

**THE 8X10 KING BEE, JR.**  
**COMPLETE PORTRAIT OUTFIT**



**Ralph J. Golsen .. Chicago**



**RALPH J. GOLSEN**

**LENSES**



**AND APPARATUS  
PHOTOGRAPHIC SUPPLIES  
OF EVERY DESCRIPTION.**

**CHICAGO.**



WHEN ORDERING FROM THIS LIST SAY FROM CATALOGUE No. 16  
WE SELL EVERYTHING IN

**Photographic Apparatus, Accessories  
and Supplies**

FROM THE CHEAPEST THAT'S GOOD TO THE VERY BEST THAT'S MADE

WE CARRY THE LARGEST LINE OF  
**Lenses, Cameras and General Photographic  
Apparatus and Accessories**

OF ANY HOUSE IN AMERICA  
And a Large Well-Selected Stock of Card Mounts, Dry  
Plates, Chemicals, Paper, Etc.

WE ARE PROGRESSIVE

All Roads Lead to Chicago

*Ralph J. Golsen*  
*July*

LP1180

The advertisement features a central illustration of a multi-story building with classical architectural details, including arched windows and columns. The building is flanked by two tall, slender columns. Above the building, a large globe is centered, with the text "THE GREATEST LENS AND OUTFIT HOUSE OF AMERICA" written around its perimeter. The globe is divided into "NORTH" and "SOUTH" regions. Two smaller globes, identical to the large one, are positioned on either side of the building's top. Each globe is supported by a small rectangular base with the text "RALPH J. GOLSEN CHICAGO." written on it. The building itself has several signs: "RALPH J. GOLSSEN CHICAGO." on the top facade, "RALPH J. GOLSSEN." on a central balcony, "LENSES AND CAMERAS." on a lower balcony, and "72 PHOTOGRAPHIC APPARATUS AND SUPPLIES. 74" on the ground floor. The entire illustration is framed by a double-line border.



# Complete Catalogue No. 16,

OF

## NEW GOODS

FROM

**"The Greatest Lens and Outfit House of America."**

**I**T is our belief that this complete catalogue of modern photographic apparatus and supplies excels anything ever attempted in this line. It is an encyclopedia of modern photographic appliances. We include such of the old line goods as continue to be in demand, and introduce apparatus of recent model and manufacture which we are confident will fully meet all that is claimed for it. While we quote a large line of apparatus, novelties and supplies, your work might suggest some photographic requisite not listed; write us and it will be promptly supplied if obtainable in the American or European market.

In our descriptive matter great care has been taken to cover all points fully; no expense has been spared in our illustrations, they portray accurately the various apparatus and show minute detail, giving the purchaser the advantage of forming an accurate idea as to the general construction of the goods—almost as well as if at our store making a personal inspection.

Our special series of lenses—made for us—under tested formulae to meet all requirements in their respective fields—are absolutely the very best value ever offered.

Our cameras, stands, attachments and general apparatus are modern in every particular. We have from the cheapest that's good to the very best that's made.

Our backgrounds are made in three series—*Distemper*, the best inexpensive grounds ever offered to the trade; *Oilene*, the almost indestructible product of high merit; the *Monarch* series, the quintessence of background production.

Our complete Portrait and View Outfits are the combination of modern apparatus at most remarkably low prices.

Our paper products are of high quality and are not restricted. We allow liberal discounts and prepay express charges, on paper, to any point in the United States.

A complete line of the very best supplies—Dry Plates, Chemicals, Developers, etc. Every article we sell is guaranteed just as represented.

Quality is paramount in all of our productions, and in no instance can the same goods be purchased for less money.

Lenses and complete outfits stand out prominently in our business—our justly earned reputation as the "*Greatest Lens and Outfit House of America*" is the result of our immense sales—and the sales increase in proportion as the trade becomes acquainted with our goods.

We are pioneers in the introduction of complete portrait and view outfits—**ready for service**—at a combination price very much lower than it was possible to purchase the same goods separately heretofore. Some dealers have made attempts to imitate our progressive methods, but a comparison of outfits is all that is necessary to convince the most exacting that the "R. J. G. Outfits" are preeminently superior to anything offered at the same price.

"What you can get from any house you can get from Ralph J. Golsen. You can get from Ralph J. Golsen what you can't get from any other house." Your orders solicited.

### RALPH J. GOLSEN

## Photographic Apparatus and Supplies

OF EVERY DESCRIPTION.

72-74 Wabash Ave.,

Established 1892.

CHICAGO.

# TERMS.

**CASH OR C. O. D.**—3 per cent cash discount is allowed on all cash remittances or C. O. D. shipments, except on goods marked **Net**. On C. O. D. express shipments not less than 25 per cent ( $\frac{1}{4}$ ) of the amount must be remitted with order.

**C. O. D. FREIGHT SHIPMENTS.**—We will ship goods freight, with bill of lading attached to draft and collect through your local bank or express agent, if not a banking town. We require one-quarter of the amount remitted with order when goods are to be shipped C. O. D. freight.

When desired we will ship subject to examination, and lenses (C. O. D. express) subject to trial, and instruct agent to refund money, less charges, if goods are returned.

The following instructions appear on every lot shipped C. O. D. (also on invoice inside C. O. D. wrapper, besides being on wrapper itself) when the article is sent subject to trial:

Hold money ..... days to allow trial; if not accepted refund money **LESS ALL** expense charges and return goods at once.  
**RALPH J. GOLSEN.**

So you run absolutely no risk whatever.

To responsible parties who furnish approved references, 30 days, 3 per cent, 10 days.

Send Chicago references, if possible. This avoids delay, as is likely when necessary to write to other cities. Bank or commercial agency references preferred.

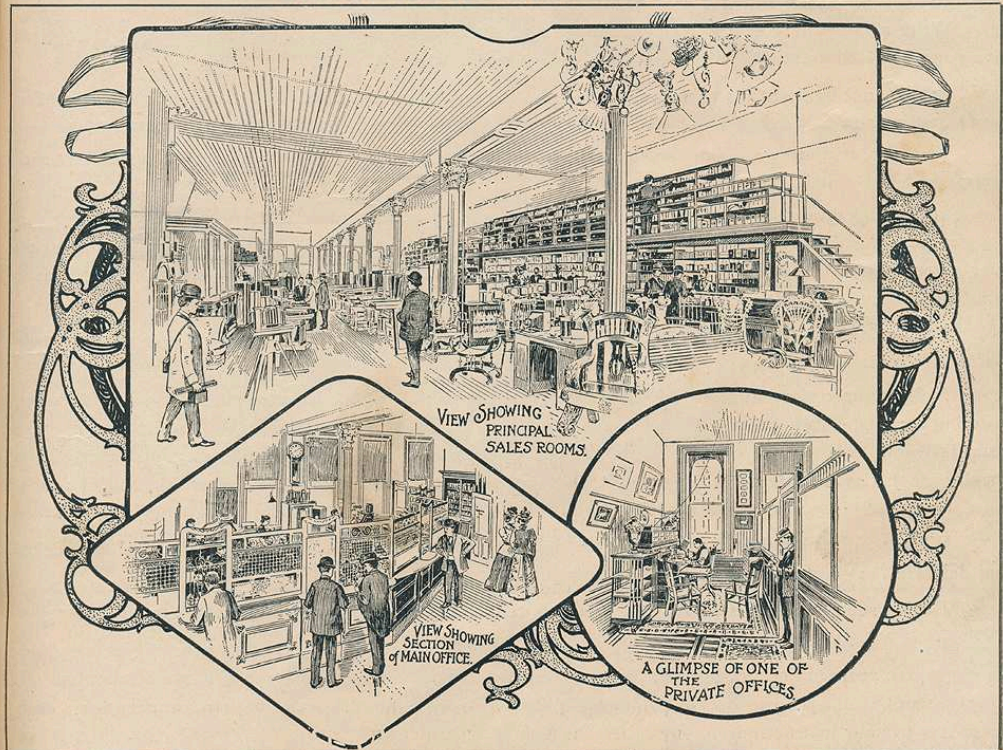
Remit by P. O. Money Order, Express Money Order, or Chicago or New York Draft.

**No Charge for Boxing or Cartage.**

We prepay express charges on prepared photographic paper, that we list, to any point in the United States.

Goods ordered by mail must be paid for in advance, including postage.

**READ IMPORTANT INSTRUCTIONS—PAGE 3.**



### SATISFIED CUSTOMERS.

To satisfy a customer is like skillfully placing a foundation stone for a structure; to satisfy many customers is strengthening that foundation in proportion to the number satisfied; to satisfy practically all customers is the further strengthening of the foundation and the formation of the upper structure; to continue to satisfy the already satisfied customers is like cementing and bolting together the sound and firm structure and preparing it for additions which will follow.

**This is our policy.** We are zealous of the interest of the photographer—which is also our interest.



# Important Instructions.

**Read This.** It will likely save unnecessary correspondence, prevent delays, obviate complaints, and do much to make our dealings mutually satisfactory.

**DO NOT MUTILATE THIS CATALOGUE---save it as a reference from which to order your goods.**

It is not necessary to "cut out" the illustration—order what you want by name or number as listed in this book, and if you think your order is not clear, mention number of page. Write as plainly and definitely as you can. Write only on one side of paper and avoid the possibility of our overlooking any part of your correspondence.

Always state how to ship—freight or express, and mention route preferred.

Write name plainly and give **town, county and state** to which goods are to be shipped, and also give your **Postoffice** address if different from express or freight station.

**Goods sent by mail are at purchaser's risk.** In no instance will we hold ourselves responsible for goods lost in the mails.

Flash light compound, magnesium, liquids, gun cotton, collodion, glassware and other like material cannot be sent by mail.

Small packages can be sent prepaid express at mail rates, provided they go over only one line (no transfer), and provided charges are prepaid. The rate is 1 cent per ounce, and package must not weigh over 4 pounds (64 ounces). Should you order goods this way, **remit charges with order**, and be sure to remit sufficient to cover the express on goods, including the weight of packing.

Use our order blanks and return envelopes when possible. When your supply is low send for more—**they are free.**

Make your orders explicit—do not overlook the size of plates, paper, envelopes, etc.; also when ordering mounts, give number, size, color and quantity. If mounts are to be printed or embossed, make your instructions very plain and submit sample when possible. When ordering grounds be careful to specify which side of the sitter your light falls on, shade of ground; give height, width, and, if continuous, say so, and give size of floor cloth wanted.

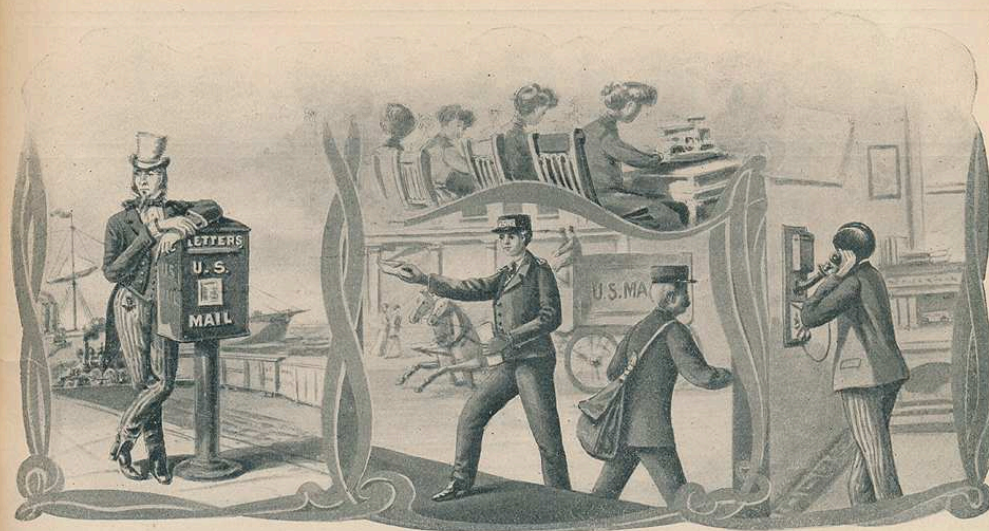
We are not responsible for breakage or damage in transportation. All goods are carefully packed and delivered in good order to the express or railroad company.

Do not send money loose in a letter—if you want to send currency, register your letter.

While we prefer you to confine your orders to goods in this catalogue, it is not necessary, as anything photographic ordered and not in stock will be obtained for immediate shipment, if it can be purchased in Chicago; and, if not, we will obtain them as quickly as possible and forward without unnecessary delay according to your instructions.

On general principles we prefer not to make substitutions; we generally **have what our customers want.** The almost unlimited number of specialties in the many branches and greatly increased field of photography, make it quite impossible to have everything. If in great haste a wise substitution might be preferable to a delay; again, the preference may be a delay rather than a substitution—therefore, a line on your order: "Do not substitute," or "Substitute, if necessary," will assist us materially.

**"We try to avoid mistakes, but never try to avoid righting them."**



## Our Travellers

And we cover the whole territory and cover it quickly

**W**E are the originators of modern methods in Photographic merchandising. We sell goods direct to the consumer by means of catalogues, supplementary lists, *Photopivot* and the representative Photographic Journals. Our catalogues present to you in classified order all of the standard lines of photographic apparatus and supplies as well as our exclusive special line of lenses, apparatus and novelties; you are thus enabled to select at leisure in your own home and at lowest prices such goods as you may require with greater ease and as much accuracy as though you were present at our counters. We are the pioneers in the introduction of complete portrait and view outfits—ready for service. We prepay express charges on photographic paper to any part of the United States. We make a specialty of lenses, apparatus and complete outfits. We are recognized as

"The Greatest Lens and Outfit House of America."

Our Stimulator  
and  
Disseminator of  
Photographic  
Information.

**THE**  
*Photopivot.*  
CHICAGO

Photopivot will  
be mailed  
regularly to  
subscribers  
only. Issued  
Bi-Monthly.

Subscription: 12 Issues, 50 cents. 6 Issues, 25 cents

Remit Money Order, Currency or Stamps



# Choice of Lenses

**T**HE importance of reliable Lenses for any grade of photographic work should not be overlooked.

Success will depend, in a great measure, upon the right choice and proper use of the lens.

The selection of a lens for use in the studio depends upon a variety of conditions, chief of which are the size of picture, the working speed of the lens and the length of studio.

The greater the illuminating-power of the instrument, the more quickly it works, but in due proportion the focal length and size of picture are diminished. Increase of illuminating-power is always attended by sacrifice of depth of focus, and vice versa. Objectives of longer focus produce pictures excelling in correct physical proportions; but this result is never attained by taxing the covering power of a lens—a practice quite common among photographers.

An experienced artist will always prefer a large instrument, provided his studio will admit of its use, instead of trying to make large pictures with a small lens—that is, use a lens designed to cut a size larger **rather** than try to make a lens designed for a smaller size cut larger, as the latter can be accomplished only by the use of small stops and at the expense of speed. Then too, a large, quick-acting portrait lens has the added advantage of enabling the operator to increase the size of field by the use of stops.

The round, soft, atmospheric effect which make portraits lifelike, beautiful and artistic, can be obtained with a lens made exclusively for portraiture.

Rectilinear, symmetrical and anastigmat lenses form a class designed for a variety of work. Each, while applicable for a general purpose lens, has some specific feature designed to meet a distinctive class of work.

It is claimed by manufacturers of "Rectilinear" and "Anastigmat" lenses that they will yield perfect portraits—this is true, as you may look at it—and in many instances this class of lens is used only for all studio work and gives excellent satisfaction. They are particularly desirable for group work. If, for any reason, the operator does not want or cannot purchase more than one lens, then this class of lens will give the best all-around results, but if he aim to equip himself with what he should have in the studio then purchase two or more lenses, each designed for its respective work.

Field photography usually calls for a medium or long focus instrument. This applies also to "commercial" work, except in special cases, when conditions regulate the style of lens necessary.

Wide angle lenses are required for interior photography, confined situations, general outside work, including outside groups.

Anastigmat lenses, and rectilinear lenses constructed with special regard to obviate curvature, are particularly desirable for photo engravers' work.

Every enterprising photographer should possess several instruments capable of producing any class of work required of him.

No one lens can be expected to do the work of several.

The presence of bubbles **does not in any way effect the performance** of a lens.

The discovery of **Jena Glass** permits the construction of Anastigmat lenses of the very highest order. A peculiarity of this glass is the numerous small bubbles throughout its structure; their presence in the glass presents no disadvantages—they do not affect the sharpness of the image or the correction of the lens itself.

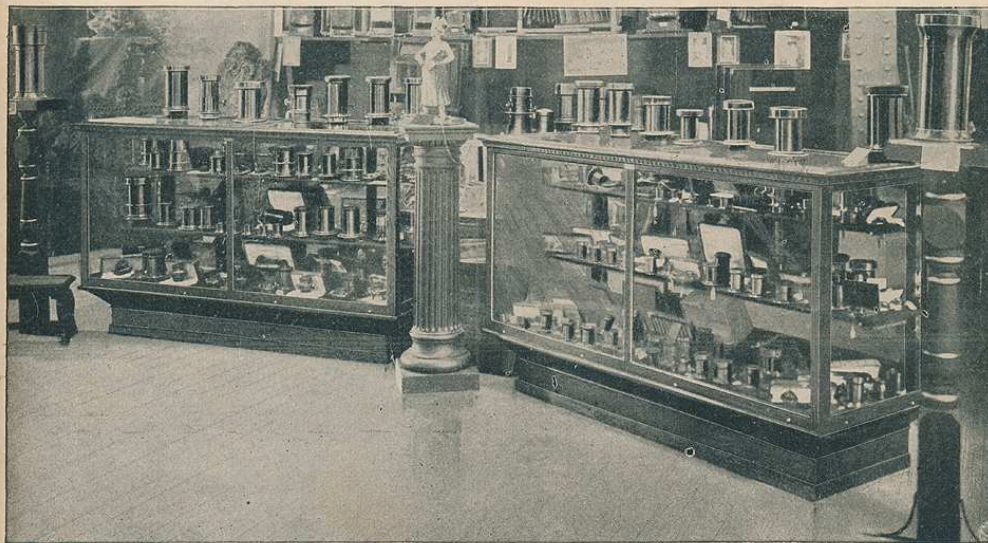
# LENSES.

**W**E list a large line of lenses, including our Special Series and those of other makes which have met with most favor and which we are confident will meet all claimed for them, but if the preference be for some instrument not quoted in this list (we cannot quote them all, space will not permit) we will furnish on short notice and on our liberal trial terms, same as we do any other lens.

**We can supply any lens, of any series, of any size, of any make.**

Every instrument we sell is fully guaranteed.

If desired lenses will be sent C. O. D., with instructions to express agent to hold money five or ten days to allow a trial. If not perfectly satisfactory money will be refunded, less charges for returning the package. We have had some complaints because agents do not always follow our instructions implicitly. In such cases advise us at once and we will look after same promptly—through the **General Agent**, in Chicago.



SHOWING PART OF OUR LENS DISPLAY AT NATIONAL CONVENTION.  
CONCEDED TO BE THE LARGEST DISPLAY OF LENSES EVER EXHIBITED AT A PHOTOGRAPHIC CONVENTION.

## Our Special Lenses.

Most of our series of special lenses are made for us according to specific optical formulae by the Bausch & Lomb Optical Co., the largest manufacturers of lenses in the world. The development of their business from its most insignificant beginning is due to their painstaking, accurate and conscientious work, coupled with the securing for their works the most improved mechanical equipments, the best raw materials and every advance which science has made in constructive formulae. Under these conditions are our lenses made specially for us to meet our requirements, which are the requirements of all classes of photographic work and kindred sciences made known to us during the past eighteen years by constant associations and dealings with and providing for the practical workers in their respective branches. We therefore feel justified in our confidence that we can meet all reasonable demands made upon us in the lens line and in recommending so strongly lenses made for us under the conditions above mentioned. Our claims are verified by the number of testimonials which we have received; but final judgment rests with our customers, as every lens is guaranteed and sent on five or ten days' trial, if required, subject to exchange or money refunded, at the option of the purchaser.



# LENSES

EVERY LENS WE SELL IS GUARANTEED AS REPRESENTED.

## 3 A Series Rapid Portrait.

For Portraits and Groups.

SPEED F 5 (Full Opening.)

Made Specially and for us only by the Bausch & Lomb Optical Co.  
Waterhouse Stops.



This lens has met with greater favor than any ever offered, and at such a moderate price that it is little short of a marvel.

These Lenses have great depth of focus, excellent definition, together with brilliancy of illumination and great speed. They embody the excellent qualities of the extra rapid Rectilinear lenses with a considerable increase in speed. There are no portrait lenses at the same price on the market which will equal their performance.

### PRICES.

No.	Sizes.	Diameter. Inches.	Back Focus. Inches.	Equivalent Focus. Inches.	Price.
8	5 x 8	2 9-16	8 1/2	12	\$35.00
9	6 1/2 x 8 1/2	3 1/4	11	15 1/2	45.00
10	8 x 10	4 1-16	13 1/2	16 3/4	65.00

Distances required for standing cabinet of person 6 feet tall, making 6-inch image on ground glass, is as follows (approximately): 5x8, 13 ft.; 6 1/2x8 1/2, 17 ft.; 8x10, 18 ft. These few express a composite opinion of hundreds of letters received.—

I am pleased with the 3A Lens, it does much better work than a \$90.00 portrait lens I had before.—C. J. Ostrom, Winthrop, Minn.

The 6 1/2x8 1/2 3 A Lens is all right.—Burdick, Middleton, Mich.

The 3 A Lens purchased of you is a very good one; it made fine negatives with it.—F. E. Crosby, Brett, Iowa.

I am more than pleased with the work of the 3 A Lens.—Albert Walter, Phillips, Wis.

The 6 1/2x8 1/2 3 A Series Rapid Portrait Lens was really a surprise. Have taken 8x10 groups with it; have not lost a negative since using it as its speed is away ahead of the most restless youngsters.—D. R. Beckstrom, Tribune, Kan.

See other testimonials in this catalogue.

High Quality Paper—Lowest Prices—and we Pay the Express.

## 3 B Series Extra Rapid Portrait.

SPEED F 4 (Full Opening.)

As Good a Lens as there is on Earth at Any Price!

Iris Diaphragm. Diffusing Focus.



Our Extra Rapid Portrait Lens is the Portrait Lens Par Excellence. The Lens is Composed of Two Systems. The Front Lenses of the front system are cemented together, while the Lenses of the rear system are set in mountings and slightly separated. This Mounting is Adjustable so that the Operator may get Any Diffusion of Light and Softness of Effect Desired. The speed of these Lenses being F-4, they are Suited and Adapted to the Most Rapid Studio Work. Their Optical Properties are unsurpassed by any lenses now on the market regardless of the price. These lenses are corrected to give the greatest sharpness, which is required for making small portraits, and this sharpness may be modified by the adjustable rear mounting giving greater depth of

focus and softer definition on large portraits where the sitter is near the lens. These lenses are designed for portrait work and we can recommend them to you as being without a peer.

### PRICES.

No.	Sizes.	Diameter. Inches.	Back Focus. Inches.	Equivalent Focus. Inches.	Prices.
11	5 x 8	3 1/4	8 1/2	11	\$ 60.00
12	6 1/2 x 8 1/2	4 1-16	11 1/2	16	90.00
13	8 x 10	4 5-16	13 1/2	18 1/4	150.00

Distances required for Standing Cabinet of persons 6 feet tall, making 6-inch image on ground glass is as follows (approximately): 5x8, 12 ft.; 6 1/2x8 1/2, 17 1/2 ft.; 8x10, 19 1/2 ft. These few express a composite opinion of hundreds of letters received.

The 3 B Portrait Lens I ordered from you is a bird; far ahead of anything I have ever used and have had some of the best.—O. M. Pole, Hillsboro, Ore.

Am perfectly delighted with the 3 B Lens.—C. M. Pegrarn, Shaw, Miss.

I like the 6 1/2x8 1/2 3 B Lens better every day.—W. H. Jewel, Christiansburg, Va.

The 5x8 3 B Lens is far superior to any make of lens I ever used; it is quick, cuts all sizes true, safe and brilliant.—J. A. Morris, Rockmart, Ga.

See other testimonials this catalogue.

## Series C Special Rapid Portrait.

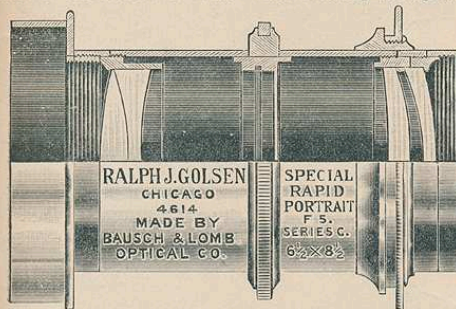
SPEED F 5

Supplied with Improved Iris Diaphragm.

This lens will be found to compare favorably with the highest priced lenses of European manufacture. It is one of our very latest instruments and is meeting with great favor.

These lenses are composed of two systems, the front system being cemented together, while those of the back are supplied with a diffusing adjustment as used in our 3 B Series and the Dallmeyer Series of portrait lenses.

With this diffusing adjustment, which controls the focus, the operator is enabled to secure any desired softness, roundness or distribution of focus. This diffusing arrangement



Showing Construction of Lenses.

should be used only on heads, cabinet or larger, and not to excess, unless it be the special desire of the operator to secure a decided diffused or "fuzzy" effect.

For ordinary cabinet work there is not any necessity for stopping the lens down; by using a smaller stop it will serve you well for groups and general studio work. This lens is designed for rapid portraiture, for the production of brilliant and well defined negatives and for use in short operating rooms.

### PRICE LIST.

No.	Size. Inches.	Diameter. Inches.	Equivalent Focus. Inches.	Back Focus. Inches.	Price.
2	5 x 8	1 7/8	8 1/2	7	\$30.00
1	5 x 8	2 1/8	8 1/2	6 1/2	\$33.00
2	6 1/2 x 8 1/2	2 9-16	11	8 1/2	45.00
3	8 x 10	3 5-16	15 1/2	11 1/2	60.00

We also furnish these lenses fitted with Benster Diaphragm Shutter—for full description of which see shutters, this catalogue.

No.	Price.
1. Fitted with Benster Shutter, complete.....	\$45.00
2. Fitted with Benster Shutter, complete.....	55.00
3. Fitted with Benster Shutter, complete.....	70.00

The outfit received and has created a good impression, the lens is fine.—Illinois College of Photography, Effingham, Ill.

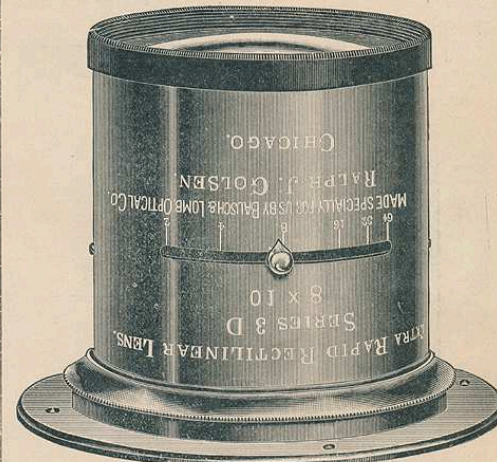
We can supply any lens of any series, of any size.

## Series D Extra Rapid Rectilinear.

(Portrait Rectilinear.)

SPEED F 6 (full opening). IRIS DIAPHRAGM. For Portraits, Groups, Landscapes, Etc. Equal to the Highest Price Lenses, of this type, Made Anywhere.

This type of lens is symmetrical in construction, both the front and back combinations being composed of optical glass perfectly ground, accurately centered and cemented together. They have great speed, covering capacity and depth of focus. The image circle embraces an angle of about 70 degrees. The glass composing these lenses is very hard and exceptionally



brilliant, and is not likely to become scratched or otherwise injured. This lens is specially adapted to studio work, being satisfactory for portraiture, and is especially adapted for groups. It is also a superb landscape lens, and will give satisfaction in every respect.

### PRICES.

No.	Size. Inches.	Diameter. Inches.	Back Focus. Inches.	Equiv. Focus. Inches.	Price.
2	5 x 8	1 7/8	7	8	\$30.00
3	6 1/2 x 8 1/2	1 3/4	8 1/2	9 7-16	40.00
4	8 x 10	2 1/8	9 7/8	11 1/4	50.00
5	10 x 12	2 9-16	12 1/2	14 1/4	60.00
5 1/2	11 x 14	2 7/8	14 3/4	16 3/4	70.00
6	12 x 15	3 5-16	15 1/2	17 1/2	80.00
6 1/2	14 x 17	3 1/2	17 1/2	20	90.00
7	16 x 20	3 13-16	20	22 3/4	100.00

Distances required (approximately) for standing cabinet of person 6 ft. tall, making 6-in. figure on ground glass, are as follows: 5x8, 8 8-10 ft.; 6 1/2x8 1/2, 9 7-16 ft.; 8x10, 12 ft.; 10x12, 16 ft.; 11x14, 18 1/2 ft.

## 3 D Series Lenses.

Fitted with Bausch & Lomb "Automat" Double Valve Time and Instantaneous Shutter,

or with

Bausch & Lomb Volute Shutter.

For full description see shutters, this catalogue.

### PRICES.

	With "Automat."	With "Volute."
6 1/2 x 8 1/2 .....	\$45.00	\$55.00
8 x 10 .....	55.00	66.00

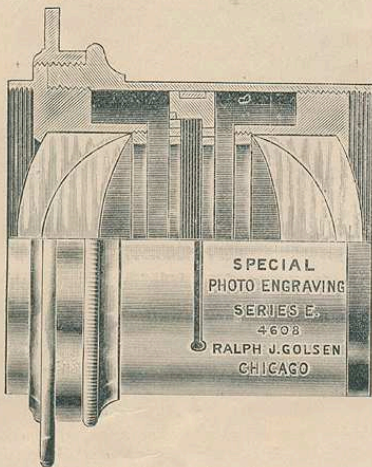
Sizes larger than 8x10 not supplied with these shutters.

A Trial of our Lenses will Convince you of their Merits.



**Series E Special Photo-Engraving Lens**  
For Half Tone, Line Work and Zinc Etching.  
**SPEED F 8**

We have had produced in this instrument the highest type of rectilinear lens, designed especially for Photo Engravers' use, approaching in definition and fine detail the most expensive anastigmat lenses. This series has no equal. Nothing has ever been placed on the market for this line of work that so satisfactorily meets the requirements of the engraver, at so moderate a price. They have been tested by our most practical workers and pronounced marvels. The illustration shows the construction of the lenses. They are mounted in



Showing Construction of Lenses.

strong but not too heavy mountings, and with the modern compact form of hood to which a prism may be most readily adapted.

For Engravers desiring an extremely high-grade lens at an exceptionally moderate price this will fully meet the requirements. These lenses are supplied with the Standard Waterhouse diaphragm. If the square opening diaphragms are preferred, state so in order, and they will be furnished at same price, no extra charge.

**PRICE.**

No.	Size. Inches.	Diameter. Inches.	Equiv. Focus. Inches.	Back Focus. Inches.	Price.
1	8x10	2 3/8	11 1/4	9 3/4	\$55.00
2	10x12	2 1/2	15 5/8	13 3/8	67.50
3	11x14	2 7/8	16 3/4	14 1/4	85.00
4	14x17	3 1/2	20	17 1/2	110.00
5	16x20	3 3/4	22 3/4	19 3/8	140.00

I am more than pleased with the *Special R. R. Lens*, it is far better than a lens I paid double the price for; do not think a better lens can be had anywhere for the price.—J. E. Roy, Lewiston, Maine.

**Ralph J. Golsen**  
gives the best value for your money.

Every Ground we sell is Guaranteed satisfactory.

**Series F Special Rapid Rectilinear.**  
**SPEED F 8**

For Groups, Landscape, Architectural and General Portrait and View Work.

These lenses are especially adapted for all work requiring very rapid lenses with great flatness of field and depth of definition. They are neatly mounted in modern style and furnished with a full set of Waterhouse Stops. The glass from which the lenses are ground is exceptionally clear and bril-



liant, and the lenses are perfectly corrected and especially adapted for all-around work.

The speed is sufficient for all instantaneous work, even under conditions which are not the most favorable. The lenses have excellent covering capacity, and the focus is medium, and will give a most satisfactory perspective.

**PRICES.**

Size Inches	Diameter. Inches.	Back Focus. Inches.	Equiv. Focus. Inchs. s.	Price.
5 x 8	1 3/8	7 1/2	8 3/4	\$15.00
6 1/2 x 8	1 3/4	9 11-16	10 7/8	25.00
8 x 10	2 1/8	11 7/8	13 1/4	35.00
10 x 12	2 1/2	13 7/8	15 7/8	40.00
11 x 14	2 7-16	16 1/2	18 1/2	50.00
12 x 15	2 7/8	16 5/8	19	60.00
16 x 20	3 3/8	21 1/4	24	75.00
18 x 22	3 13-16	25 1/2	29	100.00

Distances required (approximately) for standing cabinet of person 6 ft. tall, making 6-in. figure on ground glass, are as follows: 5x8, 9 1/2 ft.; 6 1/2x8 1/2, 11 ft.; 8x10, 15 ft.; 10x12, 17 ft.; 11x14, 20 ft.

Above Lenses Fitted with Bausch & Lomb "Automat" Double Valve Shutter, or with

Bausch & Lomb "Volute," Iris Diaphragm Shutter.

**PRICES WITH SHUTTER.**

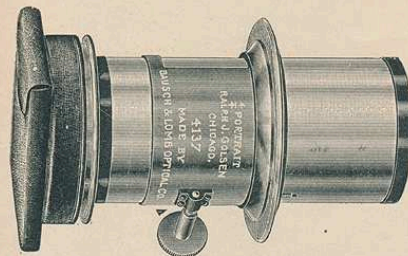
Size	With "Automat."	With "Volute."
6 1/2x8 1/2	\$35.00	\$45.00
8x10	40.00	51.00

Sizes larger than 8x10 not supplied with above shutters.

**Series G "R. J. G." Portrait Combination.**  
**SPEED F 5**

Rack and Pinion Series.

An inexpensive Portrait lens of exceptionally good quality for the studio.



The 1/4, 1-3 and 1/2, latter intended principally for portrait work in the gallery, are excellent for penny picture negatives, copying, etc. The 1/4 and 1-3 chiefly for copying and enlarging, and just the thing for the small penny work, being of short focus and very rapid. The 4-4 will be found a good general Lens around the gallery. Is excellent for portraits, busts, groups, etc. For latter class of work it has to be stopped down some but will admit of diaphragming, as it is of great illumination and rapidity. The very best cheap "Portrait Lens" in the market. The mountings are of brass and nickel of the very finest quality and workmanship.

Sizes.	Back Focus.	Equivalent Focus.	Diameter.
1-4	4 1/2 inches	6 inches	1 1/2 inches
1-3	5 1/2 inches	7 1/2 inches	1 3/8 inches
1-2	7 inches	10 inches	2 1/4 inches
2-3	8 1/2 inches	12 inches	2 1/2 inches
4-4	10 1/2 inches	15 inches	3 inches

**PRICES.**

Size large top.	Size Small top.	Price.
1-4 size will cut.....3 1/4x4 1/4	4 x 5	\$10.00
1-3 size will cut.....4 x 5	4 1/4 x 6 1/2	15.00
1-2 size will cut.....4 1/4x6 1/2	5 x 7	20.00
2-3 size will cut.....5 x 7	6 1/2 x 8 1/2	25.00
4-4 size will cut.....6 1/2x8 1/2	8 x 10	35.00

Distance required for standing cabinet of person six feet tall, making 6-inch image on ground glass are (approximately) as follows: 1-3 size, 8 ft.; 1/2 size, 10 5-6 ft.; 2-3 size, 13 ft.; 4-4 size, 16 ft.

The 6 1/2x8 1/2 R & P Portrait lens gives perfect satisfaction; used 3 B Dallmeyer for six years previous to this, and think this lens equal to it.—De Haven Bros., Kalamazoo, Mich.

I am in receipt of a letter from Mr. S. S. Gordon, New Castle, Penn., saying that the R & P Portrait B & L lens that he bought of you on my recommendation, is giving excellent satisfaction and he is so pleased; writes to thank me for my letter of advice to him.—S. A. Watson, Danville, Ill.

Quality is paramount in all of our productions, and in no instance can the same quality of goods be purchased for less money.

**Series P Special Portrait.**

Rack and Pinion.

Made by Bausch & Lomb Optical Co.

To meet the demand for a special lens at a very low price suitable for penny pictures and up to 5x7, permitting the use of one lens for all work up to full cabinet or cabinet groups and capable of operating in confined situations, we have introduced the *Series P Special Portrait lens*. We recommend it for use with penny cameras or any portrait or group work up to 5x7. It is rapid, has good illumination, considerable depth and will yield most satisfactory results. It is 10-in equivalent focus, cuts cabinet with full opening and 5x7 with largest stop. For a small lens at the price sold, it has no equal. Is supplied with rack and pinion focusing adjustment and complete set of Waterhouse stops.



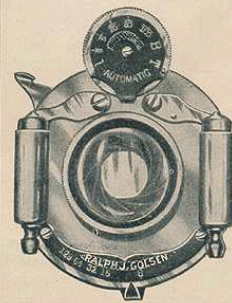
Price \$15.00.

**Series II P Rapid Rectilinear.**

Fitted with Double Valve Shutter.

The extensive use of outfits for penny pictures under varying conditions, such as the traveling photographer meets in his visits to the cities and towns throughout all sections of the country, has necessitated the application of lenses of various construction.

The value of a lens with shutter fitted in the center and operated entirely outside of the camera is quite important in some instances, also the application of the same lens and shutter for outside group or landscape work is a feature that will appeal to the operator who desires to get an outfit for various requirements at the smallest possible cost and to occupy minimum space. The Series II P is offered to meet the above conditions. These lenses are not so rapid as the strictly portrait series, but will perform satisfactorily under ordinary conditions in the studio and for general outside work.



**PRICE.**

Size 5x7 Lens, Fitted with Double Valve Automatic Shutter, complete.....	\$11.50
Price includes bulb and tube.	

Our DISTEMPER BACKGROUNDS, the very best inexpensive grounds ever offered to the trade.

Those King Bee Portrait Outfits are Marvels.



**Series I "R. J. G." Rapid Rectilinear.**

**SPEED F 8**

Supplied with Waterhouse or Iris Diaphragm.



Cut shows Lens for Waterhouse Stops.

These lenses are of the rapid symmetrical type, and are adapted for landscape, architectural subjects, copying and enlarging.

They work with F8 (No. 4) and give excellent results when employed for portraiture at full aperture.

Even the larger lenses of this series are suitable for studio work, having unusually sharp definition, uniform illumination and great depth, being qualities so much sought for in groups, figures, large heads, etc.

The back combination may be very advantageously used as a single view lens, covering about twice the size of plate with half the speed.

Equip. Focus Inches	Dia. m. Inches	Plate F8 Inches	Price Waterhouse Diaphragm	Price Iris Dia. Lever Style
6½	7/8	4 x 5	\$10.00	
8½	1¼	5 x 7	12.00	
9½	1½	5 x 8	12.00	\$15.00
11	1¾	6½ x 8½	15.00	20.00
13	1¾	8 x 10	22.50	30.00
15	2¼	10 x 12	30.00	35.00
18	2¾	11 x 14	35.00	40.00
21	3	14 x 17	45.00	50.00
24	3¾	16 x 20	60.00	65.00
27	3¾	18 x 22	65.00	75.00
30	4¼	20 x 24	75.00	90.00

Distance required between lens and subject for standing Cabinet Pictures of persons 6 feet tall, making 6-inch figure on Ground Glass are as follows: 5x8 lens, 9½ feet; 6½x8½ size lens, 11 feet; 8x10 size lens, 13 feet; 10x12 size lens, 15 feet; 11x14 size lens, 19 feet.

I find the 8x10, Series I, Special R. R. Lens purchased from you very satisfactory.—M. B. Stubblefield, New Bloomfield, Missouri.

The Special R. R. lens purchased from you can't be beat for the price. It is O. K. Have made fine groups with it.—C. S. McKibbell, Schaller, Iowa.

We can Supply any Lens of any Series, of any Size.

**King Favorite Rapid Rectilinear.**

**SPEED F 8**

Fitted with Improved Iris Diaphragm.



This cut shows the actual size of the 6½x8½ Lens.

This lens has good illumination and fine definition. It is ground from imported glass and is a general purpose lens—of the double rectilinear type—is rapid, working at F. 8, possesses qualities not equalled by lenses sold at double the price. This lens is specially recommended for all classes of out-door work, and groups; also, has qualities which commend it for portraits, for which purpose it has been used with excellent results. Every lens is fully guaranteed to do all we claim for it.

The Improved lever Iris diaphragm is now supplied (same as in the R. J. G. Rapid Symmetrical illustrated next page) in place of as shown in above cut.

With Stop F. 8.	Equivalent Focus.	Diameter of Lens.	Price.	Our Net Price.
6½ x 8½	11-inch	1½-inch	\$20.00	\$15.00
8 x 10	13½-inch	1¾-inch	22.50	17.00

These lenses will cut a size larger with smaller stop.

**"R. J. G." Rapid Symmetrical.**

**SPEED F 8**

Iris Diaphragm.

For Views, Groups and Portraits, Landscape and Instantaneous Work. Angle, about 60 degrees.

The "R. J. G." Rapid Rectilinear Symmetrical works at F8. We can confidently recommend these lenses, especially for all around work, and the speed is sufficient for all instantaneous exposures, even under conditions which are not the most favorable. Have excellent covering capacity, the focus is medium and will give a most satisfactory perspective.

Size	Dia. Inches.	Equip. Focus Inches.	Back Focus Inches.	Price.
6½ x 8½	1¼	11	9¼	\$25.00
8 x 10	1¾	13	11½	32.00
6½ x 8½ Fitted with Double Valve Automatic Shutter,				35.00
8 x 10 Fitted with Double Valve Automatic Shutter,				40.00

(See illustration page 13.)

**"R. & J. G." Rapid Symmetrical—Con'd.**

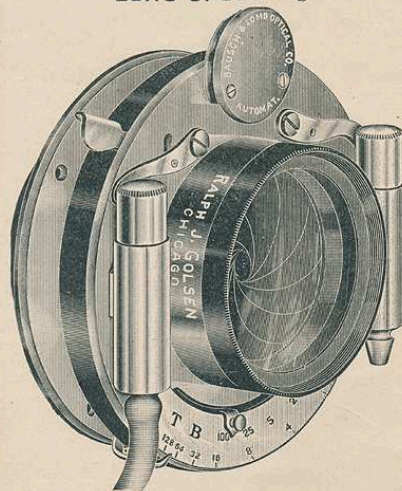


See Description and Price List, page 12.

**Rapid Rectilinear.**

Fitted with B. & L. "Automat" Shutter.

**LENS SPEED F 8**



The Lens and Shutter.

Made especially for us by Bausch & Lomb Optical Co.

The "R. J. G." Special Rapid Rectilinear Lens works at F. 8 (largest stop). For Views, Groups and Portraits. Landscape and Instantaneous work.

We can confidently recommend these Lenses especially for all around work, and the speed is sufficient for instantaneous exposures. Have excellent covering capacity, the focus is medium and will give a satisfactory perspective. Are truly wonderful and inexpensive instruments, so will let it suffice that they speak for themselves.

Order your Paper from us—we Prepay the Express.

**Rectilinear Lens and Shutter.—Con'd.**

**Shutter**—Ever alert to embody the very latest and best, we have adopted for 1902, the very best inexpensive shutter made—the Bausch & Lomb 1902 "Automat" Double Valve Time and Instantaneous. The shutter automatically sets itself after each exposure.

This shutter is not bulky—it is small, compact, accurately and strongly built—it presents a handsome appearance and its action is finer than its appearance.

Bulb and tube included with lens and shutter.

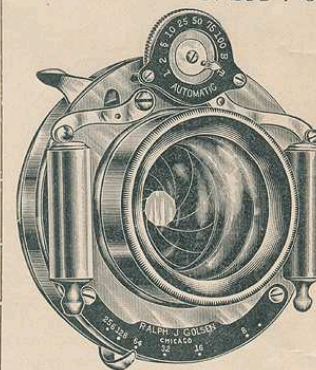
**PRICES.**

	Price.
6½x 8½ Lens and shutter.....	\$25.00
8 x 10 Lens and shutter.....	30.00

**"Junior" Rapid Rectilinear.**

Fitted with Double Valve Automatic Shutter.

**SPEED F 8**



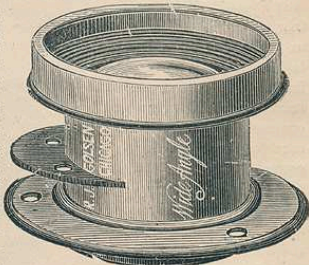
This double lens, a Rapid Rectilinear, works at F. 8, has good illumination and fine definition. It is a general purpose lens and is recommended for all classes of out-door work and groups, has qualities which also commend it for portraits, for which purpose it has been used with excellent results. These lenses are fully guaranteed to do all we claim for them.

No.	Size.	PRICES.	Price.
0	4 x 5	Lens and shutter.....	\$ 8.50
1	5 x 7	Lens and shutter.....	10.50
2	6½ x 8½	Lens and shutter.....	19.50
3	8 x 10	Lens and shutter.....	25.00

**"No Name" Wide Angle.**

80 TO 90 DEGREES

This lens gives a good illumination and is sufficiently fast for all ordinary interior and outside group and landscape work. It serves as a view lens and for photographing buildings at short distance. While not as rapid as some wide angle lenses, it is used very successfully for flash-light work. It is particularly desirable in view of its good qualities at such a moderate price.

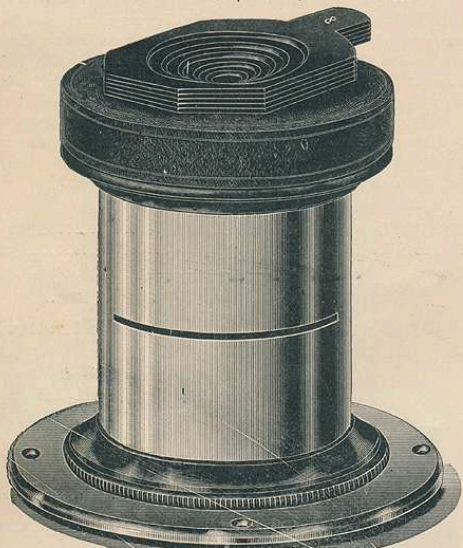


**PRICES.**

No.	Size.	Angle.	Price
1	4 x 5	80 to 90 degrees.....	\$6.00
2	5 x 7	80 to 90 degrees.....	9.00
2½	5 x 8	80 to 90 degrees.....	10.00
3	6½ x 8½	80 to 90 degrees.....	12.00
4	8 x 10	80 to 90 degrees.....	13.50



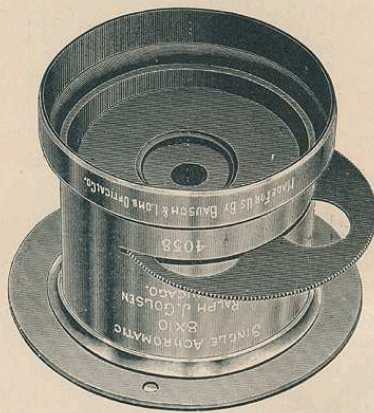
"No Name" Rapid Rectilinear.



These lenses are of astonishingly fine quality and will agreeably surprise the purchaser. Manufactured by a maker of high reputation, but whose name, because of exceedingly low figures we are not at liberty to give, therefore "nameless." Are of rapid symmetrical type, adapted for architectural subjects, copying and enlarging, as well as for portraits, groups and every variety of rectilinear work, including views; work with large aperture, and quick enough for all ordinary purposes inside and instantaneous for view work.

PRICES.			
Size.	Diam.	Back Focus.	Equip. Focus.
6 1/2 x 8 1/2	1 3/8 inches	11 inches	12 inches
8 x 10	1 3/8 inches	13 3/8 inches	14 7/8 inches

"R. J. G." Rapid Single Achromatic.



For all ordinary work, these lenses give universal satisfaction, showing very brilliant effects and fully covering the plates specified.

Each lens is mounted in brass, highly finished, and is furnished with rotary diaphragm having five stops, and is fitted with a morocco cap.

PRICES.			
Back Focus.	Size of Plate with Stop F 16.	Diameter of Lens.	Price.
6 inches	4 x 5 inches	1 1/4 inch	\$2.50
8 inches	5 x 7 inches	1 1/4 inch	3.75
9 1/2 inches	5 x 8 inches	1 1/4 inch	4.00
11 1/2 inches	6 1/2 x 8 1/2 inches	1 5/8 inch	5.00
12 1/2 inches	8 x 10 inches	1 3/8 inch	6.00
17 inches	10 x 12 inches	2 inch	7.50
19 inches	11 x 14 inches	2 1/2 inch	10.00

"R. J. G." SYMMETRICAL STEREO.

Rapid Rectilinear. Speed F. 8. They are perfectly matched for Stereoscopic work.

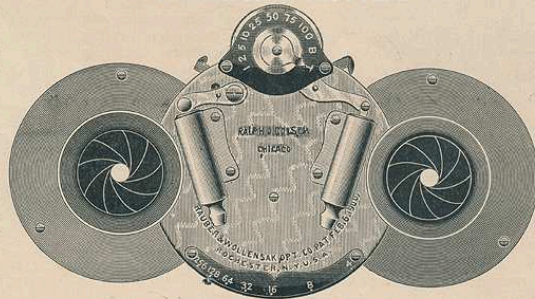
It is set for action by a trigger at the right, shown in the illustration, and released with a bulb or the finger as preferred. The leaves work simultaneously, consequently both pictures receive exactly the same exposure.

The Stereo Shutter has a triplicate movement, operating for time, instantaneous and bulb exposures. The iris diaphragms move in unison by adjusting a single index at the bottom.

Any desired speed to 100 part of second can be ob-

Lenses, per pair, without shutter, \$18.00; complete with shutter, \$30.00.

STEREOSCOPIC SHUTTER.



About One-Half Actual Size.

PRICE.

Stereo Shutter, 7/8-inch opening, no lenses, \$15.00; extra for fitting to other lenses, \$1.00.

Our complete View Outfits are thoroughly modern.

Series II A "R. J. G." Medium Angle.

60 DEGREES



We have to offer a lens between the wide angle lenses and the Rapid Rectilinear lenses to meet a long felt want among photographers. These lenses have an angle of 60 degrees and are especially desirable for groups and interiors when taken by flash light. We can recommend these lenses also where a considerable angle is desired in landscape photography.

PRICES.			
Size.	Diameter.	Equip. Focus.	Price.
4 x 5	3/4 inch	5 1/4 inch	\$10.00
5 x 8	7/8 inch	6 1/2 inch	13.50
6 1/2 x 8 1/2	1 1/8 inch	8 inch	18.00
8 x 10	1 1/4 inch	10 1/2 inch	20.00
11 x 14	1 7/8 inch	14 inch	22.50
14 x 17	2 inch	17 inch	30.00

Series II B "R. J. G." Wide Angle.

80 DEGREES

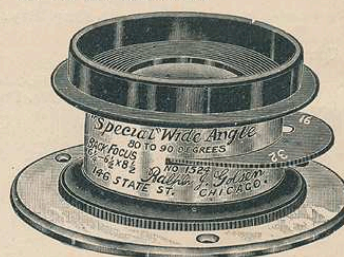


These lenses have an angle of about 80 degrees. The combinations are symmetrical, mounted neatly and very compact. These lenses are especially adapted for that class of work which does not require the great angle which is obtainable with our extreme angle lenses, and will be found satisfactory for all flash light work and general interiors.

PRICES.			
Size.	Diameter.	Equip. Focus.	Price.
4 x 5	3/4 inch	3 3/4 inch	\$ 7.50
5 x 8	3/4 inch	5 1/4 inch	9.00
6 1/2 x 8 1/2	7/8 inch	6 1/2 inch	15.00
8 x 10	1 1/8 inch	8 inch	18.00
11 x 14	1 1/2 inch	10 1/2 inch	22.50
14 x 17	2 inch	14 inch	27.50

Series II C "R.J.G." Improved Wide Angle

80 TO 90 DEGREES



These lenses are highly recommended for those desiring a cheap lens for general use, such as high buildings, interiors, and architectural work. They have an angle of from 80 degrees to 90 degrees, depending upon the stops used. These lenses have rare covering capacity and equality of illumination, and where the larger stops are used a speed suitable for instantaneous or flash light exposures can be obtained. The mounting now made without hood (different from cut herewith) allowing more freedom of light and consequently giving greater rapidity.

The great King Bee Portrait Outfits fully described in this Catalogue.

Series II C, Wide Angle - Continued.

PRICES.

Size of Plate with Stop F16.	Back Focus.	Extra Flange.	Price
4 x 5	3 3/8 inches	\$0.30	\$ 7.50
5 x 7	4 7/8 inches	.35	9.00
5 x 8	5 5/8 inches	.45	10.00
6 1/2 x 8 1/2	6 1/4 inches	.55	12.00
8 x 10	7 1/4 inches	.75	15.00
11 x 14		1.25	20.00

Series II D "R. J. G." Extreme Wide Angle

100 DEGREES



These Lenses represent the highest type of construction in the manufacture of extreme wide angle lenses. The Angular Aperture is about 100 Degrees. The illumination is exceptionally brilliant and even over the Entire Field, enabling them to be used for flash light photography with much larger stops than usual. They are fast enough for instantaneous out of door work and are Guaranteed to Give Perfect Satisfaction for the class of work for which they are intended. If desired these lenses may be used on the next larger plate by using a small stop, enabling the photographer in many instances to get the greatest angle which is possible to obtain with a photographic lens.

PRICES.			
Size.	Diameter.	Equip. Focus.	Price
4 x 5	3/4 inch	3 1/4 inch	\$13.50
5 x 8	3/4 inch	3 1/2 inch	17.50
6 1/2 x 8 1/2	3/4 inch	5 1/4 inch	22.50
8 x 10	7/8 inch	6 1/2 inch	25.00
11 x 14	1 1/8 inch	8 inch	30.00
14 x 17	1 1/2 inch	10 1/2 inch	40.00

Series II E "R. J. G." Extreme Wide Angle Anastigmat. 100 DEGREES



This objective is the result of recent very exhaustive computations on the famous Jena glass and is constructed for the most extreme angle work where a perfect panorama is desired.

The angular aperture runs up to 100 degrees with entire freedom from distortion, and combines a flatness of field and minute defining power.

Its admirable adaptability for all classes of interior and architectural work will no doubt secure for this lens a most enthusiastic reception.

PRICE.			
Equip. Focus.	Diameter.	Plate F 14.	Extra Flanges.
3 1/2	5/8	4 x 5	\$0.30
4 1/8	3/4	5 x 7	.35
5 1/4	7/8	5 x 8	.45
6	1	6 1/2 x 8 1/2	.55
7 1/2	1 1/8	8 x 10	.75
9	1 1/2	10 x 12	1.00
10 3/8	1 3/4	11 x 14	1.25
13	2 1/4	14 x 17	1.75
17	3	18 x 22	45.00
24	4	20 x 24	60.00



## Series H "R. J. G." Convertible Combination.

## A Convertible Wide Angle Rectilinear Lens.

Forming Lenses of 90° and 70°; Short Focus, Long Focus, Extreme Long Focus; Wide Angle Rectilinear Series; for Architectural work, giving flat field and sharp definition. Rapid Rectilinear for studio use—and four single combinations of four distinct focal lengths, applicable for varied Tele-photo and Landscape Photography.

Ten Lenses in One and the Price Particularly Low.

For those desiring a complete set of lenses for all purposes we have had constructed the above Convertible objective of ten different focal lengths.

Each focal length covers the one plate for which the entire set is catalogued, producing different angle pictures and not requiring ten different size cameras to obtain all benefits of the different combinations.

Thus the 8x10 set will give focal lengths of from 6 inches to 25 inches, producing angles from 90 de-



grees to 15 degrees and each different focal length covers the 8x10 plate perfectly.

From the great variety of focal lengths possible with the different combinations, the photographer is certainly capable of performing any conceivable form of work, from extreme angle pictures to portraits and groups.

Each set is contained in a velvet lined case, as shown in cut, and besides being most effective, presents a very handsome appearance.

Size Plates.	Focal Lengths.	Size Plates.	Focal Lengths.
6½x8½.....	5¼, 6¼, 7, 8, 9, 10, 13½, 18, 22	8x10.....	6, 7, 8, 9, 10, 11, 12, 15, 20, 25

Each Lens is numbered and the combinations are formed with the greatest simplicity.

The visible diameter of R. J. G. Convertible Lenses are:

Rectilinear Combination.....8 x10 No. 4 front lens 1¾ in.	Wide Angle Combination.....8 x10 No. 2 front lens 1¾ in.
Rectilinear Combination.....8 x10 No. 3 back lens 1¾ in.	Wide Angle Combination.....8 x10 No. 1 back lens 1 in.
Rectilinear Combination.....6½x 8½ No. 4 front lens 1¾ in.	Wide Angle Combination.....6½x 8½ No. 2 front lens 1 in.
Rectilinear Combination.....6½x 8½ No. 3 back lens 1¾ in.	Wide Angle Combination.....6½x 8½ No. 1 back lens 1 in.

The separate lenses, Nos. 1, 2, 3 and 4, are used separately or with one another to form various combinations or focal length lenses. Directions with each set.

## PRICE.

6½ x 8½, \$22.00      8 x 10, \$25.00

Above sets fitted with Bausch & Lomb "Automat" Double Valve Shutter or Wollensak Double Valve Automatic—complete Lens and Shutter—

6½ x 8½, complete, \$32.00      8 x 10, complete, \$35.00

Do not Overlook our Special Portrait Lenses.

## Bausch & Lomb-Zeiss Anastigmat Lenses.



THESE lenses, invented by Dr. P. Rudolph, of the firm of Carl Zeiss, Jena, from whom the Bausch & Lomb Optical Co. have secured the exclusive right to manufacture them in America, under American patents, have marked an epoch in the construction of photographic lenses. Their optical advantages are so pronounced that they were immediately recognized, and are today generally accepted as the standard photographic lenses.

Like all meritorious articles, they were followed by imitations, but it is self-evident that the knowledge and ability which originated this type of lens must forge ahead of all imitators, no matter how strenuous their efforts. This truth is exemplified in the fact that "Zeiss Anastigmat" is the synonym for the "Best photographic lenses in existence."

The patentees have supplied us with the exact specifications for their construction, and keep us fully informed as to all improvements and the construction of new types. The high quality of these lenses exacts the most critical methods of workmanship in the various processes of manufacture and in the final tests. However our long experience in the production of precise optical work, the painstaking care which is used, and the systematic control of work at each step of manufacture enable us to produce lenses possessing in the highest degree the superior optical properties appertaining to this improved construction.

The advantages of the Zeiss Anastigmat Lenses are: *The perfect correction of astigmatism*, astigmatism being a defect inherent in all the older types of lenses and even in some "anastigmat" lenses of other makers.

*The proper correction of axial and marginal rays*, and the exact coincidence and equal magnitude of the visual and chemical images giving sharply defined pictures over the entire plate, reproducing straight lines as such and retaining the definition with all stops, whichever may have been used to obtain the focus.

There is *no flare spot or ghost* to impair the brilliancy of the image, even when used under dazzling light.

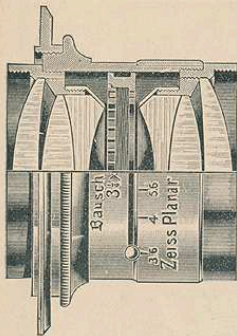
The definition being perfect even with large apertures, as a result of the elimination of astigmatism and of curvature of the image, lenses of shorter focus for a given sized plate may be used, giving greater depth of focus, wide angle, and making the lens itself more compact.

The Zeiss Anastigmats, except Series VIIa, are not symmetrical lenses in the sense that either of the combinations composing them may be used separately for photographic purposes, as it is impossible without the use of an additional set of elements to produce a single combination which will give satisfactory results.



**Series Ia Bausch & Lomb-Zeiss Planar.**

**SPEED F 3.6**



These objectives are composed of two systems, the outer element of each being a single collective lens, and the inner composed of two dispersive lenses, having (approximately) the same refractive, but different dispersive power.

These lenses reach the extreme limit of rapidity, the speed varying from f-3.6 in the smaller and medium sizes to f-5 in the larger sizes. The angle of the image circle is 72 degrees, of which 50 degrees are utilized on the small plates for which the lenses are rated. The Planars are superior in precision of defining power to any of the other anastigmats. In fact, the results obtainable are such as to leave nothing further to be desired.

In this lens the photo-engraver will find that which he has looked in vain for in other lenses, viz., a lens which will give a reproduction equal to the copy, from same size down to the smallest reduction. They possess in addition great speed, making them time savers, not only in giving the best work, but with very short exposure.

For those difficult and peculiar classes of instantaneous photography where speed is the imperative quality, the Planar will be found a great improvement over the extra rapid lenses of other types heretofore used, as they have speed equal to that of the fastest portrait lenses, and at the same time a covering power which the others have not. For making kinetograph and other negatives for the projection of animated pictures, these lenses are particularly well adapted, the smaller sizes having the requisite depth of focus and speed.

On account of their extreme rapidity and consequent large size of the lenses, the Planars are somewhat heavier than the other Anastigmats.

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

No.	Size of Plate Covered with Largest Stop.* Inches.	Equivalent Focus. Inches.	Diameter of Lens. Inches.	Speed.	Angle Deg.	PRICE. Lens Only.†
9	2 1/2 x 3 1/4	4 1/2	1 1/4	f-3.6	70	\$ 53.00
10	3 1/4 x 3 1/4	5	1 1/2	f-3.8	70	63.00
11	3 1/4 x 4 1/4	6 1/4	1 3/4	f-3.8	70	77.00
12	4 1/4 x 6 1/2	8	2	f-4.	65	109.00
13	5 x 8	10	2 1/2	f-4.	65	150.00
14	6 1/2 x 8 1/2	12	2 3/4	f-4.2	62	192.00
15	7 x 9	14 1/2	3 1/4	f-4.5	72	241.00
16	8 x 10	16 1/2	3 3/4	f-4.5	72	300.00
17	10 x 12	18 1/2	3 3/4	f-5.	68	349.00
18	12 x 16	24	4 3/4	f-5.	68	698.00

\*The next larger plate is well covered with intermediate stop. †Nos. 9, 10, 11 and 12 only can be fitted with Iris Diaphragm Shutter.

Sizes larger or smaller than listed above will be made to order if desired.

**REMEMBER**

**We make no charge for boxing or cartage.**

*R. J. G. Vignettors—simple adjustment and not expensive.*

**Series II Bausch & Lomb-Zeiss Anastigmat.**

**SPEED F 6.3**

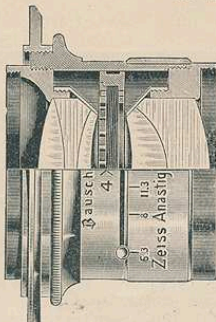


Figure shows 4 x 5 Series II Lens actual size.

The front system of these objectives is composed of two and the back system of three lenses. As the systems are necessarily quite large, on account of the large aperture, the lens as a whole is somewhat heavy; the mounts, however, are reduced in weight in every practical way. The Iris Diaphragm shutter may be fitted to all sizes up to and including the 6 1/2 x 8 1/2. The sizes larger than 6 1/2 x 8 1/2 have an aperture greater than the largest opening of the shutter, hence, if fitted with a shutter, the speed would be reduced. Special shutters must therefore be used on these larger sizes.

The speed of this series is f-6.3. Being one of the most rapid of the anastigmats, they are particularly adapted for the fastest instantaneous exposures, ordinarily rapid instantaneous work on cloudy days, in shaded situations, and in the studio.

The full angle of the field is 85 degrees, of which 46 degrees are utilized on the plates for which the respective sizes are rated. The anastigmatic and spherical corrections are of a very high order, especially considering the speed and angle.

Where a lens is to be selected solely on account of great speed, and where the VIIa is too expensive, this lens will be found the best of all anastigmats.

They possess a further advantage, that they may be used for all ordinary purposes by reducing the speed (aperture), thus giving the same covering power and depth of focus which other lenses, working under the same conditions, have.

The Series II lenses are especially desirable for the studio on account of their great speed combined with optical qualities which enable the photographer to place sitters for groups in any desired position, and does not confine them to the usual semi-circular arrangement in order to secure equal definition and size of figures.

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

No.	Size of Plate Covered with Stop F 6.3.* Inches.	Equivalent Focus. Inches.	Free Diameter of Largest Lens. Inches.	PRICE. Lens Only.	When Fitted with Diaphragm Shutter.
1	2 3/4 x 3 1/4	3 3/8	5/8	\$30.00	\$45.00
2	3 1/4 x 4 1/4	4 1/8	3/4	33.50	48.50
3	4 x 5	5 1/2	1	49.50	55.50
4	4 1/4 x 6 1/2	6 11-16	1 1/4	51.00	66.00
5	5 x 7	8 1/4	1 7-16	64.50	80.50
6	5 x 8	9 13-16	1 5/8	78.50	96.00
7	6 1/2 x 8 1/2	11 13-16	2	108.50	126.00
8	8 x 10	14 3-16	2 3/8	150.00	
9	10 x 12	16 15-16	2 13-16	192.00	
10	11 x 14	20 1-16	3 1/4	249.50	
11	12 x 15	23 1/4	3 11-16	300.00	

\*The next larger plate is well covered with small stop.

Price for matching two lenses for stereoscopic work, \$3.00.

Special sizes of Series II lenses, either larger or smaller than listed above, are made to order only. Prices on application.

**Series IIa Bausch & Lomb-Zeiss Anastigmat.**

**SPEED F 8**

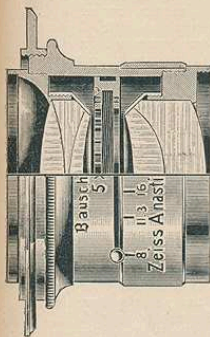


Figure shows the 5x7 Series IIa Lens actual size.

The front system of these objectives is composed of two and the back system of three lenses, special Jena glass being used. The two systems have a greater separation than in the other anastigmat lenses, and therefore admit the application of the Iris Diaphragm shutter, Volute and Automat as well as the Unicum and other shutters which operate between the lenses, to the smaller sizes. The mountings are extremely neat and compact.

These lenses have a speed of f-8 and give ample illumination under unfavorable circumstances. The anastigmatic and spherical corrections are not equaled in any other lens, except the Series VIIa. They have therefore

unequaled covering power, reproducing the minutest detail without the necessity of reducing the aperture, and rendering straight lines at all angles and in all parts of the field as such. They have an angular field of 75 degrees, 60 degrees of which are utilized on the plates for which the various sizes are rated. The focus of each lens of the series is shorter for the plate for which it is rated, than can be employed with other lenses, thus giving greater depth of focus and angle.

On account of their superior optical qualities, short focus, the compactness of the mounting, and the applicability of shutters to them, the smaller numbers are better suited for use with hand cameras than any other lenses, excepting only the Series VIIa. This is also true regarding all the sizes when used for tripod cameras. In fact, they are the best of all the Zeiss Anastigmats where one lens only is to serve for all kinds of work.

In a well lighted studio they are suited for portraits of heads and full figures on account of their depth of focus and for groups, as they do not require the proverbial semi-circular arrangement in order to secure definition and equal size of all figures.

Severe and practical tests have shown the Series IIa lenses to be well suited for copying, on account of faultless reproduction of detail, flatness of the field, and the capacity to copy straight lines at all angles. They are in everyday use by a large number of photo-engravers.

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

No.	Size of Plate Covered with Stop F-8.* Inches.	Equivalent Focus. Inches.	Free Diameter of Largest Lens. Inches.	PRICE. Lens Only.	When Fitted with Diaphragm Shutter.
1	4 x 5	4 3/8	5/8	\$30.00	\$45.00
2	4 1/4 x 6 1/2	5 1/8	3/4	33.50	48.50
3	5 x 8	6 1/2	1	44.00	59.00
4	6 1/2 x 8 1/2	8	1 3-16	54.50	69.50
5	8 x 10	9 5/8	1 7-16	64.50	80.50
6	10 x 12	11 3/8	1 5/8	85.50	103.00
7	11 x 14	13 1/4	2	125.50	143.00
8	14 x 17	17	2 3/8	160.50	

**Series IIIa Bausch & Lomb-Zeiss Anastigmat.**

**SPEED F 9**

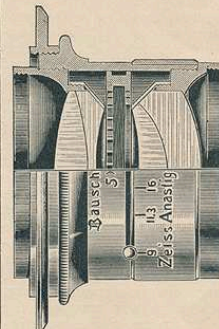


Figure represents the 5x7 Series IIIa Lens actual size.

The objectives of this series are composed of four lenses, somewhat less in diameter than the preceding series, therefore lighter and more compact.

Having a speed of f-9, they are suitable for all ordinary instantaneous work. The anastigmatic corrections are perfect beyond the size of plate for which they are rated. The field embraces an angle of 97 degrees, and about 55 degrees are included by the plates for which the various numbers are scheduled. It is therefore practical to use them as medium wide-angle lenses on larger plates than those for which they are rated, giving perfect definition to the margin, an advantage not possessed by any lens of any other make.

Where a cheaper though somewhat slower lens than series IIa is desired for hand camera work, the IIIa is recommended.

For general photography, they are good outdoor lenses and cheaper than Series IIa, and may be used as medium wide angle objectives on larger sized plates than those for which they are rated.

The small sizes have the proper angle for stereoscopic work with great depth of focus.

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

No.	Size of Plate Covered with Stop F-9.* Inches.	Equivalent Focus. Inches.	Free Diameter of Largest Lens. Inches.	PRICE. Lens Only.	When Fitted with Diaphragm Shutter.
00	2 3/4 x 3 1/4	3	7-16	\$21.00	\$36.00
00	3 1/4 x 4 1/4	3 3/4	1/2	21.00	36.00
1	4 x 5	4 3/4	5/8	23.00	38.00
2	4 1/2 x 6 1/2	5 1/8	3/4	20.50	41.50
3	5 x 7	6 3/4	7/8	31.50	46.50
4	5 x 8	7 11-16	1	35.00	50.00
5	6 1/2 x 8 1/2	9 1-16	1 1/4	45.50	60.50
6	7 x 9	10 3/4	1 7-16	56.00	72.00
7	8 x 10	12 1/2	1 5/8	70.00	86.00
8	10 x 12	16	2	105.00	122.50
9	11 x 14	19 1/2	2 7-16	139.50	
10	12 x 15	23 3/8	2 13-16	174.50	
11	14 x 17	27 3-16	3 1/4	227.00	
12	16 x 20	32 1/4	3 11-16	279.00	

\*Next larger plate is well covered with smaller stop. Price for matching two lenses for stereoscopic work, \$3.00. Special sizes of Series IIIa lenses, either larger or smaller than listed above are made to order only. Prices on application.

