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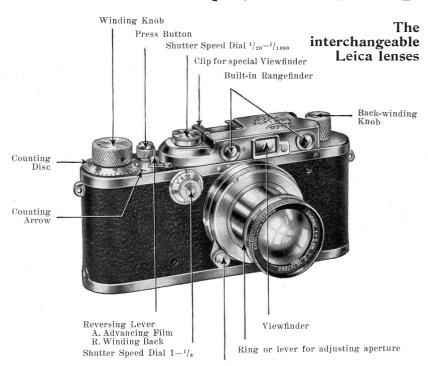
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#### PART II

# DIRECTIONS



Focusing Lever

## Leica Camera

E. LEITZ, INC., 730 FIFTH AVE., NEW YORK

#### **Contents**

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Part I of this instruction booklet deals with the use of the Leica Camera itself.

Part III is concerned with the different supplementary devices for special photographic purposes and notably with supplementary lenses and filters.

### A. The Interchangeable Leica Lenses

Every Leica camera is now fitted with a lens-changing flange which makes it possible to interchange lenses of various focal lengths without any difficulty, as the camera as well as the lenses are all standardized. The lenses are simply screwed moderately tight into the changing-flange. In order to ensure accuracy for all time we employ a changing serew flange and not a rapid or bayonet thread. When changing lenses the open camera should not be exposed to bright light but held with the aperture towards the body until the lens is screwed in.

All Leica lenses are high class Leitz anastigmats and their optical data are chosen so as to suit various purposes. There is therefore hardly a branch of photography to which the Leica camera cannot be applied with success.



Fig. 31

The following Leica lenses are supplied:

"Leitz-Elmar" F/3.5, 50 mm. focus (standard lens),

"Leitz-Elmar" F/3.5, 35 mm. focus (wide-angle lens),

"Leitz-Elmar" F/4, 90 mm. focus (portrait and distance lens),

"Leitz-Hektor" F/1.9, 73 mm. focus (ultra-rapid lens of long focal length).

- "Leitz-Hektor" F/4.5, 135 mm. focus (distance lens having great resolving power),
- "Leitz-Hektor" F/6.3, 28 mm. focus (extra wide-angle lens),
- "Leitz-Summar" F/2, 50 mm. focus (ultra-rapid universal lens),
- "Leitz-Telyt" F/4.5, 200 mm. focus (tele lens with reflex focusing),
- "Leitz-Thambar" F/2.2, 90 mm. focus (soft focus portrait lens of great rapidity).

The Standard Lens "Leitz-Elmar" F/3.5, 50 mm. focus. Owing to the favourable choice of focal length and relative aperture, this lens is the most suitable universal lens for small size negative photography, and cannot be displaced by any of the following special lenses, for it has a particularly well graded depth of focus, resulting in a remarkably realistic effect in respect of space. It will therefore always remain the most ideal lens for the majority of amateur photographers.

The tubular socket of the "Leitz-Elmar" 50 mm. lens is pulled out for photographing and locked in a bayonet catch by turning it to the right (clockwise). When the camera is not in use the lens socket is turned to the left and pushed into the camera body.

The "Leitz-Elmar" lens F/3.5, 35 mm. focus is intended primarily for architectural photographs. With these it often happens that the practicable distance between the camera and the building is not sufficient to show the latter in its entirety upon the negative. Since the 35 mm. lens embraces an angle of nearly 65°, and the 50 mm. lens only an angle of 48°, the former has an undoubted advantage over the latter when architectural subjects are to be photographed. The smaller lens is also very useful for interiors. This lens, it should be noted, is mounted in an inextensible tube. We should like to mention that photographs of interiors are possible with long exposures even without a tripod, by holding the camera with its back against a wall. For the 35 mm. lens the universal view-finder is used. (Particulars on view-finders will be found on page 15.)

This lens may also be used for photographing general subjects, especially when taking photographs of objects at rapidly changing distances. By this means, one can avoid constantly altering the focus, as the great depth of field resulting from the short focus makes it possible to keep a large depth of field

in sharp focus at a constant focal adjustment. For instance, at an aperture F/4.5 and the focus set to 21 ft., the field extends from  $9^{1}/_{2}$  ft. to infinity. Further data may be obtained from our depth of focus tables.

