

Korona Cameras

1902



It's
all
in
the
Lens

Gundlach Optical Co.
Rochester, N. Y.

Korona Cameras

LENSES AND OTHER
PHOTOGRAPHIC APPARATUS



GUNDLACH OPTICAL CO.
ROCHESTER, NEW YORK, U. S. A.

Our Unique Distinction

Korona cameras are made complete, including lens and shutter, under one roof, and should not be confused with cameras that are the combined nondescript product of different camera, lens and shutter manufacturers. We are opticians and makers of high grade lenses, not merely cabinet makers, and with our wide knowledge of optics and unequalled facilities we are able to apply scientific principles in addition to fine workmanship to our products.



Introductory

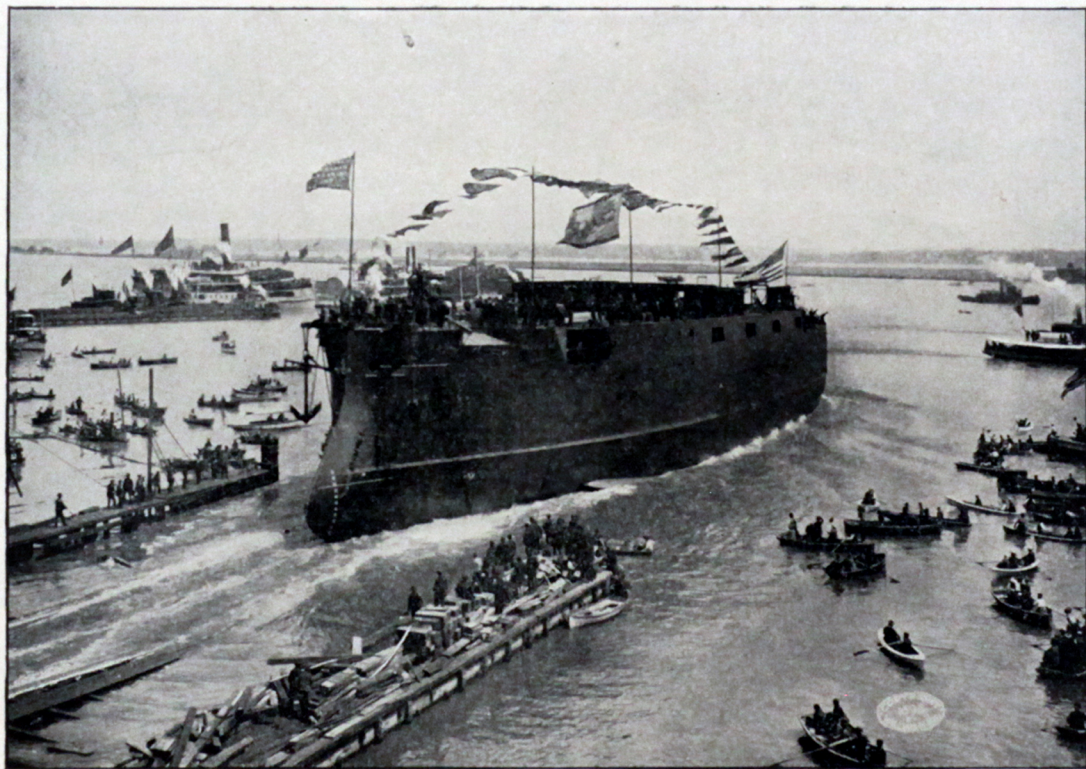


Before presenting to our patrons the description of our products for 1902 as contained in the following pages, we wish to call attention to the fact that we have made several improvements that add to the convenience and attractiveness of the Korona Camera which are very practical in their application and original in their conception. Principal of these is our method of adjusting the swing back, the addition of an auxiliary bed for use with lenses of short focus, our new automatic shutter, and many less important details that are not so apparent, but nevertheless a factor in the perfect construction of the instrument.

All cameras resemble the Korona in appearance, but to the close observer they differ in almost every detail. Note, for instance, our method of attaching the bellows without tacks, locking devices that will not mar the finish or disturb the focus, diagonal rack and pinion, and even general finish. The Korona is the only camera made complete, including lens and shutter, under one roof and it is, therefore, not the nondescript product of several manufacturers. Instead, it is made by practical opticians in the best equipped camera factory in the world.

The details of the different parts will be described under "Specifications" and it will probably suffice to add that no effort or expense has been spared to make the Korona for 1902 superior in finish and design to all previous models.

The following pages cannot convey to the intending purchaser an adequate idea of the workmanship and care exercised in the finish of Korona Cameras and we therefore invite inspection. They are sold by all photographic supply dealers or will be sent on approval, subject to terms on page 54.



Negative by
WM. H. RAU
Philadelphia, Pa.

Made with
TURNER-REICH ANASTIGMAT LENS

Launch of
U. S. S. ALABAMA



Specifications



To save reiteration we will describe under this head all features common to the cameras herein listed, and specify the special merits of each camera under its individual heading.

Finish

Only the best mahogany or cherry, thoroughly kiln dried, is used in the woodwork. This is finished with the utmost care and beautifully polished. All metal parts are made of brass, heavily nickel-plated. This makes a handsome combination, and provides no metalwork liable to rust or corrode.

The Bellows

is made of the best procurable red leather, with black lining and pressboard to stiffen the folds. Special cement is used instead of glue to insure it remaining always pliable. We would especially call attention to the exceptional bellows capacity of Series V and VI Long Focus, and also the Compact and View Koronas. There is ample to use the longest focus combination of the Rapid Rectigraphic and Series II-S Turner-Reich Convertible Anastigmat lenses.

The Covering

is of the finest quality seal-grain cow-hide or buffing.

The Rack and Pinion

is of the diagonal pattern, insuring no looseness or lost motion. This device for fine focusing is used only on Korona Cameras.

The Swing-Back

is fully described and illustrated on page 18. This device in construction exemplifies the true principle on which the theory of the swing-back is based.

The Front

has both vertical and horizontal movements, except when otherwise stated. These are controlled by a simple positive device, by which they can be firmly locked.

The Locking Devices

on Korona Cameras are of special design. The cams used to lock the front clutch the edge of the metal bed. They have no tendency to disturb the focus, and do not mar the finish after continued use.

The Ground Glass Frame

is spring actuated, and may be readily removed, if desired.

The Finder

A brilliant View Finder is furnished with all our hand cameras that will show the image clear and bright under all conditions.



Specifications

Continued



Accurate

focusing scales are fitted to each camera, also tripod sockets.

Shutters

Our new Automatic Shutter, which is always set and merely requires a pressure of the bulb to operate, is furnished with all 4 x 5 and 5 x 7 Koronas, with or without automatic exposure regulator as specified. Model D Shutter is supplied in 6½ x 8½ and 8 x 10 sizes, and will be substituted for the Model F Automatic in smaller sizes, if preferred.

Auxiliary Bed

for Wide-angle lenses can be attached to all Koronas except Series I and II, and is included with Series V Long Focus, without extra charge.

Carrying Cases

are leather-covered, or made of black sole leather as designated, and provided with handle and shoulder strap.

Lenses

The Special Symmetrical Lens, supplied with Series I and II Cameras, is a Rectilinear Lens of fine quality, and will compare favorably with any similar type of lens. It is computed on a less intricate formula than our regular Instantaneous Symmetrical Lens, and though we do not claim it equal to this series, the difference is not apparent in practical work, and can only be detected by an expert optician, with the aid of testing apparatus.

The Convertible Symmetrical Lens, furnished with Series IV, V, and VI, is our Instantaneous Symmetrical Lens, made with front and rear combinations of dissimilar foci.

With the exception of the Special Symmetrical, all lenses fitted to cameras are the same as those listed separately. Every lens is carefully tested, and must conform to our high standard of excellence before leaving the factory.

When Ordering

give full particulars of goods wanted, mention size, series and lens equipment of cameras, also shutter when option is given. Dealers, before quoting prices or placing order for special combinations of cameras, lenses or other apparatus, are requested to secure our prices first, otherwise we will make no allowance after the goods are shipped, if the invoiced price of goods does not prove to be the same as anticipated.



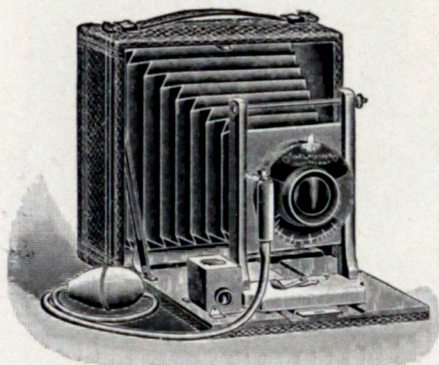
KORONA

SERIES I



This camera is simple in design, yet contains a sufficient range of movements to make it useful for all kinds of indoor or outdoor photography. It is very compact and presents a dainty appearance, as it is finished in the same style as the more expensive models.

Photography being a mechanical process, much depends on the skill of the operator, but so far as the camera can assist, this model will yield results equal to the following series, though having fewer adjustments it will not embrace such a range of work.



SPECIFICATIONS

Rising and falling front, Reversible back, Brilliant finder, Special Symmetrical lens, Automatic shutter model E, Covered case to carry camera and six holders.

DIMENSIONS

4 x 5 2 7/8 x 6 x 6
5 x 7 3 x 8 x 8

WEIGHT

4 x 5 2 lbs. 2 oz.
5 x 7 3 "

BELLOWS CAPACITY

4 x 5 7 inches
5 x 7 9 "

Eastman Roll-holder can be fitted.

PRICE

Including Carrying Case and one Plate-holder.

	4 x 5	5 x 7
Series I Korona,	\$12.00	\$16.00
Series I Korona, without lens or shutter,	8.00	11.00
Extra Plate-holders,	1.00	1.25
Cartridge Roll-holder, empty,	5.00	6.50
Wide-angle lens in cells,	8.00	10.00

See general specifications, page 5

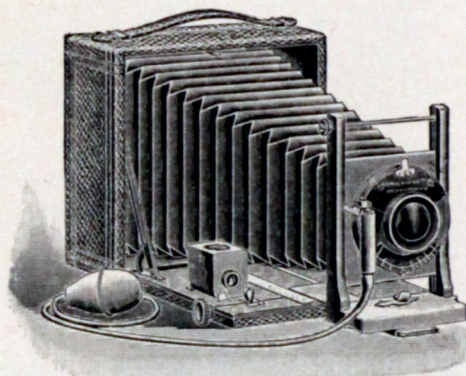


KORONA

SERIES II



The advantage of rack and pinion focusing device and extra bellows draw permitting the use of long focus lenses are two favorable points in the design of this model. This makes the camera better equipped for copying or other work, which requires bellows extension. The rear combination of the lens may be used separately which is a useful feature when photographing many subjects which can not be approached near enough to be taken with a lens of the usual focus.



SPECIFICATIONS.

Reversible back, Rising and falling front, Brilliant finder, Rack and pinion, Special convertible Symmetrical lens, Automatic shutter model E, Sole leather case to carry camera and six holders.

DIMENSIONS	WEIGHT	BELLOWS CAPACITY
4 x 5 3 1/8 x 6 x 6	4 x 5 2 lbs. 6 oz.	4 x 5 11 inches
5 x 7 3 1/4 x 8 x 8	5 x 7 3 " 8 "	5 x 7 15 "

Eastman Roll-holder can be fitted.

PRICE

Including Carrying Case and one Plate-holder.

