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ZEISS IKON

Instructions for use

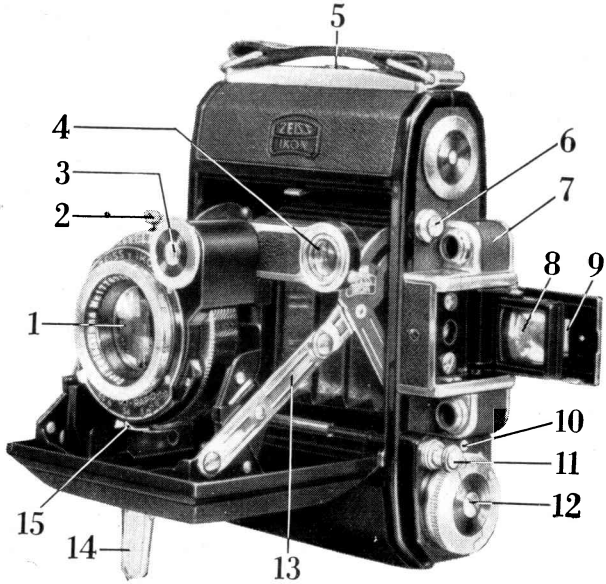
SUPER IKONTA II

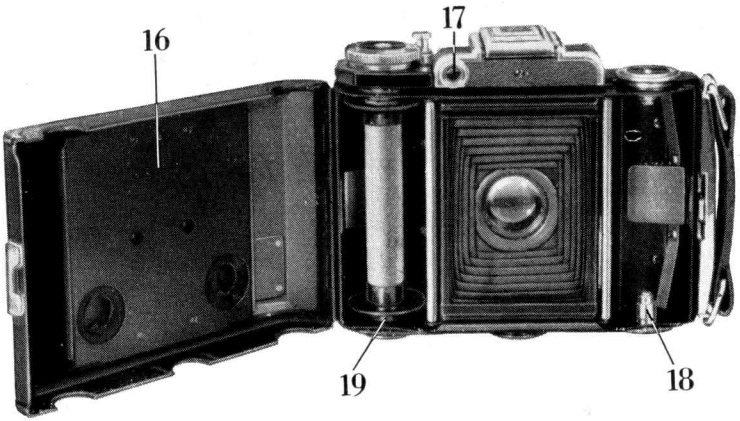
2¼ × 1¾"

ZEISS IKON AG.
DRESDEN

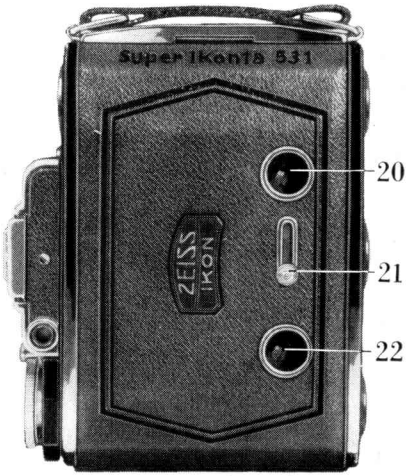
C 2590 E.

1 = Lens
2 = Shutter tension lever
3 = Focussing disc for distance meter and lens
4 = Hinged arm with rotating prism for distance meter
5 = Catch holding camera back in place
6 = Press button for opening camera
7 = Distance meter
8 = Albada finder lens
9 = Eyepiece of view finder
10 = Signal for the shutter locking mechanism
11 = Shutter release knob
12 = Film winding key
13 = Struts holding camera front
14 = Foot for taking long time exposures without stand
15 = Lever for setting diaphragm





16 = Spring pressure plate for holding the film flat in the film guide
17 = Eyepiece of distance meter
18 = Stud for holding feed spool
19 = Stud for holding take-up spool



20 = Red window in which the numbers of the exposures must appear the first time

21 = Slide for covering the windows

22 = Red window in which the numbers of the exposures must appear the second time

General

The Super Ikonta II $2^1/_4 \times 1^3/_4''$ is a roll film camera, which differs from other types of instruments mainly in the distance meter which is coupled to the lens focussing. It is a 100% "self-erecting" camera, that is, the lens springs out at once into working position when the camera is opened with one hand. Focussing on objects at the various 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.

