

THE NEW FOLDING FRENA CAMERA

(Nos. 6, 7, 8).

ILLUSTRATED AND DESCRIBED.

CHARLE COMPANY

R. & J. BECK, Ltd.,

68, CORNHILL, LONDON.

THIS CATALOGUE

Comprises the

NEW FOLDING FRENA,

A marvel of compactness when closed, fitted with either **Beck-Steinheil Lens**, giving Two Foci $4\frac{3}{4}$ in., and $8\frac{1}{2}$ in. aperture, F. 6³

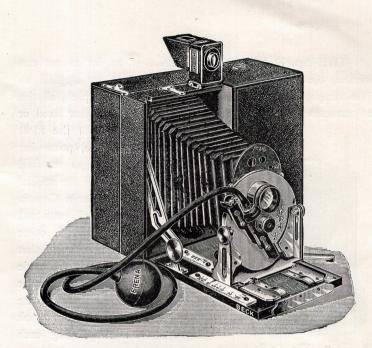
- OR -

Beck Autograph Rapid Rectilinear Lens. Focussing Lever and Scales. Direct Focussing Glass. Double Extension. Rising Front in both Directions. Swing Back. Perfect Adjustable Shutter. Carries 40 Flat Films, or Glass Plates.

Simple Model of Folding Frena with Beck Single Lens.

ALSO

THE BOX FORM FRENA CAMERAS. These not being made to fold, are not so compact, but are always ready for use, and although they have not all the adjustments for special work they are perfect instruments of their kind.



The No. 7 & 8 Folding Frena (Open). Fig. 1.

THE NEW FOLDING FRENA.

(Quarter Plate Size) made in 3 Forms.

No. 8 CAMERA, with all Adjustments and Beck-Steinheil Orthostigmat Two Foci Lens.

- No. 7 CAMERA, with all Adjustments and Beck-Rapid Rectilinear Lens.
- No. 6 CAMERA, with Fixed Focus and Beck Single Lens.

THE No. 8 FOLDING FRENA is, as far as we can foresee, the perfection of the Frena System as applied to Photography. It possesses, in the minimum of space, all the adjustments that are supplied to any Camera, whether hand or



Fig. 2. The No. 8 Folding Frena, closed.

stand. It has a Lens of the most perfect Anastigmatic type, possessing the exceptional advantages required for the full employment of the special adjustments, which render a Camera absolutely complete for all sorts and conditions of work. On the other hand, the Camera is so arranged that these adjustments need not be made use of by those who prefer the simpler forms of photography. In this case (as fully explained in the hand-book of instructions accompanying each Camera), it is almost as simple to use as any Camera on the market.

Forty flat films, "Like a Pack of Cards." or Glass Plates may be used. Long and Short Focus Lenses; Swingback, Rising Front in both Directions; Time Exposures; Bulb Exposures, or instantaneous exposures up to $\frac{1}{120}$ of a second.

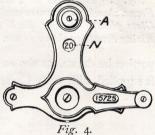
THE FILM HOLDER. This portion of the Camera contains a sliding box, holding any number of Frena Films from 1 to 40 under spring pressure—the front one always being in the Focus of the Lens. To change the Film, this sliding box is partially withdrawn as shown in Fig. 3, while the Camera is held with its Lens end pointing downward. By turning the handle A, the foremost Film is automatically dropped into the receiving chamber, where the exposed Films are deposited in a pack one by one in the order in which they have been taken. Fig. 4 gives an enlarged view of the handle by which the Film is

changed, showing the indicator at N, which registers the number of Films which have been exposed. The principle of the Frena System is the same in all kinds and models of Frena Cameras. A packet of Frena Films, as supplied by the makers, are unwrapped in a nonactinic light and placed without



any manipulation direct into the Camera in a pack. They are then, one by one, deposited in the receiving chamber as exposed,

and can be withdrawn at any time for development, or may be left till the entire pack has been used. The whole process of taking out the exposed Films and putting in a new charge, including wrapping and unwrapping, can be easily accomplished in three minutes.



