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Voigtländer

VOIGTLÄNDER- ZOOMAR 1:2,8

$f = 36\text{mm} \dots 82\text{mm}$

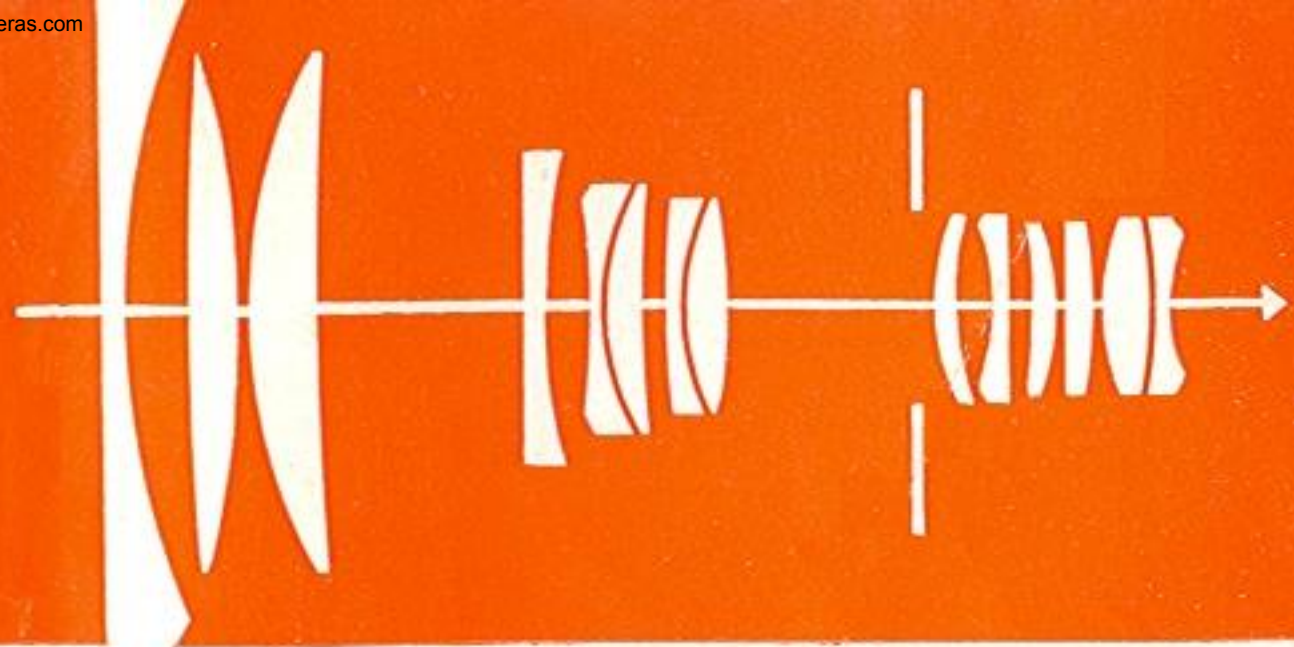


for

BESSAMATIC

Amazing New Vistas

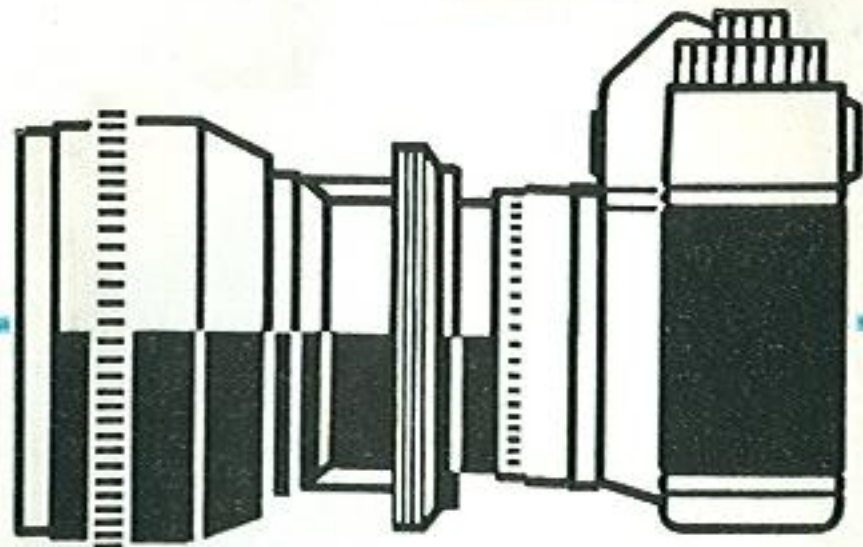
are opening for your BESSAMATIC and the VOIGTLÄNDER-ZOOMAR f/2.8 lens. Like motion picture and television cameramen you can now continuously vary the focal length of this novel lens from $1\frac{3}{8}$ to $3\frac{1}{4}$ inches (36 to 82 mm.).