The Super Ikonta II is designed to take 16 pictures of $2^1/_4 \times 1^3/_4''$ size. The number of exposures can be read off in the red observation windows. Note that the last exposure comes to within $^1/_2$ in. of the end of the film, so that when developing, take care to fix the clip usually employed right at the very end of the film, otherwise the last frame may be spoilt. This fact should be pointed out to any dealer who undertakes the development of the film. The whole affair can be avoided, however, by making use of only 15 pictures, that is, leaving the last half section unexposed.

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 special construction of the camera renders double exposures impossible, since the shutter can be released only when the red signal appears in the window (10), thus indicating that the film has been wound on to the next section.

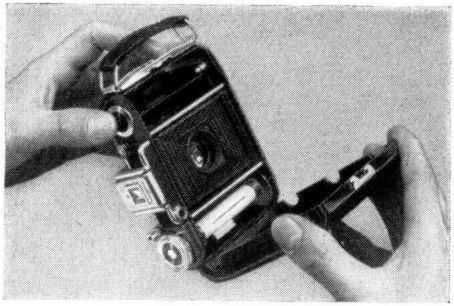
Before loading the camera with film it is most advisable to read the instructions carefully in order to make oneself familiar with the controls of the instrument.

I. Loading the camera with film

The Super Ikonta II takes roll films of type B 2 or BM 2 (wood or metal core). 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.

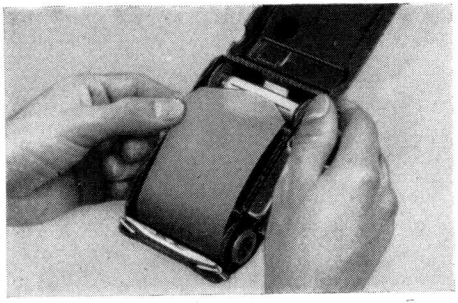
The various manipulations must be carried out in the following order:

1. Move the catch (5) in the direction of the arrow and swing the hinged camera back outwards.

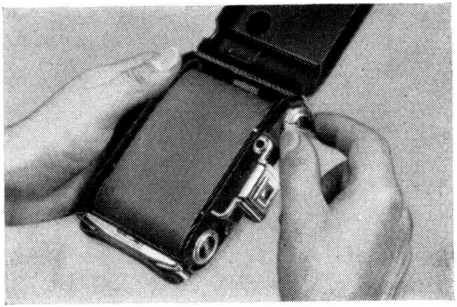


2. Place the full spool in the feed chamber (18) while drawing the spring stud outwards. The tapered end of the paper leader must point towards the take-up spool chamber (19), which contains an empty spool on which the exposed film is wound.

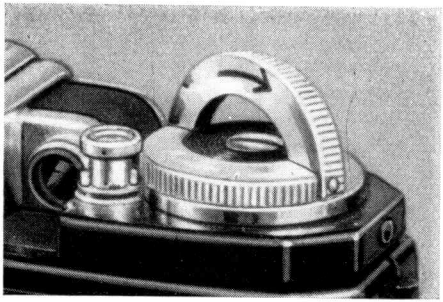
3. Detach the gummed strip which holds the protecting paper in place, and insert the end of the latter in the wide slit of the empty spool. In this position the black side of the paper should face downwards.



4. By giving a few turns to the winding key (12) in the direction of the arrow, draw the paper taut. While doing this, see that the paper is wound on straight. Any crookedness of the paper band should be put right before proceeding further.

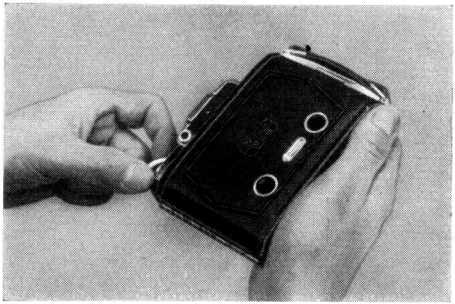


One half of the outer ring on the film winding key (12) is hinged and when lifted in the manner shown in the illustration opposite, affords a convenient grip for winding on the film.



