

BOLEX 7.5

MACROZOOM



INSTRUCTIONS MANUAL



Bolex

Macrozoom
optical system
Paillard devotees
Macrozoom subjects you
in films, titles

and easy-to-operate
like films that are ready for
that this will increase the
view-making and your camera
companion.
that after reading this instruc-
trtridge of film is used in the

camera and the results checked, before you film a holiday trip or any important event. This will help you to get to know the camera and will show if you are following the instructions correctly. When in doubt, see your Bolex dealer for advice or help.

Through our world-wide organisation, we can offer impeccable aftersales service in practically every part of the world. If service is required, return your camera to a Paillard-Bolex distributor. He alone is authorised to carry out repairs, adjustments and maintenance work. Please remember to quote the serial number—engraved on the accessory attachment plate—in any correspondence with your Bolex dealer or distributor.

The outstanding feature of your Bolex 7.5 Macrozoom movie camera is its lens: a revolutionary optical system designed with the precision and care that Paillard devotes to all the equipment it manufactures. The Macrozoom lens considerably widens the scope of the subjects you can film and allows you to incorporate in your films, titles and special effects by means of the Multitrix.

You are now the owner of a reliable and easy-to-operate camera with which you can take films that are ready for projection. There is no doubt that this will increase the pleasure you get from movie-making and your camera will be your constant companion.

We strongly recommend that after reading this instructions manual, a trial cartridge of film is used in the

camera and the results checked, before you film a holiday trip or any important event. This will help you to get to know the camera and will show if you are following the instructions correctly. When in doubt, see your Bolex dealer for advice or help.

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Contents

Technical data	3
Get to know your camera	4
Holding and controls	6
Holding	6
Main controls	6
Lens cap	6
Fitting the handgrip	6
Fitting the shoulder strap	7
Preparing the camera	8
Inserting and checking the batteries	8
Adjusting the eyepiece	8
Suitable film sensitivities	9
Loading the camera	10
Conversion filter	11
Filming	12
Framing the subject	12
Focusing	12
Automatic diaphragm	13
How to gauge the exposure level	14
Accessory filter	14
Film counter	15
Multitrix	16
Fitting to the camera	16
Use	18
Various examples of its use	18
Maintenance	21
Lens and filters	21
Lubrication	21
Accessories available separately	22
Some suggestions	23
Depth-of-field chart	24

Technical data

Bolex 7.5 Macrozoom camera with 7.5-21 mm f/1.9 lens.
Accepts Super 8 film cartridges with a capacity of 50 feet.
Cartridge duration: 3 minutes 20 seconds.
Filming speed: 18 frames per second.
Built-in conversion filter.
Exposure time: $1/46$ second.
Electric motor powered by 4 Type AA, 1.5 V "penlight" batteries.
Exposure meter powered by 2 miniature long-life batteries (Mallory PX-13).
Sensitivity range: 25 - 160 ASA (15 - 23 DIN).
Diaphragm apertures: f/1.9 - f/16.
Focusing range: from $5\frac{1}{4}$ " (13 cm) from the front of the camera to infinity.
Magnification (ratio picture on film/subject) for $f = 21$ mm and distance $5\frac{1}{4}$ ": $g = 0.1$.
Minimum field size ($f = 21$ mm; at a distance of $5\frac{1}{4}$ "): $2" \times 1\frac{1}{2}"$ (53 x 40 mm).

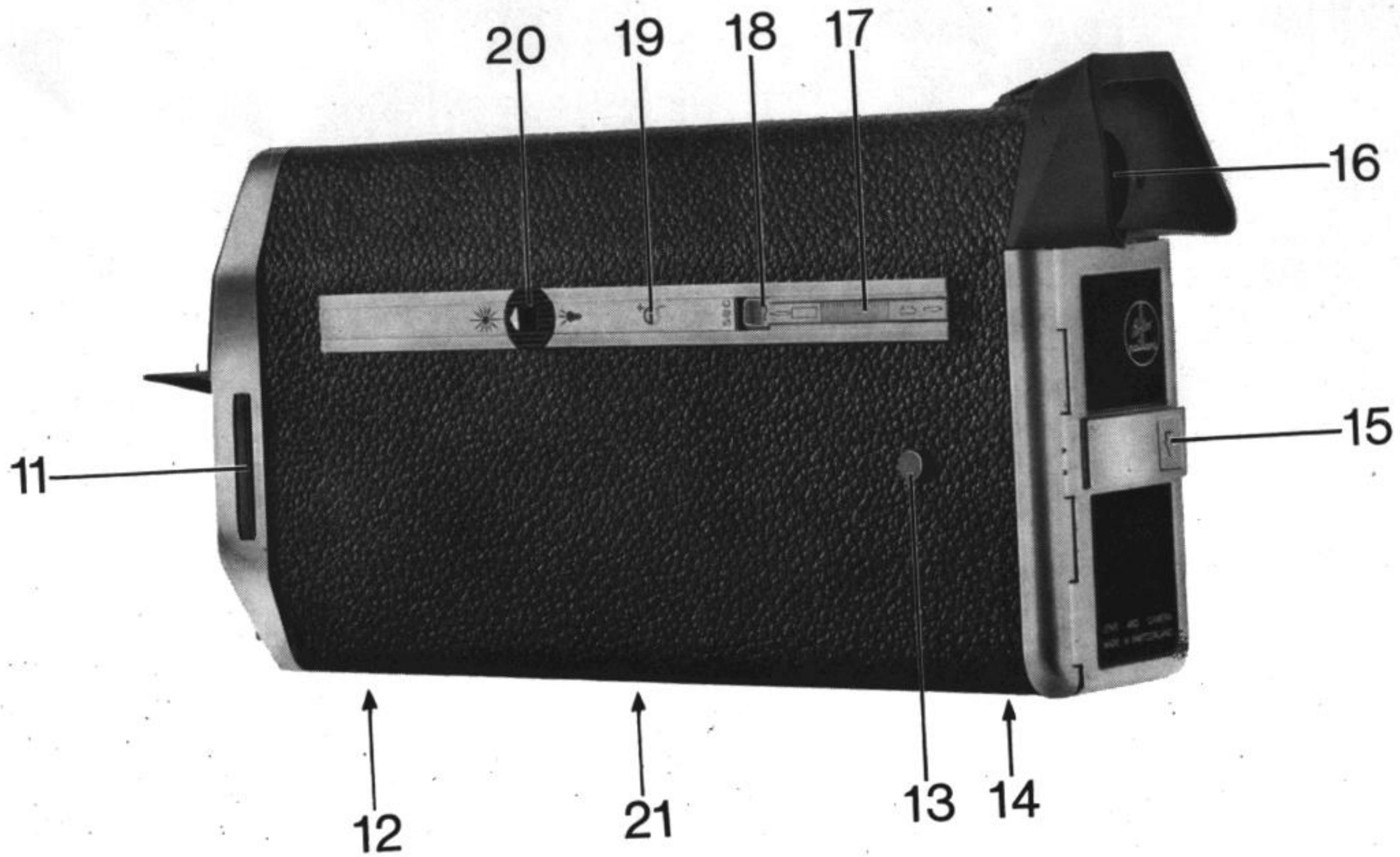


Get to know your camera

- 1 Protective cover for the knurled eyepiece adjuster
- 2 Eyecup
- 3 Film identification window
- 4 Zoom lever

- 5 Trigger
- 6 Focusing knob
- 7 Lenshood locking bar
- 8 Macrozoom lens
- 9 Lens cap

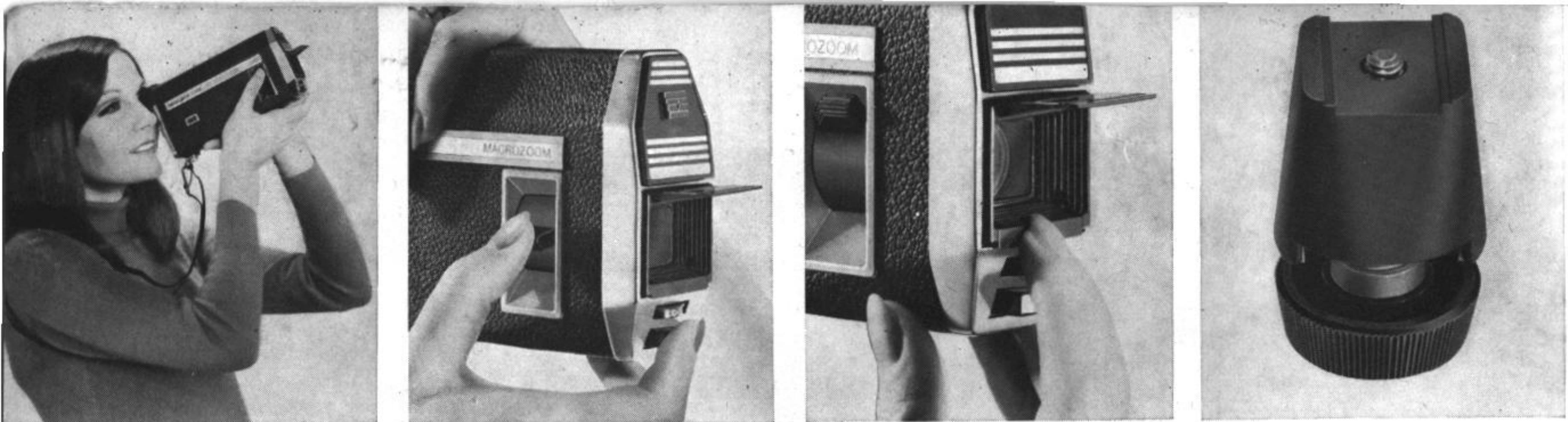
10 Battery-housing cover release



- 11 Stopper to protect accessory filter housing
- 12 1/4" threaded holes
- 13 Film unwinding indicator
- 14 Shoulder strap socket
- 15 Lever for opening the magazine cover

- 16 Eyepiece
- 17 Slide for the battery checking device
- 18 Film counter, calibrated in seconds

- 19 Exposure meter setting screw
- 20 Conversion filter selector (daylight / artificial light)
- 21 Threaded hole for fixing the holder of the lamp supplied as an accessory



Holding and control

Holding

Take the camera in the left hand.

Main controls

All the main controls can be operated with the right hand: the trigger and the focusing knob with the index finger, the zoom with the thumb.

Note: The mechanism is automatically locked

- when the lens cap is lowered,
- at the end of a film or in the absence of film, when the cover of the magazine is closed.

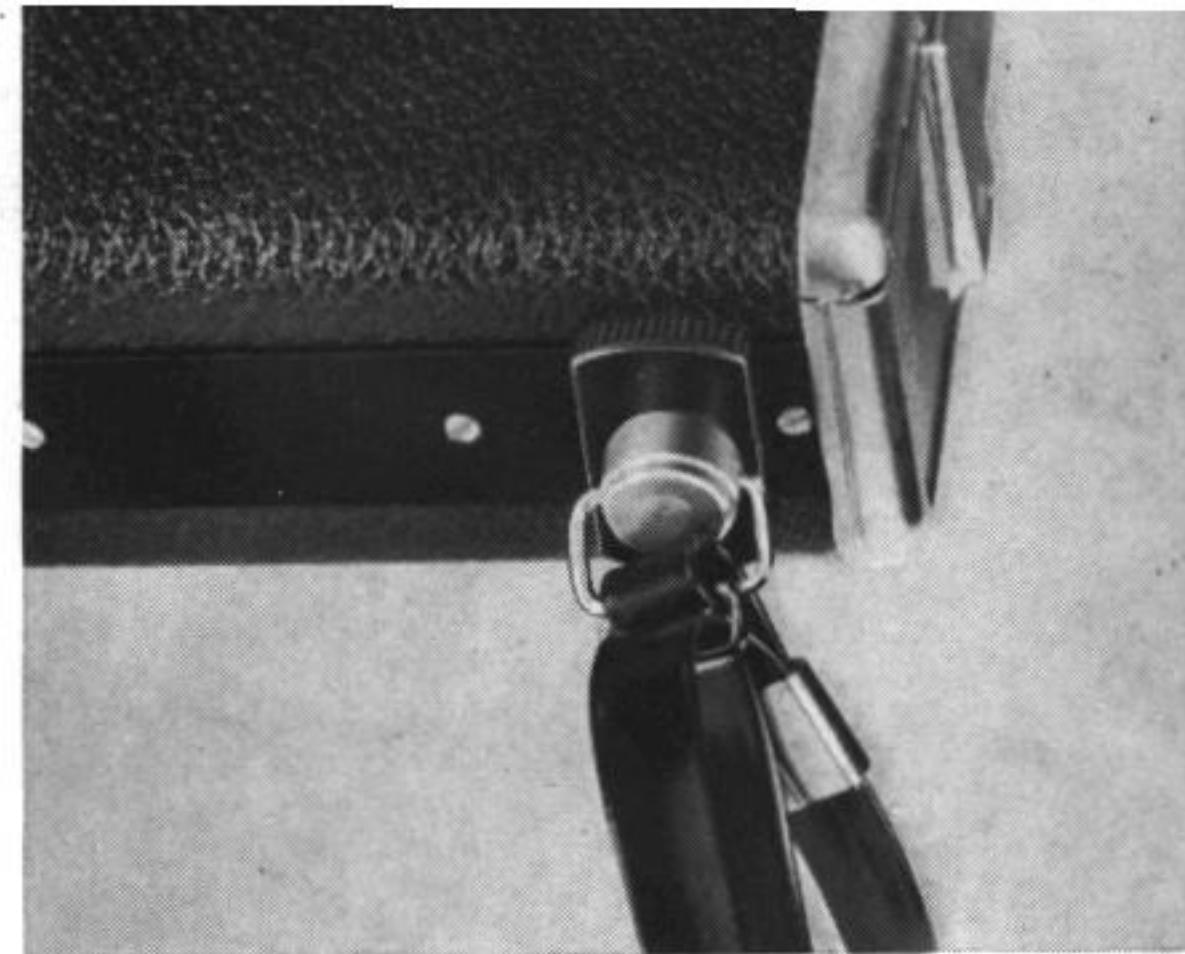
Lens cap

Open the lens cap by pressing on the bar with the index finger of the right hand.

Fitting the handgrip

The use of the handgrip will make the camera even easier to hold.