You can cover anything you like from just one camera position; this truly universal lens takes in all the breadth of a landscape or reproduces small details on a large scale. In addition to being instantly ready for any shot with the BESSAMATIC, you now have the advantages of dynamic photography, of continuous changing from one focal length to another, of a free choice of individual composition and picture arrangement, and of constant colour rendering at all focal lengths.

The VOIGTLÄNDER ZOOMAR f/2.8 is a 14-element anastigmat lens system developed specially for single lens reflex cameras. In the wide-angle position (focal length $1\frac{3}{8}$ inches or 36 mm.) it covers a view of 62 degrees; in the tele position (focal length $3\frac{1}{4}$ inches or 82 mm.) the angle is 30 degrees. The fully automatic pre-selector iris allows you to view the subject always at the full aperture of f/2.8.

VOIGTLÄNDER-ZOOMAR 1:2,8



INSTRUCTIONS

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- 1 Distance setting ring
- 2 Distance scale in feet
- 3 Distance scale in metres
- 4 Focal length setting ring
- 5 Focal length scale

- 1
- 2
- 3
- 4
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Mounting on the Camera

The VOIGTLÄNDER ZOOMAR f/2.8 has the same quick-change bayonet mount as all other interchangeable lenses of the BESSAMATIC. You therefore fit it (and remove it) in the same way as described in the camera instruction booklet.

Setting the Subject Distance

Turn the large milled ring (1) to focus the lens with the aid of the dual rangefinder system as described in the camera instruction booklet. If possible, focus at the longest focal length setting of 3 $\frac{1}{4}$ inches (82 mm.), as the larger rangefinder image there permits more accurate focusing.

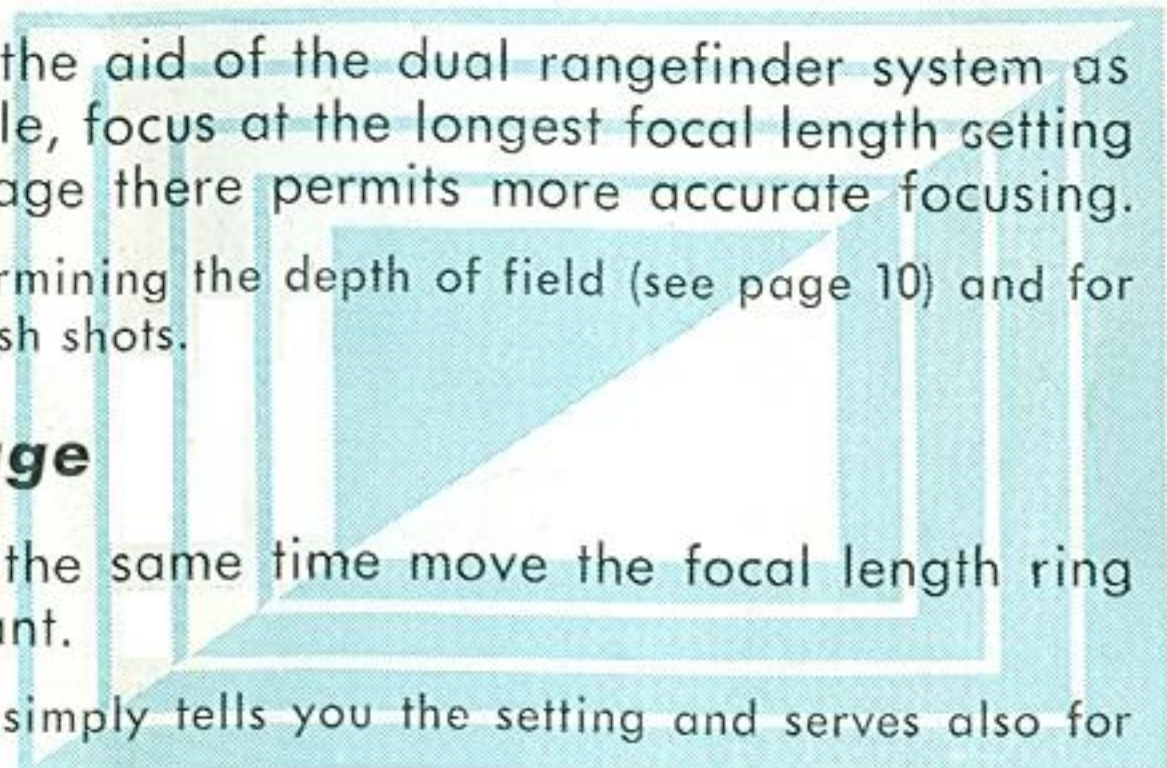
Normally the distance scales (2) and (3) serve only for determining the depth of field (see page 10) and for working out the correct aperture from guide numbers for flash shots.

