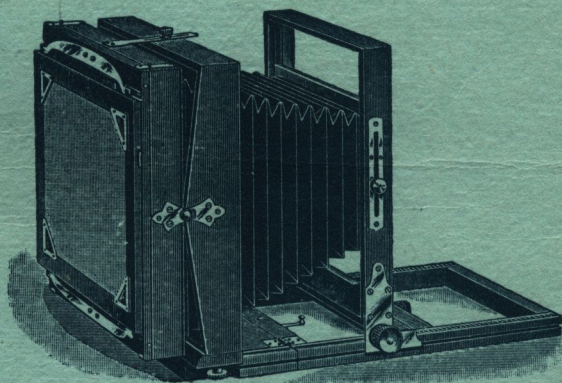


# PHOTOGRAPHIC APPARATUS

1899



MANUFACTURED BY

ROCHESTER OPTICAL CO.

ROCHESTER, N. Y.



Descriptive Catalogue

...OF...



Photographic  
Apparatus.

1899

Rochester Optical Co.,

W. F. CARLTON,

PROPRIETOR.

Office and Manufactory, 39-49 South Street,

ROCHESTER, N. Y., U. S. A.



## A Few Words With Our Customers.

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We take pleasure in presenting our 1899 Catalogue of Tripod Cameras and general photographic apparatus, inviting a critical examination of the goods described herein.

For sixteen years the Rochester Optical Co., under the personal supervision of Mr. W. F. Carlton, has been engaged exclusively in the manufacture of photographic cameras. During this period it has been our aim to offer to the trade a line of goods unexcelled in quality, and at moderate cost. As a result, our product is now a recognized standard, having proved exceedingly popular, not only among the best amateur and professional photographers throughout the United States, but in foreign markets as well.

We have at our disposal a perfectly equipped factory, and employ a corps of skilled workmen, many of whom have been with us for years, and in view of the fact that selected materials only are used, we can say, without hesitation, that our apparatus is absolutely unequaled for workmanship, durability, accuracy and excellence of finish.

Nevertheless, we are progressive and endeavor to make improvements when found practicable. If such changes cause a departure from the printed description, it will be for the better, and although adding to the cost of production, we voluntarily assume this for the benefit of our customers.

In addition to regular Tripod Cameras, we manufacture a complete line of Hand Cameras, and accessories. A full description will be found in our PREMO Catalogue, copy of which will be mailed upon request.

ROCHESTER OPTICAL CO.,

Rochester, N. Y.



## TERMS.

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Prices given are net, no charge for boxing or cartage.

We prefer that remittances be made by draft on New York, Post Office or Express Order, or Registered Letter. Bank Checks, when from parties unknown to us, *unless certified* by the bank on which they are drawn, will delay shipment of goods, until the check can be collected through our bank. Fifteen cents must be added for cost of exchange.

Persons unknown to us, desiring goods sent C. O. D., must remit one-quarter the cost with the order. The goods will then be sent C. O. D. for the balance. If not found satisfactory after 10 days' trial, they may be returned, and we will refund the money, less express charges.

Orders for shipment by freight must be accompanied by full amount of invoice.

We pack all goods with the utmost care, and will guarantee their safe arrival when sent by freight or express.

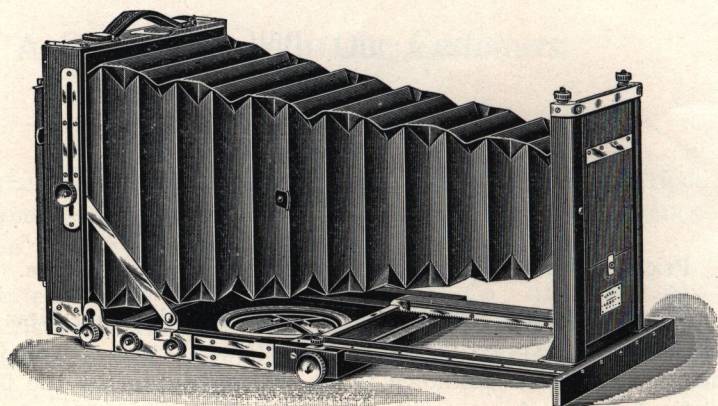
Small parcels, which do not contain glass, can be sent by mail, if desired, but, *must be sent at risk of purchaser*. In ordering goods sent by mail, postage *must be enclosed*; otherwise they will be sent by express.

In ordering please state how to ship. Should this be omitted, we will use our own discretion.



# The Carlton Camera.

REVERSIBLE BACK.



THE CARLTON CAMERA, is, without question one of the finest Cameras yet placed on the American market.

The great popularity achieved by the Universal Camera throughout the United States and Canada, led us to believe that the Carlton, with its additional features, would meet with a reception even more cordial than that given the universal, and we have not misjudged the result.

When the Universal Camera was introduced, improvements seemed almost impossible. We are progressive, however. Experience suggests new ideas and methods, and we believe in embodying them in our apparatus.

For the enthusiastic amateur and professional photographer who believes in having the very best of everything, the Carlton, with its manifold features, adapting it to an almost infinite variety of work, will be found to fully meet their views as the Camera *par excellence*.

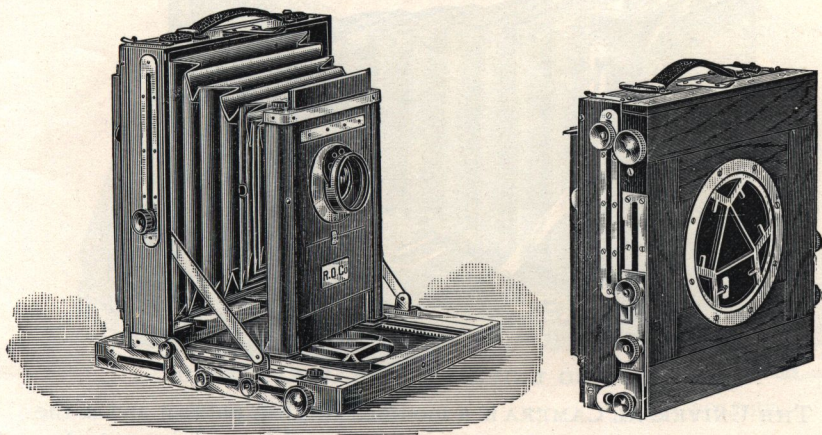
*Forward Movement of Camera-Back*—When lenses of extreme width of angle are employed on the compact form of camera, it sometimes happens that a portion of the bed is included in the picture. To prevent this, the back of the Carlton can be moved forward, thus allowing the focus to be obtained with the lens entirely out of range of the bed. This movement is quickly made by the use of two milled heads, which, when loosened, permit the back to be placed above the bed, in which position it can be moved forward.

Of course this improvement is only required with lenses of shortest focus, or "extreme angle," as the ordinary wide angle lens can be used without it.



# The Carlton Camera.

REVERSIBLE BACK.



*No Loose Top for Tripod.*—The bed of the Carlton carries its own Tripod top, adapted to the Rochester Optical Co.'s Combination Tripod. The top, made of metal, is neatly fitted in the bed and revolves easily and with great smoothness, permitting the operator to adjust the Camera in any direction. A small milled head secures it firmly in position.

All Carlton Cameras have double swing back. The dimensions are the same as given for the Universal.

The Price includes one Mahogany Perfection Holder, with rubber sides; Mahogany Combination Tripod and Canvas Case, but no lens.

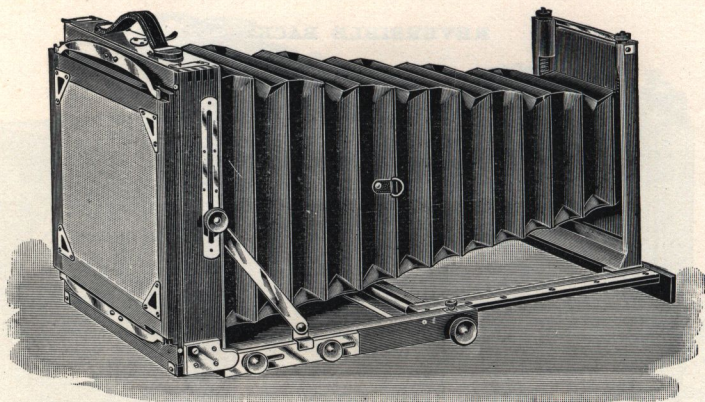
The Carlton Cameras, in sizes to 8 x 10 inclusive, are furnished with either a short or long canvas case. The former carries the camera and three holders only; the latter will hold the camera, six holders, Combination Tripod, and in sizes to 6½ x 8½ inclusive, there is a compartment for lenses. In ordering, specify style of case desired.

Size of View.	Focal Capacity.	Weight of Camera.	Double Swing.
4 x 5	13 in.	2⅞ lbs.	\$35 00
5 x 7	17 "	4⅞ "	40 00
5 x 8	19 "	5¾ "	42 00
6½ x 8½	20½ "	7 "	45 00
8 x 10	24 "	9¼ "	50 00
10 x 12	26¾ "	12¾ "	55 00
11 x 14	30¾ "	15¼ "	62 00



# The Universal Camera.

REVERSIBLE BACK.



DOUBLE SWING UNIVERSAL, FULLY EXTENDED.

THE UNIVERSAL CAMERA is a modified English pattern and is the most compact camera in the market, the  $6\frac{1}{2} \times 8\frac{1}{2}$  being but  $2\frac{7}{8}$  inches thick when folded and weighs but  $5\frac{1}{4}$  pounds.

It has an extra long leather bellows, the  $6\frac{1}{2} \times 8\frac{1}{2}$  having a focal capacity of  $20\frac{1}{4}$  inches, and other sizes in proportion; this allows the use of lenses of extreme length of focus, while wide angle lenses can also be used. Owing to the extra length of bellows the camera can be used for copying and enlarging, if desired, and in fact is as near a *Universal* camera as can well be made.

The Universal is made from selected mahogany, finished in the best possible style, and has all the latest improvements. We have spared no pains to make every working point as near perfection as possible.

The camera-box is square, the back being reversible, so that when a view is wanted either horizontally or vertically on the plate, the change can be effected in *five-seconds* by simply reversing the back instead of the entire camera-box.

The ground glass frame is held to the camera back by two springs which allow it to recede so as to insert the holder between the ground glass and camera back.

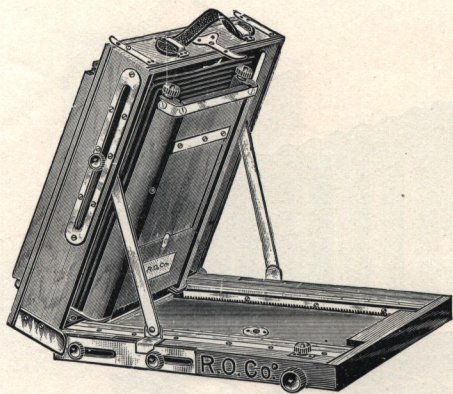
By this method the ground glass is not at all liable to breakage, besides being a most convenient method of applying the plate holder to the camera.

While very compact the Universal is simple of manipulation, there being no loose screws or parts. It is set up by tightening four milled heads and is folded again by loosening the same number.

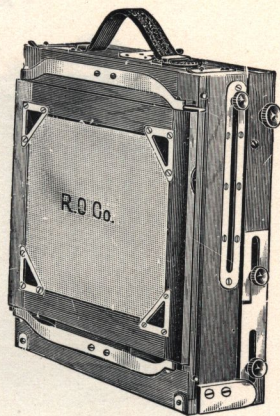


# The Universal Camera.

REVERSIBLE BACK.



PARTIALLY FOLDED.



FOLDED.

THE UNIVERSAL is made with both single and double swing, has swinging front and rising and falling front controlled by a spring acting in a ratchet, doing away with milled heads. The forward end of bellows is attached to the movable front and slides with it, thus avoiding a possibility of cutting off the rays of light.

It has fine rack and pinion, the movements being perfectly smooth. All metal work is of brass, polished and lacquered.

The Universal is provided with a leather handle, so that it may be carried without the case if desired, as one holder can be carried between the ground glass and camera back.

Price includes Canvas Carrying Case, one Perfection holder and Combination tripod, but no lens. (With sizes above 11 x 14 we send English Book Holder.)

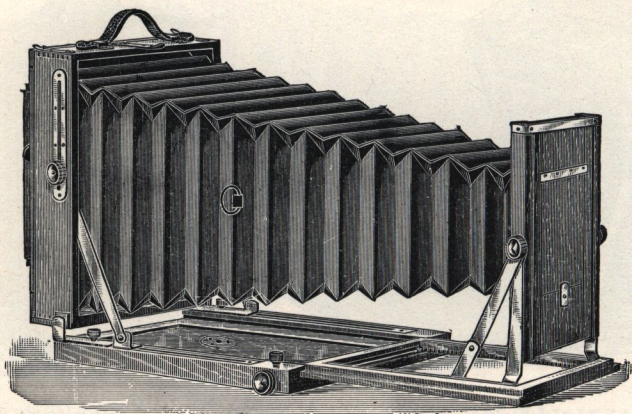
Universal Cameras, up to and including 8 x 10, are supplied with either a short or long Canvas Case. The former carries the camera and three holders. The latter holds camera, six holders and Combination Tripod, and in sizes up to 6½ x 8½ inclusive, there is a space for lenses. In ordering, specify style of case desired.

Size of View.	Focal Capacity.	Weight of Camera.	Single Swing.	Double Swing.
4 x 5	13 in	2 1/8 lbs.	\$28 00	\$30 00
5 x 7	17 "	3 3/8 "	33 00	35 00
5 x 8	19 "	4 3/4 "	35 00	37 00
6 1/2 x 8 1/2	20 1/4 "	5 1/4 "	38 00	40 00
8 x 10	24 "	7 1/2 "	40 00	43 00
10 x 12	26 1/2 "	10 3/4 "	45 00	48 00
11 x 14	30 3/4 "	13 1/4 "	50 00	55 00
14 x 17	36 "	21 1/2 "	64 00	70 00
17 x 20	43 "	34 "	75 00	85 00



# The Monitor Camera.

REVERSIBLE BACK.



THE MONITOR CAMERA is a new form of the compact style of View Camera, and is similar in general appearance to the Carlton and Universal.

The Monitor has been especially designed with a view of making a strictly high grade compact camera, possessing all the latest improvements, and yet at a lower price than the Universal.

The Monitor is made with the same care as the Carlton and Universal, and it is in every respect equally well made. It is constructed of the best mahogany, highly polished, and the brass work is polished and lacquered. The bellows is of finest leather, so that the camera presents an exceedingly handsome appearance.

It has extra long draw, thus allowing the use of lenses of extreme length of focus, while the back will slide forward by loosening two milled heads, so that extreme wide angle lenses can be used.

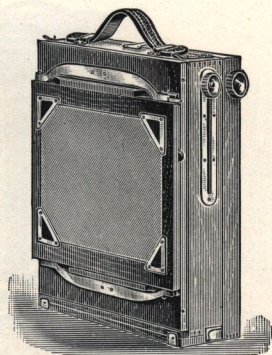
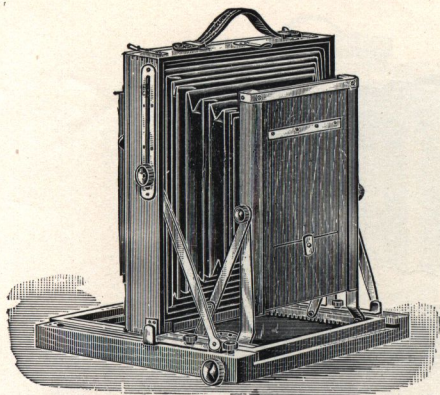
The Monitor has double swing back, rising and falling front, and is fitted with rack and pinion, the movement being perfectly smooth. The rising and falling front is controlled by a spring working in a ratchet, doing away with milled heads.

The back of the Monitor is square, and may be quickly reversed for either vertical or horizontal pictures. The ground glass is spring actuated, and recedes for the insertion of the plate holder, which slides between the ground glass frame and the back of the camera.



# The Monitor Camera.

REVERSIBLE BACK.



THE MONITOR is exceedingly compact and light in weight, yet is very simple of manipulation. But two milled heads are tightened in setting up, as the front of the camera is locked automatically in position when raised.

The Perfection Jr. Plate Holder is used with the Monitor and is a feature of the outfit. This holder is the same as fitted to the Premo Camera, and is conceded to be the best holder in the market and is the most compact.

