	\$1 75	\$1 50	
4 x 5	2 00	1 75	
4 1/4 x 5 1/2	2 10	1 85	
4 1/4 x 6 1/2	2 25	1 90	\$2 25
5 x 7	2 35	2 10	2 35
5 x 8	2 50	2 20	2 50
6 1/2 x 8 1/2	4 20	3 80	3 25
8 x 10	6 00	5 00	4 30

REGISTERING SLIDES.

(PATENTED.)

Will be supplied with new American Optical Co.'s Dry Plate Cameras and Amateur Outfits up to 10x12 size without addition to present price list.



Extract from "PHOTOGRAPHIC TIMES," March, 1884.

In the pleasure or excitement attendant upon picture-taking, holders have been so changed about that the note-book afforded no clue to their identity. All photographers, whether professional or amateur, who have in time passed puzzled their brains in the endeavor to solve such vexatious questions as these—

"Have I or have I not exposed that plate?"
 "If exposed, was the plate used for that prized picture?"
 "Shall I incur the risk of making a double exposure?"

henceforth will have themselves only to find fault with if they do not procure and use in their dry-plate holders registering slides, or, as they have been called, "Record Slides." These can be written upon with slate or lead pencil *ad libitum*, and the writing erased without injury to them. Before taking a picture the mottled surface of these slides is seen; afterward they are turned, so that the blackboard surface, which was toward the sensitive plate, is out, and the data respecting the exposures are penciled thereon—a very convenient place, by the way, to consult it when developing the plates.

The material out of which these Registering Slides is made is so hard that they outlast common paper slides in the proportion of five to one. Additional Holder Slides of this kind supplied at the following prices:

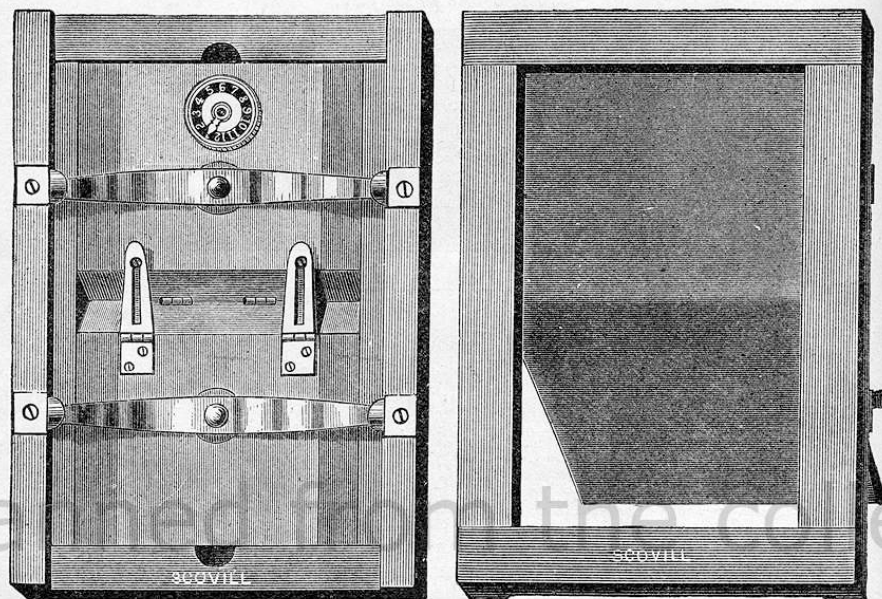
PRICE REGISTERING SLIDES.

Size for	Each.	Size for	Each.
3 1/4 x 4 1/4	\$0 18	5 x 7	\$0 35
4 x 5	20	5 x 8	40
4 1/4 x 5 1/2	24	6 1/2 x 8 1/2	55
4 1/4 x 6 1/2	28	8 x 10	75

Registering Slides not made above 8x10 size.

IRVING PRINTING FRAMES.

(PATENTED.)



IRVING PRINTING FRAME, CLOSED. IRVING PRINTING FRAME, OPEN.
BACK VIEW. FRONT VIEW.

The IRVING FRAMES have valuable features which cannot be copied. They are, in workmanship, design, and other respects, superior to all other printing frames.

The continuous felt pads, made especially to order for us, insure absolute protection and uniform pressure throughout. The Irving Patent Catches lock the back, so that when one flap is open there is not the slightest danger of the flaps, paper or negative slipping.

The springs are cut by dies of specially tempered and tested metal, and are riveted to the backs with washers underneath to protect the woodwork.

The IRVING FRAMES are made of cherry guaranteed not to warp or crack.

The tally does not depend upon any other part of the frame to lock it, for the pointer will remain in place no matter what is done to other parts of the frame.

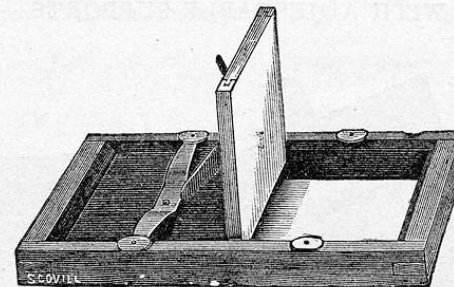
PRICES FOR HALF OR TWO-THIRDS OPENING STYLES.

3 1/4 x 4 1/4	\$0 45	5 x 7	\$0 60
4 x 5	48	5 x 8	65
4 1/4 x 5 1/2	50	6 1/2 x 8 1/2	70
4 1/4 x 6 1/2	55	8 x 10	80

When made with backs to open lengthways, ten per cent. is added to the foregoing prices, for the respective sizes.

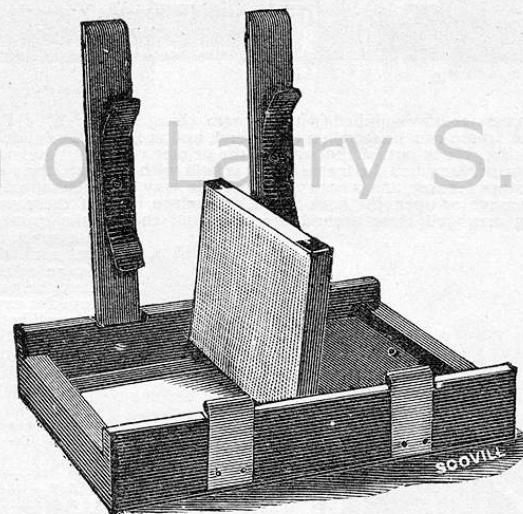
SCOVILL PRINTING FRAMES.

MANUFACTURED OF CHERRY, WITH BRASS SPRINGS, PANELED BACKS AND TALLY.



Scovill Flat Printing Frame (Open).

Our Printing Frames are constructed so that a uniform pressure is obtained, thus insuring perfect contact between the positive paper and negative plate. The back-boards are so arranged that the progress of the printing may be watched without danger of shifting the paper.



Scovill Deep Printing Frame (Open).

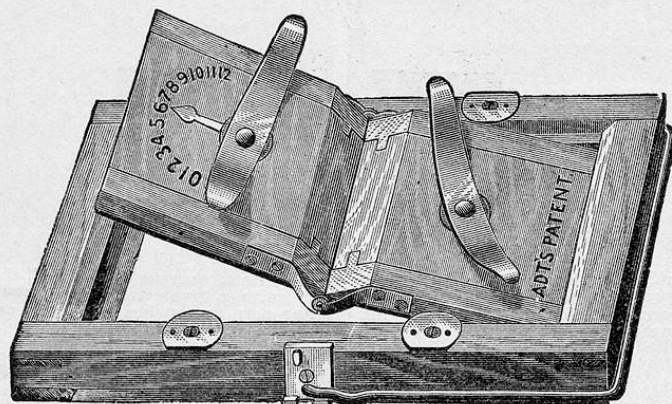
For Plates.	Flat.	Deep.	For Plates.	Flat.	Deep.
3 1/4 x 4 1/4	\$0 36	\$0 75	13 x 16	\$2 05	\$2 75
4 x 5	38	75	14 x 17	2 45	3 00
4 1/4 x 5 1/2	40	75	16 x 20	3 10	4 25
4 1/4 x 6 1/2	42	85	17 x 20	3 30	4 60
5 x 7	50	85	18 x 22	4 20	5 20
5 x 8	52	1 00	20 x 24	5 10	5 50
6 1/2 x 8 1/2	60	1 25	24 x 30		9 00
8 x 10	75	1 50	35 x 45		16 00
10 x 12	1 00	1 75	30 x 60*		22 00
11 x 14	1 85	2 50			

* Larger or special sizes made to order at short notice, according to specification.

When made with backs to open lengthways, ten per cent. is added to the foregoing prices for the respective sizes.

ADT'S PATENT PRINTING FRAME.

WITH ADJUSTABLE SUPPORTS.



These frames are now supplied (without extra charge) with Adt's Patent Support, with which the frame can be stood on either end, and at four different angles, for exposure while printing. It is out of the way of the printer when introducing the paper, or examining the print, for when the frame lies or is held with back up, the support instantly drops upon its stops for rest, and is entirely out of the way of the hand of the printer, so that he may remove or open the back-board, or replace it, as if there were no support present. Being arranged close around the sides and ends of the frame, it occupies so

little space as not to interfere with the packing or storage of the frames, and when the printer places his frame for exposure the support readily finds its position for supporting the frame without any special manipulation.

PRICES.

3 1/4 x 4 1/4	.....	\$0 50
4 x 5	.....	50
4 1/4 x 5 1/2	.....	50
4 1/4 x 6 1/2	.....	60
5 x 7	.....	65
5 x 8	.....	65
6 1/2 x 8 1/2	.....	75
8 x 10	.....	85
10 x 12	.....	1 15
11 x 14	.....	2 15
13 x 16	.....	2 40
14 x 17	.....	2 80

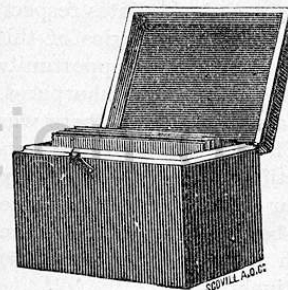
When made with back to open lengthways, an additional charge of 10 per cent. will be added to the above prices.

As will be seen by a glance at the cut, the adjacent edges of the parts of the back-board are beveled outward, and the hinges placed on the sides with their axes on a line with the surface. This permits the attachment to the face of the back-board of a HEAVY, CONTINUOUS ELASTIC FELT PAD. This obviates the necessity of using a separate pad, which is so easily misplaced and lost.

THE SCOVILL PRINTING FRAME PADS.

For	Frames, in boxes, per dozen	First Quality. Gray.
3 1/4 x 4 1/4	\$0 24
4 x 5	33
4 1/4 x 5 1/2	36
4 1/4 x 6 1/2	38
5 x 7	54
5 x 8	57
6 1/2 x 8 1/2	84
8 x 10	1 44
10 x 12	2 16
11 x 14	2 88
14 x 17	4 08
16 x 20	5 04
17 x 20	5 28
18 x 22	6 48
20 x 24	8 40

The above goods are put up in boxes containing one dozen pads each. We have improved the quality, and, as you will notice, have reduced the price.



NEGATIVE BOXES.

FOR HOLDING
TWENTY-FOUR PLATES
EACH

	Regular, with Hook.	Light Tight, with Lock and Key.		Regular, with Hook.	Light Tight, with Lock and Key.
3 1/4 x 4 1/4	..... \$0 62	\$1 62	5 x 7	..... \$0 85	\$1 85
4 x 5	..... 65	1 65	5 x 8	..... 90	1 90
4 1/4 x 5 1/2	..... 70	1 70	6 1/2 x 8 1/2	..... 1 00	2 00
4 1/4 x 6 1/2	..... 75	1 75			

NEGATIVE STORAGE BOX.

To hold 100 4x5 Negatives in Preservers.....\$1 00

WATERBURY NEGATIVE BOXES.

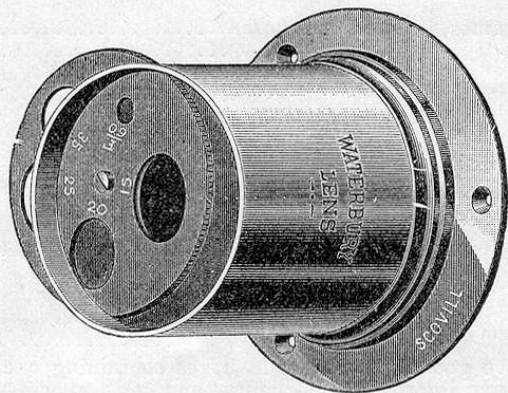
VERY LIGHT—FOR TWELVE PLATES.

4x5	.....	\$0 30
5x7	.....	47
5x8	.....	50

LANTERN SLIDE BOXES.

No. 1, to hold 25 Lantern Slides.	.....	\$0 65
" 2, " 50 " " "	.....	1 20
" 3, " 100 " " "	.....	2 50

WATERBURY LENSES.



The unprecedented success which has everywhere resulted from the employment of the Waterbury Lenses, for 4x5 and 5x8 plates respectively, induced the Scovill & Adams Co. to extend the series of this favorite objective. The popular C Waterbury Lens gave an opportunity for producing 8x10 and even 10x12 photographs with the sharpness, detail and brilliancy of the smaller sizes, but after its advent there was still a gap between the 5x8 and 8x10 sizes. The desire to see the Waterbury series complete has led to the production of the BB Waterbury Lens, which covers $6\frac{1}{2} \times 8\frac{1}{2}$ (the ever-popular 4-4 size) to the extreme edges. In future, revolving diaphragms will be supplied with all of the Waterbury Lenses. In them are cut (with mathematical accuracy) openings in value $\frac{1}{15}$, $\frac{1}{20}$, $\frac{1}{25}$, $\frac{1}{30}$, $\frac{1}{40}$, respectively.

The Waterbury Lenses are composed of a biconvex crown glass lens cemented to another lens of the plano-convex form, made of the best selected flint glass. Be sure that the *convex* side of the lens glass is toward the focusing screen.

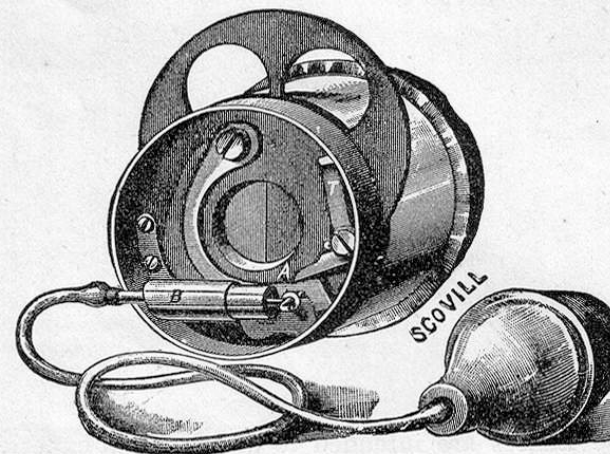
Owing to the great advances in the sensitiveness of emulsion plates, the Waterbury Lenses are now commonly used for groups and for instantaneous views, with the Scovill Safety Shutters, described on another page. No better testimony can be given to the excellence and reliability of these objectives, and the mathematical accuracy with which they are made, than that deduced from the recent test made of 392 lenses of the C series, in which large number only two lenses differed at all in focal length or luminous power from the others.

	Diameter. Inches.	Back-focus. Inches.	
A, Single, for 4x5 plate.....	$1\frac{1}{16}$	6	\$3 50
A, Matched pair, stereoscopic..			7 00
B, Single, for 5x8 plate....	$1\frac{1}{8}$	10	4 50
BB, Single, for $6\frac{1}{2} \times 8\frac{1}{2}$ plate...	$1\frac{1}{4}$	$10\frac{3}{4}$	6 00
C, Single, for 8x10 plate.....	$2\frac{1}{2}$	16	8 00

Elite Time and Instantaneous Shutter, with Pneumatic Release, for use with Waterbury Lenses, \$3.50 extra. Fitting to other lenses, 50 cents extra.

(See next page.)

THE ELITE TIME OR INSTANTANEOUS SHUTTER.



This economical shutter was especially designed for use with the Waterbury Lenses.

DIRECTIONS FOR USE.

To set the shutter for snap work, push the point A as close to the piston B as it will go. Push arm T as close to the edge of the lens as possible. The shutter is now set for quick work. When ready to expose, give a hard, quick squeeze on the bulb.

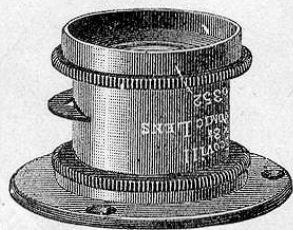
FOR TIME EXPOSURE.

Press arm T as close to centre of lens as it will go. Push the point A close to the piston B. For exposure, squeeze and hold the bulb, which will open the shutter; when the time of exposure is up, release the pressure upon the bulb and the shutter will close.

Price\$3 50

Fitting to other Single Lenses, 50 cents extra.

THE SCOVILL ECONOMIC LENSES.



These Lenses are intended to fill the want experienced by thousands of successful workers with the Waterbury Lens for a good, low-priced Rectilinear Wide-Angle Lens, whereby they can gain artistic effects in perspective at short distances.

PRICE SCOVILL ECONOMIC LENSES.

No.	Size of Plate.	Back Focus.	Equivalent Focus.	Price.
3	6½ x 8½	6 inches.	6½ inches.	\$15 00
4	8 x 10	8 "	8½ "	20 00

MORRISON WIDE-ANGLE VIEW LENSES.



These Lenses are absolutely rectilinear; they embrace an angle of fully 90 degrees, and are the most rapid, and are universally conceded to be the best *wide-angle* lenses made.

No.	Diameter of Lenses.	Equivalent Focus.	Price.
3....	4¼ x 6½	4½ inches.	\$25 00
4....	5 x 8	6 "	25 00
5....	6½ x 8½	7 "	25 00
	Front Comb. Back Comb.		
6....	8 x 10	8½ "	30 00
7....	11 x 14	11½ "	40 00
8....	14 x 17	13 "	50 00

These five sizes will fit one flange.

Nos. 1 to 6 are all made in matched pairs for stereoscopic work. The shorter focused Lenses are especially adapted for street and other views in confined situations. For general purposes, a pair of No. 5 Lenses will be found most useful.

We desire to call your attention to the

MORRISON COMBINATION WIDE-ANGLE LENSES.

The acknowledged superiority of the Morrison Wide-Angle Lenses, and the desire of photographers to have a number representing the various focal lengths in as compact form as possible, rendered it necessary for Mr. Morrison to devise a scheme for combining the various foci in one instrument. This he did some years ago, and his "Combination" Lenses are now in great demand.

An elegant morocco case, velvet lined, four and a quarter inches long by two and a half wide by one and three-quarter high, contains one eight-inch Wide-Angle Lens in its usual brass mounting, with revolving diaphragm, and a set of Lens Cells of four, five, six, and eight inches focal length respectively. These Lens Cells are interchangeable, and the operator is thus possessed of one Lens Combination by which he secures focal length of four, five, six, seven and eight inches, and hence is fully equipped for interior and exterior work from 4x5 to 8x10 in the most confined situations, or for landscapes at nearest and greatest distances from the point of observation.

The device is so simple that it will be readily understood from the following explanation. Put in Cells as follows:

Front.	Back.
5.....	with.....4.....for 4-inch Back Focus.
5.....	".....5....." 5 "
6.....	".....5....." 6 "
6.....	".....8....." 7 "
8.....	".....8....." 8 "

Thus the operator combines five focal lengths in one Lens.

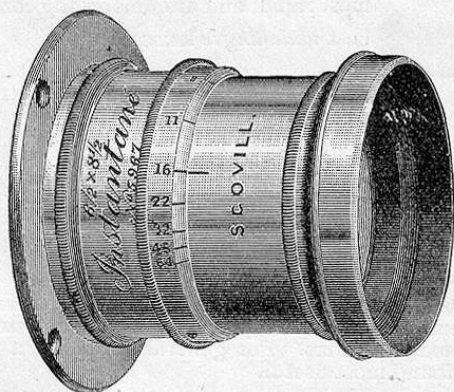
These Lenses, if purchased separately, would cost in the aggregate \$130, thus a saving of \$55 is effected.

No. 1, price complete in morocco case.....\$75 00

No. 2, combining four, five, and six inches focal lengths.. 55 00

THE INSTANTANÉ LENS.

WITH ALUMINUM MOUNT AND IRIS DIAPHRAGM.



The several lenses which form the combination of the Instantané are ground from the newly invented glass which has found such prompt recognition in Europe. By reason of the crystalline purity and whiteness of this glass, the Instantané will be found to answer the most difficult requirements in *Speed*, and to work satisfactorily when others fail.

Having such a remarkably brilliant, yet soft illumination, this lens will be found vastly superior to all others of the Rectilinear class for Portraits. Used with the full opening, it takes a portrait of very superior quality.

The Instantané Lens is perfectly Rectilinear, and entirely free from astigmatism, even when used with its full aperture. It has the most remarkable depth of focus ever produced in any lens of the character.

The Instantané is one of the few lenses that are really Aplanatic. It is guaranteed not only to cover the size plate for which it is sold, but to do this without the least loss of definition on the edge of the plate.

It has a good field, although not so forced a capacity as some, resulting in a considerably larger image of the principal object than any other lens of its size would yield, besides absolute freedom from any distortion whatever.

PRICE LIST OF INSTANTANÉ LENSES.

	Equiv. Focus.	
No. 1, for 4 x 5 size, instantaneous or timed photographs.....	6 inches.....	\$30 00
No. 2, for 5 x 8 size.....	8 ".....	35 00
No. 3, " 6½x8½ ".....	10 ".....	50 00
No. 4, " 8 x10 ".....	12 ".....	60 00
4x5 Instantané Lens, with Inst. Shutter and Iris Diaphragm, price \$40.00.		

