

CATALOGUE AND
P R I C E L I S T

...1904...

OF

Photographic
Apparatus

— A N D —

Specialties

M A N U F A C T U R E D B Y

THE FOLMER & SCHWING
MANUFACTURING CO.

No. 407 BROOME ST., NEW YORK, U. S. A.

T E L E P H O N E , 5 9 2 3 S P R I N G

TO OUR CUSTOMERS

To most camera workers GRAFLEX and GRAPHIC CAMERAS require no introduction.

No expense is spared to make the goods, described in the following pages, the best.

How well we have succeeded will be discovered by a careful examination of the numerous features and appointments of GRAFLEX and GRAPHIC CAMERAS and specialties, which have set a standard of excellence not approached by other manufacturers.

TERMS

All prices given are NET. Discounts will be allowed only to regular photographic stock dealers.

Our terms to dealers are, positively, 30 days net, or 2 per cent. off for cash in 10 days from date of invoice.

No charge for boxing or cartage.

Remit by Post-Office Money Order, Express Money Order, Registered Letter or New York Draft.

Where personal checks from strangers are sent, it will delay shipment of goods several days, until check is passed through for collection.

C. O. D. orders must be accompanied with remittance sufficient to cover charges both ways.

For amounts under \$1.00, one or two cent postage stamps may be sent.

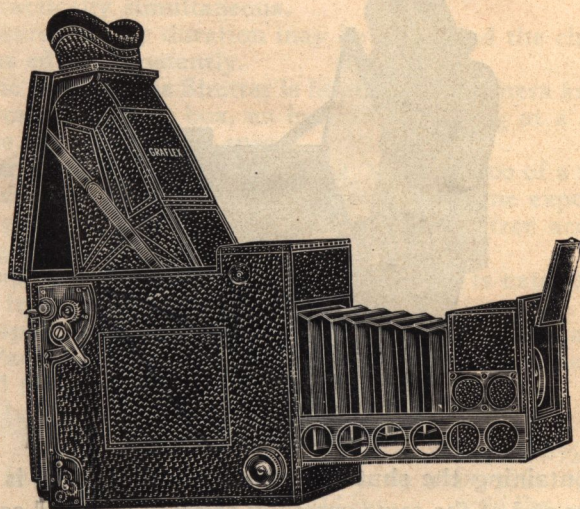
We pack with the utmost care, but cannot be responsible for breakage in transportation.

Give full shipping directions in every case.

THE FOLMER & SCHWING MFG. CO.

The Graflex Camera

Folmer's Patents, November 5th, 1901; Aug. 5th and December 16th, 1902



The Graflex Camera is designed with especial reference to the photographing of rapidly moving objects and such views as require to be seen full scale upon the focusing screen up to the very instant of exposure.

It is equally valuable for the slowest movement and stationary objects, as it entirely does away with the estimating of distance and leaves the operator free to focus on the mirror with the certainty that the plate will be in the same focus.

It is strong and simple in construction and precise in every movement. The view, recorded upon the plate or film, is exactly the same in size and position as it appears on the focusing screen when the shutter is released.

This camera is self-contained, having no loose parts to be adjusted, and is ready for use the moment it is opened.

It is constructed of the finest quality of specially selected, straight grained mahogany and all corners are lock jointed and doubly reinforced with cross-wise sections of the wood, inside and out. Danger of warping from climatic changes or splitting from undue strain is thus averted.

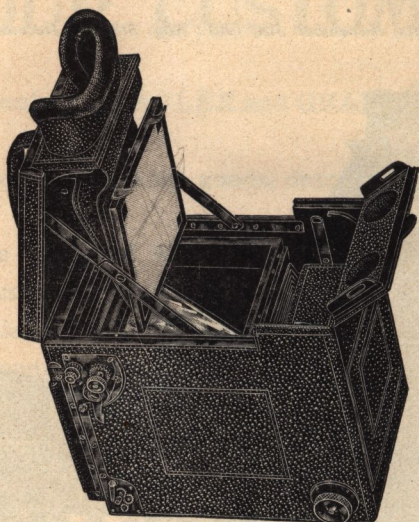
The Graflex Camera is covered with the finest quality of black Morocco leather and the bellows is of French calf.

Metal parts are of oxidized gun metal finish.

It is telescopic in form, the front racking out on two heavy brass side arms, working between the front box and the containing box, in deep grooves fitted with strong, angle metal guides allowing perfect freedom of extension without side play or lost motion.

Extension is obtained with fine rack and pinion movement, operated by a large milled head button on the outside of the box.

The Graflex Camera



The box containing the shutter and its working parts is constructed in the same manner and of the same carefully selected material as the containing box. It is made independent of the containing box, into which it is carefully fitted and to which it is firmly screwed. Additional strength is thus secured.

The focusing screen is fitted into the top of the camera, upon which, by means of a highly polished optical reflector beneath, the subject is reflected without being inverted.

This image is the exact size of that thrown upon the plate or film and occupies the same focal plane, so that the objects in focus upon the focusing screen are equally in focus upon the plate.

The reflector of focusing screen may readily be cleaned by unlocking a slot bar and removing the hood. A second focusing screen at the back of the camera provides a means of verifying the register and is useful in time exposures.

The focusing hood is provided with a protecting eye shield that conforms perfectly to the face and excludes all outside light. A clear and unobstructed view of the subject shown upon the focusing screen is thus provided, the instant the camera is opened.

The focusing button is at the right and the shutter release at the lower left side of the camera. This perfection of detail enables the operator to study his view through the eye shield and to focus properly on approaching and receding objects with the right hand, while with the left the exposure may be made at the precise instant that the view is satisfactorily arranged upon the screen.

Instantaneous exposure is made by pressure on the release button which causes the reflector to travel upward out of the path of the lens, automatically releasing the shutter before seating itself against an air cushion which prevents vibration and noise.

The Graflex Camera

Thus the image seen by the operator, full scale, upon the focusing screen, may be recorded with precision at any state of its movement, intent and exposure being practically simultaneous.

Time exposures of any duration may be made and the change from time to instantaneous effected instantly.

The Graphic Focal Plane Shutter is fitted to this camera and may be regulated from the outside of the box, an indicator showing at a glance both the curtain aperture and the shutter speed.

This shutter works at a speed of from $1/10$ to $1/1200$ of a second. It may be set at any exposure between these figures or for time exposures.

The front panel of the camera is hinged, giving free access to the lens board for changing lenses, etc.

The lens cap opens automatically as the camera is extended and will not latch until the front is again closed.

Either Graphic Magazine Plate Holder, Graflex Magazine Cut Film Holder, Film Pack Adapter, or Cartridge Roll Holder may be used.

Two tripod plates are fitted into each camera.

SPECIFICATIONS

	4 x 5	5 x 7	6 1/2 x 8 1/2	8 x 10
Dimensions in inches.	9x6 1/4 x 7 3/4	11 1/2 x 8 1/4 x 9	9 3/4 x 13 1/2 x 10 1/4	13 x 11 1/4 x 15 3/4
Weight	6 1/2 lbs.	10 1/2 lbs.	12 3/4 lbs.	18 lbs.
Focal Capacity, inches	11 1/2	16	21	24
Lens Board, inches...	3 1/2 x 3 1/2	4 1/2 x 4 1/4	5 x 5	5 1/2 x 5 1/2

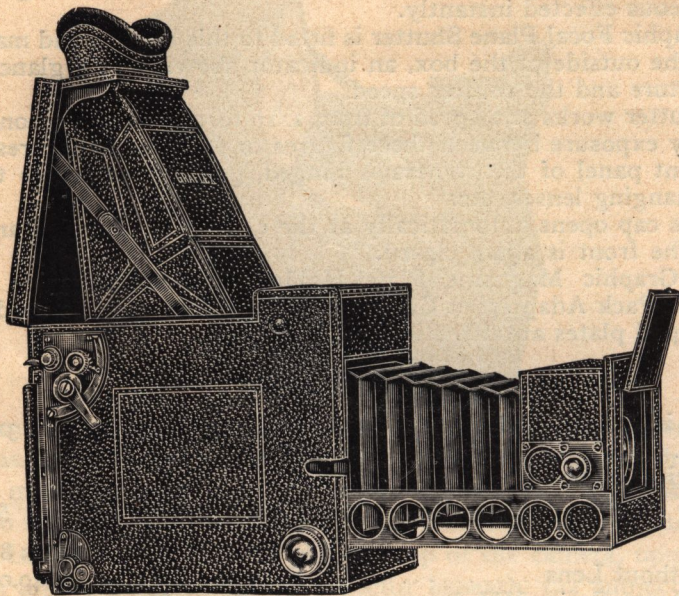
PRICES

	4 x 5	5 x 7	6 1/2 x 8 1/2	8 x 10
*Graflex, without Lens.....	\$125.00	\$150.00	\$240.00	\$325.00
With Zeiss Lens, Series VII A	No. 10	No. 13	No. 16	No. 19
F/6.3.	207.00	256.50	386.00	513.50
With Zeiss Unar	No. 6	No. 7	No. 8	No. 9
F/5	188.00	241.00	365.50	489.50
With Goerz Lens, Series I B	No. 2	No. 4	No. 6	No. 7
F/4.8 and F/5	179.50	240.50	366.50	488.00
With Goerz Lens, Series III	No. 2	No. 4	No. 6	No. 7
F/6.8	176.50	225.50	347.00	465.00
With Collinear Lens, Series II	No. 4	No. 5	No. 6	No. 7
F/5.6 and F/6.3	185.00	227.50	345.00	465.00
With Cooke Lens	No. 5	No. 7	No. 7	No. 8
F/6.5	173.50	241.00	331.00	455.00
With Plastigmat Lens	No. 3	No. 4	No. 6	No. 7
F/6.8	173.00	205.00	330.00	445.00
Graphic Magazine Plate Holder.....	13.00	15.00	.....	.....
Graflex Magazine Cut Film Holder.....	13.50	16.00	.....	.....
Film Pack Adapter.....	5.00	7.50	.....	.....
Cartridge Roll Holder.....	7.50	10.00	.....	.....
Superior Leather Case for 6 Plate Holders, Lock and Key.....	6.00	10.00	11.50	12.50
Superior Sole Leather Case for Camera only, Lock and Key.....	9.50	13.00	17.00	20.00
Same, Combination, for C. R. H. or G. M. P. H.	11.00	15.00	.....	.....
Extra Lens Boards.....	.60	.80	1.00	1.30
Extra Graflex Plate Holders.....	2.50	3.50	5.00	7.50

*The Graflex Camera will only be furnished without lens when the purchaser has a lens, which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting.

The Reversible Back Graflex Camera

Folmer's Patents, November 5th, 1901; Aug. 5th and December 16th, 1902.



The special field this camera is designed to fill is in the photographing of such subjects as require to be seen full scale upon the focusing screen up to the instant of exposure—such subjects as child life, in its almost lightning changes of expression, athletic sports, horse and yacht races, and views demanding that, for successful results, the arrangement of composition and focus shall be practically simultaneous with the exposure of plate or film.

For simplicity and precision of movement this camera is unequalled and the ease with which all that appears upon the focusing screen may be gotten upon the plate or film, makes it a great favorite with the novice.

Neither pains nor expense have been spared to make it the most perfect photographic machine of its kind in the world and every possible means have been employed to secure high speed, smoothness of movement, absence of shock on release of shutter and absolute perfection in construction.

It has no loose parts to be adjusted or arranged before operating, but is self-contained and ready for use instantly upon being opened.

The finest quality only of specially selected straight-grained mahogany is employed in the construction of this camera and all corners are lock-jointed and doubly reinforced by sections of the wood with the grain running in the opposite direction, inside and out.

The maximum of strength and rigidity is thus obtained and danger of splitting from climatic changes or unusual strain obviated.

The Reversible Back Graflex Camera

The Graflex Camera is covered with the finest quality of black Morocco leather and the bellows made of French calf.

Telescopic in form, the front racks out on two heavy brass side arms, working between the front box and the containing box, in deep grooves, fitted with strong, angle metal guides—allowing perfect freedom of extension without side play or lost motion.

Extension is obtained with fine rack and pinion movement, operated by a large milled head button.

Lenses of great focal length may be used in this camera with ease, thus accomplishing one of the main objects for which the camera was designed.

The box enclosing the shutter and its working parts is constructed in the same manner and of the same carefully selected material as the containing box. It is made independent of the containing box into which it is carefully fitted and to which it is firmly screwed. Additional strength is thus secured.

The focusing screen is fitted into the top of the camera, upon which, by means of a highly-polished optical reflector beneath, the subject is reflected without being inverted. This image is the exact size of that thrown upon the plate or film and occupies the same focal plane, so that objects in focus upon the focusing screen are equally in focus upon the plate.

The reflector of focusing screen may be readily cleaned by unlocking a shot bar and removing the hood. A second focusing screen at back of camera provides a means of verifying the register and is useful in time exposures.

The focusing hood is provided with a protecting eye shield that conforms perfectly to the face and excludes all outside light. A clear and unobstructed view of the subject shown upon the focusing screen is thus provided the instant the camera is opened.

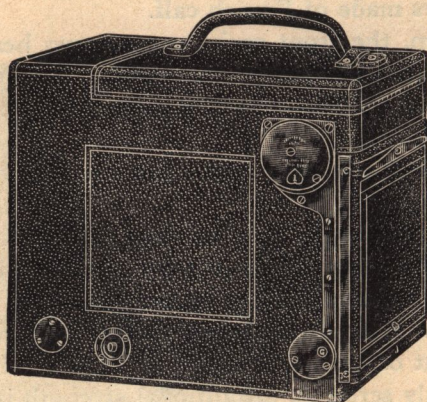
Focus is obtained by means of a large milled head button at the right and the shutter released by pressure upon a push button at the lower left side of the camera. This perfection of detail enables the operator to study his view through the eye shield and to focus properly on approaching and receding objects with the right hand, while with the left the exposure may be made at the precise instant that the view is satisfactorily arranged upon the screen.

Instantaneous exposure is made by pressure on the release button which causes the reflector to travel upward out of the path of the lens, automatically releasing the shutter before seating itself against an air cushion which prevents vibration and noise.

Thus the image seen by the operator, full scale, upon the focusing screen, may be recorded with precision at any state of its movement, intent and exposure being practically simultaneous.

Time exposures of any duration may be made and the change from time to instantaneous effected instantly.

The Reversible Back Graflex Camera



The Graphic Focal Plane Shutter is fitted to this camera and may be regulated from the outside of the box, an indicator showing at a glance both the curtain aperture and the shutter speed.

This shutter works at a speed of from $1/10$ to $1/1200$ of a second. It may be set for any exposure between these figures or for time exposures.

The front panel of the camera is hinged, giving free access to the lens board for changing lenses, etc.

The lens board may be raised or lowered by the operation of a milled head screw on the outside of the camera.

The lens cap opens automatically as the front is extended and will not latch until it is again closed.

A reversible back is fitted to this camera.

Plate holders may be inserted and slides drawn from either side, or bottom, but not from the top.

Either Graphic Magazine Plate Holder, Graflex Magazine Cut Film Holder, Film Pack Adapter, or Cartridge Roll Holder may be used.

A tripod plate is fitted into each camera.

SPECIFICATIONS

Dimensions	4 x 5	5 x 7
Focal Capacity	$6\frac{1}{4} \times 9\frac{3}{4} \times 8\frac{3}{4}$	$8\frac{1}{4} \times 13\frac{1}{4} \times 10\frac{1}{4}$
Weight	15 in.	21 in.
Size of Lens Board	$8\frac{1}{4}$	12
	$3\frac{3}{4} \times 4$	5 x 5

The Reversible Back Graflex Camera

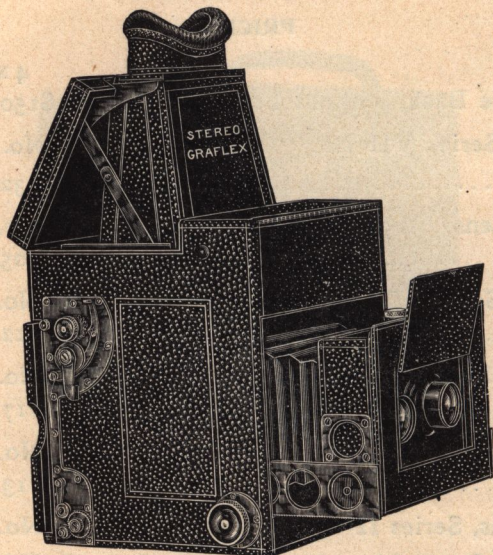
PRICES

	4 × 5	5 × 7
★Graflex, Reversible Back, without Lens.....	\$150.00	\$180.00
With Zeiss Lens, Series VII A	No. 10	No. 16
F/63	232.00	326.50
With Plastigmat Lens	No. 4	No. 6
F/6.8	205.00	270.00
With Goerz Lens, Series III	No. 3	No. 6
F/6.8	212.50	287.00
With Goerz Lens, Series I B	No. 3	No. 6
F/5 and F/5.5.....	217.00	306.50
With Zeiss Unar Lens	No. 6	No. 8
F/5 and F/5.5.....	213.00	305.50
With Collinear Lens, Series II	No. 4	No. 6
F/5.6 and F/6.3.....	210.00	285.00
With Cooke Lens	No. 6	No. 7
F/6.5	203.00	271.00
Graphic Magazine Plate Holder.....	13.00	15.00
Graflex Magazine Cut Film Holder.....	13.50	16.00
Film Pack Adapter, Leather Covered.....	5.50	8.75
Cartridge Roll Holder, Leather Covered.....	7.50	10.00
Graflex Plate Holders.....	2.50	3.50
Superior Leather Case for 6 Plate Holders, Lock and Key	6.00	10.00
Superior Sole Leather Case, Camera only.....	10.00	14.00
Same Combination for C. R. H. or G. M. P. H.....	12.00	16.00
Extra Lens Boards.....	1.25	1.50

★The Reversible Back Graflex Camera will only be furnished without lens when the purchaser has a lens which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting.

Stereo-Graflex

Folmer's Patent, April 5, 1904



Stereo-Graflex is the stereoscopic form of the regular Graflex Camera fitted with matched lenses of high grade for the two images on a 5x7 plate.

A duplicate pair of simple magnifying lenses are fitted into the focusing hood through which the images are seen coincidentally upon the focusing screen, exactly as when viewed in the stereoscope.

The protecting eye shield fits closely to the face, excluding all outside light and giving full view of the focusing screen.

As in the Graflex, the operator is enabled to study his view and correct the focus up to the very instant of exposure.

It is simple in construction and precise in operation.

The camera is self-contained, has no loose parts and is ready for use instantly upon being opened.

It is constructed of the finest quality of selected straight grained mahogany, lock-jointed and doubly reinforced and covered with the finest quality of black Morocco leather.

The bellows is of French calf.

Metal parts are all oxidized in gun metal finish.

It is telescopic in form, the front racking out on two heavy side arms, insuring rigidity when extended to full capacity.

Focusing is operated with fine rack and pinion movement from the outside of the box.

Focusing screen is fitted into the top of the camera upon which, by means of a highly polished optical reflector beneath, the subject is reflected in duplicate without being inverted.

The reflector of focusing screen may be cleaned by unlocking shot bar and removing hood. A ground glass focusing screen is provided at the back of the camera for convenience in focusing when used on tripod.

Stereo-Graflex

The focusing button is at the right and the shutter release at the left, as in the regular Graflex.

Time or instantaneous exposures may be made at will.

The Stereo-Graflex is fitted with the Graphic Focal Plane Shutter, regulated from the outside of the box and working at a speed of from 1/10 to 1/1000 of a second or any desired exposure between these figures.

Exposure is regulated so that foreground receives greater light action than the sky.

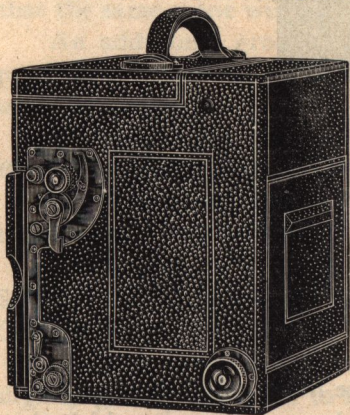
The front panel is hinged, giving access to the lens board.

The lens caps open automatically as the camera is extended, remaining open until the camera is closed.

The handle is padded and secured to the camera by loops, riveted on.

Either Graphic Magazine Plate Holder, Graflex Cut Film Holder or Cartridge Roll Holder may be used.

This camera is fitted with a tripod plate.



SPECIFICATIONS

Dimensions	7½ x 9 x 8¾
Focal Capacity	8 in.
Weight	8 lbs.
Size of Lens Board.....	3¼ x 5¾

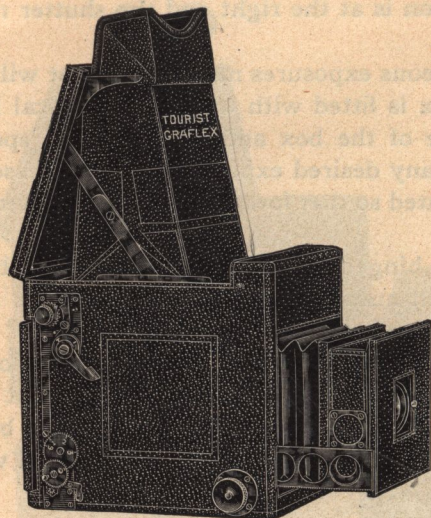
PRICES

*The Stereo-Graflex, without Lenses.	\$225.00
With Goerz Lenses, Series III, No. 1.	318.00
With Zeiss Lenses, Series VIIa, No. 7.....	364.00
With Cooke Lenses, No. 4.....	307.00
With Plastigmat Lenses, No. 2.....	308.00
With Collinear Lenses, Series II, No. 3.....	318.00
Graphic Magazine Plate Holder.....	15.00
Graflex Mag. Cut Film Holder.....	16.00
Cartridge Roll Holder.....	10.00
Graflex Plate Holders.....	3.50
Superior Sole Leather Carrying Case for Six Plate Holders.....	10.00
Same, for Camera only.....	14.00
Same, Combination for G. M. P. H. or C. R. H.....	16.00
Extra Lens Boards.....	2.00

*The Stereo-Graflex Cameras will only be furnished without lenses when the purchaser has lenses which are to be used with the camera, and in such cases we require that the lenses be sent to us to insure proper fitting.

The Tourist Graflex

Folmer's Patents, December 16, 1902; June 21, 1904



The Tourist Graflex has been designed to meet the growing demand for a camera of the Graflex type, that would be lighter in weight, more compact, and yet present the essential features of the latter in an instrument that could be offered to the public at a lower price.

The Tourist Graflex is like the regular Graflex models in that it attains the same degree of efficiency in general, has the same superior construction and simplicity of operation.

The Tourist Graflex is made throughout of the finest selected mahogany, thoroughly seasoned and kiln dried, then treated by a process in which the fibre of the wood has been so impregnated as to preclude the possibility of alternate swelling and shrinking, which, if not made impossible, would tend to be a source of continual annoyance to the traveler during the frequent climatic changes encountered in various latitudes.

After the filling process, the exposed portions of the wood are handsomely ebonized, and the camera covered with the best Morocco leather. The bellows is made of French calf.

The metal parts are all heavy sawed and milled brass, oxidized in gun metal finish.

The Tourist Graflex is telescopic in pattern, self-contained, ready for instant use upon being opened, and has no loose parts to attach before operating.

The focusing hood has a shield at the top conforming to the lines of the forehead, which shades the eyes and makes focusing easy.

No focusing cloth is needed.

Two tripod plates are provided for use when time exposures are to be made.

The Tourist Graflex

The front racks out on two heavy brass side arms, working between the front box and the containing box, in deep grooves fitted with strong angle metal guides. This construction provides for perfect freedom of extension, and obviates all possibility of side play, or lost motion.

A sliding door recessed into the camera front protects the lens when not in use, and when opened exposes the lens to view ready for use. The camera front is hinged, and may be opened when it is necessary to alter the aperture of the diaphragm, remove the lens, or clean the mirror.

An optical mirror placed at an angle of forty-five degrees reflects the image from the lens right side up to a ground glass at the top of the camera.

But one lens is necessary, this serving the double purpose of finder and recording the image on the sensitive plate or film.

Thus it is made possible not only to see the picture as it is to be, but to accurately compose the same up to the moment of exposure, and feel confident that the same scene will be recorded on the sensitive plate, or film.

An additional ground glass focusing screen at the back of the camera provides a means for verifying the register, and is useful when the camera is used on a tripod.

The focusing is done by turning a milled head button at the right side of the camera and near the front.

The shutter is released by pressing a release button on the left side of the camera.

The shutter is a simplification of the well-known Graphic Focal Plane Shutter, and is known as model "B." It is an integral part of the Tourist Graflex.