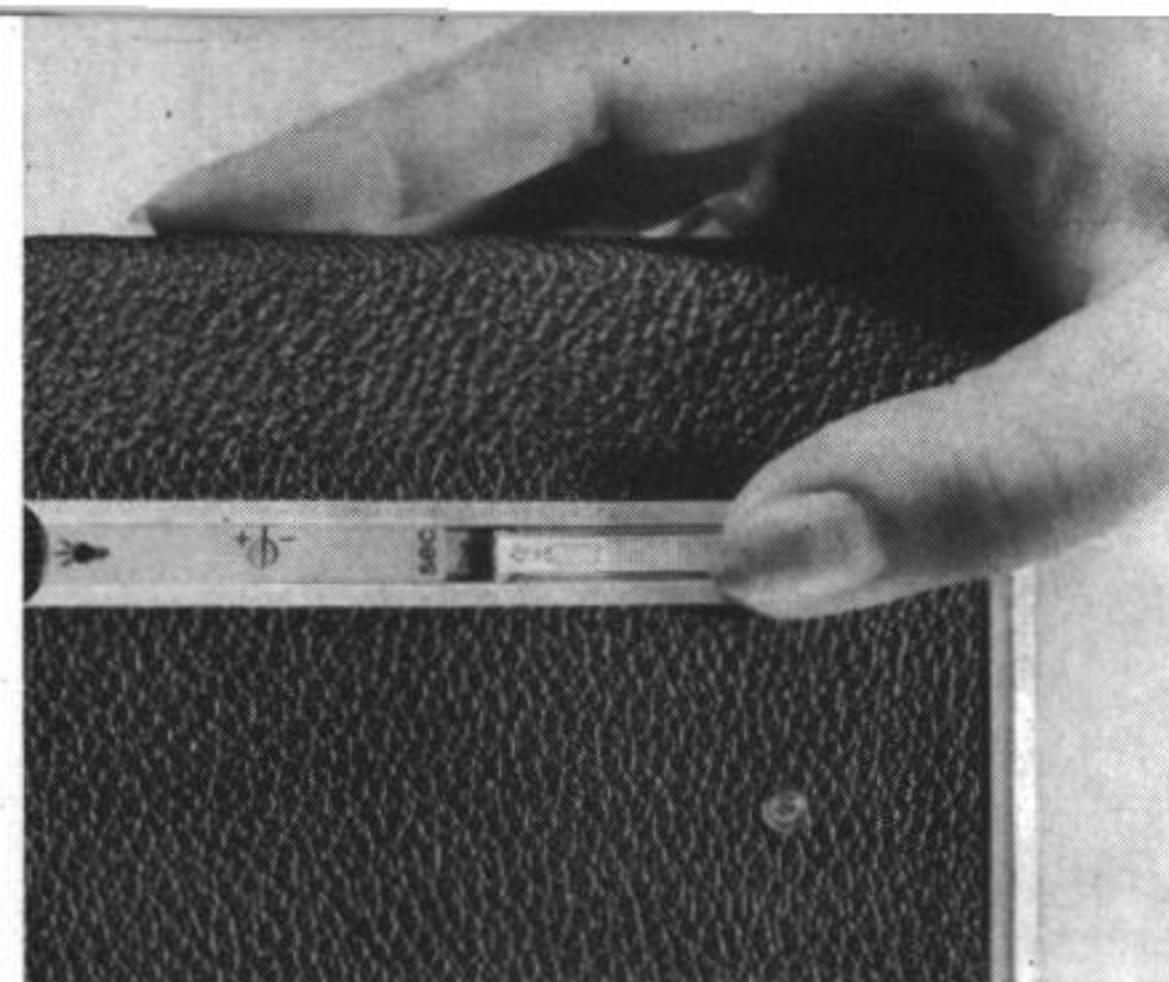
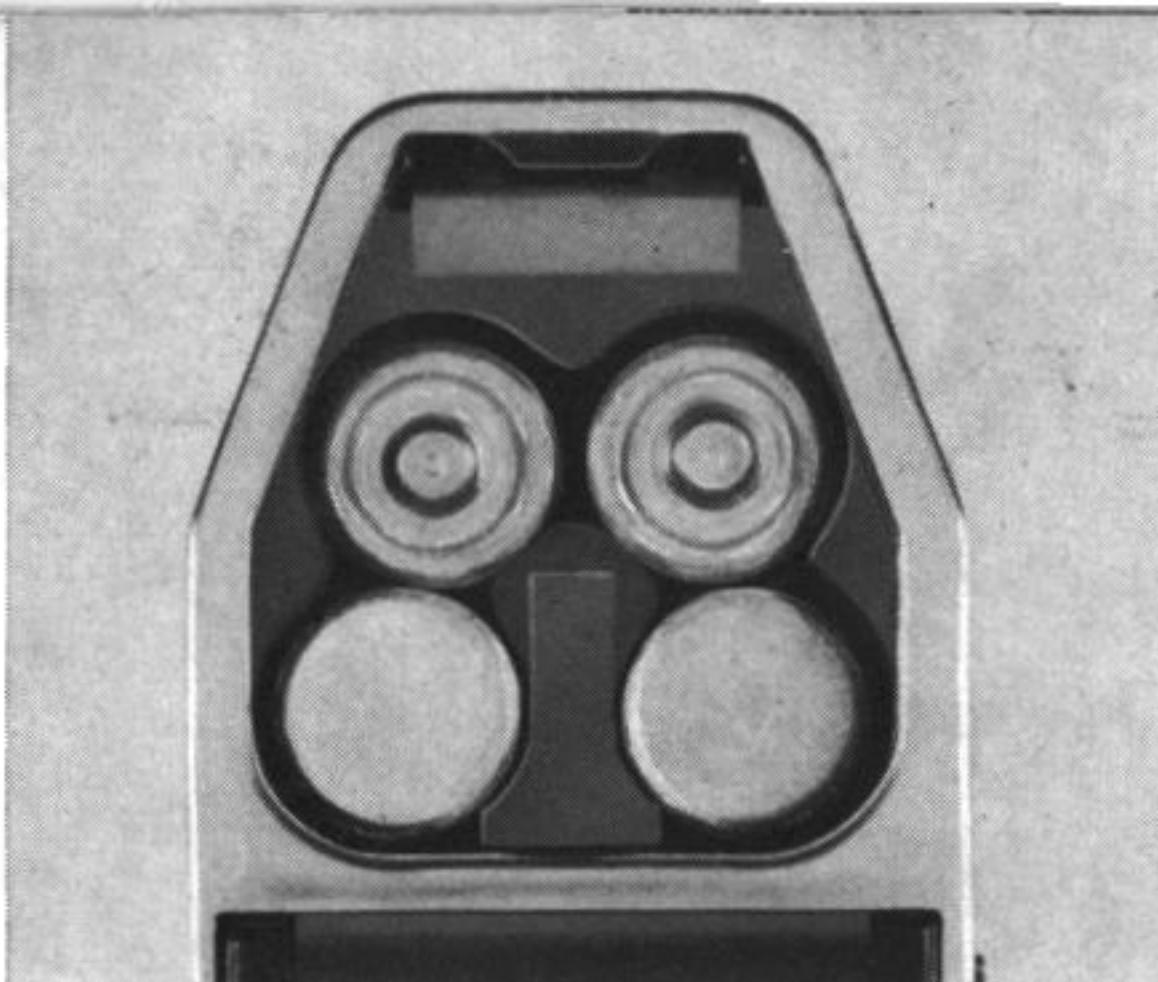
It is screwed into the front of the camera; the baseplate fits into the space beneath the handle.



Fitting the shoulder strap

With the adjustable-length shoulder strap, the camera may be slung from the shoulder or neck. It is fitted in the following manner:

- Insert the small metal part into the space provided under the camera.
- While pressing on the chromed part, pivot the black plastic piece a quarter of a turn to the left or to the right. The strap is now in position.
- To remove the shoulder strap, pull the black plastic piece towards you, at the same time pivoting it a quarter of a turn to either the left or the right.



Preparing the camera

Inserting the batteries

Open the cover.

Insert the batteries in accordance with the diagram on the inside of the housing.

Checking the batteries

Move the slide forward and check, in the viewfinder, that the needle moves to the position shown in the illustration opposite.

Attention

We recommend that, when the camera is stored, the batteries should be taken out in order to avoid any damage that may result from electrolyte leakage.

Use only high quality leakproof batteries (see page 3).

Inserting the exposure meter batteries

Take out the red drawer.

Insert the two miniature batteries (type Mallory PX-13) into their housing; check that the + sign is on the correct side.

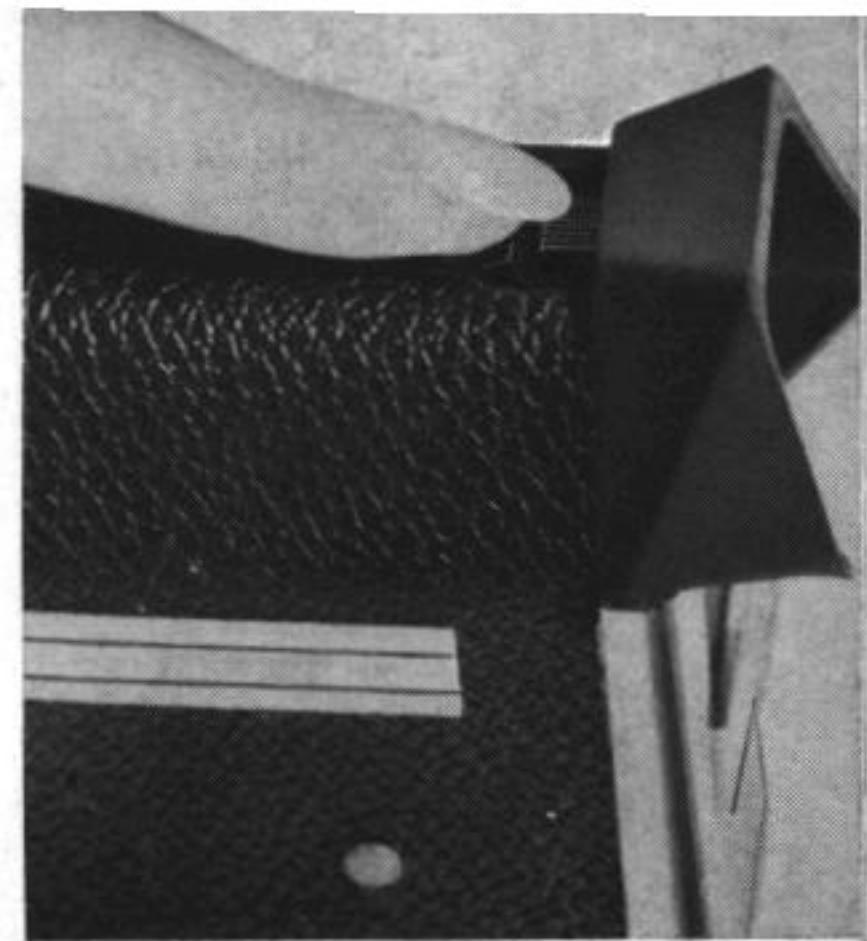
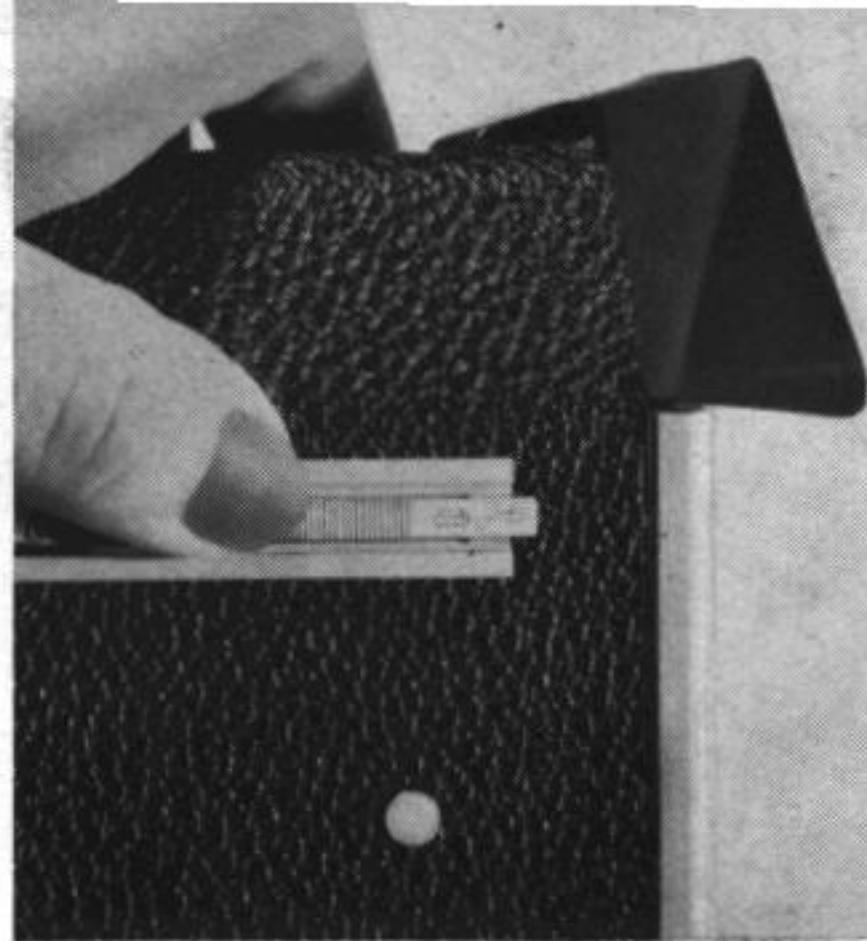
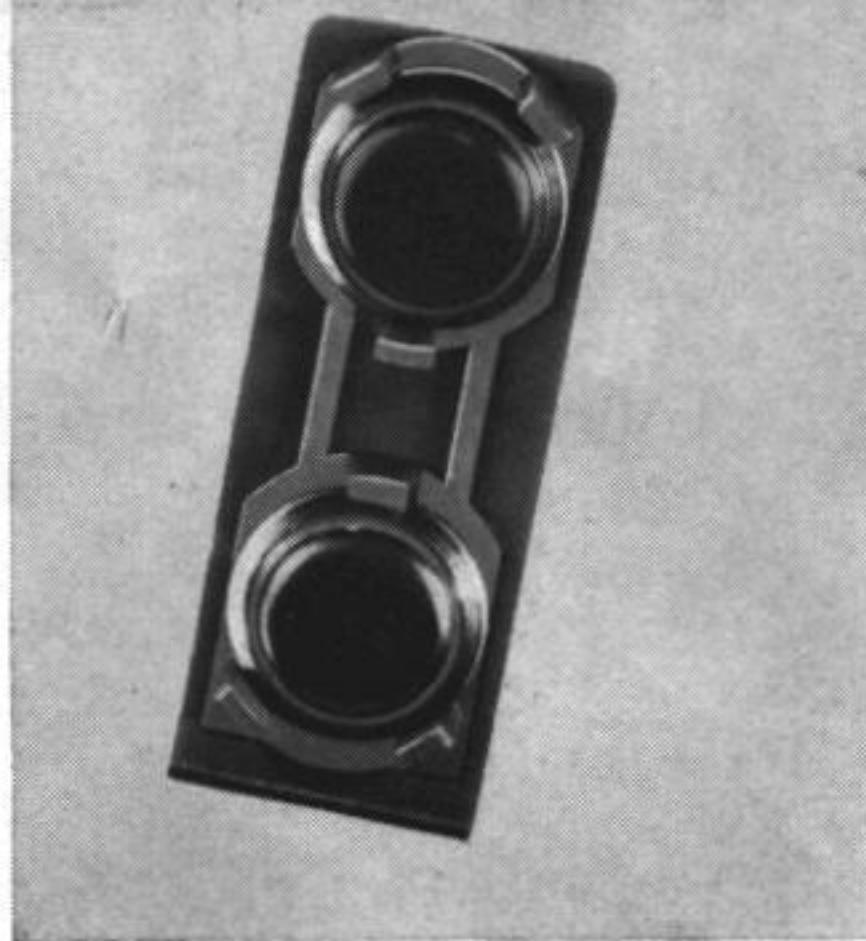
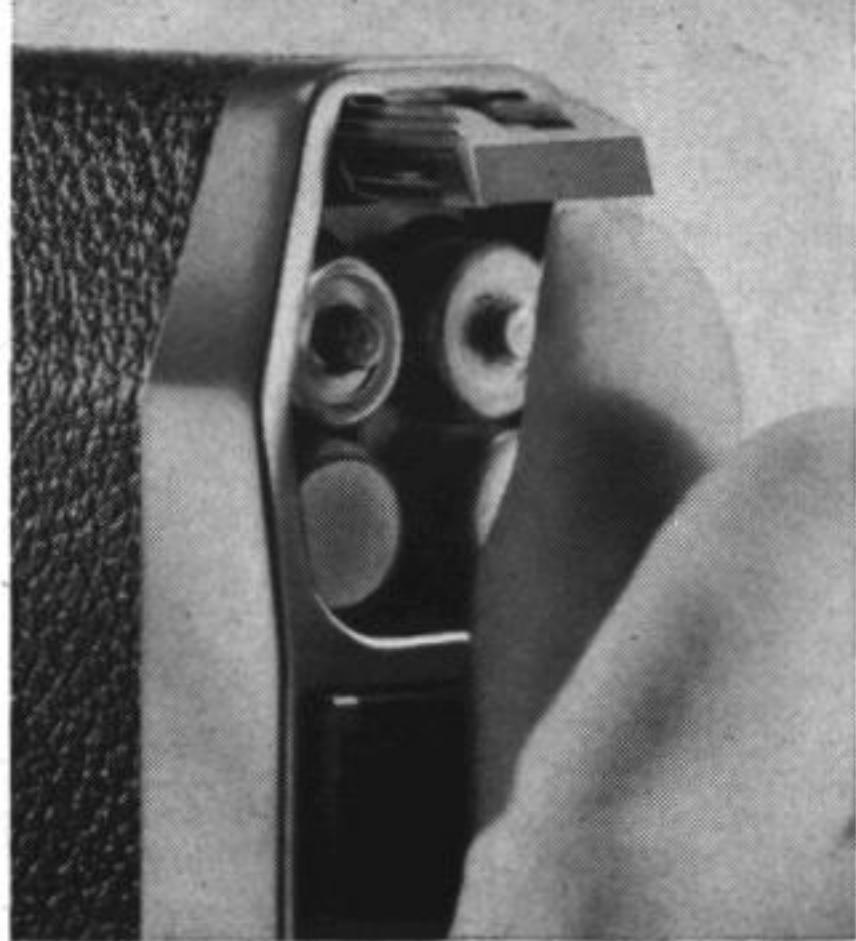
Replace the drawer.