GLASS PLATE ATTACHMENT. By means of the new arrangement of the film holder, the Folding Frena is constructed so that the lens, shutter, and Camera can be detached from the magazine and film-changing portion. The Camera portion, including lens and shutter, is about one quarter of the whole, as will be seen in Fig. 2. With the addition of a ground glass attachment and double plate holder, it can be used as an ordinary plate Camera. We have laid down a special plant of machinery, not only for producing the Camera and film holder, but also for the manufacture of a cheap and reliable double plate holder.

Fig. I shows the Folding Frena No. 8 with the tailboard open and the lens and shutter in position for use. A delicate



Fig. 5. No. 7 & 8 Folding Frena, showing Camera as used for Glass plates. Swing Back and Rising Front are shown in use.

focussing lever adjustment is provided and a scale of feet for setting the lens, which is specially adjusted in each Camera so that entire reliance may be placed in its accuracy.

A novel appliance has been invented so that the focussing of the Camera may be accomplished by the direct method, even while the film holder is attached to the Camera. If the slide of the film changing

portion be drawn, as shown in fig. 6, a focussing glass B, which is supplied with each Camera, may be inserted in a spring trap

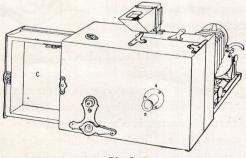


Fig 6.

door A. This focussing glass has a ground glass at one end, which, when inserted, is in the exact position that the film usually occupies, and by looking through the magnifying lens at the other end the centre of the picture may be focussed direct.

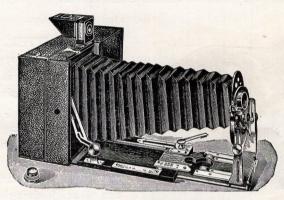
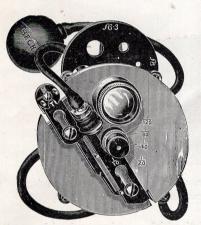


Fig 7. No. 8 Folding Frena, showing full extension, rising front, and single combination of lens in use.

A swing back is provided which can be used with great ease. The side links which support the tailboard are so made that the tailboard snaps under ordinary circumstances into the horizontal position, but for use of the swing back it may be clamped by means of two milled heads at any angle as required. Fig. 5 shows the Camera with swing back and rising front in use.

Fig. 7 shows the Folding Frena with the double extension of the Camera in use, which enables the half combination of the Beck-Steinheil Orthostigmat Lens to be employed by simply unscrewing the front combination of the lens. Thus a long focus lens can be obtained which will give a picture about double the size of that given by the normal lens. A rising front of I inch in the vertical and $\frac{3}{4}$ inch in the horizontal position is supplied. The Camera has thus all the adjustments of a stand Camera, arranged so that they do not complicate the use of the instrument and need not be used unless desired.



The "Wafer" Shutter used in the No. 7 and 8 Folding Frena. Fig. 8.

THE SHUTTER. This shutter is our new patent Wafer Shutter. It is made in an aluminium casing with thin revolving steel plate to make the exposure. It is upon the same principle as our well-known Frena Shutter, in which the variation of the speeds is obtained by altering the size of the aperture which passes over the lens. There are no brakes or other devices, and so the speeds can always be

relied upon as being practically accurate. The following instantaneous exposures can be given: $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{40}$, $\frac{1}{80}$, $\frac{1}{120}$ of a second, and time exposures may be made in two ways. In order to give a short time exposure the disc on the set off must be set to the letter B (Bulb exposures). In this case squeezing the pneumatic bulb opens the lens, which remains open only as long as the bulb is squeezed, but is closed as soon as the pressure on the bulb is released. By this means exposures from $\frac{1}{4}$ of a second to 3 or 4 seconds may conveniently be made.

When the disc on the set off is opposite the letter T squeezing the bulb opens the lens, which remains open for any length of time, and in order to close it the bulb must be squeezed a second time.

