

instruction manual



THE
Witness
CAMERA

design features of the

Witness

CAMERA

The 'Witness' camera is a precision camera taking 35-mm perforated film in the usual commercial packings or from bulk stock in a special self-opening cassette. The camera body carrying the lens, shutter and film gate is made from rigid pressure die-castings thus ensuring that the very precise alignment of the various components remains undisturbed during normal use.

The back and bottom cover of the camera are completely removable so that thorough cleaning can be carried out when required.

The film is moved from one exposure to the next by one turn of the winding knob and, at the same time, the shutter is wound up in readiness for exposure. The shutter speeds range from 1 to 1/1000 sec., Bulb and Time. Speeds can be set irrespective of whether the shutter is wound or not. The shutter can only be released when fully wound so that partial exposures or overlapping of exposures are impossible. Click stops are provided on the dials to enable shutter speeds to be set under poor lighting conditions—the shutter setting dials do not rotate when the shutter is released or wound up.

ONE

All vital moving parts of the shutter run on ball-bearings, a total of nearly 200 steel balls being used in each camera.

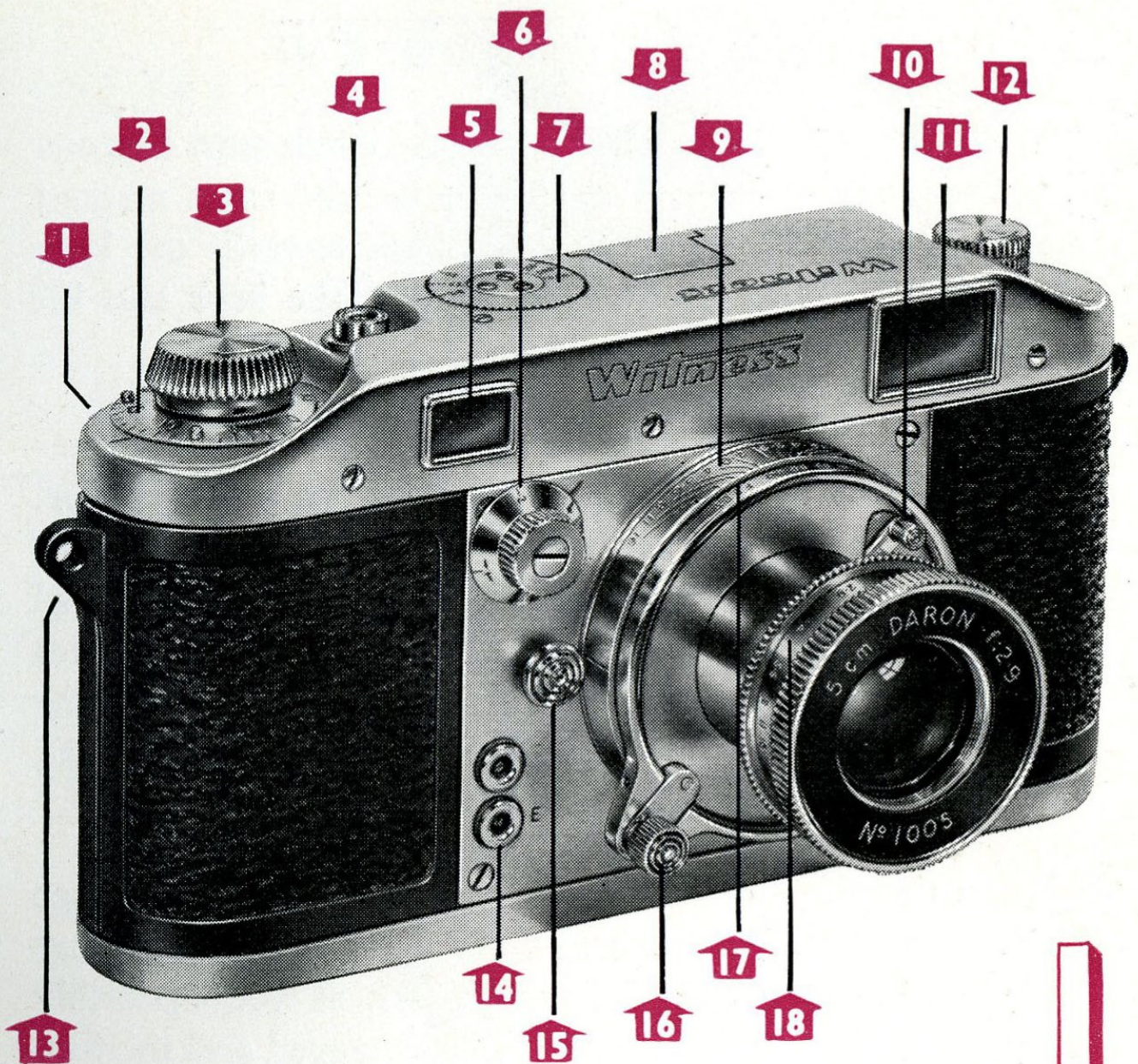
The lens is a fully corrected, hard-coated 5-cm f2.9 Daron anastigmat in a special focusing mount enabling close-ups to be taken down to 15 in. without the use of extension rings or auxiliary lenses. The focusing thread remains completely masked at all times, thus preventing dust or grit creeping in.

