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Important!

New Instruction Booklet

Before loading the camera with film, read carefully the new directions on pages 9, 14, 15 and 19 regarding the automatic locking device for the film wind.

INSTRUCTIONS FOR USE
SUPER IKOMAT

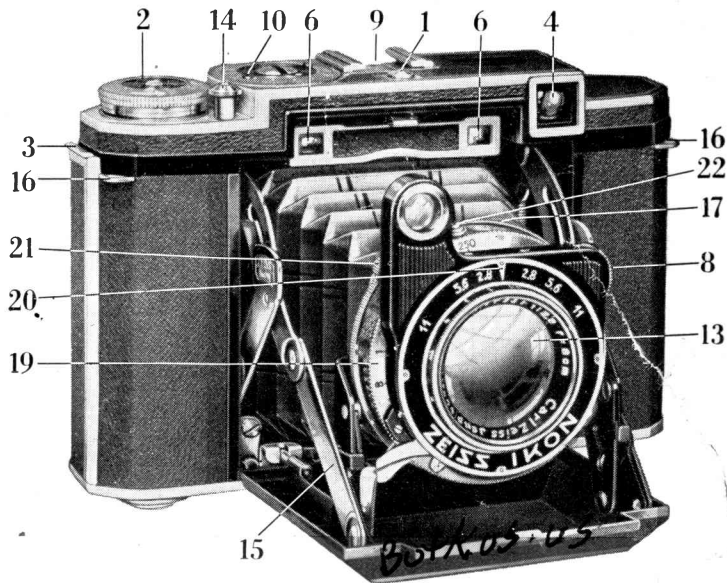
$2\frac{1}{4} \times 2\frac{1}{4}$ "

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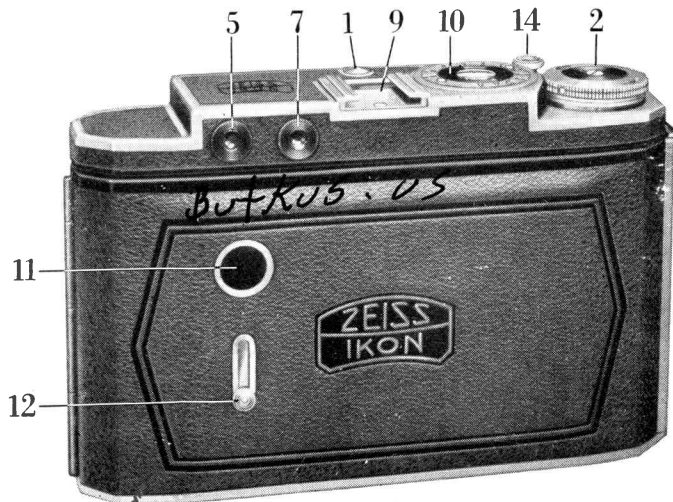
**ZEISS IKON A.-G.
D R E S D E N**

C 2535 b U. S. A.

1. Button for opening camera
2. Film winding key
3. Catch holding camera back in place
4. Finder aperture
5. Eyepiece of view finder
6. Distance meter
7. Eyepiece of distance meter
8. Focussing disc for distance meter and lens
9. Metal shoe for special finders
10. Picture counter
11. Red observation window in camera back



12. Slide for covering red observation window
13. Lens
14. Shutter release knob
15. Struts holding camera front
16. Eyelets for carrying strap
17. Diaphragm ring
18. Diaphragm scale (page 18)
19. Exposure scale
20. Indicator for distance scale
21. Shutter tension lever
22. Button for delayed action release



Introduction

The Super Ikomat $2\frac{1}{4} \times 2\frac{1}{4}$ " is a roll-film camera which differs from other types of instruments, first in the distance meter, which is coupled to the lens focussing and forms an integral part of the construction, and also in the entirely new design of the front carrying the lens.

The Compur Rapid Shutter is released, not in the customary manner by pressing a lever at the camera front, but by depressing a button on the body while holding the camera in position for exposure.

The camera is arranged to take 11 pictures $2\frac{1}{4} \times 2\frac{1}{4}$ " in size. The film wind is locked from picture to picture. The number of exposures made can be read off on a film counting disc.

The special construction of the camera renders double exposures impossible, since the shutter can be released only when the film has been wound on to the next section.

