

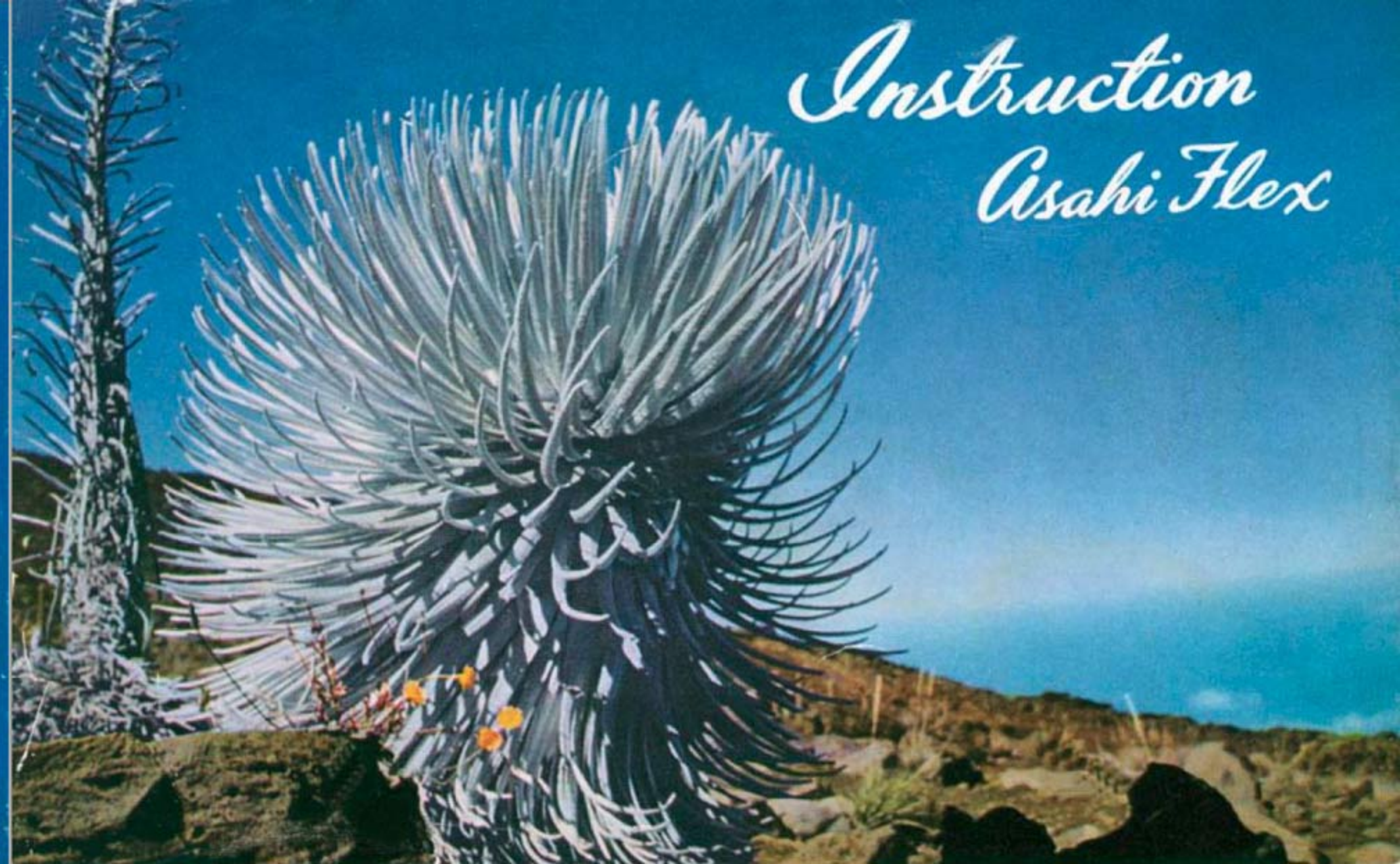
ASAHI OPTICAL CO., LTD.