	4 x 5	5 x 7
Series II Korona,	\$18.00	\$23.00
Series II Korona without lens or shutter,	14.00	18.00
Extra Plate-holders,	1.00	1.25
Cartridge Roll-holder, empty,	5.00	6.50
Wide-angle lens in cells,	8.00	10.00

See general specifications, page 5

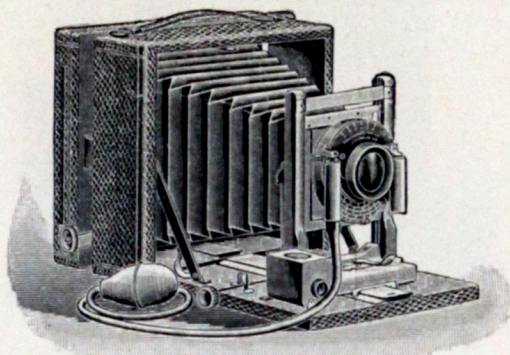


KORONA

SERIES III



Series III Korona, combines all the advantages of the preceding series, with the exception of the bellows draw of Series II Korona. The patent swing-back of this model is a decided advantage, making it better adaptable to architectural subjects and enlarges its field of usefulness. The special bed for use with Wide-angle lens can be attached to this camera. See instructions for ordering this part, page 17.



SPECIFICATIONS

Reversible back, Rising and falling front, Patent swing-back, Brilliant finder, Rack and pinion, Instantaneous Symmetrical or Series IV-S Turner-Reich lens, Automatic shutter model F, Sole leather case to carry camera and six holders.

(Model D Shutter will be substituted if preferred.)

DIMENSIONS

4 x 5 3¼ x 6¼ x 6¼
5 x 7 3½ x 8½ x 8½

WEIGHT

4 x 5 2 lbs. 9 oz.
5 x 7 3 " 12 "

BELLOWS CAPACITY

4 x 5 8 inches
5 x 7 10 "

Eastman Roll-Holder can be fitted.

PRICE

Including Carrying Case and one Plate-holder.

	4 x 5	5 x 7
Series III Korona, Instantaneous Symmetrical Lens, . . .	\$22.00	\$27.00
Series III Korona, Turner-Reich Lens,	42.00	52.00
Series III Korona, without lens or shutter,	18.00	22.00
Extra Plate-holders,	1.00	1.25
Cartridge Roll-holder, empty,	5.00	6.50
Wide-angle lens in cells,	8.00	10.00

See general specifications, page 5



KORONA

SERIES IV

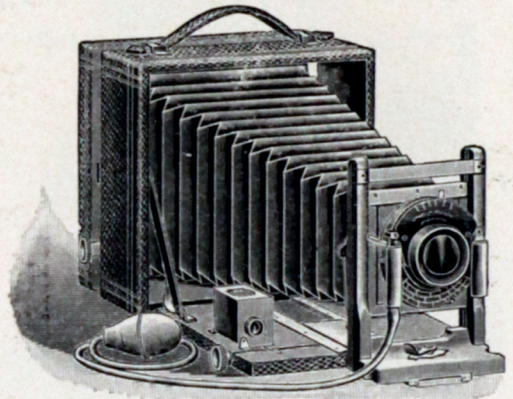


This Model is superior to Series III only in respect to its extra long bellows which is ample to allow the rear combination of the lens being used separately. In range of movements it is only exceeded by Series V and Series VI Long Focus. The special bed for use with Wide-angle lens can be attached, and if desired should be ordered per instructions page 17.

SPECIFICATIONS

Reversible back, Rising and falling front, Patent Swing back, Brilliant finder, Rack and pinion, Convertible Symmetrical or Series IV-S Turner-Reich lens, Automatic shutter model F, in 4 x 5 and 5 x 7 sizes, and model D shutter in 6½ x 8½ size, Sole leather case to carry camera and six holders.

(Model D shutter will be substituted in 4 x 5 and 5 x 7 sizes if preferred.)



DIMENSIONS				WEIGHT		BELLOWS CAPACITY	
4	x 5	3¼	x 6¼ x 6¼	4	x 5	2 lbs. 10 oz.	4 x 5 12 inches
5	x 7	3½	x 8½ x 8½	5	x 7	3 " 14 "	5 x 7 16½ "
6½	x 8½	5	x 10½ x 10½	6½	x 8½	6 " 4 "	6½ x 8½ 20 "

Eastman Roll-holder can be fitted.

PRICE

Including Carrying Case and one Plate-holder.

	4 x 5	5 x 7	6½ x 8½
Series IV Korona, Convertible Symmetrical lens,	\$25.00	\$30.00	\$45.00
Series IV Korona, Turner-Reich lens,	45.00	55.00	95.00
Series IV Korona, without lens or shutter, . . .	21.00	25.00	30.50
Extra Plate-holders,	1.00	1.25	1.60
Cartridge Roll-holder, empty,	5.00	6.50	
Wide-angle lens in cells,	8.00	10.00	12.00

See general specifications, page 5

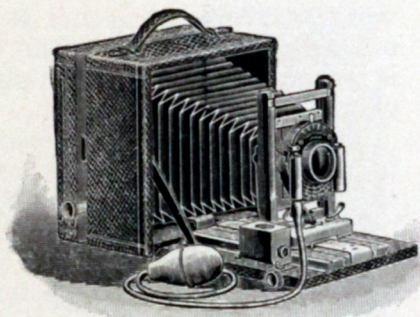


KORONA

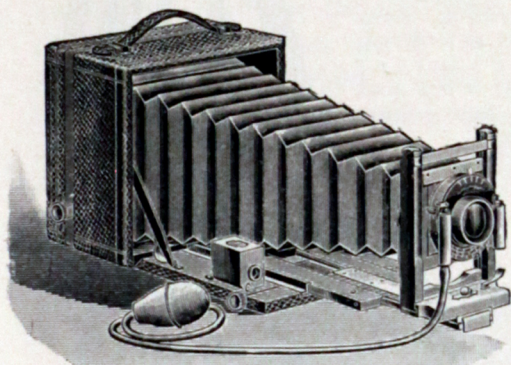
SERIES V—LONG FOCUS



Series V Korona is our crowning effort. The evolution of the Korona results in this model, which is replete in every adjustment essential to such an instrument. These are controlled by devices mechanically perfect and unique in design. The camera is not complex in construction, in fact our aim has been to avoid harassing the photographer with unnecessary complications in this respect. It is distinguished from the preceding models by its exceptional bellows capacity and superb lens equipment. We fit it with either our Convertible Symmetrical, Rapid Rectigraphic or Turner-Reich lenses, all of which are made in the convertible form, *i. e.*, so that either front or back combination may be used alone, giving lenses of dissimilar foci.



A long-focus camera with the lens of ordinary construction, where the combinations are of equal focal length, afford but little, if any, advantage over the usual style of camera, but by the use of our convertible lens system, the full range of the camera is brought into play. It is within the power of the operator, in so far as lenses or camera can aid, to accomplish results not within the reach of an ordinary outfit. These lenses and their special advantages will be found described under lenses Series IX-S, VII-S and II-S.



The 5 x 7 Turner-Reich Lens Series II-S has an equivalent focus of $7\frac{1}{2}$ " , with single combinations of 12" and 18" respectively. In addition to the above, we can also furnish a 10" combination, which, used with the 12" lens, makes a Wide-angle Lens of $5\frac{1}{2}$ " focus. The 10" and 18" lenses used in conjunction, make a lens of 7" equivalent focus. Thus it will be seen that the lenses



KORONA

SERIES V—LONG FOCUS—Continued



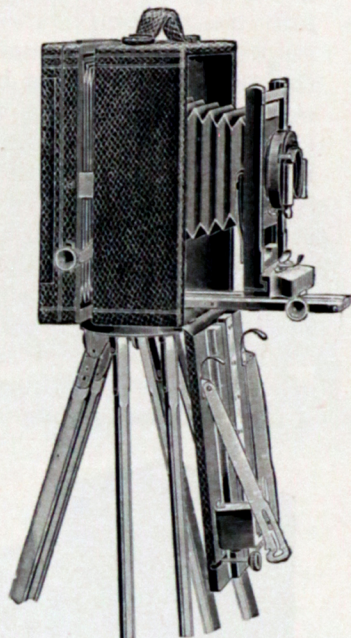
furnished as above have single combinations of 10", 12" and 18", making combinations of double lenses with equivalent focal lengths of 5½", 7" and 7½", embracing an angle of 20 degrees to 80 degrees without moving the camera. With the Convertible Symmetrical and Rectigraphic, nearly the same range of foci is obtained. The special bed for Wide-angle work is included with each outfit without extra charge.

The camera has a triple telescopic bed, and by an ingenious arrangement the full extension is acquired by merely pulling out the front. This action automatically releases the lock, holding the extra length in a normal position, and relocks it when drawn out without the aid of set screws. Special attention has been paid to rigidity, and there is no loss of strength in this model, as compared with Series VI Long Focus.

SPECIFICATIONS

Reversible back, Vertical and Horizontal front movements, Patent swing back, Rack and pinion, Brilliant finder, Lens as ordered, Automatic shutter model F in 4 x 5 and 5 x 7 sizes, and model D shutter in 6½ x 8½ size, Special bed for Wide-angle lens, Sole leather case to carry camera and six holders.

(Model D shutter will be substituted in 4 x 5 and 5 x 7 sizes, if preferred.)



DIMENSIONS				WEIGHT				BELLOWS CAPACITY			
4	x 5	3¼	x 6½	x 6½	4	x 5	3 lbs, 1 oz.	4	x 5	15½	inches
5	x 7	3¼	x 8½	x 8½	5	x 7	4 " 6 "	5	x 7	20	"
6½	x 8½	5	x 10½	x 10½	6½	x 8½	6 " 8 "	6½	x 8½	26	"

Eastman Roll-holder can be fitted.

PRICE

Including Carrying Case and one Plate-holder.

Series V Korona, Symmetrical lens,	4 x 5	5 x 7	6½ x 8½
Series V Korona, Rectigraphic lens,	\$35.00	\$45.00	\$ 60.00
Series V Korona, Turner-Reich lens,	40.00	50.00	65.00
Series V Korona, without lens or shutter,	60.00	85.00	120.00
Wide-angle lens in cells	31.00	40.00	45.50
Special 10" Turner-Reich Wide-angle lens,	8.00	10.00	12.00
Cartridge Roll-holder, empty,		15.00	
Extra Plate-holders,	5.00	6.50	
	1.00	1.25	1.60

See general specifications, page 5

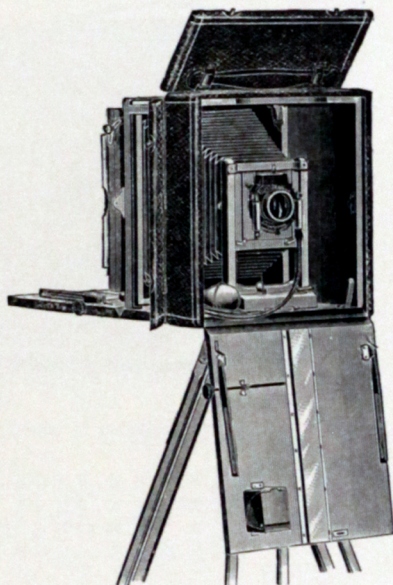


KORONA

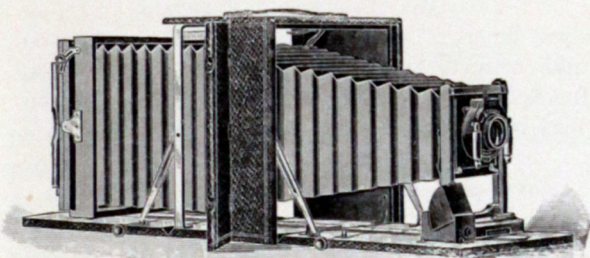
SERIES VI—LONG FOCUS



This camera embodies all the ideas of modern camera construction and is best described as a universal instrument suitable for every class of photography. For professional or the expert amateur its peculiar advantages will specially recommend it. With all the adjustments of a view camera it is compact and convenient for use as a hand camera. Its great range of movements makes it most desirable for the specialist in any branch of photography. A distinguishing point in addition to its fine construction is the unusual bellows capacity and lens equipment. Both the front and back drop down to a horizontal position and form a bed for the extension of the bellows when using long focus lenses or copying. Either front or back bed may be dropped down out of the way as illustrated in the engraving and the lens focused by the movement of either



front or back, with rack and pinion adjustment.