The Super Ikomat is a 100% "self-erecting" camera — that is, the lens springs out at once into its working position when the camera is opened with one hand.

Focussing on objects at short distances is done by turning the setting disc of the distance meter. This adjustment is communicated to the lens. The distance meter is constructed on an entirely new principle, and is proof against external conditions, vibration, etc. Flatness of the film in the focal plane is ensured by a spring pressure plate in the camera back.

Principle of the automatic shutter locking device in conjunction with the film wind

The Super Ikomat $2\frac{1}{4} \times 2\frac{1}{4}$ " is provided with an arrangement whereby the film, when wound, stops automatically when in position for the following exposure. This therefore dispenses with the necessity of watching the red observation window or counter disc.

The shutter is at the same time coupled to the film winding mechanism in such a manner that the release knob cannot be actuated unless the film has been moved on to the next picture. This obviates the danger of making double exposures and also of winding on the film, without exposing it.

The particular design of this camera makes it necessary to pay close attention to several points when loading the film.

But it is advisable at first to make oneself familiar with the following manipulations:

1. With the film locking device out of action

the film winding key turns independently of the counter disc and shutter and can be rotated at will. The shutter can be set, but not released, when the film locking device is disengaged, and it is only in this position that the film should be loaded in the camera. The procedure to be followed when inserting the film is the same as for any ordinary rollfilm camera (see page 9 et seq.).

2. With the film locking device in action

the film winding key can only be turned from one picture to the next, provided that the shutter has been previously set and released. The camera may not be loaded with film in this position. When releasing the shutter for the 11th picture the locking device becomes disengaged automatically.

3. Setting the automatic film locking device

While pressing down the counter disc turn it in the direction of the arrow up to No. 1, when a strong resistance will be felt. The counter disc should then be released.

4. Putting the automatic film locking device out of action

Turn the film winding key to its limit stop. Then set the shutter, and when releasing it, see that the release knob is held down hard. It will then be possible to move the counter disc, when pressed down, beyond the No. 11, thereby disengaging the locking mechanism

I. Loading the Camera with Film

Roll films of type BII 8 are used, which normally give 8 pictures $2\frac{1}{4} \times 3\frac{1}{4}$ ", but in the Super Ikomat they are arranged to give 11 exposures $2\frac{1}{4} \times 2\frac{1}{4}$ ". Although the film spools when unopened are light-proof, the camera should always be loaded and unloaded, and the spools stored away, in subdued light.

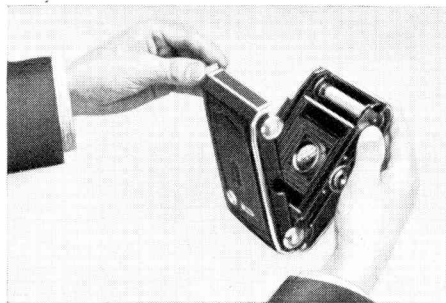
The film should be inserted in the camera only when the film locking mechanism is disengaged.

A sign that this is so is when the winding key can be rotated without meeting any stop. (See page 7, section 1). If the locking device is set,

proceed in accordance with the directions given on page 8, section 4, and then, but not before, insert the film in the camera.

The various manipulations should be carried out in the following order:

1. Pull out the catch 3 and swing outwards the hinged camera back.



2. Place the full spool in the lower or feed chamber while drawing the spring stud outwards. The tapered end of the paper leader must point towards the upper or take-up spool chamber, which contains an empty spool (the take-up spool) on which the exposed film is wound.



3. Detach the gummed strip which holds the protecting paper in place, and insert the end of the latter in the wide slit of the empty spool.

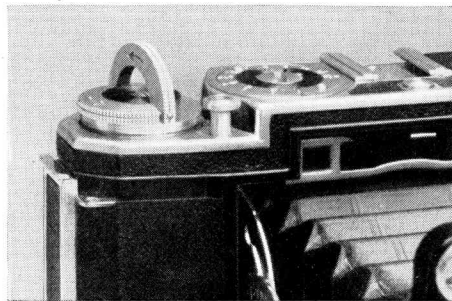


4. By giving a few turns to the winding key 2, in the direction of the arrow, draw the paper taut. In doing this, see that the paper is wound on straight. Any crookedness of the paper band must be put right before proceeding further.