In order to make the utmost of the optical quality of the 35 mm. Leitz Elmar it is advisable, as in the case of all wide-angle lenses, to use the full aperture only when unfavourable conditions of lighting make it necessary.

The "Leitz-Elmar" Lens F/4, 90 mm. focus, is mainly used for photographing distant views, but it is also very suitable for portraits when it is desired to fill the whole negative with head or head and shoulders without the necessity of getting too close to the subject. Owing to the increased working distance it is frequently used to avoid distortion of proportion. This lens is used with our universal view-finders (see page 15). The image angle for Leica negatives of the "Leitz-Elmar" 90 mm. lens is 270.

The "Leitz-Elmar" lens 90 mm. measures only 3" and weighs 10 ozs. Where it is required, therefore, to have a distance lens of fairly wide aperture but small size and weight, this lens will be preferred.



Fig. 32

The "Leitz-Hektor" F/4.5, 135 mm. covers the same range of application as the "Leitz Elmar" 90 mm., but surpasses the latter in that it has a higher resolving power and gives images half as large again as with this latter.

When working with these long focal length lenses it is particularly important to keep the camera steady. When using the 135 mm. lens the left hand should hold the lens mount from below, in rifle fashion, whilst the right hand should control the



Fig. 34. "Leitz-Hektor" lens F/1.9, 73 mm. focus

release. This should not be done in jerks but by gradually applying pressure as when working the trigger of a rifle. Preferably a tripod stand should be used with this lens, in order to avoid blurred pictures.

The "Leitz-Hektor" F/6.3, 28 mm. focus, is purely a wide-angle lens with an angle of image of  $76^{\circ}$ . Even at the remarkably large aperture for this angle of F/6.3 it gives absolutely sharp negatives entirely free from distortion. We wish to mention particularly that this lens also is coupled with the rangefinder, which has not been done before with lenses of this focal length. The relatively great light transmitting capacity of the lens permits of making short instantaneous exposures even under unfavourable lighting conditions.

The large angle of view included by the 28 mm. Leitz-Hektor lens makes necessary a more judicious use of the lens diaphragm than is needed with lenses of narrower angle if the

greatest advantage is to be taken of the optical performance of this lens. The lens should accordingly be left at full aperture only in the case of exposures which have to be made under unfavourable lighting conditions. For the best results the judicious use of the diaphragm should also be accompanied by the choice of an exposure setting which is on the ample side.

The use of strong filters should be avoided with this lens, so far as is possible, owing to the fact that the marginal rays, which as a consequence of the wide image angle impinge very obliquely on the filter, are cut down to a much greater extent than the axial rays, which fall normally to the surface, so that a noticeable falling off in illumination may ensue. With



Fig. 35. "Summar" F/2, 50 mm., collapsible mount

the excellent tone rendering obtainable with modern negative materials, however, there is in any case little occasion for the use of such filters.

The "Leitz-Summar" F/2, 50 mm. is a first-class universal lens. Even at full aperture, this lens gives critical definition right to the very corners. The particularly good chromatic correction is especially important in conjunction with the use of modern panchromatic films. The construction of this lens is such that pictures taken with it have a definite plastic effect. The lens is therefore equally suitable for all kinds of artificial light and Press photography as for general amateur photography.

The "Leitz-Summar" is obtainable in a collapsible mount.

The "Leitz-Summar" has arrows at right angles to each other on the lens socket-tube, for use when pulling out and locking the lens. On the ring which encircles the lens socket-tube, there is a short line. This line must be flush with

the arrow in the longitudinal direction of the socket-tube. The lens can then be drawn out completely, and the second arrow then appears horizontally on the socket-tube (see Fig. 35), indicating the direction in which to lock the lens. The lens is simply turned right round to the stop and is then securely locked. The aperture figures can be conveniently read from above. When locking the lens, hold only the first milled ring, without touching the milled ring behind, which serves for adjusting the aperture.

The aperture should be set only after the lens has been locked.