In our description of the various Bausch & Lomb Lenses, we have covered the most important features, but if further detailed information is wanted, write to us for complete catalogue of Bausch & Lomb Lenses and it will be promptly forwarded.

*Celebrated "6 in 1" Headgrounds are Good Grounds.*



Series VII Bausch & Lomb-Zeiss Single Anastigmats.

SPEED F 12.5

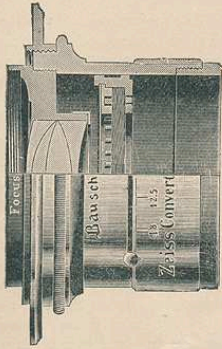


Figure shows No. 1, Series VII Lenses actual size.

The single anastigmatic system is composed of four elementary lenses (two pairs) cemented together. The lens system is mounted in a separate adapter of standard size, which fits either end of the tube of the mount, thus the combination of two systems of the same or different foci, each of which is in itself a perfect anastigmat, forms a doublet of extreme speed and angle. A Series VII single anastigmat consists of one lens system in an adapter, and a mounting into which the lens system fits. Has Iris Diaphragm. The apertures (stop numbers) are engraved in U. S. numbers on a movable ring, which may bear numbers for two or more single anastigmats of different foci, and also

for their combined focus. Each system has a serial number and the focal length engraved upon it for reference.

The speed of the single anastigmats is f-12.5. The field has an angle of 85 degrees, of which from 35 to 48 degrees are utilized on the plates for which each size is listed.

While it is not intended that the single anastigmats shall take the place of the more rapid and wider angle doublets, they form the basis for the Series VIIa Convertible Anastigmats, and have in addition a distinct field of their own, in that, when used singly, they give the most excellent results as landscape lenses, the ratio of focus to diagonal of plate for each number being considerably greater than that of the doublet lenses, commonly used for all around work.

For outside group work they are also excellent, giving negatives of great brilliancy and beautiful definition, with agreeable perspective.

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

Table listing lens specifications for Series VII, including size of plate covered, equivalent focus, back focus, diameter, and price.

\*The next larger plate is well covered with small stop.

The mountings of these lenses are provided with a removable ring, engraved with the F value of each of the Single and of the Doublet combinations.

If an additional combination is purchased, the graduated ring is exchanged for another engraved with scales for all of the combinations.

When ordering an additional Single combination, give the serial number of the lens with which it is to be used.

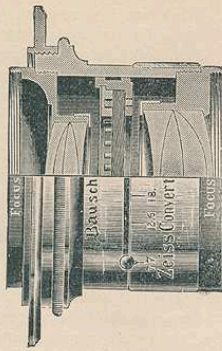
When the Single combination is desired without mounting, an allowance of \$1.50 will be made on numbers 1-5, and \$3.00 for numbers 6-10.

Nos. 1, 2, and 3 fit the same mount, and each larger size requires a succeeding larger mount; all sizes below any given size can, however, be fitted for that mount if desired.

We Prepay Express Charges on all Photographic Papers that we list.

Series VIIa Bausch & Lomb-Zeiss Quadruple Anastigmat.

SPEED F 6.3



The Convertible Anastigmats are doublet lenses composed of two of the single anastigmats, Series VII. They contain eight elementary lenses arranged in pairs, two pairs in each system; these are properly termed quadruple anastigmats. Such a lens is convertible into three lenses of different foci and angle where the two single anastigmats are of different foci, or into two where they are of the same foci.

The most practical combinations of single anastigmats are indicated in the appended table of Series VIIa lenses.

The speed when composed of two single anastigmats of the same foci is f-6.3. When the single anastigmats are of different foci, the speed is f-7 or f-7.7, according to the relative foci employed. The full angle of the image circle is 80 degrees. The average angle utilized on the size plate for which the numbers are commonly used is about 55 degrees.

The Convertible Anastigmats are perfection in all the qualities which are desired in a photographic lens. All parts of the image circle are equally well corrected. It is possible, therefore, to use, and still retain the large aperture lenses of much shorter focal than where the optical properties are of a lower order, hence the great depth of focus and angle.

The Series VIIa Anastigmats, in which the two systems are of the same foci, and especially the larger sizes, are well adapted for process work and copying of all kinds.

Table detailing combinations of single anastigmats, including front and back lenses, focus, speed, and diameter.

\*The next larger plate is covered with smaller stop.

See instructions about special and extra graduated rings—same as with Series VII.

Nos. 1, 2, 3, 4, 5, and 7, when desired for hand cameras, are mounted in special compact mountings, and the 4x5 Iris Diaphragm Shutter can then be fitted to them, in which case a reduction of \$1.00 is made from the listed price of the respective sizes fitted with Iris Diaphragm Shutter.

Sets of Bausch & Lomb-Zeiss Convertible Anastigmats.

These sets are offered complete with the lenses mounted interchangeably, each set consisting of:

One lens mount with iris diaphragm, cap, and flange, as described under Series VII.

The Single Anastigmat Lenses (three or four, as the case may be).

A neat and compact morocco case, containing all the parts of the set.

C Set of Anastigmats.

Complete in case, \$103.00.

C set of anastigmats fitted with Iris Diaphragm Shutter, \$118.00.

The six lenses which may be formed with the C set of anastigmats are shown in the accompanying table, together with their angles, covering power, and speeds.

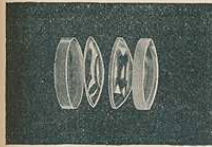
Table for C Set of Anastigmats showing lens specifications, focus, and angles.

\*The next larger plate is well covered with smaller stop.

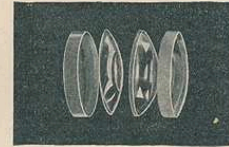
D Set of Anastigmats.

Complete in Case, \$200.00.

D set of anastigmats fitted with Iris Diaphragm Shutter, \$217.50.



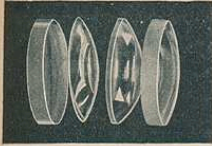
Lenses of 1 1/2-in. focus system.



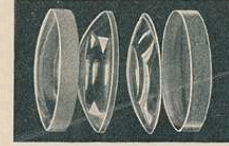
Lenses of 14-inch focus system.

The lenses of this set are the numbers 3, 4, 5, and 6 of Series VII.

The following table shows the ten lenses which may be



Lenses of 10 1/2-in. focus system.



Lenses of 10 1/4-in. focus system.

formed with this set, together with their angles, covering power and speed.

Table for D Set of Anastigmats showing lens specifications, focus, and angles.

\*The next larger plate is well covered with smaller stop.

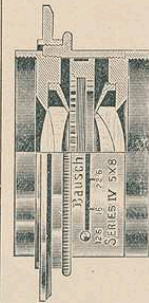
The next larger plate is well covered with smaller stop.

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Series IV Bausch & Lomb-Zeiss Anastigmat.

Wide Angle.

SPEED F 12.5



These are very compact objectives, each system is composed of two lenses. The two systems are not of the same focus, hence not usable as single lenses.

Fitted with Iris Diaphragm, except the two smaller sizes, in which the systems are so close together that it cannot be used.

They are fast enough for outdoor instantaneous work under favorable circumstances. The field of the first six numbers embraces an angle of over 100 degrees; 68 degrees on the long side of the plates for which they are rated. The full angle of the larger numbers is 85 degrees, of which 44 degrees are utilized on the plates for which they are listed.

For rapid wide-angle work or architectural or other subjects, and where the distance from the camera is such as to require wide-angle lens, the first six are recommended.

The five larger sizes are designed especially for copying, and are of less aperture than the smaller numbers of the series.

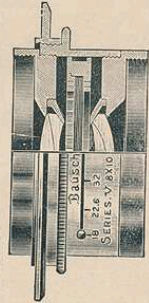
ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

Table listing specifications for Series IV lenses, including size of plate, equivalent focus, diameter, and price.

\*The next larger plate is well covered with smaller stop.

Series V. Bausch & Lomb-Zeiss Anastigmat.

SPEED F 18



The two dissymmetrical systems are composed of two lenses each. These objectives are the most compact possible to construct. Fitted with the Iris Diaphragm, except in the two smaller sizes, where the systems are so close together that it cannot be used.

The field embraces an angle of 110 degrees in the sizes up to and including No. 7a. The full angle of the lenses above No. 7a is 90 degrees. On the plate for which the smaller numbers are rated, the angle is 75 degrees, but the full angle may be obtained by using them on larger plates with smaller stops. The larger sizes have an angle of about 40 degrees on the plates for which they are listed. The anastigmatic and spherical corrections are the most perfect yet obtained in a wide-angle lens, and the images are entirely free from distortion to the margin of the plate even with the most extreme angle. They have greater speed and covering power and greater effective angle than any other extreme wide-angle lens.

The larger sizes were designed especially for copying, and for that purpose cannot be equaled in the quality of work which they will do. They are, however, not quite rapid enough for some kinds of photo-engraving.

(Continued next page.)



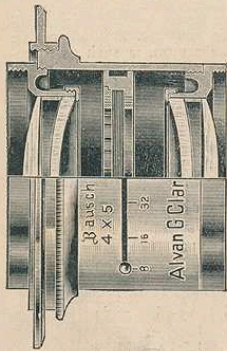
**Series V Wide Angle.—Continued.**

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

No.	Size of Plate Covered with Stop F 18.* Inches.	Equivalent Focus Inches.	Free Diameter of Largest Lens. Inches.	Prices. Lens. Only.	When Fitted with Diaphragm Shutter.
1	4 1/4 x 6 1/2	3 3/8	9-32	\$22.50	
2	5 x 7	4 1/8	3/8	22.50	
3	6 1/2 x 8 1/2	5 9/16	1/2	28.00	\$43.00
4	8 x 10	7 3/16	9/16	35.00	1.00
5	10 x 12	8 3/4	11-16	44.00	50.00
6	11 x 14	10 7/16	13-16	54.50	60.50
7	12 x 15	12 5/16	15-16	64.70	79.50
7a	16 x 18	15 3/8	1	75.00	90.00
8	12 x 15	18 3/8	1	85.50	100.50
9	16 x 18	24 7/8	1 3/8	125.50	141.50
10	20 x 25	37 5-16	2 1/8	247.50	

**Alvan G. Clark Lenses.**

**SPEED F 8**



These lenses are of such quality and capacity that they mark an epoch in the construction of photographic objectives. They are the invention of Alvan G. Clark, the celebrated manufacturer of telescopes, and are of a construction dissimilar from anything heretofore followed, and are as striking in their results as Mr. Clark's success in the telescopic objectives has been.

No.	Size of Plate Working. Inches.	Diameter of Lenses. Inches.	Back Focus. Inches.	Equivalent Focus. Inches.	Price. Brass Mounting.
4 1/4	3 1/4 x 4 1/4	3/4	4 3/4	5 1/8	\$20.00
5	4 x 5	7/8	5 3/4	6 1/8	24.00
8	5 x 8	1 1/8	7 3/4	8 1/4	30.00
8 1/2	6 1/2 x 8 1/2	1 1/2	10 1/4	11 1/8	35.00
10	8 x 10	1 3/4	12 3-16	13 1/8	50.00
12	10 x 12	2 1/8	15	16	64.00
15	12 x 15	2 5/8	18	19 1/4	82.00
18	16 x 18	3	22	23 7-16	105.00
22	20 x 22	4 1/8	28	30	145.00

**Series D Extra Rapid Universal Lens.**

**BAUSCH & LOMB.**

**SPEED F 6**

This is the extra rapid type of rectilinear lens, the front and back systems being each composed of two lenses cemented together.

The image circle embraces an angle of 70 degrees. This series represents the best of the rectilinear type of lenses, in speed, covering power, and depth of focus.

Ample exposure is obtained on dark and misty days where other slower lenses would fail.

For studio work this lens will be found especially satisfactory, and it has a sufficient covering power for excellent group work.

No.	Size of Plate. Inches.	Diameter of Lenses. Inches.	Equivalent Focus. Inches.	Back Focus. Inches.	PRICE. Lens Only.	Price. Lens with Diaphragm Shutter.
0	3 1/4 x 4 1/4	1	4 3/8	3 13-16	\$24.00	\$30.00
00	4 x 5	1 1/4	6 3/8	5 9-16	28.00	43.00
1	5 x 8	1 1/2	8	7	30.00	51.00
2	6 1/2 x 8 1/2	1 3/4	9 7-16	8 1/4	40.00	62.00
3	8 x 10	2 1/8	11 3/4	9 13-16	58.00	75.50
4	10 x 12	2 5/8	14 1/4	12 7-16	75.00	
5	12 x 15	3 5-16	17 1/2	15 1/4	100.00	
6	16 x 20	3 3/4	22 3/4	19 3/8	130.00	

**Series 1b Bausch & Lomb-Zeiss Unar.**

These objectives are composed of two dissimilar systems of two lenses each, the lenses of the systems not being cemented together. The best Jena glass is used for all the lenses. This extreme simplicity of construction, coupled with the superior optical properties attained, stamp the UNAR as the best of all unsymmetrical anastigmats.

The speed is remarkable, ranging from f-4.5 in the smaller to f-5.6 in the larger sizes.

The image circle embraces an angle of 65 degrees, of which about 48 degrees are utilized on the plate for which the lenses are rated. This lens stands between the Planar with its speed of f-3.6 and necessary bulk and weight, and the earlier anastigmats of compact construction. Its anastigmatic and spherical corrections are fully equal to those of the best members of the series.

This lens was designed especially for the hand camera. Extreme speed and covering power are secured without the use of six or eight lenses, as have heretofore been required. It is suited for the most rapid snapshots.

Its speed and length of focus recommend it for this work.

Its portability, simplicity of construction and covering power are all that could be desired. Angle, 65 degrees.

No.	*Size of Plate Covered with Largest Stop.	Equiv. Focus. Inches.	Diam. of Lens. Inches.	Speed.	Price. Lens Only.
3	2 1/2 x 3 1/2	4 1/2	1	f-4.5	\$ 31.50
4	3 1/4 x 4 1/4	5 1/2	1 1/4	f-4.5	38.50
5	4 x 5	6 1/4	1 1/4	f-5	42.00
6	5 x 7	8 3/8	1 3/4	f-5	63.00
7	5 x 8	10 1/4	2	f-5.5	91.00
8	6 1/2 x 8 1/2	12 1/4	2 1/2	f-5.5	125.50
9	8 x 10	14 3/4	2 3/4	f-5.3	164.50
10	10 x 12	18	3 1/4	f-5.6	210.00

\*The next larger plate is well covered with intermediate stop.

**Universal Wide-Angle.**

**SPEED F 16**

These lenses represent the best of the symmetrical wide-angle lenses, the front and back systems each composed of two elementary lenses. They are extremely compact and portable.

The image circle embraces an angle of over 100 degrees, of which 80 degrees are utilized on the plate for which the various sizes are rated. With smaller stops the full angle is obtained on smaller plates.

The covering power and definition are excellent, and there is very little distortion of the image, even with the highest angles.

These lenses are used for interior flash-light and outdoor instantaneous photography. Their great aperture fits them for general wide-angle work.

ALL LENSES ARE SUPPLIED WITH IMPROVED IRIS DIAPHRAGM AND MOROCCO CAP.

No.	Size of Plate Covered with Stop F 16.* Inches.	Equivalent Focus. Inches.	Back Focus. Inches.	Diameter of Lenses. Inches.	of Image Circle. Inches.	Price.
5	4 x 5	3 1/2	3 1/4	3/4	8 3/4	\$16.00
8	5 x 8	5 1/4	4 7/8	3/4	13	20.00
8 1/2	6 1/2 x 8 1/2	6 1/2	6 1-16	7/8	15	24.00
10	8 x 10	8	7 1/2	1 1/8	18	28.00
14	11 x 14	10 1/2	9 7/8	1 1/2	25 1/2	36.00
17	14 x 17	14	13 3/8	2	32	48.00
22	18 x 22	17	16	2 1/4	37	60.00
30	25 x 30	22	20 3/4	2 1/2	49	90.00

\*The next size plate is well covered when using small stop, giving 95 degrees angle.

**Bausch & Lomb Plastigmat.**

**SPEED F 6.8**

Plastigmat f-6.8 is after an entirely new formula. Experience in the construction of the most improved types of lenses and familiarity with the large variety of glasses now at the disposal of opticians have made it possible to construct an objective possessing advantages not found in the anastigmat lenses heretofore produced.

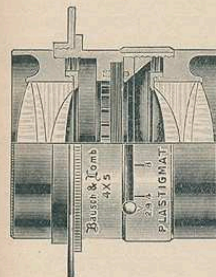
The objects attained are: Highest anastigmatic and achromatic corrections, aplanatic field, great speed, permanence of glass, compactness, correct relation of focal length to size of plate, correction of front and back systems so they may be used separately and adaptability to the various shutters between lens combinations. This latter feature is of special value, many well known anastigmat lenses not per-

employed in some anastigmats has been avoided, removing all danger of deterioration and appreciably increasing speed.

Optically Plastigmat f-6.8 is a decided step in advance. The anastigmatic corrections are absolutely perfect. The field is flat and without a trace of spherical distortion. The foci chosen for the various sizes of plates are longer than in other anastigmats, obviating the exaggerated perspective produced by short-focus lenses. The plates for which the lenses are rated are perfectly covered at full opening, a working speed of f-6.8.

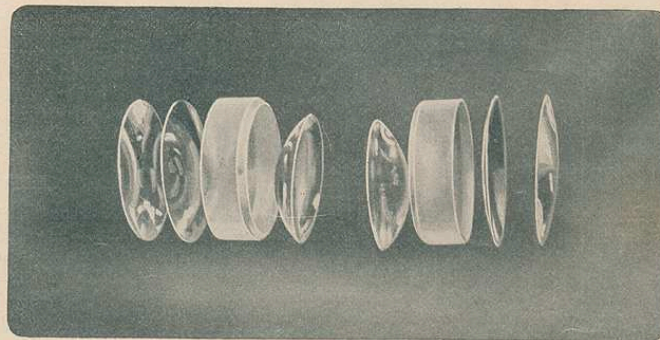
The separate systems, composed of four lenses each, have the same aplanatic and anastigmatic corrections as the doublet, hence the systems when used separately give images

**4x5 PLASTIGMAT F 6.8**



Actual Size.

5x7 has same size mount.



The Eight Lenses of Plastigmat F 6.8.

mitting the application of some type of shutters at all or at the sacrifice of optical properties.

After working long and carefully in the production of this lens and testing every member of the series in the most severe manner possible, far more severely and critically than the user will ever test them, the results have in every case been entirely satisfactory, so much so that we are able to recommend Plastigmat f-6.8 as the peer, optically, of any symmetrical anastigmat ever produced, and having in addition physical advantages possessed by none.

Plastigmat f-6.8 is a symmetrical lens, the front and back combinations being similar and composed of four lenses each. The glass is one of the famous Jena manufactures, extremely transparent, and absolutely permanent.

The use of the soft, yellow, tarnishable Jena flint glasses

free from astigmatism and spherical distortion at a speed of f-13.5, amply rapid for snap shots under normal conditions. The focal length being nearly twice that of the doublet, images twice the size at the same distance or the same size at twice the distance are obtained.

A new form of mounting has been designed for Plastigmat f-6.8. It is more compact and lighter than any heretofore made and of very neat appearance. Its shortness makes it especially convenient for use on hand cameras. The Automat, Volute, Iris Diaphragm or Unicorn shutter, or other makes of shutters, can be fitted between the lenses.

Plastigmat f-6.8 is an ideal lens for general photography and portraiture and we can recommend it in every respect where a lens of the highest optical excellence is desired.

**PRICE LIST OF PLASTIGMAT.**

No.	Equiv. Focus of Doublet In.	Plate Covered by Doublet at F 6.8	Free Diam. of Lenses In.	*Length of Lens from Mount Front to Flange	*Distance from Front Glass to Ground Glass 100 ft.	*Distance from Front Glass to Rear Glass	*Distance from Front Glass to System	Price. Plastigmat Only.	Price. Plastigmat Fitted with Iris Diaphragm Shutter.	Price. Plastigmat Fitted with Unicorn Shutter.	Price. Plastigmat Fitted with Automat Shutter.	Price. Plastigmat Fitted with Volute Shutter.
1	5 1/4	3 1/4 x 4 1/4	1 1/8	1 1/8	5 1/4	11	8 1/2	\$31 00	\$48 00	\$42 00	\$44 00	\$51 00
2	6 1/4	4x5	1 1/4	6 1/4	12	9	8	40 00	54 00	48 00	50 00	57 00
3	7 1/2	5x7	1 1/4	7 1/4	14 3/4	11 1/4	11 1/4	48 00	62 00	56 00	58 00	65 00
4	9 1/4	5x8	1 3/8	1 3/8	18 3/8	13 3/4	13 3/4	55 00	70 00	64 00	67 00	73 50
5	11	6 1/2 x 8 1/2	1 3/8	1 3/8	21	15 1/4	15 1/4	75 00	91 00	85 00	87 00	93 50
6	13	8x10	1 3/4	2 1/4	25	17	17	99 00	107 50		104 00	110 00
7	15	10x12	2 1/4	2 3/4	30	22	22	120 00			134 00	140 00

These mountings are made especially compact and can be used on any hand camera. Focusing scale for any Plastigmat, 50c. \*These distances include shutter mounting.

Order that Monarch Posing Chair at \$3.75.

See the Prosperity Pail of Pea Crystal Hypo and a Scoop.



### Projecting Lenses.

These lenses are designed for projecting magnified images of positive pictures on the screen, and are used in the stereopticon, magic lantern, etc. The lenses are mounted in a nickel-plated tube, which is adjustable by rack and pinion for rapid and accurate focusing. Each lens also has a flange for attaching to camera board. The working parts

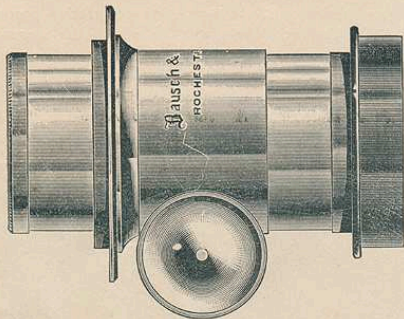


Figure shows the 1-4 Plate Objective two-thirds actual size.

are all constructed with great accuracy, and will be found to work much smoother than those of other lenses now on the market.

These lenses are especially designed for projection purposes and utilize an exceptionally large amount of the light of the lantern, giving beautifully illuminated, sharp, clear pictures. Their extremely flat field gives a clear picture of equal sharpness over the entire screen. Optically, these lenses are greatly superior to the imported lenses which have been sold for projection work.

For stereopticon, magic lantern, and all kinds of projection work, these lenses should be selected. Where a small picture is to be made to cover a large screen at a short distance, the special wide-angle objective No. 6 is recommended.

All Lenses are furnished with Leather Cap.

No.	Size.	Back Focus. Inches.	Equivalent Focus. Inches.	Diameter of Lenses. Inches.	Price
1	4-4 Plate	10½	15	3	\$32.00
2	2-3 "	8½	12	2½	21.00
3	1-2 "	7	10	2¼	14.50
4	1-3 "	5½	7½	1¾	12.00
5	1-4 "	4½	6	1½	7.00
6*	1-4 "	3	5	1½	8.00

\*Wide Angle.

TABLE SHOWING DISTANCE FROM OBJECT TO SCREEN, DIAMETER IN FEET OF PICTURE, AND FOCUS OF LENS WHICH MUST BE USED WHEN OBJECT IS THREE INCHES DIAMETER.

Equivalent Focus of Lens.	Distance from Object to Screen, in Feet.									
	10	20	30	40	50	60	70	80	90	100
15 in.		6	8	10	12	14	16	18	20	
12 in.		7½	10	12½	15	17½	20	22½	25	
10 in.	6	9	12	15	18	21	24			
7½ in.	4	8	12	16	20	24				
6 in.	5	10	15	20						
5 in.	6	12	18	24						

If you will Consider Price and Quality, we will get your Orders.

### Bausch & Lomb Tele-Photo Attachment.

The purpose of the Tele-Photo attachment is to produce larger pictures in connection with a photographic lens than can be obtained with the lens alone.

The Tele-Photo attachment is so designed that any ordinary photographic lens may be used with it. It possesses the advantage over a single long-focus lens that it does not require nearly as long a camera or extension of bellows to obtain the same magnification, and over the fixed tele-photo lens that it is easily applicable to lenses already in use, thus greatly reducing the cost and permitting a considerable variation in focus.

The attachment consists of an achromatic negative system mounted in a barrel with sliding tube, which is adjustable by rack and pinion.

The front of the barrel is threaded to receive the photographic lens, and the rear end is provided with a flange for attachment to the front board of the camera. The sliding tube has scale indicating the exact amount of magnification.

In the construction of this negative system, the greatest latitude has been allowed for variation in these lenses with which it is to be used, but it must always be borne in mind that any lack of sharpness in the image formed by the photographic lens will be exaggerated by the Tele-Photo attachment in direct proportion to the amount of enlargement, hence only lenses of the highest grade are suitable for tele-photo work.

Our Tele-Photo attachment permits a variation of magnifying power from three to eight diameters by simply adjusting the distance between the negative and positive lenses with the rack and pinion.

#### DISTANCE FROM THE FRONT BOARD TO THE GROUND GLASS.

Size. Inches.	Equivalent Focus of Photo Lens.		MAGNIFICATION.								Price.
	Inch.	Inch.	3	4	5	6	7	8	8		
4 x 5	6½	6¾	9¾	12¾	16¾	19¾	22¾	25¾		\$16.00	
5 x 8	8¾	8¾	13	17½	22	26½	31			18.00	
6½ x 8½	11½	10½	16½	22½	28½	34½	40½			20.00	
8 x 10	13½	13½	20½	27½	34½	41½	48½			24.00	

#### Diameters of Image Circle.

Size. Inches.	When used with Tele-Photo Attachment.							
4 x 5	5¼	7½	9½	12	15	17½		
5 x 8	6½	9¾	12½	16¼	19¾	22½		
6½ x 8½	8	11	14½	18	22	26		
8 x 10	9	12¾	16½	20¾	26	30		

There are many objects so situated that they cannot be satisfactorily photographed with an ordinary lens, but may be readily, from a distance. In such cases a magnified (tele-photo) picture is required.

N. B.—We do not advise the fitting of Tele-Photo Attachment to any except the very best quality lenses, as results will not be satisfactory.

Lenses should in all cases be sent us in order to secure correct adjustment and fitting.

The scale indicating magnification is computed for prevailing foci of photographic lenses, but special standardized scale will be made at an extra cost of 75 cents.

See illustration of Hand Camera Telephoto, this catalogue, showing manner of attaching to lens—or write us for Bausch & Lomb catalogue, fully illustrating the above.

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## SERIES III GOERZ DOUBLE ANASTIGMAT.

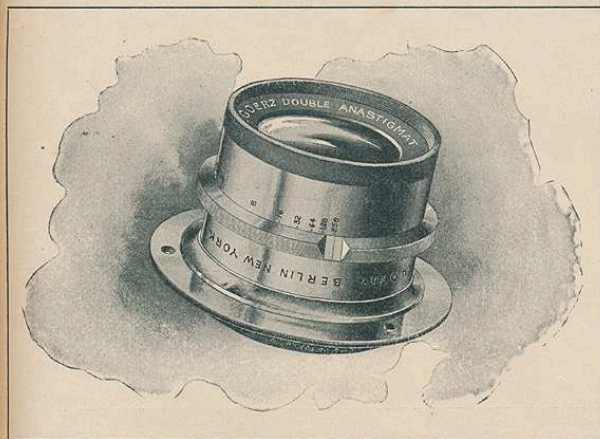
F 68.

The larger Numbers from No. 7 upwards, F 7.7.

### Universal Extra-Rapid Lens.

For portraits, groups, instantaneous photography, landscapes, architecture, interiors and enlargements.

The manufacturers of these lenses claim for them the greatest universality. They claim, and the results seem to justify it, that these lenses are equally well adapted for portraiture, giving that roundness and atmospheric effect for groups and for general landscape photography.



The lenses of this series are universal instruments in the full sense of the word. At full aperture they admit of instantaneous photographs embracing an angle of 70° being taken, even on dull days. By the use of small stops the photograph may be made to include an angle of 90°. The Double Anastigmats of series III satisfy, therefore, the highest requirements and are eminently adapted for general purposes in and out of doors.

As the image is perfectly sharp, even with the largest aperture, the definition, brilliancy and depth of every point of the field are absolutely uniform. Hence perfectly sharp, wide-angle instantaneous photographs may be taken.

The back lens, the focus of which is about double that of the entire objective, forms a landscape lens of the highest possible excellence, which may be used on a plate twice as long as that

covered by the complete lens. In this case, the illumination will be reduced to one-fourth of that given by the whole combination, with the corresponding aperture, i.e., the exposure for any particular stop must be multiplied by 4.

No.	Equivalent Focus. in.	Full Aperture. in.	*Size of Plate sharply covered at		Code Word.	Price with Iris Diaphragm.
			F: 15.5 in.	F: 6.2 in.		
0000	1½	1½ x 1½	2 x 2	2 x 2¾	Capo	\$ 34.00
000	2¾	2¾ x 2¾	2½ x 3	2¾ x 3½	Cardiff	34.00
00	3½	3 x 3	3¼ x 4¼	4 x 5	Cadiz	35.50
0	4¾	3¼ x 4¼	4 x 5	4¾ x 6½	Caesar	37.50
1	6	4 x 5	4¾ x 6½	5 x 8	Calderon	45.00
2	7	4¾ x 6½	5 x 8	7 x 9	Calla	51.50
3	8¼	5 x 8	6½ x 8½	8 x 10	Calvin	62.50
4	9½	6½ x 8½	7 x 9	10 x 12	Camerun	75.50
5	10¾	7 x 9	8 x 10	12 x 15	Camillus	91.00
6	12	8 x 10	10 x 12	16 x 18	Canada	107.00
7	14	10 x 12	12 x 15	18 x 22	Capet	140.00
7a	16½	11 x 14	13 x 17	21 x 25	Caviar	182.00
8	19	12 x 15	16 x 18	22 x 25	Carlos	219.00
9	24	16 x 18	18 x 22	24 x 30	Census	325.00
10	30	18 x 22	22 x 25	28 x 36	City	539.00
11	35	22 x 25	24 x 30	34 x 44	Columbia	1,070.00

Nos. 0000 to 5 are particularly adapted for hand and tourist cameras. The higher numbers will be found of great service for large portraits and group photography and similar work.

For stereoscopic views the lenses are accurately "paired" at an extra charge of \$2.

\*The English sizes here given are those that are recommended to give the best perspective, but they do not express the full covering power of the lens. No. 4, for instance, is quite capable of covering, at full aperture, a plate 9½ inches long. This allows a slight displacement of the lens from its central position without impairing the definition at the edges; but when the lens is displaced to any considerable extent, either a longer focus should be selected, or a smaller stop inserted.

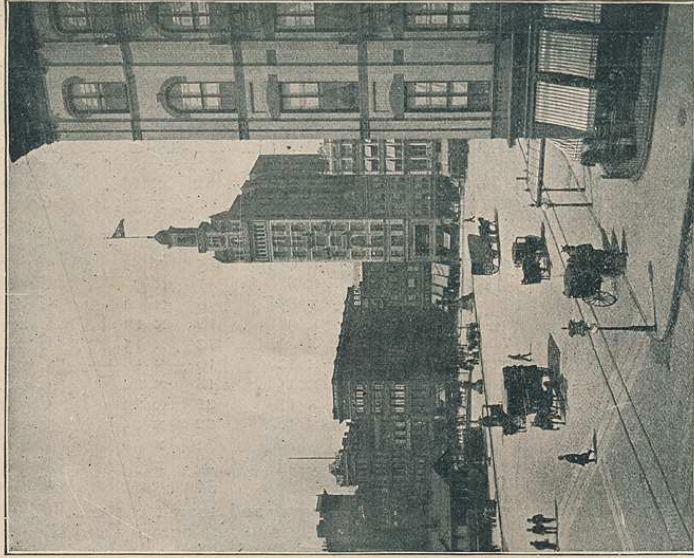
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# The Universality of the Goerz Double Anastigmat Demonstrated.

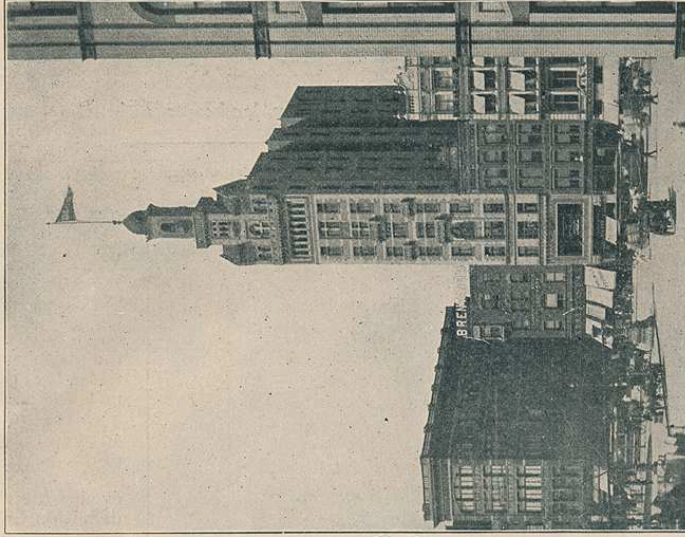
## THREE LENSES IN ONE.

USING COMPLETE LENS.



Reproduced from 4x5 Negative made with No. 1 Double Anastigmat—focus 6 inches.

USING REAR COMBINATION ALONE WITHOUT CHANGING POSITION OF CAMERA.



Reproduced from 4x5 Negative made with the rear combination of the same lens—focus 11 1/2 inches.



Reproduced from 6 1/2 x 8 1/2 negative, using the No. 1 Double Anastigmat lens of 6 inches focus as a wide-angle lens. For similar purposes the Double Anastigmats are superior in all respects to any other wide angle lens. They cannot be equalled for depth of focus, sharpness of definition, freedom from distortion, and correctness of perspective.

Your orders for Goerz Lenses solicited by Ralph J. Golsen.

We allow trial privileges on Goerz Lenses same as others.—Ralph J. Golsen.



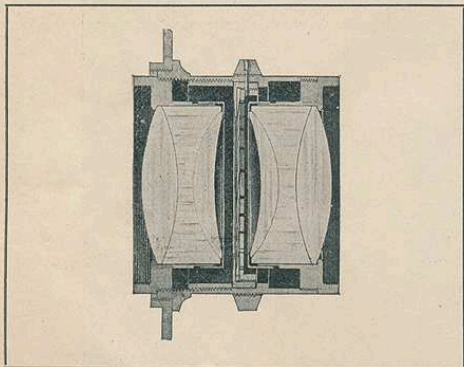
# SERIES IV GOERZ DOUBLE ANASTIGMAT

F 11

## Rapid Copying Lens.

For Full-size Reproductions, Enlargements, Large Groups, Landscapes, Instantaneous Photography, and Interiors.

Series IV of the Double Anastigmatic Lenses has been specially computed for copying in full size. It is, for this purpose, made to cover a plate of a diameter which is double the focal length of the lens



without any distortion and without astigmatic aberrations and with perfectly uniform sharpness up to the extreme edge.

This excellent lens may also be used for photographing distant objects; for in this case the curvature of the image is barely appreciable and is counterbalanced by the depth of the focus and the sharpness of the image, which is free from astigmatic aberrations. The sharp image subtends an angle of 75° with the largest stop; hence instantaneous wide angle photographs, groups, landscapes and architectures may be taken with these lenses. By means of small stops the image may be made to embrace an angle of 90°.

The hood is, as may be seen from the illustration, detachable and is fitted on in such a manner as to admit of the adaptation of a prism or mirror.

The back lens, whose focus is about double that of the whole objective, may in like manner as the lenses of Series III be used by itself as a landscape lens.

No.	Equivalent Focus.	Free Aperture.	Normal Size of Plate for Copying at		Size of Plate Covered at		Code Word.	Price with Water-house Stops.
			F 15.5 to F 22	In Life Size.	In Reduced Size.	F 15.5 For Groups.		
6	12	1 1/8	16 x 18	10 x 12	10 x 12	16 x 18	Damara	\$ 110.00
7	14	1 1/8	18 x 22	12 x 15	12 x 15	18 x 22	Darius	141.50
8	19	1 3/4	22 x 25	16 x 18	16 x 18	22 x 25	Dekan	230.00
9	24	2 3/8	24 x 30	18 x 22	18 x 22	24 x 30	Dictator	345.00
10	30	2 3/4	28 x 36	22 x 25	22 x 25	28 x 36	Dolomit	565.00
11	35	3 3/4	34 x 44	24 x 30	24 x 30	34 x 44	Doria	1,096.00
12	47	4 5/8	40 x 60	28 x 36	28 x 36	40 x 60	Drusus	1,980.00

The normal plate sizes tabulated above for copying in full size are covered with great uniformity and with a degree of sharpness which is equal to that of a fine engraving. Where this degree of sharpness is not insisted upon, e. g., for reproductions in mezzotint, the same area may be covered with full aperture.

In order to obviate any misunderstanding, we beg to remark that the double anastigmatic lenses F: 11 cover a considerably larger plate than those usually required by photographers. Nearly all cameras now in use are designed for long focus lenses, owing to the inferior capabilities of the older types of copying lenses. For this reason it is often advisable not to choose a lens of inconveniently short focus, but rather to take the next size larger.

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# Series X Goerz Hypergon Double Anastigmat.

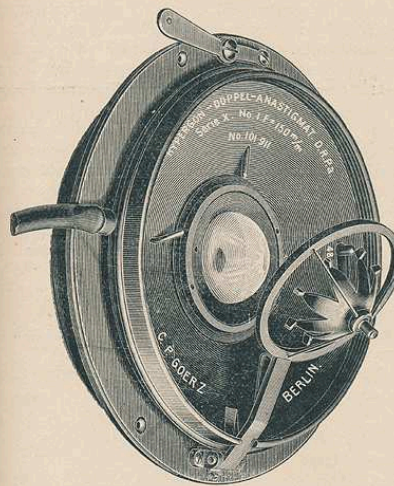
SPEED F 22 Patents pending.

Special Objective for Wide-Angle Interiors, Landscapes, Architectural and Panoramic Pictures.

The Hypergon (copyright, extreme wide angle) Double Anastigmat is a symmetrical doublet, consisting of two very thin semi-spherical single lenses. The maximum relative opening is F:22.

The image circle of this new lens embraces an angle of 135 degrees, which constitutes an enormous increase over the angle taken in by any other wide-angle lens thus far on the market. The diameter of the image circle, or in other words, the diagonal of the plates worked out by the Hypergon Double Anastigmat, is equal to five times its focal length; this means that a Hypergon Double Anastigmat of 6" focus will work out a plate of 20x24 inches, whereas the best 6" wide-angle lens of older construction could only produce a picture of 10x12 inches.

Stigmatism, spherical aberration and curvature of field are completely corrected over the entire surface of the field



of view; consequently the definition is sharp to the very edges of the image.

The chromatic aberration is not corrected, but is eliminated after the image is focused by the use of a smaller diaphragm opening.

The symmetrical design of the "Hypergon" insures complete orthoscopic results. Distortion is thus entirely obviated.

To overcome the unavoidable effects of vignetting (uneven illumination), a rotating star-diaphragm is applied to the outside of the lens.

The plates indicated in the table are not the largest plates each lens will work out. It is, therefore, possible to move the lens a considerable distance out of the center of the plate, in whatever direction may be desired.

These lenses are fitted with rotary diaphragms, giving openings corresponding to F:22 and F:31 (U. S. 30.25-60). This diaphragm is adjusted by means of a little pin projecting through the front part of the mounting.

They are besides provided with a hinged star-diaphragm and pneumatic movement for the same.

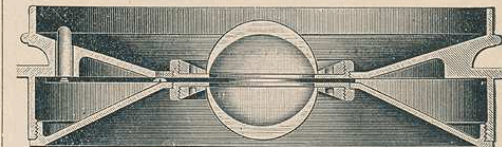
The extreme wide-angle embraced by the Hypergon Double Anastigmat necessitates a peculiar design for the mounting.

It should be so formed that the rim projects above the top of the front lens to protect it and at the same time leave

# Goerz Hypergon—Continued.

free passage to the oblique rays. These conditions combined, give rise to an unusually large diameter of the mount. The diminution of the light toward the margin of the image, which is unavoidable in all wide angle lenses and becomes more noticeable with the increased angle of the image, is corrected by the application of the star-diaphragm, the construction of which is clearly visible in the accompanying illustration.

The openings in the lens board required for the different lenses are as follows:

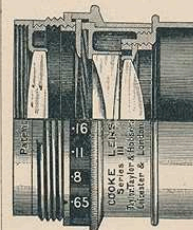


	000	000a	00	0	1	2a
Inch focus.....	2 3/8	3	3 1/2	4 3/4	6	7 7/8
Diam. of hole in lens board....	2 7-16	2 7-16	3 9-16	3 9-16	4 3-16	7
Diam. of flange....	3	2	4 1/4	4 1/4	5	7 3/4

No.	Equivalent Focus.	Plate covered sharp at F 31.	Maximum Plate.	Price including Star diaphragm
000	2 3/8	5 x 7	(8x10)	\$43.50
000a	3	7 x 9	(10x12)	49.00
00	3 1/2	10x12	(11x14)	52.50
0	4 3/4	12x16	(15x18)	62.00
1	6	16x20	(20x24)	72.50
2a	7 7/8	24x28	(25x30)	91.00

# Series V The Cooke Process Lens.

F 8



While the Cooke Lens possesses in the highest possible degree the qualities characteristic of the type of anastigmats, it is essentially unique in construction and very much simpler than any other lens belonging to this class. This simplicity of construction, aside from its merits as such, (and simplicity without sacrifice of any valuable quality is always an advantage), affords a variety of incidental advantages in construction, adjustment and in cheapening production.

The Cooke Lens has a perfectly flat field, and gives microscopic definition at full aperture. It possesses great advantages in connection with orthochromatic and three-color work in the fact that it is corrected for three regions of the spectrum and as a consequence the light filters used in the three-color process may be successively employed without altering either the size or the focal plane of the image.

Approx. Equivalent Focus in Inches.	With large apertures to cover plates up to	When stopped down, to cover plates up to	Diameter of Standard Screw. Inches.	Diameter of Standard Hood. Inches.	Prices. Lenses with Iris Diaphragms and Standard Flange.
9	5 x 8	10x12	1.5	1.9	\$ 41.50
11	6 1/2 x 8 1/2	12x15	1.75	2.1	58.00
13	8 x 10	15x17	2	2.5	74.00
16	10 x 12	16x18	2.5	2.8	110.00
18	12 x 15	20x24	3	3.3	135.00
25	16 x 18	22x26			220.00

Discount: 5 per cent for cash with order.

Prices include a set of five hard rubber diaphragms with round apertures.

Ralph J. Golsen gives the Best value for your Money.



## Voigtlaender &amp; Sohn Collinear Lenses.

THE COLLINEAR LENSES are a new type of Anastigmatic doublets consisting of two symmetrical anastigmatic halves. Each of these halves is made up of three glasses, the contiguous surfaces of which are permanently cemented together.

In the arrangement of the glasses the Collinears differ materially from other similar constructions.

The curves are flatter, and a larger lens opening can be used.

The combinations are farther apart, and there is plenty of room for the insertion of "between the lens" shutters.

The outside glasses of the combinations are not affected by the atmosphere.

There are no air spaces between the three glasses of each combination.

The great value of the Anastigmatic construction, made possible by the discovery of the new Jena glass, is now so generally understood that it is hardly necessary to dwell upon it at length.

**Asigmatism**—possessed in greater or less degree, as the case may be, by all Rapid Rectilinear and Wide Angle lenses—is that peculiarity or error in a lens, in consequence of which the focal distances vary for vertical and horizontal lines immediately adjacent to one another.

The advantages of Collinear Lenses, are:

**More Accurate Correction for Color**, consisting in the complete coincidence or registering of the various images produced in the separate spectrum colors, both in size and in position.

**Perfect Rectilinearity** and complete absence of curved lines.

**Flatness of Field** and consequent sharpness all over the picture.

**Large Covering Power** with comparatively short focus, large angle of view.

**Large Aperture** compared to focal length and consequently large speed.

With regard to the sharpness of the image which the Collinears yield, we cannot claim too much. A "Collinear" photograph is sharp from corner to corner.

The covering power of the Collinear in relation to its focus is surprisingly large by comparison. With a Collinear Lens we may use a much shorter focus than with ordinary lenses; a larger angle is obtained and the extent of the picture included is from one and one-half to two times that taken with an old style rectilinear or single lens.

In point of speed it is that the Collinear mainly excels.

In point of depth of focus, Voigtlaender's Collinears are likewise pre-eminently satisfactory. The depth is the same in the center as at the margin; there is absolutely no decrease.

Possessing this quality in so high a degree, the lenses are excellent for groups, for photographing machinery or constructional work, etc., etc.

**As single lenses**—In all Collinears the rear combination can be used alone as a landscape lens of double the focal length working at F 16 as maximum opening.

The Collinears can also be used interchangeably, and sets are offered, such, that a large variety of focal lengths, serving a large variety of purposes are obtainable with one set of combinations.

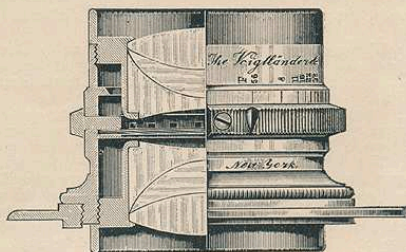
## SERIES II—EXTRA RAPID.

F 5.6

For Small Sizes.

F 6.3

For Large Sizes.



The small sizes are most valuable lenses. With absolute sharpness, depth of focus and brilliant, uniform illumination, they show twice as much speed as other Anastigmats at f7.

They admit four times as much light as some grades of Hand Camera Lenses. While the ordinary hand camera will fail in taking pictures on cloudy days or in dark places, where the illumination is incomplete, the Collinear II. will succeed.

They are ten times as quick as the lenses of the average Snap-shot Camera. Consequently shutters of extreme speed can be used, objects moving with the highest speed can be caught.

The largest sizes meet all the demands of the studio for large portrait work and groups. High speed, brilliant illumination, excellent covering power and depth of focus for groups.

No. 7 is a splendid lens for cabinet work, 8x10 heads, 10x12, or even 11x14 groups.

Nos. 9 and 10 are choice lenses for 14x17 to 18x22 heads and groups.

The sizes of plates, listed below, do not represent the maximum covering power, or utmost capacity.

## FULL APERTURE F 5.6

No.	Equivalent Focus: inches.	F 5.6 Diameter of Glasses: inches.	Size of Plates Sharp'n Covered: F 5.6 inches.	F 8 inches.	F 8 1/2 inches.	Price with Iris Diahrm.
1	3 1/2	11-16	3 1/4 x 3 1/4	3 x 4	3 1/4 x 4 1/4	\$35.00
2	4 3/4	7/8	3 1/4 x 4 1/4	4 x 5	4 1/4 x 6 1/2	40.00
3	5 7/8	1-16	4 1/4 x 6 1/2	5 x 7	6 x 8	45.00
4	7 7/8	1 1/2	5 x 7	6 x 8	7 x 9	60.00

## FULL APERTURE F 6.3

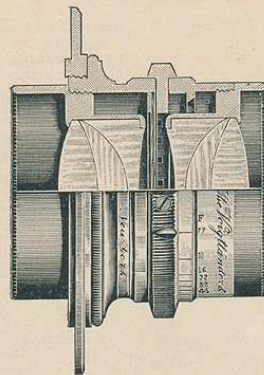
No.	Equivalent Focus: inches.	F 6.3 Diameter of Glasses: inches.	Size of Plates Sharp'n Covered: F 6.3 inches.	F 8 inches.	F 8 1/2 inches.	Price with Iris Diahrm.
5	9 7/8	1-9-16	6 x 8	6 1/2 x 8 1/2	9x11	\$77.50
6	11 7/8	1 7/8	6 1/2 x 8 1/2	8 x 10	10x12	105.00
7	14 1/2	2 1/4	8 x 10	10 x 12	12x15	140.00
8	17	2 1/2	11 x 14	12 x 15	16x20	187.50
9	20	3	12 x 15	14 x 17	18x22	235.00
10	23 3/4	3 5/8	14 x 17	18 x 22	20x24	325.00

The rear combination can be used separately, forming an anastigmatic lens with largest aperture of F 16, possessing double the focal length of the complete symmetrical lens. When thus used the diaphragm values are half as large as indicated on the scale marked on the lens barrel. Thus F 8 of the double lens represents F 16 when the rear combination only is employed.

Complete Line of our Exclusive Lenses fully described in this Catalogue.

## Series III Rapid Voigtlaender's Collinears.

FULL APERTURE F 6.8



The third series of Collinears is an extremely useful one for all around views, hand camera work, groups, instantaneous, architectural and copying work.

The speed is second to no other similar lens, except Collinear II.

Series III with full opening covers 70 degrees—75 degrees and stopped down comprises even a larger angle, so that it can be used as a wide angle lens with fine results. The small sizes are excellent lenses for hand cameras. The anastigmatic definition is microscopically sharp, and the negatives are highly adapted for enlarging.

The medium and larger sizes are extremely popular with photographers for large views and difficult groups. As in the previous series the sizes listed below do not represent the maximum covering power or capacity of the lens. The rear combination can be used separately as a long focus anastigmat with the aperture of F 16.

No.	Equivalent Focus: inches.	Free Diameter of Glasses: inches.	Size of Plates Sharply Covered: F 6.8 inches.	F 8 inches.	F 8 1/2 inches.	Price with Iris Diahrm.
0	2 1/2	5-16	1 3/4 x 1 3/4	1 3/4 x 2 1/2	2 1/2 x 2 1/2	\$20.00
00	2 3/4	13-32	1 3/4 x 2 1/2	2 1/4 x 3 1/2	3 x 4	22.50
1	3 1/2	1/2	3 1/4 x 3 1/4	3 1/4 x 4 1/4	4 x 5	27.50
2	4 1/4	11-16	3 1/4 x 4 1/4	4 1/4 x 6 1/2	5 x 6 1/2	32.50
3	5 1/8	7/8	4 1/4 x 6 1/2	5 x 7	6 1/2 x 8 1/2	40.00
3a	7	1	5 x 7	6 x 8	7 x 9	50.00
4	7 7/8	1 1/8	6 x 8	7 x 9	8 x 10	55.00

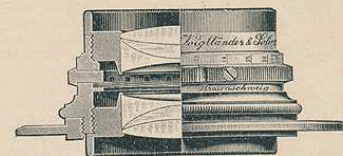
## FULL APERTURE F 7.7

No.	Equivalent Focus: inches.	Free Diameter of Glasses: inches.	Size of Plates Sharply Covered: F 7.7 inches.	F 8 inches.	F 8 1/2 inches.	Price with Iris Diahrm.
5	9 7/8	1-7-16	7 x 9	8x10	11x14	\$72.50
6	11 7/8	1-9-16	8x10	11x14	12x15	100.00
7	14 1/2	1 7/8	11x14	14x17	16x18	130.00
8	17	2 1/4	14x17	16x18	18x22	165.00
9	20	2 3/4	16x18	18x22	22x27	210.00
10	23 3/4	3-3-16	18x22	20x24	22x30	300.00
11	31 1/2	4-3-32	20x24	25x30	30x35	525.00

Do not overlook our Special Portrait Lenses.

Keep posted on things Photographic; subscribe for Photopivot.

## Series IV Wide Angle Voigtlaender's Collinears.

APERTURE NOS. 1 TO 5, F 11.3  
APERTURE NOS. 6 TO 10, F 12.5

Series IV is the first series of Symmetrical Wide Angle Lenses of Anastigmatic type to be offered in a variety of sizes. For wide angle work the lenses of this series have no equal. The sharpness of definition obtained with the largest stop is perfect, and covers a field of 75 degrees to 80 degrees; as a result their speed is comparatively very high. With small stops 90 degrees is easily obtained without the introduction of the least unevenness or trace of astigmatism.

The plates listed below are by no means the maximum. In most cases much larger plates will be covered sharply.

For line work the Series IV is preferred to all others by photo-engravers, owing to the unapproachable detail and microscopic definition. In the large sizes, customarily chosen for this work, we furnish Waterhouse stops, the iris diaphragm not being adapted to process work.

No.	Equivalent Focus: inches.	Size of Plates Sharply Covered: F 11.3 inches.	F 32 inches.	F 64 inches.	Price with Iris or Waterhouse Diaphragms.
1	4	3 1/4 x 4 1/4	4 x 6	4 1/4 x 6 1/2	\$30.00
2	4 3/4	4 1/4 x 6 1/2	5 x 7	5 1/2 x 7 1/2	35.00
3	5 7/8	5 x 7	6 x 8	7 x 9	40.00
4	7 7/8	7 x 9	9x11	10 x 12	48.00
5	10 1/4	9 x 11	10x12	12 x 15	72.00
6	12 3/4	10 x 12	12x15	14 x 17	90.00
7	17 1/2	14 x 17	16x18	18 x 22	145.00
8	23 1/2	16 x 20	18x22	20 x 24	215.00
9	31 1/2	20 x 24	22x27	25 x 30	325.00
10	39 1/2	22 x 28	25x30	30 x 35	405.00

## Combination Sets of the Voigtlaender Collinear Lenses.

Combination sets of Collinears are furnished in Series II, "Extra Rapid," and Series III, "Rapid," and of each of these series two sets are offered, a 5x7 set of three lenses and an 8x10 set of four lenses.

## SET A.

Consisting of one combination of each of the Nos. 2, 3, 4 of Series II or Series III Collinears, focus 5 1/4 to 14 inches. Price, including leather case, \$75.00.

## SET B.

Consisting of one combination of each of the Nos. 3, 4, 5, 6 of Series II or Series III Collinears, focus 6 1/4 to 21 inches. Price, including leather case, \$150.00.

The draw of bellows required for the single combinations exceeds the indicated focal lengths by from one to four inches.

A complete catalogue of Collinear Lenses, with detailed information of combination Sets A and B, also catalogue covering information as to Collinear Lenses for the various hand cameras, mailed free on request.

Our MONARCH BACKGROUNDS are the finest productions.

The most Exclusive Line of Studio Accessories.



**Manhattan Verastigmat.**

**SPEED F 6.8**



The construction of the *Verastigmat* embodies the practical execution by the most precise methods, of the conditions prescribed by the highest requirements of the theories of advanced optics.

The *Verastigmat* (truestigmat) is a new double symmetrical Anastigmat having a speed of F-6.8. It combines all the qualities which should be found in a true stig-

mat. It is guaranteed to have an absolutely flat field, even at full opening; the speed is actually, not nominally, F-6.8; the achromatic, spherical, and astigmatic aberrations are entirely eliminated; the illumination is entirely uniform, even beyond the plate for which it is rated; the definition and depth are the most perfect which can be combined in a lens.

The corrections are furthermore so complete that the lens can be used as a Wide Angle, and the back combination can be used alone at a speed of F-13.5, being a perfect single Anastigmat.

The mounting has been designed with a special view to compactness, and each one is as perfectly made as the finest instrument of precision. The cells in which the lenses are mounted are interchangeable in the barrels and adapters which are provided for any shutter.

Every *Verastigmat* is sold with the above guarantee, and may be returned if not found equal to any expectations which may be entertained of it.

**PRICES.**

No.	Focal Length	Size	Plate covered by rear system	Price
0	4 3/4	3 1/4 x 4 1/4	5 x 7	\$34.00
1	6 1/4	4 x 5	6 1/2 x 8 1/2	40.00
2	7 1/2	5 x 7	8 x 10	48.00
3	8 3/4	5 x 8	10 x 12	55.00
4	10 1/4	6 1/2 x 8 1/2	11 x 14	75.00
5	12 1/2	8 x 10	12 x 16	90.00

**Series II Standard Wide Anastigmat.**

**SPEED F 15.3**



An *Extreme Angle Anastigmat*, with an *Image Circle of 110 Degrees*; for *Flash Lights, High Buildings, Interiors, and all classes of Photographic work in Confined Situations.*

Has extraordinary flatness of field, perfection of definition, equality of illumination; small, compact and fitted with Iris Diaphragms.

Up to and including 8x10, may be fitted to the Wollensak Shutters and make excellent rapid view lenses. The rear combination may be used as a single view lens of double the focal length with very good results, also.

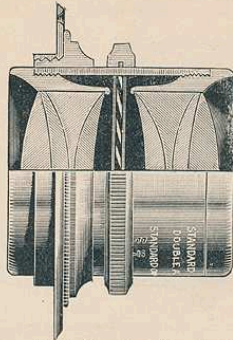
No.	Plate f-15.3	Plate f-84	Equivalent Focus	Diameter of Lens	PRICE
1	4 x 5	5 x 7	3	9-16	\$14.00
2	5 x 7	5 x 8	4 1/2	11-16	17.00
3	6 1/2 x 8 1/2	8 x 10	6	7/8	23.00
4	8 x 10	10 x 12	7	1	28.00
5	10 x 12	11 x 14	8 1/2	1 1/4	44.00
6	11 x 14	14 x 17	10 1/2	1 3/8	76.00

Remember—we make no Charge for Boxing or Cartage.

**Standard Double Anastigmat.**

**Series IVa.**

**SPEED F 7.7**



An *Extra Rapid Universal Anastigmat*, producing the *finest results in Portraits, Groups, Large Heads, Views, Landscapes, Scenery, Architecture, Copying, Enlarging, Interiors, Flash Lights, Athletic Pictures, Etc.*

Its vast capabilities and immense field of usefulness commend it to every class of Artistic and Commercial Photography.

The production of a Double Anastigmat Objective of the highest type is a most intricate, delicate, tedious and painstaking process, requiring the most expert knowledge and the most improved modern machinery.

Each Standard Double-Anastigmat is composed of eight absolutely permanent, exceedingly transparent Jena Glass lenses, ground, polished and centered to perfection.

The front and rear components are identical and each is composed of four single lenses of four different kinds of glass, all cemented together to form a completely corrected, single objective.

There are no interior surfaces uncemented which cause reflections and diminish the illuminating power.

Either front or rear lens may be used separately as a Single Anastigmat of twice the focal length of the entire objective. These are very useful for portraiture and distant landscape work, and are completely corrected for distortion over the regular size plate.

The focal lengths in the Standard Double Anastigmats are chosen to give the best proportion of image, although at full aperture the next size larger plate is covered in a most satisfactory manner.

The manufacturers have chosen the speed f-7.7 (instead of f-6.8 or f-5.6) from the fact that most of the between-lens shutters are constructed with a full diaphragm opening not larger than f-7.7.

The Standard Double Anastigmat f-7.7 possesses ample speed for rapid portrait work and indoor photography, as well as snap shots on "gray days" and full exposures in 1-800 of a second in good light. In addition to this, it is more highly corrected and possesses more even illumination and much greater depth than any Anastigmat working at a larger aperture.

The angle covered sharply at full aperture by the Standard Double Anastigmat is more than 60 degrees, and with smaller stops runs up to about 90, making an extra rapid wide angle lens of the greatest utility.

All lenses of this make are fitted with Iris diaphragms unless ordered otherwise.

We fit all sizes of the Standard Double Anastigmat to Wollensak Shutters at no extra charge for the fitting.

The manufacturers claim that their method of manufacture is so accurate that they charge nothing extra for pairing lenses for stereoscopic work.

**PRICES.**

No.	Equivalent Focus	Plate f-7.7	Plate f-84	Diameter of lens	Price
1	6	4 x 5	6 1/2 x 8 1/2	7/8	\$25.00
2	8 1/2	5 x 7	8 x 10	1 1/8	32.00
3	10 1/2	6 1/2 x 8 1/2	10 x 12	1 3/8	45.00
4	12	8 x 10	11 x 14	1 5/8	60.00
5	14	10 x 12	14 x 17	1 7/8	97.00
6	17	11 x 14	20 x 24	2 3/8	163.00

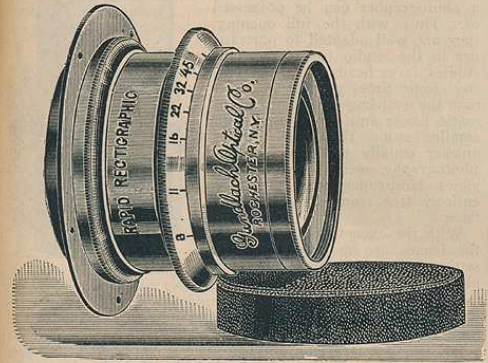
**We prepay express charges on all Photographic papers that we list.**

**Gundlach Rapid Rectigraphic.**

**F 8**

**With Iris Diaphragm.**

A convertible rectilinear lens of exceptional quality for all general photographic purposes, including portraiture and copying.

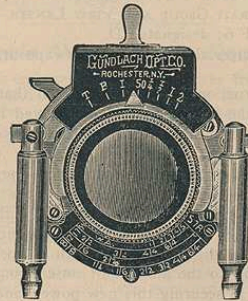


No.	Size of Plate.	Diameter of Lenses. Inches.	Equivalent Focus. Inches.	Focus of Back Lens. Inches.	Focus of Front Lens. Inches.	Price with Iris Diaphragm.
1	4 x 5	1	6 1/4	10	13 1/2	\$ 18.00
1 3/4	5 x 7	1 3/16	8	12 1/2	17	22.00
2	5 x 8	1 1/4	8 1/2	12 1/2	18	24.00
3	6 1/2 x 8 1/2	1 1/2	11	17	23	30.00
4	8 x 10	1 3/4	13	20 1/2	28	38.00
5	10 x 12	2	16	25 1/4	34	45.00
6	11 x 14	2 1/4	18 1/2	29 1/4	39 1/2	60.00
7	14 x 17	2 3/4	22	34 3/4	47	85.00
8	17 x 20	3 1/4	26	41	50	100.00

**Gundlach Rapid Rectigraphic.**

**F 8**

**Mounted in Shutter.**



No.	Size of Plate.	Diameter of Lenses. Inches.	Equivalent Focus. Inches.	Focus of Back Lens. Inches.	Focus of Front Lens. Inches.	Price, including Shutter.
1	4 x 5	1	6 1/4	10	13 1/2	\$23.00
1 3/4	5 x 7	1 3/16	8	12 1/2	17	27.00
2	5 x 8	1 1/4	8 1/2	13 1/2	18	29.00
3	6 1/2 x 8 1/2	1 1/2	11	17	23	35.00
4	8 x 10	1 3/4	13	20 1/2	28	43.00

Any other lens, the product of the Gundlach Optical Co., can be supplied promptly on order. Catalogue of complete line of these lenses mailed on application.

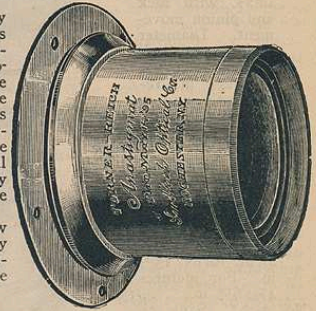
**Turner-Reich Anastigmat Process Lens.**

**SERIES V**

**With Waterhouse Stops**

Series V is specially designed for Process work and other similar branches of photography that require a lens which will give the utmost sharpness with speed and covering power. The chemical and visual focus are absolutely coincident, and the field perfectly flat.

This lens is now being used by many of the largest engraving firms in the country.

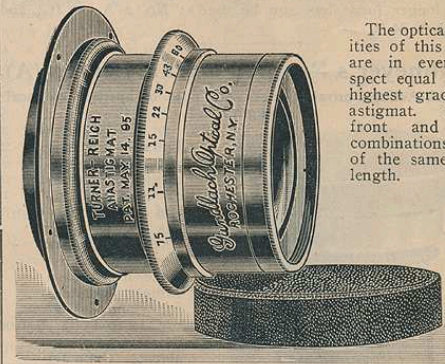


No.	Diameter of Lens. Inches.	Plate.	Focus. Inches.	Price.
1	1 5/8	10X12	14	\$ 65.00
2	2	16X18	18	125.00
3	2 5/8	18X22	24	180.00
4	3 3/8	22X25	30	275.00

**Turner-Reich Anastigmat.**

**F 7.5**

**Iris Diaphragm.**



The optical qualities of this series are in every respect equal to the highest grade anastigmat. Both front and rear combinations are of the same focal length.

Either combination may be used separately and are approximately double the equivalent focus of the complete lens. For general use in the studio and all kinds of out-door photography this series is unequalled.

No.	Equivalent Focus. Inches.	Diameter of Lenses. Inches.	Plate covered sharply with opening of	Price. Mounted in Barrel.
1	6	7/8	F 7.5, F 15, F 60	\$ 35.00
2	7 1/4	1	4 x 5, 5 x 7, 5 x 8	40.00
3	8 1/2	1 1/4	5 x 7, 5 x 8, 6 1/2 x 8 1/2	50.00
4	10 1/2	1 1/2	6 1/2 x 8 1/2, 8 x 10, 10 x 12	75.00
5	12	1 3/8	8 x 10, 10 x 12, 11 x 14	85.00
6	14	1 5/8	10 x 12, 11 x 14, 14 x 17	110.00
7	17	2 1/8	11 x 14, 14 x 17, 17 x 20	160.00
8	21	3	14 x 17, 17 x 20, 18 x 22	250.00
9	26	3 3/4	17 x 20, 18 x 22, 22 x 25	350.00

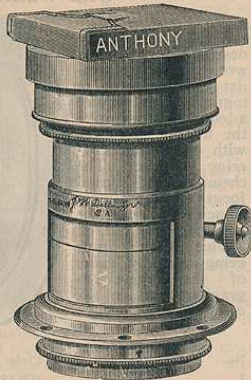
See those new Studio Accessories—they are Beauties.



**Dallmeyer's Patent Portrait Lenses (B).**  
SPEED F 4

Portrait Lenses of ordinary intensity with rates of aperture to focus F 4.

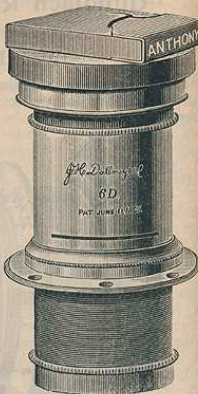
- No. 1 A\*. PATENT LENS, with rack and pinion movement. Diameter of front and back combinations, 2 3/4 and 2 3/8 in. respectively, and 10 in. equivalent focus. For pictures 4x5 in. .... \$100.00
- No. 2 A\*. Same as above. Diameter of front and back combinations, 3/4 and 3 1/2 in. respectively; equivalent focus 13 1/2 in. For pictures 4 3/4 x 6 1/2 in. .... \$136.00
- No. 3 A\*. Same as above. Diameter of lenses 4 in., equivalent focus 16 in. For pictures 6 1/2 x 8 1/2 in. and promenades and cabinets. .... 208.00
- No. 4 A. Same as above. Diameter of lenses 4 1/2 in., equivalent focus 18 in. For pictures 8x10 in. .... 292.00
- No. 5 A. IN RIGID MOUNT. Diameter of lenses, 5 in., equivalent focus 21 in. For pictures 15x15 in. and under ..... 380.00
- No. 6 A. Same as above. Diameter of lenses 6 in., equivalent focus 28 in. For pictures 20x16 in., and under ..... 456.00



**Dallmeyer's Patent Portrait and Group Lenses (D).**  
SPEED F 6

These lenses are perhaps the most generally useful instruments a photographer can be possessed of. Thus, with the full opening, they are well adapted to portraiture in the studio (as for groups, studies, large heads, etc.), possessing four times greater intensity than the well-known Triple Achromatic Lens; and, when used with smaller stops, these new lenses answer equally well for outdoor photography, such as architectural views, landscapes, etc. They are entirely free from distortion and flare.

With the exception of No. 3 D, the lenses are mounted in rigid settings, i. e., without rack and pinion movement.



No.	Diameter of Lenses, Inches.	Equivalent Focus, Inches.	Size of Group, Inches.	Size of View, Inches.	Price.
2 D*	1 1/2	9	4 3/4 x 6 1/2	6 1/2 x 8 1/2	\$ 54.00
3 D*	2 1/8	12 1/2	6 1/2 x 8 1/2	8 x 10	72.00
4 D*	2 3/8	17	8 x 10	10 x 12	104.00
5 D*	3/4	19	10 x 12	12 x 15	133.00
6 D	4	24	12 x 15	16 x 18	202.00
7 D	5	30 1/2	16 x 18	20 x 22	366.00
8 D	6	37	20 x 22	21 x 25	444.00

\*Distance for a cabinet portrait with No. 2 D, 15 ft.; with No. 3 D, 18 ft.; with No. 4 D, 25 ft.

**GENERAL REMARKS.**

Dallmeyer's Patent Portrait Lenses are made in three styles, as regards intensity or rapidity of action:

- 1st.—QUICK-ACTING PORTRAIT LENSES, ratio of aperture to focal length, F 3; designated B.
- 2nd.—PORTRAIT LENSES of the ordinary intensity. Ratio of aperture to focus, F 4; designated A.
- 3rd.—PORTRAIT GROUP AND VIEW LENSES. Ratio of aperture to focus, F 6; designated D.

B lens requires about one-half the exposure of A and one-fourth of D.

