

JUNE, 1890.

HOW TO MAKE PHOTOGRAPHS

AND

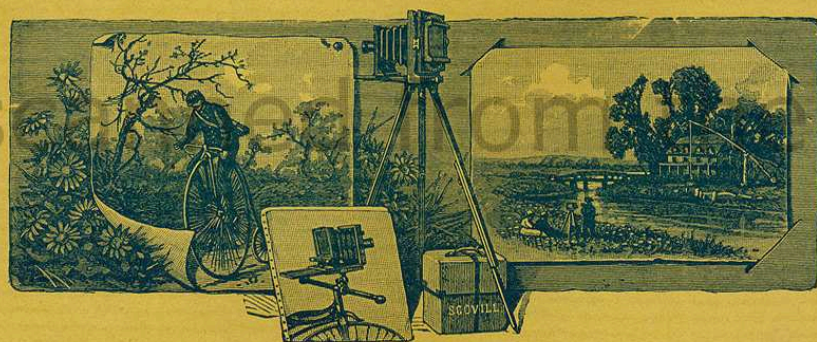
Descriptive Price List.



OSCAR FOSS,
Photographic Apparatus and Supplies,
841 MISSION STREET,
Near U. S. Mint, SAN FRANCISCO, CAL.

Amateur Branch,
621 MARKET ST., Palace Hotel.

Price, 10 Cents.



HOW TO MAKE
PHOTOGRAPHS.

AND A

DESCRIPTIVE CATALOGUE

OF

CAMERAS, LENSES, TRIPODS, PLATE-HOLDERS,
PRINTING-FRAMES, PLATES, TRAYS,
CHEMICALS, ETC.,

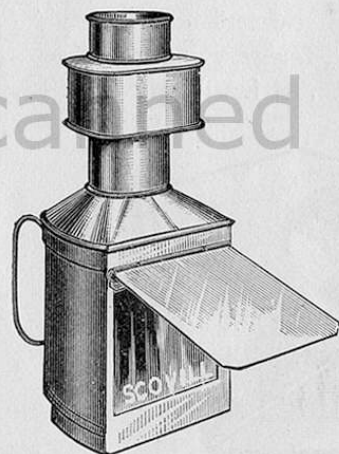
AND

All Requisites for the Amateur Photographer.

NEW YORK:
THE SCOVILL & ADAMS COMPANY,
423 BROOME STREET.
1890.

HOW TO MAKE PHOTOGRAPHS.

IT is not difficult to become an expert photographer. Any one of average intelligence may easily acquire all the skill necessary to make good technical photographs; and after that it is largely a matter of taste and judgment. Let the beginner buy his outfit of a reliable firm, and not attempt too much at first.

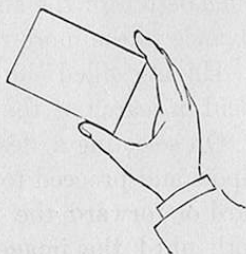


The various styles and grades of cameras, etc., with prices, are explained in the pages which follow, so it is only necessary for us here to consider briefly the actual steps required to make a finished photograph.

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

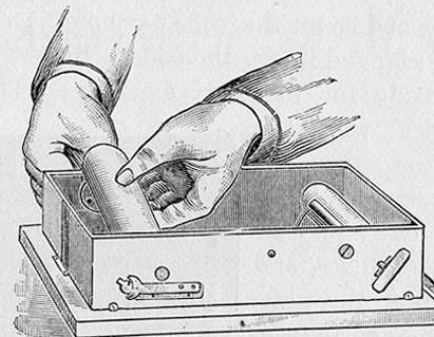
preparatory to actual work in the field. This must be done in the dark room. Any room or closet from which all rays of white light are secluded will answer. At night one's own bed-chamber will serve for a dark-room. A ruby lantern furnishes the proper quality of light.

If dry plates are used, open a package and carefully place them, one at a time, in the holders, sensitive (not the glossy) side outward. Handle the plates as shown in the cut, and be careful not to

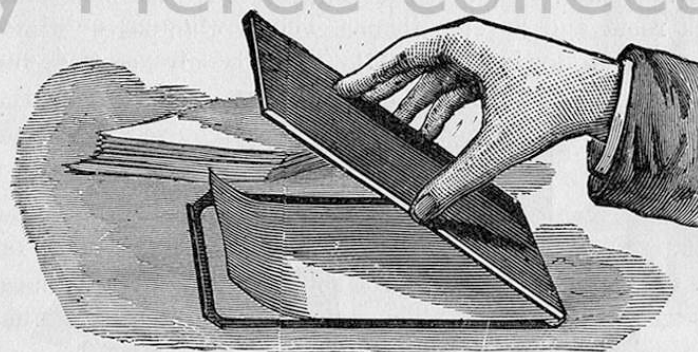


injure the sensitive film. Dust plate-holder and plates carefully with a camel's-hair brush before filling.

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 Flexible Films and the Ivory Films. At first, however, it is



much better for the amateur to use glass plates. Later he may advance to the more recent methods.

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.

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. But practice soon makes perfect in this matter as in all others.



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



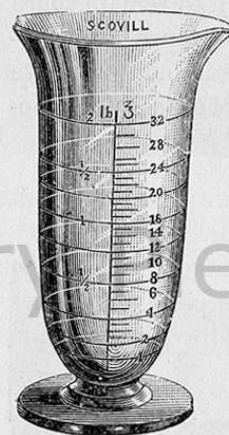
The Developing Outfit.

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 ammonium, a pound of hypo-sulphite of soda, 1 pound of alum, and a package of S. P. C. carbonate of soda developer.

Some amateurs send their exposed plates to a professional photographer for development and printing, but it is better to at least develop one's own negatives even if the prints are afterwards made by a professional.

Take a plate from one of the holders and place it first, film side up, in a tray of pure water. While it soaks there prepare the developer in the following manner:



Graduated Glass.

Dissolve the contents of the paper package marked No. 2, of the carbonate of soda developer in 64 ounces of water, and label this "Solution No. 2;" and with the minim glass add to 2 ounces of this solution 2 drams of the No. 1 solution. Now pour off the water from the tray, and flow over the plate the combined developing solution. 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, pour the developing solution back into the graduate and add a little more of the No. 2 solution (from a quarter to half an ounce) 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 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 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 hypo-



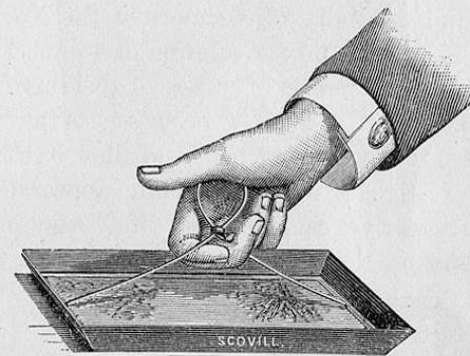
Negative Washing Box.

sulphite 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.

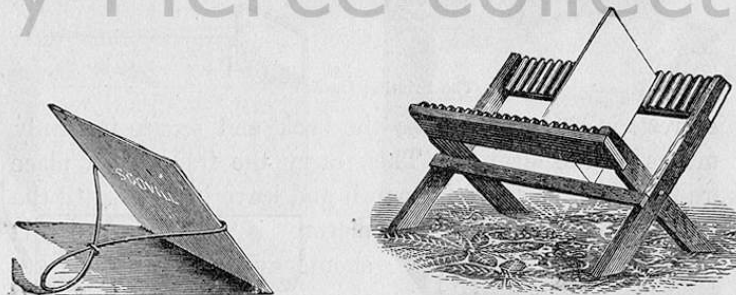
Meanwhile rinse out the first tray and partially fill it with a solution of alum, two tablespoonfuls of the coarse alum powder to sixteen ounces (or a pint) of water. Allow the plate to remain in this bath about five minutes and then thoroughly wash it again and set it on edge to dry in a negative rack 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.



The Russell Negative Clasp.



We are now ready to print. The printing and toning outfit consists of a printing frame, a porcelain pan, a vulcanite tray, some ready sensitized paper, a bottle of French azotate, a bottle of chloride of gold and sodium, a glass graduate, some hyposulphite of soda, a glass form, a Robinson trimmer, some sheets of fine card-board, a jar of parlor paste, and a bristle brush.

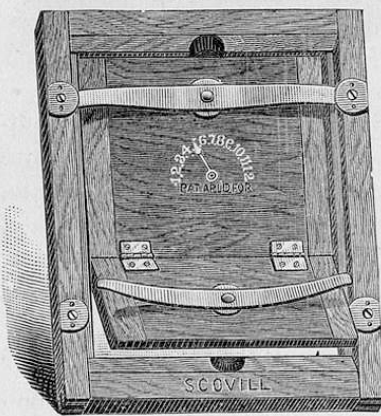
The printing process is simple. Ready-sensitized paper before being printed upon requires a preliminary preparation, that of fuming in the vapors of ammonia. The wooden box in which the printing materials are packed is so constructed as to serve as a fuming closet. See label on box. After the

paper has been exposed to the ammonia vapors for thirty minutes it is ready for the printing frame. Lay a piece of the sensitized paper face downward upon the face of the negative



The Printing Outfit.

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 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 Scovill Printing Frame.

Prepare a toning bath sufficient for the number of prints to be toned. Dissolve the contents of the bottle labelled chloride of gold and sodium (fifteen grains by weight) in fifteen ounces of water, and label the

bottle, "Chloride of Gold Solution." Take one ounce of French azotate, one and one-half ounces of the chloride of gold solution, and add six ounces of water, and we have a toning bath which works well. First, wash the prints in several changes of water, and add to the last a little of saturated solution of common washing soda. Then take seven ounces of the toning solution and change the prints to the pan containing it. Here they should be turned over and over to ensure even toning. The toning process should go on until the dark part of the pictures have a very faint purplish tint and the white portion is clear. Then wash the pictures, but preserve the toning solution.

The pictures should now be left for twenty minutes in a solution composed of four ounces of hyposulphite of soda, to which a few drops of ammonia may be added. This solution should be prepared a day or two in advance. It "fixes" the prints. Give the pictures a final and effectual washing. After they are dried, lay them out one by one and, using the Robinson trimmer, cut them to the desired size.



Robinson Trimmer.

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 brown or white 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 dark or dimly lighted room and the prints should be kept in a box or drawer where the strong sunlight will not reach them until ready for the toning process.

Further and more explicit directions for making photographs and descriptions of the latest and most advanced methods and branches of photography may be obtained by reading "THE PHOTOGRAPHIC INSTRUCTOR," edited by W. I. Lincoln Adams, and containing an appendix on the nature and uses of the various chemicals and substances employed in photographic practice by Prof. Charles Ehrmann; also "THE PHOTOGRAPHIC NEGATIVE" and "PHOTOGRAPHIC PRINTING METHODS," both by the Rev. W. H. Burbank.



DESCRIPTIVE CATALOGUE

OF

REQUISITES

FOR THE

AMATEUR PHOTOGRAPHER.



Old Style Equipment.

THE introduction of Dry-Plates and the impetus given by them to the cause of Amateur Photography, created a demand for light and compact apparatus that could be easily carried about. That demand we *anticipated and first met* by the introduction of apparatus especially designed for the use of amateurs.



New Style Equipment.

The Cameras we make for amateurs are not mere toys—they have been used and approved by eminent photographers. Certainly no apparatus can compare with that made by their American Optical Co.'s Factory, in durability, accuracy and elegance of finish. It is in use in all parts of the globe, and has by merit won this wide-spread reputation. Be not deceived by what is copied after it.

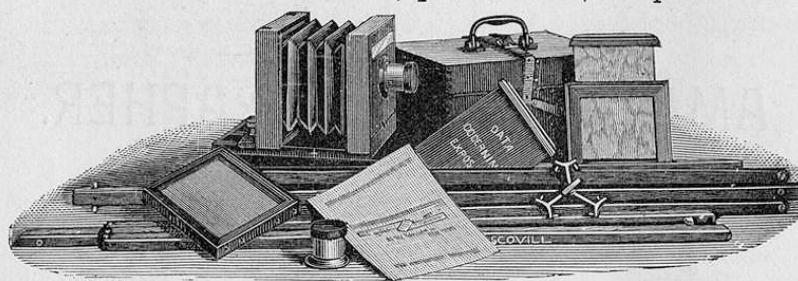
Every article enumerated in this Catalogue has the guarantee of The Scovill & Adams Co., well known throughout the world for fair and honorable dealing as well as for the superiority of their photographic apparatus and specialties.

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

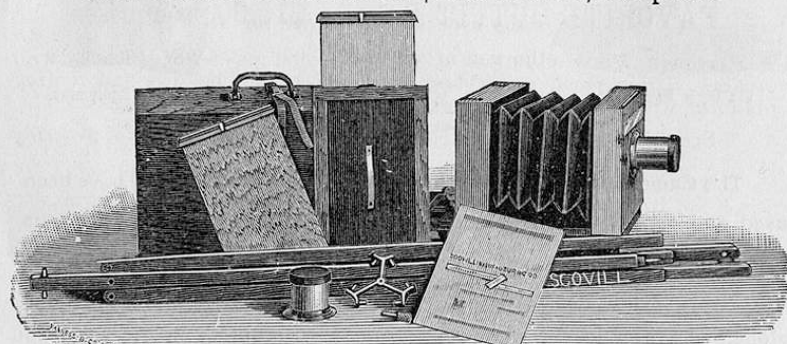


A FAVORITE VIEW CAMERA to produce 4x5 inch pictures, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously,

- 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

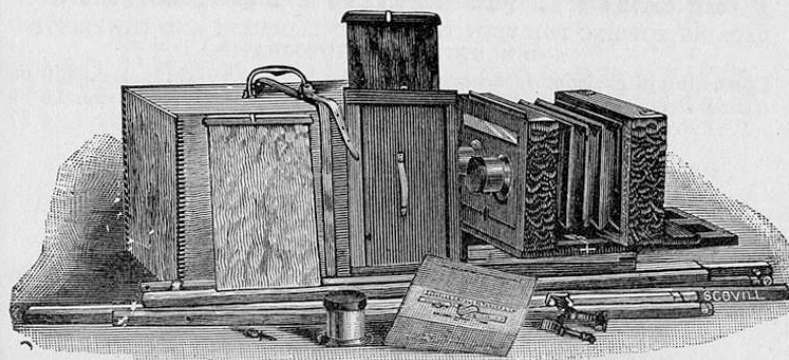


A FAVORITE VIEW CAMERA, to produce pictures 5x8 inches, with *vertical shifting front, single swing movement*, rubber bellows and folding platform, with *patent latch* for making bed rigid instantaneously; also

- 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 B, with Instantaneous Shutter, - \$13.00

FAVORITE OUTFIT C, price \$18.50, comprises



A FAVORITE VIEW CAMERA, to produce 5x8 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 (5x8 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 6½x8½ 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 8x10 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 16)..... 5 25
" 1 *Printing and Toning* Outfit, 4 x 5 (see page 17)..... 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 16)..... 6 50
" 1 *Printing and Toning* Outfit 5 x 8 (see page 17)..... 6 88

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 16)..... 6 50
" 1 *Printing and Toning* Outfit 5 x 8 (see page 17)..... 6 88

EQUIPMENT D-D-D.—Price, 28.00.

Consisting of *Favorite Apparatus* Outfit D.....\$15 00
Also 1 *Developing* Outfit 6½ x 8½ (see page 16)..... 7 00
" 1 *Printing and Toning* Outfit 6½ x 8½ (see page 17)..... 7 00

EQUIPMENT E-E-E.—Price, \$41.00.

Consisting of *Favorite Apparatus* Outfit E.....\$25 00
Also 1 *Developing* Outfit 8 x 10 (see page 16)..... 8 50
" 1 *Printing and Toning* Outfit (see page 17)..... 8 50

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.

SCOVILL'S Pure Chemicals & Accessories

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:

- | | |
|---|---------------------------------|
| 1 pkg. S.P.C. Carbonate Soda Developer, | 1 lb. Alum, |
| 2 4 x 5 Glass Pans, | 1 bot. S.P.C. Negative Varnish, |
| 1 4 oz. Graduate. | 1 doz. 4 x 5 Dry Plates, |
| 1 Minum Graduate, | 1 Scovill Focusing Cloth, |
| 1 oz. Bromide Ammonium, | 1 Ruby Lantern, |
| 1 lb. Hyposulphite Soda, | 1 Adt Manipulator. |

PRICE, COMPLETE, \$5.25.

For use with any 5 x 8 Outfit we supply the same goods, with the exception of the substitution of 5 x 8 Pans and Plates for the 4 x 5 size.

PRICE, 5 x 7 DEVELOPING OUTFIT, \$6.35.

"	5 x 8	"	"	6.50.
"	6½ x 8½	"	"	7.00.
"	8 x 10	"	"	8.50.

S. P. C.

Outfit for Printing, Toning, Fixing and Mounting 4 x 5 Pictures.

- | | | |
|----------------------------|-------------------------|-------------------------------|
| 1 4x5 Flat Printing Frame. | Price complete, \$4.87. | 1 Ounce Bromide of Potassium. |
| 2 4x5 Glass Pans. | | 2 Dozen Collins' Cards. |
| 2 Dozen 4x5 Bromide Paper. | | 1 Jar Parlor Paste. |
| 1 Set Eikonogen Developer. | | 1 Bristle Brush. |
| 1 Two-ounce Graduate. | | 1 4x5 Glass Form. |
| 1 Pound Hyposulphite Soda. | | 1 Straight Trimmer. |

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 one on preceding page, but with Printing Frame, Glass Tray, Sensitized Paper, and Card-board adapted for 5 x 8 Pictures.

Price complete, \$6.38. Securely packed in a Paper Box.

6½ x 8½ Printing and Toning Outfit. Price, \$7.00.
 8 x 10 " " " " " 8.50.

THE SCOVILL

A. B. C.

Photographic : Outfits

INCLUDING

**Landscape Lens, Dry Plates,
 Developing AND Printing Materials**

**AND ALL NECESSARY REQUISITES FOR MAKING A FINISHED,
 MOUNTED "BLUE" PRINTED PHOTOGRAPH.**

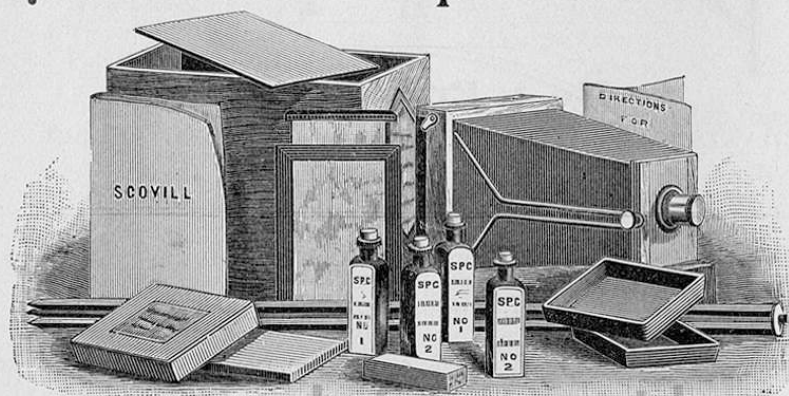
The No. 1 A. B. C. Photographic Outfit consists of view camera for making 3¼x4¼ pictures, with a quick-working lens; 6 rapid dry-plates; 2 japanned iron trays; 2 packages of S. P. C. developer (Nos. 1 and 2); a package of hypo; 1 printing frame; half dozen sheets ferro-prussiate paper; half dozen card mounts; 1 sheet of ruby paper, with full instructions for lighting the dark-room and constructing a ruby lamp; 1 Russell negative clasp.

No. 1—Price, complete\$2 00

No. 2 A. B. C. Outfit comprises all that is included in the No. 1 Outfit, and the necessities to make black and white pictures.

Price, complete.....\$2 50

THE AMERICAN Scholars' Complete Outfit.



No. 1 SCHOLARS' OUTFIT,

CONSISTING OF

- 1— $4\frac{1}{2} \times 5\frac{1}{2}$ Camera, fitted with
 - 1— $4\frac{1}{2} \times 5\frac{1}{2}$ Dry Plate Holder,
 - 1—Single Achromatic Lens and
 - 1—Tripod;
 - 1—doz. $4\frac{1}{2} \times 5\frac{1}{2}$ Gelatine Dry Plates,
 - 2— $4\frac{1}{2} \times 5\frac{1}{2}$ Japanned Trays,
 - 1—3 oz. bottle S. P. C. Pyro and Potash Developing Solution No. 1,
 - 1—3 oz. bottle S. P. C. Pyro and Potash Developing Solution No. 2,
 - 1—6 oz. package of Hyposulphite of Soda,
 - 1—package 4×5 S. P. C. Ready Sensitized Albumen Paper,
 - 1—3 oz. bottle S. P. C. Toning Solution No. 1,
 - 1—3 oz. “ “ “ “ No. 2,
 - 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, \$0.75.

No. 2 Scholars' Outfit 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, \$0.65.

THE SCOVILL Wonder Equipments.

No. 1, Price, \$7.50,

CONSISTS OF

- 1 4×5 Wonder Camera,
- 1 Wonder Lens,
- 1 Folding Tripod,
- 1 Double Plate Holder,
- 1 Package S. P. C. Ferrous Oxalate Developer,
- 2 Japanned Iron Trays,
- 1 Package Hyposulphate Soda,
- 1 Ruby Lantern,
- 1 Rubber Focus Cloth,
- 1 Package Carbutt's 4×5 Dry Plates,
- 1 Package Sensitized Paper,
- 1 4×5 Flat Printing Frame,
- 1 Jar Paste,
- 1 Package Mounts, round corners, (Crimson),
- 1 Set S. P. C. Toning Solution,
- 1 Ounce Graduate,
- 1 Manual.

No. 2, $4\frac{1}{4} \times 6\frac{1}{2}$ size, \$10.00.

No. 3, 5×7 size, - 12.00.

THE ECONOMY OUTFITS.

The Economy View Cameras are made of well-seasoned mahogany, polished, and are fitted with the Howe Patent Reversible Back. They have single-swing and rack and pinion focusing adjustments, vertical shifting front, extra front board, double holder with registering slides, rubber cone bellows; brass trimmings and canvas carrying case.

The Economy Lenses fill the want experienced by thousands for a good, low-priced rectilinear wide-angle lens, with which they can get artistic effects in perspective at short distances.