The lens is mounted on the camera by means of a quick change bayonet arrangement of special design combining the rigidity of a screwed mounting with the ease of change of a bayonet.

The coupled rangefinder is combined with the viewfinder and is of the coincidence type giving an image almost 90 per cent of actual size. In place of the usual semi-transparent mirror which is a rather vulnerable component, a pair of beam splitting prisms is used. The interface between the prisms is coated with gold in order to increase the contrast between the images, thus facilitating focusing in poor light.

Built-in synchro-flash contacts are provided which can be adjusted by dial to suit any type of flash equipment.

A very important feature is that the tripod bush and the shoe for auxiliary viewfinders and other accessories are on the centre line of the lens thus minimizing the effect of parallax.



FIGURE

- | | | | |
|----|-----------------------|----|---|
| 1 | Rewind Button. | 11 | Combined View Finder
& Range Finder Window |
| 2 | Exposure Counter. | 12 | Rewind Knob. |
| 3 | Winding Knob. | 13 | Lanyard Lug. |
| 4 | Shutter Release. | 14 | Flash Contacts. |
| 5 | Rangefinder Window. | 15 | Lens Release Button. |
| 6 | Slow Speed Dial. | 16 | Infinity Catch and
Focusing Knob. |
| 7 | Fast Speed Dial. | 17 | Distance Scale. |
| 8 | Accessory Shoe. | 18 | Aperture Setting Ring |
| 9 | Depth of Focus Scale. | | |
| 10 | Near Focus Catch. | | |

THREE

LOADING THE *Witness*

Remove the camera back by lifting the catch turn buttons with the thumb-nail and turning in the direction marked 'Open' (Fig. 2). Then draw the back towards the base just sufficiently to clear the top edge of the back and lift it off (Fig. 3).

Place the loaded cassette in the left-hand film chamber making sure that it is properly seated on the rewind claws. Draw the film leader from the cassette across the back of the camera and insert it into the slot of the take-up spool (Fig. 4). This spool is of patented design and incorporates a self-fixing device in the form of a small moulded lug near the outer end of the spool which engages in the sprocket hole of the film.

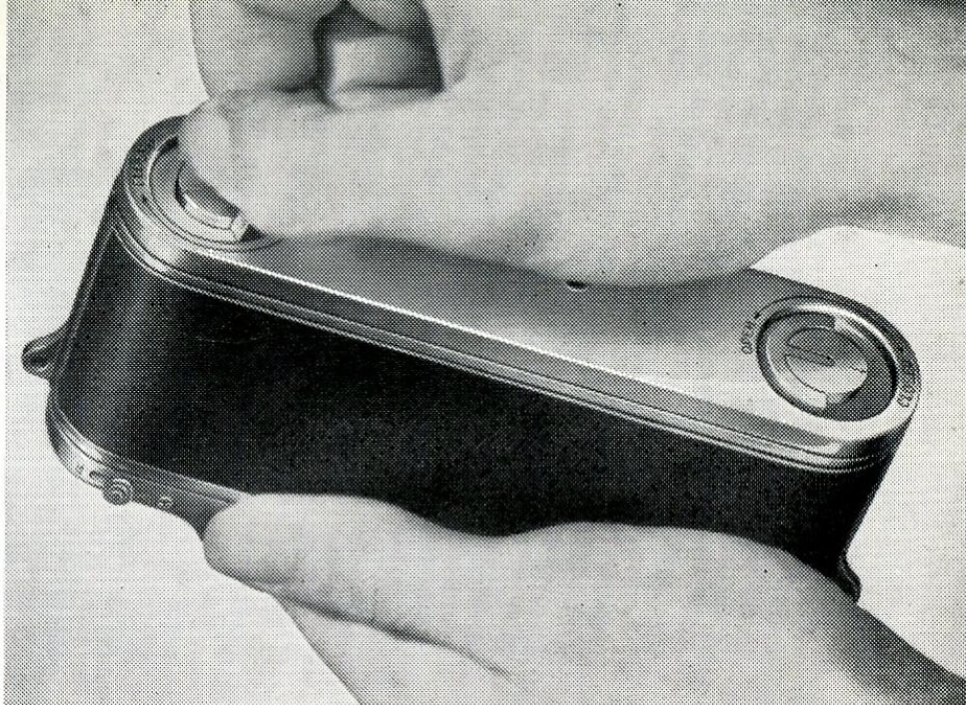
Insert the film sufficiently far to enable the lug to engage the second or third sprocket hole, thus eliminating any risk of tearing the film from its anchorage, as would possibly happen if the first sprocket hole were engaged and the film had been trimmed close to it.