The construction of the lens is such that, with the posterior cell of the back combination screwed home, the index pointing zero, it produces the sharpest possible picture of objects situated in *one plane*. Then, by unscrewing the posterior lens a turn or parts of a turn, the previous intensely sharp definition becomes modified, i. e., the contrast of excessive sharpness in one plane, compared with great want of sharpness in other planes, is balanced, producing the impression of a general distribution or depth of focus; and this in exact proportion to the amount of unscrewing. Nothing has been sacrificed in securing this new power, and it can be used or not at the will of the operator. In the case of the D lenses, rather more unscrewing is required to produce an appreciable effect. It is important the following rule be observed: *Unscrew first, and focus afterwards.*

**Subscribe for Photopivot,**  
issued "every other month,"  
six issues, 25 cents.

**Series II Dallmeyer Stigmatic Lens. F 6**

This is a new universal lens of simple construction, consisting of five lenses only. It is intended to be a lens suitable for every class of photography, from portraiture to wide-angle work, and is one of the quickest stigmatic lenses made. The smaller sized plates in these specifications are the size we advise for general work with lenses of the respective foci, since the use of a lens of too short focus tends to the production of exaggerated perspective. At full aperture these lenses cover slightly larger plates than those given, and include an angle along the diagonal of the plates of about 85 degrees.

Being perfectly free from spherical aberration, the full aperture of the lens may be used in focusing, there being no fear of any alteration taking place in the focal length of the lens when changing the size of the stop. By using either the back or front combination singly, the choice of two extra focal lengths is obtained, and for the best results the single lens should be screwed into the back of the mount. The equivalent focus of the front lens will be one and one-half times and the back two times that of the whole combination, and require respectively three times and five times the exposure of the combined lens at the same aperture. For such subjects as large heads, the single lenses may be used with full aperture, but for general use the Iris Diaphragm should be set to an aperture not larger than F 11 or F 8, for front or back respectively.

No.	Plate Covered at Full Aperture, F 6, Inches.	Largest Plate Covered at F 11, Inches.	Diameter of Lens, Inches.	Equivalent Focus, Inches.	Price, with Iris Diaphragms
1	3 1/4 x 3 1/4	4 3/4 x 6 1/2	.8	4.5	\$8.00
2	3 1/4 x 4 1/4	5 x 8	.9	5.3	46.00
3	4 x 5	6 1/2 x 8 1/2	1.1	6.4	54.00
4	4 3/4 x 6 1/2	8 x 10	1.3	7.6	65.00
5	5 x 8	10 x 12	1.6	9	84.00
6	6 1/2 x 8 1/2	12 x 15	1.9	10.7	108.00
7	8 x 10	15 x 15	2.2	12.7	148.00
8	10 x 12	16 x 18	2.6	15.1	196.00
9	12 x 15	20 x 22	3.1	18	252.00

Suitable Telephoto Attachment in Brass for

No. 1	\$30.00	No. 6	\$42.00
No. 2	30.00	No. 7	48.00
No. 3	30.00	No. 8	56.00
No. 4	36.00	No. 9	68.00
No. 5	36.00		

**Dallmeyer's Wide-Angle Rectilinear**

These lenses embrace angles of pictures from 90 degrees to 100 degrees, and enable photographers to take views of buildings, interiors, etc. in confined situations, where lenses of longer focus cannot be used, and where absolute rectitude of lines is imperative.

It is entirely free from a central spot; it can be used with a larger stop, i. e., it is quicker in action; it produces a more brilliant picture.

The front combination of the Wide-Angle Rectilinear can be used intact, by dispensing with the back, as a single lens (focal length about double that of the compound lens). The lenses are mounted in rigid settings or tubes, and a rotating diaphragm plate. In the column below, the largest size of plate covered by each lens is recorded; and, if microscopic definition up to the corners be required, the smallest or smallest but one stop should be used.

No.	Largest Dimension of Plate, Inches.	Diameter of Front Combination, Inches.	Back Focus, Inches.	Equivalent Focus, Inches.	Price.
1AA	4 1/2 x 7 1/4	3/8	3 1/2	4	\$34.00
1A	6 1/2 x 8 1/2	1 1/4	4 3/8	5 1/4	42.00
1B	8 x 10	1 3/8	5 1/2	6 1/4	50.00
1	10 x 12	1 1/2	6 1/4	7	58.00
2	12 x 15	2	7 1/2	8 1/2	80.00
3	16 x 18	2 1/2	11	13	106.00
4	20 x 22	3	14	15 1/2	152.00
5	21 x 24	3 3/4	17	19	228.00

**Dallmeyer's Rapid Rectilinear Lenses.**

(Patent.)

The Rapid Rectilinear Lens is emphatically "The Lens" for all kinds of outdoor photography. It works at an intensity of F 8, and, although not so rapid as the D Lens, requiring nearly double the exposure, is superior to it for views because of its having only four, instead of six, reflecting surfaces. It is composed of two exactly symmetrical cemented combinations, and unlike most existing double combination cemented lenses, requiring small stops to cure the inherent excessive spherical aberration, the Rapid Rectilinear is applanatic, i. e., it works with the full opening. Hence its superiority for all kinds of quick outdoor pictures, groups, instantaneous effects, landscapes, architectural subjects, or for dimly lighted interiors. For copying and enlarging, this lens is unrivaled. With smaller stops, each lens covers the next larger size plates than those recorded, thus embracing angles of pictures from 60 to 80 degrees. Many fine large portrait studies have been taken with this lens. Either combination can be used singly as an ordinary landscape lens; focus, about twice that of the compound lens. Each lens is supplied with a set of Waterhouse Diaphragms. If required, any of the lenses marked below

can be used with smaller stops, for the next size larger view. N. B.—It is recommended that all Rapid Rectilinear Lenses above the 10x12 size should always be focused with a medium stop (No. 3), whether the picture is to be afterwards taken with a larger or smaller stop. Each lens is constructed to give the greatest possible "depth of focus" which involves the above conditions.

Size of View or Landscape, Inches.	Size of Group or Portrait, Inches.	Diameter of Lenses, Inches.	Back Focus, Inches.	Equivalent Focus, Inches.	Price, Rigid Set.
3 1/4 x 4 1/4	3 1/4 x 3 1/4	3/8	3 3/8	4	\$28.00
4 x 5	3 1/4 x 4 1/4	1	5 1/2	6	34.00
4 3/4 x 6	4 x 5	1 1/4	7 1/2	8 1/4	42.00
5 x 8	5 x 6	1 3/8	9 1/4	10	48.00
6 1/2 x 8 1/2	5 x 6	1 1/2	10 3/4	11	53.00
8 x 10	6 1/2 x 8 1/2	1 3/4	12 1/4	13	68.00
10 x 12	8 x 10	2	15	16	84.00
12 x 15	10 x 12	2 1/2	18	19 1/2	114.00
16 x 18	12 x 15	3	23	24 3/4	152.00
20 x 22	16 x 18	3 3/4	28	30 1/2	206.00
21 x 25	20 x 22	4	31	33 1/2	252.00

Fitted with Iris Diaphragms to order only at same price. 4x5 furnished in matched pairs for stereo work.

**NOTICE.**

We have quoted a line of Dallmeyer lenses such as will most satisfactorily meet the requirements of the operator; any other of the Dallmeyer series of lenses can be promptly supplied.

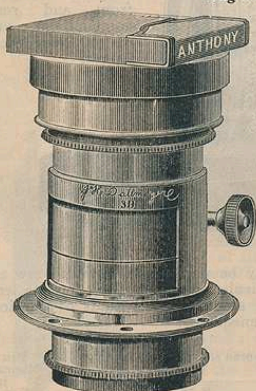
A complete list of the Dallmeyer lenses will be sent to anyone on request, and net quotations supplied on any lens selected.

Trial privileges on Dallmeyer lenses are limited to five days.

**What you can get FROM ANY HOUSE you can get from Ralph J. Golsen. You CAN get from Ralph J. Golsen what you CAN'T get from any other house.**

**Dallmeyer's Patent Portrait Lenses (A).**

Quick-Acting Portrait Lenses with ratio of aperture to focal length F 3.



No. 1 B. PATENT LENS, with rack and pinion movement. Diameter of lenses 2 in., and equivalent focus 6 in. For CARTE DE VISITE Portraits. Distance between subject and lens for standing figure, 12 to 13 ft. \$56.00

No. 2 B. Same as above. Diameter of lenses 2 3/4 in., and equivalent focus 8 1/2 in. Especially constructed for CARTE DE VISITE Portraits. Distance between subject and lens for a standing figure, 18 ft. .... 102.00

No. 3 B. Same as above. Diameter of lenses 3 1/2 in., and equivalent focus 10 1/2 in. Especially constructed for CABINET Portraits. Distance between subject and lens for a standing figure, 18 ft. .... 152.00

No. 4 B. Same as above. Diameter of lenses 4 1/2 in., and equivalent focus 14 in. For pictures 6 1/2 x 8 1/2 in. and under. Distance for a CABINET Portrait, 25 ft. .... 304.00

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**Voigtlaender Portrait Euryscope.**

The Ideal Lens for Portraits, Groups and Figures.

Unlike the regular Portrait-Lenses, the front combination of which consists of one compound lens and the rear combination of two separate lenses of quite dissimilar shape, these new lenses are composed of two perfectly symmetrical and cemented combinations, similar to the Euryscopes, and offer several important advantages.



The front and back combinations being perfectly symmetrical, superior marginal definition and perfectly even illumination of the plate can be obtained, and, with the same length of focus as heretofore, a larger field is covered and the size of the image increased, the resulting picture being absolutely free from distortion.

The Portrait-Euryscopes are made in two series. The first are short focus, of normal speed, and excel in covering capacity, depth of focus and power of definition. The other series (Third Series) are longer focus and, consequently, less rapid, but sufficiently quick-working for all ordinary portrait-work in the studio. Possessing, too, greater covering-power and more depth of focus, they are especially adapted to taking groups and standing-figures in short studios, where the regular Euryscopes, on account of their longer focus, may not be available. They are also excellent for instantaneous work, inasmuch as the flare, characterizing portrait-lenses when used out of doors, does not exist.

**Second Series Portrait Euryscope.**

SHORT FOCUS. RATIO, 1 TO 4, OR F 4

Specially adapted to general portrait work in very short or dimly-lighted studios.

No.	Diameter of Lens. Inches.	Equivalent Focus. Inches.	Size of Plate. Inches.	Price.
3	2	7 2-3	4 1/4 x 6 1/2	\$62.00
4	2 1/2	9 3/4	6 1/2 x 8 1/2	86.00
5	3	11 1/2	8 x 10	116.50
6	3 1/2	14	10 x 12	145.00
7	4	17 1/2	12 x 15	175.00

Nos. 3, 4 and 5 have Rack and Pinion. Nos. 6 and 7 mounted in rigid settings.

**Third Series Portrait Euryscope.**

LONGER FOCUS. RATIO, 1 TO 4 1/2, F 4.50

Unrivaled for general portrait work. Excellent for groups in short studios.

No.	Diameter. Inches.	Equivalent Focus. Inches.	Size of Plate. Inches.	Price.
1A	1 1/2	6 1/2	3 1/2 x 4 1/2	\$45.00
2A	1 3/4	7 1/2	4 1/2 x 6	55.00
3A	2	8 2-3	5 x 8	70.00
4A	2 1/2	10 5-6	6 1/2 x 8 1/2	95.00
5A	3	13	10 x 12	130.00
6A	3 1/2	15 1-3	11 x 14	186.50
7A	4	19 1-3	14 x 17	226.50
8A	5	25	17 x 20	426.50

All these are mounted in rigid settings.

We have our outfits made as compact and light as is consistent with durability. We do not sacrifice strength.

**Fourth Series Voigtlaender Extra Rapid Euryscope.**

APERATURE ABOUT F 6

For Groups, Standing Figures, Large Heads, Buildings, Landscape, Instantaneous Work and Copying.

This standard and reliable lens consists of two achromatic and symmetrical combinations, between which the diaphragms are placed. It is absolutely free from distortion, chemical focus and central flare ("ghosts"), the picture produced with it being mathematically correct and brilliantly and evenly illuminated. The "EXTRA RAPID EURYSCOPE" is universally conceded to be one of the quickest lenses of its class produced, and yields pictures of remarkable depth of focus, perfect definition, rare brilliancy and uniform illumination.

The width of angle embraced is from 65 to 85 degrees, according to size of plate and diaphragm used. Iris diaphragm supplied with these lenses at an additional cost of \$5.00 and upwards.

Size.	Diameter of Lens. Inches.	Equivalent Focal Length. Inches.	Size Portrait or Group. Inches.	Size Landscape. (Smallest Stop.) Inches.	Price.
0	1 1-10	4 3/4	3 1/4 x 4 1/4	4 x 5	\$27.00
00	1 1/4	6 1/4	4 x 5	5 x 7	36.00
1	1 1/2	8 1/4	5 x 7	7 x 9	45.00
2	1 3/4	10	7 x 9	8 x 10	52.00
3	2 1-6	11 1/2	8 x 10	10 x 12	65.00
4	2 1/2	14 1-3	10 x 12	11 x 14	90.00
5	3 1/8	17 1/2	11 x 14	14 x 17	135.00
6	3 1/2	21 1-3	14 x 17	18 x 22	180.00
7	4 1/8	24 1/2	18 x 22	20 x 24	220.00
8	5 1/8	32	27 x 32	30 x 36	412.00
9	6 1/2	46	30 x 36	40 x 50	900.00

Nos. 0 and 00 can be had in matched pairs of equal focus for Stereoscopic work.

The first five sizes of this series can also be had without the front hood, which renders the lenses more compact.

**Voigtlaender & Son's Wide Angle Euryscope.**

For Interiors, Landscapes and Copying.

Produces results marked by superb definition, absolute freedom from distortion, a perfectly flat field and a delicacy of effect adding a peculiar charm to the picture. Being short focus, it is admirably adapted to copying maps, engravings and all kinds of line work. Nos. 0 to 4 inclusive are provided with rotating stops and are so mounted as to fit into one and the same flange—a feature which has obvious advantages. The larger sizes, No. 5 and upward, have Water-hood diaphragms.

No. 0 can be had in matched pairs of equal focus for Stereoscopic work.

Size.	Diameter of Lens. Inches.	Equivalent Focal Length. Inches.	Size Plate with Full Aperture. Inches.	Size Plate with Smallest Stop. Inches.	Price.
0	8-16	4 1-6	4 x 5	4 1/4 x 5 1/2	\$31.00
1	10-16	5 1-3	4 1/4 x 5 1/2	5 x 7	36.00
2	11-16	6 1-3	5 x 7	6 1/2 x 8 1/2	41.00
3	14-16	7 1-3	6 1/2 x 8 1/2	8 x 10	51.00
4	1 1-16	9	8 x 10	11 x 14	69.00
5	1 5-16	16	11 x 14	14 x 18	87.00
6	1 9-16	20	14 x 18	17 x 20	108.00
7	1 13-16	25	17 x 20	20 x 24	139.00
8	2 1-16	32	20 x 24	24 x 36	231.00

**The Periscope Lens.**

Is a rectilinear combination of the wide-angle variety, having an angle of 80 degrees, and is suitable for taking interior and exterior views—a very satisfactory instrument for general open-air work.

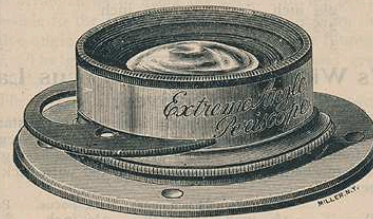
The largest aperture, F 14, admits sufficient light for instantaneous views. The larger sizes are suitable for taking portraits in the studio.



No.	Diameter of Lens. Inches.	Equivalent Focus. Inches.	Size of Plate. Largest Stop. Inches.	Size of Plate. Smallest Stop. Inches.	Price.
2	3 5/8	4 1/2	3 1/4 x 4 1/4	4 1/4 x 6 1/2	\$10.00
3	3 3/4	6	4 x 5	5 x 8	12.00
4	1 1/2	8 1/2	5 x 8	8 x 10	15.00
5	1 1/4	10 1/2	6 1/2 x 8 1/2	10 x 12	18.00
6	1 3/8	12	8 x 10	11 x 14	22.00

**The Extreme Angle Periscope Lens.**

For use where Views of an unusually Wide Angle are desired.



This objective is a symmetrical combination, and is absolutely free from astigmatism and secondary image, or "ghost," besides which it is achromatic and perfectly rectilinear. As each lens is individually achromatized, the front one can be removed and the back one used as a single landscape lens, of about double the focal length of the entire combination.

No.	Equivalent Focus. Inches.	Size of Plate. Largest Stop. Inches.	Largest Plate Covered. Inches.	Largest Aperture.	Price.
1	2.0	2 1/4 x 2 1/2	5 x 7	F 10	\$24.00
2	3.6	3 x 3	6 1/2 x 8 1/2	F 10	24.00
3	4.2	3 1/4 x 4 1/4	8 x 10	F 10	27.00
4	5.	4 x 5	10 x 12	F 14	32.00
5	5.0	4 1/4 x 6 1/2	11 x 14	F 14	40.00
6	7.1	5 x 8	14 x 17	F 14	51.00
7	8.4	6 1/2 x 8 1/2	16 x 20	F 16	66.00
8	10.	8 x 10	20 x 24	F 16	87.00
9	12.6	10 x 12	25 x 30	F 16	116.00

**Morrison Wide-Angle View Lenses.**



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

(Continued Next Column.)

**Morrison Wide-Angle Lenses—Continued.**

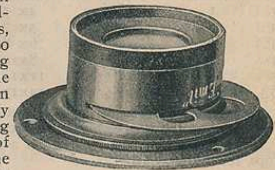
No.	Diameter of Plate. Inches.	Size of Plate. Inches.	Equivalent Focus. Inches.	Price.
0	1	3 x 4 1/4	2 1/4	\$ 20.00
3	1	4 1/4 x 6 1/2	4 1/4	25.00
4	1	5 x 8	5 1/4	25.00
5	1	6 1/2 x 8 1/2	6 1/2	25.00
6	1	8 x 10	8	30.00
7	1 1/4	11 x 14	10 1/2	40.00
8	1 1/2	14 x 17	14	50.00
9	1 3/4	17 x 20	17	60.00
10	1 1/2	20 x 24	22	80.00
11	1 1/2	25 x 30	28	100.00

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

**"Emil" Wide Angle Lens.**

80 TO 90 DEGREES

These lenses are well adapted to interiors, buildings and architectural views, having an angle of from 80 to 90 degrees, depending upon the stop used. The greatest care is exercised in their manufacture, and they show surprising covering capacity and equality of illumination. When the larger stops are used, a speed suitable for instantaneous and flash light exposures can be obtained.



Each lens is mounted in highly finished brass and is provided with a revolving diaphragm having five openings and a morocco cap.

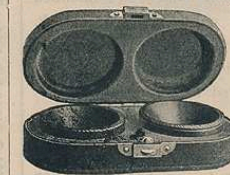
No.	Back Focus.	Diam.	Plate F 16.	Price
1	3 3/8	5 1/4	4 x 5	\$ 6.00
2	4 7/8	5 3/4	5 x 7	7.50
3	5 5/8	7 1/8	5 x 8	8.00
4	6 1/4	1	6 1/2 x 8 1/2	10.00
5	7 1/4	1 1/8	8 x 10	14.00
6	8 1/2	1 1/4	10 x 12	18.00

**"Emil" Wide Angle Lens in Cells.**

As shown in the cut, the "Emil" is offered in most convenient form. The optical properties of this lens are described above.

As listed below, these lenses are mounted in cells to fit the Wizard, Wizard Sr., Victor, Poco, Graphic, Voco, Bullard, Unicorn and Wollensak shutters, and are interchangeable with the Rectilinear lenses regularly supplied therewith.

If they are required for any shutters not mentioned above, there will be an extra charge of \$0.75.



Size.	Price.
4 x 5	\$ 6.50
5 x 7	8.00
6 1/2 x 8 1/2	10.50
8 x 10	14.50

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Good Paper—Low List Price—Big Discounts—a Great Combination.



**Darlot Portrait "Quick-Workers."**

**SHORT FOCUS**

These lenses have proved of special value in studios of limited space or meager illumination, being exceedingly rapid on account of their relatively large opening. They are designed exclusively for portraiture. Provided with rack and pinion movement and central stops.

Size.	Diameter.	Back Focus.	Size of Plate.	Price.
1/2	2 1/4 inch	6 inch	3 1/4 x 4 1/4 inch	\$24.50
2-3	2 1/2 inch	7 inch	5 x 7 inch	36.00
4-4	3 inch	8 inch	6 1/2 x 8 1/2 inch	48.00
Extra 4-4	4 inch	11 inch	8 x 10 inch	95.00

**Darlot's Rapid Hemisphericals.**

**For Portraits and Views.**

These lenses embrace an angle of from 60 degrees to 75 degrees; are quick-acting, perfectly rectilinear.

Most excellent for portraits and general gallery work; also buildings, landscapes, instantaneous work, and copying purposes.

No.	Diameter. Inches.	Eq. Focus. Inches.	Portrait. Inches.	View. Inches.	Price.
*1	1	6 1/4	4x 5	5x 7	\$ 15.00
2	1 1/4	9 1/4	5x 7	6x 8	22.50
3	1 1/2	11 3/8	6x 8	8x10	33.50
4	1 3/4	14 1/2	8x10	11x14	50.00
5	2 1/8	19 1/2	11x14	14x17	85.00
6	3	24 1/2	14x17	17x20	100.00

Nos. 1 and 2 can be had in matched pairs of equal focus for Stereoscopic work, and with rotary stops.

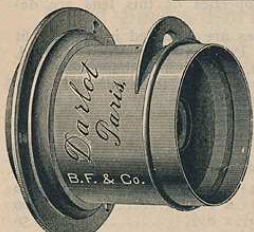
\*This size can also be had in a rigid setting, and rotating stops for Hand Cameras.

**Darlot's Wide-Angle Hemispherical Lenses.**

These lenses embrace an angle of 90 degrees, and being rectilinear, they are valuable for interiors, buildings, landscapes, etc., and in confined localities where lenses of longer focus cannot be used. Provided with three lever diaphragms.

No.	Diameter. Inches.	Eq. Focus. Inches.	Size View. Inches.	Price.
1	3/4	3	Stereoscopic	\$14.00
2	1	3 1/2	4 x 5	16.50
2 1/2	1	4 1/2	5 x 7	16.50
3	1 1/4	6 1/8	6 1/2 x 8 1/2	22.50
4	1 5/8	8 3/4	10 x 12	28.00
5	2 1/4	13 1/2	14 x 17	39.00
6	3	17 3/4	17 x 20	55.00

Nos. 1 and 2 furnished in matched pairs for Stereoscopic work.



**Darlot's Single View Lenses.**

These are single-combination lenses, and intended for purely landscape work. They are now constructed in rigid mountings, and provided with rotating stops.

Size.	Diameter. Inches.	Focus. Inches.	Plate. Inches.	Price.
1-9	1	5 1/2	Stereoscopic	Per pair, \$10.00
1-6	1 1/4	7	4x 5	Per pair, 11.25
1-4	1 1/2	7	5x 7	Each, 6.75
1-3	1 3/4	7 1/2	7x 9	8.00
1-2	2 1/4	12 1/2	10x12	10.00
2-3	2 1/2	16	11x14	14.50
4-4	3 1/4	20	14x18	20.00

The first two sizes can be had in matched pairs for stereoscopic work.

Order your Backgrounds from us.

**Darlot's Portrait Lenses.**

These lenses are constructed on the standard portrait system, are extremely rapid, but good only for portraiture. Provided with rack and pinion movement and central stops.

Size.	Diameter. Inches.	Focus. Inches.	Size of Plate. Inches.	Price.
1-4	1 1/8	4 1/4	3 1/4 x 4 1/4	\$ 10.00
1-3	1 1/8	5 1/4	4 1/4 x 5 1/4	16.00
1-2	2 1/4	6 1/2	5 x 7	20.00
4-4	3	10 1/2	8 x 10	40.00
8-4	4	15	11 x 14	105.00

The 1-4, 1-3 and 1-2 can be had in matched pairs of equal focus.

**Gem Lenses.**

These we can supply in sets of four, six, eight, nine or more, all perfectly matched. Are used for ferrotype work or portraits, making the respective number of negatives on one plate with one exposure.

1-9 size.....each, \$2.50; per set of 9 with plate, \$24.00  
1-6 size.....each, 3.75; per set of 6 with plate, 20.00  
1-4 size.....each, 4.00; per set of 4 with plate, 15.00

**BARGAIN SETS.**

1-9 size, single.....\$1.50; per set of 9 with plate, \$15.00  
1-4 size, single..... 2.50; per set of 4 with plate, 10.00

**Extra Series Darlot's Lantern Objectives.**

These lenses are made to successfully compete with similar, but low-priced, lenses for projection. To minimize the cost of construction, all engraving is omitted, except Darlot's trade mark. To be had singly or in matched pairs.

Size.	Diameter. Inches.	Back Focus. Inches.	Price.
7/4	1 3/8 inch	4 1/2 inch	\$ 5.00
1	2 1/4 inch	6 1/2 inch	11.00
2-3	2 1/2 inch	8 inch	18.00
4-4	3 inch	10 1/2 inch	30.00

**Darlot's Wide-Angle Short-Focus Lantern Objectives.**

These lenses are designed for use at very short distances, where they will project a much larger picture than the regular and longer focus objectives. They are of the highest grade of optical and mechanical excellence. Provided with rack and pinion movement.

Size.	Diameter. Inches.	Eq. Focus. Inches.	Back Focus. Inches.	Price.
1-6 Portrait	1 1/4 inch	4 inch	2 3/4 inch	\$ 9.00
1/4 Portrait	1 3/8 inch	5 inch	3 inch	10.00
Stereo. (Im. Dall.)	1 3/8 inch	5 inch	3 1/2 inch	8.50

May be had singly or in perfectly matched pairs.

**Condensing Lenses.**

The Condensing Lenses listed below are accurately ground and polished, and will be found much superior to the imported lenses commonly employed for this purpose. When condensers are wanted mounted, we supply them in our improved mounts, which are so constructed that there is the least possible danger of the lenses breaking when heated. The mountings are very neat and compact.

Diameter. Inches.	Focus of Single Lens. Inches.	Focus of Pair when Mounted. Inches.	Price One Lens Unmounted.	Price Pair Unmounted.	Price Pair Mounted in Brass.
3	4 1/2	2 1/4	\$ 1.00	\$ 1.50	
3 1/2	5	2 1/2	1.10	1.75	
4	5 1/2 or 6 1/2	3	1.25	2.00	\$ 4.00
4 1/2	5 1/2 or 6 1/2	3	1.35	2.25	5.00
4 3/4	5 1/2 or 6 1/2	3	1.50	2.75	6.00
5	6 1/2	3 1/4	1.75	3.00	7.50
5 1/2	8	4	2.25	4.00	9.00
6	8	4	3.00	5.00	12.00
6 1/2	8	4	4.00	7.50	18.00
7	9	4 1/2	5.75	10.00	24.00
8	12	6	7.50	15.00	32.00
9	14	7	10.00	20.00	40.00
10	15	7 1/2	13.50	25.00	50.00
12	18	9	27.00	35.00	80.00
14	21	10 1/2	40.00	55.00	120.00

We mount the above lens, to order, in wood, at a very moderate cost. When wood mounting will answer, write us and special quotations will be submitted.

**Photographic Prisms.**

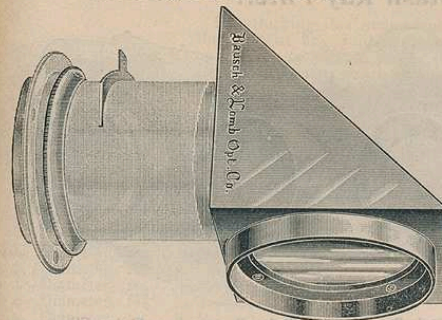


Figure shows the Prism and method of applying it to the lens.

The prism is used to reverse the image formed by the lens, from left to right, thus making it unnecessary to strip and turn the films in process work.

It effects a great saving in time and labor, and obviates the danger of stretching or damaging the film during manipulation.

These prisms are mounted so as to be entirely protected by the metal case. They are attached to the hood of any photographic lens by a threaded adapter. The mountings are so arranged as to bring the surface of the prism as close as possible to the front of the lens, thus securing the greatest effective angle of the lens and the maximum illumination and speed. The glass is of the purest quality and greatest possible light transmitting properties.

The three surfaces are optically plane and have the highest possible polish, thus giving the least loss of light. There is no interference whatever with the sharpness of the image produced by the lens.

Full Aperture of Prism Inches.	Figures in the margin show correct size Prism for Lenses as below.					PRICE.	
	Zeiss Planar Series Ia.	Zeiss Anastigmat Series Ha.	Zeiss Anastigmat Series Iv.	Zeiss Anastigmat Series V.	Zeiss Convertible Anastigmat Series Vha	When fitted to B & L Zeiss Lenses.	When fitted to Lenses of other make.
2 1/2	No. 12	No. 6	No. 7	No. 9	No. 16	\$ 45.00	\$ 47.00
2 3/4	No. 13	.....	.....	.....	.....	53.00	55.00
3	No. 14	No. 7	No. 8	No. 10	No. 19	65.00	67.00
3 1/2	No. 15	No. 8	.....	No. 22	.....	78.00	80.00
4	No. 16	.....	.....	No. 25	.....	90.00	93.00
4 1/2	No. 17	.....	No. 9	No. 28	.....	140.00	145.00
5 1/2	No. 18	.....	No. 10	No. 30	.....	180.00	185.00

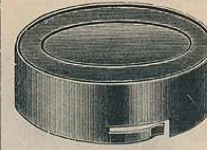
In estimating the size of prism which is required for a particular lens, a size should be selected which is at least equal to the diameter of the hood. A size which is larger than this is preferable, but under no circumstances should a smaller one be selected, as, in the work for which these prisms are required, it is of great importance to utilize all the light which the lens can transmit.

**The Standard Supplemental Lenses.**

Copying and Enlarging Lens	Combination Telephoto and Wide Angle Lens	Ray Filter
Portrait Lens	Very Light Ray Filter	
Portrait and Wide Angle Lens	Light Ray Filter	
Telephoto Lens	Medium Ray Filter	
	Dark Ray Filter	

Description and Price Next Column.

**The Standard Supplemental Lenses—Cont'd.**



By means of the above lenses the ordinary camera lens may be adapted for enlarging, portrait and wide angle work, cloud effects, etc., by simply slipping the supplemental lens over the front of the camera lens.

The Standard Supplemental Lenses comprise a complete series of adapting lenses, which are intended for use over the hood of the regular camera lens. They may be used in connection with any rectilinear, view or anastigmat lens. We furnish them either with cork linings or tongues in the rim for adjusting to different sizes of lens hoods.

Any amateur can get ten times the variety of results by using a few of these lenses, which will adapt the ordinary camera to any kind of photographic work.

**PRICES.**

**TO FIT OVER LENS HOOD.**

1 inch diameter.....\$ .50	1 1/8 inch diameter.....\$ 1.00
1 1/4 inch diameter......50	2 inch diameter..... 1.00
1 3/8 inch diameter......50	2 1/4 inch diameter..... 1.00
1 1/2 inch diameter......50	2 1/2 inch diameter..... 1.50
1 5/8 inch diameter......75	2 3/4 inch diameter..... 1.50
1 3/4 inch diameter......75	3 inch diameter..... 2.00
1 7/8 inch diameter..... 1.00	3 1/2 to 4 1/2 inch diameter. 4.00

In ordering specify the diameter of the lens hood, for which lens, and whether you wish cork lining or tongues for adjustment.

If the diameter is between sizes the price will be that of the next larger size.

The prices for different sizes of duplicators are just one-half the above prices.

**Standard Lens Set.**



A set of Supplemental Lenses containing One Enlarging and Copying Lens; one Portrait and Wide Angle Lens; one Telephoto Lens; one Light Ray Filter; one Medium Ray Filter; one Dark Ray Filter.

Adapting any bellows camera to all the different purposes specified.

This set of lenses is designed particularly for the amateur, and will increase the usefulness of his camera many times. Instead of one lens for snap shots, this set adapts his camera for many varieties of picture taking.

Each set is contained in a small velvet lined case.

PRICE: 4x5 or 5x7, to fit lens hood 1 in. to 1 3/8 in. diameter, \$3.00.

Our complete Portrait Outfits include all Desirable Improvements.



### The Bichromate of Potash Ray Filter.

The Ray Filter consists of two thin pieces of optical glass, the surfaces of which have been ground perfectly plane and parallel. Between these plates is cemented a glass ring of uniform thickness throughout, thus forming a cell in which the Bichromate of Potash solution is contained. The glass part is mounted in a metal ring, which protects it.

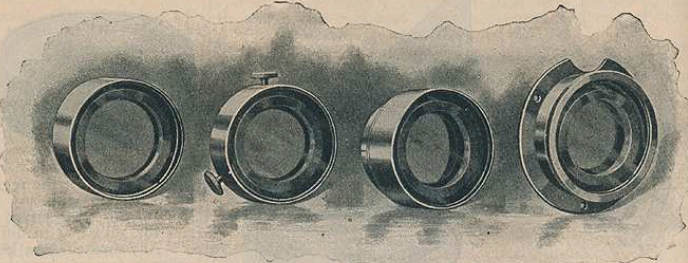
The Ray Filter prevents halation by absorbing the rays which cause the halation. They improve the defining power of the lens by absorbing those rays for which the average lens is not well corrected.

The Ray Filter gives distinct pictures of distant objects, such as mountain peaks, which cannot be photographed at all without it.

For copying paintings it is invaluable, also for interiors of rooms done in colors. Ray Filters are made in four styles: 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 I P is for regular Victor Lenses with Premo Cameras.  
Style I FF has a flange for cameras with Fixed Focus Lenses.



Style A. Style B. Style I P. Style I FF.

#### PRICE LIST.

Each Filter is packed in a neat box, with a bottle of fluid, and pipette for refilling.

Number.	Inside Diameter in Inches.	Price.	Price of Morocco Cap.	Number.	Inside Diameter in Inches.	Price.	Price of Morocco Cap.
1 P	1 3/8	\$3 25	\$ 70	5	2 15-16	\$4 50	\$0 90
1 FF	1 3/8	3 25	75	6	3 3/8	5 00	1 00
1	1 3/8	3 25	70	7	3 3/4	5 50	1 10
2	1 3/4	3 50	70	8	4 1/8	6 00	1 20
3	2 3-16	3 50	75	9	4 3/4	8 00	1 35
4	2 9-16	4 00	80	10	5 1/2	10 00	1 50

When ordering Style "A" Ray Filter, send strip of good paper just reaching around the hood of the lens.

### Bausch & Lomb Hand Camera Tele-Photo.

The Hand Camera Tele-Photo is a negative lens, mounted in an adjustable mounting with cloth-lined sliding tube. It has B. & L. standard thread screw, now used on the majority of cameras.

It is applied to the camera by removing the lens, screwing the Tele-Photo in its place and attaching the lens to the front of the Tele-Photo.

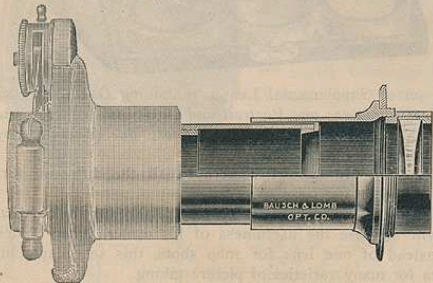
It requires no extra length of bellows, hence can be applied to any camera. It gives at long range, enlarged pictures entirely free from distortion and equaling in sharpness, contrast, depth of perspective and brilliancy, pictures made with the regular photographic lens at a short distance from the object.

Its image circle is full and clear and does not cut off the corners of the plate. Instantaneous exposures can be made under favorable conditions.

It gives a magnification of 2 1/2 diameters under conditions indicated in the accompanying table. Greater magnifications, up to 4 diameters, are obtained with additional bellows extension.

The Hand Camera Tele-Photos are constructed for use with the regular rectilinear lenses supplied with cameras by the manufacturers.

To make them of universal application, we have constructed them in three series, A, B and C, for use with photographic lenses of various equivalent foci and cameras of different bellows length.



The Hand Camera Tele-Photo can be fitted to Anastigmat and other types of lenses at an extra cost of \$2.50. As these lenses are usually of considerably shorter focus than the R. R. and Symmetrical lenses for which the Hand Camera Tele-Photo is designed, the image circle will not quite cover the plate for which the anastigmat is rated, except at the high magnification. Adapters are necessary for lenses not having standard screw, and an extra charge of \$1.50 is made for them.

#### PRICE LIST.

Size.	Series.	Approximate Focus of Lens in.	Bellows Length Magnification.	For Cameras mentioned and for others having as much bellows length.	Price.
4 x 5	A	6 3/4	9 1/4		\$ 9 00
5 x 7	A	8 1/2	13 3/4	PREMO, CENTURY,	10 00
6 1/2 x 8 1/2	A	10 1/2	15	IMPERIAL,	11 00
4 x 5	B	6	8 1/4	POCO, RAY,	9 00
5 x 7	B	7 5/8	12	MONTAUK,	10 00
6 1/2 x 8 1/2	B	10 1/2	16	GRAPHIC,	11 00
*4 x 5	C	6	7 1/2	WIZARD,	9 00
*5 x 7	C	8 1/2	9 1/2	KODAK,	11 50

\*Pictures of the above sizes will trim slightly smaller.

If bellows length is less than given above, we supply the Tele-Photo giving the 2 1/2 magnification and over. In this case, however, the corners of the negative may be cut and the print trim smaller with the lower powers; the full bellows length should be given when ordering.

Catalogue of complete line of Korona Cameras mailed on Application.

### Ideal Duplicator.



By attaching this instrument to the lens of any folding camera, any person or persons can be photographed in two positions on the same plate, without showing any division line where the two exposures meet on the plate. Many humorous pictures can be obtained in this way. Two persons can be photographed together in a group without either one having seen the other.

#### PRICES.

No. 1.	Diameter, 1 5-16 inches.	\$.25
No. 2.	Diameter, 1 7-16 inches.	.25
No. 3.	Diameter, 1 1/2 inches.	.25
No. 4.	Diameter, 1 3/4 inches.	.30
No. 5.	Diameter, 2 inches.	.30
No. 6.	Diameter, 2 1/4 inches.	.35
No. 7.	Diameter, 2 1/2 inches.	.35
No. 8.	Diameter, 2 3/4 inches.	.40
No. 9.	Diameter, 3 inches.	.40

### "Ideal" Trichromatic Cells.



These cells are made especially for use by those operators who already possess a certain knowledge of the intricacies of the three-color process, and who are desirous of obtaining a perfect filter for use with liquid color.

They are made from two plates of optically worked crown glass, ground and polished perfectly true and separated by a central ground plate of five millimeters thickness, in which has been cut a circle with top aperture (as shown in illustration) the three plates being cemented together to withstand the action of either water or dilute alcohol.

These cells will be found to possess merit to a degree hitherto unequalled, and especially claim for them, when used for the position for which they are intended, viz.: before or in front of the lens, an absolute registration of the three negatives together with sharpness of image.

#### PRICES.

Size.	Diameter of Aper.	Price each.
3X3 inch	2 inch	\$3.50
4X4 inch	3 inch	4.00
5X5 inch	4 inch	5.00

### Dyes for "Ideal" Trichromatic Cells.

We supply these dyes to users of the "Ideal" cells, accurately weighed and ready to be dissolved in stated quantity of water forming a solution of correct density for the above cells.

Being tested not only for their spectroscopic absorption but also for their "cut out" values on the standard three-color printing inks they will be found to give better effects with shorter exposure than 99 per cent of the filters in general use.

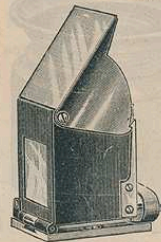
We furnish with these dyes the comparative exposure plate for which they are adjusted.

Price per vial, red, green or violet.....\$.025

**Our OILENE BACKGROUNDS,**  
the almost indestructible product of high merit,  
at a moderate price.

### Bausch & Lomb Iconoscope.

#### An Ideal View Finder.



The Iconoscope is an instrument of precision, constructed on correct optical principles and possesses none of the defects usually found in other makes.

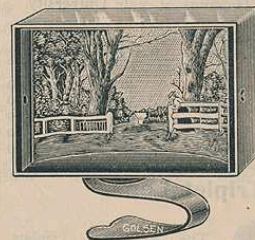
The image is *not reversed or inverted*, hence objects appear in their natural positions. Made in three sizes.

#### PRICE LIST.

Size.	Height.	Width.	Depth.	Each.
A	1 7/8 in.	7/8 in.	7/8 in.	\$5.00
B	1 1/2 in.	1 1/8 in.	1 1/8 in.	5.50
C	2 in.	1 1/4 in.	1 1/4 in.	6.00
Extra Bed-plates,				.75

### "R. J. G."

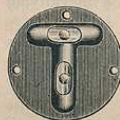
#### View Finder.



This is a double concave lens, mounted in a nickeled frame and provided with a spring clamp, by means of which it can be readily attached to the camera. It enables one to instantly and accurately locate the picture to be taken, which is reproduced in miniature with great fidelity. Can be adjusted to any camera.

Price \$1.25.

### Ideal Double Level.



This level consists of two small spirit levels which are sealed at the ends by cohesion of the glass itself, making the escape of the liquid impossible, and are placed at right angles in the form of the letter T. They are mounted in a neat brass frame, nickel-plated, and can be attached quickly by three small screws, which are supplied with the level.

Price, complete in box \$0.50.

### Ideal Camera Level.

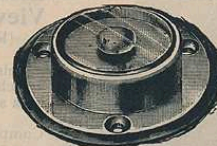


These levels are made with a little steel ball, allowed to run freely on the bottom of the level which is slightly curved and accurately centered and marked. The top is covered with a glass disc.

Price \$0.50.

### Camera Spirit Level.

#### For Hand or View Cameras.



Price, each \$0.75.

Order your Complete Outfit from Ralph J. Golsen.



**The Ideal Focusing Glass.**

(DUPLIX.)

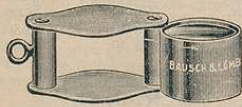
These focusing glasses are fitted with two lenses which give a flat field. They are fitted with screw adjustments. Finely finished in brass and lacquered. They are of great service to those who find difficulty in focusing on the ground glass.

Price, each, \$1.00.



**Hastings' Aplanatic Triplet Magnifier.**

As a fine focusing glass and for examining all small objects, minerals, chemical crystals, etc., this lens will be found the best, as it is constructed after a formula by Professor Charles S. Hastings of Yale University.



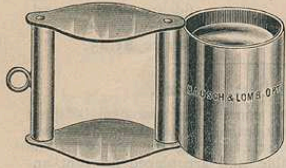
No. 35-39.

**PRICES.**

No.	Magnification	Local Length inches	Local Length Mm.	Real Field Mm.	Price
35	5.0	2	51.0	40.0	\$7.00
36	6.7	1 1/2	38.0	30.0	7.00
37	10.0	1	25.0	20.0	7.00
38	15.0	3/4	19.0	14.0	7.00
39	20.0	1/2	13.0	7.5	7.00

**Aplanatic Triplet Lens.**

The Aplanatic Triplets, while not having as large field as the Hastings lenses, give very good definition, and have good magnifying power.



No. 30-32.

**PRICES.**

No.	Magnification	Focal Length Inches	Focal Length Mm.	Price
30	10	1	25.0	\$4.00
31	14	3/4	18.0	4.00
32	20	1/2	12.5	4.00

**DARLOT FOCUSING GLASS.**

Mounted in Brass Tube ..... \$2.75

**COMPOUND FOCUSING GLASS.**

It has a double compound lens ..... \$2.50

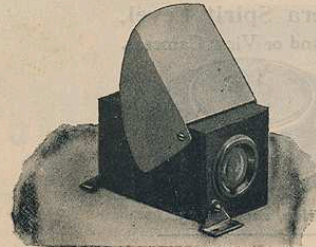
**WATERBURY FOCUSING GLASS.**

Rubber mounting ..... \$0.50

**Manhattan Brilliant View Finder. (Reversible.)**

This finder is readily attachable to cameras by a spring catch.

Complete for 4x5 or 5x7 ..... \$1.00  
Complete for 6 1/2 x 8 1/2 or 8x10 ..... \$2.00



Send for Bargain List of Cameras.

**Focusing and Retouching Glasses.**

German silver frame, ebony handle. These glasses are of the very best quality, clear and brilliant, and serve as an excellent focusing glass, also as a magnifier for retouchers. These are high-grade goods and will be found exceptionally satisfactory.

**PRICES.**

	Price
2 inch diameter, each.....	\$.70
2 1/2 inch diameter, each.....	.90
3 inch diameter, each.....	1.25
3 1/2 inch diameter, each.....	1.75
4 inch diameter, each.....	2.25
4 1/2 inch diameter, each.....	2.50



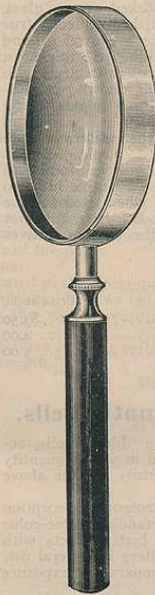
**Reducing Glasses.**

Extra Fine Quality.

German silver frame, ebony handle. These reducing glasses are of the same high quality as our magnifying glasses. We recommend these glasses to the artist and engraver.

**PRICES.**

	Price
2 inch diameter, each.....	\$1.25
2 1/2 inch diameter, each.....	1.70
3 inch diameter, each.....	2.00
3 1/2 inch diameter, each.....	2.50
4 inch diameter, each.....	3.50



Quality is paramount in all of our productions, and in no instance can the same quality of goods be purchased for less money.

**Useful Lens Tables.**

**Comparison Table of U. S. Numbers and "F" Values.**

The following table shows the correct "F" value of all numbers of the Uniform System used on our lenses.

U. S. Nos. F Value	1	2	4	8	16	32	64	128	256
	4	5.7	8	11.3	16	22.6	32	45.2	64

**Table for Determining the Minimum Length of Studio.**

Equivalent Focus of Lens, Inches.	HEIGHT OF IMAGE WHEN SUBJECT IS 6 FEET HIGH.										
	3 in. High.	4 in. High.	5 in. High.	6 in. High.	8 in. High.	10 in. High.	12 in. High.	16 in. High.	20 in. High.	24 in. High.	30 in. High.
4	8-4	6-4	5-2	4-4							
5	10-5	7-11	6-5	5-5	4-2						
6	12-6	9-6	7-8	6-6	5-0	4-1					
8	16-8	12-8	10-3	8-8	6-8	5-6	4-8				
10	20-10	15-10	12-10	10-10	8-4	6-10	5-10	4-7			
12	25-0	19-0	15-5	13-0	10-0	8-2	7-0	5-6	4-7		
16	33-4	25-4	20-6	17-4	13-4	10-11	9-4	7-4	6-2	5-4	4-6
20	41-8	31-8	25-8	21-8	16-8	13-8	11-8	9-2	7-8	6-8	5-8
24	50-0	38-0	30-10	26-0	20-0	16-5	14-0	11-0	9-2	8-0	6-10
30	62-6	47-6	38-6	32-6	25-0	20-6	17-6	13-9	11-6	10-0	8-6

**Table for Determining the Distance Between Lens and Ground Glass.**

Equivalent Focus of Lens, Inches.	HEIGHT OF IMAGE WHEN SUBJECT IS 6 FEET HIGH.										
	3 in. High.	4 in. High.	5 in. High.	6 in. High.	8 in. High.	10 in. High.	12 in. High.	16 in. High.	20 in. High.	24 in. High.	30 in. High.
4	4.1	4.2	4.3	4.33							
5	5.2	5.3	5.35	5.4	5.6						
6	6.2	6.3	6.4	6.5	6.6	6.8					
8	8.3	8.4	8.5	8.6	8.9	9.1	9.3				
10	10.4	10.5	10.7	10.8	11.1	11.4	11.6	12.2			
12	12.5	12.6	12.8	13	13.3	13.7	14	14.6	15.3		
16	16.6	16.9	17.1	17.3	17.8	18.2	18.6	19.5	20.4	21.3	22.6
20	20.8	21.1	21.4	21.6	22.2	22.8	23.3	24.4	25.5	26.6	28.3
24	25	25.3	25.6	26	26.6	27.3	28	29.3	30.6	32	34
30	31.2	31.6	32.1	32.5	33.3	34.2	35	36.6	38.3	40	42.5

**Table for Computing the Angle of View.**

Divide the long side of the plate by the equivalent focus of the lens.

If the Quotient is	The Angle is	If the Quotient is	The Angle is	If the Quotient is	The Angle is	If the Quotient is	The Angle is
.282	16 Deg.	.631	35 Deg.	1.02	54 Deg.	1.48	73 Deg.
.3	17 "	.65	36 "	1.041	55 "	1.5	74 "
.317	18 "	.67	37 "	1.063	56 "	1.53	75 "
.335	19 "	.689	38 "	1.086	57 "	1.56	76 "
.353	20 "	.708	39 "	1.108	58 "	1.59	77 "
.37	21 "	.728	40 "	1.132	59 "	1.62	78 "
.389	22 "	.748	41 "	1.155	60 "	1.649	79 "
.407	23 "	.768	42 "	1.178	61 "	1.678	80 "
.425	24 "	.788	43 "	1.2	62 "	1.7	81 "
.443	25 "	.808	44 "	1.225	63 "	1.739	82 "
.462	26 "	.828	45 "	1.25	64 "	1.769	83 "
.48	27 "	.849	46 "	1.274	65 "	1.8	84 "
.5	28 "	.87	47 "	1.3	66 "	1.833	85 "
.517	29 "	.89	48 "	1.32	67 "	1.865	86 "
.536	30 "	.911	49 "	1.35	68 "	1.898	87 "
.555	31 "	.933	50 "	1.375	69 "	1.931	88 "
.573	32 "	.954	51 "	1.4	70 "	1.965	89 "
.592	33 "	.975	52 "	1.427	71 "	2.	90 "
.611	34 "	1.	53 "	1.45	72 "		

Prompt Correspondence—Prompt Shipment—two Essential Factors we meet fully.



**Table of Enlargements.**

From the British Journal of Photography Almanac.

FOCUS OF LENS.		TIMES OF ENLARGEMENT AND REDUCTION.							
Inches	inch	1	2	3	4	5	6	7	8
		inches	inches	inches	inches	inches	inches	inches	inches
2.....	4	6	8	10	12	14	16	18	
	4	3'	2'2"	2 1/2	2'2"	2'1"	2'2"	2 1/4	
2 1/2....	5	7 1/2	10	12 1/2	15	17 1/2	20	22 1/2	
	5	3 3/4	3'1"	3 3/8	3	2'9"	2'6"	2'3" 1/2	
3.....	6	9	12	15	18	21	24	27	
	6	4 1/2	4	3 3/4	3'3"	3 1/2	3'3"	3'3"	
3 1/2....	7	10 1/2	14	17 1/2	21	24 1/2	28	31 1/2	
	7	5 1/4	4'2"	4 3/4	4'1"	4'1" 1/2	4	3'9"	
4.....	8	12	16	20	24	28	32	36	
	8	6	5'1"	5	4'4"	4'2"	4'4"	4 1/2	
4 1/2....	9	13 1/2	18	22 1/2	27	31 1/2	36	40 1/2	
	9	6 3/4	6	5'3"	5'2"	5 1/4	5'1"	5'1" 1/2	
5.....	10	15	20	25	30	35	40	45	
	10	7 1/2	6'2"	6 1/4	6	5'5"	5'5"	5'5"	
5 1/2....	11	16 1/2	22	27 1/2	33	38 1/2	44	49 1/2	
	11	8 1/4	7'1"	6'4"	6 1/2	6'5"	6'2"	6'3" 1/2	
6.....	12	18	24	30	36	42	48	54	
	12	9	8	7 1/2	7'1"	7	6'6"	6 3/4	
7.....	14	21	28	35	42	49	56	63	
	14	10 1/2	9'1"	8 3/4	8'2"	8'1"	8	7'7"	
8.....	16	24	32	40	48	56	64	72	
	16	12	10'2"	10	9'3"	9'1"	9'1"	9	
9.....	18	27	36	45	54	63	72	81	
	18	13 1/2	12	11 1/4	10'4"	10 1/2	10'2"	10 1/8	

The object of this table is to enable any manipulator who is about to enlarge (or reduce) a copy any given number of times to do so without troublesome calculation. It is assumed that the photographer knows exactly what the focus of his lens is, and that he is able to measure accurately from its optical center. The use of the table will be seen from the following illustration: A photographer has a *carte* to enlarge to four times its size, and the lens he intends employing is one of 6 inches equivalent focus. He must therefore look for 4 on the upper horizontal line and for 6 in the first vertical column, and carry his eye to where these two join, which will be at 30-7/2. The greater of these is the distance the sensitive plate must be from the center of the lens; and the lesser, the distance of the picture to be copied. To reduce a picture any given number of times, the same method must be followed; but in this case the greater number will represent the distance between the lens and the picture to be copied, the latter that between the lens and the sensitive plate. This explanation will be sufficient for every case of enlargement or reduction.

If the focus of the lens be 12 inches, as this number is not in the column of focal lengths, look out for 6 in this column and multiply by 2, and so on with any other numbers.

**What you can get FROM ANY HOUSE you can get from Ralph J. Golsen. You CAN get from Ralph J. Golsen what you CAN'T get from any other house.**

We sell Photographic Skylights—Descriptive Circulars sent on Request.

**Table Showing Displacement on Ground Glass of Objects in Motion.**

By HENRY L. TOLMAN.

(Republished, with corrections, from the *Photographic Times*.)

LENS 6 IN. EQUIV. FOCUS, GROUND GLASS AT PRINCIPAL FOCUS OF LENS.

Miles per Hour	Feet per Second	Distance on Ground Glass in inches with Object 30 Feet away	Same with Object 90 feet away	Same with Object 180 Feet away
1	1 1/2	.29	.15	.07
2	3	.59	.29	.14
3	4 1/2	.88	.44	.22
4	6	1.17	.59	.29
5	7 1/2	1.47	.73	.36
6	9	1.76	.88	.44
7	10 1/2	2.05	1.03	.51
8	12	2.35	1.17	.58
9	13	2.64	1.32	.66
10	14 1/2	2.93	1.47	.73
11	16	3.23	1.61	.80
12	17 1/2	3.52	1.76	.88
13	19	3.81	1.91	.95
14	20 1/2	4.11	2.05	1.02
15	22	4.40	2.20	1.10
20	29	5.87	2.93	1.47
25	37	7.73	3.67	1.83
30	44	8.80	4.40	2.20
35	51	10.27	5.13	2.59
40	59	11.73	5.97	2.93

**Comparative Exposures of Various Subjects.**

Open panorama, with fields and trees	.....	10
Snow, ice, marine views	.....	10
Panorama, with houses, etc.	.....	10
Banks of rivers	.....	10
Groups and portraits in open air (diffused light)	.....	10
Underneath open trees	.....	10
Groups under cover	.....	10
Beneath dense trees	.....	10
Ravines, excavations	.....	10
Portraits in light interiors	.....	10
Portraits taken 4 feet from a window, indoors, diffused light	.....	10

**A Table Showing the Correct Exposure that Should be Given for Various Moving Objects.**

By W. D. KILBEY.

The table is made out for a distance from the camera 100 times that of the focus of the lens; that is, for a 6-inch focus lens at 50 feet, a 7-inch at 58 feet, an 8-inch at 67 feet a 9-inch at 75 feet, or 12-inch at 100 feet.

	Towards the Camera Seconds.	At Right Angles to the Camera Seconds.
Man walking slowly, street scenes	1-15	1-45
Cattle grazing	1-15	1-45
Boating	1-20	1-60
Man walking, children playing, etc.	1-40	1-120
Pony and trap, trotting	1-100	1-300
Cycling, ordinary	1-100	1-300
Man running a race and jumping	1-150	1-450
Cycle racing	1-200	1-600
Horses galloping	1-200	1-600

If the object is twice the distance, the length of allowable exposure is doubled, and *vice versa*.

**Relative Brilliancy of Artificial Lights**

No.	Lights.	1	2	3	4	5	6	7	8	9
1	Sun at Midday, June 21,—1.....	1								
2	Light of Magnesium Lamp (burning 1 gram of powder)....	3	1							
3	Magnesium Ribbon, 3 mm. wide.....	14	5	1						
4	Electric Arc Lamp.....	35	11	2.5	1					
5	Oxyhydrogen Light.....	50	16	3.6	1.4	1				
6	Gas, Welsbach System.....	165	53	11	7	10	1			
7	Incandescent Electric Lamp (24 volts).....	1,600	533	115	46	32	10	1		
8	Oil of Petroleum Lamp.....	2,300	766	165	66	46	14	1.4	1	
9	Stearine Candle.....	18,000	6,000	1,300	515	360	169	11	7	1

By means of this table the nine chief sources of light above given can be compared with each other as to their relative brilliancy.

EXAMPLE—Compared with the sun, the Welsbach Gas Light is 165 less brilliant, but is ten times more brilliant than the electric incandescent lamp, and 109 more brilliant than the light from a stearine candle.

**United States Weights and Measures.**

According to existing standards.

**Lineal.**

Inches.	Feet.	Yards.	Rods.	Fur's.	Mile.
12 inches = 1 foot.	12 = 1				
3 feet = 1 yard.	36 = 3 = 1				
5.5 yards = 1 rod.	198 = 16.5 = 5.5 = 1				
40 rods = 1 furlong.	7,920 = 660 = 220 = 40 = 1				
8 furlongs = 1 mile.	63,360 = 5,280 = 1,760 = 320 = 8 = 1				

**Volume—Liquid.**

Gills.	Pints.	Gallon.	Cub. In.
4 gills = 1 pint.			
2 pints = 1 quart.	32 = 8 = 1 = 231		
4 quarts = 1 gallon.			

**Fluid.**

Gallon.	Pints.	Ounces.	Drachms.	Minims.	Cubic Centimetres.
1 = 8 = 128 = 1,024 = 61,440 = 3,785.435					
1 = 16 = 128 = 7,680 = 473.179					
1 = 8 = 480 = 29.574					
1 = 60 = 3.697					

16 ounces or a pint, is sometimes called a fluid pound.

**Troy Weight.**

Pound.	Ounces.	Pennyweights.	Grains.	Grams.
1 = 12 = 240 = 5,760 = 373.24				
1 = 1 = 20 = 480 = 31.10				
1 = 1 = 24 = 1.66				

**Apothecaries' Weight.**

lb.	3	5	9	gr.	Grains.
Pound.	Ounces.	Drachms.	Scruples.	Grains.	Grams.
1 = 12 = 96 = 288 = 5,760 = 373.24					
1 = 1 = 8 = 24 = 480 = 31.10					
1 = 1 = 3 = 60 = 3.89					
1 = 1 = 20 = 1.30					
1 = 1 = 1 = .06					

The pound, ounce and grain are the same as in Troy weight.

**Avoirdupois Weight.**

Pound.	Ounces.	Drachms.	Grains (Troy)	Grams.
1 = 16 = 256 = 7,000 = 453.60				
1 = 1 = 16 = 437.5 = 28.35				
1 = 1 = 27.34 = 1.77				

**Brass Flanges for Lenses.**

Number	1	2	3	4	5	6	7	8	9	10	11
Diameter, in.	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/2	4	5	5 1/2	6
Price, each.	\$.50	.50	.75	1.00	1.00	1.25	1.50	1.75	2.00	2.00	3.00

**Morocco Caps for Lenses.**

Number	1	2	3	4	5	6	7	8	9	10	11	12
Diam., in.	1 1/2	1 3/4	2 1/8	2 3/8	2 1/2	2 3/4	3 1/8	3 3/8	4 1/8	4 3/8	5 1/8	5 3/8
Price, ea.	\$.60	.60	.65	.70	.70	.75	.80	.90	1.00	1.10	1.20	1.25

**Grained Leather Caps for Lenses.**

Number	1	2	3	4	5	7	8	9	10
Diameter, inches	1 1/2	1 3/4	2 1/8	2 3/8	2 1/2	2 3/4	3 1/8	3 3/8	4 1/8
Price, each	\$.40	.45	.50	.55	.60	.70	.80	.90	1.00

**Sets Central Stops.**

(Diaphragms.)

Price of metal sets include Morocco case.

For Lenses of Diameter.....	Inches									
	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	
Metal (black)....	\$1.75	2.00	2.50	3.00	3.50	4.00	5.00	5.50	6.50	
Hard Rubber....	1.00	1.15	1.25	1.50	1.75	2.00	2.25	2.50	3.00	

Intermediate sizes at proportionate prices.

Order more of those Studio Accessories in this Catalogue.

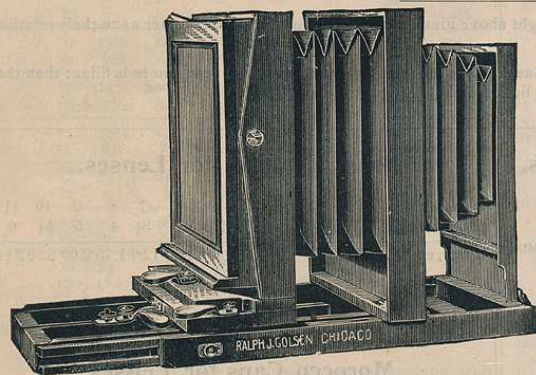


# PORTRAIT CAMERAS

With the same progressiveness that has characterized our business methods, and particularly that of being the advance guard in presenting improved apparatus to the Photographic trade, we announce some improved and specially desirable additions to our **Studio Cameras and Complete Portrait Outfits**.

A most marked achievement and one that will be thoroughly appreciated by the progressive photographer, is the **Automatic Studio Plate Holder**, fully described and illustrated under plate holders in this catalogue; another improvement is **The Self-Locking Lever** applied to the lever focus and lever swings, also described in this catalogue.

The fact that we have devoted special efforts to outfits—gives us an advantage over others in **Portrait Cameras**. We list in this department a well selected line from the inexpensive kind, covering every step up to and including the very highest "piano finish" instruments. Though we believe our line is such that you can readily make a selection—if you wish some style or make not listed—we will appreciate your order just as much and promise prompt attention. We can furnish any regular line of Cameras manufactured



## Extra Quality R. J. G. No. 220.

This high grade Studio Camera will find favor among those desiring a **strictly high grade instrument**.

They are made in the most substantial manner of the best mahogany, French polished. They have telescopic bed, double rubber bellows, rising front and are fitted with the **patented self-locking double lever swing-back and focus lever** of the same style. They are supplied with the **Automatic Holder Curtain Slide** or ordinary portrait holder with curtain slide as desired.

For large size studio work this camera is unsurpassed, and the excellent workmanship and fine finish make it an ornament to any studio.

Patented Dec. 3, 1901.

Length of Bed.	Price.
10 x 12.....38 inches.....	\$52.00
11 x 14.....52 ".....	62.00
14 x 17.....56 ".....	72.00
17 x 20.....65 ".....	82.00

Length of Bed.	Price.
18 x 22.....72 inches.....	\$90.00
20 x 24.....76 ".....	100.00
25 x 30.....78 ".....	150.00

## Wizard Portrait Camera.

We have sold a great many of these cameras and they have given **Perfect Satisfaction in every instance**. They are first-class in every respect.

This camera is fitted with the horizontal sliding carriage back (Royal style). It is fitted with **self-locking double lever swings and focus lever** and with the **Automatic Holder Curtain Slide** or ordinary portrait holder with curtain slide as desired. This is one of the most convenient Imperial cameras offered, as instead of removing the ground glass to insert the plate holder, it is simply slipped along the sliding carriage until it is out of the way. It is kitted for smaller sizes.

The carriage slide enables the operator to make two or more exposures on a plate with one lens and can focus without removing the plate holder.

8 x 10, Mahogany, 30-in. Bed.....\$38.00  
8 x 10, Cherry, 30-in. Bed.....33.00

Reversible Cabinet Attachment, No. 33, can be fitted at an extra cost of \$8.50.



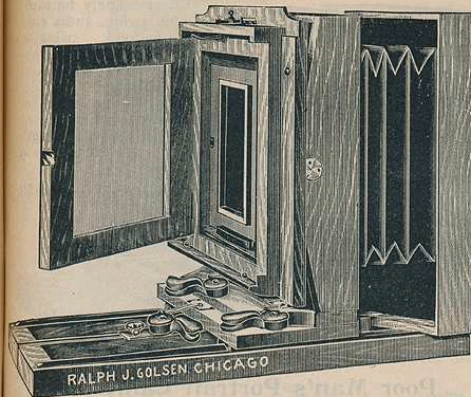
Patented Dec. 3, 1901.

This camera (cherry finish) supplied with the **Improved Wizard Automatic Camera Stand, List \$16 50**, forming our **Wizard Portrait Outfit** (no Lens).

**For Net Cash, \$39.50.**

C. O. D. Orders should be accompanied with a Cash Remittance sufficient to Cover Express Charges.

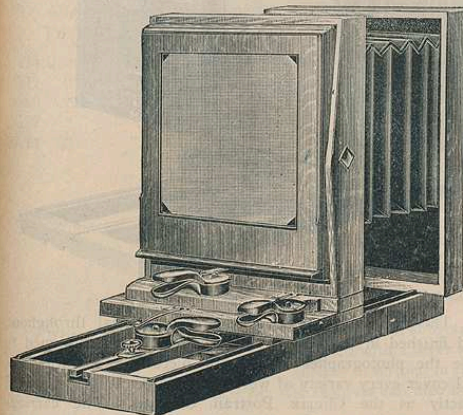
## "R. J. G." Imperial Camera. Extra Quality.



This camera is made of the very best mahogany, French polished, with **self-locking double lever, double swing and focus lever** of the same style. The smaller size is for plates 8x10 and smaller and is kitted to make two cabinets on an 8x10 or 7x10 plate or two C. D. V. on smaller plates. The camera has India rubber bellows and is fitted with the **Automatic Curtain Slide Holder** or ordinary portrait holder with curtain slide. It is the finest Imperial camera offered.

8x10, plain bed, 30 inches long. Price.....\$36.00  
10x12, plain bed, 34 inches long. Price.....40.00  
11x14, Telescopic bed, 50 inches long. Price.....70.00  
14x17, Telescopic bed, 56 inches long. Price.....85.00  
Reversible Cabinet Attachments can be fitted to any of these cameras.

## "R. J. G." Portrait Camera No. 225.



Patented Dec. 3, 1901.

This camera is made of solid quarter sawed oak, well finished, has India rubber bellows, double lever swing and focus lever, all of the **automatic self-locking patent**, and is fitted with the **Automatic Plate Holder, Curtain Slide**.

This is the finest medium priced camera offered, being perfect in every adjustment and equipment. Made in 8x10 size only.

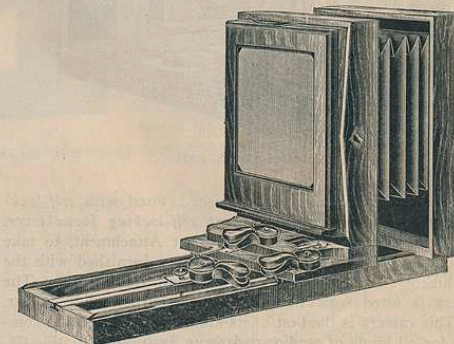
Price.....\$22.00  
Reversible Cabinet Attachment fitted at an extra charge of \$8.50.

## "R. J. G." Lakeside Camera. For Negatives or Ferrotypes, 8x10.

This camera is very similar to the Imperial Camera, but is arranged with fittings, dividers, etc., for ferrotypes as well as negatives. The bed is 26 inches long.

Price, without swing, without lenses.....\$26.00  
Price, double swing, without lenses.....31.00  
Price, Set of 4—1/4 Gems lenses and brass plate.....15.00

## "R. J. G." Portrait Camera No. 224.



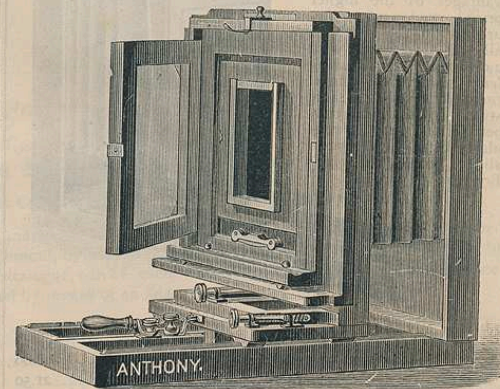
Patented Dec. 3, 1901.

This camera is made of the best mahogany, French polished. **All adjustments are automatic, self locking**. It has a 30-inch bed, best India rubber bellows, and is fitted with the **Automatic plate holder, curtain slide**. Made in 8x10 size only.

Price, French polished.....\$30.00  
Price, plain finish.....26.00

Reversible Cabinet Attachment can be fitted at an extra charge of \$8.50.

## Climax Imperial Cameras.



No. 10C. For 8x10 and under, and two cabinets on 8x10 plate, or two cartes de visite on smaller plate; length of bed, 28 1/2 inches. Varnish finish. Fitted with "Benster" Curtain Slide Holder, 13 3/4 x 13 3/4, and carriage movement on the patent rollers, lever focusing attachment, and double swing back without divisions.....\$28.00

Look up the Poor Man's Outfit—this Catalogue—it's all right.



“R. J. G.” Portrait Camera No. 226.



Patented Dec. 3, 1901.

Made of mahogany, finely finished, fitted with *self-locking swing adjustments* and *patent self-locking focus lever*. It is fitted with the *Reversible Cabinet Attachment*, to take 5x7 double plate holders, one of which is furnished with the attachment. It also includes 4 1/4x6 1/2 and 3 1/4x4 1/4 kits. The camera is fitted with *Bonanza pattern curtain slide holder*.  
 This camera is the best of its kind. Its equipment is complete for all kinds of studio work from 8x10 down to 3/4x4 1/4. Made in 8x10 size only ..... \$29.00  
 Extra 5x7 double plate holder ..... 1.00

“R. J. G.” Portrait Camera No. 227.

Plain Finish.

This camera is well made of shellaced hard wood and has all the adjustments and advantages of the higher priced grades at a figure within the reach of all. It is fitted with *automatic self-locking lever swings* and *patent focus lever* of the same style. It has *India rubber bellows* and is regularly fitted with *curtain slide holder* of the *Bonanza pattern*.

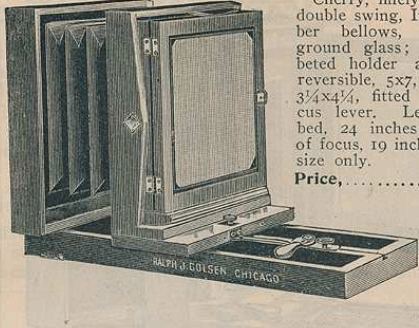


Patented Dec. 3, 1901.