$6\frac{1}{2} \times 8\frac{1}{2}$ ECONOMY OUTFIT, Complete, Price, \$40.00

COMPRISING:

- One $6\frac{1}{2} \times 8\frac{1}{2}$ Economy View Camera, described above.
- One $6\frac{1}{2} \times 8\frac{1}{2}$ Rectilinear Lens, described above.
- One Taylor Folding Tripod.

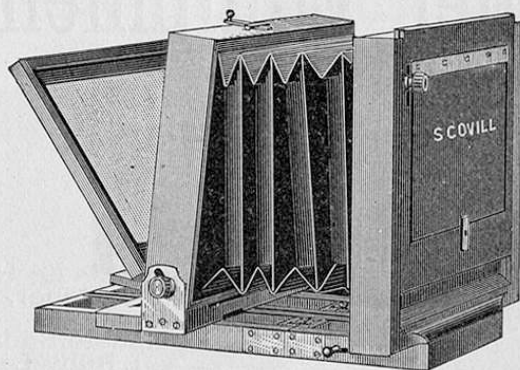
Above at list prices, \$50.25. When sold complete, \$40.00.

8×10 ECONOMY OUTFIT, Complete, \$44.00

(At list prices, \$56.25).

WATERBURY OUTFITS,

With Double Film Holders, or with Glass Plate Holders.



THE WATERBURY CAMERAS, introduced in 1885, are like other cameras and apparatus made by the American Optical Company—unapproachable!

They are made of mahogany, are 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.

4x5 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	4½x5½	Waterbury Outfit, complete.....	\$13 00
	4½x6½	" " " " " " " " " " " "	14 00
	5x7	" " " " " " " " " " " "	16 00

5x8 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*.

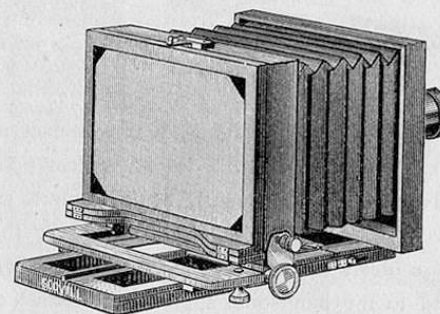
5x8 Waterbury Outfit, with Instantaneous Shutter.\$17.50

6½x8½ Waterbury Outfits, Complete..... 20.00

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. BB 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,

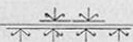
WITH REVOLVING STOPS,

AND A CARRYING CASE.

PRICE LIST IS AS FOLLOWS:

Size of View.		
4½ x 6½	.....	\$17 00
5 x 7	.....	18 00
5 x 8	.....	18 50
6½ x 8½	.....	23 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.

Centennial Outfits.

(Introduced in 1876.)

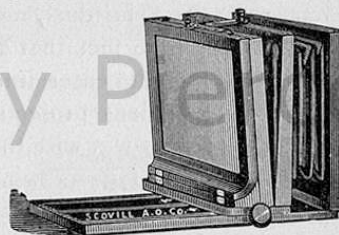
CENTENNIAL OUTFIT No. 202, price \$22.00, Consists of
 A MAHOGANY POLISHED CAMERA for taking pictures 4x5 inches, with
Folding Bellows Body, single swing, hinged bed, and brass guides. It
 has a shifting front for adjusting the sky and foreground, with
 1 Daisy Double Dry Plate Holder, with *Patent Registering Slides*; also
 1 Canvas Carrying Case.
 1 No. 1 Scovill Adjustable Tripod.

CENTENNIAL OUTFIT No. 202, with Optimus
 Instantaneous Lens.....price **\$32.00.**

CENTENNIAL OUTFIT No. 202 A.....price \$24.00,
 The same as No. 202, but with Camera for taking pictures 4½ x 5½ inches.

CENTENNIAL OUTFIT No. 202 B.....price \$26.00,
 for pictures 4½ x 6½ inches.

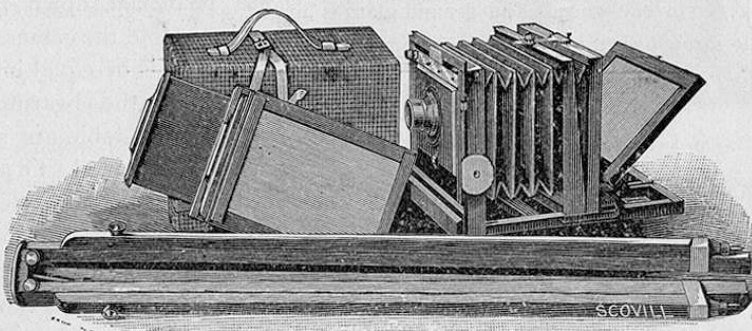
CENTENNIAL OUTFIT No. 203, price \$30.00, Consists of



A FOLDING MAHOGANY CAMERA, well known as the '76 Camera (see illustration). It is adapted for taking 5 x 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 Adjustable Tripod.

CENTENNIAL OUTFIT No. 204, price \$36.00, Consists of



A FOLDING MAHOGANY CAMERA of finest style and finish for taking 6½ x 8½ inch pictures, with
 1 Daisy Dry Plate Holder, with *Patent Registering Slides*; also
 1 Canvas Carrying Case.
 1 No. 2 Scovill Adjustable Tripod.

We recommend the purchase and use with the above Outfits of a Lens or Lenses selected from the list on page 49.

For Developing and Sensitized Paper Outfits to be used with the above, refer to pages 16 and 17.

Albion Cameras.



THE following illustrations and description are given to assist in determining the choice of those who want a camera that is "quite English, you know."

TURN-TABLE.



ALBION CAMERA OUT OF CASE (FOLDED).

they do not become clogged at any time—a defect in all imported cameras. There is also no need of a regulator or fastener for this turn-table. In whatever direction the camera is turned it remains until moved by the photographer. The extreme accuracy and nicety of the working of the Scovill turn-table can only be fairly appreciated when tried.

COMPACTNESS. Before passing from the Scovill turn-table, it is well to bear in mind that serving as a tripod top, it does away with the necessity of any other, and the bothersome tripod screw. In the highest degree, compatible with the requisite strength, the Albion Camera is compact and portable.

The Albion Cameras are provided with the Scovill turn-table, whose excellence is due, not only to the fact that it has an open center into which the lens projects, thus doing away with the necessity of unscrewing the lens every time the front board of the camera is turned down in order to fold the camera, but what is of equal importance, the bearings of the turn-table are so nicely adjusted, that

CARRYING CASE.



A glance at the fine carrying case provided for the Albion Camera is sufficient to convince one of its compactness. This case is lined with the best canton flannel, and has a leather partition to separate the camera from the holder.

CANVAS BAG FOR ALBION CAMERA.



ALBION TRIPOD.

ALBION TRIPOD. While folding compactly, as here shown, the Albion Tripod is readily extended and firm enough to support, without vibration, a 10x12 view camera. The binding straps are attached to one of the legs, so that they are always there when wanted.

The Albion Camera has the Howe patent reversible back, is arranged for double swing and a single swing front, and, when used with the SHIFTING FRONT, the extreme possibility of tilting is attained. The tallest towers must come down to the ground-glass screen, which, in common with all cameras of the English pattern, is hinged so that it may throw over the top of the camera or behind the holder when that is in use.

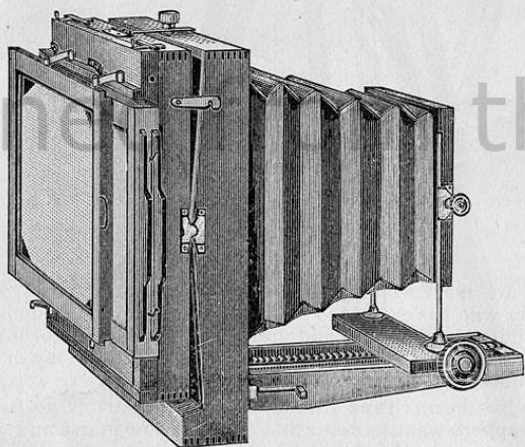
AMERICAN OPTICAL CO'S

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 Daisy Holder with *patent Registering Slides* and canvas case.



STAR REVERSIBLE-BACK CAMERAS.

	For View.	Single Swing-back.	Double Swing-back.
No. 110—	4 x5	\$25 00	\$29 00
" 111—	4½x5½	26 00	30 00
" 112—	4½x6½	30 00	34 00
" 113—	5 x7	32 00	35 00
" 114—	5 x8	34 00	38 00
" 115—	6½x8½	36 00	40 00
" 116—	8 x10	40 00	44 00
" 117—	11 x14	60 00	64 00

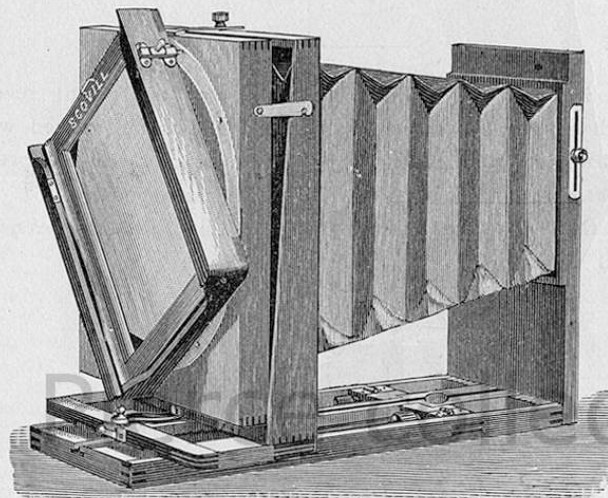
Not made above 11x14 size.

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.)

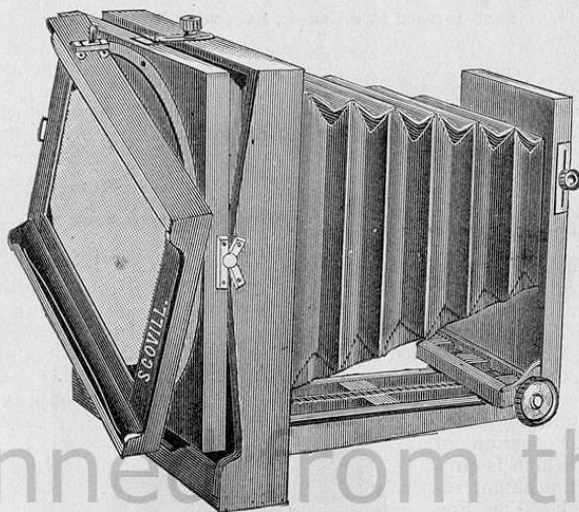
"These are the finest View Cameras ever constructed," so says every photographer who has examined any of them, and this exclamation is not merely a tribute to the beauty and grace of their design, for invariably the desire has at the same time been expressed to possess one of these truly novel and substantial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

(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.

No.	120.	For View	REVERSIBLE.	4 x 5 in.	Single Swing.	Double Swing.	With Reversible Back and Holder Extra
"	121.	"	4 1/4 x 5 1/2	"	\$27 00	\$32 00	
"	122.	"	4 1/4 x 6 1/2	"	29 00	34 00	
"	123.	"	5 x 7	"	31 00	36 00	
"	124.	"	5 x 8	"	33 00	38 00	
"	125.	"	6 1/2 x 8 1/2	"	35 00	40 00	
"	126.	"	8 x 10	"	40 00	45 00	
"	127.	"	10 x 12	with detachable back.	45 00	50 00	
"	128.	"	11 x 14	"	60 00	65 00	
"	129.	"	14 x 17	"	65 00	70 00	\$90 00
"	130.	"	17 x 20	"	75 00	80 00	105 00
"	131.	"	18 x 22	"	85 00	90 00	115 00
"	132.	"	20 x 24	"	95 00	100 00	130 00
"	132.	"	20 x 24	"	115 00	120 00	150 00

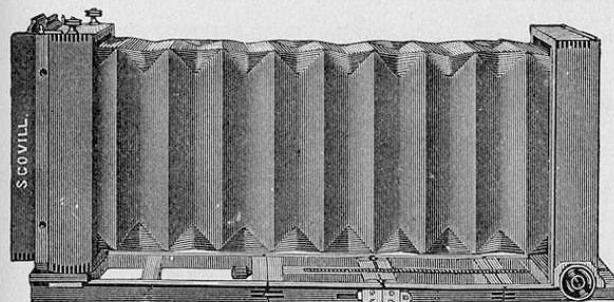
These Cameras are fitted with Daisy Dry-plate Holders.

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.

THE SCOVILL MANIFOLD CAMERA.

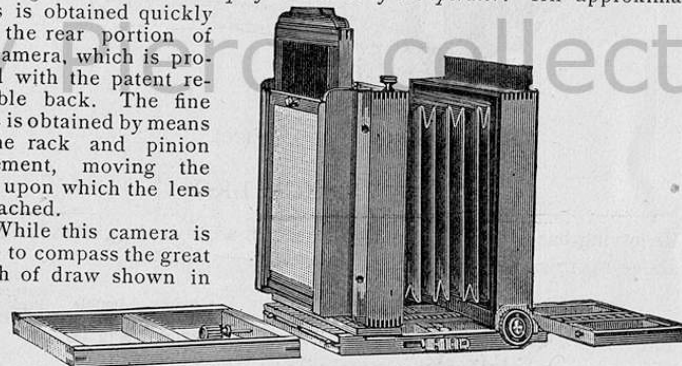


While this camera serves manifold purposes as its name indicates, nothing could be more simple or more easily manipulated. The Manifold Camera has

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.

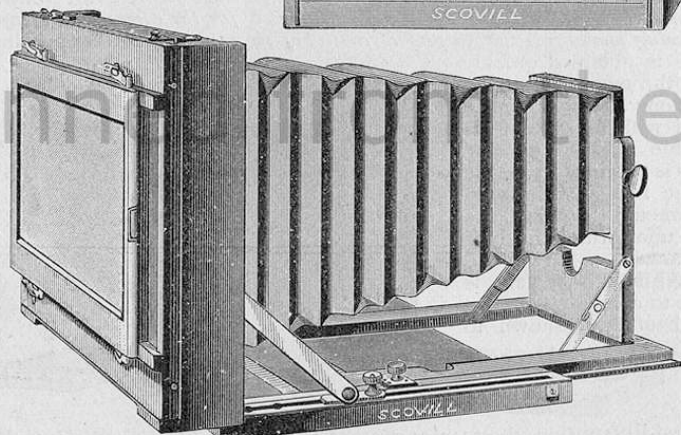
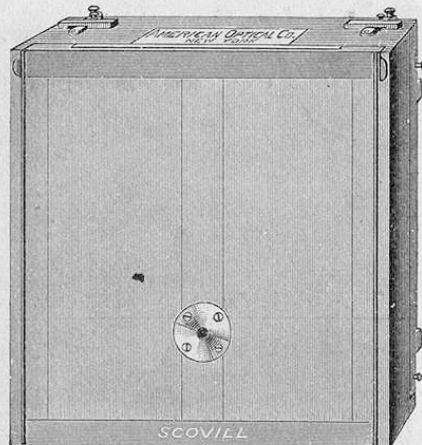
No.	No.	No.
140. 3 1/4 x 4 1/4 size \$30 00	143. 4 3/4 x 6 1/2 size \$38 00	145. 6 1/2 x 8 1/2 size \$45 00
141. 4 x 5 size.... 32 00	144. 5 x 7 size.... 38 00	146. 8 x 10 size... 50 00

IRVING 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, thus doing away with the necessity for vertical shifting arrangement to the front board. They have the Howe patent reversible back, fitted with self-locking ground-glass frame, and when desired, celluloid is used in place of glass for the focusing screen.

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



A superb canvas case, the finest ever made, is supplied with each one of the Irving Cameras. Price list is as follows:

	Single Swing.	Double Swing.
4 x 5.....	\$27.00	\$32.00
5 x 7.....	33.00	38.00
5 x 8.....	35.00	40.00
6½ x 8½.....	40.00	45.00
8 x 10.....	45.00	50.00

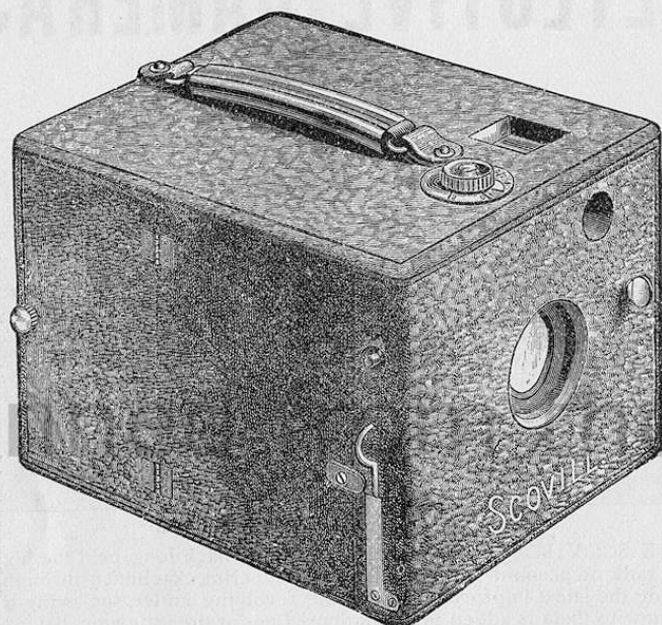
In order to convey an adequate idea of the lightness of these cameras, it is sufficient to say that the 5 x 8 size camera, with ground-glass in frame and holder, weighs only 3 lbs. Without holder, but with celluloid focusing screen, the weight is not more than 2 lbs.



Artists of renown, and shrewd Detectives, carry our Detective Cameras, and pictures are secured by them for their different lines of study, through their instrumentality, in a manner which is perfectly simple—in fact, it requires no skill other than to get within the range of focus of the unsuspecting victim. As the party, whether man, woman, or child, is not aware that anything unusual is transpiring, the expression of the countenance and the pose are not arranged with reference to their appearance in a picture. A quick-working lens is hidden in the camera, and also a few plate holders. By pressing on a spring the whole operation of exposure is completed.

— THE —

Improved Waterbury Detective Cameras.



POINTS OF SUPERIORITY.

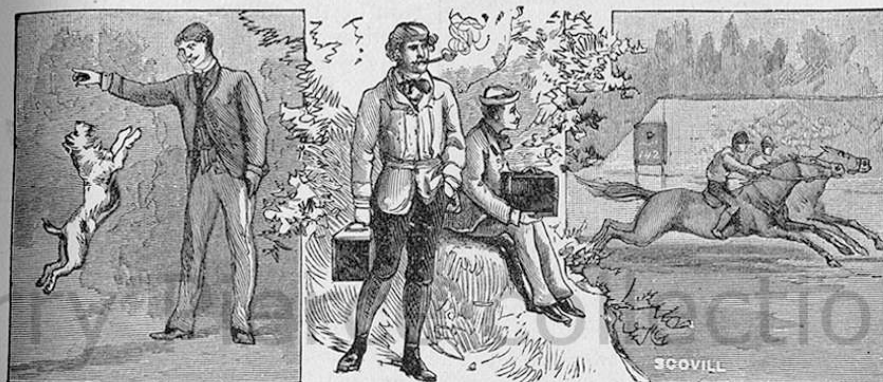
- Timed and Instantaneous Photographs.** This is the only Detective Camera which is as well adapted for making views as for photographing quickly moving objects. The negatives produced are of such sharpness that they may be enlarged to almost any size. It is in fact,
- The Only Detective Camera** made 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 *exactly the same image* as is included on the ground-glass, though diminished in size. Without this accurate finder, one cannot be sure of what is taken in or left out of an instantaneous photograph.
- 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.
- In addition to the foregoing special advantages,** the small WATERBURY DETECTIVE CAMERA is lighter and more compact than any other hand camera.
- The Focusing Scale** is where it may be readily seen.

PRICE LIST.

	Leather Covered.
4 x 5 Waterbury Detective Camera, with 2 Double Holders.....	\$25 00
5 x 7 Waterbury Detective Camera, with 2 Double Holders.....	40 00
4 x 5 Waterbury Detective Camera, with Roll Holder and Plate Holder.....	35 00
5 x 7 Waterbury Detective Camera, with Roll Holder and Plate Holder.....	58 00

SCOVILL DETECTIVE CAMERAS.

PATENTED.



THE SCOVILL DETECTIVE CAMERAS have long held the highest rank on account of their finish and superior excellence throughout. Among the latest improvements are the revolving finder, the swing-back, and now to them is added the Instantané Lens at the following list:

	Without swing.	Single swing.
3 1/4 x 4 1/4 Scovill Detective Camera, with Instantané Lens and Double-holders.....	\$55 00	\$60 00
4x5 Scovill Detective Camera, with Instantané Lens and three Double-holders.....	60 00	65 00
4 1/4 x 6 1/2 Scovill Detective Camera, with Instantané Lens and three Double-holders.....	90 00	95 00
4 3/4 x 6 1/2 or 5x7 Scovill Detective Camera, with Instantané Lens and three Double-holders.....	100 00	105 00

SCOVILL ROLL-HOLDER DETECTIVE CAMERAS.

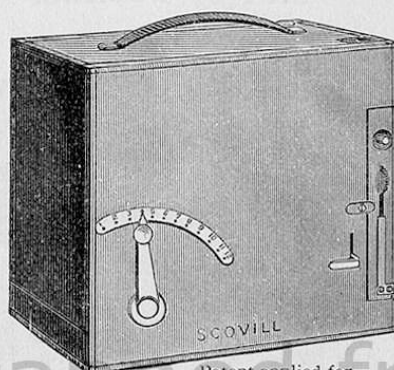
It naturally followed upon the introduction of the Roll-holder that it should be applied to the Scovill Detective Camera, and this has been done in a manner that displays the greatest ingenuity. Attached to each is the Patent Automatic Tally, to record the number of exposures made. No Roll-holder Camera is complete without this.

*3 1/4 x 4 1/4 Scovill Detective, with Instantané Lens, Roll-holder, Automatic Tally and one Double Dry-plate Holder.....	\$70 00
*4x5 Scovill Detective Camera, with Instantané Lens, Roll-holder, and one Double Dry-plate Holder.....	75 00

*NOT MADE WITH SINGLE SWING.

A REVOLUTION IN PHOTOGRAPHY.