Owing to its great light transmitting capacity, the "Leitz-Hektor" lens F/1.9, 73 mm. is of particular importance for the Press photographer and where a longer focus for greater distances is desirable. At full aperture attention must be paid to correct setting, in order to remain within the depth of field. As the lens is stopped down, the image gains rapidly in sharpness, so that it is also suitable for landscape photography.

At full aperture it is an ideal lens for portraits, as the long focal length and large aperture result in a neutral background, an effect which is often desirable in portraiture.

The "Leitz-Telyt" F/4.5, 200 mm. focus is, like the long distance lenses of 135 mm. focus, mainly for distance photographs, but it may also be employed successfully for portraits (large heads, etc.), sport and Press photography at great distances, photographs of animals in zoological gardens and in their natural surroundings. With the "Leitz-Telyt" the image ratio is rather more than one half larger than with the lenses of 135 mm. focus; accordingly the angle of image of the "Leitz-Telyt" is only 12°. With this small angle an exact determination of the field as well as exact compensation for parallax with one of the ordinary view-finders is difficult. The lens is therefore equipped with a reflex arrangement in which parallax is eliminated as a matter of course and the field of view can be observed on the ground glass screen. The focus is also adjusted with this reflex arrangement, thus eliminating the coupling with the rangefinder. The viewing of the image on the ground glass screen and the focusing are simplified by a 5 X and a 30 X magnifier.

It is advisable always to use the lens on a tripod, to avoid shaking. The exposure is made by means of a double release, which in rapid succession removes the mirror out of the path of the rays and than operates the shutter. A detailed description and instructions for the use of this lens are contained in the special leaflet "Leitz-Telyt" F/4.5, 200 mm.



Fig. 36. "Leitz-Telyt" lens F/4.5, 200 mm. focus

The "Leitz-Hektor" F/4.5, 135 mm. can also, in a shorter mount without coupling, be used interchangeably with the "Leitz-Telyt" in conjunction with the reflex arrangement. Earlier specimens of the 135 mm. Leitz Hektor lens (below No. 241,000), already distributed, differ from current models in that the lens has to be screwed into the short mount and require conversion which must be carried out in our factory. Converted lenses or lenses supplied with short mounts can also be used in the ordinary way by means of an intermediate mount with a coupling ("Zooke").

The "Leitz-Thambar" F/2.2, 90 mm. focus gives at full aperture and moderately stopped down, soft definition and is therefore chiefly suitable for portraits and for certain landscape photographs; when stopped down further the definition becomes sharp, so that it may also be used for sharp landscape and distance photographs.

The degree of the soft effect obtained is controllable within wide limits by the use of the normal iris diaphragm and an additional screw-in central diaphragm. It is greatest with the iris diaphragm at full aperture and with the central diaphragm screwed in, and somewhat less when working with the iris diaphragm at full aperture and without the additional screw-in



Fig. 37. "Leitz-Thambar" lens F/2.2, 90 mm. focus

diaphragm. Stopping down the iris diaphragm lessens the softness, but only then uniformly over the whole field when the central diaphragm is screwed in.

The white aperture scale on the "Leitz-Thambar" applies when working without the central diaphragm, the red one when the central diaphragm is screwed in.

The white aperture scale on the 90 mm. Leitz-Thambar lens is for use when the lens is being used without the central stop: the red scale, on the other hand, for when the central stop is screwed into place. If the iris diaphragm is closed down further than F/6.3, then the central stop must be screwed out, in order to permit a uniform illumination of the whole image field. For this reason the aperture figures from F/9 downwards are given in white only.

The image ratio of the various lenses is proportionate to their focal length, i. e. 28:35:50; 73:90; 105:135:200.

The helical mount. Every lens possesses its own helical mount for focusing. That of the lenses of 28 mm., 35 mm. and 50 mm. focus, is actuated by the focusing lever 17 (Fig. 1) Part I; that of all other lenses, however, by means of the large milled ring (see Fig. 34 and 37). An index line indicates the distance.

