



Instructions for using the

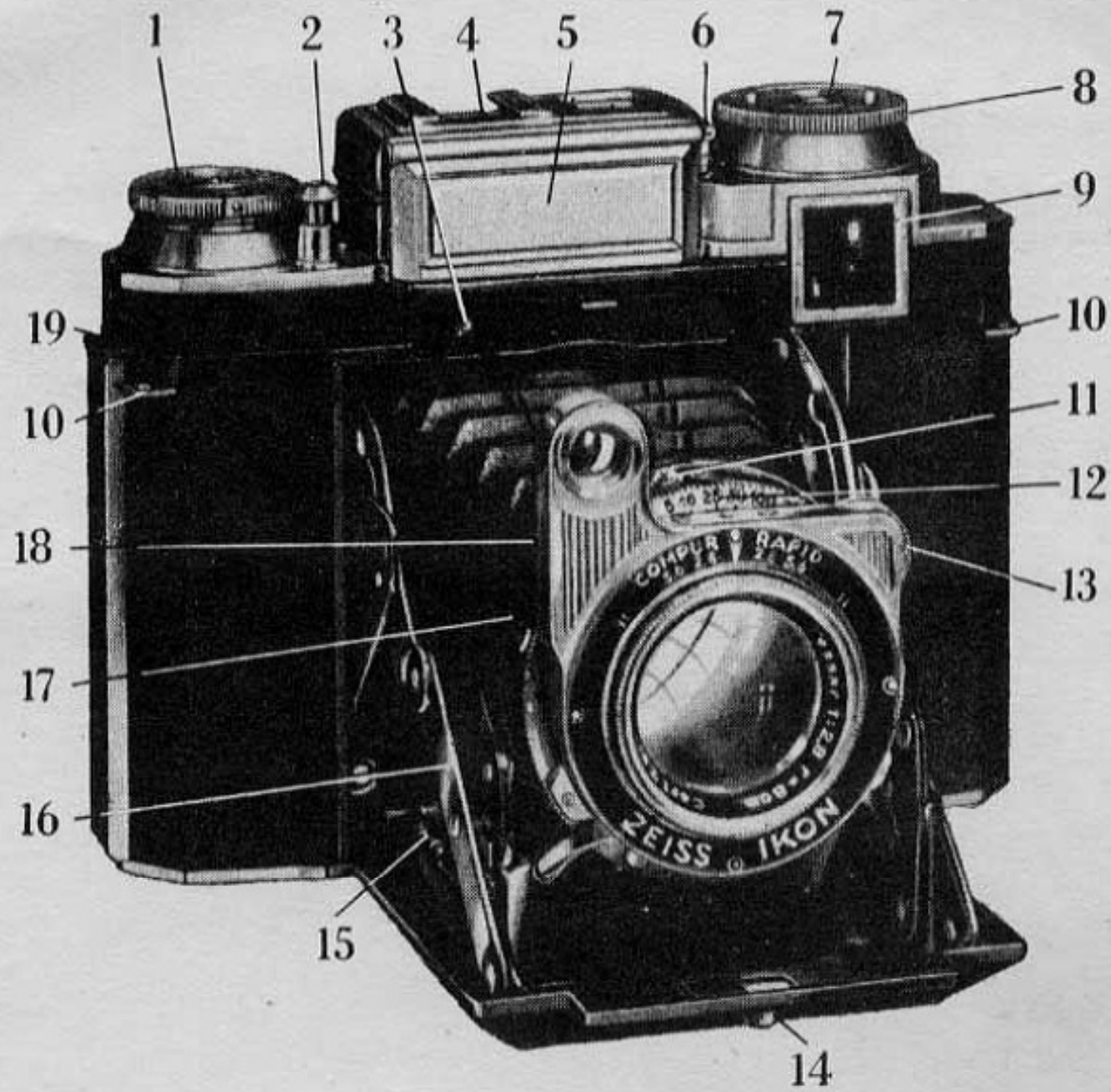
# SUPER IKONTA II No. 533/16

taking  $2\frac{1}{4}'' \times 2\frac{1}{4}''$  ( $6 \times 6$  cm) pictures,  
with built-in Photo-Electric Exposure Meter

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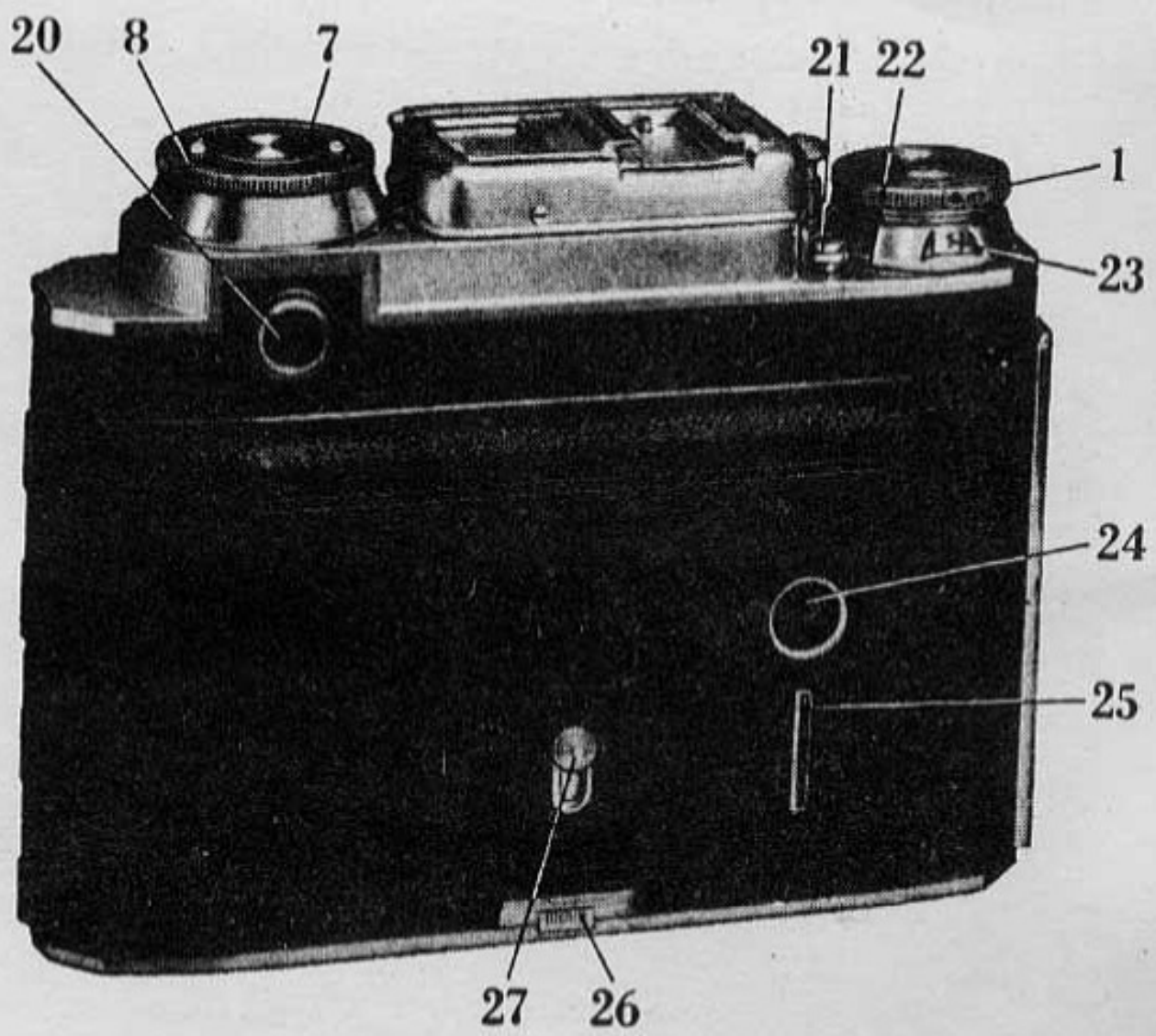


The camera  
as seen from  
the front  
(opened)

1. Film winding key
2. Shutter release button
3. Window for distance meter
4. Finder shoe to accommodate special accessories
5. Safety cover of photo-electric exposure meter
6. Bolt for opening window of exposure meter
7. Scale for setting film speed
8. Adjusting ring for exposure meter
9. Window of combined finder and distance meter
10. Metal loops for carrying strap
11. Button used when setting the delayed shutter release mechanism
12. Ring for setting shutter speeds
13. Focussing wheel operating distance meter
14. Button opening camera front
15. Connecting link to body shutter release
16. Struts of self-erecting mechanism
17. Scale of lens apertures
18. Winding lever for shutter
19. Lock for camera back

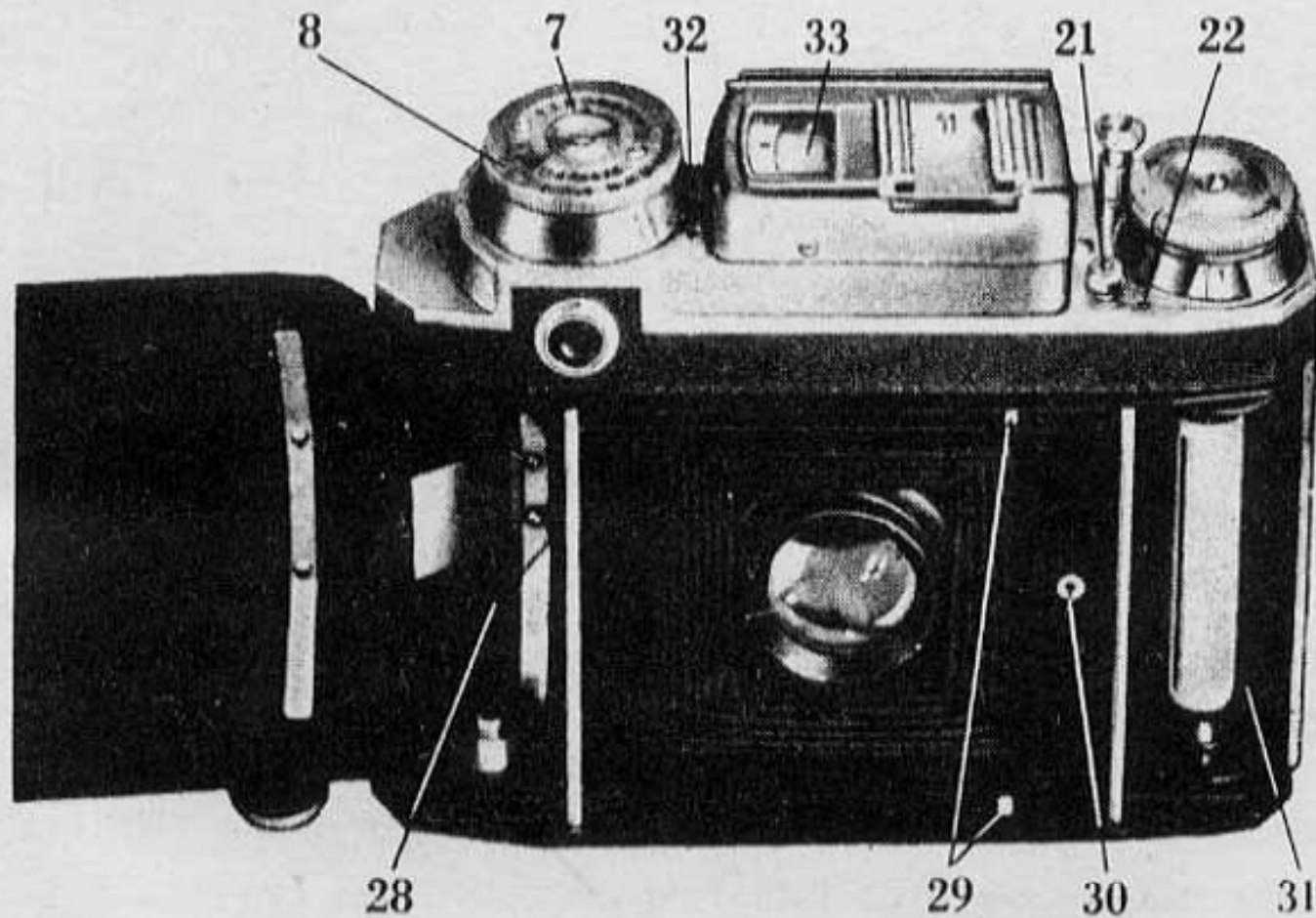


- 20. Eyepiece for combined finder and distance meter
- 21. Knob actuating the film winding lock
- 22. Signal disc indicating whether the film winding lock has been set
- 23. Picture counter
- 24. Red window in camera back with safety cover
- 25. Spring lever for lifting safety cover of red window
- 26. Support to stand camera upright
- 27. Control button for support (26)



