

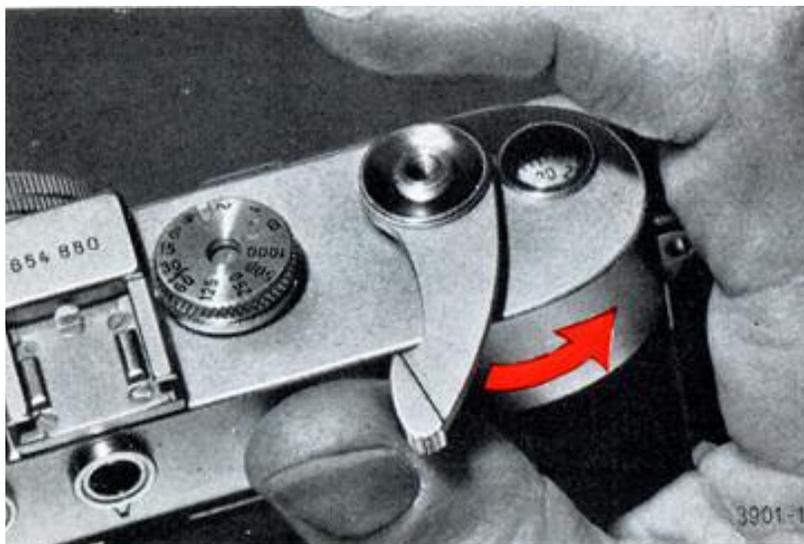
ERNST LEITZ GMBH WETZLAR GERMANY

**Instructions**

*Leica* **M 3**

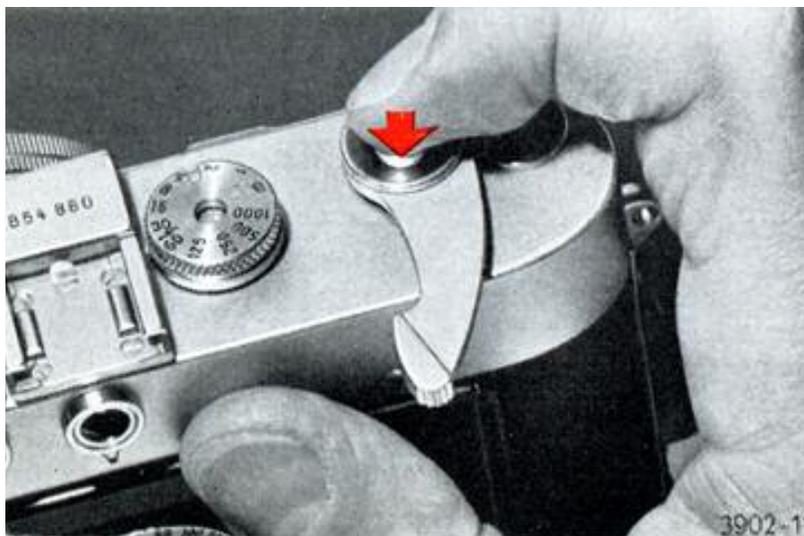
## **This Instruction Book**

contains everything you should know about your <sup>®</sup>LEICA M3. Please devote some time to reading it carefully, and practice the simple operations — without a film, to start with. You will get the hang of it much quicker than you thought. The LEICA is an advanced high-grade camera, but nevertheless - or rather because of that - amazingly simple to operate.



### **The Transport Lever**

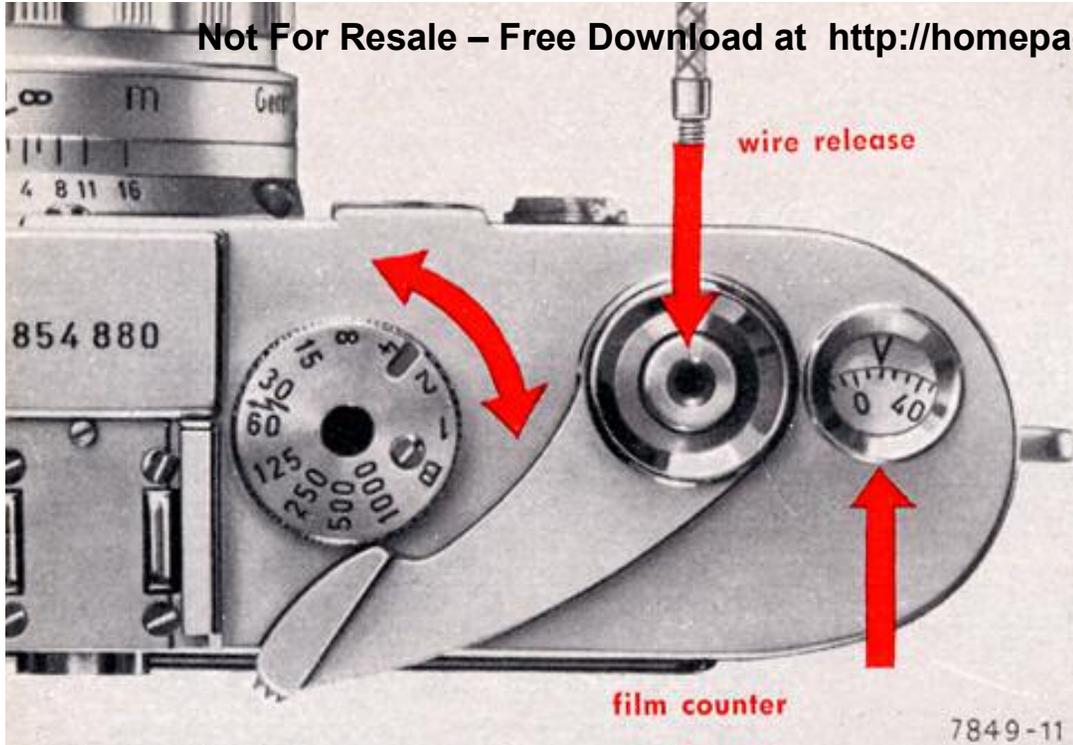
Hold the camera in both hands, and with the right thumb push the transport lever to the right as far as it will go. The lever movement tensions the focal plane shutter of the LEICA and advances the film by one frame. You may also work the film advance lever by several short strokes — if you find this more convenient.



### **The Release Button**

With the right index finger gently press down the release button - never jerk it! You will hear the click as the shutter runs down. A film in the camera would now have been exposed, in other words you would have taken a picture. Let go off the release button (lift the finger off), and you can once more operate the transport lever to tension the shutter and advance the film.

® = registered



## The Shutter Speed Dial

controls the exposure times. The engraved figures stand for fractions of a second thus 1000 indicates  $\frac{1}{1000}$  second, 125 is  $\frac{1}{125}$  second, 4 is  $\frac{1}{4}$  second, and 1 stands for  $\frac{1}{1}$  second, i.e. 1 second. The dial engages at each position when the set shutter speeds opposite the small index line, and remains at this setting. You can therefore set or read off the speeds equally well before or after tensioning the shutter. When set to "B," the shutter remains open as long as the release button is depressed.

Intermediate shutter speeds can be set within the range of 1 to  $\frac{1}{8}$  second, also between  $\frac{1}{15}$  and  $\frac{1}{30}$  second, and  $\frac{1}{60}$  to  $\frac{1}{1000}$  second (or  $\frac{1}{2}$  to  $\frac{1}{1000}$  second). The speed dial features click-stops at all engraved settings.

The photo-electric exposure meter LEICAMETER "MC" couples to the shutter speed dial as shown on pages 19-21.

For exposures with slow shutter speeds you must, of course, have a firm support. A tripod is ideal in conjunction with a locking cable-release. Screw in the cable-release without pressing the button. The handy LEITZ table tripod is very useful when travelling.

## The Film Counter

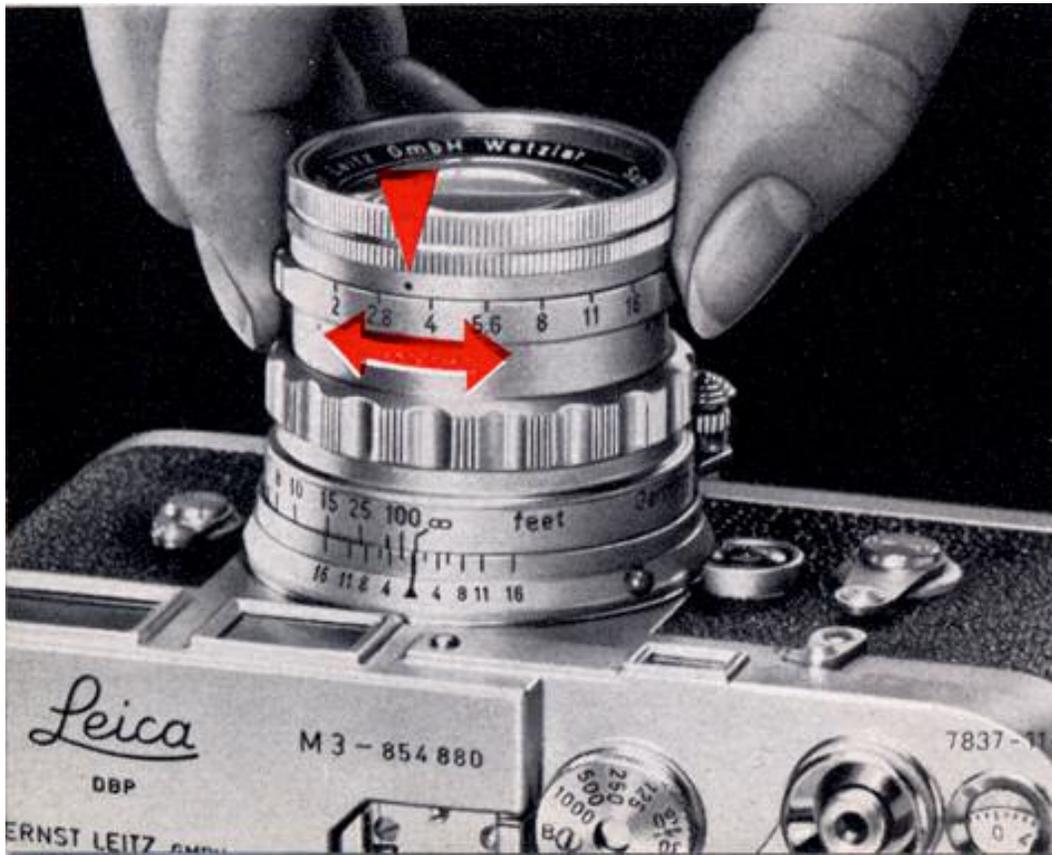
is coupled with the transport lever. If the film was correctly loaded (see notes on pages 24-26), the film counter indicates the number of exposures made. The counter stops at No. 40, and automatically returns to its initial position when you withdraw the take-up spool.

## The Iris Diaphragm

Hold the lens of your LEICA up to your eye, and rotate the aperture ring. You can then see through the lens components how the iris diaphragm opens and closes. It thus works rather like the iris of your eye which also opens or closes to adapt itself to weaker or stronger light. The iris diaphragm of the lens has a similar purpose, namely to cut down very bright light by "stopping down" — i.e. the use of a smaller lens aperture. Conversely, in poor light the use of a larger aperture admits more light to the film. At the same time the depth of field changes.