The aperture of the shutter diminishes as it passes across the plate, giving slightly greater exposure to foreground than to sky.

No other shutter made operates so close to the sensitive surface of the plate, and only with this shutter is it possible to utilize the maximum "F" value of a lens.

All shutter adjustments are made from the outside.

Time exposures of any duration may be made, and the change from time to instantaneous exposures effected instantly.

The Tourist Graflex is made in both the 4x5 and 5x7 sizes, and is of the non-reversible pattern.

The Graflex plate holder is furnished. It is practically impossible to fog plates when using the Graflex plate holder. The double sectional cut-off with which the holder is equipped will effectually exclude all light, even if the slide should be inserted obliquely.

The Graflex plate holders are handsomely ebonized.

The Tourist Graflex can be fitted with the Graphic magazine plate holder, which carries twelve plates, or with the new Graflex magazine cut film holder, which is furnished to carry twelve cut films.

The Film Pack Adapter can be fitted.

The Tourist Graflex

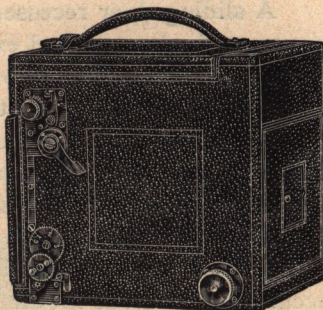
The cartridge roll holder can also be fitted if desired.

Lenses varying in focal length from $5\frac{7}{8}$ to 7 inches may be used with the 4x5 Tourist Graflex, and lenses of from $7\frac{1}{2}$ to 10 inches focal length in the 5x7.

A list of possible lens equipments is appended herewith as a guide to selection.

SPECIFICATIONS

	4 x 5	5 x 7
Dimensions ..	$7\frac{3}{4} \times 6\frac{1}{8} \times 7\frac{3}{8}$	$9\frac{3}{4} \times 8\frac{1}{4} \times 8\frac{5}{8}$
Focal Capacity	$8\frac{1}{2}$	$12\frac{1}{2}$
Weight	$4\frac{3}{4}$	8
Size of Lens Board	3×3	4×4



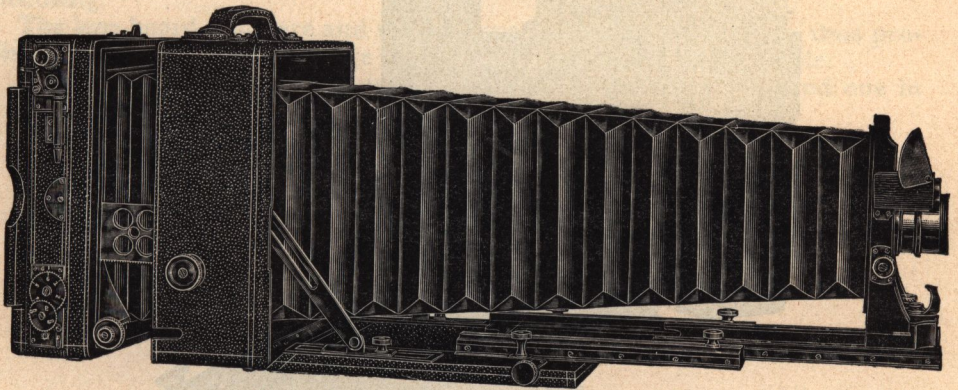
PRICES

	4 x 5	5 x 7
★ Tourist Graflex, without Lens.....	\$85.00	\$105.00
	No. 4.	No. 6.
With Cooke Lens Ser. III, F. 6.5.....	\$124.50	\$158.00
	No. 1.	No. 3.
With Goerz Lens, Ser. III, F. 6.8.....	\$130.00	\$167.50
	No. 1.	No. 3.
With Goerz Lens, Ser. IB, F. 4.8 and F. 5.....	\$132.00	\$172.00
	No. 2.	No. 4.
With Plastigmat Lens, F. 6.8.....	\$125.00	\$160.00
	No. 3.	No. 4.
With Collinear Lens, Ser. II, F. 5.6.....	\$130.00	\$165.00
	No. 7.	No. 10.
With Zeiss Ser. VIIa, F. 6.3.....	\$153.00	\$187.00
	No. 5.	No. 6.
With Zeiss Unar, F. 5.....	\$127.00	\$168.00
	No. 11.	No. 12.
With Zeiss Planar, F. 3.8 and F. 4.....	\$162.00	\$214.00
Graphic Magazine Plate Holder, Leather Covered.....	13.00	15.00
Graflex Magazine Cut Film Holder, Leather Covered	13.50	16.00
Film Pack Adapter.....	5.00	7.50
Cartridge Roll Holder, Leather Covered.....	7.50	10.00
Superior Leather Case for 6 Plate Holders, Lock and Key	6.00	10.00
Superior Leather Case for Camera only, Lock and Key	10.00	12.50
Combination Case for Camera with Mag. P. H. Film		
Holder or Roll Holder Attached.....	11.50	14.00
Extra Lens Boards.....	.50	.70
Extra Graflex Plate Holders.....	2.50	3.50

★ The Tourist Graflex Cameras will only be furnished without lenses when the purchaser has a lens which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting.

Reversible Back Cycle Graphic Special

Folmer's Patent, June 21, 1904



The Reversible Back Cycle Special is the most complete and highest grade Cycle Camera ever produced. For compactness, practicability, beauty of finish and all qualities that go to make an ideal instrument, this box is unique. It is provided with double shifting front and double swing back with fine rack and pinion adjustments, both front and back focus, large front frame with extreme rise of lens board, falling front, reversible back, Graphic Focal Plane Shutter, Model B, reversing with the back and fitted with all possible adjustments for convenience, simplicity and precision.

It is built of the best quality, carefully selected, stock, lock jointed and reinforced, and is covered with the finest grade of morocco leather. All the metal parts are of gun metal finish and the woodwork is ebonized.

Extension is obtained by two telescopic frames, reinforced with angle metal guides, running in heavy milled tracks.

Spring tension holds the front shift without additional binding screws.

Both front and back focus is controlled by fine rack and pinion movement operated by large milled head buttons.

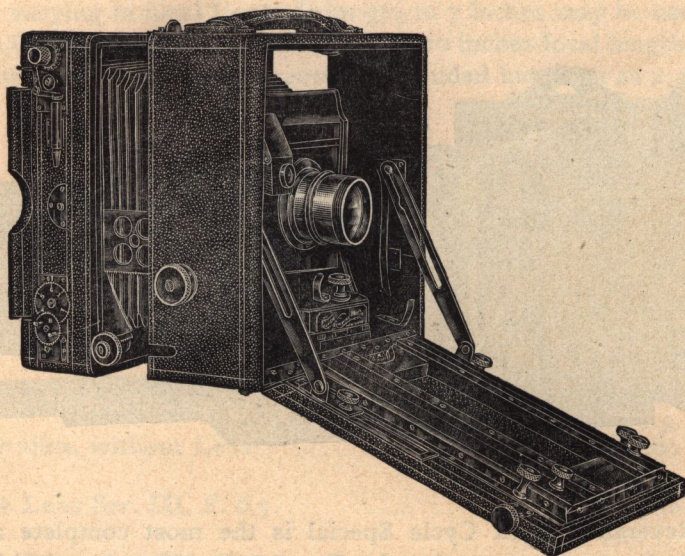
The bellows is wedge-shaped and tapers gradually to a large front board frame. The bellows is of the best quality black Russia leather, lined with the finest grade of percaline. It is fitted with rings to prevent sagging when in use with short or medium focus lenses.

Liberal swing movement is provided. For long focus work the back swing may be operated on its hinge joint and for short or medium focus, either by use of the hinge joint or by an independent double swing at back.

Space is provided in the frame of the extension track, when folded, for lenses of large size.

The reversible back is fitted to the frame with deep rabbets, and the shutter reverses with the back.

Reversible Back Cycle Graphic Special



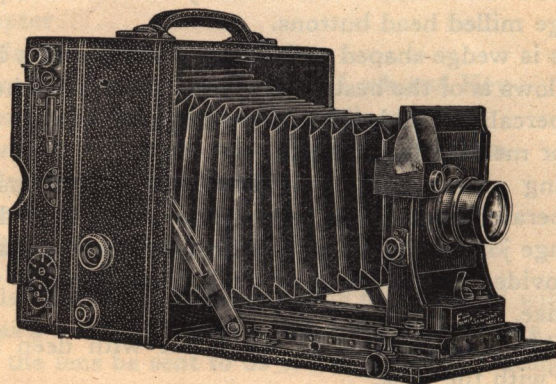
The Graphic Focal Plane Shutter, Model B, fitted to this camera, is constructed in the best possible manner and of the finest material and works with perfect accuracy and precision.

The curtain aperture may be adjusted from the outside and set at any desired opening by a scale constantly visible through a clear portion of the ground glass at the back.

All adjustments for aperture and changes in the working speed of the shutter are made from the outside and may be instantly read on the scale and dials plainly visible to the operator.

The shutter is provided with pneumatic and finger release and a wide range of exposure is possible by varying the speed and aperture of the shutter.

The shutter may be set at full opening for convenience in focusing.



Reversible Back Cycle Graphic Special

A spring actuated ground glass focusing screen is fitted to the camera, a focusing panel with side shields affording full view of the focusing screen.

A brilliant view finder with hood is attached to the front, moving with it in focusing.

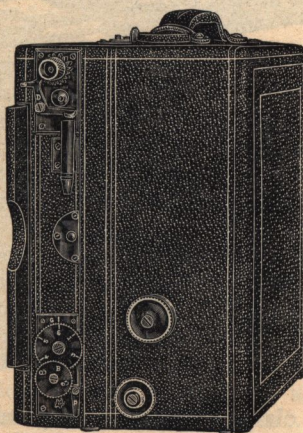
The lens board is square and rises independently of the bellows, thus providing the greatest possible range in use. The lens board is reversible.

Two tripod plates are built into the camera, one in the body and one in the front panel.

Graphic Magazine Plate Holder or Cartridge Roll Holder may be used.

The handles are padded and secured to the camera by loops, riveted on.

This camera is made only in 5 x 7 and 6½ x 8½ sizes. Prices include carrying cases and one double plate holder.



SPECIFICATIONS

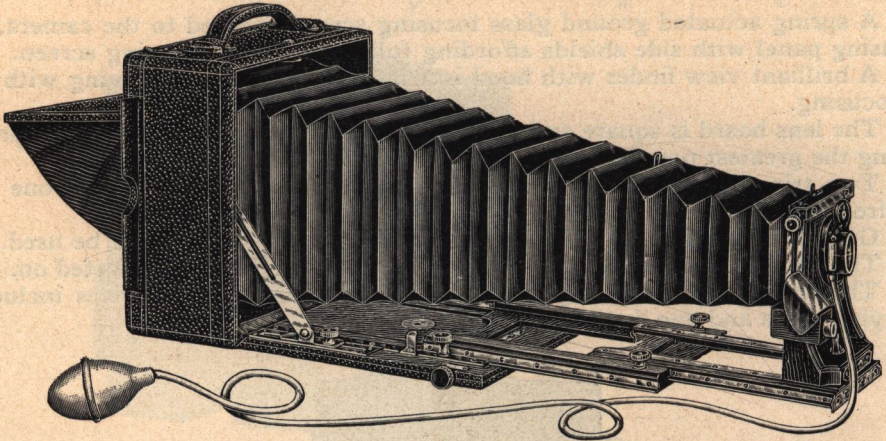
	5 x 7	6½ x 8½
Dimensions in inches.....	8¾x8¾x5¾	10¾x10¾x6¼
Focal Capacity	23	27
Weight	8¼	10¼
Size of Lens Board.....	3⅛x3⅛	3¾x3¾

PRICES

	5 x 7	6½ x 8½
	No. 3	No. 4
With Goerz Lens, Series III.....	\$162.50	\$195.50
	No. 6	No. 7
With Cooke Lens, Series III.....	153.00	211.00
	No. 4	No. 5
With Plastigmat Lens.....	155.00	195.00
	No. 10	No. 13
With Zeiss Lens, Series VII A.....	182.00	226.50
	No. 4	No. 6
With Collinear Lens, Series II.....	160.00	225.00
	No. 8	No. 8½
With Bausch & Lomb Rapid Universal Lens.....	126.00	155.00
* Camera with Focal Plane Shutter, but no Lens....	100.00	120.00

* Reversible Back Cycle Graphic Special Cameras will only be furnished without lenses, when the purchaser has a lens, which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

The Reversible Back Cycle Graphic



The Reversible Back Cycle Graphic stands as the embodiment of all that is perfect in a camera of cycle size. It is condensed into the smallest possible compass that will allow the use of long focus lenses and at the same time insure rigidity when extended to its full capacity. For all around work it cannot be surpassed.

It is constructed of the best quality, selected stock, lock jointed and reinforced and covered with the best quality, black grained leather.

The front runs out on telescopic tracks, reinforced by angle brass guides, locking rigidly, by milled head binding screws, on extension track. The front is clamped to track by a wide base block and heavy bolt, insuring rigidity and strength.

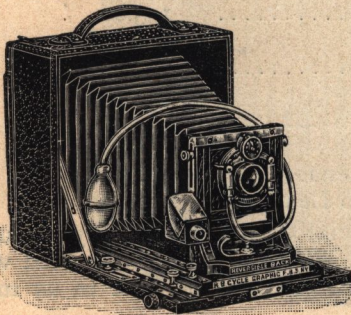
Rising and falling front clamps in position by milled head button on each side. The binding strip rises with the front and allows the use of lenses with large flanges.

Focus is obtained with fine rack and pinion movement, operated by large milled head button.

The bellows is of the finest quality red Russia leather, lined with the best grade of percaline. A ring on bellows prevents sagging when using short or medium focus lenses.

Back swings upon its hinge and is locked in position by milled head screws in sliding brackets on platform.

The extension tracks being in the form of frames, allow extra large lens space when closed, Cycle Graphics taking lenses two or more sizes larger than the plate calls for.



The Reversible Back Cycle Graphic

The reversible back is fitted to the frame with extra deep rabbets.

Plate holders may be inserted and slides drawn from top, bottom or either side.

A spring actuated, ground glass focusing screen is fitted to this camera.

A focusing panel with side shields affords full view of the focusing screen.

A brilliant view finder with hood is attached to the front, moving with it when focusing.

The lens board is removable.

Two tripod plates are built into this camera, one in the body and one in the front panel.

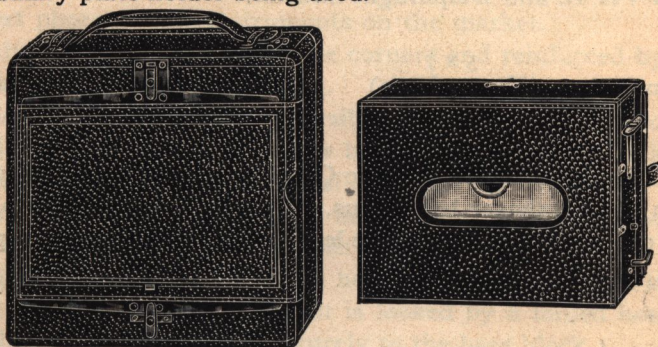
Either Graphic Magazine Plate Holder or Cartridge Roll Holder may be used.

The handles are padded and secured to the camera by loops, riveted on.

Prices include Carrying Cases and one Double Plate Holder.



The above illustration shows method of attaching Graphic Magazine Plate Holder to Reversible Back Cycle Graphic. Magazine Plate Holder is held in position by two brass pins at bottom and sliding bolt at top, and may be readily removed and ground glass replaced for focusing. Ground glass is held in position by two turn buttons clamping springs, which does not interfere with the ordinary plate holder being used.



The above illustration shows Cartridge Roll Holder detached and ground glass in position. Cartridge Roll Holder is held in position exactly the same as the Graphic Magazine Plate Holder.

SPECIFICATIONS

	4 x 5	5 x 7	6 1/2 x 8 1/2	8 x 10
Dimensions	6 5/8 x 6 5/8 x 3 3/4	8 3/4 x 8 3/4 x 3 7/8	10 3/8 x 10 3/8 x 4 1/2	12 x 12 x 5
Focal Capacity	16	22	26	30
Weight	3	5 1/4 lbs.	7 1/2	10 1/2
Size of Lens Board....	2 1/4 x 2 1/4	2 5/8 x 2 5/8	3 1/2 x 3 1/2	4 x 4

Reversible Back Cycle Graphic

PRICES

	4x5	5x7	6½x8½	8x10
Reversible Back Cycle Graphic, with Graphic R.				
R. Lens and Automatic Shutter.....	\$40.00	\$50.00	\$62.00	\$75.00
Extra Plate Holders.....	1.15	1.25	1.85	2.25
Graphic Magazine Plate Holder	13.00	15.00	....	....
Cartridge Roll Holder.....	7.00	10.00	....	....
Graphic Focal Plane Shutter.....	34.00	36.00	38.00	40.00
*Reversible Back Cycle Graphic, no lens or shutter	32.00	40.00	49.00	60.00

Reversible Back Cycle Graphic, fitted with Goerz Series III Lens and Sector Shutter.

4 x 5 (No. 1 Lens)	5 x 7 (No. 3 Lens)	6½x8½ (No. 5 Lens)	8 x 10 (No. 6 Lens)
\$94.00	\$119.50	\$160.00	\$187.00

Reversible Back Cycle Graphic, fitted with Plastigmat Lens and Diaphragm Shutter.

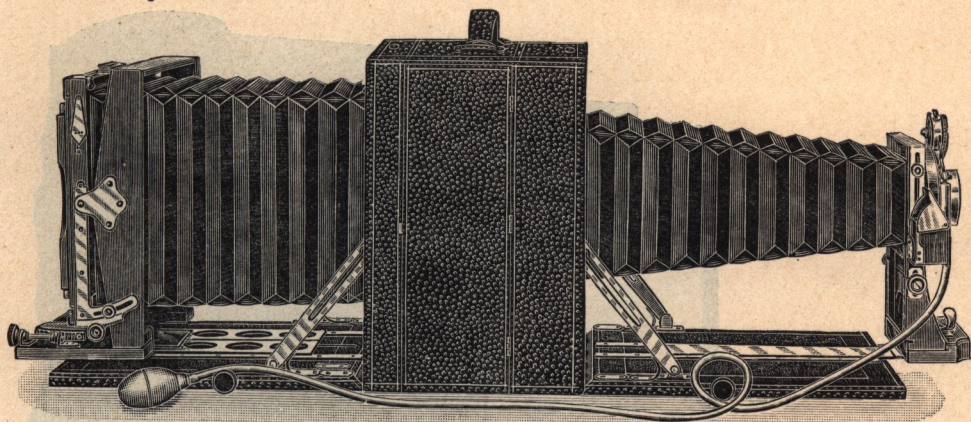
4 x 5 (No. 2 Lens)	5 x 7 (No. 3 Lens)	6½ x 8½ (No. 5 Lens)	8 x 10 (No. 6 Lens)
\$84.00	\$101.00	\$138.00	\$165.00

Reversible Back Cycle Graphic, fitted with B. & L. Zeiss Convertible Lens, Series VII A, and Diaphragm Shutter.

4 x 5 (No. 7 Lens)	5 x 7 (No. 10 Lens)	6½ x 8½ (No. 11 Lens)	8 x 10 (No. 17 Lens)
\$115.00	\$137.00	\$159.50	\$245.00

*Reversible Back Cycle Graphic Cameras will only be furnished without lenses when the purchaser has a lens, which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

Reversible Back Graphic Special



This is a camera of the highest possible grade in material, construction and perfection of appointment. It is unequalled for all around work and is an especial favorite with the professional and advanced amateur, who desire and appreciate the best. It is admirably suited to marine and telephoto work.

These cameras are made from heavy, kiln dried mahogany, with ebony finish and are covered with the finest quality of black Morocco leather.

The platform is also covered with the same quality of leather and the metal parts of the camera are oxidized in gun metal finish, making it one of the handsomest photographic instruments on the market.

The woodwork is lock jointed at the corners and reinforced by crosswise panels to prevent warping and cracking.

This camera is provided with reversible back, extra long bellows, rising, falling and sliding front, removable lens board, double swing back, rack and pinion adjustment for front and back, falling front for work with wide angle lenses, brilliant view finder, spirit level and plumb, bellows supports, tripod plate and spring actuated ground glass screen.

The rising front is locked by milled head set screws on each side.

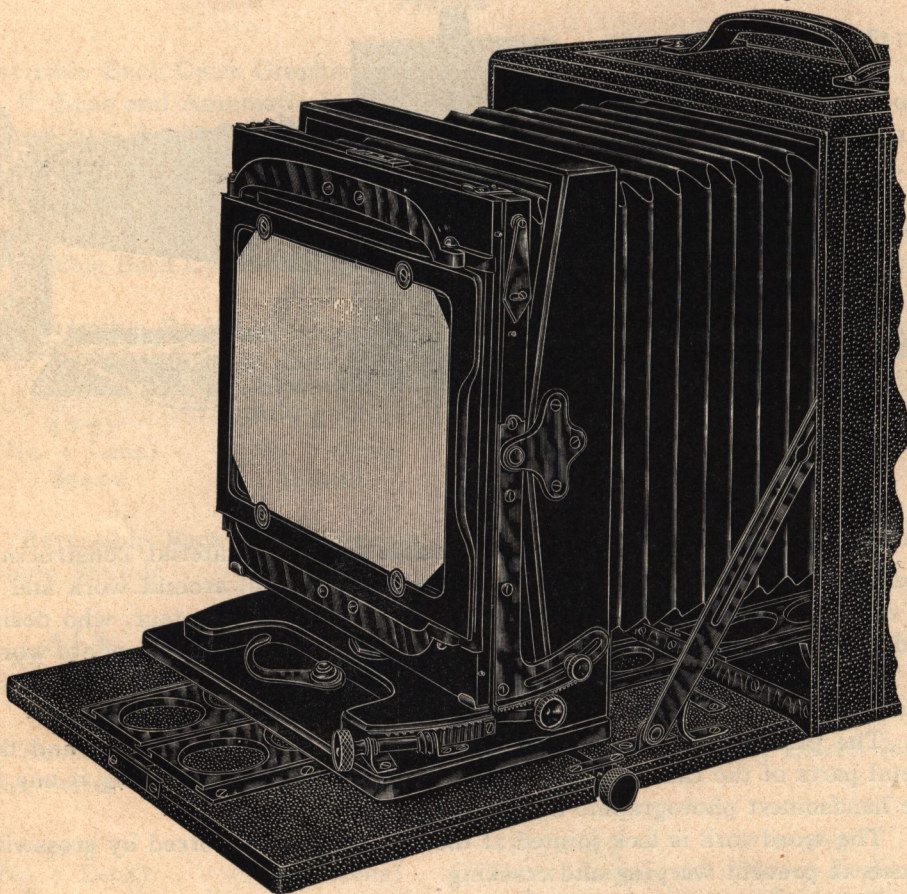
Side shifting movement of the front is locked by a milled head screw in the center, bolting the sliding front securely to the base block.

The large base block and long bearings used in the manufacture of this camera make a most substantial and rigid front.

Extra large removable lens boards are fitted, permitting the use of all high class anastigmat lenses.

Long piano hinges with short knuckles extend across width of the platform, giving great strength when the camera is open.

Reversible Back Graphic Special



Rising and falling front adjustment is operated by a fine rack and pinion movement extending across the front.

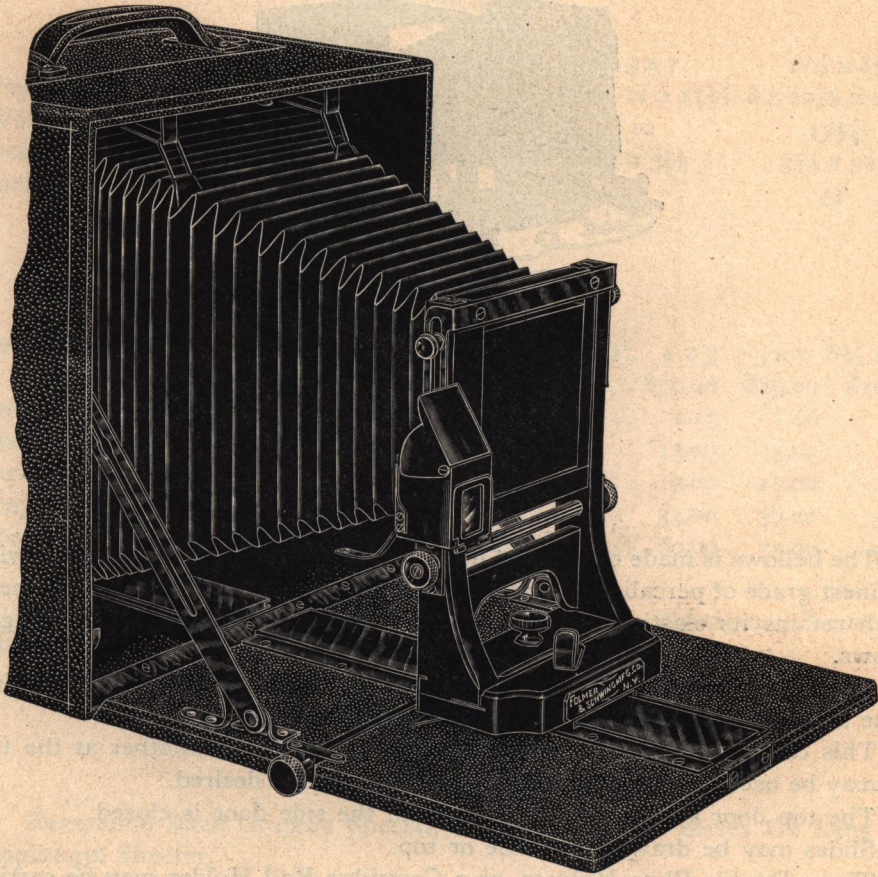
The rack and pinion focusing device for both back and front is adjusted with great accuracy.