Rear view of the shut camera





- 28. Feed spool chamber
- 29. White index dots for loading film
- 30. White ring appearing in the red window when film is not loaded
- 31. Take-up spool chamber
- 32. Adjusting screw for exposure meter
- 33. Scale window of exposure meter

Rear view of the opened camera

## Introduction

The Super Ikonta II taking  $2\frac{1}{4}'' \times 2\frac{1}{4}''$  ( $6 \times 6$  cm) pictures is a camera which differs considerably from other camera types: it embodies a built-in coupled distance meter, a built-in photo-electric exposure meter, and a built-in automatic film lock.

The camera is held at eye level and released by a body release.

The camera is intended to give 12 exposures  $2\frac{1}{4}'' \times 2\frac{1}{4}''$  and the film is automatically locked after the correct length of film has been wound on. A picture counter indicates the number of exposures which have been made.

Double exposures on one section of film are impossible, since the shutter release will only operate after the film has been wound on correctly.

The lens is focussed by turning the small milled ring controlling the distance meter, both lens mount and distance meter being adjusted

simultaneously. The distance meter is of a type that is not liable to mechanical damage and other external influences, and is not affected by ordinary vibration and similar movements.

The film is held rigidly flat in the focal plane by a special spring pressure plate in the camera back. Panchromatic films can be used in the camera without any precautions, since the red window in the camera back is kept shut with a spring safety cover.



## The working of the automatic shutter lock coupled to the film winding gear

The Super Ikonta taking  $2\frac{1}{4}'' \times 2\frac{1}{4}''$  pictures has a special lock which stops the film moving once it has been wound on the width of a single picture. The film is thus not wound on by watching the red window, or by examining the picture counter.

*This film lock is connected with the shutter, so that the release will only operate when the film has been wound on a full picture width and that the film can only be wound on when the shutter has been released. Double exposures and unexposed sections of film are thus out of the question.*

Because of this special mechanism, the film must be carefully loaded according to the instructions following, and it is very desirable that the various operations indicated shall be practised in advance in order that they are properly understood.

### **1. The film winding lock is released**

In this condition the film winding key can be turned at will, independent of the condition of the picture counter and shutter. *The shutter may be set, but cannot be released.* The film winding lock must be released before loading a film into the camera, and the loading is as usual, and will be described below.

### **2. The film winding lock is operative**

The film winding key can now only be turned on one picture width, and each time, the shutter must be wound up and released. The camera must not be loaded with film when in this condition. After the 12th exposure, the film winding lock is automatically released.

### **3. Setting the film winding lock**

The button (21) is pressed to the side in the direction of the exposure meter until a red disc appears in a small window close to it. The film winding key will now only turn on until the number (1) on the picture counter is reached.

### III. The exposure meter

#### The working principle of the exposure meter

The exposure meter is operated by means of a photo-cell, a precision measuring instrument, and a regulating resistance. Light falling on the prismatic cell window (see figure on page 21) reaches the cell, where it generates an electric current, and moves the needle of the measuring instrument across the scale (33) to a position dependent on the strength of the current. The various light values reaching the cell are compensated by means of a regulating resistance connected with the exposure scale (8). By this means, a direct reading for lens aperture at any given shutter speed is obtained with all the advantages of a zero-point reading method.

#### Comparative table of speed numbers

/ 10 <sup>0</sup> DIN	12	15	18	21	24	27	30
<sup>0</sup> Sch. Europa*	22	26	29	32	35	38	41
<sup>0</sup> Sch. USA.*	19	22	25	28	31	34	37
Weston	10	20	40	80	160	320	640
H. & D.	500	1000	2000	4000	8000	16000	32000

\* See next page



#### **4. Releasing the lock.**

*The film winding key is turned until it locks. The shutter is then set, and released by pressing the release button and holding the latter firmly down. The film winding key can then be turned until the picture counter moves over the number (12), when the winding lock will automatically be released.*

#### **I. Loading the camera with film**

The Super Ikonta is loaded with B 2 film spools, each spool giving 12 exposures  $2\frac{1}{4}'' \times 2\frac{1}{4}''$  (6×6 cm). The highly sensitive Orthochrom and Panchrom films made by Zeiss Ikon are strongly recommended, since they never fail to give good results even under bad lighting conditions. It is an insurance against failure to use a branded film such as Zeiss Ikon, for it will prevent the camera user being disappointed with his results later on.

The Zeiss Ikon Panchrom grade is distinguished from the Orthochrom grade by its greater sensitivity to colours, and its improved rendering of natural tones. Orthochrom film is sensitive to colours between blue

and yellow-green, while Panchrom is sensitive to every colour in the spectrum and will record yellow and red in their appropriate tone values in the negative. In artificial light, a panchromatic film is always preferable, since it is relatively more sensitive to this type of illumination and thus needs considerably shorter exposures. For exposures under unfavourable artificial lighting conditions the use of the Zeiss Ikon Panchrom Film 21/10<sup>0</sup> DIN is recommended.

Film spools are light-tight in the sealed state, but the loading and unloading of the camera should always be carried out in weak or diffused light merely as a precaution.

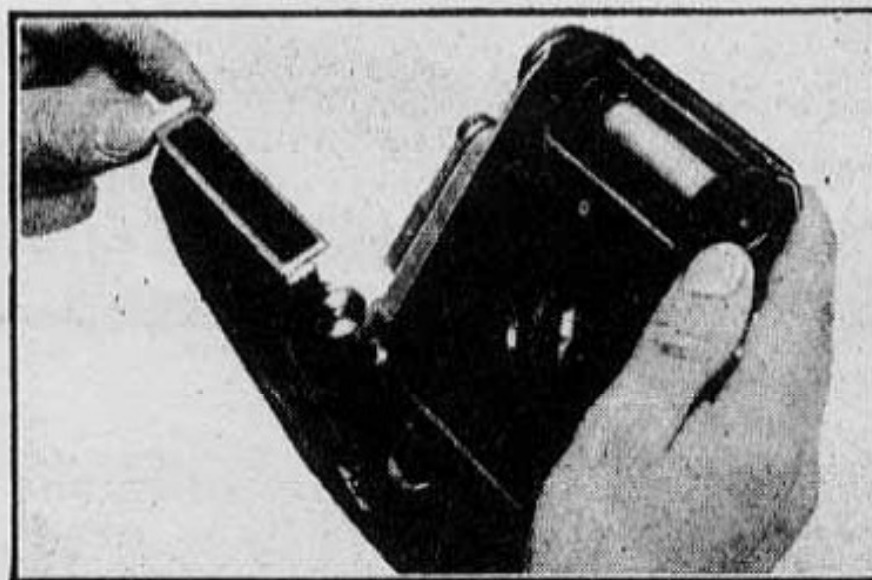
*The film must not be loaded with the film winding lock in action. This can be recognised by the appearance of the red disc in the small window (22) (page 15 fig. 6). Before loading, the red disc must have moved from sight, and the film winding key must turn at will without locking. (See page 10, section 1.)*

In practice, the lock will normally be free when a new film is loaded, since after the 12th exposure it is automatically put out of action.

*If the film winding lock is in action, it must be released as described under section 4 on page 10.*

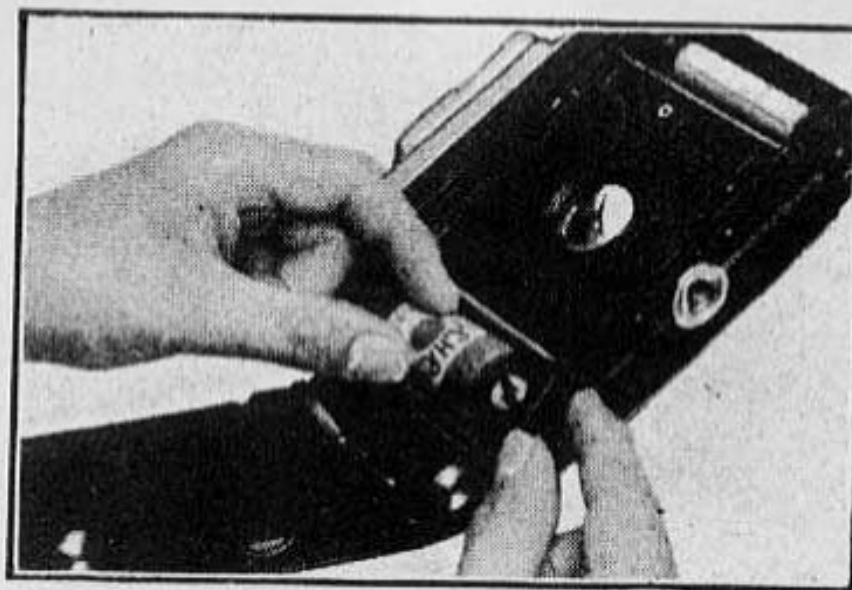
Loading the camera is carried out as follows:

1. The locking bolt (19) is released and the camera back hinged open.





2. The full spool of film is placed in the feed chamber (28), the peg on the spring having first been pulled outward to accommodate it. The pointed end of the backing paper round the film must point across the open camera back to the take-up spool chamber and the black side of the paper must face the camera lens as the spool unrolls.



3. The gum strip holding down the pointed end of the paper is broken and the point drawn across the camera and introduced into the broad slot of the empty spool.

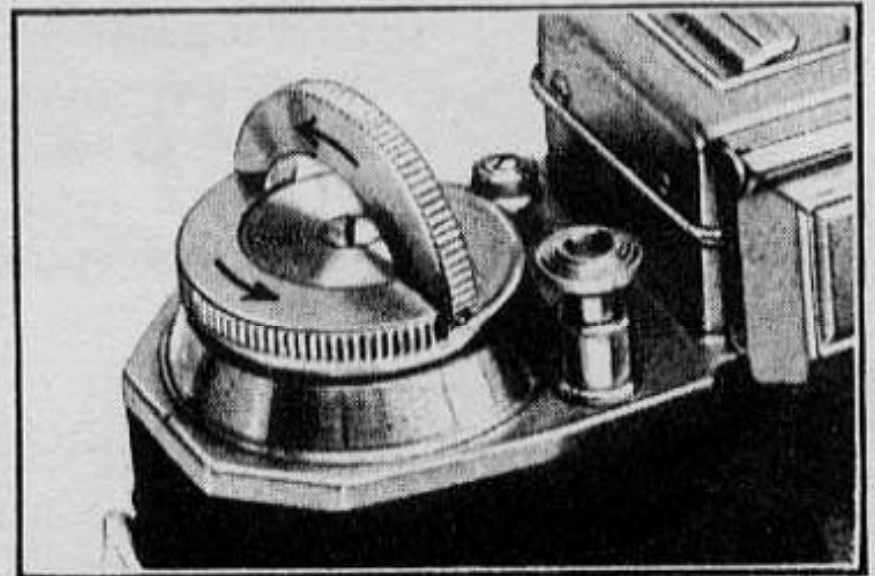


4. The backing paper is wound forward by turning the film winding key until the triangular black marks on it are exactly opposite the white marks on the inside of the camera.