SCOVILL'S PORTRAIT LENSES,

For 3¼x4¼ and 4x5 Portraits, or in pairs for Stereoscopic Views on 5x8 plate.....price each, \$8 75

SCOVILL'S "PEERLESS" QUICK-ACTING STEREO-SCOPIC LENSES,

FOR PORTRAITURE OR VIEWS.

These Lenses are especially designed for Stereoscopic Photography, and are so constructed that they will work well for interiors or exteriors.

They are particularly adapted for instantaneous work.

Diameter of Lenses, 1½ inch; focal length, 3½ inches.

By removing the back lens and substituting the front combination a focal length of 5½ inches is obtained.

They are supplied with six Waterhouse diaphragms in morocco case.

Price, per pair.....\$25 00

Imitation Dallmeyer Lens.....each, 9 50

" " Lenses, matched for Stereoscopic Work, per pair, 17 00



DARLOT WIDE-ANGLE RECTILINEAR VIEW LENSES.

These Lenses embrace an angle of 90 deg., and are valuable for taking views of buildings, interiors, etc., in confined situations, where those of longer focus cannot be used.

No.	Back Focus.	Size View.	Price.
No. 1,	2½ inches.....	For Stereoscopic Work, each.....	\$12 50
" 2,	3 ".....	" " ".....	15 00
" 3,	5 ".....	" " ".....	20 00
" 4,	8 ".....	" " ".....	25 00
" 5,	12 ".....	" " ".....	35 00

DARLOT RAPID HEMISPHERICAL VIEW LENSES.

These Lenses embrace an angle of from 60 to 75 degs.; are quick-acting, perfectly rectilinear, and provided with central stops. Will be found very fine lenses for landscapes and outdoor groups; also for copying engravings, maps, architectural subjects, etc.

No.	Back Focus.	Size View.	Rigid Mounts.
No. 1,	5½ inches.....	5x 6.....	\$13 50
" 2,	9 ".....	5x 8.....	20 00
" 3,	10½ ".....	8x10.....	30 00
" 4,	14 ".....	10x14.....	45 00

No. 1 can be had in matched pairs for Stereoscopic Work.



DESCRIPTION AND PRICES
OF THE
GUNDLACH RAPID RECTIGRAPHIC.

No.	Size of Plate.	Diam. of Lenses.	Equivalent Focus.	Focus of Back Lens.	Focus of Front Lens.	Price.
0	3 1/4 x 4 1/4	1 1/8 in.	5 in.	8 in.	11 in.	\$14 00
1	4 x 5	1 1/8 "	6 1/4 "	10 "	13 1/2 "	20 00
1 1/2	4 1/4 x 6 1/2	1 1/8 "	7 "	11 "	14 3/4 "	25 00
2	5 x 8	1 1/4 "	8 1/2 "	13 1/2 "	18 "	30 00
3	6 1/2 x 8 1/2	1 1/2 "	11 "	17 "	23 "	38 00
4	8 x 10	1 3/4 "	13 "	20 1/2 "	28 "	50 00
5	10 x 12	2 "	16 "	25 1/4 "	34 "	64 00
6	11 x 14	2 1/4 "	18 1/2 "	29 1/4 "	39 1/2 "	76 00
7	14 x 17	2 3/4 "	22 "	34 3/4 "	47 "	100 00
8	17 x 20	3 1/4 "	26 "	41 "	56 "	125 00

JAMES SWIFT & SON'S PARAGON
LENSES.

(LONDON, ENGLAND.)

We take great pleasure in announcing to American photographers that henceforth we shall be enabled to supply them with JAMES SWIFT & SON'S PARAGON LENSES.

The reputation of these lenses abroad is superior to that of any other make. They have been selected by the following named institutions because of their unequalled qualities and excellence:

The Scientific Department of the English Government in England, Calcutta and Bengal.

The Universities of Oxford and Cambridge, King's College and Edinburgh University College Schools.

Owens College, Manchester, besides the Governments of France, Germany and Italy.

The SWIFT LENSES have been awarded no less than seven gold medals, besides numerous diplomas of honor.

The lenses are manufactured from the new Abbe-Schott glass, which is undoubtedly more uniform in quality and specific gravity than the best optical flint and crown glass heretofore made; hence the lenses are of a uniformly superior quality.

THE RAPID AND PORTABLE PARAGON LENSES

Are supplied with Iris Diaphragms, and mounted in brass as well as aluminum; while the WIDE-ANGLE PARAGON LENSES are fitted with Revolving Diaphragms.

On the following pages will be found a description of the various styles of SWIFT LENSES which we carry in stock.

THE SCOVILL & ADAMS CO.,

SOLE AGENTS IN AMERICA,

423 Broome Street, New York.

NEW PORTABLE LONG FOCUS LANDSCAPE LENSES.

Effective working aperture U. S. No. 8, $f/11.314$, this being double the rapidity of any other portable series made.

JAMES SWIFT & SON beg to inform professional and amateur photographers that the undermentioned series of Lenses have been designed to meet a wide felt want. Each Lens in First Series is composed of three glasses, cemented together, thus presenting but two reflective surfaces.

For covering power, these Lenses will prove to be about half the diameter of those usually employed upon a similar sized plate.

J. SWIFT & SON guarantee these Lenses to produce pictures containing panoramic and aerial perspective, such as cannot be obtained with Lenses of shorter focus. They will be a great boon in photographing mountainous scenery or exceptionally distant landscapes. Owing to their great focal length, the most distant objects (that would otherwise be lost to view with a Lens of ordinary focus for same covering power) are rendered perfectly and clearly defined. The list below is the first of its class that has ever been introduced to the notice of photographers, and J. S. & SON are confident that the great care and attention which have been bestowed on its compilation will be duly appreciated. Waterhouse Diaphragms marked as below are supplied in a case with each Lens.

U. S. Nos.	8	16	32	64	128	256
	$f/11.314$	$f/16$	$f/22.627$	$f/32$	$f/45.255$	$f/64$

Working Intensity.	No.	Size of Plate.	Diameter of Lenses.	Equivalent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm.
U. S. No. 8, $f/11.314$		Inches.	Inches.	Inches.		
1	5 X 4	$1\frac{1}{4}$	9	$21\frac{25}{32}$	$26\frac{65}{64}$	
2	6 X 5	$1\frac{1}{2}$	11	$23\frac{50}{64}$	$28\frac{80}{64}$	
3	$8\frac{1}{2}$ X $6\frac{1}{2}$	$1\frac{1}{2}$	14	$27\frac{00}{64}$	$32\frac{50}{64}$	
4	9 X 7	$1\frac{3}{4}$	16	$29\frac{25}{64}$	$34\frac{60}{64}$	
5	10 X 8	2	18	$32\frac{40}{64}$	$37\frac{80}{64}$	
			20	$35\frac{70}{64}$	$41\frac{10}{64}$	
				$39\frac{25}{64}$	$44\frac{70}{64}$	
U. S. No. 8, $f/11.314$		Inches.	Inches.	Inches.		
6	12 X 10	$2\frac{1}{4}$	20	$45\frac{40}{64}$	$55\frac{10}{64}$	
7	13 X 11	$2\frac{1}{4}$	22	$49\frac{00}{64}$	$59\frac{50}{64}$	
8	15 X 12	$2\frac{1}{2}$	25	$57\frac{25}{64}$	$64\frac{50}{64}$	
9	18 X 16	$2\frac{3}{4}$	28	$64\frac{80}{64}$	$72\frac{00}{64}$	
10	22 X 18	3	31	$90\frac{75}{64}$	$97\frac{75}{64}$	
11	25 X 22	$3\frac{1}{2}$	34	$123\frac{15}{64}$	$132\frac{15}{64}$	
12	28 X 24	4	38	$144\frac{00}{64}$	$158\frac{00}{64}$	

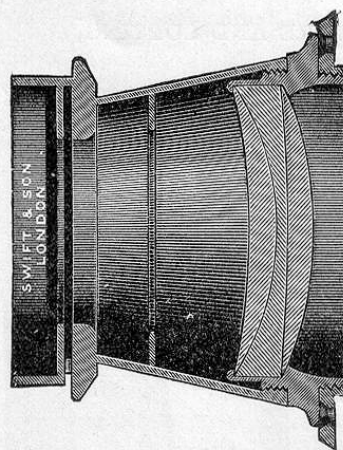
Intermediate or Longer Focus Lenses to those mentioned in above list made to order.

Second Series, composed of two glasses, working aperture same as First Series.

Working Intensity.	No.	Size of Plate.	Diameter of Lenses.	Equivalent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm.
U. S. No. 8, $f/11.314$		Inches.	Inches.	Inches.		
1a	5 X 4	$1\frac{1}{4}$	7	$12\frac{00}{64}$	$17\frac{30}{64}$	
2a	6 X 5	$1\frac{1}{2}$	8	$14\frac{50}{64}$	$19\frac{80}{64}$	
3a	$8\frac{1}{2}$ X $6\frac{1}{2}$	$1\frac{1}{2}$	12	$19\frac{80}{64}$	$25\frac{25}{64}$	
4a	9 X 7	$1\frac{3}{4}$	13	$21\frac{60}{64}$	$27\frac{00}{64}$	
5a	10 X 8	2	15	$24\frac{15}{64}$	$29\frac{50}{64}$	
6a	12 X 10	$2\frac{1}{4}$	17	$30\frac{00}{64}$	$35\frac{30}{64}$	
7a	13 X 11	$2\frac{1}{4}$	18	$32\frac{40}{64}$	$37\frac{80}{64}$	
8a	15 X 12	$2\frac{1}{2}$	22	$36\frac{00}{64}$	$41\frac{40}{64}$	
9a	18 X 16	$2\frac{3}{4}$	25	$44\frac{00}{64}$	$51\frac{15}{64}$	

SWIFT & SON'S FIRST SERIES OF WIDE-ANGLE LANDSCAPE TRIPLE LENSES,

The Effective Working Aperture of which is U. S. No. 4, or $f/8$.



LANDSCAPE LENS. 5 X 4 WIDE ANGLE.
(Actual Size.)

U. S. Nos.	4	8	16	32	64	128	256
	$f/8$	$f/11.314$	$f/16$	$f/22.627$	$f/32$	$f/45.255$	$f/64$

Working Intensity.	No.	Size of Plate.	Diameter of Lenses.	Equivalent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm.
U. S. No. 4, $f/8$...		Inches.	Inches.	Inches.		
1	5 X 4	$1\frac{1}{4}$	5	$21\frac{25}{64}$	$26\frac{65}{64}$	
2	6 X 5	$1\frac{1}{2}$	6	$23\frac{35}{64}$	$28\frac{50}{64}$	
3	$7\frac{1}{2}$ X 5	$1\frac{1}{2}$	7	$23\frac{40}{64}$	$30\frac{00}{64}$	
4	$8\frac{1}{2}$ X $6\frac{1}{2}$	$1\frac{1}{2}$	8	$29\frac{20}{64}$	$35\frac{70}{64}$	
5	10 X 8	$2\frac{1}{4}$	10	$35\frac{65}{64}$	$41\frac{00}{64}$	
6	12 X 10	$2\frac{1}{2}$	12	$35\frac{40}{64}$	$51\frac{15}{64}$	
7	15 X 12	$2\frac{3}{4}$	15	$57\frac{25}{64}$	$62\frac{65}{64}$	
8	18 X 16	3	18	$68\frac{00}{64}$	$75\frac{60}{64}$	
9	22 X 20	$3\frac{1}{2}$	22	$90\frac{75}{64}$	$98\frac{25}{64}$	
10	25 X 21	$4\frac{1}{4}$	25	$123\frac{15}{64}$	$130\frac{35}{64}$	

Second Series, same working intensity as First Series.							
U. S. Nos.	4	8	16	32	64	128	256
	$f/8$	$f/11.314$	$f/16$	$f/22.627$	$f/32$	$f/45.255$	$f/64$

Working Intensity.	No.	Size of Plate.	Diameter of Lenses.	Equivalent Focus.	Price with Waterhouse Diaphragm.	Price with Iris Diaphragm.
U. S. No. 4, $f/8$...		Inches.	Inches.	Inches.		
1a	5 X 4	$1\frac{1}{4}$	5	$14\frac{40}{64}$	$19\frac{80}{64}$	
2a	6 X 5	$1\frac{1}{2}$	6	$18\frac{00}{64}$	$23\frac{40}{64}$	
3a	$7\frac{1}{2}$ X 5	$1\frac{1}{2}$	7	$19\frac{80}{64}$	$25\frac{20}{64}$	
4a	$8\frac{1}{2}$ X $6\frac{1}{2}$	$1\frac{1}{2}$	8	$23\frac{75}{64}$	$29\frac{20}{64}$	
5a	10 X 8	$2\frac{1}{4}$	10	$30\frac{00}{64}$	$35\frac{30}{64}$	
6a	12 X 10	$2\frac{1}{2}$	12	$36\frac{00}{64}$	$41\frac{40}{64}$	
7a	15 X 12	$2\frac{3}{4}$	15	$44\frac{00}{64}$	$50\frac{00}{64}$	
8a	18 X 16	3	18	$55\frac{80}{64}$	$61\frac{20}{64}$	
9a	22 X 20	$3\frac{1}{2}$	22	$72\frac{00}{64}$	$79\frac{20}{64}$	
10a	25 X 21	$4\frac{1}{4}$	25	$104\frac{00}{64}$	$111\frac{25}{64}$	

SWIFT & SON'S PORTABLE PARAGON LENSES,

SPECIALLY CONSTRUCTED FOR

LANDSCAPES, ARCHITECTURE AND COPYING,

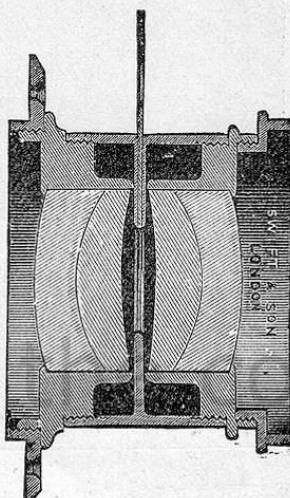
Giving either Wide, Medium or Ordinary Angles, according to the Diaphragm used,

Are universally used by most of our eminent photographers; this is attributed to their extraordinary definition and flatness of field, as well as the portable way in which they are mounted.

No. 1 to No. 10 being set in a cell $1\frac{3}{8}$ diameter, the same flange answers for all the above sizes.

With No. 1 to No. 6 a thin Revolving Diaphragm is used. All the other sizes are supplied with Waterhouse Diaphragms, the apertures used being those recommended by the Photographic Society of Great Britain as follows:

U. S. Nos.	8	16	32	64	128	256
f	f	f	f	f	f	f
	11.314	16	22.627	32	45.255	64

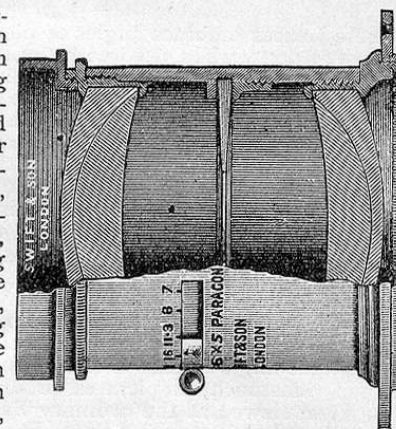


No. 6. PORTABLE PARAGON. (Actual Size.)

Working Intensity.	No.	Large Stop Covering.	Medium Stop Covering.	Small Stop Covering.	Equivalent Focus.	Price with Revolving Diaphragm.	Price with Iris Diaphragm.
U. S. No. 8, f 11.314.	1	3 X 3	4 X 3	5 X 4	3 ins.	\$19 50	\$25 00
"	2	4 X 3	5 X 4	7 1/4 X 4 1/2	4 "	21 00	26 30
"	3	5 X 4	7 1/4 X 4 1/2	8 X 5	5 "	22 75	28 10
"	4	7 1/4 X 4 1/2	8 X 5	8 1/2 X 6 1/2	6 "	25 95	31 35
"	5	8 X 5	8 1/2 X 6 1/2	9 X 7	7 "	32 40	37 80
"	6	8 1/2 X 6 1/2	9 X 7	10 X 8	8 "	40 00	44 30
"	7	9 X 7	10 X 8	12 X 10	9 "	45 50	50 75
"	8	10 X 8	12 X 10	13 X 11	10 "	52 00	57 25
"	9	12 X 10	13 X 11	15 X 12	12 "	58 40	63 75
"	10	13 X 11	15 X 12	18 X 16	15 "	64 80	68 00
"	11	15 X 12	18 X 16	22 X 18	18 "	77 75	85 00
"	12	18 X 16	22 X 20	25 X 21	21 "	97 25	104 40
"	13	20 X 18	24 X 22	28 X 23	24 "	129 60	136 80
"	14	22 X 20	26 X 24	31 X 25	27 "	169 20	178 20
"	15	24 X 22	28 X 26	34 X 28	30 "	207 40	216 50
"	16	26 X 24	30 X 28	37 X 31	34 "	259 20	268 20

SWIFT & SON'S RAPID PARAGON LENSES

Are composed of two symmetrically cemented combinations, which are aplanatic, i.e., they work with the full opening, thus imparting considerably more light to the sensitive plate than any other rapid out-door lens yet made, whether English or foreign. Their superiority in all kinds of out-door pictures, whether for portraits, groups, instantaneous effects, landscapes, architectural subjects (giving straight lines to the edge of the plate), or dimly lighted interiors, they are unrivaled. For copying and enlarging purposes these Lenses are unique, and have been supplied to home and foreign governments. With smaller stops, each Lens will cover the next or even two sizes larger plates than recorded, thus embracing angles of pictures from 60 to 80 degs., and without any flare or central white spot.



6 x 5 RAPID PARAGON, fitted with Iris Diaphragm. (Actual Size.)

Waterhouse Diaphragms marked thus:

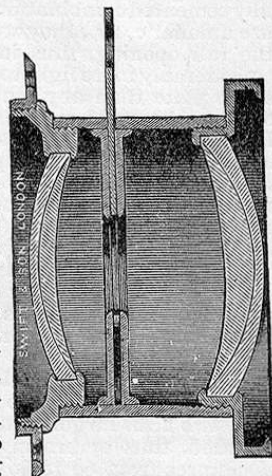
U. S. Nos.	2	4	8	16	32	64	128	256
f	f	f	f	f	f	f	f	f
	5.657	8	11.314	16	22.627	32	45.255	64

Working Intensity.	Size of View.	Size of Group.	Diameter of Lenses.	Equivalent Focus.	Price in Rigid Settings and Waterhouse Diaphragms.	Price with Iris Diaphragm.
U. S. No. 2 f 5.657.....	3 X 3	.....	3/4 in.	3 in.	\$22 70	\$28 00
"	4 X 3	.....	3/4 "	4 1/2 "	26 00	31 35
"	5 X 4	4 1/4 X 3 3/4	1 "	6 "	27 50	32 75
U. S. No. 306 f 7.....	6 X 5	5 X 4	1 1/4 "	7 1/2 "	34 00	39 40
"	8 X 5	7 1/4 X 4 1/2	1 3/8 "	9 "	37 25	42 70
U. S. No. 4 f 8.....	8 1/2 X 6 1/2	8 X 5	1 1/2 "	11 "	42 30	47 70
"	9 X 7	8 1/2 X 6 1/2	1 3/8 "	12 "	48 60	54 00
"	10 X 8	8 1/2 X 6 1/2	1 3/4 "	14 "	54 75	60 15
"	*12 X 10	10 X 8	2 "	13 "	68 00	75 25
"	12 X 10	10 X 8	2 "	14 "	68 00	75 25
"	12 X 10	10 X 8	2 "	16 "	68 00	75 25
"	13 X 11	11 X 9	2 1/4 "	18 "	74 50	82 50
"	15 X 12	13 X 11	2 1/2 "	20 "	93 60	102 60
"	18 X 16	15 X 12	3 "	24 "	120 00	131 40
"	22 X 18	18 X 16	3 1/2 "	30 "	162 00	174 60
"	25 X 22	22 X 18	4 "	34 "	194 40	208 80
"	28 X 24	25 X 20	4 1/2 "	38 "	250 20	280 80
"	32 X 28	28 X 24	5 "	44 "	307 20	336 00
"	36 X 31	31 X 27	5 1/2 "	52 "	482 40	511 20
"	40 X 35	36 X 32	6 "	58 "	612 00	648 00

* Extensively used by professional photographers where position will not allow of the use of a 16-inch focus lens. For general work, J. S. & Son recommend the 12 x 10 16-inch focus.

**JAMES SWIFT & SON'S WIDE-ANGLE PARAGON
LENSES.**

These Lenses embrace angles of pictures of nearly 100 degs. when used with the smallest stops. They are entirely free from distortion and flare, but although not aplanatic like the preceding Lenses (viz., the Rapid Paragons), they work with a larger stop than any other wide-angle combination Lens "giving the same angle" now before the photographic world. The WIDE-ANGLE PARAGON LENSES are intended for architectural views, landscapes, etc., in cramped situations, where longer focus Lenses cannot be used, and for these purposes their advantages have been recognized by many eminent photographers. For general purposes, however (more especially for architecture), the use of Wide-angle Lenses is not to be recommended, inasmuch as pictures produced by them when viewed at the ordinary vision distance (*i.e.*, from 12 to 16 inches), appear distorted. That the foreground objects are exaggerated and the distance is shortened is no fault of these Lenses, as will be seen on looking at the picture from a point that is equal to the focal length of the Lens used. In using these Wide-angle Lenses it is imperative that the camera be perfectly level and straight. When tilting is necessary, the swing-back must be used so as to bring the focusing screen parallel to the planes of the object. If this is not done, vertical and horizontal lines will appear as though they were falling together. When the swing-back is brought into play a smaller stop should be used, as this will compensate for throwing the screen out of its usual position. They are supplied with a revolving diaphragm of apertures marked as below :



No. 2 WIDE-ANGLE PARAGON.
(Actual Size.)