Both front and rear platforms may be dropped for use with wide angle lenses or for convenience in focusing.

The side swing is regulated by a fine worm screw adjustment and the vertical swing by a small pinion which may be locked in position by a milled head button. Both swing movements work from the centre.

The metal track or bed plate is milled from hard brass $\frac{5}{32}$ of an inch in thickness.

Reversible Back Graphic Special



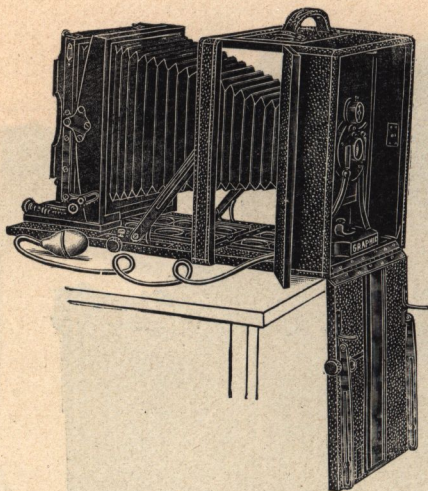
The front board may be racked several inches beyond the bed of the camera and clamped rigidly in position, thus securing an extra long draw of bellows.

The double swing back frame is mounted upon a bolster piece, well tied in, with angle brass reinforcements at the corners of the swing frame support.

The track or bed plate on the back platform is made very wide to give rigid support and to prevent oscillating movement when the back frame is drawn out.

Perforations in this metal track reduce its weight without materially affecting its strength or rigidity.

Reversible Back Graphic Special



The bellows is made of the best quality of Russia leather and is lined with the finest grade of percaline. It is constructed with our special rubber cement which retains its elasticity at all times and makes an absolutely light-tight bellows.

Bellows supports are provided in the top of the camera to prevent sagging of the bellows when the front or rear extension is used.

This camera is provided with a door at the side and another at the top and may be used as a reversible back, hand camera, if desired.

The top door automatically locks when the side door is closed.

Slides may be drawn from side or top.

Three Double Plate Holders, or a Cartridge Roll Holder may be carried in the back compartment.

The tripod plate is placed in the centre of the camera.

Extra long bellows gives this camera unusual range.

A brilliant view finder is attached to the front in an upright position, moving back and forth with the front while focusing. This arrangement brings the view finder and the focusing scale in line, greatly adding to convenience in focusing.

Ample lens space is provided in the front to take any of the large anastigmat lenses.

Reversible Back Graphic Specials are fitted with our regular Graphic Rapid Rectilinear Lens and the Graphic Automatic Shutter, but are especially designed to be used with the high grade anastigmat lenses and Graphic Focal Plane Shutters.

Reversible Back Graphic Special

SPECIFICATIONS

	4 x 5	5 x 7	6½ x 8½
Dimensions	8¼ x 6¾ x 8½	7¾ x 11 x 11½	8 x 12¼ x 12½
Weight	7¾	12	15¾
Size of Lens Board, inches....	2½ x 2½	3⅞ x 3⅞	3¾ x 3¾
Focal Capacity, inches.....	25	31	38

PRICES

Reversible Back Graphic Special, with Graphic R. R. Lens and Automatic Shutter.....	4 x 5 \$70.00	5 x 7 \$85.00	6½ x 8½ \$105.00
Extra Plate Holders.....	1.15	1.40	1.85
Graphic Magazine Plate Holder.....	13.00	15.00	
Cartridge Roll Holder.....	7.00	10.00	
Graphic Focal Plane Shutter.....	34.00	36.00	38.00
*Reversible Back Graphic Special, no Lens or Shutter	60.00	75.00	90.00

Reversible Back Graphic Special, fitted with Plastigmat Lens and Diaphragm Shutter.

4 x 5	5 x 7	6½ x 8½
(No. 2 Lens)	(No. 3 Lens)	(No. 5 Lens)
\$114.00	\$136.00	\$179.00

Reversible Back Graphic Special, fitted with Goerz Series III Lens and Diaphragm Shutter.

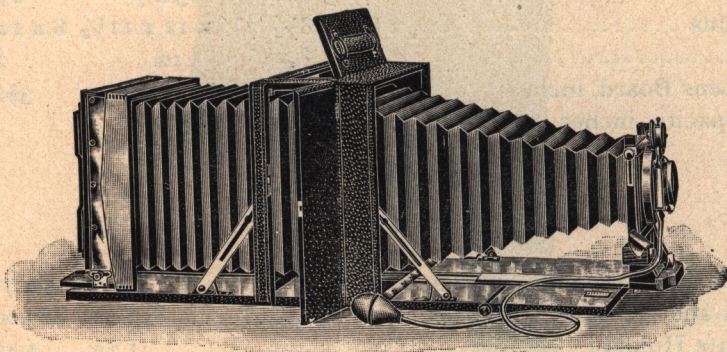
4 x 5	5 x 7	6½ x 8½
(No. 1 Lens)	(No. 3 Lens)	(No. 5 Lens)
\$119.00	\$150.50	\$195.00

Reversible Back Graphic Special, fitted with B. & L. Zeiss Convertible Series VII A. Lens.

4 x 5	5 x 7	6½ x 8½
(No. 4 Lens)	(No. 10 Lens)	(No. 13 Lens)
\$135.00	\$172.00	\$254.00

*The Reversible Back Graphic Special Cameras will only be furnished without lenses when the purchaser has a lens which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

Reversible Back Graphic



This camera possesses all the advantages of a modern long bellows view camera, together with the compactness and portability of the ordinary hand camera.

It is, in common with all the other cameras of the Graphic family, constructed of the finest quality selected stock, lock jointed and reinforced.

It is covered with the best quality of black grained leather.

The front platform is attached to the box by a heavy, short knuckle piano hinge extending full width of the camera and insuring great strength and rigidity when open.

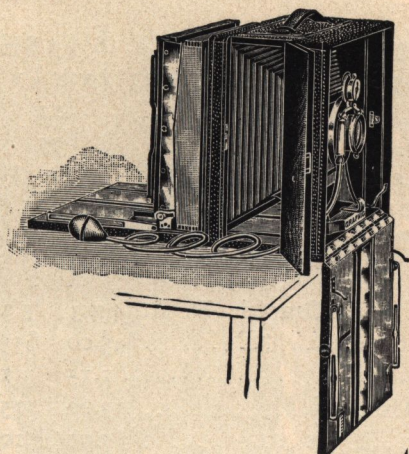
The focusing adjustment is operated with rack and pinion movement, fitted with large milled head button, by which the front may be extended several inches beyond the bed of the camera, if desired.

It is provided with rising and falling front and front side shift, making possible its application to all kinds of architectural and view photography under any and all conditions.

The front runs on a track of heavy rolled brass, providing the utmost rigidity when the camera is extended, even to its full capacity.

The bellows is made of the finest quality red Russia leather, lined with best quality percaline, and is supported from the top by a pair of metal brackets to prevent sagging and to allow of bellows being extended freely to its full capacity.

Reversible Back Graphic



This camera is provided with a double swing, reversible back, swings working from the centre. It is fitted to the frame with extra deep, light-tight rabbets.

The vertical swing locks rigidly in place by a clamp engaging both sides.

When used with wide angle lenses, the two side arms at the front of the camera are disengaged, dropping the front out of the way, and transforming the camera into a back focus instrument.

The rear platform may be dropped out of the way.

Plate holders may be inserted and slides drawn through the door at the side or top.

Door at side of camera is spring actuated. The closing of the side door automatically locks the door at the top of the camera, which cannot again be opened until the side door is unfastened.

A spring actuated ground glass focusing screen is fitted to this camera.

When closed, space is provided in the rear compartment for Three Double Plate Holders.

This camera is provided with a spirit level and plumb attached to the swing frame.

The lens board is removable.

A view finder with hood is attached to the front, moving with it when racked in and out or shifted in any direction and keeping the finder in axial coincidence with the lens.

A focusing scale is plainly visible in line with the view finder.

The tripod plate is built into the middle of the box for use when both front and back are extended, balancing it well upon the tripod.

Reversible Back Graphic

SPECIFICATIONS

	4 x 5	5 x 7	6½ x 8½	8 x 10
Dimensions.	8 x 6 x 8	9¾ x 6½ x 9¾	11¼ x 7⅞ x 11½	13½ x 8¼ x 14
Weight	5½	8½	11	17
Focal Capacity	22	26	33	38
Size of Lens Board	2½ x 2½	2⅝ x 2⅝	3½ x 3½	4½ x 4½

PRICES

Reversible Back Graphic with Graphic R. R.	4 x 5	5 x 7	6½ x 8½	8 x 10
Lens and Automatic Shutter.....	\$45.00	\$53.00	\$70.00	\$90.00
Extra Plate Holders.....	1.15	1.40	1.85	2.25
Graphic Magazine Plate Holder.....	13.00	15.00		
Cartridge Roll Holder.....	7.00	10.00		
*Reversible Back Graphic, no Lens or Shutter	37.00	43.00	55.00	70.00

Reversible Back Graphic, fitted with B. & L. Zeiss Convertible Series VII A. Lens and Diaphragm Shutter.

4 x 5	5 x 7	6½ x 8½	8 x 10
(No. 4 Lens)	(No. 10 Lens)	(No. 13 Lens)	(No. 16 Lens)
\$110.00	\$140.00	\$177.50	\$234.00

Reversible Back Graphic, fitted with Goerz Series III Lens and Diaphragm Shutter.

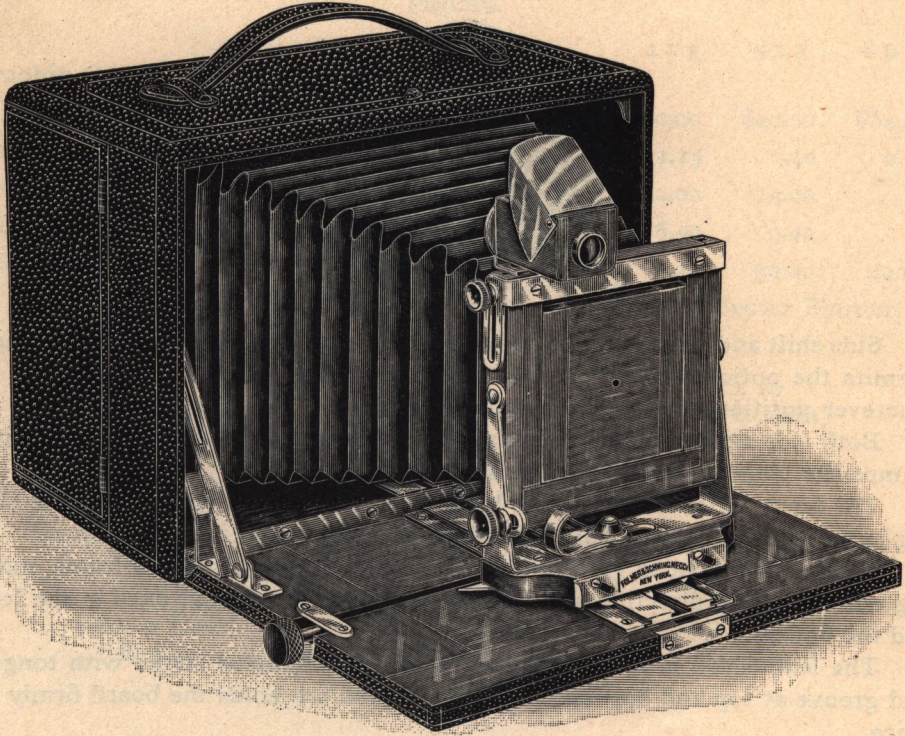
4 x 5	5 x 7	6½ x 8½	8 x 10
(No. 1 Lens)	(No. 3 Lens)	(No. 5 Lens)	(No. 6 Lens)
\$94.00	\$118.50	\$160.00	\$191.00

Reversible Back Graphic, fitted with Plastigmat Lens and Iris Diaphragm Shutter.

4 x 5	5 x 7	6½ x 8½	8 x 10
(No. 2 Lens)	(No. 3 Lens)	(No. 5 Lens)	(No. 6 Lens)
\$89.00	\$104.00	\$144.00	\$175.00

* The Reversible Back Graphic Cameras will only be furnished without lenses when the purchaser has a lens which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

The Graphic Camera



This camera is the original model from which many of our other most successful cameras have been developed. Its good points are evidenced by its ever increasing sale.

In construction it is very compact, light, but strong, simple in its adjustments and made with especial reference to practicability and durability.

It is made of selected kiln dried mahogany, lock jointed and strongly reinforced with crosswise pieces of the wood.

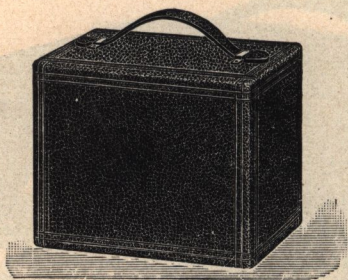
The front opens upon an extra heavy piano hinge with short knuckles, extending the entire length of the camera.

A fine rack and pinion, fitted with large milled head button, controls the focusing adjustments.

The front may be racked out several inches beyond the bed of the camera and held rigidly in place.

The front has rising and falling movement, double swing and compound side shift, which obviates the necessity of swing back and allows correction of lines and centering of image with ease and precision.

The Graphic Camera



Side shift and side swing are obtained by means of a slot in the front which permits the optical axis of the lens to be kept in the centre of the plate, in whatever position the camera may be placed.

Both side shift and side swing are firmly locked with an "S" hook, which clamps the front in position at the same time.

The front, when drawn out, is locked by a heavy bolt with shoe piece riding in a deep "T" groove, milled in heavy brass track.

A reversible hooded view finder is mounted in the lens board frame, moving with it in any direction and insuring coincidence of axial lines in the lens and the finder.

The lens board is removable and is set in a rabbeted frame with tongue and groove at top and bottom. A spring at the top holds the board firmly in place.

The bellows is of the best quality of red Russia leather, lined with percaline, and is set into a rabbet in the front board and back frame of the camera, so as to prevent danger of pulling out or breaking at the joint. This method of attaching the bellows insures absolutely light tight joints.

The bellows frame is tongued and grooved into the camera box.

Liberal lens space is provided in the front when the camera is closed and room is allowed at the back of the camera for carrying three Double Plate Holders, a Magazine Plate Holder or a Cartridge Roll Holder.

A large spring actuated panel is provided for focusing.

A spring actuated door is placed in the side of the camera for convenience in inserting plate holders and drawing slides.

The ground glass focusing screen is spring actuated and removable.

The Graphic Camera is provided with two tripod plates.

SPECIFICATIONS

	4 x 5	5 x 7	8 x 10
Dimensions	$6\frac{3}{4} \times 4\frac{1}{2} \times 5\frac{1}{2}$	$9 \times 5 \times 6\frac{1}{2}$	$12\frac{3}{4} \times 6\frac{1}{2} \times 10\frac{1}{4}$
Focal Capacity	$9\frac{1}{2}$	$10\frac{1}{2}$	17
Weight	$2\frac{1}{2}$	$3\frac{3}{4}$	$8\frac{1}{2}$
Size of Lens Board...	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{5}{8} \times 2\frac{5}{8}$	$3\frac{3}{4} \times 3\frac{3}{4}$

The Graphic Camera

PRICES

	4 x 5	5 x 7	8 x 10
Graphic Camera, fitted with Graphic R. R. Lens and Automatic Shutter.....	\$30.00	\$40.00	\$64.00
Extra Plate Holders.....	1.15	1.40	2.25
Graphic Magazine Plate Holder.....	12.00	14.00	....
Cartridge Roll Holder.....	6.50	9.00	....
*Graphic Camera, no Lens or Shutter.....	22.00	30.00	44.00
Graphic Camera, fitted with Goerz Series III Lens and Sector Shutter.			

4 x 5
(No. 1 Lens)
\$84.00

5 x 7
(No. 3 Lens)
\$109.50

8 x 10
(No. 6 Lens)
\$171.00

Graphic Camera, fitted with Plastigmat Lens and Diaphragm Shutter.

4 x 5
(No. 2 Lens)
\$74.00

5 x 7
(No. 3 Lens)
\$91.00

8 x 10
(No. 6 Lens)
\$149.00

Graphic Camera, fitted with B. & L. Zeiss Convertible Series VIIa Lens
and Diaphragm Shutter.

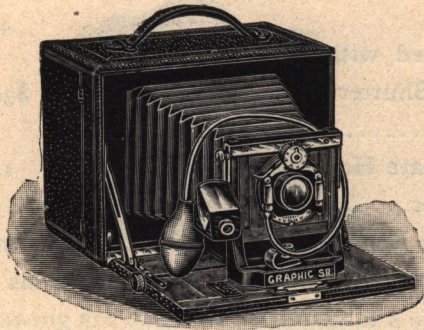
4 x 5
(No. 7 Lens)
\$103.00

5 x 7
(No. 10 Lens)
\$126.00

8 x 10
(No. 16 Lens)
\$208.00

*The Graphic Camera will only be furnished without lens when the
intending purchaser has a lens which is to be used with the camera, and in
such cases we require that the lens be sent to us to insure proper fitting and
scaling.

The Graphic Sr.



The Graphic Sr. represents the highest type of hand camera. No pains have been spared to make it as nearly perfect as possible.

It is constructed of the best kiln dried mahogany throughout, highly polished, and is covered with the best quality of black grained leather. All brass parts are polished, frosted and lacquered.

It combines double swing back, rising and falling front, with side shift and rack and pinion focusing device.

The front platform is attached to the box by a heavy piano hinge with short knuckles, extending the full width of the camera and insuring great strength when open.

Both side and back swing work from the centre.

Side swing locks at the top and bottom and keeps the plate holder in perfect alignment.

The front when drawn out is locked securely to the track by an "S" hook. Side shift is clamped by a milled head button.

The rising and falling front is secured by milled head buttons on each side. Full rise of front is practicable without reference to diameter of lens flange.

Reversible hooded view finder is attached to front, moving with it while focusing and always in line with the focusing scale.

The rack and pinion focusing attachment is very strong and practicable.

The bed plate is milled from hard brass $\frac{5}{32}$ of an inch in thickness and racks out several inches beyond the front platform.

The bellows is made of the best quality red Russia leather lined with the finest grade of percaline.

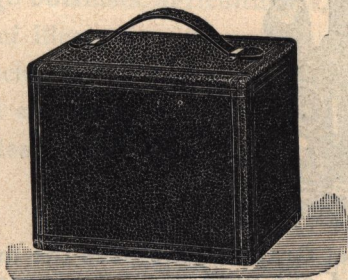
The ground glass focusing screen is spring actuated and removable.

A large spring actuated panel at back of camera affords full view of the focusing screen.

Rear compartment will carry three Double Plate Holders, Magazine Plate Holder or Cartridge Roll Holder.

Two tripod plates are fitted to this camera.

The Graphic Sr.



SPECIFICATIONS

	4 × 5	5 × 7
Dimensions, inches.....	$7\frac{1}{4} \times 5 \times 5\frac{3}{4}$	$9\frac{1}{2} \times 5\frac{1}{2} \times 7\frac{1}{2}$
Weight, pounds.....	$3\frac{3}{4}$	$4\frac{3}{4}$
Focal Capacity, inches.....	$9\frac{1}{2}$	$11\frac{1}{2}$
Size of Lens Board.....	$2\frac{1}{8} \times 2\frac{1}{8}$	$2\frac{5}{8} \times 2\frac{5}{8}$

PRICES

	4 × 5	5 × 7
Graphic Sr., fitted with Graphic R. R. Lens and Automatic Shutter	\$35.00	\$45.00
Extra Graphic Plate Holders.....	1.15	1.40
Graphic Magazine Plate Holder.....	12.00	14.00
Cartridge Roll Holder.....	6.50	9.00
*Graphic Sr., no Lens or Shutter.....	27.00	35.00

Graphic Sr., fitted with Goerz Series III Lens and Sector Shutter.

4 × 5 (No. 1 Lens)	5 × 7 (No. 3 Lens)
\$89.00	\$114.50

Graphic Sr., fitted with Plastigmat Lens and Diaphragm Shutter.

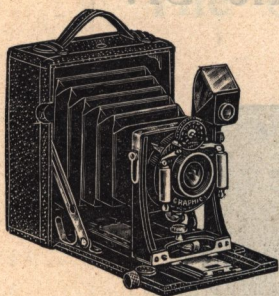
4 × 5 (No. 2 Lens)	5 × 7 (No. 3 Lens)
\$79.00	\$96.00

Graphic Sr., fitted with B. & L. Zeiss Convertible Series VIIa Lens and Diaphragm Shutter.

4 × 5 (No. 7 Lens)	5 × 7 (No. 10 Lens)
\$108.00	\$131.00

*The Graphic Senior Camera will only be furnished without lens when the intending purchaser has a lens, which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

The Folding Pocket Graphic



The Folding Pocket Graphic embraces the many good qualities of the larger cameras, worked out with great perfection and condensed into a most compact convenient pocket size. No effort has been spared to make his camera the most perfect pocket instrument manufactured.

The highest grade of material and workmanship, the best methods of construction and the finest adjustment of working parts characterize the Folding Pocket Graphic and justify its claim to superiority.

It is covered with the best quality of black Morocco leather. The wood-work is ebonized and all metal parts are oxidized in gun metal finish.

A strong piano hinge, with short knuckles, connects the front, extending the whole width of the camera and affording maximum strength when opened.

The front has rising and falling movement and side shift.

A hooded, brilliant finder is attached to the front board, moving with it as the front is racked in and out.

The front runs upon a solid brass track, clamping securely and rigidly in position.

Bellows is of the finest quality of black leather lined with the best grade of percaline and has long draw for a camera of this size.

Ground glass focusing screen is spring actuated and removable.

A hinged panel affords full view of the focusing screen.

The ground glass frame is removable for attaching Magazine Plate Holder or Cartridge Roll Holder.

Film Pack Adapter can also be used.

Two tripod plates are fitted into this camera.

Shutter is provided with finger and pneumatic release.

SPECIFICATIONS

The Folding Pocket Graphic is made only in the $3\frac{1}{4} \times 4\frac{1}{4}$ size.

Dimensions.....	$5\frac{1}{2} \times 2 \times 4\frac{5}{8}$
Focal Capacity.....	7 inches
Weight.....	$1\frac{1}{4}$ lbs.

PRICES

Folding Pocket Graphic, fitted with Graphic R. R. Lens and Automatic Shutter	\$30.00
Extra Plate Holders.....	1.15
Graphic Magazine Plate Holder.....	12.00
Cartridge Roll Holder.....	7.00
Combination Carrying Case.....	4.00
* Folding Pocket Graphic, no Lens or Shutter.....	24.00

*The Folding Pocket "Graphic" will only be furnished without lens when the intending purchaser has a lens which is to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

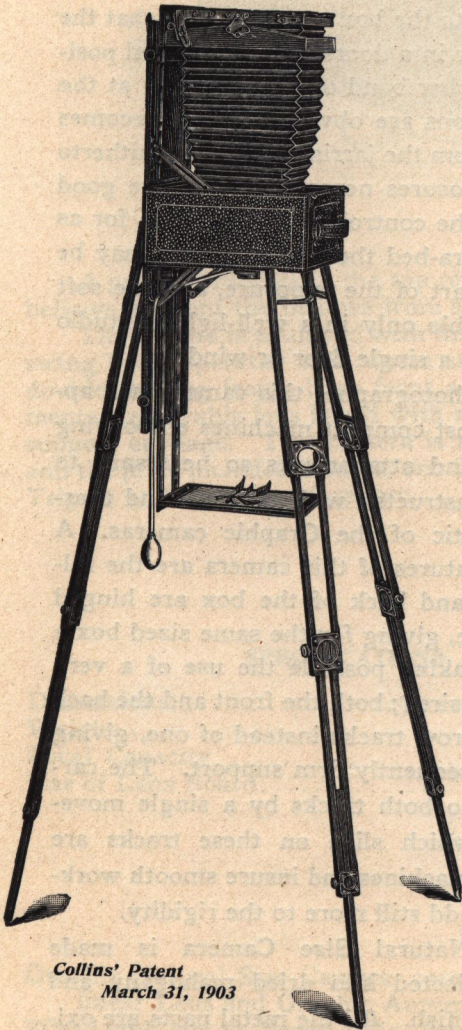
The Graphic Naturalists' Camera

There are now enough botanists, agriculturists, seedmen, etc., using cameras in the preparation of illustrations to warrant the making of a camera especially designed for such work, and after consultation with leading workers in this line and a careful consideration of their requirements this new combined view and natural size camera is offered to the scientific public.

