DIRECTIONS FOR USE

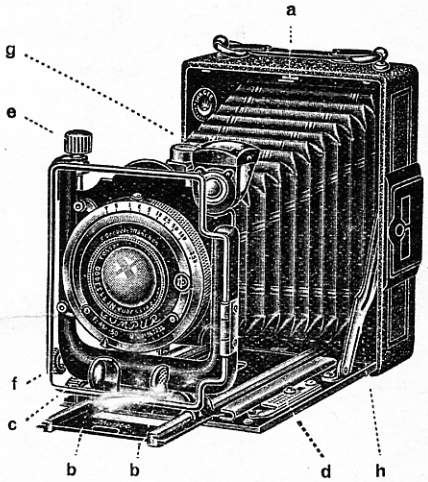
of Ihagee-Cameras with double extension

Ihagee
Patent Duplex

Ihagee
Duplex de Luxe

Ihagee Neugold

Ihagee Pionier



Ihagee
KAMERAWERK
STEENBERGEN & Co

DRESDEN - SCHANDAUER STR. 24

To open the camera.

Press the concealed button *a* beneath the camera-handle(Fig.1). Next pull down the base-board until the side-struts lock with a sharp click. Press the two halves of the plated fingergrip *b* at the base of the lens support towards each other (Fig. 2) and pull the lens support forward to its limiting stop. The camera now is set for infinity.

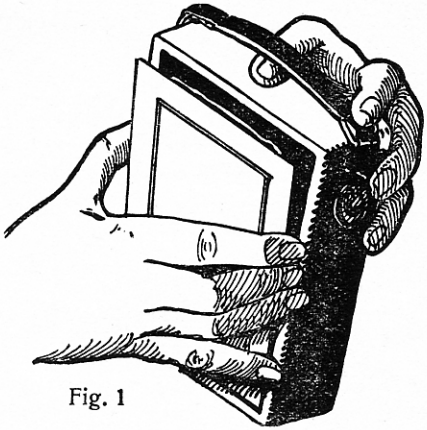


Fig. 1

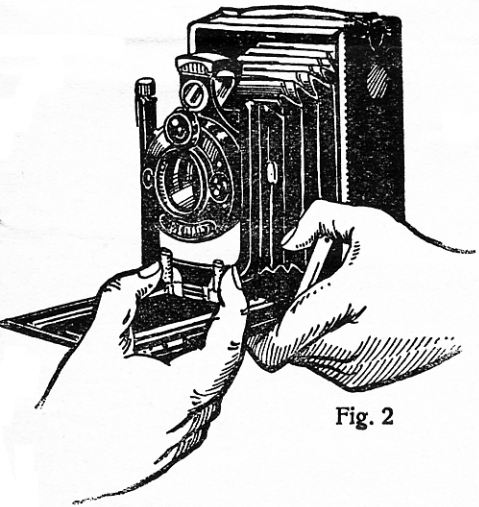


Fig. 2

Loading the slides

Plateholders must be loaded in the darkroom using a deep red light, which may be produced by a special safety lamp for photographic purposes. Take the plate after having removed the wrapper between thumb and forefinger holding the plateholder with the other hand. Place the plate under the brim at the bottom of the slide

and have the clapper at top snapped over it. Do never touch the sensitive film.

The Shutter. See pages 8 to 12 of instructions.

Exposure. Before making an exposure find out the time required for it by means of an exposure meter or the table printed at the end of these instructions. Do not hold the camera in your hand except for snapshots. If exposures exceed $^1/_{25}$ sec., place the

