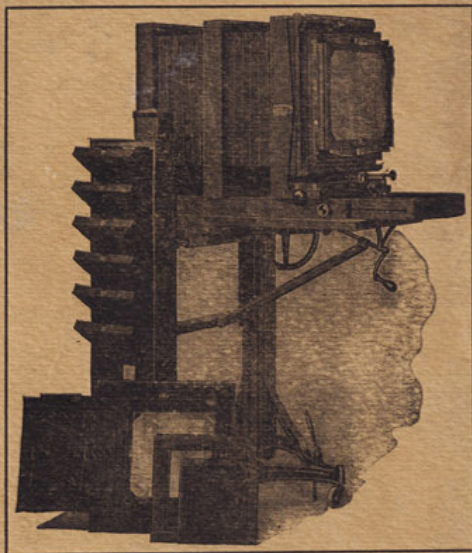


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Illustrated Catalogue No. 5

MILWAUKEE PHOTO MATERIALS CO.

LENSES

Every Lens we sell is guaranteed.

If desired, Lenses will be sent C. O. D. with instructions to express agent to hold money five days to allow a trial. If not perfectly satisfactory money will be refunded, less charges for returning the package.

Any make of Lens not carried in stock by us will be furnished on short notice, at the lowest price.

PORTRAIT LENSES

Success in portraiture will always depend, in a great measure, upon the right choice and proper use of the Lens. Portrait Lenses are either more or less rapid in action, as their diameters are larger or smaller, or as their focal lengths are shorter or longer. The focal length of a Lens regulates the size of the picture, and the diameter expresses its speed or rapidity of action. The placing of the Lens nearer to the subject increases the size of the picture, and vice versa.

Lenses are sometimes blamed for non-coincidence of foci, when the fault is really an imperfect camera box or a defective glass plate.

In placing the accessories of a portrait, or in disposing the positions of a group of persons, regard should always be had to accommodate as much as possible the curvature of field produced by the Lens, and this is accomplished by arranging the group of accessories in approximation to a curve.

The presence of a few bubbles does not in any way affect the performance of a Lens.

Keep the Lenses as much as possible from the

atmosphere and guard against sudden changes of temperature, otherwise some kinds of glass are liable to tarnish, or what is technically termed, to "sweat." Whenever any moisture becomes visible upon any surface, at once remove it by wiping with a SOFT cambric or old silk handkerchief, otherwise, resort to wiping ONLY when particles of dust adhere so firmly to the glass that they cannot be removed with a camel's hair brush. Never attempt to polish the Lenses with any kind of powder whatever.

In order to determine in general practice the focal length of Combination Lenses, adopt the following method: Set the camera up so that the image on the ground-glass appears as large as the object, and note the distance. Focus sharply on a very remote object, ascertain the difference between the two positions, and the result will be the equivalent focal length of the objective.

The following cautions in using Portrait Lenses should be carefully observed:

In making full or half length pictures from standing subjects, place the Lens opposite the center of the body, and keep the camera level. In groups it may be necessary to elevate the Lens, but this should not be done unless the camera is made with the Double Swing Back, as the shield or holder must always be exactly perpendicular to produce a picture free from distortion, and all in focus.

The following table will enable the prospective Lens buyer to determine the focal length of Lens he can use in his operating room.

TABLE FOR FINDING THE LENGTH OF STUDIO REQUIRED FOR A GIVEN FOCUS OF LENS.

Equivalent Focus of Lens	Size of Image on Ground Glass.								
	3 in. high	4 in. high	5 in. high	6 in. high	8 in. high	10 in. high	12 in. high	16 in. high	20 in. high
3 inches	6 ft. 3 in.	4 ft. 9 in.							
4 inches	8 ft. 4 in.	6 ft. 4 in.	5 ft. 1 in.	4 ft. 4 in.					
5 inches	10 ft. 5 in.	7 ft. 11 in.	6 ft. 5 in.	5 ft. 5 in.	4 ft. 2 in.				
6 inches	12 ft. 6 in.	9 ft. 6 in.	7 ft. 8 in.	6 ft. 6 in.	5 ft.	4 ft. 8 in.			
8 inches	16 ft. 8 in.	12 ft. 8 in.	10 ft. 3 in.	8 ft. 8 in.	6 ft. 8 in.	5 ft. 5 in.	4 ft. 1 in.		
10 inches	20 ft. 10 in.	15 ft. 10 in.	12 ft. 10 in.	10 ft. 10 in.	8 ft. 4 in.	6 ft. 10 in.	5 ft. 10 in.	4 ft. 7 in.	
12 inches	25 ft.	19 ft.	15 ft. 5 in.	13 ft.	10 ft.	8 ft. 2 in.	7 ft.	5 ft. 6 in.	4 ft. 7 in.
16 inches	33 ft. 4 in.	25 ft. 4 in.	20 ft. 6 in.	17 ft. 4 in.	13 ft. 5 in.	10 ft. 11 in.	9 ft. 4 in.	7 ft. 4 in.	6 ft.
20 inches	41 ft. 8 in.	31 ft. 8 in.	25 ft. 8 in.	21 ft. 8 in.	16 ft. 8 in.	13 ft. 8 in.	11 ft. 8 in.	9 ft. 2 in.	7 ft. 7 in.
24 inches	50 ft.	38 ft.	30 ft. 9 in.	26 ft.	20 ft.	16 ft. 5 in.	16 ft. 5 in.	11 ft.	9 ft. 2 in.
30 inches	62 ft. 6 in.	45 ft.	38 ft. 6 in.	32 ft. 6 in.	32 ft.	20 ft. 6 in.	20 ft. 6 in.	17 ft. 9 in.	11 ft. 2 in.

Distances from object to Lens. Height of object, 70 inches, the average height of an adult.

Example—(See 10 inches, left hand vertical column.) With a Lens of 10 inches equivalent focus it would require a distance of 20 feet and 10 inches between object and Lens to make a three-inch image from an object 70 inches high.

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ORDERING

Refer to this catalog, describing goods wanted, giving page. Write plainly and legibly. It is best to give town, county and state, and do not forget to sign your name. Always state whether we are to ship by mail, express or freight. Use our order blanks and envelopes, which will be sent upon request.

PROMPT SHIPMENTS

We usually ship the day order is received unless order is delayed by special sizes, irregular goods, printing or embossing, or any outside goods or goods not usually carried in stock by us.

Please report any unusual delay in receipt of your order.

We are not responsible for delays of transportation company.

PARCEL POST RULES AND REGULATIONS COVERING SHIPMENTS

All goods sent by parcel post are shipped at purchaser's risk unless ordered insured.

Parcel post shipments are insured and amount of the insurance will be charged on the invoice in addition to the regular mailing charge.

No damages can be recovered on lost or damaged parcel post shipments that are not insured.

Recovery on insured parcel post can be made for the full value of the shipment, up to \$25.00 or \$50.00, providing the package is lost or totally destroyed.

When an insured parcel post package consists of several separate items and any one is totally destroyed, recovery can be made for that separate part of the shipment. But if an insured parcel post package is only damaged or partially destroyed, no insurance can be collected, as parcel post insurance covers only total loss of the whole shipment or any separate item of the shipment.

C. O. D. parcel post packages are always insured, the amount of the insurance being a part of the C. O. D. charge.

Compounds, Flash Powders, Gun Cotton and Film Support are not admitted to the mails, and must be sent by Express or Freight in separate box or package.

In some instances the weight of the package makes it cheaper to ship by parcel post; in other cases express is cheaper. By consulting with the postmaster and express agent you can decide how you want your goods shipped.

When your order does not specify, we aim to ship the cheaper way, except goods easily damaged, which we usually ship by express.

C. O. D. SHIPMENTS

Time and money will be saved by sending remittance with order, as charges for returning money on C. O. D. deliveries are seldom less than 25 cents, and often more.

We require a deposit of at least 25 per cent of the amount ordered to guarantee all transportation charges, unless you are known to us. We will pay return charges on all C. O. D. orders of \$10.00 or more.

MAIL SHIPMENTS

Goods sent by mail at purchaser's risk, unless insured, for which a small charge is made, and all orders must be accompanied by remittance, covering cost of goods and postage. Send enough; if too much, we will return surplus.

BREAKAGE

We pack with the utmost care, and will not be responsible for breakage in transportation. Make your claim to the transportation company.

CREDIT

Applicants for credits should furnish Milwaukee references, if possible. Otherwise names of firms from whom you have bought goods.

TERMS

Three per cent cash discount, except on such items that are billed net. C. O. D. shipments are subject to these terms.

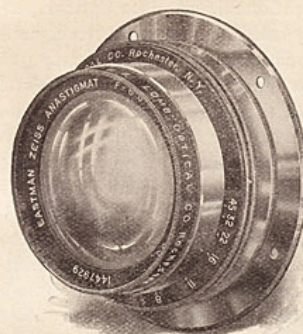
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Remit by Bank Draft, Post Office Money Order or Express Money Order. Do not send currency through the mails. Add 15 cents, if you send your personal check.

MILWAUKEE PHOTO MATERIALS CO.

LENSES

The Eastman-Zeiss Portrait Anastigmat Lens F-6.3



The Eastman-Zeiss Portrait Lens is everything in quality the names Eastman and Zeiss imply.

It is especially well adapted to home portraiture, its working aperture f-6.3 affording ample speed, and at the same time sufficient depth, making it a thoroughly satisfactory lens for outside work.

This lens is the one regularly supplied with the Eastman Home Portrait Outfit.

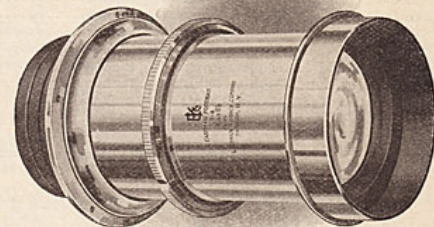
THE PRICE

Eastman-Zeiss Portrait Anastigmat Lens, f-6.3, No. 6, 10 inch focus\$46.50

Eastman Portrait Lens—Series A, F-4

The remarkable speed, F-4, makes them suitable for the most rapid studio work. Optically, they are corrected in the highest degree, affording brilliancy with softness and roundness. When working on large heads excellent depth and quality of definition are readily obtained by the simple adjusting diffusing back.

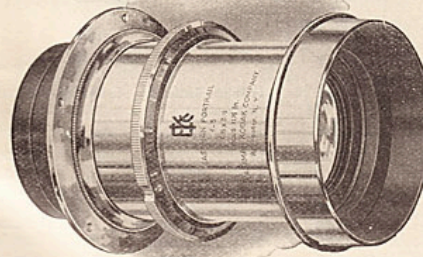
Iris diaphragm; the No. 2 will be found the most useful of the series for cabinets and general work up to 8x10; lacquered brass mountings.



THE PRICE

	Diameter	Back Focus	Equiv. Focus	
No. 1. 5 x 8	3½ inches	8½ inches	12 inches	\$ 60.00
No. 2. 6½ x 8½	4½ inches	11½ inches	16 inches	80.00
No. 3. 8 x 10	4½ inches	13½ inches	19 inches	120.00

Eastman Portrait Lens—Series B, F-5



Especially designed for quick portraiture in short length operating rooms, and will produce brilliant and well defined negatives.

The series B consists of two systems mounted in a beautifully finished barrel; iris diaphragms, and diffusing adjustment.

For cabinet work the lens may be used at full aperture, and when stopped down provides a most superior lens for group work.

THE PRICE

	Diameter	Equiv. Focus	Back Focus	
No. 1. 5 x 8	3 inches	9 inches	6½ inches	\$32.00
No. 2. 6½ x 8½	3½ inches	11½ inches	8½ inches	42.00
No. 3. 8 x 10	4 inches	15 inches	11½ inches	57.00

Zeiss Kodak Anastigmat Lens—Speed F-6.3



The Zeiss Kodak Anastigmat Lens unquestionably exhibits optical perfection to a degree hardly to be found in any other lens of whatsoever construction it may be. This anastigmat correction has several advantages over the so-called anastigmats and rectilinear lenses on the market. It has greater speed because it can be worked with the largest aperture and the resulting image will be brilliant and sharp. The sharpness will not be confined to one spot, but the outer edges of plate are equal to the center. The lens has great covering power, that is, area in which the image is sharply defined, plates one size larger than the lens is listed for can be covered, and by stopping down, nearly double the size plates can be made with perfect definition.

Its fine quality, great speed and covering power commends it to those wanting a lens for high speed photography, portraiture in the studio or home. For general outdoor work it has no equal. The price, quality considered, is the lowest that has ever been asked for an anastigmat lens.

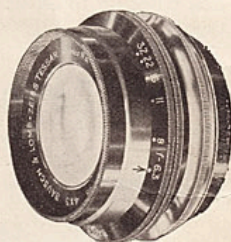
Price List Zeiss Kodak Anastigmat Lenses.
Covers at F:6.3

No.	Equiv. Focus	Inches	Diameter	In Barrels	In Compound Shutter
No. 0	Equiv. Focus 3	1 1/2 x 2 1/2	1 1/2	1	\$17.25
No. 1	Equiv. Focus 4 1/2	2 1/2 x 4 1/4	2 1/2	1	18.50
No. 2	Equiv. Focus 5	3 1/4 x 4 1/4	3 1/4	1	19.00
No. 3	Equiv. Focus 6 1/2	4 x 5	4	1	23.25
No. 4	Equiv. Focus 6 3/4	4 x 5	4 1/4	1	26.25
No. 5	Equiv. Focus 8 1/4	5 x 7	5 1/4	1	34.50
No. 6	Equiv. Focus 10	6 1/2 x 8 1/2	6 1/2	1	46.50

Bausch & Lomb-Zeiss Tessar—Series 11 b, F-6.3

Tessar, like all the other Zeiss series, possesses characteristics which guarantee it a unique position among photographic lenses of the highest quality and perfection. It claims the attention and admiration of the photographic public, both amateur and professional. Its merits are based upon results which years of experiment have now fully demonstrated.

Simplicity—Tessar is an unsymmetrical doublet of four very thin lenses made of a new type of Jena glass manufactured especially for this purpose. The front lens is uncemented, the two elements being divided by a very appreciable air space. The rear lens is cemented. The front and rear combinations are separated sufficiently to allow the Volute or Iris Diaphragm shutters to be properly fitted.



No.	Size of Plate Covered with Stops F:6.3	Size of Plate Covered with Smaller Stops	Equivalent Focus Inches	Diameter of Lens Inches	Lens and Barrel with Iris Diaphragm	In Volute Shutter		In Compound Shutter	
						No.	Price	No.	Price
2a	2 1/4 x 3 1/4	3 1/4 x 4 1/4	3 1/4	3 1/4	1	\$22.00	0	\$33.00	
3	2 1/4 x 3 1/4	3 1/4 x 4 1/4	4	4	1	28.00	0	39.00	
4	3 1/4 x 4 1/4	4 x 5	5	5	1	28.00	0	39.00	
5	4 x 5	5 x 7	6 1/2	6 1/2	1	31.00	2	45.00	
6k	3 1/4 x 5 1/4	5 x 7	6 1/2	6 1/2	1	38.50	1	51.00	
6a	5 x 7	5 x 8	7 1/2	7 1/2	2	43.50	2	57.50	
7	5 x 8	6 1/2 x 8 1/2	8 1/4	8 1/4	2	53.00	3	70.00	
6	6 1/2 x 8 1/2	8 x 10	10	10	2	71.50	3	88.50	
8	8 x 10	10 x 12	12	12	3	105.50	4	124.00	
9	10 x 12	12 x 15	14 1/2	14 1/2	3	136.50	4	155.00	
9a	11 x 14	14 x 17	16 1/4	16 1/4	3	166.00	5	194.00	
10	14 x 17	15 x 20	19 1/4	19 1/4	3	217.00			
11	16 x 20	20 x 24	23 1/4	23 1/4	3	279.00			

For matching lenses for stereoscopic work, add \$2.50 to the price of the lenses.

Bausch & Lomb-Zeiss Tessar "Anastigmat" Series Ic, Speed F:4.5

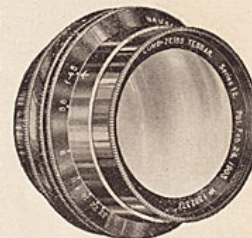
The well-known 1C Zeiss Tessar is admittedly the most universal lens of the unsymmetrical type. Its simple construction of four thin elements of Jena glass makes the absorption of light practically nothing.

The leading features of this lens are: Great Speed, Wonderful Covering Power, Needle-point Definition and the Highest Optical Correctness.

We recommend it for Portrait Work in the Studio, Home Portraiture, Groups, Enlarging, Copying, Autochrome, Color-Photographic Process Work, High Speed Work with Graflex and other speed cameras, Landscapes and general.

The reserve covering power in these lenses allows their use on larger sized plates than regularly listed.

They have flat field, which means ability to handle standing figures and groups with much larger aperture than with the ordinary type of lenses. For Bust, Portraits and general Studio work it has no equal.



BAUSCH & LOMB-ZEISS TESSAR, SERIES I C F-4.5

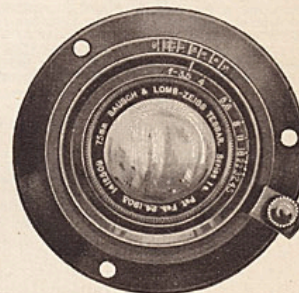
No.	Size of Plate Covered with Stop F:4.5	Equivalent Focus Inches	Diameter of Lens Inches	Price with Iris Diaphragm	Price with Aluminum Volute Shutter	Price with Aluminum Compound Shutter	Price with Lens Barrel
13	2 1/4 x 3 1/4	4 1/2	1	\$ 31.00	\$ 48.00	\$ 43.50	\$ 45.00
14	3 1/4 x 4 1/4	5	1 1/8	40.50	59.00	49.00	55.00
15	4 x 5	6	1 1/4	50.00	68.50	54.50	55.00
15a	5 x 7	7 1/2	1 1/2	62.00	82.00	67.00	65.00
16	5 x 8	8 1/4	1 3/4	99.00	119.00	117.50	105.00
17	6 1/4 x 8 1/2	9 1/2	2 1/4	139.50		167.50	140.00
18	8 x 10	11 1/2	2 5/8	180.00			
18a	10 x 12	14 1/2	3 1/4	217.00			
19	11 x 14	15 3/4	3 3/4	310.00			
20	14 x 17	19 3/4	4 1/4				

B. & L. Zeiss Tessar Ic F:3.5 For Motion Picture Cameras

The rise of the motion picture industry has brought up new problems, including a demand for lenses of enormous speed as the motion picture operator cannot control the weather conditions and must usually take his pictures just as he finds them.

Owing to the short focal lengths which are ordinarily demanded, the speed of F:3.5 is attained, which means that the light admitted to the film is almost double that of the Series Ic Tessar, F:4.5, used on the reflecting cameras. Compared to ordinary camera lenses, Tessar Ic, F:3.5, is five times faster.

Owing to the short focal length of the lenses, 2 inch for the No. 1 and 3 inch for the No. 1a, the lenses have enormous depth even at fullest aperture. A greater speed than F:3.5, while attainable and useful on some occasions, shows a lack of depth qualities. F:3.5 represents the highest practical speed and it will be found that the lenses must be stopped down in good light, so as to prevent over-exposure.



IN BARREL WITH IRIS DIAPHRAGM

Speed	Cat. No.	Covers at Full Opening	Equiv. Focus In.	Focus Mm.	Diameter	Price
F:3.5	1	3/4 x 1	2	50	3/8	\$25.00
F:3.5	1a	1 1/4 x 1 1/4	3	75	5/8	31.00
F:4.5		3/4 x 1	1 1/4	32	3/8	26.00

IN SPIRAL FOCUSING MOUNT

Speed	Cat. No.	Covers at Full Opening	Equiv. Focus In.	Focus Mm.	Diameter	Price
F:3.5	1	3/4 x 1	2	50	3/8	\$28.00
F:3.5	1a	1 1/4 x 1 1/4	3	75	5/8	34.00
F:4.5		3/4 x 1	1 1/4	32	3/8	29.00

IN TUBES FOR RACK AND PINION MOUNT (Rack and Pinion Mount Extra)

Speed	Cat. No.	Covers at Full Opening	Equiv. Focus In.	Focus Mm.	Diameter	Price
F:3.5	1	3/4 x 1	2	50	3/8	\$28.00
F:3.5	1a	1 1/4 x 1 1/4	3	75	5/8	34.00

Rack and Pinion Mount—Complete with flange, suitable for lenses in above table or in connection with adapter below, for Ic Tessar Nos. 14, 15, 15a \$7.50
 Lens Hood75
 Adapter for Tessars Nos. 14, 15 or 15a, each 2.50

BAUSCH & LOMB-ZEISS CONVERTIBLE PROTARS

Series VIIa F-6.3

Photographers who have attempted all classes of subjects with one lens will recall their frequent disappointments in the results, while if they use for this work the several lenses ordinarily required they will find themselves burdened with a multiplicity of lenses, front boards, flanges, shutters, cases, caps, etc.

The problem of variety and convenience is satisfactorily solved by the acquisition of a Series VIIa which is composed of two Series VII single anastigmats and, as may be expected from the excellence of these components, the doublet formed by combining them is simply perfection in all the qualities which are desired in a photographic lens. Inasmuch as these component lenses may be used singly or in combination, it is evident that we have here a convertible lens which, as will be shown, is universal in its application.

If in forming our doublet we select two lenses of similar foci, we get a lens with a speed of f-6.3; if, however, we combine two of dissimilar foci, there results a doublet with a speed of f-7 or f-7.7, according to the relative foci employed. Thus we have in one and the same lens one or two long focus single lenses adapted for a variety of work and an extra rapid doublet adapted for all kinds of instantaneous work. Although a doublet composed of two lenses of similar foci gives us a larger relative aperture and hence greater speed than one composed of two dissimilar foci, the latter has the advantage of being convertible into three lenses of different foci while the former is convertible into two.

While the single lenses are adapted for instantaneous outdoor work when light conditions are favorable, for landscapes, portraits and groups, the doublet, if composed of two similar lenses, is an extra rapid lens working at a speed twice as great as the ordinary Rectilinear lens, hence is adapted for all kinds of instantaneous work, for groups, for architecture, covering power, depth of focus and brilliancy.

and all subjects requiring medium angle, good covering power, depth of focus and brilliancy. To illustrate the facility with which sets of Convertible Protars may be made up and the uses to which they may be put let us start with a Series VIIa doublet No. 8. This lens is listed to cover a 5x7 plate, has a focal length of 7 inches and a speed of f.7 which is almost twice as fast as the ordinary camera lens. It is composed of two perfectly corrected single anastigmats Nos. 3 and 4 of 11 1/2-16 inches and 13 3/4 inches focus respectively listed to cover 6 1/2 x 8 1/2 and 8x10 plates with an opening of f-12.5 which is sufficient for instantaneous work under normal light conditions. We have in other words, three anastigmat lenses in one, two single anastigmats and a doublet. Now let us add to this equipment a No. 2 Series VII which covers a 5x7 plate and has a focal length of 8 3/8 inches. The addition of this lens forms the C set of Convertible Protars listed on page 7. We have now three single lenses which we may combine as follows: Our original doublet of 7 inch focus; we can form a doublet with our 13 3/4 inch and 16 1/2 inch with a resulting focal length of 8 3/4 inches, covering a 6 1/2 x 8 1/2 plate and a speed of f-7; or we can form one of 16 1/2 inch and 11 1/2 inch having 7 1/2 inch focus, covering a 5 x 7 plate and having a speed of f-7.7. In other words, we have three single anastigmats, three doublets. Referring to our list, we find the cost of these lenses to be \$108.00, or an average of \$17.16 apiece. As it is possible to purchase any other perfect anastigmat at as low a cost?

But this is not all. The addition of another Series VII lens gives us four additional lenses, a single anastigmat and three doublets at the price of a single lens, \$52.50, that is, the whole set of ten lenses, four single and six doublets, will cost \$155.50, or \$15.55 each.

Do we desire a faster lens we need only to match one of our single lenses to form a symmetrical doublet having a speed of f-6.3. The choice of lens will depend upon the class of work we would do.

This illustrates the enormous advantage of the Convertible Protars and places them where they deservedly stand in the very front rank.

To sum up the advantages of the Series VIIa lenses: They are perfectly corrected. Every doublet is in reality three lenses, each perfectly adapted for a separate kind of work. The addition of one system adds lenses, making three in all. The addition of two systems adds seven lenses, making ten in all. The greatest possible compactness is secured. The least weight. The fewest parts to lose or wear out.

SERIES VIIa

No.	Size of Plate Covered with Full Aperture* Inches	Combination of Single Protars Focus		Combined Equivalent Focus Inches	Speed	Lenses and Barrel with Iris				
		Front Lens	Back Lens			Diaphragm	In Compound			
							Without Shutter	With Shutter		
1	3 1/2 x 3 1/4	7 1/2	7 1/2	4 3/4	F:6.3	\$ 42.50	No. 1	\$ 59.50	No. 1	\$ 55.00
2	3 3/4 x 4 1/4	7 1/2	7 1/2	4 3/4	F:6.3	45.50	1	62.50	1	58.00
3	4 x 5	11 1/2	7 1/2	5 1/2	F:7.7	50.00	1	67.00	1	62.50
4	4 x 5	8 3/4	8 3/4	5	F:6.3	48.50	1	65.50	1	61.00
5	4 1/4 x 6 1/2	11 1/2	8 3/4	5 3/4	F:7	53.00	1	70.00	1	65.50
6	4 1/4 x 6 1/2	13 3/4	13 3/4	6 3/4	F:7.7	59.50	2	78.00	2	73.50
7	4 1/4 x 7 1/4	11 1/2	11 1/2	6 3/4	F:6.3	57.00	1	74.00	2	71.00
8	5 x 7	13 3/4	11 1/2	7	F:7	63.50	2	82.00	2	77.50
9	5 x 8	16 1/2	11 1/2	7 1/2	F:7.7	74.00	2	92.50	3	91.00
10	5 x 8	13 3/4	13 3/4	7 3/4	F:6.3	69.50	2	88.00	2	83.50
11	6 1/2 x 8 1/2	16 1/2	13 3/4	8 1/2	F:7	80.00	2	98.50	3	97.00
12	6 1/2 x 8 1/2	16 1/2	16 1/2	9 1/2	F:7	98.50	3	118.50	3	115.50
13	6 1/2 x 8 1/2	16 1/2	16 1/2	9 1/2	F:6.3	90.50	3	109.00	3	107.50
14	7 x 9	18 1/2	16 1/2	10	F:7	109.00	3	129.00	3	126.00
15	7 x 9	22 1/2	16 1/2	10 1/2	F:7.7	128.00	3	148.00	4	146.50
16	7 x 9	18 1/2	18 1/2	10 1/2	F:6.3	126.50	3	146.50	3	143.50
17	8 x 10	22 1/2	18 1/2	11 1/2	F:7	145.50	3	165.50	4	164.00
18	8 x 10	22 1/2	22 1/2	12 1/2	F:7	175.50	3	191.50	4	190.00
19	8 x 10	23 1/2	23 1/2	13 1/2	F:6.3	160.50	3	180.50	4	179.00
20	10 x 12	27	23 1/2	14 1/2	F:7	186.50	3	206.50	4	205.00
22	10 x 12	27	27	15 1/2	F:6.3	209.00	3	229.00	3	229.00
25	10 x 12	33 1/2	30 1/2	18 1/2	F:6.3	294.00	3	314.00	3	314.00
28	11 x 14	33 1/2	33 1/2	20 1/2	F:6.3	335.00	3	355.00	3	355.00
30	12 x 16	39 1/2	39 1/2	23 1/2	F:6.3	504.00	3	524.00	3	524.00

Bausch & Lomb-Zeiss Protar—Series VII F-12.5



This lens is a single Anastigmat composed of four elements cemented together and is mounted in a separate adapter of standard size which fits either end of the lens mount. So perfect are the spherical and anastigmatic corrections as to make the single lens almost equal to the doublet, and not only equal but actually superior to many doublet lenses of other makes for which strong claims to perfection are made.

The lens has a speed of F-12.5, which is ample for instantaneous exposures under favorable conditions. The field has an angle of 85 degrees of which from 35 degrees to 48 degrees are utilized on the plates for which each size is listed.

The lenses of this series are perfect single lenses and are the components used in forming the VIIa combinations and the Protar sets. In addition to forming the basis for the Series VIIa Convertible Anastigmats, the single Anastigmats have a distinct field of their own.

While not absolutely rectilinear they are unequalled, and may be used for a variety of purposes requiring long focus, medium speed and narrow angle, as for instance, landscape work, commercial work, large portraits and groups, and, under good light conditions, for architectural work also. They give excellent results in landscape work, where a long focus lens is required for perspective and where the plate used is small for the covering power of the lens. Since landscapes may be taken with the single Anastigmat from a considerable distance, we may look upon this lens as a sort of tele-photo, but while its magnification is less than the tele-photo, its speed is far greater.

SERIES VII PRICE LIST

No.	Size of Plate Covered with Stop F:12.5* Inches	Equivalent Focus Inches	Back Focus Inches	Diam of Lens Inches	Lens and Barrel with Iris Diaphragm No.	In Volute Shutter Without Barrel Price No.	In Compound Shutter Without Barrel Price No.		
1	4 1/4 x 6 1/2	7 1/2	8	3/4	\$ 23.50	1	\$ 40.50	1	\$ 36.00
2	5 x 7	8 3/4	9 3/4	7/8	26.50	1	43.50	1	39.00
3	6 1/2 x 8 1/2	11 1/2	12 7/8	1 1/8	31.00	1	48.00	1	43.50
4	8 x 10	13 3/4	15 1/4	1 3/8	37.50	2	56.00	2	51.50
5	10 x 12	16 1/2	17 3/4	1 7/8	48.00	2	66.50	3	65.00
6	11 x 14	18 1/2	20 1/2	2	66.50	3	86.50	3	85.50
7	12 x 16	23 1/2	25 1/2	2 1/8	85.50	3	105.50	4	104.00
8	13 x 16	27	30	2 1/4	111.50	3	131.50		
9	16 x 18	30 3/4	34	2 3/4	155.00				
10	16 x 20	33 3/4	37 1/2	3 1/4	201.50				
11	18 x 22	39 1/4	43 3/4	3 3/4	263.50				

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

Bausch & Lomb-Zeiss Convertible Protar VII in Sets. C and D

We offer two sets complete with lenses mounted interchangeably, each set consisting of: one lens mount with iris diaphragm, cap and flange, and focusing scale, the single Protar lenses (three or four, as the case may be); a neat and compact morocco case containing all the parts of the set, or including shutter if so ordered. A screen ring is also furnished to screw into front of barrel or shutter when single elements are being used. This furnishes a method of attaching a ray filter if desired.

C SET—BAUSCH & LOMB-ZEISS CONVERTIBLE PROTAR VIIa D SET—BAUSCH & LOMB-ZEISS CONVERTIBLE PROTAR VIIa

Complete in case, \$87.50.

Fitted with aluminum Volute Shutter, \$106.00.

Fitted with aluminum Compound Shutter, \$101.50.

Case for complete set including Shutter, \$1.00 extra.

Complete in case, \$170.00.

Fitted with aluminum Volute Shutter, \$190.00.

Fitted with aluminum Compound Shutter, \$187.00.

Case for complete set including Shutter, \$1.50 extra.

Series No.	Size of Plate Covered with Largest* Inches	EQUIVALENT FOCUS OF LENSES IN INCHES			Speed
		Front Lens	Back Lens	Combined Focus	
VII	3	6 1/2 x 8 1/2	.....	11 1/2	F:12.5
	4	8 x 10	.....	13 3/4	F:12.5
	5	10 x 12	.....	16 1/2	F:12.5
	6	11 x 14	.....	19 1/2	F:12.5
	7	12 x 16	.....	23 1/2	F:12.5
	8	13 x 16	.....	27	F:7.7
	9	5 x 8	13 3/4	11 1/2	F:7.7
	8	5 x 8	16 1/2	11 1/2	F:7.7
	9a	5 x 8	18 1/2	11 1/2	F:7.7
VIIa	11	6 1/2 x 8 1/2	16 1/2	13 3/4	F:7.0
	12	6 1/2 x 8 1/2	18 1/2	16 1/2	F:7.7
	14	8 x 10	18 1/2	16 1/2	F:7.0

*Larger plates covered with smaller stops.

*Larger plates covered with smaller stops.

B. & L. Zeiss Protar Wide Angle Series IV F-12.5



This is the only lens in existence which combines the two important qualifications of wide angular aperture and speed to an unusual extent. It may be classed as a medium wide angle and is listed as such, giving sharp, well covered pictures, free from the ordinary distorted edge, a very important feature in a lens of this character, especially for outdoor architectural photography. Its use as an extreme wide angle, however, is not precluded if the next smaller lens to the one listed is selected or a given lens is used on the next size plate. Its speed is such that it will give instantaneous exposure, and it is particularly valuable in flashlight exposures of large gatherings.

The objective is a doublet, each system of which is composed of two lenses. Being an unsymmetrical lens, the two systems cannot be used separately.

The angle of view is more than 100 degrees in the first six numbers and 85 degrees in the larger. Of these, 68 degrees and 44 degrees respectively are utilized on the plates for which the various members of the series are listed. The next larger plates are well covered with smaller stops.

No.	Size of Plate Covered with Stop F-12.5,* Inches	Equivalent Focus, Inches	Free Diameter of Largest Lens, Inches	Price	
				Lens Only	Fitted with Aluminum Volute Shutter
1	3 1/4 x 4 1/4	2 7/8	1/4	\$15.00	1 \$32.00
2	4 x 5	3 3/8	3/8	18.00	1 35.00
3	4 1/4 x 6 1/2	4 1/8	1/2	21.00	1 38.00
4	5 x 8	6 1/8	5/8	27.00	1 44.00
5	8 x 10	7 1/8	1	40.50	1 57.50
6	10 x 12	10 1/4	1 1/8	61.50	2 80.00
7	12 x 15	15 1/8	2 1/8	108.00	3 128.00
8	16 x 20	23 1/8	3 1/8	243.50	
9	20 x 24	35 1/8	4 1/8	543.50	
10	24 x 30	48 3/8	5 3/8		

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



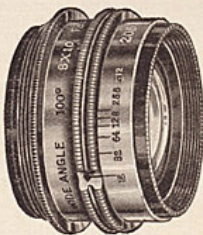
B. & L. Zeiss Apochromatic Tessar, Series VIII FOR PHOTO-ENGRAVING AND PROCESS WORK

The Apochromatic Tessar Series VIII is the lens to use for three-color work, and on account of its high corrections in this direction is equally good for black and white work. In three-color work, it is essential that the images made through the red, green and violet filters shall come to the same plane of focus, otherwise the printing blocks will not register. The Apochromatic Series VIII satisfies these difficult conditions to the highest perfection.

APOCHROMATIC TESSAR—Series VIII

No.	Speed	Equivalent Focus, Inches	Diameter Lens, Inches	Covers for Same Size Reproduction, Inches	Covers for Reduction, Inches	Price
0	F:10	13	1 7/8	11x14	7x9	\$ 93.00
0a	F:10	16	1 3/4	12x15	6x8	112.00
1	F:10	18 1/2	2	14x17	8x10	124.00
2	F:10.3	25 1/8	2 1/8	20x24	12x15	201.50
3	F:10.3	33 1/8	3 1/4	28x32	16x20	295.00
4	F:12.5	46 1/8	3 3/4	32x36	24x30	465.00
5	F:15	70 1/8	4 3/4	48x60	32x36	1,085.00

B. & L. Zeiss Protar Wide Angle Series V F-18



Series V is intended for the most exacting wide angle photography, such as architectural and interior work. Anastigmatic and spherical corrections are as perfect as obtained in a lens of this character. The images are entirely free from distortion from center to margin of plate, even with the most extreme angle.

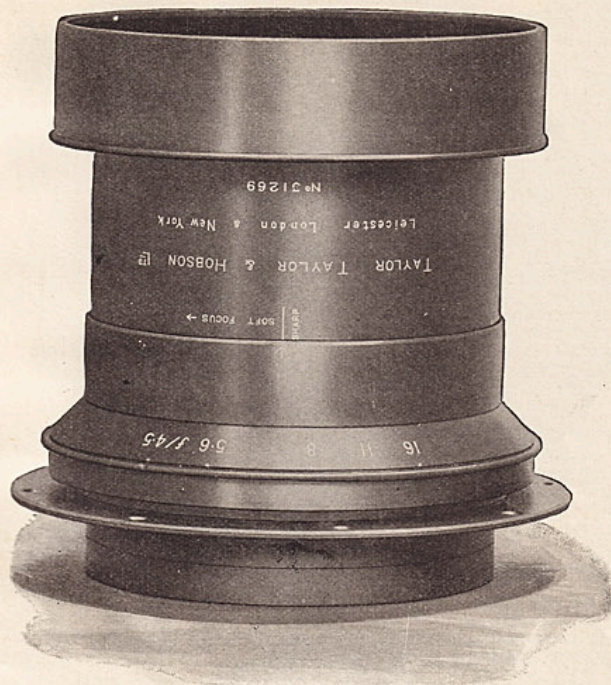
The larger sizes were designed especially for copying.

The angle of view is 110 degrees in the sizes up to and including 7a. Above that number the full angle is 90 degrees. In the smaller sizes the angle utilized is 75 degrees, but the full angle can be utilized by using large plates and smaller stops. In the larger sizes the angle utilized is 40 degrees. The next larger plate is well covered with a smaller stop.

No.	Size of Plate Covered with Stop F-18,* Inches	Equivalent Focus, Inches	Free Diameter of Largest Lens, Inches	PRICE	
				Lens and Barrel with Iris Diaphragm.	Lens Fitted with Volute Shutter
1	4 1/4 x 6 1/2	3 3/8	3/8	\$20.00	1 \$37.00
2	5 x 7	4 3/8	3/8	20.00	1 37.00
3	6 1/2 x 8 1/2	5 5/8	1/2	25.00	1 42.00
4	8 x 10	7 7/8	5/8	31.00	1 48.00
5	10 x 12	8 3/8	3/4	39.00	1 56.00
6	11 x 14	10 1/8	7/8	48.00	1 65.00
7	12 x 15	12 3/8	1	57.50	1 74.50
7a	16 x 18	15 3/8	1 1/8	76.00	1 93.00
8	14 x 17	18 1/8	1 1/8	76.00	1 93.00
9	16 x 18	24 1/8	1 3/8	111.50	2 130.00
10	20 x 25	37 1/8	2 1/8	220.00	3 240.00

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

Cooke Portrait Lenses Series II. Full Aperture F:4.5



These large Portrait Lenses of wide aperture are made essentially for artistic portraiture in dark studios. Stopped to F/5.6, they give results equal to those of the more compact series. The Cooke Portrait Lenses, series II, thus have the widest possible range of usefulness, and are unrivaled for those advanced Professionals with whom cost and size are of less consideration than ultra rapidity and unlimited scope.

These remarkable lenses form unquestionably the highest development of modern optics along the lines of portrait objectives. Coupled with phenomenal speed is a reserve capable of yielding everything from the softest and most subtle definition to perfect crispness of detail, and a depth of focus almost incredible.

The No. 22 1/2 Portrait Lens deserves the particular attention of home portrait photographers. Its focus is just short enough for those cramped situations so often encountered in the home, while its speed is so remarkable that this lens will catch even the most fleeting expression of a child. The

Nos. 23 to 24 lenses have been designed for exceptionally difficult portraiture in galleries without the advantage of an ordinarily large skylight and where the lighting is unusually poor. These three sizes are fitted with a diffusing device which enables the photographer to regulate to a nicety the depth of focus and the softness and roundness of his image. Any desired degree of softness may be introduced evenly throughout the plate, simply by revolving the iron portion of the lens-mount. The No. 23 1/2 lens of 14-inch focus naturally gives better perspective or "drawing" than does the No. 23 lens of 13-inch focus. This is simply because the No. 23 1/2 lens has a greater focal length than the No. 23.

No.	Focus	Dimensions in Inches		Diameter of Flange Screw	Distance from Lens to Sitter Cabinet		Price
		Plates covered at full Aperture			Full Length ft.	But ft.	
22 1/2	10 1/2	6 1/2 x 8 1/2		2 3/4	15	6	\$102.00
23	13	8 x 10		3 1/2	17 1/2	9	157.50
23 1/2	14 1/2	8 x 10		4	18 1/2	10	191.50
24	16	10 x 12		4	22 1/2	11	225.00

COOKE PORTRAIT LENS, SERIES VI

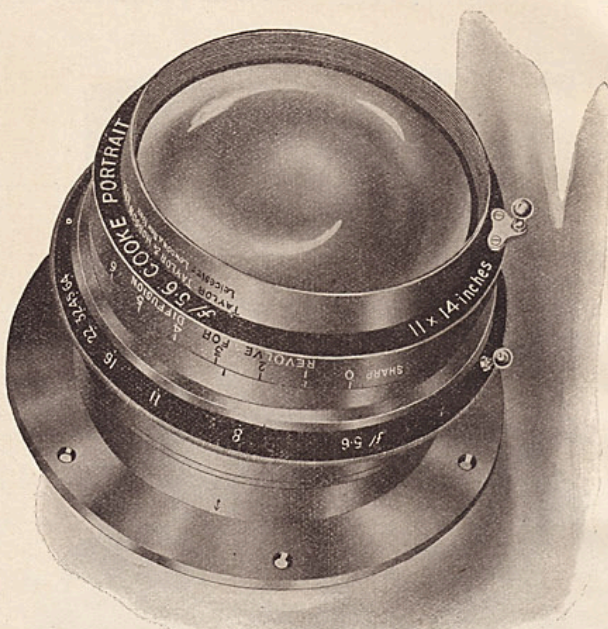
F.5.6 for Universal Application, Rapid for Portraits in Studio or Home, Diffusing focus Device, COOKE PORTRAIT LENS Series Six F/5.6

With Diffusing Device The rapid advance in artistic photography has introduced a new series of portrait lenses whose range of usefulness covers entire field of high grade portraiture.

The series VI lens, shown in the illustration, is supplied in a special mount with rotating rings which control the definition and work the iris diaphragm. The rings are operated from the back of the camera by means of cords and pulleys, or they may be rotated by hand at the front. The cords enable the photographer to watch his ground-glass and regulate to a nicety, the "depth of focus," the softness and roundness of his image, and the volume of light on the plate. The desired softness is indicated on the lens by a scale and pointer.