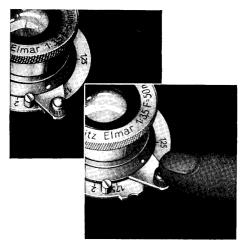


Fig. 38. The infinity catch

In addition to the main index line, Leica lenses\* now have a second index denoted by R, which serves for focusing when taking infra-red photographs. The object is focused differently according to whether the lens is coupled with the rangefinder (Leicas D, F, G and FF) or not (Leica A, C and E). When the lens is not coupled with the rangefinder, the distance is read off on the rangefinder scale and the lens set to that distance by means of the index R. When the lens is coupled and in the case of the accessory for single exposures "Oleyo", "Oligo"), as well as when the revolving stage-plate copying apparatus is being used, the lens is first focused in the usual manner, then the helical mount displaced until the index R points to that position on the scale which was first indicated by the main index.

The infinity catch. If the helical mount has reached the infinity position  $(\infty)$ , it is automatically engaged and locked. By pressure on the button of the focusing lever it may be released. This device (Fig. 38) is present on lenses of focal length 50 mm. or less.

<sup>\*</sup> Apart from the two short-focus lenses, with which the maximum sharpness in the case of infra-red exposures always lies within the depth of focus at the full aperture.

Coupling. The mechanism of the built-in rangefinder is interconnected with the helical focusing mount of the lens by means of special devices. By screwing the lens into the camera, the connection is automatically ensured. The automatic coupling represents fine motion mechanism of highest precision and guarantees utmost convenience and greatest rapidity in photographing with the Leica.

The diaphragm of the "Leitz-Elmar" 35 mm. and 50 mm. and "Leitz-Hektor" 28 mm. lenses is adjusted by means of a small lever with index line. The other lenses have a thin milled ring for adjusting the diaphragm. The figures read off are the relative apertures of the lenses. The ratio of time of exposure compared with the full open aperture is as follows:

Relative aperture 1.9 2.0 3.2 3.5 4.5 6.3 9 12.5 18 Ratio of exposure 0.36 0.4 1 1.2 2 4 8 16 32

The excellent quality of our photographic lenses is due not only to progress in the art of computation and more exact methods of production, but also to the use of special kinds of glass. Maintaining the high reputation of our Works, it goes without saying that we use optical glass of the very best quality only; in spite of all technical advancement, however, it has not yet been practicable to produce glass having certain novel optical properties so as to leave it entirely free from small air bubbles. Hence, complaints as to these are not justified, since their presence in our special lenses merely indicates the use of glass with valuable physical properties. Isolated bubbles such as are allowed to pass through our controls, have no influence whatever on the quality of the image, and the loss in light intensity is absolutely negligible.

### The Depth of Focus Scale

To enable one to read off figures for the depth of focus for the different lens apertures directly from the Leica camera, a special scale has been provided on the lens mount bearing the aperture figures from 1.9, 2, 2.5 or 3.5 respectively to 18 or so, diverging from either side of the central index mark. (See Fig. 39.)

The following is the method for ascertaining the depth of focus.

First, set the main index to the appropriate distance figure obtained by measuring or guessing of the distance to the object, say 12 feet. With aperture 6.3 the two index lines

marked 6.3 on the depth of focus scale indicate a range of depth of focus from 9 to 18 feet; with aperture 4.5 a range from 10 to 15 feet; and with aperture 18 a range from 6 feet to "infinity". (This example refers to a 50 mm. lens.)

If it is desired to obtain the utmost depth of focus for a distant view with foreground, not the main index is set to infinity but that index line of the depth of focus scale which corresponds to the aperture used. With aperture 18 the depth of focus then covers a range from  $6^{1}/_{2}$  feet to "infinity", and with aperture 6.3 a range from 18 feet to "infinity".

It is understood that the reading of the depth of focal range is limited by the two ends of the distance scale, namely, 3.5 feet and "infinity". All figures on the depth of focus scale appearing beyond these limits have no significance on the reading. In other words, when setting the main index to 3.5 feet the near point of the depth of focus range cannot be read off. When set to 100 feet the far point of the depth of focus range for aperture 3.5 lies at infinity, and similarly for all smaller apertures, although the far index of these small apertures extends beyond infinity.