One half of the outer ring on the film winding key 2 is hinged and when lifted in the manner shown in the illustration opposite, affords a convenient grip for winding on the film.

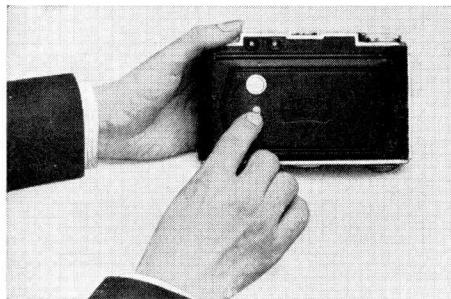
5. Close the back of the camera and lock by means of the catch 3.



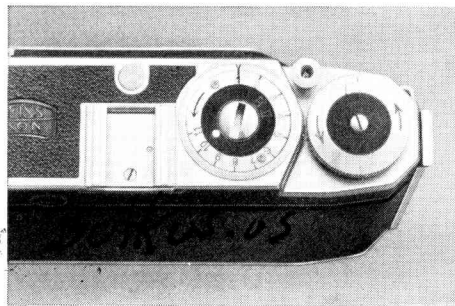
6. Turn the winding key 2 until, first, a hand and then the figure 1 appear in the red observation window 11.



7. Close the window 11 by means of the slide 12.
(Important when using panchromatic film.)



8. By pressing down the counter disc, turn it in the direction of the arrow to the number 1, when a strong resistance will be felt. Then release the counter disc. The camera is now ready for the first exposure and the automatic locking device is brought into action at the same time. The film wind is arrested from picture to picture by a mechanical arrangement in the interior of the camera. After the 11th exposure the mechanism is automatically disengaged, thus allowing the end of the film with its paper trailer to be drawn through. The counter disc only serves to show the number of exposures made. Take care not to turn or press down the counter disc in any way once the camera is loaded with film, as otherwise it may do some harm to the film conveying mechanism.



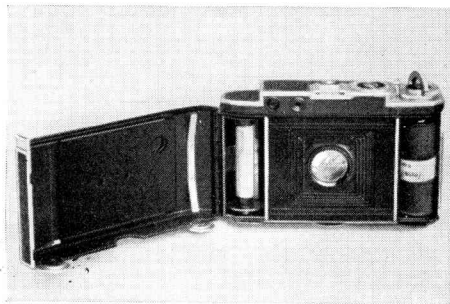
II. Taking out the film

The film should only be taken out of a camera when the locking device is not working. This is always the case when the entire film has been exposed, for after the 11th exposure the locking mechanism is put out of action automatically.

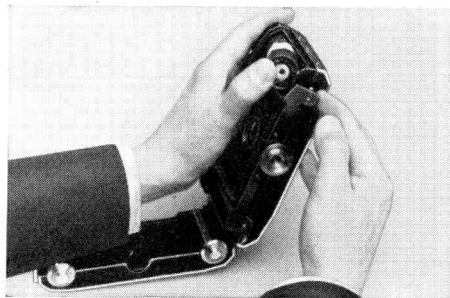
Should it be found necessary for some reason or other to remove the film before the full number of exposures has been made, turn the film winding key to the next stop and set the shutter. When releasing the shutter keep the release knob pressed down, and at the same time depress the counter disc with the other hand, turning it in the direction of the arrow beyond the number "11".

1. As soon as the 11th exposure has been made (the number 11 will then be opposite the indicating mark on the counter disc), wind off the whole length of the film. By looking through the red window it will be seen when the paper is completely wound on to the take-up spool.
2. Pull out the catch 3 and open the camera back.

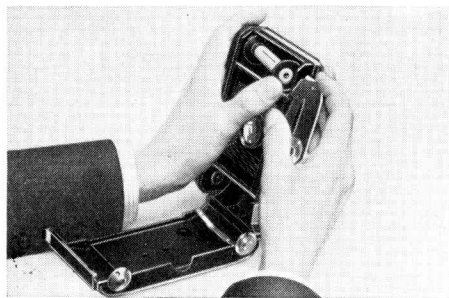
3. Fasten the end of the exposed spool by sticking down the paper with the gummed strip provided.



4. Pull back the spring stud and take out the spool.



5. Take the empty spool out of the lower or feed spool chamber and insert it into the upper or take-up one. Both ends of the core of every spool are hollow. Press the end of the spool with the round hole against the spring stud, which should be drawn outwards for the purpose, and allow the end with the slide to fit into the projections of the winding key.