U. S. Nos.	8	16	32	64	128	256
	f	f	f	f	f	f
	11,314	16	22,627	32	45,255	64

From Nos. 1 to 4 work at double the rapidity of any Wide-angle Lens made.

Working Intensity.	No.	Largest Dimensions of Plates.	Diameter of Front Combination.	Back Focus.	Equivalent Focus.	Price with Revolving Diaphragm.	Price with Iris Diaphragm.
		Inches	Inches.	Inches	Inches.		
U. S. No. 8, \int 11.314.....	A	$3\frac{1}{4} \times 3\frac{3}{4}$	$\frac{3}{4}$	$2\frac{1}{2}$	$2\frac{1}{2}$	\$26 00	\$31 50
" " " " " " " " " "	B	5×4	$\frac{3}{4}$	2	3	26 00	31 50
" " " " " " " " " "	1	$7\frac{1}{4} \times 4\frac{1}{2}$	$\frac{7}{8}$	$3\frac{1}{2}$	4	29 25	34 00
" " " " " " " " " "	2	$8\frac{1}{2} \times 6\frac{1}{2}$	$1\frac{1}{4}$	$4\frac{1}{2}$	$5\frac{1}{4}$	35 75	41 00
" " " " " " " " " "	3	12 X10	$1\frac{1}{2}$	$6\frac{1}{4}$	7	50 00	55 50
" " " " " " " " " "	4	15 X12	2	$7\frac{1}{2}$	$8\frac{1}{2}$	73 00	78 50
U. S. No. 16, \int 16.....	5	18 X16	$2\frac{1}{2}$	11	13	90 75	97 75
" " " " " " " " " "	6	22 X20	3	14	$15\frac{1}{2}$	129 60	136 80
" " " " " " " " " "	7	25 X21	$3\frac{3}{4}$	17	19	194 40	212 40

ORIGINAL ZEISS LENSES.

MANUFACTURED BY CARL ZEISS.

ANASTIGMATIC DOUBLETS (Zeiss-Anastigmat).

German Patent D. R. P. No. 56,109. Engl. Pat. 1890, No. 6,028. U. S. A. Pat. 444,714.
French Pat. No. 205,120. Austria-Hungar. Priv. No. 15,336-63,844. Ital. Pat. No. 416, Vol.
LIII. Swiss Pat. No. 2,305.

This doublet is the invention of Dr. P. Rudolph. It consists of two compound lenses, each of which is composed of single lenses in contact. As in other types, each of these compound lenses is in itself achromatized; but they possess this characteristic peculiarity that in the one the positive element (the collective lens) has a smaller refractive index than the adjacent negative element (dispersive lens), while in the other the positive element has a greater refractive index than the adjacent negative element (dispersive lens).

The principle of thus employing in an optical system achromatic members composed of elements possessing opposite optical properties, has become practicable through the judicious application of the barium-silicate glasses of relatively high refractive power made in the glass works of Messrs. Schott & Gen., of Jena. The advantage gained from thus combining elements of such opposite properties in the production of achromatic doublets consists in the means thereby obtained of completely compensating astigmatic aberrations of oblique pencils without detriment to the aplanation of a large field.

In computing the lenses of the various series it has in general been our aim to render them, irrespective of their specific applicability, as universal as possible. Accordingly, we have sought to combine a wide usefully sharp angle with great rapidity. The individual series differ, therefore, only in that an increase of the rapidity implies a diminution of the effective angle.

Series IIa forms rather an exception in this respect, inasmuch as it has a relatively small angle as compared with its aperture. On the other hand the field is particularly anastigmatically flat and the spherical correction is unusually perfect. Owing to these features Series IIa possesses certain advantages in the photography of plain objects placed at right angles to the axis of the objective, inasmuch as the lenses require comparatively little stopping down. From an amateur photographer's point of view Series IIa does not, however, possess any points of superiority over the other series of our anastigmatic lenses.

The almost complete compensation of the astigmatic aberrations of oblique pencils, the short form of the anastigmats and the fact that the component lenses of the objectives are rather larger in diameter than is strictly required by the relative aperture for which the objective is corrected, result in uniform illumination of the field from centre to margin.

At present seven series are made of the anastigmatic doublet type. These will be found specified in detail in the following lists.

SERIES I. ANASTIGMATIC LENS 1:4.5.

RAPID LENS FOR PORTRAIT AND GROUP PHOTOGRAPHY IN THE STUDIO.

This objective embraces an angle of about 75°. Within this angular extension of the field it is adapted for any kind of studio and outdoor work. The largest lens of this series will produce portraits of 1/3 full size; appropriate lenses of Series II, III and IIIa should be selected for larger pictures.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of sharp field with small stop at 70°.	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
				f 4.5	f 6.3		Price.	Code Word.	Price.	Code Word	
	Mm.	In.		In.	Inches.							Inches.	In.
1	130	5 1/8	1 1/4	2 3/8 x 2 3/8	2 3/8 x 3 1/8	7 1/8	\$47 00	Abas	\$51 00	Akron	1
2	150	5 7/8	1 1/2	2 3/8 x 3 1/8	3 1/8 x 3 1/8	8 1/4	60 00	Abukir	64 00	Alba	2
3	183	7 3/8	1 5/8	3 1/8 x 3 1/8	3 3/8 x 4 1/4	10 1/8	73 00	Achat	78 00	Algen	3
4	220	8 1/2	2	3 1/8 x 4 1/4	4 1/4 x 5 7/8	12 1/8	101 00	Actor	106 00	Alibi	4
5	260	10 1/4	2 3/8	4 1/4 x 5 7/8	5 7/8 x 7 1/8	14 1/8	140 00	Adept	146 00	Allegro	5
6	300	11 1/2	2 1/2	5 7/8 x 7 1/8	5 7/8 x 8 1/4	16 1/8	179 00	Admiral	185 00	Amara	6
7	354	13 1/8	3 1/4	5 7/8 x 8 1/4	6 1/8 x 8 1/4	19 1/8	224 00	Aera	232 00	Apsis	7
8	416	16 3/8	3 1/2	6 1/8 x 8 1/4	7 1/8 x 9 1/8	22 1/8	279 00	Age	288 00	Arbor	8

SERIES II. ANASTIGMATIC LENS 1:6.3.

EXTREMELY RAPID INSTANTANEOUS LENS FOR OUTDOOR PORTRAITS AND GROUPS.

These lenses have a particular flat anastigmatic field comprising an angle of about 85°. Withal it has a relative aperture of 1:6.3, which suffices for the shortest instantaneous exposures. These lenses are, therefore, particularly adapted for universal amateur requirements.

The larger lenses of this series will be found useful for large groups and portraits.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of sharp stop with small stop at 80°.	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
				f 6.3	f 9		Price.	Code Word.	Price.	Code Word.	
Mm.	In.	In.	Inches.	Inches.	In.						
1	85	3 3/8	5/8	2 3/8 x 2 3/8	2 3/8 x 3 1/8	5 5/8	\$28 00	Babel	\$31 00	Bourbon	1
2	105	4 1/8	3/4	3 1/8 x 3 1/8	3 1/8 x 3 1/8	6 1/8	31 00	Bambus	34 00	Brabant	2
3	140	5 1/2	1	3 1/8 x 3 1/8	3 1/8 x 4 1/4	9 1/4	38 00	Banco	41 00	Brise	3
4	170	6 1/2	1 1/4	3 1/8 x 4 1/4	4 1/4 x 5 7/8	11 3/8	47 00	Barde	51 00	Brom	4
5	210	8 1/4	1 1/2	4 1/4 x 5 7/8	5 7/8 x 7 1/8	13 7/8	60 00	Bariton	64 00	Budget	5
6	250	9 1/2	1 5/8	5 7/8 x 7 1/8	5 7/8 x 8 1/4	16 1/2	73 00	Basalt	78 00	Burgund	6
7	300	11 1/2	2	5 7/8 x 8 1/4	6 1/8 x 8 1/4	19 1/8	101 00	Bella	106 00	Buffo	7
8	360	14 1/8	2 3/8	6 1/8 x 8 1/4	7 1/8 x 9 1/8	23 1/8	140 00	Beton	146 00	Burlesk	8
9	430	16 1/8	2 1/2	7 1/8 x 9 1/8	8 1/4 x 10 3/8	28 7/8	179 00	Bisam	185 00	Burka	9
10	510	20 1/8	3 1/4	8 1/4 x 10 3/8	9 1/8 x 11 1/8	33 1/8	224 00	Boa	232 00	Bussole	10
11	590	23 1/4	3 1/2	9 1/8 x 11 1/8	10 3/8 x 13 3/4	35 7/8	279 00	Bosporus	288 00	Byzanz	11

SERIES IIa. ANASTIGMATIC LENS 1:8.

INSTANTANEOUS, GROUP, PORTRAIT, COPYING AND ENLARGING LENS.

This series is not quite so rapid as Series II. It comprises an angle of only about 75° and is, therefore, less universal than the latter. It is, however, to be preferred whenever it is required to photograph at almost full aperture with most exacting sharpness plane objects. It is thus eminently adapted for copying and enlarging.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of field with small stop at 72°.	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
				f 8	f 12.5		Price.	Code Word.	Price.	Code Word.	
Mm.	In.	In.	Inches.	Inches.	In.	\$28 00	Cab	\$31 00	Dahlia	1	
1	110	4 3/8	5/8	2 3/8 x 3 1/8	3 1/2 x 4 3/4	6 5/8					
2	136	5 3/8	3/4	3 1/8 x 4 1/4	4 3/4 x 5 7/8	8 1/4	31 00	Cacao	34 00	Danaro	2
3	167	6 1/2	1	4 1/4 x 5 7/8	5 1/8 x 7	10 1/8	41 00	Cadet	44 00	Decade	3
4	205	8	1 1/8	5 1/8 x 7	6 1/4 x 8 1/4	12 3/8	51 00	Canon	54 00	Delta	4
5	244	9 5/8	1 1/8	5 1/8 x 8 1/4	7 x 9 1/2	14 3/8	60 00	Cascade	63 00	Demant	5
6	295	11 5/8	1 5/8	7 x 9 1/2	9 1/2 x 11 3/4	17 3/8	80 00	Centaur	85 00	Diadem	6
7	350	13 3/4	2	8 1/4 x 10 3/8	10 1/4 x 13 3/8	21 1/8	117 00	Ceres	122 00	Diana	7
8	433	17	2 3/8	9 1/2 x 11 3/4	13 x 17 1/4	26 1/4	150 00	Codex	156 00	Dora	8

Two objectives of any series having exactly similar foci, and requiring the same camera extension as required for stereoscopic photography, cost M. 8.— in excess of the prices marked in the catalogue.

SERIES III. ANASTIGMATIC LENS 1:7.2.

INSTANTANEOUS, GROUP AND PORTRAIT LENS.

These objectives embrace an angle of about 85° and are sufficiently rapid for instantaneous photography of any kind.

In consequence of their simpler construction they can be supplied at lower prices than the corresponding numbers of the preceding series. They essentially serve the same purposes as Series II.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of sharp field with small stop at 80° .	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
	Mm.	In.	In.	Inches.	Inches.	In.	Price.	Code Word.	Price.	Code Word.	
1	96	$3\frac{1}{8}$	$\frac{3}{8}$	$2\frac{3}{8} \times 3\frac{1}{8}$	$3\frac{1}{8} \times 3\frac{1}{8}$	$6\frac{5}{8}$	\$23 00	Echo	\$26 00	Fabel	1
2	120	$4\frac{3}{4}$	$\frac{3}{4}$	$3\frac{1}{8} \times 3\frac{1}{8}$	$3\frac{1}{8} \times 4\frac{3}{4}$	$7\frac{7}{8}$	26 00	Edda	30 00	Factum	2
3	148	$5\frac{1}{2}$	1	$3\frac{1}{8} \times 4\frac{3}{4}$	$4\frac{3}{4} \times 5\frac{1}{2}$	$9\frac{1}{2}$	30 00	Elegie	33 00	Fakir	3
4	195	$7\frac{1}{2}$	$1\frac{1}{4}$	$4\frac{3}{4} \times 5\frac{1}{2}$	$5\frac{1}{2} \times 7\frac{1}{2}$	13	39 00	Elixir	43 00	Fama	4
5	220	8	$1\frac{1}{8}$	$5\frac{1}{8} \times 7\frac{1}{8}$	$5\frac{1}{8} \times 8\frac{1}{4}$	$14\frac{1}{2}$	49 00	Emir	52 00	Fatme	5
6	250	$9\frac{1}{8}$	$1\frac{1}{2}$	$5\frac{1}{8} \times 8\frac{1}{4}$	$6\frac{1}{8} \times 8\frac{1}{4}$	$16\frac{1}{2}$	59 00	Enclave	64 00	Faustus	6
7	315	$12\frac{3}{8}$	2	$6\frac{1}{8} \times 8\frac{1}{4}$	$7\frac{1}{8} \times 9\frac{1}{8}$	$20\frac{7}{8}$	78 00	Eremit	83 00	Ferment	7
8	442	$17\frac{3}{8}$	$2\frac{1}{2}$	$7\frac{1}{8} \times 9\frac{1}{8}$	$9\frac{1}{8} \times 11\frac{1}{8}$	$29\frac{1}{2}$	124 00	Erica	130 00	Fetisch	8
9	586	$23\frac{1}{8}$	$3\frac{1}{8}$	$9\frac{1}{8} \times 11\frac{1}{8}$	$11\frac{1}{8} \times 15\frac{3}{4}$	$38\frac{3}{8}$	176 00	Ethik	184 00	Figaro	9

Two objectives of any series having exactly similar foci, and requiring the same camera extension as required for stereoscopic photography, cost M. 8.—in excess of the prices marked in the catalogue.

To obviate deterioration of any good objective during continued use, the exposed surfaces of the Lenses (including those within the mount) should occasionally be cleaned from dust and dirt. The cleaning should, of course, be done with care, clean, soft linen being best for this purpose.

SERIES IIIa. ANASTIGMATIC LENS 1:9.

UNIVERSAL OBJECTIVE, ALSO GROUP AND LARGE PORTRAIT LENS.

The anastigmatic aplanation of the field is particularly perfect in this series. Having a relative aperture of 1:9, which gives it sufficient rapidity for any class of outdoor instantaneous photography, and embracing an angle of 97° , it is *both an instantaneous and wide-angle lens*. The smaller lenses form excellent stereoscopic and detective lenses and are largely used for instantaneous wide-angle landscape, interior and architectural photography. The larger lenses of this series are very suitable for large portraits and groups.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of sharp field with small stop at 90° .	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
	Mm.	In.	In.	Inches.	Inches.	In.	Price.	Code Word.	Price.	Code Word.	
0	75	3	$\frac{7}{8}$	$2\frac{3}{8} \times 2\frac{3}{8}$	$2\frac{3}{8} \times 3\frac{1}{8}$	.....	\$20 00	Gala	.....	.....	0
00	95	$3\frac{3}{4}$	$\frac{1}{2}$	$3\frac{1}{8} \times 3\frac{1}{8}$	$3\frac{1}{8} \times 3\frac{1}{8}$	.....	20 00	Galeere	.....	.....	00
1	120	$4\frac{3}{4}$	$\frac{3}{8}$	$3\frac{1}{8} \times 3\frac{1}{8}$	$3\frac{1}{8} \times 4\frac{3}{4}$	.....	21 00	Galone	.....	.....	1
2	150	$5\frac{7}{8}$	$\frac{3}{4}$	$3\frac{1}{8} \times 4\frac{3}{4}$	$4\frac{3}{4} \times 5\frac{7}{8}$	$11\frac{1}{2}$	25 00	Gamma	.....	.....	2
3	172	$6\frac{3}{4}$	$\frac{7}{8}$	$4\frac{3}{4} \times 5\frac{7}{8}$	$5\frac{7}{8} \times 7\frac{1}{8}$	$13\frac{1}{2}$	30 00	Gardine	\$33 00	Hades	3
4	196	$7\frac{1}{2}$	1	$5\frac{7}{8} \times 7\frac{1}{8}$	$5\frac{7}{8} \times 8\frac{1}{4}$	$15\frac{1}{2}$	33 00	Garter	36 00	Hansa	4
5	230	$9\frac{1}{8}$	$1\frac{1}{4}$	$5\frac{7}{8} \times 8\frac{1}{4}$	$6\frac{1}{8} \times 8\frac{1}{4}$	$18\frac{1}{2}$	43 00	Gazelle	46 00	Harpune	5
6	272	$10\frac{3}{4}$	$1\frac{1}{2}$	$6\frac{1}{8} \times 8\frac{1}{4}$	$7\frac{1}{8} \times 9\frac{1}{8}$	$21\frac{1}{2}$	52 00	Genius	56 00	Hebe	6
7	317	$12\frac{1}{2}$	$1\frac{3}{8}$	$7\frac{1}{8} \times 9\frac{1}{8}$	$8\frac{1}{4} \times 10\frac{3}{8}$	25	65 00	Gilde	70 00	Hector	7
8	407	16	2	$8\frac{1}{4} \times 10\frac{3}{8}$	$9\frac{1}{8} \times 11\frac{1}{8}$	32	98 00	Giraffe	103 00	Hellas	8
9	505	$19\frac{1}{2}$	$2\frac{1}{2}$	$9\frac{1}{8} \times 11\frac{1}{8}$	$10\frac{3}{8} \times 13\frac{3}{8}$	$39\frac{3}{4}$	130 00	Gloria	137 00	Herold	9
10	600	$23\frac{3}{8}$	$2\frac{1}{2}$	$10\frac{3}{8} \times 13\frac{3}{8}$	$11\frac{1}{8} \times 15\frac{3}{4}$	$47\frac{1}{4}$	163 00	Gnom	169 00	Hoboe	10
11	690	$27\frac{1}{2}$	$3\frac{1}{4}$	$11\frac{1}{8} \times 15\frac{3}{4}$	$13\frac{3}{8} \times 17\frac{3}{4}$	$54\frac{3}{8}$	211 00	Gondel	219 00	Hornist	11
12	820	$32\frac{1}{4}$	$3\frac{1}{2}$	$13\frac{3}{8} \times 17\frac{3}{4}$	$15\frac{3}{4} \times 19\frac{1}{2}$	$64\frac{1}{2}$	260 00	Gral	268 00	Hulda	12

SERIES IV. ANASTIGMATIC LENS 1:12.5.

RAPID WIDE ANGLE AND GROUP AND COPYING LENS.

The smaller lenses of this series (260 mm. = 10¼ in. incl.) embrace an angle exceeding 100° and are sufficiently rapid for outdoor instantaneous photography under ordinary circumstances. The larger lenses cover a field of about 80° and are suitably used for groups, landscapes, large portraits and copying.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of sharp field with small stop at 100°.	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
	Mm.	In.	In.	Inches.	Inches.	In.	Price.	Code Word.	Price.	Code Word.	
1	62	2 7/16	1 1/4	2 3/8 x 2 3/8	3 1/8 x 3 1/8	5 1/4	\$17 00	Ibis	....	....	1
2	98	3 7/8	3/8	3 7/8 x 3 1/8	3 1/8 x 4 3/4	8 1/8	17 00	Ida	....	....	2
3	119	4 11/16	1/2	3 1/8 x 4 3/4	4 3/4 x 5 7/8	10 3/8	20 00	Ignis	....	....	3
4	154	6 1/8	5/8	4 3/4 x 5 7/8	5 7/8 x 8 1/4	13 3/8	23 00	Ilias	....	....	4
5	196	7 11/16	1 1/8	5 7/8 x 7 1/8	7 1/8 x 9 1/8	17 5/8	30 00	Imago	\$33 00	Kabel	5
6	260	10 1/4	1	6 1/8 x 8 1/4	9 1/8 x 11 1/8	22 1/8	44 00	Impetus	47 00	Kaftan	6
For copying in mezzotint											
at f 25											
7	386	15 3/8	1 5/8	9 7/8 x 11 1/8	11 1/8 x 15 3/4	27 1/8	67 00	Inka	70 00	Karat	7
8	605	23 1/8	2	11 1/8 x 15 3/4	15 3/4 x 19 1/4	43 5/8	117 00	Irene	122 00	Kastor	8
9	906	35 1/8	2 5/8	19 1/8 x 23 3/8	23 3/8 x 27 1/2	64 3/8	263 00	Isabelle	270 00	Kaviar	9
10	1228	48 3/8	3 7/8	27 1/2 x 31 1/2	31 1/2 x 35 1/2	86 1/4	588 00	Julius	596 00	Kiosk	10

SERIES V. ANASTIGMATIC LENS 1:18.

WIDE-ANGLE LENSES FOR ARCHITECTURE, INTERIORS, PHOTOGRAMMETRY AND COPYING.

The smaller lenses of this series have an angle of more than 110° and are, therefore, typical wide-angle lenses. They are sufficiently rapid for outdoor instantaneous photography with sunlight. The larger lenses have a field of about 90°; they are particularly adapted for copying and yield within the limit of 60° a perfectly flat and anastigmatic field.