The Monitor is provided with a leather handle, so that it may be carried without the case if desired, as one holder can be placed between the ground glass and camera back.

Price includes Canvas Carrying Case, one Perfection Jr. Holder and Combination Tripod, but no lens.

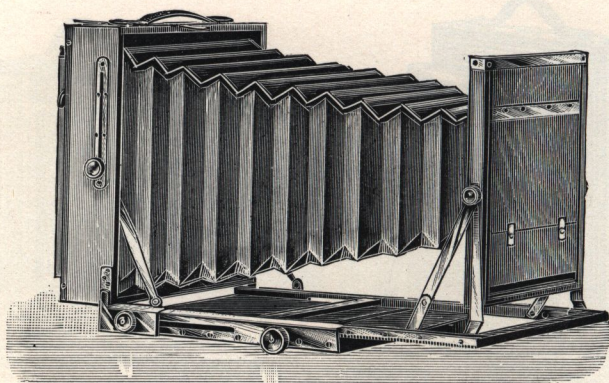
Monitor Cameras, up to and including 8 x 10, are supplied with either a short or long Canvas Case. The former carries the camera and three holders. The latter holds camera, six holders and combination Tripod, and in sizes up to 6½ x 8½ inclusive, there is a space for lenses. In ordering, specify style of case desired.

Size of View.	Focal Capacity.	Weight of Camera.	Double Swing.
4 x 5	12 in.	2 lbs.	\$24 00
5 x 7	15½ "	3½ "	27 00
5 x 8	17¼ "	4¼ "	30 00
6½ x 8½	18¾ "	4⅝ "	33 00
8 x 10	21⅞ "	6¾ "	36 00
10 x 12	26 "	9½ "	40 00
11 x 14	29¼ "	12 "	45 00



# The Kenwood Camera.

REVERSIBLE BACK.



THE KENWOOD CAMERA is another new form of the compact camera, its especial feature being the wide front for stereoscopic work. It is the only camera in the market of the compact pattern with which Stereo Lenses can be used.

The Kenwood is very compact, the  $6\frac{1}{2} \times 8\frac{1}{2}$  measuring but  $3\frac{1}{4}$  inches thick, when closed, and weighs only 6 pounds. It has extra length of draw, same as the Universal and Monitor, for very long focus lenses, and can be closed for work with extremely short focus lenses, as the back will slide forward on the bed, same as the Monitor, by loosening one milled head on either side of the bed.

The Kenwood is made from selected mahogany, highly polished. The metal work is of brass, polished and lacquered. The bellows is made of dark red leather of finest quality, presenting an exceedingly handsome appearance.

The back of the Kenwood is square and may be quickly reversed for upright or horizontal pictures. The ground glass screen is spring actuated, and recedes for the insertion of the plate holder.

The Kenwood has double swing, rising and falling front, and fine rack and pinion, the movement being perfectly smooth.

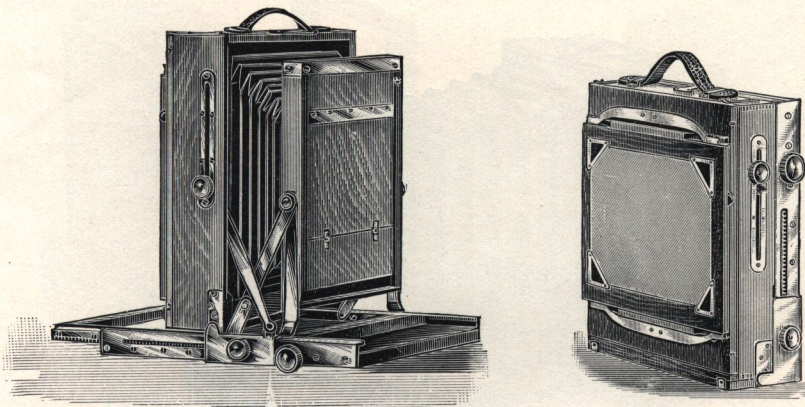
The rising and falling front is held by a spring, working in a ratchet, avoiding the necessity of milled heads.

The Kenwood is easily manipulated, as it requires the adjustment of only two milled heads, when setting up. The front locks automatically in position, the same as the Monitor.



# The Kenwood Camera.

REVERSIBLE BACK.



We have spared no pains or expense to make this camera a perfect instrument for all around work and we feel confident that the result will be fully appreciated by our friends, who desire to make the beautiful stereo views.

The Kenwood Camera is furnished with Perfection Jr. plate holder fitted with rubber slides. This holder is the same as supplied with the Premo Camera, and is a feature of the outfit. The Perfection Jr. is conceded to be the simplest and best holder ever made.

A leather handle is provided for lifting the camera from the case, or it may be carried without the case with one holder in position between the ground glass and camera back.

Kenwood Cameras are supplied with either a short or long canvas case. The former holds the camera and three plate holders. The latter holds the camera with six plate holders and Combination Tripod, and in sizes up to  $6\frac{1}{2} \times 8\frac{1}{2}$  inclusive, there is a pocket at the end for lenses. In ordering, specify which style of case is desired.

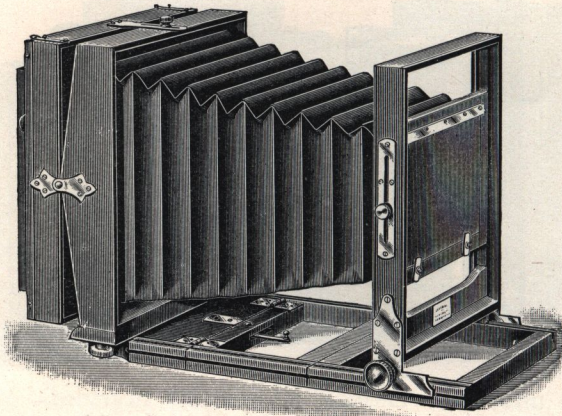
Price includes Canvas Carrying Case, one Perfection Jr. plate holder and Combination Tripod, but no lens.

Size of View.	Focal Capacity.	Weight of Camera	Double Swing.
5 x 7	15½ in.	4½ lbs.	\$30 00
5 x 8	17¼ "	5¼ "	33 00
6½ x 8½	17¾ "	6 "	36 00
8 x 10	22 "	8¼ "	40 00



# The Empire State Camera.

REVERSIBLE BACK.



To meet a constantly growing demand, especially among our professional friends, for a well made and thoroughly serviceable camera, possessing all the adjustments requisite for general work, and yet at a moderate price, we have introduced the "EMPIRE STATE."

This camera is constructed, not so much with the idea of beauty and fine finish in mind, but rather to combine in a complete and practical manner, all the movements necessary in a camera for both in-door and out-door photography.

The Empire State is made of selected mahogany, and its trimmings are of polished brass. It has forward focus with fine rack and pinion adjustment, the front being held perfectly rigid by turning a milled head placed inside of the one turning the pinion.

The bed is made to hinge, and folds completely under the camera, thus allowing lenses of extremely short focus to be used. Ample rise and fall is given to the front, a desirable feature for work in confined situations. The front board is made wide enough for stereo lenses.

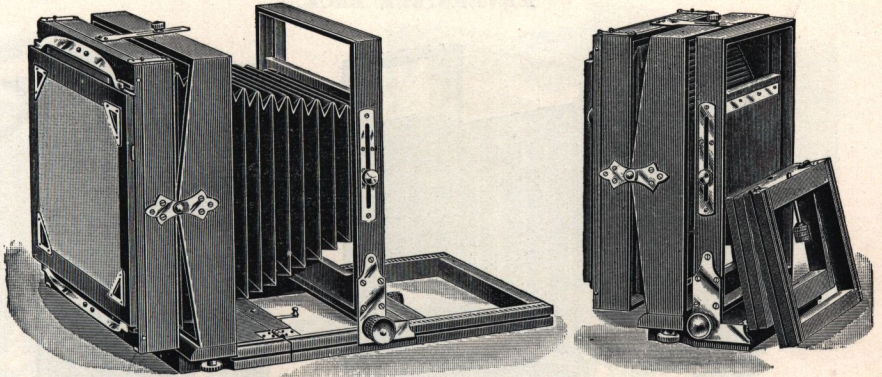
The Empire State is made both single and double swing. Unlike most of the moderate priced cameras, both swings are from the center, a feature that every professional will quickly recognize and appreciate.

The horizontal swing is attached in a very simple manner, occupying no additional room, hence the double swing is no less compact than the single swing camera.



# The Empire State Camera.

REVERSIBLE BACK.



The back is reversible, and has our spring actuated ground glass frame. The holder is inserted between the ground glass and camera back. When in position, the slide may be drawn from the top, bottom, or either side as desired.

In recommending the EMPIRE STATE as a thoroughly practical camera in every particular, we feel that our claims will be even more than justified by an examination of the instrument itself, the price in no way conveying an idea of its merits.

We make 14 x 17, and larger, with back focus and with focusing handle, instead of rack and pinion.

Price includes Canvas Carrying Case and one Perfection Holder, but no lens or tripod.

With sizes above 11 x 14 we send English Book Holder.

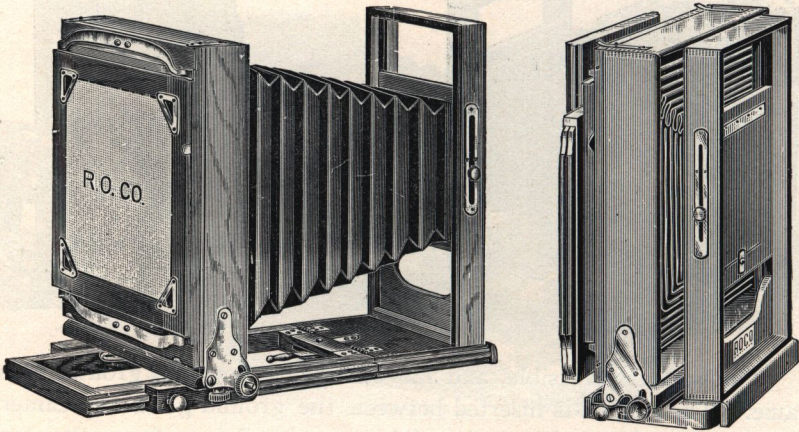
The Carrying Case will contain two extra plate holders.

Size of View.	Focal Capacity.	Weight of Camera.	Single Swing.	Double Swing.
5 x 7	15¼ in.	5 lbs.	\$17 00	\$19 00
5 x 8	16 "	5½ "	18 00	20 00
6½ x 8½	16¼ "	5¾ "	20 00	22 00
8 x 10	19 "	7¾ "	22 00	24 00
10 x 12	21 "	8¾ "	28 00	30 00
11 x 14	23½ "	11½ "	30 00	33 00
14 x 17	29 "	23¾ "	40 00	45 00
17 x 20	37 "	30 "	48 00	54 00
18 x 22	39 "	38 "	60 00	68 00
20 x 24	41 "	46 "	78 00	87 00



# The Standard Camera.

REVERSIBLE BACK.



THE STANDARD CAMERA is made on the same general style as the Empire State, though with back focus and without rack and pinion.

Though low in price the Standard is thoroughly well made of seasoned mahogany, finely finished in shellac; the metal work is of polished and lacquered brass, and as much pains are taken with the working parts as with the higher priced cameras.

The Standard has reversible back fitted with our spring-acting ground glass frame, same as the Empire State. It is furnished with the Perfection Plate Holder, and the slide may be drawn from the top or either side,—a great convenience when working in confined situations.

The horizontal swing is attached in a manner similar to the Empire State and occupies no additional room.

For those desiring a thoroughly serviceable camera with all the important adjustments, yet at a moderate outlay, we recommend the Standard.

The price includes Canvas Carrying Case and one Perfection Holder, but no lens or tripod.

The Carrying Case will hold two extra plate holders.

Size of View.	Focal Capacity.	Weight of Camera.	Single Swing.	Double Swing
3¼ x 4¼	9½ in	1⅝ lbs.	\$10 00	\$12 00
4 x 5	10½ "	2 "	10 00	12 00
5 x 7	13 "	3¼ "	12 00	14 00
5 x 8	13½ "	3⅞ "	14 00	16 00
6½ x 8½	14½ "	4⅞ "	16 00	18 00
8 x 10	16½ "	5¼ "	18 00	20 00



# New Model Improved Camera.

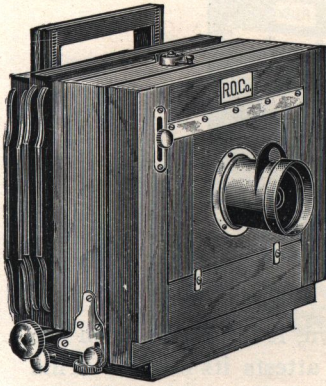


FIG. 1.

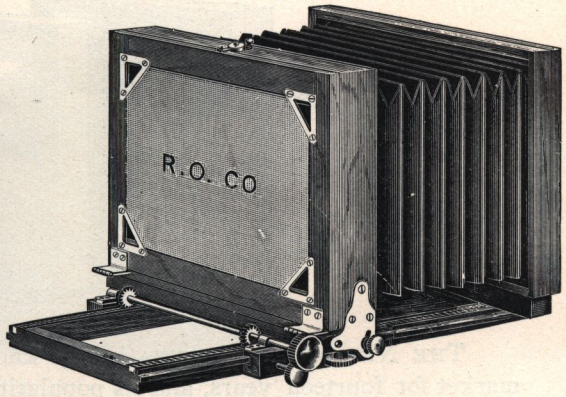


FIG. 2.

THE NEW MODEL IMPROVED is made after the general style of the New Model. It has enjoyed the reputation for the past twelve years of being the most popular camera in the market, and deservedly so, it being the only strictly first-class camera made at a price within the reach of the ordinary amateur.

It is very light and compact, which, together with its handsome appearance, makes it a desirable instrument for those who want a good camera, but do not care to invest in a high-priced outfit.

The New Model Improved is made of the best Honduras mahogany, highly polished, with brass trimmings; it has sliding front, folding bed, and is reversible by means of our new adjustable reversing clamp.

It has rack and pinion focusing movement; the folding part of bed is held rigid by our new clamp-hook, the quickest, easiest and best device yet used for the purpose.

Price includes R. O. Co.'s Single Achromatic Lens, Carlton Sliding Tripod, Carrying Case and one Perfection Plate Holder (except 8 x 10, where neither lens nor tripod are included).

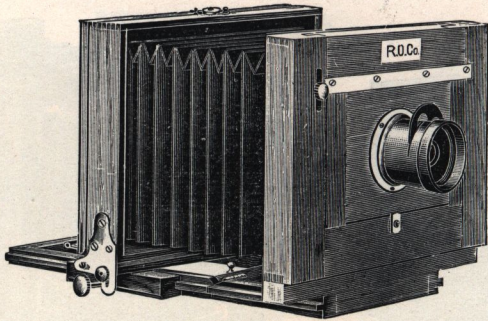
The Carrying Case will hold two extra plate holders.

Size of View.	Focal Capacity.	Weight of Camera.	Single Swing.	Double Swing.
3¼ x 4¼	8½ in.	1 5⁄8 lbs.	\$13 00	\$15 00
4 x 5	9 "	1¾ "	14 00	16 00
5 x 7	11¾ "	2 2⁄3 "	18 00	20 00
5 x 8	12½ "	2¾ "	18 00	20 00
6½ x 8½	14 "	3¼ "	22 00	24 00
8 x 10	16 "	5½ "	*15 00	*17 00

\*Not including Lens or Tripod.



# New Model Camera.



THE NEW MODEL CAMERA is well known, it having been on the market for fourteen years, and its popularity attests its merits. This camera shares with the New Model Improved the reputation of being the most popular tripod camera for amateurs' use.

It is very light and compact, making a desirable instrument for the amateur who desires a good but cheap outfit.

The New Model is made of selected cherry, well finished, and with brass trimmings. It is provided with sliding front, folding bed, and is easily reversed for upright pictures with our new adjustable reversing clamp, by means of which the strain is entirely on the bed where it belongs.

The folding part of the bed is held rigid by our new clamp-hook, the quickest, easiest, and most effective device yet used for the purpose.

Price includes R. O. Co.'s Single Achromatic Lens, Standard Folding Tripod, Carrying Case and one Perfection Plate Holder (except 8 x 10, where neither lens nor tripod are included).