Fig. 39.
The depth of focus scale

The reading of the depth of focus at the depth-of-focus scale is sufficiently accurate for all practical purposes. A specially computed table issued by us contains more accurate figures, the calculation of which is based on a circle of confusion of  $^{1}/_{30}$ th mm.

The beginner will find it advisable not to worry about the depth of focus scale, and especially not about the tables. His first aim will be to obtain his results with two settings of the focusing scale: for distant views, stop at 6.3 and setting on infinity, for portraits, full lens aperture and exact focusing on his subject. Only when he approaches more difficult subjects will he learn to avail himself of the depth of focus scale and later on of the tables, should he have to work very exactly.

### B. View-Finders for the Leica Camera Leitz Angular View-Finder

for the Leica Camera with 50 mm. lens

The Leitz Angular View-Finder ("Wintu") enables one to make exposures without attracting attention as the sighting

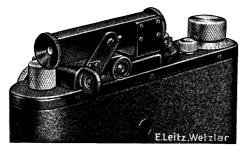


Fig. 40. The Angular View-Finder

device lies at right angles to the object to be photographed: that is, the photograph is taken as it were "round the corner". The forked bracket of the angular view-finder is slipped into

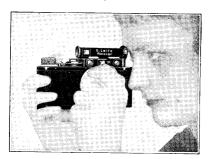


Fig. 41. How to use the Angular View-Finder

the clip on top of the camera and the small prism attached to the finder is switched in front of the eyepiece of the range finder (see Fig. 40). The camera is held during the exposure as illustrated in Fig. 41. Focusing by means of the reflecting

prism of the angular view-finder is simplified if the object is first sighted in the eyepiece of the finder.

The angular view-finder can only be used with the Leica camera and Leica lenses of 50 mm. focal length. The image appears right and left reversed.

For the Leica E the angular view-finder is supplied in an alternative form (without the prism arm for the range-finder).

#### Leitz Universal View-Finders

#### for the Leica camera with interchangeable lenses

When using the Leica camera with interchangeable lenses, the various fields covered by the different lenses are determined with the aid of special optical viewfinders which slip in the clip on top of the camera body.

# The Large Universal Finder "Vidom" for all Leica lenses (except 28 mm. and 200 mm.)

This finder contains an oblong diaphragm which is adjustable in size. By means of a milled ring the field of view is

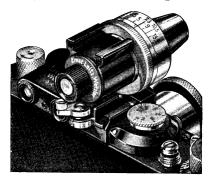


Fig. 42. The Large Universal View-Finder

reduced or increased. The proportion of the sides remains always 2:3. The milled ring is engraved with the various focal lengths of the Leica lenses. The diaphragm shows, therefore, only the field of that lens for the focal length of which the

index line has been set, and this for distances from 30 feet to infinity ( $\infty$ ). A second shorter index line close to the other is referred to when taking close-ups, i. e. for distances from 3.5 to 6 feet. It gives the reduced field obtained at these short ranges with all Leica lenses, with the exception of the wideangle lens. For distances between 9 and 30 feet the milled ring is best set between the two index lines.

For compensation of the parallax between finder and lens (displacement of both optical axes) this view-finder is fitted with a cam and lever motion for tilting the finder. By this arrangement it is ensured that an object sighted through the centre of the finder appears really in the centre of the photograph. The parallactic effect is not noticeable at distances over 12 feet. For shorter distances, however, it has to be compensated for by tilting the finder. This is done with the small lever underneath the eyepiece which is marked with figures for the respective short distances and for infinity ( $\infty$ ).

When taking a portrait, for instance, after having focused the camera, the distance is read off at the focusing scale of the lens and the small index line of the milled ring set to the focal length of the lens used; lastly the parallax lever is set according to the distance read off.

For changing over from horizontal to upright pictures and vice versa, see page 48.

#### The small Universal Finder

#### for specific lens combinations

Unlike the large Universal Finder "Vidom", the second model is only designed for certain specific combinations of lenses, as follows:

```
Model I "Viuna" for 35—50—73 mm. lenses,
II "Vizwo" 35—50—90 mm. lenses,
III "Vitre" 35—50—105 mm. lenses,
IV "Vifur" 35—50—135 mm. lenses.
```

The various fields are shown on a line drawn plate. Fig. 43a shows one of these line drawn plates as it appears when seen through the finder.