Replace the camera back by laying it on the camera leaving a small gap along the top edge, and sliding it firmly home. Turn the catches to the closed position and fold them down.

Note that, unless the catches are turned to the closed position, they cannot be folded flush with their housing thus providing an insurance against failure to lock the camera back in position. Then check that the rewind button (Fig. 1) is set to 'W.'

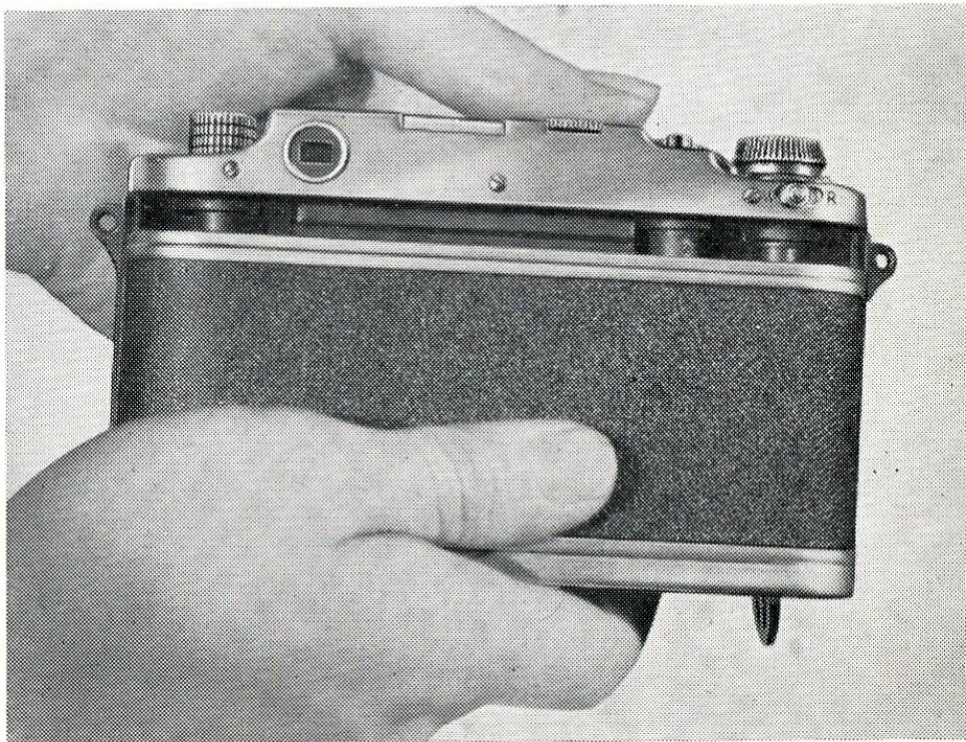
FIGURE

2



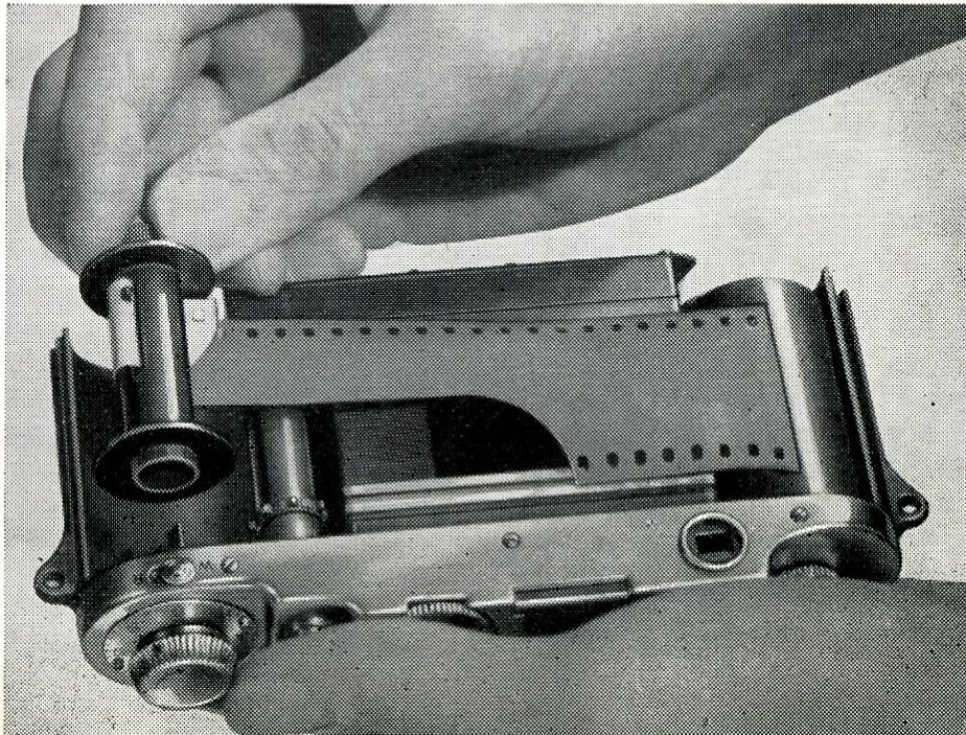
FIGURE

3



FIGURE

4



FIVE

WINDING FILM AND SHUTTER

Both the transporting of the film from one exposure to the next and the setting of the shutter are carried out simply by turning the winding knob (Fig. 1) as far as it will go in a clockwise direction.

An unusual feature of the 'Witness' is that the winding knob can be turned by a full stroke of the finger along its specially shaped edge, thus providing a simple method of taking sequences of pictures as quickly as one per second.

After locking the camera back in position, turn the winding knob as far as it will go and release the shutter by pressure on the shutter release (Fig. 1).

Repeat this operation once more to ensure that the exposed film leader is wound clear of the picture space. Wind on for a third time, but this time do not release the shutter.

Set the automatic exposure counter (Fig. 1) to '1' with the aid of the small knobs provided.

The exposure counter is friction held and may be turned in either direction.

SETTING THE SHUTTER SPEED

The 'Witness' shutter provides speeds ranging from 1 sec. to 1/1000 with the added advantage of intermediate speeds between those marked. The speeds are divided into two groups: slow (covering speeds from 1 sec.—1/25th) plus T and B, and fast (covering speeds from 1/25 to 1/1000).

These groups are controlled by two dials—the 'slow speed dial' on the front of the camera (Fig. 1) and the 'fast

speed dial' on top (Fig. 1). Both these dials are fitted with click settings which can be set before or after winding and make it simple to set the shutter by 'feel,' a novel and useful feature enabling the shutter speeds to be located in poor light such as in theatres, etc.—or surreptitiously, as in candid photography.