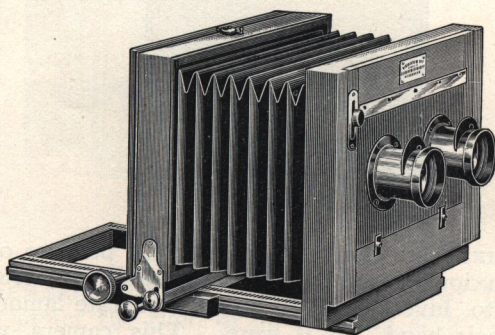
The Carrying Case will hold two extra plate holders.

Size of View.	Focal Capacity.	Weight of Camera.	Single Swing.
3¼ x 4¼	8½ in.	1 ⅜ lbs.	\$10 00
4 x 5	9 "	1 ⅝ "	10 00
5 x 7	11 ¾ "	2 ¼ "	12 00
5 x 8	12 ½ "	2 ½ "	12 00
6½ x 8½	14 "	2 ¾ "	15 00
8 x 10	16 "	5 "	*14 00

\*Not including Lens or Tripod.



# New Model Stereoscopic Camera.



The revival of the stereoscope necessarily creates a demand for a first-class Stereoscopic Camera. To meet this demand, we have devised the NEW MODEL STEREOSCOPIC CAMERA, believing it will find favor with all who are interested in this most fascinating branch of photography.

This camera is the lightest, most compact and simplest instrument yet placed on the market, combining the many desirable features needed in a Stereo Camera. It is made from the best Honduras mahogany, highly polished, with brass trimmings.

The New Model Stereoscopic Camera is patterned closely after the New Model Improved, having rack and pinion for focusing, sliding front, folding bed, and is reversible by means of our new adjustable reversing clamp. The folding bed is held rigid by a clamp-hook, which is the quickest, easiest and best device yet produced for the purpose.

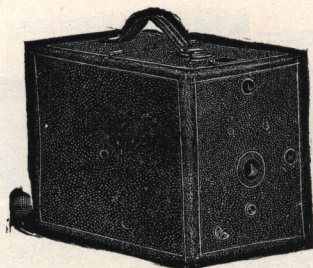
The partition and front board are removable so that the camera may be used, if desired, for other than stereoscopic pictures, by the addition of a lens of sufficient focus to cover the full plate.

Each camera is enclosed in a neat canvas case, with room for two extra Perfection Holders.

Price for 5 x 7 or 5 x 8, with matched pair of No. 1 Single	
Achromatic Lenses, Carlton Sliding Tripod and one Perfection	
Holder, - - - - -	\$22 00
Complete, without Lenses, - - - - -	16 00
Complete, without Lenses or Tripod, - - - - -	14 00



## The Vee Camera.



The VEE CAMERA has been designed for the purpose of enabling those who are anxious to enjoy the pleasures of Amateur Photography—but wish to invest at first but a moderate amount in an outfit—“to try their hand” as it were. This camera will appeal very strongly to the novice in photography. So simple is the manipulation that anyone can readily operate it.

The Vee is a thoroughly practical Camera—not a toy. It possesses many advantageous features entirely its own, and is, without question the best instrument yet offered at so low a price.

It may be used to advantage for portraits, groups, marine and landscape views, in fact is adapted for the general work of amateur photographers.

The Lens furnished is a Single Achromatic, fitted with adjustable diaphragms. It gives sharp definition, has a flat field, and is conceded to be the best of moderate priced Lenses. It has a universal focus, no adjustment being necessary.

The Vee is fitted with a new Safety Shutter adapted for both Time and Instantaneous Exposures. The speed can be governed by a small lever at the front.

The Camera may be used on a tripod when desired. Two screw plates are fitted for both upright and horizontal pictures. Two view finders are also attached.

The Plate Holder is the Perfection Jr., recognized as the easiest holder to load and unload in the market.

Though moderate in price, the Vee is carefully made and free from all complicated parts. It is finished in black leather and has a neat leather handle for carrying. Instruction manual accompanies each camera.

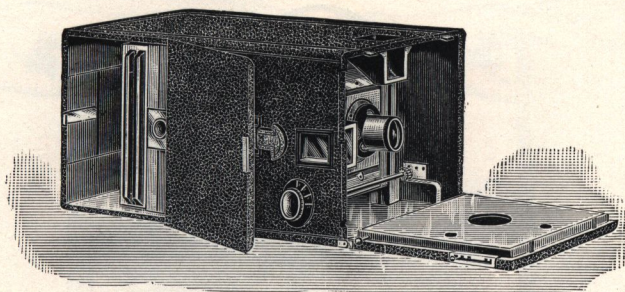
Price includes Camera complete with one Double Plate Holder.

### PRICES:

VEE Camera, $3\frac{1}{4} \times 4\frac{1}{4}$ , or $4 \times 5$ ,	- - - - -	\$5 00
Extra Plate Holders, each,	- - - - -	1 00
Standard Tripod,	- - - - -	1 50
Developing and Printing Outfit, $3\frac{1}{4} \times 4\frac{1}{4}$ ,	- - - - -	1 50
Developing and Printing Outfit, $4 \times 5$ ,	- - - - -	2 00



# The Premaret Camera.



The PREMARET Camera will be appreciated by those of our friends who prefer the rigid or non-folding style of Hand Camera. It is made throughout of mahogany, and in the same careful manner that has gained for our product a national reputation.

The Premaret is fitted with our new silent Shutter, the speed of which may be regulated, at the will of the operator, from a slow instantaneous movement to one of great rapidity, depending upon the tension exerted on the spring lever at the right.

Time exposures are made by simply extending the time stop, located above the spring lever. Either our well known Single Achromatic or the Victor Rectilinear Lens may be attached as preferred. The former is without question the best of its class, but does not of course cover quite so wide a range of work as a Rapid Rectilinear, the latter being better suited for portraits, groups and architectural subjects. Other Lenses of equal focus from  $5\frac{1}{2}$  to 6 in. may be attached, at an additional cost for fitting.

Although intended primarily for hand work, the Premaret may be placed on a tripod, being provided with two plates for this purpose. Two finders are also attached for upright and horizontal pictures. The focusing scale is at the side, and accurately marked with white figures on a black dial. Glass plates, cut and roll film may all be used in the Premaret.

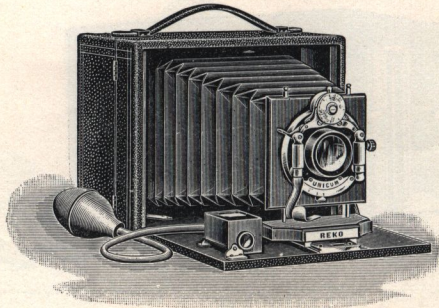
The outside dimensions of the Camera are  $5\frac{5}{8} \times 7 \times 11\frac{1}{2}$  in. including space for three double plate holders or a Roll Holder. The price includes Camera, Lens, Shutter and one Holder. Made only in  $4 \times 5$  size.

## PRICES.

	4 x 5.
PREMARET Camera with Achromatic Lens, - - - -	\$18 00
With Victor Rapid Rectilinear Lens, - - - -	23 00
Extra Plate Holders (Premo), each, - - - -	1 00
Facile Cut Film Holder, - - - -	1 35
Cartridge Roll Holder, empty, - - - -	5 00
Light Proof Roll of Film, <sup>12</sup> Exposures, - - - -	90
Leather Covered Case with Shoulder Strap, - - - -	2 50



# The Reko Camera.



To meet a large and growing demand for a thoroughly practical 4 x 5 Camera with Rapid Rectilinear Lens and pneumatic release shutter at moderate cost, we present the REKO.

Although sold at an exceptionally low price, the Reko is constructed in a first class manner throughout, being made of mahogany, with metal work of lacquered brass. The bellows is of the best red leather, and the Camera when open presents a handsome appearance.

The Lens is our new Special Reko Rectilinear. It possesses the requisite speed essential for hand Camera work, has good covering power, a flat field, great depth, and is therefore available for general use. The Unicum Shutter is so well known that a detailed description is unnecessary. It may be operated for time, instantaneous or bulb exposures, and the speed can be changed at will.

The Reko Camera is fitted with a sliding front for varying the amount of sky and foreground, also our new Central Swing Back.

Both plates and film may be used, the Reko being adapted for a Cartridge Roll Holder.

The Finder is located in a convenient position on the bed, and may be reversed for upright pictures.

The outside dimensions of the 4 x 5 Reko when closed are  $4\frac{5}{8} \times 5\frac{5}{8} \times 6\frac{3}{4}$  in., including space for three double plate holders.

This Camera must be seen to be fully appreciated, and we feel warranted in saying no instrument yet placed on the market at anywhere near the price approaches it in completeness of detail and thorough workmanship.

The price includes Camera, Rapid Rectilinear Lens, Unicum Shutter, and one Perfection Jr. Plate Holder with hard rubber slides.

## PRICES:

	4 x 5.
REKO Camera, - - - - -	\$15 00
Extra Plate Holders, each, - - - - -	1 00
Cut Film Holders, each, - - - - -	1 35
Cartridge Roll Holder, empty, - - - - -	5 00
Light Proof Roll of Film, <sup>12</sup> Exposures, - - - - -	90
Leather Covered Case, - - - - -	2 50



# The Perfection Holder.

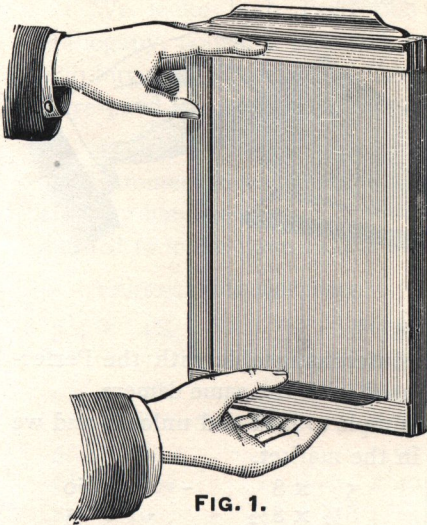


FIG. 1.

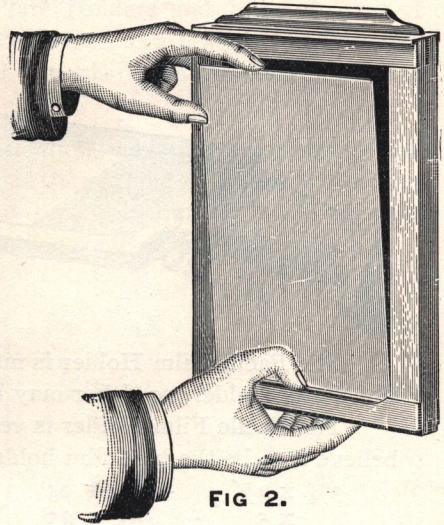


FIG. 2.

THE PERFECTION DOUBLE PLATE HOLDER is the simplest and best plate holder ever placed on the market ; it is simply *perfection*.

To load the Perfection Holder, rest the end of plate against the spring-bar at the end ; then by simply pressing bar with the thumb the plate falls into place.

To unload the Perfection Holder, hold it as illustrated in Figure 1, and by pressing on the spring-bar the plate will fall forward, the edge resting against the fingers, as illustrated in Figure 2.

As the plate is held in place by the ends only, the *full width* is exposed and but 1-16 inch is cut off from either end.

*In ordering Holders, always give name of camera they are to fit.*

$3\frac{1}{4} \times 4\frac{1}{4}$	-	\$1 00	$5 \times 7$	-	\$1 25	$8 \times 10$	-	\$1 85
$4 \times 5$	-	1 00	$5 \times 8$	-	1 35	$10 \times 12$	-	3 00
$4\frac{1}{4} \times 6\frac{1}{2}$	-	1 25	$6\frac{1}{2} \times 8\frac{1}{2}$	-	1 60	$11 \times 14$	-	5 00

The 11 x 14 Perfection Holders have rubber slides.

## The Perfection Jr. Holder.

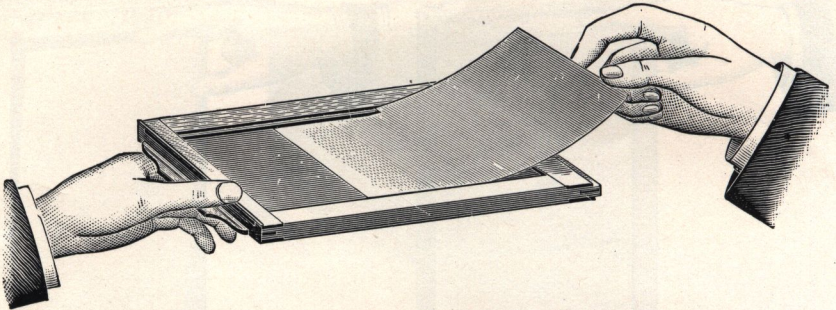
This Holder is made on the same principle as the Perfection, but is more compact and has rubber slides. It is *not* interchangeable with the regular style.

$3\frac{1}{4} \times 4\frac{1}{4}$	-	\$1 00	$5 \times 8$	-	\$1 50	$10 \times 12$	-	\$4 25
$4 \times 5$	-	1 00	$6\frac{1}{2} \times 8\frac{1}{2}$	-	1 60	$11 \times 14$	-	4 75
$5 \times 7$	-	1 25	$8 \times 10$	-	2 00			



# The Facile Film Holder.

FOR CUT FILMS.

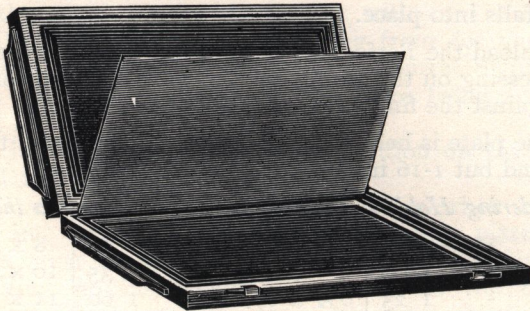


The Facile Film Holder is made interchangeable with the Perfection Plate Holder, so either may be used with the same camera.

The Facile Film Holder is very simple to load and unload, and we believe it to be the best film holder in the market.

3¼ x 4¼	-	-	\$1 25	5 x 8	-	-	\$1 60
4 x 5	-	-	1 25	6½ x 8½	-	-	1 85
4¼ x 6½	-	-	1 40	8 x 10	-	-	2 20
5 x 7	-	-	1 50				

# English Book Holder.



EXTRA THIN.

This is the regular English form of holder, and it has many advantages; the two sides are hinged, and open like a book when placing or displacing the plates; the septum, for division between the two sides of holder, is also hinged, and no trouble to put in place in the dark room. Fitted with Hard Rubber Slides.

11 x 14	-	-	\$6 00	18 x 22	-	-	\$12 00
14 x 17	-	-	7 50	20 x 24	-	-	15 00
17 x 20	-	-	9 00				



## Mahogany Holders.

We make both Perfection Plate Holders and Film Holders of Mahogany, polished, and with rubber slides, as a few of our customers who buy the Universal and Carlton cameras desire the plate holders to correspond in appearance.

As it is purely a matter of satisfaction, we cannot consistently ask our customers to buy these instead of the regular style, for while they are very handsome, they are not any better in quality. We were requested to make them in this manner by some of our customers.

PERFECTION HOLDERS.				FILM HOLDERS.			
3¼ x 4¼	-	-	\$1 50	3¼ x 4¼	-	-	\$1 75
4 x 5	-	-	1 50	4 x 5	-	-	1 75
4¼ x 6½	-	-	1 90	4¼ x 6½	-	-	2 00
5 x 7	-	-	2 00	5 x 7	-	-	2 15
5 x 8	-	-	2 00	5 x 8	-	-	2 25
6½ x 8½	-	-	2 40	6½ x 8½	-	-	2 75
8 x 10	-	-	2 85	8 x 10	-	-	3 25
10 x 12	-	-	4 50				

## Inside Kits.



Kits consist of thin wooden frames, made to fit in the Dry Plate Holder, and with rabbets for holding smaller plates.

Our Kits have buttons at each end of aperture for holding the plate in place.