There are many amateur photographers who do not want to be encumbered with glass plates, nor do they want to use films in rolls, as in many roll holders one hundred exposures must be made before any portion of the roll can be developed, and the finished pictures conveniently made. Our new



Patent applied for.

"Advill" Camera

—made for either twelve or twenty-four cut films—is a happy medium between these extremes. The cut films used with it may be of different degrees of sensitiveness, and any of them exposed at pleasure. The Lever, which is also the Indicator, may be moved backward or forward. Each film carrier has a number corresponding to a similar number on the outside of the camera. After exposing one film move the indicator along from one number to the next number to get the exposed film out of the way and the unexposed film into place.

It is not necessary to send out an elaborate handbook of instructions with this simple, effective and novel camera.

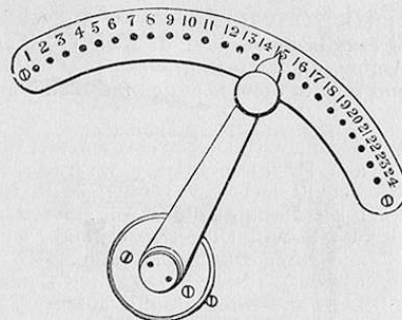
Anyone can see at a glance how to Set the Shutter, Touch the Release and Turn the Indicator.

The camera is fitted with an Instantané Lens, which has an arrangement connected with it for changing the stops in the Lens without opening the camera. The shutter is arranged for both timed and instantaneous exposures. Attached to the leather-covered case there is a recessed finder.

At present we have only a few of these cameras, but expect soon to have a supply, ample to meet the demand.

No. 1, "ADVILL" CAMERA, for 12 4x5 Films, Price, \$35 00

No. 2, "ADVILL" CAMERA, for 24 4x5 Films, Price, 40 00



KODAK CAMERAS.

LIST OF KODAKS.

No. 1 KODAK.

For 100 round pictures, 2 1/2 inches diameter.....\$25 00

No. 2 KODAK.

For 100 round pictures, 3 1/2 inches diameter..... 32 50

No. 3 KODAK.

For 100 square pictures, 3 1/4 x 4 1/4 inches..... 40 00

No. 3 KODAK Junior.

For 60 square pictures, 3 1/4 x 4 1/4 inches..... 40 00

No. 4 KODAK.

For 100 square pictures, 4x5 inches..... 50 00

No. 4 KODAK Junior.

For 48 square pictures, 4x5 inches..... 50 00

4x5 Folding KODAK.

For 48 square pictures, 4x5 inches..... 50 00

5x7 Folding KODAK.

For 32 square pictures, 5x7 inches..... 60 00

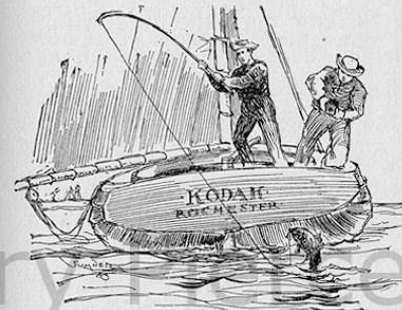
The comparative size of the "KODAK" is shown by the accompanying illustrations, and its popularity is not surprising when its compactness and its practical worth are considered.

AS A TOURIST'S CAMERA

it is unexcelled. In its carrying case, with shoulder strap, it is of no more trouble in transportation than an ordinary field glass—in fact it looks not unlike one.



KODAK—Abroad.



KODAK—Caught on the "Fly."



KODAK—The Landmark.

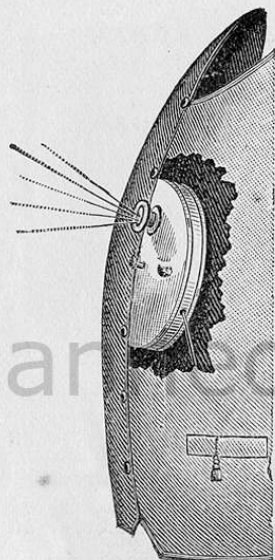


KODAK—Rapid Transit Photography.



KODAK—On Board Ship.

CONCEALED CAMERAS.



The **Concealed Cameras** are designed for the use of those who wish to photograph, without attracting the attention of any one, the interesting sights met in every-day life, such as picturesque groups, quaint figures, and striking facial expression, where opportunity to sketch or to set up an ordinary camera and tripod, arrange the focus, draw slides, and such manipulation are out of the question. The beautiful results obtained with this Camera, and the ease with which they are secured, make it of great value to artists and detectives.

The **New (No. 2) Concealed Camera** was planned to make pictures of the size suitable for lantern slides. Handsome velvet-lined leather cases are provided with it in which the Cameras are carried or when not worn underneath the vest.

CONCEALED CAMERAS.

No. 1, in Velvet-lined Case, with $\frac{1}{2}$ dozen plates.....	\$10 00
Keystone Plates, per dozen.....	1 20
No. 2, for Lantern Slides, in Velvet-lined Case, with $\frac{1}{2}$ dozen plates	15 00
Keystone Plates, per dozen.....	1 65

Sample Photographs furnished on application.

SCOVILL Pocket Photographic Outfit for Bicyclists.



WITH WHICH TO SECURE MEMENTOES OF PLEASANT EXCURSIONS.

So popular has amateur photography become among wheelmen, that the two amusements are now often combined. The Camera allows unbounded opportunities to the amateur bicyclist to gather choice landscape views.

BICYCLISTS' "POCKET" PHOTO-OUTFIT,

Consisting of a $3\frac{1}{4} \times 4\frac{1}{4}$ "Pocket" Camera, with Double Dry Plate Holder, with *patent Registering Slides* and Hinged Ground Glass. This Camera weighs only 12 ounces.

A UNIVERSAL JOINT BICYCLE ATTACHMENT.

A. S. M. C. INSTANTANEOUS LENS, with Stops.

The "Pocket" Bicycle Camera weighs only 12 ounces.

PRICE, - - - \$12.00.

NICKEL-PLATED BICYCLE ADJUSTABLE SUPPORT\$2.50

This has no loose pieces, and is so accurately made as to have no side play.

With the outfit just described, clear, sharp pictures can be obtained which will make fine transparencies and lantern slides, or they can be enlarged up to 8x10 size.

The "TOM THUMB" Camera.

Patented May 27, 1889.

THE "TOM THUMB" CAMERA, when not in actual use, can be put out of sight in one's pocket. Fig. 1 shows the Camera complete for carrying in the pocket. Fig. 2 is a Black Walnut Case, $4\frac{1}{2}$ inches each way, for carrying the Camera by hand, and also allowing it to be operated as readily as when out of the case.

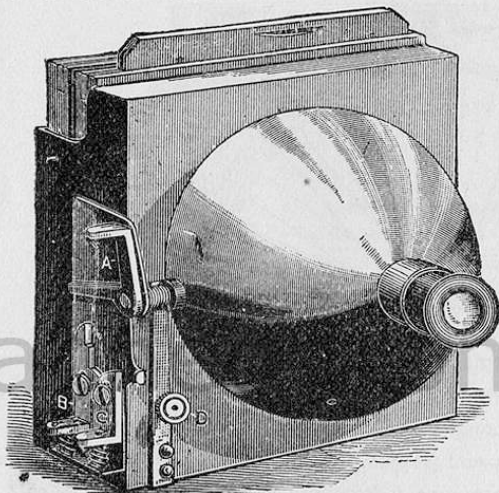


FIG. 1.—Size, $3\frac{1}{2}$ in. square on back; $2\frac{1}{2}$ in. deep in focal length. Weight, $7\frac{3}{4}$ ounces. Size of Plate used, $2\frac{1}{2}$ inches square.

This Camera is perfectly made, nickel plated, handsomely finished, and deserves the eponym, "*Multum in Parvo*." It is furnished with a very light plate holder (a dozen of which may be easily carried in a pocket). A circular diaphragm is provided for inserting in the back of the Camera when round pictures are desired. The Shutter is adapted for both instantaneous and time work; the speed is regulated by the screw D shown in cut. Full instructions for operating, which are simple, are furnished with each Camera.

It must not be imagined that because the Camera is small that it is not good. It takes a picture $2\frac{1}{2}$ inches square, perfect in every respect; easily developed and printed in the usual manner.

Price complete, \$10.00.

Sensitive Plates, per dozen, 30c.

Extra Plate Holders, 75c. each.

Developing Outfit, \$2.00.—Comprising: 1 Ruby Lantern, 2 Trays, 1 Pkg. Developer, 2oz. Graduate, 1 lb. Hypo., 1 doz. Plates.

DIRECTIONS.

The Plate Holder is inserted in the same manner as that of an ordinary camera. See that the shutter is set before drawing the slide. Set the shutter by moving the Arm A until its extremity is engaged by the second Catch C. For an instantaneous exposure release the shutter by pressing catch B. When a time exposure is desired, release Catch C, when the arm will strike B and remain open until released at B, as for instantaneous exposures. The rapidity of the exposure may be regulated by the screw D. To remove Camera from the case, withdraw sliding bottom and pass the Camera downward through the opening.

Universal Focus, 8 ft. and beyond

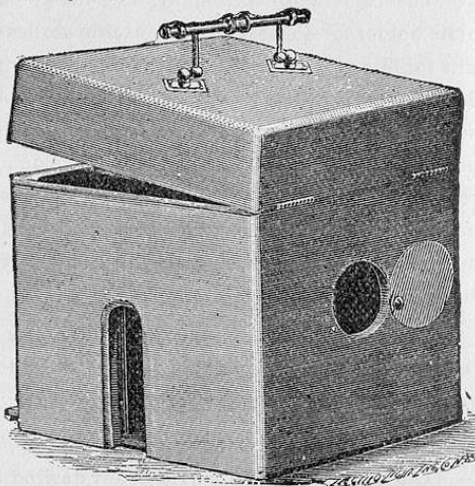
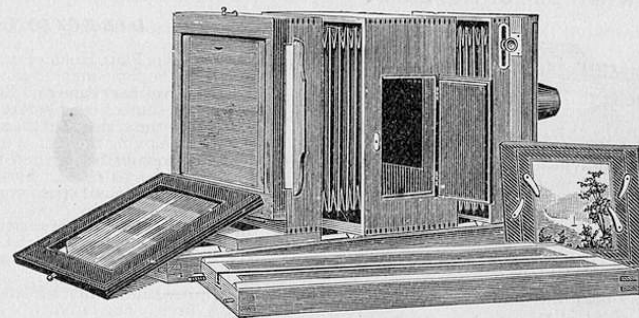


FIG. 2.

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 two forms: 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) 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 Flamming single plate holder for $4\frac{1}{4} \times 5\frac{1}{2}$ plates; usable vertically or horizontally, and with kits for $3\frac{1}{4} \times 4\frac{1}{4}$ 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, whilst 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 center 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 disc of thin microscopic covering glass is attached with balsam to the center 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 centering), 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, whilst 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.

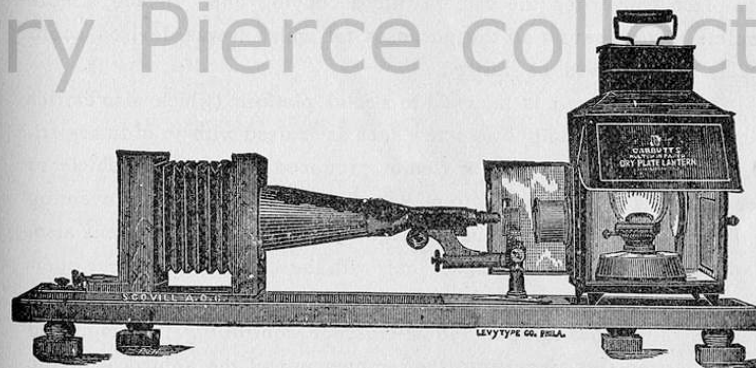
Walmsley Micro-Camera.....	\$18 00
" " enlarging, reducing, and copying pattern ..	30 00

SCOVILL'S OUTFIT

For PHOTOGRAPHING with the MICROSCOPE.

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 do, 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.

Scovill's Photomicroscopic Equipment,

— CONSISTING OF —

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

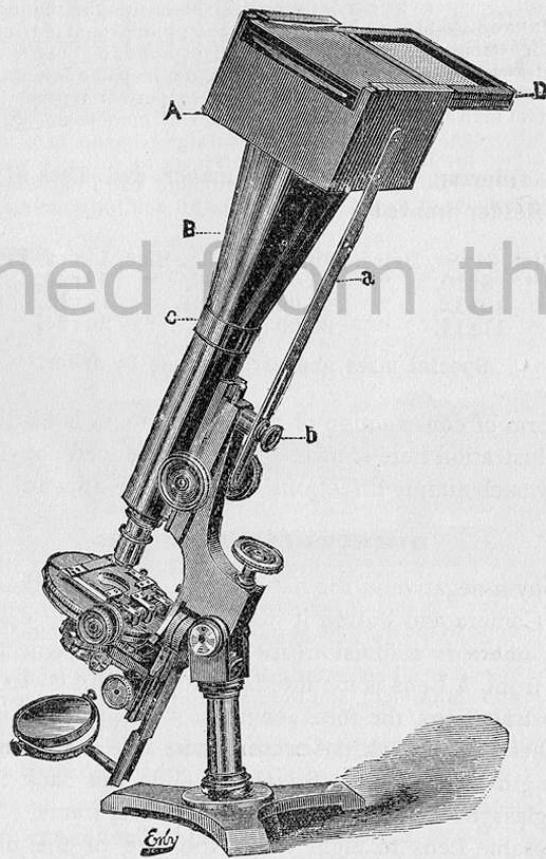
Price, Complete, \$18.00.

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.

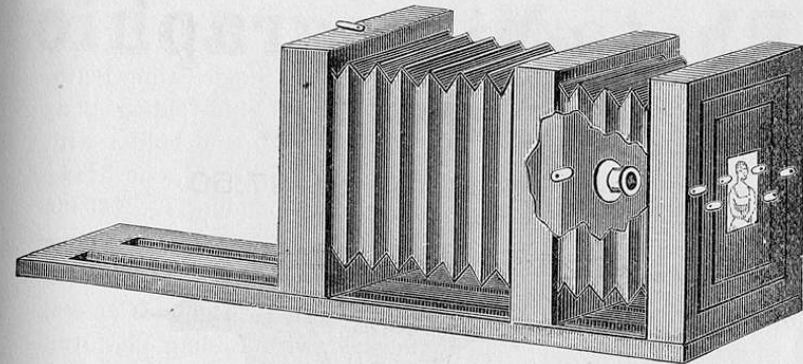
Size, $2\frac{3}{4} \times 3\frac{1}{4}$. Price, \$7.50.



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 Scovill Enlarging, Reducing and Copying Cameras.



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

No. 61.—Size, $6\frac{1}{2} \times 8\frac{1}{2}$, Price, \$30.00	No. 65.—Size, 14×17 , Price, \$72.00
" 62. " 8×10 , " 35.00	" 66. " 17×20 , " 90.00
" 63. " 10×12 , " 48.00	" 66½. " 18×22 , " 100.00
" 64. " 11×14 , " 60.00	" 67. " 20×24 , " 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.

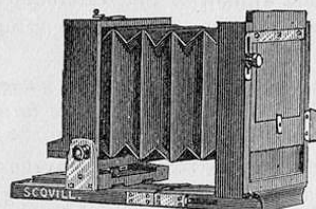
To copy a negative in the natural size, place it in the kit on the front of Camera and button it in. Attached to the center frame of the Camera is a division upon which, on the side toward the Camera front, a Lens is mounted. Suppose this to be a quarter-plate Portrait Lens, the focal length of which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

OUTFITS FOR LADIES.

PETITE OUTFIT, consisting of $3\frac{1}{4} \times 4\frac{1}{4}$ Single Swing Petite Camera, made of mahogany, polished, with folding platform, patent latch for ditto, double dry-plate holder with registering slides, one jointed adjustable tripod, one $3\frac{1}{4} \times 4\frac{1}{4}$ Optimus Instantaneous Lens. Price, complete.....\$25.00. When sold separately the total cost of the parts of this outfit is, \$36.00.

MIGNON OUTFIT, consisting of $3\frac{1}{4} \times 4\frac{1}{4}$ Mignon Camera, made of mahogany, finely polished, with folding platform, patent latch for ditto, rack and pinion focusing adjustment, double dry-plate holder with registering slides, one jointed adjustable tripod, one $3\frac{1}{4} \times 4\frac{1}{4}$ Optimus Instantaneous Lens. Price complete.....\$36.00. When sold separately the total cost of the parts of this outfit is, \$48.00.

THE PETITE CAMERA.

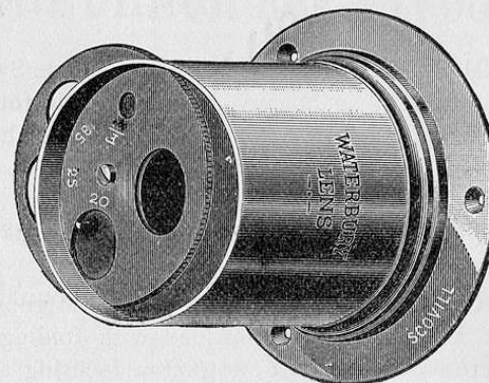


This camera was made to suit the refined taste of one of Vassar's fair students. The design on the part of the manufacturers was to reduce the impedimenta for an outing to the minimum, providing a $3\frac{1}{4} \times 4\frac{1}{4}$ camera (to make negatives of suitable size for lantern slides), with single swing, folding bed with *patent latch*, vertical shifting front, and other desirable improvements. So well has the design been carried out that many ladies will follow the example of Vassar's pupils, and learn the fascination of picture-taking with one of these finely-polished mahogany cameras. Gentlemen in search of a pocket camera need not seek further. The Petite Camera and an enlarging camera will by many be considered a satisfactory and complete equipment for such photographing as they desire to do.

PRICE.

Petite Camera with one double Dry-Plate Holder, and *patent Registering Slides*....\$12 00
Same Camera with canvas bag, with shoulder strap and Scovill's Adjustable (feather weight) Tripod.....17 00

WATERBURY LENSES.



The unprecedented success which has everywhere resulted from the employment of the Waterbury Lenses, for 4×5 and 5×8 plates respectively, induced the Scovill Mfg. Co. to extend the series of this favorite objective. The popular C Waterbury Lens gave an opportunity for producing 8×10 and even 10×12 photographs with the sharpness, detail and brilliancy of the smaller sizes, but after its advent there was still a gap between the 5×8 and 8×10 sizes. The desire to see the Waterbury series complete had 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 $\frac{1}{15}$, $\frac{1}{20}$, $\frac{1}{25}$, $\frac{1}{35}$, $\frac{1}{50}$, 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.

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 of luminous power from the others.

	Diameter. Inches.	Back-focus. Inches.	
A, Single, for 4×5 plate	$1\frac{1}{8}$	6	\$3 50
A, Matched pair, stereoscopic....			7 00
B, Single, for 5×8 plate.....	$1\frac{1}{4}$	10	4 50
B, Single, for 5×8 plate, with patent instantaneous Shutter.....			5 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 8×10 plate.....	$2\frac{1}{2}$	16	8 00

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.

The working qualities are much higher when compared with the finest lenses of this kind, than the low price indicates.

PRICE SCOVILL ECONOMIC LENSES.

No.	Size of Plate.	Back Focus.	Equivalent Focus.	Price.
2	5 x 8	5 inches.	5½ inches.	\$15 00
3	6½ x 8½	6 "	6½ "	18 00
4	8 x 10	8 "	8½ "	22 00

Morrison Wide-angle View Lenses.

Patented.



These Lenses are absolutely rectilinear; they embrace an angle of fully 100 degrees, and are the most rapid, and are universally conceded to be the best *wide-angle* lenses made.

No.	Diameter of Lens.	Size of Plate.	Equivalent Focus.	Price.
0....1	inch..	3¼ x 4¼ inch	2¼ inch, each,	\$20 00
3....1	"	4¼ x 6½ "	4¼ "	25 00
4....1	"	5 x 8 "	5¼ "	25 00
5....1	"	6½ x 8½ "	6½ "	25 00
6....1	"	8 x 10 "	8 "	30 00
7....1½	"	11 x 14 "	10½ "	40 00
8....1½	"	14 x 17 "	14 "	50 00
9....1½	"	17 x 20 "	17 "	60 00
10....1½	"	20 x 24 "	22 "	80 00
11....1½	"	25 x 30 "	28 "	100 00

These 3 sizes will fit into 1 flange.

These 2 sizes will fit into 1 flange.

These 3 sizes will fit into 1 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 a year or two since, 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:

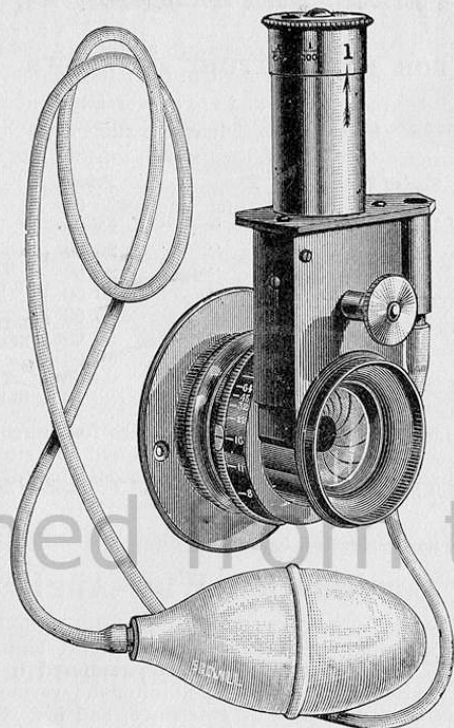
Front.	Back.
5.....with.....	4..... for 4-inch Back Focus.
5..... "	5..... " 5 "
6..... "	5..... " 6 "
6..... "	8..... " 7 "
8..... "	8..... " 8 "

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 LENSES



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.

The several lenses which form the combination of the Instantané are being 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 No. 1 size is with full aperture to cover a 4x5 plate, instantaneously.

	Equiv. Focus.	With Iris Diaphragm.
No. 1, 4 x 5 size.....	6 inches.....	\$30 00 \$35 00
No. 2, 5 x 8 ".....	8 ".....	35 00 40 00
No. 3, 6½ x 8½ ".....	10 ".....	50 00 55 00
No. 4, 8 x 10 ".....	12 ".....	60 00 65 00

No. 1, Instantané Lens, with Inst. Shutter and Iris Diaphragm, price \$40.00.