The same lens equipment is supplied as with Series V Korona under which de-

scription will be found full information regarding this part of the outfit.



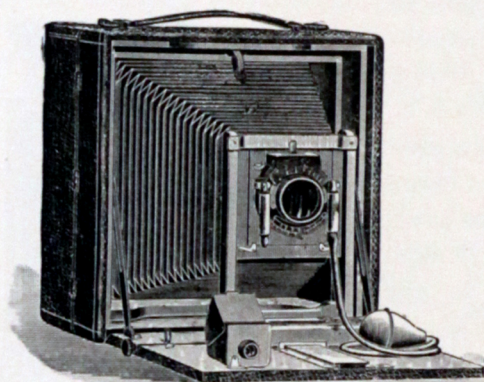
KORONA

SERIES VI—LONG FOCUS—Continued



SPECIFICATIONS

Double swing back, Vertical and horizontal front movements, Reversible back, Rack and pinion on back and front bed, Brilliant finder, Lens as ordered, Automatic shutter model F in 4 x 5 and 5 x 7 sizes, model D shutter in 6½ x 8½ and 8 x 10 sizes, Leather covered carrier for two holders. (Camera has space in back to carry three holders.)



(Model D shutter will be substituted in 4 x 5 and 5 x 7 sizes if preferred.)

DIMENSIONS			WEIGHT			BELLOWS CAPACITY		
4	x 5	7½ x 6¾ x 7¾	4	x 5	4½ lbs.	4	x 5	20 inches
5	x 7	9¼ x 6¼ x 9¾	5	x 7	6 "	5	x 7	23 "
6½	x 8½	11½ x 7¾ x 12½	6½	x 8½	12 "	6½	x 8½	31 "
8	x 10	8½ x 13½ x 13¾	8	x 10	15 "	8	x 10	36 "

Eastman Roll-holder can be fitted.

PRICE

Including one Plate-holder.

	4 x 5	5 x 7	6½ x 8½	8 x 10
Series VI Korona, Symmetrical lens, . .	\$35.00	\$45.00	\$ 60.00	\$ 75.00
Series VI Korona, Rectigraphic lens, . .	40.00	50.00	65.00	80.00
Series VI Korona, Turner-Reich lens, . .	60.00	85.00	120.00	150.00
Series VI Korona without lens or shutter,	31.00	40.00	45.50	52.00
Sole-leather Case,	3.50	4.00	5.00	6.50
Sole-leather Case to hold camera and 6 holders,	5.00	6.00	7.00	8.00
Wide-angle Lens in cells,	8.00	10.00	12.00	15.00
Special 10" Turner-Reich Wide-angle Lens,		15.00		
Cartridge Roll-holder,	5.00	6.50		
Extra Plate-holders,	1.00	1.25	1.60	2.00

See general specifications, page 5

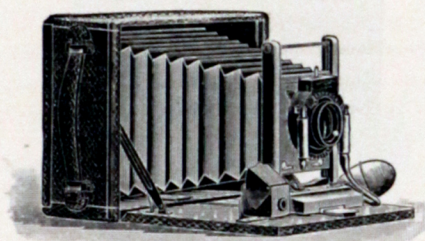


KORONA

SERIES VII



This model consists of a camera intended for ordinary hand camera work in which a large number of adjustments are not necessary. The reversible back and swing is omitted and it is made to combine compactness with utility. It is furnished with or without rack and pinion according to order.



SPECIFICATIONS

Vertical and horizontal front movements, Rack and pinion as desired, Spring actuated ground glass, Instantaneous Symmetrical or Series IV-S Turner-Reich Anastigmat lens, Automatic shutter model F, Brilliant finder, Sole leather case to hold camera and six plate-holders or camera and three holders.

DIMENSIONS

4 x 5 2 $\frac{7}{8}$ x 5 $\frac{3}{8}$ x 6 $\frac{1}{4}$
5 x 7 3 $\frac{1}{8}$ x 6 $\frac{1}{2}$ x 8 $\frac{1}{4}$

WEIGHT

4 x 5 2 lbs. 3 oz.
5 x 7 2 " 13 "

Eastman Daylight Roll-holder can be fitted.

PRICE

Including one Double Plate-holder and Carrying Case.

	4 x 5	5 x 7
Series VII Korona, Instantaneous Symmetrical lens,	\$18.00	\$23.00
Series VII Korona, Turner-Reich Lens,	38.00	48.00
Series VII Korona, without Lens or Shutter,	14.00	18.00
Extra Plate-holders,	1.00	1.25
Rack and Pinion, extra,	2.00	2.00
Cartridge Roll-holder,	5.00	6.50
Wide-angle lens in cells,	8.00	10.00

See general specifications, page 5



KORONA

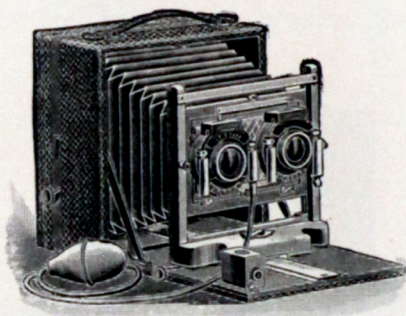
STEREOSCOPIC



Substantially the same as Series III Korona this model has an equal range of movements and is in every respect as adaptable to general use. The division in the bellows is detachable and may be quickly removed if the camera is to be used for making 5 x 7 pictures.

SPECIFICATIONS

Rising and falling front, Patent swing back, Rack and pinion, Brilliant finder, Sole-leather case to carry camera and six holders.



LENSES

We supply as Stereo lenses matched pairs of our 4 x 5 Single Achromatic, Instantaneous Symmetrical or Series IV-S Turner-Reich, as ordered, and in addition a 5 x 7 Instantaneous Symmetrical lens and automatic shutter model F for full size views. The Stereo shutter is described on page 43.

DIMENSIONS	WEIGHT	BELLOWS CAPACITY
$3\frac{1}{4} \times 8\frac{1}{8} \times 8\frac{1}{8}$	4 lbs. 8 oz.	10 inches

Eastman Roll-holder can be fitted.

PRICE

Includes 5 x 7 lens and shutter, Stereo lenses and shutter, one plate-holder and sole-leather carrying case to hold camera and six holders.

Stereo Korona with Single Achromatic Stereo lenses,	\$ 50.00
Stereo Korona with Instantaneous Symmetrical Stereo lenses, .	60.00
Stereo Korona with Turner-Reich Stereo lenses,	100.00
Stereo Korona without lenses or shutters,	25.00
Extra Plate-holders,	1.25
Cartridge Roll-holder, empty,	6.50

If wanted without 5 x 7 lens and shutter deduct \$5.00

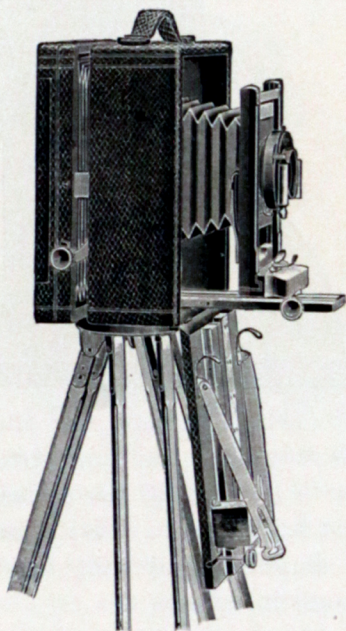


KORONA

SPECIAL BED



Special Bed for Use with Wide-Angle Lenses.



We have devised this attachment to obviate the difficulty of the bed of the camera interfering when using a Wide-angle lens on a Cycle camera, in which focusing is accomplished by moving the front. The regular bed is dropped down out of place by releasing the side arms, and the Wide-angle bed may then be quickly attached by sliding it into a metal guide which holds it firmly with spring catches.

This attachment is included with Series V Korona, but unless ordered with Series III, IV and Stereo, these cameras must be returned to the factory to have certain alterations made and fastenings added, which are necessary before the bed can be used. Express charges must be prepaid on cameras sent in to be fitted with this bed. No charge will be made for fitting. We can attach this bed to Series VII Long Focus Korona, model 1901, subject to these conditions.

PRICE

	4 x 5	5 x 7	6½ x 8½
Special Wide-angle bed with rack and pinion, . . .	\$4.00	\$4.00	\$5.00



K O R O N A

SWING-BACK-PATENTED



It is most important that the swing-back should be constructed on correct principles, otherwise it will not perform the function it is intended for and will be a useless attachment to the camera. The axis of the swing must be at the centre of the plate, or as near to it as practical, and this theory is fully exemplified in our patent swing-back.

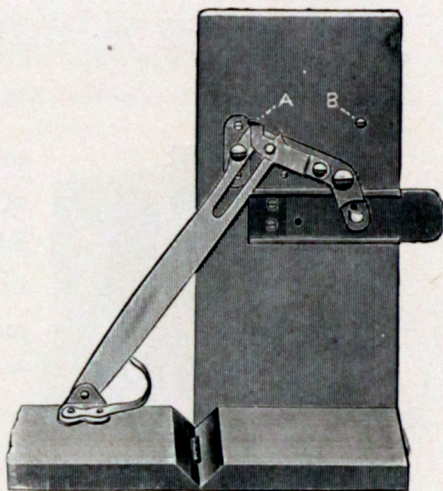
The distortion produced by using the lens out of a horizontal position may be corrected without refocusing the lens and the swing-back designed in this manner is an aid to the lens when focusing. When using a swing-back with the axis of the swing at the bottom of the plate the lens must be refocused every time the swing is adjusted and a very small diaphragm opening used to bring objects situated in different planes into focus.

The action of lowering the bed extends the back of the camera automatically into a position so the swing-back can be adjusted.

A downward pressure on the side arms allows the bed to close, which, at the same time, draws in the back of the camera.

When using the special bed for Wide-angle lens the levers A on each side should be thrown back until they engage the studs B. This will permit the side arms to be disconnected and at the same time lock the back of the camera in an extended position so the swing-back can be operated.

The camera is always fully extended whether the swing-back is used or not so the focusing scale is not rendered useless when operating this movement.