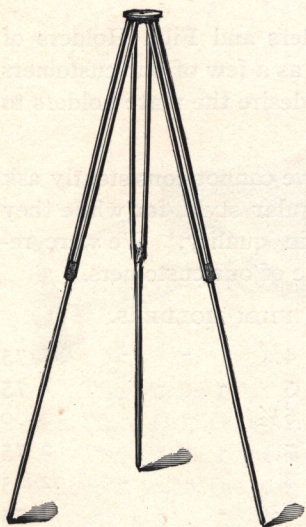
4 x 5	to hold	3¼ x 4¼ plates, each,	-	-	-	\$0 20
4¼ x 6½	"	3¼ x 4¼ plates, each,	-	-	-	20
5 x 7	"	3¼ x 4¼ or 4 x 5 plates, each,	-	-	-	25
5 x 8	"	3¼ x 4¼, 4 x 5, or 4¼ x 6½ plates, each,	-	-	-	25
6½ x 8½	"	4 x 5, 4¼ x 6½, 5 x 7, or 5 x 8 plates, each,	-	-	-	30
8 x 10	"	4¼ x 6½, 5x7, 5x8, or 6½x8½ plates, each,	-	-	-	35
10 x 12	"	5 x 7, 5 x 8, 6½ x 8½, or 8 x 10 plates, each,	-	-	-	40
11 x 14	"	8 x 10, or 10 x 12 plates, each,	-	-	-	50
14 x 17	"	8 x 10, 10 x 12, or 11 x 14 plates,	-	-	-	65
17 x 20	"	11 x 14, or 14 x 17 plates, each,	-	-	-	85
18 x 22	"	14 x 17, or 17 x 20 plates, each,	-	-	-	1 25



# Tripods.

## Standard Folding Tripod.

This is our original style of Tripod, and is so well known that an extended description is hardly necessary.



It is thoroughly well made of seasoned spruce, and is light, strong, rigid and perfectly durable in all its parts. The top is wood, covered with cloth; the screw remains attached, ready for use, and is not liable to loss. Length extended, 56 inches; length folded, 32 inches; weight, 1½ lbs.

Price for cameras from 4 x 5 to  
6½ x 8½ - - - - \$1 50

## Model Sliding Tripod.

The Model is an exceedingly neat and convenient style of tripod, intended for use with any camera up to and including 5 x 7 size.



It is thoroughly well made of seasoned spruce, finished with brass trimmings. The top is cloth covered, and contains a screw for attaching the camera.

The lower section slides within the upper and may be clamped at any desired height by means of a milled head. When closed the length is only 29½ inches. Extended for use it measures 55½ inches. Weight, 1 lb. 2 oz.



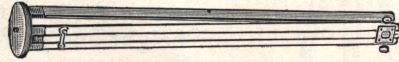
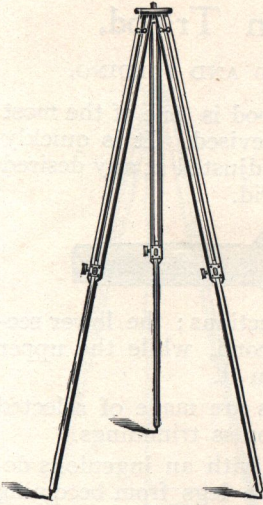
The Model will be found a very desirable tripod for use with small Hand Cameras.

Price, - - - - - \$1 50



## The Facile Sliding Tripod.

The Facile Tripod is the neatest and altogether the best moderate priced sliding tripod in the market.



The lower section of the Facile is made to slide into the upper, and by means of a milled head is held at any desired height.

A neat hook is attached to each leg, which makes it impossible for the legs to become detached from the head when tripod is in use. The head may be removed, however, if desired.

When closed the Facile measures only 30 inches long. Extended for use the length is 57 inches.

### PRICE.

No. 1—For 4 x 5 and 5 x 7 Cameras, weight 17 ounces, - \$2 00  
 No. 2—For 6½ x 8½ Cameras, weight 1 pound 9 ounces, 25

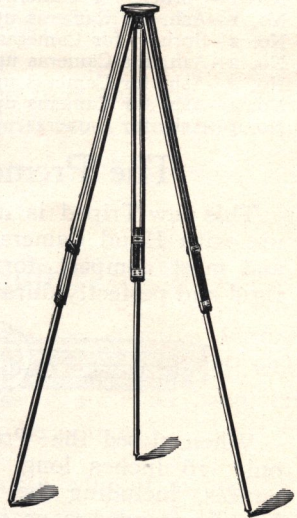
## The Carlton Sliding Tripod.

This is one of the simplest and best forms of Sliding Tripods. The legs are made in three pieces, same as the folding, which renders the tripod firmer when set up than



where made of two pieces, which is the ordinary form. The tripod top is of wood, with cloth cover.

The brass clamps each side of the leg have the ends turned toward each other, and when clamped the pressure is exerted from all sides, rendering it the most rigid tripod in the market.



### PRICE.

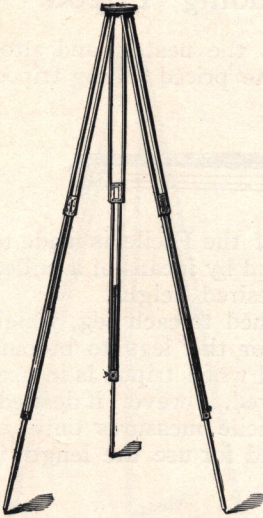
No. 1—Spruce, for Cameras up to 5 x 7, weight 1 lb. 15 oz., \$2 25  
 No. 2—Spruce, for 5 x 8 and 6½ x 8½, weight 2 lbs. 12 oz., 2 50  
 No. 3—Ash, for 8 x 10 and 10 x 12, weight 4 lbs. 15 oz., 3 00  
 No. 4—Ash, for 11 x 14 and 14 x 17, weight 7 lbs. 3 oz., 4 00  
 No. 5—Ash, for 17 x 20 to 20 x 24, weight 11 lbs., - - 5 00



## Combination Tripod.

COMBINED SLIDING AND FOLDING.

The Combination Tripod is one of the most convenient forms yet devised. It is quickly set up for use, readily adjusted at any desired height and perfectly rigid.



It is made in three sections; the lower section slides into the second, while the upper section folds back upon it.

Combination Tripods are made of selected spruce and ash, with brass trimmings.

The top is provided with an ingenious device, which prevents the legs from becoming accidentally detached when in position for use.

Extended length, 56 inches; length closed, 22 inches.

### PRICE.

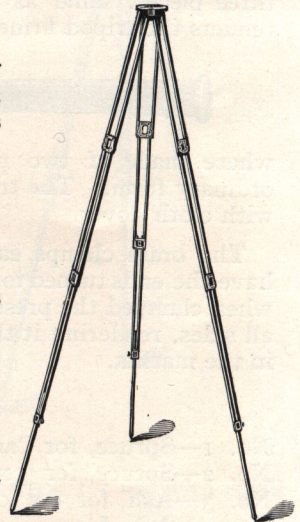
No. 0—Spruce, for Cameras up to 4 x 5, weight 1 lb.,	- - - -	\$2 75
No. 1—Spruce, for Cameras up to 5 x 7, weight 1 lb. 6 oz.	- - - -	3 00
No. 1—Ash, for Cameras up to 5 x 7, weight 2 lbs.	- - - -	3 00
No. 2—Spruce, for Cameras up to 6½ x 8½, weight 1 lb. 9 oz.	- - - -	3 25
No. 2—Ash, for Cameras up to 6½ x 8½, weight 2 lbs. 3 oz.	- - - -	3 25
No. 3—Ash, for Cameras up to 10 x 12, weight 4 lbs. 6 oz.	- - - -	3 50
No. 4—Ash, for Cameras up to 14 x 17, weight 7 lbs. 1 oz.	- - - -	4 50
No. 5—Ash, for Cameras up to 20 x 24, weight 8 lbs. 8 oz.	- - - -	6 00

## The Premo Tripod.

This new Tripod is designed especially for use with Hand Cameras. It is the lightest and most compact form ever made, yet is rigid and perfectly durable in all its parts.



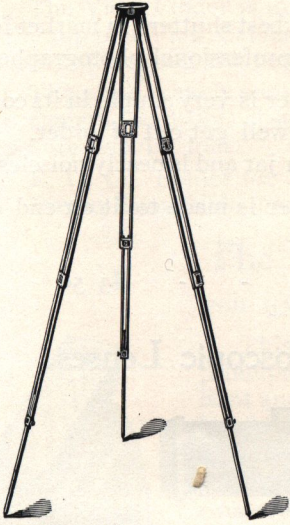
When closed the Premo Tripod measures only 16 inches long, and weighs but 15 ounces, including the Aluminum top. The length extended is 55 inches. It is quickly set up for use and readily adjusted for height by means of a milled head. The legs of the Tripod may be grasped at the top for the purpose of changing its position, without fear of separating them from the head.



No. 1—For 4 x 5 Cameras, weight 15 oz.	- - - -	\$4 50
No. 2—For 5 x 7 Cameras, weight 1 lb. 7 oz.	- - - -	5 00



## The Petite Tripod.



The Petite Tripod is another new form made expressly for Hand Camera use. Its construction is somewhat similar to the Premo, being made with three joints, but the top remains attached.

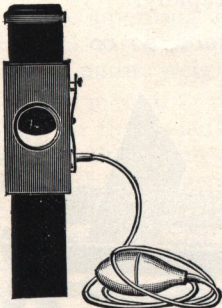


The Petite Tripod is made in four sections. For carrying, the lower section slides into the second, the second in turn into the third, and these three into the fourth. It is exceedingly compact, the length when closed being only  $16\frac{1}{4}$  inches, and it weighs but 17 ounces complete. When extended for use the length is 55 inches. The construction of the Petite Tripod renders it not only compact but rigid as well, and it is without question one of the best tripods yet introduced.

Petite Tripods are thoroughly well made from the best seasoned spruce, and handsomely finished with lacquered brass trimmings.

No. 1—For 4 x 5 and 5 x 7 Cameras, - \$5 00

## Universal Drop Shutter.



This is a very simple, yet effective form of shutter. The slide falls of its own weight when released, and by the use of a rubber band, any degree of rapidity may be obtained.

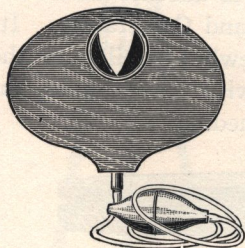
The body of the shutter being of mahogany it has a very handsome appearance. A thin strip of rubber is placed in the top of the shutter to lessen concussion caused by the falling slide. Maximum opening, 3 inches.

Price, with spring release, - - - - - \$1 00  
 With Britton's pneumatic release, bulb and tube, 1 25



## The Weller Wing Shutter.

FOR TIME AND INSTANTANEOUS WORK.



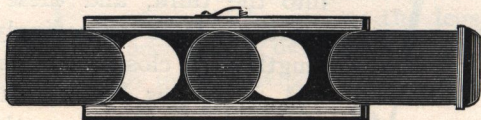
This is one of the best shutters in market for either the amateur or professional photographer.

The Weller Shutter is very simple in its construction and cannot well get out of order. It works with a minimum jar and is nearly noiseless.

The Weller Shutter is made to fit on end of lens.

Price, - - - - - \$3 50

## Universal Shutter for Stereoscopic Lenses.



This is similar to the Universal Drop Shutter, except for two Lenses. As the Slide moves horizontally, it is operated by a rubber band.

Price, - - - - - \$1 50

## Carlton's Stereoscopic Exposer.

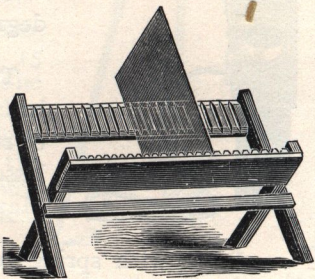


The CARLTON STEREOGRAPHIC EXPOSER is not designed for instantaneous work, but rather is a device for exposing two lenses simultaneously, though it can be done very rapidly.

Price, - - - - - \$2 00

## Folding Negative Rack.

An inexpensive and very convenient accessory for the dark room, preventing the negatives from becoming scratched while drying. Holds 24 plates.



No. 1—For plates up to  $6\frac{1}{2} \times 8\frac{1}{2}$  \$0 25  
 No. 2—For plates  $8 \times 10$  to  $14 \times 17$ , 40



## View Finders.

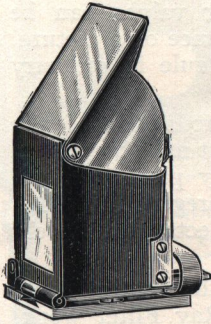
The View Finder is in reality a miniature camera, and is attached to the top of a View Camera, or on the bed of a Hand Camera, for the purpose of locating the position of the subject on the plate.

The same view is seen on the screen of the finder as is reflected in the camera, and by observing the screen the exact moment for exposure can be told.

R. O. Co. Finder for View Cameras, - - - \$ 1 25  
 Premo Reversible Finder for Hand Cameras, - - - 2 00

## The Iconoscope Finder.

FOR HAND AND VIEW CAMERAS.



This Finder is constructed on entirely new principles, by means of which an exceedingly brilliant and non-reversed image is reflected even in the brightest sunlight.

The image is, in reality, more brilliant than the actual objects appear to the eye, being formed by a concave lens which projects the picture through a solid glass prism direct to the eye. One sees with the Iconoscope all that is visible to the eye alone.

The image is as sharp and clear as that formed by a good photographic lens and is perfectly rectilinear, so that not only the objects as a whole may be clearly seen, but every detail, position or expression as well. As the image is not reversed or inverted, the objects appear in their natural position.

The adjustable hood prevents all reflections and permits the image to be viewed without shading the instrument, being held in the proper position by a spring click. The image is projected at a convenient angle so that the photographer stands in a natural position and easily glances from the image to the object without moving the head.

The mounting of the Iconoscope is extremely ingenious and being of metal throughout, forms a perfect protection for the glass part without undue weight.

The mounting proper is attached to a small metal slide by a spring hinge, so that whether the camera is used for vertical or horizontal pictures, the Iconoscope may always be in the same position. The slide works in a metal bed-plate which is attached by screws to the bed of the camera.

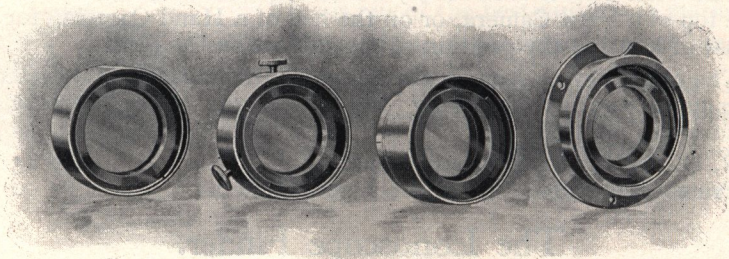
The Iconoscope may thus be instantly detached if desired, or by having several bed-plates, may be used on any number of cameras with equal facility. Made in three sizes.

### PRICE.

No. 1, Small,	- - - - -	\$5 00
No. 2, Medium,	- - - - -	5 50
No. 3, Large,	- - - - -	6 00



## Ray Filters.



By means of a Ray Filter the relative color values can be obtained, thus adding largely to the artistic appearance of a picture, and giving it an atmospheric effect, lacking as a rule in ordinary photographs.

Perhaps the most pleasing feature is the reproduction of the natural tone of the sky against which any clouds that may be present appear in relief, all the delicate detail being perfectly preserved, the intensity of the sky being such as to print with the foreground. This is possible from the fact that the foreground reflects a relatively larger per cent. of the darker rays than the sky.

Marine views are similarly well rendered. For the same reasons, snow scenes are particularly within the scope of Ray Filter work, every detail in the snow itself, as well as in the darker objects, being reproduced and of correct printing intensity.

The Ray Filter is also invaluable for copying paintings and for photographing colored interiors.

Ray Filters are made in four styles as shown in the illustration :

**Style A** has a cork-lined mounting of proper size to slip over the hood of lens. When ordering give exact diameter of hood or send a slip of paper just reaching around the hood.

**Style B** has three milled heads or binding screws, for attaching to lens hood. It can be adjusted to Lenses having hoods varying in size from those given in the table to one half inch smaller in diameter.

**Style 1 P**, is for regular Victor Lenses with Premo Cameras.

**Style F F** has a flange for cameras with Fixed Focus Lenses.

Price of Styles 1 P and F F, \$3 25.

