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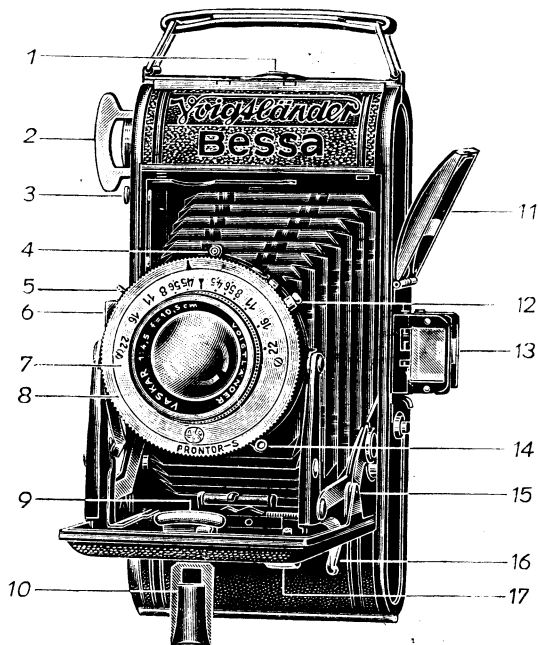
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Instructions for use

Voigtländer-BESSA 6x9



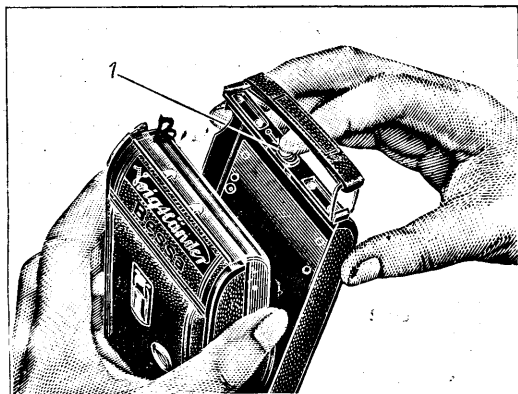
- | | |
|--------------------------------------------|---------------------------------|
| 1 Back-panel catch | 10 Baseboard support |
| 2 Film winding-key | 11 Cover for optical finder |
| 3 Baseboard catch | 12 Contact nipple for flash |
| 4 Shutter setting lever | 13 Optical direct vision finder |
| 5 Diaphragm lever | 14 Delayed action release |
| 6 Nipple for cable release | 15 Side strut joint |
| 7 Front plate with hyperfocal chart | 16 Trigger release |
| 8 Turning ring for adjusting exposure time | 17 Tripod screw bush |
| 9 Release for closing baseboard | |

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I. Inserting the film

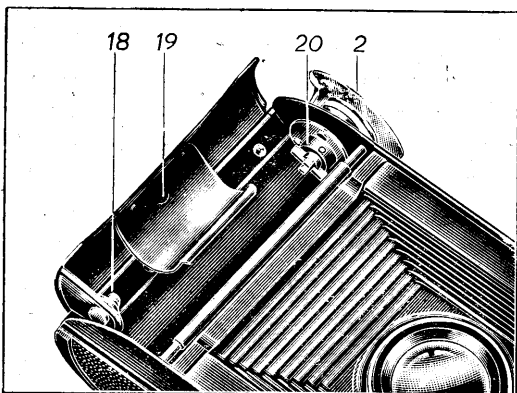
Any $3\frac{1}{4} \times 2\frac{1}{4}$ ins. film, including the 620 spool, can be used with the Bessa. The film is inserted in the camera in weak daylight or (when in the open) in the shade (shade of the body is sufficient).



1. Open the back of the camera after pushing sideways the button 1 (picture 2).
2. Put the empty spool in the top film chamber, after pulling out the film winding-key 2 as far as it will go. The slot in the spool must face the key, while the other end engages on the pin 18.