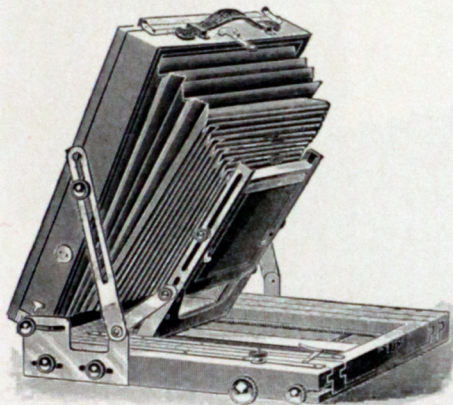


KORONA

COMPACT



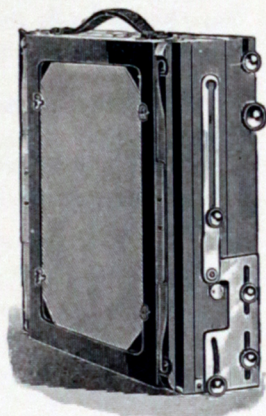
This camera contains every movement necessary to view or architectural photography, combined with the utility of working parts, compactness, light weight and beauty of finish.



After experimenting for a long time, we have eliminated all the poor features of this style camera, and made many improvements.

When the camera is opened the front is pulled forward and swings into position automatically, being locked in place by two set screws. A rough focus is acquired by sliding the front backward

or forward on a metal bed. When adjusted the front is instantly locked by turning a lever to one side. The fine focus is then adjusted by a rack and pinion conveniently placed. The bed is triple telescopic, and an extra long bellows is provided which allows the use of very long focus lenses. A unique feature is the swing-back, both vertical and horizontal are provided, and both swing from the center and so do not disturb the focus as is the case when the swing is out of center, a fault found in all cameras of this design heretofore put on the market. The most extreme wide-angle lens can be used, the back being made to slide forward enough to prevent the bed cutting off a portion of the plate. The rising front has a range of four inches, which is more than sufficient for every need. The back is reversible, and is fitted with a spring actuated ground-glass, which recedes for the insertion of the plate-holder.



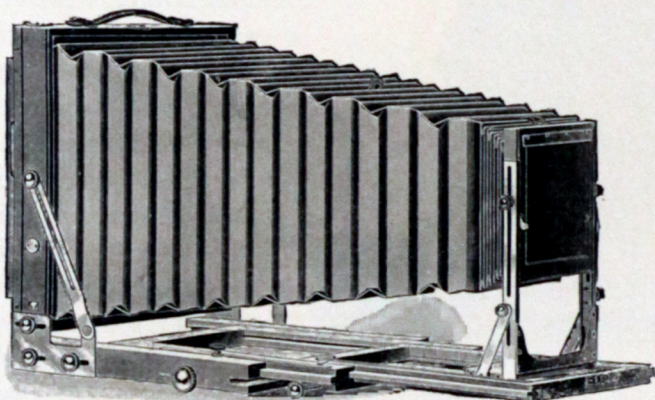


KORONA

COMPACT—Continued



The Compact is made of the best mahogany, handsomely finished, and all the metal parts are nickel-plated and polished. A leather handle is provided, so the camera may be carried without case.



SPECIFICATIONS

LENSES. With this camera we furnish our Instantaneous Symmetrical lens, Series IX-S, the Rapid Rectigraphic Convertible, Series VII-S, or the Turner-Reich Anastigmat Convertible, Series II-S, at prices listed below.

SIZE	WEIGHT	FOCAL CAPACITY	DIMENSIONS OF CAMERA
$6\frac{1}{2} \times 8\frac{1}{2}$	6 lbs. 8 oz.	24 inches	$10 \times 2\frac{7}{8} \times 10$ inches
8×10	8 lbs.	30 "	$11\frac{5}{8} \times 2\frac{7}{8} \times 13$ "

PRICE

Includes Canvas Carrying-case, one Korona-holder, but no Tripod.

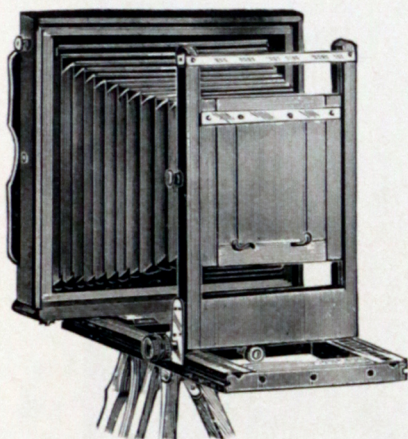
The Compact cameras are supplied with either a case to hold camera and three holders, or a long case to hold camera, three holders and tripod. In ordering, state which style is desired.

	$6\frac{1}{2} \times 8\frac{1}{2}$	8×10
Korona Compact View, without lens and shutter, . . .	\$ 36.00	\$ 40.00
Korona Compact View and Symmetrical lens,	60.00	70.00
Korona Compact View and Rectigraphic lens,	65.00	75.00
Korona Compact View and Turner-Reich lens,	120.00	140.00



KORONA

VIEW



As its name implies this is a camera for out-door work. It is beautifully finished in mahogany with nickel-plated metal work. Its range of movements are double swing-back, rising and falling front, reversible back, rack and pinion, and in addition to these it has exceptional bellows capacity. The bed is hinged in three parts so that wide-angle lens may be used without interfering.

SPECIFICATIONS

SIZE	WEIGHT	FOCAL	CAPACITY	DIMENSIONS WHEN FOLDED
6½ x 8½	6 lbs.	19½ in.		11 x 11 x 3½ in.
8 x 10	7½ "	23 in.		12½ x 12½ x 3½ in.
10 x 12	10 "	28 in.		15 x 16 x 5¼ in.
11 x 14	14½ "	34½ in.		18 x 19 x 6½ in.

PRICE

Includes Canvas Carrying-case, one Korona Holder, but no Tripod.

A short case to hold camera and six holders is supplied, but a long case to hold camera, six holders and tripod will be substituted at a small extra cost.

	6½ x 8½	8 x 10	10 x 12	11 x 14
Korona View without Lens and Shutter, .	\$ 22.00	\$ 24.00	\$35.00	\$45.00
Korona View with Symmetrical Lens and Shutter,	45.00	55.00		
Korona View with Rectigraphic Lens and Shutter,	50.00	60.00		
Korona View with Turner-Reich Lens and Shutter,	105.00	125.00		
Long case to hold camera, 6 holders and tripod, extra,	1.00	1.50	2.00	



Negative by
KEEN BROS.
Culver, Ind.

Made with
TURNER-REICH ANASTIGMAT LENS
 f 11 exposure 1-800 sec.

Riding
Græco-Roman Style



LENSES

TURNER-REICH ANASTIGMAT



The discovery of improved optical glass by the Jena factories enabled the optician to manufacture photographic lenses fully corrected for astigmatism and other optical errors, previously impossible. We were among the first to take advantage of this glass, and after a number of careful calculations and experiments, our Turner-Reich Lens was produced, with the result that for six years it has proved our claim that it is equal, if not superior, to any lens of this description manufactured under foreign patents.

The Turner-Reich lenses are fully corrected for astigmatism, and have a perfectly flat field for the size of plate they are listed to cover, with a working aperture of $f\ 7.5$. Each combination in every series may be used separately and are unequaled for landscape work. The doublets have a working aperture of $f\ 7.5$ and with smaller openings will cover a plate one and two sizes larger than they are listed for. This lens is the only anastigmat invented and controlled in the United States. All others are manufactured under foreign patents.

Patent was issued in the United States, May 14, 1895, and patents in principal European countries have since been granted.

Owing to the peculiar nature of one of the glasses used, it is impossible to obtain it free from a few small bubbles, which do not, however, injure the working of the lens.

Rapidity of Turner-Reich Lenses

Turner-Reich Anastigmat lenses have an effective working aperture of $f\ 7.5$ and are rapid enough for all kinds of instantaneous photography as the illustrations in this catalogue will testify.

To correct a mistaken impression on this point the following explanation is given: There is no inherent quality in any lens such as that commonly called speed. One lens is only more rapid than another inasmuch that it will give equal definition of the image with a larger diaphragm opening. Thus, the Turner-Reich can be said to be faster than the Rapid Rectigraphic or



L E N S E S

TURNER-REICH ANASTIGMAT—Cont'd



Instantaneous Symmetrical lenses, because being better corrected for optical errors it will cover the plate with a larger aperture, though if stopped down to the same relative sized diaphragm opening, all of these lenses will require the same exposure. Instantaneous photography of rapidly moving objects which require an exposure of extremely short duration, $\frac{1}{100}$ to $\frac{1}{1000}$ of a second, can only be accomplished with the aid of a special shutter of the type known as the focal plane which gives a high coefficient of light in proportion to the length of exposure. A larger diaphragm opening will not materially assist this result, and while a working aperture of f 5-6 or f 6-3 does not add much to the light transmitting power of the lens, it increases the bulk and weight of the instrument. At the same time there is a loss in depth of focus, definition and general covering power, which is a positive detriment unless the lens is stopped down to acquire these qualities when, of course, the advantage of the larger aperture would be lost. The result of our experience is that a working aperture of f 7-5 is the most practical and will embrace a range of subjects that includes instantaneous work of the most difficult kind, providing a suitable shutter is used.

Our diaphragm scales are marked with f value of the opening according to the Uniform System, the effective and not the actual aperture being indicated.

Important

We cannot supply shutters made by other manufacturers, but can fit them to our lenses. In such cases the shutter should be ordered direct from the maker and sent to us to be fitted with the lens. We make no reduction in price on account of our shutter or lens mount not being furnished, but to compensate for this, do not charge for the work involved in fitting shutter. When a lens of our manufacture is purchased complete with barrel or shutter and fitted by us to another make of shutter we charge for such fitting according to the labor involved in the work.



LENSES

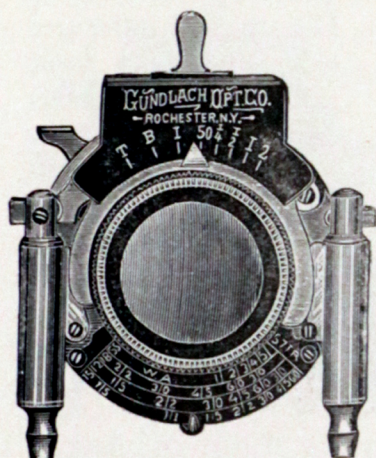
SERIES II-S



Turner-Reich Convertible Anastigmat, F:7.5

WITH IRIS DIAPHRAGM

This series of the Turner-Reich Anastigmat is made in the convertible form, *i. e.*, the single combinations are of dissimilar foci. The working aperture of the lens used as a doublet is F:7.5, and that of the single combinations F:12.5 and 22 respectively.



The diaphragm scale contains graduations showing the *f* value of the opening for the double and single lenses.

Price includes lens mounted in model D shutter, but Automatic shutter model F will be substituted in 4 x 5 and 5 x 7 size if preferred.

Will be supplied mounted in barrel with iris diaphragm at same price.