Checking

Move the slide backwards and check, in the viewfinder, that the needle moves to the position shown in the illustration opposite.

Adjusting the eyepiece

This adjustment is important and it should be carried out with the greatest care.



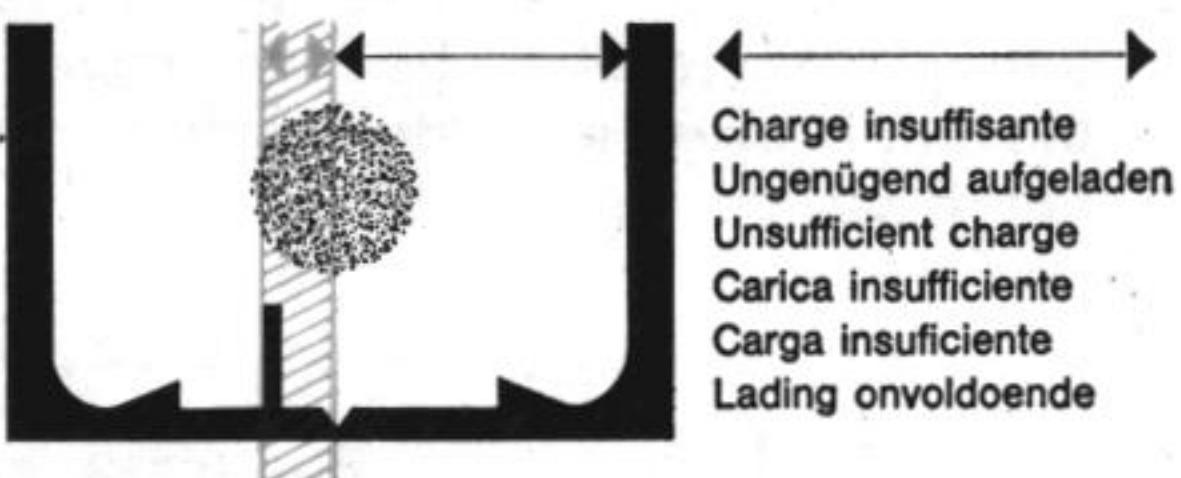
- Open the cover that protects the knurled accommodation adjuster.
- Move the zoom lever to the telephoto position (i. e. downwards).
- Through the viewfinder aim at an object over 200 feet away and turn the knurled accommodation adjuster until the image in the centre of the ground-glass is perfectly clear.

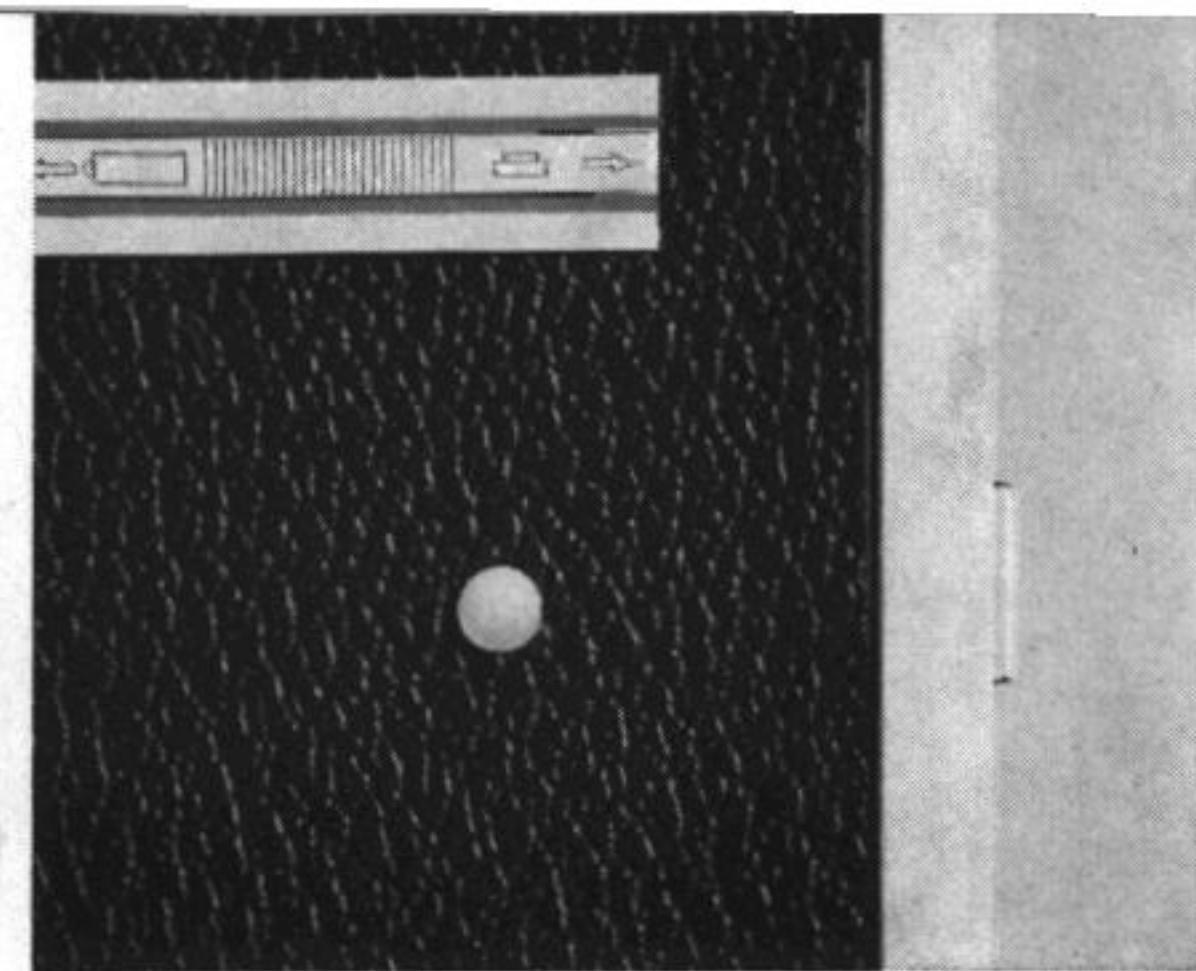
- The grain on the ground-glass screen must also be sharp.
- Close the protective cover.

Suitable film sensitivities

The automatic diaphragm adjustment device in your camera will make allowance for the sensitivity of the film loaded in the magazine. You may use:

- artificial light colour films with a sensitivity from 40 to 160 ASA (17 - 23 DIN);
- black and white films or daylight colour films with a sensitivity from 25 to 100 ASA (15 - 21 DIN).





Note

Black and white films with a sensitivity from 160 to 200 ASA (23 - 24 DIN) may also be used: merely place the conversion filter control knob to "artificial light" no matter what type of light you are filming in (daylight or artificial light). See page 11.

Loading the camera

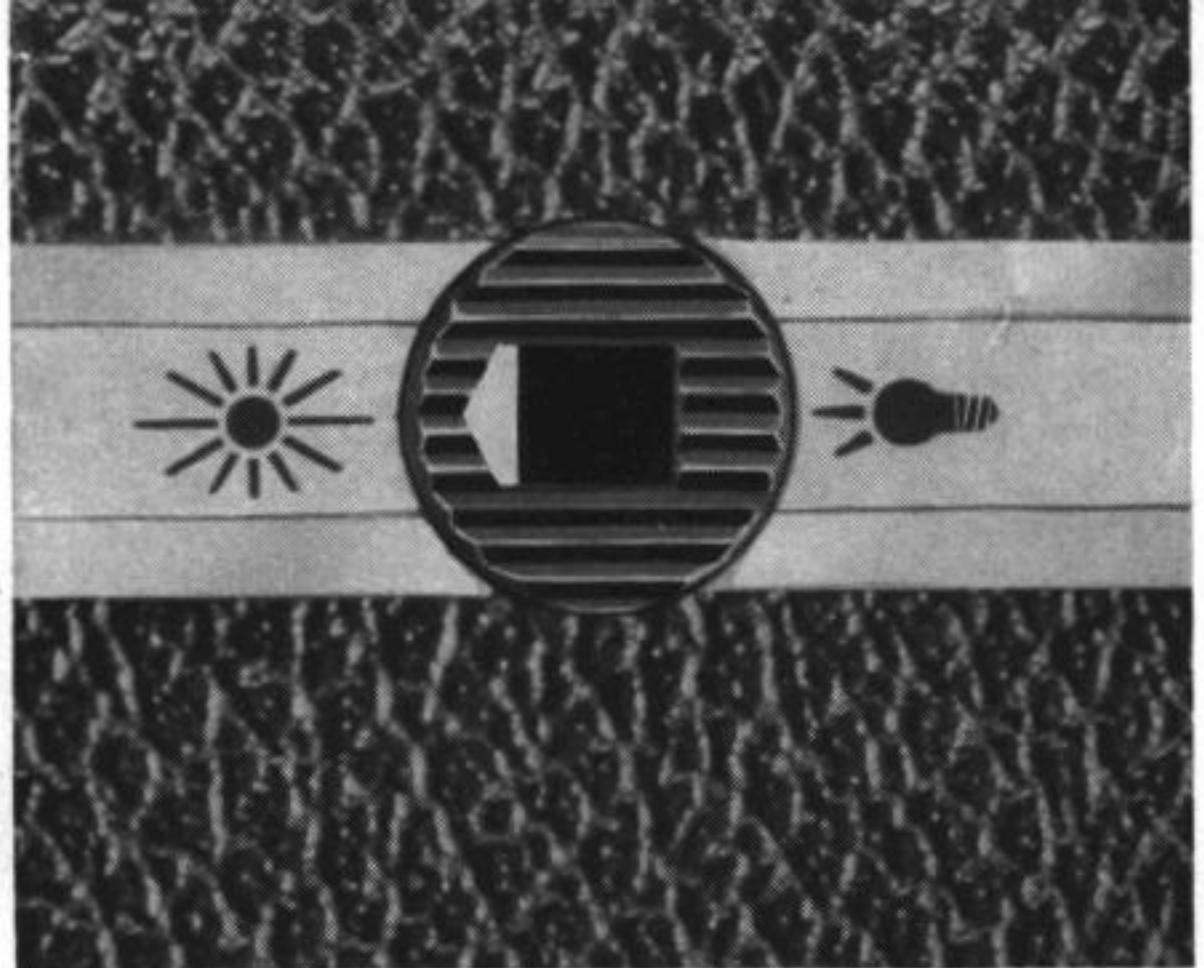
- Open the magazine cover.
- Insert the film, with the exposed section facing forward and the film indicator to the right.

— To close the cover, merely push it fully home; it locks automatically.

— You can see through the window whether or not the camera is loaded, and if so, with what type of film.

At any time, you can check whether the film is being correctly advanced through the magazine:

— If the black and white disc, that can be seen through the window, rotates when the trigger is depressed, the film is being advanced correctly; if the disc does not rotate, this means that the film is jammed. In this event, unload and reload the camera, if necessary with another cartridge of film; it may be that the film is jammed only temporarily.