Replace the top film protecting cover, push in the film winding-key and turn until the catch 20

engages the slot, when the spool will turn with the key.

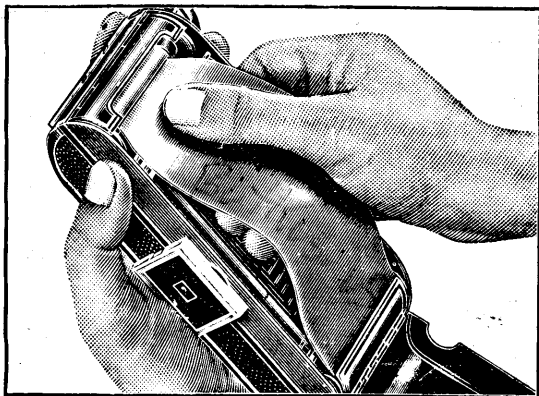


3. Place the **new film spool** in the lower film chamber; do **not** tear off the paper band until this is done. Hold the protecting paper firmly and swing in the metal cover.
4. Pull out the protecting paper (fig. 4) and insert the point into the wide slot in the empty spool. The coloured side of the paper must lie uppermost.
5. Press the film key firmly inwards and turn twice, until sure that the paper is being moved on. It must run exactly between the flanges of the empty spool and must not overlap on either side.
6. Close the back of the camera. **The round aperture at the top must engage in the groove on the film key.**

7. Open the film windows by turning the milled knob, between the windows, to the right.
8. Wind the film key evenly until you see in the lower red film window first several hands, then several dots and finally the number 1. Now, the film windows should be closed again by turning the milled knob to the left as far as the back stop.

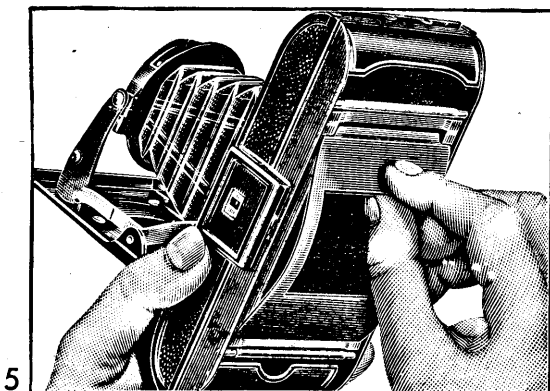
II. The Small Size Picture Device

enables 16 small pictures size $2\frac{1}{4} \times 1\frac{5}{8}$ ins. to be taken. Fig. 5 clearly shows how the grooved tongue must be inserted in the picture frame.



4 First insert the mask at the bottom, then bend gently and let it spring in at the top. It must then lie absolutely

flat. When closing the camera back, the upper film window, which is closed with full size 6×9 cm, opens



automatically. **When using the half size mask**, the numbers of the pictures on the protecting paper must be adjusted twice,

1st picture No. 1 in the lower film window,

2nd picture No. 1 in the upper film window,

3rd picture No. 2 in the lower film window,

4th picture No. 2 in the upper film window.

The **optical finder** also has a mask for small size pictures, mounted on the front lens portion. This must be raised for all small size exposures (see para III/6).

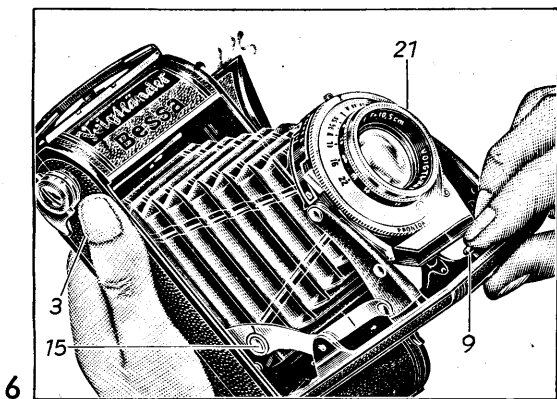
III. Taking the pictures.