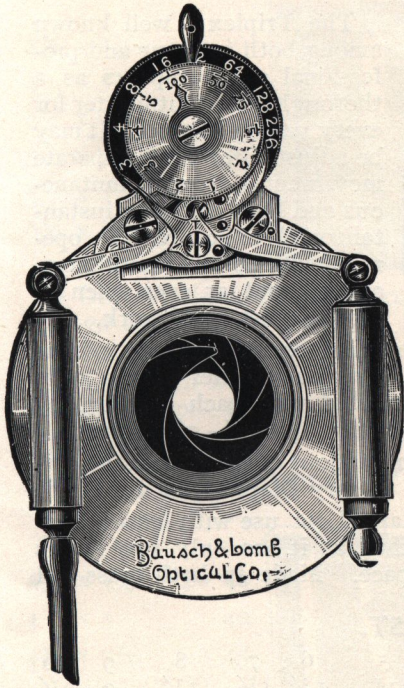
### PRICES OF STYLES A AND B:

The inside dimensions quoted are the largest diameters of hoods to which each cell can be fitted.

Number, - - -	1	2	3	4	5	6	7	8
Inside Diam. in inches, -	1 $\frac{3}{8}$	1 $\frac{3}{4}$	2 $\frac{3}{16}$	2 $\frac{9}{16}$	2 $\frac{11}{16}$	3 $\frac{3}{8}$	3 $\frac{3}{4}$	4 $\frac{1}{8}$
Price, - - - -	3.25	3.50	3.50	4.00	4.50	5.00	5.50	6.00
Morocco Cap, extra, -	.70	.70	.75	.80	.90	1.00	1.10	1.20



## The Diaphragm Shutter.



The DIAPHRAGM SHUTTER will be found to meet every requirement of the amateur or professional photographer desiring a strictly first-class shutter for in-door or out-door work.

It is constructed in the best possible manner, operates without concussion, even when set at the highest speed, and is almost noiseless in action.

It requires little argument to show that the proper place for opening and closing a shutter is in the optical axis of the lens, and in both time and instantaneous photography, it is evident that a shutter, starting its opening with a pin-hole, and gradually increasing to the size of stop for which it is set, returning in the same manner, will give the effect of a small stop, *i. e.* more

depth, flatness and equality of illumination. Comparative tests show that in practice these advantages are obtained to a marked degree.

The pointer on the small index indicates the speed. The shutter will work automatically from three seconds to fractional parts of a second, and by simply using a small lever, it may be set for time exposure of any desired duration. In the latter case a pressure on the bulb closes the shutter.

It is provided with safety device, so that in setting shutter the blades are not opened, and can therefore make no exposure.

All parts which must be manipulated are placed at the front, easy of access.

### PRICE.

Fitted for Universal, Clark or Excelsior Lenses.

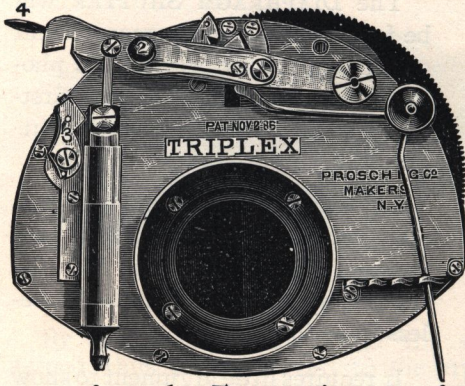
3¼ x 4¼	-	-	-	\$14 00
4 x 5	-	-	-	14 00
5 x 8	-	-	-	15 00
6½ x 8½	-	-	-	16 00
8 x 10	-	-	-	17 50

Fitted to Other Lenses, Leaving the Original Barrel Intact.

3¼ x 4¼	-	-	-	\$14 50
4 x 5	-	-	-	14 50
5 x 8	-	-	-	15 50
6½ x 8½	-	-	-	16 50
8 x 10	-	-	-	18 00



## The Prosch Triplex Shutter.



The Triplex is well known among both amateur and professional photographers as a thoroughly efficient shutter for every variety of work. It may be adjusted for three separate movements—time, instantaneous and bulb or “slow instantaneous” exposure. It operates with perfect smoothness, and without jar, even when set for the most rapid work.

An especial feature of the Triplex shutter is its wide range of speed. Four springs are furnished with each shutter, by means of which the speed may be varied from  $\frac{1}{4}$  to  $\frac{1}{100}$  of a second.

The Triplex works between the combinations of the lens, at the diaphragm, which is the correct position. Rotary Diaphragms are fitted.

This shutter is particularly well adapted for use with lenses, having the combinations placed close together, as it has only two leaves of thin steel, which require but little space. Made in both brass and aluminum.

### PRICE LIST.

No.	-	-	1	2	3	4	5	6	7	8	9	10
Aperture,	-	-	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$
Price,	-	-	\$14	\$15	\$15 50	\$16	\$16 50	\$17	\$18	\$18 50	\$19	\$20
Extra for Alumi-												
num,	-	-	\$4	\$4	\$5	\$5	\$6	\$6	\$7	\$7	\$8	

## The Prosch Athlete Shutter.

The Athlete Shutter is intended more especially for athletic, race track and general high speed work. In appearance and essential principles it is like the Triplex, but is built more strongly throughout. It has two springs, one front and one back, and is fitted with rotating diaphragm inside the shutter case, having four openings.

The Athlete attains a maximum speed of from  $\frac{1}{300}$  to  $\frac{1}{400}$  of a second, according to size. Using one spring on the front, the speed is, closely enough for all practical purposes, that of the Triplex.

Using both springs the speed is more than twice that of the Triplex Shutter. The Athlete works at the diaphragm, same as the Triplex.

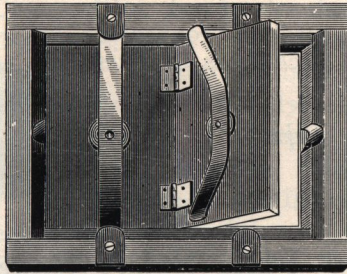
### PRICE LIST.

No.	-	-	2	3	4	5	6	7	8
Aperture,	-	-	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Price,	-	-	\$20	\$21	\$22	\$23	\$24	\$25	\$26



## R. O. Co.'s Flat Printing Frames.

3¼ x 4¼	\$0 40
4 x 5	40
4¼ x 6½	45
5 x 7	50
5 x 8	55
6½ x 8½	60



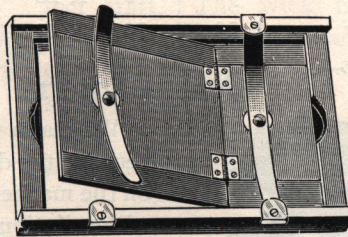
8 x 10	\$0 75
10 x 12	1 00
11 x 14	1 75
14 x 17	2 25
16 x 20	2 75
17 x 20	3 00

Our Printing Frames are constructed on an improved plan. The springs are fastened by rivets instead of screws, and have a washer placed under them to prevent wear on the wood work.

The catch buttons are set into the wood flush with the frame, so that they pile up readily.

## Favorite Printing Frames.

3¼ x 4¼	\$0 40
4 x 5	40
4¼ x 6½	45
5 x 7	50

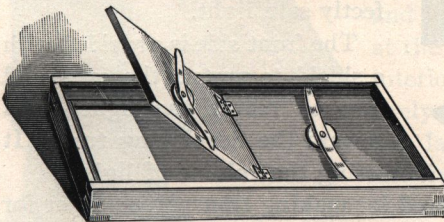


5 x 8	\$0 55
6½ x 8½	60
8 x 10	75

Having been requested to make a lighter printing frame than our regular flat frame, we comply, and place the Favorite on the market, with the full confidence that it will prove all the name implies.

While the Favorite is much lighter than the ordinary flat printing frame, it is equal in strength and durability.

## Alpha Printing Frames.



For a thoroughly well made and substantial printing frame, at moderate cost, there is nothing superior to the Alpha. It is constructed of seasoned cherry, the back being fitted with the best brass springs.

Made only in the following sizes :

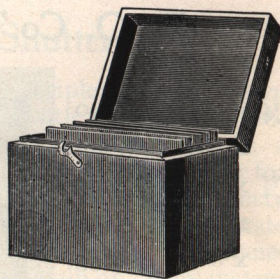
3½ x 3½	- - \$0 25	4 x 5	- - \$0 25
3¼ x 4¼	- - 0 25	5 x 7	- - 0 40



## Negative Boxes.

Made from selected whitewood, with hinged cover. Are exceedingly convenient for storing negatives. Each holds 24 plates.

3¼ x 4¼	\$0 60	5 x 8	\$ 0 70
4 x 5	60	6½ x 8½	85
4¼ x 6½	65	8 x 10	1 00
5 x 7	70	10 x 12	1 50



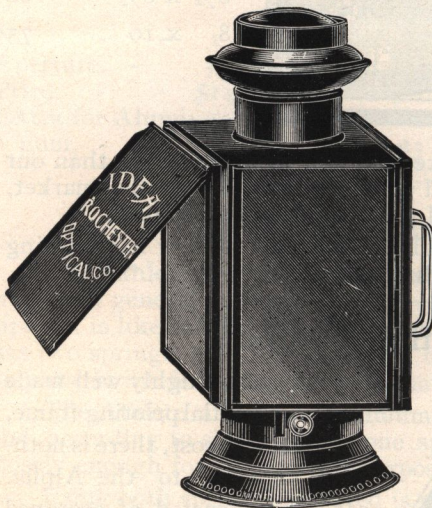
## Dry Plate Safety Boxes.

These are made similar to the Negative Box, but with all joints broken, and are lined with black velvet, preventing reflection.

They are useful in the dark room, as the box of plates may be put in the safety box, saving wrapping and unwrapping when filling the holders in a hurry. Lock and key fitted for 60 cts. extra.

3¼ x 4¼	- - - \$0 75	5 x 8	- - - \$1 00
4 x 5	- - - 75	6½ x 8½	- - - 1 20
4¼ x 6½	- - - 90	8 x 10	- - - 1 40
5 x 7	- - - 1 00	10 x 12	- - - 2 00

## The Ideal Lantern.



We claim this is the best lantern for the dark room yet placed on the market. Improved method of ventilation. A superior burner. Perfect combustion, whether wick is turned high or low. No smoke; no smell; steady light; safe light.

There are three sides for light, all of which have double glass, one sheet each Orange and Ruby, which combination makes a perfectly safe light.

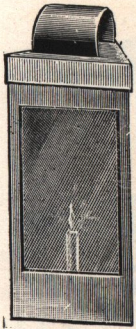
The front side is provided with a shield to protect the eyes, and also to reflect the light down toward the developing tray. It

also has a silvered reflector, thus increasing the volume of light.

If desired, one side may be used for making transparencies, or for printing with bromide paper, by using a sheet of ground glass in place of the Orange, and a tin slide or shield in place of the Ruby.

Price, - - - - - \$3 00





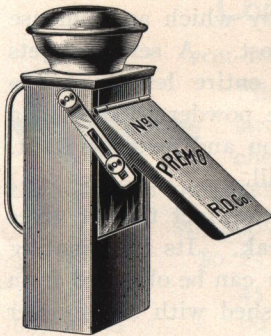
## Compact Candle Lantern.

The COMPACT CANDLE LANTERN is a new design in collapsible lamps, and is intended more especially for use when traveling. The top and bottom may both be removed and packed with the body of the lamp in a box measuring only one inch in depth.

There is no glass to break, ruby fabric being used instead. The Compact Candle Lantern will be found a useful accessory.

No. 1, Triangular, \$0 40 | No. 2, Square, \$0 65

## The Premo Lantern.

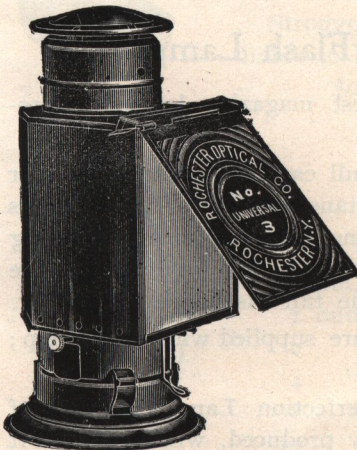


The PREMIO LANTERN, owing to its portability, is especially adapted for use when traveling. It is constructed almost wholly of brass, neatly polished, and has a hinged ventilating top, thus giving the lamp a perfect draft. The wick is controlled entirely from the outside. An adjustable shield protects the eyes from the light, and throws it at any desired angle.

The Premo Lantern will be found a desirable addition to any outfit.

Price, No. 1, - - - - - \$0 75

## The Universal Lantern.



The UNIVERSAL LANTERN is made upon an improved plan, giving an abundant draft, and complete ventilation, hence no smoke, no fume, but a steady, safe light, and *plenty of it.*

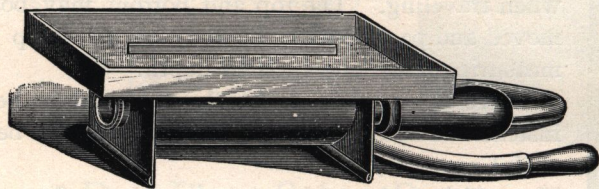
The front is fitted with both Orange and Ruby glass. The body is hinged at the back, giving easy access to the interior. The flame is regulated entirely from the outside. The back of the lamp serves as a reflector, and aids in producing a volume of light sufficient for work in any dark room. Made in three sizes.

Price, No. 1, - \$0 80 | Price, No. 2, - \$1 00  
 Price, No. 3, - - - - - \$1 50



## Hale's Magazine Flash Lamp.

PATENTED.



For certain branches of Photographic work a Flash Lamp is practically indispensable. Hale's Magazine Lamp, for Pure Magnesium, is constructed on an entirely new plan, by which an immense volume of light is produced at a minimum cost. A series of jets is arranged on an inner tube running the entire length of the magazine, and upon applying air pressure, the powder is kept in a constant "whirl," insuring perfect combustion and an even light. The duration of exposure can be varied at will.

An important feature of Hale's lamp is the fact that it gives a *solid sheet* of flame instead of a narrow streak. Its illuminating power is, therefore, necessarily far greater than can be obtained from lamps of the latter type. Each Lamp is furnished with a tin cover or lid, which also serves as an extinguisher.

Price, neatly boxed,	- - - - -	\$1 50
Pure Magnesium, fine ground, per ounce,	- - - - -	40

## Perfection Magazine Flash Lamp.

The PERFECTION is one of the best magazine lamps yet produced for the use of pure magnesium.

The magazine when loaded to its full capacity, contains powder sufficient for twenty flashes. An instantaneous flash or a continuous flame of light may be produced, the length of exposure depending upon the will of the operator. The circular wick produces a large volume of flame, entirely consuming the full discharge of powder.

A mouth-piece and rubber tubing are supplied with each lamp; a bulb may be attached if preferred.

The extreme simplicity of the Perfection Lamp, the ease of manipulation, and the excellent results produced, will commend it to all desiring a safe and thoroughly practical instrument.

Price, complete,	- - - - -	\$2 00
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## Japanned Tin Developing Trays.



4 x 5	- - -	\$0 20	6½ x 8½	- - -	\$0 30
5 x 8	- - -	25	8 x 10	- - -	40

## Vulcanized Rubber Trays.

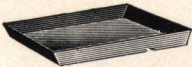


The neatest developing tray yet introduced is that made from vulcanized rubber. It has a polished surface, thus it is readily kept clean.

	SHALLOW.	DEEP.		SHALLOW.	DEEP.
4 x 5	- \$0 40	\$0 50	6½ x 8½	\$1 00	\$0 85
5 x 8	- - 70	70	8 x 10	1 50	1 15

## Compressed Fiber Trays.

FOR DEVELOPING, FIXING OR TONING.



Fiber Trays are light in weight, yet tough and strong. As they are not affected by the action of chemicals, and are easily kept clean, we recommend them for all purposes. The deep trays have a lip.

	SHALLOW.	DEEP.		SHALLOW.	DEEP.
4 x 5	- \$0 25	\$0 40	8 x 10	- \$0 85	\$0 95
5 x 8	- - 45	55	10 x 12	- - - -	1 50
6½ x 8½	- - 60	65	11 x 14	- - - -	2 25

## Agate Ware Pans.

FOR TONING PRINTS.



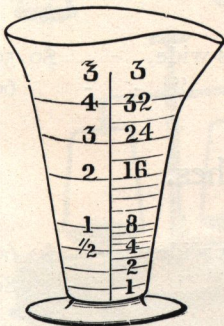
Stronger and lighter than porcelain and not liable to breakage.

7 x 9	- - - -	\$0 50	9 x 12	- - - -	\$0 90
8 x 10	- - - -	75	11 x 15	- - - -	1 10

## Graduated Glasses.

FOR MEASURING LIQUIDS.

Guaranteed Accurate.