Number.	Equivalent Focus.		Diameter of Lenses.	Plate covered at		Diameter of sharp field with small stop at 100°.	Brass Mount with Iris Diaphragm.		Aluminium Mount with Iris Diaphragm.		Number.
	Mm.	In.	In.	Inches.	Inches.	In.	Price.	Code Word.	Price.	Code Word.	
1	86	3 3/8	3/8	3 1/8 x 4 3/4	4 3/4 x 5 7/8	8 1/8	\$21 00	Labrador	....	....	1
2	112	4 3/8	3/8	4 3/4 x 5 7/8	5 7/8 x 7 1/8	11 1/8	21 00	Lagune	....	....	2
3	141	5 1/8	1/2	5 7/8 x 7 1/8	6 1/8 x 8 1/4	14 3/8	26 00	Lama	....	....	3
4	182	7 1/8	5/8	6 1/8 x 8 1/4	7 7/8 x 10 1/4	15 3/8	33 00	Lapsus	....	....	4
5	212	8 3/8	1 1/8	7 7/8 x 10 1/4	9 1/8 x 11 1/8	21 1/4	41 00	Lateran	44 00	Macao	5
6	265	10 1/8	1 1/8	9 1/8 x 11 1/8	10 1/4 x 13 3/4	26 3/4	51 00	Lava	54 00	Magister	6
7	315	12 5/8	1 5/8	7 7/8 x 13 3/4	11 1/8 x 15 3/4	31 1/2	60 00	Lawine	64 00	Magnesia	7
at f 25 for copying in mezzotint											
at f 25 for copying maps											
8	460	18 1/8	1	11 1/8 x 15 3/4	11 1/8 x 15 3/4	33 1/8	80 00	Legende	83 00	Makrele	8
9	632	24 7/8	1 3/8	15 3/4 x 19 1/4	15 3/4 x 19 1/4	45 1/8	117 00	Legion	120 00	Malaria	9
10	947	37 1/8	2 1/8	23 3/8 x 27 1/2	19 1/4 x 25 1/8	68 3/8	231 00	Leo	237 00	Marcipan	10
11	1310	51 1/8	3	29 1/2 x 35 1/2	27 1/2 x 34	94 1/2	393 00	Libelle	401 00	Marmor	11
12	1660	65 3/8	3 1/8	39 1/2 x 47 1/4	35 1/2 x 43 1/4	118 1/8	653 00	Lictor	662 00	Matador	12

Remarks on the Glasses used in the Production of the Anastigmatic Lenses.

We employ in the manufacture of the Anastigmatic Doublets exclusively carefully selected silicate-glasses, whose permanency and power of resisting external influences have been amply tested and which are free from injurious flaws and tensions. It should, however, be noted that the glasses employed in the production of Anastigmatic Lenses must necessarily possess optical properties differing entirely from those of the easily obtained usual crowns and flints. In the new glasses some of a very high refractive power are required to have a low dispersion, others of low refractive power are required to be highly dispersive. The production of glasses possessing these properties involves exceptional technical difficulties and it is, in particular, all but impossible to exclude the appearance of small bubbles. Defects of this kind are understood to in no way affect the optical capacity of a lens, the only effect which their occurrence is capable of producing being an appreciably small loss of light, which, however, even in the most unfavorable cases, does not amount to as much as 10 per cent. They can, therefore, be regarded as defects from an *aesthetic* point of view only. As far as it does not lie in our power to obviate these defects we *cannot* recognize their occurrence as a cause of reasonable complaint.

TELE-PHOTOGRAPHIC OBJECTIVES.

The tele-photographic objective is adapted for photographing landscape views at a great distance, also for architectural details and large portraits.

Formerly single *long* focus lenses were employed for this purpose. These lenses, while possessing several advantages, necessitated, owing to their long focus, cameras with inconvenient extension of bellows. The tele-photographic objective, first constructed by Messrs. C. A. Steinheil Söhne, subsequently, almost at the same time, by Dr. A. Miethe and described by Mr. Dallmeyer of London, overcomes this objection. It is virtually a long focus objective requiring a relatively short camera extension and possesses the advantage that one and the same objective, by reason of its variable focus, is adaptable to various camera extensions.

The tele-photographic objective consists of the following two principal optical parts:

1. The positive element, *i.e.*, a collective lens.
2. The negative element, *i.e.*, a dispersive lens.

The negative element has a shorter focus than the positive element and both are mounted in such a manner that their distance apart, which approximately represents their focal difference, may be varied.

Any good rapid lens may be employed as the positive element; in our case, therefore, lenses of suitable focus of series I, II, IIa, III or IIIa. A single lens, specially computed for the tele-photographic combination, should, however, be used if the latter is required to work with extra rapidity. Our positive lenses of about 100 mm. = 4 in. and 183 mm. = $7\frac{1}{4}$ in. focus, which we recommend for this purpose, will be found to yield particularly good results in this respect.

The place of the negative element is filled by a new dispersive lens, which we have patented in Germany (D.R.P. 71,473) and several other countries. We make four lenses of this type, having respectively foci of 30, 40, 58 and 75 mm. (= about $1\frac{1}{4}$, $1\frac{1}{2}$, $2\frac{1}{4}$ and 3 in.)

A peculiar feature of this dispersive lens consists in its being perfectly achromatized, while, at the same time, the external curvatures of the lenses partake of the nature of a single non-achromatic lens. This circumstance adduces exceptionally favorable conditions for the correction of the entire system.

This result is practically realized by employing in the achromatization of the dispersive lens, a positive component whose refractivity is nearly equal to or less than that of the negative component.

The two principal optical parts of the tele-photographic objective screw to the ends of a tube whose length may be varied by means of rack and pinion movement. The latter screws, like an ordinary lens, to the flange of the camera front (vide fig. 15). A few parts of the mount are, as far as practicable, made of aluminium so as to reduce the weight of the whole.

We supply two sizes of this tube, the smaller size (No. 1) being intended for 9 x 12 to 13 x 18 cm. (= $3\frac{1}{2}$ x $4\frac{3}{4}$ to $5\frac{1}{8}$ x $7\frac{1}{8}$ in.), the larger size (No. 2) for 13 x 18 to 18 x 24 cm. (= $5\frac{1}{8}$ x $7\frac{1}{8}$ to $7\frac{1}{8}$ x $9\frac{1}{2}$ in.) plates.

The No. 1 size is adapted for positive elements of 90 to 130 mm. (= $3\frac{1}{2}$ to $5\frac{1}{8}$ in.) and negative elements of about 30 to 40 mm. (= $1\frac{1}{4}$ to $1\frac{1}{2}$ in.) focus. No. 2 size is suitable for positive elements of about 180 to 220 mm. (= $7\frac{1}{8}$ to $8\frac{3}{4}$ in. focus and negative elements of about 40 to 75 mm. (= $1\frac{5}{8}$ to 3 in.) focus.

PRICES:

Tele-photographic lens tube fitted with iris-diaphragm,

Size No. 1 for 9 x 12 cm. (= $3\frac{1}{2}$ x $4\frac{3}{4}$ in.)

plates, code word: "Raptus"..... \$20 00

" fitted with iris-diaphragm,

Size No. 2 for 13 x 18 cm. (= $5\frac{1}{8}$ x $7\frac{1}{8}$ in.)

plates, code word: "Rasura"..... 23 00

Negative lens (D.R.P. 71,473),

$f=30$ mm. = $1\frac{1}{8}$ in.,	code word: "Rebus,"	} each, 10 00
$f=40$ " = $1\frac{1}{2}$ " "	" " " "Receptor,"	
$f=58$ " = $2\frac{1}{4}$ " "	" " " "Reform,"	
$f=75$ " = 1 " "	" " " "Regatta,"	

Positive lens of about 100 mm. = 4 in. focus and 25 mm. = 1 in. effective aperture, code

word: "Roland"..... 13 00

" of about 183 mm. = $7\frac{1}{4}$ in. focus and 46 mm. = $1\frac{3}{4}$ in. effective aperture, code

word: "Rubicon"..... 17 00

The negative lens is mounted in such a way that it may readily be reversed in its mount. When used in conjunction with the single positive lens of $f=100$ mm. (4 in.) or $f=183$ mm. ($7\frac{1}{4}$ in.) its concave surface should face the image; when used together with a doublet (say an Anastigmatic) its plane surface should face the image.

Directions and tables facilitating the use of the tele-photographic objective are supplied with the latter.

AUXILIARY OPTICAL APPARATUS

FOR PHOTO-MECHANICAL PRINTING PROCESSES.

PRISMS FOR REVERSING THE NEGATIVE BY REFLECTION.

These prisms are made of carefully annealed and colorless crown-glass; they are accurately rectangular and their hypotenuse surface is silvered to ensure complete reflection.

The mount of the prism screws directly to the hood of the objective in such a manner as to bring one of the non-reflecting surfaces into close proximity of the front lens. By this arrangement the prism becomes fully utilized.

We supply the prism accurately centred with respect to the axis of the objective. Subsequent adaptation of a prism renders it necessary that the existing objective should be sent to us for adjustment of the prism.

The prices of the prisms include an objective ring fitted with revolving collar and clamp, which allows of the objective being turned about its axis and clamped in any position which the prism is desired to occupy.

In the subjoined table will be found the particulars and prices of the prisms regularly made by us. The table also indicates the numbers of our anastigmatic copying lenses $\frac{1}{8}$ (series V), which are adapted for use with our prisms. The objective in combination with the prism embraces with narrow stops an angle of about 40° .

The prisms are adaptable to any other series and number not named in the table.

PRICE OF THE PRISMS, INCL. REVOLVING OBJECTIVE COLLAR.

No.	Length and Breadth of Non-reflect'g Surfaces.	Adapted for Use with		Price.	Code Word.	No.
		Anastigmatic 1:18, Focus:	Series V.			
	Inches.	Inches.	No.			
1	1	$10\frac{7}{8}$	6	\$26 00	Saeculum	1
2	$1\frac{3}{8}$	$12\frac{1}{8}$	7	36 00	Sago	2
3	$1\frac{7}{8}$	$18\frac{1}{8}$	8	49 00	Salamis	3
4	$2\frac{3}{8}$	$24\frac{7}{8}$	9	82 00	Saturn	4
5	3	$37\frac{5}{8}$ or $24\frac{7}{8}$	10 or 9	124 00	Seneca	5
6	$3\frac{9}{16}$	$51\frac{9}{16}$ or $37\frac{5}{8}$	11 or 10	179 00	Sonate	6
7	$4\frac{1}{8}$	$37\frac{5}{8}$, $51\frac{9}{16}$ or $65\frac{3}{8}$	10, 11 or 12	260 00	Stadium	7
8	$4\frac{7}{8}$	$51\frac{9}{16}$ or $65\frac{3}{8}$	11 or 12	455 00	Supremum	8

SCOVILL & ADAMS TIME AND INSTANTANEOUS SHUTTER.

That the substitution of a pneumatic release for the ordinary trigger on a wood drop-shutter greatly enhances its value, "goes without saying."

THE SCOVILL & ADAMS TIME AND INSTANTANEOUS SHUTTER

IS FITTED WITH PNEUMATIC ATTACHMENT,

which may be worked at a considerable distance from the Camera, thus enabling the operator to form part of a group or to be included in a view he is photographing. This Shutter may be used for either timed or instantaneous exposures; the change is made by simply moving a switch.



Scovill & Adams Safety Shutter, with Time and Instantaneous Attachment.

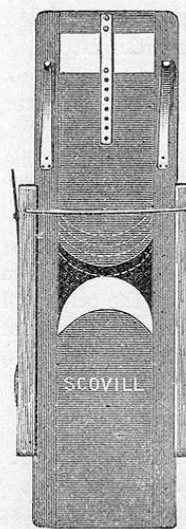
SCOVILL & ADAMS UNIVERSAL SAFETY SHUTTERS.

This Shutter is styled Universal, not only because more of the Scovill & Adams Safety Shutters are in use than of any other pattern, but because it can be arranged with a variety of openings, from $\frac{1}{4}$ to 4 inches at the centre, as shown by the dotted lines in the accompanying illustration. Uniform distribution of light over the plate is insured by the form of opening.

The brakes on all these Shutters make them safe to use, by preventing a recoil with the resulting double exposure, and the jarring common to many shutters, which in time breaks apart the glasses of a lens where cemented together—hence the designation "Safety Shutters."

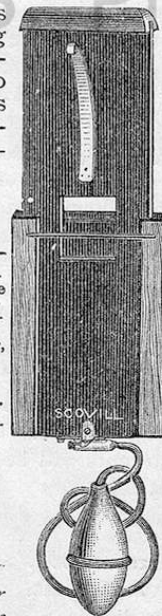
PRICE LIST.

No.	Width of Opening in Slide.	Scovill & Adams Universal Shutters.	Universal Shutters, with Pneumatic Release.	Scovill & Adams Safety Shutters.	Safety Shutters, with Pneumatic Release.	Universal Time and Instantaneous Shutter, with Pneumatic Release.
1	$1\frac{1}{4}$ ins.	\$2 70	\$4 20	\$1 20	\$2 70	\$4 70
2	$1\frac{1}{2}$ "	2 80	4 30	1 30	2 80	4 80
3	$1\frac{3}{4}$ "	2 90	4 40	1 40	2 90	4 90
4	2 "	3 00	4 50	1 50	3 00	5 00
5	$2\frac{1}{2}$ "	3 10	4 60	1 60	3 10	5 10
6	3 "	3 25	4 75	1 75	3 25	5 25



Scovill & Adams Universal Shutter.

When ordering these Shutters, exact diameter of hood of Lens should be given, so that the proper circular opening may be cut out to exactly fit hood of Lens.



Scovill & Adams Safety Shutter, with Pneumatic Release.

THE PROSCH "COLUMBIAN" TRIPLEX.

This latest product of our factory has all the well-known qualities of our famous "TRIPLEX" Shutters with the addition of an automatic safety shield, the one and only thing heretofore lacking in the construction of an otherwise perfect article.

This simple device adapts the shutter for use with Roll-film and Magazine Hand Cameras, and fogged plates from hasty setting after slide has been drawn from holder, are no longer possible. The shutter is set by the same movement that throws shield into position.

To set the shutter for *instantaneous* exposures, press down thumb-piece "A" until lever is engaged with hook "C." Shutter may be released by rubber bulb or thumb-piece shown over hook "C." It will be observed that lever and flies do not move until aperture is entirely covered by shield. The speed may be increased or reduced by changing spring to left or right, respectively, on ratchet shown at lower right hand of above cut. Two springs, one strong, one light, are furnished with each shutter.

Slow-Instantaneous.—Release spring from ratchet and throw hook "C" to the left as far as it will go, press thumb-piece "A" down as far as possible and the shutter is set. The speed of this movement is governed by force of pressure given rubber bulb attached to pneumatic piston.

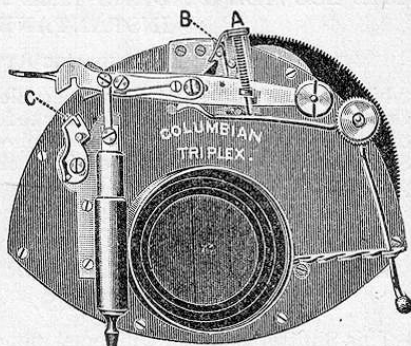
Time.—Proceed as for slow-instantaneous, and, when set, turn hook "B" down and to the left. When pressure is applied to bulb, shutter will open and so remain until pressure is released.

Focusing.—Release spring from ratchet and press hook "B" to the right until disengaged; lever will then drop and rest on hook "C" leaving shutter wide open.

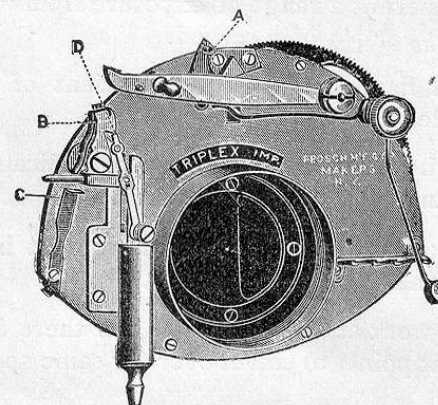
The "COLUMBIAN" will be fitted with rotary stops, to and including size No. 2A, openings to correspond with stops of customers' lens. When plain or Waterhouse stops are to be used in place of rotary the price will be \$1.00 less. When flange screw is on body of tube an extra charge of 50 cents will be made on all sizes to No. 3. On No. 3 and larger sizes, 75 cents.

PRICE.

Size	00	0	0A	1	1A	2	2A	3	3A
Aperture, ins.	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
In Brass.....	\$14.00	14.50	15.00	15.50	16.50	17.25	18.00	19.25	20.25
In Aluminum	17.00	17.50	19.00	19.50	21.50	22.25	23.50	25.50	27.25



THE TRIPLEX IMPROVED SHUTTER.



The development of Photography, especially during the last decade, has brought the photographic shutter, or exposur, as it is sometimes very properly called, into great prominence. "Cap exposures" are almost a thing of the past, for nearly every outfit, however cheap and elementary, includes some sort of shutter, even if its range of speed is only from "time" to a tenth or a fifteenth of a second; indeed, the shutter is in many cases esteemed second only to the lens itself; and when we consider that the full use and benefit of a costly and high-class rapid rectilinear or doublet lens of any kind, can only be obtained by the attachment of a shutter, correctly constructed according to the optical laws applying to a lens, and having a range of speed from time exposures to *at least* $\frac{1}{100}$, and preferably $\frac{1}{150}$ of a second, this view of its importance seems but natural.

The photographer who begins to consider the question of procuring a first-class, all-around shutter to complete a good outfit, finds that there are many contrivances on the market which, were they to be judged by their price, and the *claims* made as to their speed and qualities, *ought* to be first-class. Our correspondence, however, contains so many letters from those who have found themselves with a second- or third-, instead of a first-class instrument, especially in regard to speed, and are consequently compelled to buy over again, that we offer the following hints on the points required in

A PERFECT ALL-AROUND SHUTTER :

It should permit a range of exposure from "time" to at least $\frac{1}{100}$ or $\frac{1}{150}$ of a second.

It should have as good a co-efficient of light as is possible with the above quality.

It should be simple, durable, with no delicate clockwork mechanism to become deranged.

It must not, through powerful movement in one direction, shake or jar the camera.

It should work at the diaphragm, as there is less space (at that point) to travel over for same speed.

The first, third, fourth and fifth requirements are so obvious and self-evident that they speak for themselves. Concerning the second, the "co-efficient of light," however, there has been much discussion, as it is undoubtedly the most important point about a photographic shutter.

The "Triplex Improved" placed upon the market this season to succeed the "Triplex," is essentially like it, the working parts only having been altered to meet certain demands. Users of this shutter have always been extremely well satisfied with it, only one improvement seeming desirable, viz.: ability to "*slow up*" the shutter to a greater extent. The following are the

Features of the Improvement.

A NEW RELEASE, by which the pneumatic is entirely detached from any connection with the lever-bar during instantaneous exposures.

FOUR SPRINGS are furnished with each shutter, instead of two, as heretofore, giving, in connection with the new release, the great range of exposures shown in the

SPEED CARD, furnished with each shutter, which has been compiled after a series of careful tests, and is approximately as correct as anything of the kind can be.

By the above alterations, the ordinary sizes range in speed from $\frac{1}{25}$ to $\frac{1}{150}$ of a second, and give both the possibility of making a much slower, and also a considerably more rapid exposure than the Triplex.

Fitting to Lenses.

The Triplex Improved being fitted between the combinations of the lens, each shutter also contains an entirely new lens tube, the original lens tube or barrel not being cut in any way, unless specially ordered, but returned intact.

Rotary stops are fitted to all shutters, when possible. Shutters may also be adapted for use with Waterhouse or plain stops, same price.

Shutters are fitted, unless otherwise ordered, having same full opening as lens.

We prefer, under all circumstances, to have at least customer's lens tube, and do not guarantee fit unless we have complete lens. Where the lenses come very close together, as in the Zeiss and Goerz lenses, we must have *entire* lens.

We would point out that the very small space needed between the combinations for shutter, renders the Triplex Improved well adapted for such lenses as the Zeiss, Goerz, etc., when there is but slight room.

PRICE LIST OF "TRIPLEX IMPROVED" SHUTTERS.

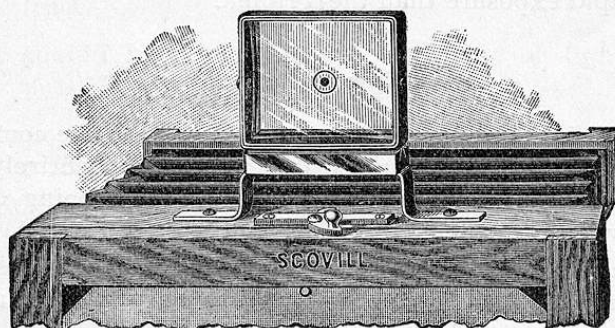
Size,	00	0	0A	1	1A	2	2A
Aperture, in.	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$
Price,	\$12.50	13.00	13.50	14.00	15.00	15.50	16.00
Extra for Aluminium, \$3.	3.50	4.	4.50	5.	5.50	6.	
	3	3A	4	5	6	7	8
	$1\frac{3}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
	\$17.00	18.00	20.00	22.00	26.00	30.00	35.00
	6.50	7.00	—	—	—	—	—

N. B.—When the combinations of lens come so close together that it is necessary to fit stop *inside of shutter case*, extra \$1.50.

SCOVILL MAGIC FINDERS.

(PATENTED.)

UNEQUALED FOR LANDSCAPE PHOTOGRAPHY.



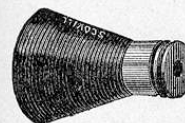
Ordinary finders are quite unsatisfactory, on account of the reversed image which they reflect. While, with the camera, this reversal may be regarded as unavoidable, it is certainly a very undesirable feature in the finder, for it greatly interferes with the judgment of the operator as to the best arrangement of the desired picture.

The ideal finder is the one having two negative lenses of rectangular form, mounted close together in a nickel-plated frame, on the bottom of which is a sliding piece, by which the finder can easily be attached to the camera.