Conversion filter

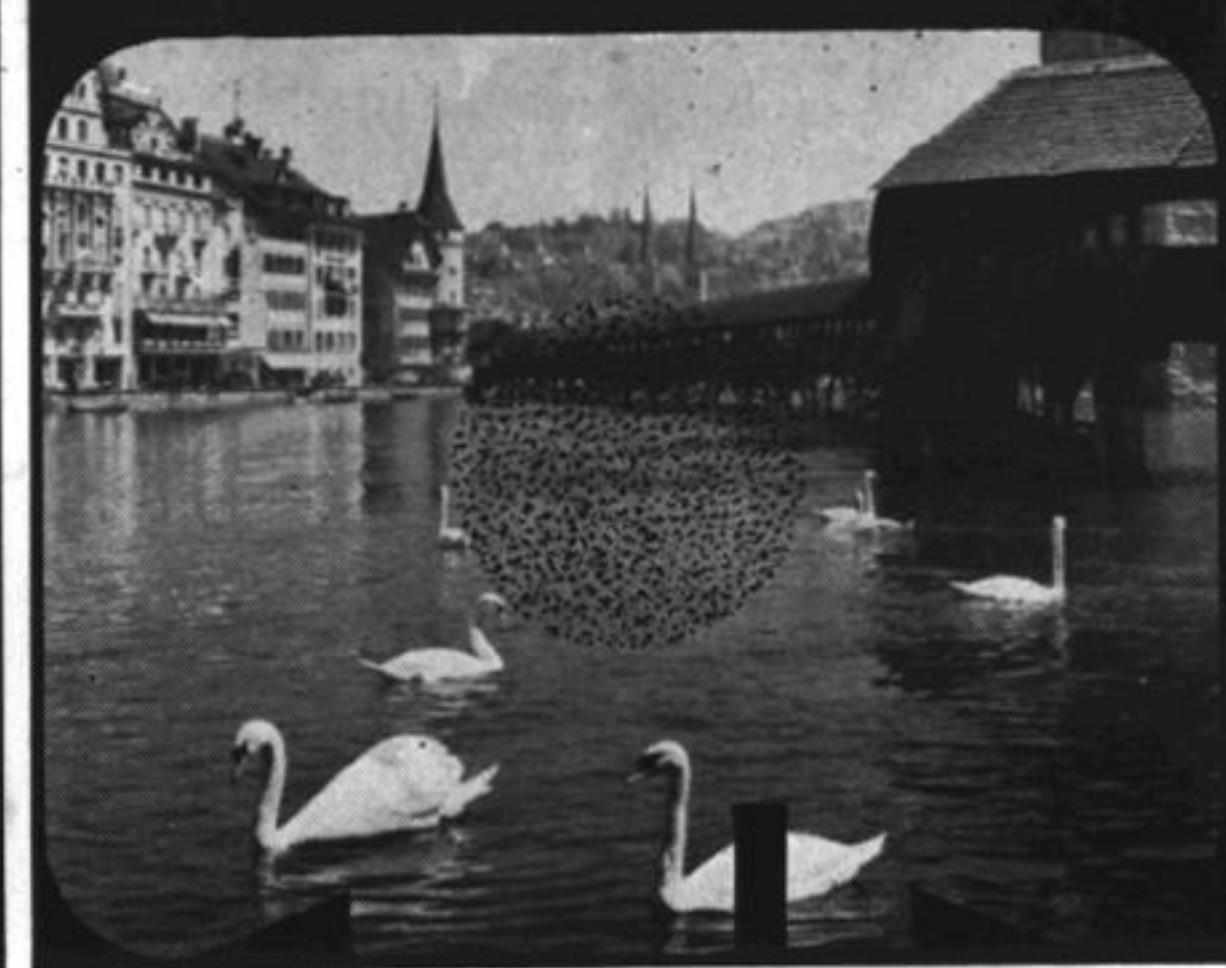
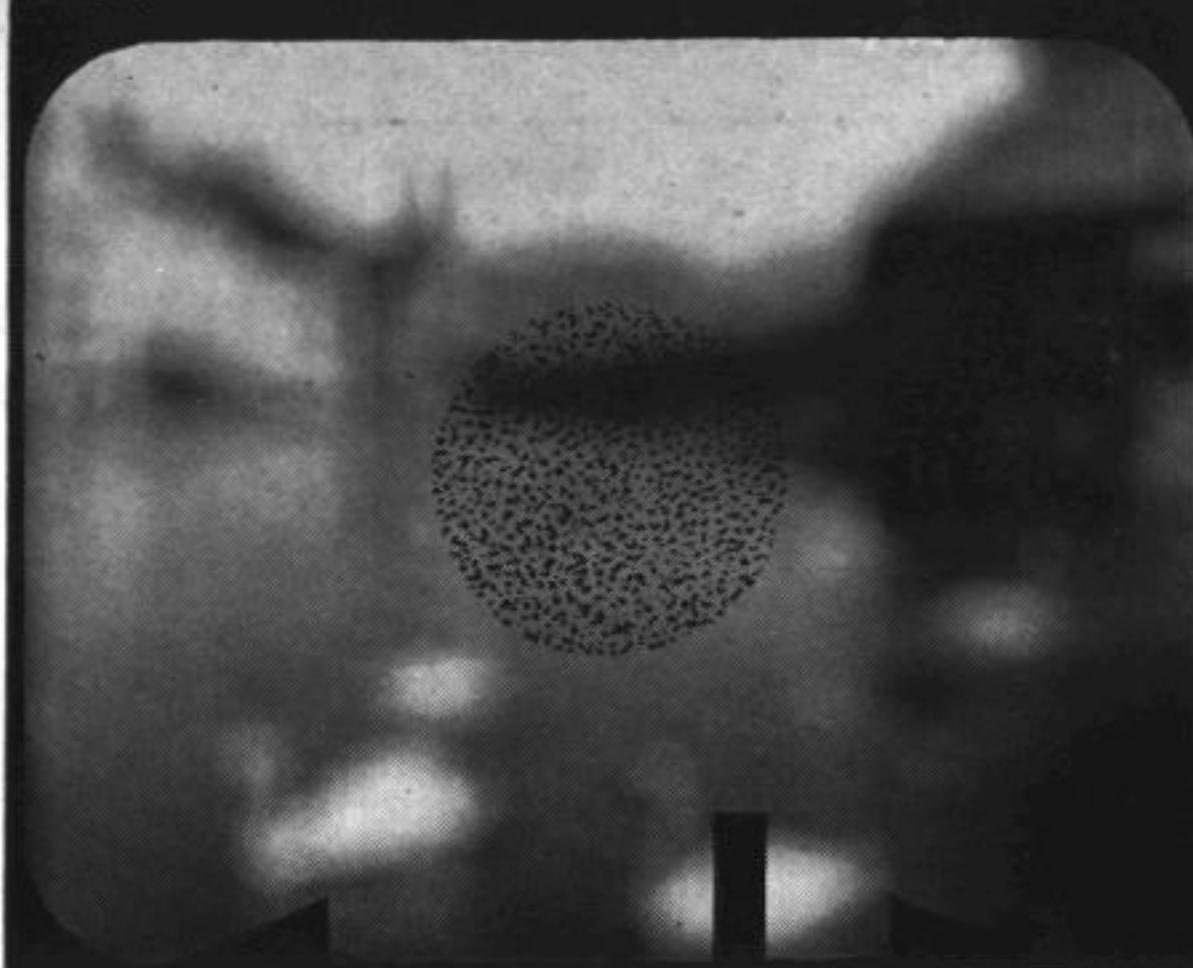
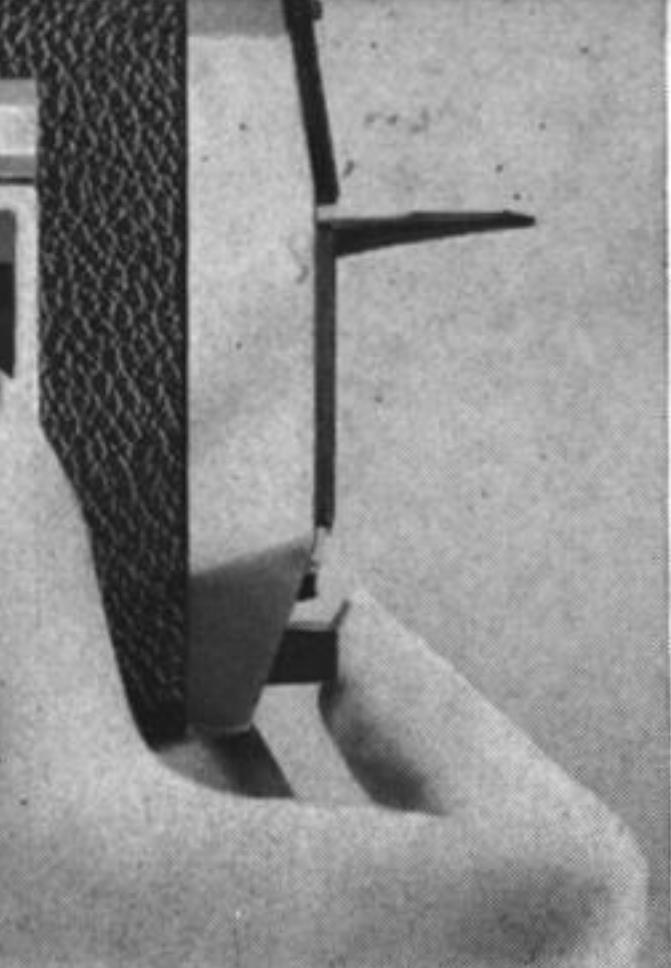
Your camera is fitted with a conversion filter which is operated by the knob illustrated above.

This knob should be adjusted in accordance with the type of film being used and the type of light in which you are filming.

For filming in artificial light we recommend the use of the Bolex-Lite S2 lamp which is specially designed for your camera (see page 22 "Accessories available separately").

Type of light ►	Filming in daylight	Filming in artificial light
Type of film		
Artificial light colour film		
Daylight colour film		Not possible
B & W film with a sensitivity not exceeding 100 ASA		
B & W film with a sensitivity from 160 to 200 ASA		

MACROZOOM



Filming

Framing the subject

Frame the subject by moving the zoom lever (with the thumb of the right hand).

Focusing

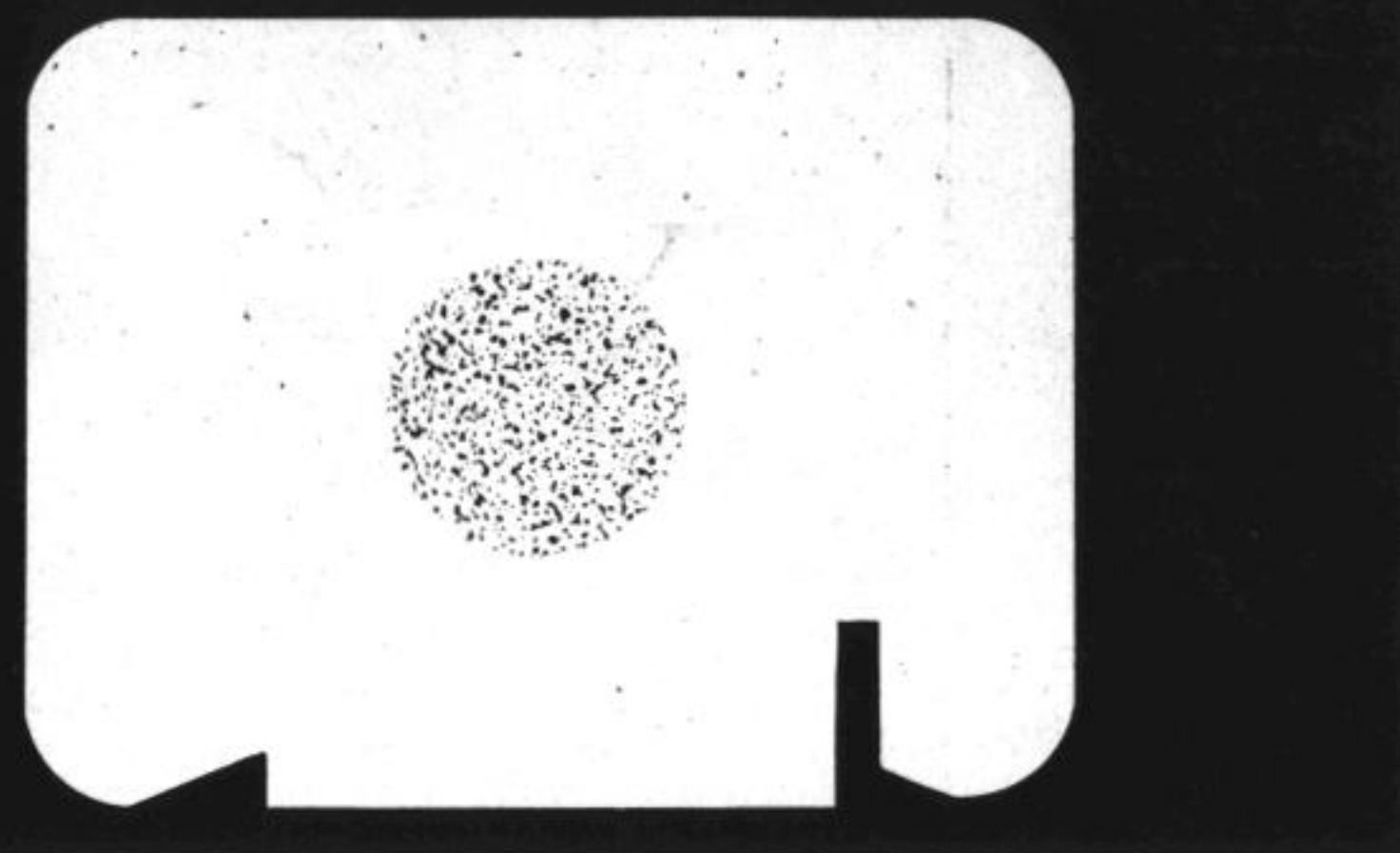
Now get the scene into focus. This is done as follows:

- move the zoom lever to the telephoto position (i.e. downwards);
- turn the knurled ring until the scene is perfectly sharp in the centre of the groundglass.

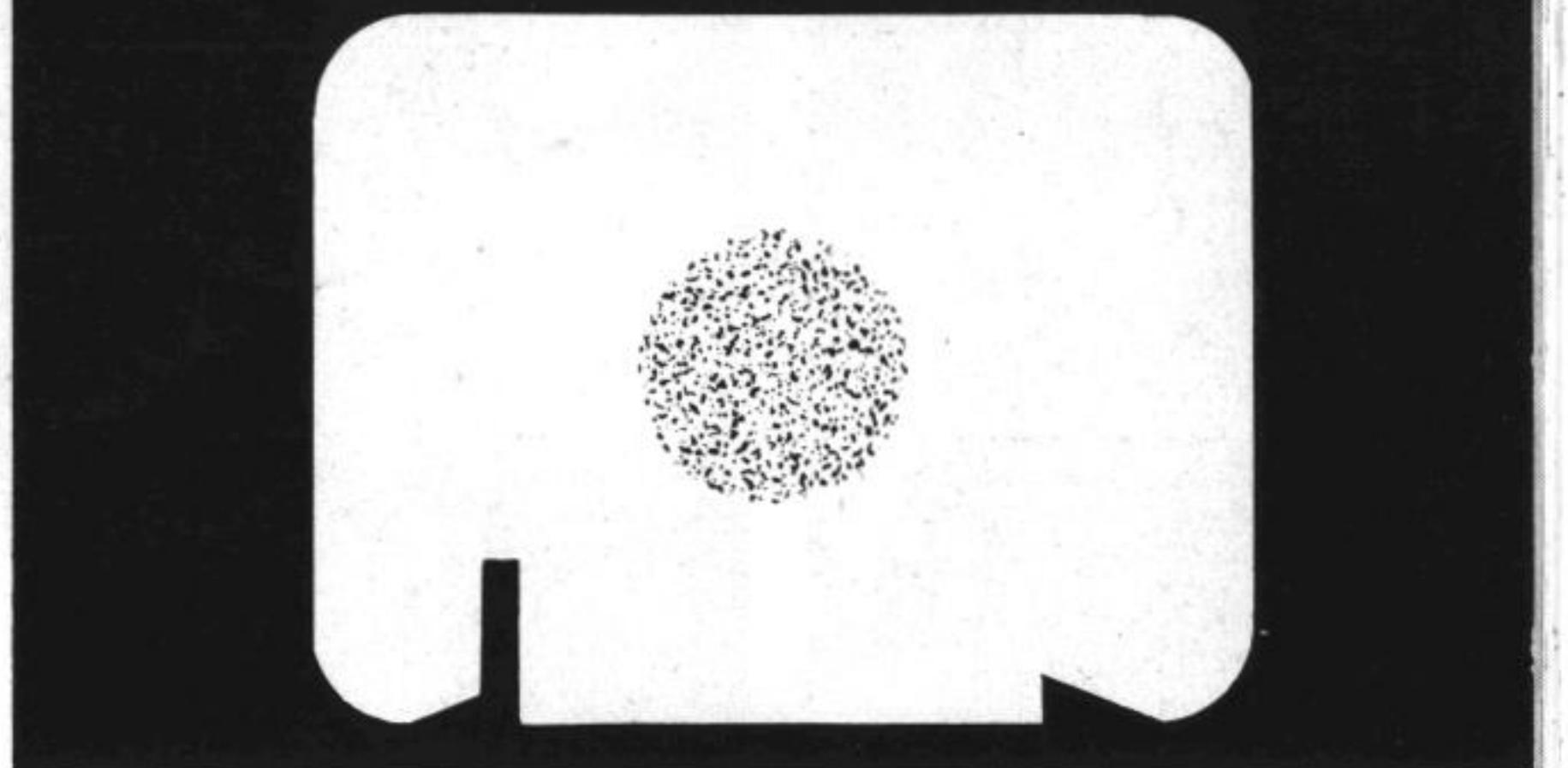
Note

Get into the habit of focusing at infinity (∞) after each filming sequence. At this setting, you can film anything from 6 feet to infinity without the need for focusing on a sunny day outdoors. (Consult the depth-of-field chart at the end of the instructions manual.)