Scovill's "Peerless" Quick-Acting Stereoscopic 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

SCOVILL'S PORTRAIT LENS,

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



Darlot Hemispherical

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.

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

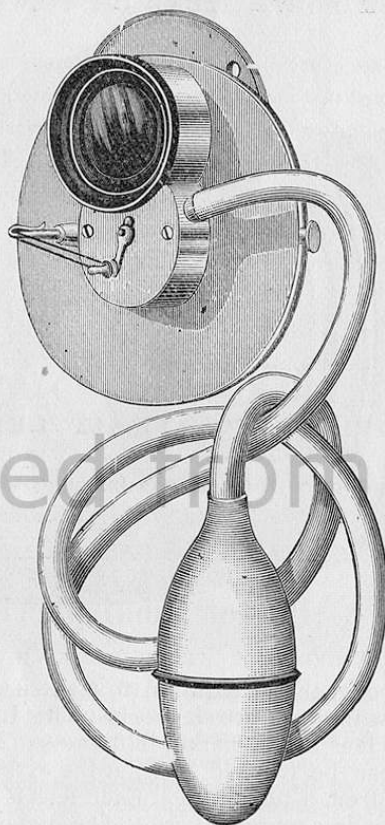
Darlot Rapid Hemispherical View Lenses.

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.

Back Focus.	Size View.	Price.
No. 1, 5½ inches.....	5x 6.....	\$15 00
" 2, 9 ".....	5x 8.....	25 00
" 3, 10½ ".....	8x10.....	35 00
" 4, 14 ".....	10x14.....	50 00

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

The Wale Universal Lenses.

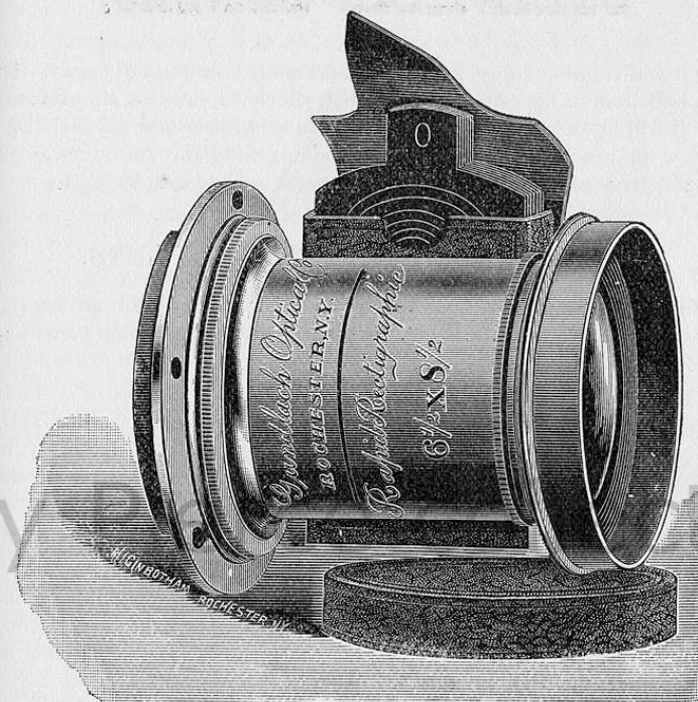


The Wale Universal Lens, with Time and Instantaneous Shutter.

For Landscapes, Groups, Portraits, and Instantaneous Views.

6 in.	back focus, for 4 x 5 Plates with Wale Shutter.	\$25
7 "	" 5 x 8 " without "	25
7 "	" 5 x 8 " with "	35
8 "	" 6 1/2 x 8 1/2 " without "	30 00
8 "	" 6 1/2 x 8 1/2 " { with Wale Instantaneous and Time Shutter. }	40 00

The Gundlach Rapid Rectigraphic Lenses.



Possesses all the qualities required to make it equally valuable for either Landscape or Portrait work. The RECTIGRAPHIC is superior to any lens in the market in flatness of field, and is the only one that can be focused sharp at the extreme edge of the field, being free from astigmatism. Each lens is supplied with a set of diaphragms in a morocco case. The diaphragms are made in accordance with the rules of the Great Britain Society.

DESCRIPTION AND PRICES.

No.	Size of Plate.	Dia. of Lenses.	Back Focus.	Equivalent Focus.	Price.
0	3 1/4 x 4 1/4	1 3/8 in.	4 5/8 in.	5 in.	\$14 00
1	4 x 5	1 "	5 7/8 "	6 1/4 "	20 00
1 1/2	4 1/4 x 6 1/2	1 1/8 "	6 5/8 "	7 "	25 00
2	5 x 8	1 1/4 "	7 1/2 "	8 "	30 00
3	6 1/2 x 8 1/2	1 1/2 "	9 1/4 "	10 "	38 00
4	8 x 10	1 3/4 "	11 "	12 "	50 00
5	10 x 12	2 "	13 1/8 "	14 1/4 "	64 00
6	11 x 14	2 1/4 "	15 1/4 "	16 1/2 "	76 00
7	14 x 17	2 5/8 "	17 1/2 "	19 "	100 00
8	17 x 20	3 "	20 "	22 "	125 00

STEINHEIL LENSES.

QUALITY, not quantity, governs in determining the price of lenses. By an examination of the following price list, which supercedes all previous ones it will be seen that Steinheil lenses are sold lower than any first-class lenses with which alone they may be compared. The introduction of Steinheil lenses marked an important advance in photographic optics.

HOW TO SELECT A STEINHEIL LENS.

In order to meet the various requirements, and to insure in each special case as perfect work as possible, we make lenses of different constructions.

Our lenses are divided into six *series*, presented in the order of their respective rapidities. Each series begins with No. 1 for the smallest size, and continues upwards. To avoid errors, it is therefore necessary in ordering to quote both the number of the series and the number of the lens in the present catalogue.

All our lenses are rectilinear and are strictly corrected for spherical errors and chemical focus.

They are free from disturbing reflections, and strongly illuminated objects can be taken with them without producing flare or light spots. They are, moreover, constructed so as to give the greatest possible equality of definition over the whole picture.

In focusing with these lenses always use largest stop and focus on object of chief interest. Then without changing focus insert proper diaphragm to secure depth in foreground and background.

The scientific basis of our establishment and the precise methods employed both in the manufacture of our astronomical and photographic apparatus, enable us to produce lenses of such uniform accuracy, that the means of most vigorous testing at our command fail to reveal any differences in the instruments we send out.

We make it a special point never to supply a lens which is capable of improvement at our hands.

According to the principle involved in their construction, our lenses are divided into two classes, viz.: *Antiplanetic* and *Aplanatic*.

Antiplanetic Lenses.

(Patented in United States and Europe.)

Briefly stated, these lenses which are the result of a series of calculations extending through several years, are composed of two non-symmetrical combinations each of as great but opposite faults as possible, which

correct each other. One combination has a shorter focus than the objective as a whole, and the other has a negative focus. The combinations are placed closely together.

By the peculiar construction, as described above, differing widely from the usual forms, it has been possible to correct to a considerable extent the hitherto greatest defect in photographic objectives, viz., "Astigmatism," and the consequent rapid decrease of definition from the center to the margin of the picture.

The result is greater sharpness and depth distributed more equally over a larger and strictly even picture, before any decrease in definition is perceptible.

Illumination, too, is more evenly distributed in consequence of lenses being proportionately nearer together.

These properties allow the lenses to be worked with full aperture or large stops, and gives them great rapidity of action.

The perfectly correct delineation produced by the antiplanets render them particularly suitable for enlargements as well as for dissolving view apparatus.

If small and sharp originals are taken, and subsequently enlarged, depths are obtained which would be unattainable in larger pictures taken *direct* with same amount of light. For this purpose, which will probably play an important part in photography, the antiplanets are specially suitable.

In making enlargements the front lens of the antiplanets should always be turned towards the enlarged picture, and the back lens towards the object to be enlarged.

This construction is designed for strictly even and correctly delineated pictures, and all tilting of the camera should be decidedly avoided and a movable lens board used instead.

The antiplanets are made in two series: The portrait antiplanets (Series I.) and the group antiplanets (Series II.), the latter being, however, also excellent dry plate portrait lenses.

Aplanatic Lenses.

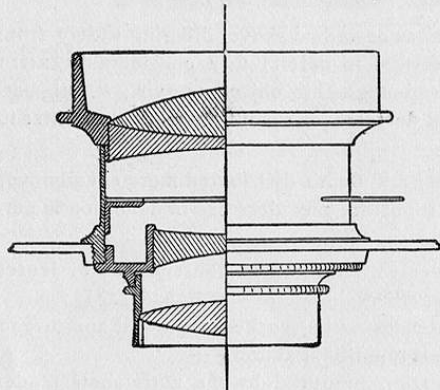
These lenses consist of the original and now well-known symmetrical and rectilinear combinations, invented by STEINHEIL in 1868 but not patented. They are made in four series, each of which is especially designed for a certain class of work. Their capabilities and object are fully explained below.

The lenses of Series V., also Series III., No. 1; Series IV., Nos. 1 and 2 have rotary diaphragms.

All the other lenses are furnished with Waterhouse diaphragms in morocco case.

STEINHEIL LENSES.

Series I.—Patent Antiplanetic Portrait Lens.



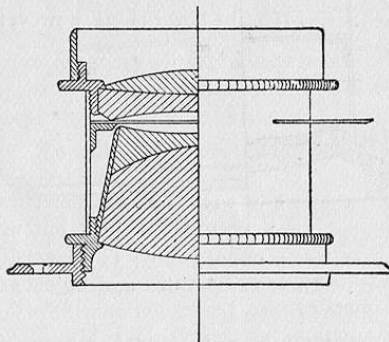
The rapidity is the same as in the usual Portrait Objectives, but there is more equality in the distribution of sharpness and illumination over the picture and greater depth. Contrary to the ordinary Portrait Objectives they produce perfectly correct delineation. Designed for *Portraits, Enlargements, and Dissolving View Apparatus.*

Series I.—Patent Antiplanetic Portrait Lens.

No.	Aperture, Inches.	Focal Length, Inches.	Plate, Inches.	Price
1.....	$\frac{5}{8}$	2	Locket-Size.	\$25 00
1a.....	$\frac{1}{2}$	$4\frac{1}{8}$	1-9 plate.	50 00
1b.....	$\frac{2}{3}$	$7\frac{1}{8}$	1-6 plate.	75 00
2.....	3	$9\frac{1}{2}$	Carte de Viste.	100 00
3.....	$\frac{3}{4}$	$12\frac{5}{8}$	Cabinet.	165 00
4.....	$\frac{5}{4}$	$23\frac{5}{8}$	Boudoir up to $\frac{1}{2}$ life-size.	330 00

Special quotations for larger sizes.

Series II.—Patent Antiplanetic Group Lens.



can be very conveniently used for adjusting lens to detective cameras, shutters, prisms or other appliances.

Designed for *Portraits, Groups, Architecture, Landscape, Instantaneous Work and Enlargements.*

Unexcelled for *Flashlight Portraits and Groups.*

No.	Aperture, Inches.	Focal Length, Inches.	Size of Portrait or Group, Inches.	Size of View or Landscape, Inches.	Price.
0.....	$\frac{3}{8}$	$1\frac{7}{8}$	$1\frac{5}{8} \times 1\frac{5}{8}$	2 x 2	\$18 00
1.....	11-16	$3\frac{3}{4}$	$3\frac{1}{4} \times 3\frac{1}{4}$	$4\frac{1}{4} \times 3\frac{1}{4}$	21 00
*1b.....	13-16	$4\frac{7}{8}$	$4\frac{1}{4} \times 3\frac{1}{4}$	$4\frac{1}{2} \times 3\frac{3}{4}$	25 00
2.....	1	$5\frac{5}{8}$	$4\frac{1}{2} \times 3\frac{3}{4}$	5 x 4	28 00
*2b.....	1 3-16	$6\frac{1}{2}$	5 x 4	$5\frac{1}{2} \times 4\frac{3}{4}$	33 00
3.....	1 5-16	$7\frac{1}{4}$	$5\frac{1}{2} \times 4\frac{1}{4}$	7 x 5	37 00
4.....	1 11-16	$9\frac{1}{8}$	7 x 5	$8\frac{1}{2} \times 6\frac{1}{2}$	48 00
5.....	$1\frac{1}{8}$	$10\frac{7}{8}$	$8\frac{1}{2} \times 6\frac{1}{2}$	10 x 8	60 00
6.....	$2\frac{1}{2}$	$14\frac{1}{8}$	10 x 8	12 x 10	95 00
7.....	3 1-16	$17\frac{3}{4}$	12 x 10	15 x 12	140 00

* Special Detective Camera Lenses: No. 1 b for plates, $4\frac{1}{4} \times 3\frac{1}{4}$; No. 2 b for plates, 5x4.

Nos. 0 to 3 are made in matched pairs for STEREO WORK.

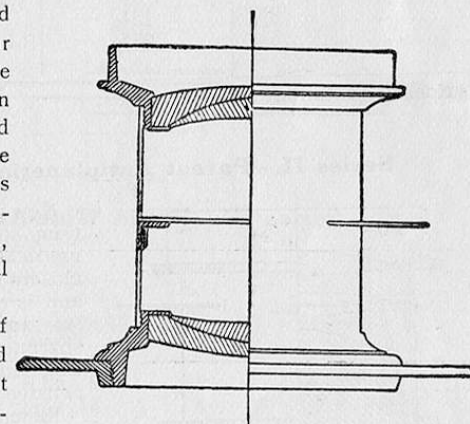
Shutters of any desired make will be fitted to our lenses at manufacturer's prices.

Series III.—Improved Aplanatic Lens.

The prototype of all rapid symmetrical and rectilinear combinations. Is now made with increased illumination and rapidity and guaranteed fully equal or superior to the most expensive lenses of its kind. Next to the Antiplanetic Group Lens, Series II., it is the best lens for general work.

Nos. 5 to 10 inclusive of this Series are now furnished to order with an attachment allowing the distance between front and back combinations to be adjusted either for direct negatives or for copying from flat surfaces, thus practically giving the operator two lenses in one. For direct pictures approach the two combinations as near as the mounting will allow, and for copying separate them in the same manner, whereby the lens loses in depth and gains correspondingly in flatness of field.

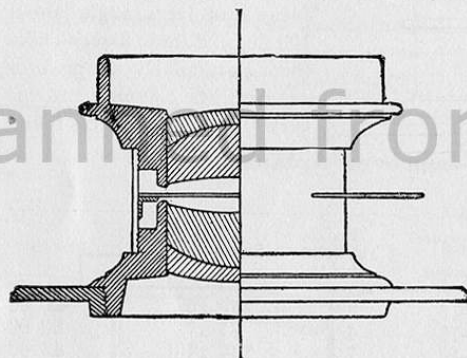
Designed for *Portraits, Groups, Architecture, Landscape and Instantaneous Work.* Also *Copying*, if used with extension as above.



No.	Aperture. Inches.	Focal Length, Inches.	Size of Portrait or Group, Inches.	Size of View or Landscape, Inches.	Price.
1.....	$\frac{1}{4}$	$1\frac{5}{8}$	For enlarging,		\$ 18 00
2.....	$\frac{5}{8}$	$3\frac{3}{4}$	$3\frac{1}{4} \times 3\frac{1}{4}$	$4\frac{1}{4} \times 3\frac{1}{4}$	18 00
3.....	1	$5\frac{5}{8}$	$4\frac{1}{4} \times 3\frac{1}{4}$	$5\frac{1}{2} \times 4\frac{1}{4}$	25 00
4.....	$1\frac{1}{4}$	$7\frac{1}{2}$	$5\frac{1}{2} \times 4\frac{1}{4}$	7×5	32 00
4b.....	1 9-16	$9\frac{1}{2}$	7×5	$8\frac{1}{2} \times 6\frac{1}{2}$	38 00
5.....	1 11-16	11	$8\frac{1}{2} \times 6\frac{1}{2}$	10×8	44 00
6.....	2 1-16	$14\frac{1}{8}$	10×8	12×10	57 00
7.....	$2\frac{3}{8}$	$17\frac{3}{8}$	12×10	14×11	86 00
8.....	2 15-16	21 3-16	17×14	20×17	125 00
9.....	3 7-16	25	20×17	22×18	166 00
10.....	4 9-16	33	22×18	24×20	245 00

Nos. 2 to 4 are made in matched pairs for STEREO WORK.

Series IV.—Rapid Wide Angle Aplanat.



Angle about 75 deg., and covering a larger field than the lenses of Series III. Effective aperture about f. 10. Specially designed for *Landscape Work and Architecture*, but can also be advantageously used for *Flash-light Interiors and Copying*.

Series IV.—Rapid Wide-Angle Aplanat.

No.	Aperture.	Focal Length. Inches.	Size of Picture.		Price.
			Full Aperture. Inches.	Smallest Stop. Inches.	
1.....	$\frac{3}{8}$	$2\frac{3}{8}$	2 x2	$3\frac{1}{4} \times 3\frac{1}{4}$	\$18 00
2.....	$\frac{1}{2}$	3	$3\frac{1}{4} \times 3\frac{1}{4}$	$4\frac{1}{4} \times 3\frac{1}{4}$	21 00
3.....	$\frac{3}{4}$	$4\frac{3}{4}$	5 x4	7×5	26 00
4.....	$\frac{1}{2}$	$6\frac{3}{8}$	7 x5	$8\frac{1}{2} \times 6\frac{1}{2}$	32 00
5.....	1	$9\frac{1}{2}$	$8\frac{1}{2} \times 6\frac{1}{2}$	12×10	44 00
6.....	$1\frac{1}{2}$	$15\frac{3}{8}$	12×10	17×14	86 00
7.....	$2\frac{1}{8}$	$23\frac{5}{8}$	17×14	24×20	160 00

It is frequently desirable to get a picture from a given point and to get it just the size to cover your plate, or of any other given size without changing your position. This can only be accomplished by using objectives of different foci, by which you can reduce or enlarge the image at

will. For this work we have arranged a *Set of Four Single Aplanats*, fitting in the same flange, aperture 1 in., covering $8\frac{1}{2} \times 6\frac{1}{2}$ with full aperture, and 12×10 with smallest stop.

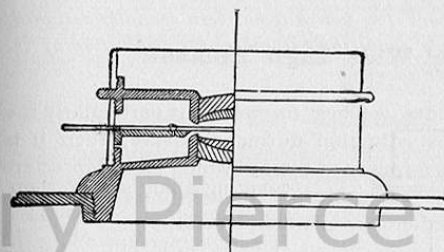
Used singly and by combination among themselves seven different foci are obtained as follows:

II in front with I behind, $7\frac{3}{4}$ in.	II single, - - -	$15\frac{5}{8}$ in.
III " " " II " $10\frac{3}{8}$ "	III " - - -	$20\frac{3}{4}$ "
I single, - - - $12\frac{5}{8}$ "	IV " - - -	$24\frac{1}{4}$ "
IV in front with III behind, 13 "		

Price in neat lock up case, \$85.00.

Sets of any class and size of Aplanats made to order.

Series V.—Extreme Wide-Angle Aplanat.

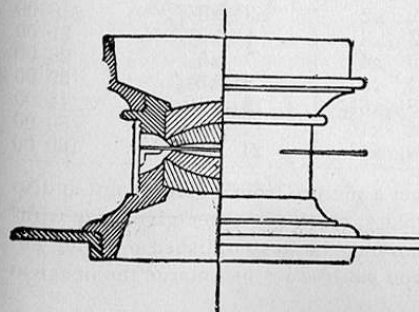


The proportionately short focus and large angle (about 100 deg.) of these lenses make them particularly adapted for *Interiors, Architecture*, and for very high, broad objects taken from short distances.

No.	Aperture. Inches.	Focal Length. Inches.	Size of Sharp Pictures. Inches.	Price.
1.....	3-16	$\frac{3}{4}$	5 x5	\$26 00
2.....	5-16	$\frac{4}{3}$	7 x7	30 00
3.....	7-16	$7\frac{1}{4}$	$10\frac{1}{4} \times 10\frac{1}{4}$	42 00
4.....	9-16	$10\frac{3}{8}$	$12\frac{1}{4} \times 12\frac{1}{4}$	61 00
5.....	14-16	16	$18\frac{1}{2} \times 18\frac{1}{2}$	93 00

Special quotations for larger sizes.

Series VI.—Wide-Angle Aplanat for Copying.



These lenses give perfect flatness of picture and sharpness of definition, and have at the same time a considerable field. Designed specially for *Copying Maps, Charts, Drawings, Paintings and Engravings and Photo-mechanical work generally*.

Series VI.—Wide-Angle Aplanat for Copying.

No.	Aperture. Inches.	Focal Length. Inches.	Size of Sharp Picture. Inches.	Price.
1.....	1	14 $\frac{3}{8}$	10 × 10	\$75 00
2.....	1 $\frac{1}{4}$	18	13 × 13	105 00
3.....	1 $\frac{3}{4}$	23 $\frac{5}{8}$	17 × 17	145 00
3b.....	2	30 $\frac{3}{4}$	20 × 20	210 00
4.....	2 $\frac{1}{2}$	38 $\frac{3}{8}$	24 × 24	320 00
5.....	3	48 $\frac{1}{4}$	28 × 28	540 00
6.....	3 $\frac{1}{2}$	56	34 × 34	760 00

Special quotations for larger sizes.

It is only a few years since this lens has been brought to the notice of photo-mechanical establishments in the United States, but it was at once recognized as the very best lens for their work for which it has been specially designed. To-day this lens is found in every establishment where the production of the highest class of work is the first consideration.

As a result of our experience we beg to point out particularly the necessity of avoiding the slightest vibration during exposure, when it is desired to obtain the extremest sharpness of picture which these lenses are capable of producing. It is also advisable not to use too small a diaphragm as the diffraction caused thereby veils the picture.