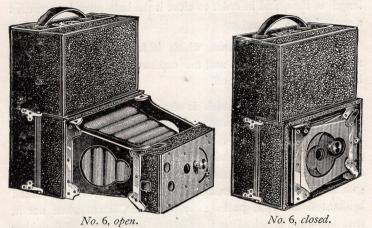
The pneumatic release, which is held in a spring fitting, may be entirely removed and the exposure made with the finger by pushing down the set off.

THE FINDER, which is shown in Figs. 1, 5, 7, is a brilliant finder made on the principle of our Patent Cornex Finder. The amount of view included in the picture is accurately portrayed in the finder, and does not vary according to the angle at which the observer looks into it. It is as reliable as the old ground glass form of finder, and as brilliant as any of the so-called brilliant finders. It packs away into the Camera when not in use, but when attached to the Camera it can be used for either horizontal or vertical pictures by merely revolving the back portion without shifting its position on the Camera.

THE LENS. The No. 8 Folding Frena carries one of the new Beck-Steinheil Orthostigmat Lenses with an aperture of $f/6\cdot 3$. Even with this very large aperture the margins of the plate are as sharp as the centre, and the rising front can be used to its full extent, namely: 1 inch, with hardly any perceptible loss of definition. The front half of the lens may be removed and the back half used alone as a lens of double the focus and one quarter the speed.

THE No. 7 FOLDING FRENA is provided with a Beck "Autograph" Rapid Rectilinear Lens, which has a full aperture of f/8. This lens when the rising front is not used covers the plate well, but the margins are not quite as sharply defined as

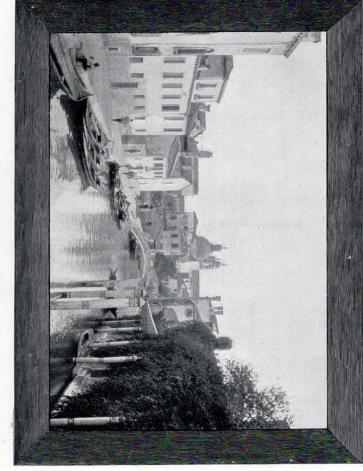
the centre till the first stop is employed. When the rising front is in use this lens requires considerable stopping down.

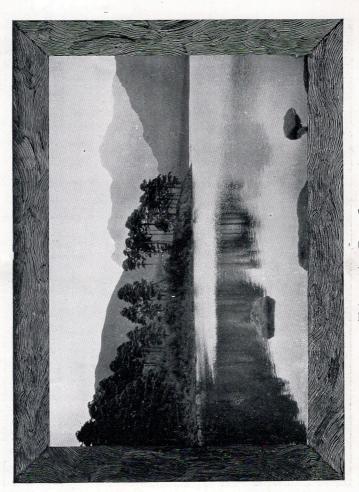


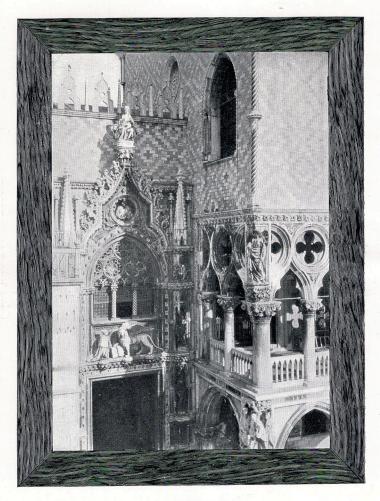
THE No. 6 FOLDING FRENA. This is a simplified form of the Folding Frena Nos. 7 and 8, with a fixed focus Beck Achromatic Single Lens. It is the same lens as that supplied in the No. 22 Box Form Frena, and is capable of the finest work. It has the same shutter giving $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{40}$, $\frac{1}{50}$ second and time exposures of any duration. Diaphragm to lens and two **patent brilliant Cornex Finders.**

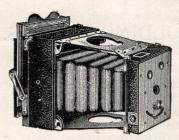
Like the box form Camera this new Frena has a fixed focus lens, the Camera when extended fits rigidly into a certain position, and can only be used when so fixed. Its range of focus includes any object between 20 feet from the Camera and the horizon. The same **system of magnifiers** is used for focussing near objects as is employed in all our fixed focus Frena Cameras. By means of these, objects as near as 9 inches can be successfully photographed.