Looking through the finder from the *proper distance, toward the view to be taken, the operator sees before him a correct, right side up, and delightfully brilliant and sharp miniature picture of the view before him, the little frame taking in the full picture projected by means of an instantaneous lens on the ground-glass of his camera. Two circles, marked in the exact centres of the front and back surfaces of the combination, serve to enable the operator to bring any certain part of the view to the exact centre of the picture by placing the eye so that the two circles cover each other, and at the same time adjusting the camera so that the selected part of the view appears inside the circles.*

The SCOVILL MAGIC FINDERS are light, ornamental, easily adjusted and detached, and are now considered indispensable by successful view takers.

No 1, for 4 x 5 Camera	.....\$1 50
" 2, " 5 x 8 "	.....1 75
" 3, " 6½ x 8½ "	.....2 00
" 4, " 8 x 10 "	.....2 50

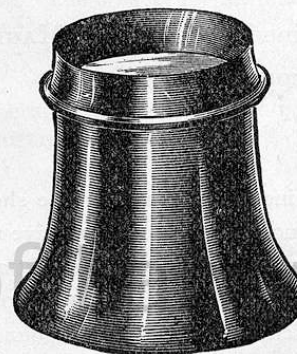
C. C. H. FOCUSING GLASS.

C. C. H. Glass.

This is a desirable little instrument for aiding the operator in getting a sharp focus.

C. C. H. FOCUSING GLASS.....	\$4 00
Darlot Focusing Glass.....	2 50
Scovill's Focusing Glass, each	75

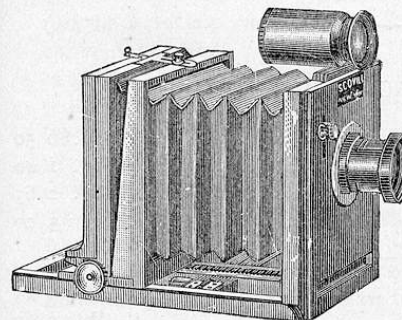
Save your eyes by using one of these instruments.

WATERBURY FOCUSING GLASS.

Waterbury Focusing Glass, Rubber.....each, \$0 50

PEERLESS VIEW FINDER.

Each\$1 50

**THE
"WATERBURY
FINDER."**

Each\$3 00

To attach to camera for instantaneous work.

THE SCOVILL MAGNESIUM COMPOUND,

WITH SILVER PAPER LABEL,

IS ENTIRELY FREE FROM POISONOUS INGREDIENTS.

In order to demonstrate this, quantities have been eaten at various times.

It has often been pounded in a mortar to show that it does not explode.

The results obtained by using our MAGNESIUM COMPOUND have never been surpassed.

"It seems almost incredible that any one should continue to use compounds which are known to be of an explosive nature. The various substances used to make actinic Magnesium light are no secrets; some are easily explosive, some are dangerously poisonous, and yet, for some fancied advantages which they offer in a compound, manufacturers are willing to put them upon a confiding public, and photographers seem ready to risk their lives, or at least the danger of severely injuring themselves by using them. Even when great caution is used, an explosive compound is always dangerous, and had better be left untouched. If there were no good compounds which were free from dangerous properties, there might be some excuse for adhering to the use of those which are known to be explosive and poisonous, but such is not the case."—*Photographic Times*.

PRICE OF SCOVILL MAGNESIUM COMPOUND.

In ounce bottles, with fuses.....	\$0 50
" $\frac{1}{4}$ pound cans "	1 40
" $\frac{1}{2}$ " " "	2 65
" 1 " " "	5 00
<hr/>	
PURE Powdered Magnesium.....	per oz., 45
" " "	" lb., 5 00

MAGNESIUM FLASH-LIGHT PHOTOGRAPHS.

HOW OBTAINED.

Since the introduction of the SCOVILL MAGNESIUM CARTRIDGES, photographs are made instantaneously, which could not otherwise be secured without great expense, trouble, and danger, in caves, tunnels, mines, and other places where daylight does not penetrate.

These are now made in the evening, with the valued surroundings, under the happiest auspices, which but a short time ago the most skilled photographer would not have thought it possible to secure. Among other occasions where this can be used to advantage are: Family Groups, Dinner, Private, Theatrical and Fancy Dress Parties, Club and College Dinners, Companies, Weddings, Church Fairs, Picnic Parties, Lodge Meetings, etc. The novelty for the public, and consequent advertisement of this method of Photography, will be at once apparent to the intelligent and progressive photographer, aside from the fact that there are many special occasions constantly presenting themselves, where a picture made in the ordinary way could not be obtained, owing to the impossibility of securing proper light.



The SCOVILL MAGNESIUM CARTRIDGES unite the very excellent quality of extremely actinic light, with convenience of ignition and perfect safety as to its non-explosive nature, and absence of poisonous or other objectionable elements. The compound is prepared in different quantities and put up in boxes, so that the light may always be at hand in convenient shape for using. The cap, too, which fits neatly over the cartridge, protects it from dampness, so that the light may be employed out-of-doors on a damp day, or even during a gentle rain. A fuse is inserted at the bottom of the cartridge, so that there is no danger of a premature explosion with a consequent burning of the hand, as is often done when a charge of the powder is ignited by a match or short taper. The combustion is instantaneous, with no detonation, and there follows no poisonous or otherwise obnoxious gases or vapors from the burning. Out-of-doors with the cap on, the combustion is quite as instantaneous, and the light nearly equal in its intensity.

MAGNESIUM FLASH-LIGHT PHOTOGRAPHS—Continued.

There are many obvious advantages in the use of the *Scovill Magnesium Cartridges* over that of all other compounds.

- 1st.—Besides being *Perfectly Safe*, from the fact that they contain no explosive or poisonous ingredients, they are
- 2d.—*Eminently Convenient and Comfortable*, the fuse attached to each cartridge avoiding the possibility of burning the fingers, the hand, or the face of him who ignites, protecting his eyes from the strain, resulting from the immediate flash following ignition without a fuse, and making it possible for him to take his place in the group or picture which he has arranged, after lighting the fuse.
- 3d.—They are *Always Ready* in the proper quantity. The operator always has at hand just the amount required to light his subject, and put up in convenient shape for using.
- 4th.—They are *Economical*, for without them more of the flash powder is used than is needed, and much of it is spilled or blown away.
- 5th.—They may be used at *any time or place*, the cap on the cartridge making it possible to use the *Scovill Magnesium Cartridge* out-of-doors *even during rain*.
- 6th.—It combines, with the foregoing *unrivalled qualities*, the advantages arising from the *highest and best qualities of actinic light*, *absolutely instantaneous combustion*, and *freedom from disagreeable and dangerous gases and fumes*.



Directions.—It is an easy matter to photograph in the dark by means of the *Scovill Magnesium Cartridge*. Any one can do it, the requirements are so simple.

Focus by means of a candle or lamp held close to the subject; if a portrait, to one of the central members of a group; or, if in an interior, to a place where detail is prominent, as wall paper or carpet.

For the Exposure, select the size cartridge most suitable for the subject. Place the cartridge on a saucer or metal plate, and behind it the screen, to reflect the light on the subject. The cartridge should be supported about the height of the camera from the floor, and behind the camera, to one side. Remove the cap of the cartridge before lighting the fuse. Out-of-doors the cap may be left on.

Develop the negative in the same way that any instantaneously exposed plate is treated.

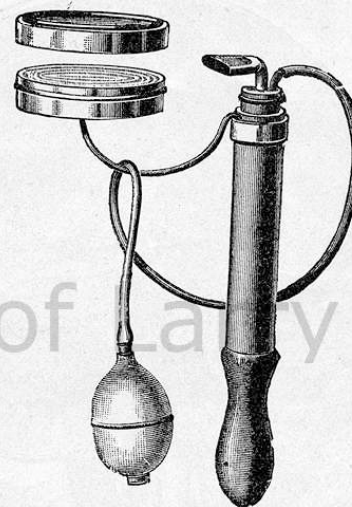
PRICE OF THE SCOVILL MAGNESIUM CARTRIDGES.

IN SILVER PAPER WRAPPERS.

	Per Doz.	Per Gro.
No. 1.—Small Size, 20 grains.....	\$0 50	\$6 00
" 2. Medium, 40 grains.....	80	9 00
" 2½. Large, 60 grains.....	1 20	13 00
" 3. Extra Large, 80 grains.....	1 50	17 00

THE LITTLE GIANT REPEATING FLASH LAMP.

Patented September 2, 1890.



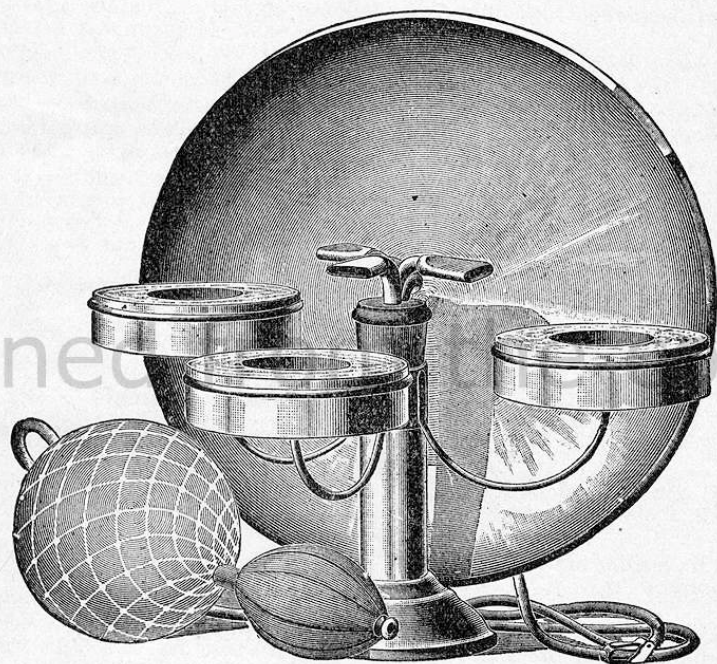
SAFE, CONVENIENT AND POWERFUL.

Embodying the same principle as the Standard Lamp, and producing a number of intensely brilliant flashes from one charge.

Price, boxed, \$2.50.

THE STANDARD TRIPLE FLASH LAMP.

(PATENTED.)

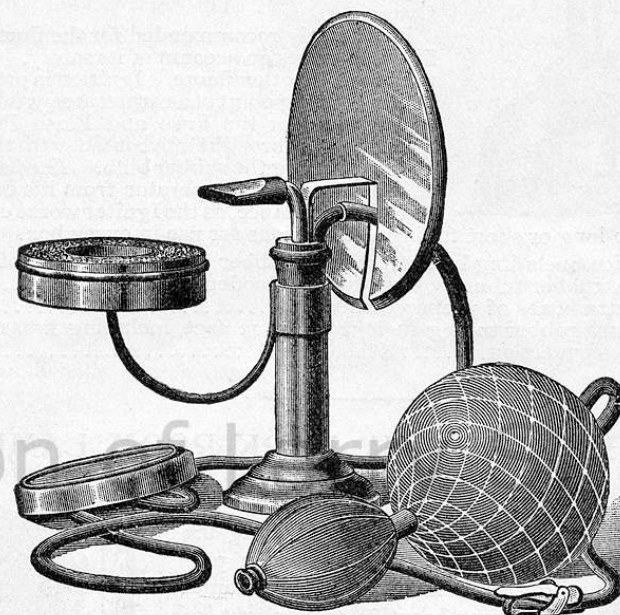


This lamp gives a continuous or intermitting light of intense power and brilliancy, and is for lighting theatres or large halls.

Price, \$7.50.

THE STANDARD FLASH LAMP.

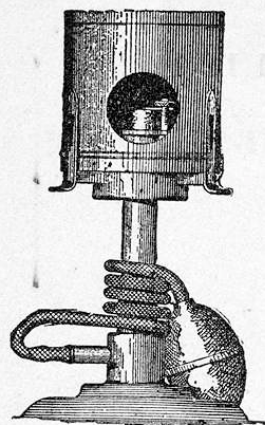
(PATENTED.)



This lamp gives a continuous or intermitting flash, and, having an Argand flame box, insures the complete consumption of powder with minimum smoke. It is for amateur or professional use.

Two or more of these lamps can be flashed instantaneously from different points.

Price, \$4.50.



THE "SAFETY" FLASH IGNITER.

(PATENTED.)

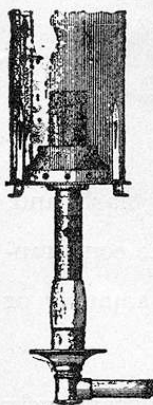
This Igniter can be used for either compound Flash Powders, Magnesium Cartridges or pure Magnesium Powder on substratum of Flash Cotton.

Particularly recommended for the Compound Flash Powders on account of its safety. It uses no alcohol or other flame. Ignition is produced by the glowing point of a carbon arranged under a receptacle for the Fuse and Flash Powder. The carbon is brought into contact with the fuse by compressing the rubber bulb. The flash can be controlled by the operator from his camera, and at any distance, as the Igniter works equally well with long or short tubing. Directions for use in every box.

Price, including box of carbons, rubber bulb, and 3 feet of rubber tubing. Complete in wooden box..... \$4 00
Extra boxes of prepared carbons..... 25
Extra rubber tubing in lengths of 12 feet, including brass connection..... 75

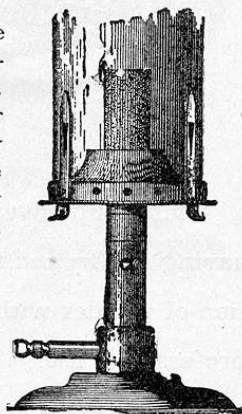
THE "ALADDIN" DARK-ROOM LAMP.

(PATENTED.)



ALADDIN.
Bracket Lamp.

For use with gas. Burning the patent Sodium Wick, which produces a non-actinic chemical flame. It gives a beautiful yellow light for dark-room use which is perfectly safe, without smoke or odor; more brilliant than the ordinary ruby light, and both pleasant and restful to the eyes. The lamp is made in two styles: the BRACKET LAMP, which may be slipped over any ordinary gas burner, and the TABLE LAMP, for which the gas connection is made by rubber tubing.

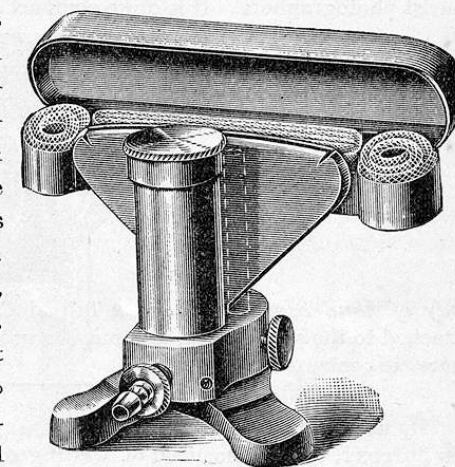


ALADDIN.
Table Lamp.

Price, including non-actinic amber chimney, extra brass tip, and box of chemical wicks, in wooden box, complete..... \$3 50
Extra chemical wicks, sufficient for one thousand hours' lighting, per box..... 35
Extra non-actinic amber chimneys, each..... 30
In ordering, please specify whether BRACKET or TABLE LAMP is desired.

THE LIGHTNING STORAGE FLASH LAMP.

Is safe to use; entirely reliable in operation; gives a larger, more intense, and decidedly more *effective* illuminating flame, with less consumption of powder, than any flash light device in the market, and, besides, leaves less smoke, smell and dirt. It is $4\frac{1}{2} \times 3$ inches in size, but in execution it is a giant, one lamp lighting largest home rooms, while two to four are sufficient for ordinary public halls, church and theatre interiors, etc.



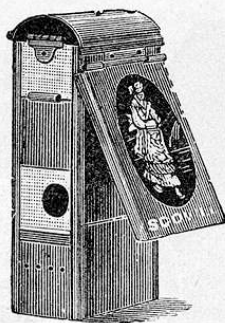
PATENT APPLIED FOR.

The cylindrical storage chamber holds about 100 grains of pure magnesium powder. A $\frac{5}{16}$ rubber tube having a mouth-piece is attached to nozzle of lamp; and when blown into undermines (as by a jet) the powder, and drives it up through fan-shaped projector tube into the alcohol combustion flame, producing a broad *vertical sheet flame*, which presents to the object to be lighted an illuminating surface of nearly 100 square inches.

The full charge of powder may be consumed in one prolonged flash of several seconds, or repeated short flashes may be made. The powder feeds *entirely automatically and surely*, and the projector tube is so constructed that the powder does not clog in it, and thus a flame unbroken and undiminished in size can be depended on from beginning to end.

A handle can be inserted either side of tube nozzle, and lamp held in the hand, or it can be secured to a stand-rod by binding-screw on side. A reflector is attachable over nozzle, and secured by binding-nut shown.

Made of Brass and Nickel-plated..... \$5 00
Extra Tube (5 Feet Furnished) per Foot..... 06
Storage Chamber Extensions (Doubling Capacity)..... 35
Connectors for Two Lamps, 60c.; Four Lamps..... 1 00

W. I. A. RUBY LIGHT LANTERN.

Used when putting dry plates into the holders, and also when developing them.

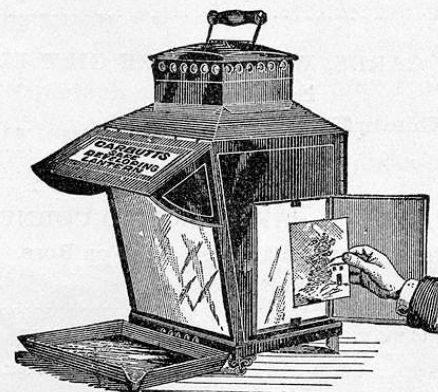
Price, each, \$0.60.

THREE SHIELDS PHOTO-ADHESIVE.

A new and superior photo-adhesive prepared specially for mounting photographs, aristotypes, engravings, scrap pictures, and for general use.

The Adhesive is guaranteed to keep in good condition indefinitely and to be entirely free from anything injurious to either photograph or mount. If too thick, it may be extended with a little water. Keep jar covered when not in use.

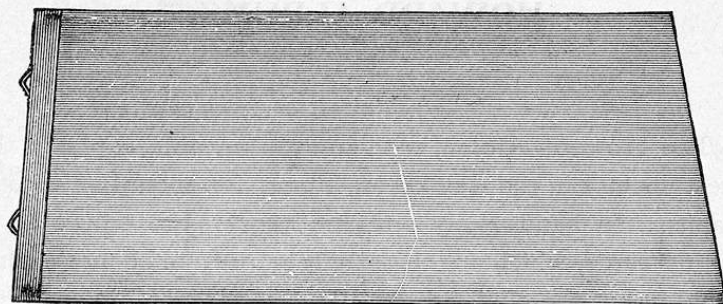
3 ounce jar.....	\$0 15
6 " "	25
14 " "	50

CARBUTT'S MULTUM IN PARVO DRY-PLATE LANTERN.

Lantern arranged for developing, and, after fixing, examining negatives by opal light.

Has three separate and distinct forms of light, and can be used for seven or more different operations in photography. It is adapted for the use of either oil or gas; is provided with coal-oil lamp, with improved patent burner and silvered reflector; is about nine inches square by fourteen inches high, with eight by ten light of deep ruby glass in front, and hood for protecting the eyes from the glare of the red light.

PRICE, \$6.00, BOXED READY FOR SHIPMENT.



HOWARD ALBUMS.

FULL CLOTH, EMBOSSED, GOLD LABEL, WITH A. M. COLLINS MFG. CO.'S
No. 1 CARDS.

		With 25 Collins Cards.	
No. 1.	— 6x 7 Cards, for 4 x 5 Photographs.....	\$1	25
" 2.	7x10 " " 5 x 8 "	1	50
" 2½.	8x10 " " 6½x 8½ "	2	00
" 3.	10x12 " " 6½x 8½ "	2	25
" 4.	11x14 " " 8 x10 "	2	50

HOWARD ALBUMS.

MOROCCO, HALF LEATHER, EXTRA GOLD FINISH, WITH A. M. COLLINS
MFG. CO.'S CARDS, BOXED.

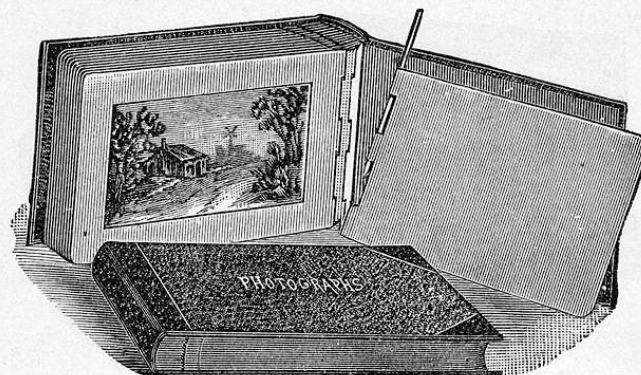
		With 25 Collins Cards.	With 50 Collins Cards.
No. 5.—	7x10 Cards, for 5 x 8 Photographs..	\$2 00	No. 11.—\$3 50
" 6.	8x10 " " 6½x 8½ " ..	2 50	" 12. 4 00
" 7.	10x12 " " 6½x 8½ " ..	3 00	" 13. 4 75
" 8.	11x14 " " 8 x10 " ..	3 50	" 14. 5 50
" 9.	14x17 " " 10 x12 or 11x14.....	5 50	" 15. 9 00
" 10.	16x20 " " 11 x14 " 14x17.....	7 25	" 16. 11 00

EXTRA CARDS, COLLINS' BEST, FOR HOWARD ALBUMS, MOUNTED WITH
LOOPS, READY FOR USE.

6x 7, Package of one dozen.....	\$0 38
7x10, " " "	50
8x10, " " "	60
10x12, " " "	75
11x14, " " "	88
14x17, " " "	1 25
16x20, " " "	1 55

THE ECLIPSE ALBUMS.