The camera here presented is a recent invention that constitutes a radical departure from all other cameras on the market. For the first time it becomes possible for scientific workers and students of natural history to secure detailed natural size photographs on a clean, white background, without addition to the outfit of a cumbersome stand.

It opens up new possibilities to the botanical collector, for without adding to the bulk of the camera, now a necessary part of every expedition, he will be able to secure natural size photographs of delicate flowers and fruits, accurately recording all the dimensions with one operation and placing on record the appearance of the specimen in its fresh state, preserving the details that in so many cases are lost, no matter how carefully the specimen is preserved. The production of this class of photographs with a clean, white background has hitherto been confined to the laboratory and the field worker has been obliged to content himself with photographs of an indefinite scale, the specimen pinned to a vertical surface and hanging in an unnatural attitude, the background filled with distracting shadows.

Florists, horticulturists and seedmen will find this camera particularly adapted to the making of photographs to be used as illustrations or for study, since it



*Collins' Patent
March 31, 1903*

The Graphic Naturalists' Camera

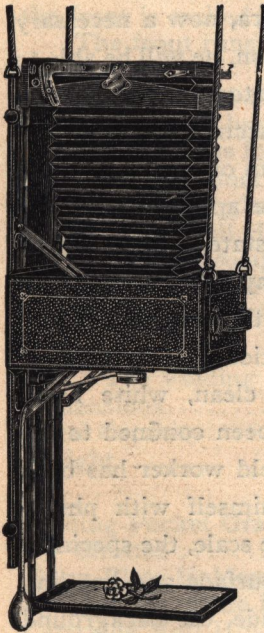
now becomes possible to select the samples and place them directly before the camera without injuring the most delicate bloom or disturbing the arrangement of the clusters, as is sure to happen if they are carried to the studio.

The making of natural size pictures now becomes the simplest instead of one of the most difficult branches of photography. No measuring is necessary to insure the scale being exactly natural size. The focusing is also done mechanically in a way that insures greater accuracy.

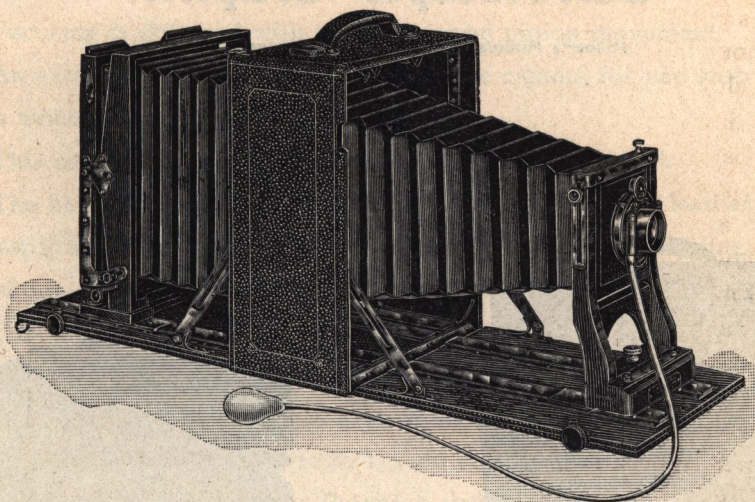
The following remarks will make apparent the advantages of this camera for indoor work: Four strings are attached to the box in such a way that the camera may be suspended from the ceiling or in a doorway in a vertical position, and by the introduction of a strong rubber band or coiled spring at the point where the four cords unite all vibrations are obviated and it becomes entirely unnecessary to protect the camera from the jarring which has hitherto interfered with the making of the long exposures necessary to secure good definition. Lighting is also entirely under the control of the operator, for as the object is supported directly on the camera-bed the whole system may be rotated during any part of the exposure, and the soft effects hitherto possible only in a well-lighted studio can be secured before a single door or window.

To the general photographer this camera will appeal as one of the most compact machines embodying all the movements and attachments so necessary to high grade work, constructed with the care and thoroughness characteristic of the Graphic cameras. A few of the special features of this camera are the following: The front and back of the box are hinged along the narrow side, giving for the same sized box a much longer bed, making possible the use of a very long bellows when desired; both the front and the back draw out on two narrow tracks instead of one, giving a wide base and consequently firm support. The carriages are clamped to both tracks by a single movement. The shoes which slide on these tracks are longer than in other machines and insure smooth working of the parts and add still more to the rigidity.

The Graphic Natural Size Camera is made throughout from selected kiln dried mahogany and cherry, in ebonized finish. All the metal parts are oxidized in gun metal finish. The camera is covered with the best quality Morocco leather, as are also the platforms, and the bellows is of the best quality black leather.



The Graphic Naturalists' Camera

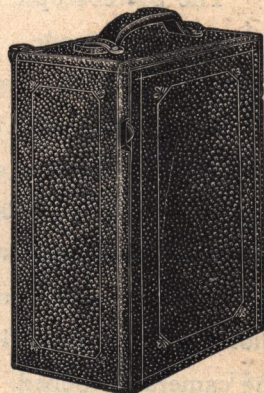


A pair of brackets in the top of the camera, connecting with loops on the bellows, prevent the bellows from sagging when not fully extended.

The camera is equipped with the following essential adjustments: Double swing back, operated with worm screw and fine rack and pinion movement; double shifting front; both front and back rack and pinion focusing adjustments; removable lens board with safety locking device; detachable specimen support or stage. This camera is made in $6\frac{1}{2} \times 8\frac{1}{2}$ size only, non-reversible, and the price includes Camera, one Graphic Double Plate Holder No. 2 Crown Tripod, and Specimen Support.

SPECIFICATIONS

Dimensions.....	$12\frac{3}{4} \times 10\frac{1}{4} \times 5\frac{1}{2}$ inches
Weight	9 pounds
Focal Capacity.....	26 inches
Size of Lens Board.....	$3\frac{1}{4} \times 3\frac{1}{4}$ inches

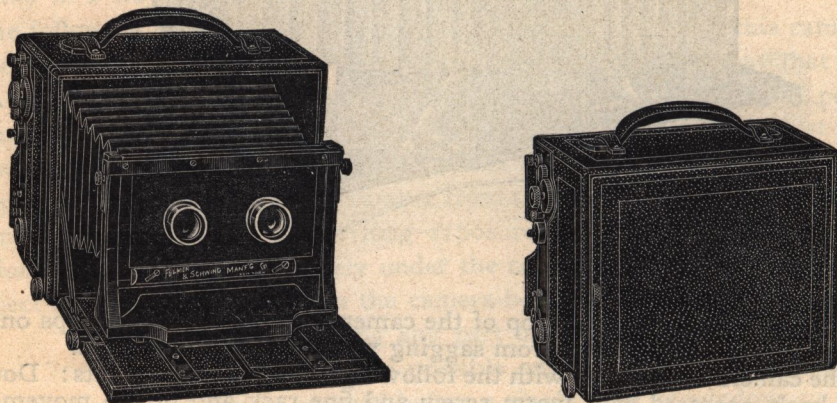


PRICES

Graphic Natural Size Camera, complete, with Graphic Rapid Rectilinear Lens and Graphic Automatic Shutter.....	\$105.00
Fitted with No. 11, Series VIIa, Zeiss Lens and Volute Shutter.	203.00
Fitted with No. 4, Series III, Goerz Double Anastigmat Lens and Volute Shutter	184.00
Graphic Natural Size Camera, no lens or shutter.....	90.00

Stereoscopic Graphic

Folmer's Patents, November 5, 1901; August 5, 1902



The Stereoscopic Graphic represents the highest type of folding stereoscopic camera made. It is similar in general design to our regular Graphic, but provided with a front of extra width to take stereoscopic lenses.

It is constructed of selected, kiln dried mahogany, highly finished and covered with the best quality black grained leather. All metal parts are oxidized in gun metal finish. This camera is thoroughly substantial in make and handsome in appearance.

The front platform is attached to the box by a heavy piano hinge, with short knuckles, extending full length of the camera, giving great strength when the camera is opened.

The front platform drops out of the way for use with lenses of short focus.

The front is securely fastened to a wide track of hard milled brass $5/32$ of an inch thick, preventing oscillation and side movement when the camera is racked out.

Stereoscopic Graphic

Focusing is obtained with a fine rack and pinion movement.

An extra pinion is set in the body of the camera for use with wide angle lenses when the front platform is dropped.

This camera has rising front and removable lens board.

The bellows is made of the finest quality black Russia leather, lined with the best grade of percaline, and has a draw of 12 inches, extending, when fully racked out, several inches beyond the front platform.

The Graphic Focal Plane Shutter is fitted to this camera. The aperture diminishing as the shutter passes across the plate, gives the operator perfect control of exposure and insures greater light action on foreground than sky. Speed may be varied from 1/10 to 1/1200 of a second.

Our Special Spring Roller Partition automatically adjusts itself to lenses of any focal length as the camera is racked in and out.

A removable, spring actuated ground glass focusing screen is fitted to this camera.

A large, hinged focusing panel, with side shields, gives full view of the focusing screen.

Graphic Magazine Plate Holder or Cartridge Roll Holder may be used.

A tripod plate is fitted to this camera.

PRICES

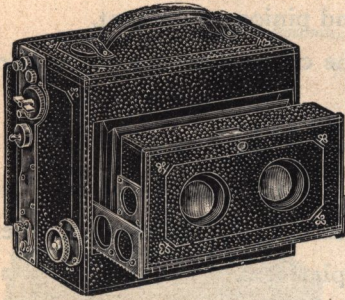
5 x 7

Stereoscopic Graphic, complete, with Matched Graphic R. R. Lens....	\$95.00
Extra Graphic Plate Holders.....	1.40
Graphic Magazine Plate Holder.....	15.00
Cartridge Roll Holder.....	10.00
*Stereoscopic Graphic, no Lenses.....	80.00

*The Stereoscopic Graphic Camera will only be furnished without lenses when the intending purchaser has a pair of lenses which are to be used with the camera, and in such cases we require that the lenses be sent to us to insure proper fitting and scaling.

The Telescopic Stereo Graphic

Folmer's Patents, November 5, 1901; August 5, 1902



The Telescopic Stereo Graphic is a self-contained telescopic box, similar in general construction to our regular Telescopic Graphic.

It is light, strong and very compact.

It is constructed of selected mahogany, kiln dried, lock jointed at the corners and reinforced with cross ties. It is covered with the best quality of black Morocco.

The telescopic front racks out on two side arms running in metal guides. Full bellows extension is thus obtained without side play or lost motion.

It is provided with rising front and removable lens board.

The front opens for convenience in adjusting diaphragms and cleaning and changing lenses.

A fine rack and pinion movement regulates the focusing extension and is operated by a large milled head button on the outside.

Our Special Spring Roller Partition automatically adjusts itself to lenses of any focal length.

The Graphic Focal Plane Shutter, fitted to this camera, provides a means of photographing rapidly moving objects, sky and foreground pictures, etc., in a manner not to be found in any other instrument. The exposure diminishes as the shutter passes from foreground to sky, giving the operator perfect control of exposure. Speed may be varied from $1/10$ to $1/1200$ of a second.

Pneumatic and finger release, as well as setting device for shutter, are worked from the outside of the camera.

Cartridge Roll Holder or Magazine Holder may be used.

Removable, spring actuated ground glass focusing screen is fitted to this camera. A large, spring actuated panel with side shields affords full view of the focusing screen.

A tripod plate is fitted into this camera.

Telescopic Stereo Graphics will accommodate lenses varying in focus from 4 to $6\frac{1}{2}$ inches.

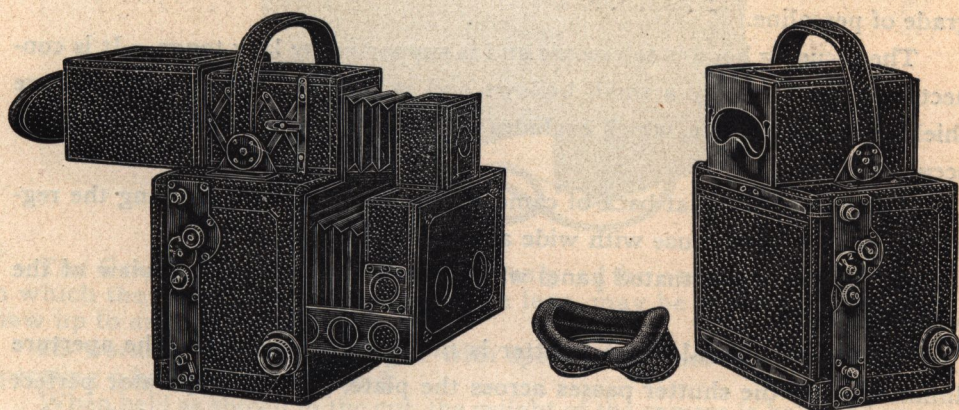
PRICES

Telescopic Stereo Graphic, fitted with Matched Graphic R. R. Lenses..	\$90.00
Extra Plate Holders.....	1.40
Graphic Magazine Plate Holder.....	15.00
Cartridge Roll Holder.....	10.00
* Telescopic Stereo Graphic, no Lenses.....	75.00

* The Telescopic Stereo Graphic Camera will only be furnished without lenses when the intending purchaser has a pair of lenses, which are to be used with the camera, and in such cases we require that the lenses be sent to us to insure proper fitting and scaling.

The Triple Lens Stereo Graphic

Folmer's Patents, November 5, 1901; August 5, 1902



The Triple Lens Stereo Graphic is a high grade stereoscopic camera with an accurately matched focusing lens working in perfect unison with the exposing lenses and enabling the operator to compose and focus his subject upon the ground glass precisely as it is thrown upon the plate or film by the lower lenses. The image may thus be kept constantly in view up to and during exposure, and is seen upon a line with the eye as in a field glass.

It is constructed of the best grade of selected mahogany, kiln dried, and strongly reinforced by cross ties.

It is covered with the best quality black Morocco leather, with woodwork ebonized and metal parts oxidized in gun metal finish.

Telescopic in form, the front racks out on two heavy brass side arms, extending full depth of the camera and running between strong angle metal guides, allowing perfect freedom of extension without side play.

The Triple Lens Stereo Graphic

Sliding covers in the front board protect the lenses when not in use.

The front door is hinged for adjustment of diaphragms or changing of lenses.

Focusing adjustment is operated by large, milled head button on the outside which moves all three lenses in unison, insuring perfect accuracy of focus.

The bellows is of the finest quality of leather and is lined with the best grade of percaline.

The focusing hood is telescopic and is supported by lazy tongs. It is connected to the front by a small bellows and is provided with detachable eye shield, fitted to the face, which excludes all light and renders focusing easy and accurate.

A focusing screen at back of camera affords a means of verifying the register of the lens or for use with wide angle lenses.

A large, spring actuated panel with side shields, affords full view of the focusing screen.

The Graphic Focal Plane Shutter is fitted to this camera. The aperture diminishing as the shutter passes across the plate, gives the operator perfect control of exposure and insures greater light action on foreground than sky. Speed may be varied from $1/10$ to $1/1200$ of a second.

A tripod plate is fitted to this camera.

The high grade anastigmat lenses fitted to this camera, for exposing, may be matched with a less expensive focusing lens, if desired.

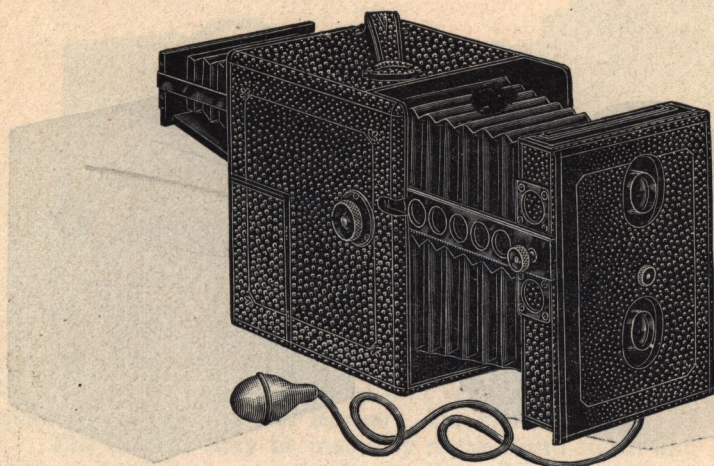
PRICES

5 x 7

Triple Lens Stereo Graphic, fitted with matched pair of No. 7 Series VIIa B. & L. Zeiss Convertible Lenses, with matched focussing finder lens	\$305.00
Triple Lens Stereo Graphic, fitted with matched pair of No. 1 Series III Goerz Lenses, with matched focusing finder lens	258.00
★ Triple Lens Stereo Graphic, without Lenses	150.00

★The Triple Lens Stereo Graphic Camera will only be furnished without lenses when the intending purchaser has lenses which are to be used with the camera, and in such cases we require that the lenses be sent to us to insure proper fitting.

The Graphic Twin Lens Special



The Graphic Twin Lens Special is designed for use as a hand camera, in which the image, seen through a twin lens, may be focused and kept in view up to and during exposure.

Its working parts are arranged with special reference to convenience in operating when held in the hand.

When held as shown in the cut, the weight of the camera is balanced upon the left hand and the instrument is steadied against the forehead while the right hand is left free for focusing and releasing the shutter.

This camera closes very compactly and is provided with telescopic front and collapsible focusing eye shield, rising front, long draw of bellows, rack and pinion focusing device, removable lens board and spring actuated focusing screen for time work.

It is constructed of the finest, selected kiln dried mahogany, lock jointed and reinforced with crosswise panels of the wood.

It is covered with the best quality black grained leather, the exposed parts being finished in ebony and the metal oxidized.

The telescopic front is racked out on two heavy brass side arms extending full length of the camera, and running between strong metal guides. This construction allows extreme draw of bellows and great rigidity.

Perforations in the side arms reduce weight without loss of strength.

The rack and pinion focusing adjustment is operated by a large milled head button.

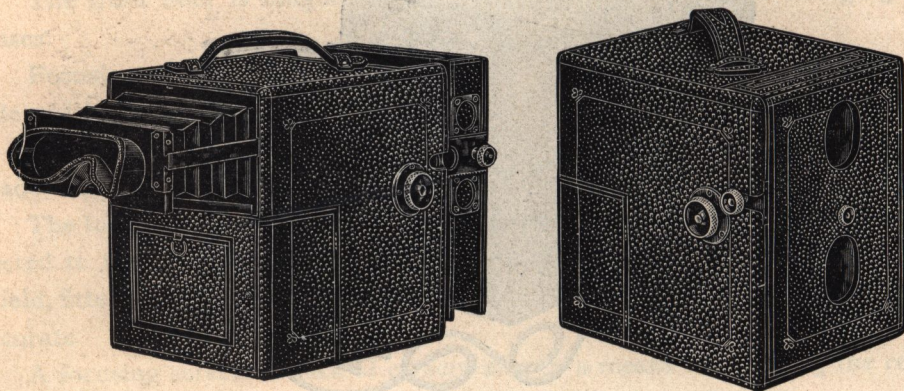
Rising and falling front is operated by rack and pinion with spring tension which holds the front in position without binding screws.

The front of camera is hinged at top with piano hinge extending its full width and may be opened to change or clean lenses. If opened at right angles to front and held in position by side arm, it serves as a lens shield.

Metal covers, protecting both lenses, are geared together inside the front and operated from the outside by a single, milled head button.

The focusing hood is collapsible and is provided with an eye shield, fitting the face and excluding all light. When extended, it is supported upon two brass side arms, running between metal guides. It is braced against the focusing panel and is extremely rigid.

The Graphic Twin Lens Special



A spring actuated, ground glass focusing screen is provided for time exposures and for verifying focus of twin lens.

A large, spring actuated panel affords full view of the focusing screen.

A door in side of camera gives access to rear compartment in which is sufficient space to carry either three Double Plate Holders, a Magazine Plate Holder or a Cartridge Roll Holder.

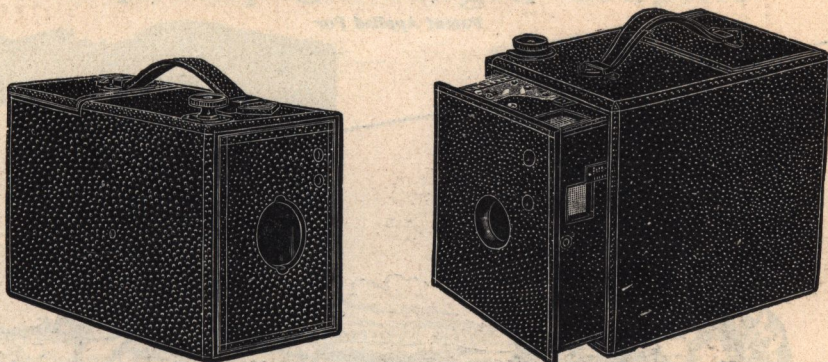
Two tripod plates are set into this camera.

Outside dimensions of camera when closed are $9 \times 7 \times 9\frac{1}{4}$ inches, and weight is $6\frac{1}{4}$ pounds. Made in 4×5 size only.

Graphic Twin Lens Special, fitted with Graphic Rapid Rectilinear Lenses and Graphic Automatic Shutter.....	\$82.00
Extra Plate Holders.....	1.15
Graphic Magazine Plate Holder.....	12.00
Cartridge Roll Holder, empty.....	6.50
Sole Leather Carrying Case.....	6.00
* Graphic Twin Lens Special, no Lens or Shutter.....	65.00
Graphic Twin Lens Special, fitted with No. 2, Series III, Goerz Double Anastigmat Lens, Sector Shutter and Matched Focussing Finder Lens	150.00
Graphic Twin Lens Special, fitted with No. 7, Series VIIa, Zeiss Convertible Lens, Diaphragm Shutter, and Matched Focussing Finder Lens	165.00

* The Graphic Twin Lens Special Camera will only be furnished without lenses when the intending purchaser has lenses which are to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting.

The Telescopic Graphic Camera



The Telescopic Graphic Camera combines all the good points of a hand camera with the compactness of the folding type. It is constructed of selected mahogany, lock jointed and reinforced, and is covered with the best quality of black grained leather. Its metal parts are finished in dead black.

The camera may be instantly racked into focus and made ready for use without having to open the front.

Finders, focusing scale and shutter release come into view as the box is extended.

The telescopic front is racked out upon two heavy metal arms and is operated by a large milled head button attached to a heavy metal rod, extending the entire width of the camera and engaging both arms.

The front of the camera is hinged and free access is provided for cleaning lens, etc.

A sliding cover protects the lens when not in use.

The lens board is removable.

Two brilliant finders are fitted to this camera.

The automatic shutter is provided with finger and pneumatic release.

Two tripod plates are fitted into this camera.

A large, spring actuated panel gives full view of the focusing screen.

The ground glass screen is spring actuated and removable.

Room is provided in the back of the camera for three Double Plate Holders, a Graphic Magazine Plate Holder, a Magazine Film Holder or a Cartridge Roll Holder.

PRICES

5 x 7

Telescopic Graphic Camera, with Graphic R. R. Lens and Automatic Shutter	\$30.00
Extra Plate Holders, each	1.15
Graphic Magazine Plate Holder	12.00
Cartridge Roll Holder, empty	6.50
Sole-Leather Carrying Case	4.00
Telescopic Graphic, fitted with Series VIIa, No. 7, Zeiss Convertible Lens and Diaphragm Shutter	103.00
Telescopic Graphic, fitted with Series III, No. 1, Goerz Double Anastigmat Lens and Sector Shutter	89.00
* Telescopic Graphic, no Lens or Shutter	22.00

*The Telescopic Graphic Cameras will only be furnished without lenses when the intending purchaser has a high-grade lens which is intended to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting.

The Deceptive Angle Graphic

Patent Applied For



This camera is in every sense of the word a detective camera, being thoroughly disguised to resemble a stereo camera and so arranged as to photograph subjects at right angles to its apparent line of vision.