No. 6, G, open.



No. 6, G, closed.

Camera detached as used with double backs.

		Icui Ducu	
OF	THE FOLDING F	RENAS, NOS.	6, 7 & 8.
Lens	No. 6. $\begin{cases} 5^{\frac{1}{2}} \text{ in. Single} \\ \text{Achromatic} \end{cases}$	No. 7. 5½ in. Rapid Rectilinear	No. 8. 4 ³ and 8 ¹ / ₂ in. Beck- Steinheil Orthostigmat.
Largest aperture	<i>f</i> /11.	£18.	f /6·3.
Focus	Fixed, Range Horizon to 20 ft. Frena Magnifier may be used for near objects.	Adjust	able to any distance.
Size of film	$4\frac{1}{4} \times 3\frac{1}{4}$ in.		$4\frac{1}{4} \times 3\frac{1}{4}$ in.
Size of picture	$4\frac{1}{4} \times 3$ in.		$4\frac{1}{4} \times 3$ in.
Full charge	40 films.		40 films.
Speeds of shutter	$\frac{1}{5}, \frac{1}{10}, \frac{1}{20}, \frac{1}{40}, \frac{1}{80}$	1 10,	$\frac{1}{20}, \frac{1}{40}, \frac{1}{50}, \frac{1}{120}$
Indicator showing number of films exposed.) On back of Holde	er. On b	ack of Holder.
Finders	} Two "Stationar Brilliant.	cy" One rev	olving "Stationary" Brilliant.
Tripod sockets	Two.		Two.
Focussing glass and double dark slides		I	extra if desired.
Weight	3 1bs.	3	lbs.
Dimensions	$8\frac{1}{4}$ in. \times $5\frac{5}{8}$ in. \times $3\frac{1}{2}$	in. 81 in	$1. \times 5\frac{6}{5}$ in. $\times 3\frac{1}{4}$ in.
Dimensions of Camera only	$\bigg\}_{5\frac{5}{6}in.\times 4\frac{1}{4}in.\times 1\frac{7}{6}}$	in. 5 ⁵ / ₈ in	$1. \times 4^{1}_{4}$ in. $\times 1^{5}_{\mathrm{B}}$ in.

Technical Data

PRICES OF THE FOLDING FRENAS.

No. 6, 7, 8.

No. 8.	The Folding Frena (‡-plate size) with film holder, handbook and forty flat films, fitted with Beck-Steinheil 2 focus Orthostigmat Lens	£11	18	6
No. 8, G.	The above without film holder, but with 3 double dark slides and ground glass attach- ment	10	7	0
No. 7.	The Folding Frena (4-plate size) with film holder, handbook and forty flat films, fitted with Beck Rapid Rectilinear Autograph Lens	9	8	6
No. 7, G.	The above without film holder, but with 3 double dark slides and ground glass attach- ment	7	17	0
	The Folding Frena (¹ / ₄ -plate size) single lens model, with complete film changer, handbook and forty films	5	8	6
No. 6, G.	The Folding Frena (4-plate size) single lens model, without film changer, but with ground glass attachment and 3 double dark slides	3	17	0
	Magnifiers for near objects, for use with the No. 6 Camera, set of 4 in case	0	10	6
	Ground glass attachment and key for detaching camera	0	6	6
	Double dark slides $(4\frac{1}{4} \times 3\frac{1}{4} \text{ in.})$, weight $2\frac{1}{4}$ ozs. each	0	3	6

The Frena Hand Camera has steadily and surely made its way into public favour. The yearly increase in the sale of Frena Films is alone sufficient to prove how greatly it is appreciated by those who use it.