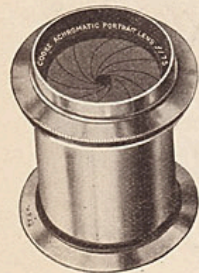
With its full aperture of F/5.6, the lens is extremely rapid. Containing only three thin glasses, it is in practice distinctly faster than the more complicated lenses marked with the same aperture. It has greater "depth of focus" than the ordinary portrait lens, and so is just as well adapted for groups as for heads and busts.

The prices include the cords and pulleys, which are easily attached by anyone.



Dimensions in Inches.

No.	Focus	Plates Covered with full aperture		Diameter of flange at F/16 screw	Full Length Feet		Distance from Sitter to Lens Cabinet Panel		Price
		8x10	11x14		Bust	Panel			
35	13	8x10	11x14	3	17½	9	12	6	\$120.00
36	16	10x12	12x15	3½	22½	11½	14	7	170.00
37	18	11x14	16x18	4	25	13	16	8	196.00



Cooke Achromatic Portrait Lenses

FULL APERTURE F/7.5 FOR DIFFUSED EFFECTS IN PORTRAITS

Requests for the lenses have been so numerous during the last few years, that there has been placed on the market four sizes under the name of "Cooke Achromatic Portrait Lenses F/7.5." Whoever expects sharp definition will be disappointed, but the photographer who desires softness and roundness coupled with fine modeling and a true perspective will be both astonished and delighted. The lenses may be used for all portrait work at their full apertures without introducing distortion, double images or other optical imperfections which are prominent in some of the so-called soft focus lenses.

Every Cooke Achromatic Portrait lens is supplied with a sole-leather carrying-case, while the finish of the mounting and the convenience of the screw-threads are the same as characterize the famous Cooke Anastigmats.

No.	Focus	Plates covered with Full Aperture	Diameter of Flange Screw, In.	Price
50	10½	4 x 5	2	\$33.00
51	12	5 x 8	2	38.50
52	15	6½x 8½	2½	47.00
53	18	8 x 10	3	57.50

Cooke Anastigmat

SERIES II. APERTURE F/4.5

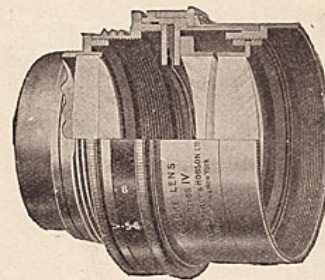


These ultra rapid Anastigmats are designed for subjects demanding extreme speed for use in such as Graflex Speed Kodaks, Hand Cameras and Focal Plane shutter work. For general outdoor work on account of their extreme speed and good covering power, and they are excellent for portraiture in poorly lighted studios. They are universally used for Home Portraiture, copying, enlarging, and as a general purpose lens they are unexcelled.

These Cooke Anastigmats can be fitted to most shutters now on the market. When ordering with shutters specify make and for price add the list price of shutter to list price of lens. No extra price for fitting.

No.	Dimensions in Inches				Price	Price With Compound Shutter
	Actual Focus	Plates Covered From Diaphragm	Plates Covered With Full Aperture	Diam. of Flange Screw		
20	4	4¼	3¼x3¼	1¼	\$ 31.00	\$ 42.00
20½	5	5	3¼x4¼	1½	35.50	48.00
20b	5½	5¾	3¼x4¼	1½	39.00	53.00
21	6	6¼	4 x 5	1¾	41.00	55.00
21½	7	7½	5 x 7	1¾	50.00	64.00
22	8	8½	5 x 8	2¼	62.00	79.00
22½	10½	11	6½x8½	2¾	102.00	120.50

Series IV. Full Aperture F/5.6



The Series IV lenses are designed for high-speed photography with focal plane shutters; for the portraiture of groups; and for difficult photographs in exceptionally poor lights. The definition is perfect throughout the sizes of plate specified.

The advantages of a simple construction are fully developed in this series, and result in objectives of greater rapidity and defining power, with a more uniform excellence than has hitherto been possible in lenses having such large apertures.

SERIES IV. FULL APERTURE F/5.6

No.	Dimensions in Inches				Price	Price With Compound-Shutter
	Focus	Plates Covered With Full Aperture	Plates Covered at F/16	Diam. of Flange Screw		
28	11	7x 9	10x12	2½	\$ 95.00	\$113.50
29	13	8x10	11x14	2¾	115.00	133.50
30	16	10x12	12x15	3¼	162.00	.....
31	18	11x14	16x18	4	185.00	.....

Cooke Process Lenses

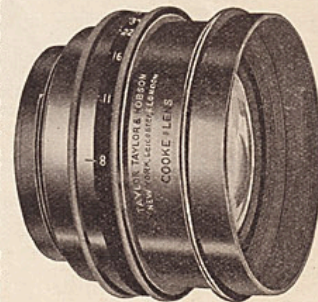
The illustrations in the leading magazines throughout the world are now made with Cooke Process Lenses. The reason is that for such work they give uniformly well defined images, free from distortion, from fog, and other common defects of lenses; while for three-color work they have the unique property of being adjustable so that in our final tests we secure color images of equal size.

The lens-hood which receives the cap is removable, and a screw-thread receives interchangeably any prism or mirror suitably mounted and always in the correct position. An Iris diaphragm is provided, and in front of it is a slot to receive process diaphragms if necessary. This slot may be closed or opened at pleasure, merely by revolving the inscription-tube.



Cooke Series V. Full Aperture F/8

The distinguishing features of the series V Cooke lenses are the exquisitely sharp definition and the brilliance of the image. They define sharply to the extreme corners even of plates much larger than those for which they are designed. Thus the 5x7 lens may be stopped to F/16 and used with the greatest success for wide angle work on 8x10 plates. They also have great depth of focus.



No.	Dimensions in Inches				Price	Price with Compound Shutter
	Focus	Plates Covered With Full Aperture	Plates Covered at F/16	Diam. of Flange Screw		
14p	9	5 x 8	10x12	F/ 8	1½	\$ 48.00
15p	11	6½x 8½	12x15	F/ 8	1¾	67.50
16p	13	8 x 10	14x17	F/ 8	2	87.00
17p	16	10 x 12	18x20	F/ 8	2½	117.00
18p	18	12 x 15	20x24	F/ 8	3	145.00
19p	25	16 x 20	24x27	F/10	3	205.00
19ap	30	20 x 24	.....	F/16	4	275.00
19bp	36	24 x 30	.....	F/16	4	350.00
19cp	42	30 x 36	.....	F/16	.....	504.00
19dp	48	36 x 48	.....	F/16	.....	658.00

No.	Dimensions in Inches				Price	Price with Compound Shutter
	Focus	Plates Covered With Full Aperture	Plates Covered at F/16	Diam. of Flange Screw		
13	7½	5 x 7	8x10	1¼	F/8	\$ 39.50
14	9	5 x 8	10x12	1½	8	48.00
15	11	6½x 8½	12x15	1¾	8	67.50
16	13	8 x 10	14x17	2	8	87.00
17	16	10 x 12	18x20	2½	8	117.00
18	18	12 x 15	20x24	3	8	145.00
19	25	16 x 18	24x27	4	10	205.00
19a	30	20 x 24	Proportionately larger	5	16	275.00

Cooke Cinematograph Lenses

SERIES IIa. FULL APERTURE F/3.5

These ultra rapid Cooke Cinematograph lenses are designed specially for the exacting requirements of Cinematography. They give needle-like definition at full aperture and possess that great depth of field so necessary for this work.



Like other Cooke Anastigmats, they have only three glasses, are without cement and can be used under the most trying conditions of temperature without damage.

They are mounted in a special barrel containing a focusing device and are fitted with an iris diaphragm. These lenses are also supplied in standard barrel with iris diaphragm and

flange. Special tube-hoods are provided for a nominal charge, to cut out extraneous light from the front of the lens.

At \$30.00 and \$36.00 respectively, we furnish the two following sizes in special sunk mounts adapted to fit motion picture cameras having standard focusing jackets.

For Tele-photography, we adapt in compact mountings the Nos. 1, 2 and 2½ Cooke-Telar lenses to cinematograph cameras. In this way large images of distant objects are shown, the No. 2½ size giving a magnification seven times greater than that of a 2-inch lens. Cooke Anastigmat lenses of long focus can also be adapted.

We have a finely equipped workshop where we undertake the adaptation of lenses of all makes to the various forms of cinematograph cameras.

No.	Focus Inches	Plates Covered Full Aperture	Speed	Price in Iris Barrel	Price in Focusing Mount
45	2	¼ x 1	F/3.5	\$26.00	\$30.00
46	3	1¼ x 1¼	F/3.5	32.00	36.00

Series IIIa—Full Aperture F/6.5

These lenses are designed for general photography and are recommended for instantaneous work with hand-cameras. Light and compact, they are mounted with special regard to the construction of Kodaks, Premo and other cameras. The Eastman Kodak Company has well defined one advantage of anastigmat lenses on Kodaks:



"With an anastigmat the construction and optical corrections are such that sharp, satisfactory pictures may be made at an opening more than one-seventh the focal length of the lens—a considerably larger opening than is possible with the ordinary lens, and, hence, admitting very much more light in a given time. So much more, that in clear, bright light, exposures as short as 1-1000 second may be made. And on dull days and even indoors, where with an R. R. lens little or no impression could be obtained, the anastigmat admits so much light that 'slow snap shots' may be made."

The defining power of the series IIIa Cooke lenses is such that a test chart photographed from corner to corner of the plate and examined under a powerful magnifier shows detail as sharp at the corners as at the center.

This claim is made confidently. From their own plates, the lenses make perfect enlargements to a size limited only by one's enlarging apparatus.

The No. 3 Kodak receives the No. 3 lens, the No. 3A Kodak the No. 4 lens, and the No. 4A Kodak takes the No. 6 lens.

—Dimensions in Inches—

No.	Focus	Plates Covered with Full Aperture	Diameter of Flange	Price	Price with Compound Shutter
3	5	3¼ x 4¼	1¼	\$30.00	\$41.00
4	6½	3¼ x 5½	1½	35.00	47.50
5	7½	5 x 7	1½	43.50	56.00
6	8¼	5 x 8	1¾	49.00	63.00

Cooke Primoplane Lenses

SERIES VIIa. FULL APERTURE F/6.5 For Wide-Angle Work of All Kinds

This well-known series is designed exclusively for wide-angle photographs. For dim interiors, banquets, and large groups, the Primoplane anastigmats have this great advantage: They may be accurately focused with the largest diaphragm opening, so that the photographer may see clearly what he is getting on the focusing screen.



Fairly good definition is given even at F/6.5, but this wide opening is usually too large to permit sharp definition of everything grouped within the limited space available. The diaphragm must therefore be stopped down to increase the depth of focus, though it need rarely be stopped below F/16.

Focus Carefully. It is advisable to focus the lens a little "long," using the diaphragm wide open and afterwards stopping down to secure the requisite depth of focus. In other words, with objects at varying distances from the camera, focus at F/6.5 upon a point about two-thirds of the way down the occupied space, and then "stop down" until everything appears sharp. Some photographers focus only half-way down, or only one-third, and then blame the lens. There is always difficulty, of course, in focusing at the same time objects both far and near.

Cooke Primoplane lenses are mounted to "between-lens" shutters with the complete lens fitted in the front of the shutter. When thus fitted to the correct size of shutter, the lenses permit the extreme rise of the camera-front.

—Dimensions in Inches—

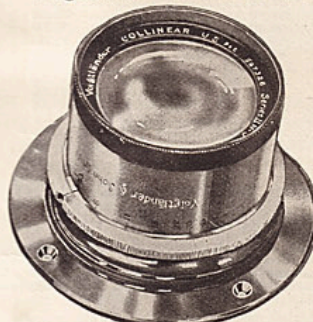
No.	Focus	Plates	Diameter of Flange	Price	Price with Compound Shutter
33	3	3¼ x 4¼	1¼	\$32.50	\$46.50
39	4	4 x 5	1¼	33.50	47.50
40	5	5 x 8	1½	35.00	49.00
41	6	6½ x 8½	1½	39.50	53.50
42	7	8 x 10	1¾	48.50	65.50

Heliar Lens F.4.5



The Voigtlander Heliar Anastigmat Lens F.4.5 is universally recognized as a high type of ultra-rapid anastigmat, possessing in addition to its great speed, optical corrections of the highest order, absolutely eliminating spherical and chromatic aberrations, flare, coma and other optical defects often found in high-

Voigtlander Collinear Series II, F.5.4



The Voigtlander Collinear Series II is an extra rapid anastigmat lens of high quality and compact construction. It is symmetrical, each of the combinations being a corrected objective double the focal length of the double lens, therefore producing an image twice the normal size. The speed of the

single combination is F.11.3. The lens is highly recommended as an all-around, high-speed anastigmat, for portraits, groups, architectural and landscape work. The doublet covers an image circle of about 80 degrees.

Collinear Lens Series II

		F. 5. 4		Price With	
No.	Focus Inches	Free Diameter of Focus Glasses	Size of Plate Covered at Full Aperture F.5.4	Size of Plate Covered at Medium Stop	Iris Diaphragm
0	2½	1½	1¼ x 1½	1¼ x 1¼	\$ 27.00
00	2¾	1½	1¼ x 2½	2 x 3	29.00
1	3½	1½	3¼ x 3¼	4 x 4	32.00
*2	4¾	7/8	3¼ x 4¼	4 x 5	36.00
*2A	5½	1	4¼ x 4¾	4¼ x 6½	38.50
*3	6	1½	4 x 5	5 x 7	40.50
*3A	7	1½	4½ x 6½	5 x 8	47.00
*4	8	1½	5 x 7	6½ x 8½	54.00

		F. 6. 3		Price With	
No.	Focus Inches	Free Diameter of Focus Glasses	Size of Plate Covered at Full Aperture F.6.3	Size of Plate Covered at Medium Stop	Iris Diaphragm
*5	9½	1½	5 x 8	7 x 9	\$ 70.00
*6	12	1½	6½ x 8½	8 x 10	95.00
7	14½	2¼	8 x 10	10 x 12	126.00
8	17½	2¼	11 x 14	12 x 15	170.00
9	20½	3½	12 x 15	14 x 17	212.00
10	24	3½	14 x 17	18 x 22	293.00

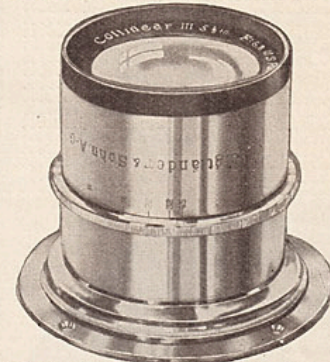
speed lenses of this type. For artistic portraiture the Heliar Lens possesses in a high degree the very qualities which are essential. Its great speed F.4.5 in all sizes permits of extremely rapid exposures indoors. For enlarging, projecting, speed camera work and home portraiture it is very desirable.

Small sizes for cinematograph cameras.

HELILAR LENS

No.	Working Focus Inches	Aperture of Lens Inches	Size of Plate Covered at F.4.5 Inches	Price With Iris Diaphragm	Price in Focusing Mount
000	1½	1½	1 x 1	\$ 23.00	\$27.00
00	2	3/8	1¼ x 1½	26.00	30.00
00A	2¾	5/8	1½ x 2	28.00	32.00
0	3½	¾	2 x 2	32.00	36.50
0A	4	7/8	2½ x 3½	33.50	38.00
1	4¾	1½	2¾ x 4	35.00	40.00
2	5½	1½	3¼ x 4¼	40.00	...
2A	6¼	1½	4 x 5	43.00	...
3	7½	1½	3¼ x 5½	51.00	...
3A	8¼	1½	5 x 7	68.00	...
4	9½	2¼	5 x 8	80.00	...
5	11¾	2½	6½ x 8½	116.00	...
6	14	3½	7 x 9½	150.00	...
7	16½	3½	8½ x 10½	200.00	...
8	19	4½	10 x 12	240.00	...
9	24	5½	11 x 14	400.00	...

Voigtlander Collinear Series III, F.6.8

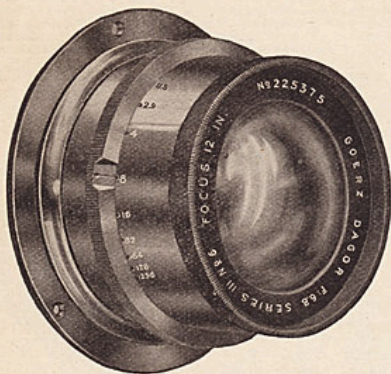


The Voigtlander Collinear Series III is a highly corrected double anastigmat lens of the symmetrical type, working at F.6.8 and F.7.7 speed. Either the front or back combinations can be used singly at a speed of F.16. The lens is compact

and will cover plates many sizes larger than listed for, thus making it useful as a wide angle lens, covering an image circle up to about 90 degrees.

Collinear Lens Series III

		F. 6. 8		Price With	
No.	Focus Inches	Free Diameter of Focus Glasses	Size of Plate Covered at Full Aperture F.6.8	Size of Plate Covered at Medium Stop	Iris Diaphragm
0	2¼	1½	2½ x 3¼	3 x 4	\$ 25.00
1	3½	1½	2¾ x 3¼	3¼ x 4¼	27.00
*1A	4¼	5/8	3 x 3¼	3¼ x 4½	28.50
*2	4¾	1½	3¼ x 4¼	4¼ x 6	30.50
*2A	5¾	¾	3¼ x 4½	4¾ x 6½	32.50
*3	6	7/8	4 x 5	5 x 7	36.00
*3S	6½	1½	3¼ x 5½	5¼ x 7½	36.00
*3a	7½	1	5 x 7	6 x 8	45.00



**Goerz Double Anastigmat Lens—Dagor—
Series III. Speed F-6.8. A Universal
Extra Rapid Lens**

For Portraits, Groups, Instantaneous Photography, Landscapes, Architecture, Interiors, Enlargements and Wide Angle.

The astigmatism is completely corrected, the result being that, even with full aperture, the image is as sharp at the edge as it is at the center.

The curvature of the field is, within an angle of 72 degrees, eliminated—i. e., that part of the image which is comprised within this angle is absolutely flat. The definition and depth are the same in all parts of the field.

The symmetrical arrangement of the two members of the Double Anastigmat has the advantage over the dissymmetrical types of admitting of either half (which has approximately double the focal length of the entire system) being used as a single landscape lens.

The back lens, the focus of which is about the double of that of the entire objective, may, by itself, be used as a landscape lens.

The following glasses are employed in the construction of the Double Anastigmat, viz., a Barium-Silicate Crown, a light Baryta Flint and a soft Silicate Crown. All three glasses are absolutely permanent and are highly transparent and perfectly homogeneous.

PRICES OF DAGOR LENSES

Number	Equivalent Focus Inches	In Barrel Iris Diaphragm	With Sector Shutter	With Compound Shutter
0000	1 1/8	\$ 30.00	\$ 43.50	\$ 41.00
000	2 3/8	30.00	43.50	41.00
000a	3	31.00	44.50	42.00
00	3 1/2	32.00	45.50	43.00
0*	4 1/2	33.50	47.00	44.50
0*	5 1/2	40.00	53.50	52.50
1	6	46.00	59.50	58.50
2	7	56.00	69.50	70.00
3	8 1/4	67.00	83.00	81.00
4	9 1/2	81.00	97.00	98.00
5	10 3/4	96.00	112.00	113.00
6	12	126.00	144.50	144.50
7	14	163.00	181.50	181.50
7a	16 1/2	197.00	225.00	225.00
8	19	292.00	.....	.....
9	24	480.00	.....	.....
10	30	950.00	.....	.....
11	35	.....	.....	.....



**Goerz Celor Anastigmat Series IB. F-4.5.
F-5.5. Extra Rapid Apochromatic**

Special objective for fastest instantaneous exposures, portraits in room and studio; enlargements and reproductions; three-color process; tele-photography; projections. Also for landscapes and architectural views, and for all purposes requiring extreme speed.

There are in the market several anastigmat lenses working at a great relative aperture. Theoretically, their speed leaves nothing to be desired; but when they are used at their full aperture the extent of the field sharply covered is not sufficient to allow one to make practical use of their speed.

Our Celor Lens combines these properties. It has its place therefore in all up-to-date studios.

We claim that Celor Lenses are superior to all other anastigmats of equal maximum aperture because of their larger field of sharp definition at full opening. This enables one to select a Celor Lens of shorter focal length than that of other similar anastigmats, an important consideration where the length of the studio is limited. This is a great advantage for the photographer, meaning, as it does, a gain in the depth of focus and incidentally in actual working speed.

The back combination of the Celor can be used as a single lens of double the focal length. At F-32 it will yield about the same definition as the whole lens and twice the covering power of the latter.

PRICES OF CELOR LENSES

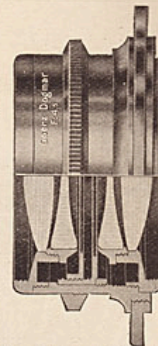
Number	Equivalent Focus Inches	In Barrel Iris Diaphragm	With Sector Shutter	With Compound Shutter
000	2 1/2	\$ 31.00	\$ 44.50	\$ 42.00
000a	3	32.00	45.50	43.00
00	3 1/2	34.00	47.50	45.00
0*	4 1/2	36.00	49.50	48.50
1	6	42.00	55.50	56.00
2	7	49.00	63.00	63.00
3	8 1/4	60.00	76.00	77.00
4	9 1/2	81.00	.....	99.50
5	10 3/4	97.00	.....	115.50
6	12	146.00	.....	.....
7	14	187.00	.....	.....
7a	16 1/2	.....	.....	.....
8	19	220.00	.....	.....

*For Kodaks and other small hand cameras we supply No. 0a of 5 inches focus at the same price as the No. 0 Celor.

GOERZ DOGMAR F:4.5 AND F:6.3

The F:4.5 Dogmar is a convertible anastigmat, offering the advantages of three focal lengths in one lens. It is highly corrected and gives negatives of remarkable definition and sparkling brilliancy. It is free from flare and coma.

It is supplied in two series, one working at the maximum speed of F 4.5 in all sizes, making it ideal for portraiture and for use on reflecting cameras. The second series has a maximum speed of F 6.3. Because of its high speed, perfect optical correction and compact size, it is especially recommended for use on hand and pocket cameras.



PRICES OF DOGMAR LENSES—F:4.5 SERIES PRICES OF DOGMAR LENSES—F:6.3 SERIES

No.	Equivalent Focus Inches	In Barrel Iris Diaphragm	With Compound Shutter	No.	Equivalent Focus Inches	In Barrel Iris Diaphragm	With Compound Shutter
000	2 3/8	\$34.00	\$45.00	000	2 3/8	\$27.00	\$38.00
000a	3	34.00	45.00	000a	3	27.00	38.00
00	4	35.00	46.00	0	4	28.00	39.00
0	5	36.00	49.00	0	5	30.00	41.00
0a	5 1/4	38.00	52.00	1	6	33.00	46.00
1	6	43.00	57.00	00	7	40.00	53.00
1a	6 1/2	48.00	62.00	0	8 1/4	46.00	60.00
2	7	53.00	70.00	1	9 1/2	56.00	70.00
3	8 1/4	66.00	83.00	1a	10 3/4	.....	.....
4	9 1/2	96.00	115.00	2	12	.....	.....
5	10 3/4	124.00	143.00	3	.....	.....	.....
6 (F:5.5)	12	116.00	134.50	.....	.....	.....	.....

Goerz Hypar F:3.5—F:4.5

The Hypar is a new portrait lens intended to meet the requirements of photographers who wish a lens equally efficient for standard commercial portraiture and for the impressionistic rendering of character which distinguishes the work of the greatest photographic portrait artists of today. It is not a special lens for producing a "fuzzy" lack of definition; but it blends the outlines and tone gradations of the masses of light and shade so as to produce exquisite modeling, together with just that degree of softness which distinguishes an artistic from a mechanical production. The Hypar is free from internal reflections, thus permitting portraits to be taken against the light if desired. The Hypar is distinctively a portrait lens, having an effective angle of 35° at F:3.5 and 45° at F:4.5.

The Nos. 6 and 7 work at the extreme speed of F:3.5, while the larger sizes work at F:4.5, fast enough for instantaneous exposure under the average skylight.

PRICES OF PORTRAIT HYPAR LENSES

No.	Equivalent Focus	Speed	Barrel Iris Diaphragm
6	12	F:3.5	\$179.00
7	14	F:3.5	245.00
7	14	F:4.5	156.00
7a	16 1/2	F:4.5	196.00
8	19	F:4.5	261.00
9	24	F:4.5	489.00

PRICES OF KINO HYPAR LENSES F:3.5

Equivalent Focus Inches	In Barrel Iris Diaphragm	With Ango Focusing Mount
1 1/2	\$27.00	\$30.50
2	27.00	30.50
2 3/8	28.50	32.00
3	32.00	37.00

Special focusing mounts affording extreme accuracy can also be supplied. Full information on request.

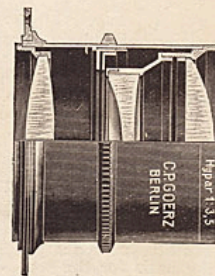
Goerz Syntor F:6.8

PRICES OF SYNTOR LENSES

No.	Equivalent Focus Inches	In Barrel Iris Diaphragm	With Sector Shutter	With Compound Shutter
000a	3	\$20.00	\$33.50	\$31.00
00	3 1/2	20.50	34.00	31.50
0*	4 1/2	21.00	34.50	32.00
1*	6	24.00	37.50	36.50
2	7	29.00	42.50	41.50
3	8 1/4	41.00	54.50	55.00
4	9 1/2	49.00	65.00	63.00
5	12	65.00	81.00	82.00

Goerz Process Anastigmat PRICES OF PROCESS DAGOR (F:7.7) LENSES

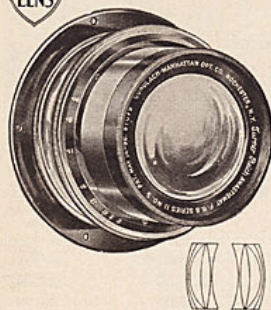
No.	Equivalent Focus, Inches	With Waterhouse Stop
6	12	\$ 99.00
7	14	127.00
7a	16 1/2	172.00
8	19	207.00
9	24	310.00
10	30	508.00



Turner-Reich Convertible Anastigmat Lenses
Series II. Speed, F-6.8

The Turner-Reich Series II Convertible Anastigmats are the highest type of lenses made. The field of correction extends uniformly from the center to the edge of the light circle. They are made of the best optical glass that can be obtained, and this, in conjunction with the care with which each lens is corrected, individually, permits us to bring all Turner-Reich Lenses up to a uniform standard of perfection.

IT'S ALL IN THE LENS



This Convertible Anastigmat, formed of two perfectly corrected single combinations of unequal focal length, gives the advantage of three distinct focal lengths, working at different speeds. For example: An 8x10 lens has an equivalent focus of 12 inches, working speed full aperture F-6.8; back combination alone, largest aperture, works at F-12.5, equivalent focus 21 inches; front combination alone, full aperture, works at F-16, equivalent focus 28 inches. Thus you have three distinct lenses in one.

The Turner-Reich Lenses are also used for wide angle work, because of their remarkable covering power. A 5x8 lens will cover an 8x10 plate, an 8x10 lens will cover an 11x14 plate, and other sizes in the same proportion, by using smaller diaphragms, so that the desired depth of field can be obtained. They are furnished in barrel with Iris Diaphragm, or in any up-to-date shutter.

These lenses are very useful for commercial work, both in and out-of-doors. For the Portrait Photographer they cannot be excelled for groups, large heads, standing figures and home portraiture. As a Hand Camera Lens, they are excellent.

SPECIFICATIONS AND PRICES

Turner-Reich Convertible Anastigmat F-6.8 Series II.

No.	Diameter of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	For Plates	Price with Barrel or Regno Shutter	Price in Auto Shutter	Price in Ilex Universal	Mtd. in Compound Shutter	Mtd. in Optimo Shutter	Mtd. in Ilex Acme Shutter
0	3/4 in.	5 in.	8 in.	12 in.	3 1/4 x 4 3/4	\$ 30.00	\$ 32.00	\$ 34.00	\$ 37.00	\$ 40.00	\$ 40.00
1	7/8 in.	6 1/4 in.	11 in.	14 in.	4 x 5	40.00	42.00	44.00	49.50	50.00	49.00
2	1 1/8 in.	7 1/2 in.	12 in.	18 in.	5 x 7	48.00	50.00	53.00	58.25	58.00	58.00
3	1 1/4 in.	8 1/2 in.	14 in.	20 in.	5 x 8	55.00	57.00	59.00	65.25	65.00	67.00
4	1 1/2 in.	10 1/2 in.	18 in.	24 in.	6 1/2 x 8 1/2	75.00	77.00	79.00	88.00	85.00	87.00
5	1 3/4 in.	12 in.	21 in.	28 in.	8 x 10	90.00	92.00	94.00	101.00	100.00	101.00
*6	2 in.	15 in.	24 in.	36 in.	11 x 14	150.00	152.00	154.00	162.00	160.00	160.00

The single combinations give a working aperture of F-12.5 and F-16 respectively for the rear and front combinations. Barrel mounts have an iris diaphragm.

When shutter is furnished by customer the following amounts may be deducted from list prices in barrel No. 0 \$5.00, No. 1 \$5.00, No. 2 \$6.00, No. 3 \$6.00, No. 4 \$8.00, No. 5 \$9.00. Fitting will be charged for according to the amount of work involved.

*Working aperture F-7.5.

Turner-Reich Convertible Anastigmat F-6.8 in Sets

The great advantage possessed by the Convertible Anastigmat making it the most economical lens as well as the most useful lens is its power to decrease or increase its range of focal lengths by the addition of extra single combinations of different foci from those forming the original lens which is the basis for the set. One extra combination (only half a lens) will form a doublet with either the front or back combination and really adds in this way three new lenses to the photographers' equipment and with three single combinations three doublets are obtained and six different focal lengths.

The addition of two extra single combinations to a complete lens making four in all, provides six doublets or complete lenses, making ten lenses of different foci for the photographer to work with, providing a lens of just the right focus to suit any subject or viewpoint, all fitting one mount or shutter interchangeably, at an average cost each of about the price of a good rapid rectilinear and a total cost about equal to the price of some 8x10 symmetrical anastigmats. This is where the economy comes in and the convenience should be considered as well.

The Convertible Turner-Reich is a double Anastigmat in the sense that each of the single combinations is perfectly corrected independently of its relation to the other. They are practically rectilinear and give almost a flat field. The working aperture F-12.5 for the rear combinations and F-16 for the front combinations is large enough for short exposures, even instantaneous exposures under suitable conditions.

PRICES

Set for 6 1/2 x 8 1/2 or 8x10 Cameras.

Single Combinations	Focal Lengths in Combination	Working Aperture	Suitable Shutters	Price
14 in. No. 3	14 in. + 18 in. = 8 in.	F:6.4	No. 4 Regno	\$10.00
18 in. No. 4	14 in. + 24 in. = 9 1/2 in.	F:7.6	No. 4 Auto	12.00
24 in. No. 4	14 in. + 24 in. = 10 1/2 in.	F:8.4	No. 4 Optimo	20.00
28 in. No. 4	18 in. + 24 in. = 10 1/2 in.	F:6.8	No. 3 Compound	20.00
	18 in. + 28 in. = 11 1/2 in.	F:7.5	No. 4 Ilex Universal	20.00
	24 in. + 28 in. = 13 in.	F:8.3	No. 4 Ilex Acme	20.00

Price of set without Mount, \$162.00; Barrel Mount with Iris Diaphragm, \$9.00; Average cost of ten lenses \$16.20 each; Average cost of five doublets, \$32.40 each.

NOTE.—To permit mounting these lenses in a shutter of minimum size the single combination of 28 in. focus is made of the same diameter as the 18 in. and 24 in. combinations, otherwise the mounting of the other three combinations would be much heavier than necessary. The combination with the longer focal length should be used in front when using two combinations to form a doublet.

TURNER-REICH
Symmetrical Anastigmat F:6.8

Series III

The Series II and Series III Turner-Reich Anastigmats are identical in optical qualities and the single combinations of the latter may be used separately like those of the convertible lenses but they are equal instead of dissimilar in focal length. The singles of the symmetrical series are about twice the focal length of the doublet. Accurate mounting and fitting of our lenses cannot be guaranteed unless we are allowed to do the work, and if the customer supplies the shutter it should be sent to us and we will furnish proper diaphragm and focusing scales for the lens.

The separation of Anastigmat lenses is very important and each lens must be treated individually. All fitting is done by a modification of the lens cells and the shutter is always left intact.

Equivalent No.	Focus	Diameter of Lenses	For Plates	Price Mounted in Barrel	Price in Auto Shutter	Price in Ilex Universal
8 1/4 in.	7/8 in.	4x5	...	\$ 35.00	\$ 37.00	\$ 39.00
7 1/2 in.	1 1/4 in.	5x7	...	40.00	42.00	45.00
8 1/2 in.	1 1/2 in.	5x8	...	45.00	47.00	49.00
10 1/2 in.	1 3/4 in.	6 1/2 x 8 1/2	...	65.00	67.00	69.00
12 in.	1 7/8 in.	8x10	...	75.00	77.00	79.00
14 in.	2 in.	10x12	...	100.00	102.00	104.00
17 in.	2 1/4 in.	11x14	...	145.00		
21 in.	3 1/8 in.	14x17	...	225.00		

TURNER-REICH CELLS
Anastigmat F:6.8



While primarily intended for the 3A Kodak this lens is suitable for any 3 1/4 x 5 1/2 or 4 x 5 camera as plates or films of this size require exactly the same covering power. These lenses are furnished ready to screw into any shutter with openings for the lens cells 1 1/8 inch diameter and

21 m/m thick, practically a standard size in several different makes of shutters. We offer the Turner-Reich lens in cells ready to screw into the Kodak single or double valve shutter and no special fitting is required.

PRICES

For No. 3A and No. 4 Kodaks 4x5 Series III Turner-Reich Anastigmat F:6.8 in cells, 8 1/2 inches focal length, in handsome silk lined case, diaphragm and focusing scales included \$30.00
Auto Shutter, extra 8.00
No. 1 Compound Shutter, extra 14.50
No. 1a Optimo Shutter, extra 15.00
No. 1 Ilex Acme Shutter, extra 44.00
Other shutters will be furnished if desired and in changing the shutter it is advisable to send us the Kodak for fitting.

Perigraphic Convertible Lenses F:5.6

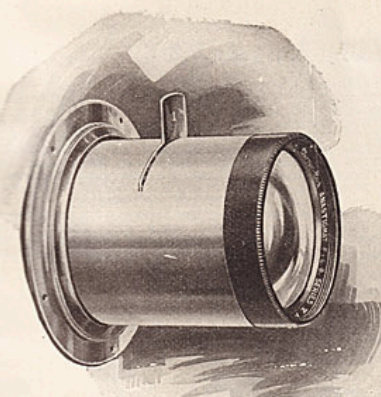
Rapid Portrait, View and General Purpose Lenses

The Perigraphic has many valuable qualities to recommend it to those who require one lens for several different purposes at a moderate price. First, it gives a large working aperture which makes it very desirable for portraiture especially indoor portraits which require better delineation of the surroundings than gallery work and at full aperture it will give finer definition and a much flatter field than a portrait lens proper of the Petzval type. For groups it is a much better lens. When stopped down to F:8 or smaller it will excel the ordinary rapid rectilinear and equal our Rapid Rectigraphic Lenses. At F:16 it will compare very favorably with an anastigmat by which it is only excelled in flatness of field. Being convertible it offers two single combinations of unequal focal lengths useful for obtaining a larger image from the same viewpoint or for covering larger plates without the wide angle which would result from using the lens complete. The covering power of this lens is remarkable and this can be taken advantage of by using it complete for a wide angle lens to cover a plate one or two sizes larger than the size listed.

PRICES

No.	Size	Will Cover	Equival. Focus	Back Focus	Front Lens	Inches	Barrel	Optimo
1	4x5	6 1/2 x 8 1/2	5 1/2	10	13 1/2	...	\$30.00	\$40.00
2	5x7	8x10	8	13 1/2	18	...	35.00	47.00
3	6 1/2 x 8 1/2	10x12	10	17	23	...	42.00	52.00
4	8x10	11x14	12	20 1/2	28	...	62.00	
5	11x14	14x17	16	25 1/2	34	...	64.00	

Sizes up to No. 3 inclusive (6 1/2 x 8 1/2) will be furnished in Auto Shutter instead of Regno for \$2.00 extra.

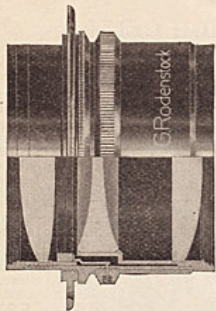


TURNER-REICH
Anastigmat Series V F:9

These lenses are intended for process work and all other purposes of reproduction which require absolute definition. They are also the best lenses for all kinds of commercial photography above 8x10 as they are smaller and much lighter than lenses of larger working aperture. There is also a considerable saving in cost as compared with more rapid lenses of equal focal lengths. As satisfactory depth of focus can never be secured in commercial work or when using lenses of these focal lengths without stopping down to at least F:9 it follows that a larger aperture offers no advantage. These lenses give a perfect image free from chromatic aberration, astigmatism or distortion. The definition is critically sharp over the whole field. The homogeneous formation and permanency of Turner-Reich lenses make them especially desirable for use in establishments where chemicals and acid fumes are present.

PRICES

Diameter of Lenses	Plate	Focus	Water-house Stops	Iris Diaphragm or Regno Shutter	Price
1 1/4 in.	10x12	14 in.	...	...	\$ 75.00
1 1/2 in.	12x18	18 in.	...	...	125.00
1 3/4 in.	12x17	24 in.	...	...	190.00
2 in.	14x17	36 in.	...	...	275.00



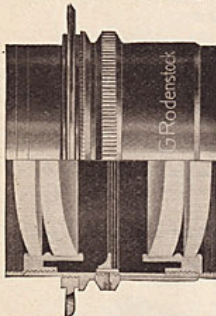
RODENSTOCK ANASTIGMATS
"Clanbury" F.4/5

The "CLANBURY" is a three-glass uncorrected double Anastigmat with an aperture of F.4/5, constructed upon the non-symmetrical basis—possessing great illumination together with sharp marginal definition. These superb objectives are thoroughly efficient for newspaper or press photography, animal life, airships, dirigibles, express trains, motor boats, motor cycles, automobiles, athletic sports, portraiture under the skylights or in the homes; or any class of motion photography requiring lenses of exceptional speed and highest optical corrections. Furthermore, in lieu of these advantages, the "CLANBURY" is capable of overcoming the exacting conditions as set forth in the production of three-color natural photography.

The smaller sizes are par excellence for all focal plane cameras, while the larger sizes can not be excelled for portraiture either in the home or the studio. Instantaneous exposures can be made indoors with perfect ease and certainty of results. Numbers 4, 5, 6 and 6a are especially recommended to the professional photographer.

THE F.4/5 CLANBURY ANASTIGMAT

No.	Focus	Size of Plate	In Barrel	In Ilex Acme Shutter	Compound Shutter
01	6 1/2	4 / 5	\$ 40.00	\$ 51.00	\$ 55.00
02	7	5 / 7	45.00	57.00	60.00
03	7 1/2	5 1/8	60.00	72.00	75.00
04	8	6 1/2 / 8 1/2	73.00	85.00	90.00
05	9 1/2	8 / 10	110.00	130.00	140.00
*6	14 1/2	8 1/2 / 10 1/2	156.00	180.00	190.00
*6a	16 1/2	11 / 14	210.00	240.00	250.00



Series I. Euryrnyr F.6/8

Various advantages are obtained with our Double Anastigmat Series I Euryrnyr, as in the construction of this instrument it is of exceptional correction and technical workmanship. The Series I Euryrnyr is of the symmetrical type (either combination may be used separately) and are an extra rapid Double Anastigmat of the universal method of construction, producing the best results in Portraits, Groups, Large Heads, Views, Landscapes, Sceneries, Architecture, Copying, Enlarging, Reducing Interiors, Flash Lights, Action Exposures, Marine and Yachting Scenes, also Commercial and Photo Engraving Line Photography. Its vast field of usefulness commends it to every class of artistic and commercial photography.

The larger sizes of this series are suitable for almost any purpose, and are particularly recommended for commercial work and general studio grouping. On account of their long focus they give fine perspective, while any degree of depth of focus can easily be obtained by stopping down to the desired point.

SERIES I. EURYRNYR F.6/8

No.	Focus	Size of Plate Full Aperture	Size of Plate at F. 31	In Barrel	Compound Shutter	Optimo Shutter	Ilex Acme Shutter	Ilex Universal
00	4 1/2	2 1/2 / 3 1/2	3 1/2 / 4 1/2	\$16.50	\$25.50	\$30.00	\$ 34.00	\$26.50
01	5 1/4	3 1/4 / 4 1/4	4 1/4 / 5 1/4	20.00	32.00	36.00	40.00	30.00
02	6 1/2	4 / 5 1/2	5 1/2 / 6 1/2	23.00	34.00	38.00	42.00	32.00
03	7 1/2	5 1/4 / 6 1/4	6 1/4 / 7 1/4	28.00	42.00	46.00	50.00	39.00
04	8 1/2	6 1/2 / 7 1/2	7 1/2 / 8 1/2	34.00	50.00	54.00	58.00	45.00
05	9 1/2	7 1/4 / 8 1/4	8 1/4 / 9 1/4	40.00	58.00	62.00	66.00	50.00
06	11 1/2	8 / 9 1/2	9 1/2 / 10 1/2	60.00	80.00	84.00	88.00	70.00
07	14 1/2	11 1/4 / 12 1/4	12 1/4 / 13 1/4	90.00	110.00	114.00	118.00	100.00
08	16 1/2	14 / 15 1/2	15 1/2 / 16 1/2	110.00	130.00	134.00	138.00	120.00
09	19	16 / 18	18 / 20	150.00	180.00	184.00	188.00	160.00

Euryrnyr Series III F.5/4

Our Series III F.5/4 "EURYRNYRS" are universally conceded a double anastigmat of par excellence plus quality. It is constructed so as to insure of its successfully coping with hazy and mucky conditions of light on dull dark days in or out of the studio.

With the larger numbers (4, 5 and 6) owing to their speed, the photographer will find them particularly desirable for general all around work in the studio, as they are ideal for busts, full lengths and groups, and especially so for baby pictures, where speed and sharp marginal definition are so often so essential.

These lenses will be found invaluable for enlarging, copying and reducing, and especially so for enlarging, as the iris diaphragm is made of metal steel leaves, which, is of course impervious to the ruinous effects of excessive heat. They are unexcelled for general work, and adapted for use on hand cameras, Graflex, speed Graphic and all other forms of speed cameras.