6. Turn the winding key 2 until it snaps with a click into the spool and turns the spool with it.

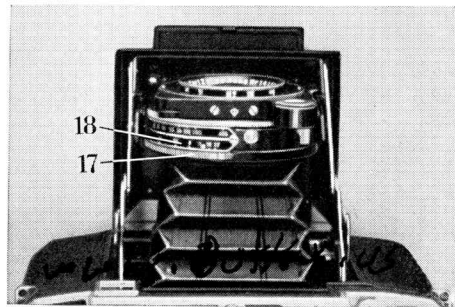
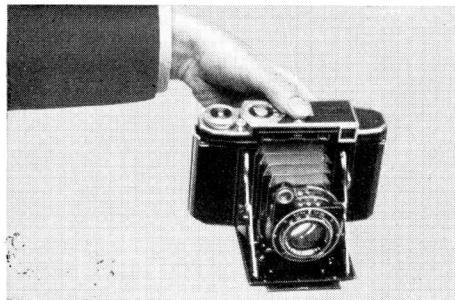


III. Making the Exposure

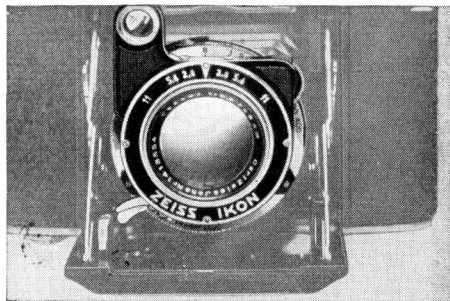
1. Pressure on the knob 1 will cause the camera to spring automatically into working position (the camera should be tilted in a slightly downward direction).

Lens Apertures

2. The required aperture of the lens is obtained by setting the indicating mark on the diaphragm ring 17 to the corresponding number on the scale 18. A higher number on the diaphragm ring denotes a smaller aperture, needs a longer exposure time, and increases the depth of focus. The depth of focus for the various stops can be read from the scale on the front plate of the shutter. For fuller particulars, consult



the table on page 31, which serves to indicate the distance and lens aperture to which the camera must be set so as to give the depth of focus for subjects at various distances, e. g. a group of people, the nearest of whom are 10 ft. and the furthest 22 ft. from the camera. In this particular case it will be seen from the table that when focussing on 15 ft. and using $f/11$ the depth of focus extends from 8'11" to 46' and thus amply suffices for a group arranged between 10 ft. and 22 ft.

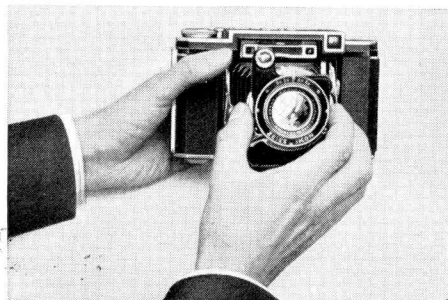


The Compur Rapid Shutter. The shutter can only function:

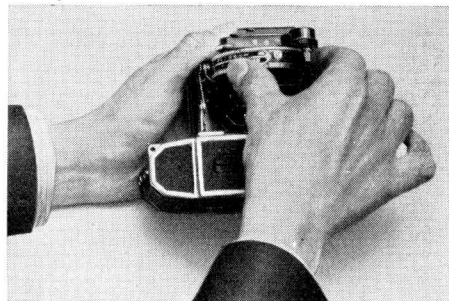
- a) if the camera is wound up ready for exposure,
- b) if the film locking device is set,
- c) if the film has been wound on to the next exposure.

Failing the fulfilment of any one of these conditions, the shutter cannot be released. In such cases it is possible to set the shutter, but not to release it.

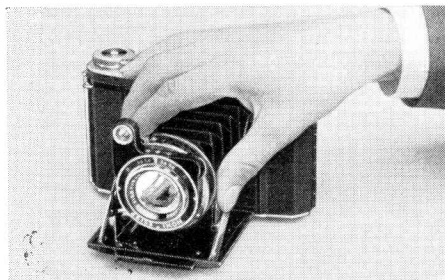
3. Turn the ring 19 until the required speed is brought opposite the mark 20. The numbers on the ring read in fractions of a second. With this shutter it is possible to make "instantaneous" exposures from 1 to $\frac{1}{400}$ sec.