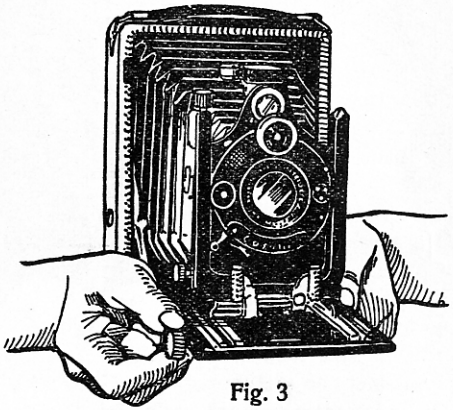


Fig. 3

camera a on table or screw it to a tripod. For this purpose two bushes (for vertical and horizontal pictures) are provided. If the distance between the object to be taken and the camera amounts to approximately 200 times the focal length, exposures should be made while the camera is focussed for "infinity". The focal length is engraved on the front lens mount and usually, in our cameras, equal to about $4^1/_8$ ins in the $3^1/_4 \times 2^1/_4$ size, to about $5^1/_4$ ins the quarter plate size, to about $6^1/_2$ ins in the postcard size and $7^1/_4$ ins in the halfplate size.

Focussing. For nearer distances pull out the knob of the rack *c* and rotate until the pointer is opposite the desired distance as shown on the focussing scale *d*. To operate the rising and falling front turn the pinion *e*. For the cross front (or rising front for horizontal pictures) the pinion *f* is utilized.

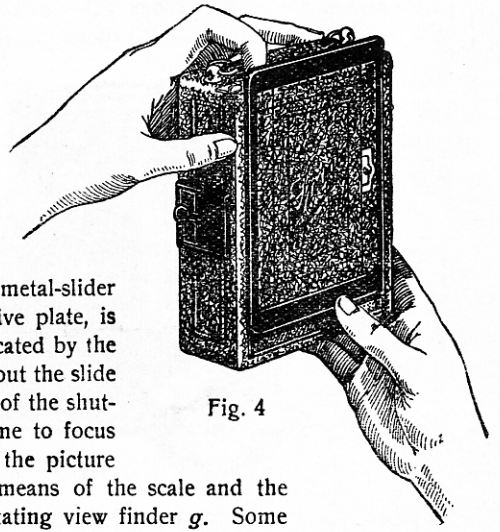


Fig. 4

For the best results it is advisable to focus on the hooded ground glass screen until a sharp picture results. Having done this or having foccussed the picture at the scale the screen is removed and a single plate-metal-slider loaded with its sensitive plate, is slid into the place vacated by the screen (Fig 4). Draw out the slide and expose by means of the shutter. If there is no time to focus in the above manner the picture can be obtained by means of the scale and the limits of it by the rotating view finder *g*. Some cameras are fitted with a very practical wire view finder, it is to be found at the lens-holder and is moved upwards until it stands parallel to the lens. The sighting-frame is likewise errected, and the object viewed through the same and the wire view finder. The picture is now to be seen in its correct outlines. After having taken the picture shut at once the plate holder.

The Diaphragm. As the annexed directions for operating the shutter indicate, every shutter is provided with a diaphragm or stop which can be reduced or enlarged at will. Just a few words about how these stops are used. If it is intended to take a picture in which the foreground as well as the background with houses, mountains, trees, etc. appear equally sharp, a stop is needed. By means of a small lever mentioned in the directions the diaphragm can be closed more or less to obtain a great depth of focus. The rule is: **the smaller the diaphragm, the greater the depth of focus and the longer the exposure!** — Larger diaphragms can be used for snapshots, while time exposures require smaller ones.

The double extension. With double anastigmats the front-lens can be screwed off and the backlens alone may be used. As the focal distance thus will be doubled, the rapidity will be considerably diminished and in consequence the exposure should be extented.

The backlens being roughly double the focal length of the double lens, requires the use of the double extension. Rack forward until a complete sharp image is visible on the focussing screen.

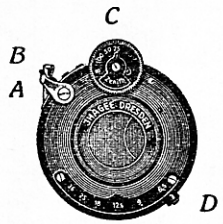
Using the tripod is indispensable when taking views with the backlens. With simple anastigmats the backlens may not be used. But to utilize the double extension in a better way it is advantageous to use the "Ihagee-Outfit", an invaluable accessory.

To close the camera. If the rising or sliding front has been used return these to its central position. Also the view finder must be brought back in its normal position. Then turn the double extension quite back in the camera and press the milled

button against the baseboard. That is absolutely necessary for closing the camera. Push the lens support back along its rails as far as it will go by means of the plated finger grip as when opening. Press the struts *h* against the camera at the same time raising the baseboard. The side-struts will now be unlocked and the base-board closed until a catch is felt to lock.