Either combination may be used separately, and when used in this manner are about double the focal of the complete objective.

SERIES III "EURYRNYR" F.5/4

No.	Focus	Size of Plate at Full Aperture	Size of Plate at F. 31	In Barrel	Compound Shutter	Optimo Shutter	Ilex Acme Shutter
01	5 1/4	3 1/4 / 4 1/4	4 / 5	\$ 26.00	\$ 42.00	\$ 46.00	\$44.00
02	6 1/2	4 / 5 1/2	5 / 6	30.00	46.00	50.00	48.00
03	7	5 / 6	6 1/8	35.00	52.00	56.00	54.00
03B	8 1/4	5 / 8	8 / 10	50.50	70.00	74.00	72.00
04	9 1/2	6 1/4 / 7 1/4	10 / 12	60.00	80.00	84.00	82.00
05	12	8 / 10	11 / 14	90.00	112.00	116.00	114.00
06	14	10 / 12	12 / 15	125.00	150.00	154.00	152.00

Velostigmat, Series I. F-6.3.

After a most thorough series of experiments and tests, we have succeeded in increasing the working speed of the Series I. from F:6.8 to F:6.3 without detracting from its high quality or fine optical corrections. The mechanical and optical construction of this lens is of the highest order and it is fully corrected for spherical and chromatic aberration and astigmatism. The finish, whether mounted in barrel or in shutter, is black enamel with gold engraving, making it durable, practical and beautiful in appearance.



sirable for landscape and view work, architectural and commercial photography, copying, enlarging, and for all classes of work requiring a perfectly corrected objective.

We can supply the Series I. lenses in cells to fit the 3 1/4 x 4 1/4—3 1/4 x 5 1/2 and 4 x 5 sizes Folding Pocket Kodaks, Seneca and Ansco roll film cameras, and as these lenses are of the exact focus they can simply be screwed into the shutters on the above cameras without special fitting.

The Series I. is as near an "all-around" or "general purpose" lens as can be made, and because of its small size is especially desirable for compact cameras and kodaks. It will cover plates two sizes larger than is listed for by stopping down and single combinations are corrected for separate use by stopping down. The Series I. is especially de-

PRICE

No.	Diam. of Lens	Equivalent Focus	Plates Covered Sharply at F:6.3	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	1 1/2 in.	5 in.	3 1/4 x 4 1/4	\$23.00	\$26.00	\$33.00
2	1 in.	6 in.	4 x 5	27.00	30.00	37.00
2A	1 1/2 in.	6 1/2 in.	3 1/4 x 5 1/2	27.00	30.00	37.00
3	1 1/4 in.	7 in.	5 x 7	35.00	39.00	47.00
4	1 1/2 in.	9 1/2 in.	6 1/2 x 8 1/2	55.00	57.00	65.00
5	1 3/4 in.	12 1/2 in.	8 x 10	65.00	70.00	80.00
6	2 1/2 in.	16 in.	11 x 14	112.00	117.00	130.00

Velostigmat, Series II. F-4.5.

The Series II. is the latest addition to our Velostigmat Series. It is fully corrected in every respect, and is at least equal to any objective of its type on the market. The three larger sizes are equipped with our simplified diffusing adjustment, making them desirable and practical for use in the studio, for portraits and groups, and all classes of professional work as well as for home portraiture, etc.



separately, as they are not corrected for use alone.

PRICE

No.	Diam. of Lens	Equivalent Focus	Plates Covered Sharply at F:4.5	With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter
1	1 1/4 in.	5 in.	3 1/4 x 4 1/4	\$32.00	\$37.00	\$43.00
2	1 1/2 in.	6 in.	4 x 5	38.00	43.00	49.00
3	1 3/4 in.	7 in.	5 x 7	45.00	50.00	57.00
4	1 1/2 in.	8 1/2 in.	5 x 8	60.00	65.00	72.00
5	2 1/4 in.	9 1/2 in.	6 1/2 x 8 1/2	73.00	78.00	85.00
6	2 1/2 in.	12 in.	8 x 10	110.00	115.00	125.00
7	3 1/2 in.	15 1/2 in.	11 x 14	180.00	185.00	200.00

The No. 5, 6 and 7 sizes have diffusing adjustment which makes them particularly valuable for portrait and group work.

The diffusing adjustment enables the operator to obtain an even degree of diffusion or softness over the entire plate. This is a decided advantage in an Anastigmat lens—in reality giving the owner two lenses in one. Without the use of the diffusing adjustment, the Series II. is desirable for any class of work to which an Anastigmat can be adapted, and by using the diffusion adjustment it at once becomes a thoroughly practical portrait lens. The single combinations of the Series II. cannot be used

NOTE—To ascertain cost of Velostigmat in mounts fitted to customer's own shutter, deduct following amounts from list prices in barrel: No. 1, \$3.00; No. 2, \$4.00; No. 3, \$5.00; No. 4, \$6.00; No. 5, \$7.00; No. 6, \$8.00; No. 7, \$9.00.

The largest size Series II. that can be mounted in Regno shutter is No. 6. That size and the larger ones can be mounted in our Studio shutter.

Velostigmat Wide Angle Series, III. F-9.5.



The Series III. is specially adapted to interior architectural, mechanical and all classes of work where it is necessary to work in confined space or where a fast objective with a wide angle is desired. It gives a perfectly flat field and covers the plate sharp at full aperture, and on account of its speed is most desirable for flash-light work of interiors, etc.

The angle of field is 90 degrees, although a greater angle can be obtained by stopping down and using it on the next size larger plate than it is listed for.

The Series III. can be furnished in barrel with iris diaphragm and cap or with our shutters as listed below. Angle of Field, 90 degrees.

PRICE

No.	Working Aperture	Equivalent Focus	Plates Covered at F:9.5			
			With Barrel or Regno Shutter	With Auto Shutter	With Optimo Shutter	With Regno Shutter
1	1 1/2 in.	4.3 in.	5 x 7	\$28.00	\$30.00	\$38.00
2	1 1/4 in.	5.4 in.	6 1/2 x 8 1/2	34.00	36.00	44.00
3	1 1/2 in.	6.25 in.	8 x 10	43.00	45.00	53.00
4	1 3/4 in.	9 in.	11 x 14	65.00	67.00	75.00

Vinco-Anastigmat, F-6.3.—F-6.8.



The Vinco-Anastigmat was placed on the market to meet the demand for a moderate priced Anastigmat lens that could be fully guaranteed to be equal to any Anastigmat selling at a lower price than our Series I. Velostigmat F:6.3.

The Vinco is not a convertible lens, as the separate combinations are not corrected for use singly, but for all work where the complete lens is used, this objective will be found thoroughly satisfactory, as it will cover sharply at full aperture, the size plate for which it is listed, or plates one size larger by stopping down.

The Vinco is equally suitable for landscape, commercial and architectural work, speed photography of the ordinary kinds, copying and enlarging, and home portraiture where the lighting conditions are ideal.

PRICE

No.	Size of Plate Covered at F:6.8	Equivalent Focus	Diam. Lens	With Barrel or Regno Shutter			
				With Auto Shutter	With Optimo Shutter	With Regno Shutter	With Optimo Shutter
0	3 1/4 x 4 1/4	5 1/2 in.	1 1/2 in.	F:6.3 \$18.00	\$20.00	\$26.00	
1	4 x 5	6 in.	1 3/4 in.	F:6.3 20.00	22.00	28.00	
1A	3 1/4 x 5 1/2	6 1/2 in.	1 3/4 in.	F:6.3 20.00	22.00	28.00	
2	5 x 7	7 in.	1 3/4 in.	F:6.8 25.00	28.00	35.00	
2	6 1/2 x 8 1/2	9 1/2 in.	1 3/4 in.	F:6.8 35.00	38.00	45.00	
4	8 x 10	12 in.	1 3/4 in.	F:6.8 45.00	48.00	57.00	

Vitax Portrait F:3.8

For Portrait Work

When used wide open for head and bust work at the extreme high speed of F:3.8, fast exposures are possible under almost any light, and by stopping down slightly, and the use of the equalizing and diffusing adjustment, the Vitax can be used for full lengths and groups—a point in its favor not to be found with lenses of this type not equipped with an adjustment of this kind.

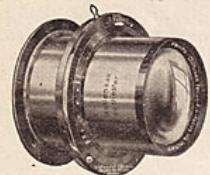
The diffusing adjustment is simple and effective, any desired degree being obtained by a simple turn of the knob, making it unnecessary to remove the lens from front board, as is necessary with some lenses. The diffusion is obtained by separating the lenses in the rear combination, thereby preserving the optical formula, and enabling the operator to secure an image with a beautiful "roundness" or "stereoscopic" effect, free from wiry definition, and still not too fuzzy.

The Vitax is handsomely finished in black enamel, with nickel trimmings, and can be furnished either in barrel with iris diaphragm and cap, or mounted in our Studio shutter.

No.	Lens	Focus	Outside Diameter of Flange	Price in Barrel with Iris Diaphragm	Price in Studio Shutter
1	3 in.	10 in.	5 1/2 in.	\$ 70.00	\$ 78.00
2	3 1/2 in.	13 1/2 in.	6 1/2 in.	90.00	100.00
3	4 1/2 in.	16 in.	7 1/2 in.	125.00	137.00

Verito Diffused Focus F:4

The Verito has met with a most welcome reception by the best known workers in artistic portraiture and landscape work, as it is a tool that allows the operator to put individuality into his work.



The speed of the Verito—F:4, makes it especially desirable for portraiture, either in the studio or at home, and even at this large aperture, it is possible to obtain an image remarkably free from flare and "running around."

The Verito is a double lens, made on an original formula, which gives the desired diffusion, yet shows little or no even definition over the entire plate. The owner of a Verito can make portraits, groups, landscapes, etc., "as the eye sees," but sharp negatives, with wiry definition, cannot be made with it unless stopped down to an aperture of F:11 or smaller.

The rear combination of the Verito is especially desirable for large heads and other work requiring ideal perspective.

Verito lenses are furnished mounted in polished black barrels, trimmed with black enamel, and equipped with shutters of our manufacture as listed below.

Nos. A and B are compact in size, and primarily intended for roll film and plate cameras. The maximum working speed or aperture F:6, is ample for hand camera work, and at that aperture a very pleasing degree of diffusion is obtained.

When so ordered, special jamb nut flange will be furnished without extra charge, making it possible to fit these outfits to cameras having metal front boards.

No.	Size	Speed	Focus	Rear Comb. Lens	Mounted in Barrel	Mount. in Studio	Mount. in Auto
A	3 3/4 x 4 1/4	F:6	5 in.	10 in.	1 in.		\$15.00
B	4 x 5	F:6	6 1/2 in.	14 in.	1 1/2 in.		17.50
0	4 x 5	F:4	7 in.	11 in.	1 1/2 in.		\$20.00
1	5 x 7	F:4	9 in.	14 in.	2 1/2 in.		30.00
2	6 1/2 x 8 1/2	F:4	11 1/2 in.	20 in.	3 in.		35.00
3	8 x 10	F:4	14 1/2 in.	20 in.	3 1/2 in.		50.00
4	11 x 14	F:4	18 in.	24 in.	4 1/2 in.		70.00

Vesta Portrait F:5

The Vesta is similar in many respects to the Vitax, the principal difference being a slower speed, and no equalizing or diffusing adjustment. It is fast enough for all ordinary studio work, such as busts, large heads, etc., and quite suitable for standing figures and groups where great speed is not essential.

A point in favor of the Vesta is the fact that the front combination is corrected for use alone, thereby giving the owner really two lenses. The single combination is considerably slower than the complete lens, but sufficiently fast for large heads and other work requiring a lens of long focus. To use the front combination alone, unscrew the rear combination and put the front one in its place.

The Vesta is mounted in polished and lacquered black barrels, with black enamel trimmings, and with iris diaphragm and cap, or can be mounted in our Studio shutter as listed below.

No.	Size	Diameter of Lens	Equiva- lent	Focus	Front Combi- nation	Outside Diameter of Flange	Price
1	3 3/4 x 4 1/4	1 1/2 in.	6 in.	9 in.	3 1/2 in.	\$15.00	
2	4 x 5	1 3/4 in.	7 in.	11 in.	3 3/4 in.	20.00	
3	5 x 7	2 1/4 in.	10 in.	14 in.	4 in.	25.00	
4	6 1/2 x 8 1/2	2 3/4 in.	11 1/2 in.	17 in.	4 1/2 in.	35.00	
5	8 x 10	3 in.	14 in.	21 in.	5 1/2 in.	50.00	

Versar Portrait and View F:6

The Versar is what might be termed a general-purpose objective.

The two elements of the Versar are of the same focal length, being about double the equivalent focus, and can be used separately by stopping down.



The high speed of the Versar makes it desirable for ordinary studio work, including busts, full lengths and groups, and because of its small size, and high speed, is a practical objective for home portraiture, and work of similar character. General view, commercial and architectural work can be done with the Versar when slightly stopped down.

The Versar can be furnished in polished and lacquered black barrels, with iris diaphragm and cap, or fitted to the various shutters of our manufacture, as listed below.

Attention is directed to the fact that the Versar will not give fine definition to the extreme corners of the size plate for which it is listed unless stopped down to an aperture of about F:11.

With Mounted in or Studio Shutter

No.	Size	Diameter	Equivalent Focus	Mounted in or Studio Shutter	With Regno Auto Shutter
1	4 x 5	1 1/4 in.	6 1/2 in.	\$16.00	\$17.00
2	5 x 7	1 1/2 in.	8 3/4 in.	19.00	20.00
3	6 1/2 x 8 1/2	1 3/4 in.	9 1/2 in.	25.00	27.00
4	8 x 10	2 in.	11 1/2 in.	33.00	35.00
5	10 x 12	2 1/2 in.	15 in.	42.00	45.00
6	11 x 14	2 3/4 in.	16 1/2 in.	54.00	57.00
7	14 x 17	3 in.	18 in.	70.00	75.00
8	17 x 20	3 1/2 in.	22 1/2 in.	90.00	95.00

Dallmeyer's Patent Portrait Lenses

These are manufactured in three degrees of intensity or rapidity of action: 1st. Portrait Lenses, Intensity F. 3: designated B. 2d. Portrait Lenses, Intensity F. 4: designated A. 3d. Portrait, Group and View Lenses, Intensity F. 6: designated D.

The denominators of the fractions expressing intensity of the Lenses above mentioned, viz., 3, 4, 6, when squared, at once express the relative time of exposures for each Lens. Thus the B series require about one-half the exposure of A and one-fourth of D.

DESCRIPTION.—These Lenses are constructed on a different principle to the old or Petzval type of Portrait Lenses, and excel them in sharpness of definition, in freedom from distortion and flare, and in equality of illumination; while, in addition to this, they afford the means, by the simple turn of a screw, of obtaining greater equality or depth of definition.

The construction of the Lens is such that, with the posterior cells of the back combination screwed home, it produces the sharpest possible picture of objects situated in one plane. Then, by unscrewing the posterior cell, a turn, or parts of a turn, the previous intensely sharp definition becomes modified, i. e., the contrast of excessive sharpness in one plane, compared with great want of sharpness in other planes, is balanced, producing the impression of a general distribution or depth of focus; and this in proportion to the amount of unscrewing. Nothing has been sacrificed in securing this new power, and can be used or not at the will of the operator, who will rapidly become proficient in judging what is necessary to produce any desired effect.

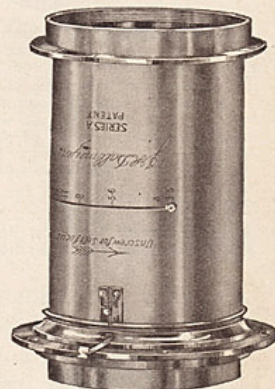
Series A, Speed F. 4

These require nearly double the exposure of the B lenses.

No.	Description	Waterhouse Diaphragm	Iris Diaphragm
No. 1	A* PATENT LENS, with rack and pinion movement. Diameter of front and back combination, 2 3/4 and 2 1/2 in., respectively. Equivalent focus, 10 in. for pictures 4x5 in.	\$ 90.00	\$ 99.00
No. 2	A* PATENT LENS, with rack and pinion movement. Diameter of front and back combinations, 3 1/2 and 3 1/4 in., respectively. Equivalent focus, 13 1/2 in. for pictures 6x7 in.	122.00	133.00
No. 3	A* PATENT LENS. Diameter of Lenses, 4 in. Equivalent focus, 16 in. for pictures 6 1/2 x 8 1/2 in. Promenades and Cabinets	187.00	198.00
No. 4	A PATENT LENS. Diameter of Lenses, 4 1/2 in. Equivalent focus, 18 in. for pictures 8x10 in. and under	263.00	277.00
No. 5	A, In Rigid Mount. Diameter of Lenses, 5 in. Equivalent focus, 22 in. for pictures 12x15 in. and under....	342.00	356.00
No. 6	A, In Rigid Mount. Diameter of Lenses, 6 in. Equivalent focus, 30 in. for pictures 16x20 in. and under....	410.00	427.00

DALLMEYER'S PATENT PORTRAIT LENSES Series B, Speed F. 3.5

No. 1	B PATENT LENS, with rack and pinion movement. Diameter of Lenses, 2 in. Equivalent focus, 6 in. For CARTE DE VISITE PORTRAITS. Distance between subjects and lens for standing figure, 12 to 13 ft.	50.00	56.00
No. 2	B PATENT LENS, with rack and pinion movement. Diameter of Lenses, 2 1/4 in. Equivalent focus, 8 1/4 in. Especially constructed for CARTE DE VISITE PORTRAITS, though it may be used with perfect satisfaction for Cabinets also. Distance between subject and lens for a standing figure (Carte de Visite), 15 ft.	\$ 92.00	\$100.00
No. 3	B PATENT LENS. Diameter of Lenses, 3 1/4 in. Equivalent focus, 11 1/2 in. Especially constructed for CABINET PORTRAITS. Distance between subject and lens for a standing figure, 18 ft.; for Carte de Visite, 25 ft.	137.00	148.00
No. 4	B PATENT LENS. Diameter of Lenses, 4 1/2 in. Equivalent focus, 17 in. for pictures 8x10 and under. Distance for a Cabinet standing figure, 25 ft.	274.00	292.00



Dallmeyer's Patent Portrait and Group Lenses

Series D, Speed F. 6

These require about twice the exposure of the A, and nearly four times that of the B series. They are more especially designed for groups, large heads, and full figure work in the studio. For outdoor subjects, these lenses are generally useful, whether for groups, instantaneous effects, architecture or landscapes; for, in common with all our Patent Portrait Lenses, they are free from a central "flare spot," even when used with the smallest diaphragms; and they are entirely free from distortion.

With the exception of Nos. 2 D and 3 D, these Lenses are mounted in rigid setting, i. e., without rack and pinion movement.

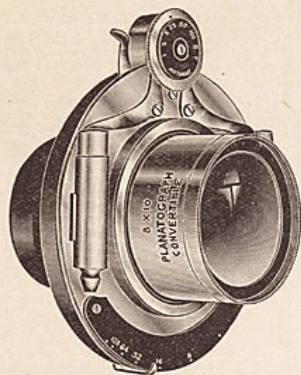
No.	Diameter of Lenses	Equiv. Focus	Size of Portrait or Group	Size of View	Waterhouse Diaphragm	Iris Diaphragm
No. 2 D*	1 1/2 in.	9 in.	5 x 7	5 x 8 in.	\$ 48.00	\$ 52.00
No. 3 D*	2 1/2 in.	12 1/2 in.	6 1/2 x 8 1/2	8x10 in.	65.00	70.00
No. 4 D	2 3/4 in.	17 in.	8 x 10	10x12 in.	94.00	102.00
No. 5 D	3 1/4 in.	19 in.	10 x 12	12x15 in.	120.00	130.00
No. 6 D	4 in.	24 in.	12 x 15	16x18 in.	182.00	190.00
No. 7 D	5 in.	30 1/2 in.	16 x 18	20x22 in.	329.00	344.00
No. 8 D	6 in.	37 in.	20 x 22	21x25 in.	400.00	418.00

*Distance for a full-length Cabinet with No. 2 D, 14 feet (not recommended where a longer focus lens can be used); with No. 3 D, 18 feet; No. 4 D, 25 feet.



Planatograph Rapid Symmetrical Lens

F.8 fitted in B and L Auto Shutter.



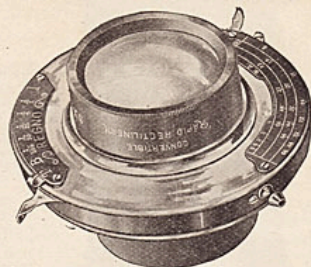
The Planatograph is a high grade Rapid Symmetrical Lens with good speed and covering power. The back combination is corrected so as to work single, thus giving two different focal lengths, making it a valuable lens for Commercial, Architectural, Views, Groups and portrait work. Price includes Lens and Shutter.

Specifications

4 x 5	Diameter 1 inch; Focus 6 inch....	\$10.00
5 x 7	Diameter 1 1/8 inch; Focus 8 inch....	13.50
6 1/2 x 8 1/2	Diameter 1 1/2 inch; Focus 11 inch....	18.50
8 x 10	Diameter 1 3/4 inch; Focus 13 inch....	21.50

Rapid Symmetrical Series V, F-8

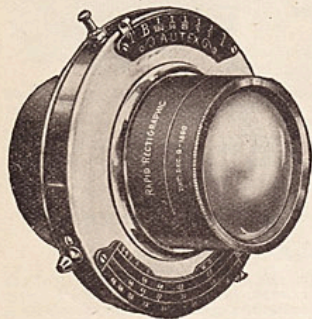
Our Rapid Symmetrical Lens is suitable for all kinds of general photographic work including portraiture and groups. It is of the convertible type, both systems being corrected for use separately, so it can be used for long focus work, copying, enlarging, etc. It is composed of two combinations of imported glass, each one consisting of a crown and flint accurately ground and polished and cemented together. It is compact, so is suitable for the ordinary hand cameras and very desirable for many different purposes.



SPECIAL PRICES

No.	Size	Diameter	Equivalent Focus	Mounted in Barrel	With Regno Shutter	With Auto Shutter
1	3 1/2 x 4 1/4	3/4 in.	5 in.	\$ 7.00	\$ 7.50	\$ 9.50
2	4 x 5	1 "	6 1/2 "	8.00	9.00	11.00
3	5 x 7	1 1/8 "	8 "	9.50	10.50	12.50
4	6 1/2 x 8 1/2	1 1/2 "	10 1/2 "	13.50	15.00	17.00
5	8 x 10	1 3/4 "	12 1/2 "	18.50	20.00	22.00
6	10 x 12	2 "	16 "	28.00	30.00	
7	11 x 14	2 1/4 "	18 1/2 "	32.50	35.00	
8	14 x 17	2 3/4 "	22 "	50.00		
9	17 x 20	3 1/4 "	26 "	65.00		

Rapid Rectigraphic Convertible Lenses F-8



The Rapid Rectigraphic is a superior type of rapid rectilinear lens which really stands in a class by itself between such lenses and the anastigmats.

The formula of the Rapid Rectigraphic requires three elementary lenses in each combination and by this construction the corrections have been carried to a higher degree than is possible in the usual two system formation. The Rapid Rectigraphic demonstrates a remarkably flat field and a very slight trace of astigmatism. Before the introduction of anastigmats this lens was very popular with process workers and many of them are still used for this purpose.

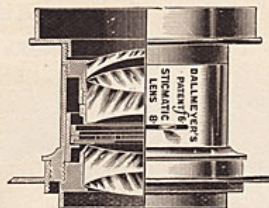
We believe the Rapid Rectigraphic has the distinction of being the first convertible lens ever made.

No.	Size of Plate	Diameter of Lenses	Equivalent Focus	Focus of Back Lens	Focus of Front Lens	Mounted in Barrel or Regno Shutter	Mounted in Auto Shutter
1	4 x 5	7/8 in.	6 1/4 in.	11 in.	14 in.	\$18.00	\$20.00
2	5 x 7	1 1/8 in.	7 1/2 in.	12 in.	18 in.	22.00	24.00
3	5 x 8	1 1/4 in.	8 1/2 in.	14 in.	20 in.	26.00	28.00
4	6 1/2 x 8 1/2	1 1/2 in.	10 1/2 in.	18 in.	24 in.	30.00	33.00
5	8 x 10	1 3/4 in.	12 in.	21 in.	28 in.	38.00	42.00
6	10 x 12	2 in.	16 in.	25 1/4 in.	34 in.	45.00	52.00
7	11 x 14	2 1/4 in.	18 1/2 in.	29 1/4 in.	39 1/2 in.	60.00	67.00
8	14 x 17	2 3/4 in.	22 in.	34 3/4 in.	47 in.	85.00	
9	17 x 20	3 1/4 in.	26 in.	41 in.	56 in.	100.00	

Optional Ilex General Shutter in place of Regno. Ilex Universal in place of Auto.

DALLMEYER STIGMATIC PORTRAIT LENS SERIES II, SPEED F-6

It is intended to be a lens suitable for every class of photography, from portraiture to wide-angle work, and is the quickest stigmatic lens made, except the Dallmeyer Stigmatic Portrait Lenses, Series I, which work in F-4.



No.	Eq. Focal Length in. In.	Plate covered at full aperture F-6	Plate covered at F-16	Dia. of Lens In.	Price with Iris Dia.	Suitable Telephoto Attachment in Brass
1AA	3.25	2 x 2 1/2	.....	.55	\$ 25.50	.....
1A	4	2 1/2 x 3 1/4	.....	.65	27.00	.....
2	4.5	3 1/2 x 3 1/2	5 x 7	.8	30.00	\$ 24.00
3	5.3	3 3/4 x 4 1/4	5 x 8	.9	37.00	24.00
4	6.4	4 x 5	6 1/2 x 8 1/2	1.1	43.00	24.00
5	7.6	5 x 7	8 x 10	1.3	52.00	29.00
6	9	5 x 8	10 x 12	1.6	67.00	29.00
7	10.7	6 1/2 x 8 1/2	12 x 15	1.9	86.00	33.00
8	12.7	8 x 10	14 x 17	2.2	119.00	39.00
9	15.1	10 x 12	16 x 18	2.6	152.00	45.00
10	18	12 x 15	20 x 22	3.1	202.00	54.00

B. & L. Telephoto Attachment

For Distant Buildings, Mountains, Architectural Details, Otherwise Inaccessible Views, etc.

A Telephoto lens is a so-called negative element; that is, a dispersive lens, and it must be used in connection with a photographic objective, which is the positive element. It is always of shorter focal length than the positive. It magnifies the image produced by the latter, so that it forms a valuable adjunct to a photographic equipment, especially since it makes it possible to get pictures of views otherwise inaccessible by reason of distance or location.

The Telephoto affords a very wide range of focus with ordinary bellows extension, and gives the same good perspective as the long-focus lens with the same bellows extension.

Focus Inches	Fitted to Bausch & Lomb Lenses	Fitted to Lenses of Other Manufacture
2 1/2	\$22.00	\$26.00
3	28.00	32.00
4	37.00	42.00

In every instance lenses should be sent to us to secure correct adjustment in fitting Telephoto attachments.

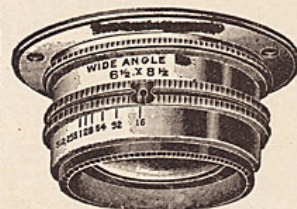
Dynar Anastigmat Lens F-6 (Voigtlander)

Equivalent Focus In.	Free Diameter of Glasses In.	Size of Plate In.	Price of Cells only Without Barrel	Price of Lens Complete
4 1/4	1 1/2	3 1/4 x 4 1/4	\$20.50	\$25.00
5 1/8	1 3/4	4 x 5	21.50	26.00
6 1/2	1 7/8	4 x 5	23.50	28.00
7 1/2	2	3 1/4 x 5 1/2	23.50	28.00
8 1/4	2 1/8	5 x 7	28.00	33.00
10	2 1/4	6 x 8	38.00	43.00
12	2 3/4	6 1/2 x 8 1/2	44.50	50.00
		8 x 10	61.50	68.00

These lenses can be supplied fitted to any shutter at special prices.

B. & L. Wide Angle

With the introduction of this objective it will be evidenced that we have entirely overcome the one great fault which is almost universal with wide-angle lenses — a round field.



Extreme Wide Angle. Series F

No.	Special Wide Angle 100 Degrees Diameter	Focus	Price
1	4 x 5	3 1/2	\$11.00
2	5 x 8	3 1/2	14.00
3	6 1/2 x 8 1/2	3 1/2	18.00
4	8 x 10	7	21.00
5	11 x 14	8	25.00
6	14 x 17	10 1/2	30.00

R. O. C. Symmetrical Wide Angle Lens

An excellent wide angle lens at a moderate price, having an angle of about 80°.

THE PRICE

No.	Size	Equivalent Focus	In Cells Only
1	4 x 5	3 1/2 in.	\$ 5.00
2	5 x 7	5 in.	7.50
3	6 1/2 x 8 1/2	6 1/2 in.	12.00
4	8 x 10	8 in.	15.00

Gundlach-Manhattan Wide Angle Lenses

Series X Extreme Wide Angle Lenses

Furnished only in barrel mount with revolving stops.



No.	Size of Plate	Diameter of Lenses In.	Back Focus In.	Focus In.	Price
1	5 x 7	7/8	2	3 3/8	\$15.00
2	6 1/2 x 8 1/2	1	4 1/4	4 5/8	18.00
3	8 x 10	1 1/4	4 3/4	5 3/8	22.00
4	10 x 12	1 3/4	6	6 1/2	26.00
5	11 x 14	1 7/8	6 3/4	7 1/2	30.00
6	14 x 17	2	8 1/4	9	35.00
7	17 x 20	2 1/4	10	11	45.00

Gundlach-Manhattan W. A. Cells Series H

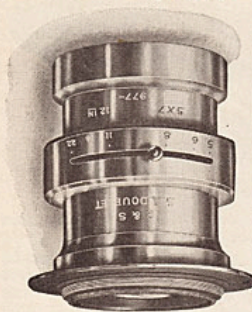
A Wide Angle Lens is a valuable addition to any outfit. It includes from twenty-five to thirty degrees wider field than the Rapid Rectilinear, Rapid Symmetrical, and is particularly valuable for confined situations—interiors and certain architectural subjects. Being much shorter in focus, it permits placing the camera closer to the object.

These Wide Angle Lenses fit the same shutter and interchange with the regular Rectilinear, Rapid Symmetrical Lenses.

PRICE

4x5.....\$5.00 5x7.....\$7.50 6 1/2x8 1/2.....\$12.00

**THE NEW "SMITH"
"Visual Quality" Lens**
Series IV F:4.5



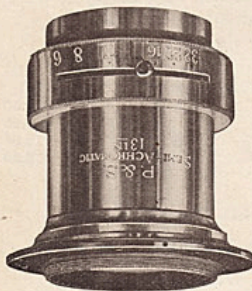
A Lens of Semi-Achromatic quality with firmer drawing—approximately half-way between the softness of the Semi-Achromatic and a fully corrected lens. Practically the "Smith" Quality of F:8 is attained in this lens at F:5. Intended for workers who desire a soft image, but not so much diffusion as in our previous series.

John W. Gillies writes: "Sunday I made the best pictures I ever did, with the best lens I ever handled. Halation was zero at F:5.6. Fine, firm definition at F:7."

Description and Sizes

No.	Size of Plate	Equivalent of Focus	Diameter of Lenses	Diameter of Flange	Weight	Price in Aluminum
1	4 x 5 in.	9 in.	2 1/4 in.	3 1/4 in.	11 oz.	\$28.00
2	5 x 7 in.	12 in.	2 1/2 in.	3 3/4 in.	14 oz.	31.00
3	6 1/2 x 8 1/2 in.	14 in.	3 1/2 in.	5 1/2 in.	32 oz.	41.00

The "Smith" Lens—Series I F:6



Soft Focus, Single Combination Semi-Achromatic Lenses for artistic portraiture, mounted in aluminum with Iris Diaphragm.

Prices strictly net.

No.	Size of plate covered	Focal Length	Diameter of Lens	Diameter of Flange	Angle of View	Price
1	4 x 5	9 in.	1 3/4 in.	2 1/2 in.	31°	\$16.00
2	5 x 7	12 in.	2 1/4 in.	3 1/4 in.	32°	20.00
3	6 1/2 x 8 1/2	14 in.	2 1/2 in.	3 3/4 in.	33°	27.00
4	8 x 10	16 in.	3 in.	4 1/4 in.	33 1/2°	31.00
5	11 x 14	18 in.	3 1/2 in.	4 5/8 in.	33°	44.00

Doublet—Series II F:6

Hand Camera Lenses

No.	Size of plate covered	Equivalent of Focus	Diameter of Lenses	Diameter of Flange	Weight	Price in Aluminum
1	4 x 5	8 in.	1 1/2 in.	2 1/2 in.	4 1/2 oz.	\$22.00
2	3 1/2 x 5 1/2	8 in.	1 1/2 in.	2 1/2 in.	4 1/2 oz.	22.00
3	5 x 7	12 in.	2 1/4 in.	3 1/4 in.	11 oz.	25.00

No. 1 is made with a special compact mount for use on cameras of the Graflex or Reflex type.

The "Smith" Doublet—Series III F:4.5
Especially for Portraiture.

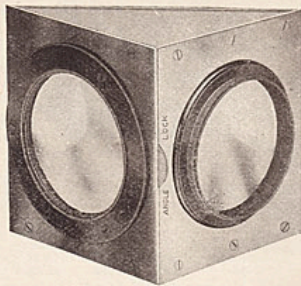
This series of S. A. Doublets places in your hands a strictly portrait lens with sufficient speed combined with the softness that has always been characteristic of our S. A. Lenses. Little if any retouching of negatives made with these lenses is necessary. Further words regarding these lenses would be superfluous.

Try Them and See!

No.	Size of plate covered	Equivalent of Focus	Diam. of Lenses	Diam. of Flange	Wgt.	Distance from sitter to lens required for 2 in. head	PRICE in Aluminum	PRICE with Wollensak Studio Shutter
1	5x7	12 in.	2 1/4 in.	3 1/4 in.	14 oz.	7 ft.	\$26.00	\$38.00
2	6 1/2x8 1/2	14 in.	3 in.	4 in.	32 oz.	9 ft.	37.00	53.00
3	8x10	16 in.	4 1/4 in.	6 in.	56 oz.	10 ft.	48.00	66.00

Process Prisms

COOKE PHOTO-ENGRAVING PRISMS



Into the manufacture of these prisms is put the finest material and workmanship that money can buy. The accuracy of each surface is guaranteed, while the convenience of the mounting is unique. Standard screw-thread are provided (see below). One thread receives Cooke Process Lenses interchangeably, while the other receives the hood of the lens as shown in the illustrations. A small lever clamps the prism at the desired angle. Cheaper prisms are, of course, to be had, but it is poor economy to buy them.

interchangeably, while the other receives the hood of the lens as shown in the illustrations. A small lever clamps the prism at the desired angle. Cheaper prisms are, of course, to be had, but it is poor economy to buy them.

For Lens No.	Size of Face	Price	For Lens No.	Size of Face	Price
14p	2	\$51.50	18p	3 1/2	\$ 98.00
15p	2 1/2	58.00	19p	3 1/2	98.00
16p	2 1/2	64.50	19ap	4 1/2	150.00
17p	3	80.00	19bp	4 1/2	150.00

Photographic Prisms

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

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

The mountings are so arranged as to bring the surface of the prism as close as possible to the front of the lens, thus securing the greatest effective angle of the lens and the maximum illumination and speed. The glass is of the purest quality and greatest possible light transmitting properties.

Figures in the margin show correct size.

Aperture of Prism Inches	For Bausch & Lomb-Zeiss Apochr. Series VIII	For Bausch & Lomb-Zeiss Protar. Series IIa	For Bausch & Lomb-Zeiss Tessar. Series IIb	Fitted to B. & L. Zeiss Lenses	Fitted to Lenses of Other Make
2 1/2	.....	No. 6	No. 8	\$ 54.00	\$ 56.00
3	No. 1	No. 7	No. 9	82.00	84.00
3 1/2	No. 2	No. 8	No. 9a	100.00	102.00
4	No. 3	No. 9	No. 10	140.00	142.00
4 1/2	No. 4	.....	No. 11	220.00	225.00
5	No. 5	.....	.....	310.00	315.00

In estimating the size of prism which is required for a particular lens, a size should be selected which is least equal to the diameter of the hood.

Cooke Spirit Levels

FOR CAMERAS AND OTHER PURPOSES

We stock spirit levels for attaching to cameras. The levels are made by Taylor & Hobson and are of the finest quality. They range in price from 75c to \$1.50.

No.	Finish	Price	No.	Finish	Price
1	Brass	\$.075	1FB	Black	\$.075
1B	Black	.75	4	Brass	1.50
1F	Brass	.75			



Nos. 1 and 1B		Nos. 1F and 1FB		Nos. 4 and 4A		No. 5	
No.	Finish	No.	Finish	No.	Finish	No.	Finish
1	Brass	1F	Black	4A	Nickel	5	Brass

Cooke Focusing Magnifier

It is almost always a difficult matter for the photographer to determine just when the image on his focusing screen is at its sharpest. Focusing in dull lights frequently becomes the merest guess-work, especially if one's eyesight is not of the best.

Of the greatest possible assistance is the Focusing Magnifier here illustrated. It draws out for use like a telescope and is placed on the ground-glass of the camera to magnify the image while focusing. It closes for compactness, and has a screw adjustment to suit the eye-sights of different users. It ensures accurate focusing, makes a cloth unnecessary, and often saves plates, especially in dull lights. "In workmanship it's like a Cooke Anastigmat." Price, postpaid.....\$2.50



Ingento Focusing Glasses

Nos. 1 AND 2 POCKET STYLE

These pocket focusing glasses have fine magnifying power; mounted in nickel frame with protection case.

No. 1 7/8-inch, each.....\$0.35
No. 2 1 1/8-inch, each......50

No. 3 INGENTO FOCUSING GLASS
This Focusing Glass has double combination lenses and screw adjustment; finely finished and lacquered.

Price, each.....\$1.00

No. 4 INGENTO FOCUSING GLASS
This is a telescopic adjustable focusing lens, mounted in brass frame, lacquered.

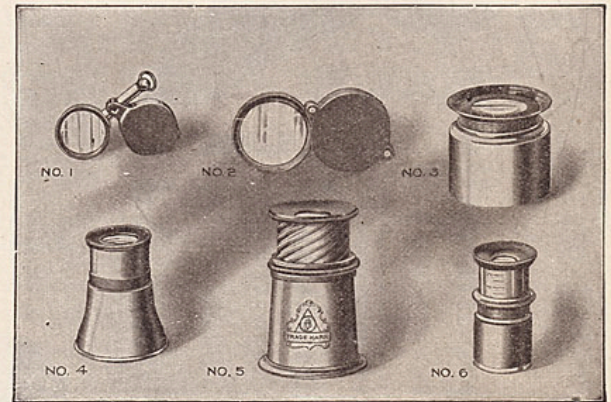
Price, each.....\$0.75

No. 5 INGENTO FOCUSING GLASS
High grade, with double combination lenses; worm screw adjustment; made of brass. It is handsomely finished with leather bound outside tube, eye-piece dull black; other parts bright.

Price, each.....\$2.25

No. 6 INGENTO FOCUSING GLASS
This focusing glass is very compact, and has great magnifying power, with double combination lenses and engraved graduated scale on inner tube for minute focusing.

Price, each.....\$2.25



COOKE STANDARD FLANGES

FOR ATTACHING LENSES TO CAMERAS

These flanges possess an important advantage. Their screws are formed within one to two thousandths of an inch above the normal sizes, and are thus freely interchangeable. A flange of this form is included with every Cooke lens not mounted in a between-lens shutter. Special sunk flanges can be made to order.

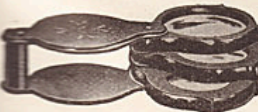
Diameter of Screw Inches	Price	Diameter of Screw Inches	Price
1 1/4	\$1.00	2 3/4	\$1.50
1 1/2	1.00	3	1.50
1 3/4	1.00	3 1/2	2.00
2	1.00	4	2.50
2 1/4	1.25	4 1/2	3.50
2 1/2	1.25		

STANDARD ADAPTERS TO CARRY LENSES IN FLANGES LARGER THAN THEIR OWN

These adapters contain the improved facilities for engagement and release, with the advantage of holding all Cooke lenses with their diaphragm indexes in one position convenient for use. They are guaranteed interchangeable with other T. & H. lens fittings. Special Adapters can be made to order.

Diameter External Screw Inches	Diameter Internal Screw Inches	Price	Diameter External Screw Inches	Diameter Internal Screw Inches	Price
1 1/2	1 1/4	\$1.00	2 1/2	2 1/4	\$2.25
1 3/4	1 3/4	1.00	2 3/4	2 1/2	2.50
2	1 3/4	1.00	3	2 1/2	2.75
2 1/4	2	1.00	3 1/2	3	2.75
2 1/2	2	1.50	3 3/4	3	3.00
		2.00	4	3 1/2	3.50

B. & L. Triple Lens Magnifiers



Seven different magnifications can be obtained with one of these magnifiers, as the three lenses of different foci are used singly or in their various combinations. They are made in the bellows shape only. In the following table the range of possible magnifications, from the weakest single lens to the strongest combination, is recorded in each instance.

Cat. No.	Diameter of Lenses in.	E. F. of Lenses in.	Range of Magnifications	Price
103	1/2, 3/4, 1	1, 1 1/2, 1 3/4	7 to 30x	\$0.70
112	3/4, 1, 1 1/4	1 1/2, 2, 2 1/2	4 to 20x	.85
121	1/2, 3/4, 1	1 1/2, 2, 2 1/2	4 to 20x	1.00

BRASS FLANGES FOR BAUSCH & LOMB LENSES

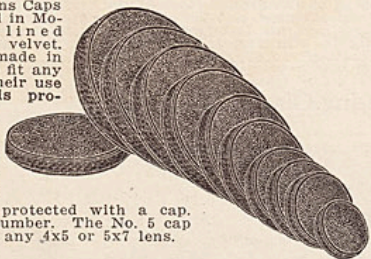
Number	1	2	3	4	5	6	7	8	9	10	11
Diameter, inches.....	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	5	5 1/2	6
Price, each.....	\$0.50	\$0.50	\$0.75	\$1.00	\$1.00	\$1.25	\$1.50	\$1.75	\$2.00	\$2.50	\$3.00

Goerz Brass Flanges

For Dagor 0, 1, 2.....	\$0.50	For Dagor 7, 7a.....	\$1.25
For Syntor 0, 1.....	.50	For Celor 4, 5, 6.....	1.25
For Celor 0.....	.75		
For Dagor 3.....	\$0.75	For Dagor 8.....	\$1.50
For Syntor 3.....	.75	For Celor 7.....	1.50
For Celor 1.....	.75	For Celor 8.....	2.00
For Dagor 4, 5, 6.....	\$1.00	For Dagor 9.....	\$1.75
For Syntor 4, 6.....	1.00	For Celor 7a.....	1.75
For Celor 2, 3.....	1.00	For Dagor 10, 11.....	2.00

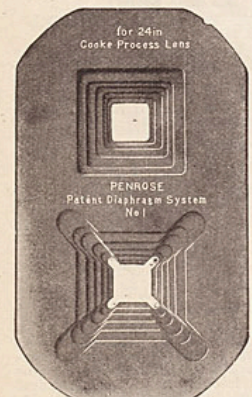
Lens Caps

These Lens Caps are covered in Morocco and lined with plush velvet. They are made in all sizes to fit any lens. By their use the lens is protected from dirt and dust, which is the general cause of scratches.