If you are filming at a wide angle (zoom lever upwards) the zone of sharpness is even larger (between 3' (1 m) and infinity), in any lighting condition.



a



b

Automatic diaphragm

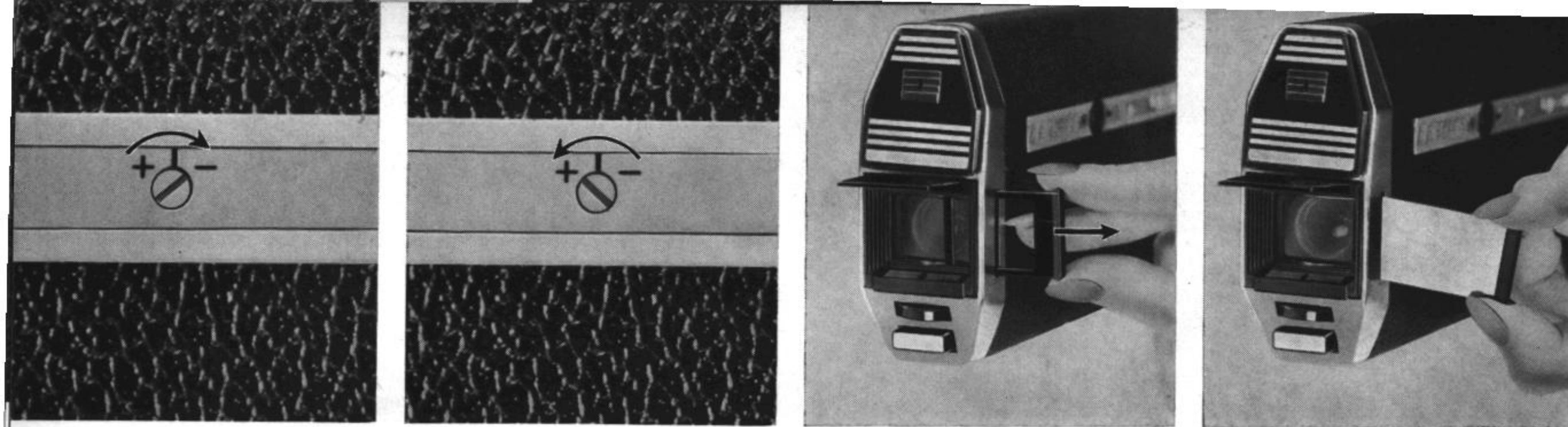
Your camera is fitted with automatic diaphragm adjustment.

- You may film as long as the indicator needle visible in the viewfinder is situated between the two shoulders.
- If the needle is in position (a), the diaphragm is set at its widest aperture of f/1.9. The needle further to the right indicates that there is insufficient light for filming.
- If the needle is in position (b), the diaphragm is locked at its minimum aperture of f/16.

Notes

When filming at night outdoors (fireworks, neon signs, etc.), you can still obtain excellent results even though the needle may indicate that there is insufficient light.

As long as the sensitivity of the film in use does not exceed 40 ASA, there is no risk of over-exposure under any lighting situation. With faster films, however, it is recommended to mount a neutral density filter in front of the lens when the needle reaches the f/16 stop.



How to gauge the exposure level

The exposure level is adjusted to an average value at the factory. Should you prefer to have your films slightly lighter or darker, the exposure level can be changed by moving the adjustment screw.

To increase the exposure (opening the diaphragm)

By turning the screw in the direction —, you can make your pictures lighter. The diaphragm will open up $\frac{3}{4}$ of a stop wider if you turn the screw as far as it will go.

To decrease the exposure (closing the diaphragm)

By turning the screw in the direction +, you can make your pictures darker. The diaphragm will close down

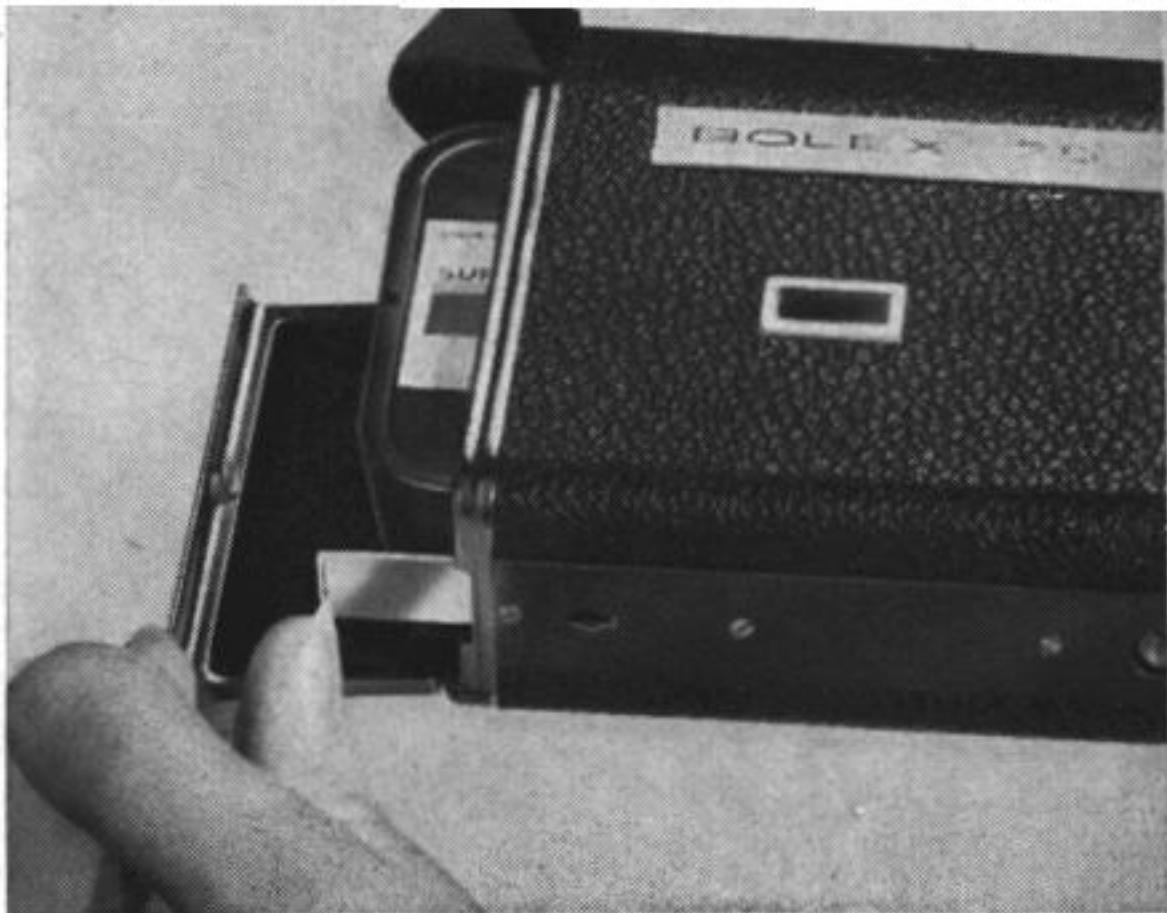
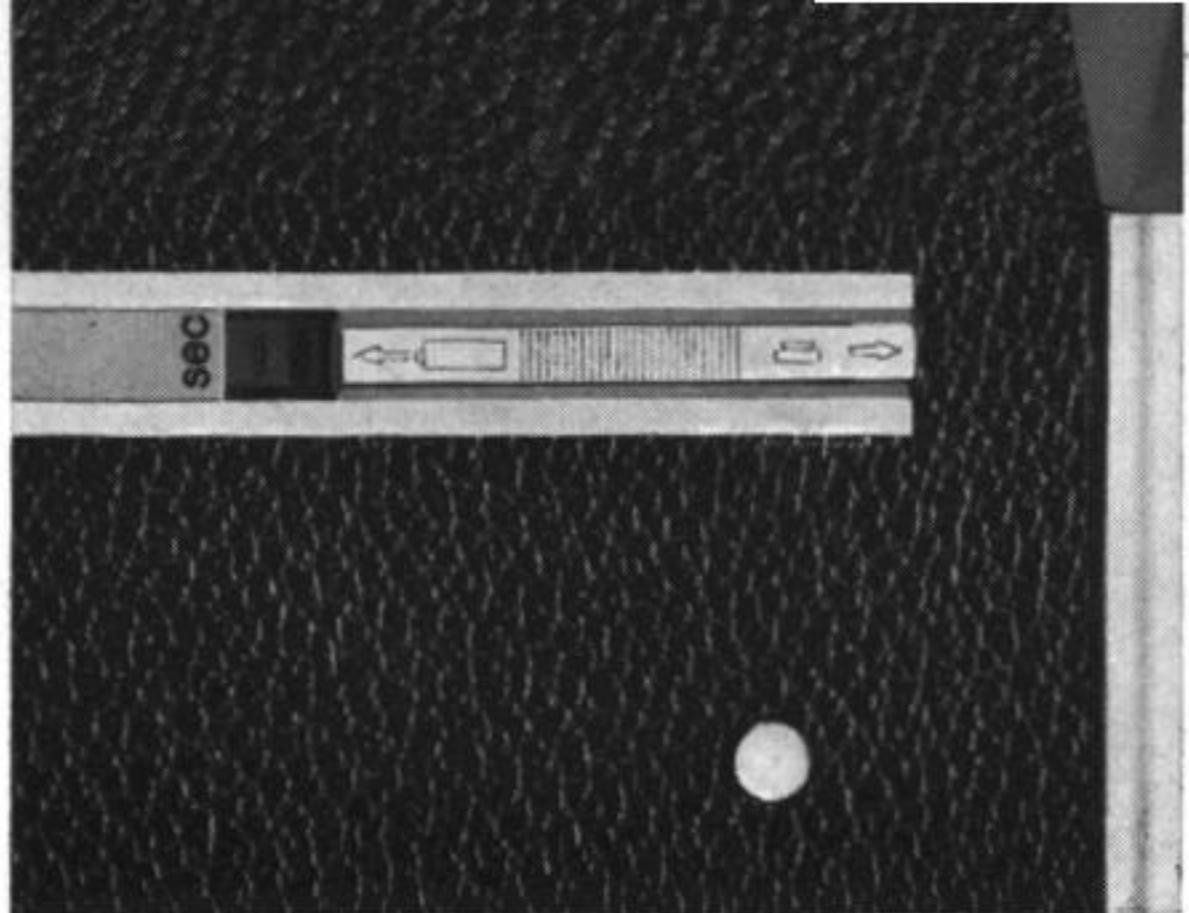
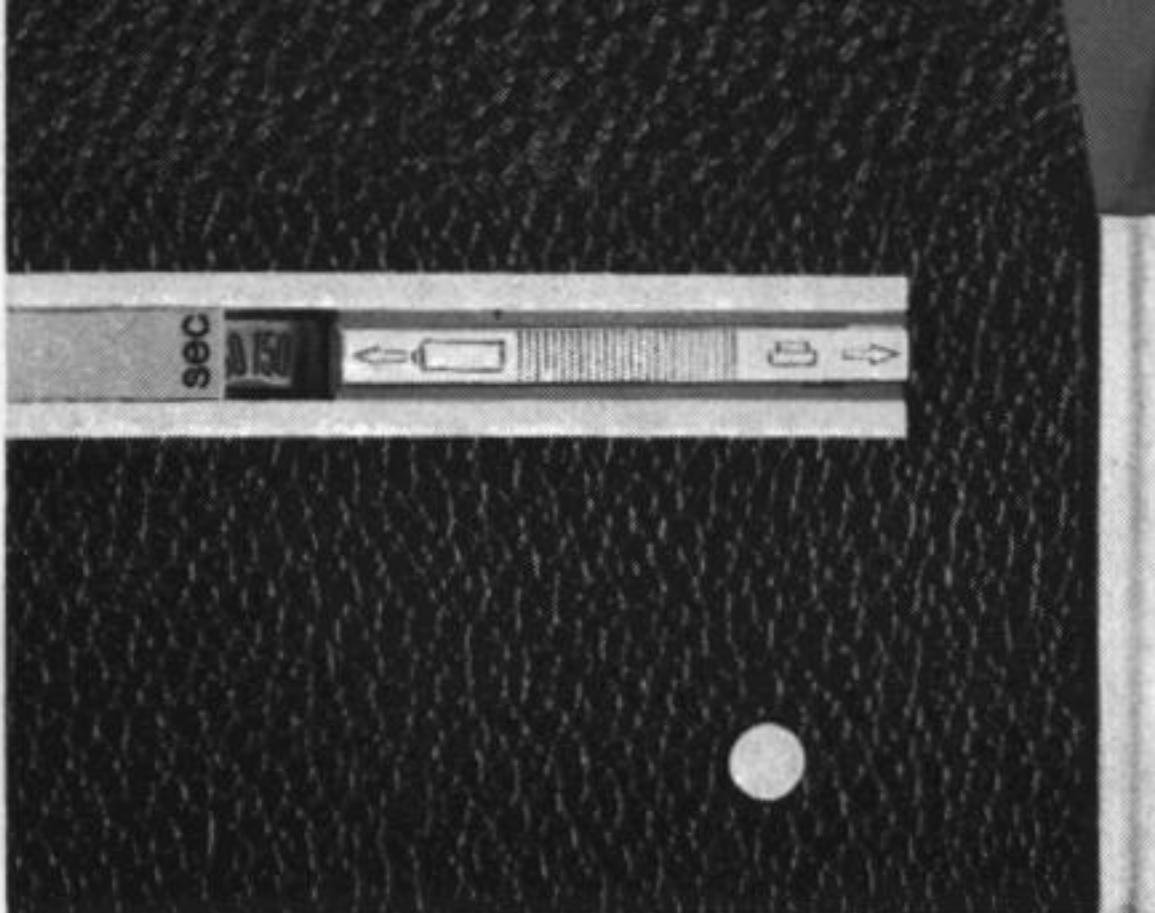
about $\frac{3}{4}$ of a stop more if you turn the screw as far as it will go.

Accessory filter (available separately)

A neutral density filter (coefficient 2) is available. With this filter it is possible to film in bright light, using films with a sensitivity higher than 40 ASA (17 DIN).

The filter is fitted in the following manner:

- Remove the black plug situated on the left of the lens.
- Take the filter and insert into the space provided.