The rim of the film winding key is hinged, so that one half may be lifted to give greater convenience in winding.

5. The camera back is closed and locked by means of the bolt (19).

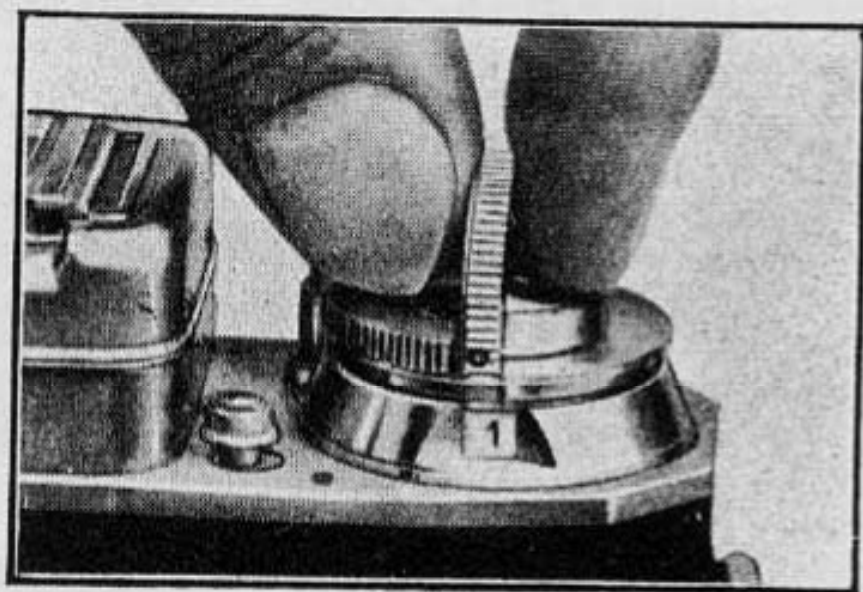
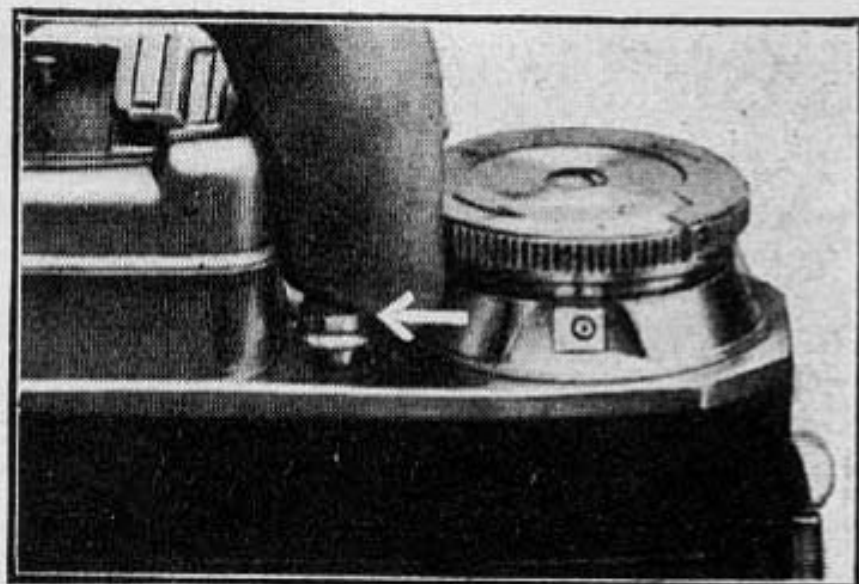


6. The button (21) is now pressed towards the exposure meter housing, and a small red disc will appear in the tiny window (22), indicating that the film winding lock is in action.

**PRESS BUTTON 21 DOWN, AND THEN TOWARDS THE EXPOSURE METER HOUSING UNTIL SMALL RED DISC APPEARS.**

7. The film is now wound on with the key (1) until the key itself locks. The number "1" will now be seen in the aperture (23) of the picture counter, and the first section of film is ready for exposure.

The operations required for making a picture are explained on pages 30 to 41.



**PRESS BUTTON 21 DOWN, AND THEN TOWARDS THE EXPOSURE METER HOUSING UNTIL SMALL RED DISC APPEARS.**



## II. Unloading the exposed film

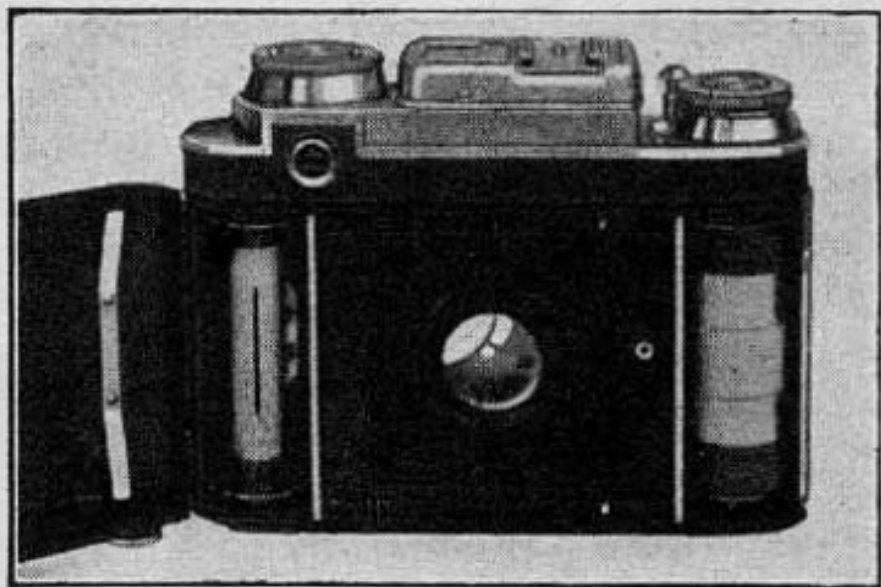
The film should, so far as possible, only be taken out of the camera when the film winding lock is in the released position, which means that the whole film is exposed, or at least wound right through the camera. After the 12th exposure, this lock is automatically released.

To unload the film before all the exposures have been made, the winding key must be turned on until it locks, the shutter set (it must *not* be set to "B") and the shutter release pressed firmly down while the film is wound through the camera. After the 12th exposure has been reached, the lock will be released automatically. This will be indicated by the appearance of the space beyond the figure "12" on the picture counter (23).

In general, the procedure for unloading is as follows:

1. After the 12th exposure — the number "12" is in the window of the picture counter (23) — the film winding key (1) is turned continuously until it moves without resistance. The safety cover is then lifted from the red window in the camera back, and it will be seen that a white ring is visible, indicating that all the film has been wound through the camera.
2. The button (19) is released and the camera back opened.

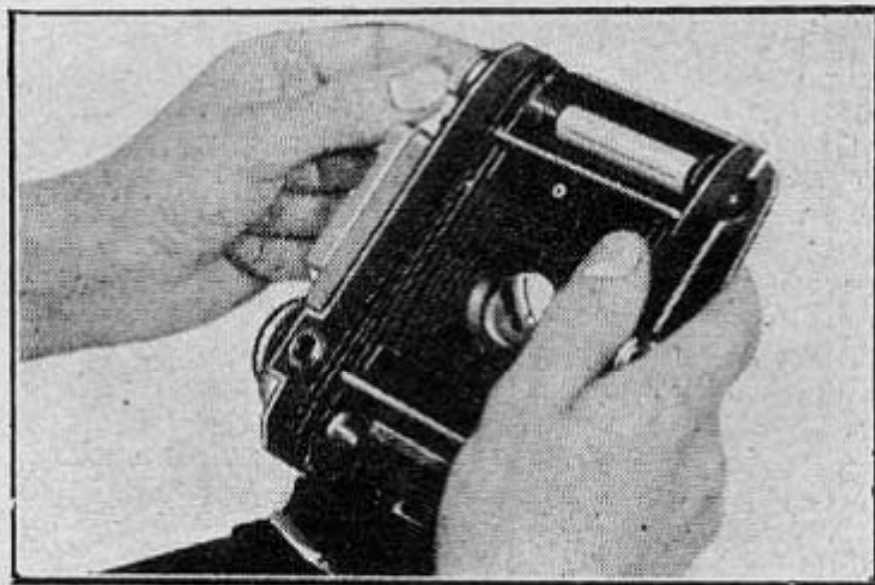
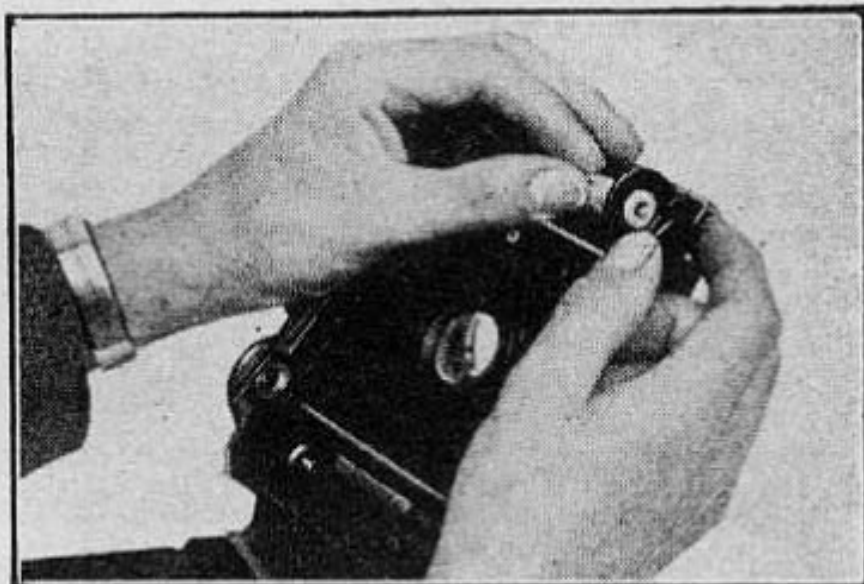
3. The exposed spool of film is removed and the end of the backing paper stuck down with the gum strip provided.



4. To remove the spool, the peg on the spring is pulled out sideways until the spool itself is freed.



5. The empty spool core is removed from the feed spool chamber, and transferred to the take-up chamber. A circular hole will be found at each end of the spool, and when inserting in the camera the slotted end shaped — =o= — must be placed so that the slot engages in the winding key. The spring pin is then pulled sideways, the other end of the spool core introduced, and the pin pressed into the plain circular hole in the end of the core.