To obtain any speed in the slow group, set the 'fast speed dial' (Fig. 1) to the setting marked 25—1. Then set the 'slow speed dial' (Fig. 1) to the desired speed.

To obtain any speed in the fast group, the 'slow speed dial' need only be set to B25 for 1/25 exposure; at all the other speeds the position of the 'slow speed dial' is immaterial.

To obtain either Bulb or Time exposures, first set the 'fast speed dial' to 'B.T.'. 'Bulb' exposures are then obtained by setting the 'slow speed dial' to B.25, pressing the shutter release and holding it pressed for the duration of the exposure.

For 'Time' exposures, set the 'slow speed dial' to 'T-1' and press the shutter release to open the shutter. At the completion of the exposure, press the shutter release in the usual way when the shutter will close.

APERTURE

Draw out the lens barrel to its full extent and lock it into position by turning firmly in a clockwise direction as far as it will go (Fig. 5). Turn the 'aperture setting ring' by its milled edge to the required aperture. This ring will be found to have click stops and the apertures are engraved in two places to ensure that the aperture setting is always visible from the top.

FOCUSING

In the 'Witness,' the rangefinder and viewfinder are combined in one eyepiece (Fig. 1) and the rangefinder is of the coincidence type.

On looking through the eyepiece it will be seen that a portion in the centre is a different colour from the rest of the image. This gold coloured area is the rangefinder, and in it, any object closer than infinity will show a double image. To focus, sight the object to be focussed, in the centre of this area. Then press the focussing knob (Fig. 1) inwards to release it from the infinity catch and turn the focussing mount anti-clockwise (as viewed from the front of the camera) until the displaced image is superimposed on the other. At this point the lens will automatically be focussed on the selected object.