Minim,	- - - -	\$0 25
1 ounce,	- - - -	20
2 "	- - - -	25
4 "	- - - -	30
8 "	- - - -	45
12 "	- - - -	60
16 "	- - - -	75





## Glass Funnels.

1	½ Pint,	-	-	-	\$0 12		1	Quart,	-	-	-	\$0 20
1	"	-	-	-	15		2	"	-	-	-	25

## Fluted Glass Funnel and Filter.



The FLUTED FUNNEL is the best glass funnel made, being very strong. It has glass ribs on the inside, forming passages through which the solution passes quickly while filtering.

1	½ Pint,	-	-	-	\$0 15		1	Quart,	-	-	-	\$0 30
1	"	-	-	-	20		2	"	-	-	-	45

## Absorbent Cotton.

2	oz. Parcel,	-	-	-	\$0 20		8	oz. Parcel,	-	-	-	\$0 50
4	oz. "	-	-	-	30		1	lb. "	-	-	-	75

## Developing Tong.

A very convenient article for development, avoiding the necessity of handling the plate with the fingers.



No. 1—	For Plates	3¼ x 4¼	to	6½ x 8½,	-	-	-	\$0 50
No. 2—	For Plates	5 x 7	to	8 x 10,	-	-	-	60



## Bristle Brushes.

For mounting photographs, also good for dusting out plate-holders.

1	inch wide,	-	-	-	\$0 15		2½	inches wide,	-	-	\$0 30
1½	" "	-	-	-	20		3	" "	-	-	40
2	" "	-	-	-	25						



## Siberian Brushes.

For dusting plates or holders.

1	inch wide,	-	-	-	\$0 20		2½	inches wide,	-	-	\$0 50
1½	" "	-	-	-	30		3	" "	-	-	60
2	" "	-	-	-	40						



## Camel's Hair Brushes.

Very soft, for dusting off plates.

1	inch wide,	-	-	-	\$0 25		2½	inches wide,	-	-	\$0 60
1½	" "	-	-	-	40		3	" "	-	-	80
2	" "	-	-	-	50						



## Negative Preservers.

These are envelopes made of strong manilla paper, the proper size for the negative; they are open at the end for inserting the negative, and have space cut for admitting the thumb and finger in removing it.

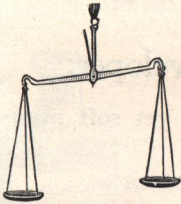
On the face are printed lines of name, number, description and remarks. They are invaluable for preserving the negative from dust, scratches, etc. Put up in packages of fifty each.

3¼ x 4¼, per package,	\$0 20	5 x 8, per package,	\$0 30
4 x 5, " "	20	6½ x 8½, " "	35
4¼ x 6½, " "	25	8 x 10, " "	45
5 x 7, " "	30	10 x 12, " "	75

## Focusing Cloths.

Gossamer Rubber,	- \$0 50	Velvet, extra large size,	\$2 50
Velvet, small,	- - 1 00		

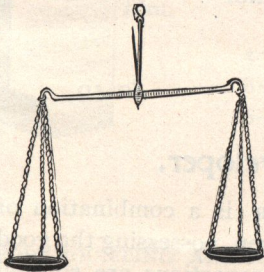
## Pocket Scales.



For weighing small quantities this scale is especially designed and well adapted to the use of the ordinary amateur. Is excellent for traveling.

Weighs grains and drams.

5-inch beam, 2¼-inch brass pans,	- \$0 60
6-inch beam, 2¼-inch brass pans,	75



## Hand Scales.

Somewhat larger than the Pocket Scale, and with larger pans, so that it is adapted for weighing a greater quantity.

Weighs grains, scruples and drams.

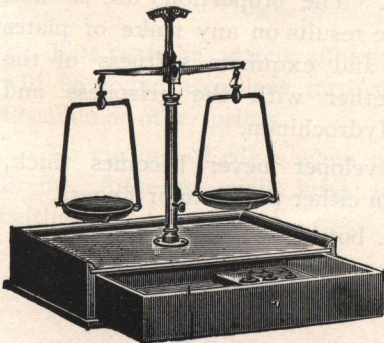
6-inch beam, 2¼-inch pans,	\$2 00
9-inch beam, 3-inch pans,	2 50

## Standard Scales.

This is the best scale for the varied wants of both professional and amateur photographers.

The entire scale can be taken apart and packed in the drawer of the walnut stand.

Price, - - \$4 00





## Carlton's Pyro-Potash Developer.

CONCENTRATED.



We claim for this developer that more can be done with a plate than almost any developer in the market; the operator has almost perfect control over the plate, and a brilliant negative is the rule.

Put up in two 8-oz. bottles, in card-board box.

Per box, - - - - - \$0 60

## Carlton's Hydrochinon Developer.

CONCENTRATED.



Will not stain the fingers or plate; gives clear shadows; especially desirable for transparencies.

Can be used over and over again.

Put up in two 8-oz. bottles, in card-board box.

Per box, - - - - - \$0 50

## Carlton's Eikonogen Developer.



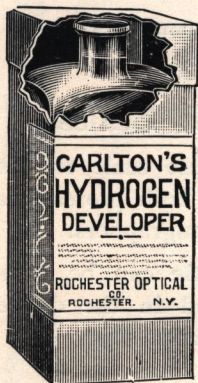
Easy of manipulation, giving brilliant yet soft negatives; especially adapted for portraiture.

Can be used over and over again.

Put up in one 16-oz. bottle.

Price, - - - - - \$0 50

## Carlton's Hydrogen Developer.



HYDROGEN DEVELOPER is a combination of Hydrochinon and Eikonogen, possessing the good qualities of both. The proportions are so well balanced that the results on any make of plates show the detail and exquisite softness of the Eikonogen, together with the crispness and density of the Hydrochinon.

Hydrogen Developer never becomes thick, and will not stain either the plate or fingers.

Price, 8-oz. bottle,	-	-	\$0 30
" 16-oz. "	-	-	50
" 32-oz. "	-	-	90

40



## Carlton's Aristo Solution.

FOR TONING ARISTOTYPE PAPER.



This solution is ready for use and is a combined toning and fixing bath. An 8-oz. bottle of Carlton's Aristo Solution will tone and fix 50 cabinet prints.

8-oz. bottle,	- - - - -	\$0 40
16-oz. " "	- - - - -	75

## Carlton's Intensifier.

CONCENTRATED.

Invaluable for strengthening weak negatives.

4-oz. bottle,	- - - - -	\$0 25
8-oz. " "	- - - - -	40
16-oz. " "	- - - - -	75



## Carlton's Negative Varnish.

Negatives from which a quantity of prints are to be made should always be varnished to prevent injury to the film.

4-oz. bottle,	- - - - -	\$0 30
8-oz. " "	- - - - -	50
16-oz. " "	- - - - -	75



## Premo Adhesive.

FOR MOUNTING ARISTOTYPE, VELOX OR OTHER PRINTS.

This paste has strong adhesive qualities, and will be found excellent for Aristotype, Velox, Bromide or other prints.

No curling of edges when using this paste. Premo Adhesive will keep indefinitely, and neither sour nor mould.

One-Quarter Pint Jar,	- - - - -	\$0 15
One-Half Pint Jar,	- - - - -	25





## Blotting Paper.

9 x 12 inches, per dozen sheets,	- - - - -	\$0 25
12 x 19 " " " "	- - - - -	50
19 x 24 " " " "	- - - - -	1 00

## Orange or Ruby Fabric.

CONVENIENT FOR LIGHTING DARK ROOMS.

Price, per piece, 18 inches square, either shade,	- - - - -	\$0 20
Price, per square yard, either shade,	- - - - -	60

## Orange or Ruby Glass.

CORRECT TINTS FOR THE DARK ROOM.

6 x 8 inches,	- - - \$0 20	10 x 12 inches,	- - - \$0 50
7 x 9 " "	- - - 25	11 x 14 " "	- - - 60
8 x 10 " "	- - - 30	12 x 15 " "	- - - 75

## Orange or Post Paper.

FOR DARK ROOM USE.

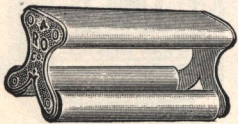
20 x 24, per sheet,	- - - - -	\$0 05
20 x 24, per dozen sheets,	- - - - -	25
20 x 24, per quire,	- - - - -	40

## Ferrotypes Plates.

FERROTYPES PLATES have a highly polished surface and are used for drying Aristotype or Bromide papers, when it is desired to have a glossy finish without burnishing. Cannot be sent by mail.

10 x 14 inches, light, each,	\$0 15	10 x 14 inches, heavy, each,	\$0 25
10 x 14 " " per doz.,	1 25	10 x 14 " " per doz.,	2 50

## Squeegee and Print Roller.

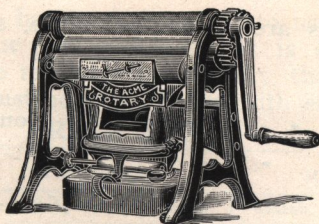


For pressing prints on cards when mounting. A very convenient tool.

6 inch Double Roller,	- - -	\$ 75
12 " " " "	- - -	1 25



## Burnishers.



We can supply any style or size Burnisher in the market, but list the following from the best now manufactured.

In ordering, state whether oil or gas is to be used for heating.

Model Rotary, 6-inch Roll,	-	-	-	-	-	-	-	-	\$ 7 50
“ “ 8 “ “	-	-	-	-	-	-	-	-	10 00
“ “ 10 “ “	-	-	-	-	-	-	-	-	12 50
“ “ 12 “ “	-	-	-	-	-	-	-	-	15 00
Entrekin Improved Rotary, 8 inch Roll,	-	-	-	-	-	-	-	-	12 00
“ “ “ 10 “ “	-	-	-	-	-	-	-	-	15 00
“ “ “ 15 “ “	-	-	-	-	-	-	-	-	35 00

## Dry Plates.

We sell several makes of Dry Plates, among them being Forbes', Record, Cramer's, Seed's, Carbutt's and Stanley's.

3¼ x 4¼, per dozen,	-	\$0 45	8 x 10, per doz.,	-	\$2 40
4 x 5, “ “	-	65	10 x 12, “ “	-	3 80
4¼ x 6½, “ “	-	90	11 x 14, “ “	-	5 00
5 x 7, “ “	-	1 10	14 x 17, “ “double thick,	-	9 00
5 x 8, “ “	-	1 25	16 x 20, “ “	-	12 50
6½ x 8½, “ “	-	1 65	18 x 22, “ “	-	15 50
3¼ x 4, Transparency Plates, for Lantern Slides, per dozen,	-	65			

## Celluloid Films.

FOR USE IN THE FACILE FILM HOLDERS.

3¼ x 4¼, per dozen,	-	\$0 55	5 x 8, per dozen,	-	\$1 55
4 x 5, “ “	-	80	6½ x 8½, “ “	-	2 10
4¼ x 6½, “ “	-	1 10	8 x 10, “ “	-	3 00
5 x 7, “ “	-	1 40			



## Photographic Chemicals.

Our Chemicals are guaranteed Pure, and of full weight and measurement.

Acetate of Soda,	- - - -	2 ounce bottle, each,	\$o 20
Acetate of Lead,	- - - -	per ounce,	15
Alum, Chrome,	- - - -	per pound,	35
Alum, Powdered,	- - - -	" "	15
Bi-Carbonate of Soda,	- - - -	" "	15
Borax,	- - - -	per ½ lb. 15c.	" "
Bromide of Ammonium,	- - - -	per ounce,	15
Bromide of Potassium,	- - - -	" "	15
Carbonate of Potash,	- - - -	per pound,	25
Carbonate of Soda,	- - - -	" "	15
Chloride of Gold, Pure,	- -	15 grain bottle, each,	60
Chloride of Lime,	- - - -	per ounce, 5c,	per pound,
			25
Citric Acid,	- - - -	per ounce,	15
Eikonogen,	- - - -	" "	40
Ferri-Cyanide of Potassium,	- - - -	" "	15
Ferro-Cyanide	" - - - -	" "	20
Glycerine,	- - - -	2 ounce bottle, each,	20
Hydrochinon,	- - - -	per ounce,	40
Hypo-Sulphite of Soda,	- - - -	1 pound box, each,	10
" " " "	- - - -	5 " " "	40
Iron, Proto-Sulphate,	- - - -	per pound,	10
Litmus Paper, Red or Blue,	- - - -	per sheet,	05
Magnesium Powder, Pure,	- - - -	per ounce,	40
Meta Bi-Sulphite of Potash,	- - - -	" "	30
Oxalate of Potash, Neutral,	- - - -	per pound,	30
Oxalic Acid,	- - - -	per ounce,	15
Phosphate of Soda,	- - - -	" "	10
Pyrogallic Acid,	- - - -	" "	40
Sulphite of Soda, Crystals,	- - - -	per pound,	25
" " Granular,	- - - -	" "	30
Sulpho-Cyanide of Ammonia,	- - - -	per ounce,	20
Tungstate of Soda,	- - - -	" "	15



## Aristotype Paper.

ARISTOTYPE PAPER has come largely into use, among both the professional and amateur photographers. It is exceedingly simple in manipulation, and the results so satisfactory, that we take pleasure in recommending it. Instructions for use with each package.

### PRICE LIST.

SIZE.	ARISTOTYPE.			MATTE SURFACE.		
	Dozen.	½ Gross.	Gross.	Dozen.	½ Gross.	Gross.
3¼ x 4¼, - - -	2 doz., \$ .20		\$1 15	2 Doz., \$ .30		\$1 50
4 x 5, - - -	2 " 25		1 25		\$ .90	1 65
3¾ x 5½, Cabinet,	20		1 35	25		2 00
5 x 7, - - -	30	\$1 60	2 65	35	1 95	3 20
5 x 8, - - -	30	1 75	3 00	40	2 10	3 60
6½ x 8½, - - -	45	2 40	4 25	55	2 90	5 10
8 x 10, - - -	60	3 50	6 50	75	4 20	7 80

## Ferro-Prussiate or Blue Paper.

FOR MAKING BLUE AND WHITE PICTURES.

We sell what is conceded to be the finest brand of Blue Paper in the market—French Satin Jr. By means of special formulæ and new methods of manufacturing, this paper possesses qualities peculiar to itself. The Prints will be found unequalled in richness and beauty.

French Satin Jr. is packed in sealed tin tubes, and will keep perfectly fresh for a long time.

### PRICE LIST.

	Per Package, 25 Sheets.		Per Package, 25 Sheets.
3½ x 3½, - - -	\$0 16	5 x 7, - - -	\$0 35
3¼ x 4¼, - - -	16	5 x 8, - - -	40
4 x 5, - - -	20	6½ x 8½, - - -	56
4¼ x 6½, - - -	30	8 x 10, - - -	68

## Bromide Paper.

STANDARD, PLATINO, ENAMELED AND MATTE ENAMEL BROMIDE PAPERS.

Bromide papers are made in two grades, "Hard" and "Soft." The "Hard" paper is especially adapted for enlarging with sunlight, while the "Soft" paper should be used for contact printing, as it is better adapted for work with artificial light.

The "Standard" paper is supplied in three weights: A, thin smooth—B, heavy smooth—C, heavy rough.

The "Platino" paper is furnished in A, thin smooth, or C, heavy rough.

In ordering always state whether the "hard" or "soft" Emulsion is desired, and if the Standard or Platino is selected, give grade of paper.

3¼ x 4¼, per dozen, -	\$0 15	5 x 8, per dozen, -	\$0 40
4 x 5, " " - - -	25	6½ x 8½, " " - - -	60
4¼ x 6½, " " - - -	30	8 x 10, " " - - -	80
5 x 7, " " - - -	35	10 x 12, " " - - -	1 20



## Velox Paper.

VELOX is a developing paper on which the image becomes visible only after the developer is applied. No dark room is necessary, as all operations of printing and developing can be performed by gas-light. The whole process is one of surprising simplicity.

You can do your printing and developing in the evening, while with your friends and family. It takes but a few seconds to do the printing, about as much for developing the image, and after the usual fixing and washing, your prints are ready. Hundreds of them can be turned out in that way in an incredibly short time; daylight or artificial light can be used.

The results are remarkable for their beauty and combine the effects of platinum and carbon. The prints will remain flat without mounting. The permanency of Velox prints has been established beyond doubt.

We carry in stock both Carbon and Special Portrait Velox. The former is best for soft negatives, while the latter is desirable for use with dense negatives.