INTERCHANGEABLE LEAVES. SPRING BACK.



THE ECLIPSE ALBUM is the most perfect album manufactured. *The interchangeable feature is superior to all others.* It contains twenty-four Collins' Best Cards, which are chemically pure and free from all matter that would injure a photograph. Each leaf is distinctly independent, and may be taken out and returned or replaced with the utmost ease without having to disturb any other leaf or part of the album. The arrangement of the picture may be altered when desired, and if a single leaf is spoiled the whole album is not ruined.

DIRECTIONS FOR REMOVING THE LEAVES AND MOUNTING PHOTOGRAPHS.

Read Carefully the Following.

The leaves of the Eclipse Album are fastened by means of a small rod or "pintle," as will be seen by the above cut. At the back of the album, in the inside, is a slot or cut expressly made, by means of which you can readily grip and remove the pintle. The pintle thus removed will give you an instrument with which you can remove the others. A pin or hairpin also answers admirably.

Place the flat or upper end against the flat end in the leaf, and press it out, thereby removing both the leaf and the pintle.

Each picture may then be finished and mounted on the card and burnished before putting the card in the album.

Photographs should under no circumstances be mounted with the ordinary photographer's paste or the many scented "paste preparations" sold by dealers generally.

We confidently recommend "Non-Cockle" as being the best preparation manufactured for mounting purposes.

In mounting the pictures it is very important to have them dry thoroughly between blotting paper, under pressure.

THE ECLIPSE ALBUM, as a sample book, especially for mounting samples of fine stationery, satins, delicate laces, etc., is pronounced by the best judges as having no equal.

PRICE.

IMPROVED SPRING BACK WITH TWENTY-FOUR COLLINS CARDS.

No. 1	..... 6x 7	..... \$2 25	No. 3½	..... 12x10 —upright..	\$4 25
" 2	..... 7x10	..... 2 50	" 4	..... 11x14	..... 4 25
" 2½	..... 10x 7½—upright..	3 50	" 4½	..... 14x11½—upright..	6 25
" 3	..... 10x12	..... 3 75	" 5	..... 14x17	..... 7 00

THE ECLIPSE ALBUMS are handsomely finished in Morocco, half leather bound, with gilt title, and enclosed in a neat box.

Nos. 2½, 3½, 4½ and 5 have round corners; Nos. 4½ and 5 are extra gold finish.

FULL LEATHER BOUND.

These books are full leather bound, seal grain, padded covers, and round corners. They are expressly made for fine trade. Price as follows:

No. 21	..... 6x 7	..... \$3 00	No. 23½	..... 12x10 —upright..	\$6 00
" 22	..... 7x10	..... 3 50	" 24	..... 11x14	..... 6 00
" 22½	..... 10x 7½—upright..	4 50	" 24½	..... 14x11½—upright..	8 00
" 23	..... 10x12	..... 5 50	" 25	..... 14x17	..... 9 00

PRICE OF EXTRA LEAVES.

White and Gray.			Best Quality.		1 Dozen in a Box.	
No. 1	..... 6x 7.....	\$o 50	No. 3½	..... 10x12.....	\$o 80	
" 2	..... 7x10.....	65	" 4	..... 11x14.....	1 10	
" 2½	..... 10x12.....	80	" 4½	..... 14x17.....	1 75	
" 3	..... 10x12.....	80	" 5	..... 14x17.....	1 75	

ILOTYPE COLLODION ARISTOTYPE PAPER.

No lubricating.

No curling whatever.

No special negatives.

Half the work in mounting.

No troublesome baths before toning.

Paper always ready for immediate use.

Toning and Fixing in one bath with *beautiful* and *permanent* results.

PRICE LIST.

	Dozen.	Gross.
2 1/4 x 3 1/4	\$0 15	\$1 10
3 x 4	15	1 25
2 3/4 x 5 3/8	20	1 50
3 1/4 x 4 1/4	20	1 60
4 x 5	25	2 00
3 3/4 x 5 1/2 (Cabinet)	25	2 00
4 x 6	25	2 00
5 x 7	40	3 50
5 x 8	45	4 00
5 1/2 x 7 3/4 (Paris Panel)	50	5 00
6 1/2 x 8 1/2	65	6 00
7 x 9	75	7 00
8 x 10	90	8 00
10 x 12	1 25	12 00
11 x 14	1 50	15 00
14 x 17	2 25	24 00
16 x 20	3 00	32 00
18 x 22	4 00	....
20 x 24	4 00	....

Special sizes, in gross lots, cut to order.

ILO SECONDS (WHEN WE HAVE THEM).

Per Box (100 Sheets).....\$1 00

ILO NEGATIVE VARNISH.

6 oz. Bottle.....	\$0 40
Pints.....	1 00
Quarts.....	1 90
Gallons.....	7 00

The toning and fixing chemicals are put up in dry form, in convenient wide-mouthed bottles. These chemicals are especially made for this paper, and are absolutely pure; all that is necessary before use is to dissolve them in hot water.

Obtainable in two sizes:

50 cts. Size, sufficient to tone and fix 250 Cabinets.
\$1.00 " " " " 500 "

ATLAS COLLODION PAPER.

A VERY SUPERIOR ARTICLE FOR GENERAL WORK.—MANIPULATION VERY SIMPLE.—RESULTS MOST EXCELLENT

SIZE.	DOZ.	GROSS.
3 1/4 x 4 1/4	\$0.20	\$1.20
4 x 5 .....	.25	1.50
2 1/4 x 3 3/4, Carte de Visite .....	.15	.75
3 x 4, Mantello .....	.15	1.00
* 3 7/8 x 5 1/2, Cabinet .....	.25	1.50
3 7/8 x 5 7/8 .....	.25	1.50
4 x 6 .....	.25	1.50
5 x 7 .....	.35	2.65
5 x 8 .....	.40	3.00
5 1/2 x 7 3/4, Paris Panel .....	.45	3.40
6 x 8 .....	.50	3.75
6 1/2 x 8 1/2 .....	.55	4.10
7 x 9 .....	.65	5.25
7 1/2 x 9 1/2 .....	.70	5.75
8 x 10 .....	.75	6.00
10 x 12	1.10	9.00
11 x 14	1.25	11.20
14 x 17	1.85	18.00
16 x 20	2.50	24.00
18 x 22	1/2 doz., \$1.75	3.00
20 x 24	1/2 doz., 2.00	3.00
		33 00

* STANDARD CABINET SIZE.—This size will be furnished on all orders for "Cabinets" when no special size is mentioned.

SECONDS.—A limited quantity of Standard Cabinet size (trimmed) Seconds at 80 cents per 100.

NO ALUM.—NO SULPHURATION.—NO YELLOW PRINTS.

SENSITIZED ALBUMA PAPER.

	DOZ.	GROSS.
2 1/4 x 3 3/4 Carte de Visite	\$0.10	\$0.60
3 x 4 Mantello .....	.10	.70
3 1/4 x 4 1/4 .....	.10	.80
4 x 5 .....	.15	1.00
3 7/8 x 5 1/2, Cabinets .....	.15	1.00
4 x 6 .....	.15	1.00
5 x 7 .....	.20	1.75
5 x 8 .....	.25	2.00
5 1/2 x 7 3/4, Paris Panel .....	.30	2.50
6 1/2 x 8 1/2 .....	.40	3.00
7 x 9 .....	.45	3.50
8 x 10 .....	.50	4.00
10 x 12 .....	.65	6.00
11 x 14 .....	.75	7.50
14 x 17	1.15	12.00
16 x 20	1.50	16.00
18 x 22	2.00	20.00
20 x 24	2.00	24.00

SECONDS.—A limited quantity of Cabinet Seconds at 50 cents per 100. CABINETS, postage paid, \$1.10 per gross.

Combined Bath Formula

FOR USE WITH

KLODENE COLLODION PAPER.

Print to a shade darker than required for separate bath toning. Immerse prints, face down, without previous washing, in

COMBINED TONING AND FIXING BATH:

Water.....	50 ounces.
Hypo.....	6 ounces.
Sulpho-Cyanide Ammonia.....	4 ounces.
Acetate Lead.....	1 ounce.
Common Salt.....	3 ounces.

To this quantity of bath add 2 grains chloride of gold in solution. This bath can be mixed just before toning, or can be made up for stock without gold, which should be added just before use. Better results are obtained by allowing this bath to stand 24 hours before using. It is advisable to save one-half of the old bath, and a like amount of new and before commencing to tone.

Use liberal quantity as to volume, and do not place too many prints in bath at a time. Care should be taken to keep hypo up to full strength, as it is the most active agent in the bath and while toning will continue; the fixing power will be greatly diminished, and the prints will not be thoroughly fixed, and yellow stains are liable to appear on finished prints. From time to time throw away part of bath and add more of new and also more gold solution. This keeps bath up to original strength.

Keep prints in motion in toning bath; tone to desired tone, then transfer to running water and wash thoroughly in several changes before placing in tray or tank for final washing.

Mount in the usual way. Burnish when slightly damp, using castile soap for lubricator.

PRICE LIST.

	DOZ.	GROSS.
2¼ x 3¾, Carte de Visite.....	\$0.15	\$0.75
3 x 4, Mantello.....	.15	1.00
3¼ x 4¼.....	.20	1.20
4 x 5.....	.25	1.50
3⅞ x 5½, Cabinets.....	.25	1.50
4 x 6.....	.25	1.50
5 x 7.....	.35	2.60
5 x 8.....	.40	3.00
5½ x 7¾, Paris Panel.....	.45	3.40
6½ x 8½.....	.55	4.10
7 x 10.....	.65	5.25
8 x 10.....	.75	6.00
10 x 12.....	1.10	9.00
11 x 14.....	1.25	11.20
14 x 17.....	1.85	18.24
16 x 20.....	½ doz. 2.50	24.00
18 x 22.....	\$1.75 3.00	30.00
20 x 24.....	2.00 3.00	33.00

SECONDS.—A limited quantity of Cabinet Seconds at 80 cents per 100.

N. Y. ARISTOTYPE PAPER.**PRICE LIST.**

	DOZ.	GROSS.
2¼ x 3¾, Carte de Visite.....	\$0.15	\$1.10
3 x 4, Mantello.....	.15	1.25
3¼ x 4¼.....	.20	1.60
4 x 5.....	.25	2.00
3⅞ x 5½, Cabinets.....	.25	2.00
4 x 6.....	.25 ½ GR.	2.00
5 x 7.....	.40	\$1.85 3.50
5 x 8.....	.45	2.10 4.00
5½ x 7¾, Paris Panel.....	.50	2.65 5.00
6½ x 8½.....	.65	3.15 6.00
7 x 9.....	.75	3.70 7.00
8 x 10.....	.90	4.20 8.00
10 x 12.....	1.25	6.30 12.00
11 x 14.....	1.50	7.90 15.00
14 x 17.....	2.25	12.60 24.00
16 x 20.....	½ doz. 3.00	16.80 32.00
18 x 22.....	\$2.00 4.00	21.00 40.00
20 x 24.....	2.25 4.00	23.00 44.00

Special sizes in gross lots cut to order.

SECONDS, in cabinet and 4 x 5 only, price per 100, \$1.00.

Directions for using N. Y. Aristotype Paper.**COMBINED TONING AND FIXING BATH:**

Hot Water.....	.66 ounces.
Hypo.....	.16 ounces.
Sulpho-Cyanide Ammonia.....	2 ounces.
Acetate Lead.....	½ ounce.
Nitrate Lead.....	½ ounce.
Citric Acid.....	½ ounce.
Chloride of Gold (in solution).....	4 grains.

Mix at least 24 hours before using. Allow to settle, and use clear portion only. Use from 20 ounces of bath for toning 75 prints (cabinets or equivalent). After each 25 prints are toned add ½ ounce of a saturated solution of hypo, as it is absolutely necessary that there should be a large excess of hypo in the combined bath. After toning 75 prints in this way, throw away three-quarters of the bath and add 16 ounces of fresh bath. Then tone 75 prints more in the same manner.

Place prints without previous washing in the above solution. Tone a shade warmer than desired in the finished print. This bath gives best results when used at 55 degrees Fahr.

Wash in running water 1 hour, or in 12 or 15 changes of water, transferring prints singly from tray to tray. Mount and dry as usual. Burnish with hot burnisher. Use castile soap as lubricator.

Don't over work your toning bath.

How to use

NEPERA-BROMIDE PAPER.



Nepera-Bromide Paper is manufactured in three grades:

Platinoid is a mat surface paper giving platinum effects, and is specially adapted for contact prints and enlargements not exceeding 20 x 24.

Rough Surface is a heavier paper, generally preferred for crayon work.

Glossy Surface or **Enameled Paper** gives, as suggested by its name, glossy prints. When toned Sepia such prints closely resemble albumen or aristotype prints, and magnificent enlargements can be made on this paper, which look like prints obtained directly under a negative. It can be burnished, or squeegeed on ferrotype plate.

The emulsion used for Nepera-Bromide Paper is made by a process which is entirely independent of condition of weather and quality of water, insuring perfect uniformity.

Nepera-Bromide Paper, on account of the special preparation of its emulsion, has better keeping qualities than any other paper. Prints made on Nepera-Bromide Paper, according to our directions, *will not fade.*

PRICES.

	DOZ.		DOZ.
3 x 4	\$0.30	11 x 14	\$3.00
4 x 5 .....	.40	14 x 17	4.50
3 1/2 x 5 1/2 to 4 x 6, Cabinet .....	.50	16 x 20	6.00
4 1/4 x 6 1/2 .....	.55	18 x 22	7.50
5 x 7 .....	.65	20 x 24	9.00
5 1/2 x 7 1/2, Paris Panel .....	.75	22 x 27	11.25
5 x 8 .....	.75	24 x 30	13.50
6 1/2 x 8 1/2	1.10	25 x 30	14.00
7 x 9	1.20	24 x 36	16.00
8 x 10	1.50	30 x 40	22.50
10 x 12	2.25		

In rolls at least 10 yards long.

	YARD.		YARD.
10 inches wide	\$0.56	20 inches wide	\$1.12
11 " " .....	.62	22 " "	1.24
12 " " .....	.68	24 " "	1.35
14 " " .....	.79	25 " "	1.40
16 " " .....	.90	30 " "	1.68
18 " "	1.00	31 " "	1.75

DISCOUNT ON ALL THE ABOVE PRICES.

Neutral Oxalate of Potassium	in boxes, per lb.,	\$0.25
Proto-Sulphate of Iron	" "	.15
Hyposulphite of Sodium	" "	.10
Ferricyanide of Potassium	per ounce bottle,	.15
Uranium Nitrate	" "	.60
Acetic Acid No. 8, per lb. bottle, \$0.20; 2 lb. bottle, \$0.32; 5 lb. bottle, \$0.70.		
Nepera Eikonogen Developing Powders, specially adapted for Bromide Paper,		.50

SCOVILL PRINT ROLLER AND SQUEEGEE.



SUPERIOR TO ANYTHING IN THE MARKET.

The Scovill Print Roller and Squeegee is especially designed to be used in the place of the ordinary Squeegee in working film and paper negatives, bromide prints for removing surplus water from albumen prints before mounting, etc.

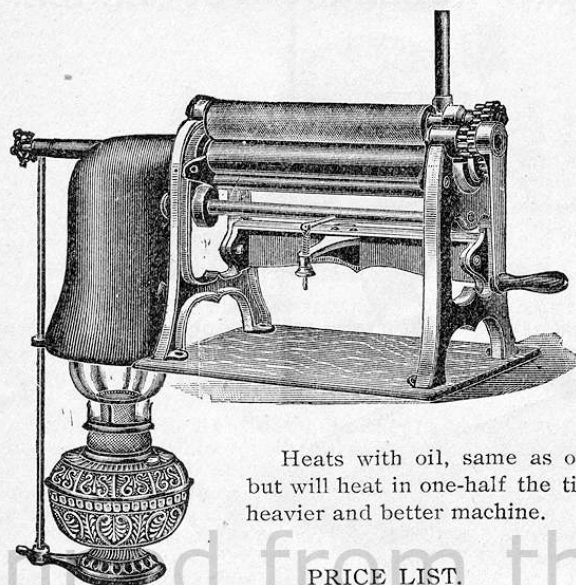
It is neatly constructed with black walnut handle, brass trimmings and a heavily covered rubber roller.

It will be found a very handy tool alike to the professional and amateur photographer.

No. 1.—8-inch, \$1.00 each.

No. 2.—12-inch, 1.50 "

ACME ARISTO BURNISHER.



Patent Pending.

Gives the highest
polish of any
Burnisher in the
world.

Heats with oil, same as our 1894 Burnisher,
but will heat in one-half the time and is a much
heavier and better machine.

PRICE LIST.

11 inch, with Gas, Gasoline or Oil Heater.	\$30.00
15 " " " " " "	40.00
21 " " " " " "	50.00
26 " " " " " "	60.00

Special sizes to order.

The above cut represents our latest production. Too much cannot be said about this machine. Just note that it has a purchase gear—the strongest possible—and answers the purpose of six gears with no backlash whatever.

It is heated by GAS, GASOLINE or OIL.

The Gas heater is simple and easy to operate—anyone can use it.

The Gasoline heater is easily handled—a novice can work it when directions are followed.

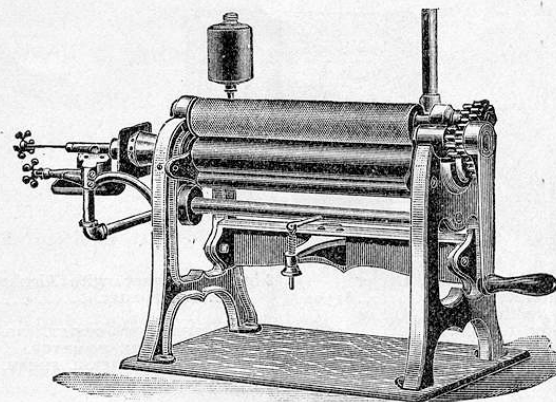
The Oil heater we wish to call special attention to, as the heating capacity of this burnisher with oil heater has been more than doubled over our 1894 Roll Heater. It is the only heater of the kind made; it is the simplest heater possible; heats direct; heats in ten minutes; a beautiful burnisher, and so simple that any photographer can use it without any instruction whatever. You can't afford to be without one.

The adjustment on this burnisher is the latest—by turning the screw the most delicate adjustment possible can be attained.

Place a card between the rolls, the thickness of picture intended to burnish, push down on adjustment bar, spin the nut up and it is ready for work. The simplest and best adjustment ever put on any burnisher.

The bearings of polishing roll are of steel; the roll is made of very heavy material, and will hold the heat a long time. The rolls cannot be brought so close together as to mar the polishing roll. It is easy to do the very finest work on this machine.

ACME ARISTO BURNISHER.

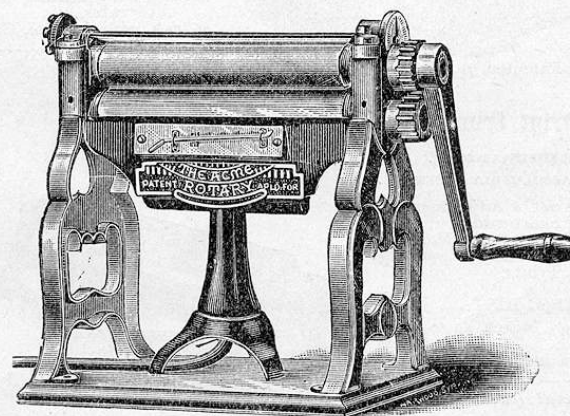


Patent Pending.

The above cut shows Gasolene Burner attached to Burnisher.

ACME
FLUE-HEATING ROTARY BURNISHER.

ONE-HAND WHEEL ADJUSTMENT. EVEN TENSION. ACME THERMOMETER
ATTACHED. KNURLED ROLL. FULL NICKEL FINISH. BOTH HOLLOW ROLLS.

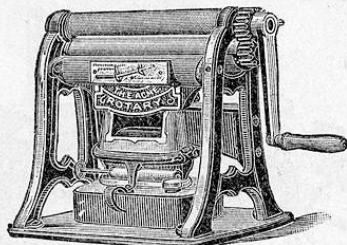


Patented May 31, 1890, and March 31, 1891.

PRICE LIST.

11 inch, Oil, Gas or Alcohol Heater.	\$25.00
15 " " " " " "	35.00

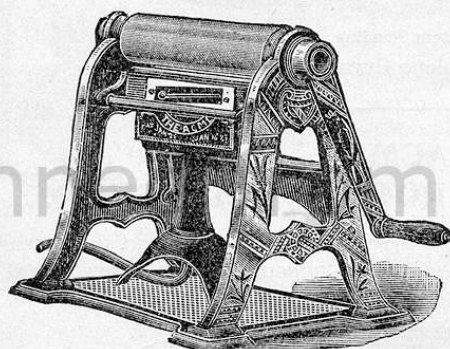
ACME IMPROVED ROTARY BURNISHER.



8 inch Rotary, with Alcohol, Oil or Gas Heater.....\$13.00
 11 inch Rotary, with Alcohol, Oil or Gas Heater.....20.00
 15 inch Rotary, with Alcohol, Oil or Gas Heater.....25.00

8 inch Stationary, with Alcohol, Oil or Gas Heater.....\$10.00

NO SMELL. NO SWEAT. NO SMOKE.
 THERMOMETER.
 FULL NICKEL FINISH.



Patented '76, '86, '88, '90.

Acme Stationary Burnisher.

Finest Stationary Burnisher ever made.

NO SMOKE. NO SWEAT. NO SOOT.
 Simple. Well made. Guaranteed.
 One-Hand Wheel Adjustment.
 Thermometer Attached.

REVISED PRICE LIST.