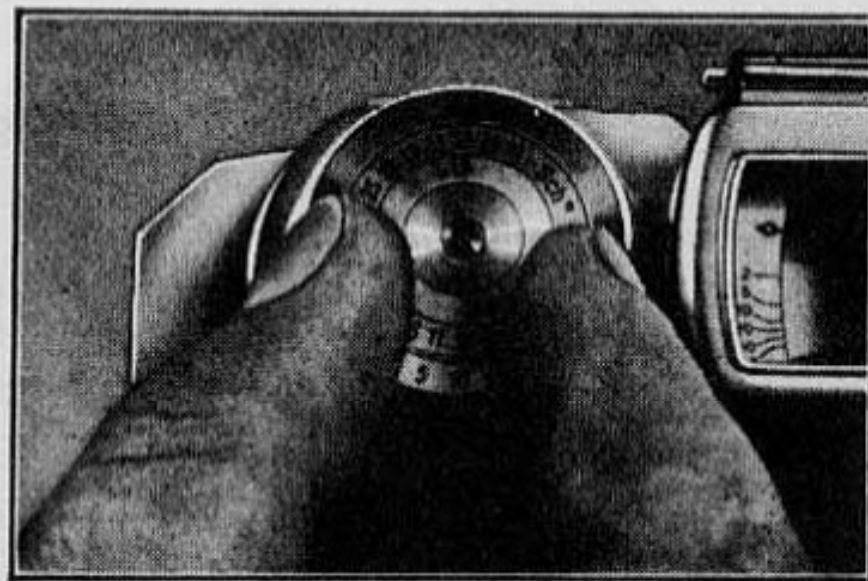


In the case of cameras manufactured for the **USA** market the dial (7) showing the film speeds is marked with **red** figures (USA Scheiner degrees) while **black** figures are taken for indicating European Scheiner degrees.

If with cameras having red scales film is used bearing Scheiner ratings according to European standards, the corresponding values in USA Scheiner degrees have to be found in the comparative table (3rd line) and set against the mark on the inner disc in order to obtain correct exposures and vice-versa.

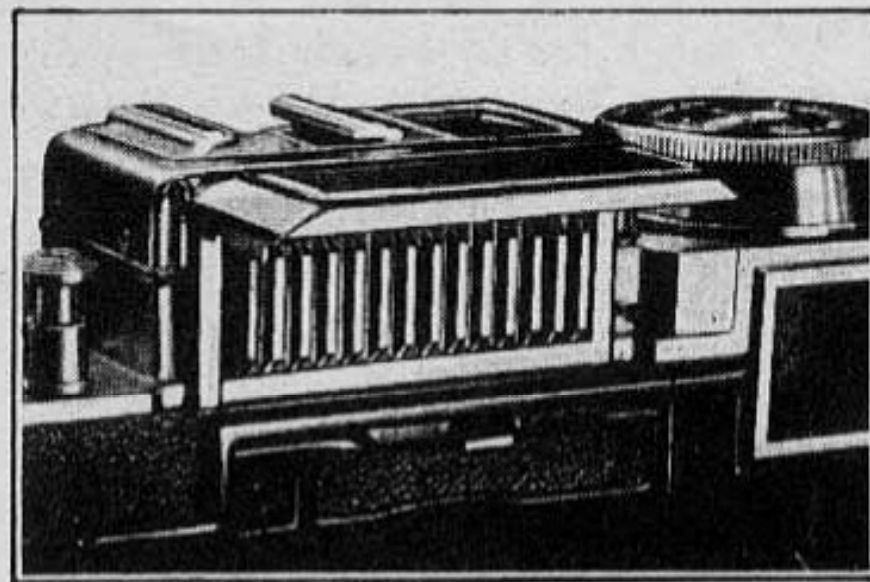
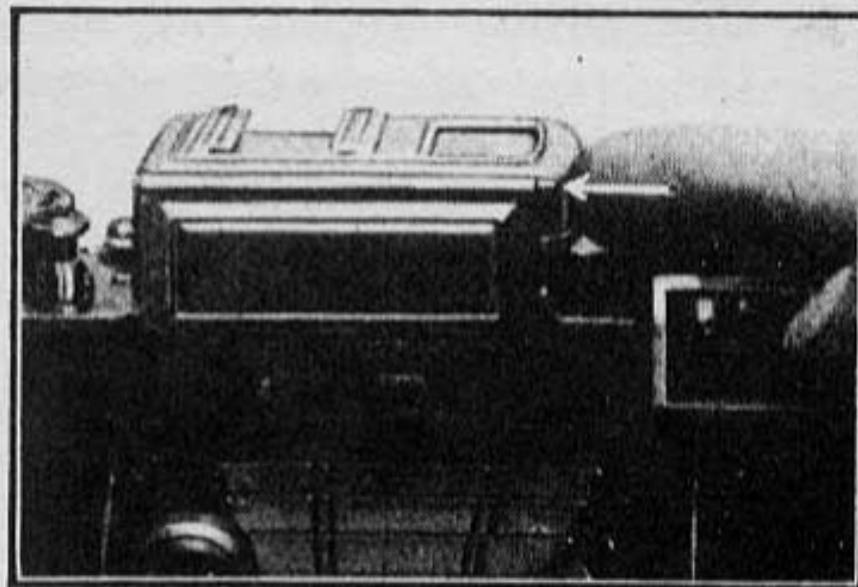
### Operating the exposure meter:

1. The ring (7) is turned with the help of the two small projections until the number indicating the film sensitivity in use is against the mark on the inner disc. (In the figure on page 22 the scale is set to  $35^0$  Sch.)

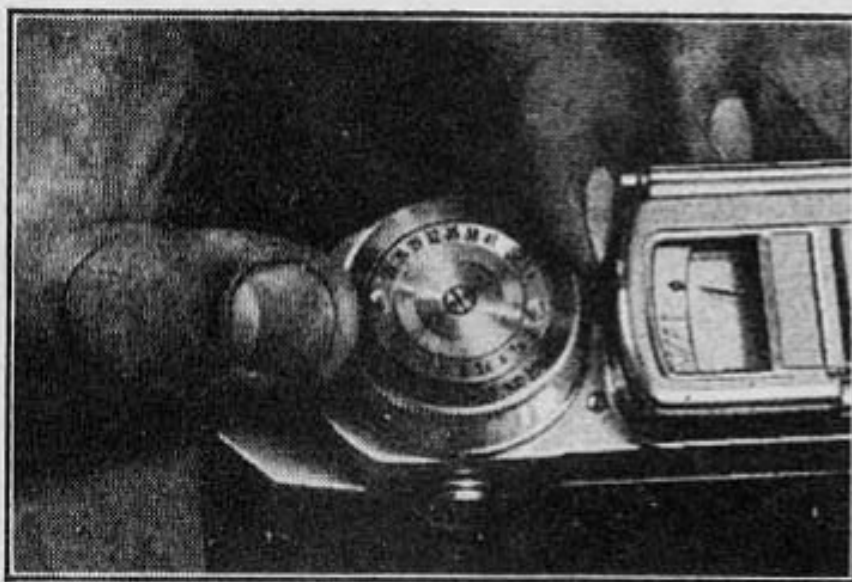


2. The cover over the cell-window is opened by pressing the small bolt (6) inwards. The prismatic window is now exposed to the incident light.
  
3. The camera is directed towards the central portion of the scene to be photographed when taking a reading. If the subject contrast is very high, or if the shadows of the scene are important, the camera should be directed towards them rather than towards the scene generally, and thus take the shadows primarily in account during the reading.

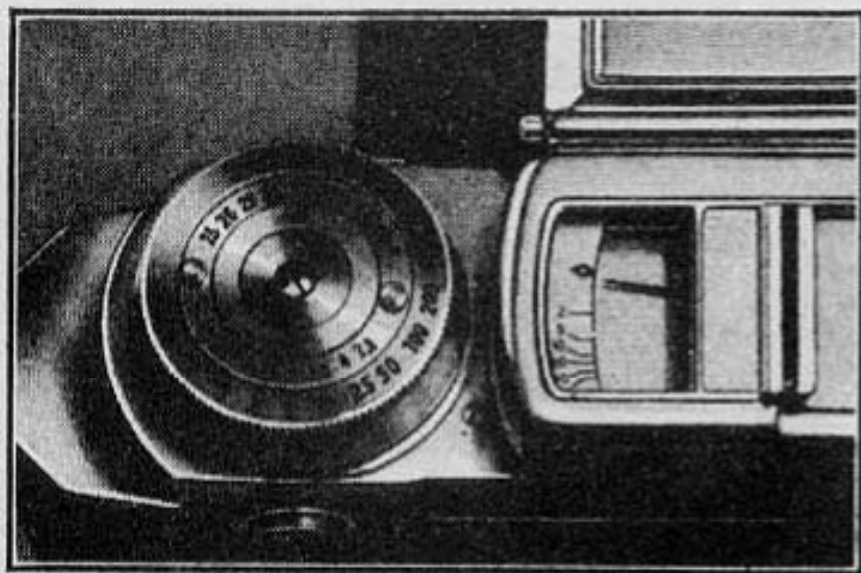
**The reading must be taken with the Camera open ready for use, since the meter is calibrated only for use in this position.**  
(See page 30, chapter IV.)



4. The adjusting ring (8), carrying the scale of shutter speeds, is turned until the needle in the window (33) is exactly against the setting mark ◆



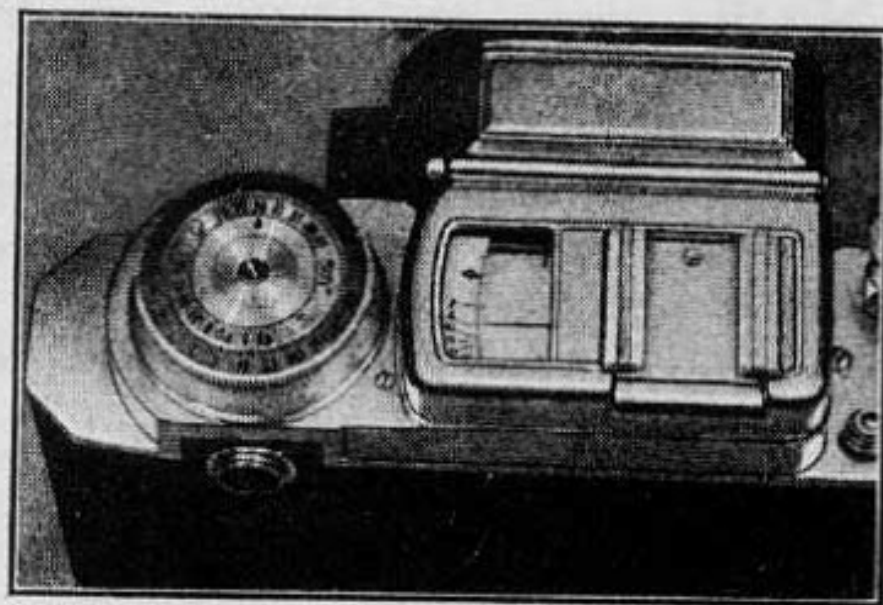
5. The appropriate lens aperture for any shutter speed can now be read off on the scale of the ring (8), or else a suitable shutter speed found for a given lens aperture. Black figures on the scale indicate fractions of a second (e. g. 25 =  $\frac{1}{25}$  th, 50 =  $\frac{1}{50}$  th), while red figures indicate full seconds. Intermediate values for shutter speed cannot be set on the camera, so that intermediate positions of the lens aperture must be used by way of compensation.