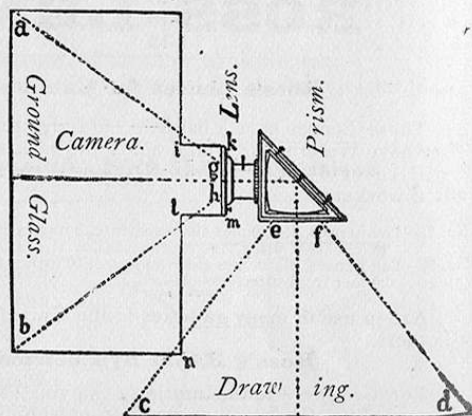
For obtaining inverted negatives, without stripping the film, we have designed the Prisms of Series VII, which can be fitted to the above or any other lenses.

Series VII.—Prisms.

These prisms are made of one solid homogenous mass of glass, with silvered hypotenuse.

They are centered in their mountings and adjustable to our lenses simply by unscrewing the hood of the lens and screwing the prism in its place.

With every prism is furnished a rotary flange with set screw, allowing the prism to be turned and fixed at any angle to the horizon. Designed for making *Inverted Negatives without stripping the film.* Also for special and scientific work.

**Series VII.—Prisms.**

No.	To work with Lenses as follows:	Price.
1	Ser. III. No. 2, Ser. IV. No. 3, Ser. IV. No. 4.....	\$37 00
2	Ser. V. No. 1, Ser. V. No. 2.....	41 00
3	Ser. IV. No. 5, Ser. V. No. 3, Ser. VI. No. 1.....	45 00
4	Ser. III. No. 3, Ser. VI. No. 2.....	57 00
5	Ser. II. No. 2, Ser. III. No. 4, Ser. V. No. 4.....	68 00
6	Ser. IV. No. 6, Ser. V. No. 5.....	80 00
7	Ser. II. No. 3, Ser. VI. No. 3.....	110 00
8	Ser. III. No. 5, Ser. VI. No. 3 $\frac{1}{2}$, Ser. VI. No. 4.....	125 00
9	Ser. IV. No. 7.....	155 00
10	Ser. II. No. 4, Ser. III. No. 6, Ser. VI. No. 5.....	185 00
11	Ser. VI. No. 6.....	287 00
12	Ser. III. No. 7.....	493 00

No charge made for *fitting* the above Prisms to Steinheil Lenses. For fitting to other makes of lenses the labor will be charged for at cost.

Series VIII.—Aplanatic Focusing Lenses.

These are a combination of three lenses, so constructed that, at a considerable focal distance and large field, they produce an even, undistorted picture, achromatic both inside and outside of the axis.

No.	Focal Length.	Linear Magnifying Power.	Price.
1.....	2 $\frac{3}{8}$ in.	.....about 3 $\frac{1}{2}$ times.....	\$12 00
2.....	1 $\frac{5}{8}$ "	....." 5 ".....	10 00
3.....	1 "	....." 8 ".....	8 00

ROSS LENSES.**Ross's Lenses for Cabinet Portraits.**

These Lenses have a flat field, and give remarkably brilliant pictures. They have Waterhouse Diaphragms and rack-and-pinion movement. No. 2 will cover 6 $\frac{1}{2}$ × 8 $\frac{1}{2}$ plate. No. 3 will cover 8 × 10 plate, and are very quick workers.

No. 2.—The Lenses, 3 $\frac{1}{8}$ inches clear aperture, 8 inches focus; should be placed at 18 feet from sitter.....	\$140 00
No. 3.—The Lenses, 3 $\frac{1}{8}$ inches clear aperture, 10 inches focus; should be placed at 20 feet from sitter.....	156 00

Are in use in many galleries in the United States, to the exclusion of all others.

Ross's Rapid Symmetrical Lenses.

For Groups, Views, Interiors, Copying, and every kind of out-door photography. Giving an angle of from 50 to 80 degs. The "Rapid Symmetricals" being aplanatic, work with full aperture, and are, perhaps, the best and most useful Lenses an amateur or professional photographer can possess for general out-door purposes.

Size View.	Size Group.	Diam. Lenses.	Equiv. Foc.	Rigid Setting.
a 4 1/4 x 3 1/4	Stereo.	3/4 inch.	4 1/2 inch.	\$32 00
a 5 x 4	4 1/4 x 3 1/4	1 "	6 "	34 00
7 1/4 x 4 1/2	5 x 4	1 "	7 1/2 "	42 00
8 x 5	7 1/4 x 4 1/2	1 1/8 "	8 1/2 "	46 00
8 1/2 x 6 1/2	8 x 5	1 1/4 "	11 "	52 00
10 x 8	8 1/2 x 6 1/2	1 3/4 "	13 "	68 00
12 x 10	10 x 8	2 "	16 "	84 00
13 x 11	11 x 9	2 1/4 "	18 "	92 00
15 x 12	13 x 11	2 1/2 "	20 "	116 00
18 x 16	15 x 12	3 "	24 "	148 00
22 x 18	18 x 16	3 1/4 "	30 "	200 00
25 x 22	22 x 18	4 "	34 "	240 00

(a) These Lenses are supplied accurately paired for stereoscopic purposes.

Waterhouse Diaphragms are supplied with these Lenses, as the apertures are too large to permit of Rotating Stops; but the latter can be adapted, if required, at small extra cost.

The Rapid Symmetrical Lenses are free from "flare" and distortion, and give absolutely straight marginal lines, rendering them invaluable for all kinds of architectural subjects, dimly-lighted interiors, copying, enlarging, etc. They are also used for instantaneous work with great success.

With smaller stops, each Lens covers the next size larger plate than that given, thereby greatly increasing the angle of view when desired. The two combinations being exactly similar, either can be used alone as an ordinary single Landscape Lens, the focus of which will be exactly double that of the compound.

They are the best universal Lens made.

Ross's Portable Symmetrical Lenses.

For Landscapes, Architecture, and Copying, give wide or ordinary angles, according to the stop used. Since the discovery of photography, perhaps, no lens for Landscape and Architectural purposes has had so great a share of popularity as the Symmetricals. This is doubtless attributable to their extraordinary definition and flatness of field, as well as the exceedingly portable form in which they are constructed. They are much used by amateurs, and are great favorites. For photo-lithographic work, they are unequalled.

No.	Large Stop.	Medium Stop.	Small Stop.	Equiv. Focus.	Price.
a 1	3 x 3	4 x 3	5 x 4	3 inch.	\$24 00
a 2	4 x 3	5 x 4	7 1/4 x 4 1/2	4 "	26 00
a 3	5 x 4	7 1/4 x 4 1/2	8 x 5	5 "	28 00
a 4	7 1/4 x 4 1/2	8 x 5	8 1/2 x 6 1/2	6 "	32 00
5	8 x 5	8 1/2 x 6 1/2	9 x 7	7 "	40 00
6	8 1/2 x 6 1/2	9 x 7	10 x 8	8 "	48 00
7	9 x 7	10 x 8	12 x 10	9 "	56 00
8	10 x 8	12 x 10	13 x 11	10 "	64 00
9	12 x 10	13 x 11	15 x 12	12 "	72 00
10	13 x 11	15 x 12	18 x 16	15 "	80 00
11	15 x 12	18 x 16	22 x 18	18 "	96 00
12	18 x 16	22 x 18	25 x 20	21 "	120 00

(a) These Lenses are supplied accurately paired for stereoscopic purposes.

Nos. 1 to 8, Rotating Diaphragms. Nos. 9 to 12, Waterhouse Diaphragms.

The first ten of the series, having their screws alike, fit into the same flange.

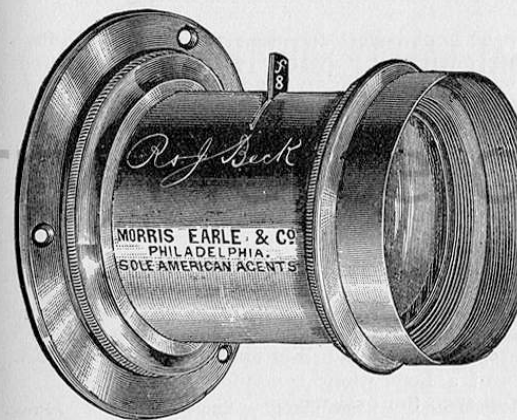
These Lenses can be used with full aperture when only a limited field is required; while with smaller stops a wide-angle is obtained. They work with about the same rapidity as the ordinary-angle Doublets, their largest aperture being about equal to one-sixteenth of their focus. They give straight marginal lines, and, in consequence of the combination being placed so close together (leaving only just room enough for the diaphragm) they are absolutely free from distortion and flare.

Beck Autograph Rectilinear Lenses.

None genuine without this engraved on the tube.

Ref Beck.

These Lenses possess qualities entirely their own.



5 x 4. ACTUAL SIZE.

These Lenses are perfectly Aplanatic, covering with full aperture to the extreme corners the size plate for which they are designated in the list, and much larger sizes when moderately stopped down. They are very rapid in action rendering them particularly valuable for instantaneous and short-time exposures; are rigidly rectilinear and symmetrical; possess wonderful penetration and definition, and are the lightest and most compact of any lenses in the market—a matter of no small moment to the landscape photographer. The No. 5 Lens will make life-size heads, sharp and free from distortion. They are in use in many of the leading galleries of the country.

No.	Size of Plate.	Diameter of Lenses.	Back Focus.	Equiv'lent Focus.	Angle.	Price.
1	3 1/4 x 4 1/4	7/8 in.	4 1/2 in.	5 in.	75°	\$25 00
2	4 1/4 x 5 1/2	1 in.	6 in.	6 3/4 in.	70°	30 00
3	5 x 8	1 1/4 in.	8 in.	8 3/4 in.	64°	35 00
4	6 1/2 x 8 1/2	1 1/2 in.	10 1/4 in.	11 in.	67°	50 00
5	8 x 10	1 3/4 in.	12 1/4 in.	13 in.	66°	60 00
6	10 x 12	2 in.	14 1/2 in.	16 in.	66°	75 00
7	11 x 14	2 1/4 in.	16 3/4 in.	18 in.	66°	100 00
8	14 x 17	3 in.	22 in.	24 in.	66°	160 00
9	20 x 22	3 3/4 in.	27 1/2 in.	30 in.	66°	200 00

Scovill 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 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 UNIVERSAL SAFETY SHUTTERS.

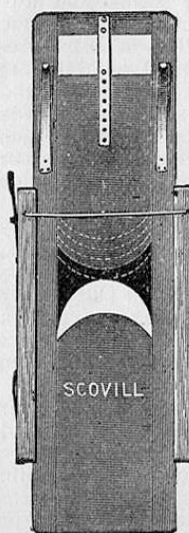
This Shutter is styled Universal, not only because more of the Scovill Safety Shutters are in use than of any other pattern, but because it can be arranged with a variety of openings, from $\frac{1}{4}$ to 2 inches at the center, as shown by the dotted lines of the accompanying illustration. Uniform 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 Universal Shutters.	Universal Shutters, with Pneumatic Release.	Scovill Safety Shutters.	Safety Shutters, with Pneumatic Release.	Universal Time and Instantaneous Shutters with Pneumatic Release.
1	1½ ins.	\$2.70	\$4.20	\$1.20	\$2.70	\$4.70
2	1½ "	2.80	4.30	1.30	2.80	4.80
3	1½ "	2.90	4.40	1.40	2.90	4.90
4	2 "	3.00	4.50	1.50	3.00	5.00
5	2½ "	3.10	4.60	1.60	3.10	5.10
6	3 "	3.25	4.75	1.75	3.25	5.25

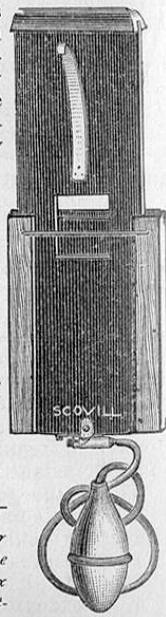
When ordering these Shutters, exact diameter of hood of Lens should be given, so that the proper circular opening may be cut out to exactly fit hood of Lens. If not stated, the Shutters will be sent without the round opening being cut.



Scovill Universal Shutter.

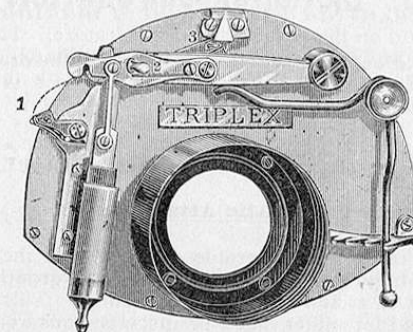


Scovill Safety Shutter, with Time and Instantaneous Attachment.



Scovill Safety Shutter.

"TRIPLEX" SHUTTER.



Two-Third Size 4 and 5 Shutter.

The Triplex Shutter, as will be seen by the cut, is in some respects similar to the "Duplex," the Shutter which has attained a world-wide reputation, and is to-day the best all-round shutter to be found. The Triplex has all its mechanism on the face of the Shutter (except the two exposing slides in the inside of the case, which are of steel and cannot get out of order), and all of its three movements, **TIME, SLOW INSTANTANEOUS** and **QUICK INSTANTANEOUS**, are operated by one pneumatic. Its method of opening and closing the aperture, by two oppositely pivoted slides swinging in opposite directions, half way and stopped for Time exposures, and a *complete continuous* movement for Instantaneous, has never been equalled. It is far superior to any iris arrangement in its method of admitting light, and is the only way great rapidity without jar can be obtained.

The Triplex will work from twice to four times faster than any shutter having an interrupted movement—as those which have slides or leaves which recede from centre or middle, to open, and return to close aperture. The Triplex, having but two exposing slides, there is much less liability to derangement than in Shutters which have more, and in all its other features it is equally superior in point of simplicity, durability and reliability, to any known Shutter.

The Shutter can be adapted to several kinds of lenses to which it is impossible to adapt any other, and we believe is the only Shutter which can be handily adapted into Detective Boxes, to be released by push trip or bulb at pleasure, and can also be reset and adjustment of spring made without opening box.

These Shutters are also made in a greater number of sizes than any other, which enables us not only to adapt Shutters to all sizes of lenses, but, what is of much importance, to furnish a shutter with the most desirable size of aperture corresponding with diaphragm of lens. Our Rotary Stops give facility of adjusting to proper stops while head is under cloth focusing; or when waiting for an approaching object, if sun becomes clouded or it suddenly brightens, making a change of stop desirable, it can be made instantly.

The method of making a **TIME EXPOSURE** is very simple. Air bulb is pressed and Shutter opens; when pressure is relieved it closes and is reset for another exposure. Any one who can count seconds can make Time exposures as accurately with this as with any Shutter with automatic attachment. It frequently happens that an exposure which is intended to be quite a lengthy one, owing to a breeze starting—if landscape work—or some one of a group moving, it is desirable to close shutter quickly. With

a set-time Shutter this cannot be done, but with the Triplex it is done as quick as thought. With **SLOW INSTANTANEOUS** movement the quickness of exposure anywhere from $\frac{1}{4}$ to $\frac{1}{50}$ of a second *can be made just as required, at the very instant of making it.* Too much stress cannot be laid on the advantages of this feature. There are Shutters with which very slow exposures can be made, but the exposure *must be what it is previously adjusted for;* but with the Triplex, if in exposure on an animal, single person or group, the object remains quiet, the air bulb can be given a pressure so that as long as a quarter-second time can be given; but if it is restless and a shorter exposure is necessary to stop motion, by pressing bulb quickly the exposure can be made as short as $\frac{1}{50}$ of a second.

As shown in cut, Shutter is held in open position by spring for focusing. To adjust for **TIME**, simply unhook spring. For **SLOW INSTANTANEOUS**, move hook 3 to upright position. For **QUICK INSTANTANEOUS**, hook on spring, throw in catch 1 and pull down knob 2, and shutter sets and locks.

The Triplex is adapted to any style of Detective Camera. When so adapted it can be released both by a push trip and by pneumatic bulb, for Quick Instantaneous; and for Slow Instantaneous and Time, by bulb only. Including Rotary Stops and necessary fitting to box, price \$15.00. We require to have lens and box.

The **TRIPLEX STEREOSCOPIC** fills perfectly the want of a Time and Instantaneous Shutter for stereoscopic work. It consists of two Triplex Shutters on one frame, operated by one lever and one release, and consequently gives two identical exposures. Made in two sizes. No. 1, $\frac{3}{4}$ inch opening, price \$18.00. No. 2, $\frac{7}{8}$ inch, \$19.50. Lenses are arranged at $3\frac{1}{4}$ inches from centres, but this will be increased up to $3\frac{3}{4}$ inches for \$1.00 additional. Rotary Stops, \$2. Flange Collars when required, 75 cents.

When no particular size Shutter is specified in order, lenses as a rule are adapted to Shutter having opening less than the largest diaphragm of lens. Thus a $6\frac{1}{2} \times 8\frac{1}{2}$ lens is adapted to a No. 1 Shutter. Rotary Stops include *five* openings, largest corresponding with opening in Shutter, four others such as are thought best. Requests for special sizes are, however, complied with when possible. Rotary Stops up to size No. 1, price \$1.50; over that size up to No. 2A, \$2.00 extra, but not furnished above 2A.

Numbers.....	00	0	0A	1	1A	2	2A	3	3A	4	5
Openings, in...	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	
Prices.....	\$11.50	12.00	12.50	13.00	13.50	14.00	14.50	16.00	18.00	20.00	22.00

When flange collars are required, as on Ross and lenses similarly mounted, 50 cents extra.

Shutters can be furnished for most standard lenses, fitted ready for use, but it is to the customer's interest to forward his lens tube, otherwise perfect fit is not guaranteed.

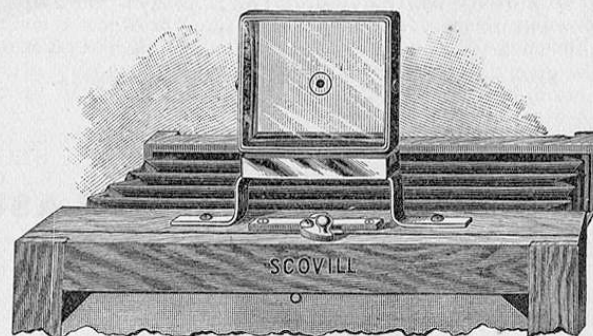
We are also makers of the popular Duplex Shutter. This Shutter has one feature that many like, which the Triplex has not. Time exposures are made by two pulsations of air bulb; the first opening and the second closing the Shutter. With the added improvement of Silent Time and Slow Instantaneous movement (similar to the Time and Slow Instantaneous of Triplex), it has four methods of exposure, giving a greater range than any known Shutter.

While we guarantee these Shutters to be the quickest Shutters made—working both Time and Instantaneous—and *as quick as any purely Instantaneous* Shutters, we do not guarantee them quick enough to take, at *short range* horses running or trotting fast, and other extremely fast work. For this work we make a special Shutter, the "Prosch Rapid," and this we do guarantee. We believe this Shutter to be the only one quick enough for this kind of work. Made in two sizes. No. 1, with 1 inch opening, \$18.00. No. 2, with $1\frac{1}{2}$ inch opening, \$22.00.

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 a convenient distance, say twelve inches, *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.

PRICE LIST.

No. 1, for 4 x 5 Camera.	-	-	-	\$1 50
" 2, " 5 x 8 "	-	-	-	1 75
" 3, " 6 1/2 x 8 1/2 "	-	-	-	2 00
" 4, " 8 x 10 "	-	-	-	2 50

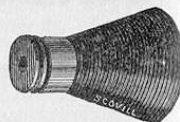
C. C. H. FOCUSING GLASS.

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

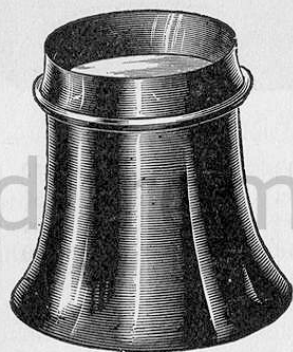
Scovill's Focusing Glass, each.....75



C. C. H. Glass.

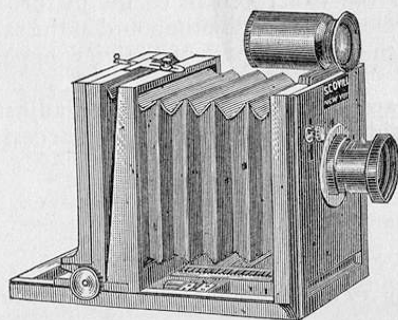
Save your eyes by using one of these instruments.

WATERBURY FOCUSING GLASS.



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

PEERLESS VIEW FINDER, Each, \$1.50.



THE

"WATERBURY FINDER,"

Each \$3.00.

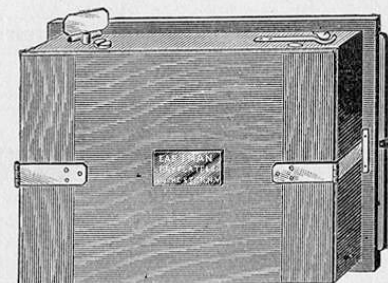
To Attach to Camera

FOR

Instantaneous Work.

Eastman-Walker Roll Holders.

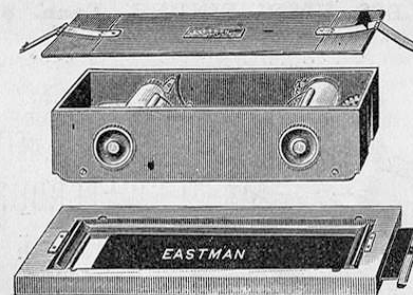
Model of 1889.



3 1/4 x 4 1/4.....	\$10 00	5 x 7	\$12 50	11 x 14.....	\$30 00
4 x 5	10 00	5 x 8	12 50	14 x 17.....	40 00
4 1/4 x 5 1/2.....	10 00	6 1/2 x 8 1/2.....	16 00	17 x 20.....	50 00
4 1/4 x 6 1/2.....	10 00	8 x 10	20 00	18 x 22.....	60 00
4 3/4 x 6 1/2.....	12 50	10 x 12	24 00	20 x 24.....	75 00

FRENCH AND GERMAN SIZES

9 x 12 cm.....	\$ 9 00	18 x 24 cm.....	\$16 00
13 x 18 "	12 50	21 x 27 "	20 00



All fitted with the new single revolution audible indicator.

All sizes of Roll Holders up to and including 11 x 14 carried in stock. Larger sizes to order.

Roll Holders.—EXTRA PARTS.