No.	Size of Plate	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price
1	4 x 5	6 in.	11 in.	14 in.	\$ 41.00
2	5 x 7	7½ "	12 "	18 "	55.00
3	5 x 8	8½ "	16 "	18 "	70.00
4	6½ x 8½	10½ "	18 "	24 "	90.00
5	8 x 10	12 "	21 "	23 "	105.00

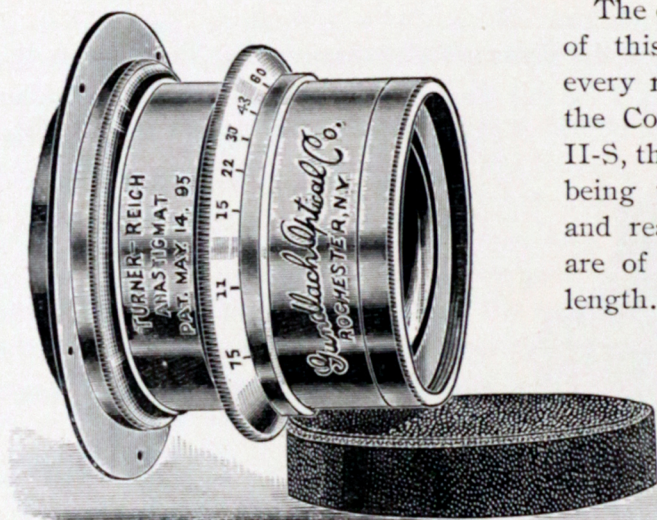


LENSES

SERIES III



Turner-Reich Anastigmat, F: 7.5 *with Iris Diaphragm*



The optical qualities of this series are in every respect equal to the Convertible Series II-S, the only difference being that both front and rear combinations are of the same focal length.

Either combination may be used separately and are approximately double the equivalent focus of the complete lens.

For general use in the studio and all kinds of out-door photography this series is unequalled.

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



LENSES

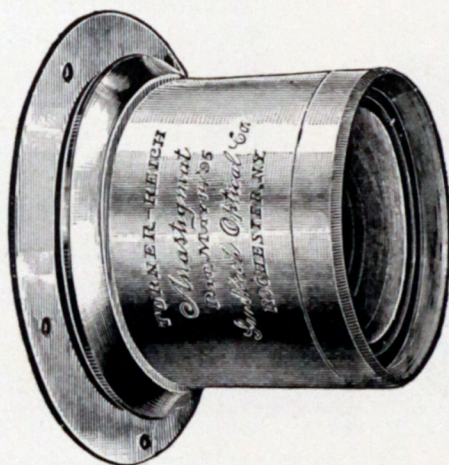
SERIES V



Turner-Reich Anastigmat Process Lens

WITH WATERHOUSE STOPS

Series V is specially designed for Process work and other similar branches of photography that require a lens which will



give the utmost sharpness with speed and covering power. The chemical and visual focus are absolutely coincident, and the field perfectly flat.

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

No.	Diameter of Lens	Plate	Focus	Price
1	1 $\frac{5}{8}$ in.	10 x 12	14 in.	\$ 65.00
2	2 "	16 x 18	18 "	125.00
3	2 $\frac{5}{8}$ "	18 x 22	24 "	180.00
4	3 $\frac{3}{8}$ "	22 x 25	30 "	275.00



L E N S E S



The Rectigraphic and Perigraphic Lenses

These lenses are perfectly achromatic and rectilinear, and of superior covering power and definition. Excepting our Turner-Reich Anastigmat, no lenses in equivalent grades are equal to these in general excellence.

The two combinations are of different focal length, the back lens having much shorter focus than the front lens, and the relative curvatures are so calculated as to secure perfect optical symmetry of the compound, and at the same time to form perfect achromatic and aplanatic objectives for themselves if used singly. This novel plan offers the important advantage that these lenses, in fact, consist of three objectives of different focal lengths, in the following approximate proportions:

Equivalent of compound (both lenses),	2
Back lens alone,	3
Front lens alone,	4

thus giving, on the same plate, pictures differing in size about as 2 to 3 to 4.

To use the back lens alone, the front lens should be removed. To use the front lens alone, remove the back lens and screw the front lens in place occupied by back lens. The focal lengths of the compound and of each combination are engraved in the mounts.



LENSES

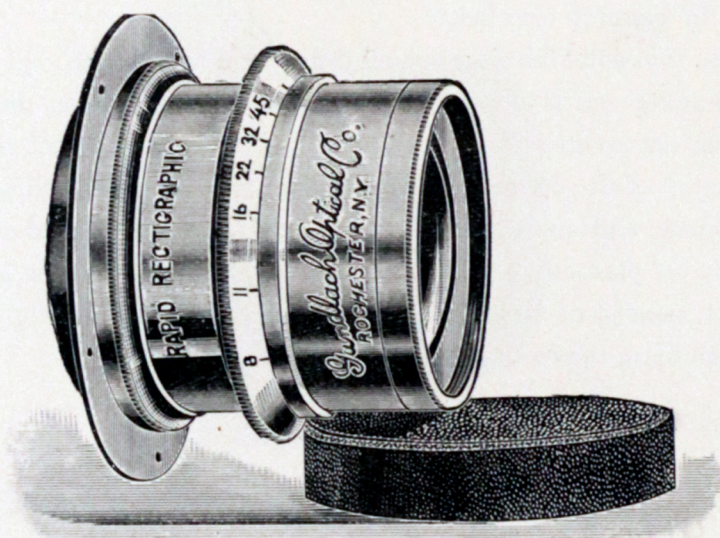
SERIES VII



Rapid Rectigraphic, F:8

WITH IRIS DIAPHRAGM

A convertible rectilinear lens of exceptional quality for all general photographic purposes, including portraiture and copying.
(See page 29 for general description.)



No.	Size of Plate	Diameter of Lens	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price with Iris Diaphragm
1	4 x 5	1 in.	6¼ in.	10 in.	13½ in.	\$ 18.00
1¾	5 x 7	1⅞ in.	8 "	12½ "	17 "	22.00
2	5 x 8	1¼ "	8½ "	13½ "	18 "	24.00
3	6½ x 8½	1½ "	11 "	17 "	23 "	30.00
4	8 x 10	1¾ "	13 "	20½ "	28 "	38.00
5	10 x 12	2 "	16 "	25¼ "	34 "	45.00
6	11 x 14	2¼ "	18½ "	29¼ "	39½ "	60.00
7	14 x 17	2¾ "	22 "	34¾ "	47 "	85.00
8	17 x 20	3¼ "	26 "	41 "	56 "	100.00



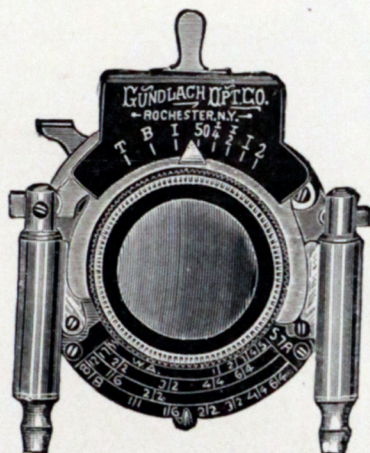
LENSES

SERIES VII-S



Rapid Rectigraphic, F:8

MOUNTED IN SHUTTER



Similar to Series VII, but furnished in shutter. (See page 29 for general description.)

Model D shutter will be furnished if shutter is not specified, but automatic shutter, Model F, will be substituted in 4 x 5 and 5 x 7 sizes if preferred.

No.	Size of Plate.	Diam. of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price, including Shutter
1	4 x 5	1 in.	6¼ in.	10 in.	13½ in.	\$23.00
1¾	5 x 7	1⅞ " "	8 " "	12½ " "	17 " "	27.00
2	5 x 8	1¼ " "	8½ " "	13½ " "	18 " "	29.00
3	6½ x 8½	1½ " "	11 " "	17 " "	23 " "	35.00
4	8 x 10	1¾ " "	13 " "	20½ " "	28 " "	43.00

L E N S E S

S E R I E S V I I I

The Perigraphic with Iris Diaphragm



This lens has the same general construction as the Rectigraphic Lens, but is in effect a wide-angle lens. The combinations may be used singly with good effect, differing as do those of the Rectigraphic Lens.

The largest aperture of the diaphragm is f 8, but when used as a wide-angle lens it must be stopped down to obtain marginal definition. See page 35.

These lenses cannot be mounted in shutter in 4×5 and 5×7 sizes.

No.	Size of Plate	Diameter of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Price
0	4 x 5	$\frac{3}{4}$ in.	$3\frac{3}{4}$ in.	$5\frac{7}{8}$ in.	8 in.	\$18.00
1	5 x 7	1 " "	5 " "	8 " "	11 " "	26.00
2	$6\frac{1}{2} \times 8\frac{1}{2}$	$1\frac{5}{8}$ " "	$6\frac{1}{4}$ " "	10 " "	$13\frac{1}{2}$ " "	30.00
3	8 x 10	$1\frac{7}{8}$ " "	$8\frac{1}{2}$ " "	$13\frac{1}{2}$ " "	18 " "	35.00
4	10 x 12	$1\frac{15}{16}$ " "	11 " "	17 " "	23 " "	42.00
5	11 x 14	$2\frac{3}{8}$ " "	13 " "	$25\frac{1}{2}$ " "	28 " "	52.00
6	14 x 17	$2\frac{3}{8}$ " "	16 " "	$25\frac{1}{2}$ " "	34 " "	64.00
7	17 x 20	$3\frac{1}{8}$ " "	$18\frac{1}{2}$ " "	$29\frac{1}{4}$ " "	$39\frac{1}{2}$ " "	90.00



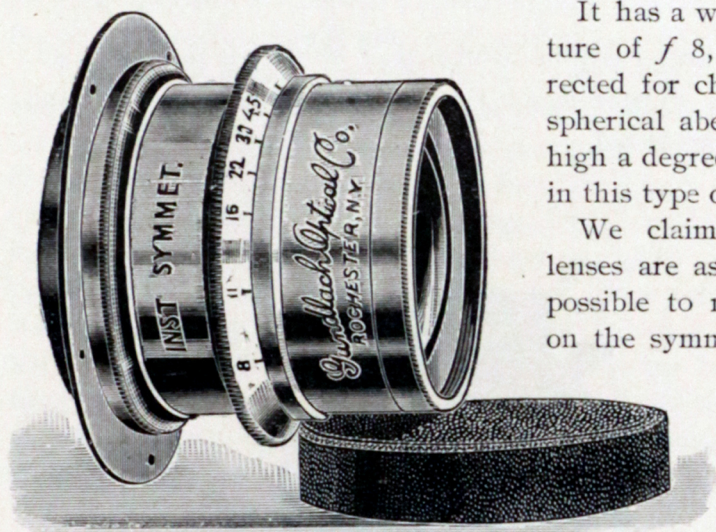
LENSES

SERIES IX



Instantaneous Symmetrical

This is an applanatic rectilinear of the symmetrical type, *i. e.*, both combinations are of the same focal length.



It has a working aperture of $f\ 8$, and is corrected for chromatic and spherical aberration to as high a degree as possible in this type of lens.

We claim that these lenses are as fine as it is possible to make a lens on the symmetrical plan,

and we are anxious to have them compared with lenses of the same style of any other make, regardless of price. This lens is suitable for all kinds of general photographic work including portraiture and groups. Iris diaphragms are now supplied with these lenses.