The aperture or f-numbers 1.4—2—2.8—4—5.6—8—11 — 16 — 22 — 32\*) are a measure of the amount of light reaching the film. They are chosen in such a way that

closing down the aperture from each number to the next reduces the light by one-half. Similarly on opening up, each aperture passes twice the light of the next smaller one. So remember: a high aperture number signifies a small aperture, and vice-versa.



\*) The length of this scale of numbers depends on the type of lens.

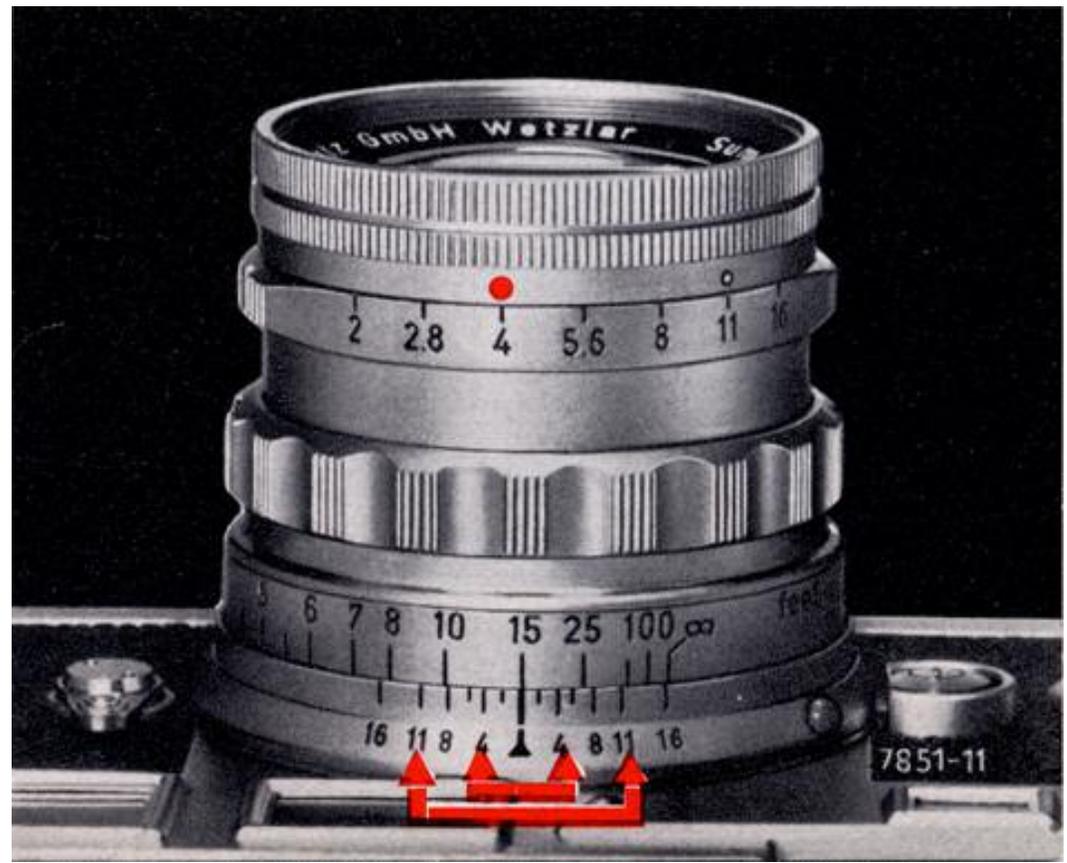
## The Depth-of-Field Scale

The picture reproduces sharpest those parts of the scene which are at the exact distance – in a plane parallel to the film – on which the lens is focused. This maximum sharpness gradually falls off in front of, and behind, that focused distance, resulting in a certain zone within which everything is still acceptably sharp. The extent of this zone of sharpness – the "depth of field" – depends on the subject distance, the focal length of the lens, and the aperture. Stopping down increases the sharp field, which is desirable for most subjects extending appreciably in depth. This also explains the importance of aperture control in photography.

To find the limits of this zone, look at the depth of field scale of your lens. The sharp zone is that enclosed between two index lines of the same aperture number. If, for instance, you have set your 50mm SUMMICRON lens to 15 feet, the available depth of field with an aperture of  $f/4$  (see red arrows in the illustration) extends from about  $12\frac{1}{2}$  to 20 feet. If, however, you stop down to  $f/11$ , the zone of sharpness covers a field from about 9 to 40 feet. (When altering the aperture, be sure to adjust the exposure time accordingly.)

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See also page 9: Optical Depth-of-field Indicator in the measuring field of the combination range-viewfinder.



## **The Brilliant-Frame Range-Viewfinder**

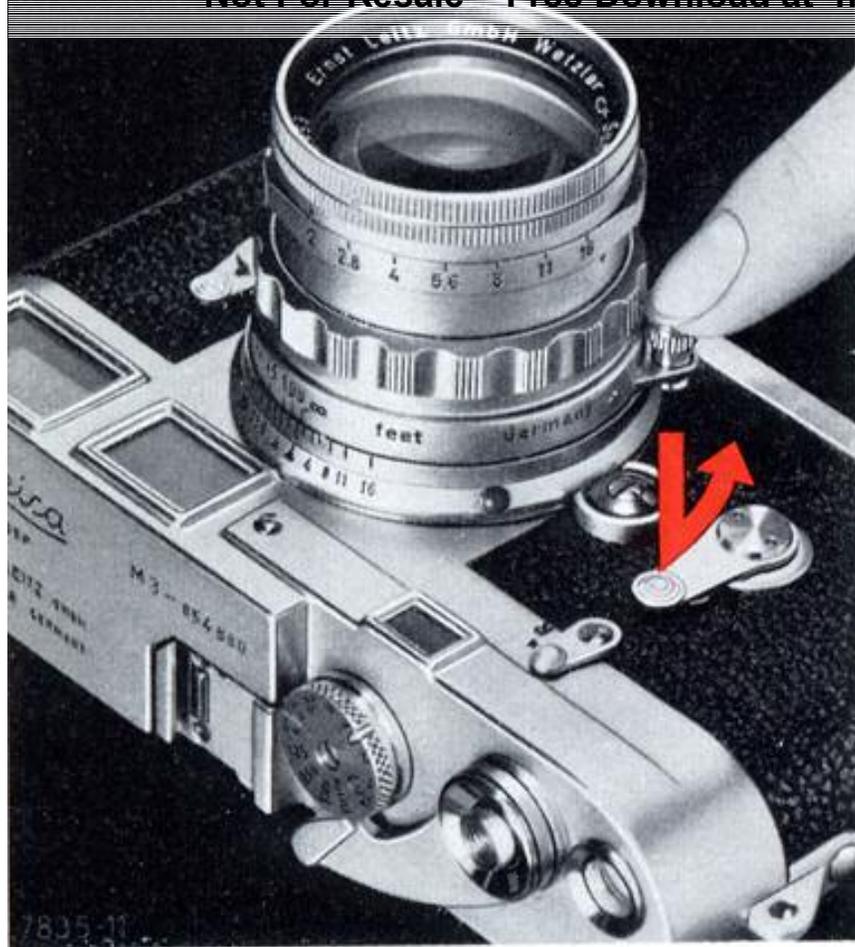
of the LEICA M3 is designed to function as both a particularly efficient viewfinder and as a highly accurate coupled rangefinder. Everything visible within the bright line frame is recorded on the film with the standard 50 mm lens. This holds true even if you are in a hurry and should happen to glance obliquely through the finder. The brilliant frame is coupled to the focusing movement and automatically shifts itself throughout the whole focusing range. This compensates for parallax errors due to the different positions of the optical axes of the lens and the finder.

The viewfinder shows the image in almost natural size. So even if you should occasionally open your other eye to survey the field, you will not be startled by a sudden change in image scale. The brightness of the brilliant frame is sufficient to show up the limits of the field equally clearly with dark subjects. An additional advantage is that the subject remains visible even during the exposure.

In the center of the finder the sharp rectangular rangefinder field is visible. This appears brighter than surrounding viewfinder area. The rangefinder field disappears if you cover the small rangefinder window with your finger. This is useful when you want to observe the effect of your subject in the viewfinder image only.



This is how the subject appears in the brilliant-frame range-viewfinder with a 50 mm lens in position.



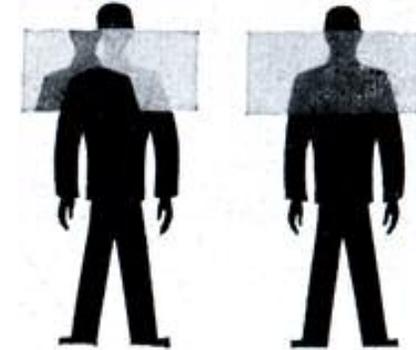
## The Distance

can be set on the distance scale engraved on every lens, or with the aid of the rangefinder image visible in the finder. Some lenses lock in the infinity position; for focusing on nearer distances this lock must be released by depressing the infinity catch.

Always remember to extend and lock the barrel of collapsible lenses (see also page 16). If you now rotate the focusing lever or mount of the lens, a scale of numbers moves past the fixed focusing index and indicates the distance in feet and/or metres. This way of focusing is less important, as you can set the distance much more accurately with the aid of the built-in coupled rangefinder. The scale is useful, however, for reading off the depth-of-field available and for special subjects where the rangefinder cannot be used.

Practice in using the rangefinder is important for developing an efficient focusing technique, and is also great fun. Set the lens to infinity, and observe, say, a window a few yards away through the rangefinder. You will see a bright sharp rectangle in the centre of the finder area. Hold the LEICA in such a way that the vertical window bar cuts through this rectangular rangefinder field. Inside the rangefinder field you will see a double image; i.e. the window bar appears as a second image to the left of the main one. This indicates that the lens is not correctly focused on the film. Now adjust the lens while still looking through