6. *Where the light reaching the cell is very limited in quantity, so that the needle will not reach the normal setting mark even if the ring (8) is turned right up to the end of its travel, the ring (8) may be turned until it is in this position and the exposure read against one of the other marks on the plate beneath the needle. If this is done, the indicated exposure on the ring (8) must be multiplied by the factor to which the needle points. The multiplier settings will be found between the normal setting mark and the zero mark on the scale in window (33).*

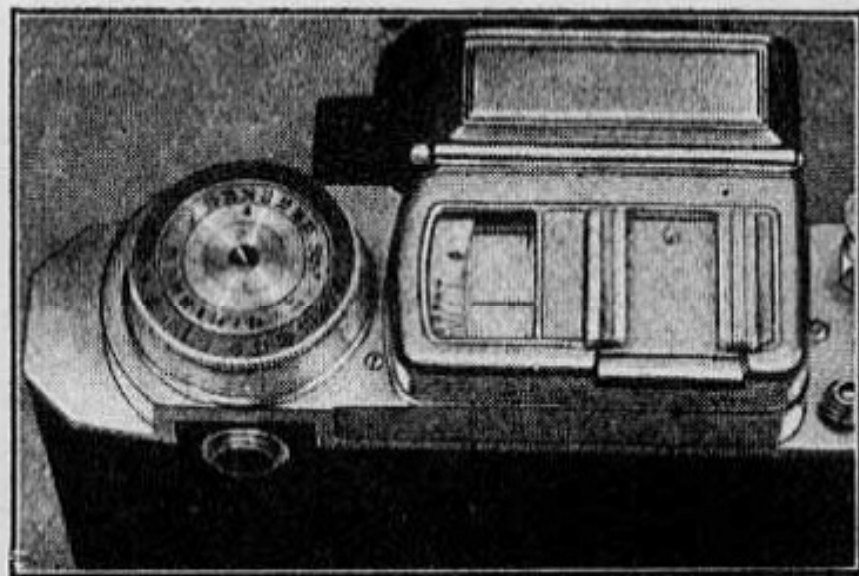
The numbers 2, 5, 10, 20, and 40 on the scale indicate the numbers by which the exposure indicated on ring (8) must be multiplied.



If the needle lies between two multiplier settings, then the approximate intermediate multiplier value can be estimated with sufficient accuracy for practical work. If the needle lies midway between the 5 and 10 settings, then one may multiply the indicated exposure by 7; if between the normal setting and the 2 setting, it may be multiplied by  $1\frac{1}{2}$ .

*If the values obtained from the multiplier settings are to be correct, it is essential that the setting ring (8) is turned anticlockwise as far as it will go before a reading is taken.*

Example: In the illustration opposite the multiplier setting marked 5 is opposite the needle. The indicated exposure for a film of  $29^{\circ}$  Sch. at  $f/5.6$  is  $\frac{1}{5}$ th second, so that the correct exposure in the camera would be  $5 \times \frac{1}{5}$ th = 1 second. Similarly, for  $f/16$ , the value would be  $5 \times 2 = 10$  seconds.

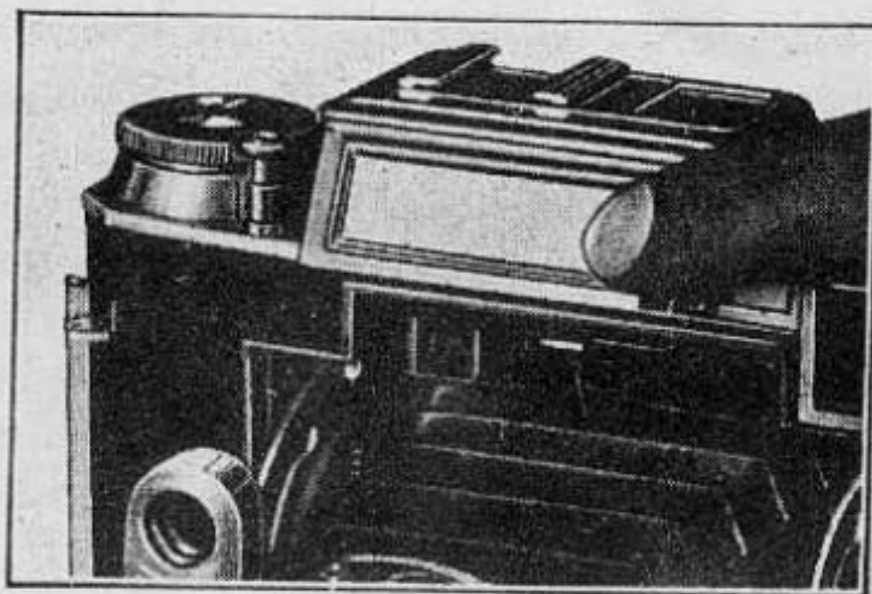


The main conversions which arise when using the multiplier settings of the exposure meter are indicated in the table below.

Reading on shutter speed scale (black figures)	Multiplier factor —				
	2	5	10	20	40
50	$\frac{1}{25}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	1
25	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	1	2
10	$\frac{1}{5}$	$\frac{1}{2}$	1	2	4
5	$\frac{1}{2}$	1	2	4	8
2	1	$2\frac{1}{2}$	5	10	20



7. After taking a reading, the cover over the cell window is folded over with the finger until it snaps into the closed position.



### **Factors for use with special subjects:**

In *daylight* the indicated values from the meter are equally correct for both orthochromatic and panchromatic film.

In *artificial light*, panchromatic film with depressed red sensitivity requires half the indicated exposure (one step less exposure on the dial) while panchromatic film with high red sensitivity requires one quarter the indicated exposure, or two steps less on the dial. Since exposures in artificial light are usually taken in numbers rather than one at a time, this variation can be dealt with in practice by altering the sensitivity

value on the inner disc of ring (8). The dial is then set to a speed one or two steps higher than the daylight sensitivity of the panchromatic film, e. g. to 35<sup>0</sup> Sch. or 38<sup>0</sup> Sch. instead of 32<sup>0</sup> Sch.

If orthochromatic films happen to be used in artificial light, then it is necessary to multiply the indicated exposure by four, or to set the sensitivity value two steps lower on the scale than the ordinary daylight value.

*Intertors in daylight* not against the light (i. e. where the window is more or less behind the camera) can be exposed for one quarter (two steps) the normal exposure time indicated by the meter.

Exposures against the light out of doors or indoors, where the light is either the sun or a window will need four times (two steps) longer exposure than indicated.

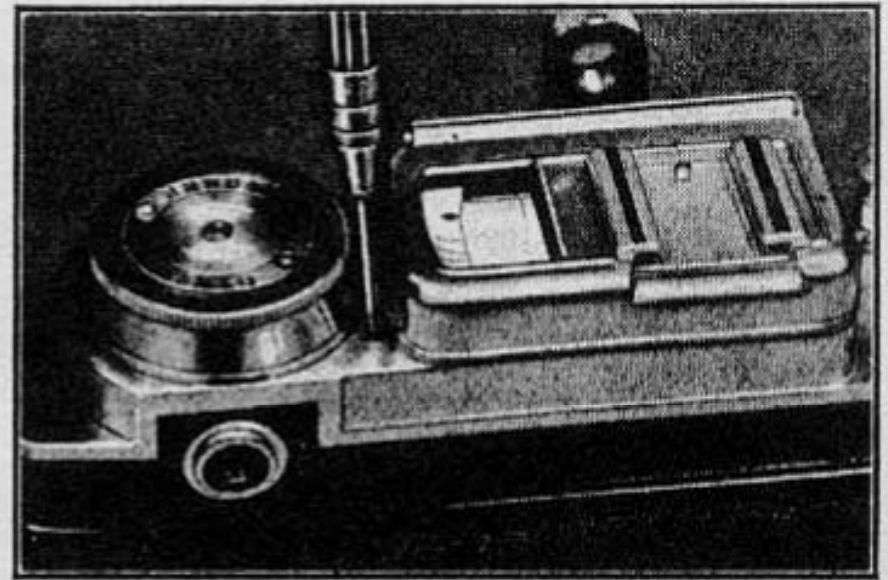
The exposure times for which the meter is calibrated are normal ones: for exposures on rapidly moving objects it is quite possible to use half the indicated exposure and still obtain useable negatives.

## Care of the exposure meter

The photo-electric meter is a precision instrument and must be treated with the respect it deserves. It should not be exposed to shocks or jolts, and *iron implements must be kept away from it*. To keep the photo-cell itself in the condition of highest sensitivity, *the cover should be kept over it unless actually taking a reading*. *No attempt should be made to measure the light from the sun*: the meter will not record so high a value, and the cell is not improved in quality by being subjected to such a strain.

## Zero adjustment of the exposure meter

The mark just beyond the "40" multiplier setting of the needle scale is the zero index, and it may happen that if the meter is not treated carefully, the needle will fail to return to zero when no light falls on the cell. This does not ruin the meter, since a special zero adjustment screw is provided, and anyone may re-adjust the movement with a screw-driver.



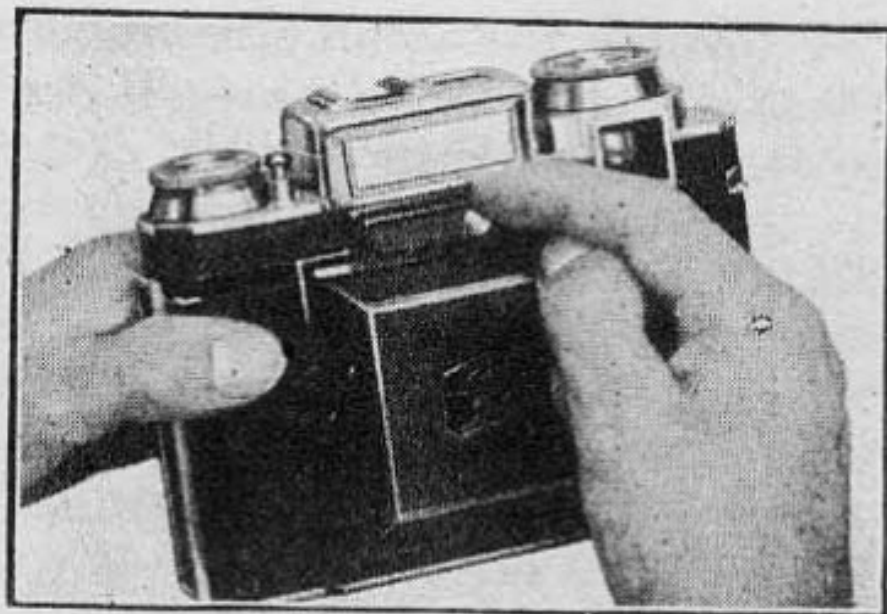


By turning the small screw on the left next to the exposure-meter body, the scale beneath the needle will move, and it can be shifted until the zero mark on the scale is exactly over the needle of the galvanometer. It is important when making this adjustment to be sure that no light whatever is reaching the cell, and thus no current is flowing through the instrument coil, for it is only under such circumstances that the needle can be expected to return completely to zero. The cell is so sensitive that to lower the cover over the prismatic window is not sufficient when adjusting the zero point, for ample light can pass through the hinged joint of the cover — as well as in at the sides — to make the needle move off zero. Adjusting must thus only be carried out in weak light (never in the sun), and a dark cloth placed round the cell window to ensure that no light passes through the latter. It is also useful to turn the ring (8) in a clockwise direction as far as it will go before judging whether any adjustment is necessary.