6 1/2 x 8 1/2, length of bed, 24 inches.	Price	\$18.00
8 x 10 “ “ “ “	“	21.50
10 x 12 “ “ “ “	“	26.00
11 x 14 “ “ “ “	“	31.50
14 x 17 “ “ “ “	“	38.00
17 x 20 “ “ “ “	“	50.00

These cameras can be fitted with the *Automatic Plate Holder* at 15 per cent additional.

“R. J. G.” Portrait Camera No. 256.



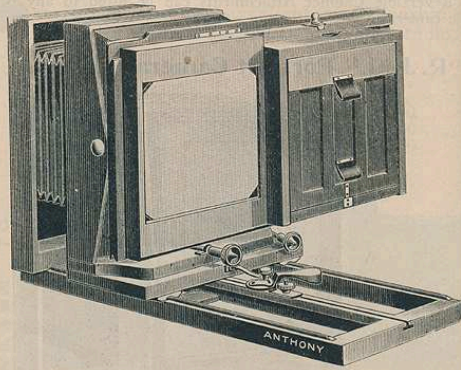
Cherry, finely finished, double swing, India rubber bellows, swinging ground glass; has *rabbeted holder and kits, reversible*. 5x7, 4 1/4x6 1/2, 3 1/4x4 1/4, fitted with *focus lever*. Length of bed, 24 inches; length of focus, 19 inches. 8x10 size only.

Price, ..... \$13.50

Poor Man's Portrait Camera.

See illustration “*Poor Man's Portrait Outfit*,” this catalogue. Very similar to above No. 256, but has *curtain slide Bonanza holder*.  
 Price, net ..... \$14.50

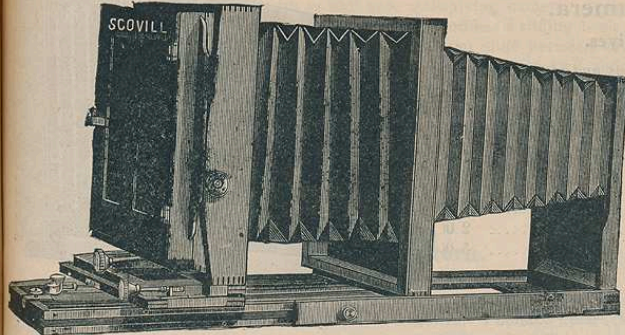
New Royal Camera.



This camera is made of the best material throughout and finished in the best possible manner. It is designed to give the photographer an elegant piece of apparatus that will cover every variety of work up to 8x10. It is constructed exactly as the *Climax Portrait Cameras*. The carriage movement being made separate is attached to the camera in the same manner as the holder. The *Benster Holder*, supplied with it, can be used on the camera itself by removing the *Royal Attachment*, a separate 8x10 *Ground Glass and Frame* being supplied with it. Any of our *Automatic Attachments* can be used in connection with this camera if so desired.

8x10 size, complete	.....	\$55.00
11x14 size, complete	.....	80.00

American Optical Co.'s Highest Grade Portrait Cameras.



The American Optical Co.'s Portrait Cameras are manufactured from the best mahogany, French polish, with *India rubber bellows* and *V-shaped wooden guide*. They are also furnished with the *Lever Focusing Attachment*, by which the most delicate focus can be adjusted with the utmost facility and ease. When ordering please specify whether *Waterbury* or *Bonanza Holder* is preferred.

Attention of operators is especially called to the *Double Swing Back* on these fine *Studio Cameras*. When lenses of short focal length are used, the face is very often distorted, unless the operator tips his camera, and even then he is apt to get the face elongated or widened, unless he is very

careful. Any operator who has been annoyed by being unable to reflect the image upon the ground glass without distortion, will see how completely this arrangement overcomes the difficulty.

Size of Plate. Inches.	Length of Platform. Inches.	When fully Extended. Inches.	Double Swing. \$	Size of Plate. Inches.	Length of Platform. Inches.	When fully Extended. Inches.	Double Swing. \$
11x14	26	48	\$64 00	18x22	38	70	\$100 00
14x17	33	60	76 00	20x24	40	72	110 00
17x20	36	65	90 00	25x30	40	80	170 00

American Optical Co.'s Boston Imperial Camera.

EXTRA QUALITY.

The Boston Imperial Camera is the same as above illustration, with the 8x10 attachment, with sliding carriage and holder and swinging ground glass. The illustration of the American Optical Co.'s Portrait Camera just above, shows the instrument with the telescopic bed drawn out, and the 11x14 holder in place of the detachable carriage. The 11x14 Boston Imperial Camera will make two imperials on an 8x10 or 4-4 plate, two cards on a 5x8 plate; two large panel pictures, 6x10 inches in size, can also be made, and regular work from 11x14 to 3 1/4 x 4 1/4 inclusive.

When ordering please specify whether *Curtain Slide*, *Waterbury* or *Bonanza Holder* is preferred.

For length of extension bed see above list of American Optical Co.'s Portrait Cameras.

11x14 Boston Imperial Camera and Holder, with 8x10 attachment, with double swing back and holder	.....	\$ 85 00
14x17 “ “ “ “ “ “ “ “	.....	100 00
17x20 “ “ “ “ “ “ “ “	.....	110 00
18x22 “ “ “ “ “ “ “ “	.....	120 00
20x24 “ “ “ “ “ “ “ “	.....	140 00

Anthony Climax Portrait Cameras.

Fitted with the “*Benster*” *Curtain Slide Plate Holders*.

Have *Double Swing Back*, *Tangent Screw Motion* and *Telescopic Bed*.

The above illustration answers for the Climax Camera, as the construction is very similar.

These cameras are manufactured in the most substantial manner from the best of mahogany, and handsomely finished with all late improvements, and are supplied with a *lever attachment*, by which the most minute adjustment of the focus may be instantly obtained. *Automatic Attachments* described in this catalogue, can be used with these cameras at additional prices quoted for same. *Smaller size Benster Holders* can also be used by means of an adapter, at small additional cost.

No.	Length of bed, in.	Price. \$
13 B. 11x14 and under; length of bed, 49 in.		\$ 64 00
14 B. 14x17 “ “ “ 60 in.		76 00
15 B. 17x20 “ “ “ 65 in.		90 00
16 B. 18x22 “ “ “ 77 in.		100 00
17 B. 20x24 “ “ “ 77 1/2 in.		110 00
18 B. 22x27 “ “ “ “		130 00
20 B. 25x30 “ “ “ “		170 00

Cameras made to order only.

See Holders and Attachments fully described in this catalogue.

The King Bee Jr. Outfit is very Popular—look it up.

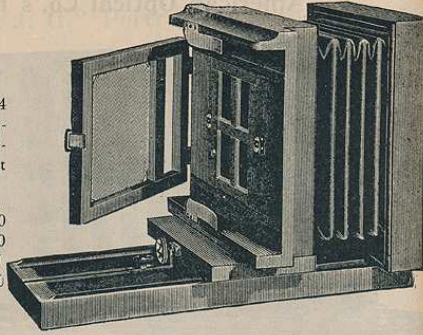


### Improved Victoria Camera.

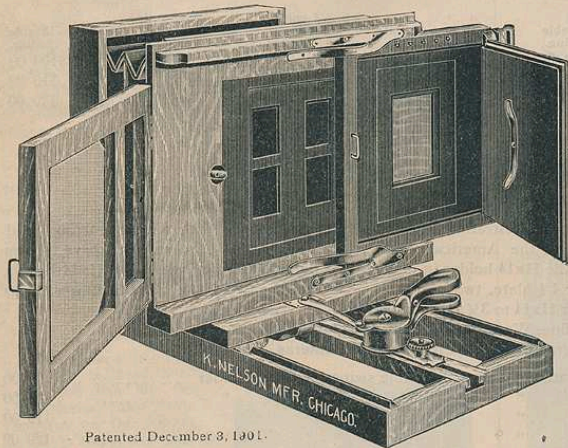
For Ferrotypes or Negatives.

For making 5x7, 4 1/4 x 6 1/2, and 3 1/4 x 4 1/4 pictures, and reversible, and 4 or 8 on 5x7 plates, with 4 Gem Lenses. It is handsomely finished in mahogany, has rabbeted shield and kits. The camera has several improvements over anything heretofore offered to the trade. Price includes kit and dividers for making four 1/4 Gems on a 5x7 plate.

5x7 camera, without lenses.....	\$10 00
With four 1/4 Gem lenses on plate.....	23 00
Extra diaphragms for 9 or 18 on a 5x7 plate.....	2 00
Extra holders.....	5 00



### Improved Victoria Camera No. 229.



Patented December 3, 1901.

This is the very latest camera, applied for ferrotypes and negatives. It makes a most convenient style; light and compact, for a traveling photographer who does not wish to make over 5x7 negatives. Length of bed is 20 inches.

This camera for 5x7 plates is fitted with the patent self-locking focus lever and diaphragms for making 4 1/4 x 6 1/2 and 3 1/4 x 4 1/4 pictures with one tube; it is also fitted to make four or eight pictures on a 5x7 plate with four-gem tubes. The camera is made of selected hardwood and has all the latest improvements.

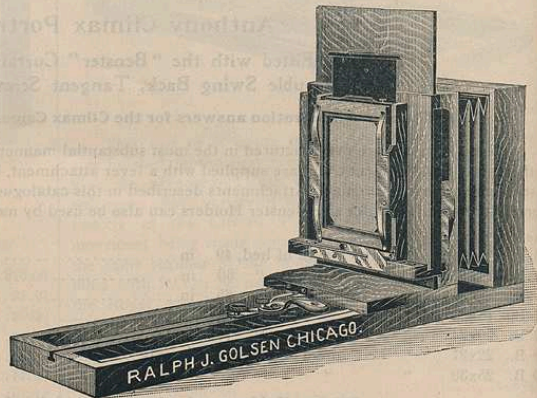
Price, without tubes.....	\$12 00
Extra plate holders.....	4 50
Price extra diaphragms to make 9 or 18 pictures on a 5x7 plate.....	2 00
Price, four 1/4 gem lenses and brass plate.....	15 00

### Penny Picture Camera No. 30. Combination Portrait, Multiplying and Copying.

This camera makes 1, 4, 9, 12, 16, 20, 30 and 42 on 5x7 plate, and can also be used for copying. Note that only one lens is required. This camera can be used for all regular portrait work in the gallery up to and including 5x7, also 3 1/4 x 4 1/4, 4x5, and 4 1/4 x 6 1/2 not reversible, (kits extra) and for copying as well as the multiplying process. It has 30-inch bed, rubber bellows, one double dry plate holder of latest pattern with rubber slides and spring actuating ground glass. No brass indicators or finders are required, making it exceedingly simple.

It has rising front and the new self-locking focus lever. The camera is made of selected hardwood and is handsomely finished. With the inside kits removed the camera is adapted to regular cabinet work.

Price, including one 5x7 holder.....	\$22 00
Extra 5x7 double holders.....	1 00



Patented December 3, 1901.

For other Penny Cameras see Penny Outfits this Catalogue.

We carry a Complete Line of Photographic Supplies.

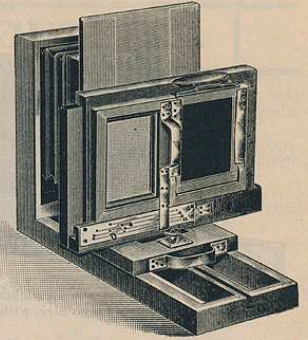
### Golsen Penny Picture Camera.

This is a regular portrait Camera as well as a multiplying camera. It is made of hard wood, finely finished, has India rubber bellows and has a sliding back which makes it unnecessary to remove and replace the holder or slide between each exposure. The metal work is made of aluminum; two sizes are made 4x5 and 5x7; the 4x5 will make 1, 4, 9 and 12 exposures on a 4x5 plate, using one lens. The 5x7 camera will make 1, 4, 9, 12 and 24 exposures using one lens.

The plate holder is double with rubber slides and each camera is fitted with one holder.

Price, 4 x 5 Camera.....	\$12.00	Extra Holders....	\$0.80
Price, 5 x 7 Camera.....	16.00	Extra Holders....	1.00

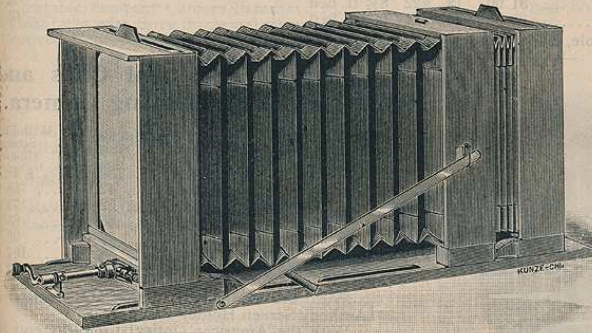
See Complete Penny Picture Outfits, this Catalogue.



### The Multiplex Camera.

For Enlarging and Reducing Direct from the Negative.

One of the latest inventions pertaining to photography, is a camera for the purpose of enlarging or reducing direct from the negative. Founded upon scientific principles and mathematical precision, which means perfect results. This camera does away with the necessity of expensive lenses and mechanism for the production of large photographic prints, and enables the photographer to produce better perspective effects than heretofore. A print any size desired may be made from a small negative by projecting the light through a perfect lens from the negative onto any sensitized surface; this is brought into perfect focus by the



This cut shows the camera in its extended form, as it would appear while making enlargements, its length extended being 29 inches; by a very simple device this may be folded up to 18 inches in length as shown below.

action of the differential screw thread, which is employed to move carriage containing the negative simultaneously with the carriage holding the sensitized paper or other material; by this means the correct perspective and atmospheric effects which appear in nature will be brought out clearly by the enlargement from the small negative. The simplicity of this device enables one who can make and develop a contact print to operate it with perfect assurance of success. The same may be said of transparencies and also of lantern slides. The expense of enlarging is very trifling if you do it yourself, and the work is the most fascinating of any connected with photography. Detail which cannot be brought to view in a contact print stands out clearly and beautifully in the enlargement when made by this camera. You undoubtedly have many choice negatives which, if enlarged, would make most beautiful pictures.

The Multiplex is perfect in its mechanical construction. A perfect focus is always insured irrespective of size of picture. The detachable parts containing the print or negative are easily handled, making it only necessary to use the dark room in the same manner you would for making contact prints.

The merits of this device should recommend it to all who are interested in photography, whether in an amateur or professional way.

Beautiful bromide enlargements, soft and deep transparencies and sharp, clear lantern slides are results always obtained by the use of the Multiplex camera.

These cameras are made in two sizes.

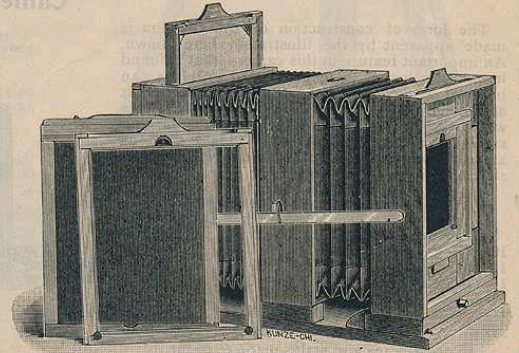
No. 1. Enlarges to 8 x 10 from 4 x 5 negatives or 2 1/2 diameter from smaller plates.

Price \$15.00.

No. 2. Enlarges to 11 x 14 from 5 x 7 negatives or 3 diameter from smaller plates.

Price \$20.00.

Larger sizes to order only, quotations on application.

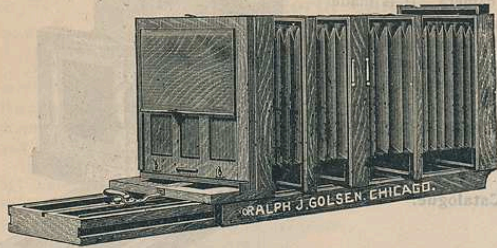


This cut shows the camera in its most compact form and measures 18x10x12 and enlarges to size 8x10 from a 3 1/4 x 4 1/4 or 4x5 plate and 2 1/2 diameter from any smaller plate or negative. Camera is handsomely finished in cherry with brass trimmings and well made bellows.

R. J. G. Lenses—Highest Quality—Moderate Prices.



**"R. J. G." Copying Camera No. 239.**



Patented December 3, 1901.

Cut Shows Large Size, with Extra Supports.

Made of hardwood, shellaced, not varnished. They are fitted with the patent **self-locking focus lever** and wet-plate holder. They have no swing, it being unnecessary. Complete in every respect, (no lens) and for copying they will meet every requirement satisfactorily. They are made with regulation length of bed, unless otherwise specified. Any length made to order, rigid or detachable, single or double bellows. Estimates for special sizes on application.

They can be fitted with an adjustable front at an extra cost of ten per cent in addition to prices below.

6½x8½, with bed 3½ ft. in length.....	\$20 00	14x17, with bed 6½ ft. in length.....	\$50 00
8x10, with bed 5 ft. in length.....	24 00	17x20, with bed 8 ft. in length.....	60 00
10x12, with bed 5½ ft. in length.....	28 00	18x22, with bed 8½ ft. in length.....	70 00
11x14, with bed 6 ft. in length.....	37 00	20x24, with bed 9 ft. in length.....	85 00

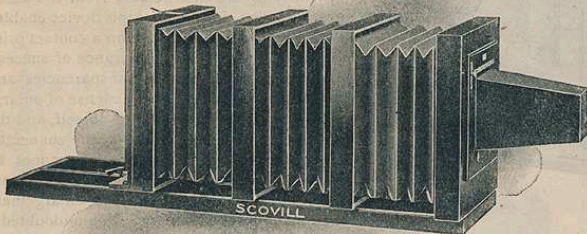
**Copying, Enlarging and Reducing Camera No. 237.**

Similar to above Copying Camera in every respect, but with the additions of an interior centre lens board for enlarging and reducing. Adjustable fronts ten per cent extra.

6½x8½, 3½ ft. bed.....	\$22 00	14 x17 6½ ft. bed.....	\$55 00
8 x10 5 ft. bed.....	26 50	17 x20 8 ft. bed.....	66 00
10 x12 5½ ft. bed.....	31 00	18 x22 8½ ft. bed.....	75 00
11 x14 6 ft. bed.....	38 50	20 x24 9 ft. bed.....	95 00

Any special lengths of bed, rigid or detachable, made to order. Estimates on application.

**American Optical Co.'s and Anthony's Copying Camera.**



Size.	With Regular Holder.	With Lined Screen Holder.
With 3¼ ft. bed....	8x10.....\$33 00	\$ 48 00
" 4 ".....	10x12.....	58 00
" 4½ ".....	11x14.....	71 00
" 5 ".....	14x17.....	85 00
" 6 ".....	17x20.....	92 50
" 7 ".....	18x22.....	107 50
Made to order only.	20x24.....	122 00

With the Anthony Cameras the Benster or Anthony Screen Holder is supplied.

With the American Optical Co.'s Cameras the Bonanza or Scovill-Levy Screen Holder is supplied.

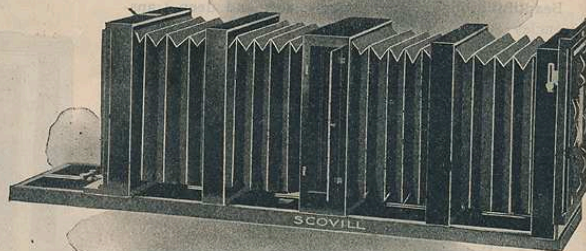
State plainly which holder is wanted. See full description of holders this catalogue.

**Anthony Climax and American Optical Co.'s Enlarging, Reducing and Copying Cameras.**

The form of construction of this camera is made apparent by the illustration here shown. An important feature in this camera, that is found in no other, is that the centre-board with lens can be used in the end of the camera, converting it at once into an extra long copying camera. This will be found very advantageous in enlarging small pictures by one operation. These cameras are all fitted with the Benster Holder, with wooden slide and silver-saving bottle.

	With Benster Holder.	With Lined Screen Holder.
8x10, with 5½ ft. bed.....	\$ 88 00	\$ 53 00
10x12, " 6 ".....	54 00	70 00
11x14, " 7 ".....	65 00	84 00
14x17, " 8 ".....	84 00	103 00
17x20, " 9 ".....	100 00	120 50
18x22, " 9 ".....	110 00	132 50
20x24, " 10 ".....	124 00	148 00

Special sizes and styles made to order.



With the Anthony Cameras, the Benster or Anthony Screen Holder is supplied. With the American Optical Co.'s Cameras the Bonanza or Scovill-Levy Screen Holder is supplied. State plainly which holder is wanted. See full description of holders, this catalogue.

We handle the Best Goods and guarantee Every Article sold.

**COMPLETE PORTRAIT OUTFITS.**

To this particular department we have given considerable time and study, with the object of supplying the very best equipment at the lowest possible price. To meet the requirements of the various branches of the business we have arranged a complete line of outfits which we believe exceed anything ever offered to the trade.

In constructing our outfits we do not overlook the essential features to make them satisfactory to the practical worker. The Cameras, Stands and attachments are well made, they embody the latest improvements and are the best values offered.

The lenses supplied with these outfits are of high quality, fully described in this catalogue. Our complete outfits are guaranteed as represented and lenses are subject to trial.

The general favor with which these outfits have met and absolute satisfaction they have given is evident by the unsolicited expression as to their merits. We refer you to testimonials in this catalogue—they are but a few of hundreds received.

All of our outfits are fitted ready for use.

**Golsen's Penny Picture Outfits.**

**Golsen's 4x5 Penny Picture Outfits**

Make 1, 4, 9 and 12 exposures on 4x5 plate.

	List	Net Separately
Consists of a splendid 4x5 Camera, carriage slide, with ground glass intact, obviating removal of it and Holder. Complete with rubber slide Double Holder.....	\$12.00	\$10.75
No. 00 Magic Camera Stand, polished oak, strongly made. Showy, portable, compact Camera Stand.....	3.00	2.85
¼ Gem Lens, with three Stops and Flange.....	8.00	6.00
Improved Four-Wing Shutter.....	4.00	3.60
	\$27.00	\$23.25

**Above forming Golsen's Penny Outfit A. COMPLETE FOR \$20.00 NET CASH.**

¼ Gem in place of ¼ with above outfit at \$2.00 less, but same will not cut 4x5 even stopped down. We highly recommend our ¼ Bausch & Lomb Rack and Pinion Portrait Combination at \$3.50 extra.

The above 4x5 Outfit A, as described, with our "Series P" Lens in place of the Gem Lens forming—

**Golsen's 4x5 Penny Outfit B. COMPLETE FOR \$25.00 NET CASH.**

The above 4x5 Outfit "A" as described, with our "Series II P" Lens and Automatic Shutter in place of Gem Lens and four-wing shutter forming—

**Golsen's 4x5 Penny Outfit C. COMPLETE FOR \$22.50 NET CASH.**

Extra Double 4x5 Holders, rubber slides.....each \$0.80  
Extra Double 4x5 Holders, press board slides.....each 0.60

**Golsen's 5x7 Penny Picture Outfits**

Make 1, 4, 9, 12 and 24 exposures on 5x7 plate.

	List	Net Separately
Camera same as 4x5, but for 1, 4, 9, 12 and 24 exposures on 5x7 plate, with double Dry Plate Holder, rubber slides.....	\$16.00	\$14.40
No. 00, Magic Camera Stand, as above.....	3.00	2.85
¼ Bausch & Lomb Portrait Combination, Rack and Pinion series, cuts 5x7, made specially and exclusively for us.....	20.00	20.00
Improved Four-Wing Shutter.....	4.50	4.00
	\$43.50	\$41.25

**Forming Golsen's 5x7 Penny Outfit D. COMPLETE FOR \$34.50 NET CASH.**

The above 5x7 Outfit D, as described, with Series P, Lens in place of the ¼ size B. & L. Portrait, forming—

**Golsen's 5x7 Penny Outfit E. COMPLETE FOR \$30.00 NET CASH.**

The above 5x7 Outfit D as described, with our Series II P Lens and Automatic Shutter in place of ¼ size B. & L. Portrait and Four-Wing Shutter, forming—

**Golsen's 5x7 Penny Outfit F. COMPLETE FOR \$24.00 NET CASH.**



Extra Double Holders, 5x7 press board slides.....each \$ 0.80  
" " " 5x7 rubber slides..... " 1.00

Any of these Outfits supplied with the No. 1 "R. J. G." Automatic Stand in place of the No. 00 Magic for \$2.00 extra.

Pure Chemicals—Correct Card Mounts—Fresh Papers—Leading Brands of Plates.



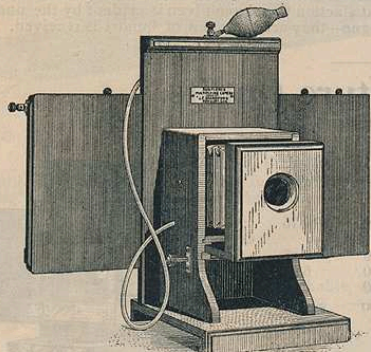
**Sunflower Penny Outfits.**

**INCLUDING THE SUNFLOWER MULTIPLYING CAMERA.**

The Sunflower Multiplying Camera is designed and built especially for making small multiple photographs, rapidity of action and ease of operation commanding in its construction the most careful consideration.

The Sunflower Camera is entirely different from all others. It was designed for this small work exclusively and contains exclusive points of merit.

The construction of this camera is such that the ground glass can instantly be brought into position for focusing; the



shutter opening automatically remains open until the ground glass is started out of position, when it closes instantly. This special feature not only saves the time of opening and closing the shutter but absolutely prevents the possibility of fogging the plate by sliding it before the open lens. Another time saver is the possibility of withdrawing the slide when the plate holder is inserted to position and not having to replace it until the capacity of the plate is exhausted. The tally score above the spacing rod, when properly worked, prevents the possibility of double exposures. These special features make the Sunflower Camera a most complete, safe, and rapid working apparatus for the production of this small work.

It is supplied with a quick acting double lens, four wing shutter, one double plate holder, one Automatic Shutter Device and inside kits for making either 6, 8, 12, 18, 24 or 36 separate negatives on a single 5x7 plate, the largest available picture being 2 3/8 inches square.

Price, complete as above described.....\$30.00 net

The above apparatus complete as described, with a No. 00 Magic Stand, forming our

**Sunflower Penny Outfit S  
COMPLETE FOR \$32.00 NET CASH.**

Extra plate holders, each.....\$1.25

**Cabinet Attachment.**

A perfected attachment for above camera which enlarges its capacity to full cabinet work without in any way interfering with its perfect appointments for the smaller sizes. The change is quickly made from the smaller to the larger size by simply removing the regular plate carrier and inserting the substitute which carries the plate in a vertical position, instead of the horizontal, and permits of full plate exposures. It is made to meet the demand for an all around camera and its purchasers will not be disappointed.

Price of Sunflower Camera, complete, fitted with this attachment and 5x8 Iris Double Lens.....\$38.00 net

The above complete as described, with a No. 00 Magic stand, forming our

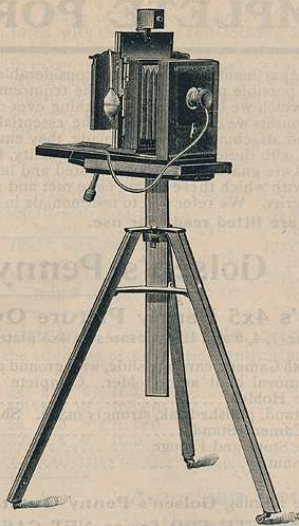
**Sunflower Outfit T  
COMPLETE FOR \$40.00 NET CASH.**

The cabinet attachment will fit any of the Sunflower Cameras numbered above 500.

Price of Attachment when sold separately.....\$5.00

Knowing our Prices to be absolutely the Lowest, we invite the Closest Comparison.

**The Universal Penny Outfit.**



Comprises a 5x7 Portrait and Penny Photo Outfit in one and is thus universal in the nature of the work it does. Has reversible back and arranged to make 1, 2, 4, 6, 8, 9, 12, 15, 18, 20, 24 and 28 separate exposures on a 5x7 plate, using but one lens.

Outfit consists of camera, finder, lens shutter, stand and one double holder.

Price complete. . . \$45.00

Extra Double Holders, each . . 1.35

Four 1/4 size gem tubes, set in brass plate; one wet plate holder and diaphragms for 4 on a 5x7 plate, fitted to above camera.

For . . . \$10.00 net.

**Long Focus Penny Outfits.**

**Including our Penny Picture Camera No. 30, 5 x 7 With 30-inch Bed.**

**Combination Portrait Multiplying and Copying Camera.**

(See illustration Portrait Cameras, this catalogue).

This camera makes 1, 4, 9, 12, 16, 20, 30 and 42 on 5x7 plate, and can also be used for copying. Note that *only one lens is required*. This camera can be used for all regular portrait work in the gallery up to and including 5x7, also 3 1/4 x 4 1/4, 4x5 and 4 1/4 x 6 1/2 not reversible, (kits extra) and for copying as well as the multiplying process. It has 30-inch bed, rubber bellows, one double dry plate holder of latest pattern with rubber slides and spring actuating ground glass. No brass indicators or finders are required, making it exceedingly simple.

It has rising front and the new self-locking focus lever. The camera is made of selected hardwood and is handsomely finished. With the inside kits removed the camera is adapted to regular cabinet work.

Price, including one 5x7 holder.....\$22.00

Extra 5x7 double holders each, rubber slides......80

5x7 kits, 4 1/4 x 6 1/2, 4x5 or 3 1/4 x 4 1/4 opening, each......30

The above Camera and Holder with No. 00 Magic Stand, 1/2 size Bausch & Lomb Portrait Combination Lens Rack and Pinion Series, cuts 5x7 and 4 Wing Shutter, all fitted ready for use, forming the

**Long Focus Penny Outfit G  
COMPLETE FOR \$39.50 NET CASH.**

The above outfit G as described, with our Series P lens in place of 1/2 size B. & L. Portrait, forming the

**Long Focus Penny Outfit H  
COMPLETE FOR \$34.50 NET CASH.**

The above outfit G, as described, with our Series II, P lens and automatic shutter, in place of 1/2 size B. & L. Portrait lens and 4 Wing Shutter, forming the

**Long Focus Penny Outfit J  
COMPLETE FOR \$30.00 NET CASH.**

**"R. J. G." Complete Ferrotypes Outfits.**

For Ferrotypes or Negatives.

These Cameras are fitted with dividers, etc., for ferrotypes work; they also can be just as readily used for negative (regular portrait) work, as the inside dividers are interchangeable.

	List Price	Price Net Separately
The 5x7 "R. J. G." Improved Ferrotypes Camera, Sliding Rab. Plate Holder, with 3 1/4 x 4 1/4 Rab. Kit. For 5x7 and 3 1/4 x 4 1/4 pictures and reversible, and 4 and 8 on 5x7 plate with 4 1/4 Gem Tubes; Camera (without Lenses).....	\$12.00	\$11.00
No. 00. Magic Camera Stand.....	3.00	2.85

4 1/4 Gem Lenses, perfectly matched, and brass plate, not new, but in fine condition, just as good and answer the same purpose exactly, guaranteed.....	15.00	10.00
	\$80.00	\$28.85

The above forming the  
**"R. J. G." 5x7 Ferrotypes Outfit K.  
COMPLETE FOR \$21.00 NET CASH.**

The above Outfit K with a 1/2 size Series G Rack and Pinion Portrait Lens and Four-Wing Shutter, forming the—  
**"R. J. G." Ferrotypes and Portrait Outfit L.  
COMPLETE FOR \$40.00 NET CASH.**

The above Outfit K with Series P Lens and Two-Wing Shutter forming the—  
**"R. J. G." Ferrotypes and Portrait Outfit M.  
COMPLETE FOR \$35.00 NET CASH.**

The above Outfit K with Series II P Lens and Automatic Shutter forming the—  
**"R. J. G." Ferrotypes and Portrait Outfit N.  
COMPLETE FOR \$31.50 NET CASH.**

**"R. J. G." 5x7 Portrait Outfits.**

The above 5x7 Camera and Stand with our Series G 1/2 size Portrait Lens and Four-Wing Shutter forming the—  
**"R. J. G." 5x7 Portrait Outfit O.  
COMPLETE FOR \$33.50 NET CASH.**

The above 5x7 Camera and Stand with our Series II P Lens and Automatic Shutter forming the—  
**"R. J. G." 5x7 Portrait Outfit R.  
COMPLETE FOR \$23.50 NET CASH.**

All of above Outfits are Fitted and Shipped Ready for Use.

Progressive, Up-to-Date and most Complete Photographic Supply House.



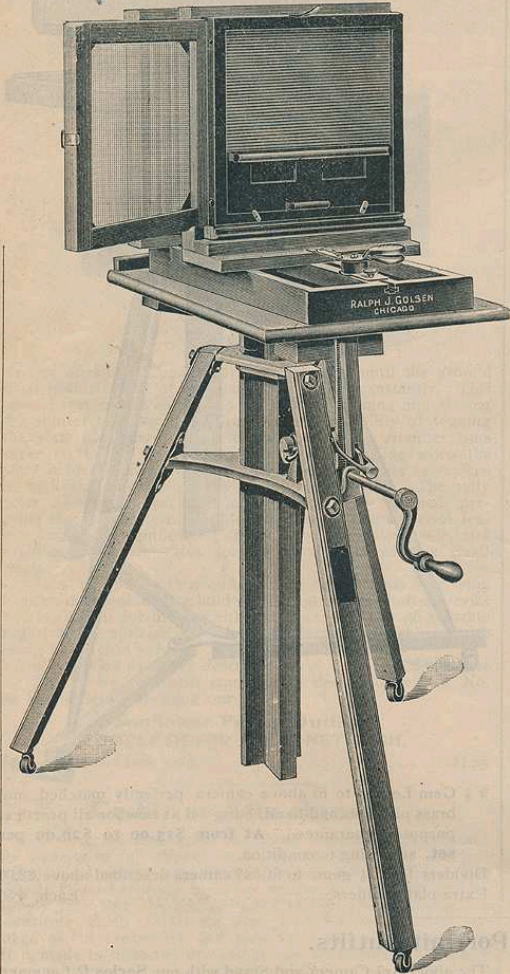
9 1/4 Gem Lenses to fit above camera perfectly matched, and brass plate, second-hand, but good as new for all practical purposes, guaranteed. At from \$15.00 to \$20.00 per set, according to condition.  
Dividers for 9 1/4 gems to fit 5x7 camera described above.....\$2.00  
Extra plate holders..... Each, 4.50



# THE POOR MAN'S PORTRAIT OUTFIT

IT WILL MAKE HIM MONEY.

These outfits have met with wonderful success and have given universal satisfaction. There is nothing that equals them at the price.



The Goods are all Strictly First-class.

## PRICE

### The Camera

is 8x10 double swing, cherry wood, good finish, India rubber bellows, swinging ground glass, self-locking lever focus and Curtain Slide Automatic Plate Holder.....

	Net.
List.	Separately.
\$16.50	\$14.50

### The Camera Stand

is No. 0 Magic—Light, substantial, easily taken apart and readily put together. Exceedingly convenient for traveling photographers—packing very compact when disjointed.....

6 75	6 00
------	------

### The Lens

is our 8x10 Bausch & Lomb "Special" Rapid Rectilinear, 2 1/4 inches diameter; 11 1/2 inch back focus; 13 1/4 equiv. focus, for Groups, Portraits and Views

35 00	35 00
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### The Shutter

is Bausch & Lomb Improved "Automatic," T. & I. fitted to above lens....

14 00	12 50
\$72 25	\$68 00

Above Outfit for **\$45.00** Net Cash Fitted Ready for Use.

Above outfit with our Series G 4-4 Bausch & Lomb Portrait Combination, Rack and Pinion Series, 10 1/2-inch back focus, 15-inch equiv. focus, 3-inch diameter, cutting 6 1/2 x 8 1/2 to 8x10 for Portraits and Groups, listed at \$35.00 and the \$4.00 shutter

For **\$55.00** Net Cash

We will furnish No. 1 MAGIC STAND in place of No. 0 Magic, with above outfit for \$2.00 extra.

We can supply any Photographic Goods manufactured.

# THE 8 x 10 KING BEE JR.

Complete Portrait Outfit.

A CRACKER JACK SURELY!

Comprising 8x10 High Grade Camera, with self-locking lever focus and swings; Curtain Slide "Automatic" Plate Holder; also, Cabinet attachment, 5x7 Double Plate Holder and Stand. See Illustration.

## PRICE.

8x10 Camera and Plate Holder, Cabinet Reversible Attachment and 5x7 Double Plate Holder .....	\$ 29 00
Wizard Stand with Adjustable Trough for 12 Holders .....	18 75
*8x10 3A R. J. G., Bausch & Lomb Portrait and Group Lens. See this Catalogue for description of Lens, for distance required and detailed description.....	65 00
No. 5, 4-wing, 5-inch Shutter .....	7 00
	List, \$119 75

For **\$85.00** Net Cash

Extra 5x7 Double Plate Holders, with press board slides..... Each, \$0 80 net

Extra 5x7 Double Plate Holders, with rubber slides..... Each, 1 00 net

\*NOTE.—Will supply our 8x10 3D Bausch & Lomb Extra Rapid Portrait Rectilinear Lens fitted with B. & L. "Automat," T. & I. Iris Diaphragm Shutter with this outfit in place of 3A Lens and 4-Wing Shutter if preferred, at same price.

The Camera and 8x10 Holder, Attachment with 5x7 Double Holder and Camera Stand and Trough of above outfit, without Lens and Shutter.

For **\$43.50** Net Cash

The above \$85.00 outfit supplied with our 3B Lens in place of 3A.

For **\$150.00** Net Cash



The 5x7 holders can be supplied with kits for use of plates 4 1/4 x 6 1/2 or smaller at 25 cents each.

Goods Fully Guaranteed—at the VERY LOWEST PRICES.



## Effingham Portrait Outfit.

A combination of the essential apparatus necessary to produce perfect portraits with the greatest satisfaction and comfort of the operation. This outfit includes our Series C Special Rapid Portrait Lens fitted with Benster Diaphragm Shutter. Each separate piece of this outfit is such as merits absolute confidence and as a whole forms a combination, not equaled by any outfit sold at a similar price.

**High Grade. Strength with Compactness, and Operated with the Greatest Ease.**

**THE CAMERA**—Is the Anthony 8x10 Extra Quality Mahogany Portrait Camera of newest design, highly finished with all modern adjustments, has double swing easily operated by screw movement; patent lever brass focusing attachment. Fitted with Benster Holder with curtain slide. Price \$23.00.

**THE ATTACHMENT**—Is the Anthony Improved Automatic Cabinet Attachment, by means of which, in one movement, the ground glass is pushed aside and holder placed in position with slide automatically drawn, ready for exposure. With this attachment is included one single curtain slide holder. Price \$10.

**THE STAND**—Is one of the most substantial on the market. It is strong and compact, easily operated. It is raised and lowered by means of a crank and balanced by weights. By means of the Gem City Lever attached to the stand—as shown in cut, it can be made instantly rigid—thus preventing the possibility of the stand moving and effecting the focus. Price \$15.00.

**THE LENS**—Is our 8x10 Series C Special Rapid Portrait, working at F. 5, supplied with diffusing adjustment. A lens of exceptional merit, made specially for us by Bausch & Lomb Optical Co., fully described in this catalogue. Price \$65.00.

**THE SHUTTER**—Is the Benster Diaphragm, fitted in the barrel of the lens mounting—in the position of the diaphragm. It exposes the plate equally, giving even illumination. This shutter is recognized as the ideal Studio Shutter. It is fully described in this catalogue. Price \$18.00.

Total list price \$131.00.

### ABOVE OUTFIT COMPLETE

All Fitted Ready for Service for \$105.00 net cash.

The above \$105.00 outfit supplied with the New York Stand in place of the Bonanza Stand, complete for \$107.50.

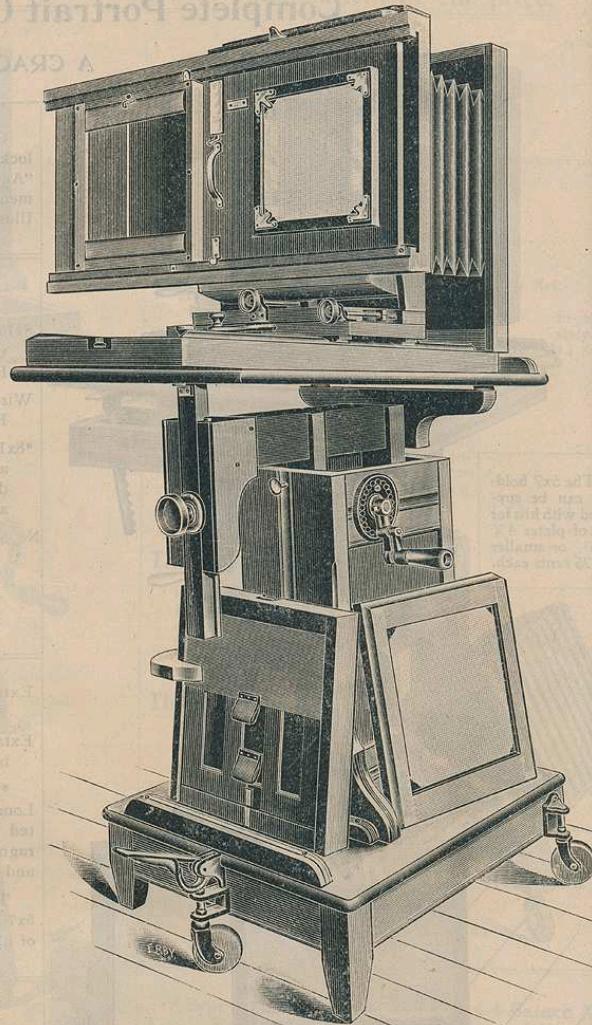
The Improved Wizard Automatic Stand (same as quoted with our King Bee, Jr., outfit), supplied in place of Bonanza at \$1.50 extra. Trough for Wizard Stand is \$2.25 extra

Any of the above outfits supplied with the 5x7 Reversible Holder Automatic Attachment in place of the regular not reversible, for \$2.50 extra.

Extra 5x7 Non-reversible Curtain Slide Holders, each \$1.50.

Extra 5x7 Reversible Curtain Slide Holders, each \$2.00.

Cut does not show Rack for small Holders, but same is supplied at no extra cost, and position of same where Ground Glass Frame appears at bottom.



## THE KING BEE

11x14 Telescopic Platform Complete Portrait Outfit.

It Leaves Them All in the Lurch.

### PRICE.

Extra Quality Mahogany Camera, Pure India Rubber Double Bellows, Double Self-Locking Lever Swings and Lever Focus, Curtain Slide Automatic Holder.....	\$ 57 00
Reversible Cabinet Attachment, with 5x7 Double Dry Plate Holder, Rubber Slides	12 50
11x14 Improved Wizard Camera Stand, with adjustable Plate Holder, Rack for 12 Holders.....	18 75
11x14 R. J. G. 3D, Iris, Bausch & Lomb Extra Rapid Rectilinear Portrait and Group Lens, made exclusively for us.....	70 00
No. 5, 3 3/4-inch, 4-Wing Portrait Shutter.....	5 50
	\$163 75

For  
**\$125.00**  
Net Cash

Extra 5x7 Double Holders, Rubber Slides. Each.....	\$1 00
Extra 5x7 Double Holders, Press Board Slides. Each.....	80
Kits for 3 1/4 x 4 1/4, 4x5 and 4 1/2 x 6 1/2 plates, to fit all 5x7 holders.....	25

Supplied with our No. 10, 3A, 8x10 Portrait Lens in place of the 3D Series

For  
**\$118.50**  
Net Cash

(The 8x10, 3A, cuts 11x14, small stop)



See description of Lenses this Catalogue for distances required, etc., and also for testimonials.

We not only sell you Cameras and Lenses at Low Prices, but Sundries as well.

Use Standard Goods and get Satisfactory Results.

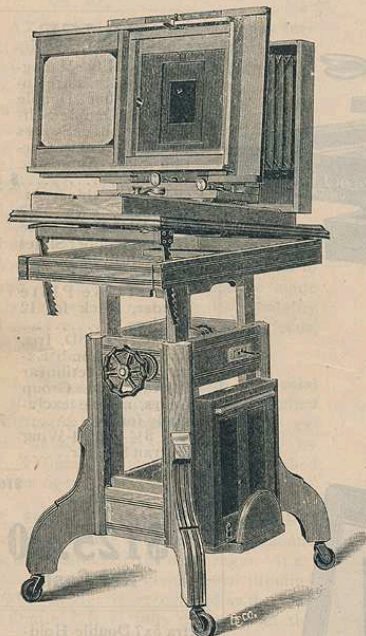


**Wizard Studio Outfit.**

**A Practical, Inexpensive Outfit.**

The Camera—This outfit offers advantages not obtained in others without sliding carriage back. With the horizontal sliding back the operator can make two exposures on a plate; also, the ground glass is in the sliding frame, therefore not necessary to remove it to insert the holder but simply slide the frame into position. The camera is made of cherry, highly finished, it is fitted with self-locking double lever swings and focus lever, also with the automatic curtain slide holder. For more detailed description see Wizard Portrait Camera. The stand is the Improved Wizard Automatic, fully described in this catalogue.

Price \$39.50.



This illustration shows the Screw Swing Adjustments. The Improved Cameras supplied with this outfit are furnished with the SELF-LOCKING LEVER SWINGS.

The above outfit with our 5-7 cabinet attachment No. 33, and 5-7 double holder, complete for.....\$47.50

**Do not overlook our Special Portrait Lenses.**

**Order your paper from us—we prepay the express.**

We sell Photographic Goods Cheaper than any House in America.

**The New York Studio Outfit**

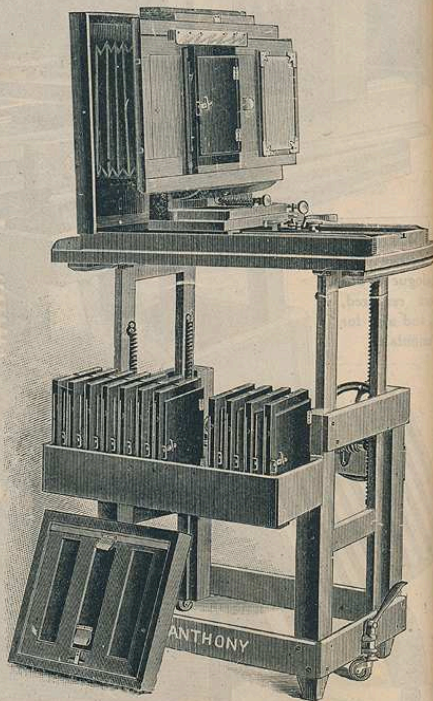
Is a most complete outfit for the studio. It comprises:

I.—11C 8x10 Mahogany Portrait Camera, of newest design, fitted with double-swing back and patent lever focus attachment. Fitted also with curtain-slide Benster Holder Camera and holder, \$23.00.

II.—Automatic Cabinet Attachment, with one curtain slide holder, by means of which, in one movement, the ground glass is pushed aside and holder placed in position with slide automatically drawn, ready for exposure. Attachment, with one holder (not reversible), \$10.00.

III.—No. 1 New York Camera Stand, the most modern studio stand, having only one hand wheel for raising, lowering and tilting the top, \$18.50.

IV.—Holder Rack, carried on the side of the stand, having thirteen grooves for twelve plate holders, \$1.25.



**PRICE LIST.**

8x10 New York Outfit, as above.....	\$50
8x10 New York Outfit, with 5x7 Reversible Holder....	\$4
11x14 New York Outfit.....	75
11x14 New York Outfit, with 5x7 Reversible Holder....	77
Extra Non-Reversible Holders, with curtain slide, 4 1/2 x 6 1/2, 5x7 or 5x8, each.....	1
Extra 5x7 Reversible Holders, each.....	2
8x10 No. 11-C Camera, with 8x10 holder.....	23
11x14 No. 13-C Camera, with 11x14 holder (The 11x14 has Telescopic Bed).....	53

For price of Automatic Attachment see Attachments, for price of New York Camera Stands see Stands, catalogue.

**VIEW CAMERAS**

We have our Outfits made as Compact and Light as is Consistent with Durability. We do not Sacrifice Strength.

Some important features of our outfits, as compared with others, are their strength, perfect rigidity, attractive appearance and careful general construction, all of which result in cameras of **great durability**. This feature should not be lightly treated, but should be an important consideration when purchasing an outfit for general every-day work. **The experienced professional knows this**, the beginner should profit by this experience. If you want a "business camera," one that will serve you well and give you the best value for the money invested, purchase one of these outfits.

Some purchasers, thinking only of extreme compactness, often make the error of buying a "Folding Hand Camera"—after putting the camera to use they soon learn the error of their judgment. It is self-evident that a lightly-built camera—one, for instance, after the style of a "Cycle Folding"—cannot have the durability of a strong, rigid one built with a view of constant service. The one is for occasional use to meet the wishes of those interested in photography for pleasure only, the other to meet the business end and serve faithfully the operator who puts it into service as frequently as business demands.

**R. J. G. Long Focus View Cameras.**

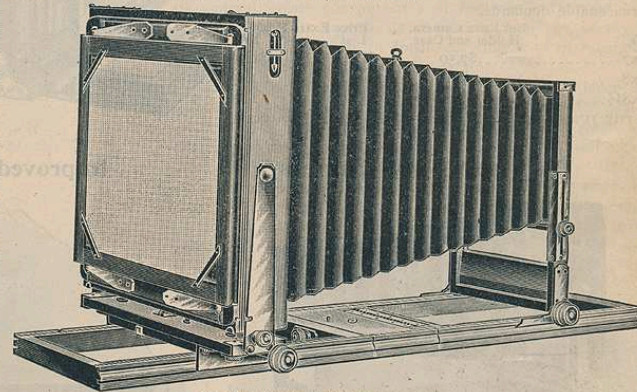
**Front and Back Focus and Rack and Pinion Adjustments.**

Every care is exercised in the construction of these cameras. They are made of Mahogany, highly polished, with lacquered brass trimmings. R. J. G. Long Focus View Cameras have been designed to meet the demand for a high grade, strong, compact and easily manipulated view camera.

The 6 1/2 x 8 1/2, when extended, has a draw of 24 inches, and the 8x10 29 inches—the greatest focal capacity of any view camera on the market. They have the front and back focus, both operated by a rack and pinion. The bed is in three sections—the front section being hung with a piano hinge so as to fold close to the camera and allows ample room for the lens and shutter to be attached; the rear section is attached to the middle bed by means of a large thumb-screw and two pins that telescope into brass sockets.

The HORIZONTAL and VERTICAL (double) swings in the rear are operated from the center. The vertical swing is governed by one set-screw instead of two. All the adjustments, including the front and rear focus, are held rigidly in position by large set-screws.

The double grooved bed allows the front and back to be placed very close together and makes the camera very compact and portable and affords a range in which any focus lens can be used.



Showing Camera partially extended.

The Rising and Falling front is operated by RACK and PINION and has great range above and below the center. The front contains a very large lens board, which admits the largest sized shutter to be fitted to it.

The unique PLUMB BOB LEVELLING ATTACHMENT enables the operator to level the camera in both directions.

The camera is fitted with a reversible back. That portion of the back that comes in contact with the plate holder is covered with black velvet, preventing any possibility of light coming in. In closing the camera the back cannot be racked beyond its correct position on account of an automatic stop.

The bellows has the SAFETY FOLD, doing away with sharp corners and any liability to crack. They are made of material specially prepared that is in itself absolutely light proof, but in addition it is double lined.

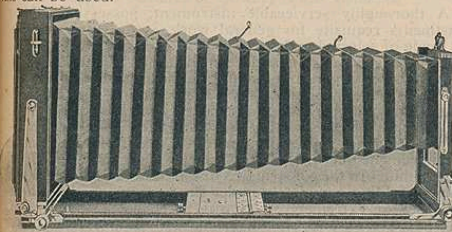
The first lining is the finest quality of prepared Para rubber; the second is a rubber-coated cloth, thus insuring absolutely light proof bellows, and, what is more important, one that will continue to be absolutely light proof after seeing hard usage.

The 6 1/2 x 8 1/2 and 8x10 are fitted with a removable "cut-off" division so that two pictures can be taken on one plate.

These features, combined with absolute rigidity, smooth and easy running adjustments, beautiful finish and highly polished brass lacquered metal parts, make the R. J. G. Long Focus View Camera the finest view camera on the market today.

The carrying case is the long style compartment, arranged to carry the camera, extra holders and tripod. This is well constructed, canvas covered, cloth lined, and supplied with leather handle and two straps.

The 11x14 camera has 34 inch focal capacity.



**PRICE LIST.**

Price includes camera, double holder and carrying case.

Size.	Net.	Extra with Rubber Slides.	Holders with Press Board.
6 1/2 x 7	\$13.50	\$1.00	\$ .80
6 1/2 x 8 1/2	14.50	1.25	1.00
8 x 10	16.00	1.25	1.50
11 x 14	27.50	3.00	2.50
6 1/2 x 8 1/2 Warnica Adjustable Holders, each.....	\$1.85		
8x10 Warnica Adjustable Holders, each.....	2.25		

The 11x14 is supplied with short case unless long case specially ordered.

Box, Folding, Magazine, Panoramic, Film or Plate Cameras at Golsen's.



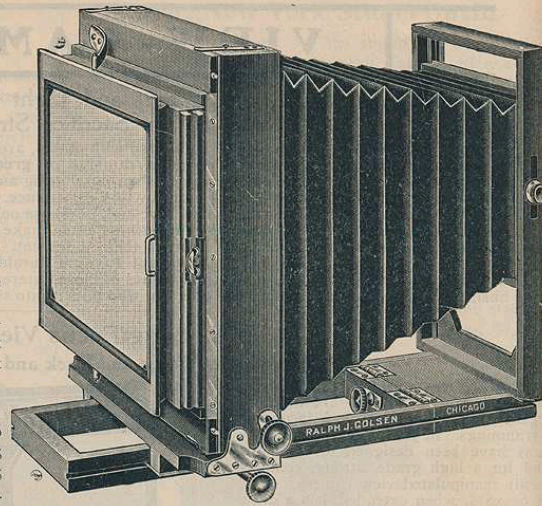
**"R. J. G. Junior" View Camera.**  
Reversible Back—Back Focus.

The camera is made of mahogany, with fine varnish finish, brass trimmings. Is *Reversible Back*, Spring Actuating Ground Glass, Folding Bed, Rising and Falling Front, Swing Back. It is adapted for either horizontal or vertical pictures—having *Reversible Back*. These cameras are fitted with the *Patent Zephyr Double Dry Plate Holders*. A wood carrying case with leather handle, is supplied—to hold camera and double holder and lens. The bellows is of good material. The camera is a specially good one for the money and has all essential features. These cameras have wide front boards suitable for stereo lenses.

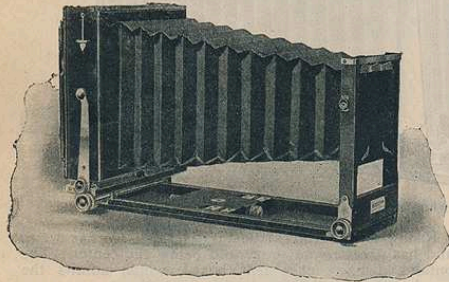
This—for an inexpensive outfit—is ahead of anything ever offered to the trade and will more than meet your expectations. We guarantee these goods to meet all reasonable demands.

Size	Net Price Camera, Holder and Case	Price Extra Holders List	Net
5 x7	\$7.50	\$1.25	\$1.10
5 x8	8.00	1.35	1.15
6½x8½	9.50	1.60	1.35

SEE THE JUNIOR COMPLETE VIEW OUTFITS THIS CATALOGUE.



**Rochester View Camera.**



The Rochester View is designed as a thorough and practical business camera. Compactness and simplicity are the chief features embodied in its make-up.

The Rochester View is made throughout of carefully selected mahogany, very highly polished. It has a double swing back, and up to and including the 11x14 size may be focused from the front or rear; reversible back so that pictures may be taken in either a horizontal or vertical position without disturbing the camera; has rising and falling front and is equipped with both horizontal and vertical swings, which, being at the center, always keep the back parallel with the lens. The wide front particularly adapts the camera for stereo work, and a stereo attachment will be supplied when desired. The camera has a detachable bed in the rear, as well as a fine rack and pinion focusing movement, both at front and rear.

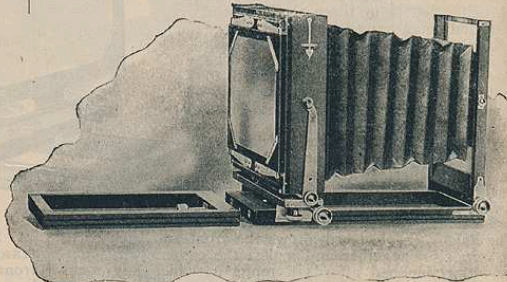
Price includes canvas carrying case and one dry plate holder. Other sizes to order.

**PRICE.**

Size of View	Focal Capacity	Weight of Camera.	Price
5 x 7	16½ in.	4½ lbs.	\$17.00
6½x 8½	17½ in.	5½ lbs.	18.00
8 x10	20 in.	7 lbs.	20.00
11 x14	22½ in.	10 lbs.	31.00
14 x17	28½ in.	21 lbs.	45.00

The POCO or Rochester holders fit these cameras.

**Improved Empire State Camera.**



A thoroughly serviceable instrument, possessing all the adjustments requisite for general work, is the Empire State. It is made of selected mahogany and its trimmings are of solid brass. It has both front and rear focus up to and including the 11x14 size, larger sizes having the rear focus only.

The focus is manipulated by a fine rack and pinion adjustment. Ease of operation and accuracy of results, together with strength of construction and durability, all of which are found in evidence in the Empire State, have served to make this instrument one of the most popular view cameras offered to the public. In the construction of the camera the bed is made to hinge, folding completely under the instrument, thus allowing lenses of extremely short foci to be used. The instrument has a rack and pinion, rising and falling front. The front board is made wide enough to permit the use of stereo lenses. It has also a double swing operating from the center—a feature that will be quickly recognized and appreciated. The 14x17, and larger, have back focus and focusing handle instead of rack and pinion.

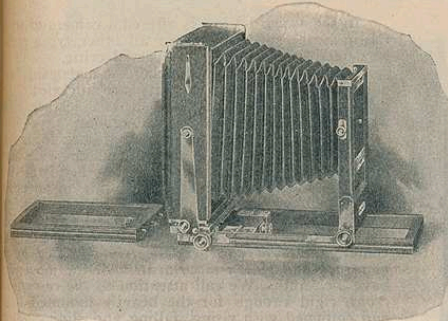
Price includes canvas carrying case and one *Perfection* holder. With sizes above 11x14 English book holders are supplied. The carrying case will contain two extra plate holders.

Size of View	Focal Capacity Inches	Weight of Camera Pounds	Price
5 x 7	22½	5	\$10.00
6½x 8½	26½	5¾	20.00
8 x10	29½	7¾	22.00
11 x14	37	11½	34.00
14 x17	48	23¾	50.00

The *Perfection* holder fits these cameras.

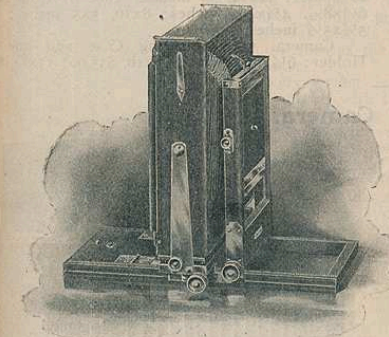
We invite Comparison, we solicit Correspondence, we request your Orders.

**Century View Camera.**  
Front and Back Focus.



Showing Camera partially extended and back bed detached.

Century View Cameras are made of mahogany, highly polished, with lacquered brass trimmings and present a very attractive appearance.



Special Features of Century View Cameras.

Perfect rigidity of every part.  
Extreme length of bellows: The 6½x8½ Century View has a draw of 23 inches, and the 8x10, 28 inches. The bellows is made without sharp corners.

The focus may be adjusted by moving the front or back as preferred, both operating by rack and pinion.

Three-section bed, giving great focal capacity. The second section is hinged, and arranged to fold close to the Camera even when lens and shutter are attached. The third section adjusts at the back by means of a large thumb-screw and two pins fitting in brass sockets.

A double grooved bed, which allows the front and back to be placed close together for short focus lenses.

Automatic lock, which prevents racking back beyond the edge of bed.

Adjustable sliding front of great range above and below the center.

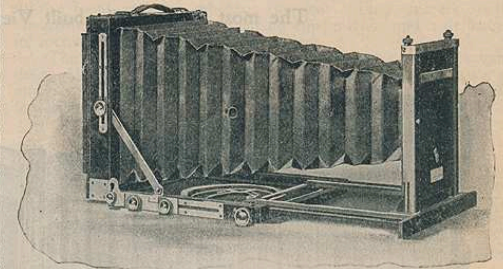
Both horizontal and vertical swings operating at the center, with set-screws at either side. Brass plumb indicator for adjusting swing back.

Reversible Back for horizontal and upright views.

**PRICE.**

Including one double plate holder and carrying case with compartment for five extra plate holders.			
6½x 8½	8x10		
Century View Camera, complete as above...	\$20.00	\$22.00	
Extra Century Double Plate Holders, each...	1.35	1.75	

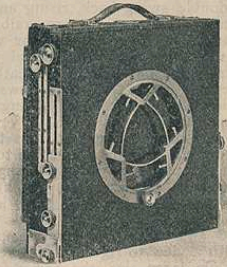
**The Carlton Camera.**



Showing Camera extended.

This instrument has achieved great popularity owing to its general utility for purposes of copying and professional photography. Its superiority in construction, its beauty of proportion, compactness of form and simplicity of manipulation appeal directly to exacting operators.

It is made of mahogany and brass, superbly finished, the long, cone-shaped bellows being of maroon leather of the finest quality. The bed of the Carlton carries its own tripod top, adapted to the combination tripod. The top is of metal, neatly fitted in the bed, and revolves easily and smoothly. It permits the operator to adjust the camera readily for any view. The Carlton is adapted to the use of extremely wide angle lenses. With the extreme length of draw, all regular lenses now on the market may be used satisfactorily. The camera is equipped with a reversible back, and has a swing back operated by the rack and pinion as well.



Showing Camera closed.

The price includes one *Perfection* holder, with rubber slides; Combination tripod and canvas case. The Carlton cameras, in sizes to 8x10, inclusive, are furnished with either a long or a short 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 6½x8½, inclusive, there is a compartment for lenses. In ordering, specify style of case desired.

**PRICE.**

Size of View	Focal Capacity Inches	Weight of Camera Pounds	Price
5 x 7	17	4¾	\$42.00
6½x 8½	20½	7	48.00
8 x10	24	9¼	55.00
11 x14	30¾	15¼	65.00

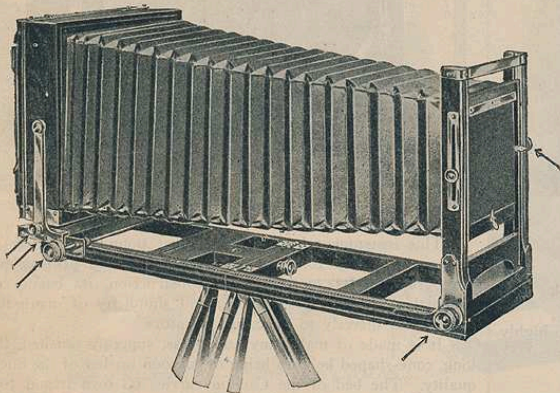
The *Perfection* holders fit these cameras.

The Quantity of Goods we sell places us beyond Competition.



**Wizard View Camera.**

The most substantially built View Camera of modern manufacture.



In the Wizard View is offered a camera of which the immense superiority over all other types can be denied by even the most partial critic.

This box is built of the choicest mahogany, polished, and the brass parts are nicked. The bellows is of the finest red Russia leather. The workmanship is exemplary throughout.

This camera is of the front and back focus by permitting of the use of long focus or wide angle lenses of even the shortest foci. The bed is in two sections—the last detachable—resulting in an unsurpassed bellows capacity. The reversible back is fitted with a spring actuated ground glass screen. Both the horizontal and vertical swings are pivoted in center, and both can be delicately adjusted by new rack and pinion movement. All the movements have lock-nuts. We call attention to the re-enforced front, rigid enough for the heavily mounted lens and equipped with rising, falling and sliding adjustments operated with rack and pinion.

Each camera is provided with one plate holder and a convenient canvas carrying case with compartments for the camera, five plate holders, tripod and lenses.

Length of bellows: 6½x8½, 23 inches; 8x26 inches; 11x14, 30 inches. Size of Lens Box 6½x8½, 4¾x4¾ inches; 8x10, 5x5 inches; 11x14, 5½x5½ inches.

Camera, with Carrying Case and one P. Holder: 6½x8½, \$30.00; 8x10, \$35.00; 11x14, \$40.00.

**The "Sky-Scraper" Camera.**

Reversible Back, Double Swing, BackFocus.

"Sky-Scraper" Cameras are adapted for all-around work, being fitted with double swing back, rising and falling front, fine screw focusing adjustment and reversible back. They can be used in the studio as readily as for view work.

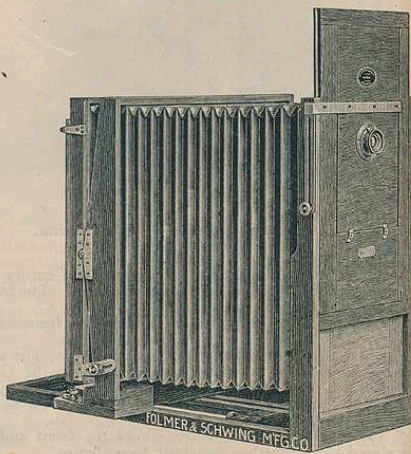
The bellows, which is one of the special features of this camera, is made from the best quality of leather; back being rectangular, carries the upper edge of bellows quite a liberal distance above the top of plate, and, being wedge-shaped, tapers towards front, the bellows closes up very compact and allows the lens board to be raised so that the optical axis of lens is carried quite a distance above the top line of plate. This is a decided advantage in photographing tall buildings.

Lens Board may be cut eccentric, which gives an additional rise to lens, and when reversed gives increased fall of front.

Bed is hinged and closes up very compactly, although camera is built with a view to rigidity and every part is made very substantial. On large size, the bed is cut and hinged, so that the rear will drop down when using short focus lenses.

Camera is constructed from selected mahogany, with bed rails of straight-grain cherry.

Price includes Camera, one Sterling Double Plate Holder, and Carrying Case: No Lens or Shutter.



The "Sky-Scraper" Camera is designed for photographing tall buildings where an excessive rise of front is required and increased back swing.

**PRICES.**

Size of View	Size of Lens Board	Focal Capacity	Weight	Double Swing
8x10	5x6 in.	21 in.	9 lbs.	\$35.00
11x14	6x7 in.	26 in.	14 lbs.	50.00
14x17	7x8 in.	36 in.	23 lbs.	75.00

**King Compact View Camera.**

The King Camera is equipped with every adjustment found valuable in photography.

It has a double swing back and front. The back may be swung in either a horizontal or vertical direction, the front in a vertical plane. The advantage of this equipment is to be appreciated at once.

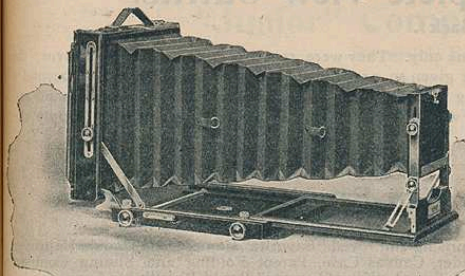
Objects either above or below the level of the camera

(King Camera continued next page).

may readily be photographed without distortion. The bed of the camera may be racked close to the front for the use of wide angle lenses. 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 may be effected by simply reversing the back instead of the entire camera. The focus when once determined is not affected by this change.

Have a Camera with you on your "Outing"—it is a great Companion.

**King Compact View Camera—Continued.**



It has two fine rack and pinion focusing movements, one at the front and the other at the rear. They operate with smoothness and precision, insuring convenience and a delicacy in focusing not obtainable otherwise.

The price of the King includes one holder and canvas case. When desired, cases will be furnished to hold camera and six holders; or camera, six holders, tripod, and pocket for lenses.

**PRICE.**

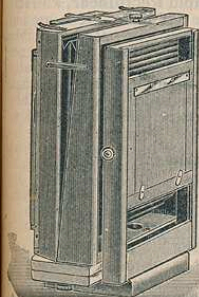
Size of View	Focal Capacity Pounds	Weight of Camera Inches	Price
5 x 7	17	4	\$36.00
6½x8½	21	5	40.00
8 x 10	24¾	5¾	45.00
11 x 14	33¼	11¼	55.00

The Poco or Rochester holders fit these Cameras. The 11x14 is supplied with book holder.

**Improved "Favorite" View Camera.**

(Manufactured by the Rochester Optical & Camera Co.)

Reversible Back—Back Focus.



Showing Camera Folded.

A favorite with all classes of photographers. All wood parts are of finest selected mahogany, highly polished; mountings of polished and lacquered brass. Although listed at a popular price, the same general care is used in its manufacture as the costlier instruments.

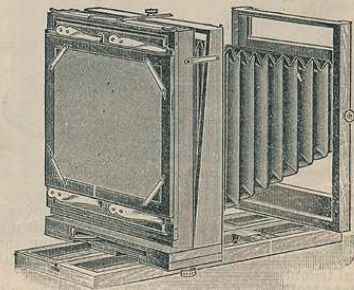
It is very strong and rigid, light in weight, with the least possibility of getting out of order. It is fitted with reversible back. Has spring actuated ground glass screen. The slide can be withdrawn from the top or either side.

The back focus allows the use of extra wide angle of lenses without the front obstructing the view. It is operated by a quick-acting lever. Two tripod plates are fitted to the base, one toward the front and the other at the rear, which insures the balance of the camera on the tripod when the same is fully extended or with lenses of any length of focus. The adjustments also include the rising and falling front, and double swing back. The front is made wide enough so that stereoscopic lenses can be used. The 6½x8½ and 8x10 sizes have a cut-off division in order that two pictures may be taken on one plate.