Opening the camera. Press the button 3 and evenly pull down the open end of the baseboard until the struts snap in at 15.

And closing. Press the catch 9 in the direction of the camera body (picture 6). The baseboard can now be closed without effort.

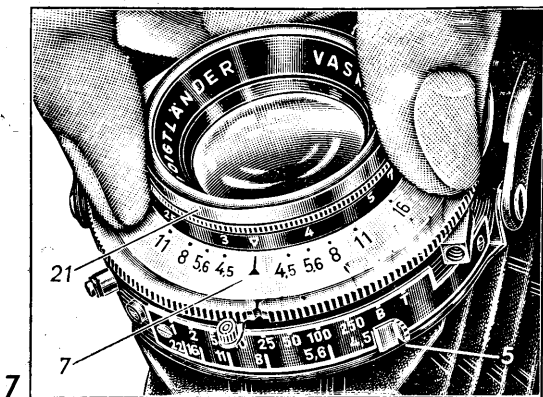
1. Adjust the Focus

The feet focussing scale is engraved round the edge of the front lens mount 21. Turn the front lens by the milled ring and set the focus against the mark, as shown in fig. 7. ∞ = infinity, i. e. anything over 100 feet.



Snapshot adjustments are: ∇ at 12 feet and \circ at 50 feet. If you use as small an aperture as F/11, the sharp zone

(see cipher 3) will extend from 8 feet to 16 feet with focus set at ∇ and from 16 feet to ∞ with focus set at O.



The following rule should therefore be noted:

For snapshots close-up, set at ∇ .

For snapshots at 16 feet or longer range, set at O.

Use the aperture of F/11.

2. Stop Adjustment

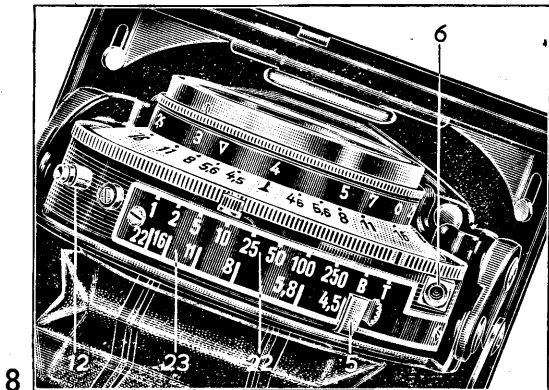
You already know that the diaphragm increases the depth of focus, while at the same time it reduces the lens aperture and thus lengthens the exposure time. (The smaller the stop [aperture], the higher the stop number.) The stop numbers of the Bessa

are calculated in such a way that each smaller stop requires double the time of exposure of the preceding one. The stop lever is denoted by 5 in fig. 8.

3. Depth of focus

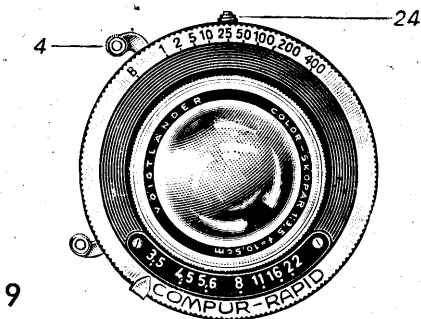
Hyperfocal chart (at the back of the camera):

If you set the focus to a certain range, say 12 feet, then not only that point, but a certain surrounding zone will be sharp. At 25 feet and F/4,5, for example, everything between 19 feet and 36 feet will be sharp. This zone



increases as the aperture diminishes. At 25 feet and F/11, it extends from 14 feet to 102 feet.

To read the depth-of-focus table, find the aperture in the left vertical column (e. g. F/8) and on the corresponding horizontal line there appears, under each distance marking, the various distances covering the zone of sharpness (depth-of-focus) e. g., at F/8 when the lens is focussed at 6 feet, everything is sharp between 5 feet and 7 feet.