Shutters for Ihagee Cameras

The shutters used in connection with our cameras are briefly described below:



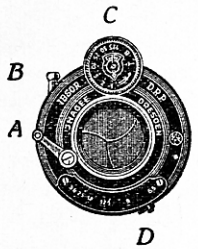
Shutter for time and instantaneous exposures $^1/_{25}$—$^1/_{100}$ sec. The **Zenith Shutter** shown is of the automatic type, i. e.: it is always ready and need not be set. Exposure is made by depressing the finger release A or, if preferred, the wire release which can be screwed into the small nut B.

If **longer time exposures** are desired, adjust the milled disc C so that the letter Z is opposite the pointer. The shutter will now open by pressure on the release and remain open until a second pressure. When the release has been pressed after the shutter is set to Z, the latter is opened for long time exposures as often required for indoor work.

For **short time exposures** set the disc to B. If the release is pressed down now, the shutter will open but close again as soon as the pressure ceases so that both very short and longer exposures can be made.

When making **instantaneous exposures** or snapshots observe the following: The instantaneous shutter speeds stated are parts of a second; 25, for example, means $^1/_{25}$; 50, $^1/_{50}$; and 100, $^1/_{100}$ sec. According to the time of exposure ascertained, one of these three speeds should be chosen by turning the milled disc so that the pointer indicates the speed desired. Then depress the finger or wire release, whereupon the shutter will open, remain open for the time set, and close again automatically. The exposure is made now.

The **Diaphragm Scale** will be found below the lens. A small pointer D can be displaced to the right and left and easily set to the correct diaphragm in each case.



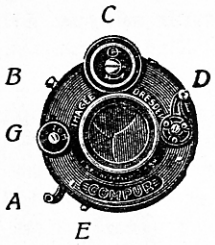
The **Ibsor Shutter** shown here is also an automatic one which is always ready and requires no setting. Exposure is made by the depression of the finger release A or, if preferred, of the wire release which may be screwed into the small nut B.

For **prolonged time exposures** turn the small milled disc C above the lens until the pointer is at Z. Pressure on the release will cause the shutter to open and a second pressure will close it again so that exposures of unlimited duration are possible.

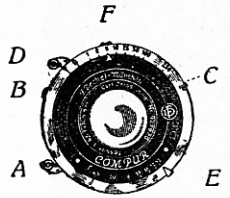
For **short time exposures** turn the disc to B. Pressure on the release will open the shutter which will close again when the pressure ceases so that both very short and longer exposures can be made.

For **instantaneous and short time exposures** of definite duration set the disc to the time required, that is, to one of the figures on the disc. 1 is equal to 1 second, 2 to $^1/_2$, 5 to $^1/_5$, 10 to $^1/_{10}$ second, etc. Set the pointer to one of these figures, according to the time of exposure ascertained, and press the release. The shutter will then open, remain open for the time desired, and close again automatically. The snapshot is made.

The **Diaphragm Scale** will be found below the lens. A small pointer D can be displaced to the right and left and set to the correct diaphragm in each case.



The **Compur Shutter** is an ingeniously designed clockwork and should be treated as such. Above all, never use force and do not fail to read the instructions carefully. Exposure is made by pressing the finger release A or, if preferred, the wire release which can be screwed into the small nut B.



Explanation of Letters: Lever A serves for releasing the shutter. The wire release is screwed into the small nut B. By turning the disc C or the small milled C wheel the various speeds are adjusted. The small wheel "G" should be set before each exposure as follows: for snapshots to "M" or "I"; for longer time exposures to "Z" or "T"; and for shorter time exposures to „D" or „B". By means of the lever D the shutter is set for snapshots, and the pointer E serves for setting the diaphragm. If pushed back **after the shutter has been set,** the button F will disengage the lever D for a second additional setting whereby the automatic release is set. However, the button F is found only on shutters provided with automatic release, the advance mechanism. Shutters lacking this device contain all the parts described with the exception of the button F.