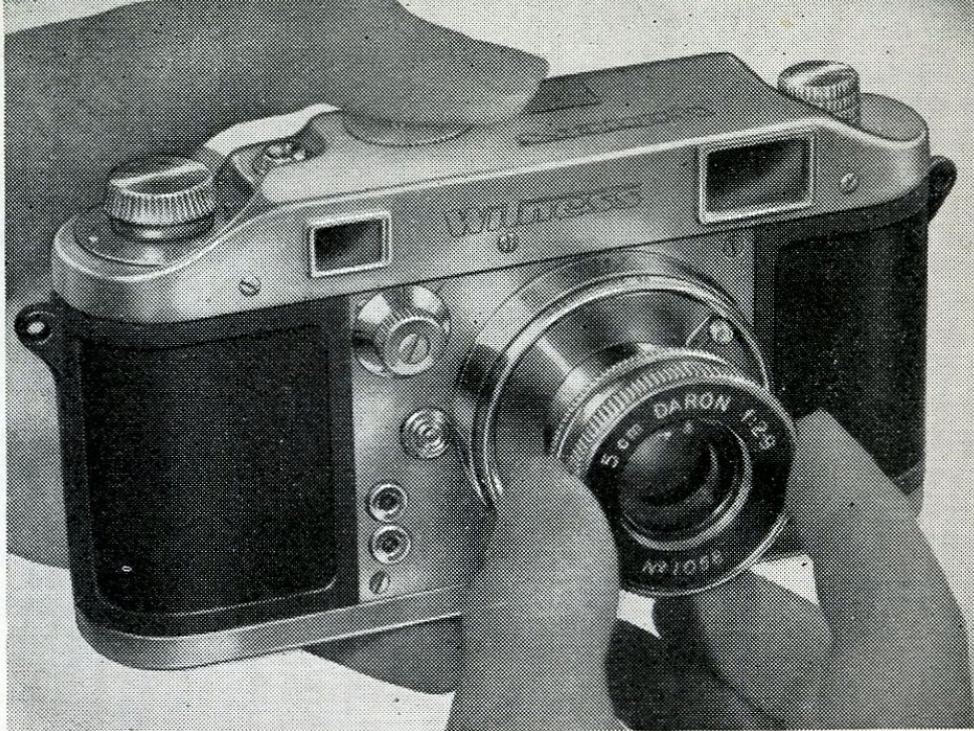
The camera is then ready to make the exposure. Although the 'Witness' is particularly free from 'camera shake' due to the smooth working of the shutter and shutter release, nevertheless it should be held firmly and steadily and the shutter release squeezed rather than pressed; 'stabbing' the shutter must definitely be avoided. A very little practice will show the most satisfactory way to hold the 'Witness.'

SUMMARY OF OPERATIONS

- 1 Load Camera and Lock Back in Position.**
- 2 Set Rewind Button to 'W' and Wind and Release shutter twice.**
- 3 Wind shutter again, and set counter to '1.'**
- 4 Set to Selected Shutter Speed.**
- 5 Set to Selected Aperture.**
- 6 Focus Lens.**
- 7 Expose.**
- 8 Wind on for Next Exposure.**