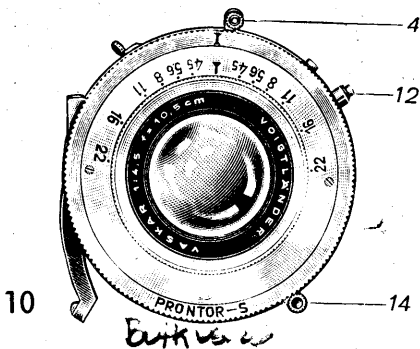


With Bessa 6 × 9 with Prontor S the hyperfocal chart is no longer on the camera back but is engraved on the front plate. The actual range of the depth of focus for each stop can immediately be read, after focussing. Example: At 12 feet and stop 5,6 the depth of focus extends from 10 feet to 15 feet or by focussing on 20 feet and with stop 16 from 10 feet to ∞ (infinity).

4. Shutters

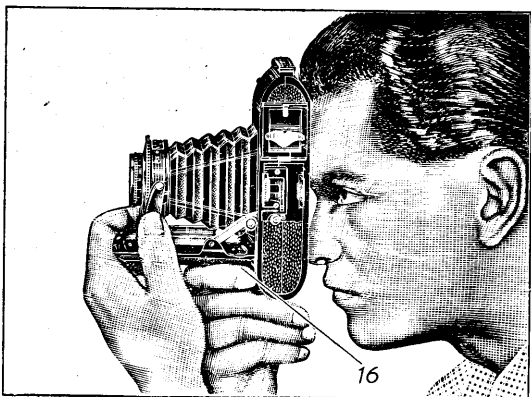
The shutter must be set before **each** exposure, also with B and T (the latter with Prontor only).

Compur-Rapid shutter must be set by pressing the lever 4 to the right, the **Prontor S** shutter by pressing this lever to the left.



The figures represent fractions of seconds, e. g. 5 means $\frac{1}{5}$ th of a second, 100 means $\frac{1}{100}$ sec. and so on. If necessary, the shutter can be set between the values e. g. $\frac{1}{75}$ sec. between 50 and 100. **Exception:** Do not set between 10 and 25 as well as with higher speeds than $\frac{1}{100}$ sec. For the "T" adjustment (Prontor S only), the shutter opens when the trigger is first pressed and closes when it is pressed a second time.

For the "B" adjustment, however, the shutter remains open as long as the pressure on the release lever is



maintained. The various markings are set opposite the indication by revolving the milled ring 8. **All** shutters are released by pressing down the trigger 16 (fig. 1), which operates the release lever.

When adjusting and setting at the highest speed of the Compur Rapid, some resistance is encountered, due to the engagement of a powerful spring. Turn the milled ring gently past the tension.

Besides Compur Rapid, the Bessa is fitted with Prontor S (highest speed $\frac{1}{250}$ sec.), which has, in addition a self-timing device. With Prontor S, as with all other Prontor shutters, a synchronized flash unit may be used. The

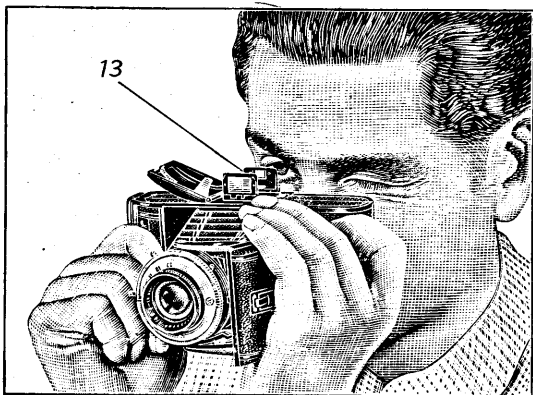
nipple 12 on the upper part of the shutter must be connected with a flash unit and the picture may be taken as usual. All speeds of the shutter from $\frac{1}{25}$ sec. to 1 sec. may be used with the flash unit.