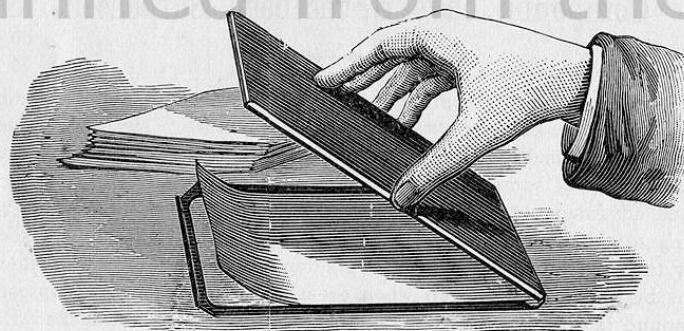
All parts of Roll Holders are made interchangeable, and any part can be furnished on application.

Extra Keys, old model... .25 cts each.

EXTRA REELS.

3¼ inches.....50 cts.	11 inches.....\$1 00
4 "50 "	14 "1 00
4½ "50 "	16 "1 25
4¾ "50 "	17 "1 25
5 "50 "	18 "1 25
6½ "75 "	20 "1 50
8 "75 "	25 "2 00
10 "75 "	

Extra Reels enable the operator to remove the exposed paper from the roll holder without separating the exposures or rewinding the paper film, an operation that should always be avoided. Enough extra reels should be provided to carry all exposures that are intended to be made before developing. For instance, if 100 exposures are to be made on a trip, 3 extra reels are required. Each reel, as soon as full, is removed from the holder and replaced by another to take the paper from a fresh spool. The boxes in which the spools are sold serve to store the reels of exposed paper. Empty spools are thrown away.

Film Carriers.

Patented May 5, 1885.

3/8 in. thick.	1/2 in. thick.	3/4 in. thick.	1 in. thick.	1 1/8 in. thick.	1 1/4 in. thick.
3 1/4 x 4 1/4..\$0 25	\$0 25	—	8 x 10..\$0 50	\$0 50	\$0 50
4 x 5 .. 30	30	—	10 x 12.. —	—	60
4 1/4 x 6 1/2.. 30	—	—	11 x 14.. —	—	75
5 x 7 .. 35	—	35	14 x 17.. —	—	1 00
5 x 7 1/2.. 35	—	—	16 x 20.. —	—	\$1 25
5 x 8 .. 35	35	35	18 x 22.. —	—	1 50
6 1/2 x 8 1/2.. 40	40	40	20 x 24.. —	—	1 75

In ordering carriers specify which thickness is wanted. The thicker the carrier the more rigid.

Double Holders that have the plate slide in from the end require the thinnest carrier, (3/8).

The Daisy Holder will take the 1/2 inch carriers when the septum is removed. As the carriers are opaque, the septum is not required.

Wet Plate Holders require the 3/8 carriers.

THE SCOVILL**MAGNESIUM * COMPOUND**

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.....	\$ 50
" 1/4 pound cans "	1 40
" 1/2 " " "	2 65
" 1 " " "	5 00

Pure Magnesium Filings.....per oz,	\$0 50
" " " "	1b, 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 conveniency 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.

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. Made in three sizes, large, medium and small, 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 unrivaled 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 Scovill reflecting 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.

Full directions for making portraits, interiors and other instantaneous photographs in the dark by means of Magnesium light are given in the PHOTOGRAPHIC TIMES.

Read it carefully each week in order to keep posted on the latest advances in this and every other branch of Photography.

PRICE LIST OF THE SCOVILL MAGNESIUM CARTRIDGES:

		Per Pkg.	Per Gro.
No. 1.	SMALL SIZE, in packages of six.....	\$0 25	\$6 00
" 2.	MEDIUM, " "	40	9 00
" 2½	" " "	60	13 00
" 3.	LARGE, " "	75	17 00

These cartridges cannot be sent by mail.

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.

3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	\$1 10
4 x 5	1 25
4 $\frac{1}{4}$ x 5 $\frac{1}{2}$	1 25
4 $\frac{1}{4}$ x 6 $\frac{1}{2}$	1 25
4 $\frac{3}{4}$ x 6 $\frac{1}{2}$	1 30
5 x 7	1 30
5 x 8	1 40
6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	1 70
8 x 10	2 00

Films may also be used with Daisy, Light Weight—New style—and Flammang Holders, by placing in them Scovill Film Carriers, which are listed as follows:

Scovill Film Carriers.

3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	\$0 10
4 x 5	10
4 $\frac{1}{4}$ x 5 $\frac{1}{2}$	11
4 $\frac{1}{4}$ x 6 $\frac{1}{2}$	15
5 x 7	17
5 x 8	22
6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	26
8 x 10	30

PRICE LIST —OF— PHOTOGRAPH CARDS FOR MOUNTING VIEWS.

Plain Cards, White or Gray.

Per Package of 25.

No. 2.	9 x 11.....	\$0 45
" 2.	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	30

Plain Cards, with Square Gilt Line.

Per Package of 25.

No. 2.	10 x 12, White or Gray, 6 x 8 Opening.....	\$1 00
" 2.	9 x 11, " " 5 x 8 ".....	80
" 2.	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$, " " 4 x 5 ".....	60

UNENAMELED CARDS, ROUND CORNERS.

No. 9, White, Primrose, Gray or Rose.

Per Package of 25.

Boudoir (or 5 x 8), 5 $\frac{1}{4}$ x 8 $\frac{1}{2}$	\$0 38
4 $\frac{1}{4}$ x 5 $\frac{1}{4}$	25
5 x 7	35
3 $\frac{1}{2}$ x 4 $\frac{1}{2}$	15

ENAMELED CARDS, ROUND CORNERS.

No. 9, Black, Chocolate or Maroon-Gray.

Per Package of 25.

Boudoir (or 5 x 8), 5 $\frac{1}{4}$ x 8 $\frac{1}{2}$	\$0 55
4 $\frac{1}{4}$ x 5 $\frac{1}{4}$	30
5 x 7	45
3 $\frac{1}{2}$ x 4 $\frac{1}{2}$	20

UNENAMELED GOLD BEVELED EDGE CARDS, ROUND CORNERS.

No. 26, White, Primrose, Gray or Rose.

Per Package of 25.

Cabinet size, 4 $\frac{1}{4}$ x 6 $\frac{1}{2}$	\$0 35
Boudoir " 5 $\frac{1}{4}$ x 8 $\frac{1}{2}$	70
4 $\frac{1}{4}$ x 5 $\frac{1}{4}$	40
5 x 7	60
3 $\frac{1}{2}$ x 4 $\frac{1}{2}$	32

ENAMELED GOLD BEVELED EDGE CARDS, ROUND CORNERS.

No. 67, Maroon-Gray, and

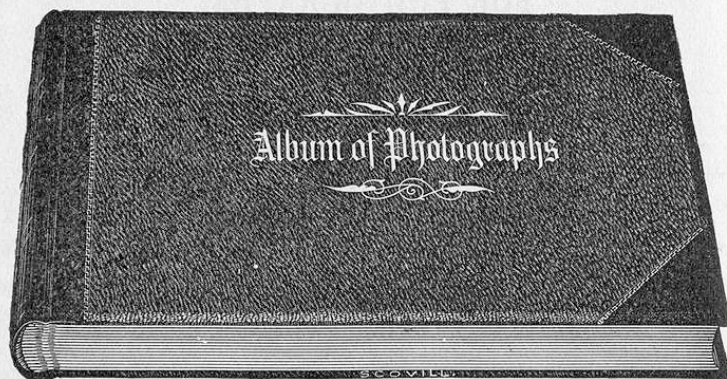
" 26, Black, Chocolate, Dark Olive or Bottle Green.

Per Package of 25.

Cabinet size, 4 $\frac{1}{4}$ x 6 $\frac{1}{2}$	\$0 45
Boudoir " 5 $\frac{1}{4}$ x 8 $\frac{1}{2}$	80
4 $\frac{1}{4}$ x 5 $\frac{1}{4}$	45
5 x 7	70
3 $\frac{1}{2}$ x 4 $\frac{1}{2}$	35

Scovill Albums FOR Photographs.

(NEW STYLE.)



How often the Amateur Photographer is heard to remark, that as fast as he makes prints from a negative his friends get away with them, and none are left to be treasured up as evidences of his advancement in the art. In order to keep at least one picture from each negative, and to arrange the collection in the best manner for display and preservation, tasteful albums have been introduced by the Scovill Manufacturing Co.

Each Album has 48 pages, 24 leaves. In them the finest card-board only is used, chemically free from anything that could injure a print.

PRICES:

Size of Card	6x7	7x10	10x12	11x14	14x17
For Photo. (size)	4x5	5x8	6½x8½	8x10	11x14
Plain	\$1.25	1.50	2.25	2.50	5.00
With Prepared Surface...	1.50	1.80	3.00	3.50	6.50
With Gilt Lines.....	1.75	2.00	2.75	3.00	

Price-List of Porte-Feuille, Including 25 Sheets of Collins' Best Quality White Cards.

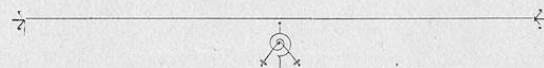
No. 2, Outside Dimensions, 10x12 for 6½x 8½ Photographs.....	\$3 10
" 3, " " " 11x14 for 8 x10 "	2 50

Price-List of Porte-Feuille, Including 25 Sheets of Collins' White Muslin-Back Cards.

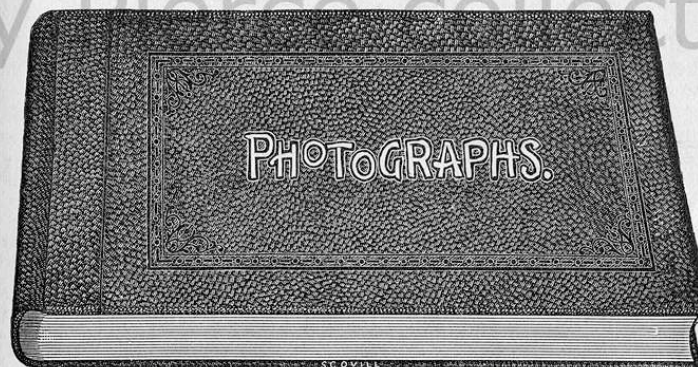
No. 5, Outside Dimensions, 10x12 for 6½x 8½ Photographs.....	\$2 00
" 6, " " " 11x14 for 8 x10 "	2 40

Howard :: Albums

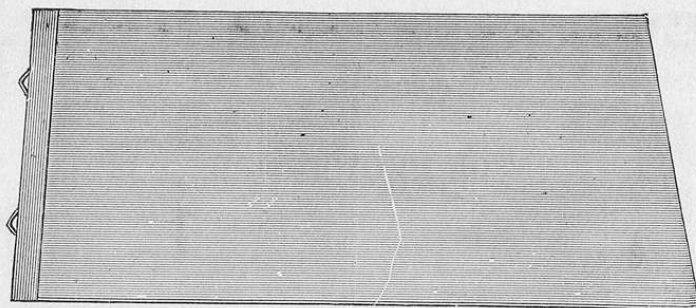
FOR PHOTOGRAPHS.



THE Howard Album, with interchangeable cards, is the latest novelty in the way of an album for mounting photographs. In handsomely embossed covers, are bound 25 of Collins' cards, which are chemically pure from all matter that would injure the photographs. In the mode of binding, and their interchangeable feature, lies the difference between this and other albums.



To each card are attached two small metallic binding loops, so fastened that they act like hinges; through the projection of these loops a binding cord passes, which fastens at the back with a tie; thus each card is bound in the cover independently, and may be taken out and returned or replaced with ease. This method of making an album affords the amateur the best means of preserving the results of his labor, because each picture may be finished before putting the card in the album. The arrangement of the pictures may also be altered at will—if a single card is spoiled, the whole album is not ruined. If a picture is taken out, it can be quickly and readily done without injury to the volume.

**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 " " 6½ x 8½ "	2 00	
" 3.	— 10x12 " " 6½ x 8½ "	2 25	
" 4.	— 11x14 " " 8 x 10 "	2 50	

HOWARD ALBUMS.

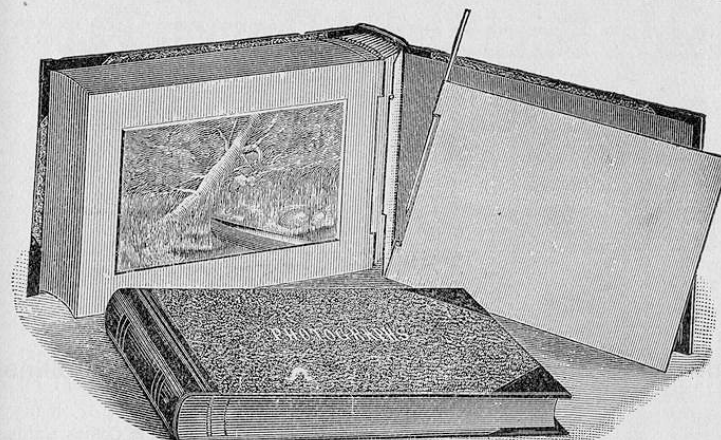
Morocco, Half Leather, Extra Gold Finish, with A. M.
Collins Mfg. Co.'s Cards, Boxed.

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

Extra Cards Collins' Best for Howard Albums, Mounted with Loops,
Ready for Use.

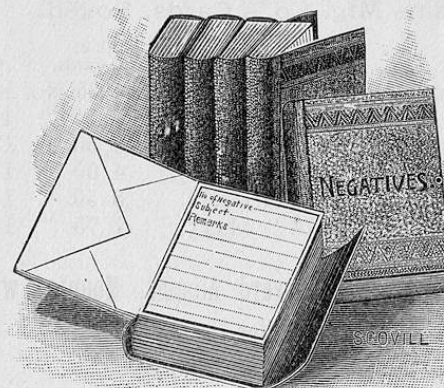
6x 7, Package of one dozen.....	\$0 38
7x10, " " "	50
8x10, " " "	60
10x12, " " "	62
11x14, " " "	88
14x17, " " "	1 25
16x20, " " "	1 55

IMPROVED SPRING BACK ECLIPSE ALBUM.

**Price List of Improved Eclipse Albums.**

No. 1, with 24 6 x 7 cards for 4 x 5 Photos.....	\$2 25
No. 2, " 24 7 x 10 " " 5 x 8 "	2 50
No. 2½, " 24 7½ x 10 " " 5 x 8 " upright.....	3 50
No. 3, " 24 10 x 12 " " 6½ x 8½ "	3 75
No. 3½, " 24 " " 6½ x 8½ " upright.....	4 25
No. 4, " 24 11 x 14 " " 8 x 10 "	4 25

THE HOWARD Negative Preserver and Binder.



These convenient Binders consist of heavy, finely surfaced envelopes (Negative Preservers), secured in cloth covers, and printed for reference, as shown in cut, and are designed for the preservation and classification of either paper or glass negatives or mounted or unmounted photographs.

The HOWARD BINDERS occupy much less space than negative boxes. By means of the patent adjustable back, the file enlarges as the envelopes are filled.

The Binders are all made with front flap and tie.

No. 30, for 4½ x 5½, 4 x 5, 3½ x 4½ negatives or prints.....	\$0 55
No. 31, for 5 x 8, 5 x 7, 4½ x 6½ negatives or prints.....	65
No. 32, for 6½ x 8½ negatives or prints.....	85
No. 33, for 8 x 10 negatives or prints.....	1 15

SCOVILL'S Ready Sensitized Albumen Paper.

This Paper was expressly manufactured for and introduced by us to give to those who have not the skill, time, inclination or appliances to sensitize photographic paper preparatory to printing, an article of the finest quality and of uniform sensitiveness.

Size.	PRICE LIST.	Per Package.
4x 5 inches, in light-tight packages, 2 dozen.....		\$0 40
5x 8 " " " 2 "		75
6½x8½ " " " 2 "		1 00
8x10 " " " 2 "		1 50
18x22 " " " 1 "		per doz. 3 00

To save loss, rolls are not broken.

TIN CASES to hold one dozen 18x22 Sensitized Paper, 30 cents each.
three " " " " 50 "

FERRO-PRUSSIAN * PAPER,

For Making Blue and White Pictures.

Our brand is a sure index of superiority in texture, the paper is better wrapped than any other, and is noticeably free from spots streaks or flaws.

This paper is extremely simple in its manipulation, and therefore very convenient for making proofs from negatives. It is also adapted for the reproduction of *Mottoes, Plans, Drawings, Manuscript, Circulars*, and to show representations of *Scenery, Boats, Machinery, &c.*, for an engraver to copy from. The rapidity with which a print can be made with this paper is for numerous purposes, and to men in some occupations, a very great recommendation in its favor.

Size	PRICE LIST.	Per Package.
4 x 5 inches, in 2 dozen light-tight parcels.....		\$0 28
5 x 8 " " 2 " "		50
6½x 8½ " " 2 " "		67
8 x10 " " 2 " "		83

To save loss, parcels are not broken.

In full rolls of 10 yards each, 30 inches wide, \$3.50 per roll.

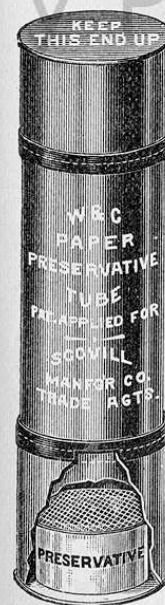
W. & C.

PERFECT PRESERVING TUBES.

FOR SENSITIZED PHOTOGRAPHIC PAPERS.

(PATENT APPLIED FOR.)

COMPACT, RELIABLE, AIR-TIGHT.



No.1. Holds 4	x5	to 4¼x6½ (Preservative extra)	\$0 90
" 2	" 5	x7 to 5 x 8	" " 1 10
" 3	" 6½x8½	to 8 x10	" " 1 50
" 4	" 18	x22	" " 2 00
" 5	" 18	x22 Gallery use	" " 3 00

THE

W. & C. Perfect Paper Preservative

Will keep Sensitized Paper FRESH and BRILLIANT FOR MONTHS.

EIGHT YEARS in constant use in Europe.

Paper can be silvered on dull, cloudy days, and used whenever needed. Proof Paper always fresh and ready for use.

PRICE OF PERFECT PRESERVATIVE.

Tin box, size for Nos. 1, 2, and 3 Tubes.....	each, \$0 20
Tin box, " " 4 and 5 "	" 0 35

Bon-Marche Porcelain Glass,

For use with Eastman's Transferotype Paper, with ground face; extra quality. Packed in boxes containing six panels.

Size.	For Photograph.	Each.
5½ x 6½	4 x 5	\$ 15
5¾ x 8	4¼ x 6½	17
6½ x 8½	5 x 7	22
11 x 8½	Double cabinets	36
15½ x 8½	Three cabinets	55
8 x 10	6½ x 8½	30
9½ x 11½	8 x 10	45
12½ x 14½	10 x 12	90
13½ x 16½	11 x 14	1 10

TRANSFEROTYPE PAPER.

Patented October 14, 1884.

CUT SHEETS.

SIZE.	PER DOZ.	SIZE.	PER DOZ.
3¼ x 4¼	\$0 25	6½ x 8½	\$1 10
4 x 5	40	8 x 10	1 50
4¼ x 5½	50	10 x 12	2 25
4¼ x 6½	55	10 x 14	2 65
4¾ x 6½	60	11 x 14	3 00
5 x 7	65	12 x 15	3 35
5 x 7½	70	14 x 17	4 50
5 x 8	75	16 x 20	6 00

SPECIAL SIZES FOR PLACQUES, TILES, &c.

SIZE.	PER DOZ.	SIZE.	PER DOZ.	SIZE.	PER DOZ.
4 x 4	\$0 35	6 x 6	\$0 75	10 x 10	\$2 00
5 x 5	50	8 x 8	1 30	12 x 12	3 00

Other sizes in proportion.

If ordered in packages of less than one dozen, an extra charge of 25 cents will be made for packing.

Eastman Transparent Films.

PATENTS APPLIED FOR.

On Patent Spools, to fit the Eastman-Walker Roll Holder.

SIZE.	PRICE. 24 Exposures.	PRICE. 48 Exposures.
3¼ inch, 3¼ x 4¼ Exposures	\$1 00	\$2 00
4 " 4 x 5 "	1 50	3 00
4½ " 4½ x 6½ "	2 00	4 00
4¾ " 4¾ x 6½ "	2 25	4 50
5 " 5 x 8 "	3 00	6 00
6½ " 6½ x 8½ "	4 00	8 00
8 " 8 x 10 "	6 00	12 00

Kodak Spools for No. 1 Kodak Camera, \$2.50 each.

Add 1½ cents per inch for postage on 24 Exposure Spools and 2½ cents per inch on 48 Exposure Spools, if ordered by mail.

AMERICAN FILMS.

PATENTED MAY 5, 1885.

The American Film consists of a film of *insoluble* sensitive gelatine emulsion attached to a paper support by means of a layer of *soluble* plain gelatine. The paper serves as a temporary support during the operations of exposure, developing, fixing and washing. After which the film is laid down on a prepared sheet of glass, the paper is removed by warm water which dissolves the soluble gelatine layer and leaves the film on the glass; the paper is then replaced by a varnish of thick gelatine and glycerine, dried and the whole stripped from the glass ready for printing. Full details of the operations outlined are given in the printed directions enclosed in every package. We recommend these Films for use where a perfectly transparent negative is required, as in enlarging.

American Films on Spools to fit Roll Holders.

Size.	Price.
4½ inch, for 24 exposures 4½ x 7½	\$2 00
4¾ " " " 4¾ x 6½	1 75
5 " " " 5 x 8	2 20
6½ " " " 6½ x 8½	3 00
8 " " " 8 x 10	4 50
10 " " " 10 x 12	6 75

TURKKA BROMIDE PAPER.

PRICE, No. 1, 2 or 3.—CUT SHEETS.

Size.	Price.	Size.	Price.	Size.	Price.
3 1/4 x 4 1/4	-	6 1/2 x 8 1/2	-	17 x 20	\$3 85
4 x 5	-	8 x 10	\$0 65	18 x 22	-
4 1/4 x 5 1/2	-	10 x 12	-	20 x 24	4 50
4 1/4 x 6 1/2	-	10 x 14	1 35	22 x 27	-
4 3/4 x 6 1/2	-	11 x 14	-	24 x 30	7 00
5 x 7	-	12 x 15	1 80	25 x 30	8 25
5 x 7 1/2	-	14 x 17	2 00	24 x 36	8 50
5 x 8	-	16 x 20	2 70	30 x 40	10 00
	-		3 60		13 50

Made in Three Grades: No. 1, Thin Smooth. No. 2, Heavy Smooth. No. 3, Heavy Rough.