The bellows is cone-shaped and is made in the best possible manner of selected bellows material, and will not crinkle or get out of shape when folded. These cameras are supplied

with the improved Poco Double Holders, P. B. Slides. The weight of the 6½x8½ size is only 5 pounds, measuring 10x5x12 inches. Other sizes in same proportion.

Price includes camera, carrying case, and one double dry plate holder.



Camera Extended, Showing Back View.

**PRICES.**

Size of View	Focal Capacity	Weight of Camera	Special Net Price	Press Board Slides	Hard Rubber Slides
6½x8½	15¾ in.	5 lbs.	\$10.50	\$1.20	\$1.30
8 x 10	18¼ in.	6¼ lbs.	11.50	1.40	1.50
11 x 14	23¾ in.	10 lbs.	18.50	3.00	

**"King-Favorite" Special View Outfits.**

No. 42—6½ x 8½. No. 43—8 x 10.

The Special Outfits include the Improved Favorite Camera, Holder and Canvas; Case Compact Tripods Rapid Rectilinear lens and DOUBLE VALVE AUTOMATIC SHUTTER with bulb and tube.

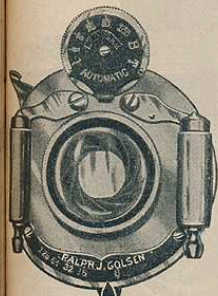
**PRICES.**

No. 42 Outfit Complete, 6½ x 8½	\$25.50
No. 43 Outfit Complete, 8 x 10	29.50

**Wide Angle Lenses**—If you wish in addition to above outfits, or outfits Nos. 41, and 42, page 66, a **Wide Angle Lens**, we will supply one fitted to an extra front board for above cameras for outfits No. 40 and No. 41 or for outfits No. 42 and 43 fitted on extra front, or in cells interchangeable in shutter with the Rapid Rectilinear as follows:

Wide Angle Lens, 90 degrees, good quality and sold under our guarantee, subject to trial and exchange if not satisfactory—6½ x 8½ for \$9.00; 8 x 10 for \$10.00.

See King-Favorite Outfits Nos. 40 and 41 Page 66.



This Double Valve Automatic Shutter is supplied with the Special "K. F." View Outfits. No. 42 and No. 43.

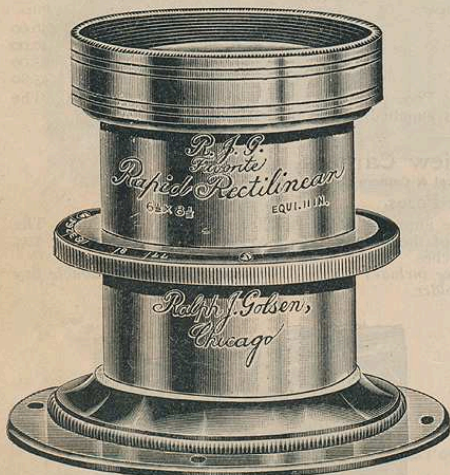
A Ray Filter adds much to the Character of your Negative.



# "King-Favorite" Complete View Outfits.

(Reversible Back).

Originally we offered this outfit at these prices for a limited time only. They were received with such great favor, the demand so great and continuous, the general satisfaction they have given so pronounced,—that we are convinced beyond a doubt that the trade fully appreciates the great values we are offering in these outfits—therefore, to meet this great demand and continue to offer such values, we have placed a large special order with the manufacturers and will continue to supply the "King-Favorite" as one of our regular complete view outfits.



This cut shows the actual size of the 6 1/2 x 8 1/2 Lens.

## "King-Favorite" View Outfits.

No. 40—6 1/2 x 8 1/2. No. 41—8 x 10.

Comprising Improved "Favorite" Camera, one Double Improved Poco Holder, Canvas Case, Patent Folding and Sliding Compact Hardwood Tripod, "King-Favorite" Rapid Rectilinear Lens with Iris Diaphragm, 4-Wing Pneumatic (behind the lens) Shutter—all fitted ready for use.

The Camera is the Improved "Favorite," manufactured by the Rochester Optical and Camera Co. Reversible Back, Double Swing Back Focus, Folding Platform, Rising and falling front, Spring Actuating Ground Glass, etc. Fully described on preceding page.

The Lens is the "King-Favorite" Rapid Rectilinear, with Iris Diaphragm. Has good illumination and fine definition. It is ground from imported glass and is a general purpose lens—of the double rectilinear type—is rapid, working at F 8, possesses qualities not equalled by lenses sold at double the price. This lens is specially recommended for all classes of out-door work, and groups; also has qualities which commend it for portraits, for which purpose it has been used with excellent results. Every lens is fully guaranteed to do all we claim for it.

### Price of Lenses as follows:

With Stop F 8	Equivalent Focus	Diameter of Lens	Price	Our Net Price
6 1/2 x 8 1/2	11-inch	1 1/4-inch	\$20.00	\$15.00
8 x 10	13 1/2-inch	1 3/4-inch	22.50	17.00

These lenses will cut a size larger with smaller stop.

The Lens is now supplied with Improved Lever Iris Diaphragm instead of circular heavy metal band as shown in cut.

The Tripod is of the combination style—Folding and Sliding; Patent Automatic Lock Top, made of Hardwood, with Nickel-plated metal trimmings.

The Plate Holder is the Improved Double Poco, with Hinged Ends, Press Board Slides.

The Carrying Case is made of the best quality Canvas, with strap and leather handle. Large enough to accommodate Camera and two extra (three altogether) Double Dry Plate Holders, Lens and Shutter.

The Shutter is the Improved 4-Wing Pneumatic Shutter, with large bulb and three feet rubber tubing. This shutter is fitted on the inside of front board, back of the lens. We fit the lens and shutter ready for use.

No. 40 Outfit All complete, fitted ready for use, 6 1/2 x 8 1/2, \$22.50 net cash.

No. 41 Outfit All complete, fitted ready for use, 8 x 10, \$26.50 net cash.

The above Complete Outfits, with Single Lenses.

If you wish to have a Single Achromatic View Lens, in place of the Double Rapid Rectilinear, we will supply as follows:

Camera, holder, case, tripod, shutter and single lens, complete, fitted ready for use—6 1/2 x 8 1/2 for \$20.00 net cash; 8 x 10 for \$23.00 net cash.

### PRICE LIST.

	No. 40. 6 1/2 x 8 1/2.	No. 41. 8 x 10.
Improved "Favorite" Camera, Holder and Case	List \$14.00 Net Separately \$10.50	List \$15.50 Net Separately \$11.50
"King-Favorite" Lens, Rapid Rectilinear, Iris	20.00	22.50
Compact Tripod	3.00	3.50
Improved Shutter	4.00	4.00
	\$41.00	\$35.10

See Page 65 for description of Camera, also for wide angle lenses for these Outfits.

Remember—we make no Charge for Boxing or Cartage.

# "Junior" Complete View Outfits.

Reversible Back—Back Focus.

In these "Junior Outfits" we believe we have "struck bottom." If it is possible to put up a good outfit for less money we certainly (if anyone) would know how.

This is an outfit that will meet the wants of those "who have only a small amount to invest"—and yet must have a good, well made, practical and durable equipment—to do the general work demanded of them.

The "Junior" is what they are looking for and it won't disappoint them. A better outfit for the money has never been made.

## "Junior" View Outfits.

No. 44—5x7, No. 45—5x8, No. 46—6 1/2 x 8 1/2.

The Camera is made of mahogany, with fine varnish finish, brass trimmings. Is Reversible Back.

Spring Actuating Ground Glass, Folding Bed, Rising and Falling Front, Double Swing Back. The Reversible Back adapts it for either horizontal or vertical pictures. These cameras are fitted with the Patent

Phyr Double Dry Plate Holders. A wood carrying case with leather handle is supplied—to hold camera and double holder and lens. The bellows is of good material. The camera is a specially good one for the money and has all essential features; they have wide front boards suitable for stereo lenses. The 5x7 and 5x8 cameras are provided with a combination—sliding and folding tripod, the "Triplex Junior,"—it is light, compact and rigid.

The 6 1/2 x 8 1/2 cameras are provided with the Improved Folding tripod—yellow shellac finish, with nickel trimmings—large circular wood top (cloth covered). The large top being specially desirable for this size camera. The Single Lenses supplied with the outfits are for ordinary landscape work, give excellent results, and fully cover the plate specified. They are fitted with rotary stops.

THE DOUBLE LENS supplied is a Rapid Rectilinear, with Waterhouse Diaphragm, works at F 8, has good illumination and fine definition. It is a general purpose lens, and is recommended for all classes of out-door work and groups, has qualities which commend it for portraits—for which purpose it has been used with excellent results. These lenses are fully guaranteed to do all we claim for them.

We consider these lenses quite equal to the instruments which are furnished with the "King-Favorite" Outfits.

This—for an inexpensive outfit—is ahead of anything ever offered to the trade, and will more than meet your expectations. We guarantee these goods to meet all reasonable demands.

### PRICES—Net Cash. Complete Outfits—including Camera, Holder, Case, Tripod, and Lens without Shutter.

Outfit No.	Size.	Net Price Complete		Price Extra Holders		Net Price Rapid Rectilinear Lens Waterhouse Stops.
		with Single Lens.	with Double Rapid Rectilinear Lens.	Camera, Holder and Case.	List. Net.	
No. 44	5 x 7	\$9.50	\$14.25	\$7.50	\$1.25	\$9.00
No. 45	5 x 8	11.00	14.75	8.00	1.35	10.00
No. 46	6 1/2 x 8 1/2	11.75	17.00	9.50	1.60	13.50

## "Junior Special" View Outfits.

No. 47—5x7, No. 48—5x8, No. 49—6 1/2 x 8 1/2.

The "JUNIOR SPECIAL" VIEW OUTFITS, including Camera, Holder, Case, Tripod, same as with "Junior" Outfit, and RAPID RECTILINEAR LENS AND DOUBLE VALVE AUTOMATIC SHUTTER.

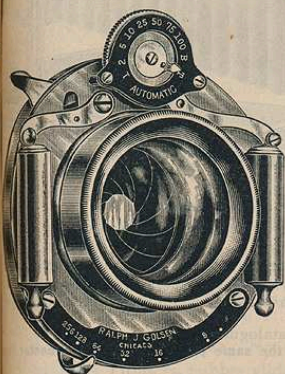
### PRICES—Net Cash.

Outfit No. 47—Size 5 x 7 complete, as above	Net, \$17.50
" No. 48— " 5 x 8 " " " " " "	" 18.00
" No. 49— " 6 1/2 x 8 1/2 " " " " " "	" 22.50

WIDE ANGLE LENSES—If you wish, in addition to above outfits a Wide Angle Lens, we will supply one fitted to an extra front board for outfits No. 44, 45 and 46; and with outfits No. 47, 48 and 49, to an extra front board or in cells, interchangeable in Shutter with Rapid Rectilinear Lens, as follows:

Wide Angle Lens, 90 degrees, good quality, and sold under our guarantee and subject to trial—5x7, \$7.50; 5x8, \$8.00; 6 1/2 x 8 1/2, \$9.00.

We are constantly adding New Articles to our Stock—we always have the Latest.



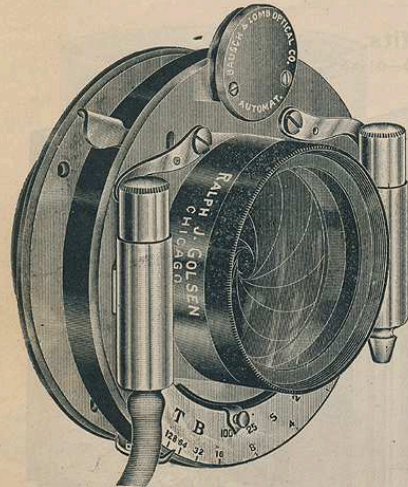


# Improved Long Focus Complete View Outfits.

No. 30, 6½x8½. No. 31, 8x10.

These outfits include the most improved view camera on the market. Superior by far to anything yet introduced. The camera has rising and falling front, operated with rack and pinion. Piano hinge bed. Automatic back stop. Combination front and back focus, both operated with rack and pinion. **Is strong, rigid, light, compact, practical.**

The 6½x8½ when extended has a draw of 24 inches, the 8x10 when extended has a draw of 29 inches, the greatest capacity of any view camera on the market and with this advantage it closes compactly into as small a space as cameras not possessing the same advantages.



## Complete View Outfits.

The No. 30, 6½x8½. No. 31, 8x10.

**Comprise**—Camera, Double Dry Plate holder, Patent Sliding and Folding Compact Tripod, Bausch & Lomb Extra Quality Special Rapid Rectilinear Lens, 1902 Improved Bausch & Lomb "Automat" Double Valve Pneumatic Time and Instantaneous Shutter; all complete, fitted and ready for use. All of above in compact compartment (long style) camera carrying case with two straps.

### The Lens and Shutter

Made especially for us by Bausch & Lomb Optical Co. The "R. J. G." Special Rapid Rectilinear Lens works at F. 8 (largest stop) for views, groups and portraits, landscape and instantaneous work.

We can confidently recommend these lenses especially for all around work, and the speed is sufficient for all instantaneous exposures, even under conditions which are not the most favorable. Have excellent covering capacity, the focus is medium and will give a most satisfactory perspective. Lack of space prevents us from giving a detailed description of these true wonderful and inexpensive instruments, so will let it suffice that they speak for themselves.

**Shutter**—Ever alert to embody the very latest and best in our outfit, we have adopted for our Improved Long Focus Complete View Outfits the very best Shutter made—The Bausch & Lomb "Automat" Double Valve Time and Instantaneous. The Shutter automatically sets itself after each exposure. It gives exposures from one second to 1/100 second and may in addition be set so that time exposures of any duration may be made as well as quick exposures.

This Shutter is not bulky—it is small, compact, accurately and strongly built—it presents a handsome appearance and its action is finer than its appearance.

**The Tripod**—Made of selected ash, wooden felt top, metal parts nickled brass, folds in three sections, compact for strong, rigid.

**The Camera**—The Cameras supplied with these outfits are the very latest 1902 Model View Cameras, and will readily and satisfactorily meet the requirements of all classes of photographers. All wood parts are made of the very best selected mahogany, carefully dovetailed, highly polished, with lacquered brass mountings. Every care is exercised in the construction of these instruments.

**Strong, rigid, light, practical,** thoroughly up to date—the latest—made to cover the field of usefulness at a price within the reach of all. It is reversible back, allowing the view to be taken in either a vertical or horizontal position, or both, without reversing the camera, has spring-actuated ground glass screen. The slide can be withdrawn from top, bottom or either side, an advantage particularly valuable when operating in confined situations. It is a **combined front and back focus**—with rack and pinion adjustment, which enables the operator to secure the finest focus with the greatest convenience.

This combination permits the use of any extreme wide angle or extreme long focus lens. It is provided with patent set screw, which locks it when correct focus is obtained. This camera is provided with rising and falling front, operated with rack and pinion, and double swing back.

A most serviceable adjustment is the cut-off division provided in back of camera so that two pictures may be taken on one plate. The main bed is connected with a brass piano hinge, almost indestructible.

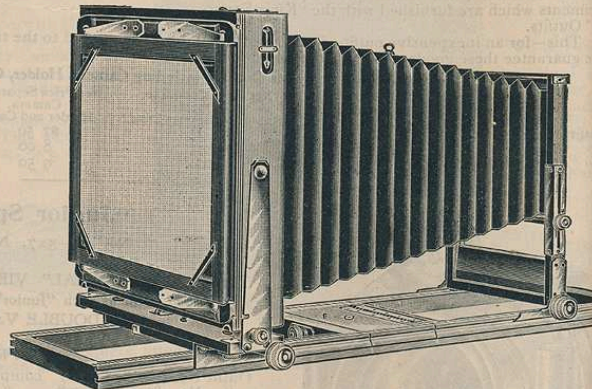
The 6½x8½ has 24-inch bellows, the 8x10, 29 inch—thus permitting the use of extreme long focus lenses, and utilizing this also as a copying camera.

The swing is from the center, which is optically correct, and an indicator is connected with the swing bar, insuring accurate focus.

**The Carrying Case** is one of the very latest long compartment pattern, arranged to carry camera, tripod and six double plate holders. It is covered with strong durable canvas and lined with colored cotton flannel, which prevents scratching the apparatus.

For illustration of tripod see the "R. J. G." Combination under tripod section, this catalogue.

If preferred, we will supply these outfits in place of the above camera and at the same price, either the Rochester View Improved Empire State or Century View Camera.



Showing Camera Partially Extended.

Never order "Same as Last"—this is Indefinite and may lead to Errors.

# Improved Long Focus Complete View Outfits—Continued.

PRICE LIST.

No. 30 OUTFIT—6½x8½.		No. 31 OUTFIT, 8x10.	
Comprising	Price List. Separately	Comprising	Price List. Separately
	Net.		Net.
6½x8½ 1902 Long Focus, Double Swing Combination Front and Back Focus, Reversible Back Camera with 24-inch bellows, 1 Holder and Case as described.....	\$17.00	8x10 1902 Long Focus, Double Swing, Combination Front and Back Focus, Reversible Back Camera with 29-inch bellows, 1 Holder and Case, as described.....	\$19.00
6½x8½ Folding and Sliding Compact Tripod, fits into case with Camera.....	3.00	8x10 Folding and Sliding Compact Tripod, fits into Case with Camera.....	3.50
6½x8½ R. J. G. Special Rapid Rectilinear Lens, made especially for us by Bausch & Lomb Optical Co.....	25.00	8x10 R. J. G. Special Rapid Rectilinear Lens, made especially for us by Bausch & Lomb Optical Co.....	30.00
6½x8½ B. & L. 1902 "Automat" Double Valve, Iris, Time and Instantaneous Shutter, fitted to above Lens.....	25.00	8x10 B. & L. 1902 "Automat" Double Valve Time and Instantaneous Shutter, fitted to above Lens.....	30.00
	\$45.00		\$52.50
	\$41.75		\$48.50

Above outfit No. 30 complete for \$29.50 net cash.

Above outfit No. 30 complete with R. J. G. 3D Extra Rapid Rectilinear Lens made especially for us by Bausch & Lomb Optical Co., 8¼-in. Back Focus, in place of R. J. G. Special Rapid Rectilinear, with Bausch & Lomb "Automat" Shutter. **Forming our outfit No. 30A.**

Complete for \$52.50 net cash.

Above outfit No. 30 complete with R. J. G. Convertible Combination Rectilinear Wide Angle Lens, fitted with Wollensak Automatic Double Valve Shutter or B. & L. "Automat," in place of R. J. G. Special Rapid Rectilinear Lens. **Forming our outfit No. 30B:**

Complete for \$42.50 net cash.

### EXTRA HOLDERS FOR ABOVE CAMERAS. NET

6½x8½—Press Board Slides.....	\$1.00
8x10—Press Board Slides.....	1.25
6½x8½—Rubber Slides.....	1.25
8x10—Rubber Slides.....	1.50
6½x8½—Warnica Adjustable Holders.....	1.85
8x10—Warnica Adjustable Holders.....	2.25

**The Camera is the King Compact View,** manufactured by the Rochester Optical & Camera Co., illustrated and fully described in this catalogue. When desired cases will be furnished to hold camera and six holders; or camera, six holders, tripod, and pocket for lenses.

**The Lens and Shutter** for outfits No. 32, 6½x8½ and No. 33, 8x10, the same as with our Improved Long Focus View Outfits Nos. 30 and 31.

For Outfits Nos. 32A and 33A we supply the **Extra Rapid 3D Lens.** For Outfits Nos. 32B and 33B we supply the **"R. J. G." Convertible Combination Rectilinear Wide Angle Lens.**

## Price List of Complete Compact Outfits.

Including Camera Holder, Carrying Case, Tripod, Lens, Shutter—all Fitted Ready for Work.

COMPACT OUTFIT No. 32, 6½x8½.		COMPACT OUTFIT No. 33—8x10.	
	List.	Net Separately.	List.
6½x8½ King Compact Camera, one holder, long or short carrying case, as described.....	\$40.00	\$30.00	\$45.00
6½x8½ R. J. G. Rapid Rectilinear Lens and B. & L. Automat Shutter as described.....	25.00	25.00	30.00
6½x8½ No. 2 Combination Tripod.....	3.00	2.25	3.50
	\$68.00	\$57.25	\$78.50
	\$67.25	\$56.25	\$66.25
<b>For \$48.50 Complete, net cash.</b>			
COMPACT OUTFIT, No. 32A 6½x8½.		COMPACT OUTFIT No. 33A—8x10.	
	List.	Net Separately.	List.
6½x8½ King Compact Camera, one holder, long or short carrying case, as described.....	\$40.00	\$30.00	\$45.00
6½x8½ Bausch & Lomb R. J. G. 3D Series Extra Rapid Rectilinear Lens.....	45.00	45.00	55.00
6½x8½ Bausch & Lomb "Automat" Shutter, fitted to above.....	3.00	2.25	3.50
6½x8½ No. 2 Combination Tripod.....	3.00	2.25	3.50
	\$88.00	\$77.25	\$103.50
	\$87.25	\$76.25	\$91.25
<b>For \$63.50 Complete, net cash.</b>			
COMPACT OUTFIT No. 32B—6½x8½.		COMPACT OUTFIT No. 33B—8x10.	
	List.	Net Separately.	List.
6½x8½ King Compact Camera, one holder, long or short carrying case, as described.....	\$40.00	\$30.00	\$45.00
6½x8½ R. J. G. Convertible Rectilinear W. A. Lens and B. & L. "Automat" Shutter as described.....	32.00	32.00	36.00
6½x8½ No. 2 Combination Tripod.....	3.00	2.25	3.50
	\$75.00	\$64.25	\$84.50
	\$74.25	\$63.25	\$72.25
<b>For \$54.50 Complete, Net cash.</b>			
6½x8½ Holders, rubber slides, each \$1.20.			
<b>For \$62.50 Complete.</b>			
8x10 Holders, rubber slides, each \$1.50.			

Goods ordered by Mail must be paid for in advance and Postage included.

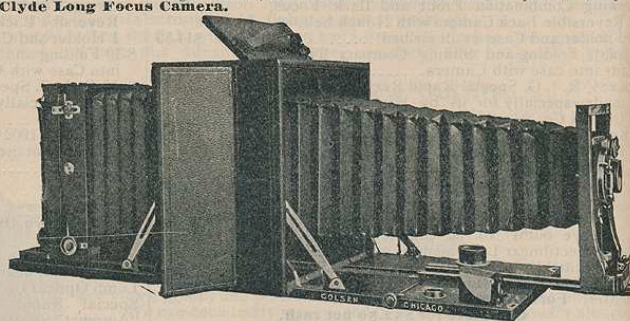


# Clyde Long Focus Wide Angle Outfit.

Appreciating a demand for a camera embodying all the conveniences and stability of a regular tripod view camera, as used by the old line professional and also embodying the modern advanced ideas of a technical, critical and exacting enthusiast, and all combined in a convenient, compact form, we present as an accomplishment of these requirements, our **Clyde Long Focus Camera.**

A most complete and elegant camera, in which are combined all movements and adjustments. Substantially constructed, optically and mechanically perfect, and exquisitely finished, this camera immediately appeals to the advanced amateur and to the professional. It lends itself with equal facility for use as an ordinary view camera, or for long focus, copying or wide angle work. None better adapted to the highest requirements of modern photography will be found.

The box is of the back and front focus type, giving an exceptionally long available bellows. The beds are attached to the box by means of **piano hinges**, which give desirable rigidity. The front and back focal adjustments work with the utmost accuracy and smoothness, the front being provided with a rack and pinion. The movements in the **rising, falling and sliding front** are of liberal range in every direction. The reversible back enables one to make either vertical or horizontal pictures without changing the position of the camera, and is provided with double swing, working at centers. The horizontal swing is accurately controlled by a worm screw, the milled head of which shows in our engravings. The vertical swing is operated by a rack and pinion attachment. The ground glass frame is spring actuated. On the front bed are brilliant view finder and the level. When it is desired to use only the front focal adjustment, the back bed is dropped as shown, the plate holder being inserted and the slide removed.



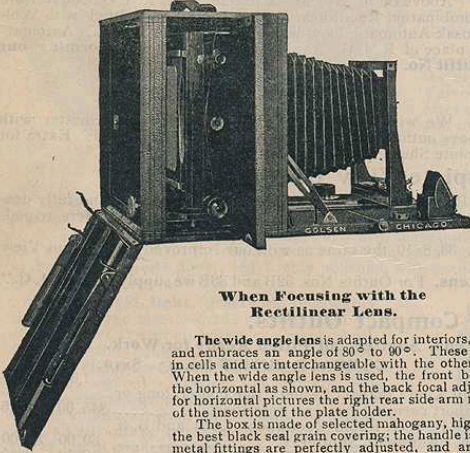
Showing Full Extension.

The bellows is the longest for the various sizes ever fitted in a camera of the kind, making the instrument perfectly adapted to copying and tele-photo work. This camera is supplied with a **Tele-photo Lens** and by virtue of this fact the optical equipment is consistent with the distinctive constructive features of the camera. When not in use, the Tele-photo is secured to a flange on the front bed.

Besides the Tele-photo, we supply an **Extra Rapid Rectilinear lens**, which we guarantee to be a first class instrument. It is of the rapid symmetrical type adapted for instantaneous landscape work, groups, architectural subjects, copying and enlarging—the  $6\frac{1}{2} \times 8\frac{1}{2}$  and  $8\frac{1}{2} \times 10\frac{1}{2}$  also being specially desirable for general studio work.

By different combinations of these two lenses, which are interchangeable in the shutter, four distinct objectives may be formed. This is explained in the following table, which refers to the 5x7 camera. The relative values of focal speeds and magnifications are the same for the other three sizes of the camera, as those here given.

FRONT COMBINATION.	BACK COMBINATION.	FOCAL LENGTH.	RELATIVE SPEED.	MAGNIFICATION.
Extra Rapid Rectilinear.	Extra Rapid Rectilinear.	$7\frac{1}{2}$ inches.	10.	1.
Tele-photo.	"	"	4.	1.25
"	"	15	1.5	2.
"	Tele-photo.	23	1.	3.25



When Focusing with the Rectilinear Lens.

The wide angle lens is adapted for interiors, flash-light work, etc., and embraces an angle of  $80^\circ$  to  $90^\circ$ . These lenses are mounted in cells and are interchangeable with the other lenses and shutters. When the wide angle lens is used, the front bed is dropped below the horizontal as shown, and the back focal adjustment is employed; for horizontal pictures the right rear side arm is uncoupled to permit of the insertion of the plate holder.

The box is made of selected mahogany, highly polished, and has the best black seal grain covering; the handle is of sole leather. The metal fittings are perfectly adjusted, and are finished in nickel.

Pressure on the hidden buttons provided for the purpose, cause the beds and doors to open automatically, the ingenuity of its design, this instrument is far in advance of all others. The beds are built up of eleven pieces, and of desirably heavy stock. The four panels are tied in with the grain running diagonally, to prevent warping. The piano hinges are a new feature, and the front with its elevation and cross sliding adjustments as shown in our engravings, has resulted in increasing the efficiency of the camera. The rack and pinion adjustment of the vertical swing will not fail to elicit the approval of the most exacting.



The tripod as per cut, is strong, hard wood, well made, compact.

### DIMENSIONS, ETC.

Dimensions	5 x 7, — 10 x 7 x 10 1/2 inches; 6 1/2 x 8 1/2, — 11 1/2 x 8 x 12 1/2 inches; 8 x 10, — 14 x 9 1/2 x 14 1/2 inches
Length of Bellows	28 inches; " " 33 1/2 inches; " " 40 1/2 inches.
Weight, complete.	" " 9 pounds; " " 13 1/2 pounds; " " 19 pounds.

### PRICES.

	List.	5x7.	Net.	List.	6 1/2 x 8 1/2.	Net.	List.	8x10.	Net.
Camera (no lens)	\$43.00	\$32.50	\$51.00	\$38.50	\$60.00	\$45.00			
Extra R. R. Lens and Tele-photo, with Shutter.	30.00	22.50	35.00	26.50	42.00	32.50			
Wide Angle Lens in Cells.	8.00	6.50	10.50	8.50	15.00	12.00			
R. J. G. Combination Tripod	3.00	2.25	3.00	2.25	3.50	2.50			
Total	\$84.00	\$69.75	\$99.50	\$75.75	\$121.50	\$92.50			
All Complete	For Net Cash, \$46.50	For Net Cash, \$55.00	For Net Cash, \$64.50						

Ralph J. Golsen gives the Best value for your Money.

# HAND CAMERAS

## The Weno Hawk-Eye Series.

WITH PERFORATED DAYLIGHT LOADING FILM CARTRIDGE.

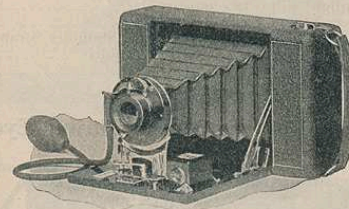
The film cartridge has made pocket photography practical and has made it possible to do away with the dark room in loading and unloading the camera.

These cameras are of the very highest possible workmanship.

Hawk-Eyes are built on the interchangeable plan, with everything made to fit. All parts are accurately made so that no extra fitting is required, and a part taken from one Hawk-Eye is interchangeable with a corresponding part from a similar camera.

The wood parts are made up of sectional pieces, which prevents all warping, shrinking or swelling. The best leather obtainable is used for covering and constructing the bellows. In fact, all material used is the best obtainable, as experience has taught us that quality should be considered before cost when making selection of stock for use in the process of manufacture.

### No. 3 Folding Weno Hawk-Eye.

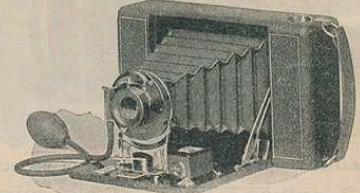


### No. 3 Continued.

#### PRICE LIST.

No. 3 Folding Weno Hawk-Eye, with Double R. R. Lens, not loaded.	15.00
No. 3 Folding Weno Hawk-Eye, with Single Set Focus Achromatic Lens, not loaded.	13.50
Sunlight Film, 6 exposures.	.35
Sunlight Film, 12 exposures.	.70
Black Sole Leather Carrying Case, with Shoulder Strap.	1.25
Portrait Lens Attachment.	.50
Glass Plate Attachment, with Holder	3.00
Single Glass Plate Holder	.50

### No. 3 Special Folding Weno Hawk-Eye.



#### An ideal outfit in pocket size, complete in every detail

The No. 3 Folding Weno Hawk-Eye is the only pocket camera having a pneumatic release automatic shutter with Iris diaphragm stops for regular equipment. This shutter is always set and can be released by lever or bulb for instantaneous, bulb or time exposures. The Iris diaphragm stops enable the operator to gauge the size of the opening according to the strength of light.

The lens supplied with the regular equipment is a double rapid rectilinear of great depth and covering capacity. For those who prefer a lens of universal focus that does not require the judgment of distances or the use of a focusing scale, we furnish a single achromatic Meniscus, which produces pictures of extreme sharpness of all objects over eight feet distant.

All folding Weno Hawk-Eyes have brilliant reversible finders, mounted in mahogany, and carefully adjusted, covering the exact field of the lens, thus showing just what is included in the picture.

Tripod sockets for both horizontal and vertical time exposures are provided, which improvement is not embodied in any other pocket camera. A glass plate attachment is furnished extra which fits interchangeably with the back cover.

The method of adjusting and removing the film spools is extremely simple and can be accomplished safely in broad daylight. The regular film for this camera is Perforated Daylight Loading and furnished in six and twelve exposure rolls which register and count the exposures automatically. A ruby window fitted in the back allows the use of  $3/4$  Special Kodak film of six exposures.

The mahogany polished front bed, the nickel fittings, morocco grain leather covering, lacquered brass shutter, and leather bellows of maroon shade, create a contrast that is most pleasing to the eye.

Dimensions,  $1\frac{1}{8} \times 4\frac{3}{8} \times 7\frac{1}{4}$  inches; size of photo,  $3\frac{1}{4} \times 4\frac{1}{4}$  inches; weight, 20 ounces; capacity, 12 exposures; double rapid rectilinear lens with focal length of 5 inches.

(Continued next column).

#### A pocket camera, dainty in detail, possessing all the features of a professional outfit.

In construction and finish the No. 3 Special Folding Weno Hawk-Eye is practically the same as the regular No. 3, as described. The dimensions, however, are a trifle larger in order to provide ample space for fitting all popular high-grade lenses and shutters, and also fitting special standard when desired. When furnished with regular equipment the Weno rapid rectilinear lens and automatic shutter are fitted.

As a special equipment for those who desire an outfit with the advantage of a rising and falling front, and extra rapid rectilinear lens fitted with latest improved Bausch & Lomb automatic shutter with retarding device, we can heartily recommend this Hawk-Eye.

Photography with pocket cameras has been seriously handicapped in the past owing to unsightly foreground figuring most conspicuously in the picture. By the use of the rising front, by rack and pinion, this difficulty is entirely overcome without pointing the camera upward, thus avoiding that ever common occurrence—distortion.

The extra rapid lens is of sufficient speed to obtain pictures of moving objects at a very short distance from the camera. Any of the standard high-grade lenses of  $3\frac{1}{4} \times 4\frac{1}{4}$  size can be readily fitted. We recommend the Bausch & Lomb Plastigmat, which works at a speed of f-6.8. Quotations will be given on other combinations when requested.

(Continued next page).

Compare our Prices on Tripods with those quoted in other Catalogues.



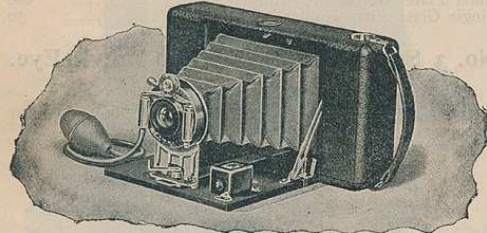
**No. 3 Special Weno Hawk-Eye—Continued.**

The back cover is fitted in such a manner that a glass plate attachment fits interchangeably.  
 Either Perforated Daylight Loading or No. 3 Folding Pocket Kodak film, of six or twelve exposures, fits this Hawk-Eye.  
 Dimensions, 2x4½x7⅞ inches; size of photo, 3¼x4¼ inches; weight, 22 ounces; capacity, 12 exposures; double rapid rectilinear lens with focal length of 5 inches. Weno automatic shutter.

**PRICE LIST.**

No. 3 Special Folding Weno Hawk-Eye, with Double R. R. Lens, not loaded.....	\$15.00
No. 3 Special Folding Weno Hawk-Eye, with Single Set Focus Achromatic Meniscus Lens, not loaded.....	13.50
No. 3 Special Folding Weno Hawk-Eye, with B. & L. Automatic Shutter, Rising and Falling Front, and Extra Rapid Rectilinear Lens, not loaded.....	20.00
No. 3 Special Folding Weno Hawk-Eye, Rising and Falling Front, without lens or shutter.....	14.00
No. 3 Special Folding Weno Hawk-Eye, Rising and Falling Front, with B. & L. Automatic Shutter, no lens.....	18.00
No. 3 Special Folding Weno Hawk-Eye, with No. 1 B. & L. Plastigmat Lens, EXTRA.....	34.00
Sunlight Film, 6 exposures.....	.35
Sunlight Film, 12 exposures.....	.70
Portrait Lens Attachment.....	.50
Black Sole Leather Carrying Case, with Shoulder Strap, Glass Plate Attachment, with Plate Holder.....	3.00
Single Glass Plate Holder.....	.50

**No. 4 Folding Weno Hawk-Eye.**



The ideal of simplicity and the height of perfection.

**No. 4 Folding Weno Hawk-Eye.**

The No. 4 Folding Weno Hawk-Eye is about one-half the size and weight of other film cameras making a 4x5 picture.

The lens furnished with the regular equipment is strictly a high grade, rapid rectilinear, having a working speed of f-8, thus making it possible to obtain correct exposures when conditions are not favorable. Each lens has a most rigid test and is guaranteed uniform and of great depth and covering capacity.

The shutter is the latest improved high-grade automatic, made by the Bausch & Lomb Optical Co. This shutter is always set and operates by bulb or finger release, has Iris diaphragm and works from 1-100 to 1 second, also time exposure of any duration desired.

The covering is morocco grain leather, and the wood parts of fine grain mahogany beautifully polished. The metal fittings are of nickel finish. Two tripod sockets and a reversible brilliant finder are provided.

As a special equipment this Hawk-Eye is furnished with rising and falling front, the standard being entirely of metal and fitted with rack and pinion for raising and lowering the lens as required.

Lenses of the highest grade, also shutters of other design, can be fitted. We recommend the Bausch & Lomb Plastigmat lens with a working speed of f-6.8. Any standard lens of

(Continued next column).

Order from us any Camera that you see Advertised—we can supply it.

**No. 4 Folding Weno Hawk-Eye—Continued.**

not over six inches focus can be furnished. The attachment which is supplied for those who desire to use glass plates has a spring actuating ground glass, is very compact, and fits interchangeably with the back cover.

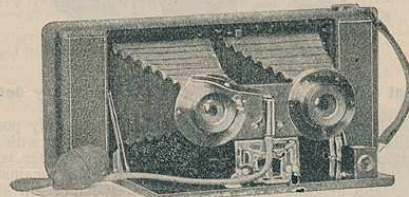
Perforated Daylight Loading Film, in six or twelve exposure rolls, is the regular material for use in this Hawk-Eye. A ruby window allows the use of No. 4 Bull's-Eye Cartridge film.

Dimensions, 2x5x8¾ inches; size of photo, 4x5 inches; weight, 27 ounces; capacity, 12 exposures; double rapid rectilinear lens with focal length of 5¾ inches; Bausch & Lomb automatic shutter with retarding device.

**PRICE LIST.**

No. 4 Folding Weno Hawk-Eye, with Double R. R. Lens, not loaded.....	\$22.50
No. 4 Folding Weno Hawk-Eye, with Single Set Focus Achromatic Meniscus Lens, not loaded.....	20.00
No. 4 Folding Weno Hawk-Eye, with Rising and Falling Front and Extra R. R. Lens.....	25.00
No. 4 Folding Weno Hawk-Eye, without lens or shutter.....	16.50
No. 4 Folding Weno Hawk-Eye, with B. & L. Automatic Shutter, no lens.....	20.00
No. 4 Folding Weno Hawk-Eye, with No. 1 B. & L. Plastigmat Lens, EXTRA.....	34.00
Special Sunlight Film, 6 exposures.....	.45
Special Sunlight Film, 12 exposures.....	.90
Portrait Lens Attachment.....	.50
Black Sole Leather Carrying Case, with Shoulder Strap, Glass Plate Attachment, with Plate Holder.....	3.00
Single Glass Plate Holder.....	.50

**Stereo Folding Weno Hawk-Eye.**



A Daylight Loading Stereo outfit complete, in pocket form, guaranteed to produce perfect perspectives.

In the branch of photography for which this Hawk-Eye is designed realistic observation is produced by the use of two lenses, making two pictures at the same time, which, when transposed and viewed through a stereoscope, produce actual visual effects, thus giving the same impression as when looking at the objects themselves.

The Stereo Weno Hawk-Eye is smaller than any other camera offered for making stereographs.

The lenses are double rapid rectilinear of exactly the same focal length and speed, thus obtaining the same perspective, and consequently negatives of the same density corresponding in every detail.

The shutter is a double automatic with Iris diaphragm, is always set, and permits making instantaneous or time exposures with both lenses at the same time and of the same duration.

A lens cap is furnished which allows making regular photographs 3¼x3¼ inches. A socket for tripod and brilliant finder for centering the object are provided. The trimming are nickel, the wood parts of polished mahogany, the covering of the best morocco grain leather, and the camera throughout is beautifully finished.

A ruby window which is fitted in the back allows the use of Cartridge film of twelve exposures, 3¼x4¼, which is of sufficient length for six stereo negatives.

Any of the standard high-grade lenses with focal length of not over five inches can be fitted. The No. 1 B. & L.

(Continued next page).

**Stereo Folding Weno Hawk-Eye—Continued.**

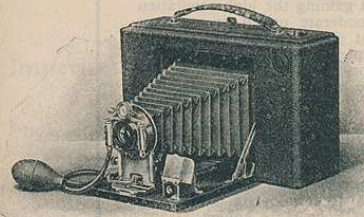
Plastigmat is of high type and especially adapted for this branch of photography.

Dimensions, 1⅞x4¾x10¼ inches; size of photo, standard stereo; weight, 28 ounces; capacity, 6 exposures; double rapid rectilinear lenses with focal length of 5 inches.

**PRICE LIST.**

Stereo Weno Hawk-Eye, with Automatic Shutter and Double R. R. Lenses, not loaded.....	\$25.00
Stereo Weno Hawk-Eye, with Automatic Shutter, no lens.....	21.00
Stereo Weno Hawk-Eye, with B. & L. No. 1 Plastigmat Lenses, EXTRA.....	68.00

**Nos. 3 and 4 Focusing Weno Hawk-Eye.**

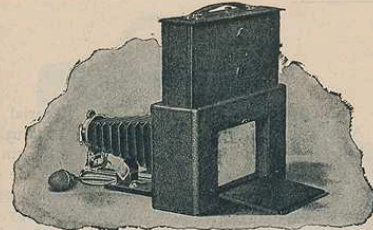


A camera embodying all the best features of film and plate outfits, and can be readily termed "two in one."

This new design of Hawk-Eye construction will meet the demand of the advanced amateur, as they are so constructed as to use Daylight Loading Film and have the advantage of focusing the object of full size upon a ground glass.

The section of the camera embodying the film chambers telescopes, and when drawn upward a spring actuating ground glass adjusts itself automatically in the same focal plane as the film, which, allows focusing and centering the object accurately.

After focusing, the film section is pushed in position, and, at the same time, the ground glass moves backward to its original place. This focusing improvement does not



in any way hinder the use of this camera as a simple snap shot outfit, as focusing can be accomplished in the usual manner by use of the graduating scale.

The long focus rapid rectilinear lens works at a speed of f-8, and the extreme length of the bellows allows focusing on an object at only eighteen inches from the lens.

The front bed is fitted with a rack and pinion for fine focusing and the standard has a rising, falling and sliding adjustment.

The shutter is the latest improved B. & L. Automatic, with Retarding Device, making exposures from 1-100 to one

(Continued next column).

**Focusing Wenos—Continued.**

second with great accuracy, also time exposures of any duration. The shutter being of standard opening permits the fitting of the famous B. & L. Plastigmat, or any high-grade lenses.

A brilliant reversible finder with hood, and sockets for attaching tripod for horizontal and vertical pictures, are provided. Adapted for Perforated Daylight Loading or No. 4 Bulls-Eye Cartridge film.

**No. 3 Focusing Weno Hawk-Eye.**

Dimensions, 3½x5½x9⅝ inches; size of photo, 3¼x4¼ inches; weight, 3½ pounds; capacity, 12 exposures; double extra rapid rectilinear lens with focal length of 6 inches.

**PRICE LIST.**

No. 3 Focusing Weno Hawk-Eye, with B. & L. Automatic Shutter and Extra R. R. Lens, not loaded.....	\$27.50
No. 3 Focusing Weno Hawk-Eye, without lens or shutter.....	23.00
No. 3 Focusing Weno Hawk-Eye, with B. & L. Automatic Shutter, no lens.....	25.00
No. 3 Focusing Weno Hawk-Eye, with No. 1 B. & L. Plastigmat Lens, EXTRA.....	34.00
Sunlight Film, 6 exposures.....	.35
Sunlight Film, 12 exposures.....	.70
Black Sole Leather Carrying Case, with Shoulder Strap.....	2.25

**No. 4 Focusing Weno Hawk-Eye.**

Dimensions, 3½x6½x10¼ inches; size of photo, 4x5 inches; weight, 4 pounds; capacity, 12 exposures; double extra rapid rectilinear lens with focal length of 6½ inches.

**PRICE LIST.**

No. 4 Focusing Weno Hawk-Eye, with B. & L. Automatic Shutter and Extra R. R. Lens, not loaded.....	\$30.00
No. 4 Focusing Weno Hawk-Eye, without lens or shutter.....	23.00
No. 4 Focusing Weno Hawk-Eye, with B. & L. Automatic Shutter, no lens.....	27.00
No. 4 Focusing Weno Hawk-Eye, with No. 2 B. & L. Plastigmat Lens, EXTRA.....	40.00
Special Sunlight Film, 6 exposures.....	.45
Special Sunlight Film, 12 exposures.....	.90
Black Sole Leather Carrying Case, with Shoulder Strap.....	2.50

**Perforated Daylight Loading Film.**

Attached to each end of the film is a strip of black paper, which excludes the light when wound upon the spool, and allows loading and unloading by daylight. Perforations at regular intervals engage a detent, which, connected with the register, records the exposures and counts them automatically.

2 x 2½, 12 exposures.....	\$.40	3¼x4¼, 12 exposures.....	\$.70
3½x3½, 6 exposures.....	.30	4 x 5, 6 exposures.....	.45
3½x3½, 12 exposures.....	.60	4 x 5, 12 exposures.....	.90
3¼x4¼, 6 exposures.....	.35	5 x 7, 12 exposures.....	1.60

In ordering film always state the style of Hawk-Eye for which it is intended.

**Roll Film.**

**For former Model Cameras and Roll Holders.**

In.	Exposures.		In.	Exposures.	
3¼	25	3¼x4¼	5	25	5 x 7
3¼	50	3¼x4¼	5	50	5 x 7
3¼	25	3½x3½	5	25	5 x 7
3¼	50	3½x3½	5	50	5 x 7
4	25	4 x 5	6½	25	6½x8½
4	50	4 x 5	6½	50	6½x8½
4½	25	4 x 5	8½	25	8½x6½
4½	50	4 x 5	8½	50	8½x6½

When ordering film, always state in which camera it is to be used.

Our Cash System enables us to sell goods Cheaper than Others.



# Imperial Hand Cameras

There are very few articles that combine so many arts as the manufacture of the hand camera of today. There is the accuracy that must be in a precise instrument of its nature—the mahogany must bear that exquisite polish that is seen on the highest grade of musical instruments; the metal parts should be polished to the brilliancy of a mirror and then carefully lacquered; the mechanical parts must work with ease and precision; the adjustment should be complete and convenient for operation. All these qualities Imperial Cameras possess. They are made by the most skilled workmen from the best material procurable in a factory that is very complete in its equipment and earnest in its desire to merit the commendation of the camera user.

Then there is the all important feature, the Lens—the essence of the camera. It is in this point that Imperial Cameras excel. The makers grind their own lenses and it is needless to say that in this point they spare no cost or pains, as it is the quality of the lens that has been paramount in gaining the high reputation for Imperial Cameras. They make a number of moderate priced instruments and it is wonderful to note the quality of lenses that these instruments possess.

The Imperial family is most complete. The Imperial Magazine is the best magazine camera on the market. It has only one door, and that in the back, for both loading and unloading, thus doing away with the objectionable bottom door.

The Imperial Folding Cameras include a list of instruments that meet the camera users' most exacting requirements.

The Imperial View Camera is one of the latest additions to the famous family. They possess the greatest focal capacity of any view camera on the market. The front board is very large and will accommodate the largest shutter with the minimum fitting. The bellows is absolutely light proof. The Imperial View Camera is not only made so that it will take the New Imperial plate holder, but will also take the well known Premo plate holder and Poco plate holder.

Imperial View Cameras have surely made a step in the right direction as they will accommodate the three most important kinds of plate holders—New Imperials, Premos and Pocos.

Imperial Cameras are made for work. They are strong, simple and compact. This famous family is made by the Imperial Camera & Manufacturing Co., of La Crosse, Wis.

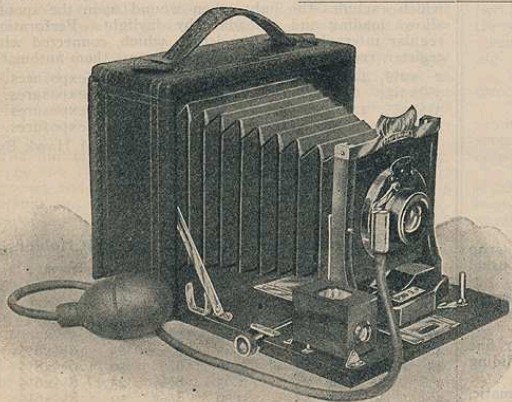
All of the Imperial folding cameras are of the compact style and are supplied with a carrying case that holds the camera in one compartment and the plate holders and accessories in another.

All of the folding cameras, with the exception of the Imperial No. 9 are reversible back and have bellows and track extension sufficient for long focus work; also rising and falling front, reversible view finder.

All, even the cheapest, are equipped with RACK AND PINION FOCUSING DEVICE, AN ADJUSTMENT THAT EVERY FOLDING CAMERA SHOULD HAVE.

All are made of solid mahogany and covered with fine quality black seal leather; metal parts are polished, lacquered brass. all of the beds are fitted with piano hinge.

Carrying case and one double holder furnished with each Imperial Camera



## Imperial No. 9.

Fitted with a Double Lens and Imperial Junior Automatic Shutter. Five panel polished mahogany bed attached with brass piano hinge. Satin finish bellows. There are two tripod sockets, one on the bottom and one on the side, permitting the plate to be used either horizontally or vertically. This camera was designed to meet the popular demand for a moderate priced camera containing such adjustments as the rack and pinion focusing device that are necessary to satisfactory work. The Camera has a lens and shutter that insures good work.

Price, complete, Imperial No. 9.....\$11.00  
 Extra Imperial Double Plate Holder..... 1.00

Our Paper is Fresh—that is Essential to obtain Good Results.

## Imperial No. 11 and No. 12.

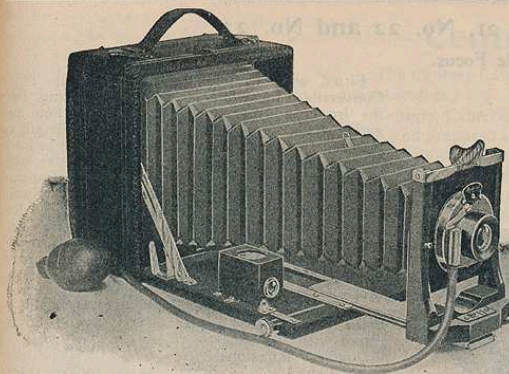
### Long Focus.

Fitted with a Double Rapid Rectilinear Long Focus Lens permitting the rear lens to be used alone. Imperial Junior Automatic Shutter. Sufficient extension for long focus work. Five panel polished mahogany bed attached with brass piano hinge.

The popularity of the long focus instrument is increasing. The rear lens when used alone permits of a long focus and an increased size of object in your picture.

The Imperial No. 10 is similar to the above, only the lenses are not suitable for long focus work, being the same as furnished in Imperial No. 9.

	4x5	5x7
Price, complete, Imperial No. 10....	\$14.00	.....
Price, complete, Imperial No. 11....	15.50	.....
Price, complete, Imperial No. 12....	.....	\$20.00
Extra Imperial Double Plate Holder	1.00	1.25



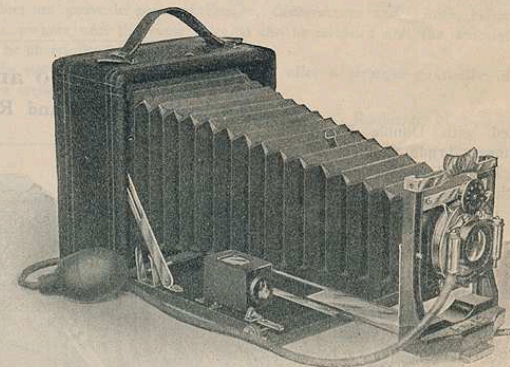
## Imperial No. 14 and No. 15.

### Long Focus.

Fitted with a Double Rapid Rectilinear Convertible Long Focus Lens, permitting both the rear and front lenses to be used alone. Regular Double Valve Imperial Shutter. Reversible Multi Lens Crystal View Finder—NO HOOD NECESSARY. Bellows made of finest red morocco leather.

This camera, while similar in some respects to Imperial No. 11 and No. 12, is a much finer instrument. The lenses are of a higher quality and make the instrument an exceptionally satisfactory one for long focus work.

	No. 14	No. 15
	4x5.	5x7.
Price, complete.....	\$18.00	\$25.00
Extra Imperial Double Plate		
Holders .....	1.00	1.25



## Imperial No. 18 and No. 19.

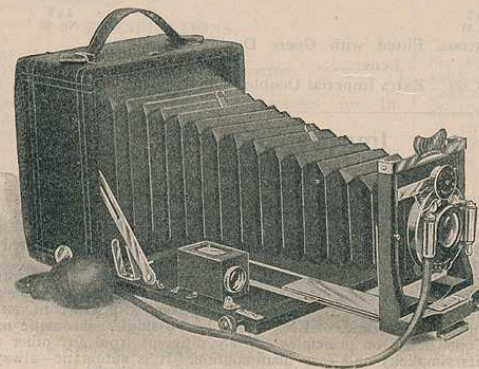
### Long Focus.

Fitted with a Double Rapid Rectilinear Convertible Long Focus Lens, permitting both the front and the rear lens to be used alone. Double Valve Automatic Imperial Shutter, with retarding device or speed regulator. Fitted with the patent Imperial Eccentric Self-Locking Swing Back and Swing Bed. Double telescoping bed. Reversible Multi Lens Crystal View Finder—NO HOOD NECESSARY. Bellows made of finest red morocco leather. Two tripod sockets—one in the bed and one in the Camera box.

	No. 18	No. 19
	4x5	5x7
Price, complete.....	\$28.50	\$36.00
Fitted with Imperial Anastigmat		
Lens .....	58.00	76.00
Extra Imperial Double Plate		
Holders .....	1.00	1.25

IMPERIAL No. 16 AND No. 17 same as described above, except they are fitted with Regular Double Valve Imperial Shutter instead of the Automatic Imperial.

	No. 16	No. 17
	4x5	5x7
Price, complete.....	\$25.00	\$33.00
Extra Imperial Double Plate		
Holders .....	1.00	1.25

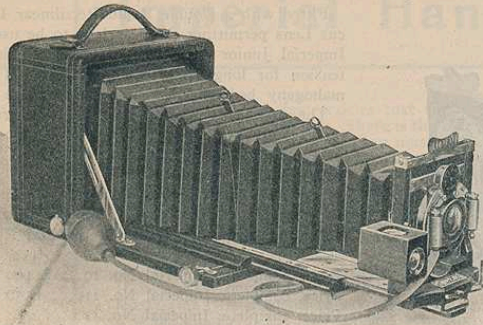


We exercise the Greatest Care in Packing and Shipping our Goods.



Imperial No. 20, No. 21, No. 22 and No. 23.

Triple Focus.



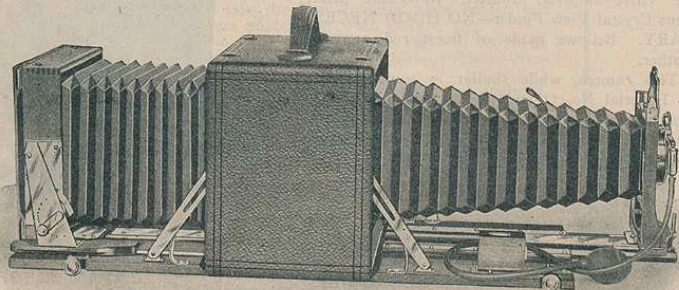
Fitted with Double Rapid Rectilinear Triple Convertible Long Focus Lens—permitting both the front and rear lenses being used alone and giving three focal lengths. The focal length of the front lens uses the entire draw of the bellows. Double Valve Automatic Imperial Shutter with retarding device or speed regulator. Imperial Eccentric Self-Locking Swing Back and Swing Bed. Triple telescoping self-locking bed. Reversible Multi Lens Crystal View Finder. Bellows, finest red morocco leather. Two tripod sockets—one in the bed and one in the camera box.

	4x5 No. 20	5x7 No. 21	6 1/2 x 8 1/2 No. 22	8x10 No. 23
Price, complete.....	\$35.00	\$45.00	\$55.00	\$65.00
Fitted with Imperial Double Anastigmat Lens.....	65.00	85.00	100.00	125.00
Fitted with Goerz Double Anastigmat Lens.....	100.00	135.00	170.00	205.00
Extra Imperial Double Plate Holder.....	1.00	1.25	1.70	2.00

Imperial No. 30 and No. 31.

Triple Focus Front and Rear Extension.

Fitted with Double Rapid Rectilinear Triple Convertible Long Focus Lens—permitting both the front and rear lenses being used alone and giving three focal lengths. The focal length of the front lens uses the entire draw of the bellows. Double Valve Automatic Imperial Shutter with retarding device or speed regulator. Double swing, operated by Eccentric Automatic Self-Locking attachments. Front and rear extensions have rack and pinion focusing device. Reversible Multi Lens Crystal View Finder. Bellows, finest red morocco leather.



	4x5 No. 30	5x7 No. 31		4x5 No. 30	5x7 No. 31
Price complete.....	\$45.00	\$55.00	Fitted with Goerz Double Anastigmat Lens.....	\$116.00	\$150.00
Fitted with Imperial Double Anastigmat Lens.....	75.50	95.00	Extra Imperial Double Plate Holders.....	1.00	1.25

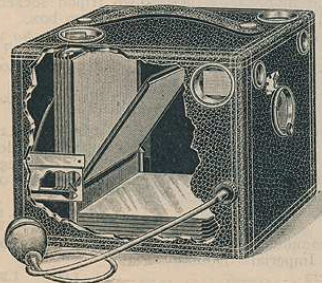
Imperial Magazine.

Patented.

The Imperial Magazine is at once the most convenient, the most efficient, as well as the easiest of operation of all magazine cameras. It is so simple that the youngest amateur can understand and operate it. It can be loaded with twelve plates at a time, and has a plate-changing mechanism that can be operated quicker and easier than any other camera.

The Imperial Magazine is a fixed focus camera, is always ready for instant use, and needs only the pressing of the button or bulb to catch the quickest and most unlooked for happening. IT HAS ONLY ONE DOOR AND THAT IN THE BACK, for both loading and unloading. LENS—This is the single achromatic meniscus. SHUTTER—Constructed on principles entirely different from any other shutter; its merits are its simplicity and easy manipulation. It is automatic—always set—and releases without jar, insuring sharp pictures.

4x5 Magazine Imperial, complete, with twelve plate-holders.....\$10.00  
Sole-Leather Carrying Case..... 2.50



When Shipping Directions are Omitted, we will use our Discretion.

Century Folding Cameras.

The Century Cameras embody all of the good qualities of high grade camera manufactures.

Century Cameras are constructed throughout of the best mahogany, kiln dried, and prepared long before it is actually required for use, to guard against any possibility of warping. All corners are gracefully rounded, and every Century Camera, from the lowest-priced to the most expensive, is not merely nailed together and then covered with leather—it is dovetailed. It is the attention to every detail that has won for the Century Camera the position it occupies among the leading amateur and professional photographers the world over.

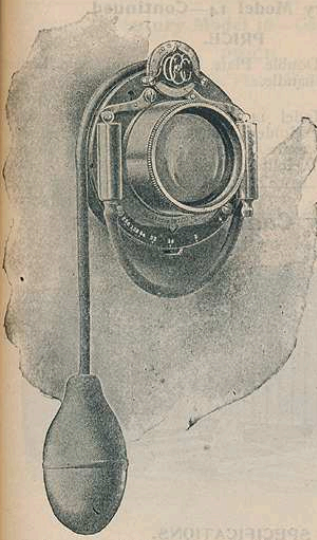
All metal parts are of brass; those outside being nickelled, while the inside trimmings are handsomely polished and lacquered. Everything connected with Century Cameras displays in all details of material, workmanship, finish, general design and mechanical construction the highest attainable type of excellence.

The Century Guarantee

We back our claim for quality with the strongest kind of a guarantee. "If, after ten days' trial and a careful comparison with all other Cameras, the Century does not prove in point of Design, Construction and Finish, better value at anywhere near the same price, it can be returned and the amount paid will be cheerfully refunded."

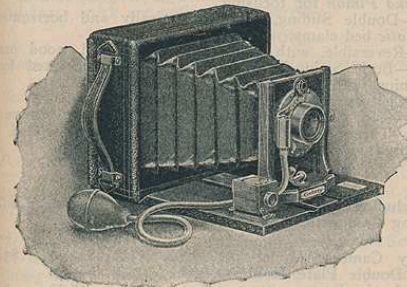
We do not know how it is possible to offer a stronger guarantee—if we did we would not hesitate to do so.

CENTURY CAMERA CO., Rochester, N. Y.



Century Planatic Lens, Series III, fitted with No. 1 Automatic Shutter.

Century Compact, Model 10.



SPECIFICATIONS.

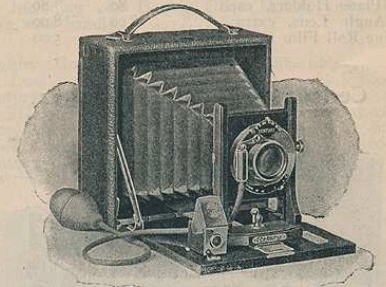
Camera Box—Century finish throughout.  
Front—Adjustable above and below the center.  
Lens—Century Rapid Rectilinear.  
Shutter—Century Automatic No. 3. Operates for Instantaneous; Time and Bulb exposures.  
Finder—Reversible.  
Dimensions—4x5, 5 1/4 x 2 x 6 1/2 inches. 5x7, 6 1/2 x 2 3/4 x 8 1/2 inches.  
Weight—4x5, 21 ounces; 5x7, 32 ounces.

PRICE.

Including one Double Plate Holder and Carrying Case with handle.	4x5	5x7
Century Compact Camera, Model 10.....	\$9.00	\$13.00
Extra Double Plate Holders, each.....	.80	1.00

We prepay express charges on all Photographic papers that we list.

Century, Models 11 and 11A.



SPECIFICATIONS.

Camera Box—Century finish throughout.  
Front—Adjustable above and below the center.  
Back—Reversible, with Automatic Screen and wooden Panel.  
Lens—Century Rapid Rectilinear.  
Shutter—Century Automatic No. 3, with Triplicate Movement.  
Finder—Reversible, brass bound and hooded.  
Plates and Film may be used.

Century, Model 11A.

This Camera is Model 11 with swing-back and swing-bed added, and in place of the Rapid Rectilinear Lens with No. 3 Automatic Shutter, Model 11A has our Rapid Symmetrical Lens, and the No. 2 Automatic Shutter, making a most efficient and desirable equipment.

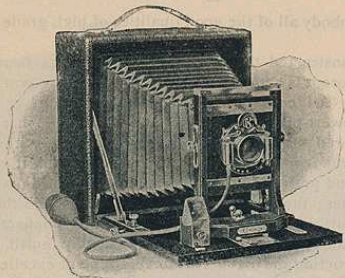
PRICE.

Including one Double Plate Holder and Carrying Case with handle.	3 1/2 x 4 1/2	4x5	5x7
Century Camera, Model 11.....	\$11.00	\$11.00	\$16.00
Century Camera, Model 11A.....	14.00	14.00	20.00
Extra Plate Holders, each.....	.80	.80	1.00
Cartridge Roll Film Holder, fitted..	5.00	5.00	6.50

Flash Cotton, Flash Powders, Glassware and Liquids cannot be sent by Mail.



**Century Camera, Model 12.**



**SPECIFICATIONS.**

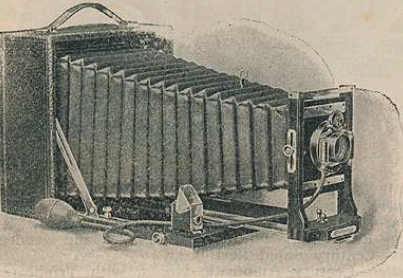
*Camera Box*—Century finish throughout.  
*Rack and Pinion* for focusing.  
*Front*—Adjustable, for regulating sky and foreground.  
*Back*—Reversible, with Automatic Screen and wooden panel.  
*Swing*—Both Swing-Back and Swing-Bed.  
*Lens*—Century Rapid Symmetrical.  
*Shutter*—Century Regular Double Valve, No. 4. Triplicate Movement.  
*Finder*—Three-Lens Brilliant, brass bound and hooded.  
*Plates and Film* may be used.

**PRICE.**

Including one Double Plate Holder and Sole Leather Carrying Case, with handle.

	3 1/2 x 4 1/2	4 x 5	5 x 7
Century Camera, Model 12.....	\$18.00	\$18.00	\$24.00
Extra Plate Holders, each.....	.80	.80	1.00
Wide Angle Lens, extra.....	8.00	8.00	10.00
Cartridge Roll Film Holder, fitted..	5.00	5.00	6.50

**Century Camera, Model 14.**



**SPECIFICATIONS.**

*Camera Box*—Solid Mahogany, dovetailed and covered with fine black leather.  
*Bed*—Polished Mahogany, attached with piano hinge. Bellows of sufficient length to use back combination of Lens alone.  
*Focal Capacity*—4x5, 11 inches; 5x7, 1 1/2 inches.  
*Rack and Pinion* for focusing.  
*Front*—Adjustable, for regulating sky and foreground.  
*Back*—Reversible, with Automatic Screen and wooden panel.  
*Swing*—Both Swing-Back and Swing-Bed.  
*Lens*—Century Rapid Convertible.  
*Shutter*—Century Automatic, No. 1 with Triplicate Movement.  
*Finder*—Three Lens Brilliant, brass bound and hooded.  
*Plates and Film* may be used.

(Continued next column).

Complete Line of our Exclusive Lenses fully described in this Catalogue.

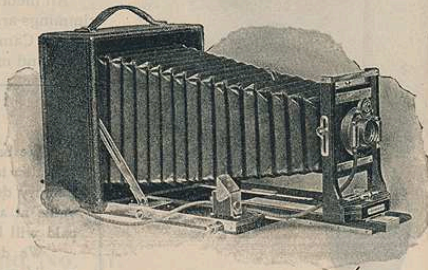
**Century Model 14—Continued.**

**PRICE.**

Including one Double Plate Holder and Sole Leather Carrying Case with handle.

	4 x 5	5 x 7
Century Camera, Model 14.....	\$22.00	\$29.00
Extra Double Plate Holders, each.....	.80	1.00
Wide Angle Lens, extra.....	8.00	10.00
Cartridge Roll Film Holder, fitted.....	5.00	6.50

**Century Camera, Model 15.**



**SPECIFICATIONS.**

*Camera Box*—Century finish throughout.  
*Bed*—Polished Mahogany, attached with brass piano hinge. Bellows of sufficient length to use back combination of lens alone.  
*Focal Capacity*—4x5, 11 inches; 5x7, 1 1/2 inches.  
*Rack and Pinion* for focusing.  
*Front*—Double Sliding, moving vertically and horizontally.  
*Automatic bed clamp.*  
*Back*—Reversible, with Automatic Screen and wood panel.  
*Swing*—Both Swing-Back and Swing-Bed, operated by Pinion with Century Patent Lock.  
*Lens*—Century Rapid Convertible.  
*Shutter*—No. 1 Century Automatic with Triplicate Movement.  
*Finder*—Three Lens Brilliant, Brass bound and hooded.  
*Plates and Film* may be used.

**PRICE.**

Including one Double Plate Holder and Sole Leather Carrying Case with handle.

	4 x 5	5 x 7
Century Camera, Model 15.....	\$27.00	\$34.00
Extra Double Plate Holders, each.....	.80	1.00
Wide Angle Lens, extra.....	8.00	10.00
Cartridge Roll Film Holder, fitted.....	5.00	6.50

**Century Camera, Model 16.**

**SPECIFICATIONS.**

*Camera Box*—Solid Mahogany, dovetailed and covered with cowhide leather.  
*Bed*—Double extension, attached with brass piano hinge. Bellows of sufficient length to use back combination of lens alone.  
*Focal Capacity*—4x5, 12 1/2 inches; 5x7, 16 1/2 inches.  
*Rack and Pinion* for focusing. Century patent bed lock.  
*Front*—Double Sliding, moving vertically and horizontally.  
*Automatic bed clamp.*  
*Back*—Reversible, with Automatic wood panel.  
*Swing*—Both Swing-Back and Swing-Bed, operated by pinion, with Century patent lock.  
*Lens*—Century Rapid Convertible.  
*Shutter*—No. 1 Century Automatic with Triplicate Movement.  
*Finder*—Three Lens Brilliant, Brass bound and hooded.  
*Plates and Film* may be used.

(Continued next page).

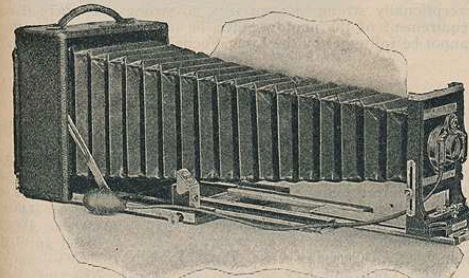
**Century Model 16—Continued.**

**PRICE.**

Including one Double Plate Holder and Sole Leather Carrying Case with handle.

	4 x 5	5 x 7
Century Camera, Model 16.....	\$29.00	\$36.00
Extra Double Plate Holders, each.....	.80	1.00
Wide Angle Lens, extra.....	8.00	10.00
Century Curtain Slide Shutter, fitted.....	15.00	20.00
Cartridge Roll Film Holder, fitted.....	5.00	6.50

**The Century Grand.**



The Century Grand is a distinctive Camera. It contains improvements and exclusive features not in any other folding hand Camera in the market. The general design, solid construction, rigidity of every part, portability, easy means of manipulating all adjustments, and fine finish of both wood and brass work are noticeable features.

**SPECIFICATIONS.**

*Camera Box*—Solid Mahogany, dovetailed and covered with black cowhide.  
*Bed*—Triple Extension, telescopic and brass bound; attached with brass piano hinge, and operated by a single pinion. Bellows of sufficient length to use either the front or the back combination of the lens alone.  
*Focal Capacity*—4x5, 17 inches; 5x7, 24 inches; 6 1/2 x 8 1/2, 28 inches.  
*Rack and Pinion* for focusing, with Century Patent Bed Lock.  
*Front*—Double Sliding, with Automatic Clamp, Rack and Pinion adjustment.  
*Back*—Reversible, with Automatic Focusing Screen and wooden panel.  
*Swing*—Both Swing-Back and Swing-Bed, operated by the focusing pinion.  
*Lens*—Century Triple Convertible or Planatic, Series III.  
*Shutter*—Century Automatic No. 1. Has Triplicate Movement.  
*Finder*—Three Lens Brilliant, brass bound and hooded.  
*Plates and Film* may be used.