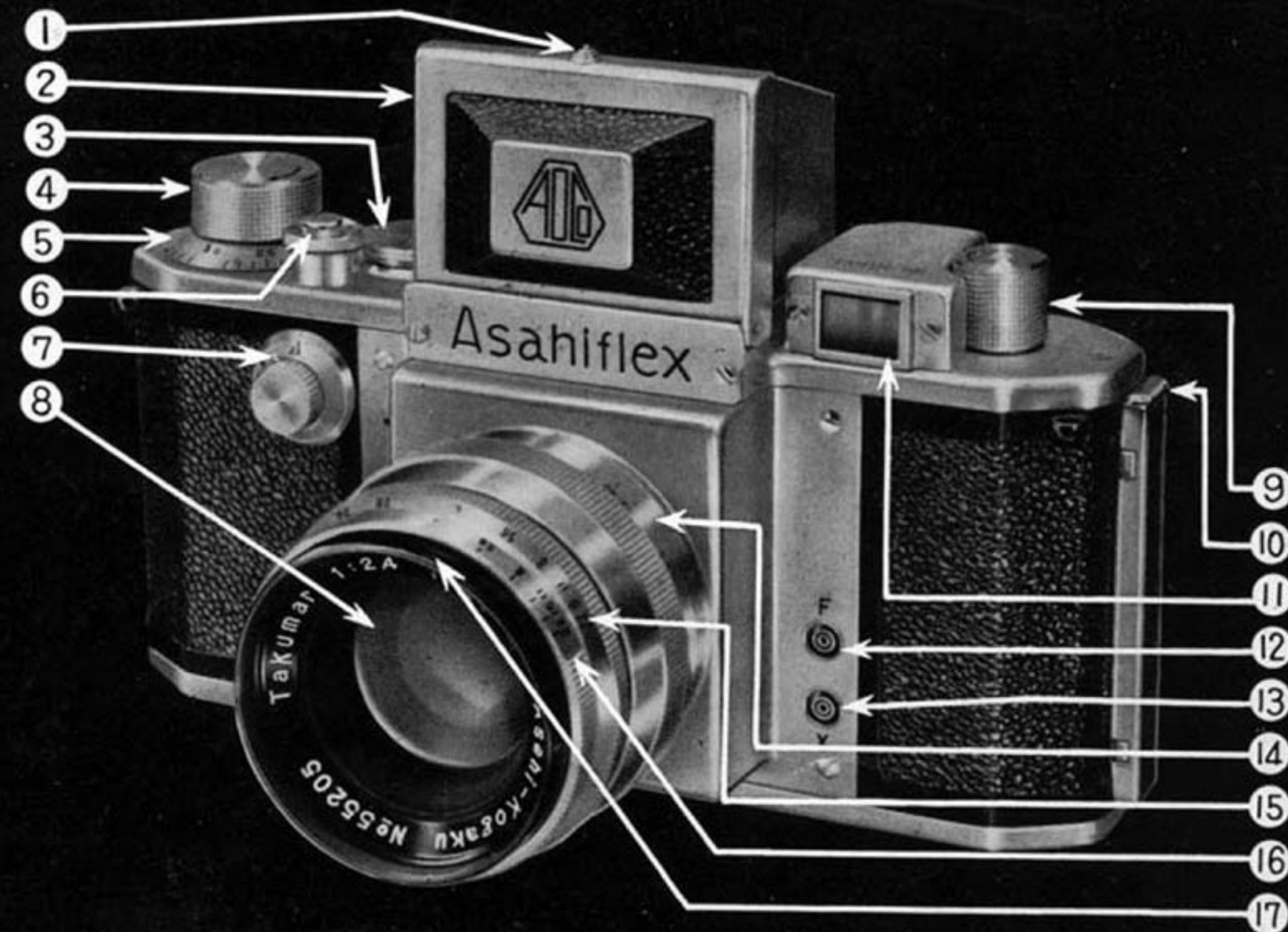
No. 980, Shimura-Maenochō, Itabashi-ku, Tokyo, Japan