No.	Size of Plate	Diam. of Lenses	Equivalent Focus	Price
1	4 x 5	1 in.	6¼ in.	\$10.00
1¾	5 x 7	1⅞ " "	8 " "	15.00
2	5 x 8	1¼ " "	8½ " "	18.00
3	6½ x 8½	1½ " "	11 " "	22.50
4	8 x 10	1¾ " "	13 " "	28.00
5	10 x 12	2 " "	16 " "	40.00
6	11 x 14	2¼ " "	18½ " "	52.00
7	14 x 17	2¾ " "	22 " "	70.00
8	17 x 20	3¼ " "	26 " "	80.00



LENSES

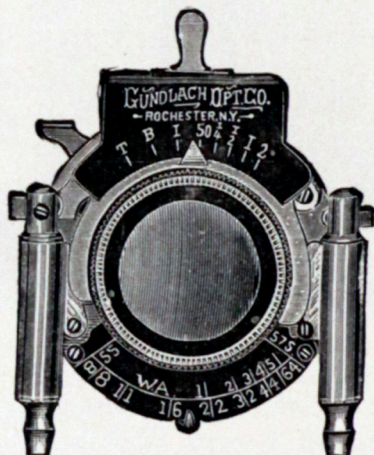
SERIES IX-S



Instantaneous Symmetrical

MOUNTED IN SHUTTER WITH IRIS DIAPHRAGM

Model D shutter will be furnished if shutter is not specified, but automatic shutter model F will be substituted in 4 x 5 and 5 x 7 sizes if preferred.





LENSES



IMPORTANT

Wide-angle Lenses

Considerable misapprehension exists in the minds of many regarding this class of lenses as to their rapidity and covering power, to remove which the following explanation may be of service:

Wide-angle lenses, on account of their limited light circle and short focus in proportion to the size of plate covered, must be used with a small diaphragm opening to secure marginal definition and depth of focus. In fact, the larger openings are only intended to facilitate focusing by admitting a greater amount of illumination. Fixed rules of optics govern these points and it is not within the power of the optician to make a lens embracing a wide-angle that will project a sharp image with a large aperture. No definite statement can be made as to the size of opening necessary to secure good definition, as this depends largely on the nature of the subject and whether it includes objects situated in more or less separated planes.

Care of Lenses

It is of the utmost importance that lenses should be perfectly clean to obtain the full value of their speed and defining power. When lenses have been subjected to a change of atmosphere, or have not been used for some time, they will occasionally have a veil form on the surface that is not noticeable, except when the lens is held at a certain angle to the light.

A lens in this condition will not focus sharply, and the image will be dull and hazy. This veil can be removed by gently polishing the surface with a piece of soft cotton after moistening the lens by breathing on it. All grit or dust should be removed with a soft brush before the lens is polished to prevent the surface being scratched.

Lenses should never be kept in a temperature of unusual warmth or left exposed to the direct rays of the sun, as this may cause the cement between the combinations to soften or deteriorate.

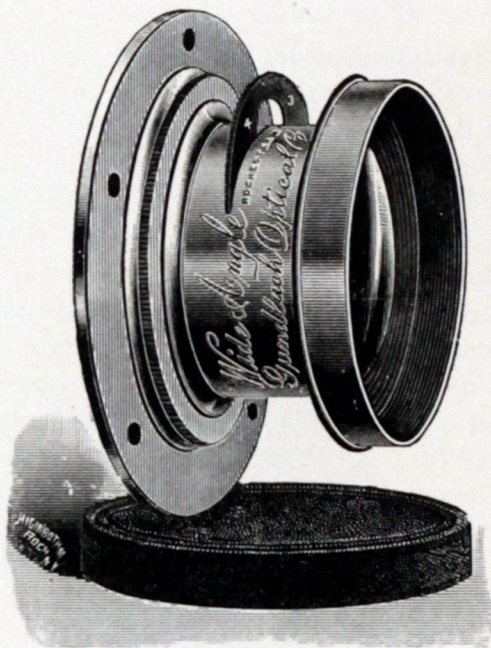


LENSES

SERIES X



Wide-angle Lens



The extreme angular aperture of this lens is the especial feature for which we recommend it to the photographic public. It is absolutely rectilinear, and possesses, in so far as any lens of extreme angle can, the qualities which have won so much favor for our other lenses. It is provided with rotating stops. Its angle is fully 100° . These lenses cannot be mounted in a shutter.

No.	Size of Plate	Diam. of Lenses	Back Focus	Equivalent Focus	Price
1	5 x 7	$\frac{7}{8}$ in.	3 in.	$3\frac{3}{8}$ in.	\$24.00
2	$6\frac{1}{2}$ x $8\frac{1}{2}$	1 " "	$4\frac{1}{8}$ " "	$4\frac{5}{8}$ " "	30.00
3	8 x 10	$1\frac{1}{8}$ " "	$4\frac{3}{4}$ " "	$5\frac{5}{8}$ " "	35.00
4	10 x 12	$1\frac{7}{8}$ " "	6 " "	$6\frac{1}{2}$ " "	40.00
5	11 x 14	$1\frac{5}{8}$ " "	$6\frac{7}{8}$ " "	$7\frac{1}{2}$ " "	47.00
6	14 x 17	2 " "	$8\frac{1}{4}$ " "	9 " "	55.00
7	17 x 20	$2\frac{3}{8}$ " "	10 " "	$10\frac{1}{8}$ " "	80.00

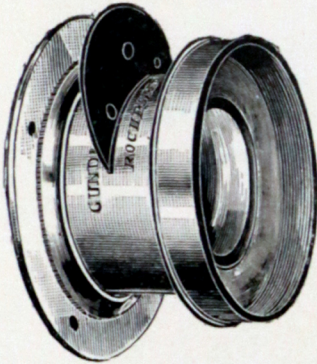


LENSES

SERIES XI



Wide-angle Symmetrical Lens



This is a fine Wide-angle lens, made on the Symmetrical plan, and will give good satisfaction. We can strongly recommend it for quality, and it sells at a very low price. It embraces an angle of from 80° to 85° , and for a Wide-angle is very rapid. These lenses are mounted in barrel with rotating stops or supplied in cells to fit our shutters.

No.	Size of Plate	Equivalent Focus	Back Focus	Price in Barrel
1	4 x 5 in.	4 in.	$3\frac{1}{2}$ in.	\$ 9.00
2	5 x 7 "	$5\frac{1}{2}$ "	$4\frac{3}{4}$ "	12.00
3	$6\frac{1}{2}$ x $8\frac{1}{2}$ "	$6\frac{1}{2}$ "	$5\frac{1}{2}$ "	15.00
4	8 x 10 "	8 "	$7\frac{1}{4}$ "	18.00

Wide-angle Symmetrical Lens

MOUNTED IN CELLS

These lenses are the same as Series XI, but furnished in cells so they can be used interchangeably with any of our lenses mounted in shutters. When ordering specify design of shutter and series of lens.

4 x 5
\$8.00

5 x 7
\$10.00

$6\frac{1}{2}$ x $8\frac{1}{2}$
\$12.00

8 x 10
\$15.00

An additional charge will be made for mounting these lenses to fit shutters of other makers according to the labor involved, and in such cases we require the shutter to insure the lens being correctly fitted.



LENSES



Single Achromatic Lenses

These lenses are constructed especially for photographic purposes, and consist of a positive crown-glass lens combined with a negative flint-glass lens, corrected for chromatic aberration.

The following prices are for lenses unmounted :

$\frac{3}{4}$ in. diameter,	$4\frac{1}{4}$ in. focus	\$0.50
$\frac{3}{4}$ " "	5 " "	50
1 " "	6 " "	80
$1\frac{1}{4}$ " "	8 " "	1.60
$1\frac{1}{2}$ " "	10 " "	2.00
$1\frac{1}{2}$ " "	12 " "	2.00
$2\frac{1}{2}$ " "	16 " "	4.50

Special prices will be quoted on these lenses to dealers or manufacturers desiring to use them in quantities, or sizes not listed above.

Single Achromatic Lenses, Mounted

These lenses are mounted in a nicely finished and lacquered brass mount, which is provided with a rotating diaphragm, and is also fitted with a morocco cap.

No.	Size of Plate	Focus	Price
1	$2\frac{1}{2}$ x $3\frac{1}{4}$ inches	5 inches	\$2.75
2	$3\frac{1}{4}$ x $4\frac{1}{4}$ "	$5\frac{1}{2}$ "	3.00
3	4 x 5 "	6 "	3.25
4	5 x 8 "	9 "	4.50
5	$6\frac{1}{2}$ x $8\frac{1}{2}$ "	12 "	5.50
6	8 x 10 "	14 "	7.50



LENSES



Double Convex Finder Lenses

These lenses are of the best quality, accurately centered so that the optical axis is concentric with the edge and the surfaces.

No.	Diameter	Focus	Price
1	$\frac{3}{8}$ inch	$\frac{3}{4}$, 1, $1\frac{1}{4}$ inch	\$ 0.15
2	$\frac{1}{2}$ "	1, $1\frac{1}{4}$, $1\frac{1}{2}$ "	20
3	$\frac{5}{8}$ "	$1\frac{1}{2}$, 2 "	25
4	$\frac{3}{4}$ "	2, 3 "	30
5	$\frac{7}{8}$ "	$2\frac{1}{2}$, 3, $3\frac{1}{2}$ "	35
6	1 "	3, 4 "	40

Price-list of Caps, Diaphragms and Flanges

	0	1	2	3	4	5	6	7	8
Flanges	\$0.35	\$0.45	\$0.65	\$0.75	\$1.00	\$1.30	\$1.60	\$2.50	\$3.00
Waterhouse Diaphragms	70	80	1.20	1.75	2.25	2.75	3.40	5.75	6.75
Diaphragm Cases	30	35	40	45	50	65	75	1.25	1.50
Caps	30	35	40	45	50	65	75	1.25	1.50



Negative by
KEEN BROS.
Culver, Ind.

Made with
TURNER-REICH ANASTIGMAT LENS
 f 7-5, 1-1000 sec.

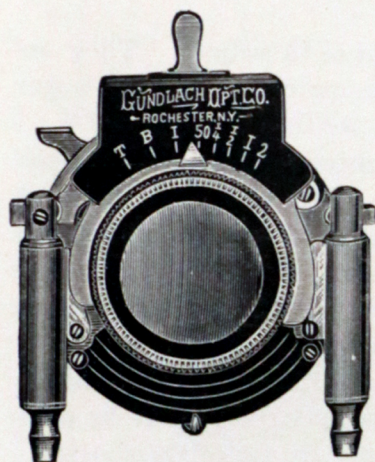
Turning a
flip over a horse.

SHUTTERS

MODEL D

Model D Shutter

WITH IRIS DIAPHRAGM



Model D is a pneumatic shutter giving automatic exposures from $\frac{1}{100}$ to 2 seconds and in addition will make exposures of any duration when the indicator is set at time or bulb. It works entirely without vibration and the blades remain open for the full time of exposure, an advantage over certain types which take up much of the specified time for the movements of the blades.

When setting the shutter the blades remain closed and it can be released by either finger or bulb.

It is made only in sizes listed. The graduation of the diaphragm plate is in accordance with the system of the British Society; the number indicates the f value of the opening. Where the plates are graduated with a second series of numbers, as, 1, 2, 3, etc., they do not refer to the focus of the lens, but are only to be used to indicate a change in the size of the opening, when using the W. A. Lenses.

No.	When fitted to Lenses of our own manufacture	When fitted to Lenses of other manufacture, leaving barrel intact
1-4 x 5	\$ 8.00	\$ 9.00
2-5 x 7	8.00	9.00
3-6½ x 8½	12.00	13.00
4-8 x 10	12.00	13.00

We assume no responsibility for the proper mounting of a lens into a Shutter, whether of our own or other manufacture, unless the complete lens is sent to us.



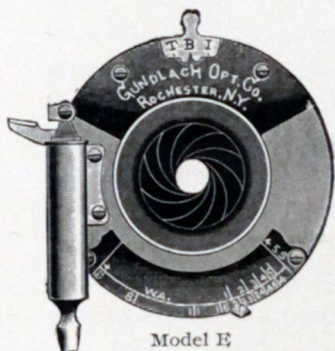
SHUTTERS

KORONA AUTOMATIC



Korona Automatic Shutters

These shutters are entirely automatic in action. They are always set and merely require a pressure of the bulb or finger release to operate them.