All lenses should be protected with a cap. Order by number. The No. 5 cap fits almost any 4x5 or 5x7 lens.

No.	Size, in-side diam. Inches	Price each	No.	Size, in-side diam. Inches	Price each	No.	Size, in-side diam. Inches	Price each
5	1 1/4	\$0.25	18	2 1/8	\$0.60	31	2 7/8	\$0.70
6	1 1/2	.25	19	2 1/4	.60	32	2 11/8	.70
7	1 3/4	.25	20	2 3/8	.60	33	3	.70
8	1 7/8	.30	21	2 1/2	.60	35	3 1/4	.80
9	1 3/4	.30	22	2 3/8	.60	37	3 1/2	.80
10	1 7/8	.40	23	2 3/4	.60	38	3 3/8	.80
11	1 3/4	.40	24	2 7/8	.60	39	3 3/4	.80
12	1 11/8	.40	25	2 3/4	.60	41	3 1/2	.80
13	1 3/4	.40	26	2 3/8	.70	43	3 3/4	.90
14	1 11/8	.50	27	2 3/4	.70	45	3 3/4	.90
15	1 3/4	.50	28	2 11/8	.70	47	3 3/4	.90
16	1 11/8	.50	29	2 3/4	.70	49	4	1.00
17	2	.50	30	2 11/8	.70			

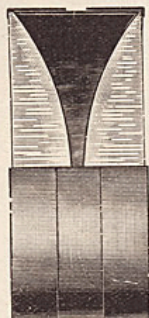


Penrose Patent Diaphragms

These patent diaphragms are for half-tone photo-engraving with any Cooke Process Lenses. A full description will be mailed free on request.

For Lens No.	Price per Set in Morocco-Covered Case	For Lens No.	Price per Set in Morocco-Covered Case
14p	\$ 9.50	18p	\$12.00
15p	9.50	19p	12.00
16p	10.00	19ap	15.50
17p	10.75	19bp	15.50

Condensing Lenses



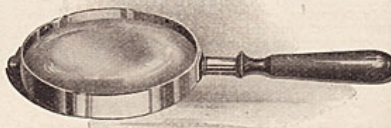
The condensing lenses listed below are accurately ground and polished, and will be found much superior to the imported lenses commonly employed for this purpose. When condensers are wanted mounted, we supply them in our improved mounts, which are so constructed that there is the least possible danger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

Diameter in Inches	One Lens mounted	Pair of Lenses Mounted
6 1/4	\$ 3.50	\$12.00
8	7.00	20.00
9	9.00	25.00
10	12.00	32.00
12	24.00	57.00
14	36.00	82.00

Goerz Leather Caps, Plush Lined

Each	Each		
For Dagor 0, 1, la.....	\$0.40	For Syntor 4.....	\$0.55
For Dagor 2, 3.....	.45	For Syntor 6.....	.60
For Dagor 4, 5.....	.55	For Celor 0, 1.....	.45
For Dagor 6, 7, 7a.....	.60	For Celor 2.....	.55
For Dagor 8.....	.80	For Celor 3, 4, 5, 6.....	.60
For Syntor 0, 1, la.....	.40	For Celor 7.....	.80
For Syntor 2, 3.....	.45	For Celor 7a, 8.....	1.00

Reading and Retouching Glasses



These glasses are the best, every one being guaranteed. They have ebonized wood handles, and nickel-plated rims. The lenses are ground from extra white glass, of very strong curvatures, giving the best possible magnification for different diameters.

Diameter	Price
2 inches	\$0.60
2 1/2 inches	.80
3 inches	1.00
3 1/2 inches	1.50
4 inches	2.00
4 1/2 inches	2.25
5 inches	2.50

Reducing Glasses

Very handy in examining large work that has to be reduced to a smaller size.

Diameter	Price
2 inches	\$1.00
2 1/2 inches	1.50
3 inches	2.00
3 1/2 inches	3.00
4 inches	4.00

Wratten & Wainwright Filters

These filters are in accordance with the very latest scientific developments, and are universally recognized as the very best to be obtained.

We will supply the gelatine film, but most customers prefer to have it protected by being cemented between glass.

The filters are cemented in the three following qualities of glass according to the purpose for which they are required:

A. Optical plate of the highest quality, prepared by Adams Hilger, Ltd.

B. White optical glass of good quality, working satisfactorily on ordinary photographic lenses.

C. White optical glass of less perfect figure, suitable for visual work or such purposes as spectroscopy or photomicrography, when the filter is placed in the path of a dispersed beam. Unless otherwise specified filters for photography are cemented in B glass.

The Wratten orthochromatic filters or screens are supplied in three strengths:

Series K-1. A very light screen to the eye, but of high correcting power. It requires double the normal exposure upon the Panchromatic plate, and about three times the normal exposure upon other color sensitive plates. The ideal screen for short exposure and hand camera work.

Series K-2. A strong screen increasing the exposure about four times on the Panchromatic plate, and about ten times on other color sensitive plates. The standard correcting screen and is usually supplied when particulars as to depth are not given.

Series K-3. This screen affords correct color rendering upon the Panchromatic plate. Requires five times the normal exposure and is not recommended for plates other than the Panchromatic. This screen is largely used for picture copying, and for other work requiring exactly truthful rendering in monochrome of varied colors.

Contrast Filters

These filters are very useful in commercial work, and will be supplied in the following grades:

G. Strong yellow, valuable in photographing oak and pine woods.

Tri-Color. A—Orange Red. B—Green. C—Blue.

A. For photographing mahogany and rosewood, and similar articles.

B. For photographing typewriting, figure rugs, carpets, etc.

For three-color work. For photographing dark mahogany, blue prints, etc.

THE PRICE Filters

Gelatine Film, unmounted, K-1, K-2, K-3, G, A, B, C, F, per sq. in.	\$ 0.10
Minimum charge	.20

Orthochromatic Filters

For General Orthochromatic Work. Gelatine Film. Sets of three, K-1, K-2, K-3, 2 in. sq., per set.....	\$ 1.00
Separate Filters, K-1, K-2, K-3, 2 in. sq., each.....	.35
Separate Filters, K-1, K-2, K-3, 3 in. sq., each.....	.75

Contrast Filters for Commercial Photography

Complete set of eight Filters, 3 in. sq., cemented in B glass, packed in neat case, K-1, K-2, K-3, G, A, B, C, F, per set.....	\$20.00
Set of three Filters, 3 in. sq., cemented in B glass and packed in neat case, K-3, G, A, per set.....	7.50
Separate Filters: any of the above, 3 in. sq., cemented in B glass, each.....	2.50

Contrast Film Filters

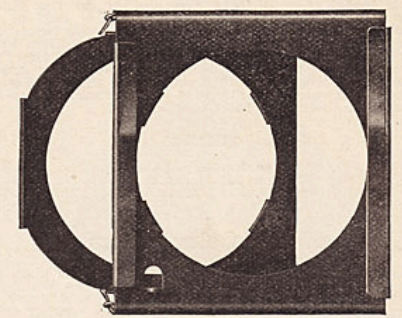
Set of three Filters, 3 in. sq., K-2, G, A, per set.....	\$ 2.25
Set of four Filters, 3 in. sq., A, B, C, K-3, per set.....	3.00
Separate Filters, 3 in. sq., K-1, K-2, K-3, G, A, B, C, F, each.....	.75

Tri-Color Filters

(Gelatine Film) Set of three Filters, 2 in. sq., A, B, C, per set.....	\$ 1.00
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NOTE—We also supply special filters for process work. Prices on application.

Eastman Adjustable Filter Holder



Adjustable Filter Holders—For 2-inch square filters. Will fit lens mounts 7/8 inch to 1 1/8 inch diameter.....	\$ 2.50
Adjustable Filter Holders—For 3-inch square filters. Will fit lens mounts 1 3/8 inch to 2 1/8 inch diameter.....	1.50
Filter Test Chart—Contains Orthochromatic (K), Contrast and Monochrome Gelatine film filters for viewing the subject to be photographed....	.75

Wratten & Wainwright Filters

Filter	Unmounted Mounted		
	Circles or Squares in B Glass	Light Squares in B Glass	Light Metal Cell
1/4 inch.....	\$0.20	\$0.75	\$1.30
1 1/4 inch.....	.20	.85	1.50
1 1/2 inch.....	.20	.95	1.60
1 3/4 inch.....	.25	1.10	1.75
1 7/8 inch.....	.30	1.15	1.85
2 inch.....	.30	1.25	2.00
2 1/4 inch.....	.35	1.40	2.20
2 1/2 inch.....	.45	1.50	2.40
2 3/4 inch.....	.65	1.90	2.80
3 inch.....	.75	2.50	3.50
3 1/4 inch.....	1.10	3.15	4.00
3 1/2 inch.....	1.25	3.75	5.00
4 inch.....	1.60	4.50	6.00
5 inch.....	2.50	6.25	8.00

Filters ordered in sets are tested to work together and are packed in leather cases, \$1.25 extra.

Wratten Experimental Film Filter Book

Contains 30 Tri-Color Gelatine Film Filters, 2x3 inches..... \$ 5.00

Wratten & Wainwright Filters Cemented in Flats

3 x 3 1/2 sets of 4 (tri-color and K-3).....	\$ 68.00
3 1/4 x 3 1/4 sets of 4 (tri-color and K-3).....	75.00
3 1/2 x 3 1/2 sets of 4 (tri-color and K-3).....	85.00
4 x 4 sets of 4 (tri-color and K-3).....	105.00

Wratten Photometric Filters

Cemented in "B" Glass
2 1/4 inches square, sets of 9..... \$ 25.00

Wratten "M" Filters in Sets of 9

2 inches square, Gelatine Film.....	\$ 2.50
2 inch cemented in "C" glass in leather case.....	7.50
4 inch cemented in "C" glass in leather case.....	20.00

Wratten Copyboard Chart

Per dozen..... \$ 0.50

Wratten Ink Testers

Each..... \$ 1.25

Warwick Time Meters

Each..... \$ 5.00

Wratten Ink Control

Per set..... \$ 6.00

Kodak Sky Filters

The Kodak Sky Filters are similar to the Kodak Color Filters, except that only the upper half of the filter is stained a yellow color to relieve the brightness from the sky, while the lower half of the filter being colorless, permits of a normal exposure for the foreground. The Sky Filter is intended only for use in landscape photography, to equalize the great difference of light between the sky and foreground. They are mounted the same as the Color Filters.

PRICES

- Nos. 1, 2, 8 and 9, each.....\$0.50
- Nos. 3, 4 and 6, each......75
- Nos. 5 and 7, each.....1.00

Kodak Color Filters

These filters are of great value in outdoor photography, and for all subjects embracing colors which act weakly on the sensitive film, as they hold back the strong blue and violet rays, affording the weaker colors time to record. The Kodak Color Filters are mounted in the same manner as the Kodak Portrait Attachment.

PRICES

- No. 1. For Vest Pocket, Nos. 1 and 1A Folding Pocket Kodaks, Nos. 0 and 2 Brownies, Nos. 2 and 2A Folding Pocket Brownies.....\$0.50
- No. 2. For No. 2A Brownie......50
- No. 3. For No. 1A Autographic Kodak Junior, both single and double lens; Nos. 1A and 3 Autographic Kodaks, and No. 3 Folding Brownie....75
- No. 4. For Nos. 2 and 3 Bull's-Eye and No. 3 Brownie......75
- No. 5. For No. 3A Autographic Kodak, 4 and 4A Kodaks, No. 3A Folding Brownie.....1.00
- No. 6. For Nos. 1A and 3 Autographic Kodaks Special, Nos. 1A and 3 Autographic Kodaks, with Kodak Anastigmat, f.7.7 lens and No. 1 Autographic Kodak Special......75
- No. 7. For No. 3A Autographic Kodak Special and No. 3A Autographic Kodak, with Kodak Anastigmat, f.7.7 lens.....1.00
- No. 8. For No. 1 Autographic Kodak Junior, both single and double lens and Vest Pocket Autographic Kodak Special......50
- No. 9. For No. 3 Autographic Kodak with Kodak Automatic shutter......50

B. & L. Ray Filters

FITS LENSES

No.	Inside Diameter	Ic	II b.	VII*	VIIa	Price
A1	1 1/4	13-14	3-4-5-5k	1-2-3	3-5-7	\$4.00
B1P	1 1/4	13-14	3-4-5-5k	1-2-3	3-5-7	4.00
A2	2	15-15a	5a-6	4-5	6-8-9-10-11-13	6.00
A3	2 1/4	16-17	7-8	6-7	12-14-15-16-17-19	9.00
B1	1 1/4	13-14	3-4-5-5k	1-2-3	3-5-7	4.00
B2	2	15-15a	5a-6	4-5	6-8-9-10-11-13	6.00
B3	2 1/4	16-17	7-8	6-7	12-14-15-16-17-19	9.00

*Use screen ring furnished with lens to attach filter.

B. & L. Precision Ray Filter

No.	Clear Aperture	For Apo-Tessar Lenses	For Apo-Protar Lenses	For Apo-Tessar Lenses	Price with Adapter
2P	2 3/4	0, 1	6, 7	8, 9, 9a	\$50.00
3P	3 3/4	2, 3, 4	8, 9	10	65.00

Allowance for adapter if not required, \$1.50.

B. & L. Special Ray Filter

- No. 3. Special Ray Filter with adapter, clear aperture, 2 3/4 in.....\$15.00
 - No. 4. Special Ray Filter with adapter, clear aperture, 3 3/4 in.....20.00
 - No. 3a. Set of 3 No. 3 Filters with one adapter..40.00
 - No. 4a. Set of 3 No. 4 Filters with one adapter..55.00
- For list of lenses to which they can be fitted, see table under Precision Ray Filters.

Goerz Compensating Filters

Made from New Jena Glass

These filters are made of a new Jena glass and furnished either singly or in sets of two of different density. On account of the great transparency of the glass used, instantaneous exposures are possible, when light conditions are favorable. The necessary increase in exposure, when these filters are used, is about 2 and 5 times, respectively, provided orthochromatic plates are used. Orthochromatic plates should always be used with any filter, otherwise results are problematical.

Dagor or Syntor Lens	Number	Single Screen Any Density Each
Dagor or Syntor Lens.....	0, 1, 1a	\$4.50
Dagor or Syntor Lens.....	2, 3	6.00
Dagor or Syntor Lens.....	4, 5, 6	9.00
Celor Lens.....	0, 0a	4.50
Celor Lens.....	1	6.00
Celor Lens.....	2, 3	9.00

These filters are made to screw into front cell of our lenses.

Special size made to order; prices on request.

The Ingento Ser. A Ray Filter

This Ray Filter can be used with any make of dry plates on the market. It gives true color value to all objects in a picture, whether landscapes, snow scenes, interiors, flowers, portraits, etc. It should be used in photographing mountains or distant objects. It prevents halation, as it absorbs the rays that cause it. The most beautiful cloud effects are obtained with it. Mounted in nickel plated cells with adjustable springs.

No.	Diameter in.	Price
0.....	%	\$0.75
1.....	1 1/8	.75
2 (for box cameras).....		.75
3.....	1 1/4	1.00
4.....	1 1/2	1.00
5.....	1 3/4	1.25
6.....	2	1.50
7.....	2 1/4	1.75
8.....	2 1/2	2.00
9.....	2 3/4	2.25
10.....	3	2.50
11.....	3 1/4	3.00
12.....	3 1/2	3.50
13.....	4	4.25
14.....	4 1/2	5.00

Ingento Color Filter, Ser. B

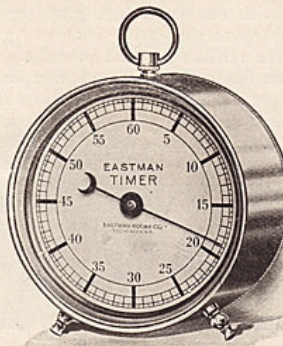
(Wallace's Visual Luminosity)

This filter is also of great value to commercial photographers in photographing colored packages, labels and furniture, where it is important that the grain of the wood be recorded in the photograph. Every Ray Filter is spectroscopically tested and fully guaranteed.

PRICES

No. 0. Diam. % in.....	\$1.00
No. 1. Diam. 1 1/8 in.....	1.25
No. 2. For Box Cameras.....	1.25
No. 3. Diam. 1 1/4 in.....	1.50
No. 4. Diam. 1 1/2 in.....	1.50
No. 5. Diam. 1 3/4 in.....	2.00
No. 6. Diam. 2 in.....	2.25
No. 7. Diam. 2 1/4 in.....	2.50
No. 8. Diam. 2 1/2 in.....	3.00
No. 9. Diam. 2 3/4 in.....	3.25
No. 10. Diam. 3 in.....	3.50
No. 11. Diam. 3 1/4 in.....	4.00
No. 12. Diam. 3 1/2 in.....	4.50
No. 13. Diam. 4 in.....	5.25
No. 14. Diam. 4 1/2 in.....	6.00

Eastman Timer



For timing Gaslight or Bromide papers, Copies, Lantern Slides and all photographic exposures in minutes, seconds or half-seconds.

Indispensable to all users of Developing papers, as it insures uniform prints, also for tank developing.

Can be read at a glance across the exposing room or in the dim light of the dark room.

You'll wonder how you ever got along without it Price, each.....\$2.00

Focal Plane Meter

(WATKINS')

The design and working of this meter is the same as the regular Bee, but is adjusted for instantaneous work with focal plane shutters. It shows speeds up to 1-4000 of a second. Price.....\$1.25

Queen Bee Meter

(WATKINS')

This differs from the regular Bee Meter chiefly in its more ornate construction, being silver plated, equipped with a convex ivory dial, lettered with hand engraving on the metal rim and provided with a leather-covered pocket case. It has a chain pendulum for timing seconds. The Queen Bee Meter is made for those who desire the finest workmanship and material obtainable. Price.....\$4.50

Wynne's Exposure Meters

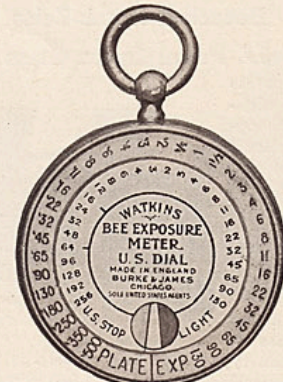


An invaluable accessory for exposures on doubtful subjects. The dial revolves so as to expose a sensitive strip of paper to light. When the standard tint shown in the revolving rings and read off exposure. Full directions and a table of plate speeds come with each meter. State whether you wish F values or Uniform System values.

PRICE

- Meters, nickel plated.....\$2.50
- Deadmatch Paper for refills......15

Bee Meter



A pocket instrument for estimating exposures. Perfectly reliable.

PRICE

- Bee Meters.....\$1.25
- Refills......25

Watkins' Kinematograph Exposure Meter

INVENTED BY ALFRED WATKINS

This is a scientifically accurate exposure meter, which shows in a few seconds the correct lens aperture to use under any condition of light, at any time and in any place, or if the lens aperture is constant, it determines the correct shutter opening. Every operator should have one of these perfect little meters. No larger than a lady's watch. Carried in the vest pocket.

Besides being an accurate Meter, this instrument is supplied with a chain and ball, which can be used as a half-second pendulum, thus making a watch unnecessary for timing. It is also of value in timing the crank revolutions, one revolution per half second being considered standard. Weight with Chain and Pendulum, 2 1/2 ounces. Nickel plated and polished. Price, each, complete with instructions.....\$3.00

Exposure Meter Sundries

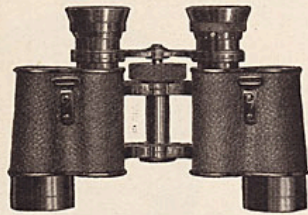
- All meters are furnished complete with instructions and speed card, but a charge will invariably be made for them if wanted separately or afterward.
- Speed card, from actual test of principal American plates.....\$0.05
- Instruction booklet for any pattern Watkins meter......10
- Steadfast disk refill (with tints) for Bee and dial meters......25
- Steadfast ribbon refill (with tints) for the Standard meter......25
- Refills for Print meter......25
- Extra dial for meter, either U. S. or F system for Queen Bee......50
- Extra dial for meter, either U. S. or F system for Bee Meter......25
- Extra dial for Bee Meter, either U. S. or F System, for Autochrome plates......50

BINOCULARS

Bausch & Lomb-Zeiss

3X Prism Opera Glass

This glass is what the highest type of opera glass should be—optical efficiency of the first order in unusually compact form. It is scarcely to be compared with the ordinary opera glass of the Galilean type. The field of view is more than twice as extensive, measuring 25 feet across at a distance of 100 feet, with an angular field of 13°.



The magnifying power (3X) has been found to be the most satisfactory for the theater and is also sufficient for observations out-of-doors at moderate distances. The definition is remarkably clear and the illumination brilliant even to the very edge of the field.

Bausch & Lomb-Zeiss

6X, 24mm Diameter Stereo Binocular

This is an eminently satisfactory glass for the study of birds and animals. Because of its greater illumination it is distinctly superior to glasses of higher powers for work in the woods or in foliage, where the sunlight is of necessity limited. While always a popular bird glass, we have increased its value by enlarging the objectives.

This is also a desirable instrument for use at races and games, or to observe any objects in motion. The field is large and the magnification sufficient for such a purpose. It gives an angular field of 6.8°, or a linear field of 120 yards wide at a distance of 1,000 yards.

Bausch & Lomb

10X, 45mm Diameter Stereo Prism Marine Glass

We have designed this glass particularly to meet the requirements of Navy and Army officers and of navigators in general. It is a wonderfully effective combination of a high power and brilliant illumination, accomplished by coupling exceptionally large

objectives with our usual high-grade optics. The increased stereoscopic feature is also of great value in noting the relative position of vessels, tracing a distant coast line or in similar observations.

The United States government has purchased a large number of these glasses, which have given very general satisfaction. We believe that no other glass of so high a power can be more satisfactorily used in cloudy, stormy weather, or in a dusky light. Sportsmen and yachtsmen accordingly appreciate it as much as the more serious purposed officials of the government.

Bausch & Lomb-Zeiss

8X, 21mm Diameter Stereo Binocular

We have made this glass for a number of years and because of the very general satisfaction it has given we retain it on our list. It is very popular as a **tourists' glass**. The features are its unusual compactness and cheapness for an instrument of its quality and possibilities.

Illumination, of course, is sacrificed to a certain extent for the sake of magnification and economy. It is a very valuable instrument for the price, however, and is more useful than the preceding ones of the series for examining objects at a distance. The angular field measures 5.1°, giving a linear field 90 yards wide at a distance of 1,000 yards.

This is the lightest and most compact of any of our regular binoculars, hence particularly easy to carry and to hold. It weighs only 15½ ounces and measures, when closed, 4½ inches in length and 5 inches in width.

Bausch & Lomb-Zeiss

12X, 30mm Diameter Stereo Binocular

This glass possesses the highest magnifying power which we thus far have considered practical to embody in a hand telescope. It is impossible to hold a glass of higher power steady enough in the hands to obtain a clear and well defined image.

While the illumination and the field are of necessity secondary to the magnification in this glass, we have offset these difficulties as far as possible by enlarging the objectives materially. The result is a glass which will give remarkable results in good light, particularly in work at great distances. It is specially recommended as a **day marine glass**, also for military men, sportsmen and explorers for use wherever a high magnification is the chief consideration.

SUMMARY—SPECIFICATIONS AND PRICES

Linear Magnification (Power)	Diameter of Objectives in mm.	Objective Field		Weight in oz.	Dimensions in Inches		Price
		Angular	Linear in Yds. at 1,000 Yds.		Length	Width	
3X	12	13°	243 (25 ft. at 100 ft.)	7½	2½	3¾	\$40.00
6X	21	6.8°	120	21	3½	5½	50.00
6X	30	8.4°	150	24½	4¾	5½	60.00
8X	21	5.1°	90	15½	4¾	5	50.00
8X	25	6.6°	115	21	3½	5½	55.00
12X	30	3.3°	58	25	3¾	5½	75.00
10X	45	4.6°	79	31½	7¾	6¾	90.00

(B. & L. Marine)

SHUTTERS

Bausch & Lomb Volute Shutter

Theoretically and practically the proper place for a shutter is at the diaphragm point of the lens. An Iris Diaphragm, opening and closing at that point, gives the maximum illumination with the minimum motion, absolutely uniform exposure, and an increase in the depth of focus, covering power and definition of the lens, with no distortion of the image, the entire picture impressing itself upon the plate from the moment the shutter begins to open until it closes.

Volute represents the highest type of this form of shutter. It is the most rapid, compact, convenient, dust-proof, durable and elegant Iris Diaphragm Shutter ever offered. It gives bulb and time exposures and works automatically at varying speeds very closely approximating from 3 seconds to 1-150, 1-100 and 1-75 second respectively in Nos. 1, 2 and 3.

All speeds are controlled by our patent pneumatic retarding device. An exposure of 1-150th second is fast enough for athletes, race horses, express trains and the like in motion with very good sized images. There is no other Iris Diaphragm Shutter giving equal speed.

The shutter is set by simply moving the pointer at the top. Any size opening, from pin hole to largest stop, is obtained by placing the lower pointer opposite the stop number desired. No extra stops or diaphragms are needed.

No.	Will Take Lenses With Opening of	Prices			When Lenses Are Sent Us	
		Automatic Exposure Seconds	Volute Shutter Only	Fitted to Bausch & Lomb Lenses	Fitted to Lenses of Other Manufacture	
1	1 in.	3 to 1-150	\$17.00	\$19.50	\$20.50	
2	1½ in.	3 to 1-100	18.50	21.50	23.00	
3	2 in.	3 to 1-75	20.00	24.00	26.00	

Auto Shutter

The Auto takes the place of the Autex and shows many marked improvements over the same in both construction, finish and operation. The five-leaf system has been adopted for making exposures, as this gives a star-shaped aperture, the points of the star reaching to the edge of the plate, thereby giving the greatest possible illumination.

Exposure can be made either by pressure on the push button or with wire release, which is furnished as a regular equipment with each shutter. The various exposures are governed by the indicator at the top of shutter, and in addition to time and bulb, it is possible to obtain three fast and three slow instantaneous exposures, and can be opened for focusing by setting the lever at "F."

It is fitted with Iris diaphragm and is handsomely finished in black enamel, with nickel trimmings.

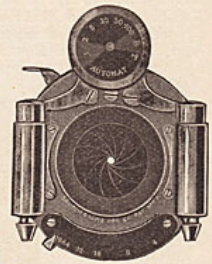
The Auto automatically sets itself after each exposure, and being small in size and light in weight, is recommended as being a thoroughly practical and reliable shutter for general work.

No.	Light Aperture	Price	No.	Light Aperture	Price
1	¼ in.	\$7.00	3	1½ in.	\$10.00
2	1 in.	8.00	4	1¾ in.	12.00

Bausch & Lomb Automat Shutter

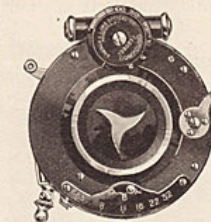
This shutter is strictly automatic, in that it is always set ready for exposure and is released by simple pressure of the pneumatic bulb or finger release.

The speed can be made to vary from approximately 1 second to about 1-100th second. It has time device by which shutter may be opened and closed by two successive pressures and bulb device by which shutter may be kept open with one pressure. Speeds are controlled by our patent retarding device. An Iris Diaphragm gives any size stop, the stop values being read off on a scale graduated specially for the particular lens used with the shutter.



No.	Will take lenses with opening of	Price	
		Fitted to lenses of our manufacture	Fitted to lenses of other manufacture
1	23 mm.	\$10.00	\$11.00
2	30 mm.	12.00	13.00
3	40 mm.	14.00	15.00

Compound Shutter



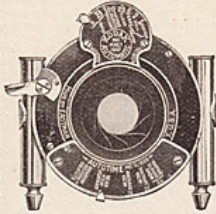
The Compound shutter is an automatic and setting shutter combined, in which the adjustments are prevented from interfering with each other by an ingenious locking device. Both bulb and time exposures can be made automatically, while speeds of from one second to the maximum speed indicated in the price list can be given automatically when the shutter is set.

No.	Opening Inches	Maximum Speed Seconds	When Lenses Are Sent Us		
			Compound Shutter Only	Fitted to Bausch & Lomb Lenses	Fitted to Lenses of Other Manufacture
00	½	1-300	\$11.00	\$13.00	\$14.00
0	⅔	1-250	11.00	13.00	14.00
1	⅞	1-200	12.50	15.00	16.00
2	1	1-150	14.00	17.00	18.50
3	1¼	1-100	17.00	20.50	22.50
4	1½	1-75	18.50	22.50	24.50
5	1¾	1-75	28.00	33.00	35.00
0 Stereo	⅞	1-200	20.00	24.00	26.00
1 Stereo	⅞	1-200	23.50	28.50	30.50

6-in. Antinous Release	.50
12-in. Antinous Release	.75
Stereo separation, 3¼ inches.	

Kodak Autotime Scale

The Kodak Automatic is an unusually accurate shutter, adjusted for time, bulb and graduated speeds from one second to 1/100 of a second. It is fitted with Kodak Autotime Scale and is supplied as a special equipment on the Nos. 1A, 3 and 3A Autographic Kodaks.



With the Autotime Scale there is little possibility of making incorrect exposures out of doors, as it automatically indicates the correct time of exposure and stop opening to use with the prevailing light.

These scales are supplied regularly on the Kodak Automatic shutter, and at an extra charge for the following standard shutters and lenses, and can be readily attached by anyone. Always order by style letter as below.

Style A. For use with Kodak Ball Bearing shutter, 2½x4¼ and 3¼x4¼, when fitted with double lens only.
Style AA. For use with Kodak Ball Bearing shutter, 3x5¼, 3¼x5½ and 4x5, when fitted with double lens only.

Style B. For use with F. P. K. Automatic, 2½x4¼ and 3¼x4¼, No. 1 S. V. (Blair or Premo) Automatic, or No. 1 B. & L. S. V. Automatic shutters.

Style BB. For use with F. P. K. Automatic, 3¼x5½ and 4x5, No. 2 S. V. (Blair or Premo) Automatic, or No. 2 B. & L. S. V. Automatic shutters.

Style C. For use with Kodak Automatic shutter, 3¼x4¼.

Style CC. For use with Kodak Automatic shutter, 3¼x5½ and 4x5.

Style D. For use with B. & L. Automatic and Century Automatic shutters, 3¼x4¼.

Style DD. For use with B. & L. Automatic and Century Automatic shutters, 3¼x5½ and 4x5.

Style DDD. For use with B. & L. Automatic shutter, 4¼x6¼.

Style I. For use with Kodak Ball Bearing shutter (with double lens), 2¼x3¼.

Style J. For use with Kodak Ball Bearing shutter (with single lens), 2¼x3¼.

Style L. For use with Kodak Ball Bearing shutter (with single lens), 2¼x4¼.

Price, any of above styles.....\$1.00

Style H. For use with No. 0, 3¼x4¼ Compound shutter.

Style HH. For use with No. 1, 3¼x5½ and 4x5 Compound shutter.

Style HHH. For use with No. 2, 4¼x6¼ and 5x7 Compound shutter.

Price, any style for use with Compound shutter...\$1.50

Ilex Shutters

These shutters embody an entirely new principle in shutter construction. The retarding speeds are controlled by a chain of wheels instead of the pump and valve system usually employed.

Ilex Shutters are unaffected by cold, heat, dampness or dust, and their action is always sure and accurate. The light apertures are sufficiently large to accommodate anastigmat lenses and to permit their use at full opening. The threads and separations are standard, which enables us to supply anastigmat lenses in cells which fit these shutters without special adjustments.

All of the Ilex Shutters are very light and compact and can be fitted to all the popular folding hand and pocket cameras.

Ilex Acme

This shutter is designed especially to meet the demand for a high-grade, extremely rapid shutter which embodies the Ilex features.

The Ilex Acme gives absolutely accurate speeds under all conditions. It has a four blade star system, insuring even illumination over the whole plate. It has a speed of 1/300th of a second in all sizes. The speeds obtainable are 1, ½, 1/5, 1/25, 1/100, 1/200 and 1/300 of a second. It works without jar or recoil. It is fitted with an Iris Diaphragm.



No.	Light Aperture	Lens Opening	Outside Diameter	Price
No. 1.....	1 in.	1 1/8 in.	2 1/2 in.	\$14.00
No. 2.....	1 in.	1 1/8 in.	2 3/4 in.	16.00
No. 3.....	1 1/4 in.	1 3/4 in.	3 in.	18.00
No. 4.....	1 1/2 in.	2 1/8 in.	3 3/4 in.	20.00

Ilex Universal

This shutter is strictly automatic in action. It embodies the same general principles of the Ilex construction as the Acme. It is the fastest automatic shutter ever produced, giving exposures up to 1/150th of a second and has all the intermediate speeds down to one second, in addition to time and bulb. The Ilex wheel arrangement insures speed and accuracy. It has a four-blade star system, similar to the Acme. Supplied with Iris Diaphragm.



No.	Light Aperture	Lens Opening	Outside Diameter	Price
No. 1.....	1 in.	1 1/8 in.	2 1/2 in.	\$10.00
No. 2.....	1 in.	1 1/8 in.	2 3/4 in.	11.00
No. 3.....	1 1/4 in.	1 3/4 in.	3 in.	12.00
No. 4.....	1 1/2 in.	2 1/8 in.	3 3/4 in.	14.00

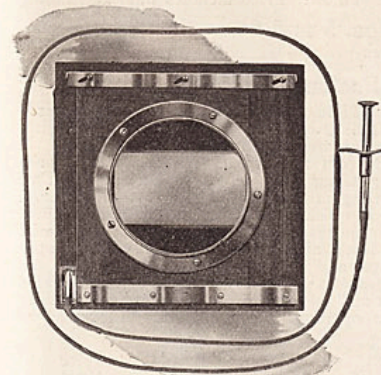
Optimo

Many attempts have been made in the past few years to produce a thoroughly satisfactory between the lens shutter fast enough to photograph successfully rapidly moving objects, but simple, compact and reliable. The five leaves revolve in making the exposure, one end passing through the opening and the other end taking its place, which makes high speed possible, and in opening and closing it shows a star-shaped aperture, the points of the star reaching to the edges of the opening, thus giving the greatest possible illumination to the plate. Besides "bulb and time" the Optimo has a range of automatically controlled exposures ranging from one second to 1/300th of a second.



No.	Light Aperture	Price
1.....	3/4 in.	\$14.00
1a.....	3/4 in.	15.00
2.....	1 in.	16.00
3.....	1 1/4 in.	18.00
4.....	1 1/2 in.	20.00

The Auto Studio Shutter
Patent Applied For.



The Auto Studio Shutter is a curtain shutter, and the curtain principle is the correct one in shutter construction. The shutter works back of the lens, and is silent. It is so constructed that it opens from the center and closes to the center, giving a perfect uniform exposure of the plate. It requires no setting. The shutter is automatic in its action. It is always ready for use, and being simple in construction and free from complicated mechanism it will not easily get out of order. A mere pressure on the cable release opens the shutter and by another movement the shutter automatically closes. An ingenious device on the release permits the shutter being locked open for focusing for time exposures, and by merely pressing on the release it will return the shutter to its normal position for slow instantaneous work.

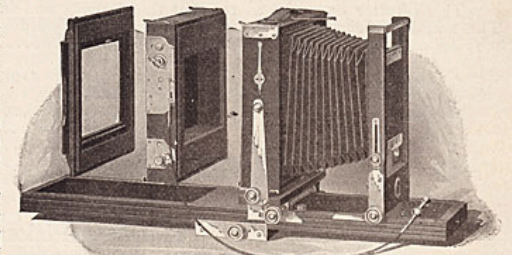
The Auto Studio Shutter fits in the camera as a substitute for a lens board, having a separate lens board fitted to the shutter, which enables the user to have a series of lens fitted to these boards, which interchange in the shutter, thus allowing any number of lenses to be used with one shutter.

The Auto Studio Shutter does away with the old fashioned pneumatic release, it being provided with a new and ingenious cable release, easy to work and reliable. The release doesn't get out of order, it is dependable, doesn't fail to operate at the moment when it is expected to. There is no rubber tubing and bulb to be continually replaced. The cable release operates the shutter by a positive action, the inner cable being made of fine-braided steel wire, with the outer casing closely wound brass wire, and the whole covered with a braid, affords one of the most permanent shutter releases ever invented.

The Auto Studio Shutter No.	PRICE	Measurements		Opening	Price
		7x7 inches	8x8 inches		
No. 0.....		7x7 inches	8x8 inches	3 1/2 x 3 1/2 inches	\$ 8.00
No. 0, for 11x14 Commercial Cameras.....		8x8 inches	9x9 inches	5 inch	9.00
No. 2.....		9x9 inches	10x10 inches	5 inch	9.00
No. 3.....		10x10 inches	10x10 inches	6 inch	12.00
No. 4.....		10x10 inches			

Graflex Focal Plane Shutter
Patent Applied For.

For ultra rapid photography, the Graflex Shutter presents numerous advantages over those working in front of, between or behind the lens. Its position immediately in front of the sensitive plate or film insures the distribution of light with equal intensity upon every portion of the sensitive surface. In addition, the principle upon which it is constructed not only gives the maximum in speed, but at the same time the plate receives a greater volume of light in a given time than with any other type of shutter.



To secure successful results of rapidly moving objects, such as horse and automobile races, railroad trains, football games, baseball contests, etc., there is no style of shutter that can equal the Graflex. While constructed primarily for high speed work, it is also adapted for slow automatic exposures and time exposures of any duration. By simply turning a small dial the speed can be varied from "time" to one one-thousandth part of a second. The maximum speed of an ordinary shutter placed at the diaphragm of a lens does not exceed one one-hundredth of a second, and many shutters of this class do not give shorter exposures than one-fiftieth of a second.

The curtain of the Graflex Shutter is made on an entirely new principle—in one long piece, with apertures ranging from full openings to 1/8 of an inch. This insures an absolutely uniform aperture for the admission of light, and not a wedge-shaped opening, as is so often the case with shutters having a double adjustable curtain.

The Graflex Shutter is instantly set for any exposure by a half turn of a winding key. Dials on the outside indicate both the size of curtain aperture and the tension of roller spring controlling the speed.

The Graflex Shutter is as easy to operate as an ordinary shutter, and can be adapted to all makes of view and folding plate cameras. We fit it for the Eastman View, without extra charge, but when ordered for other cameras we add cost of adapting.

Graflex Focal Plane Shutter, 4x5.....	PRICE	Graflex Focal Plane Shutter, 6 1/2 x 8 1/2.....	Price
\$15.00		\$17.50	
Graflex Focal Plane Shutter, 5x7.....	16.00	Graflex Focal Plane Shutter, 8x10.....	20.00
Graflex Focal Plane Shutter for Eastman View Cameras, 5x7.....		Graflex Focal Plane Shutter for Eastman View Cameras, 6 1/2 x 8 1/2.....	14.00
Graflex Focal Plane Shutter for Eastman View Cameras, 6 1/2 x 8 1/2.....		Graflex Focal Plane Shutter for Eastman View Cameras, 8x10.....	15.50
Graflex Focal Plane Shutter for Eastman View Cameras, 8x10.....			17.00

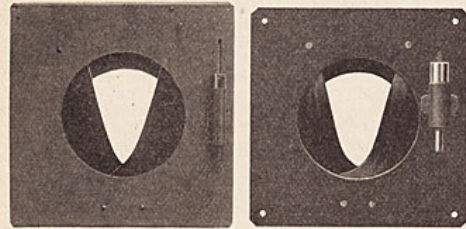
Packard Shutter No. 5

For Time Exposures

This Shutter has four wings and is the same as the No. 6 below, without the instantaneous attachment. It has the advantage of a very large opening in a very small shutter. Price includes bulb and tubing.

Packard-Ideal Shutter Nos. 5 and 6

For Time Exposures



No. 5

No. 6

Packard-Ideal Shutter No. 6

For Time and Instantaneous Exposures

This Shutter is the same as the No. 5 with the addition of the instantaneous attachment. It is changed from time to instantaneous exposures by simply pushing in or pulling out a small pin which goes through the front board into the shutter. This change is quickly made from the outside, and the shutter requires no setting as it works automatically, setting itself after each exposure without opening the wings, and is always ready. At no time during an exposure is there any jar or vibration, and used as a "time" shutter, it is absolutely noiseless or silent in opening. Price includes bulb and tubing.

DIA. OPENING		OUTSIDE DIMENSIONS		PRICE	
1 1/2	3 3/4 inches square	\$4.00	\$5.50	3 3/4	6 inches square
1 3/4	3 1/2 inches square	4.00	5.50	3 1/2	6 1/2 inches square
2	4 inches square	4.00	6.00	3 3/4	7 inches square
2 1/4	4 1/2 inches square	4.50	6.00	4	7 1/2 inches square
2 1/2	4 3/4 inches square	5.00	6.00	4 1/2	8 inches square
2 3/4	5 inches square	5.00	6.50	5	8 1/2 inches square
3	5 3/4 inches square	5.00	6.50		

The Following Sizes Made to Order in No. 5 Only

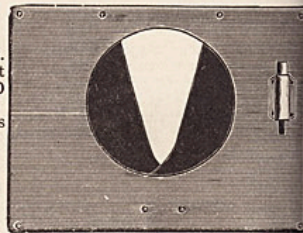
DIA. OPENING	OUTSIDE DIMENSIONS	PRICE	DIA. OPENING	OUTSIDE DIMENSIONS	PRICE
5 1/2	9 1/2 inches square	\$ 8.00	7	11 3/4 inches square	\$11.00
6	10 1/4 inches square	9.00	8	13 1/4 inches square	12.00
6 1/2	11 inches square	10.00			

Packard Shutter No. 1

For Time Exposures

This Shutter opens so as to light the drapery and foreground most. The smallest sizes are sufficiently rapid for any outdoor work, except moving objects. Price with bulb and tubing. Each \$4.00

DIA. OPENING	OUTSIDE DIMENSIONS	DIA. OPENING	OUTSIDE DIMENSIONS
1 1/2	3 x 3 1/2	3	5 x 7
1 3/4	3 x 3 3/4	3 1/4	5 1/2 x 7 1/2
2	3 1/2 x 4 1/2	3 1/2	6 x 8
2 1/4	4 x 5 1/4	3 3/4	6 x 8 1/4
2 1/2	4 1/2 x 5 3/4	4	6 1/2 x 8 1/2
2 3/4	4 3/4 x 6	4 1/2	7 x 9



No. 1

Thornton-Pickard Shutters

MODEL A

This model is for general use. It fits the lens hood and is easily adapted to fit more than one size lens. It is equipped with a speed indicator for instantaneous exposures from 1/10 to 1/90 of a second, in the smaller sizes. By the addition of the exposure valve exposures can be made automatically for 1/2, 1/4, 1/2 and 3 seconds. These shutters are supplied with cord wind.