It is of the twin lens type, fitted with regular lens and shutter for exposure and a matched lens through which the subject is seen in the same size as on the focusing screen.

This camera possesses unequalled advantages for detective camera work. It is carefully constructed of selected, kiln dried mahogany and covered with the best quality of black grained leather.

The side of the camera is fitted with a pair of dummy stereo lenses and imitation finder apparently in the direct line of vision when the operator is focusing.

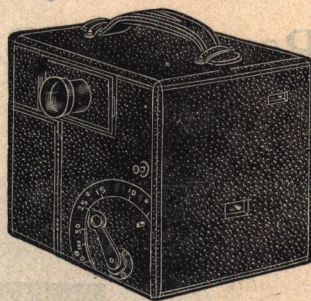
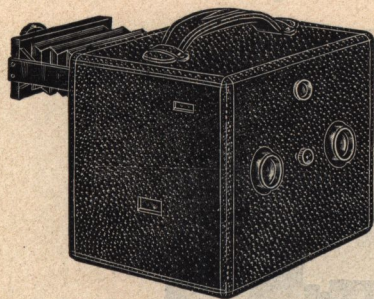
The rack and pinion focusing device is concealed inside the camera with the exception of a small focusing lever operated by the thumb from the outside.

The point of the focusing lever acts as an index on a graduated focusing scale for off-hand, snapshot work when in use without focusing screens.

The front of the camera is hinged and may be opened to change or clean the lenses.

Two rectangular apertures are provided in the front through which the lenses work.

The Deceptive Angle Graphic



Metal shields cover the lens apertures when not in use.

The focusing finder lens reflects the image upon the ground glass screen exactly as it is thrown upon the plate or film by the lower lens.

Lens boards are removable.

The focusing hood is telescopic, being drawn out on two metal side arms riding between metal guides. It is fitted with a single eye tube like a jeweler's glass which permits of sharp and accurate focusing.

A spring actuated, ground glass focusing screen is provided for time exposures or for verification of focus.

A hinged panel in the back affords full view of the focusing screen when used for time exposure.

The rear compartment will carry three Double Plate Holders, Magazine Plate Holder or Cartridge Roll Holder.

The shutter is arranged to set and release from the outside and working parts for both are conveniently placed, within easy reach of thumb near the focusing lever.

Two tripod plates are fitted into this camera.

When high grade anastigmat lenses are fitted to Deceptive Angle Graphics a less expensive lens may be matched for the focusing finder.

This camera is made only in $3\frac{1}{4} \times 4\frac{1}{4}$ size.

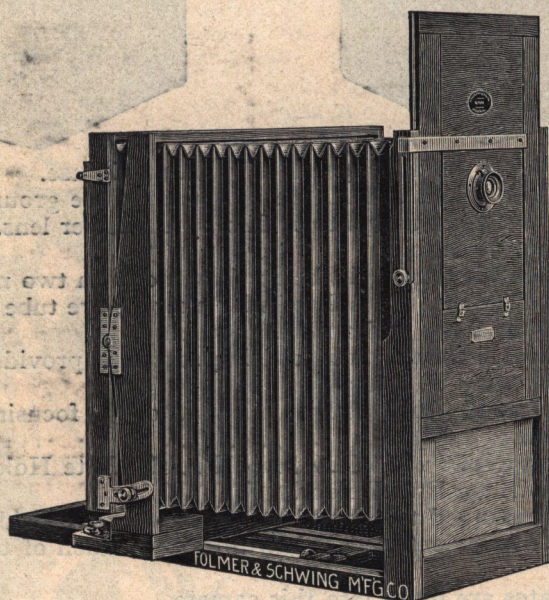
Outside dimensions of Deceptive Angle Graphic are $8\frac{1}{4} \times 6\frac{1}{8} \times 6\frac{5}{8}$ inches, and weight is three pounds.

PRICES

	$3\frac{1}{4} \times 4\frac{1}{4}$
Deceptive Angle Graphic, fitted with Graphic Rapid Rectilinear Lenses and Graphic Automatic Shutter.....	\$67.00
Extra Plate Holders.....	1.15
Graphic Magazine Plate Holder.....	12.00
Cartridge Roll Holder, empty.....	5.00
Sole-Leather Carrying Case.....	5.00
Deceptive Angle Graphic, no Lens or Shutter.....	50.00
Deceptive Angle Graphic Camera, fitted with Series III, No. o, Goerz Double Anastigmat Lens, Automatic Shutter and Matched Focusing Finder Lens.....	110.00
Deceptive Angle Graphic Camera, fitted with No. 4, Series VIIa, Zeiss Convertible Lens, Automatic Shutter and Matched Focusing Finder Lens.....	135.00

*The Deceptive Angle Graphic Cameras will only be furnished without lenses when the intending purchaser has a high-grade lens which is intended to be used with the camera, and in such cases we require that the lens be sent to us to insure proper fitting and scaling.

The Sky Scraper Camera Reversible Back—Double Swing



The Sky Scraper Camera is especially designed for photographing tall buildings where great rise of front is required together with excessive back swing. The Sky Scraper Camera is, however, perfectly adapted to all-around work, being fitted with double swing, back focus, rising and falling front and reversible back.

It is constructed of selected mahogany with bed rails of straight grained cherry. It is built with special regard to strength and rigidity in all its parts.

The bed is hinged and closes up into very small compass.

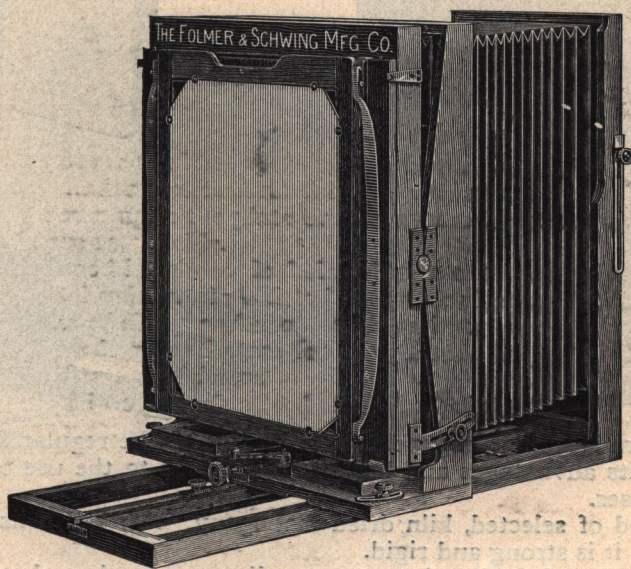
On the larger sizes, rear section of the bed is hinged, to drop down, out of the way, when using short focus lenses.

The rising front moves independently of the bellows and allows the lens to be raised until its optical axis is above the top line of the plate.

The lens board, being square, may be reversed or turned half way round in either direction. This is a great advantage over ordinary camera construction, as, if the lens hole is cut eccentric, extreme range is possible on either side as

The Sky Scraper Camera

Reversible Back—Double Swing



well as upward and downward. This feature is very useful in photographing tall buildings from cramped positions.

The bellows is wedge shaped and tapers gradually to a large front board frame, which gives great strength and prevents the bellows from sagging.

The bellows, which is a feature of this camera, is made of the best quality of a material specially prepared for it.

The Sterling Plate Holder is furnished with this camera.

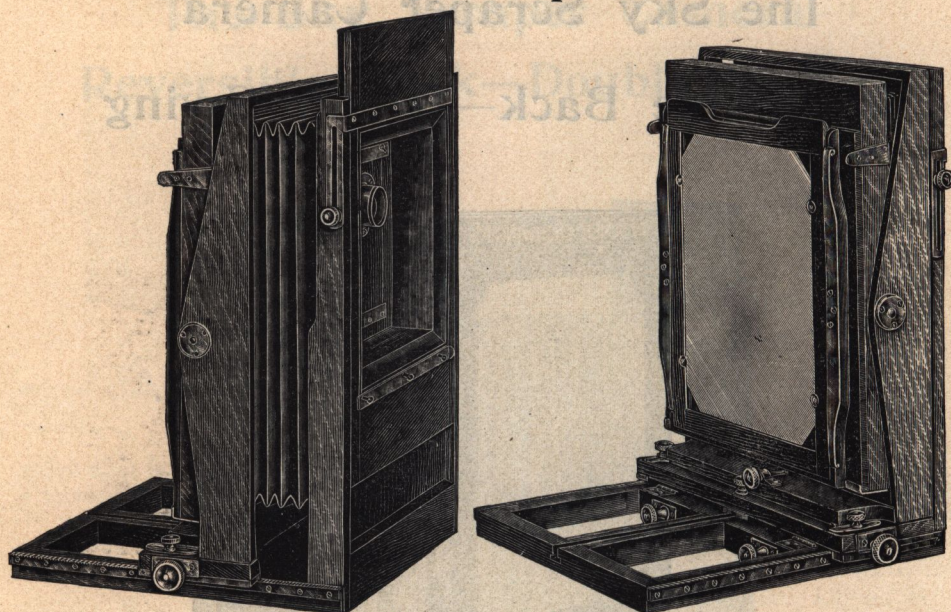
Prices include Karatol Carrying Case and one Plate Holder; no lens or shutter.

PRICES

Size of View	Size of Lens Board	Focal Capacity	Weight	Double Swing
8 x 10	6 x 6 in.	21 in.	9 lbs.	\$40.00
11 x 14	7 x 7 in.	26 in.	14 lbs.	55.00
14 x 17	7 x 8 in.	36 in.	23 lbs.	75.00

Larger sizes made to order.

The Sky Scraper Special Camera



This camera is similar in general construction to the regular Sky Scraper, possessing all its advantages and being also adapted to the use of extremely short focus lenses.

Constructed of selected, kiln dried mahogany, with bed rails of straight grained cherry, it is strong and rigid.

The bed is hinged, folding into very small compass when closed.

A large rising front, to accommodate lenses of extremely short focus, such as the Goerz Hypergon, moves independently of the bellows, allowing the lens to be raised until its optical axis is above the top line of the plate.

The lens board is square and if the lens hole is cut eccentric, extreme range is possible on either side as well as upward and downward. This feature is useful in photographing tall buildings from cramped positions. The lens board may be entirely reversed or turned half way round in either direction.

A large depressed cone is fitted for use with lenses of extremely short focal capacity, which, if reversed, serves also to extend the draw of bellows for longer focus work.

The bellows is rectangular and wedge shaped, tapering gradually from the side to the large front board frame, insuring strength and preventing bellows from sagging. The bellows is made from a high grade material specially prepared for it.

Back focus is operated by a fine rack and pinion movement.

The double swing back is reversible, both vertical and horizontal swing pivoting on their optical centres.

Vertical swing is operated by finely adjusted worm screw.

Horizontal swing is locked rigidly in position by milled head screws, firmly engaging both sides.

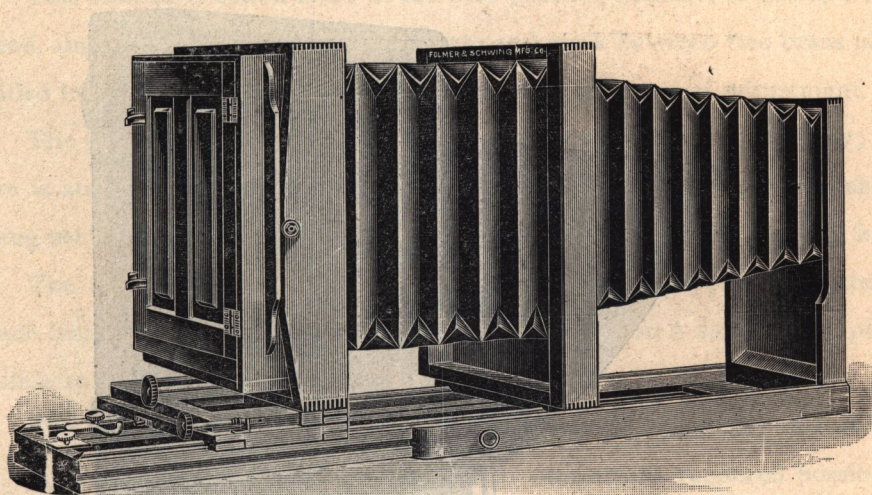
Sterling Double Plate Holders are fitted to this camera.

The price includes a hand-sewed, waterproof carrying case of first quality and one double plate holder; no lens or shutter.

PRICES

8 x 10	\$45.00
11 x 14	60.00

The F. & S. "Crown" Improved Portrait Cameras



Our Improved Portrait Cameras are made of specially selected cherry and mahogany, handsomely polished; fitted with V-shaped guides, telescopic bed, best quality rubber bellows, lever focusing attachment, double swing back, rising and falling front, and are furnished with our Sterling Double Plate Holder up to the 11x14 size. Larger sizes with curtain slide studio holders, and ground glass frames.

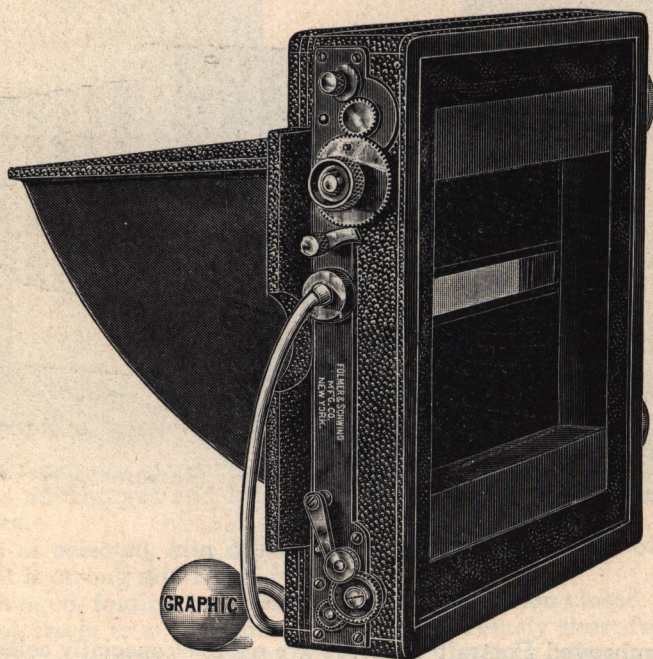
PRICES

8 x 10, 30-inch bed.....	\$45.00
11 x 14, 48-inch bed.....	65.00
14 x 17, 60-inch bed.....	80.00
16 x 20, 65-inch bed.....	90.00
18 x 22, 70-inch bed.....	100.00
20 x 24, 72-inch bed.....	115.00

Special sizes made to order.

The Graphic Focal Plane Shutter

Folmer's Patents, November 5, 1901; August 5, 1902



The Focal Plane Shutter presents many advantages over those working in front of or between the lenses.

The Graphic Focal Plane Shutter is the most complete and perfect instrument of its kind on the market. In perfection of mechanism, simplicity and strength of construction, precision of adjustment and ease of manipulation it is unique.

The aperture decreases as the shutter passes across the plate, giving greater exposure to foreground than sky. In use with the reversible back type of camera, this feature may be applied to the photographing of street scenes with one side in heavy shadow.

By its position, immediately in front of the plate or film and practically in the same focal plane, the light is distributed with equal intensity upon every portion of the sensitive surface.

As the curtain aperture moves more rapidly across the plate than the object being photographed, the effect of arrested motion is complete. It is only with the Graphic Focal Plane Shutter that instantaneous exposures are literally possible.

The Graphic Focal Plane Shutter

This shutter is constructed in the best possible manner, of selected hardwood, and all working parts are fitted into and work between two brass plates, drilled in pairs, to insure perfect alignment and accuracy of adjustment.

The gearing and metal parts are strong and cut with great accuracy; their size is such as to insure economy of motion in every direction—the shutter being set by only a trifle more than a single revolution of the winding key.

The aperture adjustment and variation in working speed of shutter are made from the outside and may instantly be read upon a set of dials, plainly visible to the operator.

The Graphic Focal Plane Shutter has pneumatic and finger release.

A range of more than 600 variations in exposure is rendered possible by the varying speeds and apertures of this shutter.

Time stops are fitted to all shutters up to and including $6\frac{1}{2} \times 8\frac{1}{2}$. Larger sizes can be worked for time exposures by use of lens cap.

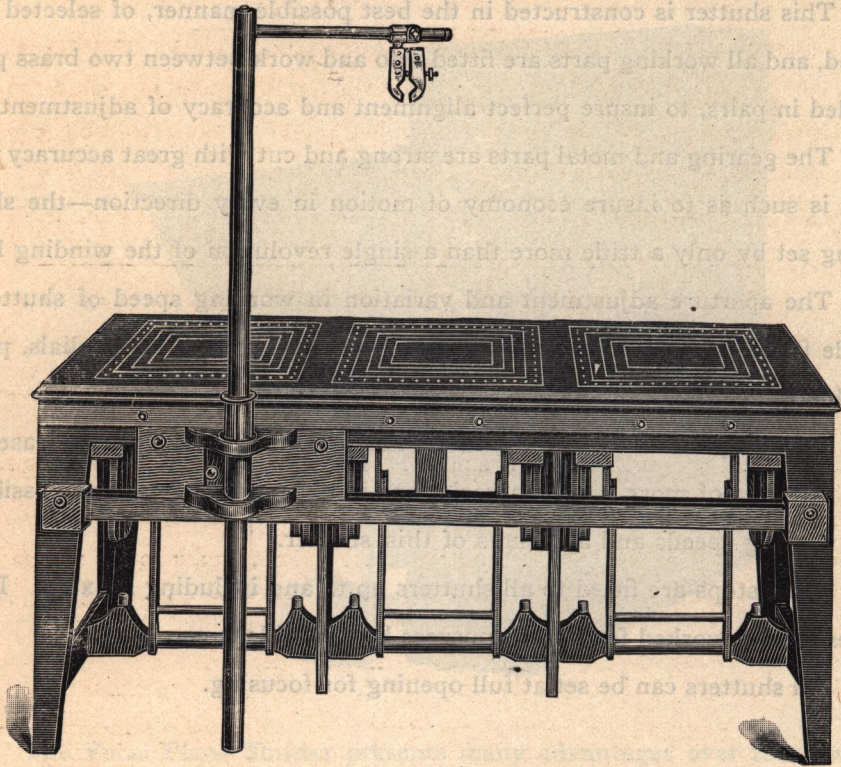
All shutters can be set at full opening for focusing.

PRICES

	When fitted to GRAPHIC cameras	When fitted to cameras of other manufacture
4 x 5	\$34.00	\$35.00
5 x 7	36.00	37.00
$6\frac{1}{2} \times 8\frac{1}{2}$	38.00	40.00
8 x 10	40.00	42.00

Folmer's X-Ray Table

Patent Applied For



Is a perfectly appointed and thoroughly practicable table for use in the making of Shadow-Graphs. It provides the widest possible range of adjustment both for tube and patient under examination.

The table is of cherry and mahogany, in hard oil finish, and measures 6 feet in length by 21 inches in width. It is 32 inches high and is provided with three openings for insertion of plates, 14x17, or smaller. The subject may be so placed as to bring any portion of the body directly over the plate in use.

It is fitted for plates of any size up to and including 14x17, the smaller sizes centering accurately by means of kits.

Folmer's X-Ray Table

Only the thickness of the artificial leather, forming the table top, and the enclosing envelope separate the surface of the plate from the subject under examination, the entire separation being not more than $1/16$ of an inch.

The exact position of any sized plate is indicated by the outlines scored on the top of the table, which coincide exactly with the kits provided.

The plate is brought into contact with the under side of the table top and held in position by Knee Joint Platforms shown in cut.

Plates may be quickly inserted or changed by drawing forward the cross bar in the knee joint, which lowers the plate platform. The platform is replaced in position by pressing back the knee joint until the arms stand in vertical position.

The tube is carried in rubber padded jaws, attached to horizontal arms with swivel clamp, enabling its use at any desired angle.

The horizontal arm may be raised or lowered by means of its upright support. Both upright and horizontal supports are scaled in inches, allowing perfect adjustment of tube at any desired height or distance from the side of table. The upright support moves on a swivel, affording wide range to right and left.

The tube may, without disturbing the subject, be shifted $2\frac{1}{2}$ inches more or less, by use of the scale on the horizontal arm. This adjustment, equal to the pupillary separation of the eyes, makes possible an accurate stereoscopic effect and allows the making of X-Ray stereoscopic negatives with ease and accuracy.

The upright support rides in a carriage, between two guides, extending full length of the table and may be locked rigidly at any point.

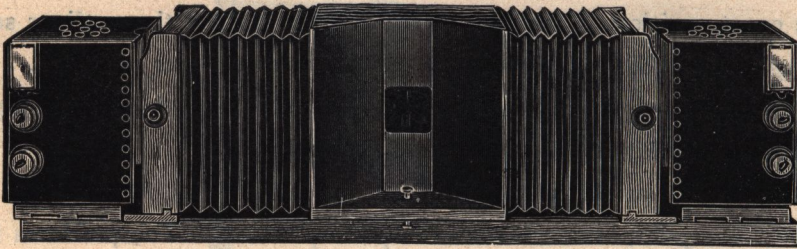
Buttons are provided on the sides of the table for adjustment of bands or straps to keep the subject in position.

PRICE

X-Ray Table, complete, without tube..... \$165.00

Folmer's X-Ray Reflecting Stereoscope

Patent Applied For



Is a complete and perfect apparatus for viewing X-Ray negatives stereoscopically under artificial light.

It consists of two compartments for carrying negatives, provided with an illuminating box at each end, a double pair of bellows, and a center compartment provided with reflectors so arranged as to show the negatives in perfect stereoscopic effect when viewed from the front.

The negatives, previously taken for this purpose, are made in pairs, at a separation of $2\frac{1}{2}$ inches, or the exact pupillary separation of the observer's eyes and perfectly superimposed in the viewing compartment.

It is constructed of cherry and mahogany in hard oil finish. The bellows are of the best quality red Russia leather. The illuminating boxes are of metal, porcelain lined. Each illuminating box is supplied with twelve 16-candle power electric bulbs.

It will carry negatives of any size up to and including 11x14 inches. The negatives to be viewed in stereoscopic effect are accurately centered and adjusted by means of a shifting frame and convenient adjusting screws in the carrying frames and kits are provided for negatives smaller than 11x14.

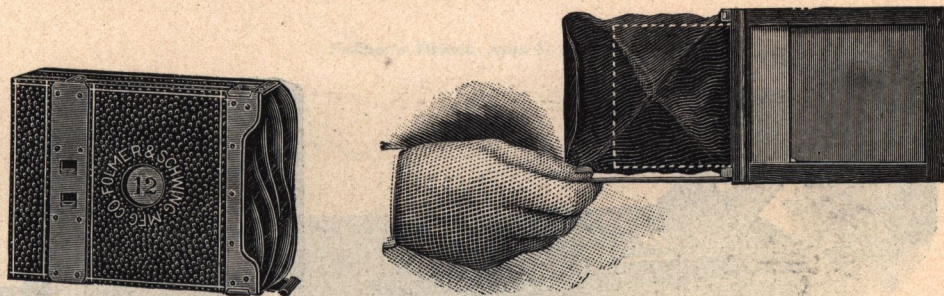
The reflecting stereoscope used in conjunction with our X-Ray table affords a most convenient and thoroughly practicable method of X-Ray examination in stereoscopic effect.

PRICE

X-Ray Stereoscope, complete..... \$135.00

The Graphic Magazine Plate Holder

Folmer's Patent, August 15, 1899.



The Graphic Magazine Plate Holder is designated to carry twelve glass plates loaded into metal septums. It may be adapted to any of the standard makes of cameras. This magazine holder is thoroughly well made from selected cherry and is reinforced with brass plates.

Simple and durable, it is a favorite both with amateurs and professionals.

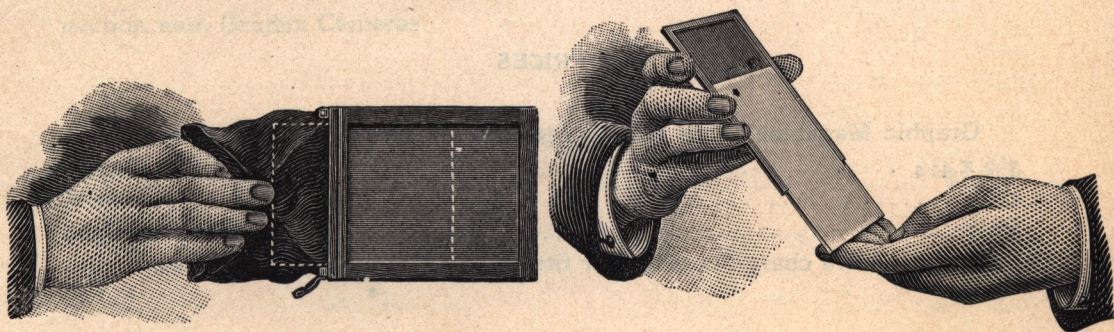
The glass plates are loaded into separate metal septums, each of which is numbered on the back in serial number. The number appears before the ruby window at the back of the magazine as each exposure is made.