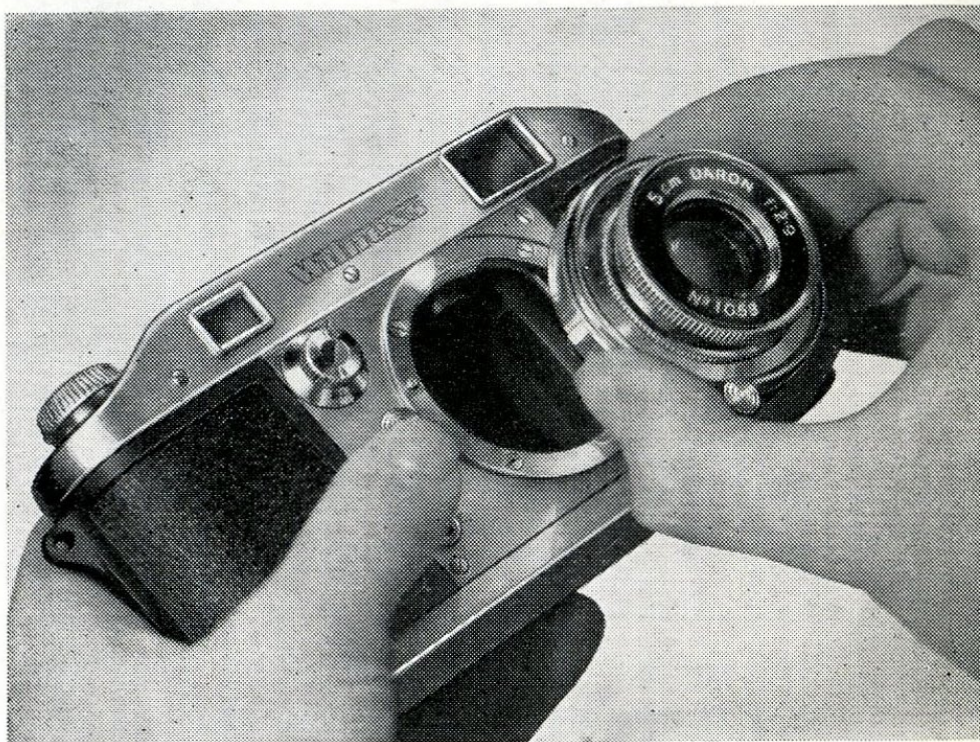
FIGURE

5



FIGURE

6



REWINDING FILM

The 'Witness' takes any standard cassette of 36 exposures or less and provision is also made for a special reloadable cassette (see page 12).

There are those who make a practice of taking photographs until the end of the film is reached, its attachment to the spool then preventing any further exposure being made. This practice sometimes leads to considerable embarrassment because the film occasionally comes away

NINE

from the cassette spool and, unless two cassettes are used, a darkroom becomes necessary to unload the camera.

The 'Witness' design is such that two cassettes can be used thus obviating the need to rewind, but when only one cassette is used, the film must be rewound into the cassette before removing the camera back.

To do this, at the end of 36 exposures (or whatever number of frames have been loaded) set the rewind button (Fig. 1) to 'R,' pull the rewind knob (Fig. 1) upwards to provide a convenient grip and wind in a clockwise direction until the resistance of the attached film on the take-up spool is felt. Do not force the film from the spool as this will require considerable effort if the film is properly attached and will cause a tightening of the film on itself in the cassette, possibly causing abrasion marks. Remove exposed cassette.

Do not forget to return the reverse button to 'W' and push in the rewind knob.

INTERCHANGEABLE LENS

The 'Witness' lens is very accurately coupled to the rangefinder at all distances from infinity to 3 feet. It also possesses an almost unique feature—it can be extended to focus, by measurement, on objects as close as 15 in. without the use of supplementary lenses or extension tubes. To do this, turn the lens to its 3 ft. 0 in. setting when the 'near focus catch' (Fig. 1) will be found on the focusing mount near the 'lens release button' (Fig. 1).

Push this catch downwards towards the camera base and continue to turn the lens, holding the catch for a small portion of the lens travel. Do not push the lens mount hard up against the stop (which actually is slightly beyond the 3 ft. 0 in. setting) when doing this, as the near focus catch is liable to be damaged. The lens can then be turned

to any distance down to 15 in. as shown on the 'distance scale' (Fig. 1). To ensure that objects are in focus, when using the close distance settings (nearer than 33 in.) the distance should be measured accurately, measuring from the front plate of the lens mount (i.e. the engraved name plate). Before pushing in the lens barrel, return the focusing mount to infinity.

When the lens is returned to the normal distance settings (3 ft. 0 in.—Inf.) the near focus catch automatically assumes the locked position.

The 'Witness' lens is unusual in its fitting. It incorporates the advantages of both bayonet and screw fittings. It is as quick to change as conventional bayonet mounts but is as firmly rigid as a screw mount.

THE DEPTH OF FOCUS SCALE

This will be found on the lens mounting (Fig. 1). It will be seen that the aperture markings from $f\ 2.9$ — $f\ 16$ are duplicated on each side of the distance indicating arrow. To read the scale, the lens is first focused on the required distance and at any aperture the limits of sharp focus can be seen at a glance.

The minimum distance in focus can be read opposite the selected aperture marked on the left of the arrow and the maximum distance on the right of the arrow.

REMOVING THE LENS

To remove the lens from its mount, press the 'lens release button' on the front of the camera (Fig. 1) inwards and turn the whole lens in its mounting in an anti-clockwise direction as far as it will go. The lens can then be lifted free of the camera (Fig. 6). To replace the lens in the body, insert the lens with its red engraved line in line

with the red dot marking on the camera body, ensuring that it is seated firmly and evenly in the camera lens opening and turn in a clockwise direction as far as it will go. The lens will then be firmly locked in position.