## IV. Making the exposure

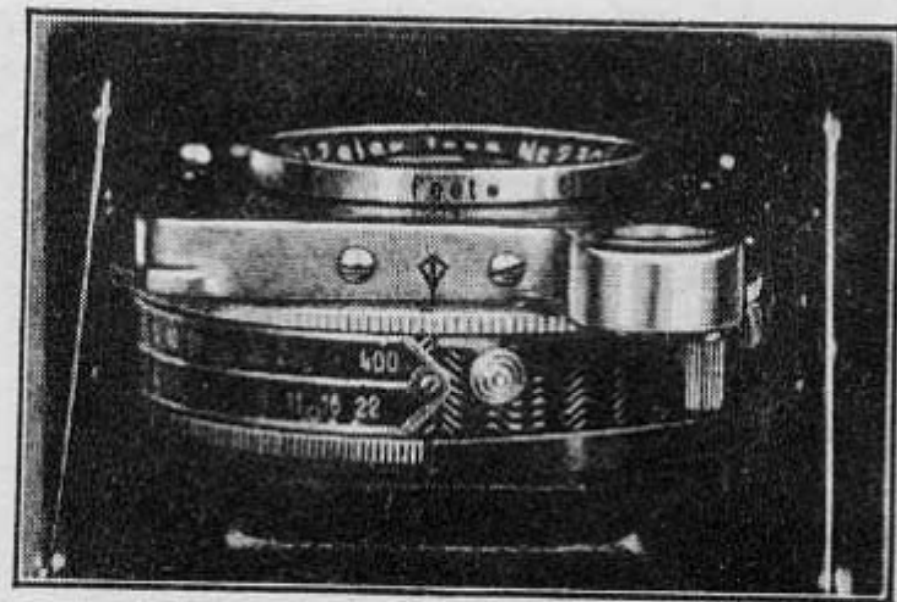
### Opening the camera

1. By moving the small button (14) downwards, the front carrying the lens and shutter is opened, and will move automatically into the erected position.

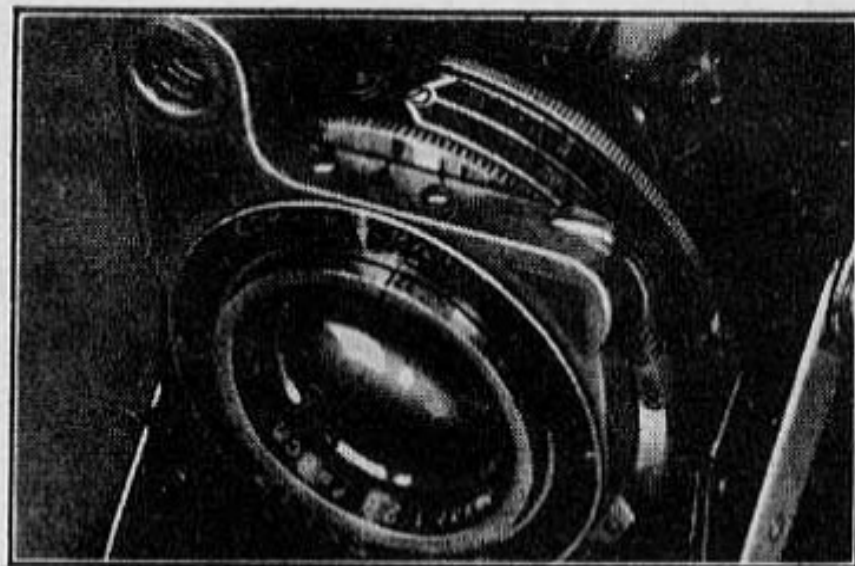


### The lens aperture

2. The lens aperture may now be adjusted by the ring (17). This ring has an index mark on it, and the latter is set against the required aperture number on the scale. The larger the aperture number, the smaller the actual aperture, but the longer the exposure and the greater the depth of focus.



The depth of focus at any given lens aperture is indicated on the scale in front of the shutter housing. More accurate and detailed values are given in the table on page 48, from which one may determine the most useful aperture and focussing distance for a subject of considerable depth. If, for instance, a group of people extends between 9 feet and 20 feet from the camera, the table shows that by using an aperture of  $f/11$  and focussing on 12 feet, all of them will be recorded sharply, the depth of focus reaching from 8 to 24 feet.





## **The Compur shutter**

The shutter can only be released —

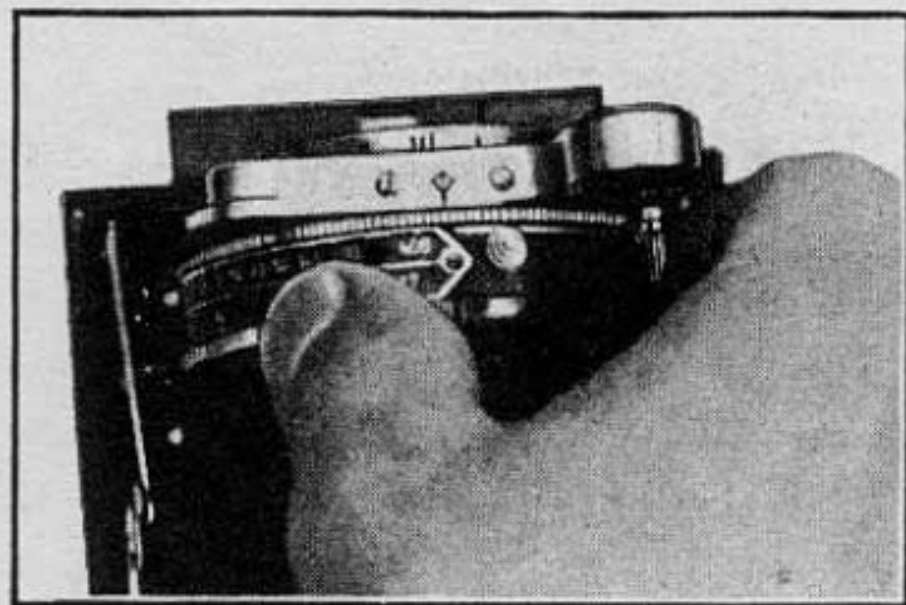
- (a) when the camera is open for use,
- (b) when the film winding lock is in action, and —
- (c) when the film has been correctly wound on to the next picture.

Under all other circumstances the shutter release does not work. The shutter may be set at any time, but not released except as indicated above (see also page 36).

3. The shutter speed is adjusted by means of the ring (12). The numbers on the ring indicate fractions of a second, and are set against a black index mark on the housing by the ring. The shutter gives automatic exposures between 1 second and  $\frac{1}{400}$ th second.

The shutter speed which has been set may be seen on the scale (35) when looking down on the camera from above. (See fig. on page 30.) The ring (12) is fitted with an index mark on its outer edge for this purpose.

4. To set the shutter, the lever (18) is moved along its slot until it slips under a catch. When setting the shutter for snapshot exposures, and in particular for the  $\frac{1}{400}$ th second speed, it is natural that

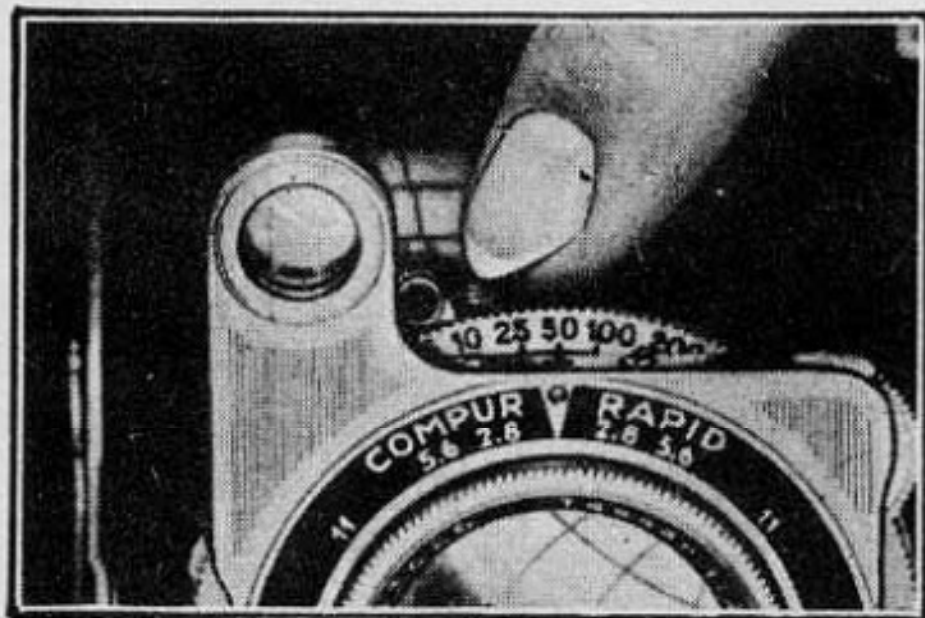


a certain amount of resistance from the spring must be overcome. In order that the shutter mechanism is not damaged, or the lens support strained, it is necessary to apply appropriate counter-pressure on the other side of the shutter casing when setting.

To use the delayed-action shutter release, the button (11) must be pushed backwards, after which the lever (18) can be pushed farther along the slot until it slips under a second catch.

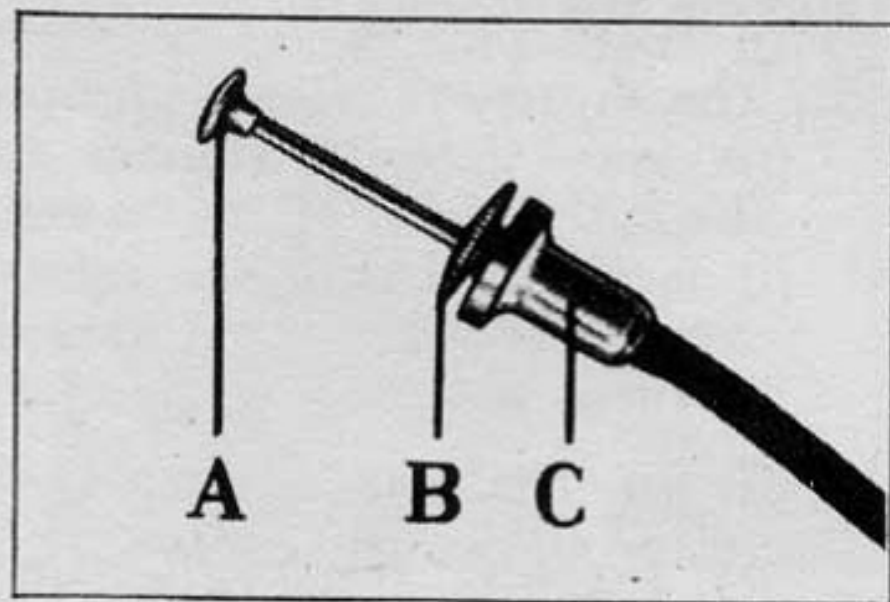
The delayed-action mechanism cannot be used when the shutter is set either to B or to  $\frac{1}{400}$ th second.

For time exposures, the shutter ring (12) must be set until the letter "B" is against the index mark.





For long time exposures the special flexible shutter release delivered with the camera should be used, after screwing it into the nipple provided on the camera shutter release button. This flexible release is distinguished from the normal type by having a moveable plate (B) between the plunger (A) and the body (C). The shutter is set to B, and wound up. As soon as the plunger (A)



is pressed the shutter will open, and will remain open until the plate (B) is pressed firmly against the body (C) of the release. The special flexible release can be used like any other ordinary release by pressing the plate (B) against the body (C) and turning it slightly to the right. In this position the locking mechanism is out of action, and the release may be used for short time exposures on the "B" setting, as well as for ordinary snapshot exposures.

## Making the exposure

5. The shutter is released by pressure on the button (2). It is important to note that the shutter release must be pressed down gently to the full extent of its travel, and that if it is only partially pressed it is possible that the release mechanism will jam. If this happens, the button is released once more by winding on the film to the next picture, but one section of the film has not been exposed.

Under such circumstances, it is still possible to make the exposure by pressing the connecting link (15) between the shutter release button (2) and the shutter itself.

When the delayed-action shutter mechanism is used, the clockwork runs for approximately 12 seconds before the exposure is actually made. When set to B, the shutter opens when the release is pressed, and shuts immediately this pressure is relaxed.