When a plate is exposed the septum is, by means of a brass rod, drawn into a leather bag attached to the end of the magazine and reinserted by hand into the rear of the magazine holder.

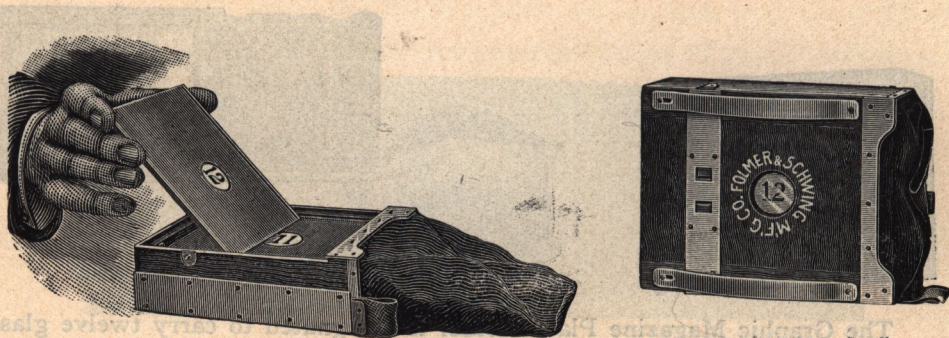
Each septum has a depression in its back, which serves as a spring to force the plate forward into focus, regardless of the thickness of the plate. The serial numbers are placed in these depressions.

Springs at the back of the magazine force the septums forward and bring the front plate into exact register for each exposure.

The entire number of plates in the magazine may be exposed, or one or more may be exposed and removed from the magazine for development at any time. In this case the empty septums should be replaced in the back of the magazine holder in order to fill the space and keep the springs at proper tension.



The Graphic Magazine Plate Holder



The magazine may be removed from the camera in order to focus upon the ground glass.

A safety slide protects the plates when the magazine is removed from the camera.

Our new double automatic cut-off prevents the least trace of white light from entering while the safety slide is withdrawn.

The leather bag is made of superior quality of extra heavy leather, very soft and flexible.

This bag is made with a single seam, reinforced and absolutely light tight. It folds up neatly into the end of the magazine and occupies no more space than the caps of ordinary plate holders.

The back of the Graphic Magazine Plate Holder is removable for loading and unloading.

When the back is closed it is secured in position by sliding locks, securely fastened on the sides of the magazine.

PRICES

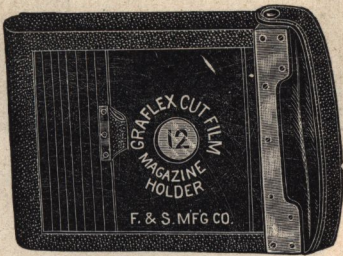
Graphic Magazine Plate Holder fitted to Graflex or Graphic Cameras.

3 $\frac{1}{4}$ x 4 $\frac{1}{4}$	\$12.00
4 x 5	13.00
5 x 7	15.00

An extra charge is made for fitting to other makes of cameras.

The Graflex Magazine Cut Film Holder

Folmer's Patent, June 7, 1904



The Cartridge Roll Holder is constructed of hardwood with brass trim-
mings and can be fitted to any of our Graphic or Graflex cameras up to and
including the 6x5 size.

The Graflex Magazine Cut Film Holder is an embodiment of simplicity.
There are no working parts to get out of order.

The Cut Films are inserted in septums, with which the holder is provided.
The Graflex Magazine Cut Film Holder is provided with a curtain slide,
instead of the regulation dark slide.

By the opening and closing of this slide, the exposed film is forced into a
changing-bag, from which it may be re-inserted in the back of the holder.

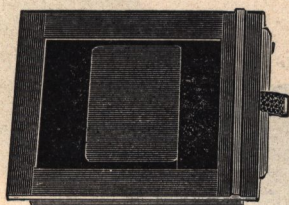
The septums are consecutively numbered, and these numbers are visible
through a ruby window in the back of the holder.

The Graflex Magazine Cut Film Holder is designed for use solely in con-
nection with Graflex Cameras.

PRICES

4 x 5	\$13.50
5 x 7	16.00

The Cartridge Roll Holder



The Cartridge Roll Holder is constructed of hardwood with brass trimmings and can be fitted to any of our Graphic or Graflex cameras up to and including the 5x7 size.

It is interchangeable with the Graphic Plate Holder, the Graphic Magazine Plate Holder or the Graflex Magazine Film Holder.

Changes from one to the other may be made in the field with perfect safety.

This Roll Holder will carry transparent Film Cartridges for twelve exposures.

A red celluloid window in the back of the holder enables the operator to count exposures.

PRICES

3 $\frac{1}{4}$ x4 $\frac{1}{4}$, fitted for Graphic Camera.....	\$6.50
4x5, fitted for Graphic Camera.....	.6.50
5x7, fitted for Graphic Camera.....	9.00

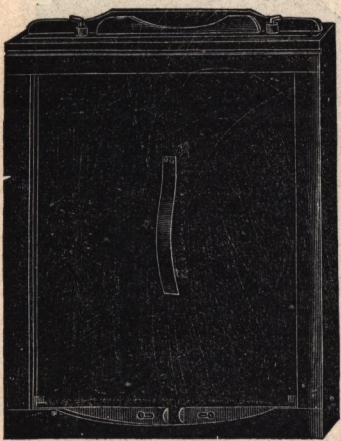
An extra charge will be made for fitting to reversible back cameras.

PRICES FITTED TO GRAFLEX CAMERAS

4x5, Morocco Leather Covered.....	\$7.50
5x7, Morocco Leather Covered.....	10.00

The Graflex Plate Holder

Patent Applied For



The Graflex Holder is simple, strong, practical and absolutely light proof. It is constructed of well-seasoned, selected cherry and finished in black. It is fitted with our double sectional cut-off, which excludes all light and prevents fogging of plates when drawing or replacing slides.

The holder is grooved, instead of tongued, affording increased thickness and strength without increase of space occupied.

The Graflex Holder is loaded by placing the end of the plate nearest cut-off into the holder, dropping it into position and fastening by two sliding locks at the opposite end of the holder. These locks hold the plate securely. They also do away with the side and end rabbets and allow the full width and length of the plate to be exposed, with the exception of less than 1/16 of an inch at one end.

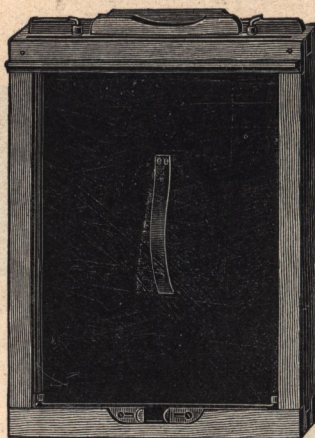
Graflex Plate Holders are fitted with special slides.

PRICES

4 x 5	\$2.50
5 x 7	3.50
6½x8½.....	5.00
8 x 10	7.00

The Graphic Plate Holder

Patent Applied For



These plate holders are the simplest, strongest and most practical plate holders in the market.

They are made of selected, well-seasoned cherry and fitted with our sectional cut-off, which wholly prevents the entrance of light and fogging of plates when drawing or replacing slides.

The Graphic Plate Holder is loaded by placing the end of the plate nearest cut-off into the holder and dropping it into position, when it is immediately fastened by two sliding locks at the opposite end of the holder. These locks hold the plate securely in position. They also do away with the side and end rabbets and allow the full width and length of the plate to be exposed with the exception of less than $\frac{1}{16}$ of an inch at one end.

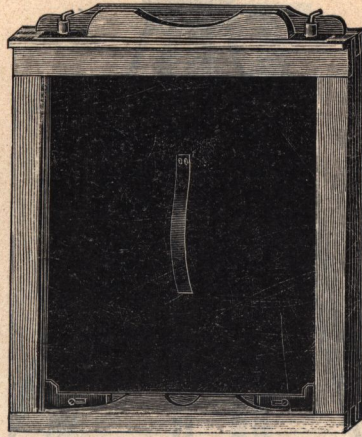
Graphic Plate Holders are fitted with mat finish rubber slides.

PRICES

3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ .....	.\$1.15
4 x 5	1.15
5 x 7	1.40
6 $\frac{1}{2}$ x 8 $\frac{1}{2}$	1.85
8 x 10	2.25
11 x 14	6.00

The Sterling Plate Holder

Patent Applied For



Sterling Double Plate Holders are simple, strong, compact and absolutely light proof.

They are fitted with our new sectional cut-off and sliding locks, which hold the plate securely in position. Full size of plate may be exposed except $\frac{1}{16}$ of an inch at one end only.

Sterling Holders are fitted with Special Fiber slides.

Sterling Holders are furnished with Sky Scraper, Sky Scraper Special, "Crown," F. & S., E. R. & C. Cameras and Crown Portrait Cameras in 8x10 and 11x14 sizes.

PRICES

8x10.....	\$2.50
11x14.....	6.00
14x17.....	8.50

Inside



Kits

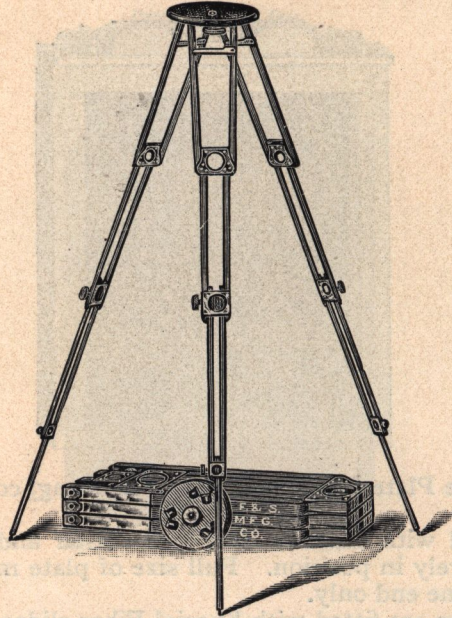
Kits consist of thin wooden frames, made to fit in the Dry Plate Holder, and with rabbets for holding smaller plates, or Kits.

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

4 x 5	to hold	$3\frac{1}{4} \times 4\frac{1}{4}$ plates, each.....	\$0.20
$4\frac{1}{4} \times 6\frac{1}{2}$	to hold	$3\frac{1}{4} \times 4\frac{1}{4}$ plates, each.....	.20
5 x 7	to hold	$3\frac{1}{4} \times 4\frac{1}{4}$ or 4x5 plates, each.....	.25
5 x 8	to hold	$3\frac{1}{4} \times 4\frac{1}{4}$, 4x5, or $4\frac{1}{4} \times 6\frac{1}{2}$ plates, each.....	.25
$6\frac{1}{2} \times 8\frac{1}{2}$	to hold	4 x 5, $4\frac{1}{4} \times 6\frac{1}{2}$, 5x7, or 5x8 plates, each.....	.30
8 x 10	to hold	$4\frac{1}{4} \times 6\frac{1}{2}$, 5x7, 5x8, or $6\frac{1}{2} \times 8\frac{1}{2}$ plates, each.....	.35
10 x 12	to hold	5x7, 5x8, $6\frac{1}{2} \times 8\frac{1}{2}$, or 8x10 plates, each.....	.40
11 x 14	to hold	8 x 10, or 10x12 plates, each.....	.50
14 x 17	to hold	8 x 10, 10x12, or 11x14 plates, each.....	.65
17 x 20	to hold	11 x 14, or 14x17 plates, each.....	.85
18 x 22	to hold	14 x 17, or 17x20 plates, each.....	1.25

F. & S. Crown Tripod

Folmer's Patent, June 23, 1903



The F. & S. Crown Tripod is a four-section telescopic folding tripod, quickly set up and readily adjusted for height by means of milled head binding screws.

These tripods are made from selected straight grained cherry stock, which is soaked in an oil bath for ten days before being finished. The wood is then rubbed down and shellaced. This treatment renders the wood extremely tough and practically waterproof.

The lower sections telescope into the third and the upper section folds back upon it.

Binding screws on lower sections of this tripod are upset and cannot be lost.

Taper pins in the ear pieces of the head fit snugly into metal tipped sockets in the upper section of the legs, preventing loose joints and side play.

Expansion brackets in the upper section make it impossible for the legs to be detached from the head until brackets are folded.

The No. 1 Crown Tripod measures, when closed, $16\frac{1}{4}$ inches and weighs (including 4-inch top) 36 ounces. When extended to its full capacity, it stands 4 1-3 feet high.

The No. 2 Crown Tripod, when closed, measures $17\frac{1}{4}$ inches long and weighs (with 6-inch cross grain top) 65 ounces. When extended, this tripod has a height of 4 2-3 feet.

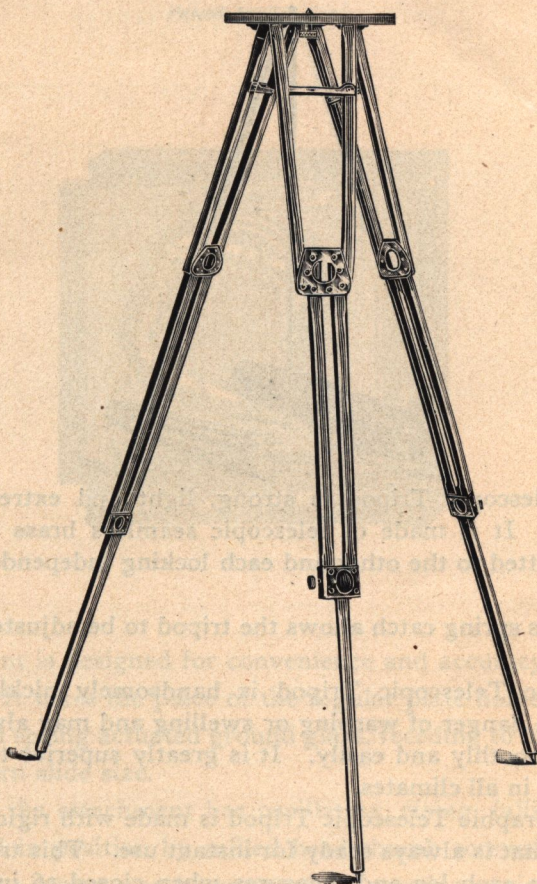
The No. 3 Crown Tripod, when closed, measures 20 inches long and weighs (with 6-inch cross grain top) 70 ounces. When extended, this tripod has a height of 5 feet 6 inches.

Larger sizes can be made to order.

PRICES

No. 1 Crown Tripod.....	\$5.50
No. 2 Crown Tripod.....	6.00
No. 3 Crown Tripod.....	7.50

The Professional Tripod



The Professional Tripod is made to meet the demand for a substantial, heavy tripod for use with 11x14 and larger cameras.

It is a three-section, telescopic folding tripod which may be quickly set up and adjusted for height by means of heavy milled head binding screws.

This tripod is made of carefully selected, straight-grained cherry, which has been soaked in an oil bath for ten days before refinishing.

This treatment renders the wood extremely tough and moisture proof.

In other detail it is not unlike the F. & S. Crown Tripod.

The Professional Tripod is provided with expansion brackets in the upper section, which make it impossible for the legs to be detached from the head, until the brackets are folded.

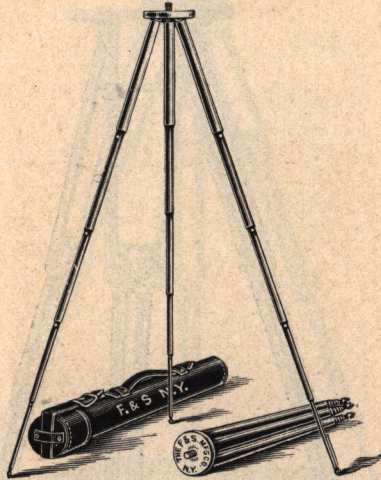
This method of construction also considerably increases rigidity.

PRICES

No. 1 Professional Tripod, for cameras up to and including 14x17....	\$12.50
No. 2 Professional Tripod, for cameras 14x17 and larger.....	18.00

Graphic Telescopic Tripod

Folmer's Patent, August 9, 1898



Graphic Telescopic Tripod is strong, light and extremely rigid when opened for use. It is made of telescopic seamless brass tubing, each section accurately fitted to the other and each locking independently of the other when opened.

An ingenious spring catch allows the tripod to be adjusted for any desired height.

The Graphic Telescopic Tripod is handsomely nickled and polished, wholly free from danger of warping or swelling and may always be depended upon to work smoothly and easily. It is greatly superior to wooden tripods and may be used in all climates.

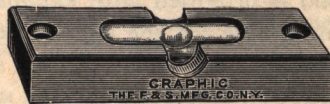
The No. 1 Graphic Telescopic Tripod is made with rigid camera screw in the tripod head that is always ready for instant use. This tripod has five telescopic sections in each leg and measures when closed 16 inches long by $1\frac{7}{8}$ inches in diameter and weighs 32 ounces. When fully extended the tripod stands 4 1-3 feet high.

This tripod is extremely rigid and will hold a camera up to and including the 4x5 size.

PRICE

No. 1 Graphic Telescopic Tripod and Case..... \$7.50

Graphic Level

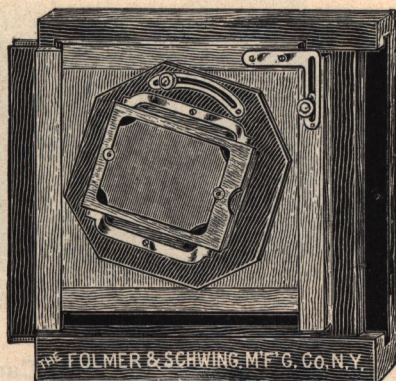


Graphic Levels are made very accurate and carefully adjusted, and are very sensitive to the slightest variation.

Price..... \$0.75

The F. & S. Lantern Slide Attachment

Patent Applied For



This attachment is designed for convenience and accuracy in the making of lantern slides. It takes the place of the regular plate holder.

It is fitted with spring actuated ground glass, receding to take double plate holder $3\frac{1}{4} \times 4$, lantern slide size.

The centre of the attachment has oscillating, rising, falling and shifting movements, locked in position by milled head thumb screws. By removing the thumb screw the centre may be reversed for copying upright negatives, or so placed that the slide may be drawn from the left side.

The advantages of this lantern slide attachment will be apparent to any slide maker.

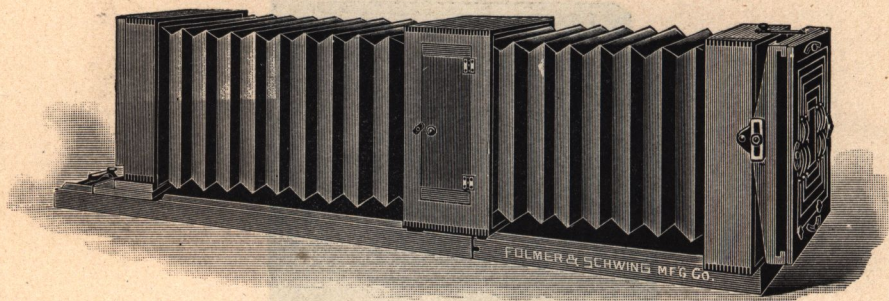
The F. & S. Lantern Slide Attachment will be fitted to any make of enlarging, reducing and copying camera without additional charge if exact dimensions and depth of rabbets are furnished. To insure a perfect fit, however, an old plate holder will best serve this purpose.

PRICES

To fit 8x10 Enlarging, Reducing and Copying Camera.....	\$12.50
To fit 11x14 Enlarging, Reducing and Copying Camera.....	15.00
To fit 14x17 Enlarging, Reducing and Copying Camera.....	18.00

The F. & S. Enlarging, Reducing and Copying Camera

Rising, Sliding, Oscillating and Swinging Front



The F. & S. Enlarging, Reducing and Copying Cameras are made very substantial and compact, which is a great convenience in shipping or storing away when not in use.

The rear section of bellows is made much longer than the front, which is a decided advantage for enlarging work. The opening in front and center compartments being the same size, makes the lens board interchangeable, and may be used in front as a copying camera, with an extra long draw of bellows, or set in the center compartment for enlarging or reducing.

The center compartment has both front and back rabbets, which allows the operator to bring the lens closer to the negative when enlarging.

The bed of camera is made in two sections, the rear section being longer than the front.

The F. & S. Enlarging, Reducing and Copying Cameras are fitted with our new rising and falling, swinging, sliding and oscillating fronts, furnished with full set of reversible front kits, which hold any size plate from lantern-slide up. The combined movements of the front enable an operator to produce straight-lined lantern-slides from very crooked negatives.

The F. & S. Enlarging, Reducing and Copying Cameras have V-shaped guides and lever focusing attachment, nicely adjusted.

The ground glass on 8x10 and 11x14 is spring-actuated, receding to receive Sterling double plate-holder.

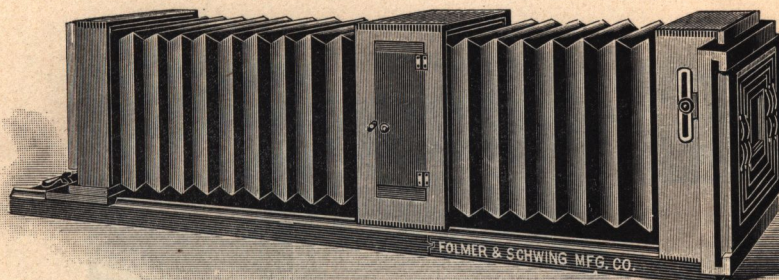
Price includes Camera and one Double Plate-Holder with full set of Kits.

PRICES

8x10, 5 foot bed.....	\$45.00
11x14, 5½ foot bed.....	70.00

Special sizes made to order

The "Crown" Enlarging, Reducing and Copying Camera



The Crown Enlarging, Reducing and Copying Cameras are made very substantial and compact, which is a great convenience in shipping or storing away when not in use.

The rear section of bellows is made much longer than the front, which is a decided advantage for enlarging work. The opening in the front and center compartments being the same size, the Lens Board is interchangeable, and may be used in front as a copying camera, with an extra long draw of bellows, or set in the center compartment for enlarging or reducing.

The bed of Camera is made in two sections, the rear section being longer than the front, making the Camera very short and compact.

The Crown Enlarging, Reducing and Copying Cameras are fitted with rising, falling and sliding fronts, and are furnished with a full set of reversible front kits, which hold any size plate, from lantern-slide up.

The Crown Enlarging, Reducing and Copying Cameras have V-shaped guides and lever focusing attachment, nicely adjusted. The ground glass on 8x10 and 11x14 is spring-actuated, receding to receive Sterling Double Plate Holder, and closing automatically ready for focusing when plate holder is withdrawn.

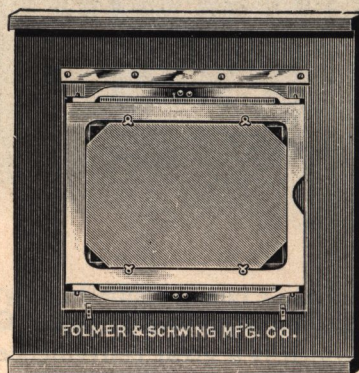
Price includes Camera, one Double Plate Holder with full set of Kits.

PRICES

8x10, 5 foot bed.....	\$35.00
11x14, 5½ foot bed.....	60.00
14x17, 6 foot bed.....	70.00
18x22, 6½ foot bed.....	90.00

Special sizes made to order

F. & S. Reversible Center Adapter



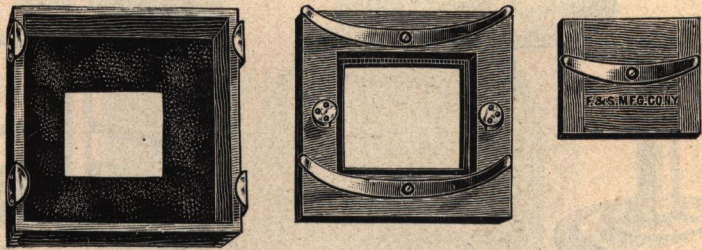
These adapters are designed for use of small sized plates on large sized cameras. They are fitted to take the place of the regular back and are provided with spring actuated ground glass.

They are designed for use with Double Plate Holders and will take plates either $3\frac{1}{4} \times 4$, 4×5 , 5×7 , or larger sizes, as desired.

PRICES

For 8×10 Camera, with one Double Plate Holder.....	\$10.00
For 10×12 Camera, with one Double Plate Holder.....	11.00
For 11×14 Camera, with one Double Plate Holder.....	12.00
For 14×17 Camera, with one Double Plate Holder.....	14.00
For 16×20 Camera, with one Double Plate Holder.....	16.00
For 18×22 Camera, with one Double Plate Holder.....	18.00

The F. & S. Lantern Slide Contact Printing Frame



The F. & S. Lantern Slide Contact Printing Frame is constructed with special reference to convenience in making lantern slides by contact and enables the user to select any portion of the negative desired. By its use, the negative may be shifted so that any part may be brought into contact with the lantern slide and held securely in position by the back panel and springs.