Time Exposures: are made automatically, and the shutter need not be set. For longer time exposures the outer ring C or the small wheel "G" is turned until the letter T is at the point marked. Pressure on the finger release A or on the wire release will open the shutter which remains open until the release is pressed again. In case of time exposures of shorter duration the letter B is moved to the marked point, and when the finger release A or the wire release is pressed, the shutter will open and remain open as long as the pressure lasts. This procedure is followed if exposures exceed 1 second.

Instantaneous Exposures: For instantaneous and short time exposures up to 1 second, turn the outer ring C or the small milled wheel "G" while simultaneously setting the small wheel "G" to "M" or "I" until the desired exposure time is at the marked point when the shutter will close automatically if opened. The figures marked on the ring, with the exception of 1, indicate fractions of a second, 2 being equal to $^1/_2$, 5 to $^1/_5$, 10 to $^1/_{10}$, etc., while at 1 the shutter will remain open a full second. If the desired time coincides with the marking, push up lhe tension lever in the direction of the arrow until it clicks. The shutter is now set and ready for exposure. Pressure on the finger release A or on the wire release will cause the shutter to unwind and open automatically, remain open for the time set, and close again. The shutter is then ready again for time exposures after the ring has been set to T or B, while every instantaneous exposure requires previous setting.

Correct Position of Diaphragm is Important! The Compur shutter is constructed so that if the letters T and B are on the index line, the tension lever D is locked, and in case of speeds ranging from 1 second to maximum, the time mechanism (T - B) is disengaged, an arrangement which prevents failures even if the camera is handled carelessly. The speeds increase without interruption from 1 second to $^1/_{100}$ sec., and it is possible to obtain intermediate speeds by setting between two figures, (for example between $^1/_{50}$ and $^1/_{100} = ^1/_{75}$ sec.). No intermediate speeds are possible between $^1/_{100}$ and maximum speed ($^1/_{200}$, $^1/_{250}$, $^1/_{300}$) or between B and 1 second. For maximum speeds arrange the time before setting the shutter, as it will be hardly possible after setting.

Automatic Release applies only to shutters which are fitted with an advance mechanism and the button F. If you wish to appear in the picture to be taken, set the shutter as described and push back the knob F located on the edge, whereby additional tensioning of the lever D is made possible and the automatic release will be set. Release takes place in the regular way by depressing the lever A or the wire release, whereupon the automatic release will release the shutter in about 12 seconds and exposure be made according to the time set. The shutter is now set again for normal work, and it is necessary to proceed as described if one wishes to take a picture of oneself. The automatic release can be employed for all instantaneous speeds stated with the exception of the maximum ones ($^1/_{250}$ to $^1/_{300}$).

Exposure Table

Table **"A"** lists the subjects and Table **"B"** shows at a glance the correct exposure at an aperture of F/11 in sunshine, taking into account the month and the hour, and at a plate speed of 275° H. & D. If the speed is 450° H. & D., only onehalf of the time should be taken, and at 130° H. & D. the time should be doubled. When the sky is cloudy, double the exposure, and in very dull weather, treble it.

If the aperture is not F/11, look at Table "C" where the correct exposure for any aperture is given on the same line on which the ime for F/11 is stated.

Table "A"

1 = Open Landscapes, Beach Scenes.
2 = Landscape with Foreground, Street Scenes, Studio Work.
3 = Architectural Subjects, Portraits, Outdoors.
4 = Light Interiors, Portraits in Room.