## Holding the camera for the exposure

6. No definite instruction can be given for holding the camera, for it is only important that the camera is held firmly in the hands and does not move in the slightest degree during the time that the shutter is open. It has been found useful to hold the camera in the palms of the hands with the fingers surrounding it, as shown opposite. The forefinger of the right hand can then operate the shutter release while the middle finger of the left hand works the focussing wheel (13). The fingers must naturally not be held in the way of the windows of either the distance meter or view-finder.

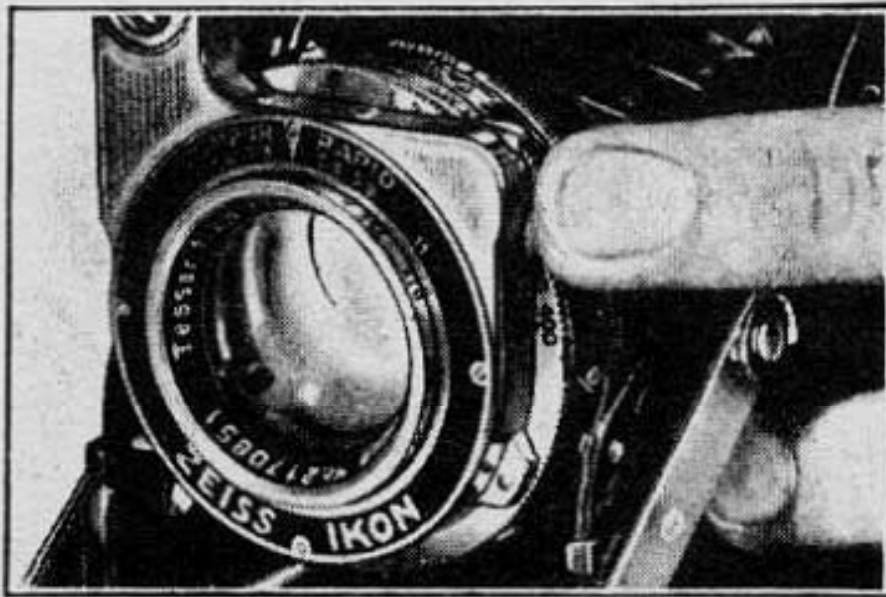




## The combined view-finder and distance meter

7. Focussing is carried out exclusively with the distance meter, which is coupled to the focussing mount of the lens. By this means, correct focussing can be guaranteed under all circumstances.

By looking through the eyepiece (20), there will be seen in the centre of the finder field a central circular lighter patch in which the objects in front of the camera will appear in double outline.

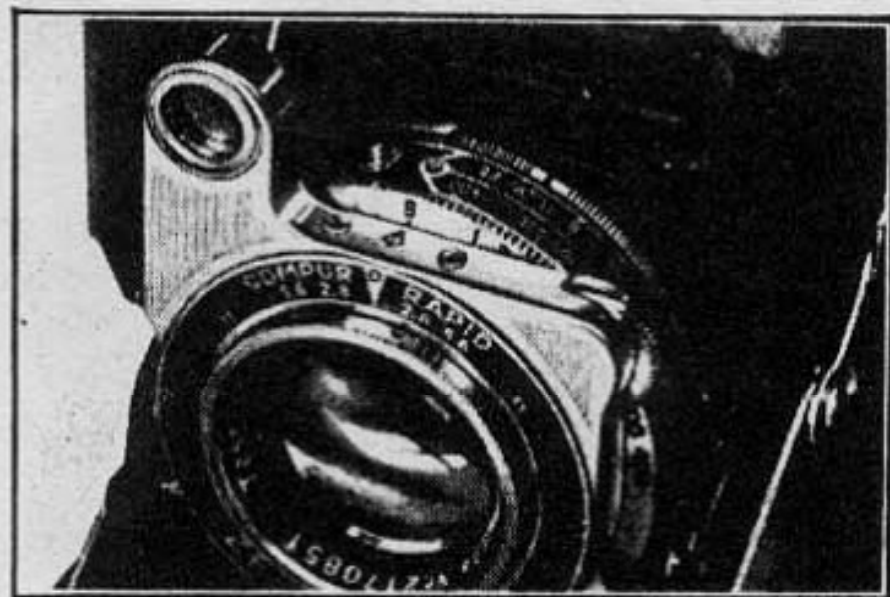


By rotating the small focussing wheel (13), one of these outlines will move sideways, and when it has been shifted until only one image instead of two can be seen, the lens is focussed on that particular distance.

It is important to make sure that vertical lines in the subject to be photographed are parallel to the edge of the view-finder field, since if this is not the case perspective will be distorted in the negative, and the buildings shown will appear to be falling forward or backwards. In time exposures similar precautions are required, and the camera must not be tilted either upwards or downwards.

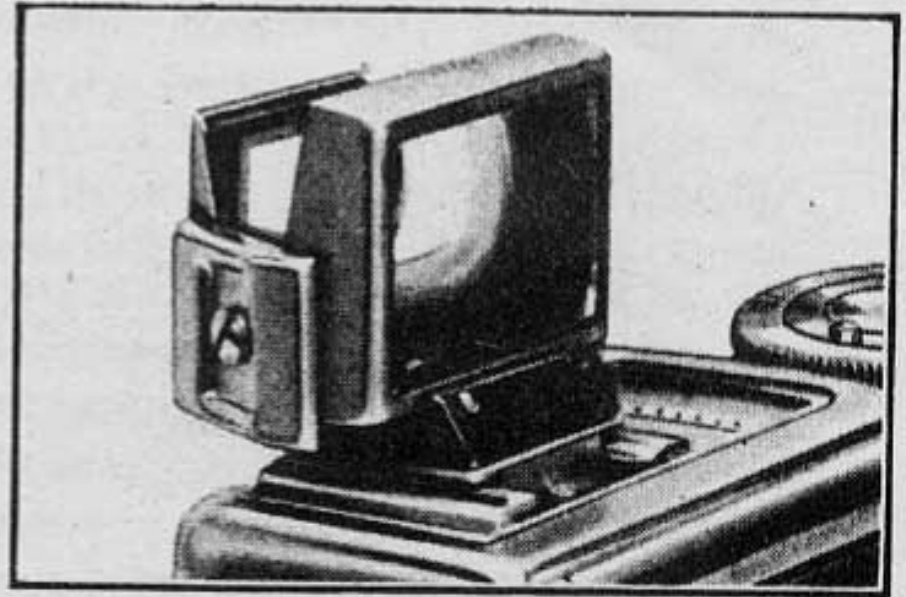
The scale of focussing distances is engraved on the ring surrounding the lens, and can be read off against an index mark.

Distances are measured from the focal plane of the camera: in practice this is equivalent to the back wall of the camera.

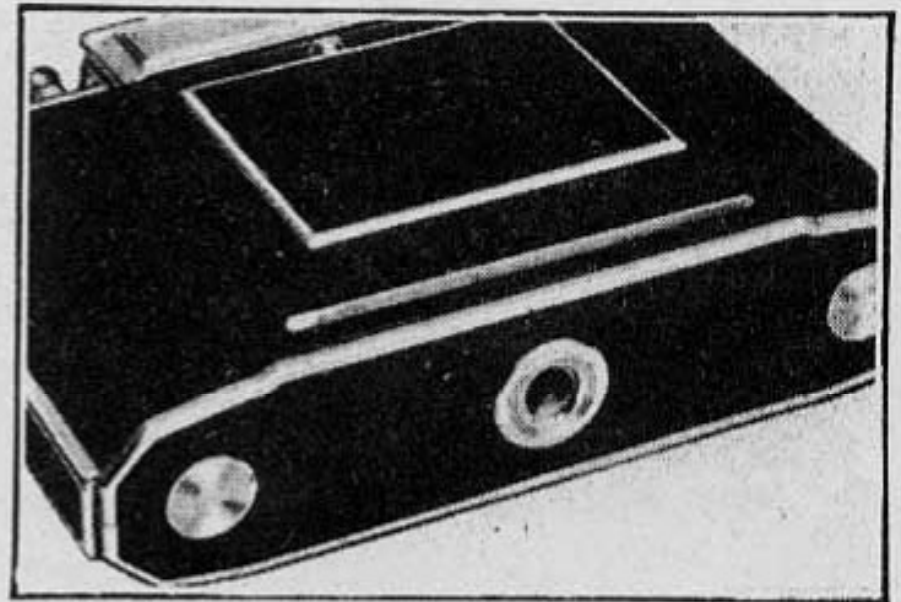


## General notes

8. Special view-finders, such as the van Albada type, may be fitted into the finder shoe (4) on top of the camera.

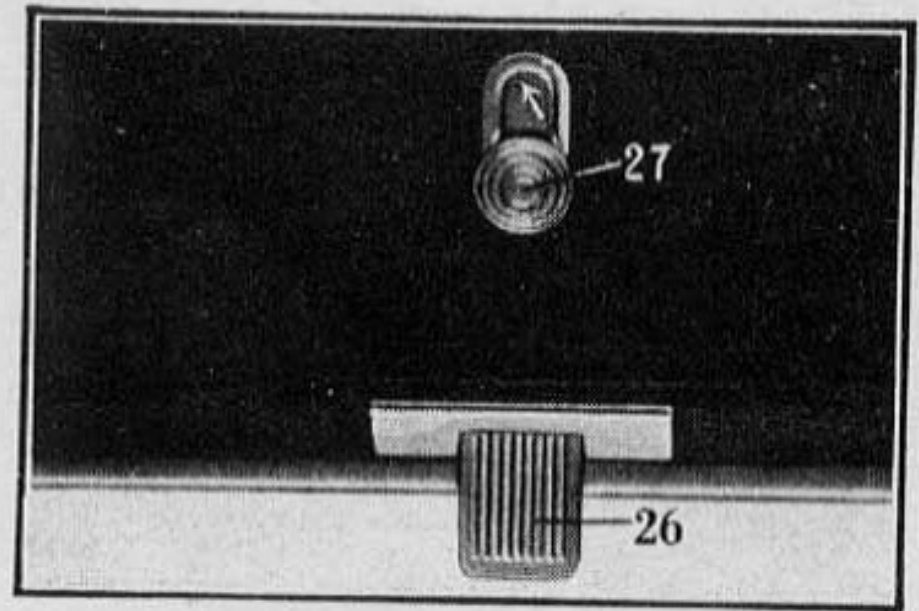


9. The base of the camera is fitted with a bush into which a tripod may be screwed for time exposures.

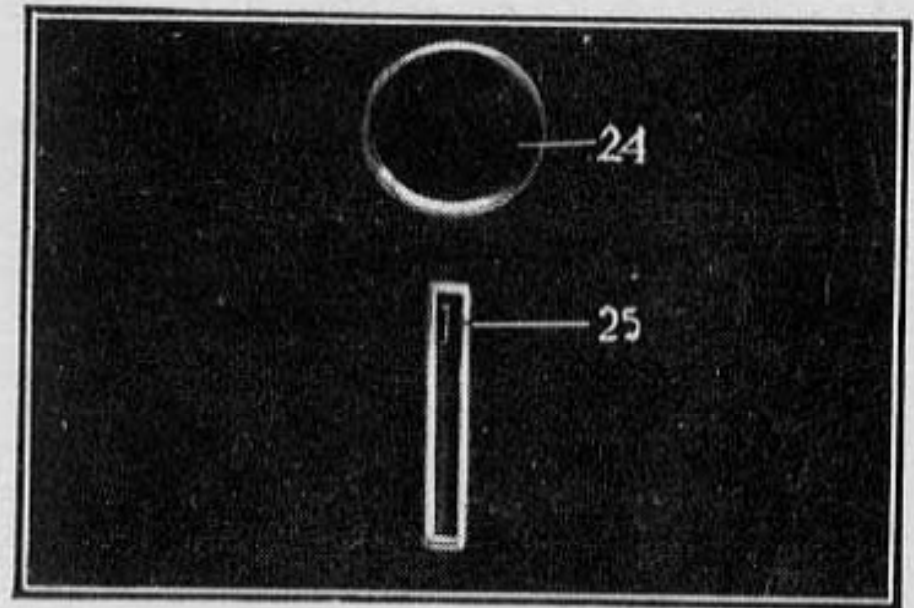




If the camera is to be stood up on a table or similar support, the small knob (27) on the camera back is pressed down, and a supporting foot (26) will emerge from the lower side of the back. To return this support to its original position, the knob (27) is pushed upwards and to the left as indicated by the arrow.