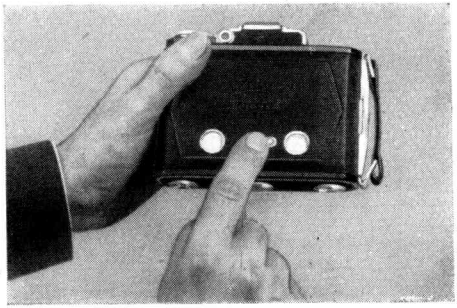
5. Close the back of the camera; a click of the catch (5) will show that it is locked.

6. Push aside the slide (21) in the camera back, and by turning the key (12) wind on the film until, first, a hand and then the figure 1 appear in the red observation window (20) near the carrying strap. The film is now in position for the first exposure.



Important: The numbers on the film have to appear once in the window (20) and a second time in the window (22) of the camera back. The picture obtained will be vertical if the camera is held in the normal cross-wise position, and horizontal if the camera is held upright.

7. Every time the film has been wound on to the next picture, the red windows (20) and (22) should be closed by means of the slide (21). This is of the utmost importance when employing panchromatic film.



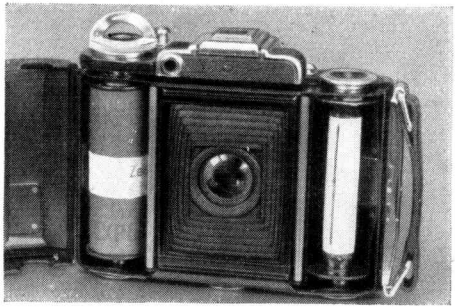
II. Taking out the film

After the 16 exposures have been made, take out the film from the camera in the order indicated below.

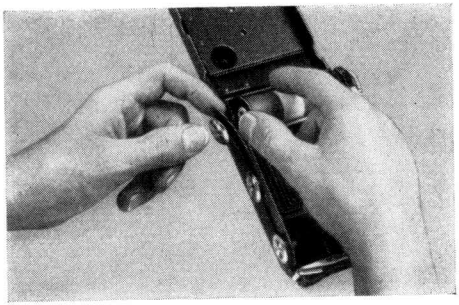
1. Turn the film winding key (12) until the end of the protecting paper has been seen to pass the windows (20) and (22).

2. Push aside the catch (5) in the direction of the arrow and open the camera back at the same time.

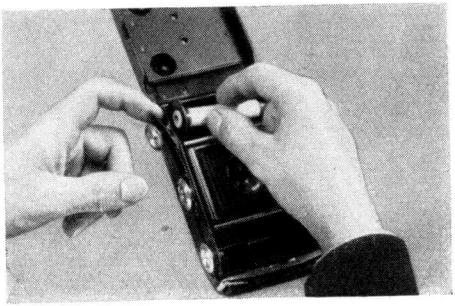
3. Pull the end of the paper firmly with one hand and wind the paper tightly on the spool by turning the winding key.
   Now fasten the end by sticking down the gummed paper sticker provided.



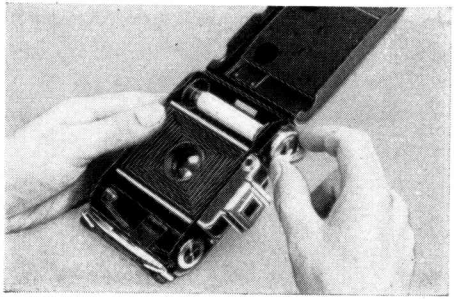
4. Draw the spring stud (19) outwards and take out the spool. It is advisable to protect it from the light by keeping it in the light-tight tin foil in which it was originally packed.



5. Take the empty spool out of the feed spool chamber (18) and insert it into the take-up chamber (19). Both ends of the core of every spool are hollow. Press the end of the spool with the round hole against the spring stud (19), which should be drawn outwards for the purpose, and allow the end with the slit =o= to fit into the projections of the winding key.