Adjusting the Focal Length and Coverage

Observe the subject through the viewfinder, and at the same time move the focal length ring forward or back until you see the field of view you want.

The scale of focal lengths engraved on the lens barrel (5) simply tells you the setting and serves also for working out the depth of field (see page 10).

To set the exposure proceed in the same way as described in the camera instruction booklet. The aperture-speed combination obtained by the setting pointer system of the automatic exposure control remains unchanged as you alter the focal length.





Visual Composition

The comparison shots on the left demonstrate the scope of the VOIGTLÄNDER ZOOMAR f/2.8. To fill the frame with just the motor scooter, would mean standing in the middle of the road — dangerous with passing cars. Shooting from the other side with interchangeable lenses of fixed focal length offers only two alternatives:

Top picture: standard 2 inch (50 mm.) lens.
This takes in more than you want.

Bottom picture: 3³/₈ inch (85 mm.) telephoto lens.
The angle of view is too small; part of the subject is cut off.

Only an intermediate focal length (in this case about 2¹/₂ inches or 65 mm.) gives the ideal result as shown in the centre shot.

Arrangement and Perspective

can also be controlled individually by changing both the focal length and the viewpoint. This modifies the relative proportions of objects at different distances and you can quickly obtain the exact effect you want (see opposite).



This series shows three views of the same subject, but three different pictorial effects. The left-hand shot was taken at the wide-angle position of $1\frac{3}{8}$ inches (36 mm.), the centre one at the standard focal length of 2 inches (50 mm.), and the right-hand picture at the $3\frac{1}{4}$ inch (82 mm.) tele position. For the second and third exposure the cameraman retreated back by about ten feet each time.



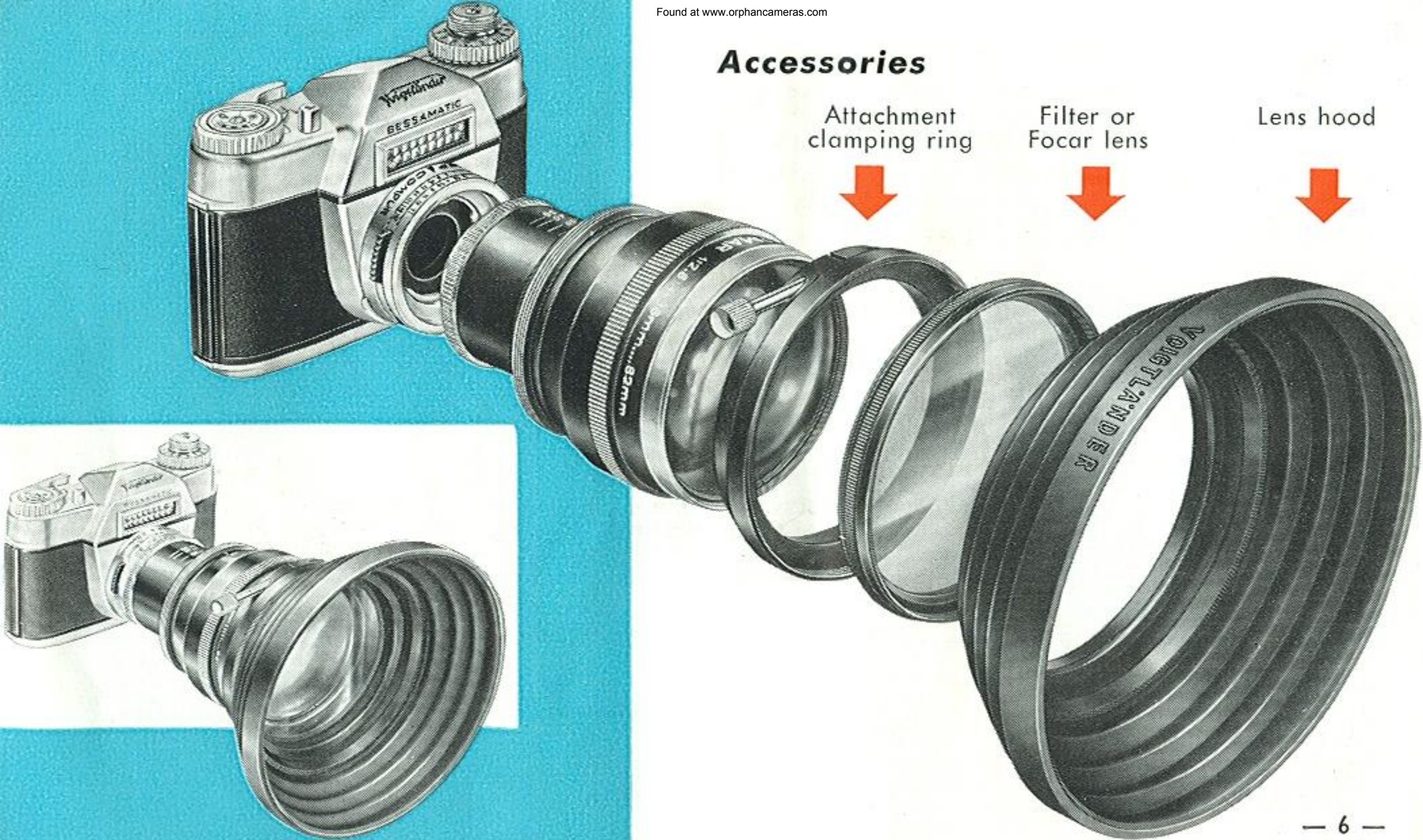
This variation of focal length and viewpoint changes the scales of the background relative to the main subject, and so provides any desired perspective effect.