The centre frame may be removed and lantern slide plate placed in position and secured, with centre panel and spring, ready for exposure.

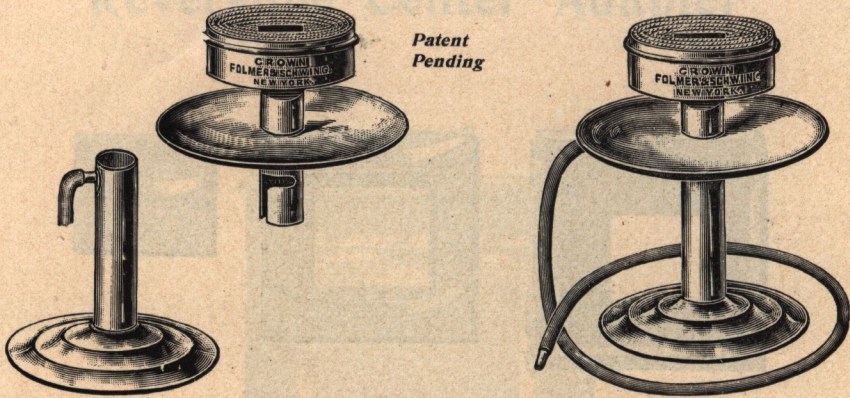
These frames are constructed of straight grained cherry with lock jointed corners in sizes 4x5 and 5x7 inches.

The outside dimensions of the 4x5 measure 8x8 inches, with a depth of 1 3/8 inches. The 5x7 measures 12x12 inches with a depth of 1 1/2 inches.

PRICES

4x5 size.....	\$3.00
5x7 size.....	4.50

Folmer's Magazine "Crown" Flash Lamps



The Crown Flash Lamp is so constructed that the magnesium powder is stored in the body of the lamp and is blown up through center of flame, which thoroughly consumes the magnesium powder and produces a powerful light. The head of lamp is filled with lamp-wick, which is saturated with alcohol, producing a large flame, which is very essential in a perfect flash lamp.

The head of lamp is removable, in order to fill the magazine with magnesium powder. A safety disc is provided, to protect the hand when using lamp. Tube and mouth pieces are all furnished.

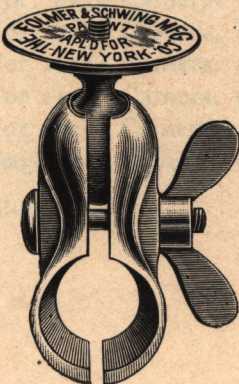
The Double Spreader will not clog up and is more powerful than any other lamp of double its cost now on the market. Long or short flashes can be made.

The Crown is the perfection of flash lamps, being safe, economical and reliable. It is finished in polished nickel and presents a very handsome appearance.

PRICE

No. 1..... \$1.50

Use Pure Magnesium Only



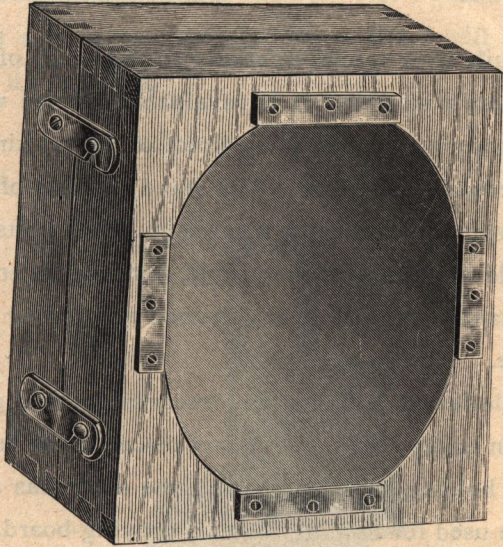
The Graphic Ball-Socket Camera Clamp

Patent applied for

The Graphic Ball-Socket Camera Clamp attaches to any bicycle handle-bar, or may be clamped to a limb of a tree, and forms practically an adjustable tripod-head, fitting all of the standard Cameras. The Graphic Ball-Socket Camera Clamp is made extra strong and handsomely nickel-finished. We furnish them in the standard Camera thread, which will fit any Camera.

Price, 75 cents

Mounted Condensing Lenses



1915
1904
1911
1913
1883
32

We carry in stock Condensing Lenses of the sizes mentioned below.

The Condensers are carefully ground and highly polished, and are selected to have as little color as possible, thus insuring rapid work when used for enlarging.

Each Condenser is mounted in a separate box frame made of mahogany, which is handsomely finished.

These box frames are made with rabbets, the face of one frame fitting the other.

The mounts are then locked together with heavy flat brass hooks as shown. A ground glass, easily removable, is interposed.

PRICES

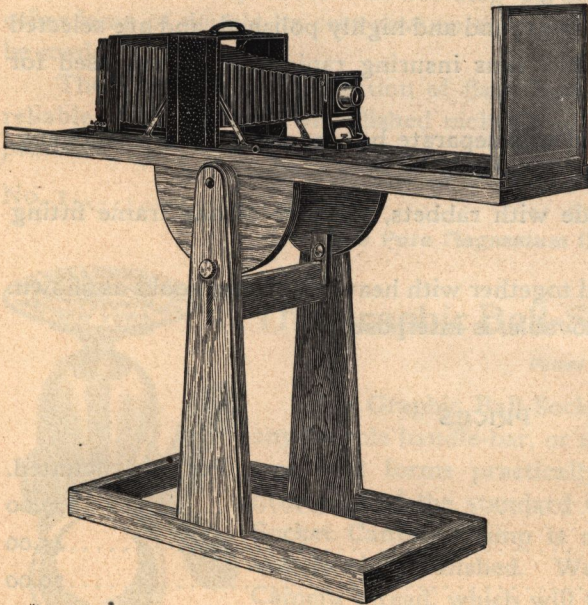
Diameter.	Per pair, mounted.
8 inch	\$27.00
10 inch	45.00
12 inch	70.00
14 inch	110.00

F. & S. Tilting Laboratory Stand

This stand is built with special reference to the needs of the scientist and photographic laboratory worker. It is invaluable for use with a long focus camera, either for copying or enlarging direct or for making lantern slides, transparencies or reduced negatives. The stand consists of a solid base and upright support carrying a rigid track pivoted on heavy bolts by which it may be tilted at any angle from upright to upright, covering an entire half circle of 180 degrees and instantly clamped in any desired position by large milled head screws at either side.

Two movable platforms, both running freely in grooved guides and clamping firmly in position at any desired point, are placed at either end of the track. One of these is for holding the camera, and the other has an upright frame fitted which may be used for holding either a copying-board, ground glass, or nest of kits for negatives of various sizes.

The advantages of a double movement as obtained by platforms operated

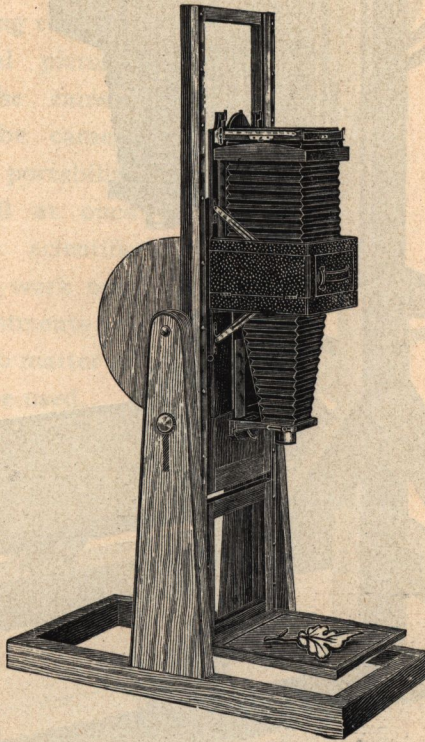


as above will be at once apparent to the copyist, microscopist and lantern-slide maker. The tilting of the platform, as well as locking it in position, is effected with the greatest ease and affords a simple and successful means of illuminating objects to be photographed, and of elevating the platform so that transparencies may be made against the sky.

These stands are made in two sizes, Nos. 1 and 2,

F. & S. Tilting Laboratory Stand

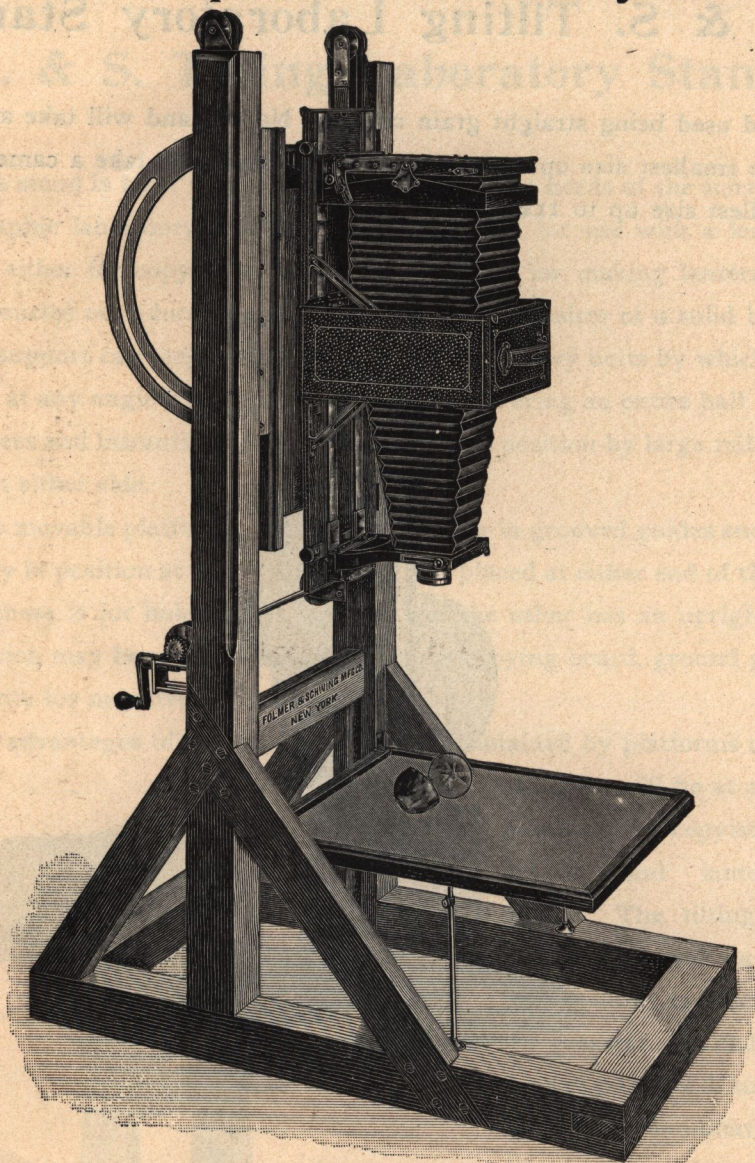
the wood used being straight grain cherry. No. 1 stand will take a camera from the smallest size up to $6\frac{1}{2} \times 8\frac{1}{2}$. No. 2 stand will take a camera from the smallest size up to 11×14 .



PRICES

No. 1 F. & S. Tilting Laboratory Stand.....	\$25.00
No. 2 F. & S. Tilting Laboratory Stand.....	45.00

F. & S. Special Laboratory Stand



The F. & S. Special Laboratory Stand is somewhat more elaborate than the regular F. & S. Tilting Laboratory Stand.

This stand is built of selected straight grained cherry, and is fitted with a bevel gear attachment, connected to the platform, to which the camera is attached, affording every ease of adjustment.

Details of construction are well brought out in the accompanying illustration.

This stand is furnished in the one size, which will accommodate up to and including 11x14 cameras.

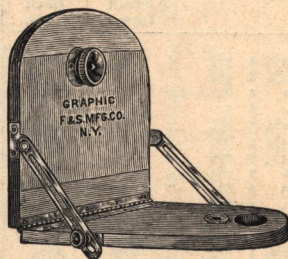
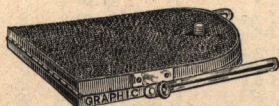
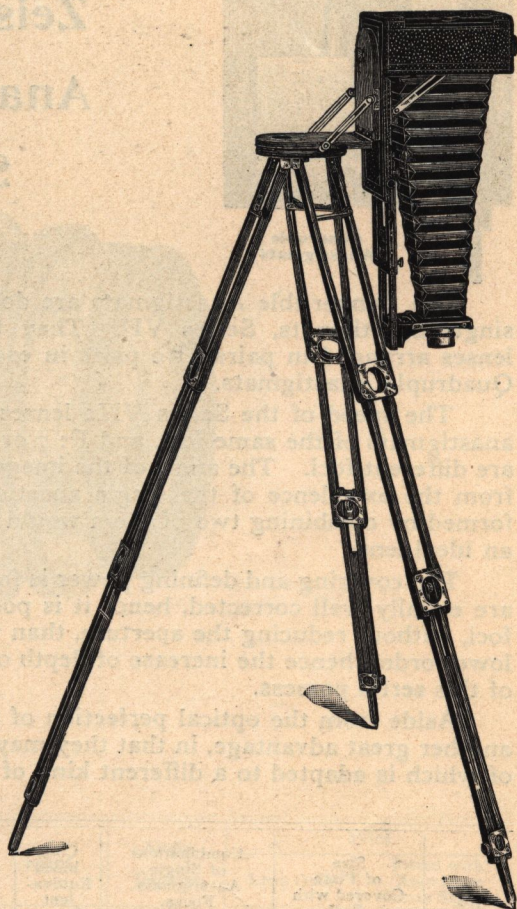
PRICE
F. & S. Laboratory Stand..... \$100.00

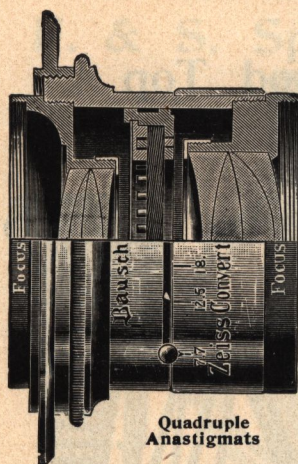
F. & S. Tilting Tripod Top

The Crown Tilting Tripod Top is made in two sizes, Nos. 1 and 2, especially designed for use with our Crowned Tripods. By the aid of this attachment the camera may be tilted at any angle upward or downward, and permits of the camera being reversed instantly for vertical pictures without changing the camera back or removing the camera from the tripod. Its portability and compactness will at once commend it to the scientific worker, especially for work out-of-doors, and its adjustments insure a rigid support, no matter in what position it may be used.

PRICES

No. 1 Crown Tilting Tripod	
Top.....	\$3.00
No. 2 Crown Tilting Tripod	
Top.....	3.50





B. & L.

Zeiss Convertible Anastigmat Lens Series VIIa

The Convertible Anastigmats are doublet lenses, each composed of two single anastigmats, Series VII. They therefore contain eight elementary lenses arranged in pairs, two pairs in each system, and are properly termed Quadruple Anastigmats.

The speed of the Series VIIa lenses is $F: 6.3$ when composed of single anastigmats of the same foci, and $F: 7$ or $F: 7.7$ when the single anastigmats are different foci. The angle of the image circle is 80° . It might be expected from the excellence of the single anastigmats, the Convertible Anastigmats formed by combining two of them would possess all the desirable qualities of an ideal lens.

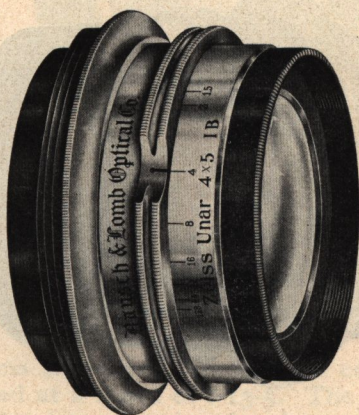
The covering and defining power is faultless. All parts of the image circle are equally well corrected, hence it is possible to use lenses of much shorter foci, without reducing the aperture, than where the optical properties are of a lower order, hence the increase of depth of focus and angle which the number of this series possess.

Aside from the optical perfection of the Series VIIa lenses, they possess another great advantage, in that they may be converted into three lenses, each of which is adapted to a different kind of work.

No.	Size of Plate Covered with Full Aperture.	Combinations of Single Anastigmats. Focus.		Combined Equivalent Focus. Inches.	Speed.	Price.	
		Front Lens.	Back Lens.			Lenses Only,	When Fitted with Diaphragm Shutter.
1	$3\frac{1}{4} \times 3\frac{1}{4}$	$7\frac{1}{4}$	$7\frac{1}{4}$	$4\frac{1}{8}$	$f-6.3$	\$51.00	\$66.00
2	$3\frac{1}{4} \times 4\frac{1}{4}$	9	$7\frac{1}{4}$	$4\frac{1}{2}$	$f-7$	54.50	60.50
3	4×5	$11\frac{1}{2}$	$7\frac{1}{4}$	5	$f-7.7$	50.50	74.50
4	$4 \times 5\frac{1}{2}$	9	9	5	$f-6.3$	58.00	73.00
5	$4\frac{1}{4} \times 6\frac{1}{2}$	$11\frac{1}{2}$	9	$5\frac{3}{4}$	$f-7.7$	63.00	78.00
6	$4\frac{1}{4} \times 6\frac{1}{2}$	14	$11\frac{1}{2}$	$6\frac{1}{4}$	$f-7.7$	70.00	85.00
7	$4\frac{1}{2} \times 7\frac{1}{4}$	$11\frac{1}{2}$	$11\frac{1}{2}$	$6\frac{1}{2}$	$f-6.3$	68.00	83.00
8	$5 \times 8\frac{1}{2}$	14	$11\frac{1}{2}$	7	$f-7$	75.00	90.00
9	$5 \times 8\frac{1}{2}$	$16\frac{1}{2}$	$11\frac{1}{2}$	$7\frac{1}{2}$	$f-7.7$	87.50	103.50
10	$5 \times 8\frac{1}{2}$	$16\frac{1}{2}$	14	8	$f-6.3$	82.00	97.00
11	$6\frac{1}{2} \times 8\frac{1}{2}$	$16\frac{1}{2}$	$14\frac{1}{2}$	$8\frac{1}{2}$	$f-7$	94.50	110.50
12	$6\frac{1}{2} \times 8\frac{1}{2}$	$19\frac{1}{4}$	14	$9\frac{1}{2}$	$f-7.7$	115.50	133.00
13	$6\frac{1}{2} \times 8\frac{1}{2}$	$16\frac{1}{2}$	$16\frac{1}{2}$	$9\frac{1}{4}$	$f-6.3$	100.50	122.50
14	7×9	$19\frac{1}{4}$	$16\frac{1}{2}$	10	$f-7$	127.50	145.00
15	7×9	$23\frac{1}{2}$	$16\frac{1}{2}$	11	$f-7.7$	148.50	166.00
16	7×9	$19\frac{1}{4}$	$19\frac{1}{4}$	11	$f-6.3$	146.50	164.00
17	8×10	$23\frac{1}{2}$	$19\frac{1}{4}$	12	$f-7$	167.50	185.00
18	8×10	$27\frac{1}{2}$	$19\frac{1}{4}$	$12\frac{3}{4}$	$f-7.7$	197.00	214.50
19	8×10	$23\frac{1}{2}$	$23\frac{1}{2}$	$13\frac{1}{4}$	$f-6.3$	188.50	200.00

Bausch & Lomb-Zeiss Unar f=4.5

Series I b

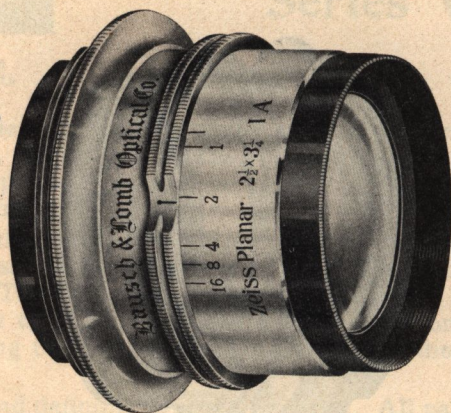


No.	Size of Plate Covered with Largest Stop* Inches	Equivalent Focus Inches	Diameter of Lens Inches	Speed	Angle Degrees	Price	
						Lens Only	Fitted with Aluminum Volute Shutter
3	2½ x 3½	4½	1	f-4.5	65	\$31.50	\$48.50
4	3¼ x 4¼	5½	1¼	f-4.5	65	38.50	57.00
5	4 x 5	6¼	1¼	f-5	65	42.00	60.50
6	5 x 7	8¾	1¾	f-5	65	63.00	83.00
7	5 x 8	10¼	2	f-5.5	65	91.00	111.00
8	6½ x 8½	12¼	2½	f-5.5	65	125.50	.....
9	8 x 10	14¾	2¾	f-5.5	65	164.50	.....
10	10 x 12	18	3¼	f-5.6	65	210.00	.....

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

Bausch & Lomb-Zeiss Planar f=3.6

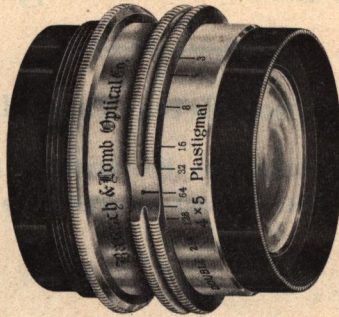
Series I a



No.	Size of Plate Covered with Largest Stop.* Inches	Equivalent Focus Inches	Diameter of Lens Inches	Speed	Angle Degrees	Price	
						Lens Only	Fitted with Aluminum Volute Shutter
9	2½ x 3¼	4½	1¼	f-3.6	70	\$ 53.00	\$ 70.00
10	3¼ x 3¼	5	1½	f-3.8	70	63.00	81.50
11	3¼ x 4¼	6¼	1¾	f-3.8	70	77.00	95.50
12	4¼ x 6½	8	2	f-4.	65	109.00	129.00
13	5 x 8	10	2½	f-4.	65	150.00	170.00
14	6½ x 8½	12	2¾	f-4.2	62	192.00	.....
15	7 x 9	14½	3¼	f-4.5	72	241.00	.....
16	8 x 10	16¾	3¾	f-4.5	72	300.00	.....
17	10 x 12	18½	3¾	f-5.	68	349.00	.....
18	12 x 16	24	4¾	f-5.	68	698.00	.....

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

Bausch & Lomb Plastigmat f=6.8



Plastigmat has all the attributes of a high-grade lens to an unusual extent. It has great speed, crisp definition over a large circle, wonderful covering power and illumination.

Plastigmat is a symmetrical lens, the front and back combinations being composed of four lenses each. The glass used is very transparent and absolutely permanent.

The separate systems show truly remarkable covering power. The rear combination can be used at a speed of f-13-5. 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.

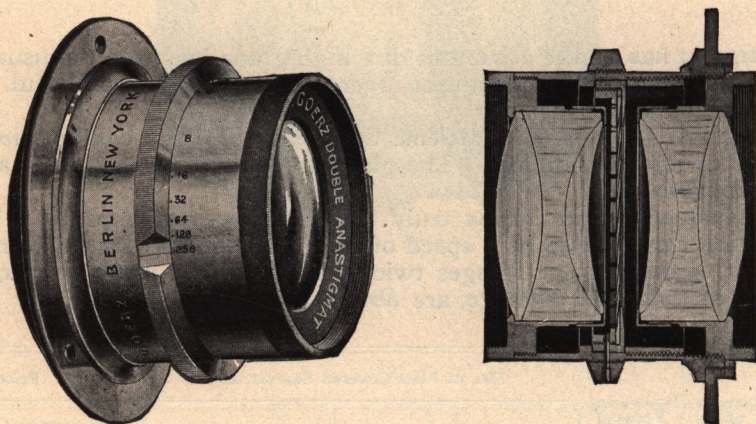
No.	Diameter of Lens	Equivalent Focus of Doublet	Size of Plate Covered Sharply at			Price	
			f-6.8	f-16	f-62	Plastigmat Only	Fitted with Aluminum Volute Shutter
1	$\frac{7}{8}$	$5\frac{1}{4}$	$3\frac{1}{4} \times 4\frac{1}{4}$	4 x 5	5 x 7	\$34 00	\$51 00
2	$1\frac{5}{8}$	$6\frac{1}{4}$	4 x 5	5 x 7	5 x 8	40.00	57.00
3	$1\frac{3}{4}$	$7\frac{1}{2}$	5 x 7	5 x 8	7 x 9	48.00	65.00
4	$1\frac{3}{8}$	$8\frac{3}{4}$	5 x 8	$6\frac{1}{2} \times 8\frac{1}{2}$	8 x 10	55.00	73.50
5	$1\frac{5}{8}$	11	$6\frac{1}{2} \times 8\frac{1}{2}$	8 x 10	10 x 12	75.00	93.50
6	$1\frac{1}{4}$	13	8 x 10	10 x 12	14 x 17	90.00	110.00
7	$2\frac{3}{8}$	15	10 x 12	12 x 15	16 x 18	120.00	140.00
8	$2\frac{1}{2}$	17	11 x 14	14 x 17	18 x 22	170 00	.....
9	$3\frac{1}{8}$	$21\frac{1}{2}$	14 x 17	16 x 18	20 x 24	210 00	.....
10	$3\frac{3}{4}$	26	16 x 18	18 x 22	24 x 30	300.00	.....
11	$4\frac{1}{4}$	$29\frac{1}{2}$	18 x 22	22 x 25	28 x 36	480.00	.....