ACCESSORY SHOE

The accessory shoe (Fig. 1) is provided with a spring loaded dust cover which can be depressed to allow entry of the various accessories such as supplementary viewfinders, etc.

This is located directly over the centre line of the lens thus minimizing parallax error.

The tripod bush in the camera base is also located centrally with the lens, thus evenly distributing the weight of the camera and easing the strain when long focus lenses are used.

INSTRUCTIONS FOR USE OF SPECIAL *Witness* CASSETTE

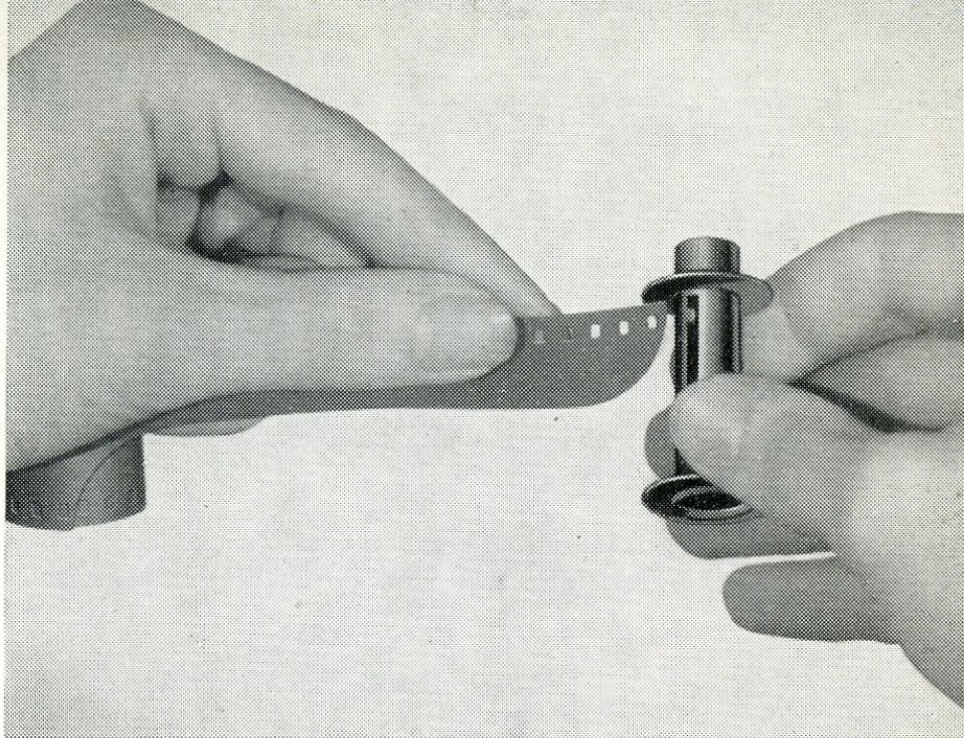
To be loaded in Darkroom.

The 'Witness' cassette is of the self-opening type and consists of three parts namely, the spool, inner shell and outer shell.

It is so designed as to fit snugly into the camera body, where it is located in position by a projection which lies in the special socket provided. When correctly seated it lies in such a position that, when the camera back is put in place, (with its locking catches set at 'open') a small internal lug engages on the knob of the inner shell of the cassette and at the same time disengages the locking catch from the outer shell. Then, when the camera back