Accessories

Attachment
clamping ring

Filter or
Focar lens

Lens hood



Filters

Three filters are available for the VOIGTLÄNDER ZOOMAR f/2.8: a yellow filter G 3 x, an orange filter O 5 x, and an ultra-violet filter UV. The effect and filter factors of these filters are described in detail in the camera instruction book.

Supplementary Focar Lenses

The advantages of the VOIGTLÄNDER ZOOMAR f/2.8 in the normal focusing range from about 4½ feet (1.3 metres) to infinity are also available for close-ups with Focar lenses. These cover the following focusing ranges:

Focar A	(1 dioptré):	from 39¾ to 21 inches	(101 to 53 cm.)
Focar B	(2 dioptrés):	from 19¾ to 13⅝ inches	(50 to 34.5 cm.)
Focar A + B	(3 dioptrés):	from 13 to 10 inches	(33 to 25.6 cm.)

Close-up technique is basically the same as described in the camera instruction booklet. The various depth of field ranges are easily found from the depth of field calculator (see page 10).

The Attachment Clamping Ring

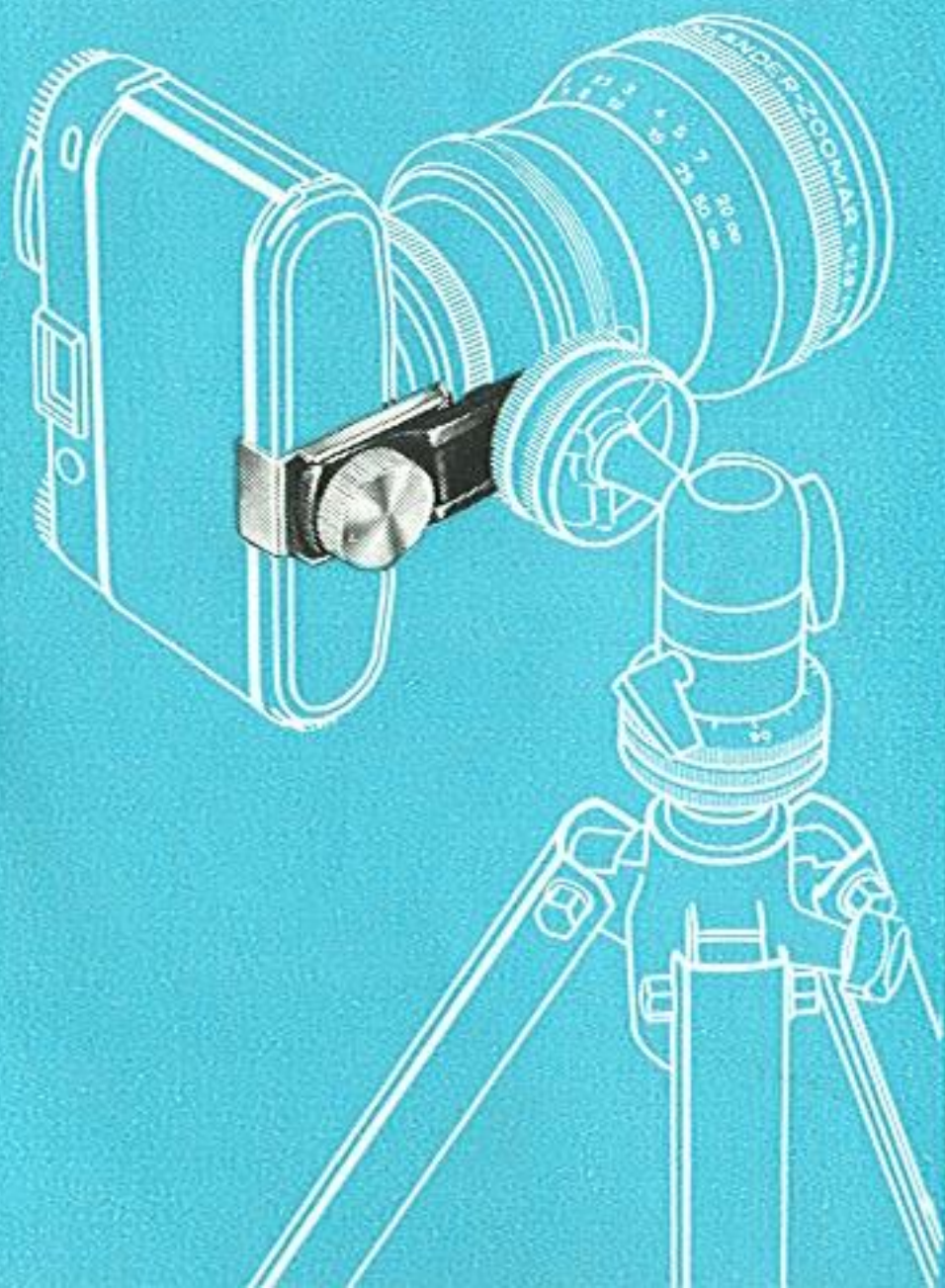
Filters, Focar lenses and the collapsible rubber lens hood are attached to the lens with the aid of the clamping ring.