OTHER SIZES IN PROPORTION.

If ordered in packages of less than one dozen, an extra charge of 25 cents will be made for packing.

IN ROLLS OR ON PATENT SPOOLS FOR ENLARGING EASELS.

10 inches wide,	20 inches wide,	30 inches wide,	40 inches wide,	50 inches wide,	60 inches wide,
11	22	33	44	55	66
12	24	36	48	60	72
14	28	42	56	70	84
16	32	48	64	80	96
18	36	54	72	90	108

NOT LESS THAN TEN YARDS ON A SPOOL.

EASTMAN'S PERMANENT BROMIDE PAPER

MADE IN THREE VARIETIES.

A—Smooth surface, thin, for positive printing, copying drawings, etc., by contact.

B—Smooth surface, heavy, for enlargements, and working in ink, oil and water colors.

C—Rough surface, heavy, for enlargements, plain, and for working in crayon, ink, water colors and oil.

All one price.

Our paper is uniformly and heavily coated by machinery with silver bromide, mixed with the least possible quantity of gelatine, to avoid curling, and to preserve the tooth of the paper for working with crayons.

We recommend the rough paper for plain enlargements and contact prints of all kinds on account of the fine artistic effects to be obtained.

Every batch of Bromide Paper is critically tested in our Enlarging Department. Absolute uniformity guaranteed.

Parties who have tried other makes of Bromide Paper and failed to obtain satisfactory results, are solicited to give this paper a trial.

A, B or C.—Cut Sheets.

Size.	Per Doz.	Size.	Per Doz.
3 1/4 x 4 1/4	\$0 25	11 x 14	\$3 00
4 x 5	40	12 x 15	3 35
4 1/4 x 5 1/2	50	14 x 17	4 50
4 1/4 x 6 1/2	55	16 x 20	6 00
4 3/4 x 6 1/2	60	17 x 20	6 40
5 x 7	65	18 x 22	7 50
5 x 7 1/2	70	20 x 24	9 00
5 x 8	75	22 x 27	11 25
6 1/2 x 8 1/2	1 10	24 x 30	13 50
8 x 10	1 50	25 x 30	14 00
10 x 12	2 25	24 x 36	16 00
10 x 14	2 65	30 x 40	22 50

Other sizes in proportion.

ON SPOOLS.

Patented May 5, 1885.

Per Yard.	Per 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 74

Not less than 10 yards on a spool.

If ordered in packages of less than one dozen, an extra charge of 25 cents net will be made for packing.

SQUEEGEES.



VELVET RUBBER.

6 inch.....40 cents. | 8 inch.....50 cents.
12 inch.....75 cents.

Squeegees are used to scrape off the water from the paper negative when laid on the rubber plates to dry.

HARD RUBBER PLATES.

FOR DRYING PAPER NEGATIVES.

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

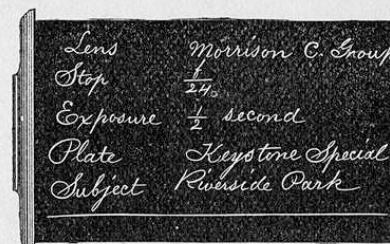
One Negative can be squeegeed upon each side of the rubber plate, which can then be placed in an ordinary plate rack to dry.

TRANSLUCINE.

A new material for rendering paper negatives translucent, without the aid of heat. Put up in corked bottles. Inodorous, and has simply to be rubbed on to the back of the negative and wiped off with a cloth. Price, 35 cents per bottle.

REGISTERING SLIDES.

(PATENTED)



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 past 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. They 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. Additional Holder Slides of this kind supplied at the following prices:

PRICE REGISTERING SLIDES.

Size for	Each.	Size for	Each.
3½ x 4½.....	\$0 18	5 x 7.....	\$0 35
" 4 x 5.....	20	" 5 x 8.....	40
" 4½ x 5½.....	24	" 6½ x 8½.....	55
" 4½ x 6½.....	28	" 8 x 10.....	75

Registering Slides not made above 8x10 size.

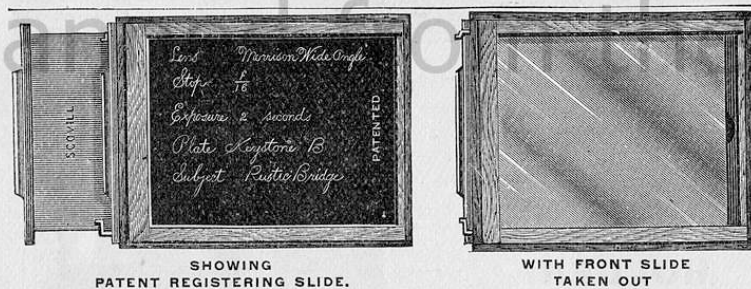
LIGHT-WEIGHT

SCOVILL.

***** LIGHTWEIGHT *****

Double Holders.

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



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 89.

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.

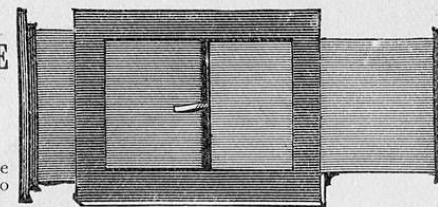
3 1/4 x 4 1/4	\$1.10	5 x 7	\$1.30
4 x 5	1.25	5 1/2 x 7	1.40
4 1/4 x 5 1/2	1.25	5 x 8	1.40
4 1/4 x 6 1/2	1.25	6 1/2 x 8 1/2	1.70
4 3/4 x 6 1/2	1.30	8 x 10	2.00

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

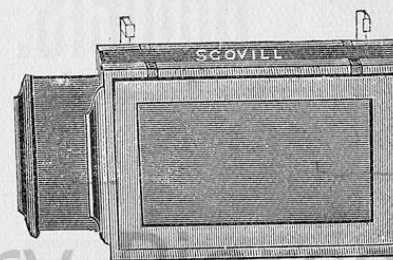
**THE
SCOVILL N. S. DRY PLATE
HOLDER.**

(PATENTED.)

Scovill's Patent Double Dry Plate Holders are reversible, and made to receive kits.



THE DAISY DRY PLATE HOLDER.

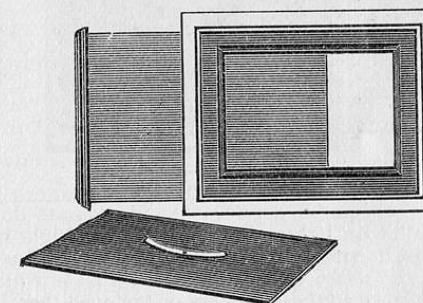


"This holder is a Daisy." The frequent repetition of this exclamation fixed the name by which our new holder is designated. It has the great merit of being lighter and of occupying less space than any other substantial holder that has ever been devised. The Daisy Holder opens like a book when the dry 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.)

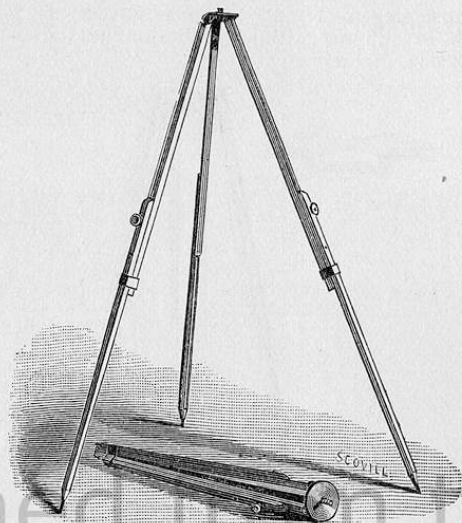
Arranged to take Kits of Lesser Size.



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

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 5 x 7 to 10 x 12 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.

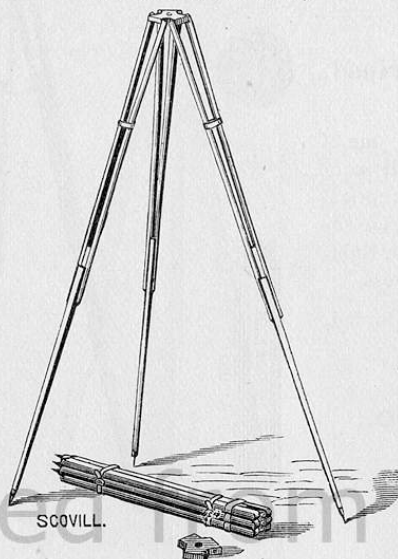
The artistic design and faultless finish of every portion of this Tripod cannot be realized without seeing one, and to use an ALBION TRIPOD means to be fully satisfied, and wish for none other.



No. 1, price.....	\$5 00
No. 2, Cherry wood.....	6 00
No. 3, Spruce (very light), price.....	6 00

The Scovill Adjustable Tripod.

(FEATHER WEIGHT.)

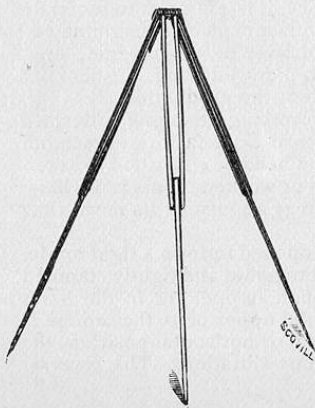


Nothing more compact, certainly nothing as graceful in appearance and light in weight as the new Tripod for out-door Photography, just produced by the American Optical Company, has yet made its appearance. Because so readily adjusted to the utmost irregularity of the earth's surface, it was decided to 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... 4.75



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.

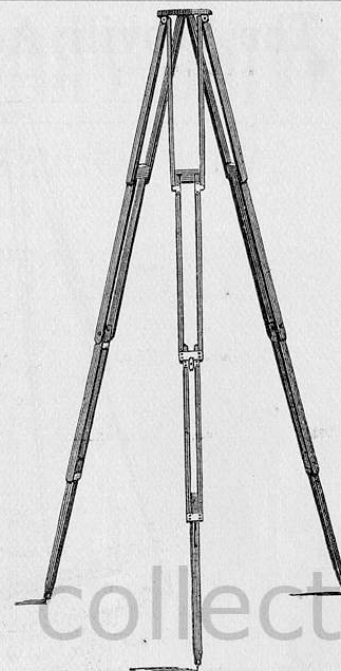
The Daisy Tripod.

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.

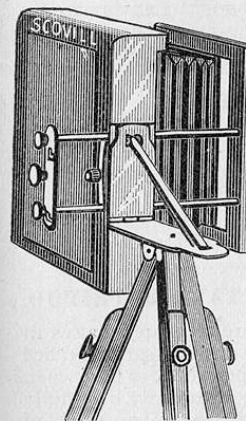
Weight, 2 lbs.

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.

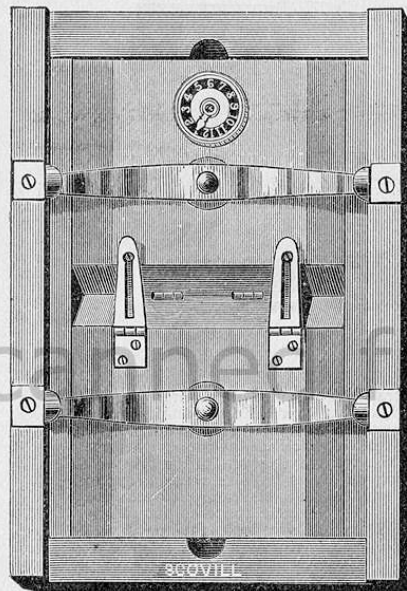
"When the new reversing attachment devised at the American Optical Co.'s factory is seen, no manual of instruction need be consulted to ascertain how it is applied or worked. This is obvious. A cut does not convey an idea of its merit thus readily.

"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."

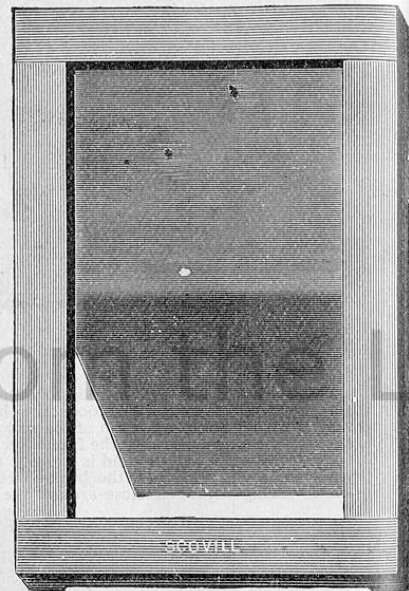
IRVING PRINTING FRAMES

WITH ADJUSTABLE SUPPORTS.

(PATENTED.)



IRVING PRINTING FRAME, CLOSED
FRONT VIEW.



IRVING PRINTING FRAME, OPEN.
BACK 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 wood-work.

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

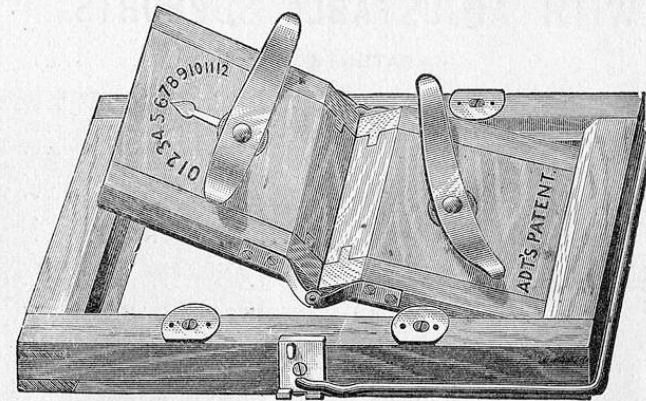
The tally does not depend upon any other part of the frame to lock it, for the pointer will remain in place no matter what is done to other parts of the frame.

Prices for Half or Two-thirds Opening Styles.

3 1/4 x 4 1/4	.45	5 x 7	.60
4 x 5	.48	5 x 8	.65
4 1/4 x 5 1/2	.50	6 1/4 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.

ADT'S PATENT PRINTING FRAME.



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 1/4 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 PEERLESS DARK-ROOM LANTERN.



"This is without question the best Lantern for the photographer's use yet introduced." Such is the report of experts who have had them in use for months.

Why they were agreed in their conclusions:

Because the ventilation is perfect, and danger of overheating overcome.

Because it is constructed so that white light does not escape.

Because it gives ample light for the dark-room.

Because the abundant light does not fog, but does show any spot or blemish in the plate.

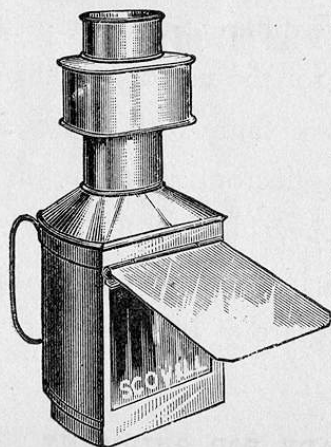
Because so much of the

light may be thrown into the developing dish and be shaded from the eyes.

Because it may be used either with coal-oil or candle.

Because the flame may be so quickly controlled by unlatching the door or uncatching the bottom of the Lantern.

Price, \$2.50.



The W. I. A. Petite Dry-Plate Lantern

Will be found quite superior to any lantern previously offered at a smaller price than the Scovill Peerless Lantern. It is much to be preferred above an oil consumer, on account of safety and cleanliness. The light emitted is abundant, and the ventilation perfect. When not in use the chimney of this petite lantern may be taken off and placed inside over the candle.

Price, \$1.25.

CARBUTT'S

MULTUM IN PARVO

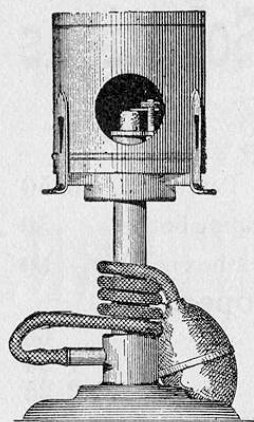
DRY PLATE LANTERN.



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 good for protecting the eyes from the glare of the red light.

PRICE \$6.00, BOXED READY FOR SHIPMENT.



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.

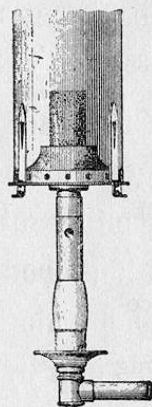
Particularly recommended for the Compound Flash Powders on account of its safety. It uses no alcohol or other flame. Ignition is produced by the glowing point of a carbon arranged under a receptacle for the Fuse and Flash Powder. The carbon is brought into contact with the fuse by compressing the rubber 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

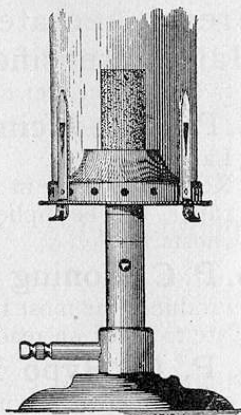
THE "ALADDIN" DARK ROOM LAMP.

(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.

Ready-Prepared Solutions FOR PHOTOGRAPHERS' USES.

S. P. C. Clarifying Solution. Per bottle, \$0 50

S. P. C. Restrainer. In accurate dropping bottle, 50

S. P. C. Developing Powders. Per box of 12, 50

S. P. C. Pyro and Potash Developer.

Price, per package, 60

Price, per pint set, 1 25

Price, per quart set, 2 25

S. P. C. Hydrochinon Developer.

Does not stain the fingers or leave the plate yellow; works equally well with all brands of plates, giving perfect detail, density and brilliancy in the negative. Full directions enclosed in each package. Price, per package, 60

S. P. C. Pyro and Soda Developer.

Price, per package, 60

S. P. C. Bromide Paper Developer

for Eastman Bromide Paper. Set, 75

S. P. C. Eikonogen Developer. Per package, 75

French Azotate (For Toning Prints.) Per bottle, 25

Hall's Intensifier (For Strengthening Weak Negatives). Price, per bottle, 75

S. P. C. Reducing Solution. 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.

S. P. C. Toning Solution. Per set, 1 00

Produces the most brilliant tones, ranging from chocolate to black on ready-sensitized paper.

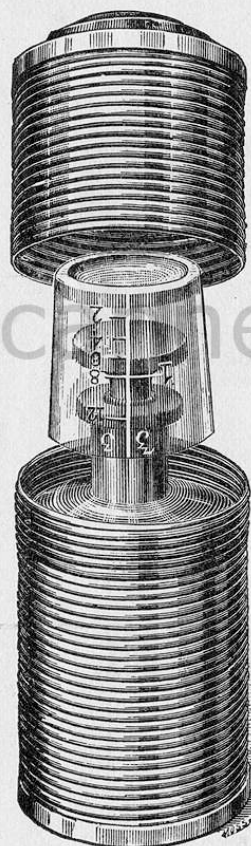
S. P. C. Hypo Eliminator. (For Removing every trace of Hyposulphite of Soda from Negatives and Prints). Price, per bottle, with book of testing paper, 50

S. P. C. Orthochromatic Solutions.

By which any plate may be rendered color-sensitive. Price, per package, 1 50

S. P. C. Retouching Fluid. (For Varnished and Unvarnished Negatives). Price, per bottle, 25

DEVELOPERS AND CHEMICALS IN SOLUTION TRANSPORTED SAFELY IN CORRUGATED PROTECTING CASES,

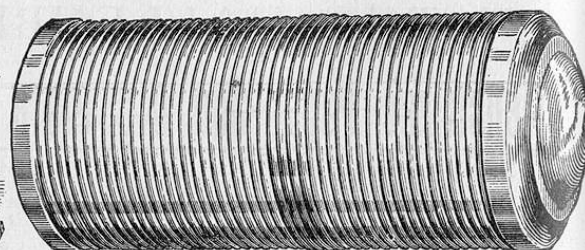


Supplied with Cut Glass Bottles, and Graduated
Tumbler to Measure Liquids.

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 nickled 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.



PRICE LIST.

Each.

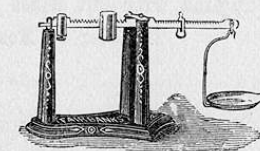
No. 1. Diameter, 1½ in. Length, 3½ in. Weight, 4½ oz. Furnished with 1 ounce bottle.....\$.50

No. 3 A Diameter, 2 in. Length, 5½ in. Weight, 7½ oz. Furnished with 4 oz. bottle, with tumbler, making ½ pint flask..... .85

No. 4 A Diameter, 2½ in. Length, 7 in. Weight, 14 oz. Furnished with 8 oz. bottle, with tumbler, making ½ pint flask..... 1.10

No. 12 A Diameter, 2½ in. Length, 6 in. Weight, 17 oz. Furnished

FAIRBANK'S Photographers' Scale.



NEW PATTERN, 2½ INCH PAN.

Half grain to 8 drams indicated on beam. No weights required.

JAPANNED SCALE, NICKEL-PLATED BEAM, - - \$5.00.

THE HALLENBECK Sensitized Paper and Dry Plate Safety Box.

Size.	Price, Ordinary.	Price, Cedar lined.
4 x 5	\$1 00	\$1 50
5 x 8	1 15	1 65
6½ x 8½	1 25	1 75
8 x 10	1 50	2 00
19 x 23	4 50	5 50

These boxes are provided with lock and key, and with weighted inside lid to keep paper flat.

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	6½ x 8½ inch.....	\$0 38
4½ x 6½ ".....	30	6½ x 9 ".....	48
5 x 7 ".....	30	8 x 10 ".....	48
5 x 8 ".....	34	10 x 12 ".....	75
6½ x 7½ ".....	38	11 x 14 ".....	90



SCOVILL'S ETCHED GROUND GLASS

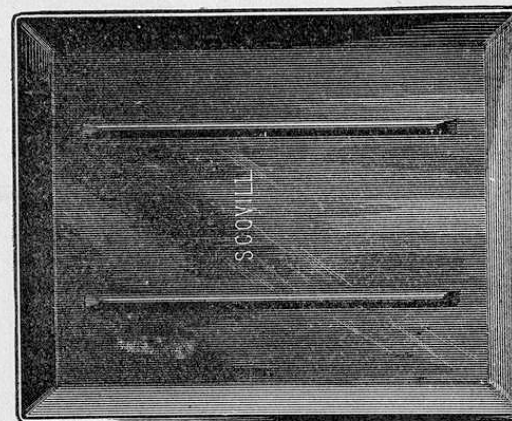
(WITH HANDSOME DESIGNS ON BORDER), FOR TRANSPARENCIES.