**PRICE.**

Including one Double Plate Holder, and handsome plush lined sole leather Case.

Century Grand, Triple Convertible			
Lens .....	4 x 5 \$35.00	5 x 7 \$45.00	6 1/2 x 8 1/2 \$60.00
Century Grand, Planatic Lens, Series III.....	40.00	50.00	67.00
Extra Plate Holders, each.....	.80	1.00	1.35
Wide Angle Lens, extra.....	8.00	10.00	12.00
Century Curtain Slide Shutter, fitted.....	15.00	20.00	26.00
Cartridge Roll Film Holder.....	5.00	6.50	NOT MADE

**Century Grand Junior.**

The Century Grand Junior meets the demand for a long focus, compact Camera, constructed on modern ideas—at a moderate price.

(Continued next column).

**Century Grand Junior—Continued.**

It resembles in general design the Century Grand, though less elaborate in fittings and adjustments. It has, however, all necessary features. A single pinion operates the different sections, and also acts as a lock when flush with the bed.

A Double Sliding front provides for any desired movement of the lens, up or down—to the right or left. No set screw is required as the pinion rod locks the front in any position.

The front, with lens and shutter, is securely held at any desired point on the bed by the new Automatic clamp.

We list the Century Grand Jr., with Triple Convertible and Planatic Lens, Series III, fitted with No. 1 Automatic Shutter. Both lenses are of the three focus type. The bellows is long enough to use either the front or back combination alone, or for a telephoto attachment.

The illustration of the Century Grand applies to this.

**SPECIFICATIONS.**

*Camera Box*—Century finish throughout.  
*Bed*—Triple Extension and telescopic, attached with piano hinge.  
*Focal Capacity*—4x5, 17 inches; 5x7, 24 inches.  
*Rack and Pinion* for Focusing, with Century Patent bed lock.  
*Front*—Double Sliding, with Automatic Clamp and Rack and Pinion adjustment.  
*Back*—Reversible; with Automatic Focusing screen and wooden panel.  
*Swing*—Both Swing-Back and Swing-Bed; operated by rack and pinion.  
*Lens*—Century Triple Convertible or Planatic, Series III.  
*Shutter*—Century Automatic No. 1. Has Triplicate Movement.  
*Finder*—Three Lens Brilliant, brass bound and hooded.

**PRICE.**

Including one Double Plate Holder and sole leather Case with handle.

	4 x 5	5 x 7
Century Grand Junior, Triple Convertible Lens .....	\$32.00	\$41.00
Century Grand Junior, Planatic Lens Series III.....	37.00	46.00
Extra Plate Holders, each.....	.80	1.00
Wide Angle Lens, extra.....	8.00	10.00
Century Curtain Slide Shutter, fitted.....	15.00	20.00
Cartridge Roll Film Holder, fitted.....	5.00	6.50

**Century Ultra Grand.**

The Century Ultra Grand has earned for itself the significant title—"The Finest Camera in the World." The whole equipment is made up on the most elaborate scale.

The Camera is the Century Grand Special, covered with an exquisite black leather. All metal parts, including the Diaphragm Shutter, are silver plated. The bellows is satin—a deep crimson, and in contrast with the silver mountings and black leather the effect is rich in the extreme.

The Carrying Case is an elegant design, made of solid sole leather and lined with purple silk velvet. The lid is padded and fitted with lock and key. The Plate Holders are of solid mahogany with silver plated clips.

The above illustration for the Century Grand Special applies to this.

**PRICE.**

Including six Solid Mahogany Plate Holders and Special Carrying Case.

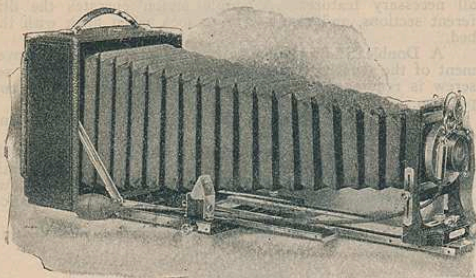
Century Ultra Grand with Goerz Lens, Series III, and Diaphragm Shutter.....	4 x 5 \$125.00	5 x 7 \$150.00	6 1/2 x 8 1/2 \$200.00
With Zeiss Convertible Lens, Series VIIA.....	139.50	172.50	239.50
With Collinear Lens, Series II.....	126.00	159.50	203.00
With Bausch & Lomb Plagimat Lens .....	119.00	144.50	198.50

Order that Monarch Posing Chair at \$8.75.



**Century Grand Special.**

"The Acme of Perfection."



The Century Grand Special is the regular Century Grand Camera, substituting a Goerz Double Anastigmat Lens, Series III, fitted with Bausch & Lomb Iris Diaphragm Shutter. They satisfy the highest requirements of the professional and amateur photographer, being adapted for all around purposes, in and out of doors, and consequently are universal instruments in every sense of the word. Lenses of this type possess great speed, and with large aperture admit of instantaneous photographs being taken even on dull days. The image is cut sharp and clear without the use of diaphragms—definition, brilliancy and depth being uniform over the entire plate.

The back combination can be used by itself for the purpose of photographing long distance subjects. The focus is about double that of the compound lens.

We fit Goerz Lens, No. 1, Series III, to 4x5 Cameras, No. 2 to 5x7, and No. 4 to 6 1/2 x 8 1/2. The No. 3 Lens, 8 1/2 focus will be substituted for No. 2 at an additional cost of \$11.00.

The Bausch & Lomb Iris Diaphragm Shutter is so well known, a detailed description is not necessary. We also fit the Goerz Lens with Goerz Sector Shutter.

The Century Grand Special is also furnished with other standard Anastigmat lenses, such as ZEISS CONVERTIBLE, SERIES VIIA; COLLINEAR ANASTIGMAT, SERIES II; BAUSCH & LOMB PLASTIGMAT.

We fit the No. 3 Zeiss Lens, Series VIIA, to 4x5 Cameras, No. 8 to 5x7, and No. 12 to 6 1/2 x 8 1/2.

We fit the No. 3 Collinear Lens, Series II, to 4x5 Cameras, No. 4 to 5x7 and No. 5 to 6 1/2 x 8 1/2.

We fit the No. 2 Plastigmat to 4x5 Cameras, No. 3 to 5x7 and No. 5 to 6 1/2 x 8 1/2. The Carrying Case is of handsome Sole Leather lined with velvet, the lid being padded. It has lock and key in addition to snap catches at the sides, and will accommodate five extra plate holders.

**PRICE.**

Including one Double Plate Holder and Special Carrying Case.			
	4x5	5x7	6 1/2 x 8 1/2
Century Grand Special, with Goerz Lens, Series III.....	\$ 87.50	\$103.50	\$142.50
With Goerz Lens and Goerz Sector Shutter.....	96.50	111.50	157.50
With Zeiss Convertible Lens, Series VIIA.....	102.00	126.00	182.00
With Collinear Lens, Series II.....	88.50	113.00	145.50
With Bausch & Lomb Plastigmat Lens.....	81.50	98.00	141.00
Extra Double Plate Holders, each.....	.80	1.00	1.35
Century Curtain Slide Shutter, fitted.....	15.00	20.00	26.00
Cartridge Roll Film Holder.....	5.00	6.50	NOT MADE

Every Century Camera is sold with the understanding that it shall prove entirely satisfactory to the purchaser.

*It matters not What you Want—Photographic—if it's Good, we supply it.*

**Long Focus Century Grand Special.**

With the exception of the Lens, Shutter and Carrying Case, the Long Focus Century Grand Special is the same as Long Focus Century Grand. For general use no type of lens gives greater satisfaction than an Anastigmat. The Long Focus Century Grand Special is furnished with any one of the following standard Anastigmat Lenses: GOERZ DOUBLE ANASTIGMAT, SERIES III; COLLINEAR, SERIES II; BAUSCH & LOMB PLASTIGMAT; ZEISS CONVERTIBLE, SERIES VIIA.

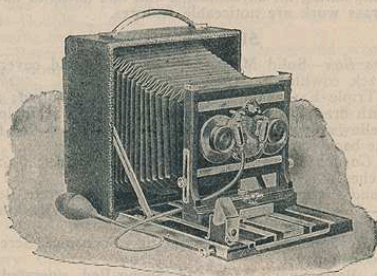
Fitted with Bausch & Lomb Diaphragm Shutter. We furnish the Goerz Lens with Sector Shutter when desired.

Such a combination of Camera, Lens and Shutter is an exceptionally strong one—in fact, so strong that there is no requirement of the photographer, be it ever so exacting, that cannot be fully met by the Long Focus Century Grand Special.

**PRICE.**

Including one Double Plate Holder.			
	5x7	6 1/2 x 8 1/2	
Long Focus Century Grand Special, Goerz Lens, Series III.....	\$108.50	\$147.50	
With Goerz Lens and Goerz Sector Shutter.....	116.50	162.50	
With Collinear Lens, Series II.....	118.00	150.50	
With Bausch & Lomb Plastigmat Lens.....	103.00	146.00	
With Zeiss Convertible Lens, Series VIIA.....	131.00	187.00	
Extra Double Plate Holders.....	1.00	1.35	
Sole Leather Carrying Case, Plush Lined, with Lock and Key.....	7.50	9.00	

**Century Stereoscopic Cameras.**



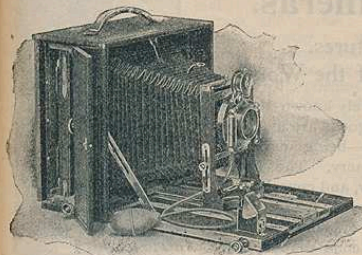
Century Cameras with a wide front to accommodate the two matched lenses and special Shutter necessary form the Stereo Cameras. They all correspond with the regular models in general design and adjustments, but in place of one lens for full sized 5x7 pictures a matched pair of Century Rapid Symmetrical Lenses and new Stereoscopic Shutter are fitted. It operates for Instantaneous, Time and Bulb exposures. The regular lens and shutter for making full sized 5x7 pictures, may be added to the outfit at any time.

The specifications for Models 12, 14, 15, 16 and the Century Grand given on preceding pages, also apply to Stereoscopic Centurys.

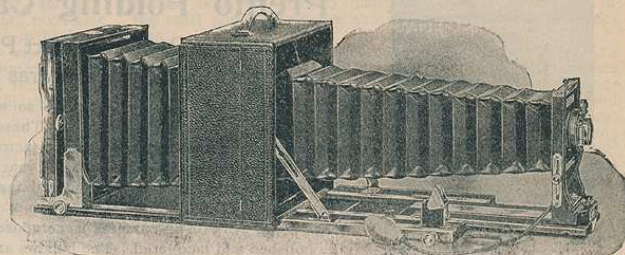
**PRICE.**

Including one Double Plate Holder and Sole Leather Case with Handle.	
Stereo Century, Model 12.....	\$45.00
Stereo Century, Model 14.....	50.00
Stereo Century, Model 15.....	55.00
Stereo Century, Model 16.....	57.00
Stereo Century Grand.....	65.00
Extra Plate Holders, each.....	1.00
Century Curtain Shutter, fitted.....	20.00
Roll Film Holder, fitted.....	6.50

**The Long Focus Century Grand.**



Showing Camera with back closed and front partially extended.



Showing front and back extended.

The new Long Focus Reversible Back Grand is in keeping with all Centurys. It is one of the finest Cameras of this type ever offered. A universal instrument in the full sense of the word.

It is a most compact and rigid Camera. In its construction are embodied many new and practical features.

Camera Box—Solid Mahogany, dovetailed and covered with black cowhide.

Bed—Double extension front, single extension at the back. Bellows of sufficient length to use either the front or back combination of lens alone.

Focal Capacity—5x7, 28 inches; 6 1/2 x 8 1/2, 34 inches.

Rack and Pinion—On both front and back beds, with locking device.

Front—Double Sliding, Rack and Pinion Adjustment, also Automatic Clamp.

Back—Reversible, with Automatic Focusing Screen and wooden panel.

Swing—Both vertical and horizontal Swings, with Index. Former is adjusted by the focusing pinion. The latter by a milled head at the back.

Lens—Century Triple Convertible or Planatic, Series III.

Shutter—Century Automatic No. 1, with Triplicate Movement.

Finder—Three Lens Brilliant, brass bound and hooded.

Plates and Film may be used.

**Adlake Cameras.**

These are Magazine Cameras, box style, with universal focus lens.

**PRICES.**

4x5 Special, with 12 Aluminum Light-tight Plate-holders.....	\$12.00
4x5 Regular, with 12 Steel Light-tight Plate-holders.....	10.00
(Otherwise same as the Special.)	
3 1/2 x 4 1/4 Regular, with 12 Steel Light-tight Plate-holders.....	9.00
4x5 Repeater, with 12 Steel Plate-holders.....	8.00
3 1/2 x 4 1/4 Repeater, with 12 Steel Plate-holders.....	7.00

Special Adlake Catalogue Mailed on Request.

**Reflex Cameras.**

The advantage of the Reflex Camera is that it shows on a ground glass placed in top of Camera a full-size picture, right side up, projected by the same lens which is used to make the impression on the plate or film. As this ground glass is accurately ruled in squares, it also forms a satisfactory level. The result is obtained by a mirror which intercepts all the rays passed by the lens and focuses them on the ground glass in top of camera. This does away with the judging of distances and focusing by scale. In making the exposure a pressure on the shutter release closes the mirror against the ground glass and at the same time releases the focal plane shutter. You can focus and see your object, full size, with the plate in position, slide drawn, shutter set, and lens open until the moment of exposure.

(Reflex Cameras continued next column).

**If you will consider price and quality we will get your orders.**

**Reflex Cameras—Continued.**

**PRICE LIST.**

Including Plate Holder and Focal Plane Shutter.

	4x5	5x7	6 1/2 x 8 1/2
Focus.....	5 7/8" x 7"	7 7/8" x 9 1/4"	9 1/4" x 10 3/4"
Camera without lens.....	30.00	40.00	50.00
Fitted with Reflex Rapid Rectilinear lens.....	f8	40.00	52.50
Fitted with Reflex extra Rapid Rectilinear lens f6	58.00	70.00	85.00
Fitted with Goerz Ser. III.....	No.1 75.00	No. 3 102.50	No. 4 125.00
Fitted with B. & L. Zeiss Conv.....	No.6 100.00	No.11 134.00	No.13 156.50
Fitted with B. & L. Plastigmat.....	No.2 70.00	No. 4 95.00	No. 5 125.00
Fitted with Collinear Ser. II.....	No.3 75.00	No. 4 100.00	No. 5 127.50
Plate Holders.....	1.00	1.25	1.60
Eastman Daylight Cartridge Roll Holder.....	5.00	6.50	
Fitting Roll Holders.....	2.00	2.00	

**Special.**

	Stereo.	4x5	5x7	6 1/2 x 8 1/2
Focus.....	4 3/4" x 5 1/4"	8 1/4" & up	10 1/2" & up	12" & up
Camera without lens.....	75.00	85.00	45.00	55.00

Stereo lenses will have to be matched to order at a charge of \$2.00 additional to prices of lenses.

These special sizes are for the purpose of using a lens of 1 1/2 in. longer focus than is usually placed on ordinary Reflex cameras.

Special Reflex Catalogue Mailed on Request.

Pure Chemicals and Correctly Compounded Preparations—that is what we offer.



## Premo Folding Cameras.

Premos Produce Perfect Pictures.  
They are the Standard Cameras of the World.

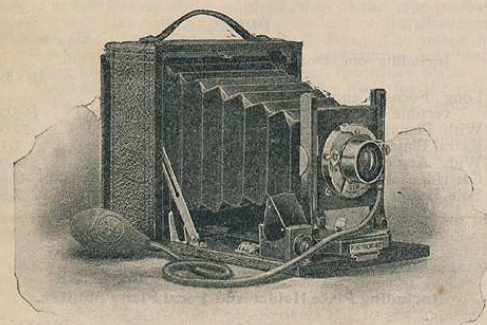
The value of the Premo Cameras is so widely known that an exhaustive description is unnecessary. These goods are manufactured in the most complete hand camera factory—being marvelous in the variety and completeness of its machinery. The Premo Cameras are constructed from selected mahogany, and covered with fine seal grain leather.

The metal work on all cameras is composed of selected brass, highly polished and lacquered. The bellows are cone shaped, flexible, and non-collapsible, being made of red Russia leather, lined with rubber gossamer cloth. They are absolutely impervious to light. On the long draw bellows, rings are attached for the purpose of drawing the folds forward and fastening to the front, so that the folds of the bellows in the rear will not obstruct the view on the plate.

Unless otherwise specifically mentioned all Premo Cameras are as above described—mahogany, highly polished, leather covered, leather bellows, etc.



### Pony Premo No. 2.



Made in 4 x 5 size only.

**SPECIFICATIONS.**—Dimensions, 6x6x2½; draw, 7 inches; front, rising and falling; back, reversible, with spring actuated ground glass screen; panel in back for focusing; hooded brilliant view finder; level, double spirit pattern; tripod socket; shutter, Gem Automatic, with bulb and hose attachment; lens, Rapid Rectilinear; carrying case; one plate holder.

The illustration for No. 3 answers for No. 2—the difference being only in shutter and swing.

#### PRICES.

Camera Complete, 4x5	\$11.00
Premo Plate Holder	1.00
Shoulder Strap	.25

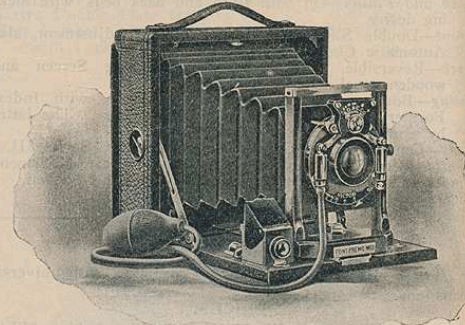
### Pony Premo No. 3.

This Camera Made in 4x5 Size Only.

**SPECIFICATIONS.**—Dimensions, 6x6x2½; draw, 7 inches; front, rising and falling; back, reversible, with spring actuated ground glass screen; panel in back for focusing; swing back, operating from center; hooded brilliant view finder; level, double spirit pattern; tripod socket; shutter, Victor, with bulb and hose attachment; lens, Rapid Rectilinear; carrying case; one plate holder.

A Trial of our Lenses will Convince you of their Merits.

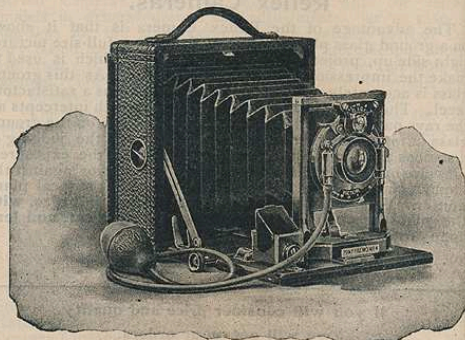
### Pony Premo No. 3—Continued.



#### PRICES.

Camera Complete, 4x5	\$15.00
Premo Double Plate Holder	1.00
Shoulder Strap	.25

### Pony Premo No. 4.



(Continued next page).

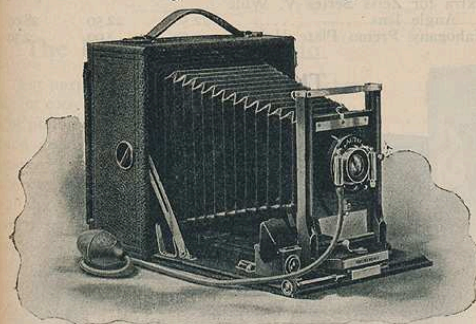
### Pony Premo No. 4—Continued.

**SPECIFICATIONS.**—Dimensions, 6x6x2½ for 4x5; 8x8x3 for 5x7; draw, 9 inches for 4x5; 13 inches for 5x7; front, rising and falling; rack and pinion; back, reversible, with spring actuated ground glass screen; panel in back for focusing; swing back, central; hooded brilliant view finder; level, double spirit pattern; tripod socket; shutter, Victor with Iris diaphragm and finger and pneumatic release, bulb and hose attachment; lens, Rochester Symmetrical; removable lens board; carrying case; one plate holder.

#### PRICES.

	4x5	5x7
Camera Complete	\$20.00	\$27.00
Wide Angle Lens	10.00	12.00
Premo Plate Holder	1.00	1.25
Shoulder Strap	.25	.25

### Pony Premo No. 5.



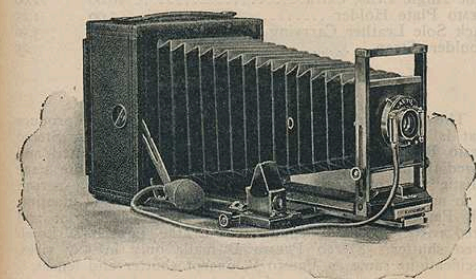
This is one of the very popular cameras of the Premo Series, and, as per specifications, has a long draw, operated by the rack and pinion front focus.

**SPECIFICATIONS.**—Dimensions, 6x6x3 for 4x5, 8x8x3¼ for 5x7, 10x10x4 for 6½x8½; draw, 11 inches for 4x5; 15 inches for 5x7, 18 inches for 6½x8½; front, rising and falling; removable lens board; rack and pinion; back, reversible, with spring actuated ground glass screen; panel in back for focusing; central swing back; finder, brilliant hooded reversible; level, double spirit pattern; tripod socket; shutter, Auto, with bulb and hose attachment; lens, Planatograph; carrying case; one plate holder.

#### PRICES.

	4x5	5x7	6½x8½
Camera Complete	\$27.00	\$35.00	\$45.00
Camera Complete, with B. & L. Plastigmat Lens	62.00	75.00	109.00
Wide Angle Lens	10.00	12.00	15.00
Premo Plate Holder	1.00	1.25	1.75
Shoulder Strap	.25	.25	.35

### Pony Premo No. 6.



Subscribe for Photopivot—a Disseminator of Photographic Information.

### Pony Premo No. 6—Continued.

Pony Premo No. 6 represents the highest product of human skill and selected material. It has proven one of the most popular cameras and has given universal satisfaction.

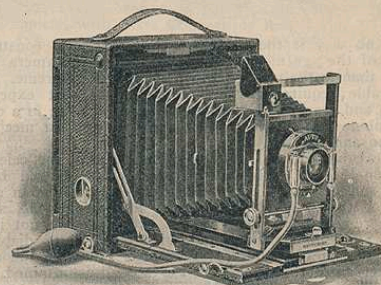
**SPECIFICATIONS.**—Dimensions, 6x6x3 in 4x5; 8x8½x4 in 5x7; 10x10x5 in 6½x8½; draw, 15 inches in 4x5; 20 inches in 5x7; 24 inches in 6½x8½; front, rack and pinion adjustment, also rising and falling; focusing adjustment, rack and pinion, double acting, automatic, with screw clamping device; back, reversible, with spring actuated ground glass screen; panel in back for focusing central swing back; hooded brilliant view finder; level, double spirit pattern; removable lens board; two tripod sockets; shutter, Auto, with bulb and hose attachment; lens, Planatograph; sole leather carrying case, and one plate holder.

#### PRICES.

	4x5	5x7	6½x8½
Camera Complete	\$33.00	\$42.00	\$55.00
Camera Complete, with Bausch & Lomb Plastigmat lens—			
No. 2, 4x5	\$ 66.50	No. 5, 6½x8½	\$116.50
No. 3, 5x7	80.50		
Camera Complete, with Voigtlaender Collinear lens, series II—			
No. 2, 4x5	\$ 66.50	No. 6, 6½x8½	\$146.50
No. 4, 5x7	92.50		
Camera Complete, with Zeiss Convertible lens, series VIIA—			
No. 3, 4x5	\$ 86.00	No. 12, 6½x8½	\$157.00
No. 8, 5x7	107.50		
Camera Complete, with Goerz double Anastigmat lens series III—			
No. 1, 4x5	\$ 71.50	No. 4, 6½x8½	\$117.00
No. 2, 5x7	84.00		

	4x5	5x7	6½x8½
Extra for Volute Shutter in place of Auto	\$ 9.00	\$10.00	\$12.00
Wide Angle Lens	10.00	12.00	15.00
Premo Plate Holder	1.00	1.25	1.75
Shoulder Strap	.25	.25	.35

### Pony Premo No. 7.



**SPECIFICATIONS.**—Dimensions, 6½x6½x3¼ in 4x5, 8½x8½x4 in 5x7, 9¼x9¼x5 in 6½x8½; draw, 14½ inches in 4x5, 20 inches in 5x7, 24½ inches in 6½x8½; front, rack and pinion, rising and falling; focusing adjustment, rack and pinion, double acting, automatic, with screw clamping device; bed, split and drop, with additional sectional bed; back, reversible, with spring actuated ground glass screen; panel for focusing; central swing back operated by rack and pinion; hooded brilliant view finder; level, double spirit pattern; removable lens board; two tripod sockets; shutter, Auto, Iris diaphragm, with bulb and hose attachment; lens, Planatograph; sole leather carrying case, velvet lined; one plate holder.

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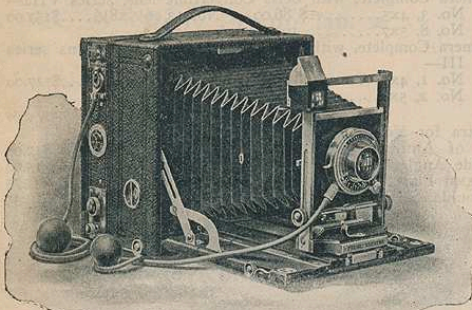


**Pony Premo No. 7—Continued.**

**PRICES.**

Camera Complete	4x5	5x7	6 1/2x8 1/2
Camera Complete, with Bausch & Lomb Plagstigmat lens—			
No. 2, 4x5	\$45.00	\$60.00	\$80.00
No. 3, 5x7	94.00		
Camera Complete, with Voigtlaender Collinear lens, Series II—			
No. 2, 4x5	\$75.50	No. 6, 6 1/2x8 1/2	\$165.00
No. 4, 5x7	106.00		
Camera Complete, with Zeiss Convertible lens, series VIIa—			
No. 3, 4x5	\$95.00	No. 12, 6 1/2x8 1/2	\$175.50
No. 8, 5x7	121.00		
Camera Complete, with Goerz double Anastigmat lens, series III—			
No. 1, 4x5	\$80.50	No. 4, 6 1/2x8 1/2	\$135.50
No. 2, 5x7	97.50		
Volute instead of Auto, extra	\$ 0.00	5x7	6 1/2x8 1/2
With Wide Angle, extra	10.00	12.00	15.00
PREMO Plate Holder	1.00	1.25	1.75
Shoulder Strap	.25	.25	.35

**The Premo Supreme**



In no way is the marvelous inventive and constructive genius of the age more strongly displayed in camera manufacture than in the production of the PREMO Supreme. Every conceivable requirement and improvement that experience, science, and practical testing have shown of value in a camera are combined in this instrument with the greatest mechanical precision and ingenuity.

The camera is so built as to incorporate the celebrated Thornton-Pickard Focal Plane shutter, recognized by the leading authorities as essential for the best results in certain kinds of work. As shown in the illustration, this shutter may be removed from the camera entirely when not in use. PREMO Supreme is also fitted with the Volute diaphragm shutter, the latest product of Bausch & Lomb, in the use of which an absolute speed of 1-150 second is attained. The construction of the camera is such that any lens or combination of lenses may be used with equal facility. As regularly equipped, PREMO Supreme will carry the Bausch & Lomb Plagstigmat lens.

**SPECIFICATIONS.**—Dimensions, 6 1/2x6 1/2x4 1/2 in 4x5, 8 1/2x8 1/2x5 1/2 in 5x7, 9 1/2x9 1/4x6 3/4 in 6 1/2x8 1/2; draw, 14 1/2 inches in 4x5, 20 inches in 5x7, 24 1/2 inches in 6 1/2x8 1/2; bellows, genuine black Persian Levant leather, lined with rubber gossamer cloth, with rings; front, rack and pinion, rising and falling; clamping and binding screw device; focusing, double acting automatic rack and pinion; bed, split and drop, piano hinge, with detachable short bed adjustment; back, reversible, with spring actuated ground glass screen; panel for focusing in back, opening upward, with hood; swing back, central swing, rack and pinion operation with key clamping device; finder, the Iconoscope; level, double spirit pattern; lens board, removable; tripod sockets, two; shutter, B. & L. Volute, and Thornton-Pickard Focal Plane, both with bulb

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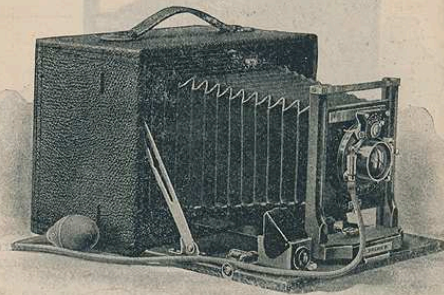
**Premo Supreme—Continued.**

and hose attachment; lens, B. & L. Plagstigmat; carrying case, seal grain leather, velvet lined, reinforced, with lock and key; plate holders, three, mahogany.

**PRICE.**

Camera complete, with Volute and Thornton-Pickard shutter, Plagstigmat lens	4x5	5x7	6 1/2x8 1/2
Camera complete, with Volute and Thornton-Pickard shutter, Zeiss Series VIIa lens	160.00	200.00	270.00
Camera complete, with Volute and Thornton-Pickard shutter, Goerz Series III lens	146.00	175.00	230.00
Camera complete, with Volute and Thornton-Pickard shutter, Voigtlaender Collinear lens	140.00	184.00	258.00
Extra for Zeiss Series V, Wide Angle lens	22.50	22.50	28.00
Mahogany Premo Plate Holders	1.50	2.00	2.50

**The Premo B.**



This camera is not cycle form, but has space in the rear for two extra holders. One PREMO plate holder is included in the outfit. Carrying case is not furnished with this camera.

**SPECIFICATIONS.**—Dimensions, 6x5x6 in 4x5, 9x5 1/2x7 in 5x7; draw, 9 1/2 inches in 4x5; 12 inches in 5x7; box, solid mahogany, highly polished, covered with best seal grain leather, with handle; metal equipment, polished and lacquered brass; bellows, red Russia leather, lined with gossamer cloth; back, single swing; panel in back for focusing; front, rising and sliding; rack and pinion focusing attachment; view finder, brilliant hooded; back, space for accommodation of plate holders; level, double spirit pattern; removable lens board; two tripod sockets; shutter, Victor; lens, Symmetrical; one plate holder.

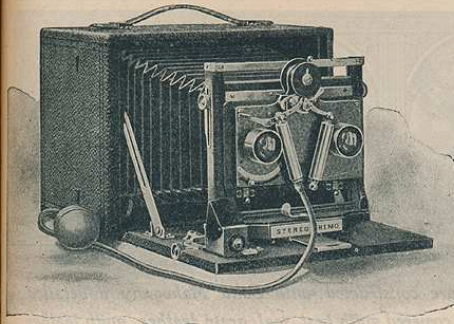
**PRICES.**

Camera Complete	4x5	5x7
Wide Angle Lens, extra	\$20.00	\$25.00
PREMO Plate Holder	10.00	12.00
Black Sole Leather Carrying Case	1.00	1.25
Shoulder Strap	2.50	3.50
	.25	.25

**The Stereo Premo**

The real object in the stereo photograph is to produce what is called "binocular vision." In other words, Stereo Premo B will produce pictures which, when mounted and viewed through a stereoscope, give to the observer the same realistic view of the object that the two eyes of a person see in nature. The Stereo Premo, which we list, is identical with Premo B, with the exception of the wide front and stereo partition. It is equipped with the Bausch & Lomb stereo shutter. Stereo Premo B made only in 5x7 sizes. Specifications same as Premo B, except shutter and lenses.

(Continued next page).



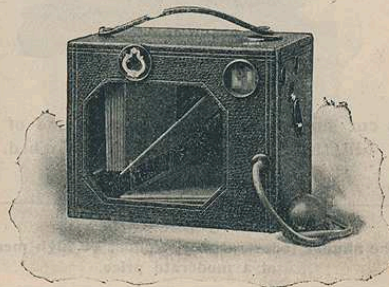
**The Long Focus Premo.**

For purposes of scientific research in schools and for copying as well, the Long Focus Premo is to be preferred owing to its adaptability. It has found great favor for advanced work of every nature. The Long Focus Premo, as its name indicates, possesses an extra long bellows. With it all the regular lenses may be used for the ordinary purposes of photography, while for special long focus work very long focus lenses are readily adapted.

**SPECIFICATIONS.**—Dimensions, 7 1/2x7x8 in 4x5, 10x7 1/4x10 1/4 in 5x7, 11 1/2x9x12 in 6 1/2x8 1/2, 13 1/2x10x14 in 8x10; draw, 25 inches in 4x5, 33 inches in 5x7, 41 inches in 6 1/2x8 1/2, 47 inches in 8x10; front, rising and falling, operated by rack and pinion; back, reversible, with spring actuated ground glass screen; swing back, rack and pinion operation; panel in back for focusing; rack and pinion both at front and rear; clamping device both at front and rear; extension bed both at front and rear; drop bed for use with wide angle lenses; view finder, brilliant hooded; level, double spirit pattern; shutter, Auto, bulb and hose attachment; lens, Tele-Photo three focus; one plate holder.

We have our outfits made as compact and light as is consistent with durability. We do not sacrifice strength.

**The Magazine Cyclone.**

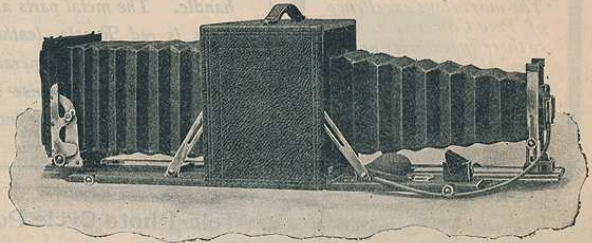


We can Supply any Lens of any Series, of any Size.

**Stereo Premo—Continued.**

**PRICES.**

Stereo PREMO B, with lens and shutter	5x7	8x10
Stereo PREMO B, without lens and shutter	48.00	24.00
Auto Lens and Shutter, extra with stereo	15.00	12.00
Victor Lens and Shutter, extra, with stereo	1.25	3.50
PREMO Plate Holders	1.25	.25
Black Sole Leather Case	3.50	
Shoulder Strap		



**PRICES.**

Camera Complete	4x5	5x7	6 1/2x8 1/2	8x10
Camera Complete, with Bausch & Lomb Plagstigmat lens—				
No. 2, 4x5	\$75.50	No. 5, 6 1/2x8 1/2	\$135.00	
No. 3, 5x7	94.00	No. 6, 8x10	164.50	
Camera Complete, with Voigtlaender Collinear lens, series II—				
No. 2, 4x5	\$75.50	No. 6, 6 1/2x8 1/2	\$165.00	
No. 4, 5x7	106.00	No. 7, 8x10	214.50	
Camera Complete, with Zeiss Convertible lens, series VIIa—				
No. 3, 4x5	\$95.00	No. 12, 6 1/2x8 1/2	\$175.50	
No. 8, 5x7	121.00	No. 17, 8x10	242.00	
Camera Complete, with Goerz double Anastigmat lens, series III—				
No. 1, 4x5	\$80.50	No. 4, 6 1/2x8 1/2	\$135.50	
No. 2, 5x7	97.50	No. 6, 8x10	181.50	
Volute shutter in place of	4x5	5x7	6 1/2x8 1/2	8x10
Auto shutter, extra	\$ 9.00	\$10.00	\$12.00	\$14.00
Wide Angle Lens	10.00	12.00	15.00	18.00
PREMO Plate Holder	1.00	1.25	1.75	2.00
Black Sole Leather Case	3.00	4.00	5.50	6.50
Shoulder Strap	.25	.25	.35	.35

The Cyclone Magazine Camera has always held an enviable position as a most complete and reliable instrument. It is an especially desirable camera for the beginner. In taking a picture there are but two simple movements required: pressing the bulb exposes the plate, and turning the key places the next plate in position. The automatic register registers the exposed plates automatically; the aluminum plate holders reduce the weight of the camera to the minimum; it has a superior unloading device, whereby all of the exposed plates may be removed without disturbing or handling them or coming in contact with those unexposed.

The Cyclone is equipped with a Meniscus lens and self-acting shutter, operated by hand or bulb and hose attachment. Is made in two sizes.

**PRICES.**

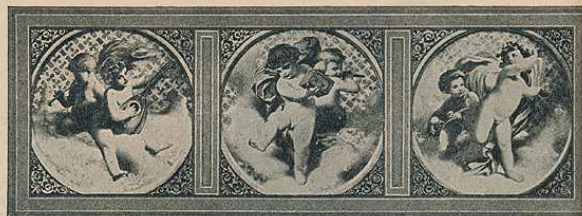
Camera, complete	3 1/2x4 1/2	4x5
Aluminum Plate Holder	\$7.00	\$8.00
Aluminum Plate Holder, per dozen	.10	.10
Sole leather Carrying Case	.00	.00
	2.25	2.50



# POCO CAMERAS

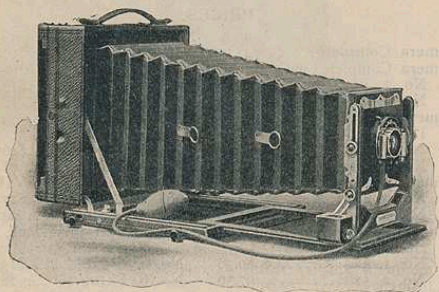


*The marvelous excellence of POCO Cameras is due to their superiority of design, their perfection of manufacture, their uniformity of quality. ....*



The POCO Cameras are constructed with Solid Mahogany dovetailed and highly polished, covered with best seal grain leather, with leather handle. The metal parts are polished and lacquered brass. The Bellows is red Russia leather, lined with gossamer cloth and equipped with rings. This general description will apply to all of the POCO Cameras unless otherwise specifically specified. One double holder and tan sole leather case included with Camera unless otherwise stated.

### Tele-Photo Cycle POCO B.



#### PRICES.

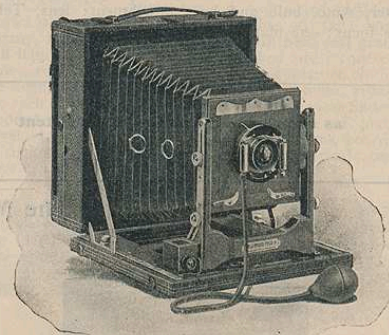
	4x5	5x7	6 1/2 x 8 1/2	8x10
Camera complete.....	\$33.00	\$42.00	\$54.00	\$68.00
Camera complete, with Bausch & Lomb Plagistmat—				
No. 2, 4x5.....	\$66.50			\$115.50
No. 3, 5x7.....		\$80.50		\$140.50
Camera complete, Voigt. Collinear, Series II—				
No. 2, 4x5.....	\$66.50			\$145.50
No. 4, 5x7.....		\$92.50		\$204.50
Camera complete, Zeiss Series VIIA—				
No. 3, 4x5.....	\$86.00			\$156.00
No. 8, 5x7.....		\$107.50		\$218.00
Camera complete, Goerz Double Anastigmat, Series III—				
No. 1, 4x5.....	\$71.50			\$116.00
No. 2, 5x7.....		\$84.00		\$157.50
Extra, Volute Shutter in 4x5 place of Auto.....	\$9.00	\$5.00	\$6 1/2 x 8 1/2 \$12.00	\$8 x 10 \$14.00
Extra, Diaphragm Shutter in place of Auto.....	6.00	7.00	9.00	11.00
Wide Angle Lens, extra..	10.00	12.00	15.00	18.00
Poco Plate Holder.....	1.00	1.25	1.75	2.00
Shoulder Strap.....	.25	.25	.35	.35

\*In the 8x10 size, where Voigtlander Collinear, Series II., No. 7, is fitted to the camera, the Volute Shutter alone is used.

High Quality Paper—Lowest Prices—and we Pay the Express.

#### DETAIL OF EQUIPMENT.

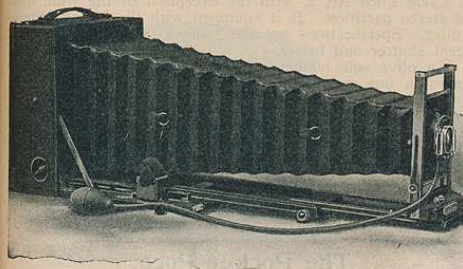
Sizes—4x5, 5x7, 6 1/2 x 8 1/2, 8x10. Measurements—4x5, 6 1/2 x 3 3/8; 5x7, 8 1/2 x 5 1/2 x 3 3/8; 6 1/2 x 8 1/2, 9 1/2 x 7 1/2 x 3 3/8; 8x10, 11 1/2 x 8 1/2. Draw—4x5, 12 in.; 5x7, 18 in.; 6 1/2 x 8 1/2, 21 in.; 8x10, 24 in. Back—Central Swing. Back—Reversible, with spring actuated ground glass screen; panel in back for focusing. Front—Rising lens board removable. Front—Swinging Rack and Pinion—Double, at front and rear. Shutter—Auto with bulb and hose attachment. Bed—Double extension. Lens—Planatograph. Finder—Poco View Finder and Level combined. Tripod Sockets—Two.



This cut shows camera extended to end of main bed, the other cut shows extension bed.

**Our OILENE BACKGROUNDS,**  
the almost indestructible product of high merit,  
at a moderate price.

### Tele-Photo Cycle POCO C.



#### DETAIL OF EQUIPMENT.

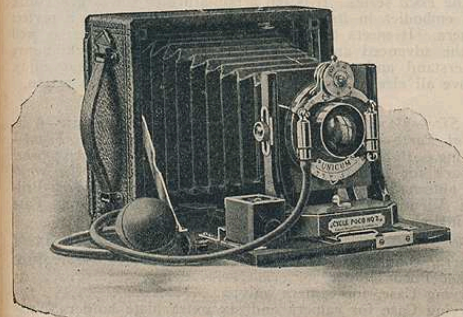
Sizes—4x5, 5x7, 6 1/2 x 8 1/2, 8x10. Measurements—4x5, 6 x 3 3/8; 5x7, 8 1/2 x 5 1/2 x 3 3/8; 6 1/2 x 8 1/2, 10 x 10 x 4; 8x10, 11 1/2 x 11 1/2 x 4. Draw—4x5, 12 in.; 5x7, 17 1/2 in.; 6 1/2 x 8 1/2, 21 in.; 8x10, 24 in. Front—Rising and falling, operated by rack and pinion. Lens Board—Removable. Back—Reversible, with spring actuated ground glass screen; panel in back for focusing. Rack and Pinion—Double, operating extension beds. Back—Central Swing. Bed—Triple extension. Level—Poco Ball Level. Finder—Hooded Brilliant View Finder. Tripod Sockets—Two. Shutter—Auto, with bulb and hose attachment. Lens—Planatograph.

#### PRICES.

	4x5	5x7	6 1/2 x 8 1/2	8x10
Camera, complete.....	\$32.00	\$40.00	\$52.00	\$65.00
Camera complete, with Bausch & Lomb Plagistmat Lens—				
No. 2, 4x5.....	\$65.50			\$114.00
No. 3, 5x7.....		70.00		138.00
Camera complete, with Voigt. Collinear, Series II—				
No. 2, 4x5.....	\$65.50			\$144.00
No. 4, 5x7.....		91.00		\$202.00
Camera complete with Zeiss Convertible Series VIIA—				
No. 3, 4x5.....	\$85.00			\$154.50
No. 8, 5x7.....		106.00		215.50
Camera complete, with Goerz Double Anastigmat, Series III—				
No. 1, 4x5.....	\$70.50			\$114.50
No. 2, 5x7.....		\$82.50		\$155.00
Extra, for Volute Shutter 4x5 in place of Auto.....	\$9.00	\$5.00	\$6 1/2 x 8 1/2 \$12.00	\$8 x 10 \$14.00
Extra, for Diaphragm in place of Auto.....	6.00	7.00	9.00	11.00
Wide Angle Lens, extra..	10.00	12.00	15.00	18.00
Poco Plate Holder.....	1.00	1.25	1.75	2.00
Shoulder Strap.....	.25	.25	.35	.35

\*In the 8x10 size, where Voigtlander Collinear, Series II., No. 7, is fitted to the camera, the Volute Shutter alone is used.

### Cycle POCO No. 2



(Cont nued next column).

### Cycle POCO No. 2—Continued.

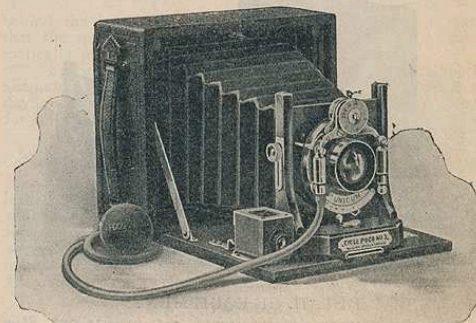
#### DETAIL OF EQUIPMENT.

Sizes—4x5, 5x7. Measurements—4x5, 6x5 1/2 x 2 1/2; 5x7, 8 1/2 x 6 1/2 x 3. Draw—4x5, 9 in.; 5x7, 10 1/2 in. Front—Rising, lens board removable. Back—Detachable, with spring actuated ground glass screen; panel in back for focusing. Rack and Pinion—Single. Tripod Sockets—Two. Shutter—Unicum, with bulb and hose attachment. Lens—Symmetrical. Finder—Poco View Finder and Level combined.

#### PRICES.

	4x5	5x7
Camera, complete.....	\$18.00	\$24.00
Wide Angle Lens, extra.....	10.00	12.00
Poco Plate Holder.....	1.00	1.25
Shoulder Strap.....	.25	.25

### Cycle POCO No. 3



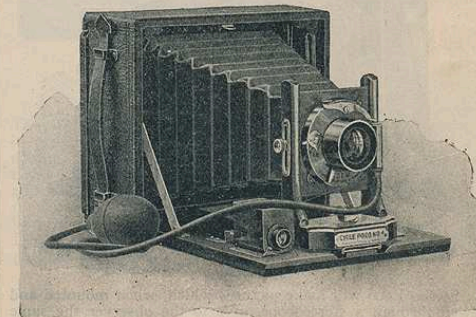
#### DETAIL OF EQUIPMENT.

Sizes—4x5, 5x7. Measurements—4x5, 6x5 1/2 x 2 1/2; 5x7, 8 1/2 x 6 1/2 x 3. Draw—4x5, 9 in.; 5x7, 10 1/2 in. Front—Rising, Back—Detachable, with spring actuated ground glass screen, and panel in back for focusing. Lens Board—Removable. Shutter—Unicum, with bulb and hose attachment. Lens—Rapid Rectilinear. Finder—Poco View Finder and Level combined. Tripod Sockets—Two.

#### PRICE.

	4x5	5x7
Camera, complete.....	\$13.50	\$19.00
Poco Plate Holder.....	1.00	1.25
Shoulder Strap.....	.25	.25

### Cycle POCO No. 4



(Continued next page).

Do not overlook our Net Prices—they are Money Savers.



**Cycle Poco No. 4—Continued.**

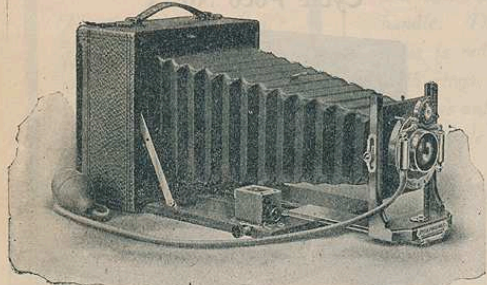
**DETAIL OF EQUIPMENT.**

Sizes—4x5, 5x7. Measurements—4x5, 6x5½x2½; 5x7, 8½x6½x3. Draw—4x5, 9 in.; 5x7, 10½ in. Front—Rising and falling. Back—Detachable, with spring actuated ground glass screen, panel in back for focusing. Shutter—Gem, with bulb and hose attachment. Lens—Rapid Rectilinear. Finder—Poco view finder and level combined. Tripod Sockets—Two.

**PRICES.**

	4x5	5x7
Camera, complete.....	\$10.00	\$15.00
Poco Plate Holder.....	1.00	1.25
Shoulder Strap.....	.25	.25

**Cycle Poco No. 5.**



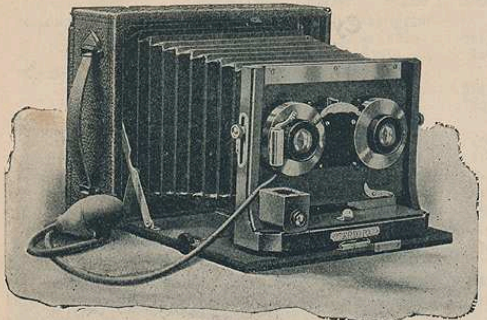
**DETAIL OF EQUIPMENT.**

Sizes—4x5, 5x7. Measurements—4x5, 6x6x3; 5x7, 8½x 8½x3. Draw—4x5, 12 in.; 5x7, 15½ in. Front—Rising and falling, lens board detachable. Back—Reversible, with spring actuated ground glass screen; panel in back for focusing. Rack and Pinion—Single. Finder—Poco view finder and level combined. Tripod Sockets—One. Shutter—Wollensak Automatic, with bulb and hose attachment. Lens—Rochester Symmetrical.

**PRICES.**

	4x5	5x7
Camera, complete.....	\$20.00	\$27.00
Poco Plate Holder.....	1.00	1.25
Shoulder Strap.....	.25	.25

**The Stereo Poco.**



Stereo Poco will make pictures which, when mounted and viewed through a stereoscope, give to the observer the same realistic view of the object that the two eyes of a person see in nature. The Stereo Poco, which we list, is identical with

Keep Posted on Things Photographic—Subscribe for Photopivot.

**Stereo Poco Continued.**

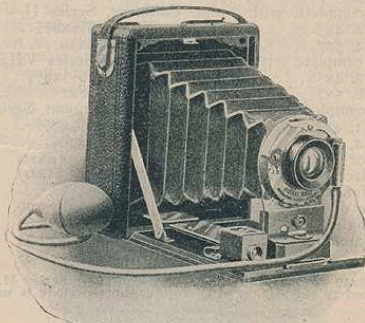
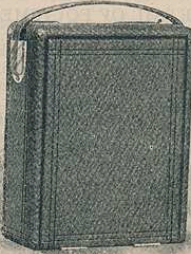
the Cycle Poco No. 2, with the exception of the wide front and stereo partition. It is equipped with the Unique Stereo Shutter. Specifications are the same as Cycle Poco No. 2, except shutter and lenses.

An olive sole leather carrying case, accommodating the camera in one end and extra plate holders in the other, is supplied with this outfit.

**PRICES.**

Camera, complete, with Unique Stereo Shutter.....	\$35.00
Unicum Shutter and Rapid Rectilinear Lens, extra with Stereo.....	10.00
Wide Angle Lens.....	20.00
Plate Holder.....	1.25
Shoulder Strap.....	.25

**The Pocket Poco.**



The Pocket Poco is the smallest and daintiest member of the Poco series. It is but a miniature of the larger Pocos, and embodies in its make-up all the essentials of a perfect camera. It meets the requirements of the beginner as well as the advanced amateur, being a camera that a child may understand and use, and an expert appreciate and enjoy. Above all else, it is compact, simple and perfect in action.

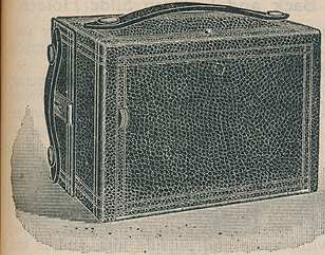
**DETAIL OF EQUIPMENT.**

Size—3¼x4¼. Measurements—17x8x5¼x4. Draw—6 in. Metal Parts—Nickel and highly polished brass. Front—Sliding. Back—Spring actuated ground glass screen; panel in back for focusing. Shutter—Special Pocket Poco, working automatically. Lens—Rapid Rectilinear. Finder—Brilliant View Finder. Tripod Sockets—Two. Carrying Case not included with this camera.

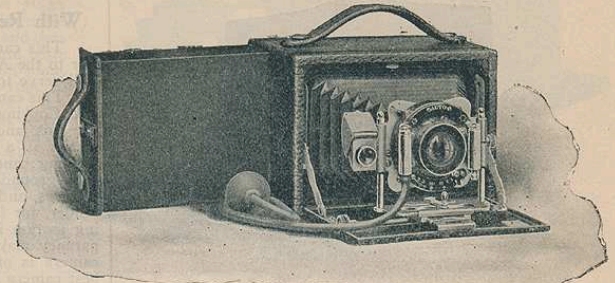
**PRICES.**

Camera, complete.....	3¼x4¼	\$9.00
Pocket Poco Holder.....		.35
Carrying Case, for camera only.....		1.75
Carrying Case for camera and six extra plate holders.....		2.25
Carrying Case for twelve plate holders.....		1.75
Carrying Case for six plate holders.....		1.25

**Snappa Camera.**



Closed.



Magazine Withdrawn.

The introduction of Snappa, the new magazine camera, marks an epoch in picture taking and camera making. Snappa is a folding camera. It is constructed of mahogany, aluminum, and sheet steel. The chief feature is the clever mechanism of the magazine. This magazine, which is made to carry twelve plates, or twenty-four films, is a component part of the camera. It is inserted easily in the box directly

behind the lens, and the mechanism controlling it is such that the mere withdrawal of the magazine telescope, automatically presents for exposure a plate or film.

The Snappa is complete in every particular. Its speed, adaptability, the fact that it can be instantly reloaded in daylight, and that it can be operated in any position, accounts for its popularity.

**DETAIL OF EQUIPMENT.**

Size—3¼x4¼. Measurements—5¾x4x3¾. Draw—5½ in. Metal Parts—Highly nickelled brass. Bellows—Red Russia leather, lined with gossamer cloth. Front—Rising, falling and sliding. Lens Board—Aluminum. Rack and Pinion—For focusing. Finder—Brilliant hooded view finder. Tripod Sockets—Two. Shutter—Auto, with bulb and hose attachments. Lens—Planatograph. Dial—Automatic registering. Magazine—With twelve plate or twenty-four film carriers.

**PRICES.**

Camera complete, with Planatograph Lens.....	\$25.00
Camera complete, with Goerz Series III Lens.....	51.00
Camera complete, with Plastigmat Lens.....	48.00
Camera complete, with Zeiss Series VIIa.....	68.00
Camera complete, with Voigtlander Collinear.....	53.50
Extra Magazine.....	5.00
Carriers (plate or film).....	.10
Carriers (plate or film), per dozen.....	1.00

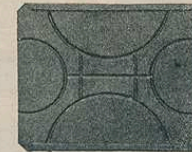
**Snappa Magazine.**



This Magazine is used exclusively with the celebrated Snappa Camera. These magazines may be interchanged in daylight with ease and safety, the operation requiring only the unlocking of the nickel key as shown in the head of the magazine. This magazine is furnished loaded with twelve plate carriers or twenty-four film carriers, as the purchaser desires.

Price, - - \$5.00

**Snappa Film Kit.**



This clever device readily adapts any plate holder to the use of films. It is a substantial metal film carrier and slips readily into the plate holder just as a plate would. It has found favor on all sides and is indispensable to an outfit when films are to be used.

**PRICES.**

3¼x4¼	4x5	5x7
\$.15	\$.15	\$.20

**Snappa Cut Films.**

These films are especially adapted to use in Poco Cameras. They lie absolutely flat, do not curl or bulge, and are always in perfect focus. Moreover, they may be developed one at a time, and receive the individual treatment that every negative requires. Again, single exposures may be developed at any time, which is impossible if roll films be used. Whenever it is desired to use film, Snappa Cut Films will be found to be preferable. They are made especially for us by the Seed Dry Plate Co., and are trustworthy and satisfactory in every particular.

**PRICES.**

3¼x4¼.....	per dozen, \$	.70
4x5.....	per dozen,	.90
5x7.....	per dozen,	1.60

**Snappa Plate and Film Carriers.**

These Carriers are designed exclusively for the Snappa Camera, which we have listed on previous pages of this catalogue. In construction this Carrier is as unique as the instrument for which it is intended. The Carrier is made of sheet metal, and is perfect in every particular.

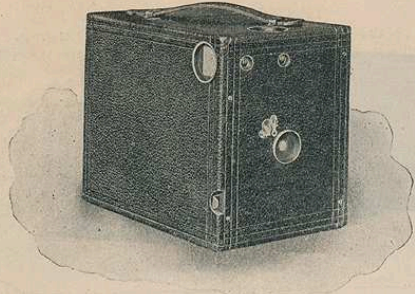
**PRICE.**

3¼x4¼.....\$.10 each; \$1.00 a dozen

Desirable Photo Material at Moderate Prices from Ralph J. Golsen.



### Cyclone Jr. and Sr. Box Style.



These are well made inexpensive cameras. Very light, supplied with aluminum plate holders. Space to carry three double holders. Automatic shutter for time or snap shot exposures. Single lens, universal focus.  
Junior Camera, complete, 3 1/2 x 3 1/2 ..... \$3.00  
Senior Camera, complete, 4x5 ..... 4.00  
Extra Rochester holders, either size ..... .60

### Prices of Folding Cameras.

Style	Without Lens or Shutter.	4x5	5x7	6 1/2 x 8 1/2	8x10
Pony Premo No. 2.....	\$ 8.50				
Pony Premo No. 3.....	11.00				
Pony Premo No. 4.....	14.00	\$20.00			
Pony Premo No. 5.....	19.00	25.00	\$33.00		
Pony Premo No. 6.....	25.00	32.00	43.00		
Pony Premo No. 7.....	37.00	50.00	68.00		
Long Focus Premo.....	37.00	50.00	68.00	\$85.00	
Premio Supreme.....	85.00	112.00	145.00		
Pony Premo B.....	\$14.00	14.00	20.00		
Premio A.....		19.00	25.00		
Premio B.....		14.00	18.00		
Stereo Premio A.....			31.00		
Stereo Premio B.....			24.00		
Tele Photo Poco B.....		25.00	32.00	42.00	53.00
Tele Photo Poco C.....		24.00	30.00	40.00	50.00
Tele Photo Poco D.....		19.00	25.00	33.00	43.00
Cycle Poco No. 1.....		14.00	18.00		
Cycle Poco No. 2.....		12.00	17.00		
Cycle Poco No. 3.....		9.50	14.00		
Cycle Poco No. 4.....		7.50	11.50		
Cycle Poco No. 5.....		13.00	18.00		
Poco A.....		16.00	20.00		
Stereo Poco.....			23.00		
Snappa.....		19.00			

### The Cartridge Roll Holder.

We furnish Cartridge System Roll Holders for any of the Premo or Poco Cameras, 4x5 or 5x7, interchangeable with plate holders. In ordering Roll Holders, specify for what camera they are intended, together with size.

The Cartridge Roll Holders load in daylight, and are well made, of hardwood, with fine seal grain leather covering. They have nickel fittings, and are handsomely finished.

#### PRICE.

4 x 5.....	\$5.00
5 x 7.....	6.50

### Roll Films.

For use with the roll-holder when fitted to Premo or Poco cameras.

#### PRICES.

3 1/4 x 4 1/4, 12 exposures, cartridge system.....	\$ .70
4x5, 12 exposures, cartridge system.....	.90
5x7, 12 exposures, cartridge system.....	1.60

Those King Bee Portrait Outfits are Marvels.

### 5 x 7 Climax Enlarging, Reducing and Copying Camera.

#### With Reversible Back and Lantern Slide Holder.

This camera in appearance and construction is very similar to the Anthony Lantern Slide Camera and the illustration will serve to give a general idea of its appearance.

This camera, like the regular Climax Enlarging, Reducing, and Copying Camera, has an extra long bed, a center-board for lens, and lateral extension of bellows at each end, which makes it a perfect instrument for enlarging, reducing, or copying; and it is also provided with a 5x7 reversible back with ground glass and plate holder for upright or horizontal pictures, and an adjustable back, with ground glass and plate holder, for lantern slide plates. The back is fitted with sliding motion in all directions, by which the negative or transparency may be squared up without cutting the plate. This camera is provided with inside and outside kits, and is the best camera for its purpose made.

Price.....	\$22.00
Extra Holders.....	1.50

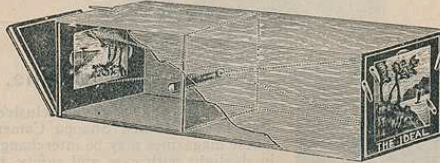
### The Brighton Enlarging and Copying Camera for Plates or Paper.

This Camera is completely equipped for enlarging or copying either on plates or paper. It consists of two boxes within an outer case, both of which may be drawn out to meet the desired focus. It is fitted with Lens and Shutter (the latter operating from the outside of camera), Ground Glass and Plate Holder in which either plates or paper may be used. The front of Camera has a nest of kits from 4x5 up to 8x10 for use in making enlargements on paper from negatives of any of these various sizes. In copying, simply draw out front box, which then leaves a copying Camera, and extend the back box to desired focus.

In constructing this Camera, the demand for a good, practical but cheap Camera was considered, and it is especially useful for amateurs who are desirous of making enlargements from their own negatives.

8 x 10 Complete.....	\$12.00
----------------------	---------

### The Ideal 4 x 5 Lantern Slide Camera. No Focusing. No Centering. No Waste of Plates.



The superiority of optically made slides over those that are made by contact, is a well established fact among Lantern Slide experts. Heretofore the amateur lantern slide maker has been barred from making this superior slide, owing to the cost and the difficulty of manipulating the Lantern Slide Cameras.

With the Ideal there is no focusing or centering to be done; all that is necessary is to slip the negative in at one end and the lantern slide plate at the other and make the exposure.

As it is a fixed focus camera, sharp slides can be the only result. The kit in the front is made reversible so as to accommodate vertical or horizontal negatives. The shutter is simple and cannot get out of order.

The lens is the finest Achromatic Meniscus combination, which for depth of focus and sharpness of definition cannot be excelled.

The boxes are strongly made of thoroughly seasoned wood.

Price.....	\$5.00
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See the Multiplex Camera, Page 51.

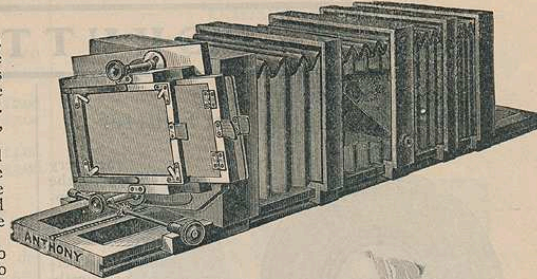
### Anthony's Lantern Slide Camera.

For copying 4x5 negatives, or smaller, on 3/4x4 or 3/4x4 1/4 plates, for use in the lantern. Is made with special reference to transparency work, and has an oscillating frame carriage for ground glass and plate holder, to facilitate the adjustment of picture on plate.

It is well made, light, and simple of construction, and unsurpassed for excellence and convenience.

An important feature in this camera, that is found in no other, is that the center-board with lens can be used in the end of the camera, converting it at once into an extra long copying camera. This will be found very advantageous in enlarging small pictures by one operation.

Price.....	\$12.00
Special Holders, extra, 3/4x4 or 3/4x4 1/4.....	1.50



### The Ideal Enlarging Lantern.

The Ideal Enlarging Lanterns represent the latest and most improved invention in the photographic art. By the aid of these lanterns the photographer can make bromide enlargements of unlimited size from his small negatives. The operation is so simple that complete success is assured from the very start. All that is required is to light the lamp, insert the negative, and project the rays on a sheet of bromide paper (after the size and exact focus has been ascertained) for about one minute, then develop the paper in the usual way, and a beautiful enlargement is the result.

They are manufactured entirely of metal, which guarantees them against warping from heat or any other cause. They are finely copper plated and oxidized, and buffed to a beautiful finish, which, in combination with the nickel plated rods, red bellows, and Russian iron lamp body, gives them a handsome appearance.

The stage which receives the negative carrier is open at the top, so that larger negatives than those for which the lantern is adapted can be used. For instance, with our No. 1 Enlarging Lantern which is adapted for 4x5 negatives, it is possible to enlarge any part of an 8x10 negative.

The stage is perfectly square, and the carrier frame is so constructed that the negative will be perfectly centered with the condensers when placed in either a vertical or horizontal position.

The Condensing Lenses in the No. 1 Enlarging Lantern are 6 1/2 inches in diameter, which fully cover a 4x5 plate. These lenses are fitted securely in a strong metal frame, so that they retain their correct optical position. The bellows in these lanterns are extra long, so that they can accommodate projection lenses of any focal length, and also enable the operator to do reducing to lantern slide size.

The Ideal Enlarging Lanterns are fitted with an incandescent gas light, or with a kerosene oil lamp fitted with the new central draft burner, which makes a very actinic light. This lamp is perfectly ventilated, and is void of smell and smoke, which is the general trouble with the three or four-wick lamps used for this purpose.

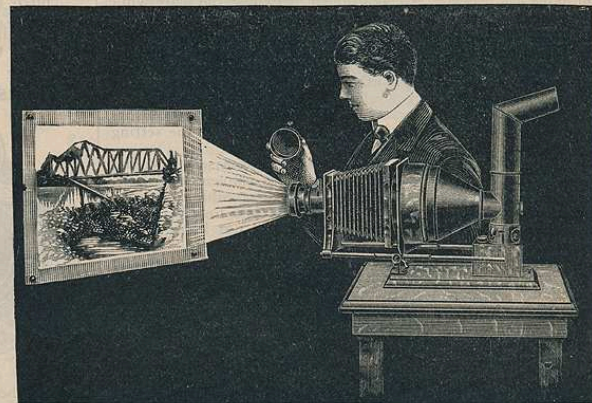
These lanterns can be used for projecting lantern slides by using the Ideal Lantern Slide attachment. The No. 1 is admirably adapted for this purpose, as it is very compact. We supply these lanterns with or without projection lenses, as any camera lens can be used for enlarging. The front board is made of polished mahogany, so that any lens can be fitted on it. For general work we recommend our Series G or Series P Portrait Lens, which are fitted with rack and pinion and diaphragms. The rack and pinion is necessary for quick adjustment.

The Ideal Lanterns can be used advantageously in making lantern slides by reduction. By simply removing the front portion to which are attached the bellows and rods, it is converted into a reducing lantern. Each part of these lanterns has a distinctive character and use. Their superior excellence has been proved by their constant use by practical photographers.

#### PRICES.

No. 1—Enlarging Lantern for 4x5 or smaller negatives, complete with 6 1/2-inch condensing lenses, negative carrier, frame, and central draft oil lamp or incandescent gas light (without projecting lens).....	\$25.00
No. 1B—Complete with high-grade photographically corrected portrait lens, fitted with diaphragms and rack and pinion, Lantern Slide Adapter.....	35.00
No. 2—Enlarging Lantern, complete with 8-inch condensing lenses, negative carrier frame for 5x7 negatives, fitted with incandescent gas light only, without projection lens.....	55.00
No. 2A—Complete with high-grade photographically corrected portrait lens, fitted with rack and pinion and diaphragms.....	65.00

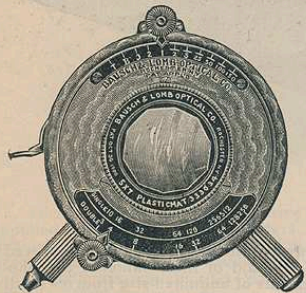
Our complete View Outfits are thoroughly modern.





# SHUTTERS

## Bausch & Lomb Volute Iris Diaphragm Shutter



This is the very latest product of the Bausch & Lomb Optical Co., and conceded to be one of the very finest shutters made. Theoretically and practically the proper place for a shutter is at the diaphragm point of the lens. An iris diaphragm, opening and closing at that point, gives the maximum illumination with the minimum

motion, absolutely uniform exposure, and an increase in the depth of focus, covering power and definition of the lens, with no distortion of the image the entire picture impressing itself upon the plate from the moment the shutter begins to open until it closes.

Volute represents the highest type of this form of shutter. It is the most rapid, compact, convenient, dustproof, durable and elegant Iris Diaphragm Shutter ever offered. It gives exposures from 1-150 second to 3 seconds automatically, also bulb and time exposures. All speeds are controlled by patent pneumatic retarding device. An exposure of 1-150 second is fast enough for athletes, race horses, express trains and the like in motion with very good-sized images.

There is no other Iris Diaphragm Shutter giving equal speed. The shutter is set for the various speeds by simply moving the pointer at the top. Any size opening, from pin hole to largest stop, is obtained by placing the lower pointer opposite the stop number desired. No extra stops or diaphragms are needed. It cannot open or expose the plate while being set. There is no recoil, even at highest speed. It can be arranged for use with two or more lenses.

When exposure is made the shutter opens instantly and remains open to the full extent until the exposure is completed, when it closes instantly, thus giving the greatest possible exposure and correct relative exposures for all speeds.

The shutter is set by raising the setting lever. Exposure is made either by pneumatic bulb or by depressing the setting lever.

All working parts are enclosed within the case, protecting them from dust, making the shutter more convenient to use, more pleasing in appearance, and making it possible to fit it to lenses in which the combinations are very close together. The actuating mechanism is simple, durable and not liable to get out of repair.

The workmanship is the very finest throughout. Volute is an instrument of precision comparable in accuracy of construction, operation and in finish to a watch. It is made in three sizes and can be applied to lenses up to and including those having an aperture of 52 mm. Volute can be fitted to any lens and is supplied on all makes of cameras.

No. 1, will take lenses with opening of 24 mm.; automatic exposure 3 sec. to 1-150 sec.; price, fitted to lenses of Bausch & Lomb manufacture.....\$17.00  
Price, fitted to lenses of other manufactures..... 18.00

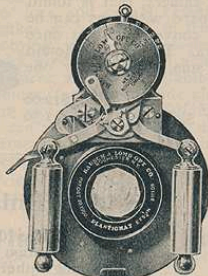
No. 2, will take lenses with opening of 36 mm.; automatic exposure 3 sec. to 1-100 sec.; price, fitted to lenses of Bausch & Lomb manufacture..... 18.50  
Price, fitted to lenses of other manufactures..... 20.00

No. 3, will take lenses with opening of 52 mm.; automatic exposure 3 sec. to 1-75 sec.; price, fitted to lenses of Bausch & Lomb manufacture..... 20.00  
Price, fitted to lenses of other manufactures..... 22.00

On account of its very small size, Volute is applicable to the pocket cameras. The blades being extremely thin, it can be applied to those lenses in which the combinations are very close together.