A s s e m b l y : Clamp the ring to the front lens mount and screw the accessory into the inner screw thread of the ring (95 mm. diameter). Several attachments can of course be combined; for instance the lens hood can screw into the filter or the Focar lens (see illustration opposite). When combining a Focar lens with a filter, place the latter between the ZOOMAR and the Focar lens.

The Tripod Adapter

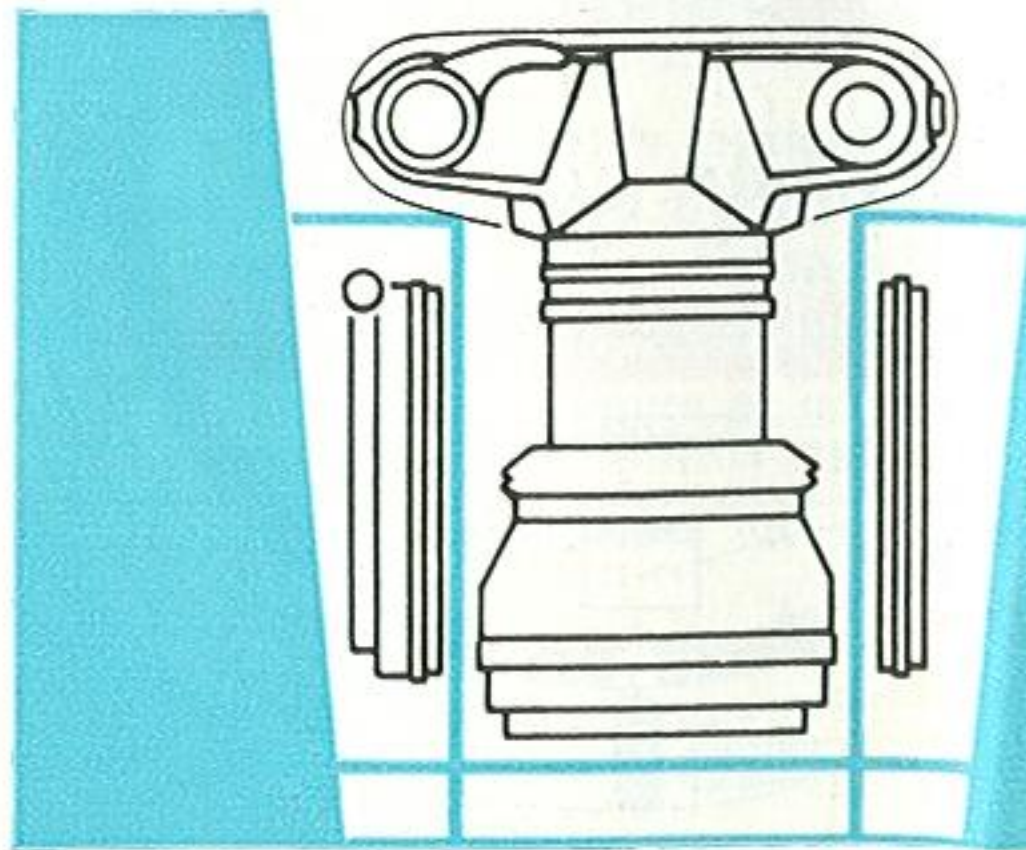
between the ball-and-socket head of the tripod and the camera. The adapter shifts the centre of gravity of the camera and eliminates any risk of the whole set-up toppling over.