### PRICE LIST.

	Dozen.	Gross.
3¼ x 4¼, - - - - -	\$0 20	\$1 60
4 x 5, - - - - -	25	2 00
3⅞ x 5½ Cabinet, - - - - -	25	2 00
4 x 6, - - - - -	25	2 00
4¼ x 6½, - - - - -	35	2 75
5 x 7, - - - - -	40	3 50
6½ x 8½, - - - - -	65	6 00
8 x 10, - - - - -	90	8 00

### Prepared Developer for Velox Paper.

Metol-Quinol, powder, ready for use, in Glass Tubes, per tube, \$0 20  
 Metol-Quinol, in boxes of five tubes, per box, - - - 75

One tube of Metol-Quinol, freshly dissolved and properly used, will develop from 40 to 60 4 x 5 Velox Prints.



## Card Mounts.

The sizes given are the size of the print, the actual size of the Card Mount being larger, to allow a margin.

When mounts are ordered sent by mail, postage must accompany the order. The amount to add per package for postage on the different sizes is as follows:  $3\frac{1}{4} \times 4\frac{1}{4}$ , 13 cents;  $4 \times 5$ , 15 cents; Cabinet, 17 cents;  $4\frac{1}{4} \times 6\frac{1}{2}$  and Stereoscopic, 19 cents;  $5 \times 7$ , 20 cents;  $5 \times 8$ , 26 cents;  $6\frac{1}{2} \times 8\frac{1}{2}$ , 37 cents;  $8 \times 10$ , 45 cents.

### No. 1.—Plain, Round Edge, White, Rose or Primrose.

	Per Package of 25.	Per 100.		Per Package of 25.	Per 100.
$3\frac{1}{4} \times 4\frac{1}{4}$ , -	\$0 18	\$0 65	$5 \times 7$ , -	\$0 30	\$0 95
$4 \times 5$ , -	20	70	$5 \times 8$ , -	35	1 10
Cabinet, -	25	80	$6\frac{1}{2} \times 8\frac{1}{2}$ , -	50	1 50
$4\frac{1}{4} \times 6\frac{1}{2}$ or Stereo, 30		85	$8 \times 10$ , -	70	2 25

### No. 2.—White, Rose or Amber, with Gilt Beveled Edge.

	Per Package of 25.	Per 100.		Per Package of 25.	Per 100.
$3\frac{1}{4} \times 4\frac{1}{4}$ , -	\$0 25	\$0 80	$5 \times 7$ , -	\$0 50	\$1 75
$4 \times 5$ , -	30	95	$5 \times 8$ , -	55	90
Cabinet, -	30	1 00	$6\frac{1}{2} \times 8\frac{1}{2}$ , -	80	2 75
$4\frac{1}{4} \times 6\frac{1}{2}$ or Stereo, 45		1 50	$8 \times 10$ , -	1 00	3 40

### No. 3.—Maroon or Bottle Green, Gray Back with Gilt Beveled Edge.

	Per Package of 25.	Per 100.		Per Package of 25.	Per 100.
$4 \times 5$ , -	\$0 35	\$1 10	$5 \times 8$ , -	\$0 65	\$2 25
Cabinet, -	40	1 25	$6\frac{1}{2} \times 8\frac{1}{2}$ , -	80	2 85
$5 \times 7$ , -	60	2 10	$8 \times 10$ , -	1 00	3 60

### No. 4.—Unenameled, Narrow Embossed Border, Assorted Colors, White, Primrose, Pearl, Gray and Rose.

	Per Package of 25.	Per 100.		Per Package of 25.	Per 100.
$4 \times 5$ , -	\$0 35	\$1 20	$5 \times 7$ , -	\$0 65	\$2 25

### No. 5.—Unenameled, Wide Embossed Border, Assorted Colors, White, Gray, Tea and Steel Gray.

	Per Dozen.	Per 100.		Per Dozen.	Per 100.
$3\frac{1}{4} \times 4\frac{1}{4}$ , -	\$0 25	\$1 65	$5 \times 7$ , -	\$0 35	\$2 50
$4 \times 5$ , -	25	1 75			

### No. 6.—Gray, with wide Border for Framing.

$4 \times 5$ , per dozen, -	\$0 15	$5 \times 8$ , per dozen, -	\$0 25
$4\frac{1}{4} \times 6\frac{1}{2}$ , " - - -	20	$6\frac{1}{2} \times 8\frac{1}{2}$ , " - - -	30
$5 \times 7$ , " - - -	25	$8 \times 10$ , " - - -	45

### No. 7.—Chocolate, with Wide Border for Framing.

$4 \times 5$ , per dozen, -	\$0 20	$5 \times 8$ , per dozen, -	\$0 30
$4\frac{1}{4} \times 6\frac{1}{2}$ , " - - -	25	$6\frac{1}{2} \times 8\frac{1}{2}$ , " - - -	45
$5 \times 7$ , " - - -	30	$8 \times 10$ , " - - -	60



## Extra Parts of Apparatus.

Including Holder Slides, Front Boards, Ground Glass, Tripod Screws, Bellows,  
Reversible Backs, Carrying Cases, Etc.

SIZE.	Regular Holder Slides.	Hard Rubber Holder Slides.	Front Boards for Model Cameras.	Front Boards for Imp. Model and Standard.	Front Boards for Universal and Carlton.	Front Board and Division for Stereo. Work.	Ground Glass for Focusing Screen.	Tripod Screws.	Reversible Backs for View Cameras.	Square Bellows, for Model and Imp. Model.	Cone Bellows, for Empire and Standard.	Long Cone Bellows for Carlton and Universal.	Canvas Case for Camera and two Holders.	Long Canvas Case, for Universal, Six Holders and Tripod.
3½ x 4¼	\$0 15	\$0 25	\$0 25	\$0 40	\$0 50	\$0 50	\$0 12	\$0 25	\$4 50	\$2 00	\$3 50	\$4 00	\$2 25	\$3 00
4 x 5	15	25	25	40	50	50	12	25	5 00	2 00	3 50	4 00	2 25	3 00
4½ x 6½	20	30	25	40	50	50	15	25	5 50	2 00	3 75	4 25	2 50	3 25
5 x 7	20	35	25	40	50	50	18	25	6 00	2 00	4 00	4 50	2 50	3 50
5 x 8	20	35	25	40	50	50	18	25	6 00	2 00	4 00	4 50	2 75	3 50
6½ x 8½	25	45	25	40	50	75	20	25	6 50	2 25	4 50	5 00	3 00	3 75
8 x 10	30	50	25	40	50	75	25	25	7 00	2 50	5 00	5 50	3 25	4 00
10 x 12	45	80			60		35	40	7 50					
11 x 14		1 25			60		65	50	8 50					
14 x 17		2 00			75		80	55	10 00					
17 x 20		3 00							12 00					

## Miscellaneous.

Spring-catch for holding Holder on New Model, each,	\$0 25
Head for Standard, Facile or Combination Tripods,	50
Reversing attachment for New Model,	50
Clamp Hooks, for holding Folding Bed rigid,	25
Clamp and Screw, for leg of Sliding Tripod,	50
Milled Heads, with Screw, for various uses,	15
“ “ without “ “ “ “	10
Small Bed Plates for Hand Cameras,	25
Bed Plates for View Cameras,	40
Ruby or Orange Glass, for Universal Lanterns, Nos. 1 and 2,	10
Ruby or Orange Glass, for Universal No. 3 or Ideal Lanterns,	15
Corner Plates, for Ground Glass, each,	10



## Caps and Flanges.

### Morocco Caps for Lenses.

No.	-	-	1	2	3	4	5	6	7	8	9
Diameter, inches,			1½	1¾	1⅞	2⅛	2⅜	2½	2¾	3⅛	3½
Price, each,			\$0 60	\$0 60	\$0 65	\$0 70	\$0 70	\$0 75	\$0 80	\$0 90	\$1 00

### Brass Flanges for Lens.

No.	-	-	1	2	3	4	5	6	7	8	9
Diameter, inches,			1½	1¾	2	2¼	2½	3	3½	4	5
Price, each,			\$0 50	\$0 50	\$0 75	\$1 00	\$1 00	\$1 25	\$1 50	\$1 75	\$2 00

## Complete Developing and Printing Outfits.

For the large number of amateurs who prefer not only to "take" pictures, but finish them as well, we have arranged the following complete outfits, comprising all necessary articles for developing the negative and making the print.

### Outfit No. 1.

<ul style="list-style-type: none"> <li>3 Tin Developing Trays.</li> <li>½ dozen Dry Plates.</li> <li>1 R. O. Compact Candle Lamp.</li> <li>1 Bottle Hydrogen Developer.</li> <li>1 Glass Graduate.</li> </ul>		<ul style="list-style-type: none"> <li>1 Printing Frame.</li> <li>1 dozen Velox Paper.</li> <li>1 Tube M. Q. Developer.</li> <li>½ pound Hypo Sulphite Soda.</li> <li>1 dozen Card Mounts.</li> </ul>
Price, neatly boxed,		<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>4 × 5</span> <span>5 × 7</span> </div> <div style="display: flex; justify-content: space-between;"> <span>\$2 00</span> <span>\$3 25</span> </div>

### Outfit No. 2.

This outfit contains a greater variety of accessories than No. 1, and a larger quantity of plates, chemicals, etc. It includes

<ul style="list-style-type: none"> <li>3 Japanned Tin Developing Trays.</li> <li>1 dozen Dry Plates.</li> <li>1 Glass Graduate.</li> <li>1 Box Hydrogen Developer.</li> <li>1 pound Hypo Sulphite Soda.</li> <li>1 Jar Premo Adhesive.</li> </ul>		<ul style="list-style-type: none"> <li>1 Universal Ruby Lantern.</li> <li>1 Favorite Printing Frame.</li> <li>1 dozen Velox Paper.</li> <li>1 Tube M. Q. Developer.</li> <li>25 Card Mounts.</li> <li>1 copy <i>Amateur Photographer</i>.</li> </ul>
Price,		<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>3¼ × 4¼</span> <span>4 × 5</span> <span>5 × 7</span> <span>5 × 8</span> <span>6½ × 8½</span> <span>8 × 10</span> </div> <div style="display: flex; justify-content: space-between;"> <span>\$3 75</span> <span>\$4 00</span> <span>\$4 75</span> <span>\$5 00</span> <span>\$6 00</span> <span>\$7 50</span> </div>



## R. O. Co.'s Single Achromatic Lens.

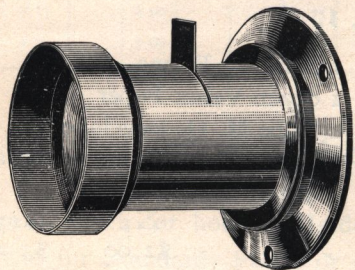
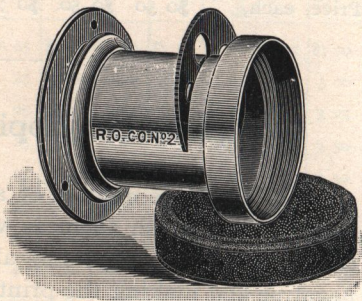
These Lenses are conceded to be the best of the low-priced Lenses, giving a wonderful definition, with great depth of focus and flatness of field, especially when using the smaller diaphragms. They are perfectly achromatic, and are as near rectilinear as is possible in a Single Combination Lens, and are quick working.

These Lenses are furnished with *Rotating Diaphragms*, having four apertures, and are very convenient to use; the largest opening is of sufficient size for instantaneous pictures.

Though designed for landscape work they will make excellent groups, and even portraits.

NO.	LENGTH OF FOCUS.	SIZE.	PRICE.
1	6 inch,	4 x 5,	\$3 00
1½	8 "	4¼ x 6½,	3 50
2	10 "	5 x 8,	4 00
3	11 "	6½ x 8½,	5 00
4	13 "	8 x 10,	7 00

No. 1, furnished in matched pairs, for Stereoscopic work, at \$6.00.



## R. O. Co.'s Excelsior Lens.

RAPID RECTILINEAR.

The EXCELSIOR LENS was made to meet the wants of the amateur who desires a better lens than our Single View Lens, and yet at a moderate outlay. It has acquired a popularity quite beyond our expectations. We

confidently think it is the best value of any lens, and equal to many lenses at a much higher price.

They are perfectly rectilinear, have great depth of focus and flatness of field, giving brilliant definition; they will be found excellent for landscapes, architectural subjects and instantaneous work, as well as groups and portraits. Fitted with Waterhouse Stops or Iris Diaphragms.

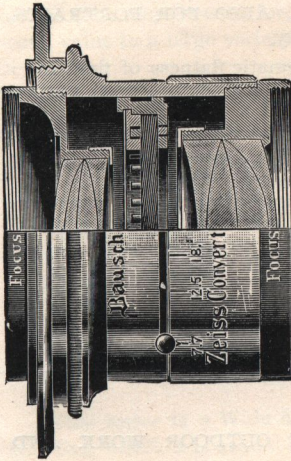
NO.	LENGTH OF FOCUS.	SIZE.	PRICE.	
			WATERHOUSE STOPS.	IRIS DIAPHRAGMS.
1	6½ inch,	4 x 5	\$10 00	\$12 50
2	9 "	5 x 8	12 00	15 00
3	11 "	6½ x 8½	15 00	18 50
4	13 "	8 x 10	20 00	23 50
5	16 "	10 x 12	30 00	35 00
6	20 "	12 x 15	45 00	50 00



# Rapid Rectilinear Lenses.

## Zeiss-Convertible Anastigmat. Series VIIA.

Doublet Combination. Extra Rapid Universal Lens for Portraits, Groups, Copying, Landscapes, and Hand Camera Work.



The Zeiss-Convertible Anastigmat Lenses, Series VIIA, are composed of two separate Anastigmat Lenses of different foci, each of which may be used singly, thus *combining three lenses in one*. The great value of such a lens will be quickly recognized by both amateur and professional photographers. It affords the means for obtaining not only unapproached work under the usual ordinary conditions, but for producing large figures, groups and landscape views from a great distance—in fact, all photographs which require lenses of relatively long focus.

By virtue of their great aperture and large anastigmatically flat field, these lenses are applicable to all branches of photography. They are particularly useful in all work where flatness, microscopic definition and freedom from astigmatism are prime factors. The angle is about  $80^\circ$ .

When one combination is being used singly, it should always be screwed in the back of the tube, and the hood in the front.

When both combinations are used, that of the longer focus should be in the front end of the tube, thus giving the greatest possible aperture.

Each separate lens-mount has its number and length of focus engraved upon it. All sizes are furnished with Iris Diaphragm.

The mountings are provided with a revolvable ring, engraved with the F value of each of the Single and of the Doublet Combinations.

The correct stop for each of the lenses is thus always read from the scale exactly as in the case of a simple lens.

No.	Plate covered with full Aperture.	Largest Relative Aperture.	Focus.	Plate Covered.		Focus of		Price.
				Using Front Lens only. $f$ 12.5	Using Back Lens only. $f$ 12.5	Front Lens.	Back Lens.	
2	$3\frac{1}{4} \times 4\frac{1}{4}$	$f$ . 7	$4\frac{1}{2}$	5 x 7	$4\frac{1}{4} \times 6\frac{1}{2}$	9	$7\frac{1}{4}$	\$ 54 00
3	4 x 5	" 7.7	5	$6\frac{1}{2} \times 8\frac{1}{2}$	$4\frac{1}{4} \times 6\frac{1}{2}$	$11\frac{1}{2}$	$7\frac{1}{4}$	60 00
4	4 x 5	" 6.3	5	5 x 7	5 x 7	9	9	58 00
5	$4\frac{1}{4} \times 6\frac{1}{2}$	" 7	$5\frac{3}{4}$	$6\frac{1}{2} \times 8\frac{1}{2}$	5 x 7	$11\frac{1}{2}$	9	63 00
6	$4\frac{3}{4} \times 6\frac{1}{2}$	" 7.7	$6\frac{1}{4}$	8 x 10	5 x 7	14	9	70 00
7	$4\frac{1}{2} \times 7\frac{1}{4}$	" 6.3	$6\frac{1}{2}$	$6\frac{1}{2} \times 8\frac{1}{2}$	$6\frac{1}{2} \times 8\frac{1}{2}$	$11\frac{1}{2}$	$11\frac{1}{2}$	68 00
8	5 x 7	" 7	7	8 x 10	$6\frac{1}{2} \times 8\frac{1}{2}$	14	$11\frac{1}{2}$	75 00
9	5 x 8	" 7.7	$7\frac{1}{2}$	10 x 12	$6\frac{1}{2} \times 8\frac{1}{2}$	$16\frac{1}{2}$	$11\frac{1}{2}$	87 00
10	5 x $8\frac{1}{2}$	" 6.3	8	8 x 10	8 x 10	14	14	82 00
11	$6\frac{1}{2} \times 8\frac{1}{2}$	" 7	$8\frac{1}{2}$	10 x 12	8 x 10	$16\frac{1}{2}$	14	94 00
12	$6\frac{1}{2} \times 8\frac{1}{2}$	" 7.7	$9\frac{1}{4}$	11 x 14	8 x 10	$19\frac{1}{4}$	14	115 00
14	7 x 9	" 7	10	11 x 14	10 x 12	$19\frac{1}{4}$	$16\frac{1}{2}$	128 00
17	8 x 10	" 7	12	12 x 16	11 x 14	$23\frac{1}{2}$	$19\frac{1}{4}$	168 00
18	8 x 10	" 7.7	$12\frac{3}{4}$	13 x 16	11 x 14	$27\frac{1}{2}$	$19\frac{1}{4}$	198 00



## The Zeiss Anastigmat Lenses.

Among the advantages claimed for these lenses are extreme flatness of field, absolute uniformity of illumination, unusual depth of focus and freedom from astigmatism. Fitted with Iris Diaphragms.