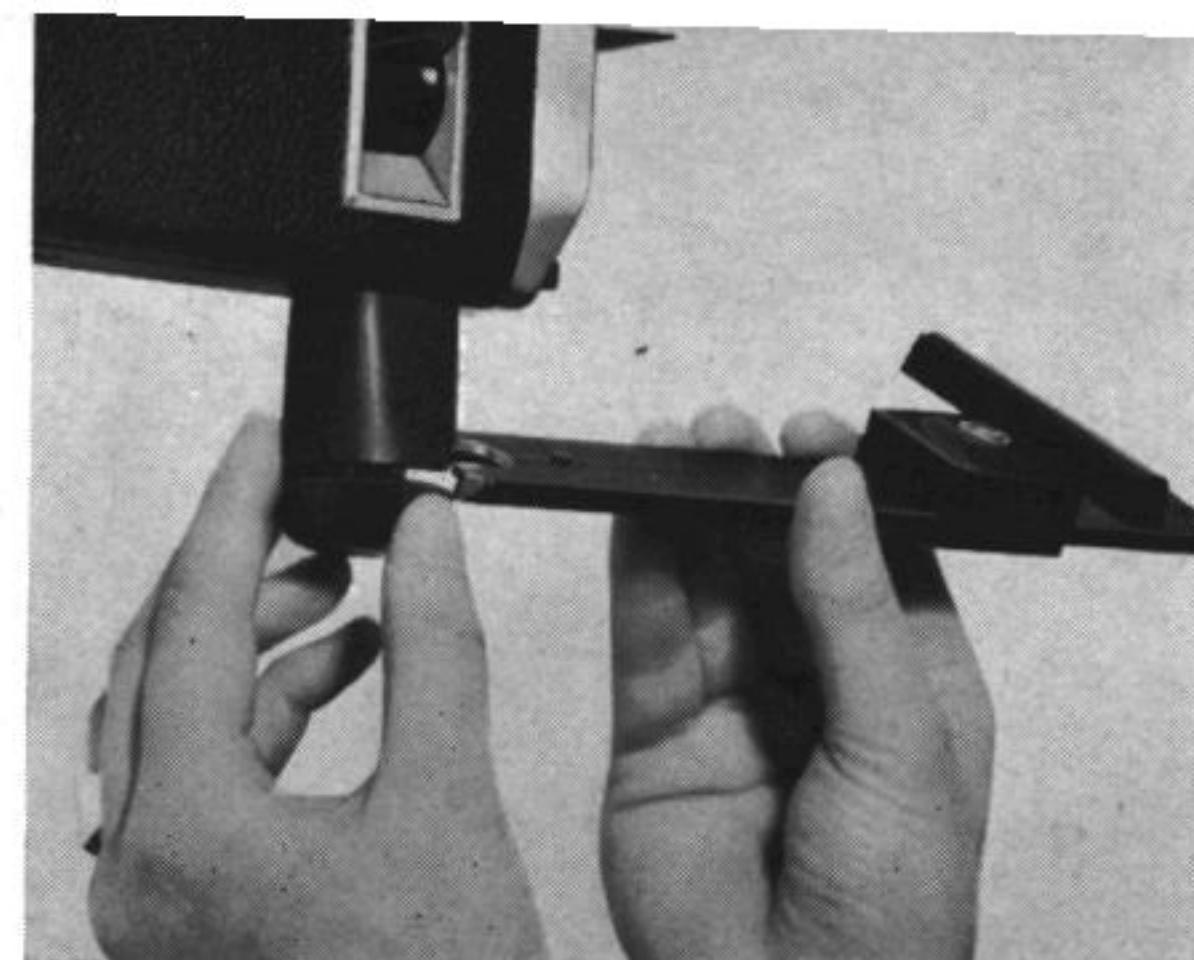
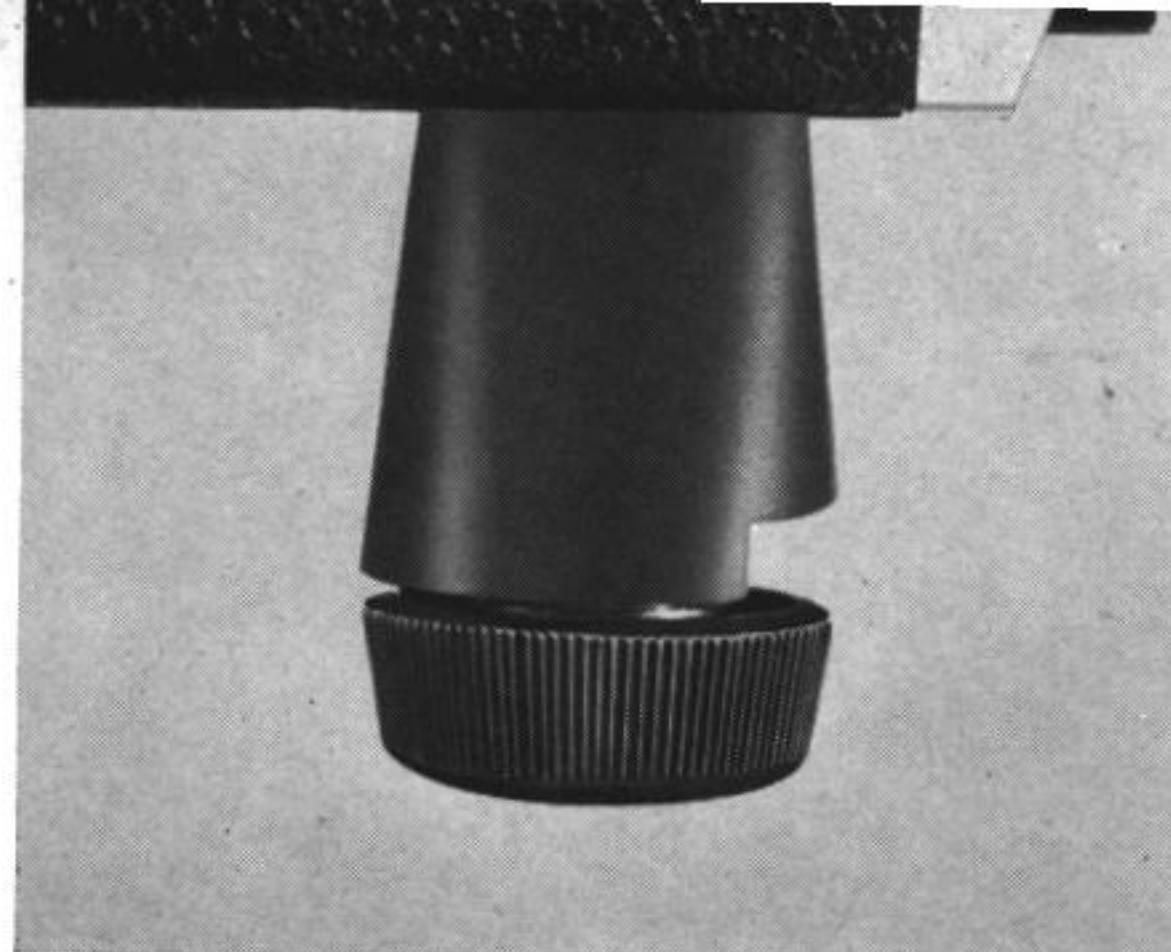
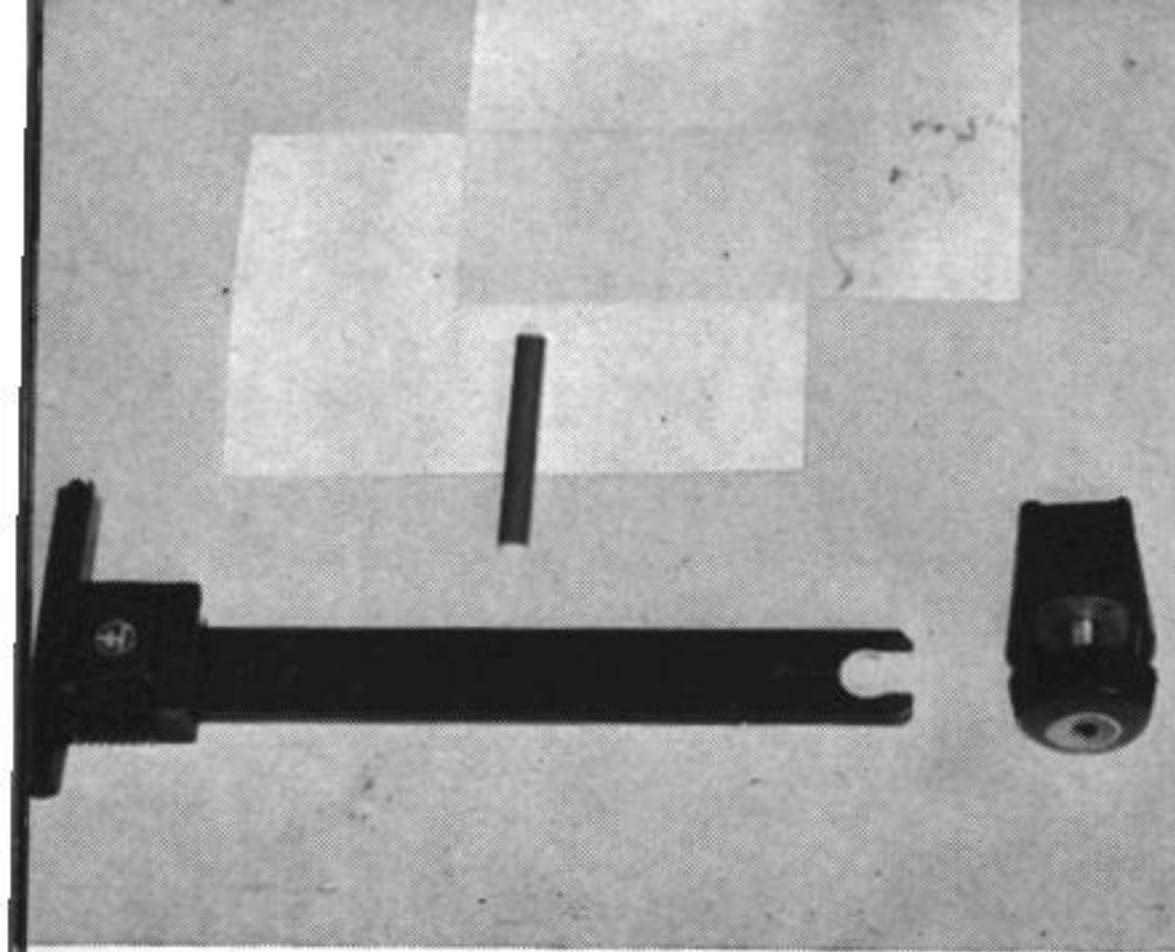
Film counter

Film advance is indicated by a counter calibrated **in seconds**. At any given moment, this counter will indicate the amount of unexposed film remaining in your cartridge.

When the figures appear on a red background, only a few seconds of filming remain. Continue filming to the end, the camera will stop when there is no more film left.

When your film is finished, open the magazine and remove the cartridge (the word "exposed" should appear on the part of the film which is visible).

Should the need arise, you may unload the film even if the cartridge has not been fully exposed. In such a case, the visible section of the film will be fogged. Note how much of the film has already been exposed, since, when the film is reloaded into the camera, the counter will no longer indicate the previously exposed portion. If the cartridge does not fall out by itself, you can extract it by pulling this lever.



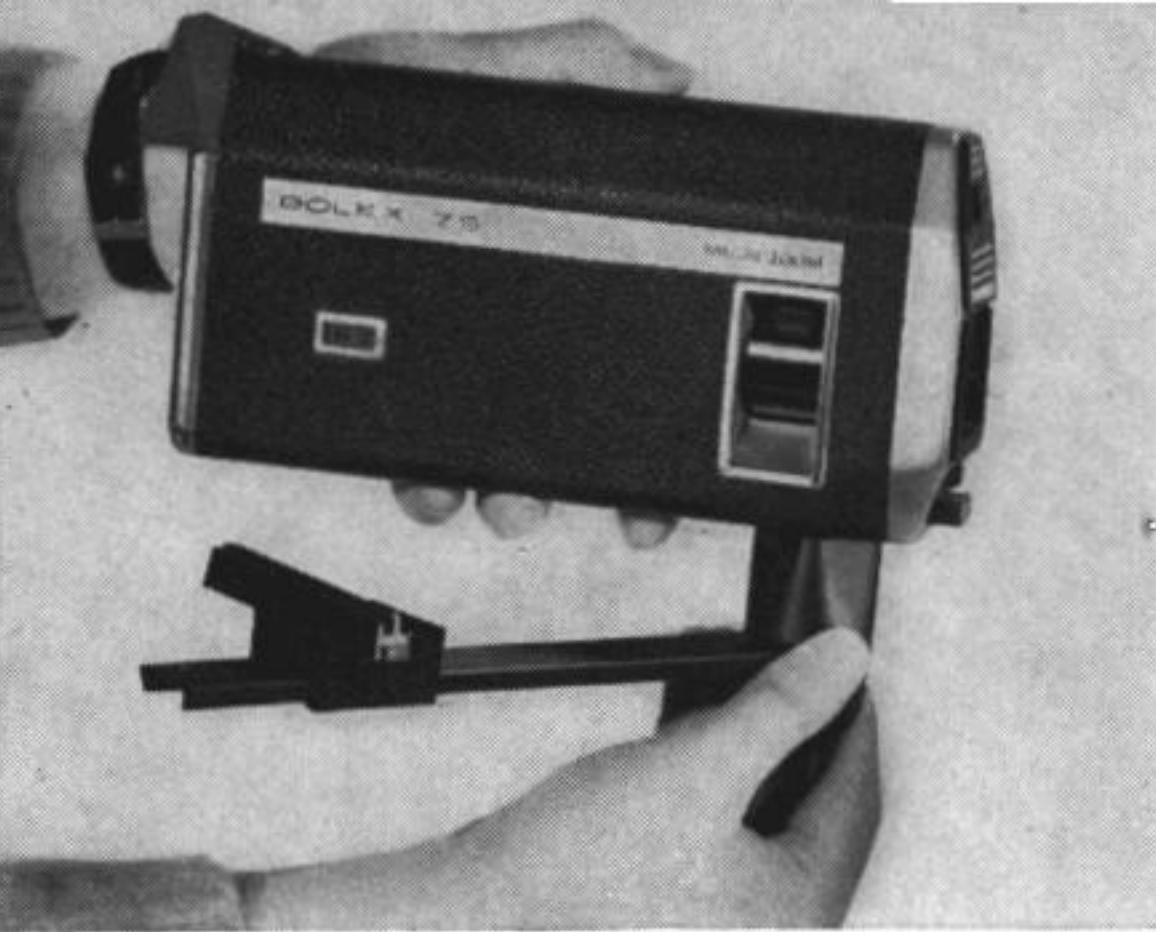
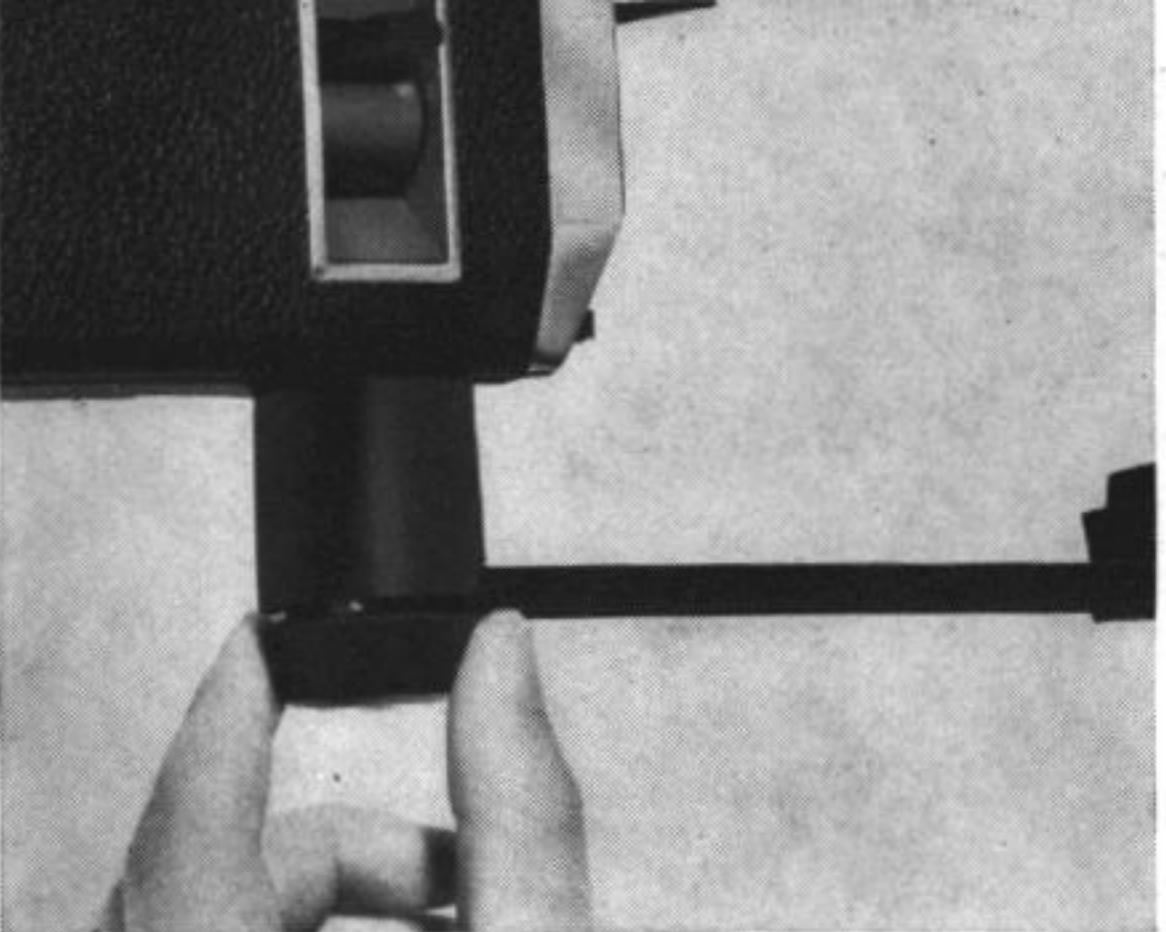
Multitrix