Assembly: Mount the adapter by one of its two tripod bushes ($\frac{1}{4}$ inch and $\frac{3}{8}$ inch) on the ball-and-socket head of the tripod. Fit the camera on the adapter by its tripod bush.



Carrying Cases

Apart from the single leather containers for the lens and accessories, the carrying case shown here is very useful. It takes the camera complete with the lens, as well as two filters or Focar lenses including the attachment clamping ring. The back, which unbuttons, holds the rubber lens hood in the leather cover. This case therefore keeps your whole photographic outfit together.

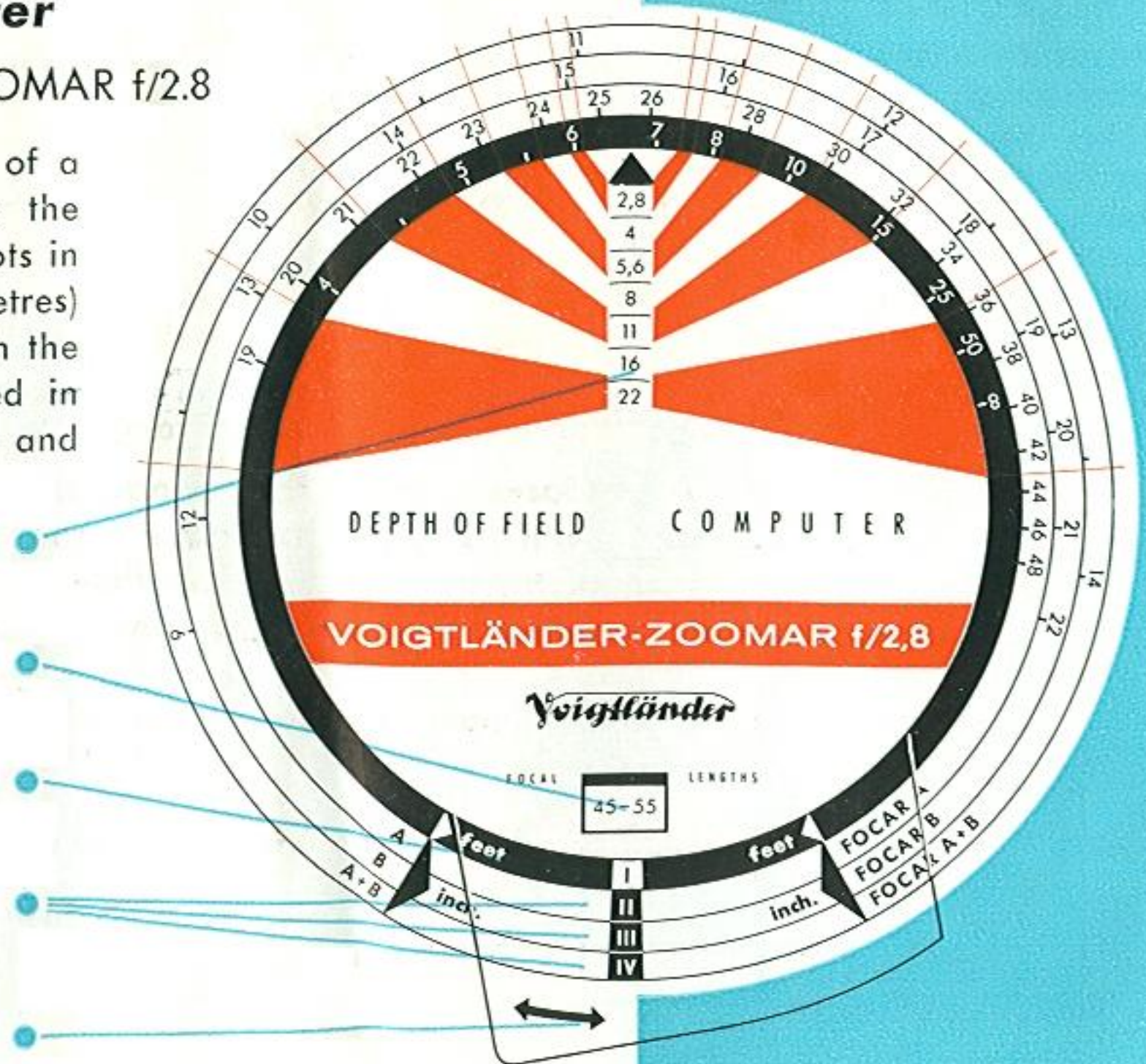


The Depth of Field Computer

for the VOIGTLÄNDER ZOOMAR f/2.8

is included with every lens in the form of a disc-type calculator. It instantly shows the zones of sharp focus for all ZOOMAR shots in the normal range between 4 $\frac{1}{4}$ feet (1.3 metres) and infinity, as well as for close-ups with the Focar lenses. The blue side is calibrated in feet and inches, the red side in metres and centimetres.