The increasing number of testimonials received from all parts of the world show that it is suitable for all climates and for all classes of photographers—beginners and experts alike.

No one need find any difficulty in using it, as a complete handbook is supplied with each Camera, giving full instructions as to its manipulation.

Many competent and unprejudiced judges have volunteered the opinion that the Frena is the **best Hand Camera in existence**, irrespective of price. Its unparalleled success has been due to the fact that it possesses features that render it not only perfectly simple to use, but also capable of work of the widest possible scope.

It has a Beck Lens of the finest quality, thus ensuring superb definition.

The advantages of Cut Films in a Hand Camera are evident. Not only are films much less heavy than glass plates, but they take less room in packing, and the negatives can easily and safely be stored between the pages of a memorandum book.

It has been said that films do not keep good as long as glass plates, but we can say from experience that such is not the case, and that they keep quite as well if the same precautions are taken to protect them.

The New Tropical Film has been specially introduced for use abroad, where it may be necessary for them to be kept for an extra long time before use.



The Frena has stood the test of time, and has been constantly improved and perfected. It is now unrivalled for certainty of action, simplicity of use, and quality of resultant pictures.

THE BOX MODEL FRENA CAMERAS.

So many thousands of these are in use that it is not necessary to give as full a description as of the new Folding Frena. They carry 40 flat films which are discharged one by one into the receiving chambers as used. They have the advantage of being always ready for use at a moment's notice, but are consequently not so portable as the folding model. The lenses supplied in them are equal to those of the folding model, and we are now fitting these Cameras with the Beck-Steinheil Orthostigmat when required. For this class of Camera, however, where the lens is permanently opposite the centre of the plate, and, when owing to the focus being fixed, it is inadvisable to use very large apertures, the advantages of the Beck-Steinheil lenses are not so marked. There is, therefore, only a slight advantage to be gained by replacing the ordinary Frena lens in this way. The shutter is on the same principle as that of the folding Camera, differing only in its details. The great feature of this pattern of Camera is its ease of use. The finders are all of the Patent "Cornex" Brilliant type. The lenses are all provided with diaphragms. A swing back and level are fitted to each Camera, and the finish and workmanship is first quality throughout.

The Use of the Box Model Frena.

THREE simple manipulations, repeated for each exposure, are all that is required of the operator. These manipulations are :--

1.—Wind the Shutter by turning a knob.

2.-Set off the Shutter by pressing a trigger.

3.-Change the Film by turning the handle.

There is an adjustment to alter the length of exposure.

There are diaphragms to the lens, and a swing back for use by the expert when required.



Technical Data.

Lens		41 in. Beck Achromatic Single Lens.
Aperture		f/11, diaphragms $f/16$, $f/22$, $f/64$.
Focus		Fixed. Range (f/II) : Horizon to 14 feet. Frena Magnifiers may be added for objects as near as I foot.
Size of film		$_{3\frac{1}{2}}$ in. $\times 2\frac{5}{8}$ in.
Size of picture		$_{3\frac{1}{2}}$ in. \times 2 $\frac{3}{2}$ in.
Full charge		2 packs, i.e., 40 films.
Speed of Shutter		$\frac{1}{5}$ $\frac{1}{10}$ $\frac{1}{20}$ $\frac{1}{40}$ $\frac{1}{50}$ of a second; and time exposures.
Indicator showing of films used		Right hand side of case.
Swing back		Can be used about 20° with smallest stop.
Finders		For vertical and horizontal pictures respectively.
Tripod sockets		To order only.
Weight (charged 40 films)	l with	2ª lbs.
Dimensions		$9\frac{1}{2}$ in. \times 5 in. \times $3\frac{1}{2}$ in.

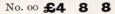
Price-Camera, £2 15s. 0d.; 40 setoloid films, 3s. 8d.

No. 00. £2 18 8

Frena Magnifiers, set of 3 in case, 7s. 6d.