*Instruction
Asahi Flex*

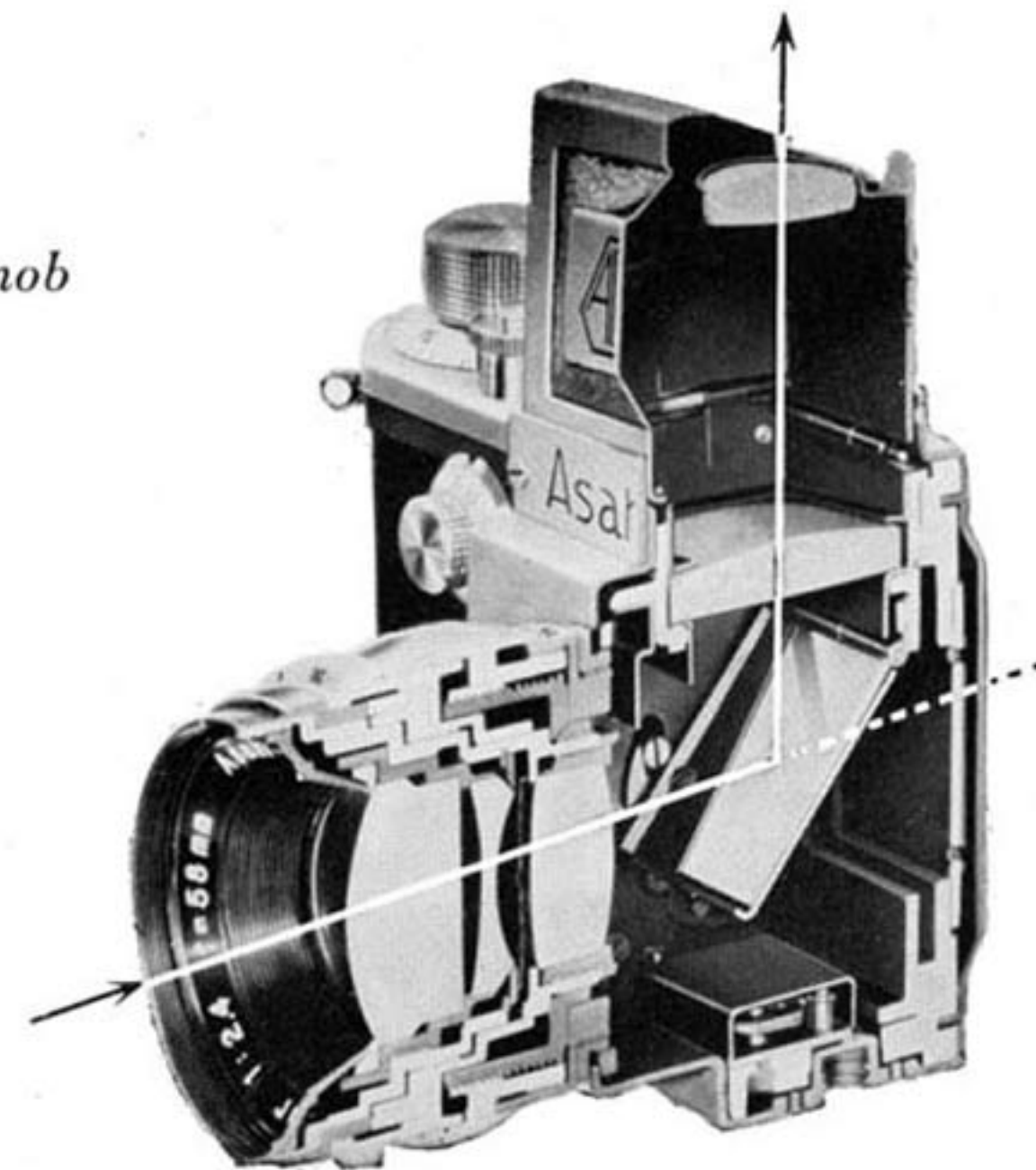
HOSOKAWA, TOKYO, JAPAN

7. M. 3. H





- ① Hood lock
- ② Hood for focusing finder glass
- ③ High speed shutter dial
- ④ Film winding & shutter cocking knob
- ⑤ Exposure counter dial
- ⑥ Shutter release button
- ⑦ Slow speed shutter dial
- ⑧ Lens
- ⑨ Film rewinding knob
- ⑩ Rear Cover lock
- ⑪ Eye-level view finder
- ⑫ Synchronizer terminal F
- ⑬ Synchronizer terminal X
- ⑭ Distance scale ring
- ⑮ Diaphragm adjusting ring
- ⑯ Pre-set adjusting ring
- ⑰ Pre-set diaphragm index



INSTRUCTIONS FOR YOUR ASAHI FLEX

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BEFORE TAKING PICTURES

Set pre-set adjusting ring.