The Multitrix, supplied with the camera, allows you to film titles, postcards, folders, maps, and even colour transparencies as easily and automatically as a long shot. All these special scenes can be filmed right out on location, thereby coming home with well-rounded films, ready for projection without time consuming editing

and splicing - films of well above average interest and quality.

Fitting

The Multitrix fits on to the handgrip.



— Unscrew the knurled knob about $\frac{3}{4}$ of a turn and slide the rail into the slot provided for this purpose. Push it fully home and retighten the knurled knob.

The Multitrix can be folded back when not in use.

To do this

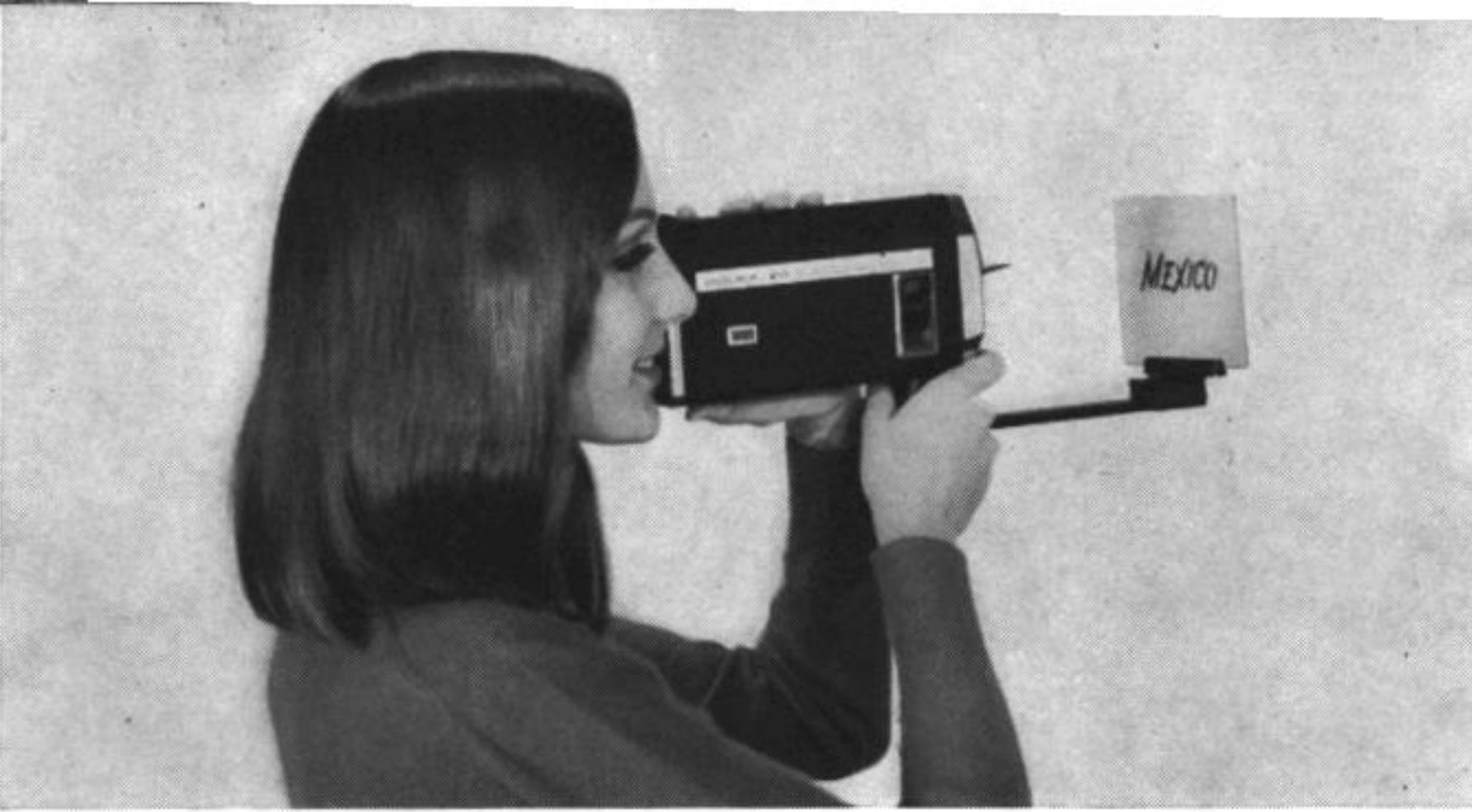
- Unscrew the knurled knob about $\frac{3}{4}$ of a turn.
- Pull the grip towards you and pivot the Multitrix +

grip unit backwards, at the same time preventing the knurled knob from turning.

— Retighten the knurled knob.

— The card holder can pivot on the slide rail to make it less bulky.

Once the Multitrix has been folded back, it forms a very useful carrying handle.



Use

The card holder should always be against the stop at the end of the slide rail, the grooves turned away from the camera.

a) Title on a postcard

- Draw your title directly on to the postcard using, for example, the wax crayon supplied with your equipment, a felt pen or a lipstick.
- With the card holder against its stop, place your card in one of the grooves of the clip.
- Focus with the lens in the telephoto position.
- Fill your viewfinder with the image by means of the zoom lever taking care to leave an adequate margin to ensure that the edges of the card are not visible on the projected film.

- Position yourself so that the light comes from over one of your shoulders and film.

You can link up your title and a natural background; to do this ask a friend to remove the card from the holder while you turn the distance knob to infinity (∞) without removing your finger from the trigger. It is also possible to follow the first title with a second card which is placed in the second groove of the card holder.

b) Title on transparent acetate sheet

- Draw your title on the acetate sheet using the wax crayon supplied with the Multitrix or a felt pen.
- Insert the acetate sheet into the card holder.

By varying the focal length of the lens, the focus and the position of the card holder in relation to the lens, you can obtain a range of different effects, such as:

VACANCES 1968



1. Sharply focused title with blurred background (or vice versa)

The title must be small enough to be filmed with the lens in the telephoto position.

— Focus on the title and film.

You can obtain an attractive sequence linking up the title with the background by gradually turning the distance knob to infinity: as the background comes more sharply into focus, the title will become more and more blurred. You can even make the title disappear completely by sliding the card holder up to the lens.

2. Sharply focused title and background

The title must be filmed with the lens in the wide-angle position to provide adequate depth-of-field.

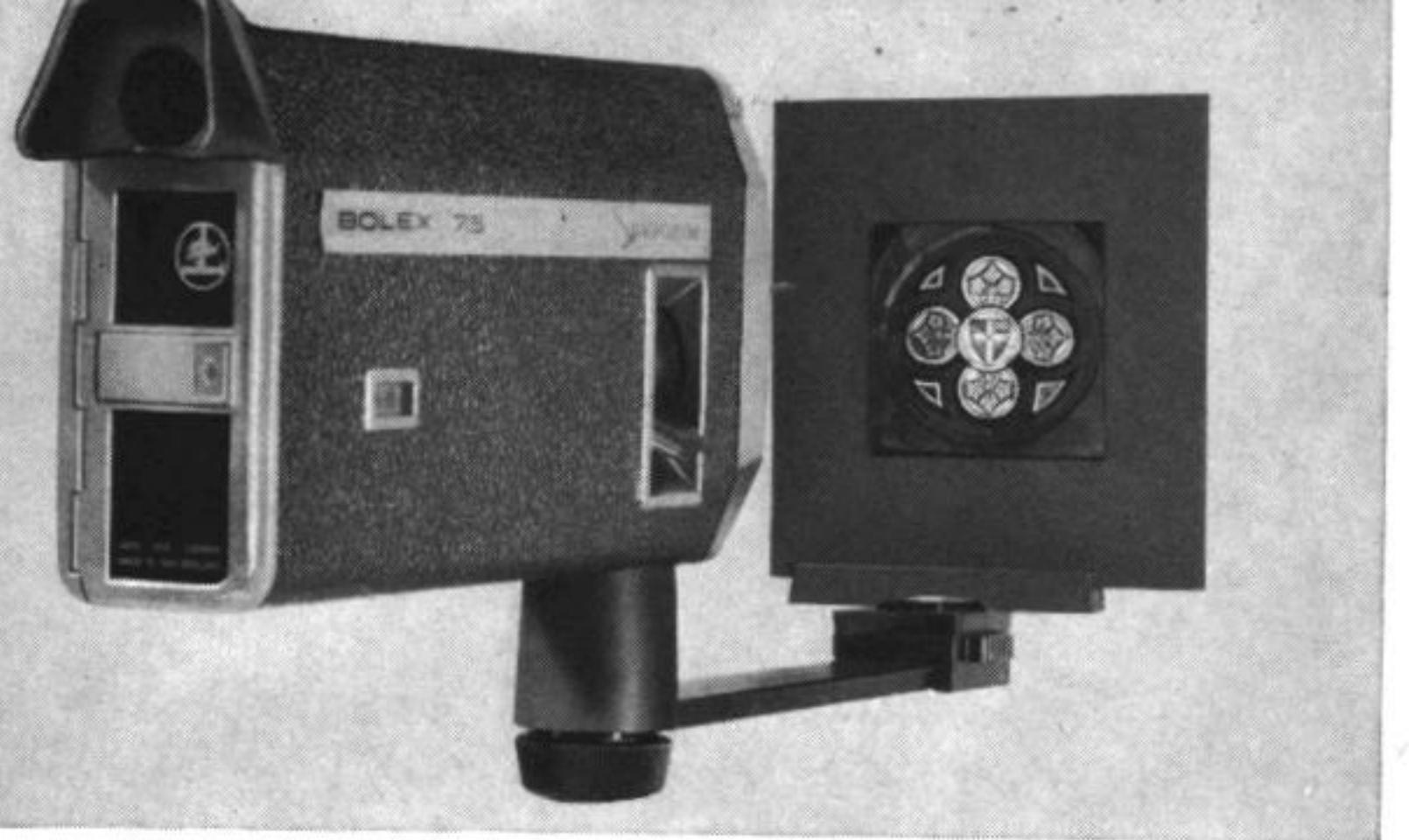
— Focus to a distance of about 7 feet and film.

If there is sufficient light to film at f/8 or smaller, you can even focus on the background. In this way you can zoom from your title, filmed with your lens at wide angle, to a detail in the background, with your lens at telephoto, without any danger of obtaining blurred pictures.

3. Sharply focused title against a moving background

Proceed in the same fashion as described under section 2, but move your camera across a not too distant background, e.g. along a wall, along a hedge or along a road, etc. The movement of the camera must be quite rapid to ensure that the background appears completely blurred or "panned".

An interesting sequence can be obtained by stopping at a specific point and highlighting it by zooming in; this will at the same time blur the title.



c) Filming a $2\frac{1}{4} \times 2\frac{1}{4}$ " slide

- Fix the slide on to the acetate sheet or on to a piece of black cardboard, with cut out centre.
- Insert the whole unit into the grooves of the card holder.
- Point the camera at a source of diffused white light, for example, a white wall or ceiling, a white piece of paper, etc. and film.

By pointing the camera at a coloured background, you can modify the colouring in the slide and obtain a variety of interesting effects.

Maintenance

On no account should the camera mechanism be taken apart. Any such action would invalidate the guarantee. It is essential to keep the interior of your camera absolutely clean.

Lens and filters

Keep the surface of the front lens, and the filters absolutely clean. Use the paper sold specially for this purpose by your photographic dealer. Avoid rubbing the lens of the camera too frequently since this may damage the anti-reflection coating.

After filming, fold the lens cap down over the lens. Avoid dust and finger prints—perspiration will attack the glass.