Presentation Model,

Covered in buff calf leather, with polished brass fittings and 40 setoloid films.



4



Technical Data.

Lens Aperture Focus	4 ¹ / ₄ in. "Autograph" Rapid Rectilinear. <i>f</i> /8, diaphragms <i>f</i> /11, <i>f</i> /16, <i>f</i> /22, <i>f</i> /64 Fixed. Range (<i>f</i> /11): Horizon to 14 feet. Frena Magnifiers may be added for objects as near as 1 ft.
Size of film Size of picture Full charge	3월 in. × 2월 in. 3월 in. × 2월 in. 2 packs, <i>ie</i> , 40 films. 書 方 故 衣 む of a second : and time exposures.
Speed of shutter Indicator showing number	Right hand side of case.
of films used Swing back	Can be used about 20° with smallest top. Two-for vertical and horizontal pictures respectively.
Finders Tripod sockets	Two-and screw for affixing to tripod.
Weight (charged with 40 films)	2 ³ / ₄ 1bs.
Dimensions Price—Camera,	$9 \text{ in. } \times 5 \text{ in. } \times 3\frac{1}{2} \text{ in.}$ £5 0s. 0d. ; 40 celluloid films. 5s. 0d.

Frena Magnifiers, set of 3, in case, 7s. 6d.

No. o. £5 5 0

Presentation Model.

Covered in buff calf leather, with polished brass fittings and 40 celluloid films

No. o. £6 15 0

No. o Frena Camera fitted Beck-Steinheil Orthostigmat Lens complete

£8 15 0

16

THE FRENA No. 22.

(‡ plate size.)

 $4\frac{1}{4}$ in. \times $3\frac{1}{4}$ in. Single Lens Form.



Technical Data.

Lens Aperture Focus		 	51 inch Achromatic Single Lens. f/11 Diaphragms, $f/16$, $f/22$, $f/64$. Fixed Range, Horizon to 20 feet. Frena Magnifiers			
			may be added for objects as near as 9 inches.			
Size of Film			$4\frac{1}{4}$ in. $\times 3\frac{1}{4}$ in.			
Size of Picture			$4\frac{1}{4}$ in. \times 3 in.			
Full Charge			2 packs, <i>i.e.</i> , 40 films.			
Speed of Shutter			$\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{40}$, $\frac{1}{80}$ second and time exposures.			
Indicator showing	num	ber	The leader being the set of the set of the			
of Films used			Right-hand side of case.			
Swing Back			Can be used about 20° with smallest stop.			
Finders			Two patent " Brilliant Stationary."			
Tripod Sockets			Two, and screw for affixing to stand.			
Weight (charged	with	40				
films)			4 lbs.			
Dimensions			12 in. × 5 [‡] in. × 4 [§] in.			
Price-Camera, £5 Os. Od.; 40 celluloid films 8s. 6d.						

£5 8s. 6d.

Frena Magnifiers, set of four in case, 10s. 6d.

Presentation Model

Covered in buff calf leather, with polished brass fittings and 40 films

£7 0 0



Technical Data.

Lens			5 ¹ / ₂ "Autograph" Rapid Rectilinear.
Aperture			f/8, diaphragms f/11, f/16, f/22, f.64.
Focus			Fixed. Range $(f/11)$: Horizon to 20 feet. Frena
			Magnifiers on revolving diaphragm in Camera
			front. Range f/11; No. 1, 27-9 ft.; No. 2, 10-6 ft.;
			No. 3, 6-41 ft.; No. 4, 41-31 ft. Higher power
			Magnifiers are supplied for nearer objects at an
			extra charge.
Size of film			$4\frac{1}{4}$ in. $\times 3\frac{1}{4}$ in.
Size of picture			$4\frac{1}{4}$ in. $\times 3$ in.
Full charge			2 packs, <i>i.e.</i> . 40 films.
Speed of shutter			$\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{40}$, $\frac{1}{50}$ of a second; and time exposures.
Indicator showing			5, 10, 20, 40, 80 of a second, and time exposition
of films used			Right hand side of case.
Swing back			Can be used about 20° with smallest stop.
Finders			Two-for vertical and horizontal pictures respectively.
Tripod sockets			Two—and Screw for affixing to tripod.
Weight (charged			I wo-and screw for anixing to tripod.
	with	40	. 11
films)			4 lbs.
Dimensions			$11\frac{1}{2}$ in. \times 5 $\frac{1}{2}$ in. \times 4 $\frac{1}{2}$ in.
Price_C	amen	a. £	8 9s. 0d. : 40 Films (Celluloid), 8s. 6d.