The broad outer border indicates the field covered by the wide-angle "Leitz-Elmar" lens of 35 mm. focus; the second broad line is for the standard lens 50 mm., the third for the long-focus distance lens "Leitz-Elmar" 135 mm. These fields are all correct for distances over 30 ft. The thin lines within the various fields, however, are correct for close-ups (at about 6 ft.) and show the reduced field obtained at these short ranges. A small cross in the centre simplifies central sighting.

The parallax between finder and lens is compensated for by tilting the finder. This is done as described above by means of a small lever fitted underneath the eyepiece.

Both models are built after the principle of a small astronomical telescope in combination with an image-erecting prism. The image, however, appears right and left reversed. The



Fig. 43. The Small Universal View-Finder on the Leica

unique arrangement of these finders has the special and important advantage that any slight tilt of the camera will cause the image seen through the finder to assume a pronouncedly oblique position. The tilt of the image in the finder, due to the prism arrangement, is twice as great as that of the camera body itself, thus providing an excellent means of setting the camera accurately horizontal or vertical, as the case may be.

When the camera is turned for taking upright pictures, the image in the finder appears upside down. In order to be able to see the view in its natural position, the prism in the eyepiece is made to turn through 90°. The limits of the movement are felt by definite stops. It should be noted that with the finder in working position, the oblong diaphragm in the eyepiece should always be set horizontally.

When following rapidly moving objects, owing to the left and right mirror reversal of the image in the finder, it is advisable to keep both eyes open so as to retain the object more easily in the centre.

For finding the proper pictorial composition the universal finder is used without camera. Sighting through the finder shows immediately whether the desired effect can be obtained with any particular lens. This is a great convenience, especially when working with long focal length lenses, as one

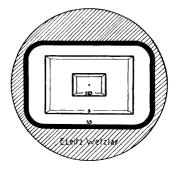


Fig. 43a. The field of view in the small Universal Finder "Vifur" (Model IV)

need not take the camera and lenses from the case until the best position has been found.

Fitting the Universal Finders. The universal finders slip into the clip provided on top of the Leica body. A similar clip is fitted to the top of the universal finders to enable one to attach a separate range finder. Care must be taken to ensure that the universal finder is always pushed into the clip as far as it will go.

Subsequent Fitting of a Universal Finder. The universal finders will, without special adaptation, fit all Leica cameras, and an adjustment of the clip on previously supplied cameras is not as a rule necessary. If in particular cases the image of the finder does not exactly agree with the image obtained on the film, it is advisable to send both finder and camera to us for adjustment.

### The Sport Finders

#### (not available at the time of this printing)

For the lenses of 73 to 135 mm. focal length, a Sport Finder is supplied through which a rapidly moving object can be observed before it actually enters the field of view of the Leica. The field of the Leica is defined by a plainly visible light rectangle, in which the object appears upright, the right way round and in natural size. It can therefore be observed with both eyes. The sport view-finder is also equipped with a parallax-compensating device.

The marking on this view-finder indicates the respective focus of the lens with which it may be used. The foot of the

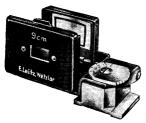


Fig. 44

finder is slipped into the clip on top of the camera in such a way, that the metal plate with the distance figures 1, 1·5, 2, 4 and infinity engraved on it, lies above the back of the camera. For working with it, the lid is raised, whereby the mirror frame springs into position. After having focused the camera lens, the distance is read off the scale and the metal frame of the finder set to the same figure in order to compensate for parallax. When photographing from distances between 15 and 30 ft., it should be set half-way between 15 and infinity. The adjustment has to be carried out the more carefully, the longer the focal length of the lens. When the finder is not being used, it is advisable to fold it up so as to prevent the lens from suffering any damage.

### Leitz Frame Finder

#### for the Leica camera

This finder can be highly recommended, especially for sports photography and for exposures from aeroplanes.