Series III

Goerz Double Anastigmat F:6.⁸

Universal Extra-Rapid Lens

For Portraits, Groups, Instantaneous Photography, Landscapes, Architecture,
Interiors and Enlargements



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 all-round purposes, in and out of doors.

As the image is perfectly sharp, even with large apertures, the definition, brilliancy and depth of every point of the field is 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, may by itself be used as a landscape lens.

Series III

Goerz Double Anastigmat F:6.⁸

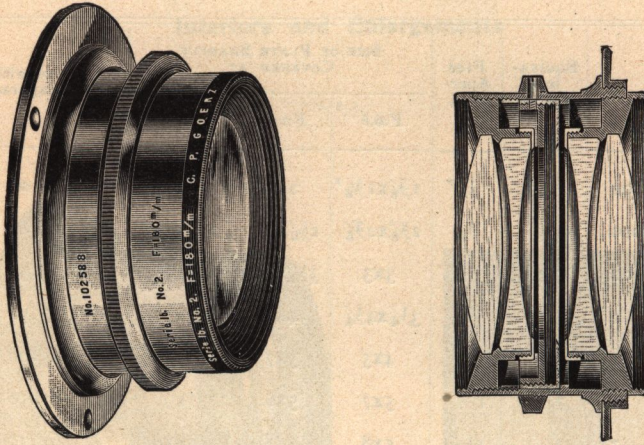
(U. S. 2.⁹⁰)

No.	Equiv- alent Focus.	Free Aper- ture.	SIZE OF PLATE SHARPLY COVERED AT			Price with Iris Diaphragm.	
			F:6.8	F:11.5	F:62		
F:6. ⁸	0000	1 $\frac{5}{8}$ "	$\frac{1}{4}$ "	1 $\frac{5}{8}$ x1 $\frac{5}{8}$ "	2x2"	2x2 $\frac{3}{4}$ "	\$34.00
	000	2 $\frac{3}{8}$	$\frac{3}{8}$	2 $\frac{3}{8}$ x2 $\frac{3}{8}$	2 $\frac{1}{2}$ x3	2 $\frac{3}{4}$ x3 $\frac{1}{2}$	34.00
	00	3 $\frac{1}{2}$	$\frac{1}{2}$	3x3	3 $\frac{1}{4}$ x4 $\frac{1}{4}$	4x5	35.50
	0	4 $\frac{3}{4}$	$\frac{5}{8}$	3 $\frac{1}{4}$ x4 $\frac{1}{4}$	4x5	5x7	37.50
	1	6	$\frac{7}{8}$	4x5	5x7	5x8	45.00
	2	7	1	5x7	5x8	7x9	51.50
	3	8 $\frac{1}{4}$	1 $\frac{1}{4}$	5x8	6 $\frac{1}{2}$ x8 $\frac{1}{2}$	8x10	62.50
	4	9 $\frac{1}{2}$	1 $\frac{5}{8}$	6 $\frac{1}{2}$ x8 $\frac{1}{2}$	7x9	10x12	75.50
	5	10 $\frac{3}{4}$	1 $\frac{1}{2}$	7x9	8x10	12x15	91.00
	6	12	1 $\frac{5}{8}$	8x10	10x12	16x18	107.00
	7	14	2	10x12	12x15	18x22	140.00
F:7. ¹	7a	16 $\frac{1}{2}$	2 $\frac{3}{8}$	11x14	13x17	21x25	182.00
	8	19	2 $\frac{5}{8}$	12x15	16x18	22x25	219.00
	9	24	3 $\frac{5}{8}$	16x18	18x22	24x30	325.00
	10	30	4 $\frac{1}{4}$	18x22	22x25	28x36	539.00
	11	35	5	22x25	24x30	34x44	1,070.00

For stereoscopic views the lenses are "paired" at an extra charge of \$2.50.

Goerz Double Anastigmat

Type B. Series 1^B



This is a symmetrical objective. Each combination is composed of two thin glasses, separated by a small air space. The loss of light through absorption is therefore very small.

The illustration shows the unusual short build of these lenses. They are very light and compact and therefore specially useful for folding cameras. Their shortness also insures great evenness of illumination.

Goerz Double Anastigmat

Series 1^B Goerz Double Anastigmat Type B

F:4.⁵ F:5.⁵ (U. S. 1.25-1.90)

No.	Focus.	Relative Opening.	Diameter of Lenses.	Size of Plate.		Price with Iris Diaphragm
				Full Open.	F:15.5	
000	2 $\frac{3}{8}$ "	F 4. ⁵	$\frac{9}{16}$ "	1 $\frac{1}{2}$ x2 $\frac{1}{2}$ "	2x2 $\frac{1}{2}$ "	\$34.50
00	3 $\frac{1}{2}$	F 4. ⁸	$\frac{25}{32}$	2 $\frac{1}{2}$ x3 $\frac{1}{2}$	3x4	38.00
0	4 $\frac{3}{4}$	F 4. ⁸	1 $\frac{1}{8}$ $\frac{1}{2}$	3 $\frac{1}{4}$ x4 $\frac{1}{4}$	4x5	40.00
1	6	F 4. ⁸	1 $\frac{1}{4}$	4x5	5x7	47.00
2	7	F 4. ⁸	1 $\frac{1}{2}$	5x7	5x8	54.50
3	8 $\frac{1}{4}$	F 5.	1 $\frac{3}{4}$	5x8	6 $\frac{1}{2}$ x8 $\frac{1}{2}$	67.00
4	9 $\frac{1}{2}$	F 5.	1 $\frac{3}{8}$ $\frac{1}{2}$	6 $\frac{1}{2}$ x8 $\frac{1}{2}$	7x9	90.50
5	10 $\frac{3}{4}$	F 5.	2 $\frac{3}{16}$	7x9	8x10	108.50
6	12	F 5. ⁵	2 $\frac{1}{4}$	8x10	10x12	126.50
7	14	F 5. ⁵	2 $\frac{2}{8}$ $\frac{1}{2}$	10x12	12x15	163.00
7a	16 $\frac{1}{2}$	F 5. ⁵	3 $\frac{3}{8}$ $\frac{1}{2}$	11x14	13x17	208.50
8	19	F 5. ⁵	3 $\frac{9}{16}$	12x15	16x18	245.00

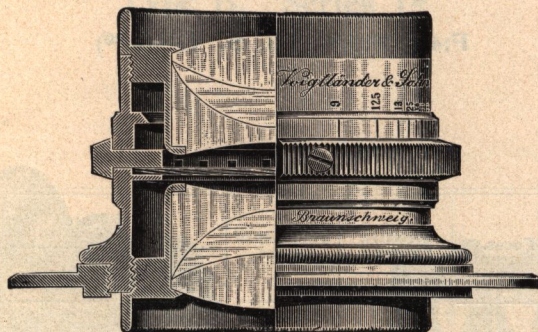
The lenses of Type B, Series 1^B, are especially suitable for the fastest instantaneous exposures, under unfavorable conditions of light. In midsummer they enable the operator to expose his plates correctly during the early forenoon and late afternoon, when lenses with lesser relative openings would be insufficient, owing to the weaker actinic action of the light during these hours. They actually lengthen the photographic workday by two hours. And in the winter season, when even at noonday the light is frequently too weak to permit of rapid exposures with other lenses, the Series 1^B will satisfactorily produce the desired results.

Voigtlaender's Collinears, Series II

Extra Rapid

F:5.6 for small sizes

F:6.3 for large sizes

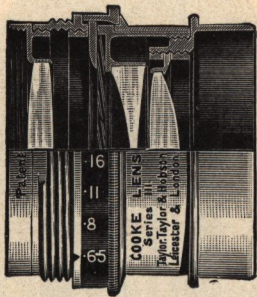


No.	Equivalent Focus.	Size of Plates Sharply Covered.			Price with Iris Diaphragm.
		F:5.6.	F:8.	F:32.	
	inches	inches	inches	inches	
1	3½	3¼x3¼	3x4	3¼x4¼	\$35.00
2	4¾	3¼x4¼	4¼x6½	5x7	40.00
3	5⅞	4¼x6½	5x7	6½x8½	45.00
4	7⅞	5x7	6½x8½	8x10	60.00

Full Aperture F:6.3

5	9⅞	6x8	6½x8½	9x11	\$77.50
6	11⅞	6½x8½	8x10	10x12	105.00
7	14½	8x10	10x12	12x15	140.00
8	17	11x14	12x15	16x20	187.50
9	20	12x15	14x17	20x24	235.00
10	23⅝	14x17	18x22	22x28	325.00

Cooke Anastigmat Lenses



SERIES III, F:6.5						SERIES V, F:8					
Dimensions in Inches.					Prices.	Dimensions in Inches.					Prices.
No.	Equiv- alent Focus.	With Full Apertures to Cover Plates.	At F:16 to Cover Plates.	Diam. of Flange Screw.	With Iris Diaphragm and Stand- ard Flange	No.	Equiv- alent Focus.	With Full Apertures to Cover Plates.	At F:16 to Cover Plates.	Diam. of Flange Screw.	With Iris Diaphragm and Stand- ard Flange
1	3	2¼ x 2¼	3¼ x 4¼	1¼	\$ 27.50	10	4¼	3¼ x 3¼	4 x 5	1¼	\$ 26.00
2	4¼	3¼ x 3¼	4 x 5	1¼	32.00	11	5	3¼ x 4¼	4¼ x 6½	1¼	28.00
3	5	3¼ x 4¼	4¼ x 6½	1¼	35.00	12	6	4 x 5	5 x 8	1¼	32.00
4	6	4 x 5	6½ x 8½	1½	39.50	13	7½	4¼ x 6½	6½ x 8½	1½	39.50
5	7½	4¼ x 6½	8 x 10	1½	48.50	14	9	5 x 8	10 x 12	1½	48.00
6	8¼	5 x 7	8 x 10	1¾	53.00	15	11	6½ x 8½	12 x 15	1¾	67.50
7	11	6½ x 8½	11 x 14	2¼	91.00	16	13	8 x 10	14 x 17	2	87.00
8	13	8 x 10	14 x 17	2½	130.00	17	16	10 x 12	18 x 20	2½	130.00
						18	18	12 x 15	20 x 24	3	160.50
						19	24	16 x 18	24 x 27	4	260.00

Bausch & Lomb-Zeiss Anastigmat Lens Series V

Speed f-18

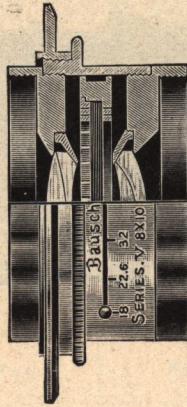


Figure shows 8 x 10 Series V Lens actual size

APPLICATION.—EXTREME WIDE ANGLE WORK

The lenses of this series are without question the most desirable wide-angle lenses made, and should be selected wherever an extreme wide angle is required. They have greater speed and covering power and greater effective angle than any other extreme wide-angle lens, and are at the same time much more compact.

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.

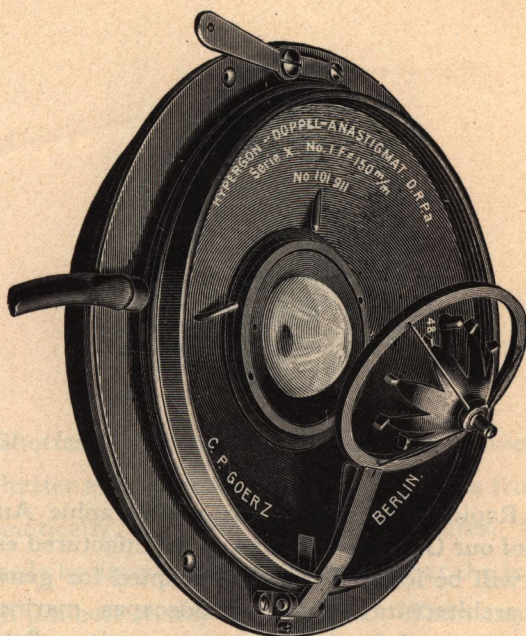
All Lenses are supplied with Improved Iris Diaphragm and Morocco Cap

No.	Size of Plate Covered with Stop f-18. Inches.	Equivalent Focus. Inches.	Free Diameter of Largest Lens. Inches.	Price.	
				Lens Only.	When Fitted with Diaphragm Shutter.
1	4½x6½	3¾	3¾	\$ 22.50	
2	5x7	4½	4½	22.50	
3	6½x8½	5½	5½	28.00	
4	8x10	7½	7½	35.00	
5	10x12	8¾	8¾	44.00	\$ 59.00
6	11x14	10½	10½	54.50	69.50
7	12x15	12½	12½	64.50	79.50
7 ^a	16x18	15¾	1	75.00	90.00
8	12x15	18¾	1	85.50	100.50
9	16x18	24¾	18/8	125.50	141.50
10	20x25	37½	2½	247.50	

The Goerz Hypergon Double Anastigmat Series X

F:22.

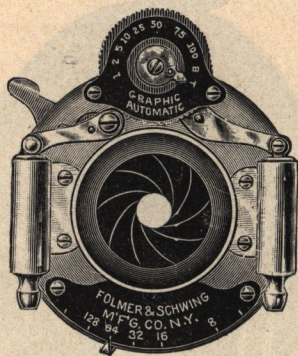
Angle 135°



For the complete description of the method of using these extreme wide angle lenses, we refer to the catalogue of the C. P. Goerz Optical Works, and wish to state here that by the advent of these remarkable instruments the range of photographic possibilities has been very materially increased. Whereas the usual wide angle lenses are capable of giving images up to $2\frac{1}{2}x$ the length of the focus of the lens used, these Hypergon Wide Angle Lenses will produce anastigmatically corrected pictures, free from distortion, which are $6x$ as long as the focal length of the lens used. The extreme angle of light transmitted by these lenses calls for the peculiar form of the mounting, and at the same time for the special design of camera illustrated and described on page 50 of this catalogue, as with the ordinary construction of cameras these lenses could not be used to the full range of their capabilities.

Series X No.	Equivalent Focus in inches	Plate Covered Sharp at F : 31	Maximum Plate	Price including Star- diaphragm
000	$2\frac{3}{8}$	5x 7	(8x10)	\$43.50
000 a	3	8x10	(10x12)	49.00
00	$3\frac{1}{2}$	10x12	(11x14)	52.50
0	$4\frac{3}{4}$	12x16	(15x18)	62.00
1	6	16x20	(20x24)	72.50
2 a	$7\frac{7}{8}$	24x28	(25x30)	91.00

The Graphic Rapid Rectilinear Lens and Graphic Automatic Shutter



The Graphic Rapid Rectilinear Lens and Graphic Automatic Shutter, which we fit to all of our Graphic Cameras, is manufactured especially for hand camera work and will be found admirably adapted for general photography, portraits, groups, architectural subjects, landscapes, marine views, copying, etc., possessing great speed for instantaneous work, a flat field, marvelous depth of focus, covering power, and free from distortion.

The Graphic Automatic Shutter is a marvel of ingenuity, with all of the latest and most improved adjustments, and is strictly up-to-date in every respect.

When an exposure is made the shutter is automatically set for the next exposure, and is therefore always ready for use.

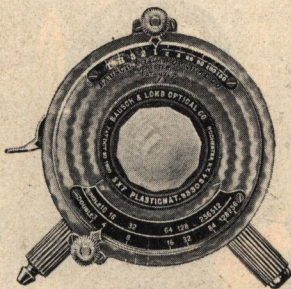
The iris diaphragm and blades of shutter work between the lenses and may be easily regulated for instantaneous, time or bulb exposures.

The shutter is practically noiseless and perfectly free from vibration, and is fitted with both finger and pneumatic release. The variations of speed are graduated on disc at top of shutter and the shutter is readily set for the desired speed by revolving the disc back or forth until the desired speed is opposite the pointer. Time exposures are made by turning the pointer to the letter "T," when one pressure of the bulb or finger release opens the shutter and the second pressure closes it.

When bulb time is desired, revolve the disc until the pointer is opposite the letter "B," when shutter will remain open so long as pressure is exerted on the finger release or bulb and will close when pressure is removed.

The iris stops are regulated by lever at bottom of shutter. The stop numbers are graduated on plate in the uniform system.

The Volute Shutter



The Volute Shutter is the most rapid, compact, convenient and elegant Iris Diaphragm Shutter ever offered. It gives exposures from 1/150th second to 3 seconds automatically, also bulb and time exposures. The shutter is set for the various speeds by simply moving the pointer at the top. The diaphragm can be varied from pin-hole to any size desired. When exposure is made the shutter opens instantly and remains open to full extent until the exposure is completed, when it closes instantly. Volute cannot open or expose plate while being set.

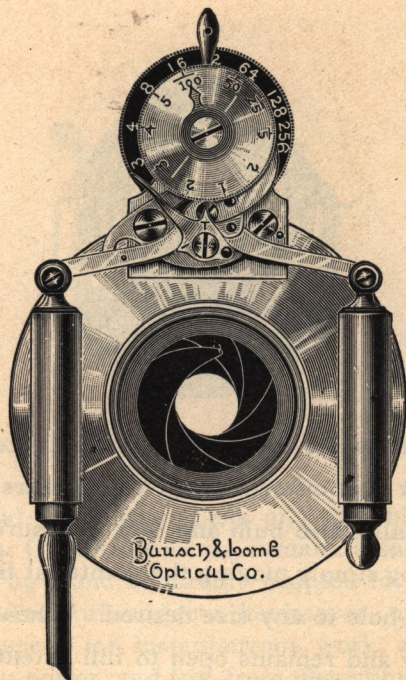
Aluminum or brass Volute Shutters will be furnished at the option of purchaser.

PRICE LIST

No.	Will Take Lenses with Opening of	Automatic Exposure	Price Fitted to B. & L. Lenses	Price Fitted to Lenses of Other Manufacturers
1	24 mm.	3 sec. to $\frac{1}{150}$ sec.	\$17 00	\$18 00
2	36 mm.	3 sec. to $\frac{1}{100}$ sec.	18 50	20 00
3	52 mm.	3 sec. to $\frac{1}{75}$ sec.	20 00	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.

The Iris Diaphragm Shutter

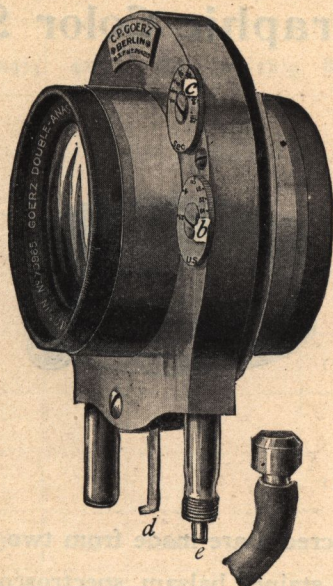


The Iris Diaphragm Shutter has been in use for thirteen years and still holds its position as a favorite for ordinary requirements for instantaneous work. It is operated either by pneumatic bulb or finger release and it does not jar the camera even when working at its highest speed. It has setting device to give any size opening from pin-hole to the largest stop. A simple turn of the setting lever makes it ready for exposure.

PRICE LIST .

No.	Will take Lenses with opening of	Price fitted to B. & L. Lenses	Price fitted to Lenses of Other Manufacturers
1	22 mm.	\$12 00	\$13 00
2	28 mm.	13 00	14 00
3	35 mm.	14 00	15 00
4	45 mm.	15 00	16 00

The Sector Shutter



This shutter contains all the good qualities of this style of shutter and many improvements over any that have heretofore been placed before the public. Its manipulation is extremely simple and as the mechanism is also very simple a uniform and reliable action may be depended on.

All the moving parts of this shutter are completely covered and therefore are proof against dust and moisture. After opening with great velocity it will remain fully open for the period desired and then close with equal rapidity. Thus the lens will work during almost the full time of the exposure with the full size of opening for which it is set. The speeds marked on the shutter are absolutely reliable and range from $1/150$ to $1/2$ second.

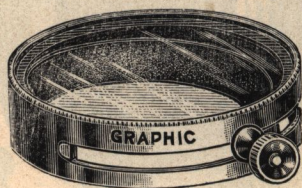
This shutter being of aluminum is very light and adds almost nothing to the weight of the lens, and because of its compactness may be fitted to nearly all hand cameras.

These Sector Shutters are made in the following sizes only, suitable for lenses as stated below:

Size of Shutter	For GOERZ LENSES Series III			Price
0	Double-Anastigmat III/0 F 6.8			
1	Double-Anastigmat III/1 F 4.8	.....	I C/0 F:6.3	\$17 00
2	Double-Anastigmat III/2 F 6.8	.....	I C/1 F:6.3	17 00
3	Double-Anastigmat III/3 F 6.8	I B/0 F:4.8	I C/2 F:6.3	17 00
4	Double-Anastigmat III/4 F 6.8	I B/1 F:4.8	I C/3 F:6.3	20 00
5	Double-Anastigmat III/5 F 6.8	I B/2 F:4.8	I C/4 F:6.3	20 00
6	Double-Anastigmat III/6 F 7.2	I B/3 F:5.5	I C/5 F:7.2	20 00

An extra charge will be made for fitting to other than Goerz lenses

The Graphic Color Screen



The Graphic Color Screens are made from two pieces of selected optical glass, between which is a stained balsam, spectroscopically tested to give the best rendering of color values.

These Color Screens are fitted in a polished lacquered brass mount with an adjustable clamp ring, which permits the screen to be used with a number of lenses having various diameters of mounts.

In ordering state diameter of lens hood.

PRICES

No. 1 Graphic Color Screen, 1½ inches in diameter.....	\$3.00
No. 2 Graphic Color Screen, 2 inches in diameter.....	3.50
No. 3 Graphic Color Screen, 3 inches in diameter.....	4.00

Miscellaneous Parts

	3¼x4¼	4x5	5x7	6½x8½	8x10	11x14	14x17	18x22
Lens Boards for R. B. Graflex Cameras		1 25	1 50					
Lens Boards for Tourist Graflex Cameras		50	70					
Polished Lens Boards for Stereo Graphic Cameras			60					
Lens Boards with Rack for Stereo Graflex Cameras			2 00					
Polished Lens Boards for Crown Portrait Cameras					1 25	1 50	1 75	2 00
Lens Boards for Sky-Scraper Cameras					60	75	90	
Lens Boards for "Crown" F. & S. Cameras					1 00	1 25	1 50	1 75
Polished Lens Boards for Graphic Cameras	30	35	40	45	50	60		
Lens Boards for Graflex Cameras		60	80	1 00	1 30			
Septums for Graphic Magazine Plate Holders	30	35	45					
Septums for Graflex Magazine Cut Film Holders		35	45					
Tripod Screws	25	25	25	35	35	35		
Tripod Screw Plates	25	25	25	25	25	35		
Slides for Film Pack Adapters	25	30	40					
Slides for Graphic Magazine Plate Holders	35	45	55					
Slides for Cartridge Roll Holders	25	35	45					
Ground Glass for Focussing Screens	15	15	20	25	35	1 00	1 50	2 00
Sole Leather Cases for 6 Graphic Plate Holders	1 75	2 00	2 75	3 50	4 50			
Sole Leather Cases for Graphic R. B. Cycle Cameras	2 25	2 50	3 50	4 50	5 50			
Slides for Sterling Plate Holders					65	1 50	1 85	
Slides for Graphic Plate Holders	25	30	40	45	55	1 45		
Slides for Graflex Plate Holders		50	70	85	1 00			

Special Apparatus

IN addition to the apparatus catalogued in the preceding pages, we have exceptional facilities in our factory for designing and constructing Special Cameras and Photographic Apparatus. A feature of our business is providing equipments for any kind of Photographic research, or investigation. Many of the largest Hospitals, Colleges, Agricultural Experiment Stations, etc., use exclusively apparatus designed by us to meet their individual requirements. We are always pleased to receive inquiries along these lines, and upon request will furnish estimates.

The Folmer & Schwing Mfg. Co.

407 BROOME STREET, NEW YORK CITY