MODEL B

This shutter is of exactly the same construction as Model A, but is arranged to be screwed to the lens board, acting practically as an inside shutter. The back is fitted with velvet, insuring a light-tight joint when attached to the lens board. The lens flange is screwed to the detachable panel which fits into the front of the shutter.

Diameter in Inches	Model A (for front of lens)		Diameter in Inches	Model B (behind lens)	
	Model A	Model B		Model A	Model B
1 1/2	\$5.50	\$5.75	3 1/2	\$10.00	\$10.50
1 3/4	5.75	6.25	4	12.00	12.50
2	6.00	6.75	4 1/2	14.00	14.50
2 1/2	6.75	7.75	5	14.50	15.50
3	8.25	9.00			

Bulb release will be supplied unless Antinous is especially ordered.
 Extra Bulb Release.....\$0.75 Extra Antinous Release.....\$0.75
 Extra panels for Model B shutters, up to 2 1/2 inches, \$0.60; up to 3 1/2 inches, \$0.85; up to 5 inches, \$1.00

The New Silent Shutter

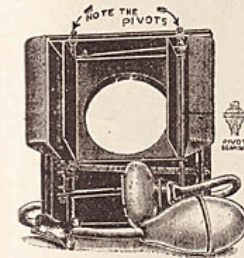
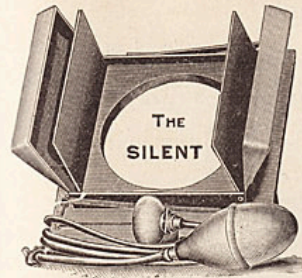
It's Perfection, That's All

You know what it means to have a shutter that will open with absolutely NO SOUND.

Absolutely noiseless in opening is one of the valuable characteristics of this shutter. Every photographer who has experienced repeated failures owing to the "click" of his shutter in opening, causing his subject to look toward the lens at the vital moment of exposure, or some member of a group, or an individual sitter to move just at the wrong time, will instantly appreciate the great value of the "Silent" shutter, which will enable him to make exposure while his subject is unconscious of it.

The "Silent" is extremely simple, not likely to get out of order and the most compact of any professional shutter made; the 3 1/2-inch opening being but 5 1/4 x 5 3/4 outside.

Made in the following sizes: 2, 2 1/2, 3, 3 1/2 and 4 inches, \$5.00; 4 1/2-inch, \$6.00; 5-inch, \$7.00; 5 1/2-inch, \$8.00; 6-inch, \$9.00.
 Extra bulb and tube, \$0.75.



The New Pivot-Bearing Silent Shutter

Our improved, patented pivot bearing shutter is, without a doubt, the world's greatest studio shutter. It is made with a steel frame, in which conical brass bearings are set. These bearings are threaded at one end (as indicated by small arrows in cut) so that any wear can be taken up at any time, thus eliminating all sound or friction from that source. These in connection with our patented Cupped Air Cushions make it an

ABSOLUTELY NOISELESS SHUTTER.

Speed about 1/4 second and up. Provided with bulb, 6 feet of tubing and "shut-off."

Opening	Outside	Opening	Outside	Price
4 in.	6 x 6 1/2	4 in.	6 x 6 1/2	\$ 7.00
4 1/2 in.	6 1/2 x 7 3/4	4 1/2 in.	6 1/2 x 7 3/4	8.00
5 in.	7 x 7 3/4	5 in.	7 x 7 3/4	9.00
5 1/2 in.	7 1/2 x 7 3/4	5 1/2 in.	7 1/2 x 7 3/4	10.00
6 in.	8 x 8 1/2	6 in.	8 x 8 1/2	11.00
7 in.	9 x 9 1/2	7 in.	9 x 9 1/2	12.00
8 in.	10 x 10 1/2	8 in.	10 x 10 1/2	13.00

Studio Shutter

This shutter works between the lens, has ten leaves, which form the iris diaphragm, and has been made practically noiseless if operated correctly, as it has cushions at all points of contact in the mechanism.

Exposures can be made by bulb only, making it possible to give instantaneous exposures from about one-fifth of a second up to any desired length of time. As all exposures are made with the leaves opening and closing at the center (thereby diaphragming) a greater depth of focus is obtained when using this style shutter, than is possible with winged shutters when using the lens at the same working aperture.

Practically all portrait lenses can be fitted with the Studio shutter, but only those of our manufacture can be mounted correctly without having them specially fitted, as all lenses, especially those of the Anastigmat type, require very accurate fitting and adjustment.

Our charge for this work is very reasonable, and the average fitting can be completed and returned within forty-eight hours from its receipt at our factory.



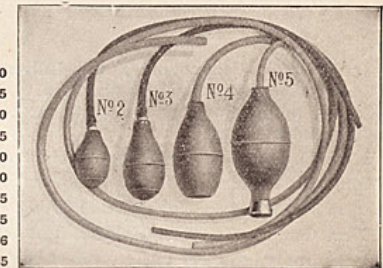
No.	Outside Diameter	Light Opening	Will fit Portrait Lenses as follows		Price
			Vesta	Vitax	
.....	3 1/2 in.	2 1/2 in.	No. 3	.....	\$10.00
.....	4 1/4 in.	2 3/4 in.	No. 4	.....	12.00
.....	4 1/2 in.	2 3/4 in.	No. 5	No. 1	14.00
.....	5 in.	3 1/2 in.	.....	No. 2	16.00
.....	6 in.	4 in.	.....	No. 3	18.00

Antinous

For all Small Shutters, 6 in. Each.....\$0.50
 For larger, 12 in. Each......75
 Cable Release for Kodaks. Each......25

Camera Bulbs and Tubing

No. 1.	For small Pocket Cameras, 6-inch Tubing.....	\$0.20
No. 2.	For larger Pocket Cameras, 6-inch Tubing.....	.25
No. 2 Special.	For special Kodaks, 8-inch Tubing.....	.30
No. 3.	For View Cameras, 12-inch Tubing.....	.35
No. 4.	For View Cameras, 18-inch Tubing.....	.40
No. 5.	For Studio Cameras, 36-inch Tubing.....	.50
No. 5.	For Studio Cameras, Bulb only.....	.35
No. 6.	For Studio Cameras, 4 1/2-inch Bulb only.....	.45
	Red Tubing, per foot.....	.06
	White Tubing, per foot.....	.05



The Century Universal Studio Outfit

In designing and constructing the Century Universal Studio Outfit, we have produced an equipment that embodies the highest degree of efficiency with elegance of design and richness of finish.

The camera is made of fine selected mahogany and cherry, highly polished, the metal work being lacquered brass. It is provided with vertical and horizontal swings operated by worm screw and sector.

The focusing adjustments are identical with those on the Century Grand Camera.

The Automatic Cabinet Attachment is readily put in place by swinging the focusing screen around at the side of the camera, a double action hinge allowing the screen to be swung entirely out of the way.

The Universal Holder and the Curtain Slide Cabinet Holder, which form a part of the Attachment, are ebonized, adding richness and dignity to the outfit.

The Century Automatic Attachment is the same as supplied with the Century Grand Studio Outfit.

In child portraiture the Century Semi-Centennial Stand is indispensable, as the platform may be elevated to 49 inches or depressed to within 14 inches of the floor. This brings the axis of the lens into correct relation to the position of the subject and eliminates the incorrect perspective and false drawing obtained with stands of the ordinary sort. The back of the stand may be raised and lowered by turning a conveniently located handle. The tilting device is positive in its action, self-locking, and does not jar the camera upon being operated.

The platform is raised and lowered by pinions engaging vertical racks attached to uprights, a unique locking device holding the platform in any required position, irrespective of the size or weight of camera carried. A jack for locking the stand in position on the floor, and noiseless rubber-tired casters are included.

Century Grand Portrait Camera No. 2, 8 x 10. Focal capacity, 25 inches. Size of Lens Board, 9 x 9 inches.

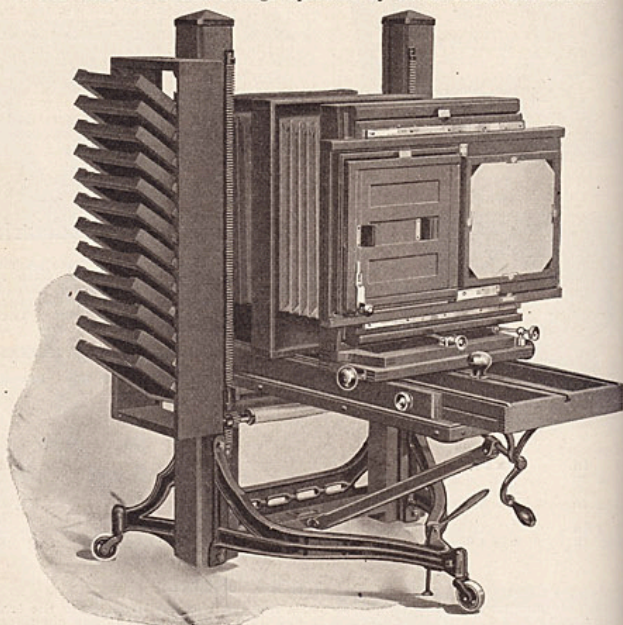
Century Grand Portrait Camera No. 2, 11 x 14. Focal capacity, 43 inches. Size of Lens Board, 10 x 10 inches

THE PRICE

	8x10	11x14
Century Universal Studio Outfit, complete, including Grand Portrait Camera No. 2 with Century Universal Holder, Automatic Cabinet Attachment and one Curtain Holder (5 x 7, 4 3/4 x 6 1/2 or 4 1/4 x 6 1/2, size optional), Century Semi-Centennial Stand with adjustable rack to carry twelve plate holders.....	\$81.00	\$120.50
Century Universal Studio Outfit, complete, including Grand Portrait Camera with Century Universal Holder, Automatic Attachment for 8x10 Holders, and one 8x10 Curtain Holder, Century Semi-Centennial Stand.....		128.00

When Furnished Separately

Grand Studio Camera only, with Universal Holder	35.00	69.00
Century Semi-Centennial Stand.....	25.00	27.50
Cabinet Automatic Attachment with one holder (5 x 7, 4 3/4 x 6 1/2 or 4 1/4 x 6 1/2, size optional as above)	19.00	22.00
Extra Curtain Slide Holder or Cabinet Attachment, Hard Wood, Ebonized finish.....	2.50	2.50
Automatic Attachment for 8 x 10 holder with one 8 x 10 Curtain Holder.....		29.50
Extra 8 x 10 Curtain Holder, Hard Wood, Ebonized finish		5.50
Extra Century Universal Holder.....	8.00	16.00
Rack, grooved to carry twelve cabinet holders.....	2.00	2.00



11x14 Universal Studio Outfit with 8x10 Automatic Attachment in Position.

The Century Grand Studio Outfit

In beauty of finish and line this outfit will add materially to the attractiveness and dignity of any studio.

The Camera furnished with this outfit is the No. 2 Century Grand Portrait. This instrument is made of the finest selected mahogany and cherry, highly polished, the metal work being of lacquered brass. Both vertical and horizontal swings are provided, quickly operated by means of a worm screw movement.

Focusing is rendered particularly easy by the employment of two large focusing knobs, one at either side of the camera, while the draw knob in the center locks the camera back in the required position. Another feature that adds much to the ease of operation is the Century method of supporting the back frame on small "V" metal rollers. This permits the back to be moved smoothly and easily without friction.

The Century Automatic Cabinet Attachment is entirely different in design from any other, easier to operate, smoother in manipulation, lighter, more compact and positive in action.

The attachment consists of a wooden frame to which is adjusted a sliding carriage of sufficient length to accommodate a reversible curtain slide holder at one end and a ground glass screen at the other. After focusing, the carriage is moved from left to right by simply pushing a knob at the bottom, the focusing screen being thus replaced by the plate holder, the curtain slide by the same movement being automatically withdrawn. One movement shifts the ground glass, places the holder in the exact position for exposure and withdraws the slide. Reversing the movement closes the curtain slide and places the ground glass screen in focusing position.

Pressing a spring at the top of the sliding carriage adjusts the attachment so that two pictures may be made on one plate. The attachment will be supplied to take either 4 1/4 x 6 1/2, 4 3/4 x 6 1/2, or 5 x 7 holders for either the 8 x 10 or 11 x 14 camera.

For the 11 x 14 camera, a new attachment may be fitted, taking 8 x 10 plates. This attachment is reversible and permits of two exposures on the 8 x 10 plate. The same holder may also be adapted for 6 1/2 x 8 1/2 plates; if this is desired, it should be so specified when ordering. The Automatic Cabinet Attachment may be instantly attached to the camera, by swinging the camera focusing screen around to the side, a double action hinge permitting the screen to swing entirely out of the way.

The Century Universal Holder with curtain slide will take all sizes of plates from the full capacity of the camera down. In addition to the Universal Holder, one Curtain Slide Holder (5 x 7, 4 1/4 x 6 1/2, or 4 3/4 x 6 1/2, size optional) is supplied. Both holders are supplied in ebonized finish.

The Century Grand Outfit includes the No. 2 Century Stand and practical use has demonstrated it to be one of the best stands ever made. Dispensing with weights, beveled gears, ratchets or set screws, this stand is devoid of all annoying complications and is rigid, strong and durable.

The top of the stand is raised or lowered by means of a readily accessible handle attached to a large wheel. This wheel is within easy reach of the operator, and owing to the accurate balance of the stand, moves with the utmost freedom. One revolution of the wheel is sufficient to raise or lower the camera three full inches—a most important consideration. The tilting device for raising the back of the camera is marvelously simple and rapid in action. The clamping of the steel rod supporting the top is automatic, and when the camera is to be tilted forward, the top is simply lifted to the desired angle and the camera remains in position. A light pressure of the thumb is all that is necessary when the top is to be lowered. The stand is easily adapted to accommodate cameras of different weights, by means of a simply adjusted counter balance in the base. The stand is fitted with rubber bound casters, and camera stand jack for holding stand rigid during exposure. Top of stand covered with fine felt, all metal parts beautifully oxidized. A mahogany rack, grooved to carry ten cabinet holders, is conveniently attached to side of stand.

Century Grand Portrait Camera No. 2, 8 x 10.

Focal capacity, 25 inches. Size of lens board, 9 x 9 inches.

Century Grand Portrait Camera No. 2, 11 x 14.

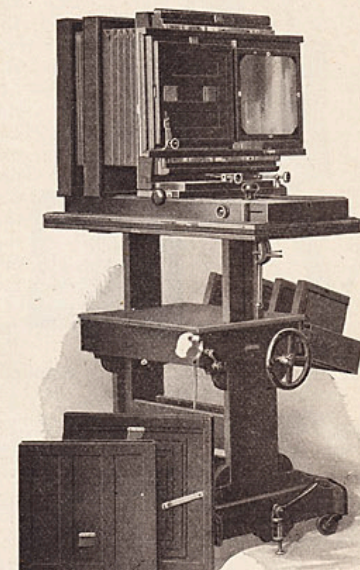
Focal capacity, 43 inches. Size of lens board, 10 x 10 inches.

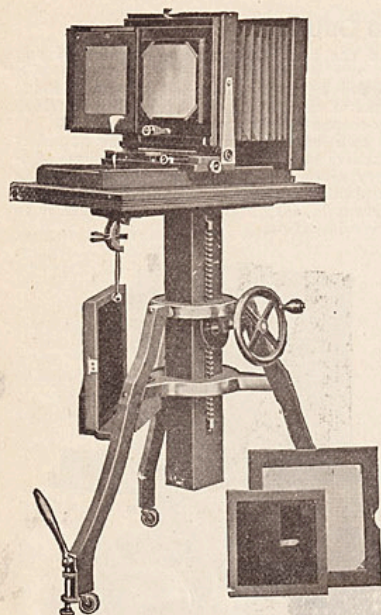
The Price

	8 x 10	11 x 14
Century Grand Studio Outfit, complete, including Grand Portrait Camera No. 2 with Universal Holder, Automatic Cabinet Attachment and one Curtain Holder (5 x 7, 4 3/4 x 6 1/2, or 4 1/4 x 6 1/2, size optional), No. 2, Camera Stand with adjustable rack to carry ten plate holders	\$83.50	\$122.00
Century Grand Studio Outfit, complete, including Grand Portrait Camera No. 2 with Universal Holder, Automatic Attachment for 8 x 10 Holders and one 8 x 10 Curtain Holder, No. 2 Camera Stand		129.50

When Furnished Separately

Grand Studio Camera No. 2 only with Universal Holder	35.00	69.00
Century Studio Stand No. 2.....	27.50	29.00
Automatic Cabinet Attachment with one holder (5 x 7, 4 3/4 x 6 1/2, or 4 1/4 x 6 1/2, size optional as above)	19.00	22.00
Extra Curtain Slide Holder for Cabinet Attachment, Hard Wood Ebonized finish.....	2.50	2.50
Automatic Attachment for 8 x 10 holder with one 8 x 10 Curtain Holder		29.50
Extra 8 x 10 Curtain Holder, Hard Wood Ebonized finish		5.50
Extra Century-Universal Holder.....	8.00	16.00
Rack, grooved to carry ten cabinet holders.....	2.00	2.00





Century Studio Outfit No. 4

This outfit is especially designed for use in a confined space, and all parts are made as light and compact as is consistent with good workmanship. The camera is the Century Portrait No. 4, 8x10. It is of most rigid construction, built of mahogany and cherry, and splendidly finished; provided with vertical and horizontal swings and rack and pinion focusing device. The back frame bolster is fitted with metal V'd guides sliding in V'd grooves in bed, providing easy and accurate focusing and freedom from vibration. A binding screw is provided to securely lock the back frame in any desired position after focusing. Focal capacity 22 inches, lens board 9x9 inches.

The Cabinet Attachment is not automatic, but takes the regular 5x7 Century Curtain Slide Holder, which is fitted at one end of the attachment and ground glass at the other, permitting the operator to focus and slide the carriage so as to bring the plate holder in position for exposure, drawing the slide by hand. These holders provide for loading plates in either position. When plates are loaded in a horizontal position, the Cabinet Attachment permits two exposures on a 5x7 plate. The regular 8x10 Light Weight Curtain Slide Holder in ebony is fitted, which is reversible on camera, also detachable 8x10 Ground Glass Screen.

An adapter frame with spring actuated ground glass can be fitted to the above camera, permitting the use of Eastman View Holders, taking plates or cut film.

The No. 4 Century Stand is supplied.

THE PRICE

Century Studio Outfit No. 4, including Century 8x10 Portrait Camera No. 4, with 8x10 Light Weight Curtain Slide Holder, Cabinet Attachment and Cabinet Curtain Slide Holder, No. 4 Century Stand and Holder Rack.....	\$50.00
When Furnished Separately	
Century Portrait Camera No. 4 with Curtain Slide Holder.....	28.00
Century Camera Stand No. 4.....	12.00
Century Cabinet Attachment No. 4 with 8x10 Curtain Slide Holder.....	\$10.00
Extra No. 4 8x10 Light Weight Curtain Slide Holder, ebonized finish.....	5.50
Extra Curtain Slide Holders for Cabinet Attachment, ebonized finish, each.....	2.50
8x10 Spring Actuated Ground Glass Back to take 8x10 Eastman View Plate or Cut Film Holder.....	12.50
Adapter Frame adapting the above back to camera.....	2.50

Century Studio Outfit No. 5

The No. 5 Studio Outfit consists of 5x7 Studio Camera with sliding back, legs, stand and double plate holder, and is particularly well adapted for branch studio or resort work.

The camera has 14-inch bellows, swing back, sliding plate holder carrier, and micrometer focusing device.

The back is reversible, accommodating the regular 5x7 double plate holders.

The back may be locked in three positions, permitting one, two or four exposures on a 5x7 plate.

The Plate Holder is the regular 5x7 Eastman Double View Holder, equipped with light excluding cut off. The slide may be inserted cornerwise without danger of fogging the plate; a valuable feature in a busy studio.

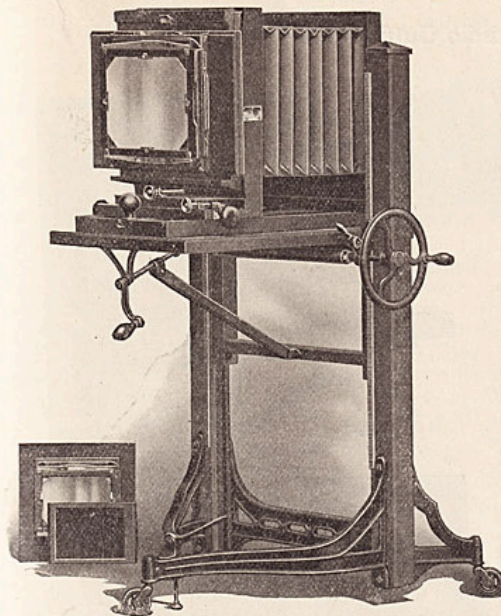
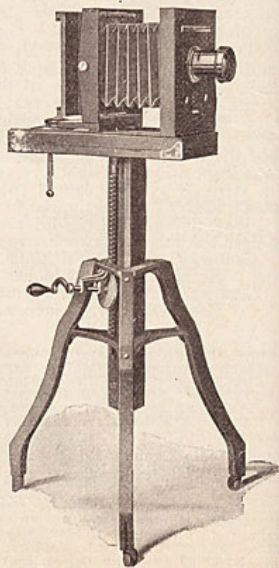
The lens is a Bausch & Lomb portrait lens, speed of f.5, equipped with iris diaphragm, focal length 10 inches.

The Stand is of substantial construction, made of hard wood, richly finished; raising and lowering device, also, gravity tilting device.

The No. 5 Outfit is a complete outfit, and though inexpensive, measures fully up to the Century standard of quality, and will not be found out of keeping with the equipment of the most up-to-date studio.

THE PRICE

No. 5 Century Studio Outfit complete, including Camera, Stand, Lens, Shutter and one double plate holder.....	\$55.00
Extra plate holders, each.....	1.00



Century Studio Outfit No. 7

The Century Studio Outfit No. 7 is the same as the Universal Studio Outfit, with the exception of the swinging ground glass frame and the use of Curtain Slide Holders being dispensed with, substituting instead a sliding carriage fitted with spring-actuated reversible ground glass frame, similar to that used on the regular View Camera, taking the regular Eastman View Camera Plate or Cut Film Holders, permitting exposures on full plate in either horizontal or vertical position, or by using the diaphragm furnished make two exposures on the plate in a horizontal position. The sliding carriage permits the plate being shifted sufficiently to center perfectly with the lens.

Extra reversible adapters may be had to take smaller sized Eastman View Plate or Cut Film Holders, affording the most complete and up-to-date Studio Outfit now on the market.

The stand is the regular No. 1 Semi-Centennial Stand. (See page 66.)

THE PRICE

Century Studio Outfit No. 7 complete consists of an 8x10 Portrait Camera with Sliding Ground Glass Carriage, including one 8x10 and one 5x7 Adapter Back, with an 8x10 and 5x7 Eastman View Plate or Cut Film Holder, and Semi-Centennial Stand.....\$74.00

When Furnished Separately

One No. 7 Studio Camera with Sliding Ground Glass Carriage and one 8x10 Eastman View Plate or Cut Film Holder.....	39.50
One No. 7 Sliding Ground Glass Carriage with 8x10 Eastman View Plate or Cut Film Holder.....	18.00
One No. 1 Semi-Centennial Stand.....	25.00
One 8x10-5x7 Adapter Back to take 5x7 Eastman View Plate or Cut Film Holder.....	9.50

Century Penny Picture Camera

Without question, the Century Penny Picture Camera is the most substantial and efficient camera of its kind ever placed on the market. The camera is solidly constructed of mahogany and cherry, and has a bellows capacity of 17 inches.

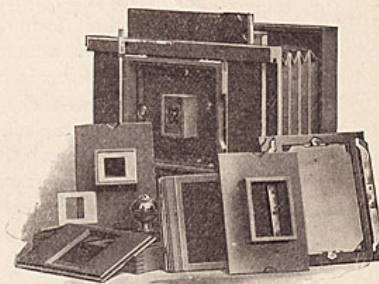
The back is made to slide both vertically and horizontally and permits taking one, two, four, six, eight, twelve, sixteen or twenty-four exposures on the same 5x7 plate when in a horizontal position. This camera is fitted with a quick-acting focusing knob, while all working parts have been constructed of material sufficiently heavy to overcome the many objectionable features in the multiplying cameras heretofore supplied.

The addition of the Century Portrait Lens, as supplied with the No. 5 Studio Outfit and special shutter, leaves nothing to be desired in the line of a complete penny picture outfit.

Century Penny Picture Camera, 5x7. Focal capacity, 17 inches. Size of Lens Board, 6½x6½ inches.

THE PRICE

Century Penny Picture Camera, non-reversible back, including full set of diaphragm kits and one 5x7 Eastman View Plate Holder.....	\$18.00
Reversible Back Century Penny Picture Camera, including full set of kits and one 5x7 Eastman View Plate Holder.....	22.50
Extra 5x7 Eastman View Plate Holders, each.....	1.00
Century No. 5 Portrait Lens, f.5, with shutter, bulb and tube.....	25.00



Century Studio Outfit No. 8

The Century Studio Outfit No. 8 is, without question, the most substantial and efficient equipment that has been offered to the professional photographer. The camera is rigidly constructed of the best possible material, and its double bellows and telescopic bed afford a focal capacity of 43 inches, which is more than ample for the most exacting work. The woodwork of the camera is made of the finest selected mahogany and cherry, highly polished, and all metal work is of lacquered brass. The camera is provided with both horizontal and vertical swings, which are actuated by a worm screw movement. Focusing is rendered particularly easy by the fact that a large focusing knob is fitted to each side of the camera, a large draw knob in the center locking the camera back in any desired position. The camera back is supported by small V metal rollers running in grooves. This permits the back of the camera to be moved easily and smoothly.

The sliding ground glass carriage takes 11x14 Eastman View Plate or Portrait Film Holder, and the carriage is furnished with an adapter back, which takes either 8x10 Eastman View Plate or Portrait Film Holder. The spring-actuated ground glass back fitted to this sliding carriage is reversible, and adjustments are provided for two exposures on an 11x14 or two exposures on an 8x10 plate. If desired, interchangeable backs can be secured, permitting the use of 6½x8½ or 5x7 holders with the 11x14 sliding carriage above mentioned.

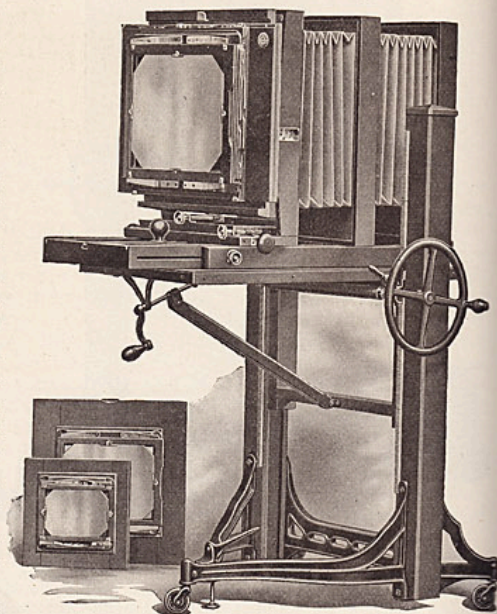
The stand supplied with this outfit is the well known Century Semi-Centennial Stand in the 11x14 size. The felt-covered platform on this stand may be elevated 49 inches from the floor, and a quick-acting worm screw, actuated by a readily accessible handle, enables the operator to tilt the platform. The platform is raised and lowered by pinions engaging vertical racks attached to the uprights. These racks are milled from heavy brass, and a unique locking device is provided, which holds the platform at any desired elevation. A heavy spring on the shaft acts as a counterbalance, and the platform may be easily raised and lowered irrespective of the size and weight of the camera carried. A jack for locking the stand in position on the floor and noiseless rubber tired casters are provided.

THE PRICE

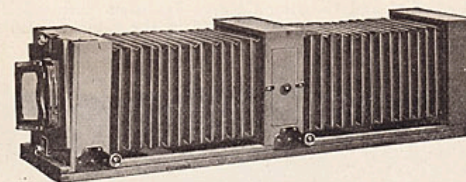
Century Studio Outfit No. 8 complete consists of an 11x14 Grand Portrait Camera No. 2, with one Sliding Ground Glass Carriage, one 11x14 Eastman View Plate or Cut Film Holder, one 8x10 Adapter Back with 8x10 Eastman View Plate or Cut Film Holder, one 5x7 Adapter Back with 5x7 Eastman View Plate or Cut Film Holder, and one No. 2 Semi-Centennial Stand.....\$115.00

When Furnished Separately

One Studio Camera 11x14 with Sliding Ground Glass Carriage and one 11x14 Eastman View Plate or Cut Film Holder..... 65.00
 One No. 2 Semi-Centennial Stand..... 27.50
 One 11x14-8x10 Adapter Back to take 8x10 Eastman View Plate or Cut Film Holder..... 13.00
 One 8x10-5x7 Adapter Back to take 5x7 Eastman View Plate or Cut Film Holder..... 9.50



CENTURY LANTERN SLIDE CAMERA



The Century Lantern Slide Camera is a thoroughly effective and inexpensive apparatus for making lantern slides. This instrument has a bellows capacity of 36 inches, and the front is fitted with spring finger kits from the capacity of the camera, 5x7, to 3¼x4¼. The center compartment is fitted with a lens board which can be removed and placed in the front of the camera, when the instrument is used for copying purposes. The back regularly furnished with this outfit includes a 3¼x4 lantern slide holder. This lantern slide back is adjustable in any position, either rising or oscillating, in order that any oblique lines in the negative may be brought into correct position on the lantern slide.

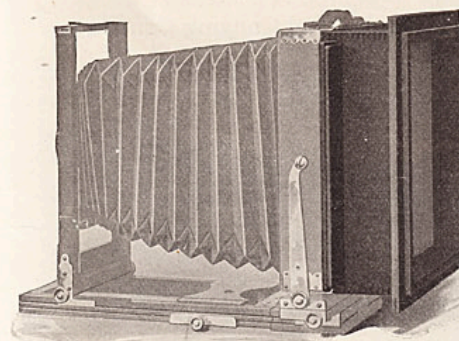
For those who wish to make 5x7 copies or positives, an extra back is supplied. This back takes 5x7 Century Double View Plate Holder. Focusing is done by means of a heavy milled head engaging the rack and pinion with locking device for securing the back in any required position. The movement of the center compartment is controlled by a milled head with lock nut for holding the center section securely in position.

The camera is attractively finished, and makes a thoroughly efficient equipment.

The Price

Century Lantern Slide Camera, including one Lantern Slide Back, one 3¼x4 Double Lantern Slide Holder, one Interchangeable Lens Board, two Spring Finger Kits.....\$25.00
 5x7 Back, including one 5x7 Century Double View Plate Holder..... 6.00
 3¼x4 Lantern Slide Plate Holders, each..... 1.00
 5x7 Century View Plate Holders, each..... 1.00
 6½-inch focus R. R. Lens in shutter..... 12.00

THE R. O. C. ENLARGING BACK



The R. O. C. Enlarging Back is similar in construction to the back of the Graphic Enlarging Camera, and may be instantly attached to the back of a view camera, at once adapting it for enlarging with either artificial or day light.

The R. O. C. Enlarging Back is made in two sizes to fit the 6½x8½ and 8x10 Empire State and Premo View Cameras.

Adapters to fit R. O. C. Century or Eastman View Cameras supplied without extra charge.

For fitting to view cameras other than above specified an extra charge of one dollar net will be made.

The Price

R. O. C. Enlarging Back.....\$8.00

REFLECTING CONE FOR R. O. C. ENLARGING BACK

This Reflecting Cone is designed for use with the R. O. C. Enlarging Back, and is attached and used in the same manner as the reflecting cone supplied with the Graphic Enlarging and Reducing Camera.

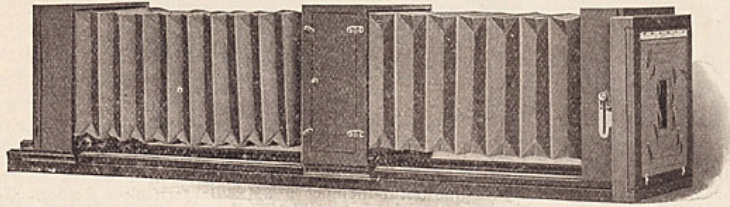
The Reflecting Cone is to be used with an arc lamp or Cooper-Hewitt tubes, and does away with the necessity for condensers.

The Price

Reflecting Cone for R. O. C. Enlarging Back, 6½x8½..... \$5.00
 Do., for 8x10..... 5.00

The Crown Enlarging, Reducing and Copying Camera

The Crown Enlarging, Reducing and Copying Camera is fitted with all adjustments necessary for ordinary work, and is constructed of the best materials and in the same careful manner that characterizes all Folmer & Schwing products.



The rear section of bellows is much longer than the forward section—a decidedly valuable feature in making enlargements. As the openings in the front and center compartment are of the same size, the lens board is interchangeable, and may be used in front when an extra extension of bellows is necessary for copying; or placed in the center compartment when making enlargements or reductions.

This camera is fitted with rising, sliding and falling front, and is equipped with a full set of reversible kits, accepting plates from 3¼x4¼ inches up to the capacity of the camera.

The Crown Cameras have V-shaped guides and a device for accurate focusing. The ground glass is spring actuated and recedes to take a Bromide Paper Holder, closing automatically when the holder is withdrawn.

	8x10	11x14	14x17	18x22
Length of Bed	5 feet	5½ feet	6 feet	6½ feet

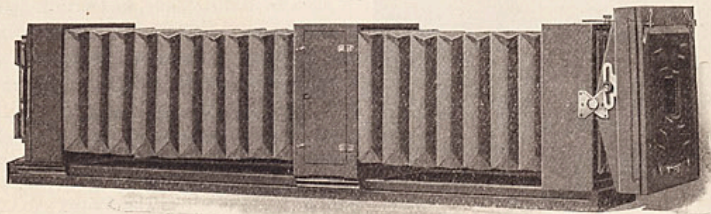
PRICE

Including One Combination Bromide Paper and Plate Holder and complete set of Kits.

The Crown Enlarging, Reducing and Copying Camera, 8x10.....	\$ 38.00
The Crown Enlarging, Reducing and Copying Camera, 11x14.....	65.00
The Crown Enlarging, Reducing and Copying Camera, 14x17.....	80.00
The Crown Enlarging, Reducing and Copying Camera, 18x22.....	105.00

The Folmer & Schwing Enlarging, Reducing and Copying Camera

The Folmer & Schwing Enlarging, Reducing and Copying Camera embodies many exclusive features that are particularly valuable to photographic workers. The front is not only rising and falling, but also swinging, sliding and oscillating, enabling the operator to produce straight lined lantern slides, copies or enlargements from negatives showing a marked degree of distortion.



The rear section of the bellows is much longer than the front section—a decided advantage when making enlargements. As the openings in the front and center compartments are of the same size, the lens board is interchangeable, and may be used in front when an extra long draw of bellows is required for copying, or adjusted in the center compartment for enlarging or reducing. This camera is a valuable addition to the equipment of any photographer, and especially to those who make architectural photographs with cameras having rigid or insufficient swing-back.

The Folmer & Schwing Enlarging, Reducing and Copying Camera, 8x10. Length of bed, 5 feet.
The Folmer & Schwing Enlarging, Reducing and Copying Camera, 11x14. Length of bed, 5½ feet.

PRICE

Including one Combination Bromide Paper and Plate Holder and full set of Kits.

The Folmer & Schwing Enlarging, Reducing and Copying Camera, 8x10.....	\$50.00
The Folmer & Schwing Enlarging, Reducing and Copying Camera, 11x14.....	78.00

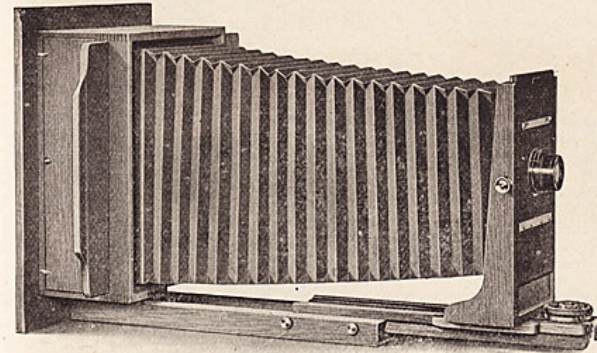
Graphic Enlarging and Reducing Cameras

The Graphic Enlarging and Reducing Camera is designed for enlarging and reducing work on either plates or bromide paper and is so constructed that it may be fastened to the side of the dark room, projecting the enlargement or reduction on a movable easel in the dark room.

This camera is operated without condensing lenses, a specially designed reflecting cone being used as a substitute, and producing better results.

The size of the enlargement is regulated by the focal length of the objective used and by the distance the easel is placed from the camera. The negative to be enlarged or reduced is illuminated by artificial light from the outside of the dark room with a reflecting cone projecting through the side of the dark room, receiving the light from the lamp with the reflection from the sides of the cone. In this way the entire negative is evenly illuminated and enlargements or reductions to any size desired may be secured.

The bed of the camera is telescopic in form, permitting of a liberal extension when necessary, or the contraction of the bed allowing of the use of short focus lenses, as the case may require.



A carrier with full set of nested spring finger kits is fitted into the camera. We recommend the Majestic Lamp, as illustrated below, as most suitable for this camera. However, Cooper-Hewitt Tubes or any other suitable light may be used.

Where Cooper-Hewitt Tubes are used, they should be brought up close to the outer surface of the dark room partition, dispensing with the use of the reflecting cone. A reflecting shade should be placed back of the arc or Cooper-Hewitt Tubes, which will add greatly to the illumination obtained. A cylindrical shaped sheet of asbestos will fill this requirement nicely.

Direct daylight may be used with the above camera.

Graphic Enlarging and Reducing Cameras are furnished with our new Micrometer Focusing Device, which affords the most accurate adjustment in this respect.

An orange screen cap gives sufficient light in the dark room to adjust the bromide paper accurately on the easel.

The No. 1 Graphic Enlarging and Reducing Camera will take all size negatives up to and including the 5 x 7 size, the No. 2 all size negatives up to and including 8 x 10 size, the No. 3 all size negatives up to and including the 11 x 14 size.

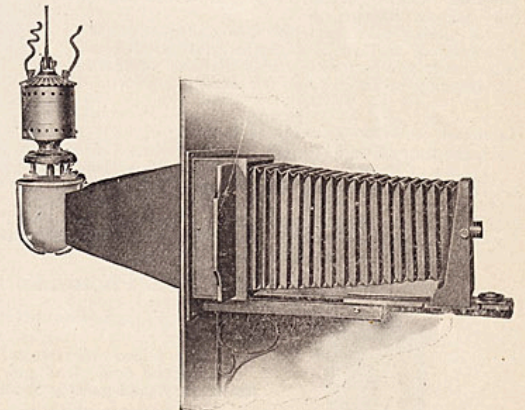


Diagram Showing Graphic Enlarging and Reducing Camera in Use with Majestic Lamp.

A Bromide Paper Easel for use in connection with these cameras is provided.

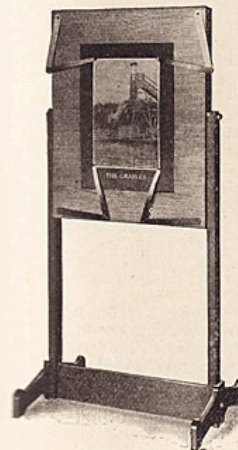
These easels are designed to be used in conjunction with our Graphic Enlarging and Reducing Camera, placed in the dark room, and then moved back or forth to suit the required enlargement.

They are made regularly in three sizes, corresponding by number to the Graphic Enlarging and Reducing Cameras and are all of a uniform height, 50 inches from the floor to the center of the Bromide Board:

PRICES

Including one Graphic Enlarging and Reducing Camera, with reflecting cone negative carrier with full set of nested spring finger kits and three pieces of fine diffusing ground glass.

No. 1 Graphic Enlarging and Reducing Outfit, 5 x 7.....	\$28 00
No. 2 Graphic Enlarging and Reducing Outfit, 8 x 10.....	35 00
No. 3 Graphic Enlarging and Reducing Outfit, 11 x 14.....	45 00
No. 1 Bromide Easel complete, as shown above, with bromide board 14x17..	8 00
No. 2 Bromide Easel complete, as shown above, with bromide board 16x20	10 00
No. 3 Bromide Easel complete, as shown above, with bromide board 28x36..	14 00
Spring Fingers for No. 1 and No. 2 Easel, per set of 4.....	1 60
Spring Fingers for No. 3 Easel, per set of 4.....	2 00



LABORATORY OUTFIT

For Photo-Micrographic, Lantern Slide and Copying Work

It consists of a Copying Camera with Combination Bromide Paper and Plate Holder, Swinging Copy or Negative Holder with set of Spring Finger Kits, Ground Glass, and a Tilting Laboratory Stand. This provides an equipment with which Photo-Micrographic, Lantern Slide and Copying work may be done.

Camera

The Camera is well made of mahogany and cherry, with removable lens board, reversible back and is fitted with our improved micrometer focusing device, which permits of very accurate focusing while the Camera is in either a horizontal or vertical position.

The 5x7 Camera has a draw of 36 inches, the 8x10, 60 inches.