11 inch, with Alcohol, Gas or Oil Heater.....\$18.00
 15 inch, with Alcohol, Gas or Oil Heater.....22.00
 21 inch, with Alcohol, Gas or Oil Heater.....40.00
 26 inch, with Alcohol, Gas or Oil Heater.....60.00

Acme Print Trimmer.

CUTS A WHOLE SHEET AT ONCE.

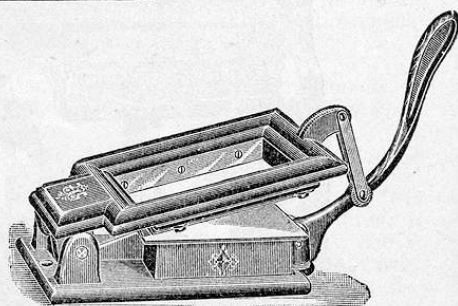
ABSOLUTELY ACCURATE.

Never gets out of Adjustment.
 Self Sharpening.
 Simplest Trimmer ever Made.
 Prevents all Possibility of Spoiling Prints.

PRICE LIST.

No. 1—3¼ x 5½ inches. 16 to Sheet.....\$12.00
 No. 2—3¼ x 6 inches. 12 to Sheet.....12.00

Any special size to order.



Patented Aug. 26, 1890.

ACME BURNISHER OIL, for Bearings of Polishing Roll.

Something new. Will not dry with the heat, and wears for a long time. Can be used on any of our hollow roll burnishers. Ask your dealer for this.

Price, per Stick, 15 cents.

FELT BACKGROUNDS.

The Scovill & Adams Plain Felt Backgrounds, recently introduced, is a great boon to all Photographers, both Professional and Amateur.

It is made of strong, thick and even stock, and is of an agreeable neutral drab color. It is especially suitable for vignetting. The texture of the cloth absorbs instead of reflecting light, and thus produces soft effects, and agreeable depth in print. The liability of defacement by water stains is obviated.

The prices of these grounds are as follows:

4x6 feet.....	\$2 50
5x6 ".....	2 75
6x6 ".....	3 00
6x7 ".....	3 50
6x8 ".....	4 00

These sizes may be sent by mail on receipt of 35 cents extra.

VULCANITE TRAYS.

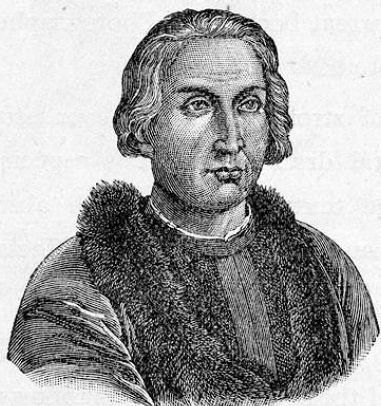
4x 5.....	\$0 50
5x 7.....	60
5x 8.....	70
7x 9.....	85
8x10.....	1 15
10x12.....	1 75

GLASS PANS.

4¼ x 5½.....	\$0 28
5½ x 8½.....	38
7 x 9.....	65
8½ x 10½.....	75

SOMETHING NEW!
THE COLUMBIAN DEVELOPER.

COMPLETE IN ONE SOLUTION.



THE VERY LATEST AND THE VERY BEST.

THE COLUMBIAN DEVELOPER is a powerful, new, one-solution developer, especially suited for undertimed and instantaneously exposed plates. It yields negatives of the most beautiful half-tones and middle tints, and of unsurpassed printing qualities.

Full directions for working on each bottle.

Price, for Eight-ounce Bottle.....only 30 Cents.

DR. ANDRESEN'S AMIDOL

THE NEW DEVELOPER.

(Patented June 21, 1892, No. 477,486.)

IN CRYSTALS, SOLUTION, CARTRIDGES.

Price in 1 ounce cans.....	\$0 75
" 1/4 pound cans.....	2 75
" 1/2 ".....	5 25
" 1 ".....	10 00
The S. P. C. Amidol Developing Solution, with full directions, ready for use, in eight (8) ounce bottles.....	50
Cartridges, in packages of five.....	1 00
Cartridges, in packages of ten.....	2 00

HAUFF'S AMIDOL.

If you are not using one of these AMIDOL DEVELOPERS send for a sample at once.

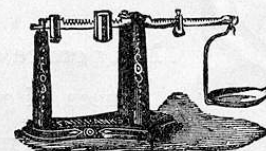
PRICE LIST.

In 1 ounce packages.....	\$0 75
" 2 " " (Hauff's).....	1 50
" 1/4 pound ".....	2 75
" 1/2 " ".....	5 25
" 1 " ".....	10 00

AMIDOL CARTRIDGES.

In packages of 5 (Andresen's).....	\$1 00
" " 6 (Hauff's).....	1 20
" " 10 (Andresen's).....	2 00

FAIRBANKS' PHOTOGRAPHER'S SCALE.



NEW PATTERN, 2 1/2 INCH PAN.

Half-grain to 8 drachms indicated on beam. No weights required.

Japanned Scale, Nickel-Plated Beam.....\$5 00

THE



ACID FIXING AND HARDENING COMPOUND,

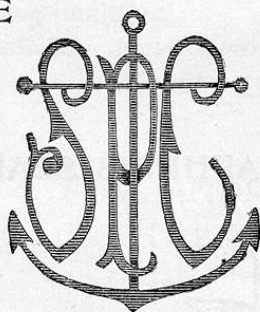
FOR NEGATIVES, TRANSPARENCIES,
LANTERN SLIDES AND BROMIDE
PAPER.

Destroys all developing fog and
yields peculiarly beautiful and permanent results.

This solution can be used repeatedly so long as it fixes.
It can also be used as a reducer of over-density by a long
continued treatment.

Price, in 1 lb. packages, only.....\$0 25
In ½ lb. packages, only..... 15

THE



WOODBURY ANTIPYR,

AN IMPROVED CONCENTRATED HARDENER FOR GELATINE PLATES
AND PRINTS.

Mix 1 ounce of this solution with
10 ounces of water and soak the
plate or print therein for from six to ten minutes. Then rinse
off and dry.

The plate or print thus treated will withstand a heat
exceeding 100° F. This solution may be used repeatedly.

Price per bottle.....\$0 75

HARD RUBBER PLATES.

FOR SQUEEGEEING PRINTS UPON.

			¹ / ₈ in. thick.
4	x	5	10 cents each
5	x	7	18 "
5	x	8	20 "
6½	x	8½	30 "
8	x	10	40 "
10	x	12	60 "
11	x	14	75 "

SQUEEGEES.

6 inches, each.....	\$0 40
8 " "	50
12 " "	75

S. P. C. JAPANNED DEVELOPING TRAYS

(MADE OF SELECTED METAL)

FOR DRY PLATE PHOTOGRAPHY.

Size			price, each, 20 cents
4½ x 5½ inches.....			25 "
5½ x 8½ "			30 "
7 x 9 "			40 "
8½ x 10½ "			

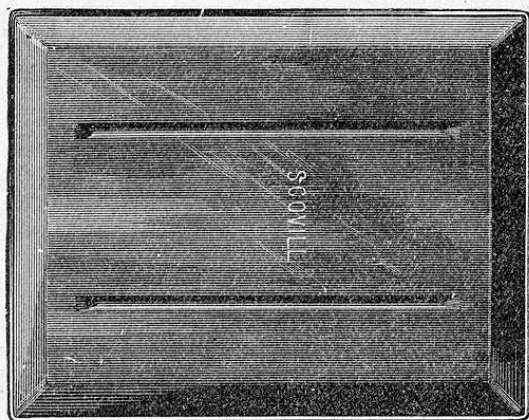
IMPROVED PAPIER MACHÉ TRAYS,

THE COATING OF WHICH IS SUPERIOR TO ANY GOODS
OF THIS CLASS YET PUT UPON THE MARKET.

PRICE LIST PAPIER MACHÉ TRAYS.

No.									
1,	for	3¼ x 4¼	plates, each.....						\$0 25
2,	"	4 x 5	" "						25
3,	"	5 x 7	" "						35
4,	"	5 x 8	" "						45
5,	"	7 x 9	" "						55
6,	"	8 x 10	" "						75
7,	"	10 x 12	" "						95
8,	"	12 x 14	" "						1 35
9,	"	14 x 18	" "						2 75
10,	"	16 x 20	" "						3 25
11,	"	19 x 24	" "						5 50
12,	"	23 x 27	" "						6 50
13,	"	26 x 30	" "						7 50
14,	"	28 x 34	" "						8 50

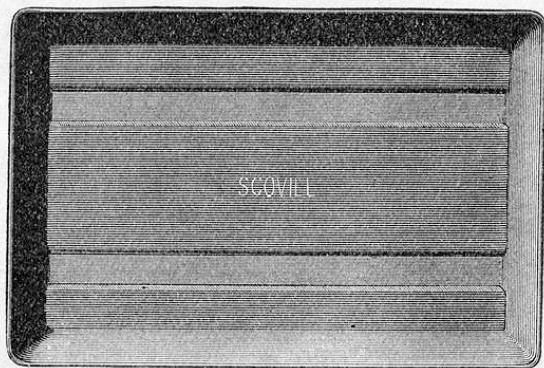
SCOVILL'S GLOSSY RUBBER TRAYS.



After a protracted and costly series of experiments, we are now able to offer to the trade a superior article in texture, durability and polish. The utility of the parallel ridgelets must at once be apparent to the photographic practitioner.

Size.	PRICE LIST.	Price, Each.
No. 200, $4\frac{3}{8} \times 5\frac{5}{8}$ for 1-4, 4-5, and $4\frac{1}{4} \times 5\frac{1}{2}$ plates.	\$0 28
" 300, $5\frac{1}{2} \times 8\frac{1}{2}$ for 5x7 and 5x8	56
" 400, 7 x 9 for $6\frac{1}{2} \times 8\frac{1}{2}$	72
" 500, $8\frac{1}{2} \times 10\frac{1}{2}$ for 7x9 and 8x10	1 08

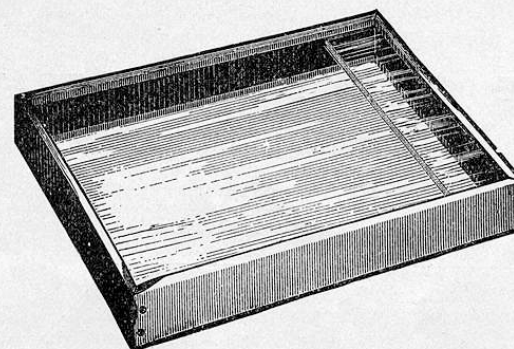
CELLULOID TRAYS.



Size.	Price, Each.
$4\frac{1}{4} \times 5\frac{1}{2}$ for 4 x 5 plates.	\$0 50
$5\frac{1}{2} \times 8\frac{1}{2}$ " 5 x 8 "	72
7 x 9 " $6\frac{1}{2} \times 8\frac{1}{2}$ "	85
$8\frac{1}{2} \times 10\frac{1}{2}$ " 8 x 10 "	1 15

THE ACME GLASS BOTTOM RESERVOIR TRAYS.

FOR DEVELOPING DRY PLATES.



These trays enable the operator to develop a plate without removing it from the solution until fully developed.

The Acme Trays are made of Walnut, with Glass Bottoms, and Receptacle at one end to hold the solution while looking at the plate. They also have buttons adhering to the glass to prevent suction.

The Acme Trays are superior to all others in respect to cheapness, durability and cleanliness. They are lined with acid proof cement, and warranted not to leak.

PRICES FOR TRAYS WITH RESERVOIR TO DEVELOP.

5 x 7 Plate and smaller.	\$1 00
5 x 8 "	1 20
$6\frac{1}{2} \times 8\frac{1}{2}$ "	1 25
8 x 10 "	1 30
20 x 24 Trays for silvering whole sheets, without reservoir, but with double thick glass bottom.	5 00

THE "BLACK DIAMOND" TRAY.

These Trays are made in two sizes—

4 1/4 x 5 1/2 inside measurement, list price.....each, \$o 3o

$5\frac{1}{2} \times 8\frac{1}{2}$ " " " " 55

24 of these trays, each size, are packed in a case.

DEVELOPERS AND CHEMICALS IN SOLUTION

TRANSPORTED SAFELY IN

CORRUGATED PROTECTING CASES.

SUPPLIED WITH CUT GLASS BOTTLES, AND
GRADUATED TUMBLER TO
MEASURE LIQUIDS.

CORRUGATED PROTECTING CASES are a great convenience to the landscape Photographer and amateur picture-taker when away from home. Though made of thin metal, the corrugation makes them so strong as to resist crushing. Being nickelled and finely finished, the external appearance of these Cases is

DECIDEDLY TASTEFUL.

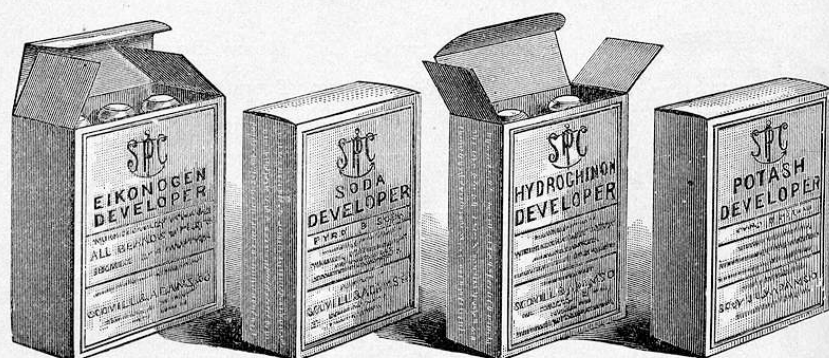
Indeed, one would be more inclined to place them in a satchel than in a packing case. Whether carried about in a horizontal or vertical position, the locking ring affords perfect protection for the liquids contained in the bottle.



		EACH.
No. 1.	Diameter, $1\frac{5}{8}$ in. Length, $3\frac{1}{2}$ in. Weight, $4\frac{1}{2}$ oz. Furnished with 1 ounce bottle.....	\$0 50
No. 3 A.	Diameter, 2 in. Length, $5\frac{1}{2}$ in. Weight, $7\frac{3}{4}$ oz. Furnished with 4 oz. bottle, with tumbler, making $\frac{1}{4}$ pint flask.....	85
No. 4 A.	Diameter, $2\frac{1}{2}$ in. Length, 7 in. Weight, 14 oz. Furnished with 8 oz. bottle, with tumbler, making $\frac{1}{2}$ pint flask.....	1 10
No. 13 A.	Diameter, $2\frac{7}{8}$ in. Length, 6 in. Weight, 17 oz. Furnished with 8 oz. bottle, with tumbler, making $\frac{1}{2}$ pint flask.....	1 20

SCOVILL PREPARED SOLUTIONS.

POWDERS AND CAPSULES.



<i>S. P. C. Eikoquinole Developer</i> , price per bottle	\$o 35
<i>S. P. C. Eikonogen Developer</i> , per package	75
<i>S. P. C. Pyro and Soda Developer</i> , price per package...	60
<i>S. P. C. Hydrochinon Developer</i> , " " ...	60
<i>S. P. C. Pyro and Potash Developer</i> , " " ...	60
<i>S. P. C. Restrainer</i> , in accurate dropping bottle	50
<i>S. P. C. Fixing and Hardening Compound</i> , ½ pound packages	15
<i>S. P. C. Fixing and Hardening Compound</i> , 1 pound packages	25
<i>The Woodbury Antipyr</i> , per bottle	75
<i>The S. P. C. Columbian Developer</i> , per bottle	30
<i>S. P. C. Clarifying Solution</i> , per bottle	50
<i>S. P. C. Reducing Solution</i> , small bottle	50
Large bottle	75
Reduces density in negatives and positives on glass or paper. Can be applied locally to remove halation marks, ghosts, etc.	

SCOVILL PREPARED SOLUTIONS—Continued.

S. P. C. Hypo Eliminator. (For Removing every trace of Hyposulphite of Soda from Negatives and Prints.)

Price, per bottle, with book of testing paper.....\$o 50



S. P. C. Retouching Fluid. (For Varnished and Unvarnished Negatives.) Price per bottle.....

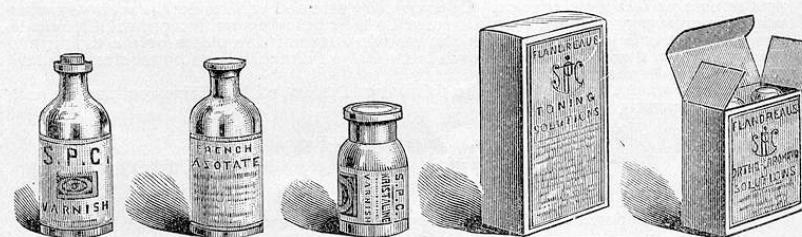
25

Magnesium Flash Compound, ounce bottle.....

50

Hall's Intensifier. (For Strengthening Weak Negatives.) Price per bottle.....

75



S. P. C. Negative Varnish.....Per bottle 35

French Azotate. (For Toning Prints.)....." " 25

Kristaline Varnish....." " 40

S. P. C. Orthochromatic Solutions, by which any plate may be rendered color-sensitive. Price per package. 1 50

A GREAT ADVANCE!

JOHN WYETH & BROTHER'S

COMPRESSED TABLETS OF PHOTOGRAPHIC CHEMICALS.

A Compact and Complete Equipment of Adjusted and Accurately Prepared Photographic Chemicals in the Form of Compressed Tablets, for the Extemporaneous Preparation of the Various Solutions Used and Required to Develop and Fix Plates and to Tone and Fix Prints.

NO NECESSITY FOR SCALES. DRY AND PORTABLE. NO WASTE OR DETERIORATION OF SOLUTIONS.

Marked strides have lately been made in the art of Photography through increased interest in all that pertains to its development, by the facilities now afforded to the experienced artist and to the amateur, in the simplified devices, appliances, instruments, cameras, etc., the extended experience in the use and application of the various chemicals intended for developing and fixing the plates and toning and fixing the prints, and the simplifying of many of the former intricate and tedious processes.

One great drawback has been the difficulty and inconvenience of carrying and storing the solutions for properly conducting the required details. At the suggestion and with the active co-operation of an experienced and thoroughly practical Photographer, we have prepared in the form of Compressed Tablets, a complete series of all the necessary Photographic Chemicals used in the Art. These will be found perfect in their adaptation to all that is required; they are compact, convenient and portable; the necessary solutions can be prepared at a moment's notice, in sufficient quantities, as the occasion demands. There is no waste, no bulky paraphernalia to carry, no stock solutions are required, only sufficient water being needed at the moment. Every tourist having a camera, and those engaged in scientific work especially, will fully appreciate the importance and value of such an outfit, as their experience will testify to the fact that their time and labor have often been lost by the undue exposure of their plates before they could be properly developed.

The Tablets are stable, do not alter or change by age or climatic influences; the only requirement being to re-cork the bottles securely immediately after being used. We feel assured, after the critical tests and practical demonstration which we have given them, that we have not exaggerated their merits and usefulness to all who are interested in Photography.

With this equipment the photographer, professional or amateur, can develop his work in the most simple and convenient way, and the plates will be absolutely perfect in finish. It was not until we had thoroughly experimented and tested the value of these combinations that we ventured to place them upon the market, but we are now thoroughly convinced, from exhaustive trials, that there is no more convenient and efficient method of producing a perfect plate or print. Of course, the care and various details necessary when using the ordinary solutions, are also required when employing our Compressed Chemicals. For those not entirely familiar with the manipulations of dry plates or the toning and fixing of prints, there is enclosed in each box a copy of directions and hints referring to the processes and details required.

The Complete Case contains the following Tablets, with full instructions on each bottle for preparing the solutions:

No. 1. DEVELOPING—PYRO.

(Composed of Sulphite of Soda, Acid Pyrogallie, Acid Citric.)

No. 2. DEVELOPING—SODA.

(Composed of Sulphite of Soda, Carb. Soda and Carb. Potash.)

Nos. 1 and 2 when mixed, as directed on the label, constitute the "Developing Solution," or, as sometimes called, "Developer."

No. 3. FIXING AND CLEARING.

(Composed of Sulphite of Soda, Acid Citric, Chrome Alum.)

No. 4. FIXING AND CLEARING.

(Consists of Hyposulphite of Soda.)

Nos. 3 and 4, when mixed, according to instructions on the label, make the Fixing and Clearing Bath, which can be kept for stock solution if so desired.

No. 5. TONING FOR PRINTS—GOLD CHLORIDE.

No. 6. TONING FOR PRINTS—SODA.

Nos. 5 and 6 constitute the Toning Bath; this must be alkaline.

COMPRESSED TABLETS, ETC.—Continued.

No. 7. PRINT FIXING—HYPOSULPHITE OF SODA.

This can also be used advantageously for stock solution, a few drops of Aqua Ammonia greatly enhancing its value.

No. 8. BROMIDE OF POTASH.

For checking the too rapid development of over-exposed plates.

Any of the above Tablets can also be procured separately.

Price for Complete Outfit.....\$3 00

The Developing Outfit containing the following Tablets, with full instructions on each bottle for preparing the solutions:

No. 1. DEVELOPING—PYRO.

(Composed of Sulphite of Soda, Acid Pyrogallie, Acid Citric.)

No. 2. DEVELOPING—SODA.

(Composed of Sulphite of Soda, Carb. Soda, and Carb. Potash.)

No. 3. FIXING AND CLEARING.

(Composed of Sulphite of Soda, Acid Citric and Chrome Alum.)

No. 4. FIXING AND CLEARING.

(Consists of Hyposulphite of Soda.)

No. 8. BROMIDE OF POTASH.

For checking the too rapid development of over-exposed plates.