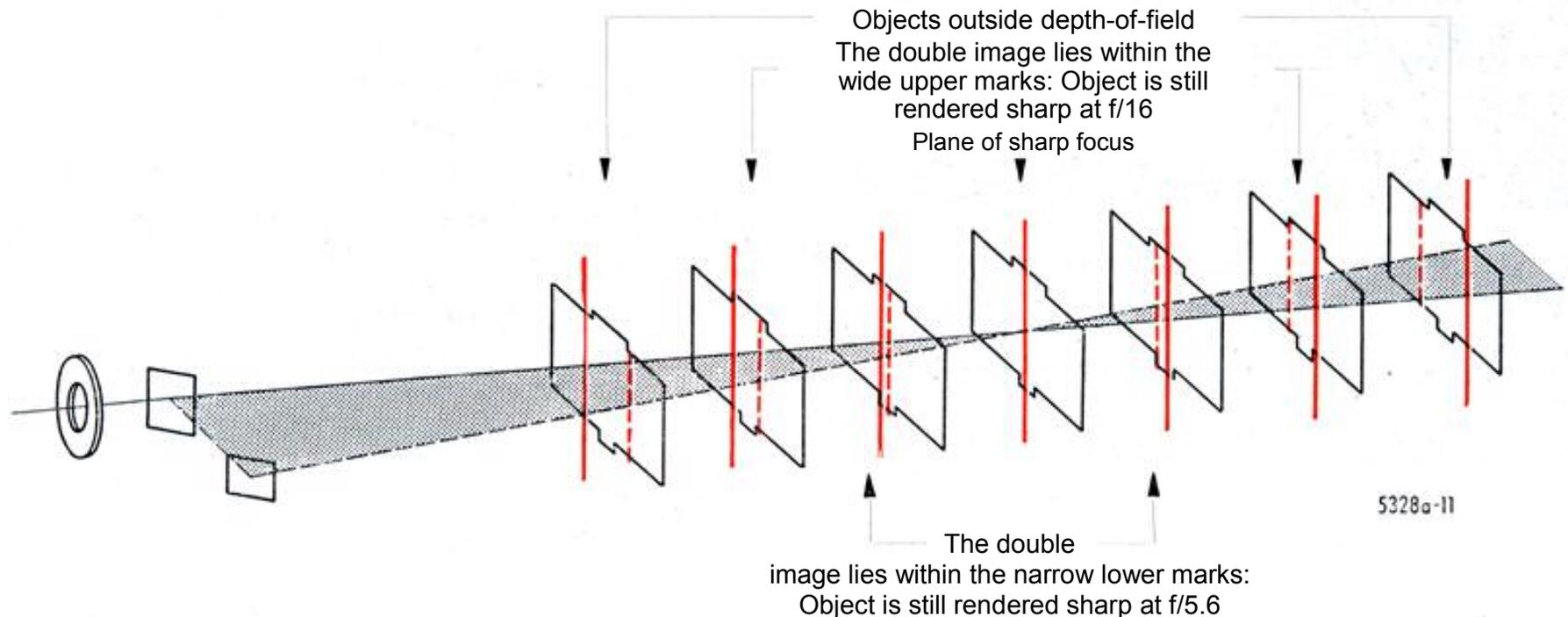
the finder; the second image moves to the right until it coincides with the stationary outline in the rangefinder field. You have now measured the distance by what is known as the **coincidence method**.



Whenever vertical lines cut through the rangefinder field, you can also measure the distance by the split-image method. This is made particularly easy by the sharp boundary of the rangefinder field. The part of the subject that is displaced sideways in this field moves across during focusing until the image becomes continuous across the boundary of the frame.

In measuring the distance you have at the same time set the lens exactly to this distance.

The functioning of the optical depth-of-field indicator in the measuring field of the combination range-viewfinder:

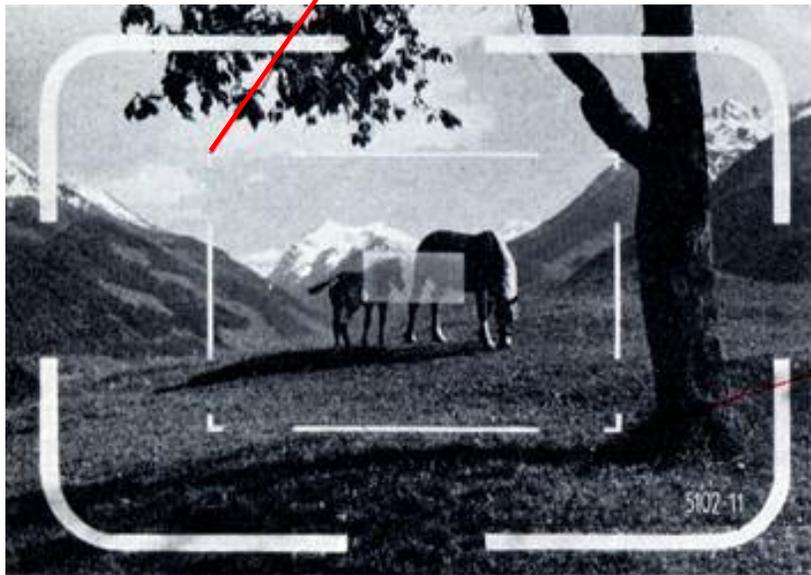


**Automatic  
Finder  
Adjustment  
for 90mm  
and 135mm  
Lenses**



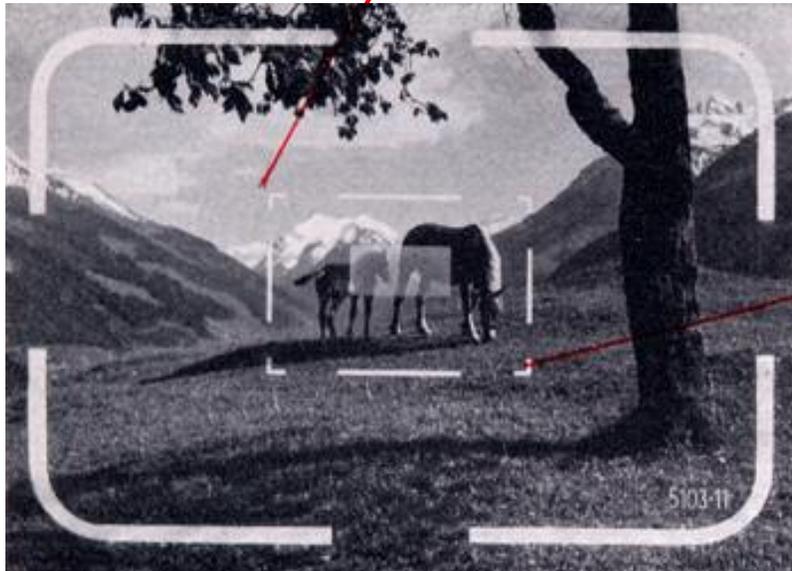
**90 mm Lenses**

Fit a 90mm LEICA lens in your LEICA M3, lock it in position, and again look through the range-viewfinder. You will now see on additional bright line finder frame which indicates the field of view covered by the 90mm lens within the field of the standard 50mm lens, and reproduced on the film with 1.8 times magnification. An important point is that the surrounding subject area remains visible in the finder, so that you can easily follow moving subjects and bring them within the 90mm finder field. In the same way the finder automatically indicates the view of the 135mm lens when you fit the 135mm ELMAR in the camera. In addition, the parallax error is



Field of view with a 90 mm LEICA lens. The subject area covered with the longer focal length is indicated by the additional bright line frame within the large brilliant frame showing the field of view of the 50 mm lens, which **remains visible all the time.**

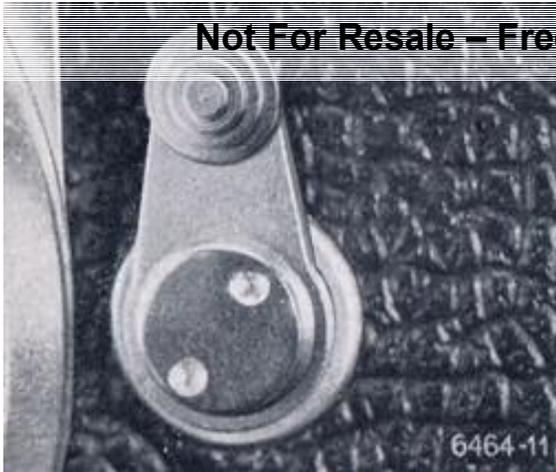
automatically compensated during focusing - just as with the 50mm lens – over the whole focusing range. The image frames visible in the finder also allow for the reduction of the field of view due to the fact that the angle covered by the lens decreases at nearer distances. The image frames are designed so as to include the full field taken in by the film even at the shortest subject distances that can be set on the coupled LEICA lenses.



Field of view with the 135 mm HEKTOR lens which yields a magnification of 2.7 times as compared with the standard 50 mm lens.

At greater subject distances the lens therefore covers a slightly larger angle of view than shown in the finder.

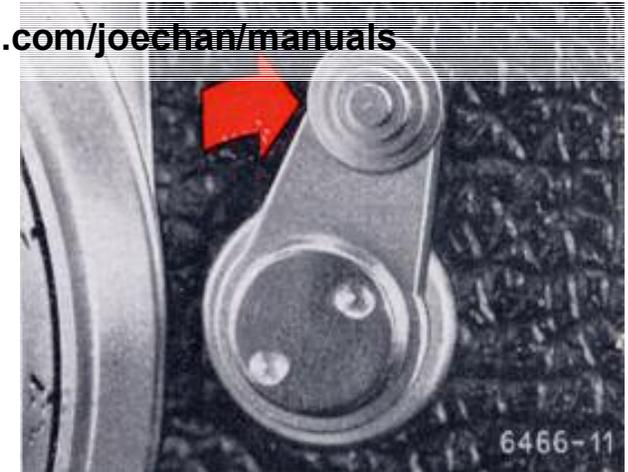
When you fit one of the 35mm wide-angle LEICA lenses with integral M 3 finder attachment to the camera, the viewfinder is automatically converted for wide-angle photography.



Lever in normal position:  
field of view for 50mm lens



Lever pointing inwards:  
field of view for 90mm lens



Lever pointing outwards:  
field of view for 135mm lens

## The Finder Frame Preselector

With the small lever on the front of the body you can make the 90mm and 135mm finder frames visible in the viewfinder even when, for example, the standard 50 mm lens is fitted to the camera. You instantly see then whether any given subject is better taken with a lens of different focal length. If you release the lever, it returns to its original position, and the additional finder frame disappears. When no lens is mounted in the camera, the finder frame for the 135mm lens appears within the frame for the 50 mm lens.

## Holding the Camera

A good camera grip is the best insurance against camera shake. Hold the LEICA M3 so that the base rests in the palms of both hands, with the thumb against the transport lever, and the index finger resting lightly on the release button. Use the left hand to operate the lens focusing lever. Keep the right eye close to the view- and rangefinder eyepiece so that the left eye, when open, can survey the whole view. Practice holding the camera