- Aperture scale with sectors for depth of field zones
- Window for focal length settings
- Scale I: subject distances and depth of field zones in feet or metres
- Scales II to IV: subject distances and depth of field zones in inches or cm. for close-ups
- Setting tab for focal length group



Reading off the Depth of Field

- ① Rotate the coloured top disc to bring the black triangular ▲ index mark opposite the distance setting (scale I) corresponding to the setting of the lens.

With close-ups with the Focar lenses the distances on the scales II to IV opposite the ▲ mark now also correspond to actual subject distances, measured from the front of the Focar lens to the subject.

- ② Rotate the tab (e) to bring the appropriate focal length group into the window (b), corresponding to the focal length (or intermediate value) read off the lens.

The figures 45, 55, and 65 always appear in two focal length ranges. For determining the focal length it is immaterial in which alternative range you set these figures.

- ③ The aperture scale (a) is marked below the triangular ▲ index mark. Sectors with guide lines radiate to the left and right from this aperture scale over the scales I to IV. The depth of field extends from the distance figure below the left-hand guide line of the appropriate sector to the distance figure below the right-hand guide line of the same sector.

For the lower figure of a focal length range (for instance 36) always use the lower line of an aperture sector; for the upper limit (for instance 45) use the upper line.

Examples :

a) **Normal focusing range** ($4\frac{1}{4}$ feet or 1.3 metres to infinity)
 Subject distance 2.5 metres
 Focal length between 45 and 55 mm.
Depth of field at f/16
 extends from 1.4 to 20 metres.

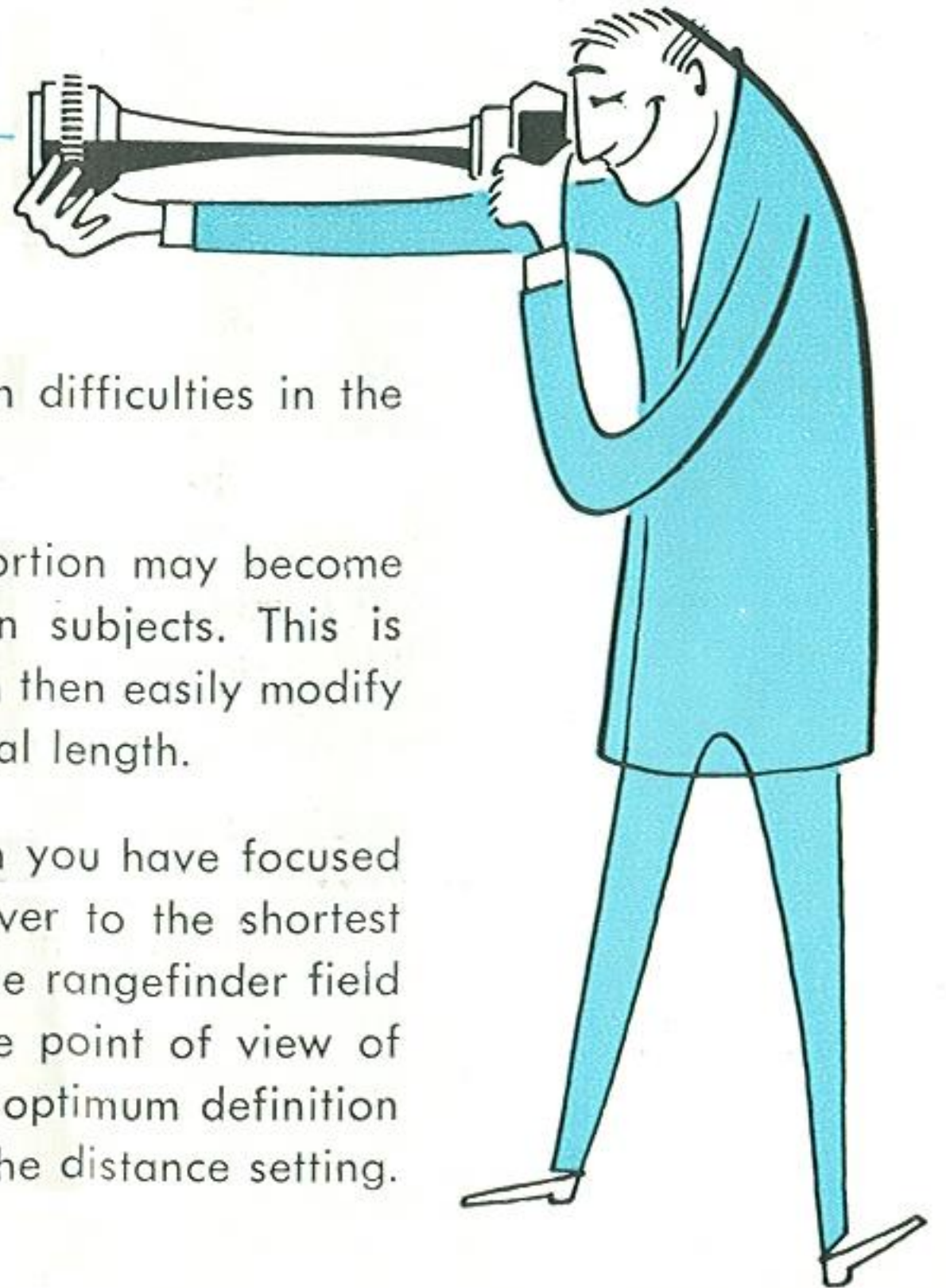
b) **Close-up with Focar B lens**
 Subject distance 44 cm. (lens set to 4 metres)
 Focal length 82 mm.
The depth of field at f/16
 extends from 42 to 46 cm.