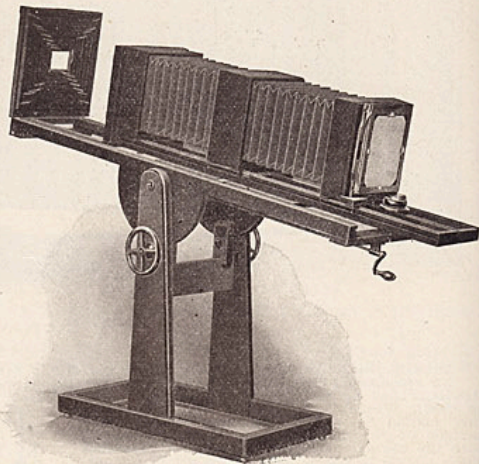
Two tripod screw plates are inserted in bed of Camera.

A Combination Bromide Paper and Plate Holder (a single book holder) fitted with a nested set of kits, carrying 3 1/4 x 4 (lantern slide size) and all sizes of paper or plates up to capacity of holder is furnished.

Stand

The Laboratory Stand consists of a solid base with two uprights supporting a tilting track, which may be swung and rigidly clamped in any position from upright to upright, describing a half circle of 180 degrees.

A sliding platform runs freely in grooves in side rails of track. This platform is fitted with standard tripod screws in order that any standard camera may be fastened to the sliding platform.



PRICES

Universal Laboratory Outfit, including—	No. 1	No. 2
Laboratory Stand, Copying Camera, One Combination Bromide Paper and Plate Holder, One Swinging Copy or Negative Holder, Set of Spring Finger Kits, Ground Glass, Spring Finger Copy Holder.....	5x7	8x10
Laboratory Stand, only.....	\$50.00	\$83.00
Copying Camera, with Combination Bromide Paper and Plate Holder, only.....	25.00	45.00
Extra Combination Bromide Paper and Plate Holder, with complete set of Kits....	25.00	38.00
	4.00	5.50

The F. & S. Photo-Micrographic Outfit

The F. & S. Photo-Micrographic Outfit is unusually complete and efficient.

The micro-objective is attached to the front of the shutter by means of a special conical adapter, thus rendering the use of the microscope unnecessary, and greatly reduces the possibility of vibration.

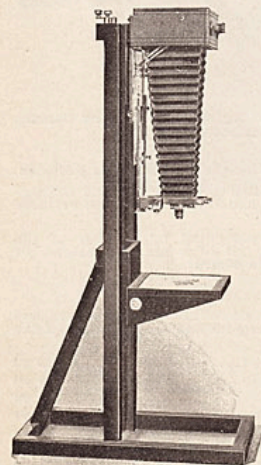
These micro-objectives are regularly supplied with foci of 16, 32 and 48 millimeters. Objectives of shorter or longer foci may be employed.

The camera supplied is the 5x7 Revolving Back Cycle Graphic and can be instantly removed from the stand for other uses. In addition to the micro-objective, the camera is equipped with 5x7 R. R. Lens in automatic shutter.

The Stand is rigidly constructed and has three adjustments which render the centering and focusing of the object extremely easy.

THE PRICE

F. & S. Photo-Micrographic Outfit, consisting of Stand, 5x7 R. B. Cycle Graphic with Graphic R. R. Lens and Automat Shutter, one Plate Holder, Sole Leather Carrying Case for camera and holders, one 48 millimeter focus Micro-objective and Adapter fitted to Automat Shutter	\$86.50
Photo-Micrographic Stand	30.00
5x7 R. B. Cycle Graphic Camera, with R. R. Lens and Automat Shutter, one Plate Holder and Carrying Case.....	50.00
Micro-objective 16 millimeter focus.....	6.00
Micro-objective 32 millimeter focus.....	5.00
Micro-objective 48 millimeter focus.....	5.00
Metal Adapter to fit Micro-objective to Automat Shutter.....	1.50



Folmer & Schwing Home Portrait Outfit No. 2

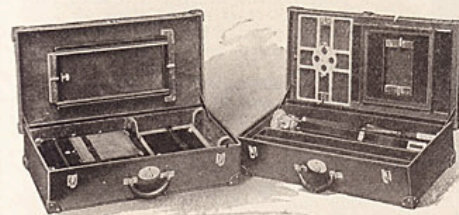
Home Portraiture is one of the most profitable and satisfactory branches of modern photography. The better class of patrons frequently prefer the intimate surroundings of the home to the more formal studio, as a place to have the family portraits made, and it is more profitable for the photographer. He is usually able to secure larger orders for portraits, and at a higher price.

Suitable Apparatus for doing this work is very essential. The Folmer & Schwing No. 2 Home Portrait Outfit, which has just been placed on the market, is most thoroughly efficient in quality, and finished in such a manner that it is not out of place in the most luxurious home.

The Camera supplied is richly finished in dark mahogany, harmonizing perfectly with the nicked finish of the metal parts. The camera is provided with front and back rack and pinion focusing attachments, as well as vertical and horizontal swings. The raising and lowering front is not attached to the bellows, and affords a movement of three inches, more than ample for the most exacting work. A spring actuated folding lens hood effectually shades the lens when working towards the light. The front board measures 7x7 inches, which will admit the use of large lenses. The sliding ground glass carriage is constructed to permit the making of two 5x8 exposures on an 8x10 film or plate. The lens being in center for each exposure, also for full 8x10 plate, vertical and horizontal.



The Home Portrait Stand is unique in appearance, very compact and rigid. It occupies but a small space when folded. The top is a finely finished aluminum casting, which can be quickly removed from stand. It can be tilted in either angle, and locked tight by simply turning a milled head screw. The center upright of stand is made of heavy gauge brass tube, finely nicked, into which telescopes another tube, to which the top is attached. The whole stand can be lowered to within 30 inches of the floor, or raised to 4 1/2 feet. The legs are made of mahogany finish, to harmonize with the woodwork of the camera. The legs are fitted with noiseless casters.



The Home Portrait Reflector can be elevated to 7 feet; is made of white cloth, 6 feet 4 inches by 44 inches wide, suspended at each end from a jointed metal rod, and supported by a light metal stand that folds compactly when not in use.

The Auto Studio Shutter works back of the lens, and is operated by a cable release. The shutter is noiseless in action.

The Sterling Plate Holders for Eastman Portrait Film or Plates are furnished with this outfit. The Cases. Two solid sole leather carrying cases contain the complete outfit. These cases are velvet lined, and compartments are provided for every part of the outfit. Each case has lock and key.

The Lens. We recommend the Bausch & Lomb Zeiss Tessar Lens, Series 1C F-4.5, No. 18; focus 11 7/8 inches. This lens is suitable for the finest portraits, groups and figure work. It is highly corrected for covering power, and has remarkable speed.

The photographer possessing one of these outfits will find an unlimited field in which to extend his business.

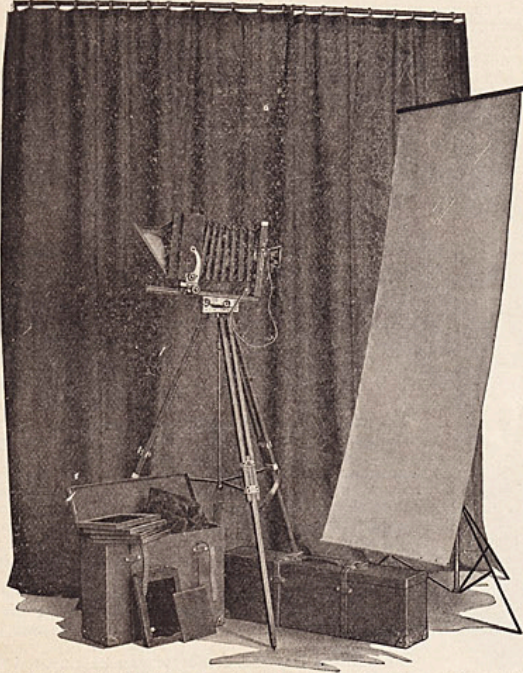
CAMERA—		SPECIFICATIONS	
Dimensions closed	15x12 1/2 x 5	Weight	10 lbs.
Focal capacity	22 inches	Size of Lens Board.....	7x7 inches
Size of Lens Board in No. 0 Studio Shutter.....			5 1/2 x 5 1/2 inches
STAND—			
Length when folded	27 inches	Weight	10 1/2 lbs.
REFLECTOR—			
Length when folded.....	27 1/2 inches	Weight	5 lbs.
CASES—			
Dimensions			28x7x14 1/2

THE PRICE

1 8x10 F. & S. Home Portrait Camera No. 2 with one 8x10 Sterling double Portrait Film Holder, and velvet-lined sole leather case with lock and key.....	\$60.00
1 8x10 Sliding Ground Glass Carriage.....	10.00
1 F. & S. Home Portrait Stand No. 2.....	30.00
1 No. 2 Back Ground, 7x8 feet.....	12.00
1 F. & S. Reflector.....	8.00
1 Focusing Cloth	1.00
5 Extra 8x10 Sterling Film or Plate Holders, each \$2.50	12.50
1 No. 0 Auto Studio Shutter.....	8.00
1 B. & L.-Zeiss Tessar Lens, Series, 1c, F.4.5, No. 18.....	139.50
1 Velvet-lined Sole Leather Carrying Case with lock and key for Stand, Reflector and Back Ground	19.00

The Eastman Home Portrait Outfit

The new Eastman Home Portrait Outfit has been specially designed by practical men, and meets every requirement in efficiency and compactness.



lined black sole leather hood is fitted to the lens. The optical equipment is all the names Eastman and Zeiss imply.

The tripod is of special construction, having an aluminum top, and sliding adjustable legs, rubber tipped. Stays run from each leg to a rod in the center, which is a continuation of the tripod screw. These stays hold the tripod absolutely rigid and it may be lifted up and moved without danger of collapsing. In folding, the tripod closes like an umbrella frame, with the stays in the center.

The background is made of a special imported willow cloth, 7 feet long and 8 feet wide, the design and color being selected with special reference to photographic use; very rich in appearance, and can be folded into very small space without injury. The background rod is made in three sections, and attached to an Eastman Background Carrier.

The reflector is made of white opaque Holland shade cloth and will reflect the maximum amount of light; mounted and hung on a stand similar to the background carrier. An adjustable rod is provided for holding the reflector at any angle. Cloth bags are provided for storing the background carrier and reflector stand when folded.

The carrying cases are exceeding light for their strength, and covered with water-proof brown Spanish Ruten, which closely resembles alligator hide.

The outfit also includes nine double plate holders, extra front board, and a 36 x 48-inch head cloth of Italian fabric.

Price complete outfit including 9 Double Holders, \$132.50.

PARTS OF OUTFIT

Furnished Separately at the Following Prices

Home Portrait Camera, including Camera Carrying Case, extra Front Board and one Plate Holder	\$30.00	Home Portrait Back Ground Carrier.....	\$3.75
Eastman Zeiss Anastigmat Lens, No. 6.....	46.50	Home Portrait Reflector	4.50
Home Portrait Shutter	14.00	Home Portrait Head Cloth, 40 x 48 inches....	1.00
Home Portrait Lens Hood.....	.75	Home Portrait Plate Holder.....	1.00
Home Portrait Tripod	4.50	Carrying Case for Home Portrait Tripod, Back Ground, Back Ground Carrier and Reflector	4.50
Home Portrait Back Ground.....	15.00		

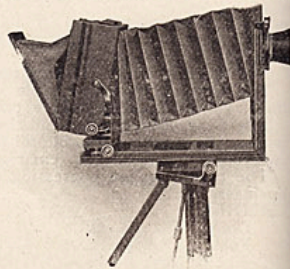
The Eastman Home Portrait Outfit includes every essential, including 5x7 camera, lens, shutter, special tripod, background and carrier, reflector, plate holders, etc., all so arranged as to pack compactly in two cases, and light enough to be easily carried.

The camera, tripod and poles for reflector, and background carrier are made of cherry, wax finished, all metal parts of the outfit copper oxidized. The camera bellows is square, of first quality red leather, and the unusually large front board will accommodate any size lens.

The bed of the camera is tilted by means of a quick acting rack and pinion; the back is reversible and provided with a focusing mirror. This focusing mirror will be found peculiarly advantageous in home portrait work, as it reflects the entire image right side up and one may view the image through the opening in the leather hood, without stooping and without the use of the head cloth.

The focusing mirror attachment slides in a groove in the camera back, and may be folded up and removed as readily as a plate holder, when it is desired to use the ground glass screen alone, or it may be partially raised for observing the image on the screen and dropped into place again.

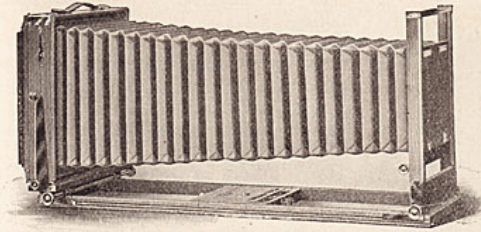
The lens supplied with the outfit is the No. 6 Eastman Zeiss Anastigmat, f.6.3, ten inch focus, covering the plate perfectly at full opening. The shutter is of the automatic double valve type, equipped with a lever for opening the shutter leaves for focusing, neatly finished in black. Bulb and six feet of tubing. A velvet



Camera Tilted Upward

Eastman View Camera No. 1

Improved Model of Empire State and Century View Camera



Anyone who is in the market for a substantial, reliable view camera at low cost, will find the Eastman View Camera No. 1 of very exceptional value for the money.

The appearance of this camera is excellent. It is mahogany finish with brass metal parts, and black bellows—a combination which is very pleasing to the eye.

The camera has no complications, it is built for practical service, and its various adjustments are such as to work conveniently and easily.

It has double extension, giving the camera a very long draw of bellows. Both front and back are actuated by rack and pinion, so that the camera may be focused from either end, and the back can be racked up as close to the front as desired. This provides for the use of lenses of the widest angle, without the chance of the front extension cutting off the rays to the lens.

The camera is provided with rising and falling front of great latitude, which is actuated by rack and pinion. The front board is removable and is large enough to accommodate any lens.

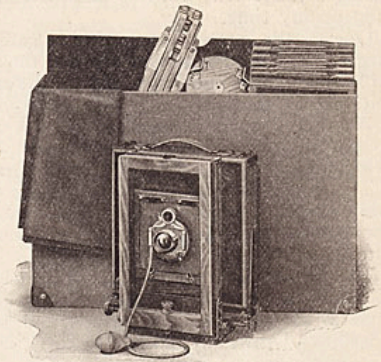
Both horizontal and vertical swings are provided, and the back is reversible and furnished with a vertical cut-off board, so that two negatives may be made on one plate, if desired.

The bellows is kept up in place at all times, without sagging, by a spring arrangement attached to the inside bellows frame. This requires no attention by the operator as it works automatically and folds with the bellows when the camera is closed.

A strap handle and plumb level are supplied, and the camera folds up compactly when not in use. The carrying case is of canvas and is made to accommodate camera, six plate holders and a tripod.

Particular attention is called to the Eastman View No. 1 Complete Outfits. Never before has so much of real view camera efficiency been offered for so small an outlay.

Bellows Draw, 5x7, 22½ in.; 6½x8½, 26 in.; 8x10, 29 in. Weight, 5x7, 6 lbs.; 6½x8½, 8 lbs.; 8x10, 9½ lbs. Size of Lens Board, 5x7, 4¼x4¼ in.; 6½x8½, 4¾x4¾ in.; 8x10, 4¾x4¾ in. Carrying case, long style canvas, combination style, with compartments for camera, holders and tripod.



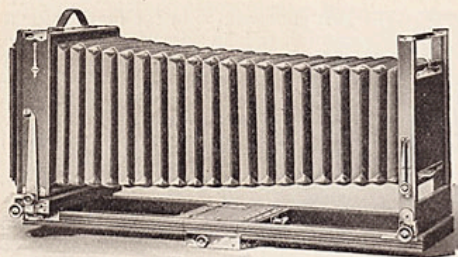
THE PRICE

	5x7	6½x8½	8x10
Eastman View Camera No. 1 (Improved Model of Empire State and Century View) with Case and Holder.....	\$19.00	\$21.00	\$23.00
Eastman View Camera No. 1 Complete Outfit*.....	34.00	43.00	51.00
Complete Outfit as above, but with Rapid Rectigraphic instead of Symmetrical Lens.....	45.00	55.00	65.00
Extra Carrying Case.....	3.50	3.75	4.00
Extra Lens Boards.....	.30	.40	.50

*Eastman View No. 1 Complete Outfit includes: Eastman View No. 1 Camera, Symmetrical Lens, Double Valve Auto Shutter, six Plate Holders, Combination Tripod, R. O. C. focusing cloth and case to hold complete outfit.

Eastman View Camera No. 2.

Improved Model of Empire State and Century View Camera.



All our experience in view camera making, all the information that we have been able to collect, of the needs of the view camera worker, have been put into the proposition of providing in this new model a view camera as near to perfection as human ingenuity can devise.

The camera is constructed with the idea of providing the greatest possible solidity and strength throughout. The extensions are extra thick, the standard is very large and will furnish an absolutely rigid support for the heaviest lenses. Corners are dovetailed and reinforced by brass angle pieces, and the metal parts are all made of the best quality of brass, fully lacquered.

The front board is removable and very large. The rising and falling front is actuated by rack and pinion, as is both the horizontal and vertical swings. The camera can be focused from both front and rear by rack and pinion, so that the back can be racked up as close to the front as desired, thus lenses of the widest angle can be used.

A sliding tripod block is provided which will travel the full length of both extensions. By this arrangement the box of the camera can always be supported directly above the tripod, or the weight distributed, as the operator may wish.

The back is reversible, a plumb level and strap handle are supplied and both horizontal and vertical cut-out boards so that four different negatives can be made on one plate if desired.

The bellows of this camera is made of genuine leather, and a spring arrangement working automatically prevents it from sagging at any time.

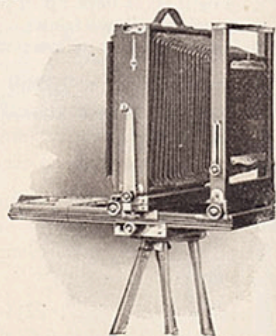
One of the conveniences of this camera is the fact that the large milled head nuts that control the various adjustments are all located on the right hand side of the camera, while the binding nuts are on the left.

Another convenience is the method of locking extensions by a specially constructed device which locks firmly by merely being pushed in and given a quarter turn.

The front extension is attached to the camera by a piano hinge, while the back extension, which is detachable, in addition to the above mentioned device is further strengthened by two clamp catches which hold it absolutely rigid.

The camera is made of hand polished mahogany, with exception of the extensions, which are of cherry on account of its greater strength. The case is of canvas and will accommodate camera, six plate holders, tripod and focusing cloth.

Bellows Draw, 5x7, 23 in.; 6½x8½, 26½ in.; 8x10, 29½ in. Weight, 5x7, 7 lbs.; 6½x8½, 10½ lbs.; 8x10, 11¼ lbs. Size of Lens Board, 5x7, 4½x4½ in.; 6½x8½, 6x6 in.; 8x10, 6x6 in. Carrying Case, canvas, combination style with compartments for camera, holders and tripod.



THE PRICE

	5x7	6½x8½	8x10
Eastman View Camera No. 2 (Improved Model of Empire State and Century View) with Case and Holder.....	\$25.00	\$28.00	\$30.00
Eastman View Camera No. 2 Complete Outfit*.....	40.00	50.00	58.00
Complete Outfit as above, but with Rapid Rectigraphic instead of Symmetrical Lens.....	51.00	62.00	72.00
Extra Carrying Case.....	4.00	4.50	5.00
Extra Lens Boards.....	.60	.75	.75
Graflex Focal Plane Shutter for Eastman View Camera.....	14.00	15.50	17.00

Sliding Adapter for 2-5x8 Exposures on 8x10 Plate, extra \$10.00.

*Eastman View No. 2 Complete Outfit includes: Eastman View No. 2 Camera, Symmetrical Lens, Double Valve Auto Shutter, six Plate Holders, Combination Tripod, R. O. C. Focusing Cloth, and Case to hold complete outfit.

R. O. C. View Camera

The R. O. C. View Camera is built on very strong lines and provided with all adjustments necessary for general work. The front standard being firmly attached to the bed is extremely rigid and will accommodate the heaviest lenses. Focusing is from the back entirely, a convenient rack and pinion attachment being furnished which moves the complete back to any point on the bed desired, where a clamping device fastens it firmly. The camera has both vertical and horizontal swing, rising and falling front, and reversible back.

It is especially adapted for interior work, as the back can be moved as close to the front as desired, so that lenses of extreme wide angle may be readily used.

All wood parts are of mahogany finish, the metal is lacquered brass, and the camera folds up compactly.

The outfit as listed comprises camera, one plate holder and carrying case. The case is of the square style, canvas.

R. O. C. View Camera, 5x7. Focal capacity, 14 inches. Weight, 4¾ pounds. Size of Lens Board, 3¼x6¾ inches.

R. O. C. View Camera, 6½x8½. Focal capacity, 15½ inches. Weight, 6 pounds. Size of Lens Board, 4½x6½ inches.

R. O. C. View Camera, 8x10. Focal capacity, 17 inches. Weight, 6¾ pounds. Size of Lens Board, 5x6 inches.

THE PRICE

	5x7	6½x8½	8x10
R. O. C. View Camera.....	\$12.00	\$13.00	\$14.00
Rapid Symmetrical Lens and D. V. Auto Shutter (extra).....	13.50	18.50	21.50
Extra Double Plate Holders, each.....	1.00	1.10	1.25
R. O. C. View Complete Outfit*.....	27.00	35.00	42.00
Extra Carrying Case, Regular.....	1.75	2.00	2.25

*R. O. C. Complete Outfit includes: R. O. C. View Camera, Symmetrical Lens and D. V. Auto Shutter, six Plate Holders, Combination Tripod, R. O. C. Focusing Cloth and Carrying Case holding complete outfit.

Empire State View Camera

The Empire State View Camera is the most substantial view camera on the market, yet very compact and light weight. It has the horizontal and vertical swings, reversible back and rising front actuated by rack and pinion. The focusing is adjusted either from the front or back. Bellows draw, 37 inches. Weight, 16 pounds. Front board, 5¾x5¾ inches. Fitted in canvas carrying case.

Price, Camera, Case and 1 11/14 Double Holder..... \$45.00
Extra 11/14 Double Plate Holders..... 4.00

R. O. C. Post Card Camera

A camera peculiarly adapted to post-card conditions. It has a leather bellows and is strongly made of hard wood with an oil finish. Each camera carries a reversible back for 5x7, 4x5, 3¼x5½, or 3¼x4¼ plates as ordered. Extra reversible backs may be supplied if desired.

This is a new field for photographic activity. There is much trade to be had even in the country towns if the photographer will add one of these outfits to his equipment. By a judicious selection of comic foregrounds, many novel ideas may be worked in the post-card line. The enormous sale of post cards at the Jersey coast resorts should be an indication of the possibilities of the post card. The outlay of money necessary to fit up such a place is small and no great risks are taken in adding this camera to the photographer's equipment.

Aside from quality and price there is not a great deal that can be said about an instrument of this type, as it has no complicated adjustments or unusual features.

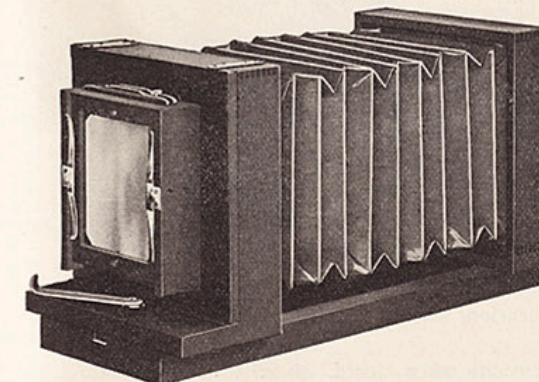
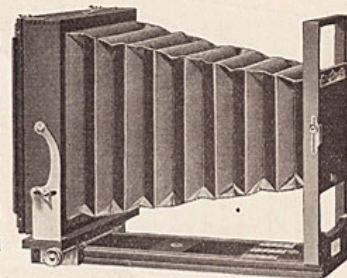
But—the appearance of the camera used for post card work has a good deal to do with the price you can demand for your work. There is a good profit in good post cards, and your patrons will without doubt be influenced regarding the quality of your work by the appearance of the instrument you use.

The new camera sells for only \$12.00, yet it is of the most substantial construction and well finished, having the appearance of an instrument selling for a good deal more money.

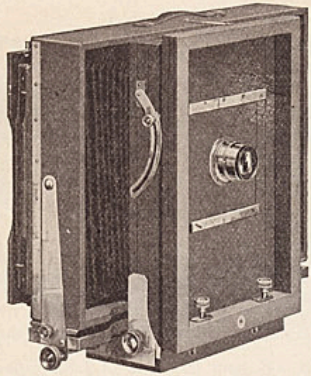
The R. O. C. is supplied with Reversible Back, either 3¼x4¼, 3¼x5½, 4x5 or 5x7 (size optional), and Double Plate Holder.

PRICE

R. O. C. Post Card Camera.....	\$12.00
R. O. C. Post Card Camera Portrait Lens 4x5.....	24.00
R. O. C. Post Card Camera Portrait Lens 5x7.....	34.50
Extra Reversible Backs, 3¼x4¼, 3¼x5½ or 4x5.....	2.50
Extra Reversible Back, 5x7.....	3.00
Extra Double Plate Holders, 3¼x4¼, 3¼x5½ or 4x5.....	.50
Extra Double Plate Holders, 5x7.....	.70
Century Camera Stand, No. 6 (with casters).....	6.75



F. & S. Banquet Camera



The F. & S. Banquet Camera is not only the best possible instrument for photographing large groups at banquets or other occasions where the negative must be made indoors, but it is also excellently adapted to general outdoor group and view work. The dimensions of the picture—12x20 inches, or with the smaller size, 7x17 inches—are particularly suitable for outdoor groups and general architectural purposes.

The construction of the camera permits its elevation so that when making indoor groups, those in remote parts of the room, and at the same time those close to the camera, will be included. This is accomplished by a swinging lens board with great rise and fall. By adjusting the back of the camera in a vertical position and lowering the lens board so that the optical axis of the lens will fall through the center of the plate with the lens pointing downward, the rectilinear lines of the interior of the building will be preserved and the greatest possible number of figures included in the picture.

The camera is provided with both front and back rack and pinion focusing adjustment, and the front track of the camera is wide enough to permit the sliding lens board frame to drop between the rails. A graduated sector on the swinging lens board frame provides means of adjusting the angle at which the lens board is to be tipped, and the scale is provided for the raising and lowering adjustment. This is an exceedingly useful feature on a camera intended for interior work of this kind, as it is frequently necessary to place the camera so close to the wall that focusing is impossible. A focusing scale is adjusted to the camera bed, which permits the operation of the instrument with the greatest rapidity and accuracy.

Two size tripod screw plates are fitted to the bed, one taking a stand and tripod screw, and the other a larger size.

The whole camera folds up compactly, and is provided with a handle so that the camera may be carried about when not contained in the carrying case.

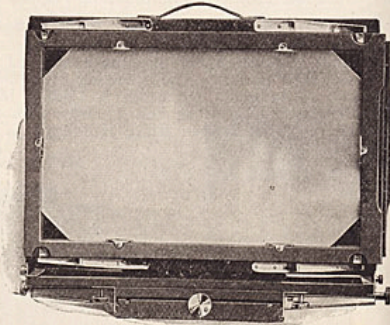
The woodwork is finished in hard oil, and the metal parts are of polished brass. The instrument is rigidly constructed and the adjustments are actuated with the utmost precision.

Focal capacity, 7x17, 16½ inches. Dimensions when closed, 19½x5½x14. Weight, 8 pounds. Size of Lens Board, 5x5.

Focal capacity, 12x20, 22 inches. Dimensions when closed, 24x6x19. Weight, 14 pounds. Size of Lens Board, 6½x6½.

THE PRICE

	7x17	12x20
F. & S. Banquet Camera, including Carrying Case and one Double Plate Holder, or cut Film Holder	\$58.00	\$68.00
Extra Double Plate Holders, each	9.00	12.00
Extra Double Cut Film Holders, each	9.00	12.00
Extra Lens Board, each	.50	.70
B. & L. Zeiss Tessar, Series 11b, No. 7, 10 inches	71.50	
B. & L. Zeiss, Series IV, No. 6, 10¼ inches	40.50	
B. & L. Zeiss Tessar, Series 11b, No. 9a, 16½ inches	166.00	
B. & L. Zeiss, Series IV, No. 7, 15¼ inches		61.50



Rear View of 12x20 Banquet Camera.

F. & S. Home Portrait Camera No. 1

The Folmer & Schwing Home Portrait Camera is a firm, rigid, excellently finished instrument with a front large and solid enough to accept portrait lenses working at high speeds. The camera is light enough to be easily carried, but nothing has been sacrificed to rigidity.

The adjustments are fitted with the utmost accuracy. The vertical and horizontal swings are operated by a worm screw and sector, while the rising and lowering front is controlled by a rack and pinion with binding screw. The back frame bolster rides on V-shaped roller bearings, which insure the smooth and easy movement of the back frame when focusing. Focusing is done by means of a rack and pinion, a binding screw permitting the back frame to be locked at any point. The back is reversible.

A rectangular red leather bellows, the full height of the camera, is provided. This permits the independent raising and lowering of the lens board frame without danger of the bellows puckering or cutting off the light.

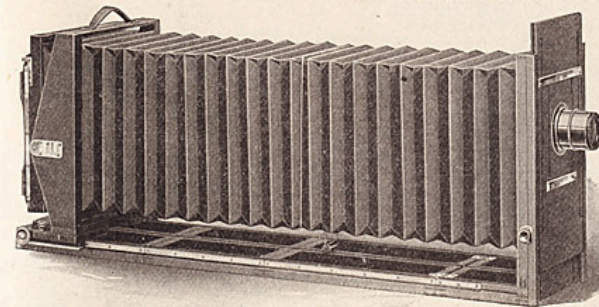
The camera is made of selected mahogany and cherry in hard oil finish. All metal parts are of polished brass.

8 x 10 Home Portrait Camera. Focal capacity, 22 inches. Dimensions when closed, 18x8x13. Weight, 11½ lbs. Size of lens board, 7x7 inches.

THE PRICE

Camera, without lens, including carrying case and one holder	\$48.00
Extra 8x10 Sterling Plate Holders, each	2.50
Sterling Cut Film Holder	2.50
Extra lens board, each	.60
No. 0 Auto Studio Shutter (lens board in shutter 5½x5½)	8.00
F. & S. Home Portrait Tripod	8.00

F. & S. Commercial Camera



The F. & S. Commercial Camera is designed to meet every requirement of the commercial photographer, and is constructed so that lenses having extreme focal length, as well as those of short focus, may be utilized. Every adjustment is provided—extreme rising and lowering front actuated by rack and pinion, double swing back adjustment with excessive swing operated

with quick thread screw, and extra long draw of bellows with unique bellows support. The front of the bellows being rectangular and the full height of the camera, permits the fitting of a front with extreme rising and lowering movement, without the possibility of the bellows cutting into the image or the puckering of the bellows.

The extension bed is divided into four sections which interchange. These bed sections are fitted with tripod plates, so that when the camera is used with bellows extended to its full capacity, two tripods may be utilized.

The camera is made from selected mahogany and cherry, all wood finished in hard oil and metal parts in lacquered polished brass.

Focal capacity, 8x10, 42 inches. Dimensions when closed, 17x8¾x13. Size of Lens Board, 7x7. Focal capacity, 11x14, 54 inches. Dimensions when closed, 22x10x17¼. Size of Lens Board, 8x8.

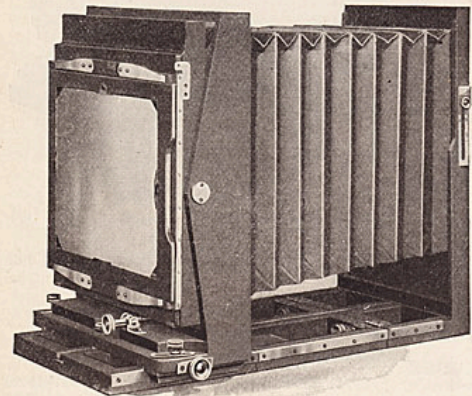
THE PRICE

	8x10	11x14
Commercial Camera, including Carrying Case and one Sterling Plate Holder	\$65.00	\$80.00
Extra Sterling Plate Holder, each	2.50	6.00
Extra Sterling Cut Film Holders, each	2.50	6.00
Extra Lens Board, each	.60	.75
Commercial Semi-Centennial Stand; No. 1 45 in. long; No. 2 54 in. long	28.00	30.50

THE IMPROVED SKY SCRAPER CAMERA

(FOLMER & SCHWING DIVISION.)

The Improved Sky Scrapper Camera is designed for photographing tall buildings and other subjects, where great rise of front and excessive swing back are necessary. In addition to its special construction for photographing in cramped quarters, this camera has all the adjustments necessary for regular work.



The large rising front, to accommodate lenses of extremely short focus, moves independently of the bellows, and is so actuated that the lens may be raised until its optical axis is above the top line of the plate.

The lens board is square, and, with the lens fitted eccentric, extreme vertical or horizontal range is possible. The lens board may be entirely reversed, or turned half way round in either direction, a feature particularly valuable when photographing tall buildings from cramped positions.

The bellows is rectangular and wedge-shaped, tapering from the side to the large front board frame, insuring strength and preventing sagging, and is made of a high grade, specially prepared material. Focusing is done by rack and pinion. The back is reversible.

Both vertical and horizontal swings are pivoted on their optical centers, and the vertical swing is operated by an accurately adjusted worm screw. The horizontal swing is locked by milled head screws firmly engaging both sides of the camera.

The front supports are made extra strong and rigid, and are firmly built into the camera bed. The back frame is likewise of unusual strength and rigidity, thus doing away with any tendency toward vibration during prolonged exposures.

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

Camera body made of finest mahogany, all metal fittings polished and lacquered brass.

The Improved Sky Scrapper Camera is an invaluable addition to the outfit of any photographer doing commercial work, as its special adjustments, used in connection with lenses of extremely short focus, permit the successful photographing of many architectural and other subjects impossible with cameras of ordinary construction.

Improved Sky Scrapper Camera, 8 x 10.

Dimensions, 16 3/4 x 13 x 7 1/2 inches. Focal capacity, 20 inches.

Weight, 11 pounds. Size of lens board, 7 x 7 inches. Minimum focus of lens accommodated, 4 inches.

Improved Sky Scrapper Camera, 11 x 14.

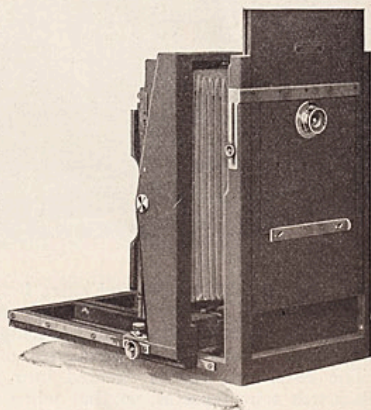
Dimensions, 21 1/4 x 17 1/4 x 8 1/4 inches. Focal capacity, 25 inches.

Weight, 20 pounds. Size of lens board, 8 x 8 inches. Minimum focus of lens accommodated, 5 inches.

PRICE

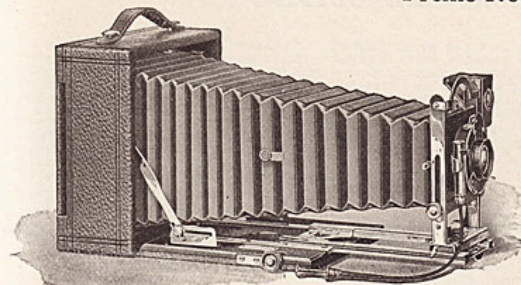
Including Carrying Case and One Sterling Double Plate Holder.

Improved Sky Scrapper Camera, 8 x 10.....	\$35.00
Improved Sky Scrapper Camera, 11 x 14.....	50.00



Showing Lens Elevated to Top of Plate

Premo No. 9



This efficient camera is designed for the amateur who wishes an instrument of very wide scope. With its complete equipment and accurate, convenient mechanical adjustments, it is a camera never before approached at the price.

The Premo No. 9 is fitted with the new Premo reversible back. This is the simplest back to reverse ever offered, for with its patented spring lug construction, it may be instantly removed and reversed without any tendency to stick or bind.

The bellows is of black leather and has sufficient draw to permit the use of the single lens combination or a telephoto attachment of several magnifications.

The standard is constructed of metal, is very rigid, and incorporates a rising and fall-

ing front of great latitude.

The regular lens and shutter equipment comprises the Kodak Automatic shutter and Autotime scale and the Planatograph lens. The single combination of the lens will produce sharp, clear pictures of objects at a distance, double the size made with the complete lens.

In the 3A and 4x5 sizes the camera is offered, at a slight increase in price, fitted with the new Kodak Anastigmat lens, F:7.7. For those who wish an Anastigmat of even greater speed it is supplied with the Cooke Kodak Anastigmat lens working at F:6.3 and the Compound shutter with cable release.

SPECIFICATIONS

Capacity, 12 film or 2 plate exposures. Box, kiln-dried wood, covered with grain leather. Bed, hand polished wood, finished in black, and supplied with rack and pinion for fine focusing, and swing arrangement. Back, spring catch, reversible. Standard, made of metal, with rising and falling front. Finder, brilliant reversible, collapsible. Tripod Socket, one. Lens, Planatograph. Shutter, Kodak Automatic. Carrying Case, sole leather, with compartments for holders. Bellows, black leather; draw 3 1/4 x 5 1/2, 13 in.; 4x5, 13 in.; 5x7, 15 1/4 in. Dimensions, 3 1/4 x 5 1/2, 3x7x7 in.; 4x5, 3x7x7 in.; 5x7, 2 7/8 x 8 1/4 x 8 1/4 in. Weight, 3 1/4 x 5 1/2, 63 ozs.; 4x5, 63 ozs.; 5x7, 76 ozs.

PRICES

Premo No. 9, with Planatograph Lens, Kodak Automatic Shutter with Kodak Autotime Scale, Case and Holder.....	4x5	3A	5x7
	\$28.00	\$28.00	\$33.00
Ditto, with Kodak Anastigmat Lens, F:7.7.....	33.00	33.00	....
Ditto, with Cooke Kodak Anastigmat Lens, F:6.3, and Compound Shutter with cable release.....	51.00	51.00	....
Ditto, with Zeiss Kodak Anastigmat Lens, F:6.3, and Compound Shutter.....	62.50	62.50	81.50
Premo Film Pack Adapter.....	1.50	1.50	2.50
Premo Film Pack (12 exposures).....	.80	.80	1.60
Kodak Portrait Attachment.....	.50	.50	.50

Premo No. 10

Designed to meet the requirements of the most advanced photographer and of the specialist in photographic work, the Premo No. 10 is equipped with every known adjustment desirable in a hand camera for making pictures under all conditions.

The bellows is of such length as to readily accommodate the single combinations of any lens system, and also to meet the capacity requirements of telephoto lenses of the highest magnifications.

Provision is made for the use of lenses of the widest angle. For this purpose, it is necessary only to unclasp the two supplementary side arms, which drops the bed down on a hinge, removing it from the path of the shortest focus lens. Then a short supplementary bed, carried conveniently at the top of the camera when not in use, is substituted for the regular bed, affording easy focusing facilities.

The camera is regularly fitted with the Planatograph lens—the best obtainable aside from the anastigmat, but it is constructed with the view of accommodating anastigmat lenses of any kind when desired.

The finish and general workmanship of the instrument must be seen to be appreciated. The shutter and all metal parts are highly nicked and the covering is of the best leather, especially selected for its beautiful grain. The wood is mahogany with hand polished black finish. The carrying case is of sole leather, lined with purple velvet.

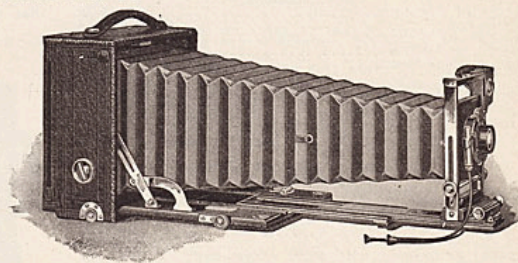
With all these advantages the Premo No. 10 can be successfully used even by the beginner.

SPECIFICATIONS

Capacity, 12 film or 2 plate exposures. Box, mahogany, leather covered. Bed, mahogany, with highly polished black finish and with triple extension runway. Back, spring catch, reversible. Swing, vertical; rack and pinion actuated, with locking device. Front, rising and falling; rack and pinion actuated, with locking device. Lens Board, removable; size 3 1/2 x 3 1/2 in. Finder, Brilliant, reversible. Tripod Sockets, two. Lens, Planatograph. Shutter, Kodak Automatic with Autotime Scale. Carrying Case, sole leather, plush lined, with compartment for holders. Bellows, black leather; draw, 19 in. Dimensions, 4x8 1/2 x 8 1/2 in. Weight, 5x7, 5 1/2 lbs. Automatic Standard Clamp.

PRICES

Premo No. 10, with Planatograph Lens and Kodak Auto. Shutter with Autotime Scale, Carrying Case and Plate Holder.....	\$ 60.00
With Zeiss Kodak Anastigmat Lens, F:6.3, and Compound Shutter.....	109.00
With B. & L. Zeiss Protar VIIa Lens, F:7, and Compound Shutter.....	141.00
Premo Film Pack Adapter.....	2.50
Premo Film Pack.....	1.60
Kodak Autotime Scale for Compound Shutter.....	1.50



CIRKUT CAMERAS AND OUTFITS



For many years the great field of Panoramic Photography has been out of reach merely because there was no suitable apparatus to allow of exploiting it. To make a panoramic picture—that is, to make it true as the eyes see it—true as to perspective and free from distortion, is something that had not been possible until the Cirkut provided the means of overcoming the difficulties that heretofore existed. And now successfully it has been done as evidenced by the large number of Cirkuts now in use.

It requires but a moment's consideration to discover the almost limitless opportunities of a camera with the wide range of possibilities that the Cirkut possesses. Survey the field. It is not alone for scenery, but for manufacturing plants, residences, country estates, public grounds, games and groups, that the Cirkut proves its usefulness.

Cirkut Cameras are made in three sizes, Nos. 5, 10 and 16, the former for film either 5, 6, 8 or 10 inches wide, the latter for 10, 12 or 16-inch widths. Any length of negative up to about 12 feet with the No. 10, and 18 feet with the No. 16, may be made, the length of the negative being determined by the focal length of the lens used. A scale is provided by means of which the operator can determine the length of film required for any exposure, and a register on the top of the tripod indicates the amount of film consumed and that still remaining unexposed. There is also a device for perforating the film after each exposure.