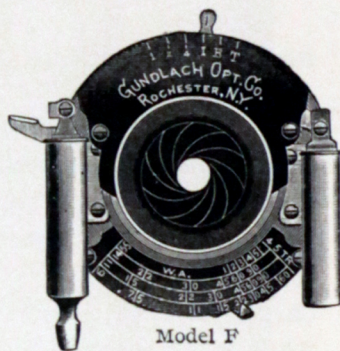


Model E

The mechanism is remarkably simple, and we have perfected our methods of constructing them to such an extent that either of these models will be found more accurate and reliable in use than former models of more intricate design.

Model E will make time, bulb or instantaneous exposures at will by moving the indicator on top of the shutter.

Model F, in addition to the above variations has an automatic time attachment by which the exposure can be regulated from $\frac{1}{100}$ to 1 second duration. Both models have iris diaphragms which are marked with the f value of the opening according to the Uniform system. These shutters operate almost silently and entirely without vibration.



Model F

	When fitted to lenses of our own manufacture	When fitted to lenses of other manufacture
Model E 4 x 5 and 5 x 7	\$7.00	\$8.00
Model F 4 x 5 and 5 x 7	8.00	9.00

We assume no responsibility for the proper mounting of a lens into a shutter, whether of our own or other manufacture, unless the complete lens is sent to us.

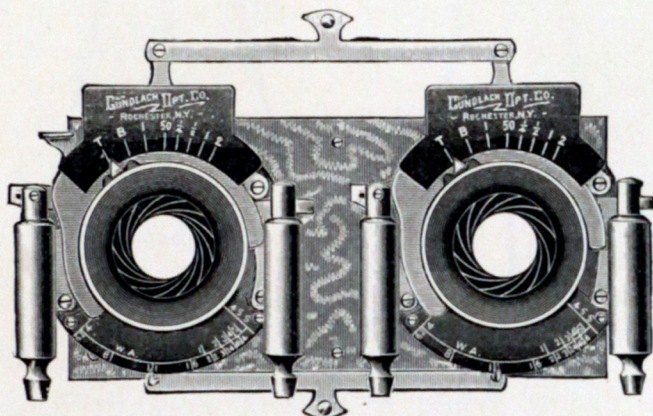
SHUTTERS

KORONA STEREO

Korona Stereo Shutter

WITH IRIS DIAPHRAGM

We have arranged for Stereo use two of our D shutters so that they work simultaneously, the setting levers, speed indicators, iris diaphragms, and other controlling mechanism of both



shutters being operated, each by a single movement. This shutter has the same range of speed as the Model D and the centers are $3\frac{1}{8}$ inches apart.

PRICE, \$15.00

The Stereo Shutter may be fitted with any of our 4 x 5 Turner-Reich, Rectigraphic, Instantaneous Symmetrical or Single Achromatic lenses.

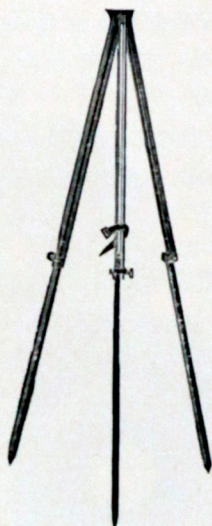
We assume no responsibility for the proper mounting of a lens into a Shutter, whether of our own or other manufacture, unless the complete lens is sent to us.



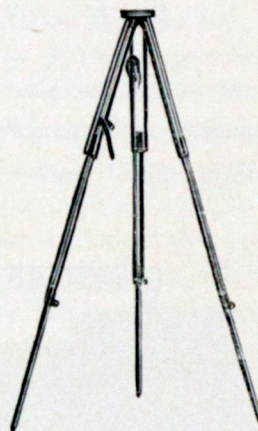
TRIPODS



Tripods



No. 0



Nos. 1 and 2

No. 0 Sliding Tripod is made of straight-grained spruce carefully selected for strength and lightness. The head is made of metal, nickel-plated, and is not detachable.

Nos. 1 and 2 are very compact. The legs close into one third their length, the upper part folding while the lower part is telescopic. The annoyance of the joints becoming separated when in use is ingeniously overcome by a locking device.

PRICE

No. 0, Spruce for 4 x 5 or 5 x 7 cameras,	\$1.50
No. 1, Ash or Spruce for 4 x 5 or 5 x 7 cameras,	3.00
No. 2, Ash or Spruce for 6½ x 8½ or 8 x 10 cameras,	3.50
No. 3, Sliding, extra heavy for 8 x 10 or larger cameras,	4.00



PLATE-HOLDERS



Korona Plate-holder

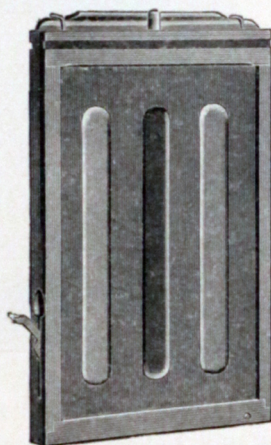
For simplicity and ease with which the plate may be inserted or removed this holder excels all others. By pressing down the lever on the edge of the holder, the spring that locks the plate in place is removed from action. When the plate is inserted a simple movement of the lever locks it firmly. The holder slide fits in a groove on all sides and the slot where it is inserted is fitted with a special metal valve that has a felt edge, in contrast to the wooden valve used on the ordinary holder.

PRICE

Fitted with hard rubber slides

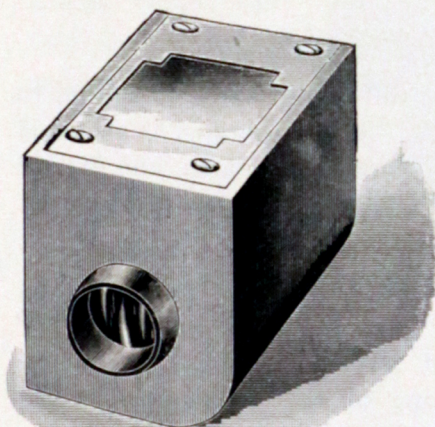
4 x 5	5 x 7	6½ x 8½	8 x 10	10 x 12	11 x 14
\$1.00	\$1.25	\$1.60	\$2.00	\$3.00	\$5.00

All genuine Korona Plate-holders have the name stamped on the septum.



Important

When ordering specify if holder is wanted to fit 1902 Korona. 1902 plate-holders are stamped with the date and will not fit cameras made previous to this year. It is not necessary to state series of camera as we make but one style of holder.



Korona Brilliant Finder

This finder is a combination of lenses and shows the image bright and clear in any light. There is no ground glass used in its construction, consequently there is no loss of light and it does not need a shield to protect it from extraneous light as in finders of the usual type.

PRICE, \$2.00

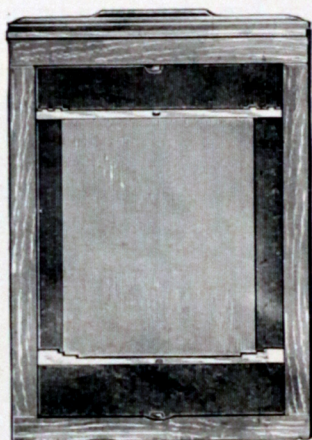
Made only in one size, suitable for any size camera.



SUNDRIES



Warnica Adjustable Plate-holder



We can furnish these holders to fit Korona Cameras in sizes listed below. They are fully guaranteed by the manufacturers, to whom all complaints should be preferred direct, in event of their not proving satisfactory.

PRICES

4 x 5
\$1.25

5 x 7
\$1.50

6½ x 8½
\$1.85

8 x 10
\$2.25

Eastman Cartridge Roll-holder

The daylight loading cartridge roll-holder can be adapted to all Koronas in 4 x 5 and 5 x 7 sizes. The roll-holder is attached by substituting it in place of the ground-glass frame, and is held in position in the same way. The change from plates to films or vice versa occupies but a few seconds.

PRICE

Roll-holder, empty	4 x 5 \$5.00	5 x 7 \$6.50
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When ordering, the size and series of camera should be mentioned to insure correct fitting of this attachment. No charge will be made for fitting.

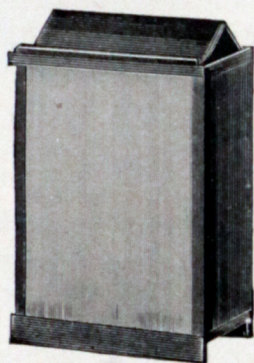


SUNDRIES



Korona Dark Room Lamps

These lamps are our own manufacture and of the most approved design.

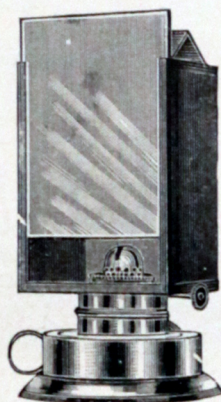


No. 0

No. 0 Candle lamp is very useful for the tourist. It burns a special candle which can be carried with safety when traveling.

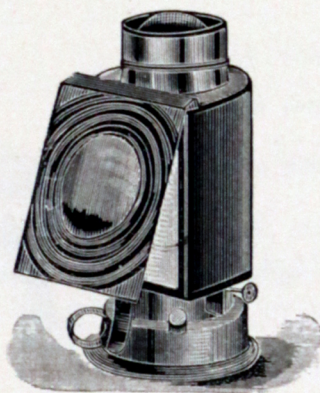
The ventilation is perfect, and they are so constructed that there are no soldered joints exposed to the heat.

They are enameled black, and all sizes give ample volume of light for the purpose of the amateur.



No. 1

No. 1 is practically the same as No. 0, but burns oil, and No. 2 is a larger size, fitted with both orange and ruby glass, in addition to which it has a shield for the eyes.



No. 2.

PRICE

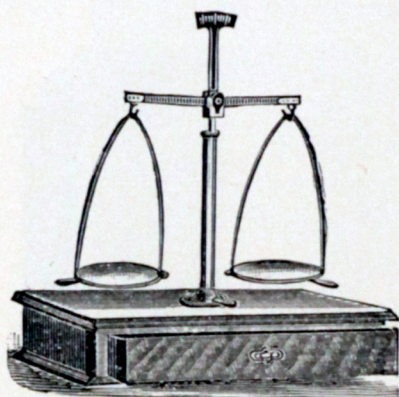
No. 0 Candle Lamp, each		\$0.30
No. 1 Oil " "		.50
No. 2 " " "		1.00
Fire Bug Candles for Candle Lamp, per dozen, 30c ; per gross, \$3.00.		



SUNDRIES



Standard Scale



For both the professional and amateur photographer this is the best scale. The entire scale can be taken apart and packed in the drawer of the walnut stand.

PRICE, \$4.00

Pocket Scale

For the amateur the pocket scale is especially designed and well adapted to his use for weighing small quantities.