5. Delayed Action-Release

Compur Rapid: Adjust and set lever as usual, then push button 24 back and again set lever 4.

Prontor S: Adjust speed and set shutter as usual. Push lever 14 to the left.

For all shutters: Release in the usual manner. The shutter operates only after the delayed-action mechanism has run down, so that you have about



10 seconds to return to your position. A slight click indicates that the shutter has been operated.

For B and T and the maximum speed of the Compur Rapid the delayed-action release must not be used.

6. Finder and Release

When the camera is opened, the **optical finder** 13 springs up into position. Use it for preference, since shots at eye level will then have the most natural perspective.

Hold the camera as in figs. 11 and 12, i. e. press it firmly against the face and look through the rear lens of the finder. The front lens indicates the exact angle of view. The **whole** rim of this lens must therefore be visible.

For pictures in the half-size, $2\frac{1}{4} \times 1\frac{5}{8}$ ins., bring up the small size mask into the frame; this mask is hinged to the front portion of the finder.

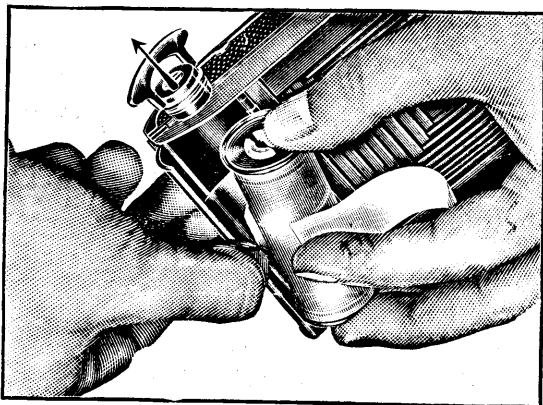
Close the finder by simply pushing down the cover, **do not touch the lenses.**

The essentially practical trigger release on the baseboard, ensuring certain release without vibration, will be found very helpful.

To avoid shaky pictures, press down the trigger until it encounters a slight resistance, i. e. be "ready to fire" as with a rifle, hold your breath and evenly pull back the trigger. Practise

this until it goes smoothly, and in time you will be able to take $\frac{1}{5}$ sec. and even $\frac{1}{2}$ sec. exposures by hand.

N. B. — Get used to turning on immediately after every exposure, as otherwise double exposures will be frequent.



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IV. Unloading

1. After making the last exposure, turn on until the protective paper is no longer visible in the lower film window.
2. Open the back of the camera, hold the end of the paper securely and carefully turn on the film key a short distance. The film will thus be wound tightly; loosely wound films are susceptible to light, while on the other hand films wound too tightly will become scratched.

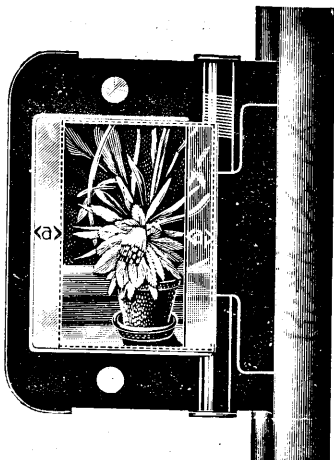
3. Now pull out the film key, and swing out the metal protecting cover with the full spool. Remove the full spool. Hold it securely to prevent it from unwinding (fig. 13), fold over the end of the paper and secure it with the gummed strip.