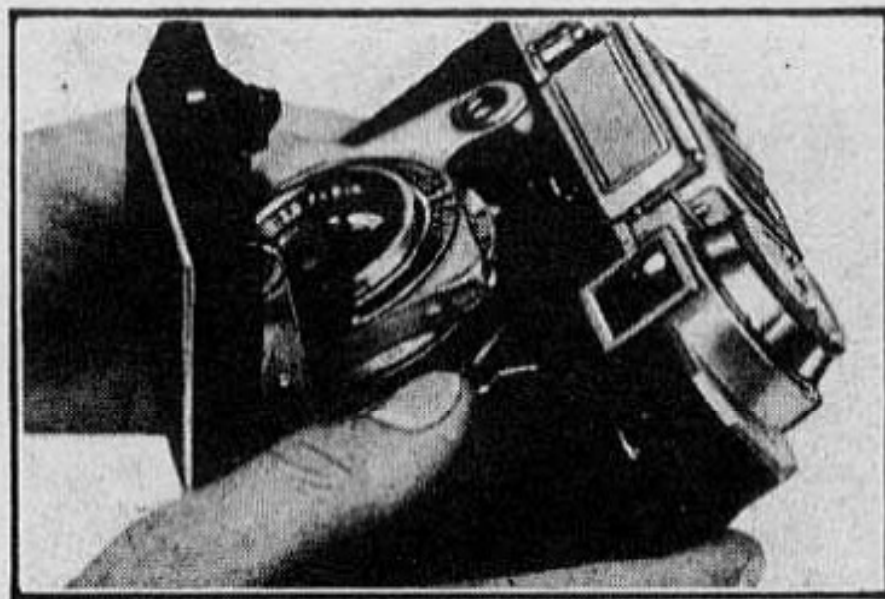
The red window (24) in the camera back is always kept covered by a spring safety cover. This window is only used to find out if film is in the camera or whether the latter is empty. If the spring lever (25) is pulled downwards in its slot, the safety cover is opened, and when no film is in the camera a white



ring on the inside of the body will be clearly visible. If this white ring cannot be seen, then film is in the camera. The numbers on the film protecting paper cannot be seen through this window.

## V. Closing the camera

The camera front is closed by pressing with the thumbs (as shown) on the struts supporting the lens board, and lifting the front towards the body. When shut, it locks into the closed position.



## Hints for exposures

The full aperture of the lens is such that on bright days it may be used at the full shutter speed of  $\frac{1}{400}$ th second. In dull weather lower shutter speeds are necessary, so that under such conditions objects in very rapid movement cannot be satisfactorily exposed.

With good lighting, the lens can be stopped down to  $f/11$ , which has the advantage that all objects between 12 feet and infinity are sharp when the focussing distance is 25 feet.

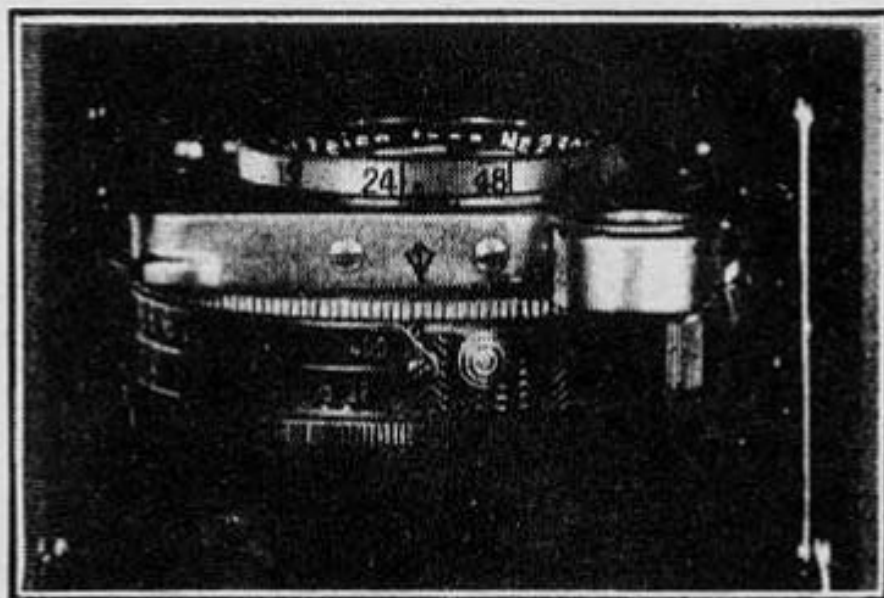
Portraits and close-ups are better taken with a larger aperture, while long-distance pictures and exposures on distant objects in general are preferably taken with the lens set to  $f/8$ .



## Important Note!

### Two-point focus setting

In order to get the greatest rapidity in use, and readiness for action, the Super Ikonta is fitted with the well-known Zeiss Ikon system for two-point focussing. By setting the lens aperture between  $f/11$  and  $f/16$  — a small red dot on the scale indicates the correct point — and the focussing scale to the corresponding mark (about 28 feet) the depth of focus ranges between 12 feet and infinity. This will suffice for most snapshot work, and the shutter may conveniently be set in advance to  $1/25$ th second. If this is done, sufficient exposure will be given to the Zeiss Ikon Orthochrom or Panchrom grade of film even on bright winter days between the hours of 9.30 a. m. and 3.00 p. m.



## **Supplementary lenses**

The closest distance on the focussing scale is just over 5 feet, so that for closer ranges supplementary lenses must be used. The table on page 47 indicates the distances of the object when using these lenses, as well as the point to which the focussing scale must be set.

## **The ever-ready carrying case**

Every owner of a high-class camera will wish to protect it from accidental damage, and a leather case is the simplest way of ensuring its protection. The ever-ready case is not a case in the ordinary sense of the word, for it is fitted with a flap which opens in a moment, and permits all necessary settings to be made to the camera without removing the latter completely from the case.

The camera is held in the ever-ready case by a screw which is attached to the tripod bush on its base, and the fixing of the camera in the case is done from the outside of the latter.

## **Zeiss Ikon filters**

Zeiss Ikon yellow and other coloured filters are available in slip on mounts to fit the front lens ring of the Super Ikonta, and do not need

to be removed when the camera is closed even with the lens focussed for closer distances than infinity. Apart from various grades in yellow, there are green filters for perfect colour reproduction on panchromatic film (useful for still life and copying work), as well as red filters for use in misty weather or for producing night effects during the daytime on infra-red sensitive film.

### **Zeiss Ikon lens hoods**

To make the pictures taken as brilliant in contrast as possible, particularly with against-light effects, it is valuable to use a lens hood which slips on to the front ring of the lens mount. With such a hood, remarkable against-light exposures can be made without any trouble caused by strong light entering the camera lens.

### **Zeiss Ikon flash-bulb synchroniser**

For synchronised exposures in flashlight, a special connector is available, which releases the camera shutter and fires the flash-bulb simultaneously.



**Size of picture field and reduction for exposures using Proxar lens  $0.67 \times 37$  or Zeiss Ikon supplementary lens 995/24 on Super Ikonta II  $2\frac{1}{4}'' \times 2\frac{1}{4}''$**

Lens setting	Distance* between object and camera	Size of picture field	Reduction
inf.	4'11''	$3'5\frac{3}{4}'' \times 3'5\frac{3}{4}''$	18,5
48'	4'5''	$3'1\frac{1}{2}'' \times 3'1\frac{1}{2}''$	16,6
24'	4'1 $\frac{1}{2}$ ''	$2'10\frac{1}{4}'' \times 2'10\frac{1}{4}''$	15,2
15'	3'8 $\frac{1}{2}$ ''	$2'7'' \times 2'7''$	13,8
12'	3'6''	$2'5\frac{1}{2}'' \times 2'5\frac{1}{2}''$	13,1
9'	3'3''	$2'3\frac{1}{2}'' \times 2'3\frac{1}{2}''$	12,3
6'	2'9 $\frac{1}{2}$ ''	$1'11\frac{1}{4}'' \times 1'11\frac{1}{4}''$	10,3

**Size of picture field and reduction for exposures using Proxar lens  $1.25 \times 37$  or Zeiss Ikon supplementary lens 995/25 on Super Ikonta II  $2\frac{1}{2}'' \times 2\frac{1}{4}''$**

Lens setting	Distance* between object and camera	Size of picture field	Reduction
inf.	2'7 $\frac{1}{2}$ ''	$1'10\frac{1}{2}'' \times 1'10\frac{1}{2}''$	10
48'	2'5 $\frac{7}{8}$ ''	$1'9\frac{1}{4}'' \times 1'9\frac{1}{4}''$	9,5
24'	2'4 $\frac{1}{4}$ ''	$1'8'' \times 1'8''$	9,0
15'	2'2 $\frac{3}{4}$ ''	$1'7'' \times 1'7''$	8,4
12'	2'1 $\frac{7}{8}$ ''	$1'6'' \times 1'6''$	8,1
9'	2'3 $\frac{1}{4}$ ''	$1'5\frac{1}{4}'' \times 1'5\frac{1}{4}''$	7,7
6'	1'10''	$1'3\frac{3}{4}'' \times 1'3\frac{3}{4}''$	7,0

\* Measured from the front rim of the supplementary lens at  $f/8$

# Depth of Focus Table

for the lenses of the Super Ikonta II  $2\frac{1}{4}'' \times 2\frac{1}{4}''$

Distances in ft.  
and inches

Distance	inf.	48'	24'	15'	
Diaphragm {	$f/2.8$	95' - inf.	31'9'' - 98'	19'1'' - 32'3''	12'11'' - 17'10''
	$f/4$	66' - inf.	27'9'' - 179'	17'7'' - 38'	12'2'' - 19'5''
	$f/5.6$	47' - inf.	23'8'' - inf.	15'10'' - 49'	11'4'' - 22'
	$f/8$	33' - inf.	19'6'' - inf.	13'10'' - 90'	10'3'' - 27'8''
	$f/11$	24' - inf.	15'10'' - inf.	11'11'' - inf.	9'2'' - 40'
	$f/16$	16'5'' - inf.	12'3'' - inf.	9'9'' - inf.	7'10'' - 175'
	$f/22$	12' - inf.	9'5'' - inf.	7'11'' - inf.	6'7'' - inf.

Distance	12'	9'	6'	
Diaphragm {	$f/2.8$	10'7'' - 13'9''	8'3'' - 10'	5'8'' - 6'5''
	$f/4$	10'2'' - 14'8''	7'11'' - 10'6''	5'6'' - 6'7''
	$f/5.6$	9'6'' - 16'2''	7'7'' - 11'2''	5'4'' - 6'11''
	$f/8$	8'9'' - 19'	7'1'' - 12'5''	5'1'' - 7'4''
	$f/11$	8' - 24'2''	6'6'' - 14'6''	4'9'' - 8'
	$f/16$	6'11'' - 45'	5'10'' - 20'	4'5'' - 9'6''
	$f/22$	6' - inf.	5'2'' - 37'	4' - 12'1''