Lubrication

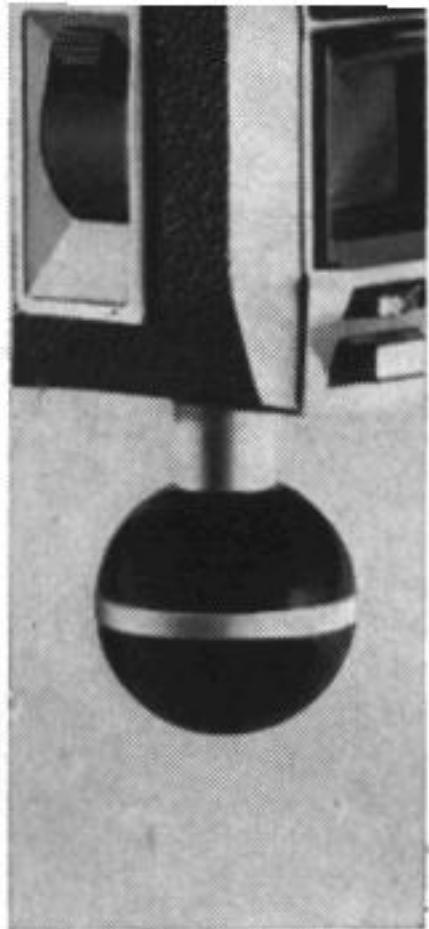
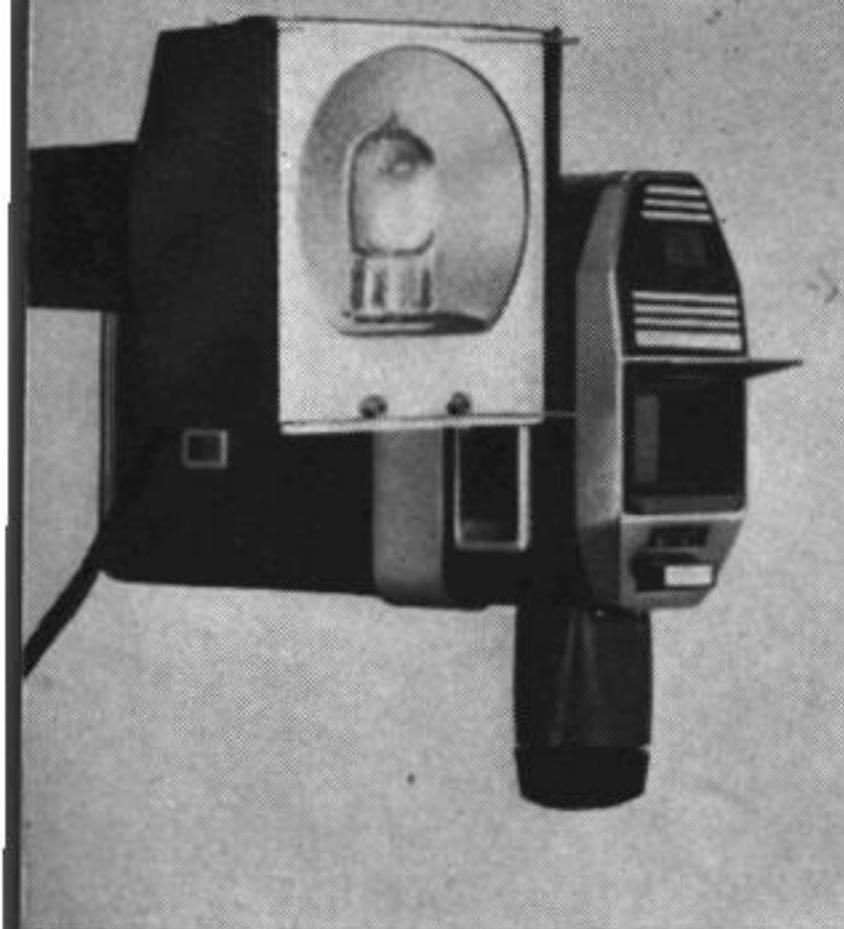
Your camera, like a high-quality watch, requires lubrication very infrequently. The oil and grease applied at the factory are sufficient to last the camera for 2 to 3 years.

After this period has elapsed, it is advisable to take the camera to your Paillard-Bolex distributor for re-lubrication.

For tropical regions

Certain precautions are necessary to protect the camera and its films from heat and humidity.

Special airtight boxes and chemicals are available to protect your camera and we strongly advise their use if you live in a tropical climate.



Accessories available separately

The **Bolex-Lite S2** halogen lamp has a high light output (650 W or 1000 W) and its wide beam is specially designed to cover the wide angle area.

Note: When using the Multitrix, do not mount the lamp on the camera, but rather at a convenient angle, about 2 feet from the subject to be filmed.

The **Bolex Minipod**, a light and handy support for your camera, ensures maximum stability when filming. (A detailed leaflet is available on request.)

The **Bolex Monopod**, a much appreciated accessory, ensures excellent stability.

The **spherical handle** can be fitted to your camera in a few seconds and ensures an excellent grip.

The **Elegant black carrying case**, provides space for your camera, film cartridges and the Multitrix.

Filter (for details and fitting, see page 14).

Some suggestions

Make your films dynamic and full of life

It is important to keep your camera as steady as possible when filming. The slightest jerking of the camera will be magnified when the film is projected on to a screen. The longer the focal length employed (telephoto), the steadier the camera must be. However, when the lens is used at wide angle, you can allow yourself more freedom without affecting the quality of your pictures.

- Avoid scenes which are too long; your film will become boring. Also avoid excessively short scenes; your film will appear disjointed and incomprehensible. Five to ten seconds per scene is a good average length.
- Vary the angle of your shots. And vary their distance,

with long shots, medium shots, close-ups, and extreme close-ups, thanks to the exceptional possibilities offered by the Macrozoom lens of the Bolex 7.5 camera. Remember that, with Super 8 film, close-ups provide the greatest satisfaction. Your camera is particularly suited to this type of scene since it is specially designed to film at very short distances.

- Do not zoom excessively; it can become monotonous. Keep this effect for occasions that really justify it.
- Finally, vary the type and frequency of the effects you use. This is an easy matter with your Bolex 7.5 movie camera.
- Make use of the Multitrix supplied with your camera. This accessory will help you improve the appeal of your films by inserting, while filming, titles or pictures taken from postcards or slides. This will give your film that extra "polish".

Depth-of-field chart

This chart indicates the upper and lower limits of depth-of-field in relation to the focusing distance and the position of the zoom lever, for various lighting conditions.

Clear sky, filming in the sunlight

Position of zoom lever ►	Lever in top position (wide-angle)	Lever in middle position (standard focal length)	Lever in lower position (telephoto)
▼ Focusing distance			
5"	2" - 3'	3" - 11"	4" - 6"
3'	10" - ∞	1' 2" - ∞	2' 1" - 8' 8"
10'	1' - ∞	1' 4" - ∞	3' 4" - ∞
∞	1' - ∞	1' 8" - ∞	5' - ∞

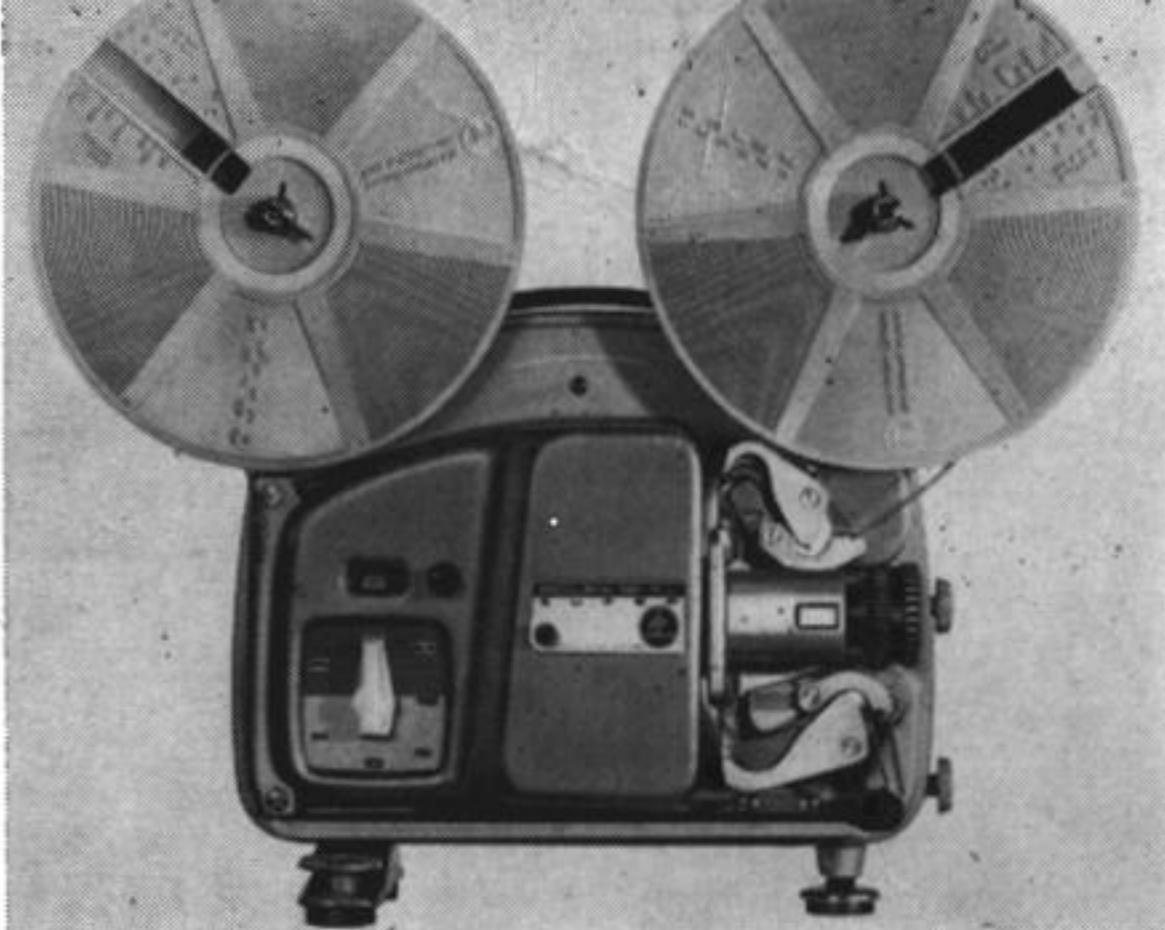
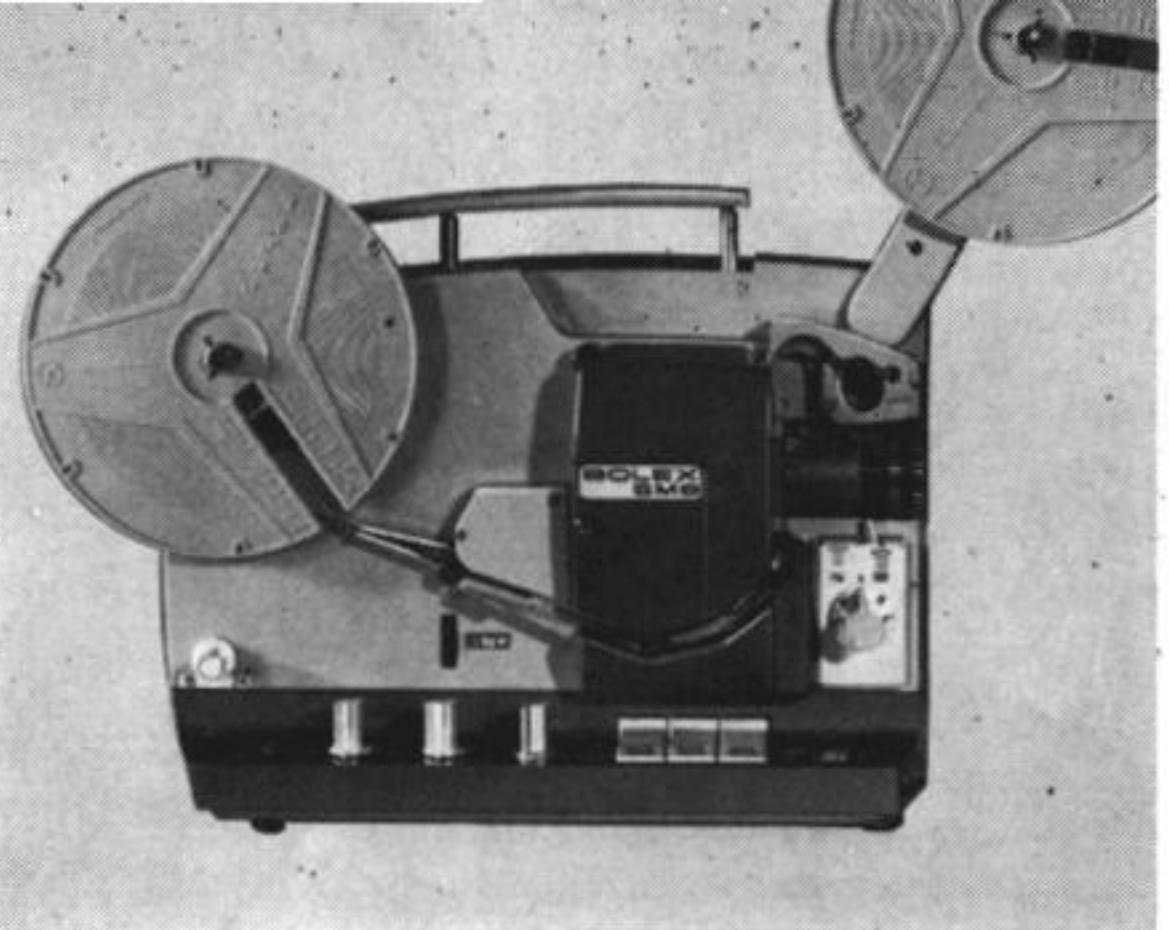
Clear sky, filming in the shadow

Position of zoom lever ►	Lever in top position (wide-angle)	Lever in middle position (standard focal length)	Lever in lower position (telephoto)
▼ Focusing distance			
5"	3" - 10"	4" - 8"	± 1/2"
3'	1' 3" - ∞	1' 8" - ∞	2' 6" - 5'
10'	1' 6" - ∞	2' 5" - ∞	5' - ∞
∞	1' 9" - ∞	3' - ∞	10' - ∞

Filming indoors, or outdoors with overcast sky (maximum diaphragm opening)

Position of zoom lever ►	Lever in top position (wide-angle)	Lever in middle position (standard focal length)	Lever in lower position (telephoto)
▼ Focusing distance			
5"	4" - 6"	± 1/2"	± 1/6"
3'	2' - 11'	2' 6" - 5'	3' - 3' 8"
10'	3' 4" - ∞	5' - ∞	7' - 15'
∞	4' 4" - ∞	9' - ∞	29' - ∞

Circle of confusion of $1/40$ mm in diameter. Distance calculated from the front of the camera.



Excitement in view!

The most exciting and enjoyable part of filming? Projection, of course. Those happy, sunny holidays, the joyful play of your toddler discovering the sea, these memorable moments will come even more vividly to life if your film is accompanied by music, a narration, or the voices of those near and dear to you.

It's easy to add sound directly on the film today! The Bolex SM 8 sound projector is simple to use, yet has all controls for adding a complete soundtrack. Film threading is entirely automatic, even over the sound heads. All sound controls are arranged for maximum convenience, and you can use spools with up to 800' of film. Other

features include 12 V/100 W quartz-halogen lamp, built-in speaker, socket for external speaker, output for connection to home Hi-Fi sets, overplay possibility, and a mixing console available as an accessory.

The Bolex silent 18-5 L Super projector features the same high quality and reliability and protects your films with kid-glove care. The 18-5 L Super offers exceptional picture brilliance, corner-to-corner sharpness, faithful colour reproduction, automatic threading, flicker-free slow motion at 5 f.p.s., and the possibility of adding sound by using a tape recorder connected to the 18-5 Synchronizer, available as an accessory.

Ask your photographic dealer to project one of your films on one of these projectors. Or ask the Bolex distributor to send you full information and literature on Bolex Super 8 projectors.

PAILLARD S.A., SAINTE-CROIX (SWITZERLAND)