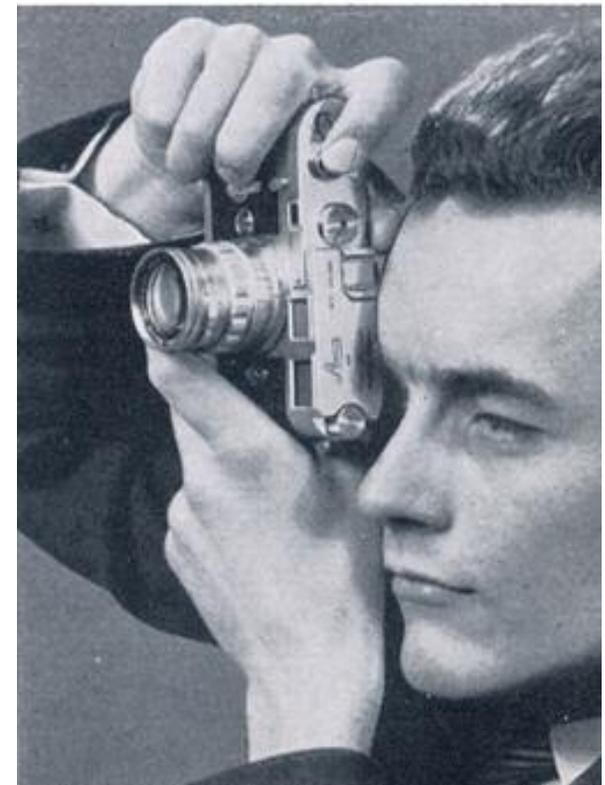
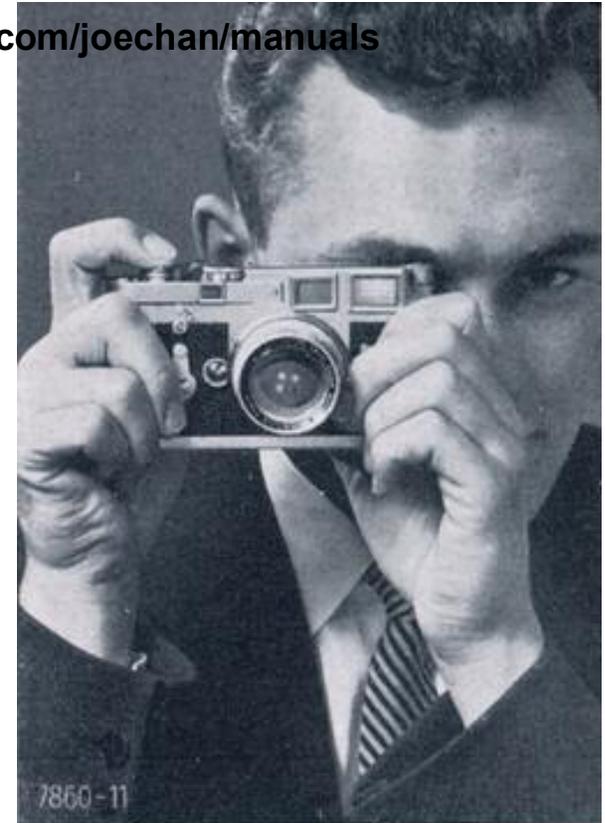
so that it is supported as much as possible against the face; the camera, head, and hands should act as one unit. The purpose of it all is to ensure a really steady camera position. This will prevent camera shake, and give you that high standard of definition which has always been the hallmark of the highly corrected LEICA lenses.

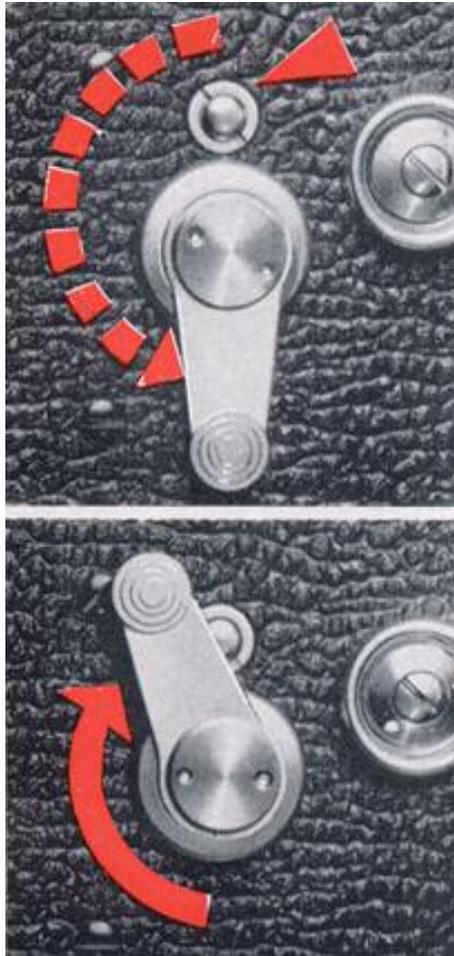
Press the release button smoothly and gently, never jab it. Move only the index finger, not the whole hand.

At first try exposing with shutter speeds of 1/60 second or faster; after some practice you will eventually be able to expose even slower shots without camera shake. If you find it more convenient, the left eye is just as suitable for viewing as the right one.

When you want to change from horizontal to vertical shots, turn the LEICA upright about the optical axis of the range-viewfinder. The camera hold does not change much. Grip the LEICA in the same way as for horizontal views.

Alternatively, you can also bring the right hand down for upright pictures, and release with the thumb. Grip the camera so that the tip of the thumb rests against the release button, and the fingers exert a counter-pressure on the base plate. Focus the lens with the left hand, and support the upper part of the camera against your forehead. This hold ensures particularly smooth releasing and film advancing. Whether you take upright or horizontal shots, you never have to take the eye from the camera, not even for picture sequences.





about 10 seconds delay

Point of release

Close-up pictures can be taken with the camera held in the hand or mounted on a tripod, the image being focused automatically with the coupled range-finder. As the depth of field is greatly reduced at such close distances, the lens should be stopped down to at least f/8 or f/11.

## The Delayed Action Self-Timer

Pull down the self-timer lever. The LEICA shutter can already be tensioned, otherwise tension it now. To make the exposure, however, do not press the release button, but the small button above the self-timer lever. You will then hear the delayed action mechanism running down while the self-timer lever slowly swings up again, releasing the shutter just before the lever reaches its original position. If you watch the lever as it 'returns, you can not only hear the moment of the exposure, but also see it; this occurs when the lever points obliquely up to the left.

The delayed action release works with all shutter speeds from 1 to 1/1000 second. With the self-timer lever fully pulled down, the delay is about 10 seconds; halfway down it is 5 seconds. Intermediate positions give intermediate delay times. You therefore have plenty of time to get into the picture yourself. The self-timer is also valuable for releasing very long tripod-mounted exposures.

## The Interchangeable Lenses of the LEICA M 3

You have a choice of focal lengths from 21 to 400 mm and have at your disposal two lenses with the exceptional aperture of f/1.4. With this range you can choose your viewpoint at will, and have complete control over the field of view and perspective. You can exhaust all pictorial possibilities.

21 mm Super-Angulon f/4  
 28 mm Summaron f/5.6  
 35 mm Summaron f/2.8  
 35 mm Summicron f/2

35 mm Summilux f/1.4  
 50 mm Elmar f/2.8  
 50 mm Summicron f/2  
 50 mm Summilux f/1.4

65 mm Elmar f/3.5\*\*  
 90 mm Elmar f/4\*  
 90 mm Elmarit f/2.8\*  
 90 mm Summicron f/2\*  
 125 mm Hektor f/2.5\*\*

135 mm Elmar f/4\*  
 200 mm Telyt f/4\*  
 280 mm Telyt f/4.8\*\*  
 400 mm Telyt f/5\*\*

\* These lenses are rangefinder coupled, but they may also be used with VISOFLEX II.

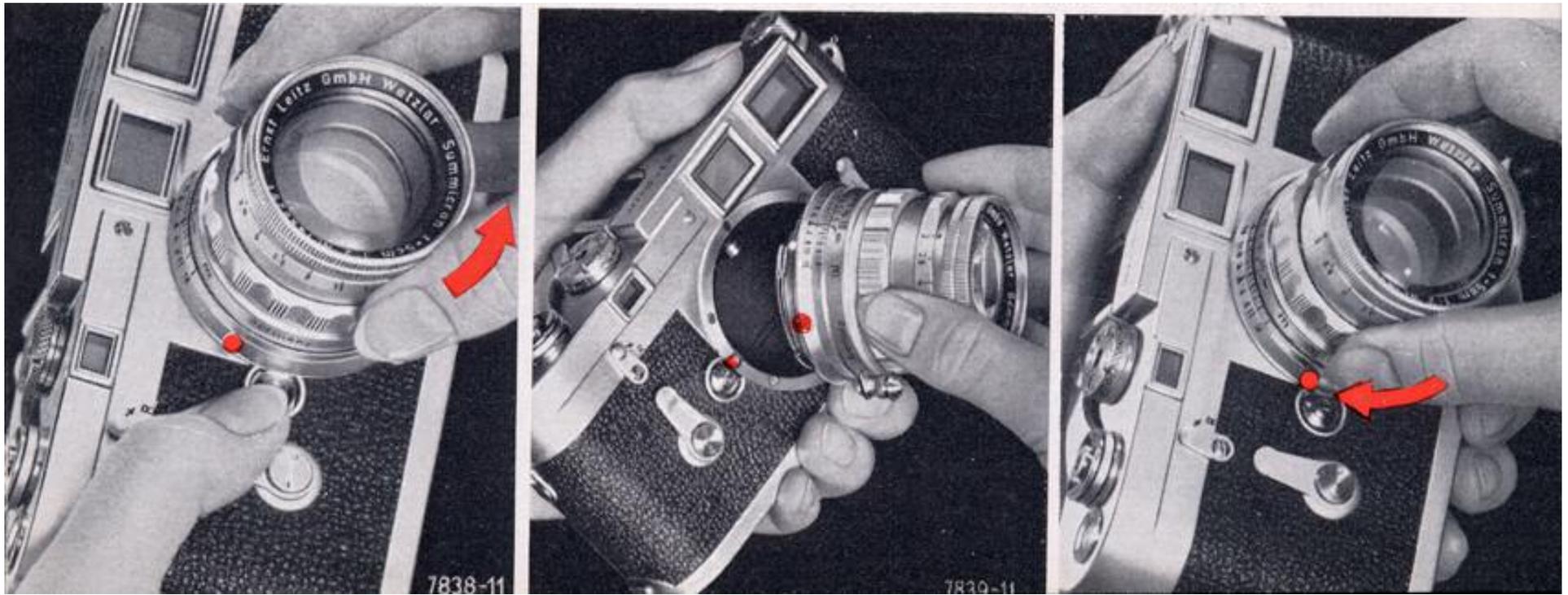
\*\* These lenses must be used with VISOFLEX I or II reflex housing, save the 65 mm ELMAR which can be used only with the VISOFLEX II.

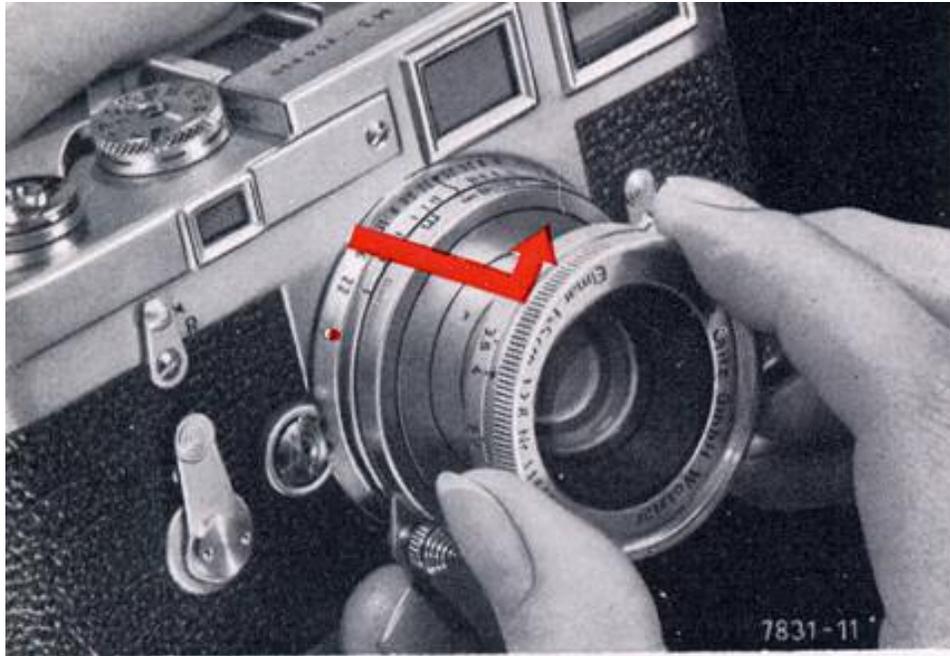
## Changing Lenses

To remove the lens, hold the camera in your left hand, pressing the button of the bayonet lock with the thumb. Grip the lens by the focusing ring with your right hand, as close as possible to the camera body, and turn anti-clockwise to release the lens. This can now be lifted out of the mount. Lenses fitted with an infinity lock should be locked at infinity before changing.