V. Close-ups

An interesting sphere, embracing pictures of flowers, small animals, postage stamps and other small subjects and reproductions. You will need the Focar lenses described below, which are simply placed over the lens. The focussing scale distances are then changed as follows:

When focusing on	Sharp definition with	
	Focar 1	Focar 2
∞	2' 7 $\frac{1}{2}$ "	1' 5 $\frac{1}{2}$ "
75'	2' 6 $\frac{1}{2}$ "	1' 5 $\frac{1}{4}$ "
50'	2' 6"	1' 5"
\bigcirc	2' 5 $\frac{1}{4}$ "	1' 4 $\frac{3}{4}$ "
25'	2' 4 $\frac{1}{2}$ "	1' 4 $\frac{1}{2}$ "
20'	2' 3 $\frac{3}{4}$ "	1' 4 $\frac{1}{4}$ "
16'	2' 3"	1' 4"
15'	2' 2 $\frac{3}{4}$ "	1' 4"
13'	2' 2 $\frac{1}{4}$ "	1' 3 $\frac{3}{4}$ "
12'	2' 1 $\frac{3}{4}$ "	1' 3 $\frac{3}{4}$ "
∇	2' 1 $\frac{1}{2}$ "	1' 3 $\frac{1}{2}$ "
10'	2' 1"	1' 3 $\frac{1}{4}$ "
9'	2' $\frac{1}{2}$ "	1' 3"
8'	1' 11 $\frac{3}{4}$ "	1' 2 $\frac{3}{4}$ "
7'	1' 11"	1' 2 $\frac{1}{2}$ "
6'	1' 10"	1' 2"
5'	1' 8 $\frac{3}{4}$ "	1' 1 $\frac{1}{2}$ "
4'6"	1' 8"	1' 1 $\frac{1}{4}$ "
4'	1' 7"	1' $\frac{3}{4}$ "
3'6"	1' 6"	1' $\frac{1}{2}$ "
3'	1' 5 $\frac{1}{2}$ "	0' 11 $\frac{3}{4}$ "

Adhere **accurately** to the distance, measuring from the lens. Shots taken with the Focar lens show a slight lack of sharpness with full aperture, particularly towards the corners. At the aperture F/5.6 or F/8 the sharpness increases and attains the normal standard at F/12.5. The time of exposure remains the same as when work-



ing without a Focar lens, i. e. it needs merely be lengthened in proportion to the aperture. When using a Focar lens the view finder does not give the exact size of the actual picture. As figure 14 shows, the actual picture will be displaced towards the camera-edge by $\frac{1}{6}$ (distance between camera and object not under $17\frac{1}{2}$ "') or by $\frac{1}{4}$ (distance between camera and object not under 12"') of the view finder field.

VI. Yellow Filter

Yellow filters are indispensable for obtaining attractive landscapes, since

they bring clouds into view. As a general rule, coloured objects should not be taken without yellow filters, since only with their use can the colour values of the various shades be correctly reproduced.

Voigtländer filters are ground as carefully as lenses from spectroscopically tested glass. They are firmly mounted on the camera lens mounts.

The times of exposure are lengthened as follows:

Filter G 1	1 ¹ / ₂ — 2 ×
Filter G 2	2 — 4 ×

The Correct Time of Exposure

The modern amateur film with a speed of approx. 27—28⁰ Scheiner (17/10⁰ DIN) has an extensive latitude of exposure so that you need not be extremely careful when exposing. However, as general rule you should always keep in your mind: you will get the best pictures with an exposure which is also sufficient for the shadows! **Therefore never give too short a time of exposure.**

VII. Cleaning coated lenses

When looking obliquely at these lenses you notice a bluish-violet gleam.

This indicates that they are "coated"
i. e. fitted with

"anti reflection layers".

The AR layers obviate reflection of light rays as a result of "counter-light" i. e. they reduce it to a minimum; at the same time they increase the brilliance of the pictures and the transmission power of the lens.

Even uncoated lenses require very careful treatment; the outer surfaces of lenses with AR layers should be treated with especial care. These layers are very hard, but they are extremely thin (app. $\frac{1}{10\,000}$ mm.).

The lens must be cleaned with a fine hair brush or a very soft cloth. Grease and oil stains may be removed by carefully touching with pure alcohol or ether.