Our Nos. 1 and 2 Developing Tablets are so prepared that those who are in the habit of immersing the plates with Pyro. solution first and then adding the Soda, can do so. Our formulas Nos. 3 and 4, for Fixing and Clearing, are of such combination that we dispense entirely with the Alum Bath, thus requiring only two trays to develop and fix the plate.

Price for Developing Outfit.....\$1 75

The Print Toning Outfit contains the following Tablets, with full instructions on each bottle for preparing the solutions:

No. 5. TONING FOR PRINTS—GOLD CHLORIDE.

No. 6. TONING FOR PRINTS—SODA.

Nos. 5 and 6 constitute the Toning Bath; this must be alkaline.

No. 7. PRINT FIXING—HYPOSULPHITE OF SODA.

This can also be used advantageously for stock solution, a few drops of Aqua Ammonia greatly enhancing its value.

Any of the above can also be secured separately in bottles of 100 Tablets each.

Price for Print Toning Outfit.....\$1 75

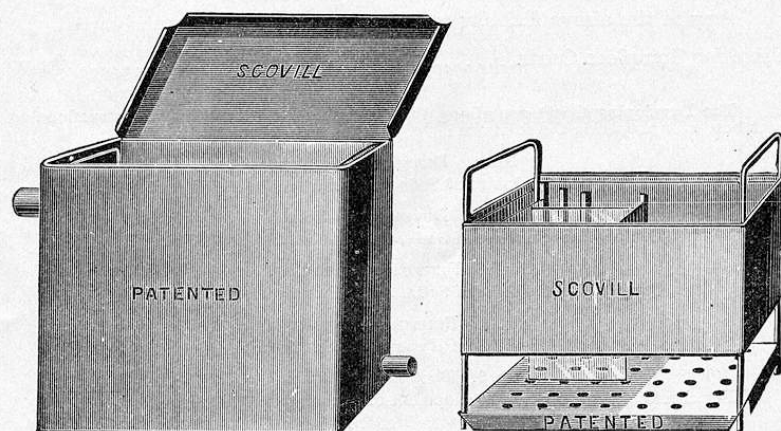
Explicit instructions will be found in the General Pamphlet contained in each Outfit.

PRICES OF SEPARATE BOTTLES OF 100 TABLETS EACH:

No. 1.....	\$0 75	No. 5.....	\$1 50
No. 2.....	30	No. 6.....	18
No. 3.....	40	No. 7.....	35
No. 4.....	35	No. 8.....	25

THE SCOVILL NEGATIVE WASHING BOXES.

(PATENTED.)



THE SCOVILL NEGATIVE WASHING BOXES are all now made adaptable and so that plates may be taken out without putting the fingers in the washing water. (See illustration.) The perforated bottom prevents water from passing through the box with too great force, and distributes it so that every plate and every portion of a plate is equally washed, and this cannot be done with any other washing box.

PRICE LIST.

	(ADAPTABLE.)	EACH.
For 4 x 5 Plates and smaller sizes.....		\$1 75
" 4 1/4 x 5 1/2 " " "		1 90
" 4 1/4 x 6 1/2 " " "		2 00
" 5 x 7 " " "		2 10
" 5 x 8 " " "		2 15
" 6 1/2 x 8 1/2 " " "		2 25
" 8 x 10 " " "		2 50
" 10 x 12 " " "		4 00
" 11 x 14 " " "		5 00
" 14 x 17 " " "		6 00

{ 8x10 ADJUSTABLE WASHING BOX..... 4 00
 Adjustable for 6 1/2 x 8 1/2, 5x8, 5x7, 4x5, 3 1/4 x 4 1/4 Plates. All sizes
 to be washed at once.

DRAWING-ROOM TRANSPARENCY FRAMES.

These Frames can be described, or characterized by one phrase,
 "THE REFINEMENT OF TASTE."

Size.	Each.	Size.	Each.
4 x 5 inch.....	\$0 28	6 1/2 x 8 1/2 inch.....	\$0 38
4 1/4 x 6 1/2 ".....	30	6 3/4 x 9 ".....	48
5 x 7 ".....	30	8 x 10 ".....	48
5 x 8 ".....	34	10 x 12 ".....	75
6 1/2 x 7 1/2 ".....	38	11 x 14 ".....	90



TRANSPARENCY PLATES.

SCOVILL'S ETCHED GROUND GLASS

(WITH HANDSOME DESIGNS ON BORDER), FOR TRANSPARENCIES.

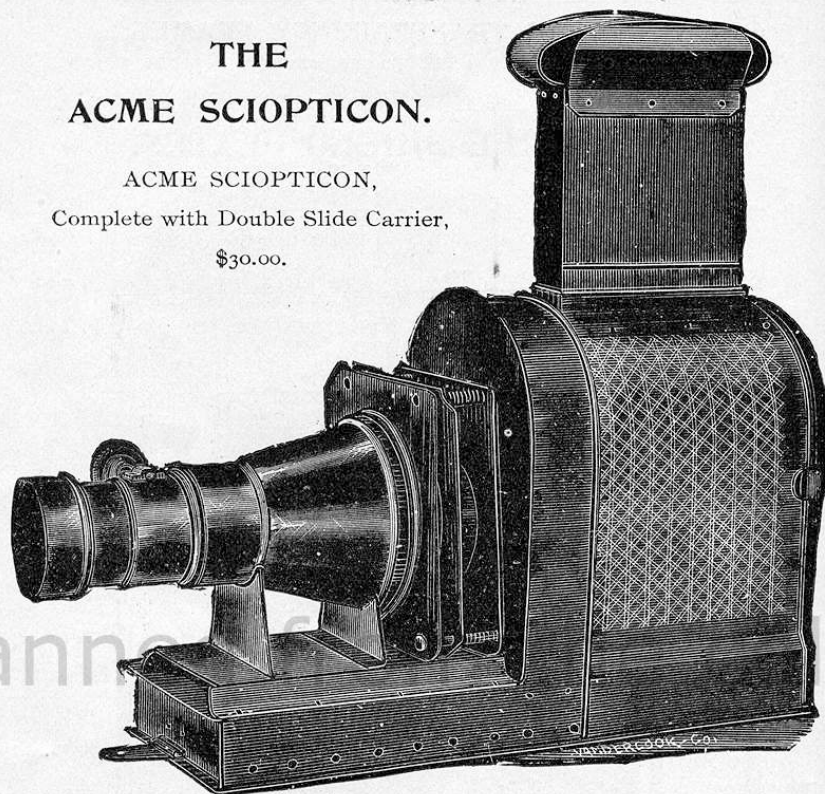
6 1/2 x 7 1/2 for 4 x 5 Picture.....	Per Light, \$0 28
6 3/4 x 9 " 4 1/4 x 6 1/2, 5 x 7, and 5 x 8 Picture.....	" 43
8 x 10 " 6 1/2 x 8 1/2 Picture.....	" 50
10 x 12 " 8 x 10 ".....	" 63

PLAIN GROUND GLASS FOR TRANSPARENCIES.

Per Light.	Per Light.	Per Light.
4 x 5 \$0 10	5 x 8 \$0 15	8 x 10..... \$0 25
4 1/4 x 5 1/2 12	6 1/2 x 8 1/2..... 20	10 x 12..... 30
4 1/4 x 6 1/2..... 13		11 x 14..... 50

THE ACME SCIOPTICON.

ACME SCIOPTICON,
Complete with Double Slide Carrier,
\$30.00.



After experimenting with most of the lanterns in the market, we have come to the conclusion that for parlor or small hall exhibitions, chemical and optical experiments, etc., the ACME LANTERN affords, at a moderate price, the greatest number of advantages, and from its simplicity and non-liability to get out of order, gives, even in inexperienced hands, results superior to all others.

The ACME SCIOPTICON when packed for carrying, in its own Russia iron case, measures 15 x 10 x 6 inches, and weighs 12 pounds; the case serving as a convenient stand when the lantern is in use.

The CASE and BODY of the lantern are of Russia iron, and neat and compact in form. That part of the body which surrounds the lamp is double, the outer cover being ornamentally perforated so as to allow a constant current of air to circulate and keep down the temperature.

The lamp is of the triple-wick variety, and so constructed that the three flames combine and by the draught of a ten-inch chimney give a brilliant flame.

The CONDENSER is 4 inches in diameter, neatly mounted in brass, thoroughly ventilated, and arranged with screw flange so that the lenses may be separated and cleaned when required.

The CONE, which carries the objective, and the mount of that lens are nickel-plated. The objective is a double achromatic lens of $1\frac{1}{2}$ inch clear aperture and 5-inch focus, so that at a distance of 12 feet from the screen it gives a brilliant picture on disc 6 feet in diameter. The focus is roughly obtained by sliding the front, carrying both cone and lens; and fine adjustment by a rack and pinion on the objective.

THE THREE SHIELD PLATES.

These Plates are specially prepared for gallery work where the greatest rapidity in the exposure is necessary. These Plates are the only ones that produce the soft effects of the wet collodion negative.

PRICES.

Size.	Dozen.
$2\frac{1}{2}$ x $2\frac{1}{2}$	\$0 30
$2\frac{5}{8}$ x $2\frac{5}{8}$	30
$3\frac{1}{2}$ x 4.....	35
$3\frac{1}{4}$ x $4\frac{1}{4}$	45
4 x 5.....	65
$4\frac{1}{4}$ x $5\frac{1}{2}$	75
$4\frac{1}{4}$ x $6\frac{1}{2}$	90
$4\frac{3}{4}$ x $6\frac{1}{2}$	1 00
5 x 7.....	1 10
5 x 8.....	1 25
$6\frac{1}{2}$ x $8\frac{1}{2}$	1 65
8 x 10.....	2 40
10 x 12.....	3 80
11 x 14.....	5 00
14 x 17.....	9 00
16 x 20.....	12 50
17 x 20.....	13 00
18 x 22.....	15 50
20 x 24.....	18 50

"ALPHA" FINGER-TIPS.

This very useful article comes in a nest of three Finger-Tips of assorted sizes, put up in a neat paper box.

These goods are made of pure gum rubber, and being very thin and pliable do not draw the fingers, while they protect them entirely from the stains of various photographic solutions.

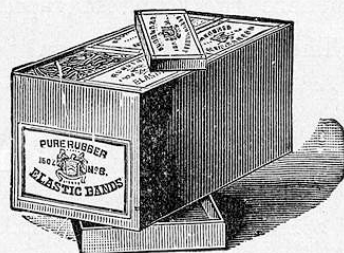
Price\$0 15

RUBBER BANDS.

Eighteen gross, $1\frac{1}{2}$ inch bands in a $\frac{1}{4}$ lb. box. Put up nicely in $\frac{1}{4}$ lb. boxes. Use them instead of twine. 2,592 bands (count 'em) in a $\frac{1}{4}$ lb. box.

Per $\frac{1}{4}$ lb. box.....\$1 00

Per 1 oz. box..... 30



THE "ALPHA" CABINET.

PURE RUBBER ELASTIC BANDS.

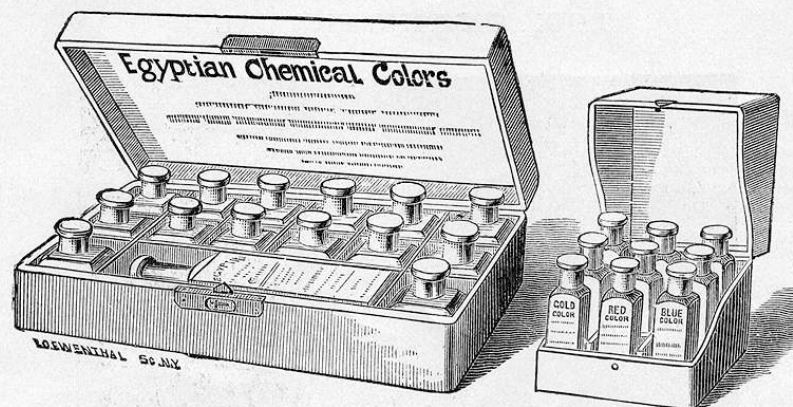


Choice assortment for Amateur Photographers, of Pure Rubber Bands—over 500, in eleven sizes, from one to three inches long, and from one-sixteenth to one-half inch in width. It also contains an "Ink Shield" for the pen, which not only saves your fingers, but your desk, books and paper.

Price complete, each.\$1 25

EGYPTIAN CHEMICAL COLORS.

TRIPLE STRENGTH.



No. 1.

No. 2.

We take pleasure in calling your attention to the EGYPTIAN CHEMICAL COLORS, prepared expressly for coloring photographs, either on plain or albumenized paper.

These Colors are something new and far superior to anything of the kind heretofore used by photographers and others for the above purpose. The art of using them is so simple that the most inexperienced person can color photographs with entire satisfaction. Photographers who have tested these Colors say that the *Blue, Brown, Rose and Flesh Colors* are indispensable and worth the price of the whole set. Each bottle is labeled with full instructions for their use and how to obtain good effects. Burnishing the photograph after it is colored does not in the least disturb the colors, but softens down and improves them.

A box of these Colors, by careful usage, ought to color three thousand photographs.

These Colors are put up in polished wooden boxes labeled "Egyptian Chemical Colors."

Box No. 2 contains nine $\frac{1}{2}$ ounce bottles of the following colors: Lemon Yellow, Dark Emerald Green, Orange or Gold Color, Blue, Dark Brown, Rose, Violet and Flesh. Price.....\$2 00

Box No. 1 contains fourteen 1 ounce bottles of the following colors: Dark Emerald Green, Orange or Gold Color, Blue, Dark Brown, Rose, Violet, Flesh, Lemon Yellow, Magenta, Salmon, Vermilion, Terra Cotta, Maroon Brown, Transparent Black, including a 4 ounce bottle of the Egyptian Transparent Compound. Price..... 6 00

SEPARATE BOTTLES OF COLORS AND COMPOUND CAN BE OBTAINED.

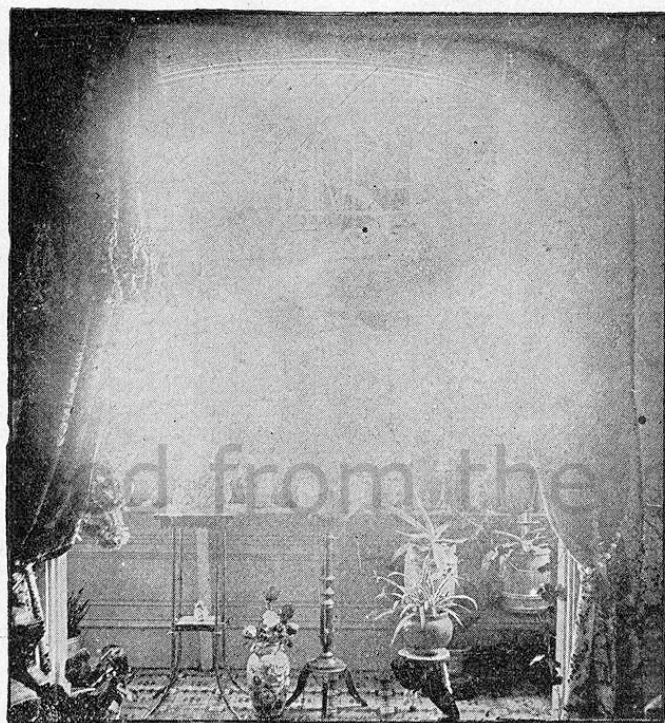
THE EGYPTIAN TRANSPARENT COMPOUND.

This article is a transparent Cement, used in connection with the above Colors, for adhering to flat or convex glass a colored unmounted photographic print.

Price, per bottle.....\$0 75

WUESTNER'S "IMPERIAL NON-HALATION" PLATES.

LOOK ON THIS PICTURE



Reproduced from Negative on Ordinary Plate.

Both negatives exposed on the same subject, one immediately after the other.

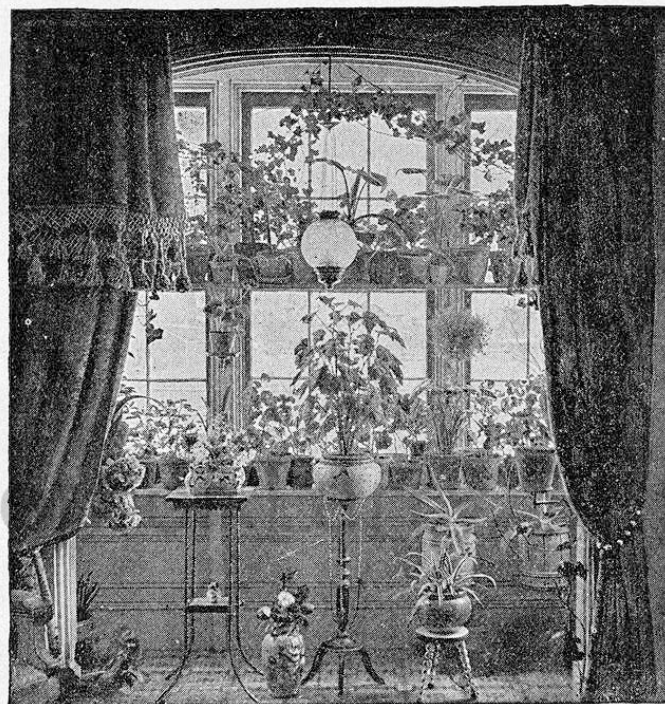
NOTE THE CONTRAST!!!

PRICE LIST OF WUESTNER'S "IMPERIAL NON-HALATION" PLATES.

Doz. in Case.	Sizes.	
39.....	3 1/4 x 4 1/4.....	\$0 55
24.....	4 x 5.....	80
24.....	4 1/4 x 5 1/2.....	90
28.....	4 1/4 x 6 1/2.....	1 10
22.....	5 x 7.....	1 40
22.....	5 x 8.....	1 55
12.....	6 1/2 x 8 1/2.....	2 10
12.....	7 x 10.....	2 70

WUESTNER'S "IMPERIAL NON-HALATION" PLATES.

AND ON THIS.



Reproduced from Negative on "Imperial Non-Halation" Plate.

Both negatives exposed on the same subject, one immediately after the other.

NOTE THE CONTRAST!!!

PRICE LIST OF WUESTNER'S "IMPERIAL NON-HALATION" PLATES.

Doz. in Case.	Sizes.	
12.....	8 x 10.....	\$3 00
3.....	10 x 12.....	4 75
3.....	11 x 14.....	6 25
2.....	14 x 17.....	11 25
1.....	16 x 20.....	15 75
1.....	17 x 20.....	16 25
1.....	18 x 22.....	19 50
1.....	20 x 24.....	23 50

REQUISITES FOR FILM PHOTOGRAPHY.

THE SCOVILL DOUBLE FILM HOLDERS are so much smaller, thinner and lighter than holders made for glass plates, that when first exhibited they were dubbed by some facetious individual "pancake holders." With old cameras an "Adapter" should be used, because we do not make these new holders as large as glass plate holders. These Adapters, with ground-glass, are supplied at the same list price as the SCOVILL DOUBLE FILM HOLDERS, which are listed as follows:

SCOVILL DOUBLE FILM HOLDERS.

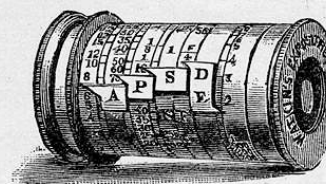
3¼ x 4¼	\$1 10
4 x 5	1 25
4¼ x 5½	1 25
4¼ x 6½	1 25
4¾ x 6½	1 30
5 x 7	1 30
5 x 8	1 40
6½ x 8½	1 70
8 x 10	2 00

Films may also be used with DAISY, LIGHT WEIGHT and FLAMMANG HOLDERS, by placing in them SCOVILL FILM CARRIERS, which are listed as follows:

SCOVILL FILM CARRIERS.

3¼ x 4¼	\$0 10
4 x 5	10
4¼ x 5½	11
4¼ x 6½	15
5 x 7	17
5 x 8	22
6½ x 8½	26
8 x 10	30

THE WATKINS EXPOSURE METER.



IN ENGLAND.

PATENTED.

IN AMERICA.

PRICE.

With one Exposure Ribbon and Book of Tables.....	Regular, \$5 00
" " " " "	Copying, 6 50
Extra Exposure Ribbons, each.....	25
Copy of Exposure Notes.....	50

This instrument works splendidly for very difficult subjects and all daylight camera exposures, and is a thorough, practical success.

A special instrument, with an extra calculating ring F, is now supplied. This instrument is invaluable for copying and enlarging, as it takes into consideration the focus, while at the same time it can be used for any ordinary purpose without reference to this addition.

Price, complete... .. \$6 50

BY FAR THE CHEAPEST AND ONLY RELIABLE METER EVER INVENTED.

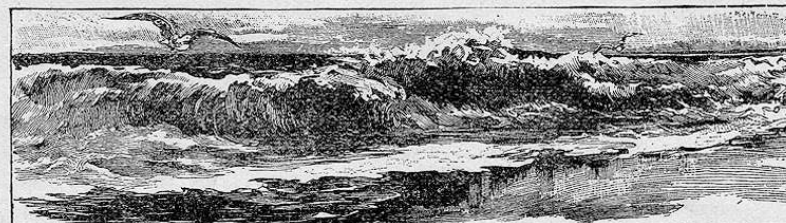
DRY PLATES.

We supply plates of all the standard brands, in all sizes, at the standard market prices.

GENERAL PRICE LIST.

CHEMICALS SUBJECT TO FLUCTUATION IN PRICES.

Glass Forms, Stereo.....each, \$o 40	Glass Forms, 4 x 5.....each, \$o 50
Card Glass Forms....." 25	" 5 x 8....." 75
Cabinet....." 50	" 1/4 x 8 1/2....." 1 00
Straight Trimmers....." 25	
Revolving....." 30	
Scovill Focusing Cloths....." 50	
" Printing Frames, flat, 3 1/4 x 4 1/4....." 36	
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