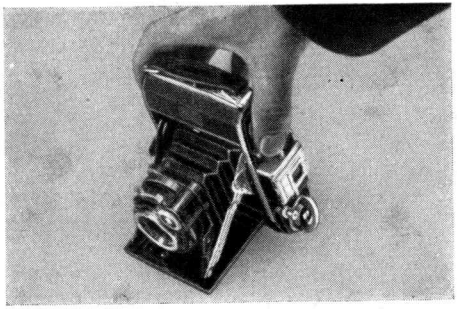


6. Turn the winding key (12) until it snaps with a click into the spool and turn the spool with it.



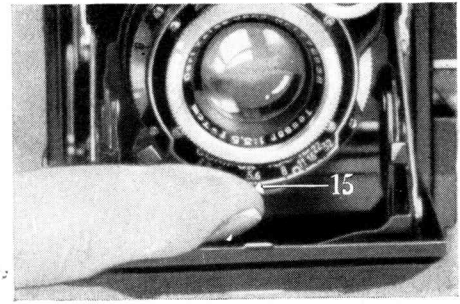
The camera can now be loaded with a new film.

III. Making the Exposure



Opening the camera

1. Pressure on the knob (6) 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 is obtained by setting the lever (15) to the corresponding number on the scale. A higher number on the diaphragm ring denotes a smaller aperture, needs a longer exposure time and increases the depth of focus. For fuller particulars regarding the depth of focus, con-

sult the table on page 31, which also 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 11 ft. and the furthest 23 ft. from the camera. In this particular instance it will be seen from the table that when focussing on 15 ft. and using *f*/8, the depth of focus extends from 10′1″ to 29′3″ and thus amply suffices for a group arranged between 11 ft. and 23 ft.

The Compur Shutter

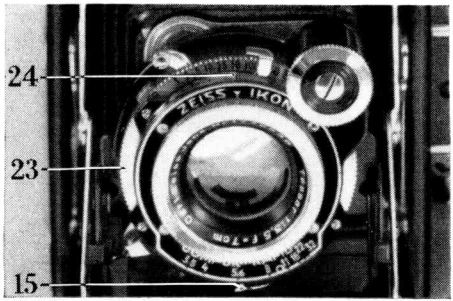
The shutter can only function

a) if the camera is open

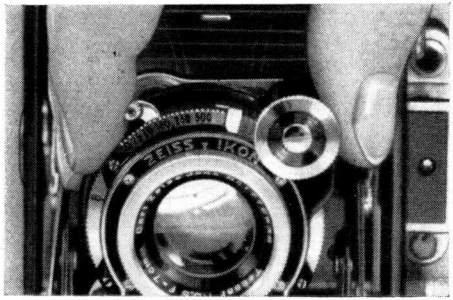
b) if the section of film lying in the film aperture has not been exposed. This can be verified by the appearance of the red signal in the window (10).

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

3. The required exposure time is obtained by turning the milled ring (23). The numbers on the ring read in fractions of a second and must be brought opposite the red mark (24). The shutter allows of "instantaneous" exposures from 1 to $^1/_{500}$ sec. Between the speeds of 1 and $^1/_{100}$ sec. the shutter may be set to intermediate values, as the speed over this range increases gradually.



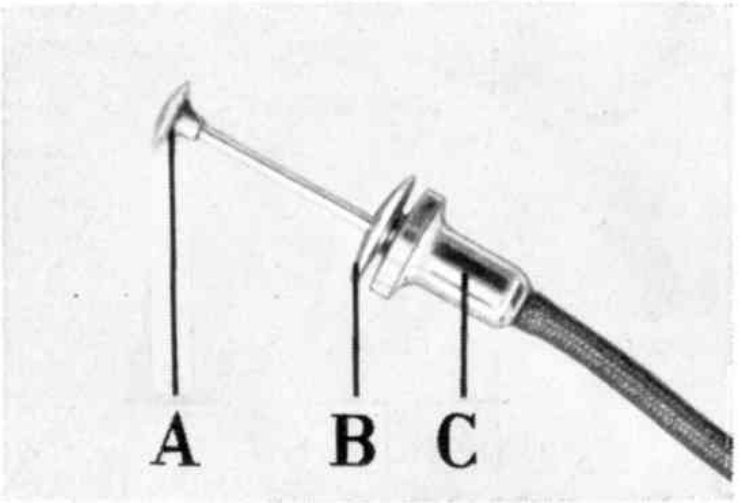
4. Set the shutter by sliding the lever (2) along in its groove in the direction of the focussing disc.