A red dot is visible next to the bayonet lock button. When another lens is to be inserted, place it in position with the red dot on the lens mount opposite the red dot on the camera body. Then secure the lens by turning it clockwise until the bayonet lock engages with an audible click.

Avoid changing lenses in strong direct light. Turn your back to the sun, and hold the camera opening towards your body. If you keep the camera and lens separately use a protective cap for each. Rear caps are available for all LEICA lenses.





## The Collapsible Lenses

When not in use, certain LEICA lenses (for instance the 50 mm ELMAR f/2.8 and the collapsible 90mm ELMAR f/4) can be unlocked by slightly turning the front anti-clockwise and pushing into the camera body. For use, fully extend the lens, and lock by turning to the right. (The collapsible 90 mm ELMAR f/4 can only be focused when it is properly extended and locked.) With any lens, always remember to take off the lens cap.

## Lens Coating

Modern coated LEICA lenses show a colored sheen on the surface, due to an anti-reflection layer which appreciably increases the brilliance and crispness of the image. The outer surfaces are hard coated and will therefore stand up to careful cleaning. In addition to its name, every LEICA lens also carries its own "personal" serial number engraved on the front mount. Make a note of this number, and of the serial number of your LEICA; they may prove to be of great help in case of loss.

## Lens Care

Any high-quality lens can yield its best performance only if the two outside glass surfaces are perfect condition. And it is much better to keep them clean than to keep cleaning them. A light yellow filter (with black-and-white film) or a colourless ultraviolet filter (for colour shots), left permanently on the lens, will protect the surface against outside influences (e.g. fine sand at the seaside). The lens hood, too, guards the lens against accidental contact with your fingers, and against splashes of water in rainy weather. To remove dust from the lens surface use a soft camel's hair brush, or in an emergency, a clean linen rag previously washed with pure soap. (Other washing or cleaning agents may leave harmful chemical residues.)

## The 50mm Dual-Range SUMMICRON

This version of the 50mm SUMMICRON lens has two focusing ranges; 1. The normal range from infinity to 3<sup>1</sup>/<sub>2</sub> feet (1 meter); 2. The close-up range from about 35 to 19 inches (88 to 48 cm) from the film-plane.

An optical finder attachment fits onto the top of the lens mount for use within the near range. This adapts the coupled range-viewfinder for close-up focusing. The lens thus acts at the same time as a close-up focusing mount with parallax compensation. The lens is inserted into the LEICA M3 — **without finder attachment** — in the usual way, by aligning the red dots on mount and body opposite each other, and turning clock-wise to lock.

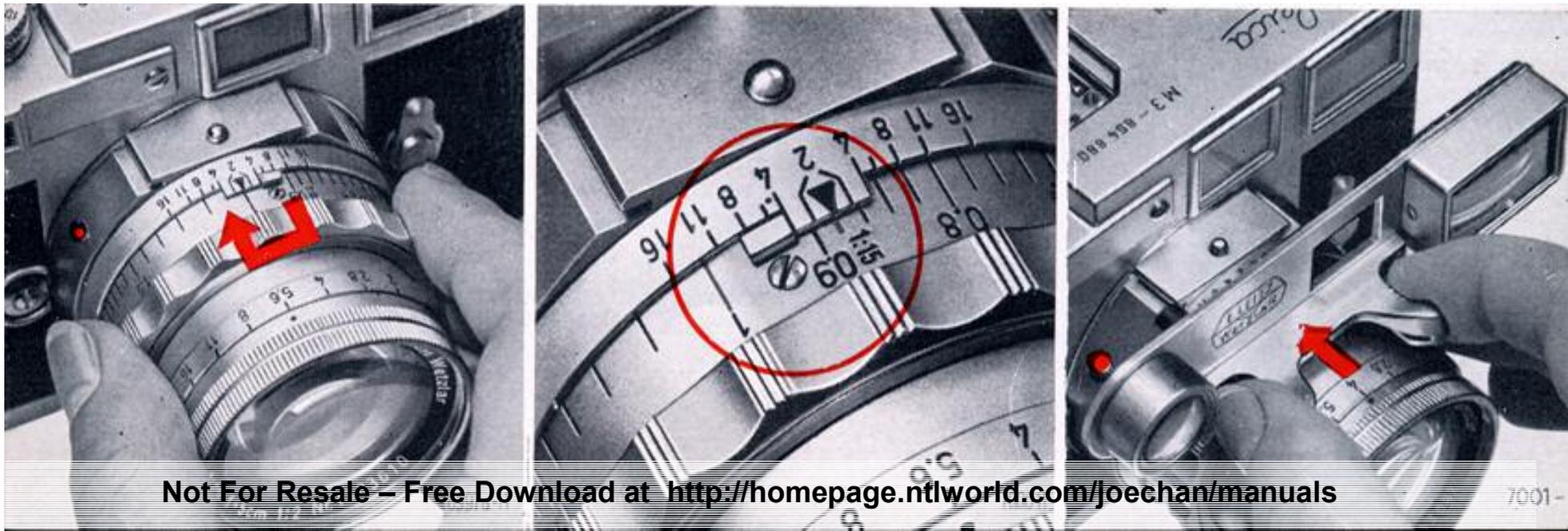
**Focusing between infinity and 3<sup>1</sup>/<sub>2</sub>, feet (1 meter).** Over this range the lens is used like any other LEICA lens. At 3<sup>1</sup>/<sub>2</sub> feet (1 meter) the focusing movement is limited by a stop.

**Focusing between 35 and 19 inches (88 and 48 cm).** The distances are measured from the back of the camera to the subject. Set the focusing mount of the lens to its near limit of 3<sup>1</sup>/<sub>2</sub> feet (1 meter), as shown in Fig. 1, pull outwards, and move it across the stop into the 35 inch (88 cm) position (Fig. 2). The lens remains locked in this position until the optical finder attachment is fully pushed home in its special fitting, thus releasing the focusing movement for the close-up range (Fig. 3).

Fig. 1

Fig. 2

Fig. 3





## In its Ever-Ready Case

the LEICA M3 is protected against the weather and minor knocks, yet is always ready for action. The lid of the ever-ready case is pivoted so that it is well out of the way even for upright shots, and cannot obstruct the lens.

## LEICA filters

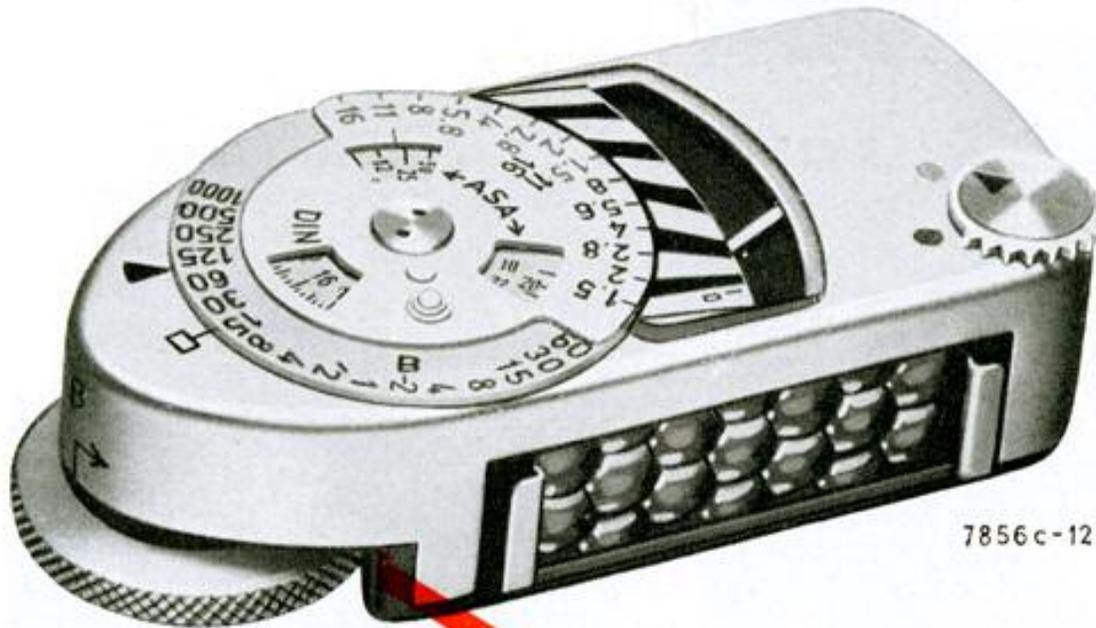
improve tonal rendition in black-and-white pictures. The yellow and orange filters, for example, yield pictorial cloud effects. The LEITZ polarizing filters subdue disturbing reflections from glass, water, and polished surfaces (other than metal ones) and increase the contrast of clouds against the sky. They are also useful in color photography. All filters for the LEICA M3 screw into the front mount of the camera lens. For special purposes two filters can even be used together (though with some risk of vignetting, if a wide lens aperture is used).



## Lens Hoods

protect the lens against direct rays of strong light sources that might give rise to flare, and also against rain and snow. Hold the lens hood so as to press in the two spring clips, place it over the lens and let it engage. Lens hood and filter can be combined; provided the correct hood is used for the lens, it will not cause vignetting (shading of the corners of the negative).

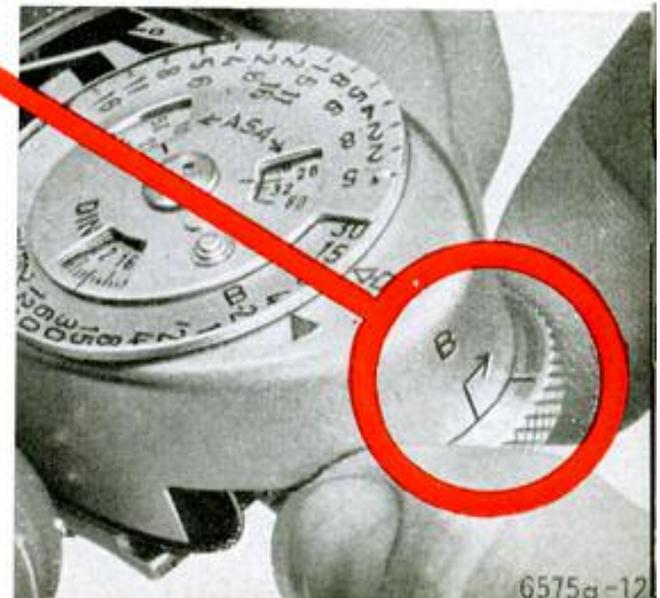
If you use the ever-ready case for the LEICA M3, the lens hood may be reversed over a number of LEICA lenses, and special lens hood caps are provided to protect the front surface of the lens.