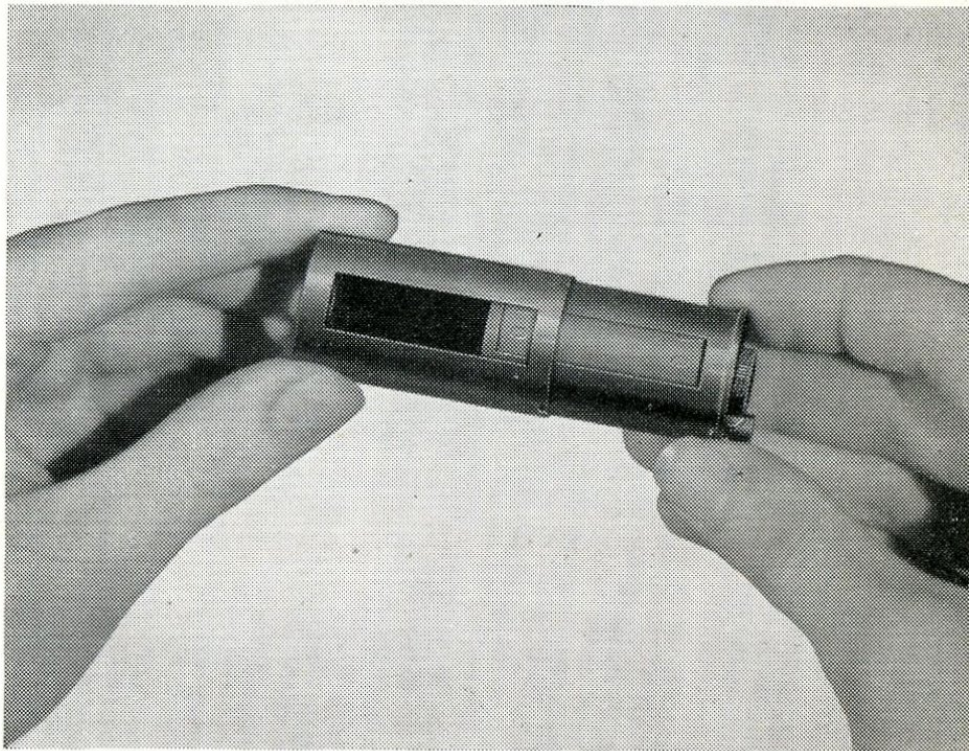
FIGURE

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FIGURE

8



is locked in position by turning the locking catch to 'closed', the inner shell of the cassette is turned with it, while the outer shell remains fixed.

This action automatically opens the mouth of the cassette, thus allowing the film to be drawn from it without friction, completely eliminating risk of scratching.

When the camera back is unlocked this action is reversed and the cassette automatically sealed for withdrawal from the camera.

To load the cassette, the end of the film should be trimmed as shown in Fig. 7. Then insert the end of the film into the slot in the cassette spool making sure that the little projection on the spool engages with one of the perforations of the film. Wind the film on to the spool by turning the spool in an anti-clockwise direction when seen from the knurled end. When the full length of film has been wound on to the spool, bend the end of the film slightly outwards to make it easy to withdraw it from the cassette. Then insert the spool with the knurled end first into the inner shell and slide the outer shell over this (Fig. 8), taking care that the apertures in the two shells are in line. Withdraw a few inches of the film out of the aperture in the cassette (if necessary, rotate the spool slightly until the end which has been previously bent over projects out of the aperture). Then close the cassette by turning the inner shell in an anti-clockwise direction until the locking catch prevents any further movement. The cassette can then be taken into daylight and loaded in the camera in the usual manner, after the projecting end of the film has been trimmed to fit the take-up spool.

USE OF CASSETTE IN PLACE OF TAKE-UP SPOOL

Open the cassette by pressing the locking catch inwards and rotating the inner shell in a clockwise direction as far as it will go, then pass the previously trimmed end of the film through the cassette aperture and insert it into the slot in the spool until one of the perforations engages the moulded lug on the spool. Then close the cassette by turning inner shell in an anti-clockwise direction and insert into the take-up compartment of the camera.

Replace back of camera and proceed as when using take-up spool.

SYNCHRO-FLASH

The 'Witness' Camera has built-in synchro-flash contacts which are adjustable for any type of flash equipment, including electronic flash.

The flash gun is connected to the two terminals on the front plate of the camera (Fig. 1) by means of the special plug supplied for this purpose. One of the terminals marked 'E', is connected to the metal work of the camera and, when using electronic flash, it is important that this is connected to the earthed terminal of the flash equipment. It is not necessary to disconnect the flash gun during the winding of the shutter, as contact is only made when the shutter is released. The time lag between release of the shutter and firing of the flash can be varied by rotating the black dial on the underside of the shutter casing inside the camera.

Approximate settings for the various types of flash bulbs are given in the following table.

SYNCHRO-FLASH DIAL SETTINGS FROM ZERO SPOT

TYPE OF BULB	SHUTTER SPEEDS		
	1/100	1/50	1/25
PHILIPS PF. 14.	—	28	24
PHILIPS PF. 25.	—	0	24
PHILIPS PF. 45.	0	0	0
PHILIPS PF. 60.	0	29	28
GEC. SPEED MIDGET.	—	—	14
GEC. 22.	0	29	29
ELECTRONIC FLASH.	—	—	6

THE

Witness

CAMERA

(Registered Trade Mark)

Registered owners of the "Witness" Camera will, from time to time receive additional sheets giving the latest information regarding the "Witness" range of accessories. These sheets can be inserted in this manual by placing them face down on the preceding page with binding edge over the wire spaces. The fibre comb is used to press the paper "cut-outs" between the wire. The comb should be kept clipped on the wire inside the back of the manual, using the two prongs on the comb.