Order your Paper from us—we Prepay the Express.

## Bausch & Lomb Iris Diaphragm Shutter



Iris Diaphragm

It is especially adapted for hand camera lenses. The time of exposure is controlled by the patent retarding device.

While the Iris Diaphragm Shutter meets all ordinary requirements for instantaneous work, we disclaim its suitability for ultra rapid photography, for which Volute is recommended, although surprising results, such as trains running sixty miles per hour, and trotting horses, show its capacity under suitable management.

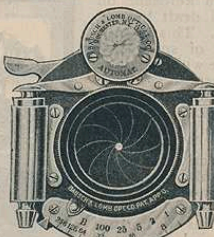
No. 1, will take lenses with opening of 22 mm.; price, fitted to lenses of Bausch & Lomb manufacture...\$12.00  
Price, fitted to lenses of other manufactures..... 13.00

No. 2, will take lenses with opening of 28 mm.; price, fitted to lenses of Bausch & Lomb manufacture... 13.00  
Price, fitted to lenses of other manufactures..... 14.00

No. 3, will take lenses with opening of 35 mm.; price, fitted to lenses of Bausch & Lomb manufacture... 14.00  
Price, fitted to lenses of other manufactures..... 15.00

No. 4, will take lenses with opening of 45 mm.; price, fitted to lenses of Bausch & Lomb manufacture... 15.00  
Price, fitted to lenses of other manufactures..... 16.00

## Bausch & Lomb Automat Shutter



Automat

The Automat is, as its name implies, a strictly automatic shutter. It is always set ready for exposure and is released by simple pressure of the pneumatic bulb or finger release.

It gives exposures from one second to about 1-100 second and may in addition be set so that time exposures of any duration may be made as well as "bulb exposures," in which case pressing the pneumatic bulb opens the blades and they remain open as long as the pressure is applied. The various speeds are secured by moving the pointer along the scale. The speeds are controlled by a patent pneumatic retarding device.

An iris diaphragm operated by lever at the lower edge gives any size stop, the stop values being read off on the graduated scale. This scale is graduated especially for the particular lens used with the shutter.

The Automat is very compact and neat in appearance. The working parts are nearly all enclosed within the case, preventing injury from dust or accident. This type of shutter was introduced by us last year and sprang into instant popularity with all camera makers, both here and abroad, as well as with the public. It is thoroughly practical and up-to-date.

(Continued next page).

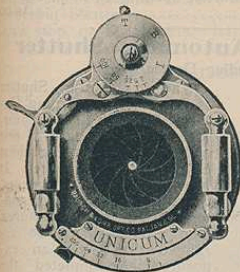
## Bausch & Lomb Automat—Continued.

No. 1, will take lenses with opening of 23 mm.; price, fitted to lenses of Bausch & Lomb manufacture...\$10.00  
Price, fitted to lenses of other manufactures..... 11.00

No. 2, will take lenses with opening of 30 mm.; price, fitted to lenses of Bausch & Lomb manufacture... 12.00  
Price, fitted to lenses of other manufactures..... 13.00

No. 3, will take lenses with opening of 40 mm.; price, fitted to lenses of Bausch & Lomb manufacture... 14.00  
Price, fitted to lenses of other manufactures..... 15.00

## Bausch & Lomb Unicum Shutter



Unicum

The Unicum Shutter is intended to meet the demand for a well made and durable shutter at a medium price.

The blades are so shaped as to give the most even illumination possible with two blades only, the aperture formed by them being at first elliptical, becoming circular.

Back of the shutter blades there is an iris diaphragm, operated by the index lever at the lower margin of the shutter, by which any desired size of stop can be obtained.

This shutter gives automatic exposures from about one-hundredth of a second to one second, and has, in addition, a "bulb exposure" by which compression of the pneumatic bulb opens the shutter, and the blades remain open as long as the bulb is compressed, closing instantly when it is released.

It has also time exposure, the blades being opened by pressure of the bulb and remaining open until closed by again pressing the bulb.

Speeds are controlled by the patent pneumatic retarding device.

This shutter has become a world standard, being in use on hundreds of thousands of high-grade cameras on both continents. Its simplicity, reliability and moderate price recommend it.

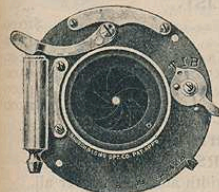
With retarding device.

No. 1, will take lenses with opening of 21 mm.; price, fitted to lenses of Bausch & Lomb make.....\$ 6.00  
Price, fitted to lenses of other makes..... 7.00

No. 2, will take lenses with opening of 26 mm.; price, fitted to lenses of Bausch & Lomb make..... 8.00  
Price, fitted to lenses of other makes..... 9.00

No. 3, will take lenses with opening of 35 mm.; price, fitted to lenses of Bausch & Lomb make..... 10.00  
Price, fitted to lenses of other makes..... 11.00

## Bausch & Lomb Simplex Shutter



Simplex

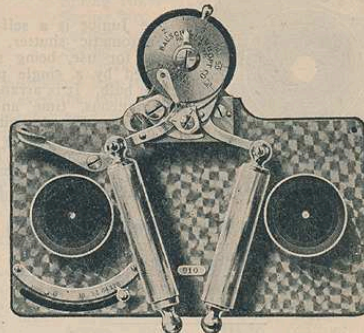
Simplex is a type of shutter originated by us to meet the demand for a reliable shutter at a very low price, and it meets the requirements admirably. Simplex is automatic in action, being always set ready for exposure, has three speeds, time bulb and instantaneous, and for ordinary work these are ample. The various speeds are secured by setting the indicator at the side of the shutter to the letter indicating the desired speed. Exposure is made either by pneumatic bulb or by finger release.

An Iris Diaphragm operated by lever, with scale of stop values, gives any size of stop opening.

Simplex is made in one size only and is intended for use with single view and Rapid Rectilinear types of lenses.

No. 1, will take lenses with opening 16.5 mm.; price...\$4.00

## Bausch & Lomb Iris Stereoscopic Shutter

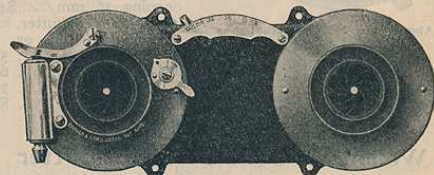


This shutter has the actuating mechanism and pneumatic retarding device of the Iris Diaphragm Shutter. The exposure is made by the two thin blades opening vertically, the openings being diamond shaped. The opening and closing of the leaves is absolutely synchronous.

The speed regulator gives all speeds from about one-hundredth of a second to three seconds, also time exposures. The Iris Stereoscopic shutter is supplied with iris diaphragms operated in unison by a lever on the front of shutter, the pointer of which indicates the value of the stops.

No. 1, will take lenses with opening of 22 mm., distance between centers 78 mm.; price.....\$16.00

## Bausch & Lomb Simplex Automatic Stereoscopic Shutter



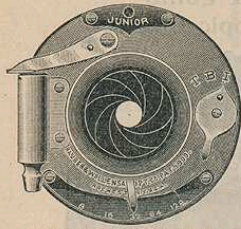
This shutter solves the problem of a reliable automatic stereoscopic shutter at a very low cost. It is very compact and light weight. The controlling mechanism operates both shutters absolutely in unison and the iris diaphragms, by which any desired size of stop opening can be had, are also controlled by one setting lever so that one motion gives the desired stop with great accuracy. Being automatic the shutter is always ready for exposures of which there are three variations: time, bulb and instantaneous. The shutter is applied directly to the camera front board by four screws.

No. 1, will take lenses with opening of 16.5 mm., distance between centers 78 mm.; price.....\$10.00



We Prepay Express Charges on all Photographic Papers that we list.



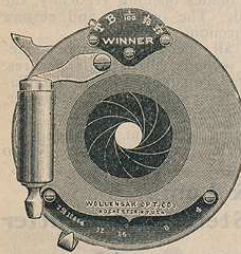


**Wollensak Junior Shutter**

The Junior is a self-setting or automatic shutter, always ready for use, being set and released by a single pressure of the bulb. It is arranged for instantaneous, time and bulb exposures. Fitted with iris diaphragm, operated by an index at the bottom. This is without question the best moderate-priced shutter in the market.

- Fitted for Single Achromatic Lens, opening 16 mm., or 5/8 in. .... \$2.00
- Fitted for Rapid Rectilinear Lens, opening 16 mm., or 5/8 in. .... 2.50
- Complete with Single Achromatic Lens. .... 3.00
- Complete with Rapid Rectilinear Lens. .... 5.50

**Wollensak Winner Shutter.**



About three-fourths actual size of 4 x 5.

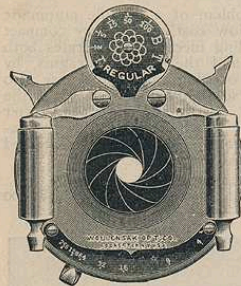
THE WINNER.—An appropriate name for such an excellent Shutter. It is adjusted for instantaneous, time, and bulb movements. Various speeds are indicated by an index at the top, while the iris diaphragms are regulated by means of an index and scale at the bottom.

This Shutter has automatic action.

**PRICE.**

- 3 1/4 x 4 1/4 Winner Shutter, opening 16 mm. .... \$4.00
- 4x5 Winner Shutter, opening 22 mm., or 7/8 in. .... 6.00
- 5 x 7 ..... 7.00
- 6 1/2 x 8 1/2 ..... 8.00
- 8 x 10 ..... 8.00

**Wollensak Double Valve Shutter**



About seven-eighths actual size of 4 x 5.

The Regular Double Valve Shutter is without question one of the very best designs for general use yet placed on the market. The ease of adjustment, perfect working of all parts, compactness, and attractive appearance are noticeable features. The Double Valve Shutter has triplicate movement, operating for instantaneous, time, and bulb exposures. It is also fitted with both a finger and pneumatic release. On a dial at the top the various degrees of speed are indicated in fractional parts of seconds,

and exposures of different lengths are secured by simply turning a milled head to the right or left. This adjustment is very much easier made in the Double Valve Shutter than many others, for the dial revolves with great smoothness, and can be readily moved by a slight pressure of the finger. The Shutter blades are so formed as to give the most even illumination possible. Just behind the blades is fitted the iris diaphragms, operated by an index at the bottom. The scale is marked in accordance with the U. S. System.

*If you will Consider Price and Quality, we will get your Orders.*

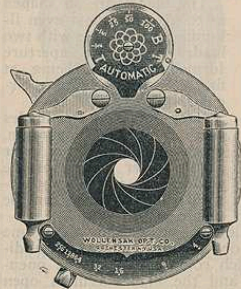
**Wollensak Double Valve—Continued.**

By means of the valve, or retarding device, at the right freedom from jar and accuracy of time are secured.

**PRICE.**

- 3 1/4 x 4 1/4 Regular Double Valve Shutter, opening 16 mm. .... \$5.00
- 4x5 Regular Double Valve Shutter, opening 22 mm., or 7/8 in. .... 6.00
- 5x7 Regular Double Valve Shutter, opening 22 mm., or 7/8 in. .... 7.00
- 6 1/2 x 8 1/2 Regular Double Valve Shutter, opening 30 mm., or 1 3/16 in. .... 8.00
- 8x10 Regular Double Valve Shutter, opening 40 mm., or 1 9/16 in. .... 10.00

**Wollensak New Automatic Shutter With Retarding Device.**



About seven-eighths actual size of 4 x 5.

The Automatic Shutter is fitted with Retarding Device, or Speed Regulator. This new Automatic is one of the most ingenious Shutters in the market. It has triplicate movements, operating for time, instantaneous and bulb exposures. The mechanism is so arranged that after an exposure is completed the Shutter automatically sets itself for the next picture. There can never be a question as to "whether the Shutter is set"—it is ready at all times, being released and set simultaneously by either the finger or bulb.

A dial at the top contains various degrees of speed marked in fractional parts of seconds, and to regulate the Shutter it is only necessary to revolve the dial until the speed desired is opposite the index.

The Shutter blades are manufactured of a special material not affected by variations in temperature. They are so shaped as to give an even illumination. Back of the blades is fitted the iris stops, which are operated by a lever at the bottom. The scale is marked in the U. S. System.

**PRICE.**

- 3 1/4 x 4 1/4 New Automatic, opening 16 mm. .... \$ 8.00
- 4x5 New Automatic, opening 22 mm., or 7/8 in. .... 10.00
- 5x7 New Automatic, opening 22 mm., or 7/8 in. .... 11.00
- 6 1/2 x 8 1/2 New Automatic, opening 30 mm., or 1 3/16 in. .... 12.00
- 8x10 New Automatic, opening 40 mm., or 1 9/16 in. .... 14.00

**Wollensak Stereo Shutter**

These shutters are constructed on the same principle as the respective single shutters, but arranged for pair of stereo lenses and one action operates both shutters simultaneously.

**STEREO LIST.**

- Winner Stereo, 3 1/4 x 4 1/4 ..... \$10.00
- Winner Stereo, 4x5 ..... 13.00
- Regular Double Valve Stereo, 3 1/4 x 4 1/4 ..... 12.00
- Regular Double Valve Stereo, 4x5 ..... 15.00
- Automatic Stereo, 3 1/4 x 4 1/4 ..... 17.00
- Automatic Stereo, 4x5 ..... 20.00

**DIMENSIONS AND WEIGHTS OF WOLLENSAK SHUTTERS.**

- Measurements given are the width and height over all.
- Junior ..... 2 1/4 x 2 1/4 ins., Wt. 2 1/2 ozs.
  - Winner ..... 2 1/4 x 2 3/4 ins., Wt. 4 ozs.
  - 4 x 5 Regular Double Valve ..... 2 1/4 x 2 3/4 ins., Wt. 4 1/2 ozs.
  - 5 x 7 Regular Double Valve ..... 2 1/4 x 2 3/4 ins., Wt. 4 1/2 ozs.
  - 6 1/2 x 8 1/2 Regular Double Valve ..... 2 3/8 x 3 1/4 ins., Wt. 8 ozs.
  - 8 x 10 Regular Double Valve ..... 3 3/4 x 3 1/4 ins., Wt. 12 ozs.
  - Stereoscopic ..... 3 x 2 1/2 ins., Wt. 8 ozs.
- Automatic Shutters measure and weigh the same as the Double Valve.

**FITTING WOLLENSAK SHUTTERS TO SPECIAL LENSES.**

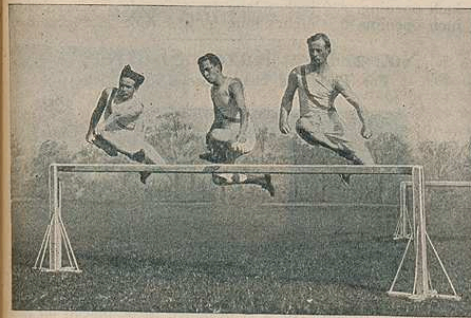
Unless a Lens is properly adjusted to the Shutter, it cannot possibly yield the best work. The combinations must be accurately centered and mounted just the right distance apart. We have exceptional facilities for the correct fitting of all makes of Lenses.

**PRICE FOR FITTING ONLY.**

- 4x5 Lenses, average size, fitted to any style of Shutter. .... \$1.00
- 5x7 Lenses, average size, fitted to any style of Shutter. .... 1.25
- 6 1/2 x 8 1/2 Lenses, average size, fitted to any style of Shutter. .... 1.50
- 8x10 Lenses, average size, fitted to any style of Shutter. .... 2.00
- Fitting and adjusting Lenses, average size, to Stereoscopic Shutter ..... 2.00
- Extra stop, or Diaphragm Plate, marked to correspond with Lens, extra. .... .50

**PRICE LIST OF FLANGES.**

- 4 x 5 Brass Flange. .... \$ .50
- 5 x 7 " " ..... .75
- 6 1/2 x 8 1/2 " " ..... 1.00
- 8 x 10 " " ..... 1.50



Made with Volute Shutter, every detail sharp. Speed 1-150 second.

**The Triplex Shutter**

Patented.

The Triplex Shutter is made of brass, and placed at the diaphragm of the lens, a new tube duplicating the original lens tube being made in each case.

There is no delicate mechanism to get out of order. All the working parts are shown on the front of the illustration herewith. The only parts inside the shutter are two steel wings or flies.

First, the shutter opens along a straight line, a diameter of the lens, and, having opened fully, closes again to this line. Careful experiments have shown that for equal times of exposure the TRIPLEX gives nearly twice the illumination of an "iris diaphragm" shutter.

Secondly, the movement of the wings of the shutter in making an exposure is an *uninterrupted pass-by movement*. The flies move in opposite directions, and being perfectly balanced, this reduces jar and vibration to a minimum. There is no "go-and-return" movement as in other shutters. This accounts for the fact that the TRIPLEX is capable of three to four times the speed *actually* attained by competing shutters.

The speed of the TRIPLEX is regulated by the use of four different springs, furnished with each shutter, differently tensioned by means of notches in a ratchet. A speed card is sent with each shutter. The chart following represents the speed of the No. 1 TRIPLEX.

**Triplex Shutter—Continued.**

- Size ..... 1
- Aperture in. .... 3/4
- Notch ..... 1 2 3
- Spring No. 1 ..... 25-40-55
- Spring No. 2 ..... 70-80-90
- Spring No. 3 ..... 110-120-130
- Spring No. 4 ..... 145-165-180

**FITTING TO LENSES.**

The customer's lens tube is never cut unless so ordered. Lenses of even the same make and size vary so much that we can assume no responsibility for accurate fitting, unless the lens is sent to us.

Rotary stops are fitted to all shutters.

We can adapt shutters to go into "Compact" and "Cycle" cameras in nearly all cases by moving the flange collar close up to shutter case. In such cases, order shutter "fitted compact."

**PRICE LIST OF TRIPLEX SHUTTERS.**

Size No.	4x5	5x7	6 1/2 x 8 1/2	8x10
Price	\$14.00	\$15.50	\$16.00	\$18.00
Size No.	1	2	3	4
Aperture, inch.	3/8	7/8	1	1 1/8
Price	\$14.00	\$15.50	\$16.00	\$16.50
Aluminum, extra	4.00	4.00	5.00	5.00
Size No.	6	7	8	
Aperture, inch.	1 1/8	1 1/2	1 3/4	
Price	\$17.00	\$18.00	\$18.50	
Aluminum, extra	6.00	7.00	7.00	

**Triplex Stereoscopic Shutter.**

This shutter consists of two TRIPLEX SHUTTERS in one frame. Both are operated simultaneously by one lever.

The accuracy of action, range of speed, and simplicity of this shutter have made it the favorite of those whose business is the making of stereoscopic views.

- Size No. .... 1 2 3 4
- Aperture, inch. .... 3/4 7/8 1 1 1/8
- Separation, inch. .... 3/4 3/4 3/2 3/4
- Price ..... \$20.00 \$22.00 \$23.50 \$25.00

**The Athlete Shutter.**

(Patented).

For Athletic, Race-Track and General High Speed Work.

In construction and general appearance it is similar to the Triplex Shutter.

The ATHLETE SHUTTER is unique in that it is unequalled by the *only* Shutter made to work at the diaphragm which is rapid enough for athletic, race-track and general high speed work.

Besides its use for high speed exposures, the ATHLETE is capable of all the ordinary work of the Triplex Shutter, including *time exposures* and the slow instantaneous movement. It is this all-round effectiveness that makes it a part of the equipment of the majority of well provided photographers.

The ATHLETE, fitted to standard lenses, will go into most hand cameras made. Room must, however, be allowed for the pneumatic on the rear face of shutter. This usually amounts to 3/8 in., i. e., this space is needed between the front board and back of shutter.

- Size No. .... 2 3 4 7
- Price ..... \$20.00 \$21.00 \$22.00 \$25.00
- Aperture ... 7/8 1 1 1/8 1 1/4 1 1/2 1 3/4
- Size No. .... 2 3 3 5 6 7
- Price ..... \$20.00 \$21.00 \$22.00 \$23.00 \$24.00 \$25.00

For use in very compact cameras, like the various Cycle Camera Models, the ATHLETE TRIPLEX MODEL Shutter is supplied.

The additional speed is here gained by a spiral spring attached to a prolongation of the lever bar, operating the flies, thus making it possible to put the back of the shutter up against the front board of the camera.

The prices are the same as for the regular ATHLETE.

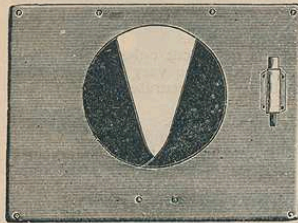
*Do not Overlook our Special Portrait Lenses.*



**Packard "Time" Shutter, No. 1.**

This Shutter is designed for Studio work, and is to go on the front board inside the camera. The smaller sizes are sufficiently rapid for any out-door work except moving objects.

SIZES.



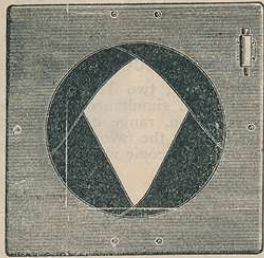
Inch Opening.	Inches Outside.
1 1/2	3 x 3 1/2
1 3/4	3 x 3 3/4
2	3 1/2 x 4 1/2
2 1/4	4 x 5 1/4
2 1/2	4 1/2 x 5 3/4
2 3/4	4 3/4 x 6
3	5 x 7
3 1/4	5 1/2 x 7 1/2
3 1/2	6 x 8
3 3/4	6 x 8 1/2
4	6 1/2 x 8 3/4
4 1/2	7 x 9

Price any of above sizes, \$4.00.

**Packard "Time" Shutter No. 5.**

For cameras having small front board, this shutter is specially adapted.

This shutter has four wings and has the advantage of a very large opening in a very small shutter.



SIZES.

1 1/2 inch opening, 3 x 4 inches outside.	\$4.00
1 3/4 inch opening, 3 x 4 1/4 inches outside.	4.00
2 inch opening, 3 1/2 x 4 1/2 inches outside.	4.00
2 1/4 inch opening, 4 1/2 x 4 3/4 inches outside.	4.50
2 1/2 inch opening, 4 3/4 x 4 3/4 inches outside.	5.00
2 3/4 inch opening, 5 x 5 inches outside.	5.00
3 inch opening, 6 x 6 inches outside.	5.00
3 1/2 inch opening, 6 x 6 inches outside.	5.00
3 3/4 inch opening, 6 1/2 x 6 1/2 inches outside.	5.00
3 1/2 inch opening, 7 x 7 inches outside.	5.00
4 inch opening, 7 1/2 x 7 1/2 inches outside.	5.50
4 1/2 inch opening, 8 x 8 inches outside.	6.00
5 inch opening, 8 1/2 x 8 1/2 inches outside.	6.50

The Following Sizes Made to Order:

5 1/2 inch opening, 9 1/2 x 9 1/2 inches outside.	\$8.00
6 inch opening, 10 1/4 x 10 1/4 inches outside.	9.00
6 1/2 inch opening, 11 x 11 inches outside.	10.00

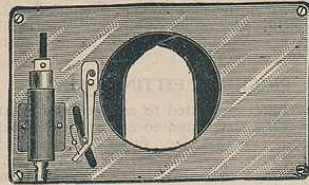


Photo by Pearce, B. & L. Shutter.

C. O. D. Orders should be accompanied with a Cash Remittance sufficient to Cover Express Charges.

**No. 1. Low Kazoo Shutter.**

For Time and Instantaneous Work.



The Low "Kazoo" Shutter, No. 1, is a handsomely finished nickel-plated shutter.

Can be instantly changed from time to instantaneous exposures by simply moving the small lever to one side.

Gives the correct exposures and requires no setting after either time or instantaneous movement, as it sets itself after every exposure without opening the wings. This shutter is provided with an adjustable spring back that will fit any size of lens tube.

1 1/2 inch opening, 4 inches long by 2 3/4 wide.	\$6.00
1 3/4 inch opening, 4 3/8 inches long by 2 7/8 wide.	6.50
2 inch opening, 4 1/2 inches long by 3 1/2 wide.	7.00
2 1/4 inch opening, 5 1/8 inches long by 3 3/4 wide.	7.50
2 1/2 inch opening, 6 inches long by 4 1/2 wide.	8.00

**No. 2. Low Kazoo Shutter.**

For Time and Instantaneous Work.



This Low "Kazoo" No. 2 is designed to be placed on the inside of the camera and attached to the front board.

It can be operated entirely from the outside of the camera at any distance away.

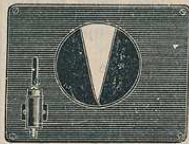
To change from time to instantaneous exposures it is only necessary to push in or pull out a small brass pin, which passes through the front board and into the shutter. It will balance open for any length of time while focusing.

The "Kazoo" gives the correct exposure, lighting the drapery or foreground most.

1 1/2 inch opening, 4 inches by 2 3/4 outside.	\$6.00
1 3/4 inch opening, 4 3/8 inch by 2 7/8 outside.	6.50
2 inch opening, 4 1/2 inch by 3 1/2 outside.	7.00
2 1/4 inch opening, 5 1/8 inch by 3 3/4 outside.	7.50
2 1/2 inch opening, 6 inch by 4 1/2 outside.	8.00

**No. 3. Low Shutter.**

For Time Exposures.



The Low Shutter No. 3 is designed to be attached to the front board on the inside of camera.

It opens so as to light the drapery and foreground most. Will balance open while focusing.

It is very simple in its construction and will not easily get out of order. Price, \$4.00 each.

1 1/2 inch opening, 2 7/8 inch wide by 3 3/8 inch long.
1 3/4 inch opening, 3 1/8 inch wide by 4 1/4 inch long.
2 inch opening, 3 1/2 inch wide by 4 3/4 inch long.
2 1/4 inch opening, 4 3/8 inch wide by 5 1/4 inch long.
2 1/2 inch opening, 5 1/8 inch wide by 5 3/4 inch long.
3 1/4 inch opening, 6 1/4 inch wide by 7 3/4 inch long.
4 inch opening, 7 1/2 inch wide by 9 inch long.

**No. 5, Low Shutter.**

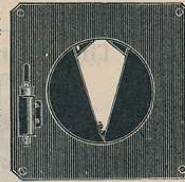
For Time Exposures.

The Low Shutter No. 5 is a very simple, well made and nicely finished shutter, having the special advantage of a very large opening in a small shutter.

Works lightly and easily and gives the correct exposure.

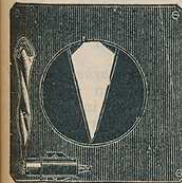
For cameras having small front boards the Shutter No. 5 is especially adapted.

The small sizes are admirably adapted for the time view work.



1 1/2 inch opening, 3 inches square.	\$4.00
1 3/4 inch opening, 3 1/2 inches square.	4.00
2 inch opening, 4 inches square.	4.50
2 1/4 inch opening, 4 3/4 inches square.	4.50
2 1/2 inch opening, 5 inches square.	5.00
2 3/4 inch opening, 5 1/4 inches square.	5.50
3 inch opening, 6 inches square.	6.00
4 1/2 inch opening, 7 1/2 x 8 inches square.	6.50
5 inch opening, 8 1/4 inches square.	7.00

**Low Shutter No. 6.**

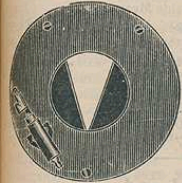


The Low Shutter No. 6 is exactly the same as No. 5, with the addition of an instantaneous attachment, which can only be applied to the four smallest sizes.

To change from time to instantaneous exposures, it is only necessary to push in or pull out a small brass pin, which passes through the front board into the shutter.

1 1/2 inch opening, 3 inches square.	\$5.50
1 3/4 inch opening, 3 1/2 inches square.	5.50
2 inch opening, 4 inches square.	6.00
2 1/4 inch opening, 4 3/4 inches square.	6.00

**Low View Shutter No. 8.**



The Low View Shutter No. 8 is designed to make only time exposures.

It is simply constructed, and is a very practical shutter. It is nicely finished with Japanned front, with brass trimmings and cherry finished back.

For work requiring only time exposure, it is a first-class shutter.

Price ..... \$4.00 each

1 1/2 in. opening.	3 3/8 in. round
1 3/4 in. opening.	4 1/4 in. round
2 in. opening.	4 3/4 in. round
2 1/4 in. opening.	5 in. round
2 1/2 in. opening.	6 3/8 in. round

**Low View Shutter No. 10.**

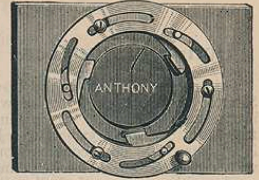
The Low Shutter No. 10 is the same as No. 8, with the addition of the instantaneous attachment.

There are now many hundreds of them in use, giving universal satisfaction and splendid results. They can be readily changed from time to instantaneous exposures by moving the brass lever to one side.

Price .....	\$6.00 each
1 1/2 in. opening.	3 3/8 in. round
1 3/4 in. opening.	4 1/4 in. round
2 in. opening.	4 3/4 in. round
2 1/4 in. opening.	5 in. round
2 1/2 in. opening.	6 in. round

C. O. D. Orders should be accompanied with a Cash Remittance sufficient to Cover Express Charges.

**The Low Adjustable Back.**



Is an automatic device for holding the shutter to the lens. All "Kazoo" Shutters No. 1, and Low Shutters Nos. 8 and 10, are provided with this back. When ordered separately, \$1.00.

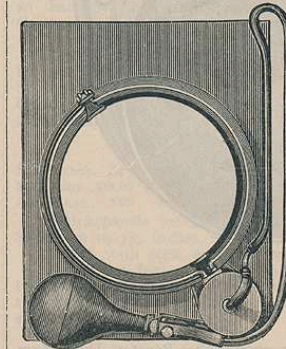
Size of Shutter	Will Fit Lens
1 1/2 in. opening.	1 1/2 to 1 7/8 in.
1 3/4 in. opening.	1 3/4 to 2 1/8 in.
2 in. opening.	2 to 3 3/8 in.
2 1/4 in. opening.	2 1/4 to 2 5/8 in.
2 1/2 in. opening.	2 1/2 to 2 7/8 in.



**Drop Shutter.**

The Drop Shutter is made of mahogany with cherry slide, the opening being made on scientific principles, the slide working by the aid of a rubber band. It is padded on top by a thin sheet of rubber, lessening the concussion when an exposure is made. Made in three sizes, with 1 3/4, 2 1/2, and 3 1/4 inch openings.

Price .....

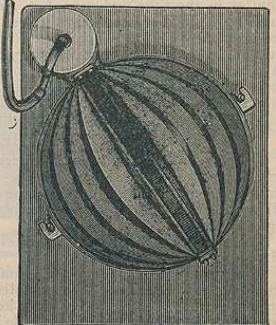


**Watson Studio Shutter.**

The most efficient shutter on the market for professional photographers; noiseless and without vibration. We recommend it with every confidence that it will give entire satisfaction.

Open.

This shutter consists of a metal ring, to which are attached two leather bellows, which, when closed, form a hemisphere. The opening and closing is done by means of a pneumatic bulb. The back of the shutter is attached to the lens-board by two screws, thus enabling the operator to change the shutter from one camera to another without any loss of time whatever.



Closed.

**PRICE LIST.**

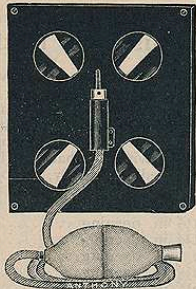
Full Size Opening.	Each.	Full Size Opening.	Each.
3 inch.	\$14.00	5 1/2 inch.	16.00
4 inch.	14.50	6 1/4 inch.	16.00
4 1/4 inch.	15.00		



**Low Bon-ton Shutter.**

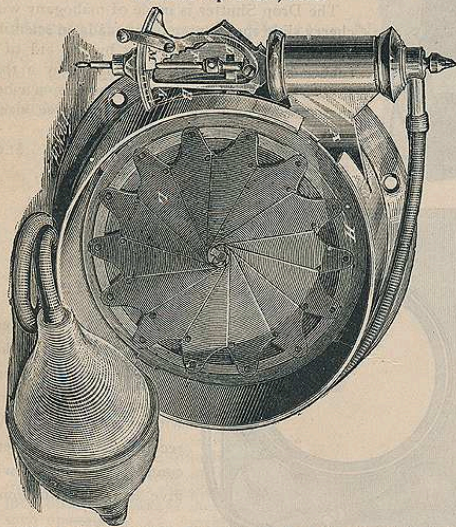
This is constructed on the Low Shutter principle, and, as shown in the cut, is adapted for making four bon-tons on a 5x7 plate. It is of the very best construction, will not get out of order, and works with a pneumatic bulb. By pressing the bulb and then removing the plug, the shutters will remain open for focusing.

Price .....\$6.00



**The Benster Diaphragm Shutter.**

Patented April 13th, 1886.



The accompanying cut shows the Benster Diaphragm Shutter in the tube and out of it, and in section view of tube showing the exact position it takes, in which you can readily see that the tube does not have to be changed to put in the shutter. The idea has been so thoroughly studied and reduced to a scientific principle, that anyone can put the shutter in their tubes in from five to ten minutes' time. It is impossible to get it in wrong.

Directions accompany each shutter.

**A FEW POINTS OF THE BENSTER SHUTTER.**

First—Its position is in the place of the diaphragm. This position is one of its finest points, viz.: the very instant the shutter is opened in the least, the illumination is equal on all parts of the plate, giving the border the same amount of light as the center.

Second—In all quick exposures it is a constant moving diaphragm.

Third—It lights the plate equally. You can see that a round hole is necessary to accomplish this, and it is the only principle that is used today that keeps a round orbit at all points. The oblong or square hole lets in more light at the point of entrance than at the lower points.

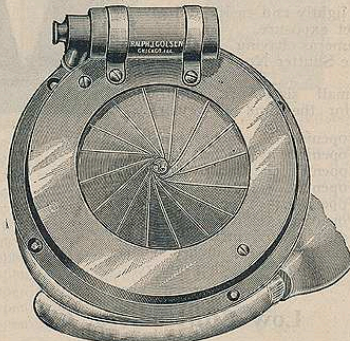
Fourth—It is plain to see that any principle outside of lens will destroy the direct rays of light that pass through. In all outside shutters when you make a quick exposure, you will observe that the wings passing back and forth give the center of your plate one-half more time than the outer portions.

R. J. G. Vignettes—simple adjustment and not expensive.

Fifth—A perfect diaphragm is assured; by moving lever rack M on gauge frame K back or forth, you will get any size opening you desire. Rack K has an index on it to guide the opening.

Prices .....from \$15.00 to \$18.00

**The "King Bee" Shutter.**



Entirely new and practical. An Iris Shutter for Studio or View Cameras.

Operated on the same principle as an Iris Diaphragm. Placed back of the Lens.

It is superior to all shutters now on the market, operating in front or back of lens, and is quicker than any Studio Shutter made. The outside measurements are, in proportion to size opening, one inch smaller than any other shutter now operated between the lenses; this is an important factor, as it permits the use of this style shutter on view cameras with small front boards.

The entire Shutter is made of metal—strong, durable, compact, sure and not expensive. It is the King Bee shutter for studio use and all ordinary view work. Operated with bulb and tube.

These shutters do not require any special fitting, but are ready for use and can be adjusted (simply screw to front board) in a few minutes.

**PRICES.**

Including Bulb and Tube.

	Size Opening	Outside Measure	Price
No. 1.....	1 1/2 inch	2 3/4 inch	\$4.30
No. 2.....	2 inch	3 3/8 inch	5.00
No. 3.....	2 1/2 inch	4 3/8 inch	5.50
No. 4.....	3 inch	5 inch	6.00
No. 5.....	3 1/2 inch	5 1/2 inch	6.50
No. 6.....	4 inch	6 3/16 inch	7.00
No. 7.....	4 1/2 inch	6 7/8 inch	7.50
No. 8.....	5 inch	7 1/2 inch	10.00

**Thornton-Pickard Patent Studio Shutter.**

Works in front of the Lens or inside the Camera.

This shutter is specially suitable for taking children, animals, and all other subjects where silence in the working of the shutter is a desideratum. NO VIBRATION.

It is made on the roller-blind principle, and is constructed with two separate blinds, which wind upon rollers at opposite ends of the box.

In their normal position the blinds cover the aperture and overlap each other.

On squeezing the pneumatic ball to make an exposure each blind instantly winds on to its roller, causing the shutter to be open from the center. On releasing the ball, the blinds immediately close.

In this manner any exposures may be given, from one eighth of a second to any longer period desired.

Size, inches . . . 2 2 1/2 3 3 1/2 4 4 1/2 5  
Prices .....\$8.50 \$10.00 \$12.00 \$14.50 \$16.50 \$19.50 \$21.50

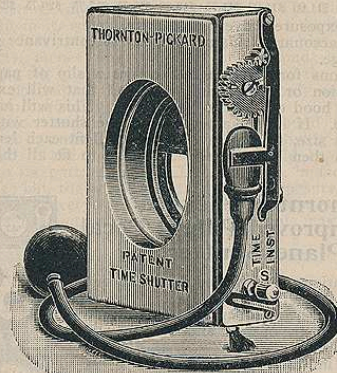
**Thornton-Pickard Shutters.**

These shutters are constructed on the roller-blind principle. They are simple, light, and carefully fitted. The curtain blind travels in one direction and avoids vibration.

**Time and Instantaneous Shutter.**

Standard Pattern.

To fit on either the Hood or Tube of the Lens. Made in two styles—mahogany and aluminum.



**PARTICULARS OF THE SMALLEST SIZE.**

Mahogany Shutter—Speed, up to 1-90 of a second; dimensions, 3 3/8 x 2 3/4 x 7/8 inches; weight, 4 1/2 ounces. Aluminum Shutter—Speed, up to 1-90 of a second; dimensions, 3 3/8 x 2 3/8 x 3/4 inches; weight, 4 ounces.

The above illustration shows the external appearance of both the mahogany and aluminum Thornton-Pickard Time and Instantaneous Shutters, either of which is the special pattern recommended for general all-round work.

The shutter is simplicity itself. There is no complicated mechanism to get out of order. It is a perfect substitute for the lens cap, and much more handy and reliable.

The same shutter may be used with any number of lenses, of different sizes, by the use of the Patent Adapters. On the aluminum shutter the speeds are stamped on the metal case.

Make time or instantaneous exposure; has a speed indicator; short time exposures of 1/8, 1/4, 1/2 second, and from 1 to 3 seconds can be obtained easily and correctly by means of the time valve.

**PRICES.**

Size, inches.....	1 1/2	1 3/4	2	2 1/2	3	3 1/2	4	4 1/2	5
Mahogany.....	\$9.00	\$9.00	\$9.75	\$11.00	\$12.75	\$14.75	\$16.75	\$18.75	\$20.75
Aluminum.....	6.50	7.00	8.25	8.50					

Fitted with time exposure valve, extra, \$1.25.

**INSTRUCTIONS FOR ORDERING.**

For Ordinary Shutters.—Please send a narrow strip of paper just long enough to meet round the lens hood or tube, not an impression or pencil drawing. Insist upon having the shutter made a good fit upon the lens. The shutters work equally well, fitted to the lens hood or the lens body.

**Thornton-Pickard Special Shutter.**

Instantaneous Only.

Recommended when the Focal Plane Shutter cannot be used, and when a shutter working at a higher speed than the time and instantaneous is required. This shutter is fitted in front of the lens, and works at a speed up to 1-180 of a second.

(Continued next column.)

Our General Line of Photographic Staples is of Superior Quality.

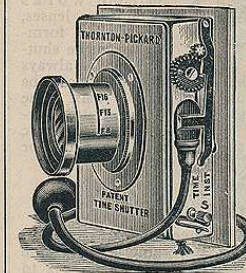
**SPECIAL SHUTTER—Continued.**

Price, including Speed Indicator—

Size, inches	1 1/2	2	2 1/2	3	3 1/2
Special Shutter	\$10.00	\$11.00	\$12.00	\$14.50	\$16.50

**Thornton-Pickard Patent Behind-lens Shutter.**

Time and Instantaneous. Mahogany and Aluminum.



This shutter is of exactly the same construction as the Standard pattern, but is arranged to be screwed to the panel of the camera front, practically acting as an inside printer. It then forms a part of the camera, and is always firmly attached and in position. The back is fitted with velvet, which insures a light-tight joint when the shutter is screwed to the panel of the camera front. The lens flange is screwed to a detachable panel which fits into the front of the shutter. Extra panels for other flanges may be had,

so that any number of lenses may be used with the same shutter, and any one instantly dropped into its place ready for immediate use.

The shutter should be attached to the camera front panel by four ordinary small screws passed through from the back of the panel into the velvet-covered back of the shutter. Care should be taken that these screws are not too long, so as to injure the blind.

**PRICES.**

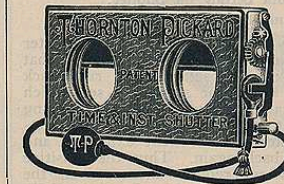
Size, inches.	1 1/2	1 3/4	2	2 1/2	3	3 1/2	4	4 1/2	5
Mahogany..	\$10.00	\$10.00	\$10.75	\$12.00	\$14.00	\$16.00	\$18.00	\$20.25	\$22.25
Aluminum..	7.00	7.50	8.75	10.00					

Extra panels for Behind-lens Shutters, up to 2 1/2 inches, \$0.60; up to 3 1/2 inches, \$0.85; up to 5 inches, \$1.00.

Fitted with time exposure valve, extra, \$1.25. Directions for ordering.—Send us the size of the front board of the camera and the inside and outside diameter of the flange, so that we can make an exact opening in the shutter board.

**Thornton-Pickard Patent Stereoscopic Shutter.**

Time and Instantaneous.



To fit on the Hoods or Tubes of Lenses. Particulars of the smallest size: Speed, up to 1-90 of a second; dimensions, 3 1/4 x 6 1/2 x 1 1/2 inches; weight, 8 ounces.

For stereoscopic work a good time and instantaneous shutter is an absolute necessity. This is the simplest and the best shutter for the purpose. It is constructed on exactly the same lines as the Standard Patent Time and Instantaneous Shutter, of which a detailed description is given on another page. It has a great range of speed for instantaneous exposures in addition to time exposures, and will therefore give any exposure, from fractions of a second up to minutes or hours. The exposure is exactly the same to each lens, and there is no vibration.

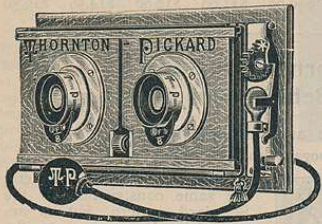
(Continued on next page.)



Patent Stereoscopic Behind-lens Shutter.

With Adjustable Panels.

For both Single and Stereoscopic Lenses.



This is a special form of the above shutter, to be attached to camera front. The lenses are mounted upon a detachable panel that fits into the front of the shutter. The shutter therefore works behind the lenses, practically forming an inside shutter, and is always

in position ready for work. The detachable panel can be removed when it is desired to substitute another lens. The opening in the blind being the full width of the shutter permits the using of either a pair of lenses for stereoscopic work or a single lens opposite the center of the plate for ordinary views.

Panel with Adjustable Centers.

In this pattern the panel carries two smaller panels to which the lens flanges are attached. By turning a small knob the distance between the centers can be varied from 2 3/4 to 3 1/4 inches.

These shutters are unequalled for stereoscopic work.

PRICES.

Table with 4 columns: Size, inches; Time and Instantaneous; Behind-lens; and prices for various shutter types.

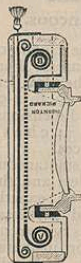
3/4-inch center, \$1.00 extra; 3/4-inch center, \$1.60 extra. Extra panel for Behind-lens Shutters, \$0.85. Extra panel for Behind-lens Shutters, with adjustable centers, \$2.00.

Time exposure valve, extra, \$1.25. Directions for Ordering.—Standard Time and Instantaneous pattern. Send us a slip of paper that will exactly fit around the hood of the lenses. Don't send a mere impression or lead-pencil drawing. Also send the distance from the center of one lens to the center of the other. Behind-lens pattern: Send us the size of the front board of your camera, also the inside and outside diameter of the flanges, and the distance from the center of one lens to the center of the other.

Thornton-Pickard Time and Instantaneous Self-Acting Blind Shutter.

Covers the Lens while Setting the Shutter.

The Cord Runs Back into the Shutter after Setting.



This makes an exceedingly useful shutter for hand cameras, and is unequalled for that class of work. The setting cord runs back into the case when the shutter is set, which is a very great advantage. The Self-capping Blind automatically covers the lens while setting the shutter for the next exposure, and then springs back again. Thus the sensitive plate may always remain uncovered in the camera for immediate use. It is specially necessary when using a magazine or roll-holder with the camera. The accompanying illustration shows a section of the shutter. The exposing blind is indicated by the dotted line, and the Self-capping Blind is shown by the thick black line immediately in front of the exposing blind. When the cord is pulled, both blinds wind up together, the Self-capping Blind covering the opening in the other. When the cord is released, the Self-capping Blind immediately rewinds into its former position, the setting cord goes into the case, and the exposing

both blinds wind up together, the Self-capping Blind covering the opening in the other. When the cord is released, the Self-capping Blind immediately rewinds into its former position, the setting cord goes into the case, and the exposing

We can supply any Photographic Goods Manufactured.

SELF-ACTING SHUTTER—Continued.

blind protects the plate from light until the exposure is made. The shutter is very compact, measuring only 1 1/2 inches thick.

Particulars of the smallest size shutter fitted with Self-capping Blind: Speed, up to 1-90 of a second; dimensions, 3/4x3/8x1 1/8 inches; weight, 6 ounces.

MAHOGANY ONLY.

Time and Instantaneous, Standard Pattern

Table with 4 columns: Size, inches; Time and Instantaneous; Behind-lens; and prices for mahogany shutters.

With exposure valve, \$1.25 extra.

A full account of this new ingenious contrivance given on another page.

Directions for Ordering.—Send us a slip of paper (not an impression or lead-pencil drawing) that will exactly fit around the hood or tube of your lens. This will insure the correct size. If it is wanted to use the shutter with lenses of different size, send us a slip that will fit each lens. The shutter can then be properly "adapted" to fit all the lenses.

Thornton-Pickard New Improved Patent Focal Plane Shutter.

All operations are effected from the outside.

Special Advantages.

Adjustable slit opened and closed from the outside.

Outside indicators showing width of slit.

Speed calculator showing the exact speed.



Showing End Section.

With this new-pattern shutter the difficulty experienced in altering the width of the slit in the blind has been entirely overcome.

A range of from 1-30 to 1-1000 of a second is obtained.

Some Advantages of the Focal Plane Shutter.

For high speed instantaneous work the advantages of the Focal Plane Shutter have not been thoroughly appreciated. It is capable of giving results that cannot be obtained by any other form of shutter. For the information of those who may not have studied the matter, we beg to draw attention to the following facts.

In the first place it should be remembered that the speed at which a shutter ought to be worked is limited by the rate of movement of the object photographed and its distance from the camera. This is the primary factor in all instantaneous work.

The second important factor is the quality of the light and the intensity or rapidity of the lens. We are assuming that the intensity of the plate is the most rapid obtainable. A fast plate is an absolute necessity for extremely short exposures.

(Continued next page).



Speed Indicator.

FOCAL PLANE SHUTTER—Continued.

To obtain the best results with an exposure of, say, 1-200th of a second, a lens having a large focal aperture must be used, or the plate will be very much under-exposed.

A lens working at f 6.5 will pass twice as much light as f 8, and will therefore take a photograph with a proportionately shorter exposure.

The short exposures obtainable with the Focal Plane Shutter are due to the fact that only a part of the plate is exposed at once. The shutter consists of a roller blind working in front of and close to the plate. The blind has a narrow slit in it, which travels rapidly across the plate. The whole exposure is made, say, for the quarter-plate size (4 1/4 inches x 3 1/4 inches) in 1-50th part of a second; but, assuming that the slit is only one-tenth the width of the plate, each particular portion of the plate will receive only one-tenth of that exposure, namely, 1-500th of a second.

Exception might be taken on the ground that, in a subject such as an athlete running, or a man diving into water, the portion of the figure exposed last would be slightly in advance of the portion exposed first. This is, in fact, theoretically true; but, the whole duration of the exposure from first to last being so very rapid, this slight distortion is practically nothing, and is quite invisible to the eye. This may be proved by reference to the photographs reproduced.

MAHOGANY ONLY.

Table with 4 columns: Size, inches; Time and Instantaneous; Behind-lens; and prices for mahogany focal plane shutters.

The time valve is not desired on the Focal Plane Shutters. Correspondence regarding fitting these shutters to different styles of cameras will have prompt and careful attention.

For Fitting Shutter to Camera, we make a charge of \$2.00. We fit the Focal Plane shutter so that it is interchangeable with the reversible back, and can be attached or detached at will.

New Patent "Time" Exposure Valve.

This is a simple invention, by which short, accurate "time" exposures can be made with any of the various patterns of time and instantaneous Thornton-Pickard Shutters.

When fitted to shutters at time of purchase,

Price .....\$1.25

Shutters that have been previously purchased without the exposure valve can be fitted with it for \$2.00. The shutters must be sent to us to be fitted.



Rubber Moulding and Adapters.

For fitting shutters to lenses and for adapting one shutter to two or more lenses. Made in seven different thicknesses, as shown.

Table with 2 columns: No. and Thick, and prices for rubber moulding and adapters.

Century Curtain Slide Shutter.

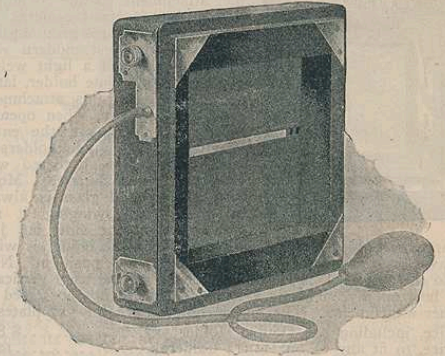
(Patent No. 3713).

For photographing very rapidly moving objects—horse and bicycle racing, flying birds, men running, leaping, jumping, general athletic sports, football games—in fact, all subjects requiring extremely short exposures the Century Curtain Slide Shutter is a valuable acquisition to any outfit.

(Continued next column.)

CENTURY CURTAIN SLIDE SHUTTER—Continued.

The principle on which it is constructed permits a shorter exposure, at the same time transmitting to the sensitive plate a greater volume of light than any other shutter. It fits between the Camera proper and the frame carrying the plate holder—the Curtain Slide moving over spring acting rollers directly in front of and across the sensitive plate. By increasing or diminishing the tension, also by adjusting the width of aperture in the curtain, variation in speed ranging



approximately from 1-10 to 1-1000 part of a second is obtained—thus making the Shutter useful for comparatively long exposures, as well as the shortest instantaneous exposures. The different degrees of speed are shown by an indicator. The width of the aperture can be varied instantly.

The Century Curtain Slide Shutter differs in construction from any other focal plane or curtain slide shutter, in that the pneumatic release and other working parts are entirely inside, and thereby fully protected. Hard wood is used in manufacture, and we cover the shutter with black leather corresponding to the Camera for which it is to be fitted.

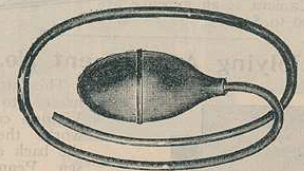
To focus, for time exposures, the curtain is simply wound on the upper roller, which avoids detaching the shutter.

PRICE, FITTED TO CENTURY CAMERAS.

Table with 3 columns: Size (4x5, 5x7, 6 1/2x8 1/2) and prices for Century Curtain Slide Shutter.

The cost of fitting to other cameras varies from \$3.00 to \$4.00.

Bulbs and Tubing.



Our bulbs and hose are made of the finest quality pure rubber. They are very elastic and can be fitted to any shutter. The No. 1 size is of red rubber and the other two sizes of white rubber.

PRICE LIST.

Table with 2 columns: Item description and price for bulbs and tubing.

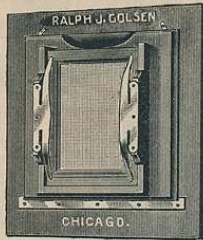
Goods Fully Guaranteed—at the VERY LOWEST PRICES.



# ATTACHMENTS FOR CAMERAS

For use of smaller plates with large cameras, or for making two or more negatives on a plate, etc., as described with each attachment setting forth its special feature.

## Reversible Cabinet Attachment No. 33.



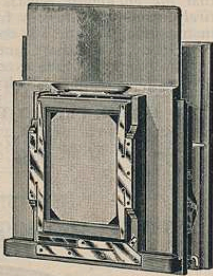
A light, simple and cheap cabinet attachment. Made to fit any of our 8x10 portrait cameras. It has a spring actuated ground glass, similar to the best modern view cameras, and also a light weight modern double plate holder, latest style. By using this attachment, photographers can, when opening a box of plates, put the entire dozen into six double holders at once, and not be bothered with changing when hurried. Moreover, the ground glass is always in place. No swinging it nor shoving it to one side, but just insert the holder in front of it, and when the holder is withdrawn, it automatically springs back into position. Note also that the back is reversible; plates can be used vertically or horizontally. This is a valuable feature not possessed by other attachments. The double holders are for 5x7 plates.

Price, including one Double Holder 5x7..... \$ 8.50  
 Price, to fit any of our 11x14 Cameras..... 12.50  
 Price of extra holders 5x7..... 1.00

Any special size, or this attachment to fit other makes of cameras, made to order at a slight advance in price.

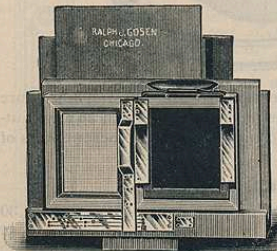
## Combination Cabinet Attachment and Multiplying Back No. 34.

For 8x10 Portrait Camera. Not reversible. Has spring actuating ground glass and double dry plate holder with rubber slides. Will make 1, 4, 9, 12, 16, 20 and 30 exposures on 5x7 plate, and a focus can be obtained for every exposure without changing the adjustments, hence no indicator is required.



The adjustments are so simple that any photographer will readily understand how to use them.  
 Price, without holder..... \$12.00  
 Extra Double Holders..... 1.00  
 This back can be fitted to any larger size Camera at an expense of from \$3.00 to \$5.00.

## Multiplying Attachment No. 35.

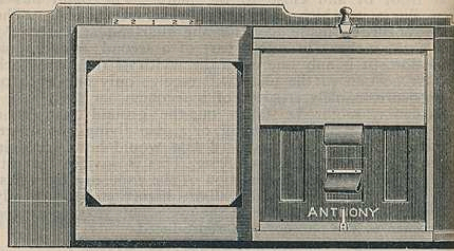


This attachment is made to fit the Victoria cameras and works the same as the back of the Golsen Penny Picture Camera. It will make 1, 4, 9, or 12 pictures on a 3/4x4/4 plate.

This will fill a long-felt want of the tintype artist, whereby he can make penny pictures with his regular Victoria Camera when used with the attachment.

Price with one double plate holder..... \$8.00  
 Extra double plate holder..... 80

## Royal Attachment for Portrait Cameras.

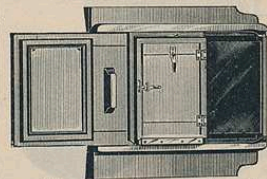


As shown in cut, is fitted with Benster Holder, works 8x10 plate and smaller; two 5x8 on an 8x10 plate; two 4 1/4 x 6 1/2 on a 6 1/2 x 8 1/2 plate; two 4x5 on a 5x8 plate, etc.

### PRICES.

Attachment for 8x10 Camera..... \$27.  
 Attachment for 11x14 Camera..... 29.  
 Attachment for 14x17 Camera..... 32.

## Smith Automatic Attachment.

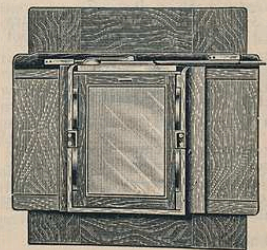


This attachment is for use on portrait cameras, and can be fitted to any 8x10 or larger camera. The plain rubber slide in the holder works automatically as the sliding carriage is adjusted. The ground glass is full size and permits focusing on full size plate for which used. Made of cherry. One single holder with rubber slide is included with the attachment.

### PRICE

No. 1. Attachment, fitted with 4 1/4 x 6 1/2 or 5x7 Holder, not reversible..... \$10.  
 Extra Holders, not reversible..... Each, 1.  
 No. 2. Attachment, fitted with 4 1/4 x 6 1/2 or 5x7 Reversible Holder..... 12.  
 Extra Holders, reversible..... Each, 1.  
 No. 3. Attachment, fitted with 6 1/2 x 8 1/2 Reversible Holder, which carries plates 6 1/2 x 8 1/2 and 5x7, makes two cabinets on 6 1/2 x 8 1/2 plate, or two half cabinets on 5x7 plate. 15.  
 Extra 6 1/2 x 8 1/2 Holders, reversible..... Each, 1.

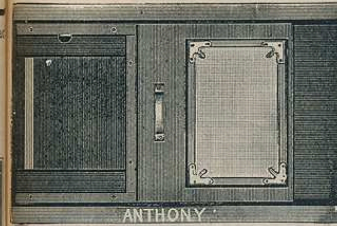
## The Universal Attachment.



The Universal 5x7 attachment can be used either as Cabinet or Penny Photo attachment; reversible back and makes 1, 2, 4, 6, 8, 9, 12, 18, 20, 24 and 28 exposures on a 5x7 plate; can be fitted to most any 8x10 Portrait camera also adaptable for and can be fitted to almost any 8x10 reversible back view camera.

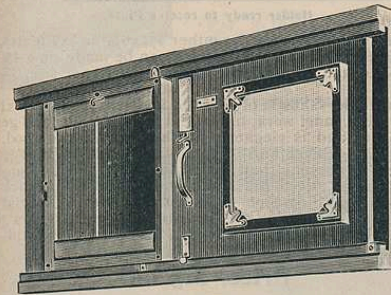
Price, with one double holder,..... \$18.  
 Extra Holders..... 1.

## The Anthony Improved Automatic Cabinet Attachment.



Showing Attachment with Non-reversible Holder.

It consists of a mahogany back that can be fitted to any 8x10 or larger camera, and has a ground glass and receptacle for plate holder on a sliding carriage which moves from left to right. The plate holder being adjusted, and the focusing being done, the carriage is moved and the ground glass is replaced by the plate holder, the curtain slide being automatically withdrawn. No lifting out of ground glass or fumbling with the slide. The one movement shifts the ground glass and places the holder



Showing Attachment with Reversible Holder.

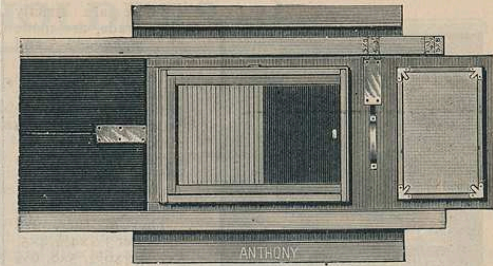
ready for exposure. A movement from right to left inserts the slide and the ground glass is restored to its position behind the lens. In ordering the Automatic Attachment, it will be necessary to give the height, width and thickness of your plate holder, and state the name of maker of the camera, and, if possible, the name of the camera. The Automatic Attachment will be made to fit any 8x10, 10x12, or 11x14 camera. It fits the camera where the ordinary holder is adjusted; 5x8, 5x7, or 4 1/4 x 6 1/2 holders are supplied, as desired.

### AUTOMATIC ATTACHMENTS.

No. 1. Regular Attachment (for one on 4 1/4 x 6 1/2, 5x7, or 5x8 plates, as preferred), to fit on 8x10 Camera, including one Curtain Slide Holder for either of above size plates. (This is same as supplied with 8x10 New York Studio Outfit.) Price, including one Holder..... \$10.00  
 Extra Holders, each..... 1.50  
 No. 2. Same as No. 1, but fitted to 11x14 Camera..... 12.00  
 No. 3. Attachment to fit 8x10 No. 11C Camera, with 8x10 Horizontal (Curtain Slide) Holder and Kits for 7x10 and 6 1/2 x 8 1/2, for two exposures on 8x10, 7x10, or 6 1/2 x 8 1/2 plate, or two each of 5x8, 5x7, or 4 1/4 x 6 1/2 plates can be used in same..... \$13.00  
 Extra 8x10 Holders, each..... 4.00  
 No. 4. Same as No. 3, but fitted to 11x14 Camera..... 15.00  
 No. 5. Attachment to fit 8x10 No. 11C Camera, fitted with one 5x7 Reversible Holder (Curtain Slide) for 5x7 Vertical or Horizontal, or two on 5x7..... 12.50  
 Extra 5x7 Reversible Holders, each..... 2.00  
 No. 6. Same as No. 5, but fitted to 11x14 Camera..... 14.50  
 No. 7. Attachment to fit 11x14 Camera, fitted with 6 1/2 x 8 1/2 Reversible Holder, with Curtain Slide..... 16.50  
 Extra 6 1/2 x 8 1/2 Reversible Holders, each..... 3.00

(Continued next column.)

## ANTHONY ATTACHMENT—Continued.



Showing Attachment with Horizontal Holder.

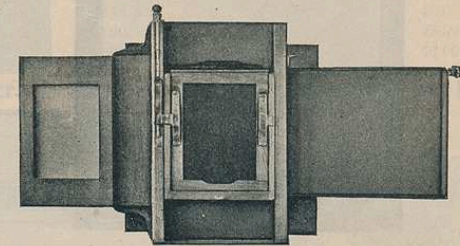
Where Automatic Attachments are desired for larger sizes of Cameras than above, add as follows:  
 For 14x17 Camera..... add \$1.50 to price of 11x14  
 For 17x20 Camera..... add 3.00 to price of 11x14

## Sunflower Multiplying Back.

This is a device that can be attached to any regular 8x10 or larger portrait camera to be used in place of ordinary plate holder; the plate is worked in a vertical position; full-sized 5x7 ground glass is fitted in the sliding carriage. This permits its use for the regular cabinet work and allows every variety of small panels, circles and penny picture sizes. It will make from 1 to 36 different negatives on a single plate, and, being supplied with the automatic shutter attachment, offers advantages for the regular cabinet and the small multiple work, over any other single device on the market. It fills the place of two separate attachments. The automatic shutter device is a leading feature and it is a great improvement over the old way of working.

Each back is supplied with 13 different shields, one automatic shutter device and one 5x7 double plate holder.

This attachment does not interfere in any way with the ordinary working of your camera as it is just as easy to put into position or remove as the ordinary plate holder. Its use, however, enables you to economize both time and plates. In making regular cabinet work, especially with children's pictures, it saves the operator's time and patience, as it enables him instantly to place either the ground glass or sensitive plate behind the lens ready for use. For the



Patented February 26, 1901.

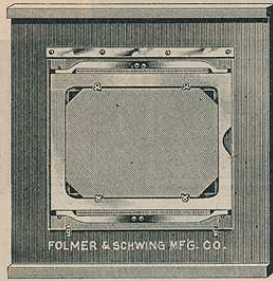
smaller work it requires but an instant to adjust it to any of the various sizes and there is absolutely no time lost in removing or replacing the slide in plate holder except at the start and finish, as the Automatic Shutter Device allows the free examination of the image on the ground glass at any time, requiring but a single movement of the operator.

Price complete, as above..... \$20.00, net  
 Extra Plate Holders, each..... 1.25, net

P. S. Any carpenter can fit these to your camera or we will fit it for one dollar extra. In that event, send your plate holder to us by express, charges paid, and it will be returned with attachment.



**Reversible Center Adapter.**



These are strictly high grade, are made of mahogany and highly polished.

These adapters are made to fit in the same place as the Studio Holder on camera, and are designed for use with Double Plate Holders, with Spring Actuated Ground Glass.

They are arranged for either 3 1/4 x 4 1/4, 4x5, 5x7, 4 1/4 x 6 1/2, 5x8, 6 1/2 x 8 1/2 or 8x10, or larger size, according to choice; also, an adapter for any given

size plate may be utilized for still smaller plates of one or more sizes by use of kits.

**PRICES.**

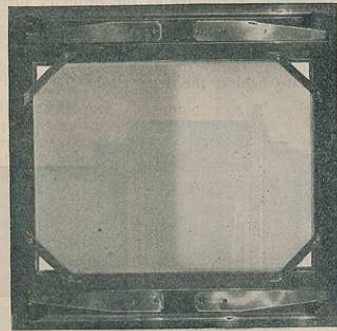
- For 8x10 Camera, with one double Plate Holder... \$ 8.00
- For 10x12 Camera, with one double Plate Holder... 9.00
- For 11x14 Camera, with one double Plate Holder... 10.00
- For 14x17 Camera, with one double Plate Holder... 12.00
- For 16x20 Camera, with one double Plate Holder... 13.00
- For 18x22 Camera, with one double Plate Holder... 14.00

**"R. J. G." Reversible Back Adjusters.**

The Reversible Back Adjuster, applied to any view camera, also can be adapted to portrait cameras.

Price includes one double holder.

These adapters can be supplied for any standard size plate and to fit any standard size or make of camera, also for any standard holder. The price does not include any fitting. The fitting can be done by anyone handy with tools or by a cabinet maker at small expense.



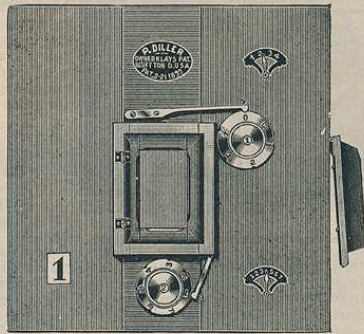
Size	Price
For 4 x 5 Plate.....	\$4.00
For 4 1/4 x 6 1/2 Plate.....	4.50
For 5 x 7 Plate.....	4.50
For 5 x 8 Plate.....	5.00
For 6 1/2 x 8 1/2 Plate.....	5.00
For 8 x 10 Plate.....	6.00
For 10 x 12 Plate.....	8.00
For 11 x 14 Plate.....	9.00

Price for fitting will be supplied on application. Give name of Camera Adapter is to fit, and size and extreme outside measure of back of camera.

The Adapter is provided with a Shut-Off, so as to make two exposures on same plate, as designated by light and dark sections on ground glass in above cut.

**Klay Multiplying Holder.**

Can be fitted to almost any 8x10 portrait camera, and also to some 8x10 reversible back view cameras. Can also be fitted to cameras larger than 8x10.



Holder ready to receive Plate.

This holder is made for either 4 1/4 x 6 1/2 or 5x7 plates, and from two to twenty-eight exposures can be made on a 4 1/4 x 6 1/2 or 5x7 plate, and printed at one time on cabinet size, 3 3/8 x 5 1/2 paper.

The Holder is made of selected and seasoned wild cherry lumber, all in panel work, to prevent from warping and getting out of order, and is elegantly finished in natural wood, giving it a rich cabinet finish, with plain brass mountings and lacquered to prevent from tarnishing. The inside construction is made of sawed brass and sheet steel. The rack and pinion work is all cut from solid metal, made by special machinery, and is as true as it is possible for metal gears to be made. It will work as smoothly as clockwork, and with proper care will last a lifetime.

**Price, \$15.00.**

Owing to changes at the factory, the demand for these Holders has been greater than the supply, and but few dealers have been able to secure them. We, however, have advantages not enjoyed by others, and can supply them. Your orders solicited.

**Miller's Multiplying Slides.**



You can take show-ers of pictures when you use Miller's No. Multiplying Slides in your plate-holder. Takes six pictures of one plate with an focusing camera. When ordering give name of holder, and if for POCO, mention hinged end.

Patented Nov. 5, 1901.

Set for 4 x 5 holder, 4 on one plate.....	\$0.50
" 4 x 5 " 6 " " .....	1.00
" 5 x 7 " 4 " " .....	1.00
" 5 x 7 " 6 " " .....	1.00
" 5 x 8 " 6 " " .....	1.00
" 6 1/2 x 8 1/2 " 6 " " .....	1.00
" 8 x 10 " 4 " " .....	1.00
" 8 x 10 " 6 " " .....	1.00

**We sell from the cheapest that's good to the very best that's made.**

**PLATE HOLDERS**

**New Automatic Studio Plate Holder No. 59.**

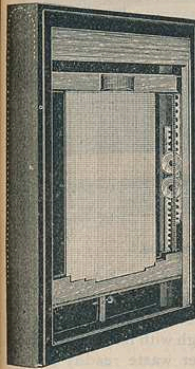
This automatic studio plate holder, is one of the greatest improvements in portrait apparatus in recent years. In this holder you can put in your plate and take it out without so much as turning a single button. You draw down the curtain slide, turn the front of the holder to you, place the plate on the bottom crosspiece, put one or two of your fingers on the top edge of the plate, press gently downward until the opening is large enough to admit the plate, then let go and the plate will slip in the top groove and remain securely in focus without any further effort. There are no loose or detachable parts to take out or replace, although the plate may be inserted and removed through the rear door, in the old way, if desired.

There is no spring to press on the back of the plate. This is not necessary with this holder.

By using the holder when loading as directed above, the mechanism will automatically adjust the two crossbars to receive any size of plate from the full capacity of the holder down to 2 inches square; the plate being always in the exact centre. This is accomplished by means of two gear wheels, on each side of the holder, working in a double rack, to the ends of which are attached the bottom and top bars, the bottom bar being automatically centered by means of tension springs at the sides.

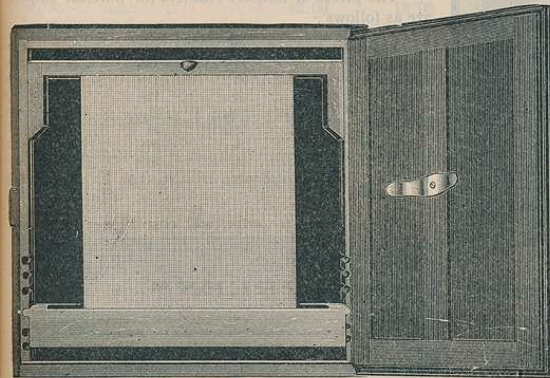
The holder is the greatest time-saver for operators ever put on the market and in large and busy studios will pay for itself in a very short time. No busy operator can afford to be without it.

They are made to fit most of our cameras, and can be fitted to most any of the standard makes.