Its most noteworthy feature is that it covers all possibilities of use, because it is not only of service for the standard lens of 50 mm. focus, but also shows the angle of field for the 35 mm. and 90 mm. "Leitz-Elmar" lenses, as well as the 73 mm. "Leitz-Hektor" lens.

For this purpose the image frame can be rotated through 180° against two stops. The normal position as shown in the illustration indicates the fields of the 50 mm. and 90 mm. lenses, while the field of the 35 and 73 mm. lenses is shown when the frame is swung round, owing to its eccentric motion. By fixing a special mask on the front side, it also serves in its normal position to give the field of the 135 mm. lens and in the opposite position, that of the 105 mm. lens. So as to facilitate the exact alignment of the narrow angle of view when the



Fig. 45

long focus lenses of 105 mm. and 135 mm. focus are used, a pin-hole can be clipped in position in front of the rear sighting aperture. This pin-hole can, however, not be used with the other lenses, as it would cause the field of view to appear too much enlarged.

Parallax in the case of close-ups can be compensated for by vertical displacement of the back sight of the finder. To this purpose it is engraved with notations  $\infty$ , 6 ft. and 3.5 ft.

When using the lenses of 35 to 90 mm. focus care should be taken to look straight through the frame of the finder; this ensures the exact coincidence of the centre of the field and its boundaries with those of the negative on the film. The sighting frame is always held close to the eye. The Frame Finder can be collapsed when not in use.

# Leitz Reflecting Finder

Contrary to the principle of direct vision at eye-level embodied in all other Leica viewfinders (normal, Universal and Angular Finders), the Reflecting Finder is constructed on the principle of the well-known reflecting finders. The image is consequently not viewed at eye-level but from a position about 8 inches above the finder. This finder is found convenient mainly where it is required to photograph from a lower position, as, for instance, when photographing children, small animals etc.

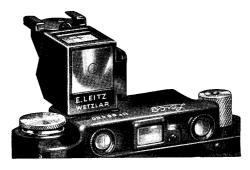


Fig. 46. The Reflecting View-Finder on the Leica

The finder consists of a housing containing a so-called "penta" prism in conjunction with a negative lens (Newton finder). This novel combination results in a very clear, bright and sharply-defined image.

To indicate the size of field for horizontal or vertical photographs the four corners are blocked out in the usual way. The image is upright and correct as to right and left. The field of view corresponds to that of the Leica lenses of 50 mm. focal length and Leica negative size  $24 \times 36$  mm.

On special request this finder can also be supplied equipped with a negative front lens, enabling it to be used with the 35 mm. or 28 mm. wide angle lenses.

The finder has engraved on top small cross-lines and in front a small circle. Sighting should be done with one eye only,

and the cross-lines should appear in the centre of the circle so as to ensure that the camera is not slanting.

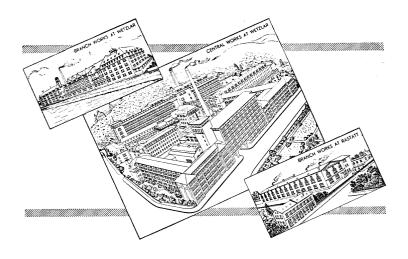
A special clip fitted to the side of the finder may accommodate a spirit level. The Reflecting Finder has two fixing flanges for horizontal and vertical pictures and is slipped into the clip on top of the camera body.

# Wide-Angle View-Finders for the Leica Camera

Special view-finders can also be supplied for both the 35 mm. Leitz Elmar and the 28 mm. Leitz Hektor-wide-angle lenses.

The 35 mm. view-finder ("Weisu") is a simple optical view-finder similar to the normal, fixed view-finder of the Leica: this is pushed into the view-finder clip on the camera.

The 28 mm. view-finder ("Suooq") is based on the sports view-finder described on p. 19 and gives a particularly clear, brilliant image of the object. For use, the foot of the finder is slipped into the clip on top of the camera, with a viewing window (marked 2.8 cm) facing the observer. The body containing the other lens is then gripped between thumb and forefinger at the edges which are milled and unfolded in a forward direction. The finder is ready for use. Having finished with it, it is always advisable to fold back the lens housing for safety's sake.



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