When setting the shutter, and this applies particularly to the speeds of $^1/_{250}$ and $^1/_{500}$ sec. a rather considerable resistance has to be overcome. To avoid overstraining the shutter mechanism or damaging the front carrying the lens, a counter pressure must be exercised when setting the shutter, as shown in the lower illustration on page 18.

For short time exposures bring the letter B on the shutter opposite the red mark. The shutter, without having to be set, is opened by a pressure on the release knob (11) and closed again as soon as this pressure ceases. For long time exposures use the special wire release which is screwed into the bush of the release knob. It differs from the customary type of wire releases by its disc (B), which moves between the button (A) and the tube (C). When the shutter, set to B, is released, it

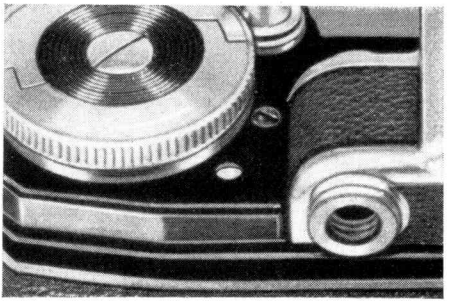
will remain open until the disc (B) is pressed down with the thumb. The special wire release can also be used for short time as well as instantaneous exposures. For this purpose the disc (B) should be pressed down on to the tube (C) and turned slightly to the right, thereby putting the locking device out of use.



Releasing the shutter

5. The shutter is released by pressure on the knob (11). At the side of the film winding key (12) there is a small window (10) in which appear, alternately, a white and a red indicating mark.

The white mark becomes visible as soon as the shutter has been released, and it is then impossible to press down the release knob even if the shutter is set. The film has to be wound on to the next exposure number in order to disengage the locking mechanism. When this is done, the red mark will appear in the window (10)—a sign that a pressure on the release knob will now operate the shutter and expose the film.



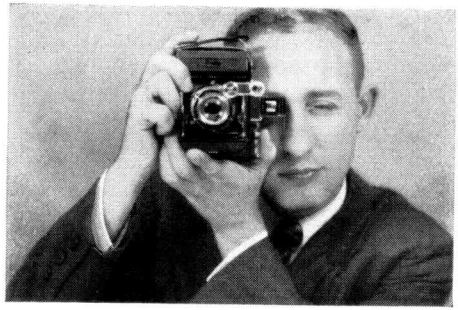
Holding the camera when taking the picture

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 hands.

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 press the release knob. Take care, however, that the fingers do not obstruct the windows of the distance meter or view finder.

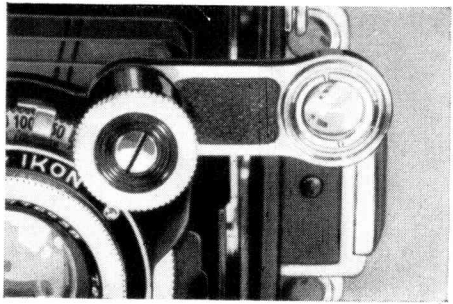
The camera may also be held by gripping the front with the right hand and operating the milled disc (4) with the thumb. But in this case, the thumb must not be allowed to slow down the shutter lever as it fires.

When taking horizontal pictures, the camera should rest mainly in the left hand, with the thumb in position ready to press the release knob (11).