4. Set the shutter by sliding the lever 21 along in its groove.

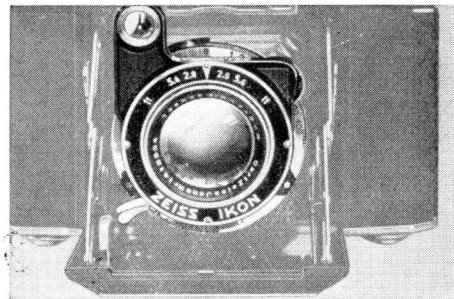


When setting the shutter for an instantaneous exposure, a considerable resistance has to be overcome; this resistance is particularly pronounced with the speed of $\frac{1}{400}$ sec. To avoid overstraining the shutter mechanism or possibility of damaging the front carrying the lens a counter pressure must be exercised when setting the shutter.



To use the delayed action release push back the knob 22, whereupon the lever 21 can be advanced to a second limit stop.

For short time exposures bring the letter B on the shutter opposite the white mark. The shutter opens by depressing the release knob 14 and closes as soon as the pressure ceases. For long time exposures use the special wire release, which is screwed in the bush of the release button. The shutter is opened by a pressure on the head of the wire release and is only closed again when the catch is disengaged by pressing on the intermediate disc. The tension lever 21 cannot be moved when the ring 19 is set to the letter B.



Releasing the shutter

5. When releasing the shutter by means of the knob 14, see to it that the latter is pressed right down until the shutter operation is completed. If the release knob is not held down for the required length

of time, it may become blocked. In this eventuality the knob will not function again until the film has been wound on, thus causing one picture frame to remain unexposed. When using the delayed action release, the clockwork is first set in motion and after about 12 seconds the shutter makes the exposure in the usual way.

Holding the Camera when Taking the Picture

6. It is impossible to give hard and fast rules for holding the camera. The essential point is that it must be held firmly and without vibration in the hand. A favourite method is to let the camera rest firmly in the palm of the right hand, with the left hand surrounding the camera body. The middle finger of the left hand can thus operate the disc 8 of the distance meter,



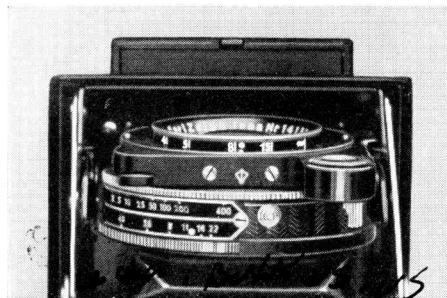
while the middle finger of the right hand can press the release knob. Take care, however, that the fingers do not obstruct the windows of the distance meter or view finder.

Setting the Distance

7. It is advisable to set the distance only with the aid of the distance meter.. Look through the eyepiece 7. In the field of view of the distance meter will be seen a round light-coloured spot in which the object aimed at appears as a double image. On turning the disc 8 one of these images will move. Rotate the disc until the double outlines disappear and the two images coincide. When this has been done, the distance meter and also the camera lens are in correct focus on the object.

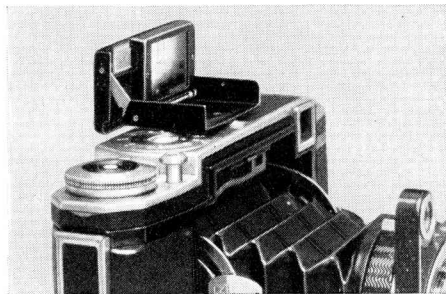


A graduated scale of distances is also engraved on the outside of the lens cell and a mark shows the distance on which the lens is focussed.



The View-Finder

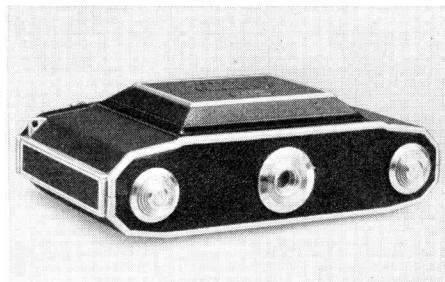
8. On looking through the eyepiece 5 of the finder, make sure that all objects which are to be photographed are seen. Special finders, such as the Albada finder are inserted in the metal shoe 9.