A Few Practical Points

The VOIGTLÄNDER ZOOMAR f/2.8 is effectively corrected for distortion over almost the whole focal length range. This is always one of the main difficulties in the design of variable focus lenses.

In the extreme telephoto position only, slight distortion may become noticeable at the edges of the field with certain subjects. This is however readily apparent in the finder, and you can then easily modify the pictorial effect by choosing a more suitable focal length.

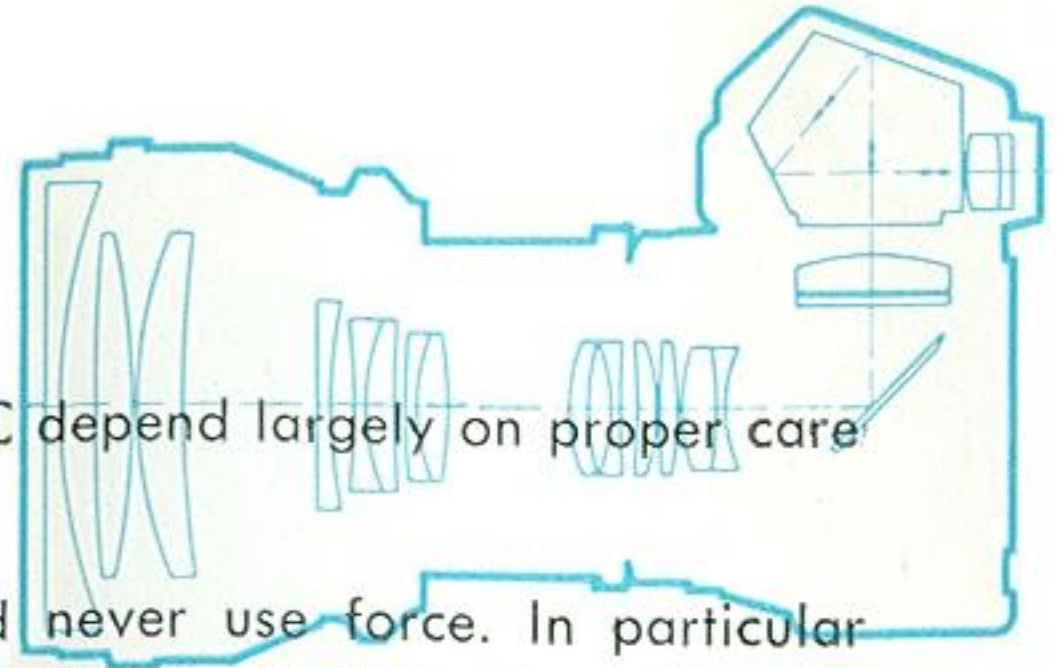
Another inherent feature of the design is that when you have focused the lens in the telephoto position and changed over to the shortest focal length, the two halves of the split image in the rangefinder field may shift very slightly. This is immaterial from the point of view of image sharpness, for the lens is adjusted to ensure optimum definition even in the wide-angle position without change in the distance setting.



Care of the Camera and Lens

Successful results and long life of your BESSAMATIC depend largely on proper care and correct operation.

- Therefore always handle the camera gently and never use force. In particular protect the camera against hard knocks and do not drop it. When travelling by car do not keep the camera in the glove compartment. In the long run such a "vibration test" will not do the built-in photo-electric exposure meter any good.
- Clean the lens only with a soft, fluffless cloth. However, first remove coarse particles of grit (or sand at the seaside) carefully with a soft sable brush. Finger marks and other traces of grease on the lens surface can be removed with a piece of cotton wool moistened with pure alcohol or ether.





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