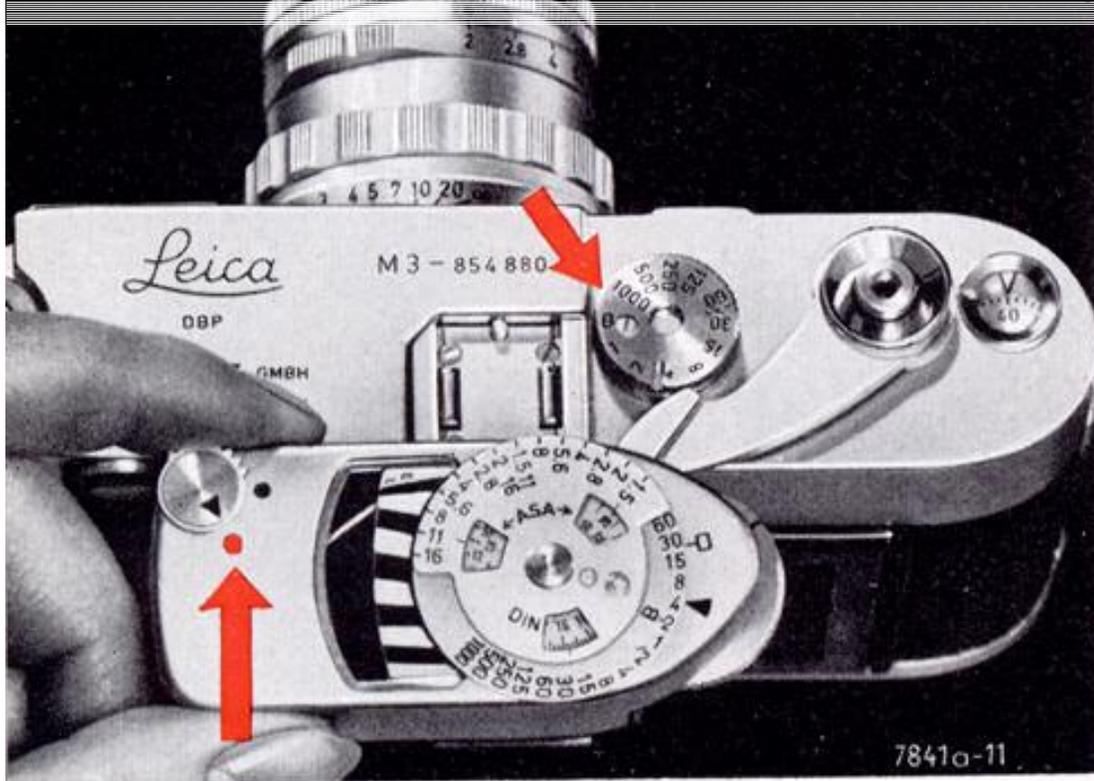


Before fitting the LEICAMETER "MC," set the shutter speed dial of the LEICA M 3 to "B." Then rotate the milled setting ring of the exposure meter in the direction of the arrow as far as it will go. The index line on the ring should coincide with the index line on the meter housing, as shown clearly in the illustration at the bottom of page 21. Now lift up the ring and continue turning in the direction of the arrow. The triangular index mark on top of the meter will then be opposite one of the figures between 4 and 120.

## The LEICAMETER "MC"

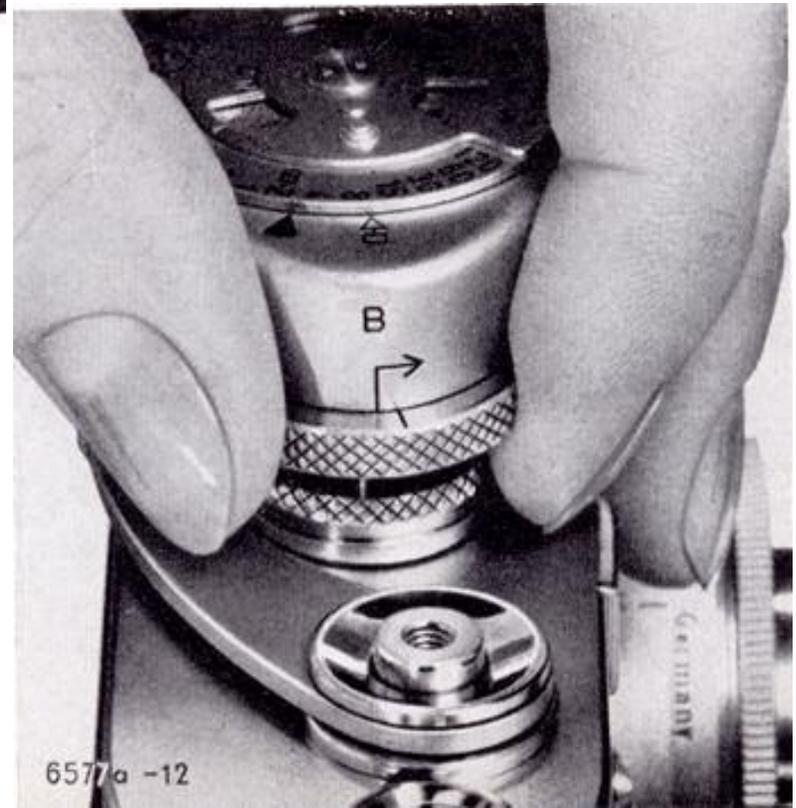
is a novel type of accessory exposure meter which couples with the focal plane shutter of the LEICA M 3. You therefore have the choice of using your LEICA camera either with the coupled exposure meter to ensure correct exposures every time, or without the meter in the usual way. Full details of the many applications of the LEICAMETER "MC" are given in the special instructions issued by the manufacturers, Metrawott AG. of Nuremberg.





The exposure meter helps you a great deal in avoiding incorrect exposures, especially with color film which needs very accurate exposure. But the instrument is equally valuable for black-and-white films, for it ensures perfect negatives of uniform quality that are easy to enlarge.

Next push the LEICAMETER "MC" into the accessory shoe of the camera as far as it will go. Turn the milled setting ring of the exposure meter backwards again **against the direction of the arrow** until it audibly engages in the shutter speed dial of the camera. The camera is now coupled with the exposure meter. To remove the LEICAMETER "MC", uncouple the milled setting ring from the shutter speed dial by setting it to "B", lifting up, and turning in the direction of the arrow (see illustration on the right) until the triangular index mark is opposite one of the figures between 4 and 120.

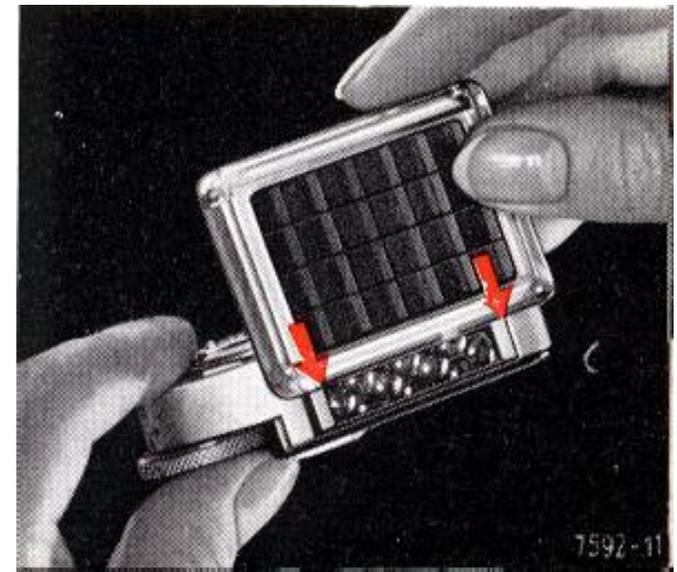




The LEICAMETER MC must be set to the speed rating of the film being used. It has two built-in measuring ranges (indicated by black and red dots on the instrument) and a third range, for extremely low illumination, is obtained by means of an accessory booster-cell (see special instructions). Direct exposure readings may be obtained in two different ways: (1) Set the desired **shutter speed** opposite the black triangle on top of the meter. Observe the aperture indicated by the moving pointer-needle, and set the lens aperture scale accordingly. (2) Set the desired **lens aperture** and turn the milled meter adjustment wheel until this aperture on the meter dial appears opposite the moving pointer-needle; the correct shutter speed is automatically set. If there isn't enough light to obtain a reading on the black aperture scale, set the range-selector to the red dot and use the red scale of apertures. Note that the first two openings on the red scale (f/1.5 and f/2) overlap the last two on the black scale (f/11 and f/16). The correct value is, determined by the position of the range selector lever.