When taking the picture, see that the horizontal and vertical lines of the subject run parallel to the sides of the finder. Tilting the camera either downwards or upwards will make towers, high buildings etc. appear as though they were falling over.

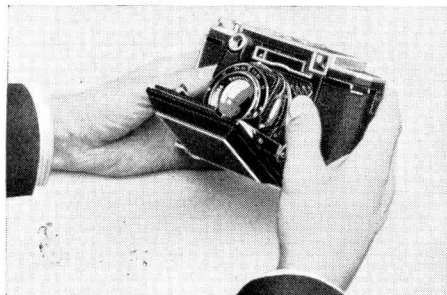
General

9. The camera has a bush for screwing it to a tripod.
10. After every exposure wind the film on to the next picture. If this is overlooked, the shutter cannot be released. This makes it impossible to make two exposures on one section of the same film.



IV. Closing the Camera

The camera is closed by pressing on the short upper arms of the struts and at the same time raising the baseboard.



Some Hints on Taking Pictures

The Super Ikomat $2\frac{1}{4} \times 2\frac{1}{4}$ " is fitted with one of two lenses, viz. the Tessar $f/2.8$ or $f/3.5$, both of which have different tasks to perform. While the Tessar $f/3.5$ is only intended for use when it is desired to obtain, at full aperture, sharply defined negatives that allow of considerable enlargement, the Tessar $f/2.8$ will be chosen when a lens with an especially large aperture is preferred. It goes without saying that pictures taken with the Tessar $f/2.8$ at full aperture are not so suitable for enlargement as those taken with smaller stops. It is therefore ad-

visible to use the full aperture of the lens only when the lighting conditions make it absolutely necessary. For the ordinary type of subject, the lens should preferably be stopped down, say, to $f/5.6$ and the time of exposure adjusted accordingly.

The large aperture of the lens allows of instantaneous exposures up to $1/400$ sec. in bright light. In dull weather slower shutter speeds must be used. In that case objects in rapid movement should not be taken, especially if they are close to the camera.

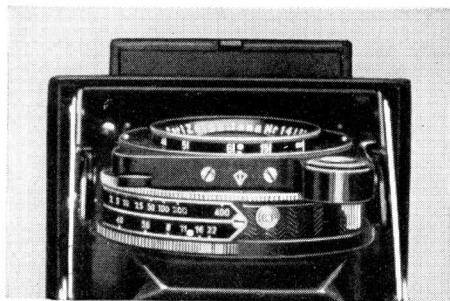
When the light is good, the lens can be stopped down to $f/11$ and at this aperture there is the advantage that when focussing on 24 ft. all objects from infinity to 11'7" are in uniformly sharp focus.

Portraits and close-ups should be taken with the largest stop, whereas for far distant subjects and distant views the lens should be stopped down to $f/8$.

N. B. Two-point Setting

For the purpose of making the camera ready for use in the minimum of time, the Super Ikomat is also fitted with the popular Zeiss Ikon Two-point Setting.

For this, the stop is set to about $f/10$ and the lens focussed on about 26 ft. The shutter should preferably be set to $\frac{1}{25}$ sec. The exact setting for aperture and distance are marked by red dots. As shown by the table (page 31), a wide range of depth of focus is obtained by setting in this way — sufficient for the great majority of subjects. When using Rapid Film the above exposure will still suffice on bright sunshiny winter days during the hours from 9 a. m. to 3 p. m.



Use of Supplementary Lenses

The camera lens will not focus on objects nearer to the camera than 5 ft. A supplementary lens or Proxar lens must be used for these.

The distances for which the different lenses can be used, as well as data regarding the focussing, will be seen from the table at the foot of page 31.

Ever-ready Case

Needless to say, a valuable camera such as the Super Ikomat should not be exposed to weather etc., but must have the protection of a leather case. The Ever-ready Case is not one of the ordinary kind but is provided with a flap which is readily opened and allows of the exposure being made and of all the required manipulation of the camera without taking the latter out of the case.

The camera is fixed to the Ever-ready case by means of the screw in the interior of the case. It must be screwed into the bush at the bottom of the camera by turning the milled screw-head on the outside of the leather case in a clockwise direction.