An entirely new Cirkut Camera has been provided for the amateur or professional photographer, requiring a panoramic camera for pictures not exceeding 5 inches in width. This is the new No. 5 Cirkut Camera, which will make a negative 5 inches wide and of any length up to 42 inches.

This little instrument is constructed on the same principle and with the same careful attention to detail as the larger cameras, and will produce results equal in quality to those secured with the larger cameras and outfits. Unlike the other Cirkuts the No. 5 is self-contained; it has no extra film attachment, the mechanism for operating the camera being contained in the body of the instrument. A pocket at the side of the camera is provided to contain the gear wheels and winding key.

Cirkut Outfits are supplied in two sizes, No. 6 and No. 8, the former being the 5x7 Cycle Graphic to which is fitted the Cirkut Attachment, while the No. 8 is an attachment fitted to a 6½x8½ Cycle Graphic. The No. 6 Cirkut Outfit takes 6½-inch film and negatives up to 6 feet long may be made, and with the No. 8 Outfit a negative 8 inches wide and any length up to 3 feet may be made. By removing the Cirkut Attachments, the cameras supplied with the Nos. 6 and 8 Cirkut Outfits may be used with plates in the usual manner. Only Eastman Daylight loading allows of the most careful focusing. The image can be seen on the ground glass not alone full width but full length of the picture.

The Cycle Graphic Cameras as supplied with Cirkut Outfits Nos. 6 and 8 are fully described on another page of this catalog.

THE NO. 5 CIRKUT CAMERA

Specifications

Width of Photograph.....	5 in.
Dimensions.....	12 x 7 x 4 in.
Weight of Complete Equipment.....	19 lbs.
Length of Bellows.....	12 in.
Size of Lens Board.....	2½ x 2¾ in.

Price

No. 5. Cirkut Camera complete, including Special Convertible Lens; 6½, 11 and 14 inches, one No. 2 Crown Tripod and Top, one Cirkut Tripod Top, gears, key, and carrying case to hold complete outfit..... **\$100.00**

THE NO. 6 CIRKUT OUTFIT

Specifications

Width of Photograph.....	6½ in.
Dimensions of Camera.....	8¾ x 4¾ x 9¾ in.
Dimensions of Camera with Film Attachment.....	10 x 8 x 10½ in.
Weight of Camera.....	6¼ lbs.
Weight of Camera with Film Attachment.....	10½ lbs.
Weight of Complete Outfit with Tripod, Top and Cases.....	25 lbs.
Length of Bellows.....	22½ in.
Size of Lens Board.....	3½ x 3 in.

Prices

No. 6. Cirkut Outfit complete including Revolving Back Cycle Graphic, 5x7, with Graphic Rapid Rectilinear Lens in Automatic Shutter, one 5x7 double Plate Holder, one 6½-inch Cirkut Attachment, one Cirkut Tripod Top, one 6½-inch Tripod Top, one No. 4 Crown Tripod, one Bulb and Hose, Gears, and two Carrying Cases to hold complete equipment..... **\$112.50**

No. 6. Cirkut Outfit with Turner Reich Lens Series II, No. 2, Triple Foci, 7½-12 and 18 inches..... **157.30**

No. 6. Cirkut Outfit with B. & L. Zeiss Protar Lens Series VIIa, No. 9, in Compound Shutter, Triple Foci, 7½-11½ and 16¼ inches..... **197.30**

THE NO. 8 CIRKUT OUTFIT

Specifications

Width of Photograph.....	8 in.
Dimensions of Camera.....	10¾ x 4½ x 10½ in.
Dimensions of Camera with Film Attachment.....	11½ x 8½ x 10½ in.
Weight of Camera.....	9 lbs.
Weight of Camera with Film Attachment.....	14 lbs.
Weight of Complete Outfit with Tripod, Top and Cases.....	34 lbs.

Price

No. 8. Cirkut Camera complete, including Turner Reich Lens Series II, 15, 24 and 36 inch in Double Valve Shutter, one F. & S. Professional Tripod, one Cirkut Tripod Top, one Bulb and Hose, Gears, and three Carrying Cases to hold complete outfit..... **\$425.00**

No. 8. Cirkut Camera without lens and shutter..... **350.00**

THE NO. 10 CIRKUT CAMERA

Specifications

Width of Photograph.....	10 in.
Dimensions.....	11¼ x 14¼ x 18 in.
Weight of Complete Equipment.....	30 lbs.
Length of Bellows.....	39 in.
Size of Lens Board.....	5 x 5 in.

Price

No. 10. Cirkut Camera complete, including Turner Reich Lens Series II, 15, 24 and 36 inch in Double Valve Shutter, one F. & S. Professional Tripod, one Cirkut Tripod Top, one Bulb and Hose, Gears, and three Carrying Cases to hold complete outfit..... **\$425.00**

No. 10. Cirkut Camera without lens and shutter..... **350.00**

THE NO. 16 CIRKUT CAMERA

Specifications

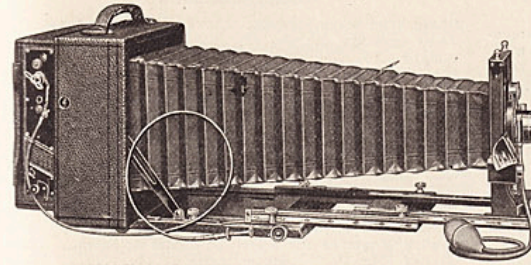
Width of Photograph.....	16 in.
Dimensions.....	11¼ x 14¼ x 18 in.
Weight of Complete Equipment.....	30 lbs.
Length of Bellows.....	39 in.
Size of Lens Board.....	5 x 5 in.

Price

No. 16. Cirkut Camera complete, including Turner Reich Lens Series II, 15, 24 and 36 inch in Double Valve Shutter, one F. & S. Professional Tripod, one Cirkut Tripod Top, one Bulb and Hose, Gears, and three Carrying Cases to hold complete outfit..... **\$425.00**

No. 16. Cirkut Camera without lens and shutter..... **350.00**

THE REVOLVING BACK CYCLE GRAPHIC



The Revolving Back Cycle Graphic meets the requirements of the professional desiring a first-class, compact instrument for all around work.

The extra large and rigid front is sufficient for the largest anastigmat lenses, and the bellows extension is ample for the use of those of long focus.

The extension front runs out on telescopic tracks, reinforced by angle brass guides. Rack and pinion device for accurate focusing.

The swing back is secured by an adjustment of the side arms running in a slotted plate on the platform and locked by milled-head binding screws. The revolving back may be instantly turned to any position, and is fitted to receive the regular ground glass back or the Graflex Focal Plane Shutter.

The rising front is provided with a self-locking device.

The Cycle Graphic is constructed of best quality selected stock, lock jointed and covered with handsome black grained leather. The bellows of finest red Russia leather.

SPECIFICATIONS

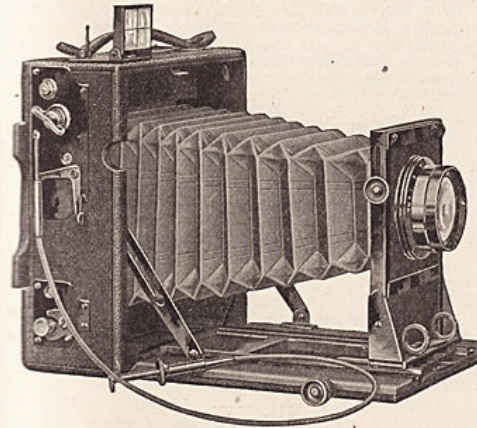
Dimensions.....	4 x 5	5 x 7	6½ x 8½	8 x 10
Focal capacity.....	6¾ x 4 x 7¾	8¾ x 4¼ x 9¼	10¾ x 4½ x 10¾	12 x 5 x 12
Weight.....	17 in.	22½ in.	26 in.	30 in.
Size of lens board.....	3¾ lbs.	6¼ lbs.	7½ lbs.	10½ lbs.
	2½ x 2½ in.	3½ x 3½ in.	4½ x 4½ in.	4½ x 4½ in.

THE PRICE

Including One Double Plate Holder and Sole Leather Carrying Case

Revolving Back Cycle Graphic with Graphic Rapid Rectilinear Lens and Automatic Shutter.....	4 x 5 \$40.00	5 x 7 \$50.00	6½ x 8½ \$62.00	8 x 10 \$75.00
With Zeiss Kodak Anastigmat Lens and Compound Shutter.....	No. 3 71.50	No. 5 95.30	No. 6 113.70	No. 7 130.10
With B. & L. Zeiss Protar Lens, Series VIIa, and Compound Shutter.....	No. 7 105.30	No. 8 127.30	No. 9 157.30	No. 10 222.40
Extra Plate holders, each.....	1.00	1.25	1.75	2.00
Graflex Focal Plane Shutter, extra.....	15.00	16.00	17.50	20.00
Supplementary bed for Wide Angle Lenses.....	7.00	7.50	8.00	9.00

The Speed Graphic



The Speed Graphic Camera is designed to meet the requirements of those desiring Focal Plane Shutter efficiency in a compact folding camera.

The Speed Graphic is made of selected, kiln-dried mahogany especially treated to withstand climatic changes. The front is large enough to accept the high speed Anastigmat lenses, and sufficiently firm to prevent vibration when the camera is used with the bellows extended to its full capacity. A piano hinge extending the full width of the camera attaches the camera body to the folding platform, which is framed and paneled to insure a maximum of rigidity without excessive weight. The extension track is made in the form of a frame, which is not only extremely rigid, but allows the lens to rest between the tracks when the camera is closed.

The Speed Graphic is covered with the best grade of Morocco leather, and the bellows, which is of ample length to accommodate the single combinations of convertible lenses, is made of black leather. All exposed wood parts are ebonized and the metal work is oxidized, producing an instrument of attractive appearance. The Speed Graphic is supplied with a non-reversible back, and when making vertical negatives the camera is turned on its side.

Built into and part of the Speed Graphic is the regular Graflex Focal Plane Shutter.

This shutter is actuated to give exposures of any duration from "time" to 1/1000 of a second.

The Speed Graphic includes the following adjustments:

Rack and Pinion Focusing, Direct View Finder, Two Tripod Sockets, Removable Lens Board, Rising Front.

SPECIFICATIONS

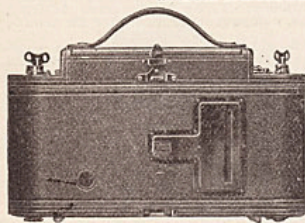
Dimensions.....	3¼ x 4¼	4x5	3¼ x 5½	5x7
Focal capacity.....	5¾ x 3¾ x 5¾	6½ x 5½ x 6½	7x2¼ x 7½	8¾ x 3¾ x 9¾
Weight.....	10 in.	12 in.	12 in.	16 in.
Size of lens board.....	2½ lbs.	3½ lbs.	3½ lbs.	5½ lbs.
	2½ x 2½ in.	3¼ x 3¼ in.	3¼ x 3¼ in.	3¼ x 3¼ in.

THE PRICE
Including One Double Plate Holder

Speed Graphic without lens.....	3¼ x 4¼ \$32.00	4x5 \$35.00	3¼ x 5½ \$37.50	5x7 \$43.00
With Zeiss Kodak Anastigmat Lens f.6.3.....	No. 2 51.00	No. 3 58.25	No. 4 63.75	No. 5 77.50
With B. & L. Zeiss Tessar, Series Ic, f.4.5.....	No. 14 67.00	No. 15 75.50	No. 15a 87.50	No. 16 105.00
With Cooke Lens, Series II, f.4.5.....	No. 20½ 67.50	No. 21 76.00	No. 21½ 87.50	No. 22 105.00
Sole leather carrying case, with lock and key, to hold camera and five extra plate holders.....	5.50	6.00	6.50	7.50
Extra lens boards, each.....	.35	.40	.40	.50
Extra plate holders, each.....	1.00	1.00	1.00	1.25

The 1A Graflex Autographic

SPECIFICATIONS



Outside dimensions, closed, 9 1/2 x 3 1/2 x 5 1/2; focal capacity, 6 1/2 in.; weight, 4 lbs.; size of lens board, 2 1/2 x 2 1/2 in.; minimum focus of lenses accommodated, 4 3/4 in. For Film only.

THE PRICE

1A Graflex without lens.....	2 1/2 x 3 1/2	\$ 60.00
With Zeiss Kodak Anastigmat Lens, f.6.3, No. 2.....		79.00
With B. & L.-Zeiss Tessar Lens, Series Ic, f.4.5, No. 14.....		95.00
With Cooke Lens, Series II, f.4.5, No. 20 1/2.....		95.50
Leather Case for 1A Graflex, extra.....		5.00
Extra lens boards, each.....		.40

To insure proper fitting we recommend that cameras be bought from us complete with lenses as listed. We will not hold ourselves responsible for results with any of our cameras when lenses are not fitted by us.

The 3A Graflex Autographic

SPECIFICATIONS

Dimensions, 10 1/4 x 5 7/8; focal capacity, 10 in.; weight, 7 lbs.; size of lens board, 3 1/4 x 3 1/4 in.; minimum focus of lenses accommodated, 6 1/4 in. For Film only.

THE PRICE

3A Graflex without lens.....	3 1/4 x 5 7/8	\$ 75.00
With Zeiss Kodak Lens, f.6.3, No. 4.....		101.25
With B. & L.-Zeiss Tessar Lens, Series Ic, f.4.5, No. 15a.....		125.00
With Cooke Lens, Series II, f.4.5, No. 21 1/2.....		125.00
Leather Case for 3A Graflex, extra.....		7.00
Extra lens boards, each.....		.50

The Auto Graflex

SPECIFICATIONS

Dimensions 3 1/4 x 4 1/4 4x5 5x7
when closed... 5 1/2 x 5 1/2 x 6 1/4 6 3/4 x 6 1/4 x 7 1/4 9 1/4 x 8 1/4 x 8 3/4
Focal capacity... 7 in. 8 1/2 in. 12 in.
Weight 3 lbs. 10 ozs. 5 lbs. 8 1/2 lbs.
Size of lens board 2 3/4 x 2 3/4 in. 3x3 in. 4x4 in.
Minimum focus of lenses accommodated... 5 in. 6 in. 7 1/2 in.

THE PRICE

Auto Graflex without lens, including one double holder.....	3 1/4 x 4 1/4	4x5	5x7	\$ 50.00	\$ 60.00	\$ 75.00
With Zeiss Kodak Lens, f.6.3, No. 2.....				69.00	83.25	109.50
With B. & L.-Zeiss Tessar, Series Ic, f.4.5.....				85.00	100.50	137.00
With Cooke, Series II, f.4.5.....				85.50	101.00	137.00

The Auto Graflex Junior

SPECIFICATIONS

Dimensions closed, 5 1/4 x 5 1/2; focal capacity, 5 1/2 in.; weight, 3 3/4 lbs.; minimum focus of lens accommodated, 4 in.

THE PRICE

Auto Graflex Junior, 2 1/4 x 3 1/4, without lens, including one double plate holder.....	2 1/4 x 3 1/4	\$ 35.00
With Zeiss Kodak Anastigmat Lens No. 1.....		53.50
With B. & L.-Zeiss Tessar, Series Ic, f.4.5, No. 13.....		66.00
With Cooke Lens, Series II, f.4.5, No. 20.....		66.00
Graflex Roll Holder.....		6.00
Graflex Magazine Plate Holder, Model A, extra.....		10.00
Graflex Film Pack Adapter, extra.....		3.00
Leather case for camera and double plate holder, with lock and key.....		4.50
Leather case for six plate holders, with lock and key.....		2.50
Leather case for camera and magazine plate holder.....		6.00
Extra Graflex plate holders, each.....		1.50

The Revolving Back Graflex Junior

SPECIFICATIONS

Dimensions when closed 6 1/4 x 5 1/2 x 6 1/4
Focal capacity 7 1/4 in.
Weight 3 1/4 lbs.
Minimum focus of lens accommodated..... 5 1/4 in.

THE PRICE

Revolving Back Graflex Junior, without lens, including one double plate holder.....	2 1/4 x 3 1/4	\$ 65.00
With Zeiss Kodak Anastigmat Lens, f.6.3, No. 3.....		88.25
With B. & L.-Zeiss Tessar Lens, Series Ic, f.4.5, No. 15.....		105.50
With Cooke Lens, Series II, f.4.5, No. 21.....		106.00
Graflex Roll Holder.....		6.00
Graflex Magazine Plate Holder, Model A, extra.....		10.00
Graflex Film Pack Adapter, extra.....		3.00
Leather case for camera and plate holder with lock and key.....		5.50
Leather case for six plate holders with lock and key.....		2.50
Leather case for camera with magazine plate holder attached.....		7.00
Extra Graflex plate holders, each.....		1.50

The Compact Graflex

SPECIFICATIONS

Dimensions when closed 7 1/4 x 5 1/2 x 7
Focal capacity 10 in.
Weight 5 1/2 lbs.
Size of lens board 3 1/4 x 3 1/4
Minimum focus of lens accommodated 6 in.

THE PRICE

Compact Graflex without lens, including one double plate holder.....	3 1/4 x 5 1/2	\$ 70.00
With Zeiss Kodak Anastigmat Lens, No. 4.....		96.25
With B. & L.-Zeiss Tessar, Series Ic, No. 15a.....		120.00
With Cooke Lens, Series II, No. 21 1/2.....		120.00
Graflex Roll Holder.....		8.00
Graflex Magazine Plate Holder, Model A.....		14.00
Graflex Film Pack Adapter, leather covered, extra.....		5.50
Leather Carrying Case for camera with plate holder or film pack adapter attached.....		6.00
Sole Leather Case for camera with magazine plate holder attached.....		7.00
Extra Graflex Plate Holders, 3 1/4 x 5 1/2.....		2.50
Extra lens boards, each.....		.50

The Telescopic Revolving Back Graflex

SPECIFICATIONS

Dimensions when closed..... 6 3/4 x 5 1/2 x 6 3/4 8 3/4 x 6 3/4 x 7 3/4
Focal capacity 8 1/2 in. 12 in.
Weight 4 1/4 lbs. 6 lbs.
Size of lens board..... 3 1/4 x 4 1/4 in. 4x4 in.
Minimum focus of lens accommodated 5 1/4 in. 7 1/4 in.

THE PRICE

Telescopic R. B. Graflex without lens, including one double plate holder.....	3 1/4 x 4 1/4	4x5	\$ 90.00	\$ 100.00
With Zeiss Kodak Anastigmat, f.6.3.....			113.25	134.50
With B. & L.-Zeiss Tessar, Ic, f.4.5.....			130.50	162.00
With Cooke Lens, Series II, f.4.5.....			131.00	150.00
Graflex Roll Holder.....			7.00	8.00
Graflex Magazine Plate Holder, Model A, extra.....			12.50	14.50
Film Pack Adapter, leather covered, extra.....			4.50	5.00
Leather case for camera and Film Pack Adapter, with lock and key.....			8.00	10.00
Leather case for camera and magazine plate holder or roll holder.....			10.00	11.50
Extra Graflex Plate Holders, each.....			2.50	2.50
Extra lens boards, each.....			.50	.75

The Home Portrait Graflex

SPECIFICATIONS

Dimensions, 10 3/4 x 9 1/2 x 10 3/4 in.; focal capacity, 18 in.; weight, 13 1/4 lbs.; size of lens boards, 6x5 and 6 1/2 x 6 1/2 in.; minimum focus of lens accommodated, 10 1/2 in.

THE PRICE

Home Portrait Graflex without lens, including one double plate holder.....	5x7	\$ 130.00
With Zeiss Kodak Anastigmat lens, f.6.3, No. 6.....		176.50
With B. & L.-Zeiss Tessar, Ic, f.4.5, No. 18.....		269.50
With Cooke Lens, Series II, f.4.5, No. 22 1/2.....		232.00
Graflex Roll Holder.....		9.00
Graflex magazine plate holder, Model A, extra.....		15.00
Film Pack Adapter, leather covered, extra.....		7.50
Leather case for camera and holder, with lock and key.....		14.00
Extra Graflex plate holders, each.....		3.50
Extra lens boards, 6x5, each.....		.80
Extra lens boards, 6 1/2 x 6 1/2, each.....		1.00

The Press Graflex

Folmer's Patent, February 5, 1907, and June 8, 1909

SPECIFICATIONS

Dimensions, 11 x 8 1/4 x 9 3/4; focal capacity, 14 in.; weight, 11 1/2 lbs.; size of lens board, 4x4 in.; minimum focus of lens accommodated, 8 in.

THE PRICE

Press Graflex without lens, including one double plate holder.....	5x7	\$ 110.00
With Zeiss Kodak Lens, f.6.3, No. 5.....		144.50
With B. & L.-Zeiss Tessar Lens, Series Ic, f.4.5, No. 16.....		172.00
With Cooke Lens, Series II, f.4.5, No. 22.....		172.00
Graflex Roll Holder.....		9.00
Graflex magazine plate holder, Model A, extra.....		15.00
Film Pack Adapter, leather covered, extra.....		7.50
Leather case for camera and plate holder or adapter attached, with lock and key.....		11.00
Leather case for camera and magazine plate holder attached, with lock and key.....		12.50
Extra Graflex holders, each.....		3.50
Extra lens boards, each.....		.75

The Stereo Auto Graflex

Folmer's Patent, February 5, 1907

SPECIFICATIONS

Dimensions, when closed, 8 1/4 x 9 x 8 3/4 in.; focal capacity, 8 in.; weight, 8 lbs.; size of lens board, 3x5 1/2 in.; minimum focus of lenses accommodated, 6 1/4 in.

THE PRICE

Stereo Auto Graflex without lenses, including one double plate holder.....	5x7	\$ 150.00
With matched pair Zeiss Kodak Lenses, f.6.3, No. 3.....		196.50
With matched pair B. & L.-Zeiss Tessar, Series IIB, f.6.3, No. 5.....		212.00
Graflex Roll Holder.....		9.00
Graflex magazine plate holder, Model A, extra.....		15.00
Film Pack Adapter, leather covered, extra.....		7.50
Leather case for camera and Film Pack Adapter, with lock and key.....		9.00
Leather case for camera and magazine plate holder or roll holder, with lock and key.....		10.00
Extra Graflex plate holders, each.....		3.50
Extra lens boards, each.....		2.00

The Naturalists' Graflex

Folmer's Patent, February 5, 1907, and April 21, 1908

SPECIFICATIONS

Dimensions, 10 x 6 1/4 x 9 3/4 in.; focal capacity, 26 in.; weight, 7 1/2 lbs.; size of lens board, 4x4 in.; minimum focus of lens accommodated, 12 1/4 in.

THE PRICE

Naturalists' Graflex, 4x5, without lens, including one double plate holder.....	4 x 5	\$ 150.00
With B. & L.-Zeiss Protar Lens, Series VIIA, No. 19, f.6.3.....		310.50
B. & L. High Power, Tele-Photo Attachment, extra.....		37.00
Graflex magazine plate or cut film holder, Model A, extra.....		13.50
Film Pack Adapter, leather covered, extra.....		5.00
Extra Graflex holders, each.....		2.50

Revolving Back Auto Graflex

Folmer's Patent, February 5, 1907, and June 8, 1908

SPECIFICATIONS

Dimensions when closed..... 3 1/4 x 4 1/4 4x5 10x6 1/4 x 8 1/2
Focal capacity 15 in. 18 in.
Weight 6 1/2 lbs. 8 1/2 lbs.
Size of lens board..... 3x3 in. 3 3/4 x 3 3/4 in.
Minimum focus of lenses accommodated 7 1/4 in. 8 3/4 in.

THE PRICE

Revolving Back Auto Graflex, without lens, including one double plate holder.....	3 1/4 x 4 1/4	4x5	\$ 100.00	\$ 115.00
Fitted with Zeiss Kodak Anastigmat Lens.....	No. 5	No. 6	134.50	161.50
Fitted with B. & L.-Zeiss Protar Lens, Series VIIA.....	No. 10	No. 13	169.50	205.50
Fitted with B. & L.-Zeiss Tessar Lens, Series Ic.....	No. 15a	No. 17	150.00	214.00
Fitted with Cooke Lens, Series II.....	No. 21 1/2	No. 22	150.00	177.00
Graflex Roll Holder.....			7.00	8.00
Graflex magazine plate holder, Model A, extra.....			12.50	13.50
Film Pack Adapter, leather covered, extra.....			4.50	5.00
Leather case for camera and Film Pack Adapter, with lock and key.....			8.00	9.00
Leather case for camera and magazine plate holder.....			9.00	10.50
Extra Graflex plate holders, extra.....			2.50	2.50
Extra lens boards.....			.60	.70

Graflex Roll Holder

1915 Model

The Graflex Roll Holder, 1915 model, takes the new Eastman Graflex Film, and will interchange with the Plate Holders on Graflex Cameras.

The Holder is substantially made and occupies the space of two Plate Holders. It can be easily loaded in daylight by raising the hinged back and removing the spool-carrying mechanism, when the black paper on the film spool is passed over the face of the carrier to the receiving spool. A retarding ratchet is provided whereby the film may be drawn absolutely flat after it is in position for exposure, affording a true recording plane. The Graflex Roll Holder is fitted with a dark slide, which permits the removal of the Holder from the Camera before the entire roll has been exposed, without injuring the film.

Film for the Graflex Roll Holder is designated by a number which is stamped on the inside back cover of the Roll Holder, as well as on the carton containing the Film.

GRAFLEX ROLL HOLDERS

1915 Model

2 1/4 x 3 1/4 For Graflex Roll Holder Film No. 50.....	\$6.00
3 1/4 x 4 1/4 For Graflex Roll Holder Film No. 51.....	7.00
3 3/4 x 5 1/2 For Graflex Roll Holder Film No. 52.....	8.00
4 x 5 For Graflex Roll Holder Film No. 53.....	8.00
5 x 7 For Graflex Roll Holder Film No. 54.....	9.00

Graflex Roll Holders will fit Graflex Cameras only

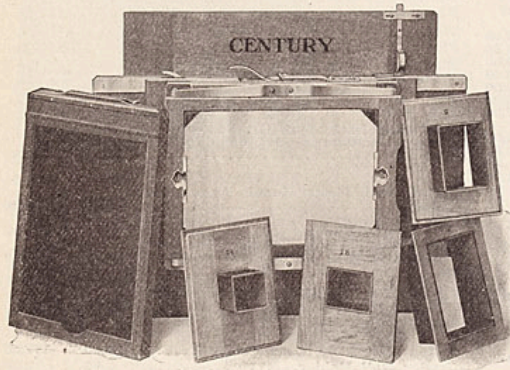
EASTMAN GRAFLEX FILM

No. 50 3 1/4 x 2 3/4 6 Exposures.....	\$0.20
No. 51 4 1/4 x 3 1/4 6 Exposures.....	.35
No. 52 5 1/2 x 3 3/4 6 Exposures.....	.40
No. 53 5 x 4 6 Exposures.....	.45
No. 54 7 x 5 6 Exposures.....	.80

To avoid error order Film by number

The Century Multiplying Back

With the Century Multiplying Back, a view camera can be converted into a multiplying camera by simply removing the reversing back and placing the multiplying back in position—as easily accomplished as changing the reversing back from a vertical to a horizontal position.



This back is constructed to give one, two, four, nine, fifteen and twenty-four exposures on a 5x7 plate, and can be instantly adjusted to the Century and Empire State Cameras in the 6½x8½ or 8x10 sizes.

The Century Multiplying Back accommodates the regular 5x7 view plate holder.

In ordering, be sure to specify the style of camera for which the back is intended. When the Century Multiplying Back is ordered for any view camera not mentioned above, a nominal charge will be made for special fitting.

PRICE

Century Multiplying Back, 6½x8½ or 8x10, including one 5x7 Century View Plate Holder.....\$12.00

Reversible Backs for R. O. and Eastman View Cameras

5 x 7	\$5.00	8x10	\$ 7.00
6½x8½	6.00	11x14	14.00

The F. & S. Lantern Slide Attachment

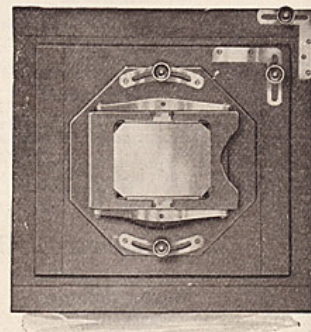
For Enlarging, Reducing and Copying Cameras

This attachment is a great convenience in making lantern slides, and is interchangeable with the regular back of the camera. It is fitted with a spring actuated ground glass, which recedes to admit a double Lantern Slide Plate Holder, 3¼x4 inches.

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

The F. & S. Lantern Slide Attachment can be fitted to any make of enlarging, reducing or copying camera, if exact dimensions are furnished. To insure perfect adjustment, however, the back of the camera should be sent in for fitting.

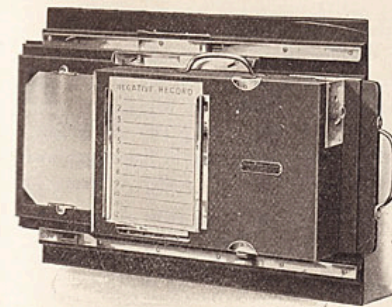
The attachment is splendidly made of the finest mahogany, and finished in keeping with the highest grade instruments.



PRICE

F. & S. Lantern Slide Attachment, 5x 7, including one Lantern Slide Plate Holder.....	\$ 9.00
F. & S. Lantern Slide Attachment, 8x10, including one Lantern Slide Plate Holder.....	12.50
F. & S. Lantern Slide Attachment, 11x14, including one Lantern Slide Plate Holder.....	15.00
F. & S. Lantern Slide Attachment, 14x17, including one Lantern Slide Plate Holder.....	18.00

F. & S. Studio Magazine Plate and Cut Film Holder



This attachment consists of a magazine with two compartments; one for carrying the unexposed plates or cut film, and the other for holding those that have been exposed.

To place an unexposed plate in position for exposure, it is simply necessary to draw the sliding carriage in and out. This action takes an unexposed plate from one compartment and places it in position for exposure. The magazine holder is constructed to carry twelve plates or cut films, and an extremely unique device is fitted, whereby the negative carrier automatically locks itself after twelve exposures have been made. This prevents the making of double exposures, and notifies the operator when the twelve plates in the holder have been used. In large galleries where plates are used in quantities, a number of magazines can be loaded in the morning, and as fast as the plates contained are exposed, new magazines can be attached to the back of the camera.

THE PRICE

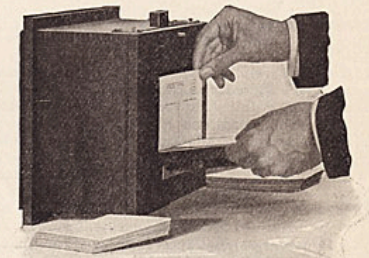
Studio Magazine Holder, complete, fitted for 8x10 Studio Camera.....	\$32.00
Plate Magazine Holder, only.....	18.00
Extra septums, per set of twelve.....	4.00

R. O. C. Post Card Printer

The R. O. C. Post Card Printer is made for the man who desires an inexpensive, yet rapid and trustworthy machine for printing developing-out post cards.

The R. O. C. Post Card Printer may be used with either artificial or daylight, but the use of artificial light is recommended owing to its greater uniformity.

The operation of the R. O. C. Post Card Printer is similar to that of an ordinary hand-printing press, as shown in the accompanying illustration. Drop the card into place against the negative, close the frame by means of the small hand lever; at the expiration of the exposure pull back on the lever, which opens the frame and drops the exposed card. The action of closing the frame automatically opens the exposure shutter, and opening the frame closes it. Every mechanical feature is positive in action, and practically impossible to get out of order.



Showing interior construction with Shutter partly opened

The negative is placed in position by removing the front of the printer, and lifting out the spring retained back as shown in the illustration. The printing opening is made full cabinet size, and a cut-out is furnished for post card size, so that the entire surface of the card may be printed, or any portion masked as desired; both negative and mask being retained firmly in position by the strong springs at each end of the frame. The back of the light box is fitted with a sheet of fine ground glass for diffusing the light, which glass can be removed or replaced instantly.

The wood parts are constructed of cherry, handsomely finished, all brass fittings polished and lacquered.

PRICE

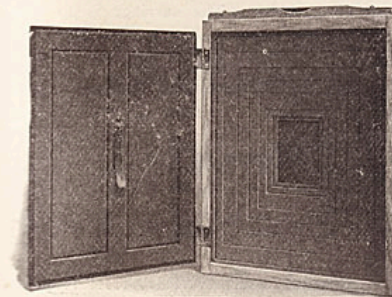
R. O. C. Post Card Printer.....	\$7.50
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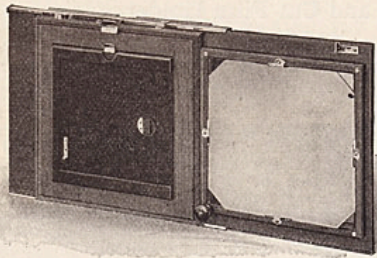
The Combination Bromide Paper and Plate Holder

This is a single "book" holder which will carry either paper or plates. Each holder is fitted with a dark slide and a set of kits from 3¼x4 (lantern slide size) to the capacity of the holder.

THE PRICE

Combination Bromide Paper and Plate Holder,	
5x7.....	\$ 4.00
8x10.....	5.50
11x14.....	7.50
14x17.....	10.00
18x22.....	14.00





No. 7 Sliding Ground Glass Carriage

This attachment consists of a sliding ground glass frame with opening for the 8x10 Century Curtain Slide Holder. Focusing is done on the ground glass, which is then moved to one side, bringing the plate holder into position for exposure. The attachment is adjusted so that two exposures can be made on a plate, and the holder may be used either vertically or horizontally.

PRICE

No. 7 Sliding Ground Glass Carriage for 8x10 Century Studio Cameras No. 1, No. 2 and No. 7, including one 8x10 Curtain Slide Holder.....	\$19.00
Adapter Frame to fit No. 7 Carriage to 11x14 Century Studio Cameras.....	3.00
Adapter Frame to permit use of 5x7 Century Studio Holders in No. 7 Carriage.....	2.00
Extra 8x10 Curtain Slide Holders, each.....	5.50
Extra 5x7 Curtain Slide Holders, each.....	2.50

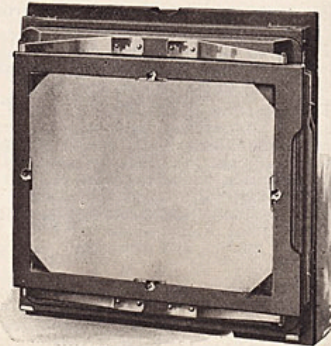
Reversible Adapter for Studio Cameras

These Adapters consist of a spring actuated ground glass back attached to a frame adjustable to the back of Century Portrait Cameras. These adapters are regularly furnished to take the View Plate Holder.

PRICE

11x14 Reversible Adapter for 11x14 Eastman View Holder, including one holder.....	\$16.50
11x14 Reversible Adapter for 8x10 Eastman View Holder, including one holder.....	13.00
11x14 Reversible Adapter for Eastman View Holder 5x7, including holder.....	12.00
8x10 Reversible Adapter for 8x10 Eastman View Holder, including one holder.....	12.50
8x10 Reversible Adapter for 6½x8½ Eastman View Holder, including one holder.....	12.00
8x10 Reversible Adapter for 5x7 Eastman View Holder, including one holder.....	11.50

NOTE: When Reversible Adapters are required for Studio Cameras other than Century, it is necessary for us to have back of camera in order that the fitting may be properly done. For this work an additional charge is made.



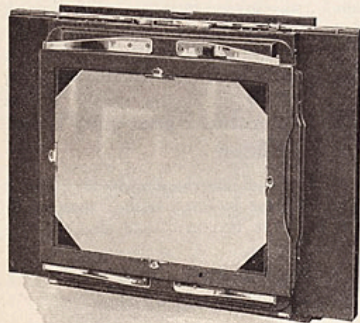
Sliding Ground Glass Carriage for Double Plate Holders

The Sliding Ground Glass Carriage constructed to fit 8x10 and 11x14 Century Studio Cameras. The carriage is so constructed that the receding ground glass back can be shifted to either side, permitting the operator to make negatives the full size of the plate, or two 5x8 exposures on the same plate with the 8x10 back and two 7x11 exposures on the same plate with the 11x14 back.

When Sliding Ground Glass Carriages are supplied for cameras other than those mentioned above, an extra charge is made for the special fitting.

THE PRICE

11x14 Sliding Ground Glass Carriage with one 11x14 Sterling Plate Holder.....	\$21.00
8x10 Sliding Ground Glass Carriage with one 8x10 Eastman View Plate Holder.....	18.00
Adapting Frame for fitting 8x10 Sliding Ground Glass Carriage to 11x14 Century Studio Cameras.....	3.00



VIEW PLATE HOLDERS

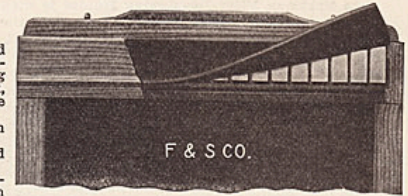
**Eastman View Plate Holder
Eastman Portrait Film Holder**

Eastman View Plate Holders are made throughout of hard wood, all joints dovetailed and fitted with a light-excluding cut-off, which prevents light passing through the narrow opening when the slide is inserted or withdrawn. They are compact, light and easy to load. The holder is designed so as to allow the exposure of the full width of the plate.

The holder is provided with a hinged flap at the base which may be raised as soon as the slide is partly withdrawn.

As soon as the plate or film is in position the flap is returned to place, the slide locking the holder as it is inserted.

The Eastman Portrait Film Holders are similar in construction to the Eastman View Plate Holder, but are for use with Eastman Portrait Film only.



The Price

Eastman View Plate Holder, 5 x 7.....	\$1.00	Eastman Portrait Film Holder, 5 x 7.....	\$1.00
Eastman View Plate Holder, 6½x8½.....	1.10	Eastman Portrait Film Holder, 6½x8½.....	1.10
Eastman View Plate Holder, 8 x 10.....	1.25	Eastman Portrait Film Holder, 8 x 10.....	1.25
Eastman View Plate Holder, 11x14.....	4.50	Eastman Portrait Film Holder, 11x14.....	4.00

Premo Plate Holder

For twenty years the superiority of the Premo Plate Holders has been conceded. In connection with the convenience of the spring-bar device for loading and unloading, an additional improvement is now incorporated in their manufacture which consists of a very flexible and resilient light trap constructed of finely tempered non-corrosive metal with independently operating spring fingers overlaid with a closely woven specially prepared fabric. The fingers bring this fabric into such close and immediate contact with the shutter cover that a slide can be inserted cornerwise without admitting light to the plate.

The Price

3¼x4¼.....	\$1.00	3¼x5½.....	\$1.00	5x7.....	\$1.25
6½x8½.....	\$1.00	4x5.....	\$1.75		

Universal Plate Holder

This holder is made for Empire State View Cameras. The Universal Plate Holder has the spring-bar device for loading and unloading, and is also supplied with a new light trap which permits of the slide being inserted cornerwise without admitting light to the plate. Universal Plate Holders are supplied with press board slides.

The Price

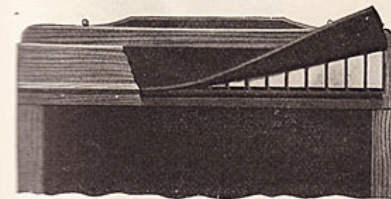
5 x 7.....	\$1.00	6½x8½.....	\$1.10	8 x 10.....	\$1.25	11x14.....	\$4.00
		14x17.....	\$5.00				

R. O. C. Plate Holder

This holder is of good construction and is for use only in the R. O. C. View Camera. It has press board slides.

The Price

5 x 7.....	\$1.00	6½x8½.....	\$1.10	8x10.....	\$1.25
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The Sterling Plate Holder

Sterling Double Plate Holders are absolutely light-proof, strong and thoroughly durable. They are fitted with a new sectional cut-off and sliding locks, that hold the plate securely in position. The full plate may be exposed, excepting ¼ of an inch at one end. A spring on either side of the septum insures absolute register of the plate.

They are furnished with Sky Scraper Cameras.

The Price

Sterling Plate Holder, 8x10.....	\$2.50
Sterling Plate Holder, 11x14.....	6.00

The Graphic Plate Holder

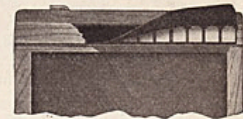
Graphic Plate Holders are made of selected well-seasoned cherry and fitted with our new finger spring cut-off, which prevents the entrance of light and fogging of plates when drawing or replacing slides.

Slides on either side of the septum keep the plates in absolute register. Sliding locks 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 ¼ of an inch at one end.

Graphic Plate Holders are fitted with mat finish slides, of a special material, that will not warp, crack, buckle or collect dust.

The Price

3¼x4¼, each.....	\$1.00	4 x 5, each.....	\$1.00	3¼x5½, each.....	\$1.25
5 x 7, each.....	1.25	6½x8½, each.....	1.75	8 x 10, each.....	2.00



The Graflex Plate Holder

The Graflex Holder, for Graflex Cameras, is simple, strong, practical and absolutely light-proof. It is constructed of well-seasoned cherry, handsomely finished in black and fitted with new finger spring cut-off, which excludes all light and prevents fogging plates when drawing or replacing slides.

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

The Price

3¼x4¼, each.....	\$1.50	3¼x4¼, each.....	\$2.50	4x5, each.....	\$2.50
3¼x5½, each.....	\$2.50	5x7, each.....	\$3.50		

R. O. C. Post Card Plate Holders

3¼x4¼.....	\$0.50	4x5.....	\$0.50
3¼x5½.....	.50	5x7.....	.70

Eastman Film Developing Holder

The Eastman Film Developing Holder is made of monel metal, a new acid-proof substance. The shape is such that the upper bar of the frame may rest in notches on the edge of the tank. At each of the four corners of that part of the frame to which the film is attached are metal clips which hold the film in position. To the center of the top bar is attached a flat piece of metal, curved at the top to form a hook. This acts both as a handle and a hook, by which the frame containing the film may be hung up to dry. By the use of the film developing holders it is a simple matter to develop, fix and wash large quantities of Eastman Portrait Film by the tank method, and while in the holder they may also be dried, thus carrying the film through the entire process of developing, fixing, washing and drying without the necessity of touching the wet film.