6½ x 7½ for 4 x 5 Picture.....	Per light, 27½ cts.
6½ x 9 " 4½ x 6½, 5x7, and 5x8 Picture.....	42½ "
8 x 10 " 6½ x 8½ Picture.....	50 "
10 x 12 " 8 x 10 ".....	62½ "

Plain Ground Glass for Transparencies.

Per Light.	Per Light.	Per Light.
4 x 5.....\$0.12	5 x 8.....\$0.18	8x10.....\$0.35
4½ x 5½..... 15	6½ x 8½..... 28	10x12..... 50
4½ x 6½..... 16		11x14..... 1.00

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.

PRICE LIST.

Size.	Price, each.
No. 200, 4½ x 5½ for 1-4, 4-5, and 4½ x 5½ plates.....	\$0 28
" 300, 5½ x 8½ for 5 x 7 and 5 x 8 ".....	56
" 400, 7 x 9 for 6½ x 8½ ".....	72
" 500, 8½ x 10½ for 7 x 9 and 8 x 10 ".....	1 08

Scovill's Outfit for Making Lantern Slides consists of

- 1 doz. Thin Crystal Glass.
- 2 " Black Mats.
- 1 package Black Adhesive Paper.
- 1 doz. 3¼x4 Keystone Gelatino-Albumen Dry Plates.
- 1 package S. P. C. Oxalate Developer.
- 2 4½x5½ Solid Glass Pans.
- 1 lb. Hyposulphite Soda.

The above, packed in wooden case, price complete..... \$3 50

For enlarging, reducing, or copying Negatives to make Lantern Slides, we recommend the use of one of the Scovill Enlarging, Reducing and Copying Cameras.

THE Scovill Sciopticon

No. 1 SCOVILL SCIOPTICON,
Complete with Double Slide Carrier,
\$30..

No. 2 SCOVILL SCIOPTICON,
Complete with Double Slide Carrier
\$50.



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 SCOVILL 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 No. 1. SCOVILL 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 covering 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 four 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 one and a half inch clear aperture and five-inch focus, so that at a distance of twelve feet from the screen, it gives a brilliant picture on disc six 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 No. 2 SCOVILL SCIOPTICON measures, when packed in case for carrying, 18½ x 12 x 8½, and weighs 19 pounds. The objective is a double achromatic lens of 1½ inches clear aperture and 5½ inches focus so that at a distance of about twelve feet from the screen it shows a brilliant picture on disc eight feet in diameter. The lamp has five wicks and is correspondingly more powerful than the lamp with the No. 1 Sciopticon.

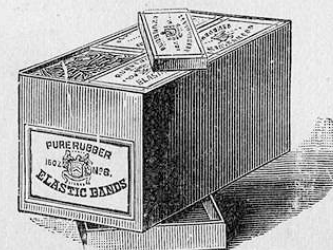
"ALPHA" FINGER-TIPS.

This very useful article comes in a nest of three finger-tips of assorted sizes, put up in a neat paper box; **Price, 15 cents.**

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.

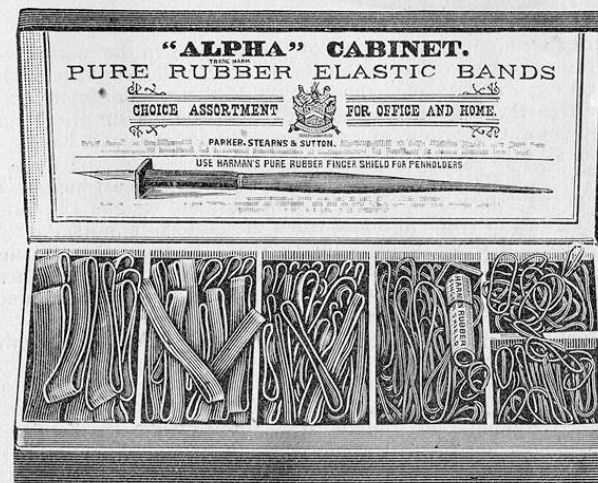
RUBBER BANDS.

Eighteen gross, 1½ inch bands in a ¼ lb. box. Put up nicely in ¼ lb. boxes. Use them instead of twine.
2,592 bands (count 'em) in a ¼ lb. box.
Per ¼ 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.

The ADT PATENT PRINT MOUNTER.

THIS IMPROVEMENT SIMPLIFIES THE MOUNTING
OF PHOTOGRAPHIC PRINTS.



The Adt Patent Print Mounter

Consists of a spring roller, to which is attached a handle, and upon which is wound a band of fine cotton cloth, one end of the band being fastened to a rod which is screwed to the mounting table.

After the pasted print has been placed upon the mount, the roller is drawn over the print, as shown in the cut, the spring roller drawing the cloth band perfectly tight, and re-winding it when the roller returns.

The uniform pressure of the roller removes all the air from under the print and presses it securely to the mount.

It absorbs the moisture from the surface of the print, leaving it perfectly smooth.

It will not displace the print, the roller being held in place by the tension of the spring on the band.

The band is of sufficient length so that when, in time, a portion of it becomes soiled, it can be wound upon the removable rod, which is fastened to the table, thereby exposing a clean surface.

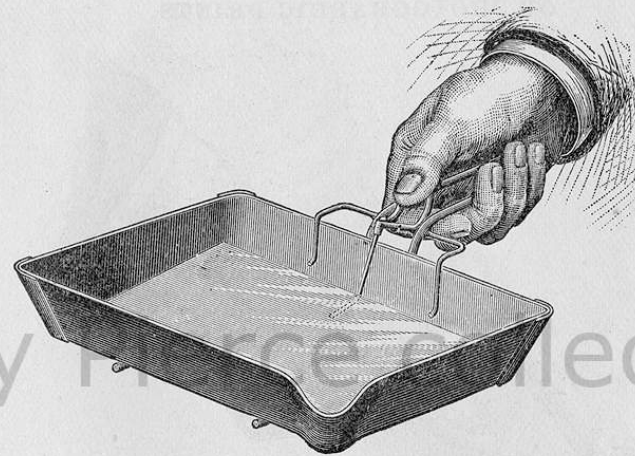
When the entire band becomes soiled it may be removed, washed, and replaced.

The ADT MOUNTER is made in a substantial manner.

It saves a vast amount of time and labor, and does the work better than by any other method.

Price, each, \$1.60.

THE ADT Patent Manipulator.



The combined features of this Device make it an indispensable contrivance for the Dark-Room.

ADAPTABLE FOR VARIOUS SIZE TRAYS.

As will be seen by a glance at the cut, this device not only protects the hands in lifting the plate from the developer, but as they do not come in contact with the tray, stained fingers are entirely avoided.

It not only prevents soiling the hands, but will be found a great aid in manipulating the plate.

It is attachable to and will firmly hold various sizes and depths of trays without adjusting.

The lifter is of German Silver, flattened at the end, thus requiring no extra amount of developer.

They are strongly made and heavily nickel-plated throughout.

Price, 85 Cents Each.

SCOVILL SQUEEGEE AND PRINT ROLLER.



Superior to anything in the Market.

The Scovill Squeegee Roller 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.

Price, \$1.00 each.

—S. P. C.—

JAPANNED DEVELOPING TRAYS

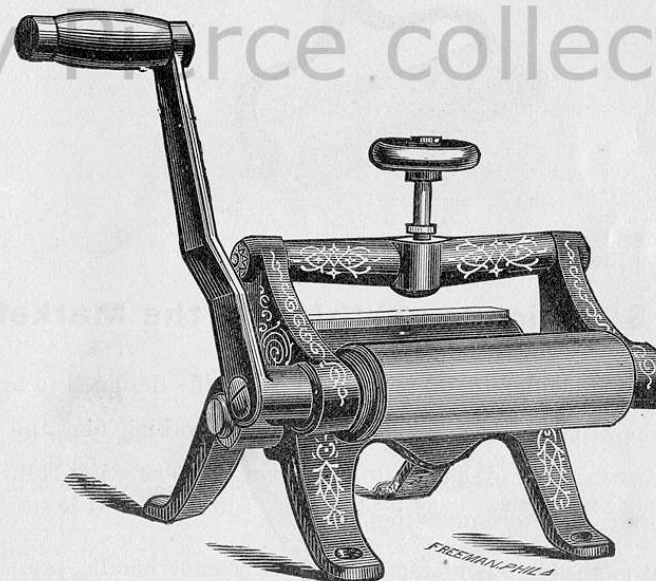
(Made of Selected Metal)

—FOR—

DRY PLATE PHOTOGRAPHY.

Size $4\frac{1}{2}$ x $5\frac{1}{2}$ inches.....	price each, 20 cents.
" $5\frac{1}{2}$ x $8\frac{1}{2}$ "	" 25 "
" 7 x 9 "	" 30 "
" $8\frac{1}{2}$ x $10\frac{1}{2}$ "	" 40 "

BURNISHERS.



—PRICES—

6 inch roll.....\$13 00 | 10 inch roll.....\$20 00

If by accident, or otherwise, the burnishing tool becomes defaced, it can be replaced with a new tool at a mere nominal cost, and the machine is as good as new.

GENERAL PRICE LIST.

Chemicals subject to Fluctuation in Prices.

Glass Forms, Stereo....each, \$0 40	Glass Forms, 4 x 5....each, \$0 50
Card Glass Forms....." 25	" 5 x 8...." 1 00
Cabinet "....." 50	" 6½ x 8½...." 1 25
Robinson's Straight Trimmers.....	" 50
" Revolving " with guide.....	" 1 00
Scovill Focusing Cloths.....	" 50
" Printing Frames, flat, 3½ x 4½.....	" 36
" " " 4 x 5.....	" 38
" " " 4½ x 5½.....	" 40
" " " 4½ x 6½.....	" 42
" " " 5 x 7.....	" 50
" " " 5 x 8.....	" 52
" " " 6½ x 8½.....	" 60
Neutral Oxalate Potash.....per lb.,	35
Protosulphate Iron.....per lb.,	14
Sulphate Iron and Ammonia.....per oz.,	15
Oxalic Acid.....per oz.,	10
Citric Acid....." 15	
Bromide Ammonium....." 12	
" Potassium....." 12	
Iodide "....." 30	
Nitrate Uranium....." 85	
Red Prussiate Potash....." 15	
Litmus Paper.....per sheet or book,	5
".....per box,	50
Carbonate Soda (Sal Soda).....per lb.,	10
Pyrogallie Acid.....per oz.,	35
Sulphuric Acid, in bottle and tin can.....	20
Bichloride Mercury....." 15	
Chloride Ammonium....." 10	
Liquid Ammonia, conc.....per lb.,	32
Hyposulphite Soda....." 10	
Alum, Ground....." 10	
Chrome Alum (commercial) in box.....	25
India Ink (for stopping out).....per stick,	25
Gihon's Opaque.....per cake,	50
French Azotate (for toning).....per bottle,	25
Chloride Gold and Sodium.....per bottle of 15 grains,	35
" " " 30 "....." 55	
S. P. C. Negative Varnish.....per bottle,	35
Parlor Paste (for mounting pictures).....½ pint jar,	25
" " " pint bottle,	35
" " " quart jars,	65
Acetate Soda.....¼ lb. bottles,	20
Ground Glass Substitute.....per bottle,	50
Dropping Tubes.....each,	10
W. I. A. Petite Lantern....." 1 25	
Peerless Lanterns....." 2 50	
Lantern Slide Mats.....per 100,	1 00
" " Binders.....per 100,	20

CARBUTT'S Keystone Dry Plates.

The Renowned KEYSTONE DRY PLATES are coated on personally im- ported fine English glass—flat and accurately cut.	SPECIAL AND ECLIPSE (blue label) for Portraits and Drop Shutter Views. And "B" white label, for Landscape and General Photography.	STRIPPING PLATES. For Engravers and Photo- Mechanical Reproductive pro- cesses.	Orthochromatic and GELATINO-ALBUMEN Transparency Plates. Keystone Positive Films.	GELATINO-ALBUMEN, on fine Ground Glass, for Win- dow and Door Transparencies.	Gelatin-Albumen on bright surface OPAL, for Contact and Enlarging.	Gelatin-Albumen on fine Matt surface OPAL, for water or oil color painting.
Size of Plates.	Sp'l Inst's and "B."	Stripping Plates.	Ortho'c and Transpar'cy.	Gr'd Glass Transpar'cy.	A Plain Opal	A Gr'd Opa
	Dozen.		Dozen.	Dozen.	‡ Dozen.	‡ Dozen.
3¼ x 4	Thin Crystal Glass for Lantern Slides.		\$0 65	....	....	....
3¼ x 4½	\$0 45	\$0 60	55	\$0 70	\$0 45	\$0 55
4 x 5	65	90	80	1 00	65	80
4¼ x 5½	75	....	90	1 12	75	90
4¼ x 6½	90	1 20	1 08	1 35	90	1 12
4¾ x 6½	95	....	1 20	....	....	....
5 x 7	1 10	1 45	1 40	1 75	1 10	1 35
5½ x 7	1 25	1 65	1 50	....	....	....
5 x 8	1 25	1 65	1 50	1 90	1 25	1 55
6½ x 8½	1 65	2 20	2 00	Doz. 2 60 ‡ Doz. 1 35	1 65	2 05
8 x 10	2 40	3 20	3 00	Doz. 3 75 ‡ Doz. 1 90	2 40	3 00
10 x 12	3 80	5 05	4 50	‡ Doz. 2 80	3 80	4 75
11 x 14	5 00	6 65	5 85	‡ Doz. 3 60	5 00	6 25
14 x 17	9 00	12 00	10 80	‡ Doz. 6 75	9 00	12 00
16 x 20	12 50	16 65	....	....	....	....
17 x 20	13 00	17 30	....	....	....	....
18 x 22	15 50	20 00	....	....	....	....
20 x 24	18 50	24 50	....	....	....	....

SIZES 10 X 12 AND LARGER ARE PUT UP HALF DOZEN IN A BOX.

CARBUTT'S FLEXIBLE NEGATIVE FILMS.

These Films Require Exactly the same Treatment as Dry Plates.

NO EXTRA PROCESSES ARE NECESSARY.

EXPOSE, DEVELOP, FIX, WASH, DRY.

Being but one-hundredth of an inch in thickness, can be printed from either side.

WEIGHT ALMOST DISPLACED.

Can be used in the regular Plate-Holder furnished with any camera for Studio work, or Films sufficient for Twenty-four Exposures can be carried in a single holder for Landscape and Instantaneous Views, taking up no more space than the presetn holder and **WEIGHING LESS** than Two Glass Plates.

PRICE OF FLEXIBLE FILM—PER DOZEN.

Coated with our "Special" and "Eclipse" Emulsions.

3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	\$0 65	5 x 7	\$1 65
4 x 5	0 95	5 $\frac{1}{2}$ x 7	1 75
4 $\frac{1}{4}$ x 5 $\frac{1}{2}$	1 12	5 x 8	1 80
4 $\frac{1}{4}$ x 6 $\frac{1}{2}$	1 30	6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	2 50
4 $\frac{3}{4}$ x 6 $\frac{1}{2}$	1 40	8 x 10.....	3 60

INSTRUCTIONS AND FORMULA FOR Carbutt's Keystone Dry Plates.

SPECIAL PORTRAIT AND INSTANTANEOUS.

Blue Label; Sensitometer 23 to 25.

PRONOUNCED THE NE PLUS ULTRA OF DRY PLATES

B—Landscape and Copying. A—Gelatino-Albumen for Transparencies.

White Label; Sens'r 16 to 20,

Red Label; Sens'r 12 to 14.

ORTHOCHROMATIC PLATES, Normal Sens'r 20 and 25; Color Sens'r 30 and 40.

No. 1. PYRO SOLUTION.

Distilled or Ice Water.....10 oz.
Sulphite of Soda Crystals..... 4 oz.
Dissolve and add slowly.
Sulphuric Acid..... 1 drachm.
Pyrogalllic Acid, Schering's 1 oz.
And Water to make 16 oz. fluid.

No. 2. ALKALINE SOLUTION.

Water, Distilled, or Melted Ice.....10 oz
Granulated Carbonate of Soda..... 2 oz
Granulated Carbonate of Potash..... 1 oz
Yellow Prussiate of Potash..... 1 oz
Dissolve, add Water to make measure 16 oz

[During Hot Weather, add to No. 1, 20 grains Bromide of Potassium.]

BROMIDE SOLUTION.—Bromide Potass. 1 part, Water 9 parts.

TO DEVELOP.

For Portraits on "Special Instantaneous," to 4 ounces of water add 3 drachms No. 1, and 2 drachms No. 2, and if plate has had proper exposure, the above developer will be found to yield a soft and rich printing negative. More of No. 2 to be added if under-exposed, and more of No. 1 with a few drops of Bromide Solution if over-exposed.

For Landscapes and Interiors on "Specials," where the exposure may be uncertain, lay the exposed plate in the Pyro Solution for a minute or two, then into the developing glass put half the quantity of No. 2 as has been taken of No. 1, and pour the Pyro Solution into it, and back on to the plate. By proceeding in this manner, adding more of No. 2 to bring out the image, or a few drops of a 10 per cent. solution of bromide to restrain, as may be required, much better results may be looked for than if a full quantity of No. 1 and No. 2 were mixed at once. FOR INSTANTANEOUS VIEWS or very dark interiors, we recommend the following procedure: To 4 ounces water add 1 dram No. 2, soak plate in this while preparing the following: water, 3 ounces, of Nos. 1 and 2 each 3 drams, 5 drops Bromide Solution, pour off the dilute alkali, and flow this strong developer over the plate; be careful to expose the plate as little as possible to the light used to develop by, no matter how safe it may be considered for ordinary development. Do not hurry by adding more No. 2; cover up the pan and give the developer time to act, when more of No. 1 or No. 2 may be added as required. For INSTANTANEOUS MARINE VIEWS, it will be best to treat the plate same as for Landscapes, by soaking plate in Pyro Solution first.

For Landscape, Machinery, Architecture, &c., on B plates, use $\frac{1}{2}$ drachm each Nos. 1 and 2 to each ounce water, adding more of each as may be required. No. 1 giving density, No. 2 giving detail and hastening development.

After washing off developer, immerse in following:

HARDENING AND CLEARING SOLUTION.

Water..... 36 oz. | Citric Acid..... $\frac{1}{4}$ oz.
Chrome Alum..... $\frac{1}{2}$ oz. |

3 to 5 minutes then wash and place in the

FIXING SOLUTION.

Hypo-sulphite of Soda... 8 oz. | Water..... 40 oz.

LANTERN TRANSPARENCIES

AND HOW TO MAKE THEM.

The requisities are, a deep printing frame a size larger than the negative to be used, with a flat glass bottom clear and free from scratches (crystal plate is best), a Carbutt Multum in Parvo Lantern, or other artificial light, and Keystone Gelatino-Albumen Plates. Transparencies can be made same size of negative by contact and exposure to artificial light, or enlarged or reduced in the camera by daylight, with equal perfection in result. To make Lantern Slides by contact, place one of the Keystone thin crystal glass transparency plates over the negative in printing frame, lay piece of dark soft material over it, close down the back, and expose to the *clear* light side (by opening the *left* hand door) of a Multum in Parvo Lantern or other light, for 10 to 30 seconds, according to density of negative, at a distance of 20 inches from the flame. Use the following developer.

CARBUTT'S IMPROVED DEVELOPER FOR TRANSPARENCIES.

A.
Oxalate of Potash..... 8 oz.
Water..... 30 oz.
Citric acid..... 60 gr.
Citrate of ammonia solution..... 2 oz.

B.
Sulphate of iron..... 4 oz.
Water..... 32 oz.
Sulphuric acid..... 16 drops.

C.
Citrate of ammonia solution.
Dissolve 1 oz. citric acid in 5 oz. distilled water, add liquor ammonia until a slip of litmus paper just loses the red color, then add water to make the whole measure 8 oz.

DEVELOPER.—Add 1 oz. of B to two of A, and $\frac{1}{2}$ oz. of water, and 3 to 6 drops of bromide solution.

Let the development continue until the blacks look quite strong, and detail plainly showing in the high lights; wash off developer thoroughly before fixing, use fresh hypo solution, when fully cleared wash for half hour, then immerse five minutes in the Hardening Solution given below; afterwards wash for half hour, then carefully go over surface with soft camel's-hair brush, or pledget of cotton to remove any particles of dirt; place in rack to dry. Then varnish with plain Collodion.

COLLODION VARNISH.

Alcohol..... 4 oz. | Sulphuric ether..... 4 oz.
Pyroxyline..... 30 to 40 gr.

When, after shaking, the cotton is dissolved, filter and flow the plain Collodion over the dry transparency, the same as when using varnish; when dry, cover with matt and a crystal cover glass, and bind with binding strip.

HARDENING AND CLEARING SOLUTION.

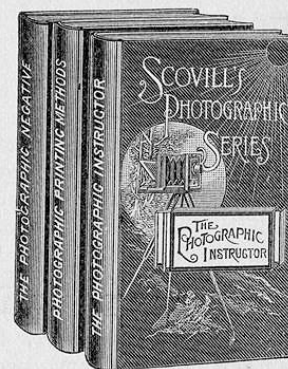
Water..... $\frac{3}{8}$ oz. | Citric acid..... $\frac{1}{4}$ oz.
Chrome alum..... $\frac{1}{2}$ oz.

3 to 5 minutes, then wash and place in the

FIXING SOLUTION.

Hyposulphite of soda..... 8 oz. | Water..... 40 oz.

The Scovill Photographic Series.



- | | Price,
Per Copy. |
|--|---------------------|
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| No. 2.—THE ART AND PRACTICE OF SILVER PRINTING.—By H. P. ROBINSON and Capt. W. DE W. ABNEY, R.E., F.R.S. (Third Edition.) Paper covers..... | 50 |
| Library Edition..... | 75 |
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