Table "B", Times of Exposure for F/11

A. M.	6 o'clock				7 o'clock				8 o'clock				9 o'clock				10 o'clock				11 o'clock			
P. M.	6 o'clock				5 o'clock				4 o'clock				3 o'clock				2 o'clock				1 o'clock			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
January													3/8	3/4	2		1/5	1/3	3/4		1/8	1/4	1/2	1
Febr.									3/8	3/4	2		1/4	1/2	1		1/6	3/8	1/2		1/10	1/5	3/8	3/4
March					1/3	1/2	1		1/6	1/3	1/2		1/10	1/5	1/2	1	1/10	1/6	3/8	1/2	1/16	1/8	1/4	1/3
April	1/3	1/2	1		1/6	3/8	1/2		1/10	1/5	3/8	1	1/16	1/8	1/4	1/2	1/16	1/10	1/3	3/8	1/25	1/10	1/5	1/4
May	1/5	3/8	3/4	3 1/2	1/8	1/5	3/8	1	1/16	1/8	1/4	1/2	1/32	1/10	1/5	1/3	1/32	1/15	1/7	1/6	1/32	1/16	1/8	1/6
June	1/8	1/4	1/2	2	1/10	1/6	1/3	3/4	1/16	1/8	1/4	1/2	1/32	1/10	1/5	1/3	1/32	1/15	1/7	1/6	1/32	1/16	1/8	1/6
July	1/6	1/3	1/2	3 1/2	1/10	1/5	3/8	1	1/16	1/8	1/4	1/2	1/32	1/10	1/5	1/4	1/32	1/15	1/7	1/6	1/32	1/16	1/8	1/6
August	1/3	1/2	1 1/4		1/6	1/3	1/2		1/8	1/4	1/2	1 1/4	1/10	1/6	1/4	1/2	1/16	1/10	1/5	1/3	1/25	1/10	1/5	1/4
Sept.					1/3	1/2	1 1/4		1/6	1/3	1/2		1/4	1/3	1/2	1 1/4	1/10	1/6	1/3	1	1/15	1/6	1/3	1/2
Oct.									1/3	1/2	1 1/4		1/4	1/2	1	2	1/7	1/4	1/2	2	1/8	1/4	1/2	1
Nov.													3/8	3/4	2		1/4	1/2	1		1/6	1/3	1/2	1 1/4
Dec.													1/2	1	3 1/2		1/3	1/2	1 1/4		1/5	1/3	1	
		sec.		min.		sec.		min.		sec.		min.		sec.		min.		sec.		min.		sec.		min.

Table "C", Times of Exposure for other Lens Apertures

F/4.5	F/5.6	F/6.8	F/8	F/11	F/16	F/22	F/32
1/400	1/250	1/160	1/125	1/64	1/32	1/16	1/8
1/192	1/128	1/80	1/64	1/32	1/16	1/8	1/4
1/125	1/80	1/60	1/40	1/20	1/10	1/6	1/3
1/96	1/64	1/40	1/32	1/16	1/8	1/4	1/2
1/96	1/60	1/40	1/30	1/15	1/8	1/4	1/2
1/72	1/40	1/32	1/20	1/10	1/5	3/8	3/4
1/48	1/32	1/20	1/16	1/8	1/4	1/2	1
1/48	1/30	1/20	1/15	1/7	1/3	1/2	1
1/40	1/26	1/18	1/13	1/6	1/3	5/8	1 1/4
1/40	1/24	1/18	1/12	1/6	1/3	3/4	1 1/4
1/36	1/20	1/16	1/10	1/5	3/8	3/4	1 1/2
1/36	1/18	1/16	1/9	1/4	1/2	7/8	1 1/2
1/24	1/16	1/10	1/8	1/4	1/2	1	2
1/24	1/14	1/10	1/7	1/3	5/8	1 1/8	2 1/4
1/20	1/12	1/9	1/6	1/3	5/8	1 1/4	2 1/2
1/18	1/10	1/8	1/5	3/8	3/4	1 1/2	3
1/12	1/8	1/5	1/4	1/2	1	1 3/4	3 1/2
1/10	1/6	7/32	1/3	1/2	1	2 1/4	4 1/2
1/9	1/5	1/4	3/8	3/4	1 1/2	3	6
1/6	1/4	3/8	1/2	1	2	4	8
7/32	3/8	1/2	3/4	1 1/4	2 1/2	5	10
1/5	1/3	7/16	5/8	1 1/4	2 1/2	5	10
1/3	1/2	3/4	1	2	4	8	16
3/4	1	1 1/2	2 1/4	3 1/2	8	16	32

Form. 504. 3000. 531. Tusch.