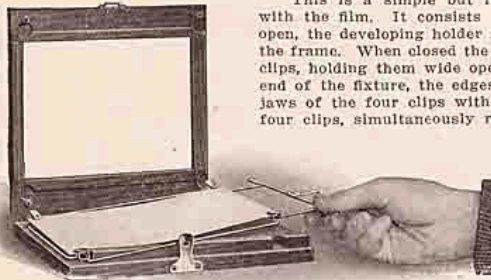


THE PRICE

5 x 7	.....\$0.30	10x12	.....\$2.00
6 1/2 x 8 1/2	......30	11x14	.....2.50
8 x 10	......40	14x14	.....3.00
10 x 10	.....2.00	14x17	.....3.00

Loading Fixture for Film Developing Holder

This is a simple but ingenious device for loading developing holders with the film. It consists of a folding hinged frame so made that, when open, the developing holder slips over a raised portion of the wooden bed of the frame. When closed the back of the frame presses against the four metal clips, holding them wide open. The film is then slid into an opening at one end of the fixture, the edges of the film passing smoothly between the open jaws of the four clips without touching them. As the frame is opened all four clips, simultaneously released, grip the film and hold it firmly in the holder. The entire operation is very simple and takes but a few seconds.



THE PRICE

5 x 7	.....\$1.00
6 1/2 x 8 1/2	.....1.10
8 x 10	.....1.25

Eastman Film Developing Box

Made of hard rubber, neat and durable and designed for use with Eastman Film Developing Holder. It will accommodate twelve 5x7 holders placed across the box or eight 8x10 holders placed lengthwise. This is an especially convenient method for the development of Portrait and X-Ray Film.

Price\$5.00

Film Pack Developing Hanger



To the photo finisher employing the vertical tank system the Film Pack Developing Hanger will prove indispensable. The hanger is composed of two flat rods hinged together, to which are attached at fixed points twelve hinged clips. The films are easily and quickly fastened to the clips in the dark room. The hanger is then doubled over the suspension rod of the tank. After development the hanger is placed in the fixing and washing tanks, and when thoroughly fixed and washed the hanger is opened out and suspended upon hooks for drying.

THE PRICE

Developing Hanger\$0.75 Extra Clips, per doz.....\$0.35

Eastman Film Sheath

The use of the Eastman Film Sheath permits the loading of portrait film in regular plate holders. It is made of aluminum and has a turned edge or rabbet at both sides and one end. The film is slid into the sheath, the edges of the film passing under the rabbets which securely holds the film. The sheath is then placed in the holder in the same manner as a dry plate.

THE PRICE

Film Sheath No. 1—For Use with Curtain Slide Holders		Film Sheath No. 2—For Use with View Holders	
4 1/4 x 6 1/2	.....\$0.25	5 x 7	.....\$0.20
5 x 7	......25	6 1/2 x 8 1/2	......20
8 x 10	......50	8 x 10	......25

CAMERA SUNDRIES

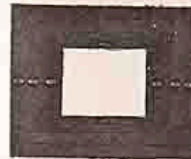
Inside Dry Plate Kits



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

To hold	Plates	Each
4 x 5	3 1/4 x 4 1/4	.....\$0.20
4 x 7	3 1/4 x 4 1/4 or 4x5	......25
5 x 8	3 1/4 x 4 1/4, 4 x 5 or 4 1/4 x 6 1/2	......25
6 1/2 x 8 1/2	4 x 5, 4 1/4 x 6 1/2, 5x7 or 5 x 8	......30
8 x 10	4 1/4 x 6 1/2, 5 x 7, 5x8 or 6 1/2 x 8 1/2	......40
11 x 14	8 x 10 or 10x12	......50
14 x 17	8 x 10, 10x12 or 11x14	......80

F. & S. Special Kits



Our Special Kits are F. & S. quality and in keeping with the high standard always maintained in our product. They are carefully made, neatly finished in dead black, and of correct size to nest perfectly.

PRICES

4 x 5	to take 3 1/4 x 4 1/4 plates, each	.....\$0.50
5 x 7	to take 4 x 5 plates, each	......60
6 1/2 x 8 1/2	to take 5 x 7 plates, each	......70
8 x 10	to take 6 1/2 x 8 1/2 plates, each	......80
11 x 14	to take 8 x 10 plates, each	.....1.00
14 x 17	to take 11 x 14 plates, each	.....1.50

Special Plate Holder Slides

Made of specially selected material, will not crack or split, electrify or collect dust.

5x7	.....\$0.35
6 1/2 x 8 1/2	......45
8 x 10	......55
11 x 14	.....1.00

Slides for Sterling Holders

8x10	.....\$0.65
11x14	.....1.50
14x17	.....1.75
12x20	.....2.25

Slides for E. O. C. Post Card Cameras

3 1/4 x 4 1/4	Press-board	.....\$0.10
3 1/4 x 5 1/2	Press-board	......10
4 x 5	Press-board	......10
4 x 7	Press-board	......15
5 x 8 1/2	Hard Rubber	......15
6 1/2 x 8 1/2	Hard Rubber	......15
8 x 10	Hard Rubber	......15
11 x 14	Hard Rubber	......20

Holder Slides

Extra Slides for Plate Holders and Premo Film Pack Adapters

4 x 4 1/4	Lacquered Press-board	.....\$0.20
4 x 5 1/2	Lacquered Press-board	......20
5 x 5	Lacquered Press-board	......20
5 x 7	Lacquered Press-board	......25
6 1/2 x 8 1/2	Lacquered Press-board	......30
8 x 10	Lacquered Press-board	......40
11 x 14	Lacquered Press-board	......60
5 x 7	Hard Rubber	......35
8 x 8 1/2	Hard Rubber	......50
10 x 10	Hard Rubber	......65

Carrying Cases for View Cameras

E. O. C. View, square	5x7	6 1/2 x 8 1/2	8x10
Eastman View No. 1	.....\$1.75	.....\$2.00	.....\$2.25
Eastman View No. 2	.....3.50	.....3.75	.....4.00
Eastman View No. 3	.....4.00	.....4.50	.....5.00

Casters

For Backgrounds, Camera Stands, Screens, Etc.



The wheels are of hard wood, 2 1/2 inches in diameter. They are so arranged that they will not drop out when lifted from the floor.

The No. 1 style have plain wood wheels, while the No. 4 are made of iron and have substantial tires of rubber, the outside diameter being also 2 1/2 inches.

PRICE

No. 1, per set of 4	.....\$1.00
No. 4, Rubber Tired Casters for Studio Stand, complete, each	.....1.00
Delto, per set of 4	.....4.00
Rubber Tired Wheels, only, for Studio Stand, each	......25
Rubber Tired Casters for Semi-Centennial Stand, each	......50

Camera Bellows

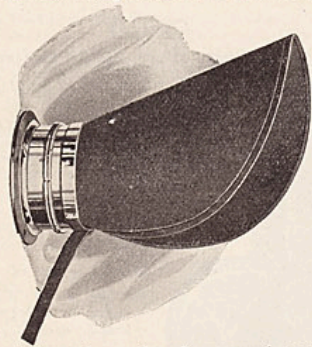
Extra bellows will be supplied for cameras when desired, at the following prices:

8x10 Sky Scraper Camera	.....\$ 7.00
11x14 Sky Scraper Camera	.....9.00
8x10 Century Grand Portrait Camera	.....7.00
11x14 Century Grand Portrait Camera, per set	.....14.00
8x10 Century Studio Camera No. 1	.....6.00
11x14 Century Studio Camera No. 1, per set	.....12.00
8x10 Century Studio Camera No. 3	.....6.00
8x10 Century Studio Camera No. 4	.....6.00
5x7 Century Studio Camera No. 5	.....3.00
Eastman View No. 1, 5x7	.....3.50
Eastman View No. 1, 6 1/2 x 8 1/2	.....4.00
Eastman View No. 1, 8x10	.....4.50
Eastman View No. 2, 5x7	.....5.00
Eastman View No. 2, 6 1/2 x 8 1/2	.....6.00
Eastman View No. 2, 8x10	.....7.00
5 x 7 Graphic E. & R. Camera	.....4.00
8 x 10 Graphic E. & R. Camera	.....6.00
11 x 14 Graphic E. & R. Camera	.....9.00
6 1/2 x 8 1/2 R. B. Cycle Graphic Camera	.....8.00
5 x 7 R. B. Cycle Graphic Camera	.....6.00
8 x 10 R. B. Cycle Graphic Camera	.....9.00
5 x 7 Pony Premo No. 9	.....4.00
5 x 7 Pony Premo No. 10	.....4.00
F. & S. Commercial Camera, 8x10	.....12.00
F. & S. Commercial Camera, 11x14	.....15.00
F. & S. Banquet Camera, 7x17	.....7.50
F. & S. Banquet Camera, 12x20	.....10.00

Lens Boards

Portrait Cameras, 5x7, 7x7	.....\$0.75
Portrait Cameras, 8x10, 9x9	.....1.00
Portrait Cameras, 11x14, 10x10	.....1.50
Eastman View Camera No. 1, 5 x 7	......30
Eastman View Camera No. 1, 6 1/2 x 8 1/2 and 8x10	......40
Eastman View Camera No. 2, 5 x 7	......60
Eastman View Camera No. 2, 6 1/2 x 8 1/2 and 8x10	......75
Sky Scraper, 8x10	......60
Sky Scraper, 11x14	......75
F. & S. and Crown E. R. & C. Cameras, 8x10	.....1.00
F. & S. and Crown E. R. & C. Cameras, 11x14	.....1.25
F. & S. and Crown E. R. & C. Cameras, 14x17	.....1.50
F. & S. and Crown E. R. & C. Cameras, 18x22	.....1.75
Hand Cameras, 6 1/2 x 8 1/2	......50
Hand Cameras, 8 x 10	......50
F. & S. Home Portrait	......60
F. & S. Banquet, 7x17	......50
F. & S. Banquet, 12x20	......70
F. & S. Commercial, 8x10	......60
F. & S. Commercial, 11x14	......75

Eastman Adjustable Lens Hood



This article replaces the clumsy and many times unsightly makeshifts with which the photographer has put up with in the past. One great advantage of this hood is the fact that if bumped into by the photographer by accident, it does not pull over the camera with it. The lens hood merely drops off, and can be readjusted instantly.

In Rembrandt lightings, the hood may be adjusted so as to guard against side lights.

It is made in 3 sizes, one for lens hood 2 to 4 inches, the other 3½ to 6 inches. The material is black morocco, with nickel plated spring band, and the inside is lined with fine non-reflecting black velvet.

PRICE

- No. 0, for lenses 2½ to 3½ in. diameter.....\$1.50
- No. 1, for lenses 3½ to 4½ in. diameter..... 2.00
- No. 2, for lenses 4½ to 6 in. diameter..... 2.50

Eastman Professional Focusing Cloth

A first-class durable article, made of extra heavy cloth, a full yard and a quarter square, with bound edges.

- Eastman Professional Focusing Cloth.....\$0.75
- Eastman Home Portrait Focusing Cloth, 40x48 inches 1.00

R. O. C. View Focusing Cloth

A good, big, generous focusing cloth, 4 feet square. Made of first quality, specially treated cloth, light in weight, and light and water proof.

PRICE

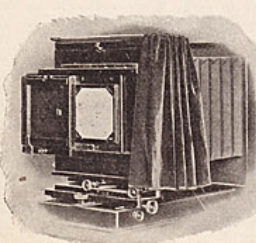
- R. O. C. View Focusing Cloth.....\$0.75

Rubber Focusing Cloth

First quality cloth medium weight, one yard wide.

PRICE

- Rubber Cloth, per yard.....\$0.35
- 1 yard by 1½ yards..... .50



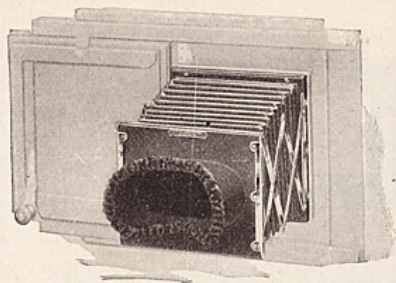
Eastman Focusing Curtain

As shown in the illustration this curtain does away entirely with the inconvenient and unsightly focusing cloth. The velvet curtain slides easily on the rod, and plate holders or any attachments are readily adjusted without inconvenience. The rod is adjustable and the curtain may be fitted to any portrait camera from 8x10 to 14x17.

PRICE

- Eastman Focusing Curtain\$5.00

The Flexible Focusing Attachment



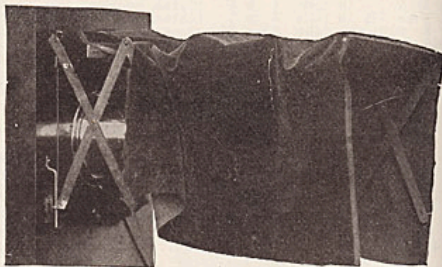
The Flexible Focusing Attachment can be fitted to any of the Century ground glass carriages. It dispenses with focusing cloths and curtains, and is constructed in such a manner that the light is effectually excluded, allowing the entire image to be accurately focused.

The Flexible Focusing Attachment adds much to the appearance of the studio outfit.

PRICE

- No. 1 Flexible Focusing Attachment, 5x7....\$6.00
- No. 2 Flexible Focusing Attachment, 8x10.... 8.00

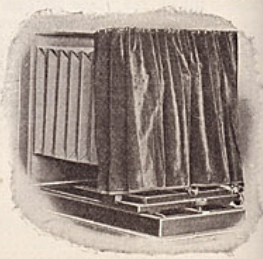
Cornell Lens Hood



Lens Hood Extended, Showing Attachment.

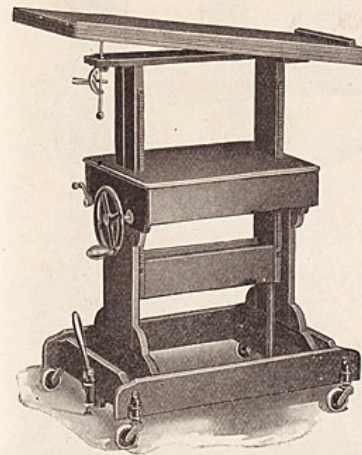
The Cornell Lens Hood keeps all stray light from the lens and insures clear and bright negatives. Will close out of the way when you wish to change your lens or diaphragm. Can be set sidewise when working towards the light, and the camera will not move if you run against it.

- Lens Hood and Attachments, each.....\$3.00



CAMERA STANDS

Century Grand Stand No. 2



The Century No. 2 Stand is entirely new in design. This stand is the result of an effort to produce the best Camera Stand ever made.

The Century No. 2 Stand is made of mahogany, insuring solidity and strength without adding weight, and also enhancing greatly the general appearance of the stand.

All weights, beveled gears, set screws, belts, ratchets, levers, etc., have been dispensed with and as a result this stand is devoid of complicated parts, and is perfectly rigid, strong and durable.

The top, which supports the camera, is raised or lowered by a turn of a direct drive adjusting wheel, placed at the back. This wheel is within easy reach of the operator when standing in his natural position at the rear of the camera. So accurately is the stand balanced that the adjusting wheel revolves with the utmost freedom. Only one revolution of the wheel is necessary to raise or lower the top three full inches—a most important consideration.

The tilting device for elevating the rear of the camera is constructed on an entirely new principle. It is the most rapid and accurate adjustment ever devised.

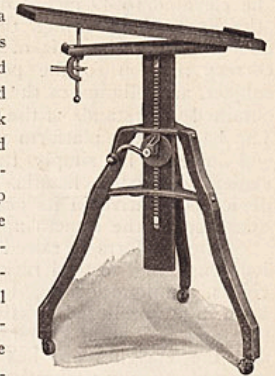
By turning the small rod attached to cog wheel near the base, the counter-balance is changed to accommodate cameras of different weights. All Century Stands are fitted with rubber-bound casters and Camera Stand Jacks. The top is covered with fine felt and all metal parts are beautifully oxidized.

PRICE

- 8x10\$27.50
- 11x14\$29.00
- Century Grand Stand No. 2.....

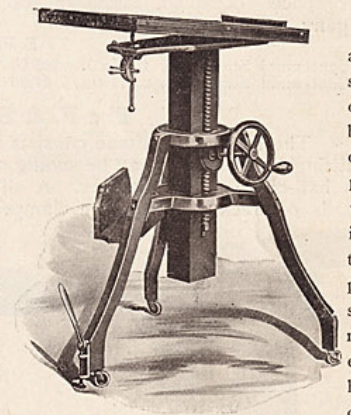
Century Camera Stand No. 3

The Stand is made of hardwood with a mahogany stain. It is exceedingly firm and rigid. It is raised and lowered by a rack and pinion and held in place by an automatic lock. The top is provided with the regular Century Tilting Device and is covered with felt. All metal parts are beautifully oxidized. The Stand bears throughout every evidence of careful workmanship.



- Price\$8.00

Century Camera Stand No. 4



This stand is a most substantial piece of apparatus, bearing evidence of most painstaking workmanship in every particular. No part has been slighted. It is raised and lowered by a hand - wheel operating a

rack and pinion and is locked automatically in position. The movement is quick and easy.

The stand rests upon three rubber tired casters and is fitted with a jack, which, by a movement of the foot renders it impossible to move the outfit when the exposure is about to be made.

The stand is made of hardwood, mahogany stained, and all metal parts are oxidized. The top is supplied with the Century Automatic Tilting Device and is covered with felt. A plateholder rack is attached in a convenient position.

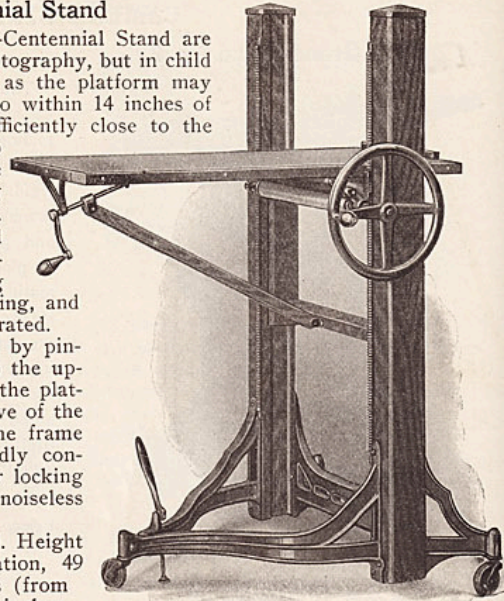
- Price\$12.00
- No. 6 Century Camera Stand..... 7.00

The Century Semi-Centennial Stand

The many advantages of the Semi-Centennial Stand are instantly apparent in all branches of photography, but in child portraiture this stand is indispensable, as the platform may be elevated to 49 inches or depressed to within 14 inches of the floor. This brings the camera sufficiently close to the floor to bring the axis of the lens into correct relation to the position of the subject, and eliminates the false drawing obtained with stands of the ordinary sort. The back of the platform may be raised and lowered by simply turning a conveniently located handle. The tilting device is positive in its action, self-locking, and does not jar the camera upon being operated.

The platform is raised and lowered by pinions engaging vertical racks attached to the uprights, a unique locking device holding the platform in any required position, irrespective of the size and weight of camera carried. The frame and the uprights are heavily and solidly constructed, avoiding vibration. A jack for locking the stand in position on the floor and noiseless rubber-tired casters are provided.

The Century Semi-Centennial Stand. Height of stand, 51 inches. Maximum elevation, 49 inches. Maximum depression, 14 inches (from floor). Floor space occupied, 29x33 inches. Finish, Mahogany.



11 x 14 Semi-Centennial Stand

THE PRICE

Century Semi-Centennial Stand No. 1, 8x10. \$25.00 Commercial Semi-Centennial Stand, 45 in. top \$28.00
 Century Semi-Centennial Stand No. 2, 11x14... 27.50 Commercial Semi-Centennial Stand, 54 in. top 30.50

The F. & S. Laboratory Stand

The Laboratory Stand consists of a solid base with two uprights supporting a tilting track, which may be swung and rigidly clamped in any position, describing a half-circle of 180 degrees. A sliding platform runs freely in grooves in side rails of track, and may be clamped securely at any point. This platform is fitted with standard tripod screws in order that any standard camera may be fastened to the sliding platform. The movement of the sliding platform is controlled by a worm screw actuated by a handle at the rear of the stand.

A Copy or Negative Holder is attached to guides running in grooves in side rails, which may be moved back or forth from the camera, and rigidly secured. This frame has the double shifting movement which permits the operator to select any portion of the negative.

A set of Spring Finger Kits is furnished with the above Frame, which will hold any size negatives, from 3 1/4 x 4 1/4 up to the capacity of the camera.

era, or a ground glass may be substituted for the kits when photographing botanical or similar subjects, or a Spring Finger Copy Holder may be substituted for the Sliding Frame when copying work is to be done.

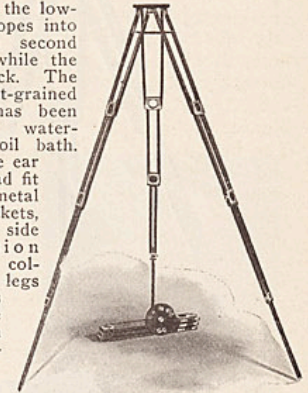
THE PRICE

F. & S. Laboratory Stand with Spring Finger Copy Holder, Kits and Ground Glass.....\$25.00 \$45.00

Tripods

CROWN TRIPOD

In this tripod, the lower section telescopes into the second, the second into the third, while the fourth folds back. The stock is straight-grained cherry, which has been toughened and waterproofed by an oil bath. Taper pins in the ear pieces of the head fit snugly into the metal top of the sockets, thus preventing side play. Expansion brackets prevent collapse of tripod legs when tripod is grasped by the hand. This is an invaluable feature.

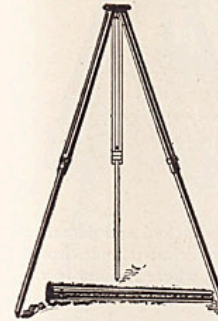


Price

No.	Top	Weight	Length Extended	Length Closed	Price
1	4 in.	36 oz.	4 1/2 ft.	16 1/2 in.	\$5.50
2	6 in.	65 oz.	4 3/4 ft.	17 1/2 in.	6.00
3	6 in.	70 oz.	5 1/2 ft.	20 in.	7.50
4	6 1/2 in.	84 oz.	5 1/2 ft.	19 1/2 in.	8.50

CARLTON SLIDING TRIPOD

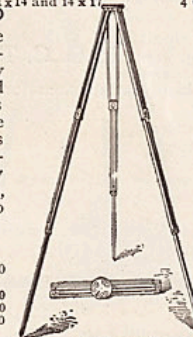
As a rigid tripod none will be found more satisfactory than the Carlton. The legs are made in three sections, rendering very firm support. The top is wood covered with cloth. The two smaller sizes are made of spruce, the larger of ash. They are of good finish and the metal parts are lacquered brass.



Style	No. Size of Camera..	lbs	ozs	Wt	Pr.
1	5x7 and smaller...	1	15	22	60
2	5x8 and 6 1/2x8 1/2	2	12	2	50
3	8x10 and 10x12	4	15	3	00
4	11x14 and 14x17	4	15	4	00

COMBINATION TRIPOD

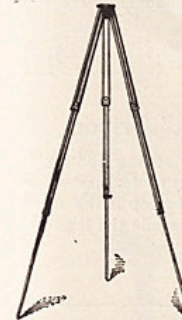
This tripod is made on the sliding and folding principle, which produces a very compact as well as a rigid support. The wood parts are ash and the finish of the very best. The trimmings are of brass with lacquer finish. The length when fully extended is fifty-six inches, when folded twenty-two inches.



Style	No.	Size of Camera	lbs	ozs	Wt	Pr.
2 1/2	6 1/2x8 1/2 and smaller	2	3	8	83	00
3	8x10 and 10x12	4	6	3	50	
4	11x14 and 14x17	7	1	4	50	
5	11x20 and 20x24	8	8	6	00	

R. O. C. TRIPOD

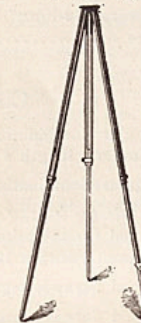
The R. O. C. tripod is of the combination type. The wood parts are maple, beautifully finished in natural color. The head is metal with wooden top, leather covered. The clamp bands are of new design, which permits clamping more readily than with milled head nuts as usually supplied. Length extended, fifty-six inches; when folded, twenty-two inches.



Style	Weight	Price
R. O. C. Tripod	34 ozs	\$1 70

FLEXO SLIDING TRIPOD

Although very light this is an extremely rigid tripod and is designed for cameras up to and including 4x5 size. The wood is straight grain spruce with shellac finish, the metal trimmings and head lacquered brass. The weight complete including head and screw, is but fifteen ounces. When extended for use the length can be made to vary from thirty to fifty-four inches. Price..... 90c



KODAK METAL TRIPODS



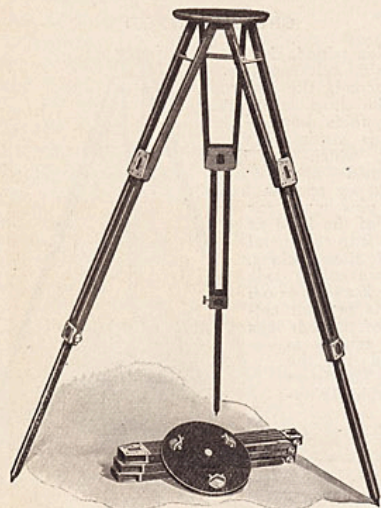
Combining light weight and compactness with exceptional rigidity, this is an ideal tripod for cameras up to 5x7.

Has telescoping legs of brass tubing—lower ones nicked—the upper black enameled. Should a part become inoperative through wear or accident, any section may be removed for repairs. This is a unique feature among metal tripods. When extended each section catches and holds firmly. To close, it is necessary to press in top catch only, the others then releasing automatically.

The Nos. 1 and 2 have revolving heads for attaching to camera. With this construction the camera may be swung so as to take in the desired view without moving the tripod, a distinct advantage over other types of metal tripods. The Nos. 1 and 2 also have straps for holding the legs in place when closed.

	Length			Weight	Price
	Sec. In.	Ext'd In.	Oz.		
Kodak Metal Tripod No. 0	3	15 1/2	39 1/2	15	\$1.60
Kodak Metal Tripod No. 1 C	4	15 1/2	48 3/4	25 1/2	2.25
Kodak Metal Tripod No. 1	4	15	48 3/4	24 1/2	2.50
Kodak Metal Tripod No. 2 C	5	18 1/2	49 1/2	28	3.00
Kodak Metal Tripod No. 2	5	18 1/2	49 1/2	25	3.25
No. 6 New Kodak Metal Tripod Folding Head, extended, 40 inches					5.00
Leatherette Case for No. 0					.75
Leather Carrying Case, for any style					1.50

No. 1 Professional Tripod



The Professional Tripod is provided with expansion brackets in the upper section, which makes it impossible for the legs to be detached from the head until the brackets are folded. This method of construction also considerably increases its rigidity.

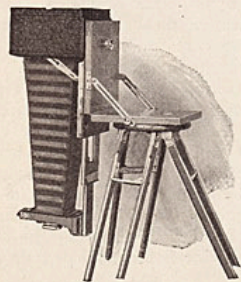
In other respects it is similar to the Crown Tripod

When closed for carrying this tripod measures 24½ inches in length. Extended for use, 4 feet 10 inches. Diameter of top, 11½ inches. Weight, 11¼ pounds.

PRICE

For cameras up to and including 14x17.....\$12.50

Crown Tilting Tripod Top

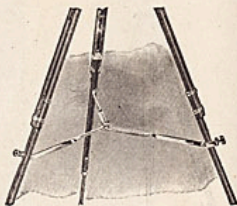


By the aid of this attachment the camera may be tilted at any angle upward or downward, and permits of the camera being reversed instantly for vertical pictures without changing the camera back or removing the camera from the tripod.

Price, each, No. 1.....\$2.00
Price, each, No. 2..... 2.50

Eastman Tripod Brace

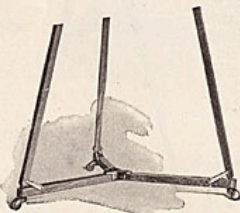
Those who have dropped a camera through the legs spreading on slippery pavements or polished floors, or had an expensive outfit upset by the wind will appreciate the protection which this device will give. It locks the tripod legs securely, preventing vibration, and can be attached and detached easily. It is just the thing for Cirkut tripods, home portraiture or tele-photography, where rigidity is important.



Price\$1.00

R. O. C. Tripod Truck

A handy attachment for converting the tripod into a light and rigid studio stand. It has three folding arms which are provided with sockets for the tripod legs. When set up the legs may be locked into the sockets. It is provided with casters. The photographer will find it invaluable in home portraiture, copying or on slippery floors, where the tripod slips.



Price, No. 1.....\$1.00
Price, No. 2..... 1.25

The Century "12-Foot" Tripod

This tripod is made exceedingly strong and rigid, and as its name indicates, is designed for use when extreme elevation is necessary. The top is the same as that of the Professional Tripod, while the legs are made proportionately stronger.

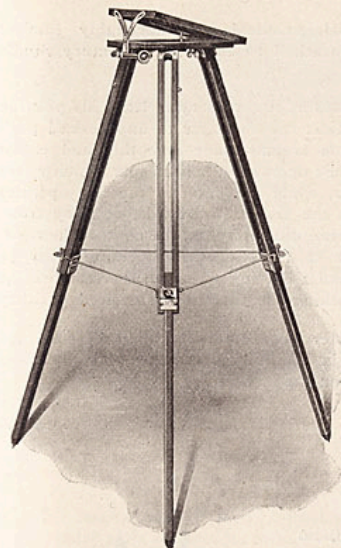
THE PRICE

Century "12-Foot" Tripod, complete.....\$18.00
Legs only 15.00

Cirkut Tripods

Regular Combination Cirkut Tripod for No. 10
Camera, length 4 ft. 8 in., legs only.....\$ 6.00
Regular Combination Cirkut Tripod for No. 16
Camera, length 5 ft., legs only..... 7.50
Special Combination Cirkut Tripod for No. 10
Camera, length 12 ft., legs only..... 12.00
Tripod Screws, regular, each..... .25
Tripod Screws, large, each..... .35

F. & S. Home Portrait Tripod



This tripod was especially designed for home portrait work, and will be found to possess many advantages over the ordinary type for interior work.

It can be instantly set up and can be adjusted or moved without danger of slipping. The rubber tips on the legs avoid the marring of polished floors.

It has also a special self-locking tilting device, and locking brace, holding tripod rigid when extended; legs fitted with rubber tips to prevent slipping.

THE PRICE

F. & S. Home Portrait Tripod.....\$8.00

Eastman Steel Filing Cabinets

The Eastman Steel Filing Cabinet offers a practical means for filing a large number of film negatives, where they are not only protected, but are as readily accessible as the contents of an ordinary office filing case.

A single unit of this filing cabinet will hold five hundred 8x10 film negatives, while a four section unit will hold two thousand.

The cabinets are made in single and in four section units, the drawers have full roller suspension bearings, and may be

fitted with partitions to hold 5x7 or both 5x7 and 8x10 film negatives. When fitted for 5x7, each drawer will hold one thousand 5x7 film negatives.

Steel transfer cases without drawers are furnished at less expense and may be used for storing the older negatives as they are transferred from the office filing cabinet.

These filing cabinets are an exceptional convenience, as they allow all negatives of recent date to be filed in the office, where they may be had for any purpose at a moment's notice.

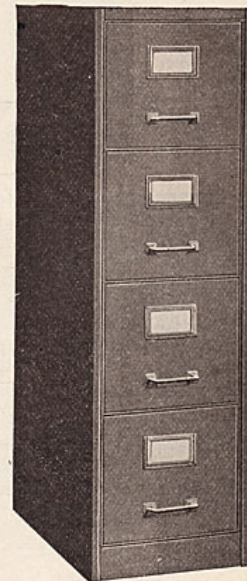
One section of a cabinet may be used for negatives which have been proofed but not ordered from, the negatives being immediately at hand when the order is given.

The cabinets are handsomely finished, and add much to the appearance and convenience of the modern photographer's office.

THE PRICE

EASTMAN STEEL FILING CABINETS

No. 1	Single Unit, capacity 500, 8x10 Film Negatives.....	\$10.00
No. 2	Single Unit, with one partition, capacity 1,000 5x7 Film Negatives.....	11.50
No. 3	Single Unit, with two partitions, capacity 500 5x7 and 250 8x10 Film Negatives.....	13.00
No. 4	Four Section Unit, capacity 2,000 8x10 Film Negatives.....	32.50
	Additional charge for fitting single drawers with one partition for 5x7 negatives, each.....	1.50
	Additional charge for fitting single drawers with two partitions for both 5x7 and 8x10 negatives, each.....	3.00
No. 5	Transfer Box, capacity 500 8x10 Film Negatives.....	2.25

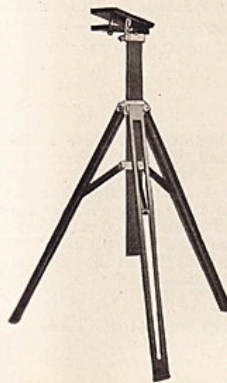


Four Section Unit.

Folding Stand

Better Than a Tripod for Most of the Work a Tripod Is Used For

Every amateur and professional photographer can find good use for this stand. It is light, portable and rigid, and will not upset accidentally. Adjustable for height and inclination, beautifully made of cherry with walnut finish. No. 1 weight 3½ lbs No. 2 weight 5½ lbs. Maximum height 53 inches.



THE PRICE

No. 1	For 6½x8½ and smaller cameras.....	\$ 9.00
No. 2	For 6½x8½ and larger cameras.....	10.00
	Special top for projection lanterns, 7½x24.....	2.00

This is attached to the regular top by the tripod screw provided to attach a camera. The camera top is detachable.

Developer and Chemical Preparations

Developer and Chemical Preparations

Developing Powders

Azo, 12 powders for 48 oz. developer.....\$0.50
 Azo, 6 powders for 24 oz. developer......25
 Eastman's Elkonogen, 12 powders for 48 oz. developer......50
 Eastman's Elkonogen, 6 powders for 24 oz. developer......25
 Eastman's Hydrochinone, 12 powders for 48 oz. developer......50
 Eastman's Hydrochinone, 6 powders for 24 oz. developer......25
 Eastman's Pyro, 12 powders for 48 oz. developer......50
 Eastman's Pyro, 6 powders for 24 oz. developer......25
 Eastman's Special (paper wrapped), 6 powders for 24 oz. developer......25
 Eastman's P. S., per pkg......40
 Eastman's Elkonogen, in hermetically sealed tubes, per pkg. 5 tubes......25
 Eastman's Hydrochinone, in hermetically sealed tubes, per pkg. 5 tubes......25
 Eastman's Pyro, in hermetically sealed tubes, per pkg. 5 tubes......25
 Eastman's Special, in hermetically sealed tubes, per pkg. 5 tubes......25

Seed Developing Specialties

Seed Elko-Hydro in pkg., each, \$0.05; pkg. 1/2 doz......25
 Seed Hydrochinone in pkg., each, \$0.05; pkg. 1/2 doz......25
 Seed Metol Hydro in pkg., each, \$0.05; pkg. 1/2 doz......25
 Seed Pyro in pkg., each, \$0.05; pkg. 1/2 doz......25

Artura Developing Specialties

Artura Developing powders, box of 6 cartridges, No. 1......25
 Artura Developing powders, box of 6 cartridges, No. 2......50

Film and Plate Tank Developing Powders

Film Tank

For Brownie Tank, pkg. 6 powders......15
 For Brownie Developing Box, pkg. 6 powders......15
 For Brownie Developing Machine, pkg. 6 powders......15
 For Vest Pocket Tank, pkg. 6 powders......15
 For 2 1/2 inch Tank, pkg. 6 powders......20
 For 3 1/2 inch Tank, pkg. 6 powders......20
 For Style A Machine, pkg. 6 powders......25
 For 5 inch Tank, pkg. 6 powders......25
 For 7 inch Tank, pkg. 6 powders......25
 For Style E Machine, pkg. 6 powders......25
 For Style H Machine, pkg. 6 powders......35

Plate Tank

For 4x 5 Plate Tank, pkg. 6 powders......20
 For 5x 7 Plate Tank, pkg. 6 powders......35
 For 8x10 Plate Tank, pkg. 6 powders......50

Premo Tank

No. 1 pkg., 6 powders......20
 No. 2 pkg., 6 powders......25
 No. 3 pkg., 6 powders......35

Professional Kodak Tank and Machine

Pkg. 48 oz. stock solution......60

M. Q. Tubes and Powders

Eastman M. Q. Tubes, per tube, \$0.05; box 100......5.00
 M. Q. Developer, Kodak, Non Abrasion, pkg. of 3 tubes......75
 Nepera M. Q. N. A. Tubes, box of 5 tubes......25
 Eastman M. Q. Powders, box of 100 powders......5.00

Eastman E. B. Platinum Developer

1/2 lb......30
 1 lb......35
 1 lb......60

Eastman E. S. Platinum Developer

1/2 lb......30
 1 lb......35
 1 lb......60

Nepera Developing Agent, powdered form, sufficient for 250 oz. paper solution or 1,000 oz. plate solution, per bottle......60

Liquid Developer

N. A. Velox Liquid Developer, 4 oz. bottle......25
 N. A. Velox Liquid Developer, 16 oz. bottle......75
 N. A. Velox Liquid Developer, 1/2 gal. bottle......2.00
 N. A. Velox Liquid Developer, 5 gal. keg......10.00
 Nepera Solution, 4 oz. bottle......20
 Nepera Solution, 16 oz. bottle......60
 Nepera Solution, 1/2 gal. bottle......1.50
 Nepera Solution, 1/2 gal. jug......9.00
 Nepera Auxiliary Powders for use with Nepera Solution, carton of 12 powders......15

Re-Developer

Royal Re-Developer, per pkg., 6 tubes.....\$0.75
 Velox Re-Developer, per box containing 14 powders of bleaching agent and 4 oz. concentrated Re-Developer......50
 2 oz. concentrated Re-Developer and powder......30
 Velox Re-Developer, per pkg., 12 glass tubes......60

American Aristotype Specialties

American Platinum Developer, No. 1 for 16 oz. Developer......15
 American Platinum Developer, No. 2 for 50 oz. Developer......35
 American Platinum Developer, No. 3 for 100 oz. Developer......60
 Aristo Gold, No. 1, per bottle......50
 Aristo Gold, No. 2, per bottle......1.00
 Aristo Gold, No. 3, per bottle......2.00
 Aristo Platinum Solution, No. 1, per bottle......50
 Aristo Platinum Solution, No. 2, per bottle......1.00
 Aristo Single Toner, No. 1, per bottle......50
 Aristo Single Toner, No. 2, per bottle......1.00
 Aristo Spotting Colors, per set......50

Angelo Specialties

Angelo Sepia Solution, 2 oz. amateur size......30
 Angelo Sepia Solution, 3 oz. bottle......40
 Angelo Sepia Solution, 8 oz. bottle......1.05
 Angelo Sepia Solution, 1 pt. bottle......2.00
 Angelo Sepia Solution, 1/2 gal. bottle......6.40
 Angelo Sepia Salt, amateur size......10
 Angelo Sepia Salt, 1/4 lb......35
 Angelo Sepia Salt, 1/2 lb......30

Hardeners

Acid Hardener, per box......25
 Sollo Hardener, Powdered, per box......40
 Sollo Hardener Solution, 8 oz. bottle......55
 Sollo Hardener Solution, 1/2 gal. bottle......1.05
 Velox Liquid Hardener, 4 oz. bottle......15
 Velox Liquid Hardener, 8 oz. bottle......25
 Velox Liquid Hardener, 1/2 gal. bottle......1.25
 Velox Liquid Hardener, 5 gal. jug......7.50

Intensifiers

Eastman Tube, each......15
 Eastman 8 oz. bottle......35
 Agfa 4 oz. bottle......30
 Agfa 8 oz. bottle......50
 Victor 4 oz. bottle......90
 Victor 8 oz. bottle......65
 Victor 16 oz. bottle......1.25

Varnishes

Marvel Retouching Varnish, 8 oz. bottle......50
 Adamantine Varnishes, 6 oz. bottle......40
 Adamantine Varnishes, 1 pt. bottle......1.00
 Adamantine Varnishes, 1 qt. bottle......1.50
 Adamantine Varnishes, 1 gal. bottle......7.00
 Eastman Non-Inflammable, 16 oz. bottle......25
 Eastman Lantern Slide Film Varnish, 4 oz. bottle......50
 Hammer, 16 oz. bottle......50

Retouching Fluids

Unrivaled Retouching Dope, per bottle......25
 Eastman per bottle, 1 oz. gal. bottle......40
 Hance's Ground Glass Substitute, per bottle......50
 Superlative Ground Glass Substitute, per bottle......35

Sundries

Kodak Acid Fixing Powders, 1/4 lb. carton......10
 Kodak Acid Fixing Powders, 1/2 lb. carton......15
 Kodak Acid Fixing Powders, 1 lb. carton......25
 Bromide Powders, 10 per cent, 4 powders in carton......05
 Eastman Chemical Outfit......30
 Eastman Spotting Colors, set......25
 Eastman Flash Sheets, 10 per 1/2 doz. market price
 Eastman Flash Sheets, No. 2, per 1/2 doz. market price
 Eastman Flash Sheets, No. 3, per 1/2 doz. market price
 Eastman Flash Cartridges, No. 1, 1/2 doz. market price
 Eastman Flash Cartridges, No. 2, 1/2 doz. market price
 Eastman Flash Cartridges, No. 3, 1/2 doz. market price
 Eastman Litmus Paper, Red or Blue, per bottle, 100 sheets......10
 Nepera Waxing Solution, 4 oz. bottle......20
 Eastman Opaque, No. 1, 3 oz......15
 Eastman Opaque, No. 2, 5 oz......25
 Eastman Photo Paste, 3 oz. tube......15
 Eastman Photo Paste, 5 oz. tube......25
 Eastman Photo Paste, 4 oz. jar......10
 Eastman Photo Paste, 8 oz. jar......20
 Eastman Photo Paste, 16 oz. jar......40
 Eastman Photo Paste, gal. pail......1.50
 Eastman Reducer and Stain Remover, per pkg., 5 tubes......25
 Agfa Reducing Salts, per bottle......80
 Artura Sepia Salts, box of 6 cartridges......50
 Eastman Photo Paste, 1/2 gal. bottle......2.00
 Sollo Toner, 4 oz. bottle......30
 Sollo Toner, 8 oz. bottle......50
 Sollo Toner, 1/2 gal. bottle......2.00
 X-Ray Developer, pkg. 6 powders, sufficient for 72 oz......50
 Dev. Negative and Positive Film, 1 gal. can......35
 Kodak Leather Dressing, pt. can......35

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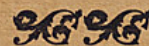
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