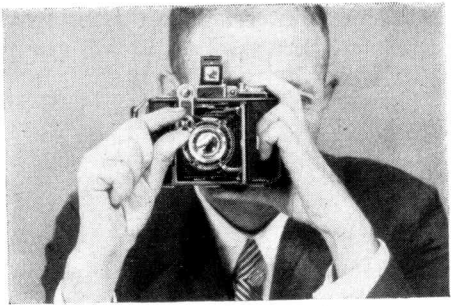


Setting the distance

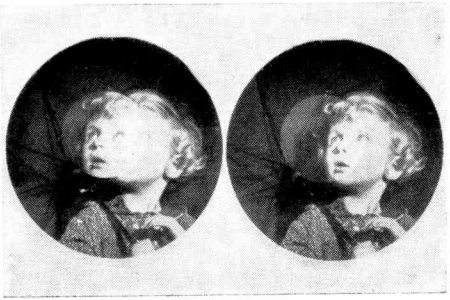
7. It is advisable to set the distance only with the aid of the distance meter. For use, the pivoted arm (4) must be swung outwards.



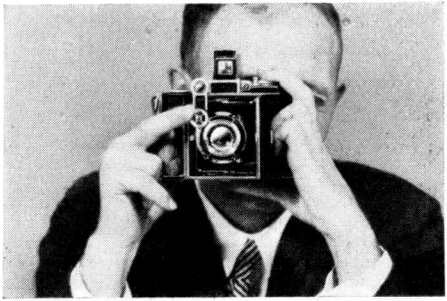
Observation is made in the viewing aperture (17). A circular light coloured field will be seen, in which all objects appear with double outlines.



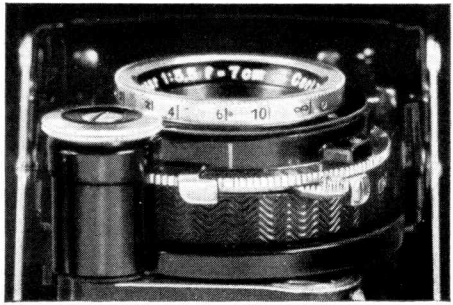
As the setting disc (3) is turned, these double images gradually coincide. When this is the case, the distance meter and the lens are accurately focussed on the object.



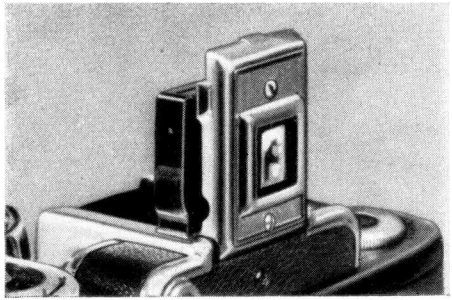
It is also possible to operate the milled disc (3) with the middle-finger of the right hand. As the thumb and index finger are holding the camera, the exposure can be made without changing the grip.



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. For the depth of field at the various distance settings, see page 31.



The view finder system van Albada



The finder gives a sharp indication of the field of view boundary by means of white lines that appear to exist in the subject photographed. For taking fast action pictures it is far superior to all other direct vision optical finders, as it shows quite a large area surrounding the actual picture field. The finder has an advantage over the simpler types of frame finders in that it clearly defines both the image and the boundary. These features were made possible by designing the view finder on an entirely new principle. A white rectangle is engraved on the inner side of the metal plate facing the eye, which has a rectangular opening with a convex window. The front part of the finder consists of 2 cemented lenses semi-translucently silvered in the centre. The white rectangular frame, mentioned above, is reflected to the eye by the curved silver surface and consequently seems to be suspended in space.

The finder must be held close to the eye so as to be able to see beyond the white field. The image seen in the white frame corresponds to the picture on the film.

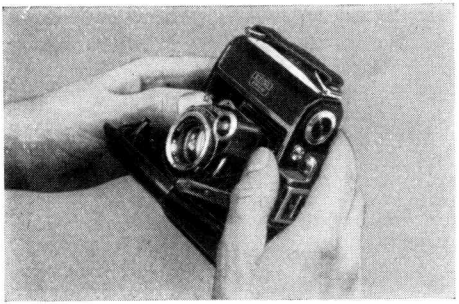
When using the finder, make sure that the viewing plate is not pressed towards the front, or otherwise a distorted picture field will be the result.

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.

On opening the camera the finder springs automatically into working position. To close the finder, fold back the viewing plate towards the front, when the finder lens will also fold up at the same time.