No. 2 £8 17 6

Presentation Model,

Covered in buff calf leather, with polished brass fittings and 40 celluloid films

No. 2 £10 10 0

No. 2 Frena Camera, fitted with Beck-Steinheil Orthostigmat Lens £13 12 6

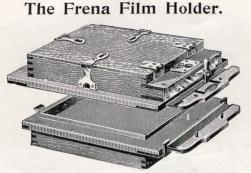


Technical Data.

Lens					61 in. "Autograph" Rapid Rectilinear.	
Aperture					f/8, diaphragms f/11, f/16, f/22, f/64.	
Focus					Fixed. Range (f/11): Horizon to 30 ft. Frena Magnifiers on revolving diaphragm in the	
					Camera front. Range $f/_{11}$, No. 1, 30-12 ft.; No. 2, 12-6½ ft.; No. 3, 5½-4½ ft.; No. 4, 4-3½ ft. Higher power magnifiers are	
					supplied for nearer objects at an extra charge.	
Size of film	1	•••			$5 \text{ in.} \times 4 \text{ in.}$	
Size of pic	ture				$5 \text{ in.} \times 3\frac{3}{4} \text{ in.}$	
Full charg	re				4 packs, i.e., 40 films.	
Speed of s	shutte	r			$\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$, $\frac{1}{40}$, $\frac{1}{80}$ of a second; and time exposures.	
Indicator	showi	ing n	umber	of		
films use	ed				Right hand side of case.	
Swing bac	k				Can be used about 20° with smallest stop.	
Finders					Two-for vertical and horizontal pictures respec- tively.	
Tripod soc	kets				Two-and screw for affixing to tripod.	
Weight (cl	harge	d with	40 fil	ns)	$5\frac{1}{2}$ lbs.	
Dimension	IS				$12\frac{1}{2}$ in. $\times 6\frac{1}{2}$ in. $\times 5\frac{1}{2}$ in.	
Pri	ice (i	nclu	ling	Fren	a Magnifiers)-Camera, £12 Os. Od.;	
40 Films (Celluloid), 12s. 0d.						
			N	0.3,	£12 12 0	
Presentation Model.—Covered in buff leather with polished brass fittings with 40 celluloid films, £14 14 0						
No. 2 Frana Camera fitted with Back Steinheil Orthostigmat Lens						

No. 3 Frena Camera, fitted with Beck-Steinheil Orthostigmat Lens, complete **£18 2 0**

19



Magazine and Receiver, Separated.

The Frena Film Holder can be fitted to any tripod Camera, like an ordinary dark slide.

It carries twenty cut sheet films, or any smaller number, and changes these automatically, "like a pack of cards."

The Frena Film Holder is adapted to ordinary Cameras by simply planing down the edges of the magazine. The only alteration requisite in the Camera to which it is to be attached is a re-adjustment of the focussing screen. If it is desired to avoid even this alteration, then another focussing screen, having the same register as the Film Holder, may be employed.

PRICES.

Quarter=plate Size $(4\frac{1}{4} \text{ in. } \times 3\frac{1}{4} \text{ in.})$	 	£2	10	0
5 in. × 4 in. Size	 	2		
Half=plate Size $(6\frac{1}{2} \text{ in. } \times 4\frac{3}{4} \text{ in.})$	 	3	0	0

Fitting to Camera extra.