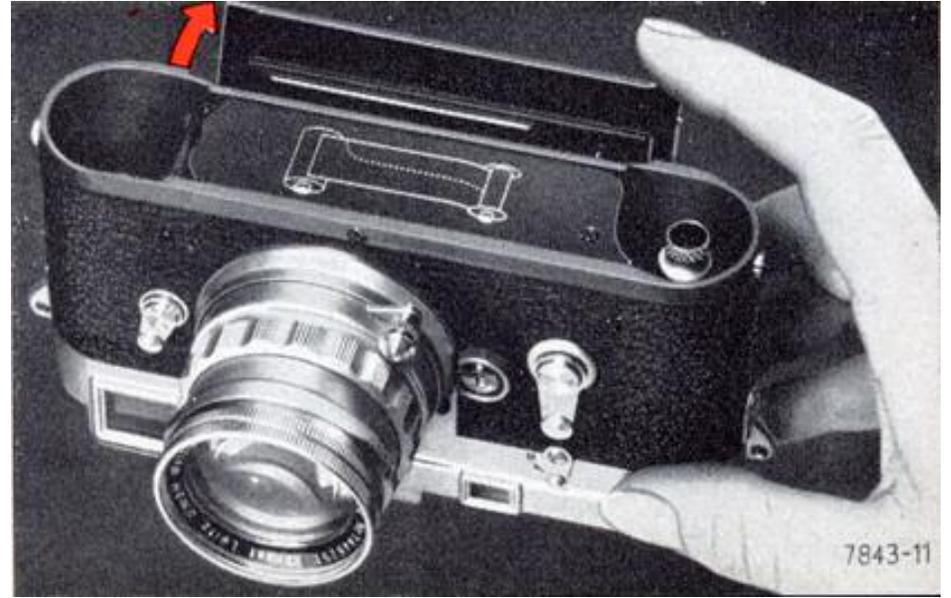
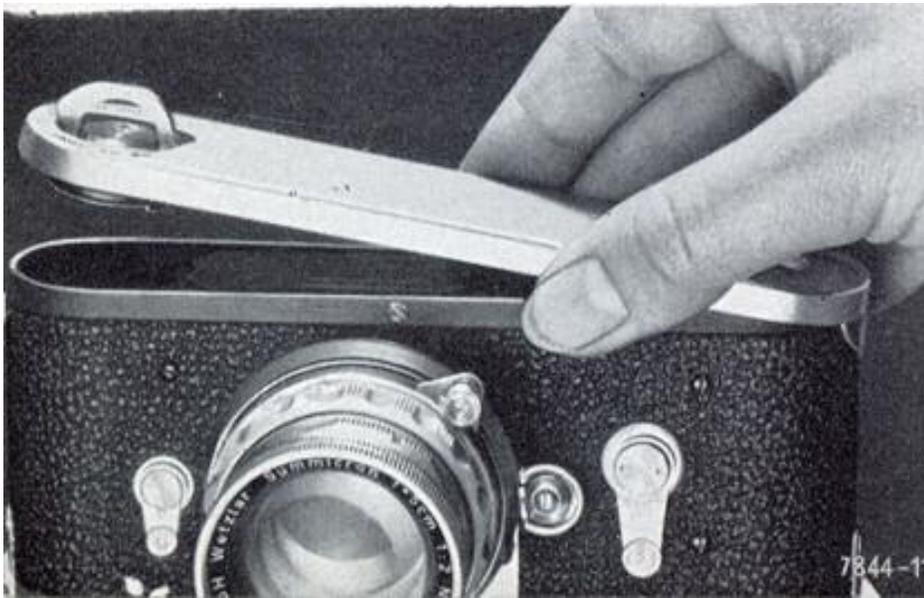
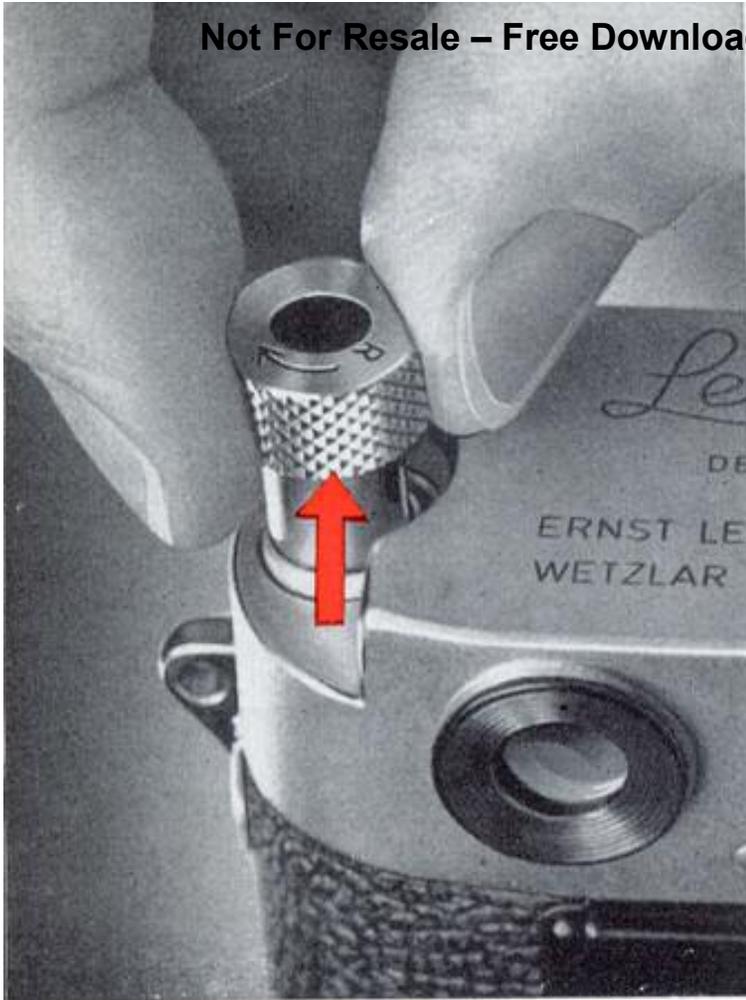
The diffusing-screen for incident-light readings attaches to the front of the meter and shows its presence by a protruding tab. See special instructions in the LEICAMETER MC manual before attempting to use this measuring technique.

For exposure times from 2 to 120 seconds turn the milled meter setting ring to "B", then lift up to uncouple before turning further in the direction of the arrow (at the right-hand side of the meter). The reading is made as described above except that the shutter-release must be held down (preferably with a locking cable-release) for the total time required. For booster-cell readings first observe the shutter speed opposite the small square symbol, then set this speed opposite the black triangle before exposing. Remember that the black triangle on top of the LEICAMETER MC always shows the speed at which the shutter is set. In the illustration above you will notice that the shutter is set at  $\frac{1}{250}$  sec., while the square symbol appears opposite  $\frac{1}{60}$  sec. Had this reading been made with the booster-cell it would be necessary to transfer the  $\frac{1}{60}$  sec. to the black triangle.



## Loading the LEICA

Daylight cassettes and properly loaded and closed "M" cassettes (type N) are light-tight. Nevertheless, avoid loading or unloading the camera in direct sunlight or strong artificial light. Outdoors, even the shade of your body will provide adequate protection. Also, do not leave exposed or unexposed cassettes lying about, but keep them safely in their cans until you are ready to use or develop them. Before opening the camera, make sure that it does not already contain a film by pulling up the rewind knob and turning it in the direction of the arrow. If you feel a resistance, first rewind the film fully, and unload

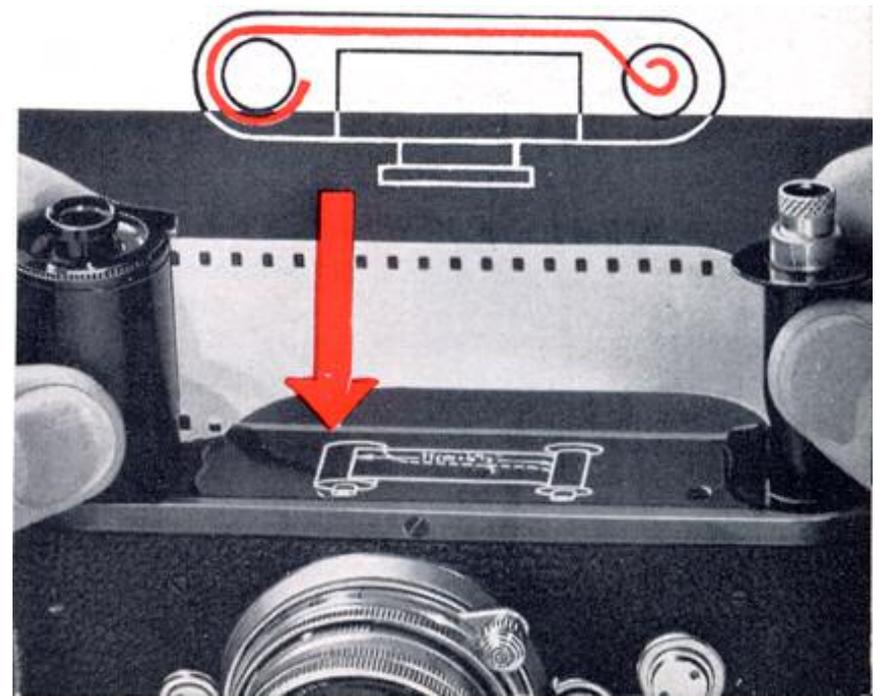
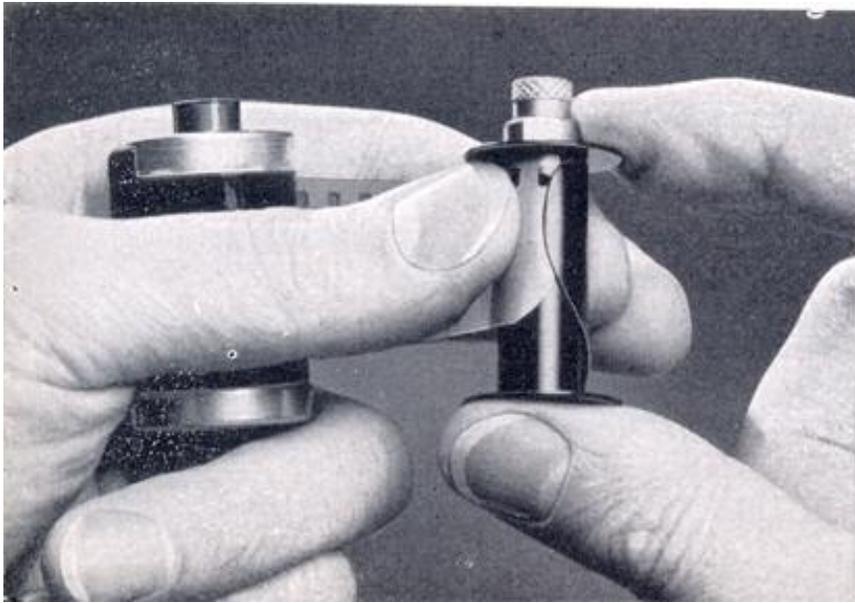


the camera as described on page 27. Turn the key in the base plate in the direction marked "auf — open", and lift off. The film cassette and the take-up spool are now easily withdrawn. Open the hinged camera back, and place the camera in front of you on the table with the open base upwards, and the lens facing you.

Hold the take-up spool in the right hand, and the cassette in the left, both with the spool knobs pointing up. Now push the beginning of the film under the clamping

spring of the take-up spool as far as it will go. The perforated film edge must lie straight against the spool flange, as shown in the illustration below.

Next, draw out just enough of the film leader from the cassette to enable you to insert the two parts — the cassette and the take-up spool — into the camera. The milled spool knobs should still point upwards and remain visible while the film slides into the film slot in front of the open camera back.



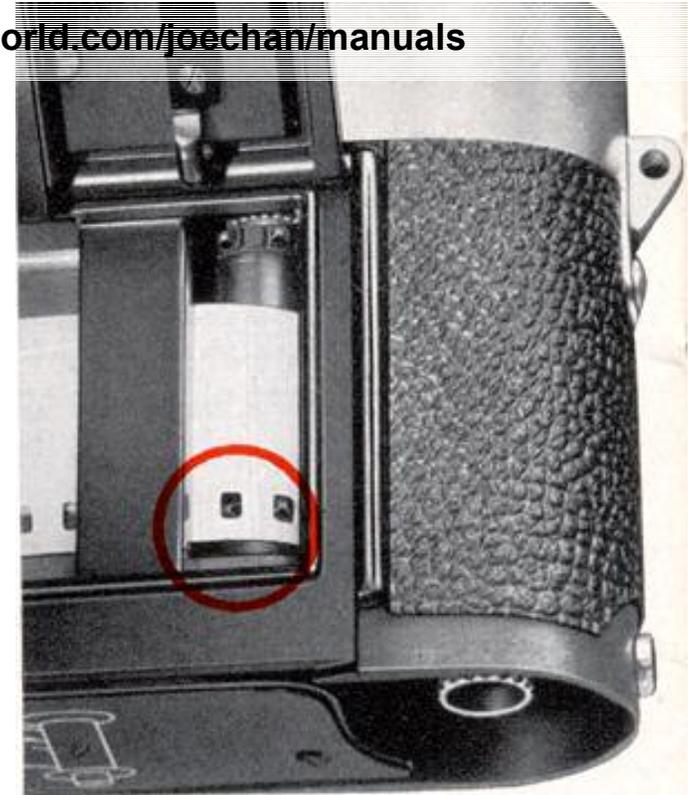
The film cassette and the take-up spool must be fully pushed home to ensure that the film lies properly between the guides.