### Series II—1:6.3.

EXTREMELY RAPID INSTANTANEOUS LENS, ALSO FOR PORTRAITS, GROUPS AND COPYING.

This Series is remarkable for its perfect anastigmatic flatness of field and its great rapidity. These Lenses are particularly suitable for the universal purposes of the amateur and professional.

No.	Size of Plate covered with Stop $f$ 9.	Diameter of Image Circle at $80^\circ$ .	Free Diameter of Largest Lens.	Equivalent Focus.	Price.
2	$3\frac{1}{4} \times 4\frac{1}{4}$ in.	$6\frac{1}{8}$ in.	$\frac{3}{4}$	$4\frac{1}{8}$ in.	\$ 33 50
3	$4 \times 5$ "	$9\frac{1}{4}$ "	I	$5\frac{1}{2}$ "	40 50
4	$4\frac{1}{4} \times 6\frac{1}{2}$ "	$11\frac{3}{8}$ "	$I\frac{1}{4}$	$6\frac{1}{8}$ "	51 00
5	$5 \times 7$ "	$13\frac{3}{8}$ "	$I\frac{7}{8}$	$8\frac{1}{4}$ "	64 50
6	$5 \times 8$ "	$16\frac{1}{2}$ "	$I\frac{5}{8}$	$9\frac{1}{8}$ "	78 50
7	$6\frac{1}{2} \times 8\frac{1}{2}$ "	$19\frac{1}{8}$ "	2	$11\frac{3}{8}$ "	108 50
8	$8 \times 10$ "	$23\frac{1}{8}$ "	$2\frac{3}{8}$	$14\frac{3}{8}$ "	150 00

### Series II A.—1:8.

FOR PORTRAITS, GROUPS, INSTANTANEOUS OUTDOOR WORK AND COPYING.

The lenses of this series have an angular aperture of  $80^\circ$ , and are adapted for all kinds of instantaneous work, also for groups, portraits, architectural subjects, etc. They are particularly adapted for Hand Camera work.

No.	Size of Plate covered with Stop $f$ 12.5.	Diameter of Image Circle at $72^\circ$ .	Free Diameter of Largest Lens.	Equivalent Focus.	Price.
I	$4 \times 5$ in.	$6\frac{5}{8}$ in.	$\frac{5}{8}$	$4\frac{3}{8}$ in.	\$ 30 00
2	$4\frac{1}{4} \times 6\frac{1}{2}$ "	$8\frac{1}{4}$ "	$\frac{3}{4}$	$5\frac{3}{8}$ "	33 50
3	$5 \times 8$ "	$10\frac{1}{8}$ "	I	$6\frac{1}{2}$ "	44 00
4	$6\frac{1}{2} \times 8\frac{1}{2}$ "	$12\frac{3}{8}$ "	$I\frac{1}{8}$	8 "	54 50
5	$8 \times 10$ "	$14\frac{3}{4}$ "	$I\frac{7}{8}$	$9\frac{3}{8}$ "	64 50
6	$10 \times 12$ "	$17\frac{3}{4}$ "	$I\frac{5}{8}$	$11\frac{3}{8}$ "	85 50

### Series III A.—1:9.

INSTANTANEOUS OUTDOOR LENS, ALSO FOR GROUPS AND LARGE PORTRAITS.

The lenses of Series III A. have an angular aperture of  $90^\circ$ . With the exception of speed, they possess the good qualities of Series II A.

No.	Size of Plate covered with Stop $f$ 12.5.	Diameter of Image Circle at $90^\circ$ .	Free Diameter of Largest Lens.	Equivalent Focus.	Price.
I	$4 \times 5$ in.	$9\frac{7}{8}$ in.	$\frac{5}{8}$	$4\frac{3}{4}$ in.	\$ 23 00
2	$4\frac{1}{4} \times 6\frac{1}{2}$ "	$11\frac{1}{8}$ "	$\frac{3}{4}$	$5\frac{3}{8}$ "	26 50
3	$5 \times 7$ "	$13\frac{3}{8}$ "	$\frac{7}{8}$	$6\frac{3}{4}$ "	31 50
4	$5 \times 8$ "	$15\frac{7}{8}$ "	I	$7\frac{1}{8}$ "	35 00
5	$6\frac{1}{2} \times 8\frac{1}{2}$ "	$18\frac{1}{8}$ "	$I\frac{1}{4}$	$9\frac{1}{8}$ "	45 50
6	$7 \times 9$ "	$21\frac{7}{8}$ "	$I\frac{7}{8}$	$10\frac{3}{4}$ "	56 00
7	$8 \times 10$ "	25 "	$I\frac{5}{8}$	$12\frac{1}{2}$ "	70 00



# Zeiss Anastigmat Lenses.

## Series IV.—1:12.5.

AN INSTANTANEOUS WIDE ANGLE LENS, FOR LANDSCAPES, INTERIORS,  
ARCHITECTURE AND COPYING.

The Lenses of this series have an angle of 100° and are therefore wide angle, and as such may be used for all out-door work with full aperture, which has unusual value in a large variety of work.

No.	Size of Plate covered with Stop $f$ 18	Diameter of Image Circle at 96°.	Free Diameter of Largest Lens.	Equivalent Focus.	Price.
1	3¼ x 4¼ in.	5¼ in.	¼ in.	2 <sup>7</sup> / <sub>16</sub> in.	\$ 17 50
2	4 x 5 "	8 <sup>11</sup> / <sub>16</sub> "	<sup>3</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>8</sub> "	17 50
3	4¼ x 6½ "	10 <sup>5</sup> / <sub>8</sub> "	½ "	4 <sup>11</sup> / <sub>16</sub> "	21 00
4	5 x 8 "	13 <sup>3</sup> / <sub>8</sub> "	<sup>5</sup> / <sub>8</sub> "	6 <sup>1</sup> / <sub>16</sub> "	24 50
5	8 x 10 "	17 <sup>5</sup> / <sub>16</sub> "	<sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>16</sub> "	31 50
6	10 x 12 "	22 <sup>1</sup> / <sub>8</sub> "	1 "	10 <sup>1</sup> / <sub>4</sub> "	47 00

## Series V.—1:18.

WIDE ANGLE LENS PAR EXCELLENCE, FOR INTERIORS, ARCHITECTURE,  
COPYING AND LANDSCAPES.

This series is a Wide Angle Lens proper, having an angle of 108°, notwithstanding which it is available for instantaneous work with sunlight illumination.

No.	Size of Plate covered with Stop $f$ 36	Diag. of Largest Pla.cov.with Sm. Stop 104° 110°.	Free Diameter of Largest Lens.	Equivalent Focus.	Price.
1	4¼ x 6½ in.	8 <sup>11</sup> / <sub>16</sub> in.	<sup>9</sup> / <sub>16</sub> in.	3 <sup>3</sup> / <sub>8</sub> in.	\$ 22 50
2	5 x 7 "	11 "	<sup>5</sup> / <sub>8</sub> "	4 <sup>3</sup> / <sub>8</sub> "	22 50
3	6½ x 8½ "	14 <sup>3</sup> / <sub>16</sub> "	½ "	5 <sup>9</sup> / <sub>16</sub> "	28 00
4	8 x 10 "	15 <sup>3</sup> / <sub>4</sub> "	<sup>9</sup> / <sub>16</sub> "	7 <sup>1</sup> / <sub>16</sub> "	35 00
5	10 x 12 "	21 <sup>1</sup> / <sub>4</sub> "	<sup>11</sup> / <sub>16</sub> "	8 <sup>3</sup> / <sub>8</sub> "	44 00
6	11 x 14 "	26 <sup>3</sup> / <sub>4</sub> "	<sup>1</sup> / <sub>8</sub> "	10 <sup>7</sup> / <sub>16</sub> "	54 50

## Darlot Rapid Hemispherical Lens.

NO.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	5½ inches.	4 x 5	\$15 00
2	9 "	5 x 8	22 50
3	10½ "	8 x 10	33 50
4	14 "	11 x 14	50 00

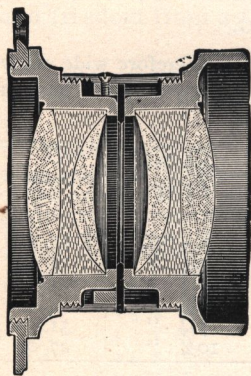
## Bausch & Lomb Rapid Universal Lens.

NO.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
5	5¾ inches.	4 x 5	\$22 00
8	7¾ "	5 x 8	26 00
8½	10 <sup>3</sup> / <sub>8</sub> "	6½ x 8½	35 00
10	12¼ "	8 x 10	48 00
12	15 "	10 x 12	60 00



# Goerz Double Anastigmat Lenses.

## Series III. F:7.7.



The Goerz Double Anastigmat Lenses are universal instruments in every sense of the word. At full aperture they admit of instantaneous photographs, embracing an angle of  $70^\circ$ , being taken, even on dull days. By the use of small diaphragms the angle may be increased to  $90^\circ$ .

The Astigmatism being completely corrected, the Goerz Lens, even when used with full aperture, will yield a perfectly sharp and brilliant image over the entire plate. For portraits, groups, architectural subjects, copying, and instantaneous work, it cannot be excelled.

The glasses employed in the construction of the three elements are so chosen as to minimise the irrationality of their spectra and thus to reduce the secondary chromatic aberration to an inappreciable quantity. The approach to apochromatic correction is, therefore, much more perfect than with the older types of photographic lenses.

The Goerz Lens is symmetrical, and when desired the front combination may be removed, the result being a single lens, approximately double the focus of the compound.

The combinations of the Series III. Lenses are mounted in close proximity, with the result that there is no perceptible falling off in the illumination of the image toward the edges of the plate.

Lenses 0 to 5 are particularly adapted for Hand and Field Cameras. The higher numbers will be found of great service for large portraits, groups and similar work.

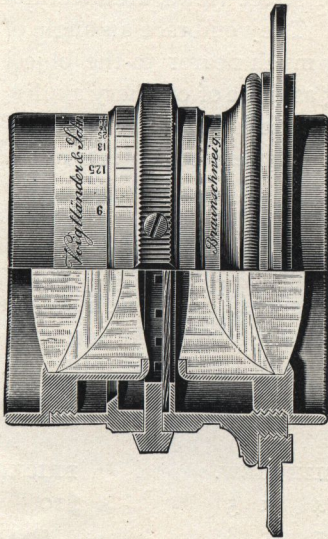
All sizes are fitted with Iris Diaphragms.

No.	Equivalent Focus.	Free Aperture.	Size of Plate Covered Sharply at			Price.
			F:7.7.	F:15.5.	F:62.	
0	4¾ in.	⅝ in.	3¼ x 4¼	4 x 5	4¾ x 6½	\$ 37 50
1	6 "	⅞ "	4 x 5	4¾ x 6½	5 x 8	45 00
2	7 "	1 "	4¾ x 6½	5 x 8	7 x 9	51 50
3	8¼ "	1¼ "	5 x 8	6½ x 8½	8 x 10	62 50
4	9½ "	1⅝ "	6½ x 8½	7 x 9	10 x 12	75 50
5	10¾ "	1⅞ "	7 x 9	8 x 10	12 x 15	91 00
6	12 "	2 "	8 x 10	10 x 12	16 x 18	107 00
7	14 "	2 ⅜ "	10 x 12	12 x 15	18 x 22	140 00
7a	16½ "	2⅝ "	11 x 14	13 x 17	21 x 25	182 00



# Collinear Double Anastigmat Lens.

## Series II.



The Collinear Lens unquestionably ranks among the highest types of modern symmetrical Double Anastigmats. It is a new form of Lens, made of Jena glass, and consists of two symmetrical anastigmatic combinations, each of which is made up of three Lenses, the contiguous surfaces being permanently cemented together.

Astigmatism—which is that peculiarity in a Lens, in consequence of which the focal distances vary for vertical and horizontal lines immediately adjacent to one another—it has been impossible to overcome, until late years, when the discovery of the new “Jena” glass enabled opticians to produce a Lens free from this error, and which has been appropriately styled the “Anastigmat.”

The sharpness of the image yielded by Collinear Lenses is remarkable. The finest definition is easily obtained over the entire plate, even when the Lens is used with full aperture. The covering power, in relation to its focus, is surprisingly large. The sizes given in the list are by no means the largest plate covered, but are chosen with regard to the proportions and appearance of the photograph.

In all Collinear Lenses, Series II, the back combination may be used separately, forming an Anastigmat Lens with largest aperture F. 11, and possessing double the focal length of the Lens when used as a compound. The smaller size Lenses are particularly well adapted for Hand Camera work, while the larger sizes meet all the demands of the studio for portraits and groups.

### Full Aperture, F. 5.6.

No.	Equivalent Focus.	Size of Plates Sharply Covered.			Price with Iris Diaphragm.
		F. 5.6.	F. 8.	F. 32.	
		INCHES.	INCHES.	INCHES.	
1	3½	3¼ x 3¼	3 x 4	3¼ x 4¼	\$ 35 00
2	4¾	3¼ x 4¼	4¼ x 6½	5 x 7	40 00
3	5¾	4¼ x 6½	5 x 7	6½ x 8½	45 00
4	7¾	5 x 7	6½ x 8½	8 x 10	60 00

### Full Aperture of Following Sizes, F. 6.3.

5	9¾	6 x 8	6½ x 8½	9 x 11	77 50
6	11¾	6½ x 8½	8 x 10	10 x 12	105 00
7	14½	8 x 10	10 x 12	12 x 15	140 00
8	17	11 x 14	12 x 15	16 x 20	187 50



## Wide Angle Lenses.

Wide Angle Lenses are used mostly for street views, architectural effects in confined situations and interiors. They embrace an angle of from 80 to 90 degrees, and admit of being much nearer to the object photographed, but are not so quick working as those of ordinary angles. The principal objection to their more general use is that, on account of the great width of angle, the perspective is exaggerated, objects in the foreground being unduly magnified.

### Excelsior Wide Angle Lens.

The Excelsior Wide Angle Lenses will be found as valuable for the character of work for which they are designed as our well known and popular Rapid Rectilinear Series. They are adapted for interiors, buildings, landscapes, and all work in confined situations, where lenses of longer focus cannot well be used. All Wide Angle Excelsior Lenses have Rotating Diaphragms.

NO.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	3½ inches.	4 x 5	\$10 00
2	5 "	5 x 8	15 00
3	6½ "	6½ x 8½	18 00
4	8 "	8 x 10	22 00

### Darlot's Wide Angle Hemispherical.

NO.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
2	3½ inches.	4 x 5	\$16 50
2½	4½ "	5 x 7	16 50
3	6⅛ "	6½ x 8½	22 50
4	8¾ "	8 x 10	28 00


### Beck's "Autograph" Wide Angle.

NO.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
1	3 inches.	4 x 5	\$25 00
2	4 "	5 x 8	30 00
3	5 "	6½ x 8½	37 50
4	7 "	8 x 10	50 00

### Universal Wide Angle.

NO.	LENGTH FOCUS.	SIZE VIEW.	PRICE.
5	3½ inches.	4 x 5	\$16.00
8	5¼ "	5 x 8	20.00
8½	6½ "	6½ x 8½	24.00
10	8 "	8 x 10	28.00





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