	Prices.	Prices.	
For 8x10 plate and under.....	\$10.00	For 17x20 plate and under.....	\$25.00
For 10x12 " " " .....	14.00	For 18x22 " " " .....	30.00
For 11x14 " " " .....	18.00	For 20x24 " " " .....	35.00
For 14x17 " " " .....	22.00	Special sizes to order will cost 20% additional.	

**Improved Wet Plate Holder No. 58.**



Made in the best manner possible; will take any size plate without kits. Has silver saving trough to catch drippings (see cut). It is the king of wet plate holders. It will fit most any of our portrait cameras, also copying and enlarging cameras.

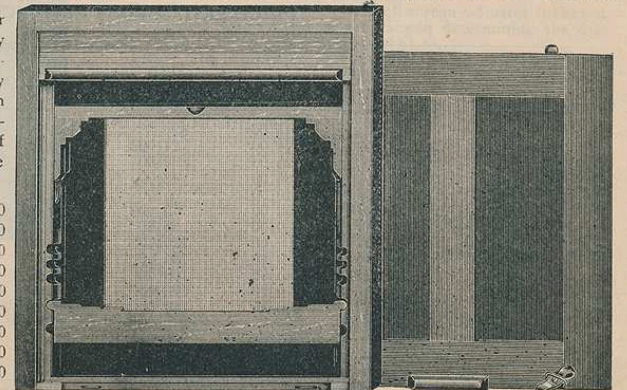
These holders are made to order to fit any ordinary portrait camera. Specify style of camera and give measurement when ordering.

6 1/2 x 8 1/2 .....	Each, \$ 8.50
8 x 10 .....	9.00
10 x 12 .....	10.00
11 x 14 .....	14.00
14 x 17 .....	16.00
17 x 20 .....	18.00
18 x 22 .....	20.00
20 x 24 .....	28.00
25 x 30 .....	40.00

**Improved Curtain Slide Holder For Portrait Cameras No. 60 (Bonanza Style).**

These holders have been in use for a number of years, and have given entire satisfaction. They are well made, handsomely finished and especially adapted for studio work. They will hold any size of plate without kits, and are so well known to the professional photographer that further description will not be necessary. They fit any of our cameras except the No. 26, and can be made to order to fit any ordinary portrait camera.

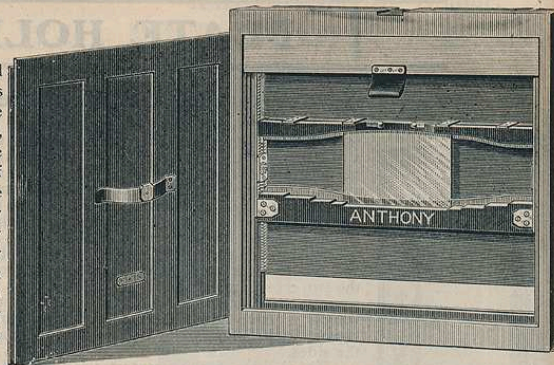
For 6 1/2 x 8 1/2 cameras.....	Price, \$ 7 00
For 8 x 10 " .....	8.00
For 10 x 12 " .....	9.00
For 11 x 14 " .....	11.00
For 14 x 17 " .....	14.00
For 17 x 20 " .....	16.00
For 18 x 22 " .....	18.00
For 20 x 24 " .....	20.00
For 25 x 30 " .....	36.00





**The "Benster" Plate Holder.**

The glass plate rests on a wooden ledge, notched for different sized plates. As the lower ledge is raised, the upper ledge descends, so that the centre of the plate is at all times in the centre of the holder, no matter what size is used. This obviates the use of inside kits, and adapts itself at once to any size of plate, from the largest the holder will admit to one not under 3 inches square. This is unquestionably the best gallery plate holder made. The ledges may be instantly fastened for plates of any size. For dry plate studio work, it is the holder *par excellence*. It is fitted to all Climax Cameras, with the exception of the 43 B, 43 C, copying, enlarging and reducing cameras, and can be specially fitted to other makes.



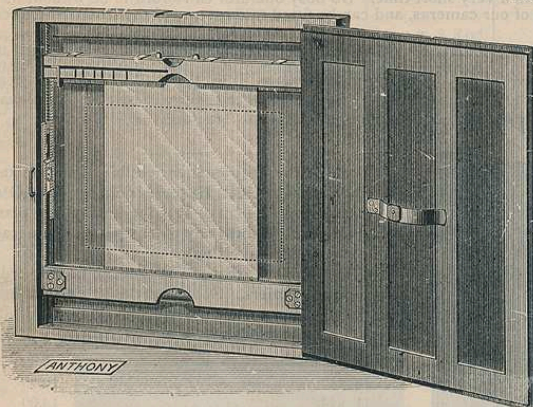
Above Shows Benster Holder with Curtain Slide.

The Benster holder, with wooden slide, is applied only to boxes for wet plate work, such as 43 B and copying cameras, and in these holders the plate rests on pure silver wire, and there is a trough with large bottle underneath, into which all the silver waste readily finds its way.

The prices of Benster Holders for portrait cameras are as follows:

For 8 x 10 plate and under, 12 3/4 in. wide, 13 3/4 in. high.....	\$10.00
For 8 x 10 " " " 13 3/4 " 13 3/4 " .....	10.00
For 10 x 12 " " " 15 " 15 1/2 " .....	16.00
For 11 x 14 " " " 17 " 17 1/2 " .....	21.00
For 14 x 17 " " " 20 1/2 " 21 " .....	24.00
For 17 x 20 " " " 23 1/2 " 24 " .....	27.00
For 18 x 22 " " " 26 " 26 1/2 " .....	30.00
For 20 x 24 " " " 28 " 28 1/2 " .....	35.00
For 22 x 27 made to order only.....	40.00
For 25 x 30 .....	44.00

Special sizes, to order, will cost 20 per cent. additional.



**HALF-TONE CROSS LINE SCREENS.**

MAX LEVY'S

**PERFECTED ENGRAVED GRATINGS**

For Half-tone Process.

**PRICE LIST—CROSS LINE SCREENS.**

SIZES IN INCHES.	75, 80 or 85	100	110 or 120	125 or 133	140 or 150	166 or 175	200
6x8	\$15.00	\$18.00	\$20.00	\$22.00	\$26.00	\$32.00	\$40.00
6 1/2 x 8 1/2	18.00	20.00	24.00	28.00	32.00	40.00	50.00
7x9	24.00	25.00	30.00	36.00	42.00	50.00	65.00
8x10	32.00	35.00	42.00	48.00	54.00	68.00	82.00
9x11	35.00	40.00	55.00	60.00	70.00	85.00	100.00
10x12	40.00	52.00	70.00	80.00	95.00	110.00	130.00
11x14	60.00	80.00	98.00	115.00	135.00	160.00	185.00
12x15	75.00	100.00	120.00	142.00	170.00	200.00	230.00
13x16	95.00	122.00	144.00	172.00	208.00	240.00	280.00
14x17	115.00	145.00	168.00	218.00	252.00	280.00	340.00
15x18	135.00	170.00	198.00	245.00	300.00	350.00	400.00
16x20	166.00	208.00	240.00	305.00	360.00	420.00	500.00
17x21	188.00	235.00	270.00	340.00	405.00	475.00	570.00
18x22	210.00	265.00	305.00	385.00	455.00	540.00	640.00
20x24	255.00	316.00	365.00	460.00	540.00	665.00	800.00

We sell Photographic Skylights—Descriptive Circulars sent on Request.

**Anthony's Ruled Cross-Line Screens for Half-Tone Work.**

The facilities for turning out the highest grade of ruled screens are unequalled. These screens possess complete opacity of the lines, perfect sharpness of edges, and absolute transparency of spaces.

They work more rapidly and with a softer blending than any other make of screen.

We make screen plates to order only, and if to be ruled in a particular way, a precise explanation as to width of lines in comparison to open spaces, etc., should accompany order, otherwise we will use our own judgment.

All sizes and rulings furnished at shortest notice.

**LINES PER INCH.**

Sizes in Inches.	75, 80 or 85.	100.	110 or 120.	125 or 133.	140 or 150.	160 or 175.	200.
6 x 8	\$15.00	\$18.00	\$20.00	\$22.00	\$26.00	\$32.00	\$40.00
6 1/2 x 8 1/2	18.00	20.00	24.00	28.00	32.00	40.00	50.00
7 x 9	24.00	25.00	30.00	36.00	42.00	50.00	65.00
8 x 10	32.00	35.00	42.00	48.00	54.00	68.00	82.00
10 x 12	40.00	52.00	70.00	80.00	95.00	110.00	130.00
11 x 14	60.00	80.00	98.00	115.00	135.00	160.00	185.00
12 x 15	75.00	100.00	120.00	142.00	170.00	200.00	230.00
13 x 16	95.00	122.00	144.00	172.00	208.00	240.00	280.00
14 x 17	115.00	145.00	168.00	208.00	252.00	280.00	340.00
16 x 20	166.00	208.00	240.00	305.00	360.00	420.00	500.00
20 x 20	205.00	260.00	300.00	380.00	450.00	.....	.....

**TRIAL SIZES.**

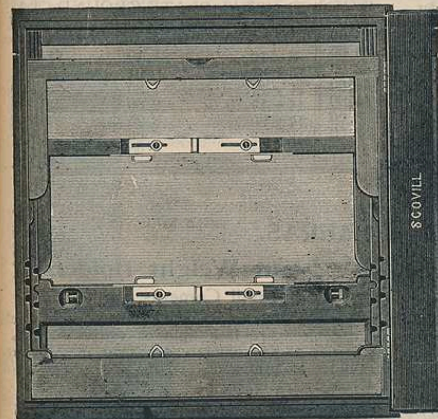
**LINES PER INCH.**

Sizes in Inches.	75, 80 or 85.	100.	110 or 120.	125 or 133.	140 or 150.	160 or 175.	200.
3 1/4 x 4 1/2	\$2.00	\$2.00	\$2.00	\$2.00	\$3.00	\$5.00	\$8.00
4 x 5	4.00	4.00	4.00	4.00	6.00	8.00	12.00
4 1/4 x 6 1/2	6.00	6.00	6.00	6.00	8.00	10.00	16.00
5 x 7	9.00	9.00	10.00	12.00	14.00	16.00	22.00
5 x 8	12.00	12.00	14.00	14.00	16.00	20.00	28.00

For single-ruled screens deduct 33 1/3 per cent. Special quotations furnished on different rulings and sizes.

**Scovill-Levy Photo-Engravers' Adjustable Screen Plate Holder**

This holder is a great improvement over the older styles for photo-engraving purposes. Its principal points of superiority are briefly:



First—The ease with which it is adjusted for different size plates and screens, by a simple sliding movement of the two inside frames to or from the center, and thus dispensing with the expensive and troublesome use of kit frames.

Second—The convenience by which the screen plate is accurately adjusted to the sensitized plate by means of the metallic sliding adjusters. (Heretofore it has been necessary to do the adjusting by means of inserting different thicknesses of cardboard, paper, etc.)

Third—Different thicknesses in the screen plates are allowed for by means of a spring which always holds the plate in accurate place, no matter what its thickness may be.

Fourth—A graduated scale on each screen adjuster makes it easy to always insure absolute accuracy in determining the distance of the screen plate from the wet plate.

Fifth—The simplicity of construction and excellent workmanship of the entire holder, being made, as it is, in the factory of the famous American Optical Company.

And, altogether, it is an ingeniously designed and beautifully constructed Holder, which will be found of indispensable aid to the practical photographer.

These holders are thicker than the ordinary plate holders, and if it is desired to use them on a camera, the ground glass of which is focused for the ordinary plate holder, a new ground glass frame is necessary in order to adjust the focus. When ordering a holder to fit a camera in use, send the old holder or the old ground glass frame so that the new ones can be made to fit the camera. Also state the size of largest and smallest screen plate to be used in holder.

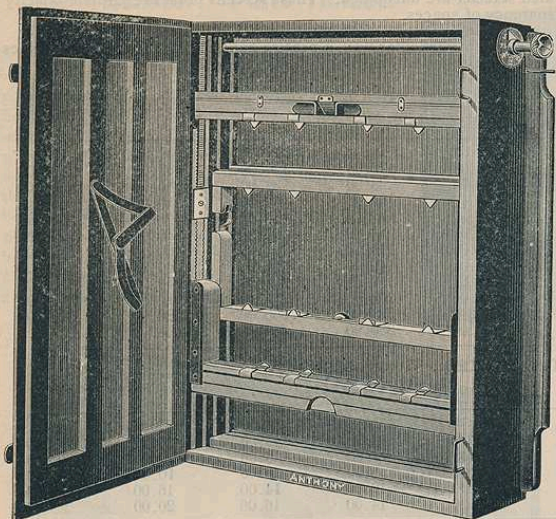
It is made in various sizes. Prices as follows:

Size	Price	Price (Frames only, for Ground Glass)	Price (Frames only, for Ground Glass)
8 x 10 size	\$25.00	\$1.50	\$44.00
10 x 12 "	32.00	1.50	48.00
11 x 14 "	40.00	1.88	52.50
14 x 17 size	.....	.....	59.00
17 x 20 "	.....	.....	.....
18 x 22 "	.....	.....	.....
20 x 24 "	.....	.....	.....

Subscribe for Photopivot—it is what you should have.



### Anthony's Improved Patent Lined Screen Holder.



This holder has been constructed to meet the requirements of the improved and advanced methods of half-tone negative making. That we have been successful will readily be demonstrated by attention to the points of advantage given below.

(a) The distance between the screen and negative plate is automatically adjusted from the outside of the holder by turning *one knob* only.

(b) The mechanism is such that exact parallelism is assured. Being constructed on sound and rigid principles, there is no loose movement between the parts that support the screen and sensitive plates, and both are perfectly secure and remain in place when once adjusted.

(c) The screen is held securely in position by new devices, without the use of springs, and will hold screens up to 3/8 of an inch thick, and from 1/2 inches up to 3/4 of an inch larger than dimensions given. Thus, a 14 x 17 holder will take a screen plate 1 7/8 in. high by 1 7/4 in. wide. The smallest screen accommodated is 5 x 5 in.

(d) The separating indicator is located on the upper right hand corner in easy reach and view of the operator. The micrometer indicator is divided into thousandths of an inch, and permits a distance from surface to surface of from .025 to 1/2 an inch, therefore making it practicable for the finest as well as the coarsest ruled plate in use.

(e) All metal parts that might be corroded by the silver solution are kept from contact with other parts that are likely to come in contact with the drippings are made of hard rubber and silver. The drippings from the plate are caught in a trough which carries them to a bottle, so preserving the life of the holder and saving the silver solution.

(f) The old-fashioned brass spring on the door for holding the negative plate in position has been abolished, and with our new arrangement bulging of the plate is overcome, making the shape of the half-tone dots appear in their proper proportion.

(g) This new construction admits of the focusing being done in the holder with ease and accuracy. A ground glass with a clear circle in the centre is placed in the position intended for the negative plate. Thus, by focusing through the screen the actual dot or contrast is easily obtained by turning the indicator. For this manner of operating the door is hung on the left side and the indicator on the right, making the focusing and adjustment as easy as when using the ordinary ground glass and frame.

#### PRICE LIST.

Largest Plate.	Outside Dimensions.	Ground Glass and Frame.	Frames only for Ground Glass.	Holder Price.	CRYSTAL PLATE GROUND GLASS
For 8 x 10.....	12 1/2 in. wide, 13 3/4 in. high	\$3.00	\$1.50	\$25.00	8 x 10..... \$1.10
For 8 x 10.....	13 3/4 " " "	3.00	1.50	25.00	10 x 12..... 1.40
For 10 x 12.....	15 " " "	3.25	1.50	32.00	11 x 14..... 1.80
For 11 x 14.....	17 " " "	3.50	1.88	40.00	14 x 17..... 2.80
For 14 x 17.....	20 1/2 " " "	4.00	2.25	44.00	17 x 20..... 3.25
For 17 x 20.....	23 1/2 " " "	4.50	2.63	48.00	18 x 22..... 5.20
For 18 x 22.....	26 " " "	5.50	2.63	52.00	20 x 24..... 6.30
For 20 x 24.....	28 " " "	6.50	3.00	59.00	

### HOLDERS FOR VIEW CAMERAS.

#### The Daisy Dry Plate Holders.

For Scovill Cameras.

The Daisy Holder opens like a book when the Dry Plates are being put into or taken out of it, and is so arranged that light cannot penetrate through from one side to the other.

Size	Price	Size	Price
3 1/4 x 4 1/4.....	\$ 1.75	8x10.....	\$ 6.00
4 x 5.....	2.00	10x12.....	8.00
4 1/4 x 5 1/2.....	2.10	11x14.....	10.00
4 1/4 x 6 1/2.....	2.25	14x17.....	12.50
5 x 7.....	2.35	17x20.....	15.50
5 x 8.....	2.50	18x22.....	18.00
6 1/2 x 8 1/2.....	4.20	20x24.....	26.00

A trial of our lenses will convince you of their merits.

Box, Folding, Magazine, Panoramic, Film or Plate Cameras at Golsen's.

#### Scovill's Light Weight Holders.

For Scovill Cameras.

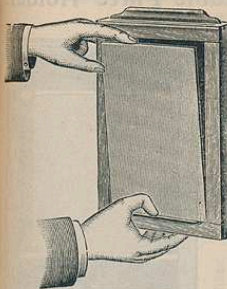
The Light Weight Holders are made with a solid frame so they will not come apart, leak light or warp.

Up to 11x14 size, these holders can be had with registering or rubber slides as preferred. Above 11x14 with wood or rubber slide only.

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

Size	Price	Size	Price
3 1/4 x 4 1/4.....	\$ 1.10	8x10.....	\$ 2.00
4 x 5.....	1.25	10x12.....	3.00
4 1/4 x 5 1/2.....	1.25	11x14.....	4.00
4 1/4 x 6 1/2.....	1.30	14x17.....	6.00
5 x 7.....	1.30	17x20.....	9.00
5 x 8.....	1.40	18x22.....	12.00
6 1/2 x 8 1/2.....	1.70	20x24.....	15.00

### The Perfection Holder.



To load the Perfection Holder, rest the end of the 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, and by pressing on the spring-bar the plate will fall forward, the edge resting against the fingers.

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.

#### PRICES.

3 1/4 x 4 1/4.....	\$1.00	5 x 7.....	\$1.15	8x10.....	\$1.85
4 x 5.....	1.00	5 x 8.....	1.30	10x12.....	3.00
4 1/4 x 6 1/2.....	1.15	6 1/2 x 8 1/2.....	1.60	11x14.....	4.00

The 11x14 Perfection Holders have rubber slides.

### Premo Plate Holders.

The Premo holder is built on the same principle as the Perfection; it is, in fact, the Perfection Junior—being slightly smaller. The advantages of the Premo holder rest in its simplicity, its patented spring bar device for reloading, and the absolutely light-tight character of the shutter. No holder on the market possesses points of merit in anything like the degree that they are found in the Premo. The spring bar reloading device has never been approached for simplicity and effectiveness. All Premo holders bear the name "Premo" embossed on the septum and no holder is a Premo unless it is so marked. To load, rest the end of plate against the spring bar at the end; by simply pressing bar with the thumb the plate falls into place. To unload, gently press the spring bar, and the plate is dislodged, resting against the fingers, when it may be taken from the holder. All Premo holders are fitted with rubber slides.



### Rochester Plate Holder.

This is a good, serviceable holder at a popular price. It is made of the best seasoned cherry, with slides of best black press-board. The same care and accuracy are exercised in its manufacture as in the more highly priced holders. It is compact, neat and simple in manipulation, and made to fit either the Premo or Cyclone cameras.

3 1/4 x 4 1/4.....	4 x 5.....	5 x 7.....
\$ .60	\$ .60	\$ .80

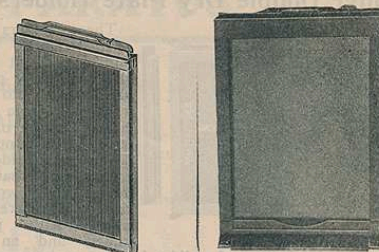
### Premo Film Holders.

These holders are made on the same general plan as the regular plate holders and with the same care. They are made to interchange with the plate holder when desired. Premo film holders are fitted with cardboard slides and never fail to give satisfaction.

3 1/4 x 4 1/4.....	4 x 5.....	5 x 7.....	6 1/2 x 8 1/2.....	8 x 10.....
\$1.00	\$1.00	\$1.25	\$1.75	\$2.00

We handle the Best Goods and guarantee Every Article sold.

### Poco Plate Holders. With Hinged End.



The Poco Holder is absolutely light-tight and very durable. In operation the Poco Holder is simplicity itself. There are no springs or other devices to get out of order. The operation is quickly and easily performed. Simply lay the plate in the holder and insert the slide. To remove, draw the slide and pick out the plate.

Poco Holders are made of selected cherry, are small, light, neat and perfect in every detail, and are adapted to any of the Poco Cameras. Every Poco Plate Holder has the word "Poco" stamped on the septum.

3 1/4 x 4 1/4.....	4 x 5.....	5 x 7.....	6 1/2 x 8 1/2.....	8 x 10.....	
With hard rubber sides, each,	\$1.00	\$1.00	\$1.25	\$1.75	\$2.00

### English Book Holder.



This is the regular English form of holder, and 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 works most satisfactorily in the dark room.

Size	Price
11x14, with rubber slides.....	\$ 6.00
14x17, " " ".....	7.50
17x20, " " ".....	9.00
18x22, " " ".....	12.00
20x24, " " ".....	15.00
11x14, with press-board slides.....	5.00
14x17, " " ".....	6.50
17x20, " " ".....	8.00
18x22, " " ".....	10.00
20x24, " " ".....	12.00

### Korona Plate Holder.

PRICE.

Fitted with hard rubber slides.

4 x 5.....	5 x 7.....	6 1/2 x 8 1/2.....	8 x 10.....	10 x 12.....	11 x 14.....
\$1.00	\$1.25	\$1.60	\$2.00	\$3.00	\$5.00

All genuine Korona Plate Holders have the name stamped on the septum.

IMPORTANT.

When ordering, specify if holder is wanted to fit 1902 Korona. 1902 plate holders are stamped with the date and will not fit cameras made previous to this year. It is not necessary to state series of camera as we make but one style of holder.

### Century Plate Holders.

See all sizes listed under the respective size cameras.

### Holders for R. J. G.

#### Long Focus View Cameras.

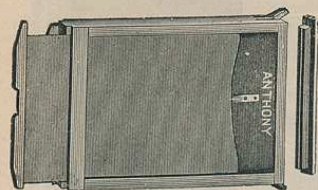
All sizes listed under the respective size cameras.

#### Imperial Double Plate Holders.

All sizes listed under the respective size cameras.



### Anthony's Patent Zephyr Double Dry Plate Holders.



These holders are of extremely light and convenient construction. The plates are placed into and removed from the holder at one of the ends, which is opened by pressing aside the metal band that secures the wooden cover. They are provided with paper slides, and an ingenious device for holding the slides in place and preventing their being accidentally drawn out when the holder contains plates.

Size	Price
4 x 5	\$1.20
4 1/4 x 6 1/2	1.25
5 x 7	1.25
5 x 8	1.35
6 1/2 x 8 1/2	1.60
8 x 10	1.85
10 x 12	3.00
11 x 14	4.50
14 x 17	6.00

With Hard Rubber Slides

### Phantom Holders.

Are the same as Zephyr Holders, but with hard rubber slides.

Size	Price	Size	Price
4 1/4 x 6 1/2	\$1.50	6 1/2 x 8 1/2	\$1.85
5 x 7	1.50	8 x 10	2.10
5 x 8	1.60		

### Ascot Holders.

These holders are similar to Zephyr and Phantom Holders, but of even lighter weight and greater compactness. They are, nevertheless, strong and serviceable, are fitted with hard rubber slides, and are excellently adapted for use with Premo and Poco Cameras.

Size	Price	Size	Price
4x5	\$1.00	5x7	\$1.25

### Rochester Adjustable Holder.



This plate holder fits all the leading cameras on the market, and at the same time successfully holds dry plates of a smaller size than that of the holder. It automatically centers any size of plate that is used in the holder, and in weight, size and general appearance is identically the same as the holders made for your camera. There are no loose or detachable parts to be continually out of order or lost.

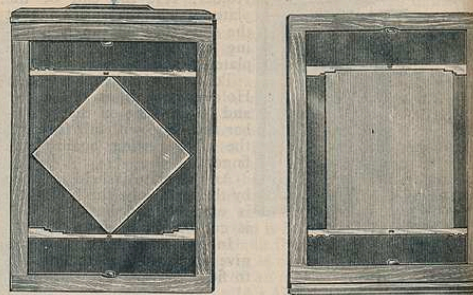
Following are the different-sized plates that may be used in these holders:

In 4x5 holder: 4x5, 3 1/4 x 4 1/4, 3 1/2 x 3 1/2	Price, \$1.00
In 5x7 holder: 5x7, 4 1/4 x 6 1/2, 4x5, 4x4	Price, 1.25

A trial of our lenses will convince you of their merits.

Every Ground we sell is Guaranteed satisfactory.

### Warnica Self-Adjustable Plate Holder



This plate holder is supplied for all styles of camera and at the same time successfully holds dry plates of a smaller size than the holder without the necessity of a kit. It automatically centers any size of plate that is used in the holder. The Warnica holder adapts the camera to the use of any size plate and materially increases the range of the instrument.

When ordering state name of holder in use, and style camera.

Size	Price	Size	Price
4x5	\$1.25	6 1/2 x 8 1/2	\$1.35
5x7	1.50	8 x 10	2.25

### Kits for Plate Holders.

For any View Plate Holder.

Kits are made for holding small plates in large plate holders. They fit in the holder the same as an ordinary plate, the opening in the center holding the smaller plate by means of a button. Kits are invaluable in many instances and no photographic outfit is complete without them.



Outside	Size Opening for Plate	Price
4 x 5	3 1/4 x 4 1/4 or 3 1/2 x 4	each, \$0.25
5 x 7	4 x 5 or 4 1/4 x 6 1/2	each, .25
5 x 8	3 3/4 x 4 3/4, 4 x 5 or 4 1/4 x 6 1/2	each, .25
6 1/2 x 8 1/2	3 3/4 x 4 3/4, 4 x 5, 5x7 or 5x8	each, .35
8 x 10	5 x 7, 5 x 8 or 6 1/2 x 8 1/2	each, .45
10 x 12	6 1/2 x 8 1/2 or 8 x 10	each, .45
11 x 14	8 x 10 or 10 x 12	each, .55
14 x 17	8 x 10, 10 x 12 or 11 x 14	each, .75
16 x 20	11 x 14	each, .85
20 x 24	16 x 20 or 17 x 20	each, 1.10

### Holder Slides.

Both in hard rubber and black press-board, fitting any style of our regular dry plate holders. In ordering slides specify if for Premo, Rochester or Cyclone holders.

Hard rubber, each	.25	.25	.30	.50	.65	\$1.00
Press-board, each	.15	.15	.20	.30	.40	.50

High quality paper, lowest prices, and we pay the express.

## PARTS OF APPARATUS

For Caps, Diaphragms and Flanges for Lenses, see page 45 this Catalogue.

### Extra Parts of Apparatus

For Anthony, Scovill and A. O. Co.'s Portrait and View Cameras.

Including Slides for holders and Front Boards, Tripod Screws and Bellows for Cameras.

Dimensions Inches	Wood Slides for Holders.	Wood Slides for Reaster Holders	Front Boards for View Portrait Cameras	Rubber Bellows for Clinax Portrait Cameras	Press Board Slides for Dbl. Holders	Rubber Slides for Double D. P. Holders	Front Boards for View Outfits	Straight Rubber Bellows for View Plate Outfits	Cone Rubber Bellows for Back Cameras	Steno Partitions for View Cameras	Tripod Screws for Cameras
3 1/4 x 4 1/4	.....	.....	.....	.....	\$0 10	\$0 15	.....	\$1 00	.....	.....	\$0 25
4 x 5	.....	.....	.....	.....	10	20	\$0 20	1 25	\$2 25	.....	25
4 1/4 x 5 1/2	.....	.....	\$0 50	\$2 00	.....	.....	.....	.....	.....	.....	.....
4 1/4 x 6 1/2	.....	.....	.....	.....	15	25	20	1 35	2 75	.....	25
5 x 7	.....	.....	.....	.....	15	30	20	1 50	3 25	.....	25
5 x 8	.....	.....	.....	.....	15	30	20	1 50	3 25	\$0 20	25
6 1/2 x 8 1/2	.....	.....	.....	.....	20	40	45	2 00	3 75	30	25
8 x 10	.....	\$0 70	80	6 00	20	50	45	2 50	4 50	30	25
10 x 12	\$0 75	1 25	80	8 00	35	1 00	.....	.....	5 50	.....	50
11 x 14	1 15	1 60	80	10 00	45	1 30	.....	.....	7 75	.....	50
14 x 17	1 35	2 00	1 00	12 00	75	2 25	.....	.....	11 00	.....	50
17 x 20	1 60	2 50	1 25	15 00	.....	.....	.....	.....	.....	.....	.....
18 x 22	2 00	2 75	1 25	18 00	.....	.....	.....	.....	.....	.....	.....
20 x 24	.....	3 25	1 25	24 00	.....	.....	.....	.....	.....	.....	.....
22 x 27	.....	3 50	1 25	32 00	.....	.....	.....	.....	.....	.....	.....
25 x 30	.....	4 00	1 25	40 00	.....	.....	.....	.....	.....	.....	.....

### Kits or Inside Frames for Wet Plate Holders

To Hold Plate	Fits in Shield	Patented Glass Corners	Rabbeted for Ferrotypes
1 1/2	1/4	\$0.50	.....
1 1/2	1/2	.60	.....
1 1/2	1/2	.65	\$0.25
1 1/2	5x 7	.....	.30
4 1/2 x 6 1/2	4 1/4	.75	.30
5 x 7	4 1/4	.75	.35
4 1/4 x 6 1/2	8x10	.90	.35
5 x 7	7x10	.....	.30
5 x 7	8x10	.90	.35
5 x 8	8x10	.90	.....
6 1/2 x 8 1/2	8x10	1.00	.35
7 x 10	11x14	.....	.60
8 x 10	10x12	1.10	.55
8 x 10	11x14	1.20	.60
10 x 12	14x17	1.60	.75
11 x 14	14x17	1.60	.75
14 x 17	17x20	1.80	1.00
17 x 20	20x24	2.25	1.25

### Rabbeted Inside Kits.

For Wet and Dry Plate Portrait Holders.

Consist of thin wooden frames made to fit in the holder, and with rabbets for holding smaller plate. Will fit in holder or kit next size larger.

Size	Each	Size	Each
4 x 5	\$0.28	6 1/2 x 8 1/2	\$0.34
4 1/2 x 5 1/2	.29	8 x 10	.40
4 1/2 x 6 1/2	.30	10 x 12	.60
5 x 7	.31	11 x 14	.66
5 x 8	.32	14 x 17	.80

When ordering, please specify whether rabbeted kits are wanted for wet or dry plates, on account of difference in thickness.

### Diaphragms and Blocks

For Portrait or Ferrotypes Cameras.

These wood diaphragms and wood blocks are quoted for special cameras but the price will apply for other makes of cameras of similar construction.

Diaphragms	Blocks for Lenses	
For 1/4 New York Gem Camera.....	\$0.90	\$1.35
" 1/4 Gem Camera.....	.90	1.35
" 1/4 ".....	.90	1.35
" 1/4 ".....	.90	1.35
" 4 1/4 ".....	1.80	1.80
" 4 1/4 Imperial Camera.....	1.35	1.80
" 8x10 ".....	1.35	1.80
" 10x12 ".....	1.80	1.80
" 8x10 Multiplying Camera.....	9.00	1.80
" 5x7 Victoria Camera.....	2.70	1.80
" Cincinnati Cameras.....	2.00	1.80

### Front Boards.

Made of Hardwood.

For R. J. G., Nelson, Anderson or similar Portrait and View Cameras for which specific quotations are not made in these lists.

5x5, Polished.....	\$0.60	Plain finish.....	\$0.50
6x 6, ".....	.70	" ".....	.55
7x 7, ".....	.75	" ".....	.65
8x 8, ".....	.90	" ".....	.75
9x 9, ".....	1.25	" ".....	1.00
10x10, ".....	1.50	" ".....	1.20
12x12, ".....	2.25	" ".....	1.75

In ordering Front Board, specify whether for View or Portrait Cameras.

Ralph J. Golsen gives the best value for your money.

The great King Bee Portrait Outfits fully described in this Catalogue.



India Rubber Bellows

For R. J. G., Nelson or Anderson Portrait Cameras or Copying Cameras or Cameras of other makes of similar construction, also for View Cameras of same or similar make.

Table with 3 columns: Size, For Portrait Cameras, Copying Cameras. Rows include sizes like 6 1/2 x 8 1/2, 8 x 10, 10 x 12, etc.

Bellows for Telescopic Bed Cameras cost 50 per cent more.

Leather Bellows.

For Century, Premo, Poco and other folding Cameras, also for the various long focus and compact view cameras listed in this catalogue.

Where price is quoted on a specific camera, the same price applies also to other cameras of same size and similar construction of approximately the same focal capacity.

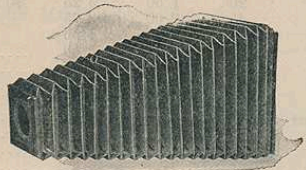


Table listing various camera models and their prices, including Folding or Pony Premos, Pony Premo No. 6, Long Focus Premo, and Empire State Cameras.

We can supply any lens of any series, of any size.

Canvas Carrying Cases.

Table with 3 columns: Size, Canvas Case for Camera and Two Holders, Long Canvas Case for Camera Six Holders and Tripod. Rows include sizes like 3 1/4 x 4 1/4, 4 x 5, 4 1/4 x 6 1/2, etc.

"R. J. G." Sole Leather Carrying Case

Our line of Carrying Cases for all makes of Camera is of superior quality. They are made of the finest leather and are hand-made and sewn.

The prices of the various sizes of carrying cases for the Weno Hawk-Eye Film Cameras, Imperial, Premo, Poco and Century Folding Hand Cameras are listed under the respective cameras quoted. When ordering from this list, mention "R. J. G. Sole Leather Carrying Cases," and if not for a specific camera as numbered in this list please give outside dimensions of your camera when folded.

Table listing various camera models and their prices, including Pocket Kodak, Folding Pocket Kodak, Bull's Eye No. 2, and Cartridge Kodak.

Focusing or Adjusting Screws.

For Portrait Cameras or old style View Cameras Not Lever Pattern.

Table with 2 columns: Camera, Price. Rows include sizes like 1/4 Camera, 4 1/2 Camera, 1/2 Camera, etc.

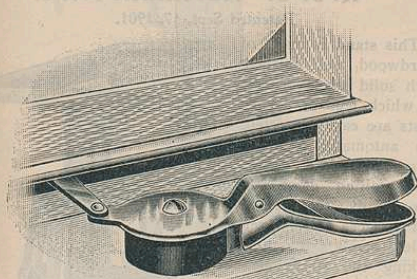
Nelson Lever Focus or Lever Spring for Penny Camera or Portrait Cameras, any size up to 25x30. Made of brass, each.....\$2.00

Do not overlook our Special Portrait Lenses.

The Self-Locking Lever.

Applied to the "Lever Focus" and "Lever Swings."

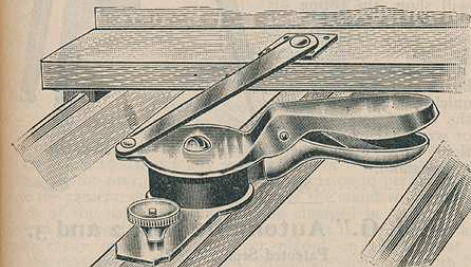
The "Self-Locking Focus Lever" for focusing, and the "Lever" operating the swings, allow the finest adjustment of focus. They automatically lock whenever released, requiring the use of only one hand to operate and set them, and avoiding the use of set screws heretofore necessary.



Patented.

This cut illustrates the Self-Locking Lever Swings.

Made of steel, each.....\$2.00



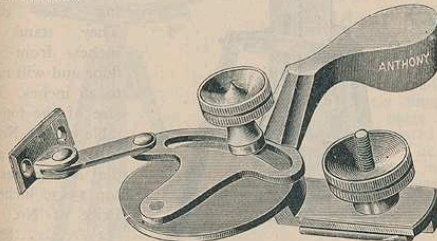
Patented.

This cut illustrates the Self-Locking Focus Lever.

Made of steel, price complete.....\$3.00

A. O. Co. Focusing Lever.

Strong; well made; brass. Permits adjustments with greatest ease.



This lever renders perfect adjustment of focus easy. A general focus obtained in the ordinary way, and by slight pressure on the lever may be reduced to microscopic sharpness.

Table with 2 columns: Size, Price. Rows include sizes like 8x10 Cameras, 11x14, 14x17, etc.

Holder Slides.

Both in hard rubber and black press-board, fitting any style of regular Poco, Premo and similar dry plate holders. In ordering slides, specify for which holders.

Table with 2 columns: Holder Type, Price. Rows include Hard Rubber, Press-board, etc.

Miscellaneous Supplies.

For Premo, Poco, Century, Imperial and other Folding Hand Cameras; also for View Cameras manufactured by the Rochester Optical & Camera Co., and others of similar construction.

Table listing various camera accessories and their prices, including View Finder, Tops for Tripod, Screws for Tripod, Lens Boards, etc.

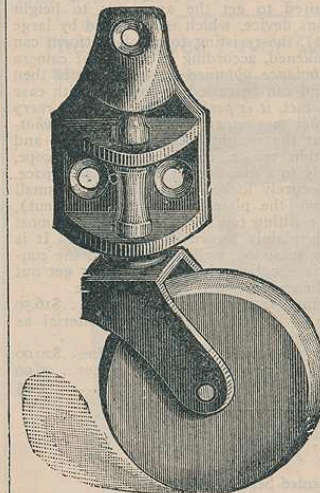
Magic Caster.

For Backgrounds, Camera Stands, Screens, Etc.

The best caster ever produced for studio purposes, for which it was especially invented.

The wheel is of wood, 3 inches in diameter, and does not drop out when raised from the floor.

Price, per set of four.....\$1.00



Order your paper from us—we prepay the express.



# CAMERA STANDS

## Wizard Automatic Stand.



This is the Stand which goes with the Wizard Outfit.

With this there isn't a constant screwing, winding, pushing, jerking, etc., required to get the apparatus to height wanted. By an ingenious device, which is regulated by large wheel at front (see cut), the resisting force of platform can be strengthened, or weakened, according to weight of camera in use, and a perfect balance obtained at once. It is then under perfect control and can be raised or lowered with ease by operator at will. In fact, it is perfectly automatic in every sense of the word. Either movement requires no effort whatever for the reason that the weight is counterbalanced, and almost any weight within reason comes within the scope, and resolves itself merely to a question of available top space. It can be readily and securely locked at any height by small lever at right just above the plate holder rack (see cut), and the arrangement for tilting top is of the latest and most convenient pattern, as is plainly shown in illustration. It is made of ash, thoroughly seasoned, well finished, and the construction of the whole is simplicity itself. It cannot get out of order, and with ordinary care will last a lifetime.

No. 7. Price for 8x10 and 11x14 or smaller cameras... \$16.50  
Made in the same style and of the same material as No. 7, but to support larger cameras  
No. 8, for cameras 14x17 and smaller, top 21x43 inches... \$20.00  
No. 9, for cameras 20x24 and smaller, top 21x50 inches... 26.00  
Trough for holding 12 5-7 holders, extra... 2.25

## "R. J. G." Automatic No. 0.

Patented Sept. 17, 1901.

The illustration of No. 1 R. J. G. Automatic Stand answers for the No. 0, as the construction is the same, the only difference being that it is lighter and top is slightly smaller.

Made of hardwood, well finished, with tilting table and automatic lock by which table is raised or lowered. Top, 11x19 inches. Can be taken apart and set up without tools.

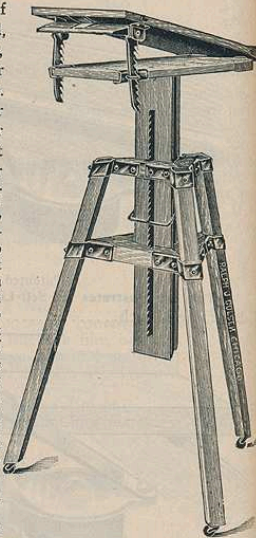
Price.....\$3.50

## "R. J. G." Automatic No. 1.

Patented Sept. 17, 1901.

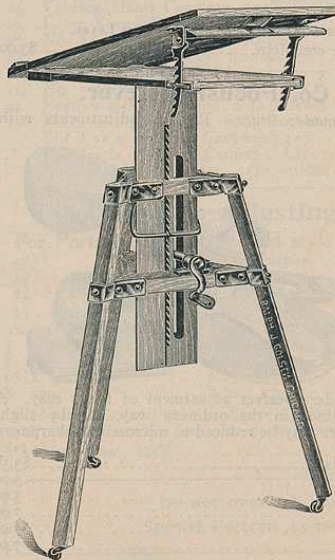
This stand is made of hardwood, well finished, with solid steel corners, in which legs or corner posts are easily inserted. An automatic lock or stop holds the center from falling down. It also binds the center and upper and lower table firmly together, making the stand perfectly rigid. It has a top or table 11x21 inches. It stands 31 inches from the floor at lowest, and 48 inches when raised to its full height. As cut will show, the tilting of the table is very simple and easily worked by one or both hands. It is shipped K. D. in boxes and can easily and quickly be set up without the use of screw-drivers or wrenches. Full directions are given with every stand.

Price .....\$5.00



## "R. J. G." Automatic Nos. 2 and 3.

Patented Sept. 17, 1901.

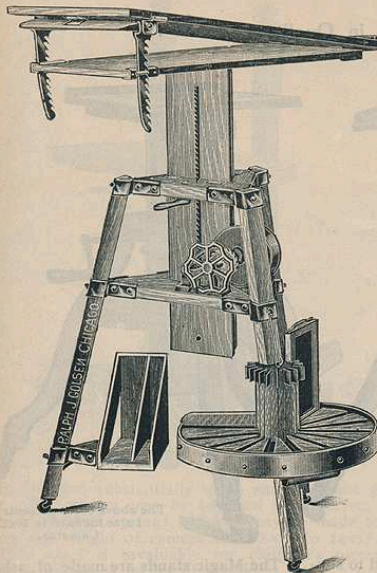


These stands are made on the same principle as the No. 1 except being larger and with a device for raising and lowering (see cut). They stand 30 inches from the floor and will raise to 46 inches. The size of the top or table of the No. 2 is 14x22 inches and the No. 3 has a top 15x30 inches.

Price of No. 2 .....\$8.00

Price of No. 3 with plain rack for holder and G. G. frame as shown in illustration of stand No. 4.....10.00

## "R. J. G." Automatic No. 4.



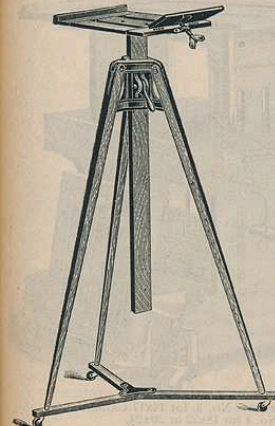
Patented Sept. 17, 1901.

Showing No. 4, with Plain and Circular Rack attached.

This stand has the automatic balancing device that can be regulated to balance any weight camera from 10x12 down. The operator may, after setting the regulator to perfectly balance the camera, quickly raise or lower the stand with a gentle touch of the hand. It can then be clamped in any position desired by simply turning the lever. This is the quickest and most easily operated stand ever placed on the market as all the movements can be made instantaneously and with but little effort. The top of the stand is paneled and measures 17x32 inches. It may be lowered to 30 inches from the floor or raised to 48 inches, and can be put up and taken apart without the use of any tools whatever.

Price with plain rack for holder and G. G. Frame.....\$13.50  
Price with plain and circular rack for 12 5x7 holders... 16.50

## The Ideal No. 1 Camera Stand.

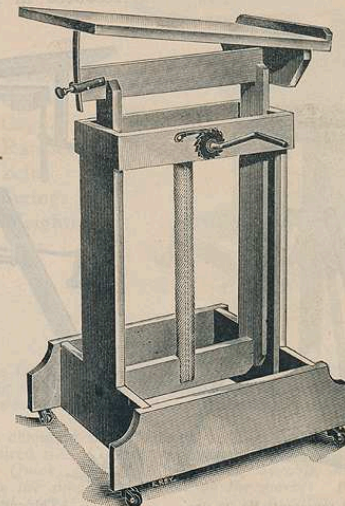


This stand is made of ash and finely finished. The metal parts are either nickel-plated or aluminized. The top measures 14 1/2 x 16 inches and is tilted by means of a worm-screw made of metal, which is superior to any attachment heretofore used for this purpose. Another original feature of this stand is that it has the new eccentric lever clamping device. By its use the stand is clamped tighter than by a screw, and is done in half the time.

Price .....\$3.00

## Junior Camera Stand.

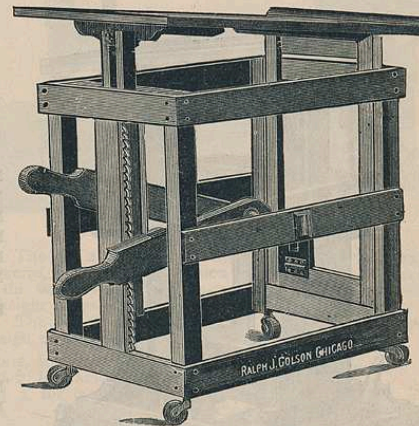
This is one of the very simplest stands on the market. Made of hardwood—ash. Varnish finish.



As shown by cut, this stand is constructed on simple principles—this recommends it. The platform is 14x24 in., stand lowers to 2 ft. 9 in., raises to 4 ft. The platform has a back incline of 1 in. and elevation of 5 in.; these adjustments are extremely simple. Stand is raised and lowered by an iron ratchet in connection with a webbing band. Has a locking device to make stand rigid at any elevation. Has four ball-bearing casters.

Price .....\$5.00

## The Improved Lever Camera Stand.



This Stand has been improved so it can be raised as high as an ordinary Camera Stand. It has large casters, which don't drop out of the sockets when lifted from the floor.

No. 12, for cameras 8x10 and smaller, price.....\$ 9.50  
No. 13, for cameras 14x17 and smaller, price..... 12.00  
No. 14, for cameras 18x22 and smaller, price..... 18.00

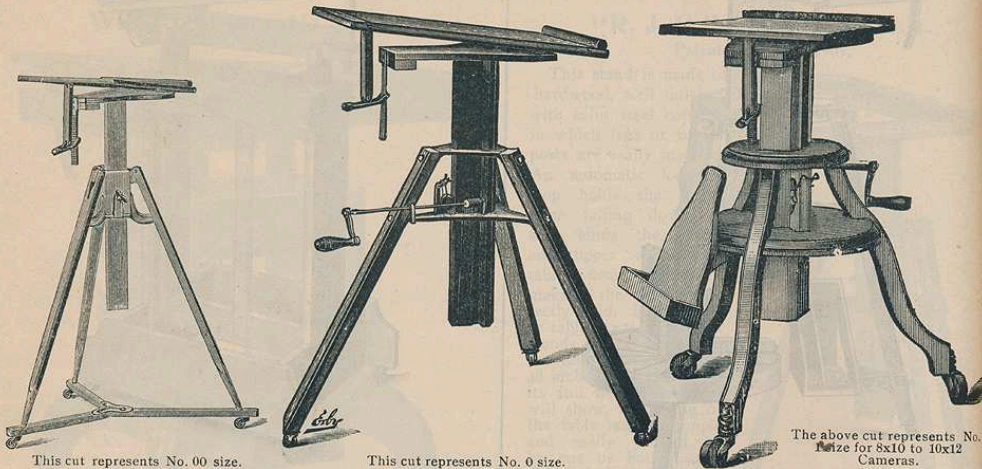
Order some of those Studio Accessories in this Catalogue.

Prompt Correspondence—Prompt Shipment—two Essential Factors we meet fully.



The Magic Camera Stands.

Reduced in Price.—Improved in Quality.

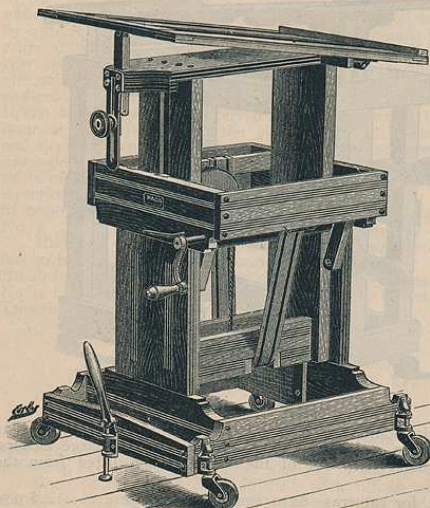


The above cut represents No. 0 size for 8x10 to 10x12 Cameras.

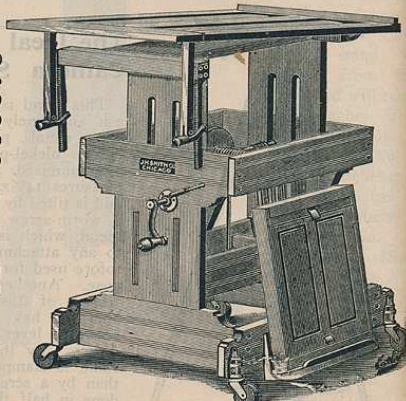
Strongly made, can be raised and lowered easily and quickly. Just the thing when you are traveling or making portraits at home. Knocks down for shipment and can be quickly and easily set up.

The No. 0 Camera Stand is designed to supply the universal demand for a good, substantial and convenient stand for cameras 8x10 or smaller at a very low price. The frame is built of ash wood and iron. The elevation of the camera is accomplished by winding a belt on a shaft, and the upright central shaft is held at any height by a patent automatic roller stop. These stands all shipped "knocked down," can be set up quickly.

The Magic stands are made of ash, and are provided with patent shaft and belt system of elevating the camera. A patent roller stop stops the camera automatically at any desired height. Nos. 2, 3 and 4 are provided with automatic coil spring, which bear the greater part of the weight of the camera, so that the use of heavy weights is done away with.



This cut represents No. 2, for 11x14 and smaller.



This cut represents No. 3, for 14x17 Camera, and No. 4 for 18x22 or 20x24.

PRICE.

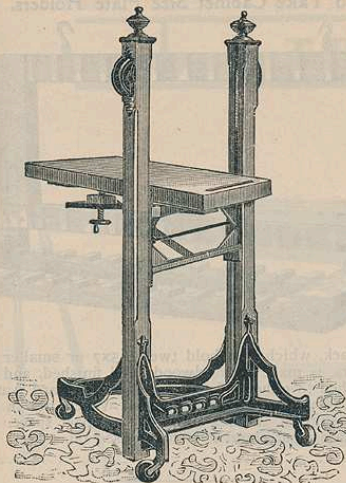
- No. 00...\$ 3.00
- No. 0... 6.75
- No. 1... 9.00
- No. 2... 12.00
- No. 3... 16.00
- No. 4... 20.00

Extra Quality.

- Golden oak finish.
- No. 2...\$16.00
- No. 3... 20 00

C. O. D. Orders should be accompanied with a Cash Remittance sufficient to Cover Express Charges.

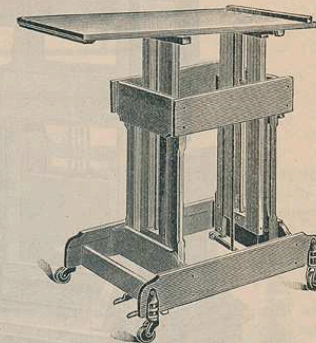
The Semi-Centennial Camera Stand.



Is well and substantially made and does not get out of order. The camera may be adjusted with perfect ease, and by the use of coil springs and key may be made to counter-balance any weight of camera from 8x10 to 14x17 inclusive. This stand is invaluable for children's pictures, as it lowers to within 13 inches of the floor. Price, complete.....\$25.00

The Globe Camera Stand No. 1.

It is a Wonder—A Surprise to All.

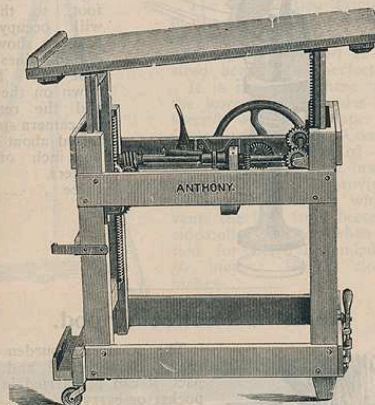


Patent Applied For.

The top of stand acts as a lever, raising either end and lowering same by releasing pedals at rear on base of stand. Lowest elevation 27 inches and highest 47 inches from floor.

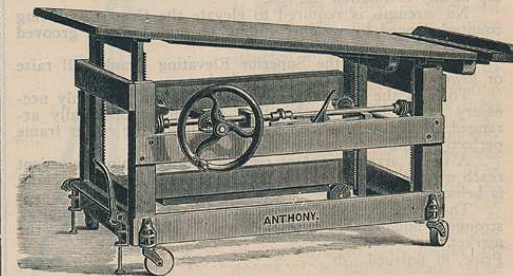
No changing from focusing position to adjust camera to any desired tilt. Clamps automatically when raising or lowering. Quick, easy, neat, practical, durable, and without question the simplest and best on the market. For cameras 8x10 and 11x14. Price, Plain Oak Finish.....\$16.50 Price, Golden Oak or Imitation Mahogany..... 18.50 Price, Genuine Mahogany..... 25.00

The "New York" Camera Stand.



No. 1.

Is at once the most useful and compact camera stand on the market. The mechanism is of the simplest kind, and is directly under the control of the operator. No bands, no weights, no set screws. The wheel, being at the side, is always handy. By the simple moving of a lever the gearing is so changed that the same wheel that elevates the stand also tilts the top. By the foot the rear caster may be thrown out of action, leaving the stand absolutely rigid and immovable.



No. 2.

The No. 2 "New York" Stand is designed to carry larger cameras, and has an extension top. The general mechanism is the same as in the No. 1, and the top may be lowered to a height of only 21 in. It is the ideal studio stand.

The No. 3 is for still larger cameras, and of the same design as the No. 2.

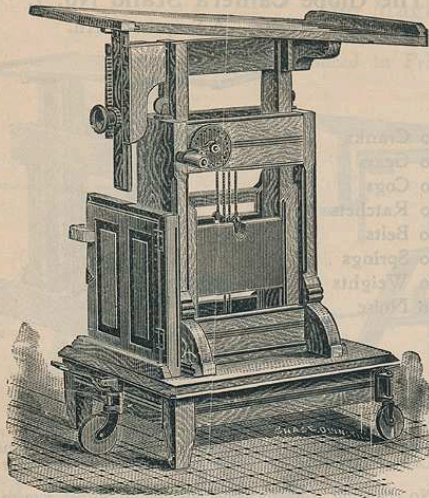
- No. 1, for cameras up to 11x14.....\$18.50
- No. 2, for cameras up to 20x24..... 26.50
- No. 3, for larger sizes..... 38.00

Quality is paramount in all of our productions, and in no instance can the same quality of goods be purchased for less money.

Catalogue of Complete Line of Korona Cameras mailed on Application.



**Bonanza Camera Stand.**



Warranted Satisfactory.

Especially designed for 8x10 cameras and smaller. Is, without exception, the best medium-priced stand ever invented. Neatest, nicest, simplest, handiest, most compact. Made of ash—sensibly constructed and beautifully finished.

It supplies every existing advantage in an apparatus of its kind and is superior in all desirable features to any of the old shaky, three-legged style of stands now in the market. Has no projecting legs. Is neat in outline. Stands perfectly solid. Is steady, strong and convenient, and eminently practical in every respect. Easily managed—quickly adjusted.

One-quarter turn of the Tilting Knob solidly locks the top at any inclination desired.

No strength is required to elevate the Camera, it being counterbalanced by weights sliding up and down in grooved guides.

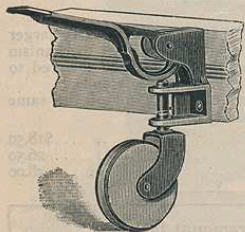
Three turns of the Superior Elevating Crank will raise or lower height of bed fourteen inches.

To hold the bed at any desired elevation it is only necessary to let loose the handle. A stop, automatically arranged, instantly catches in a dial and holds the center frame perfectly rigid.

A novel arrangement at rear of stand, within convenient reach of the operator, safely holds the shield while the stand is being moved.

The castor used is the latest and by long odds the simplest, strongest and easiest working wood wheel castor in the market.

Price, in finished ash.....\$15.00



**Gem City Lever Caster.**

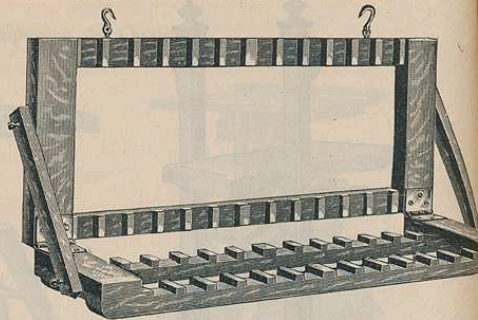
The cut represents the principal of the ingenious contrivance.

Price, each .....\$1.00

**Magic Casters.**

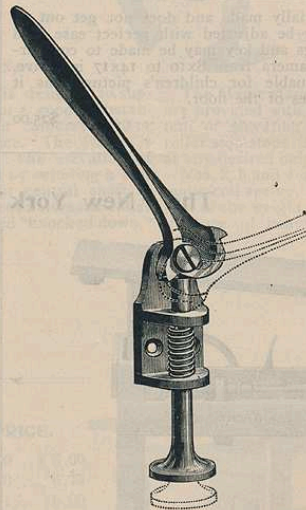
Per set of four .....\$1.00  
For illustration, see page 113.

**Folding Rack No. 61.  
To Take Cabinet Size Plate Holders.**



This rack, which will hold twelve 5x7 or smaller double plate-holders, is made of hardwood, well finished, and can be easily attached to either side of any of the Wizard Automatic or R. J. G. Automatic camera stands. When not in use or when being shipped, it folds into very compact space. When ordering, state what stand it is to be used on.

Price .....\$2.25

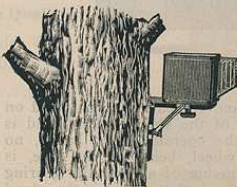


**The Magic Camera Stand Jack.**

By pushing the upper arm to the right with the foot, so that it will occupy the position shown by dotted lines, the foot is forced down on the floor and the rear of the camera stand is raised about 3/4 of an inch off its casters.

Price .....\$0.50

**Mohawk Pocket Tripod.**



which is always in place and can never be lost.

Maple Finish, \$1.50.

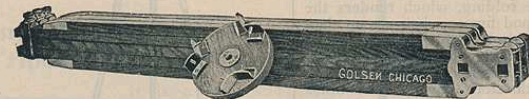
The amateur's burden made easy. Being small and compact, it can be carried in your pocket or carrying case.

It can be attached for immediate use to a tree, chair, post or fence and adjusted to any angle desired.

For indoor use a spring clamp is supplied for attachment to the back of an ordinary chair. Each tripod is supplied with new patent tripod screw,

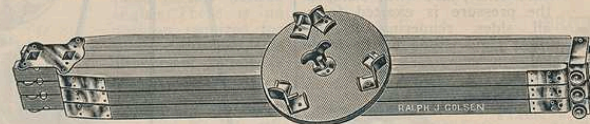
**TRIPODS.**

**"R. J. G." Combination Tripod.  
Combined Folding and Sliding.**



The wooden parts are capped with nicked brass in such a way as to give greater strength than those of other makes.

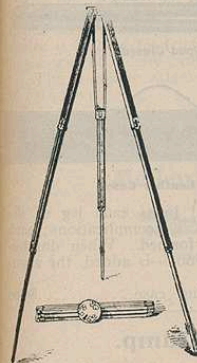
Price, No. 2, for 6 1/2 x 8 1/2 camera.....\$3.00.



These tripods are made of selected ash, wooden felt top, metal parts nicked brass, folds in three sections, compact form, strong, rigid.

No. 3, for 8x10 cameras .....\$3.50.

**R. O. Co. Combination Tripod.  
Combined Sliding and Folding.**

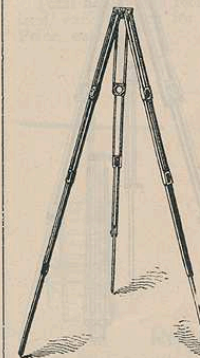


The Combination Tripod is one of the most convenient forms yet devised. It is quickly set up for use, rapidly adjusted at any desired height, and perfectly rigid.

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.

No.	For Camera up to	Weight	Price
2,	Spruce, 5 x 7	1 lb. 6 ozs.....	\$2.50
2,	Ash, 5 x 7	2 lbs. ....	2.50
2 1/2,	Spruce, 6 1/2 x 8 1/2	1 lb. 9 ozs.....	3.00
2 1/2,	Ash, 6 1/2 x 8 1/2	2 lbs. 3 ozs.....	3.00
3,	Ash, 10 x 12	4 lbs. 6 ozs.....	3.50
4,	Ash, 14 x 17	7 lbs. 1 oz. ....	4.50
5,	Ash, 20 x 24	8 lbs. 8 ozs.....	6.00

**The Premo or Poco Tripod.  
Combination Sliding and Folding.**



This tripod is designed especially for use with hand cameras. It is one of the lightest and most compact ever made. It is very rigid, durable, and perfectly constructed in all its parts.

The Premo Tripod is made of three joints. The lower section slides into the second, and these two into the third, while the upper section folds back upon the third. When closed it measures only 16 inches in length. The No. 1 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 4x5 cameras; weight, 15 ounces.....\$4.00  
No. 2, for 5x7 cameras; weight, 1 pound 7 ounces..... 5.00

**Our DISTEMPER BACKGROUNDS,  
the very best inexpensive grounds ever offered  
to the trade.**

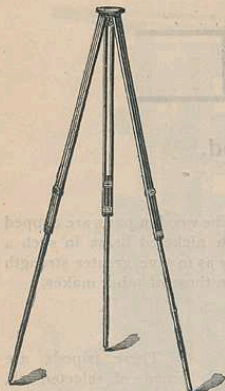
Order your Complete Outfit from Ralph J. Golsen.



**Carlton Sliding Tripod.**

For the professional photographer, this is one of the very best substantial tripods on the market.

This Tripod is especially designed for heavy cameras and hard service. 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.



Showing Tripod Extended.



Showing Tripod Folded.

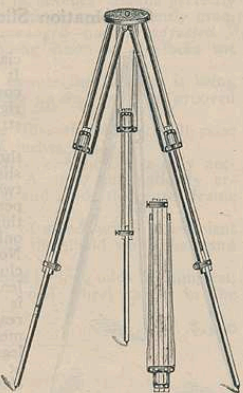
**PRICE.**

No.	Material	Weight	Price
1.	Spruce, for Cameras up to 5x7	1 lb. 15 ozs.	\$2.00
2.	Spruce, for 5x8 and 6 1/2 x 8 1/2	2 lbs. 12 ozs.	2.50
3.	Ash, for 8x10 and 10x12	4 lbs. 15 ozs.	3.00
4.	Ash, for 11x14 and 14x17	7 lbs. 3 ozs.	4.00
5.	Ash, for 17x20 to 20x24	11 lbs.	5.00

**Imperial Combination Tripod.**

These tripods are sliding and folding, made in three sections, with detachable head and locking device, to prevent the legs becoming detached while in use. They fold into a small space, the lower section sliding into the center while the upper section folds back on it. Length extended, 56 inches; folded, 22 inches.

No. 0.	For Cameras up to 5x7	\$2.00
No. 1.	For Cameras up to 5x7, with Imperial Metal Head	2.25
No. 2.	For Cameras up to and including 8x10	3.00



**Imperial Sliding Tripod.**

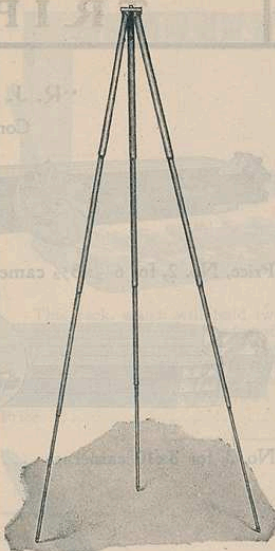
Made of selected wood, so constructed that the lowest sections slide into the upper, and are fastened at the height desired by brass set-screws on the No. 1, and by heavy metal clamps on the larger sizes.

No. 0.	For Cameras up to 4x5	\$1.00
No. 1.	For Cameras 5x7, with Imperial Metal Head	1.50
No. 2.	For Cameras 6 1/2 x 8 1/2	2.50
No. 3.	For Cameras 8x10	3.00

Our MONARCH BACKGROUNDS are the finest productions.

**The Twistlock Tripod.**

The Twistlock Tripod is constructed of nicked steel tubing of very light gauge. In this fact rests its strength. No weight capable of being placed on the tripod when set up will cause it to give. Repeated tests bear out this statement. Steel is stronger than wood or than any combination of wood and metal. When the legs of the Twistlock Tripod are fully extended they are continuous bars of steel. The Twistlock is a most rigid tripod. The legs are made in four joints of diminishing size, which telescope within one another until the tripod is closed, as shown in the illustration. Enclosed in its leather carrying case the Twistlock Tripod makes a very small package.



Tripod Extended.

other tripod having anything like the sustaining power weighs as little. The paramount argument in favor of the Twistlock Tripod is the ease and quickness with which it is manipulated. One operation, that of drawing out the sections and twisting them to the right, extends and locks each leg of the tripod. There are no thumb-screws, no complications; each operation is quickly and surely performed. When durability—for steel will last longer than wood—is added, the argument is complete.

Price, complete with leather carrying case.....\$9.00

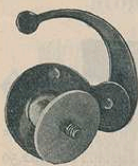


Tripod Closed.



Tripod in Leather Case.

**Cinch Tripod Clamp.**



This is a simple device by which the camera may be attached to a tripod and adjusted instantly. The camera may be tipped to any reasonable angle, either pointing upward or downward, or can be leveled with the aid of the Cinch clamp where the uneven ground would not permit the manipulation of the tripod legs.

Price.....\$ .75

Order your paper from us—we prepay the express.

Have a Camera with you on your "Outing"—it is a great Companion.

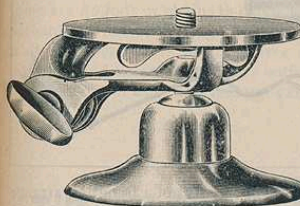
**Bicycle Clamp.**



This Clamp is designed to use as a tripod for wheelmen, adjusting it to the handlebar of the wheel and fitting the camera to it as an ordinary tripod. It is made of brass, nicely nicked. Is adjustable, and will fit any handlebar.

Price .....\$0.75

**Ingento Convertible Tripod Attachment.**



It is a time and money saver. By its use the camera can be tilted to any desired angle. There is no position required for a camera which this attachment cannot secure.

By the use of this adjustment the camera can be instantly changed from a horizontal position to upright, thus giving the ordinary camera the value of a reversible back instrument. It will enable the operator to point his camera upward at any angle so that he can photograph fancy ceilings of halls or churches—an advantage especially to architects or anyone interested in photographing the interior of domes or decorated ceilings, etc.

Again, it is often desirable to point the camera downward when photographing Mosaic flooring, etc., a movement which is easily attained when the Ingento Attachment is used. This attachment is also fitted with a ball and socket joint, which allows the operator to swing the camera to any angle without moving the legs of the tripod. There are no levers or thumb-screws used to clamp this joint, as by an ingenious device it is held by friction, which can be instantly adjusted to the weight of any camera.

The complete attachment is made of metal, handsomely nickel-plated.

Price .....\$1.50

**Mellen's Tripod Stay.**



Detached and folded, 10 inches long.



Attached to Tripod, makes it strog.

The "missing link" to a Photo outfit. No more accidents from slipping, nor from toppling over in the wind, nor from the careless swing of a blundersome foot. Tripod legs cannot collapse when you lift the camera to change position. Stay can be folded within tripod by loosening all but one leg clamp. In slippery places set up the tripod and attach the Stay before camera is secured to top.

Price .....\$0.75

We not only sell you Cameras and Lenses at Low Prices, but Sundries as well.

**The Ideal Eye Rest.**



The Ideal.

It consists of a German plate mirror, neatly framed and attached to a standard by a device admitting of its being placed at any height, any angle or any position, which may be desirable as a point of rest for the eye of sitters, and so that, while sitting they see the reflection of their faces in the mirror, and are thus enabled to assume that expression of the countenance which is most satisfactory to them, as well as to discover and correct any disarrangement of the hair, drapery, etc., etc.

It saves much time and annoyance attending resittings; the expense so saved will in a very short time pay for this instrument.

**PRICES.**

No. 1, fitted with 10x14 Mirror, in 1 1/2-inch plain polished oak Frame	\$5.25
No. 2, fitted with 10 1/2 x 17 Mirror, in 2 1/2-inch carved and polished oak Frame	6.00

**The Globe Eye Rest.**

A necessity in every studio. The block is easily pushed up or down to any desired position and it stays just where it is placed.

Total height is 6 feet, constructed wholly of iron, except block for pictures.

Price, each .....\$1.25



The Globe.

**Background Carrier.**

Can be attached to chair. Adjustable in height.

Price, - - \$1.25



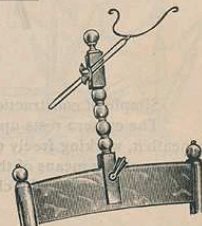
**Reflecting Screen.**

Attached the same as Background Carrier. White muslin reflector. Price, 75 cents.

**Chair Head Rest.**

Attached to chair as in cut.

Price, \$1.00





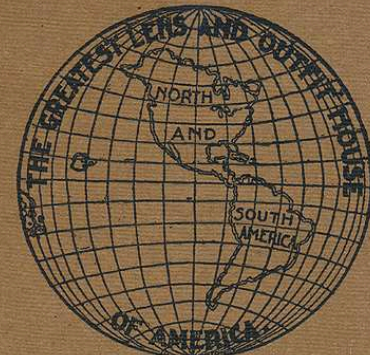
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