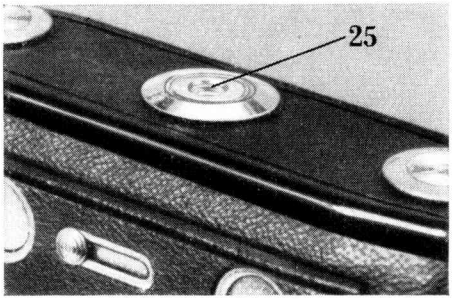
IV. Closing the Camera

First of all turn back the pivoted arm (4) and then close the camera by pressing on the short upper strut pieces, raising the baseboard at the same time.



V. General

The camera has a bush (25) for screwing it on to a tripod when upright pictures are required. For horizontal pictures, a ball-jointed tripod head should be used.



Do not fail to wind on the film after every exposure. If this is forgotten a white signal will show in the window (10) and it will then be impossible to release the shutter. Thus the danger of making double exposures is obviated.

N. B.! Two-point setting

For the purpose of making the camera ready for use in the minimum of time, the Super Ikonta is also fitted with the popular Zeiss Ikon Two-point Setting. For this, the stop is set to between *f*/8 and *f*/11 and the lens focussed on about 24 ft. As shown by the table on page 31, a wide range of depth of focus is obtained by setting in this way—sufficient for the great majority of subjects.

The time of exposure can be ascertained with the aid of exposure tables (Zeiss Ikon exposure table, which briefly covers all kinds of subjects and lighting conditions). But for determining the time of exposure accurately, it is advisable to use the "Helios" photo-electric exposure meter.

Use of supplementary lenses

The camera lens will not focus on objects nearer to the camera than 4 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 Ikonta 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.

Depth of focus table for Super Ikonta 2¼ × 1¾"

		Distance* of focussing scale				
		Inf.	48′	24′	15′	12′
Diaphragm	f/3.5	70′-″-inf.	28′6″-152′	17′11″-36′6″	12′4″-19′1″	10′3″-14′6″
	f/4	61′6″-inf.	27′-″-219′	17′4″-39′4″	12′-″-19′10″	10′-″-14′11″
	f/5.6	44′-″-inf.	22′11″-inf.	15′6″-53′	11′2″-22′9″	9′5″-16′6″
	f/8	30′10″-inf.	18′9″-inf.	13′6″-109′	10′1″-29′3″	8′8″-19′8″
	f/11	22′4″-inf.	15′3″-inf.	11′7″-inf.	8′11″-46′	7′10″-25′11″
	f/16	15′4″-inf.	11′7″-inf.	9′5″-inf.	7′7″-640′	6′9″-55′
	f/22	11′2″-inf.	9′-″-inf.	7′7″-inf.	6′5″-inf.	5′9″-inf.
	f/32	7′8″-inf.	6′7″-inf.	5′10″-inf.	5′1″-inf.	4′8″-inf.

		Distance* of focussing scale			
		9′	6′	5′	4′
Diaphragm	f/3.5	8′-″-10′4″	5′7″-6′7″	4′8″-5′5″	3′9″-4′3″
	f/4	7′10″-10′7″	5′6″-6′8″	4′8″-5′5″	3′9″-4′3″
	f/5.6	7′6″-11′4″	5′3″-6′11″	4′6″-5′7″	3′8″-4′5″
	f/8	7′-″-12′9″	5′-″-7′5″	4′4″-5′11″	3′7″-4′7″
	f/11	6′5″-15′2″	4′9″-8′2″	4′1″-6′5″	3′5″-4′11″
	f/16	5′8″-21′11″	4′4″-9′10″	3′9″-7′5″	3′2″-5′5″
	f/22	5′-″-47′	3′11″-13′	3′5″-9′-″	2′11″-6′3″
	f/32	4′2″-inf.	3′5″-27′4″	3′-″-14′3″	2′8″-8′4″

Distance scale when using Proxar lens 1 × 32 or supplementary lens No. 995/17

Distance* between object and camera	3′3½″	3′1″	2′10½″	2′8¼″	2′6¾″	2′4¾″	2′1½″	1′11½″	1′9½″
corresponds to the following markings on the scale	inf.	48′	24′	15′	12′	9′	6′	5′	4′

* Measured from the front plate of the camera shutter.