Check that the position of the film corresponds to that shown in the diagram. The matt emulsion side must face the lens and the focal plane shutter; the take-up spool winds up the film with the emulsion side out.

The teeth of the transport sprocket should engage the perforations of the film (if necessary, slowly work the transport lever until the teeth engage).

Close the camera back, replace the base plate, and lock it, thus closing the camera light-tight.

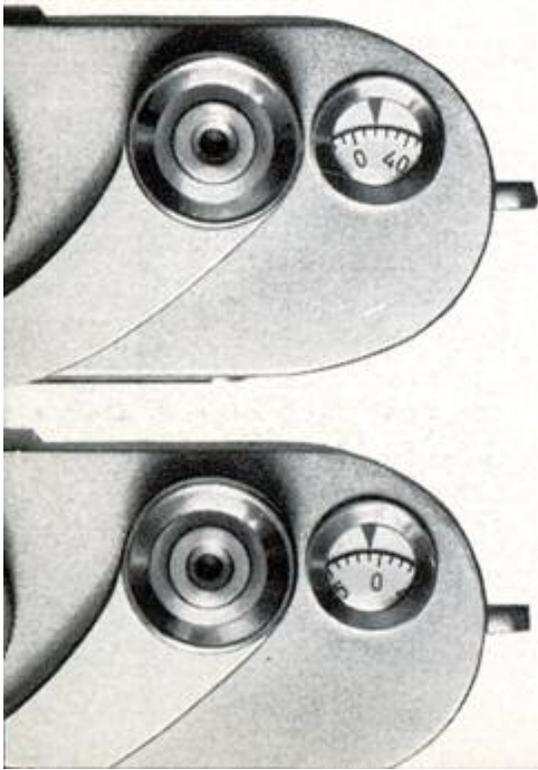
The film counter automatically returns to its starting position — two divisions before zero — when the take-up spool is withdrawn. The length of film between



the cassette and take-up spool is, of course, already fogged and useless for taking pictures.

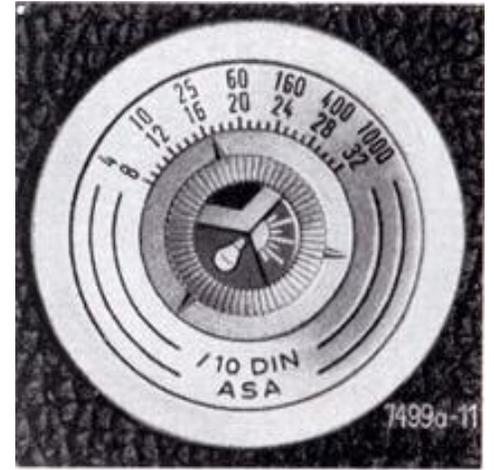
It must therefore be advanced inside the closed camera to bring a fresh, unexposed portion of the film into position for shooting. Advance the film by stroking the transport lever, and release the shutter. Repeat these steps, and advance the film once more so that the film counter indicates No. 1. You are now ready for the first exposure.

**The correct functioning of the film transport can be recognized by the fact that the red dots on the center shaft of the rewind knob rotate while the film is advanced.**



## To Set the Film-Type Indicator

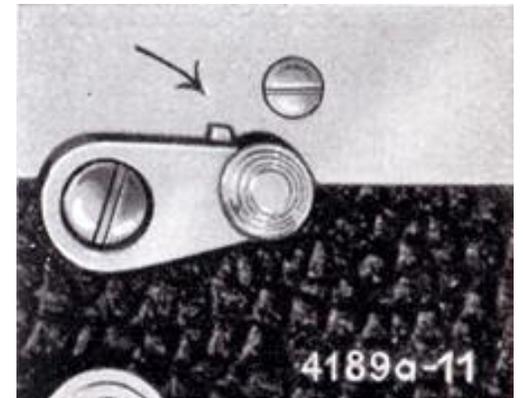
on the camera back, press one finger lightly against the center, and turn it to the type and speed of the film loaded in the camera. One of the three pointers next to the appropriate symbol (black-and-white chevron for black-and-white film, sun on red background for daylight type color film, or lamp on red background for artificial light type color film) should point to the required film speed in ASA or DIN. This then shows at a glance what film is loaded in the camera.



## Unloading the Film

When you have exposed the whole film, the transport lever can no longer be moved; a sign that the film must be rewound into its cassette. Set the reversing lever on the front of the camera to "R", pull out the rewind knob (see illustration on page 24), and turn it in the direction of the arrow until you feel a resistance. Wind past the resistance, and give the rewind knob about one more turn. The film will now have come off the take-up spool, but a short piece should still protrude from the cassette. You can then open the camera (see page 24), and remove the cassette with the exposed film. It is not advisable to rewind the film end fully into the cassette, because the protruding piece makes the cassette more light-tight. Make a note, however, on this piece that the film is exposed.

You can also partially expose the film, say the first ten frames, rewind it, and change to another film (e.g. color). When reloading the first film proceed as with unexposed film, and then keep releasing the shutter and advancing the film with a lens cap over the lens, until the film counter indicates No. 12. It is necessary to keep a space of one full frame in order to avoid overlapping.



## LEICA Films

Double-perforated 35 mm film, as used in the LEICA, is supplied by film manufacturers all over the world in several packagings and a wide range of black-and-white and color emulsions. **Daylight-loading** cassettes consist of a light-tight shell containing a length of film for 36, 20 or sometimes fewer 24x36 mm negatives or transparencies. **Daylight refills** (not available in USA) contain the same lengths of film wound onto a spool and protected against light by a length of paper "leader". They are intended for loading into empty 35 mm cassettes (or LEICA cassettes), after which they are handled exactly as daylight-loading cassettes. **Bulk-loadings** of 35 mm film are available in various lengths for darkroom loading into light-tight daylight-loading cassettes or LEICA cassettes.

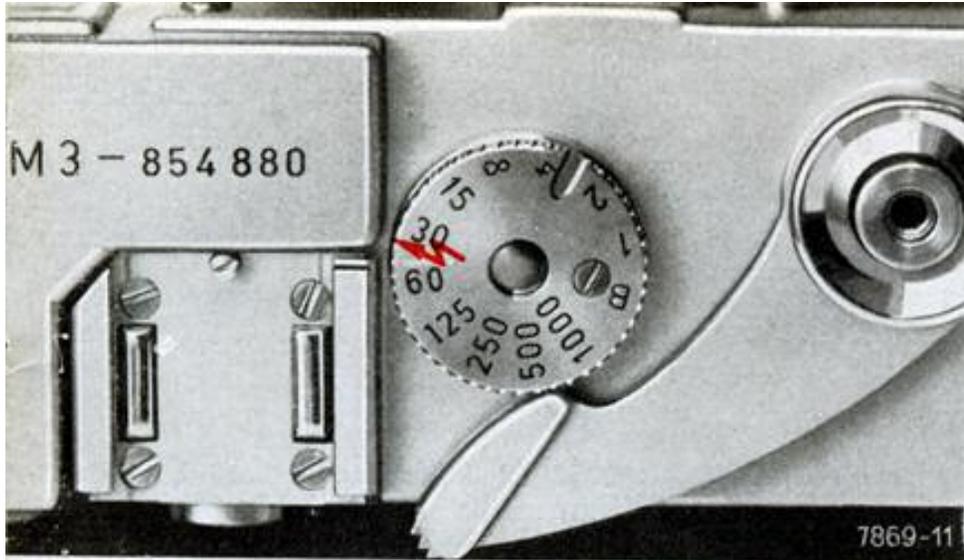
**Color films** are either reversal-films, for positive color transparencies, or color-negative films intended primarily for paper prints. Color reversal films are supplied either for daylight or various types of artificial light-sources such as flash-bulbs or flood lamps. It is important to note the type of color film before loading (setting the film-type indicator at the back of the LEICA accordingly) and to follow the manufacturers instructions relating to exposure and filtration as color films have narrow exposure latitude.

**Black-and-white films** of many types are available for the LEICA, but the most commonly used b-&-w materials are negative films intended for producing positive enlargements. These films may be divided into three broad classifications:

1 - **Medium-speed films** rated from about 80 to 160 ASA are ideal all-around materials for general-purpose b-&-w photography. They yield brilliant images, fine grain, good resolution and a great amount of exposure latitude. Their negatives will yield excellent enlargements.

2 - **High-speed films** rated at ASA 250 or higher are special-purpose materials for "available-light" photography under difficult conditions which sacrifice fine grain and resolving power to provide increased film speed. Fine for such things as night-scenes and dimly lighted interiors, but not recommended for general use in daylight.

3 — Slow films, sometimes called "thin emulsion films" have ASA speeds from about 20 to 64, yield the ultimate in image sharpness through a combination of high resolving power, contour-sharpness and extraordinarily fine grain. Ideal for great enlargements, copying and technical applications, and whenever the ultimate reproduction of fine detail is required.



## The Flash Table

All electronic flash units and most types of flash bulbs are easily synchronized with the LEICA M 3. The left-hand socket marked ⚡ is intended for electronic-flash and type F flash bulbs. With electronic-flash you can set any shutter speed between 1 second and the red ⚡ arrow which stands for  $\frac{1}{50}$  second. The effective exposure time is governed by the flash-duration of the electronic-flash. (Usually about  $\frac{1}{1000}$  sec.)

The right-hand socket is used for synchronizing class M flash bulbs. The use of focal plane type flash bulbs is recommended because these permit utilization of all shutter speeds up to  $\frac{1}{1000}$  sec. Furthermore, both electronic-flash units and flash bulbs can be connected to the M 3 at the same time, since two circuits function independently from one another.

Protective plugs are available to cover the two flash sockets on the back of the camera. A helpful hint: only leave the socket in use uncovered at any time. Connection to the wrong flash socket is a frequent cause of failures in flash pictures.

## Using flash

Details about flash bulbs, guide-numbers and suitable shutter speeds are given on the enclosed flash table for the LEICA M 3.

Note; guide-numbers are only intended as approximate guides. They are based on the use of a fairly flat, matted reflector and are valid only for subjects of average reflectivity with allowance for some light being reflected from indoor walls and ceilings.

## Practical Hints for Color Pictures

With daylight type reversal color film use only electronic flash or blue coated flash bulbs.

With artificial light type reversal color film use yellow coated flash bulbs.

With negative color film either clear flash bulbs or electronic-flash can be used, as color correction is possible at the printing stage. Only blue coated flash bulbs or electronic-flash are, however, suitable as fill-in lighting for color pictures taken in daylight.

Blue coated flash bulbs have a lower guide-number than clear bulbs of the same type.

The wide range of color films available and the need for exact exposure makes it impossible to give specific guide-numbers. We therefore suggest that you should first make some trial exposures with the chosen flash and film combination.



### Cassettes for the LEICA M 3

In these instructions we show the loading of the camera with a commercially available daylight cassette. These cassettes are very convenient, but many photographers prefer to buy their film in bulk lengths and load it themselves in the special LEITZ cassette. Such a cassette has the advantage that it is absolutely light-tight, easily cleaned, and never scratches the film, as it automatically opens inside the camera. The loading method is described in a special instruction booklet.

(Design subject to alterations without notice.)



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