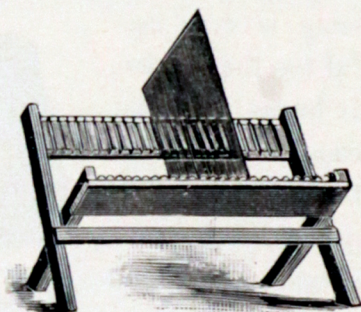
5-inch beam, 2-inch brass pans,	60c
6-inch beam, 2-inch brass pans,	75c

Folding Negative Racks

No. 1, to hold 12 plates up to 6½ x 8½	20c
No. 2, to hold 24 plates up to 6½ x 8½	25c

Focusing Cloths

Gossamer Rubber,	\$.50
Velvet,	1.50



Korona Developer

This developer is a combination of both Hydrochinon and Eikonogen, and has the good qualities of both. By this combination the negative will have the detail and softness of the Eiko and the density and brilliancy of the Hydro.

4-oz. bottle will make 12 oz. of Solution 25c



SUNDRIES



Korona Developing Powders



These are Metol-Hydro powders for either dry plates or developing papers. They are especially convenient for traveling. One tube will make four ounces of developer.

Box containing six tubes 50c

Korona Toning Solution

This is a combined toning and fixing bath ready for use. Directions for using are on each bottle. An 8-oz. bottle of the Korona Solution will tone and fix about 50 cabinet prints.

4-oz. bottle will make 12 oz. of Solution 25c

Korona Paste

This paste is of the very best quality, and is especially adapted for all kinds of printing papers.

Korona Paste does not sour or mould, and keeps indefinitely.

One-quarter pint jar . . 15c

One-half pint jar . . . 20c

One pint jar 30c

One quart jar 45c

Graduated Glasses

For Measuring Liquids



Minim,	\$0.25
1 ounce,	.20
2 ounces,	.25
4 "	.30
8 "	.40
12 "	.55
16 "	.70
32 "	1.50

Measuring Glasses



2 ounces,	\$0.10
4 "	.15
8 "	.25



SUNDRIES



Glass Funnels



¼ pint,	\$0.10
½ "	.12
1 "	.15
1 quart,	.20
2 "	.25

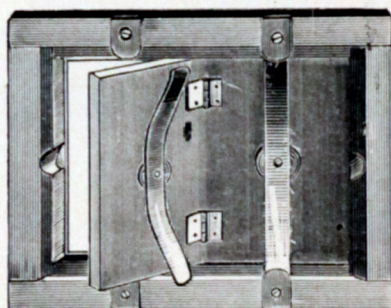
Fluted Glass Funnels



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

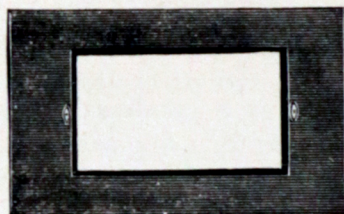
1 pint, \$0.15 | 1 quart, \$0.30

Korona Printing Frames



4 x 5,	\$0.40
5 x 7,	.50
6½ x 8½,	.60
8 x 10,	.75

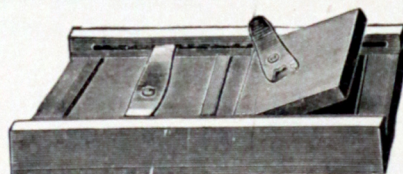
Kits



These are made so that a smaller size of plate can be used in a plate-holder.

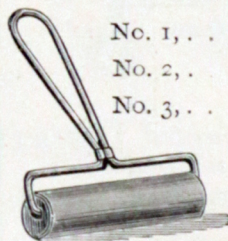
4 x 5 to hold 3¼ x 4¼ plate, .	\$0.20
5 x 7 to hold 3¼ x 4¼ or 4 x 5 plate,	.25
6½ x 8½ to hold 4 x 5 or 5 x 7 plate,	.30
8 x 10 to hold 6½ x 8½ or 5 x 7 plate,	.35

Korona Special Printing Frame



4 x 5,	\$0.25
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Print Rollers



No. 1,	\$0.20
No. 2,	.35
No. 3,	.50

Hard Rubber or Press-board Plate-holder Slides

Hard Rubber, . . . 4 x 5, \$0.20	5 x 7, \$0.25	6½ x 8½, \$0.30	8 x 10, \$0.50
Press-board, . . . 4 x 5, .15	5 x 7, .20	6½ x 8½, .25	8 x 10, .40

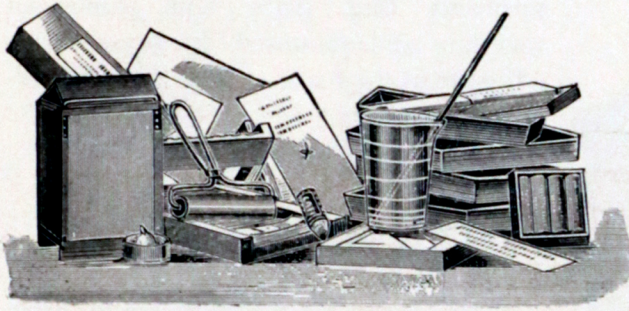


SUNDRIES



Complete Developing and Printing Outfits

For the large number of amateurs who prefer not only to "take" pictures, but finish them as well, we have arranged



the following complete outfits, comprising the necessary articles for developing the negative and making the print:

Outfit No. 1

- | | |
|--|--------------------------|
| 4 Japanned Steel Trays, | 1 Half Dozen Dry Plates, |
| 1 Dozen Mounts, | 1 Printing Frame, |
| 1 Dozen Negative Envelopes, | 1 Dry Rack, |
| 1 Dozen Paper, | 1 Four Ounce Graduate, |
| 1 "Guide for Beginners," | 1 Stirring Rod, |
| 1 Half Pound Hypo, | 1 Candle Lamp, |
| 1 Pkg. Dev. (to make 24 oz. Solution), | 1 Candle, |
| 1 Tube Paste, | 1 Print Roller, |
| | 1 Package Bromide. |
| 4 x 5, price, neatly boxed, | \$2.00 |
| 5 x 7, price, neatly boxed, | 3.25 |

Outfit No. 2

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

- | | |
|---------------------------------------|---------------------------|
| 4 Japanned Steel Trays, | 1 Korona Ruby Lamp, |
| 1 Dozen Dry Plates, | 1 Printing Frame, |
| 1 Glass Graduate, | 1 Dry Rack, |
| 1 Box Developer, | 1 Bottle Toning Solution, |
| 1 Print Roller, | 1 Dozen Paper, |
| 1 Pound Hypo-Sulphite | 25 Card Mounts, |
| Soda, | 1 Copy "Guide," |
| 1 Tube Paste, | 1 Package Bromide. |
| 4 x 5, price, neatly boxed, | \$4.00 |
| 5 x 7, price, neatly boxed, | 4.75 |



SUNDRIES



Focusing Glass

This lens is an achromatic combination of novel construction, consisting of a double convex crown-glass lens and a negative meniscus flint - glass lens, cemented together and mounted in brass, with adjustment to focus. The lens is perfectly aplanatic.

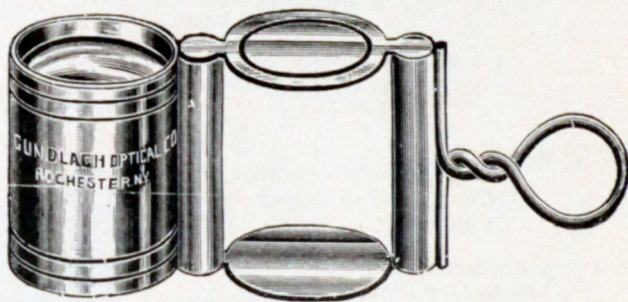
PRICE, \$3.00



Globe Magnifiers

The Globe Magnifier is made after the principle of the Globe Lens, which consists of a sphere of crown glass enclosed in two hemispheres of flint glass, and by the principle of its construction

the aberrations are corrected to a higher degree than had heretofore been obtained by any other construction. This lens has an optical axis in any direction, hence the field is perfectly flat and distinct to the outer edges and, what is true of no other lens, the field is always the largest possible. Pocket magnifiers, made on this principle, are furnished as follows:



No. 290—1 in. focus, nickel-plated brass mount, magnifying 11 diam. .	\$ 5.00
No. 291— $\frac{3}{4}$ " " " " " " " " 14 " .	5.00
No. 292— $\frac{1}{2}$ " " " " " " " " 21 " .	8.00
No. 293— $\frac{1}{4}$ " " " " " " " " 41 " .	12.00



SUNDRIES



Separate Parts of Apparatus

When ordering parts for a camera it is essential that the size and series of same should be given.

Bellows, 4	x	5	Series I and III,	\$2.50
"	5	x	7 " I " III,	3.00
"	4	x	5 " II " IV,	3.00
"	5	x	7 " II " IV,	3.50
"	6½	x	8½ " IV,	5.00
"	4	x	5 " V and VI,	3.50
"	5	x	7 " V " VI,	4.50
"	6½	x	8½ " V " VI Compact and View, .	6.50
"	8	x	10 " VI " " " .	7.50
"	Stereo,			3.50
Lens Board 4	x	5	all series,	.30
"	"	5	x 7 " "	.30
"	"	6½	x 8½ " "	.40
"	"	8	x 10,	.50
"	"	Stereo,		.40
Front uprights 4	x	5	all series,	2.50
"	"	5	x 7 " "	3.00
"	"	6½	x 8½ " "	3.50
"	"	8	x 10 " "	4.00
"	"	Stereo,		4.00
Bulb and tube 3 ft. long,				.50
Glass for Ruby Lamps, Ruby or Orange,				.10
Tripod tops with screws,				.50
" leg screws,				.15
" head "				.20
Tubing, per foot,				.10
Ground Glass 4	x	5	acid ground,	.10
"	"	5	x 7 " "	.20
"	"	6½	x 8½ " "	.30
"	"	8	x 10 " "	.40



TERMS



Terms

The prices in this list are net f. o. b. Rochester.

We will send goods on approval to responsible parties, but where applicants are unknown to us, and no satisfactory reference is given, our terms are strictly C. O. D., and a remittance, at least sufficient for expressage both ways, must accompany the order.

We guarantee the safe delivery of goods sent by freight or express, but assume no responsibility for goods ordered sent by mail.

All goods are packed with the utmost care, and our responsibility ceases when they are delivered to the transportation company. Shipments damaged in transit should be receipted for as being received in bad order, and claim made to the company which delivered them for reimbursement to the extent of the damage.

Parties unknown to us and desiring to establish a line of credit will save delay by giving reference with their order.

Discount quoted to jobbers, dealers, and agents on application.

All remittances should be made by draft, post-office or express order. On all personal checks, 15 cents extra to pay exchange must be added.

All goods guaranteed as represented.

GUNDLACH OPTICAL CO.

HENRY H. TURNER, *President and Manager*

JOHN ZELLWEGER, *Vice-President*

J. C. REICH, *Secretary and Treasurer*



R E P A I R S



Repairs

To facilitate the prompt return of merchandise sent to us for repairs the package should be plainly marked with the *name* and *address* of the sender, and full instructions sent by mail under separate cover (not enclosed with the goods).

All merchandise sent to us for repairs must have the transportation charges prepaid. Shutters in need of repairs or adjustment should be forwarded by mail or prepaid express. The shutter only should be sent, without lenses, bulb and tube, front board or camera. It is better to consult us before returning articles in need of having parts replaced owing to breakages, as we can in many cases replace the part without the goods being returned, thus saving the expense of express charges.

We are always willing to repair or replace any defective goods, but all repairs made necessary by wear or accident will be charged for.



FIELD GLASS



The Turner-Reich Binocular



Descriptive price list will be mailed on application to interested parties.

We also manufacture high grade microscopes and accessories. Send for catalogue M.