1. Remove the lens cap.

5. Set shutter speeds.



2. Erect the finder hood.

6. Focus by turning the distance scale ring then set diaphragm ring.



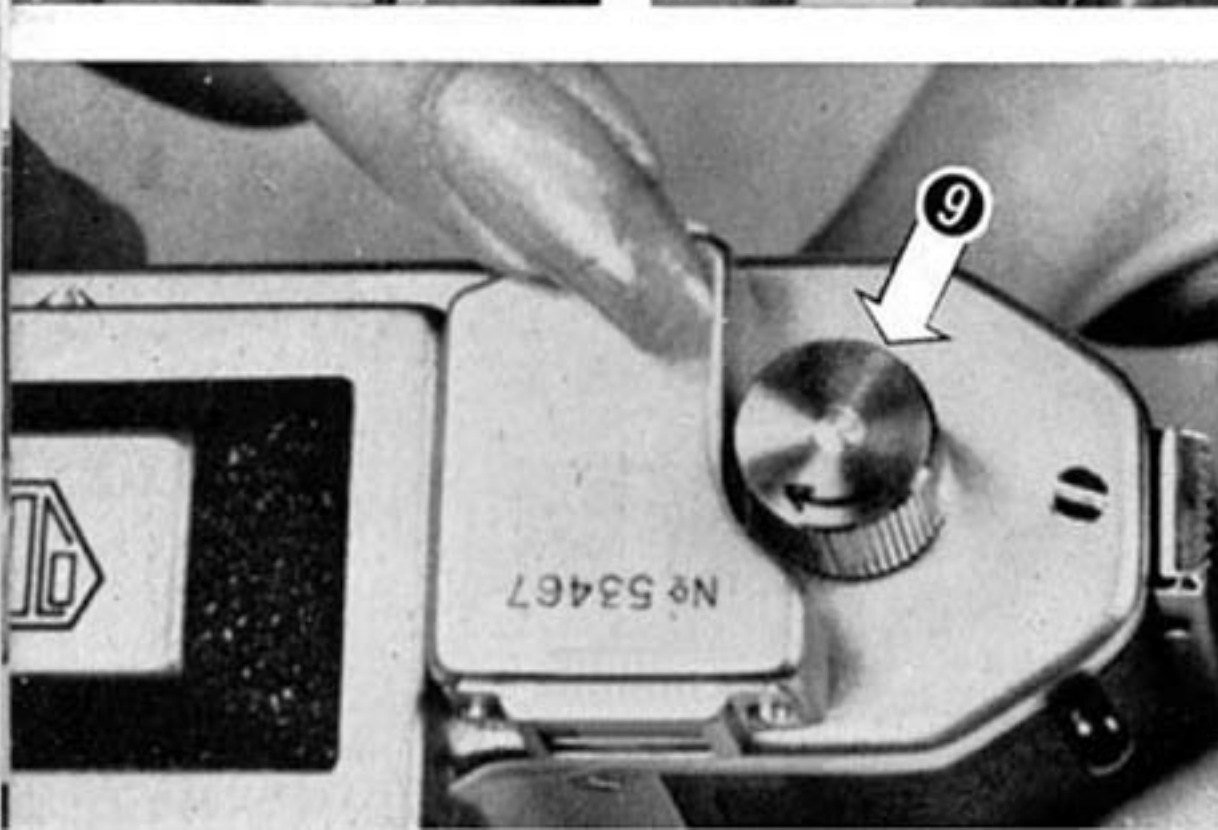
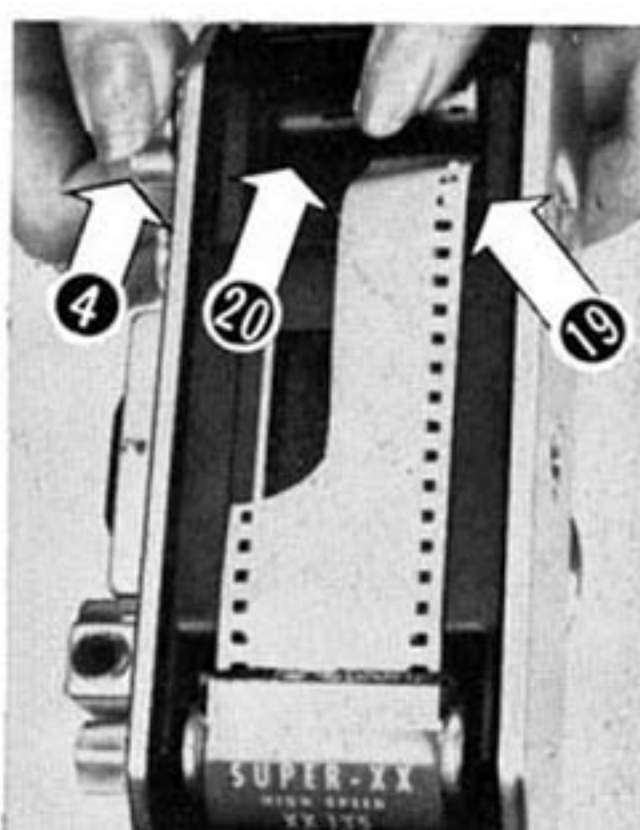
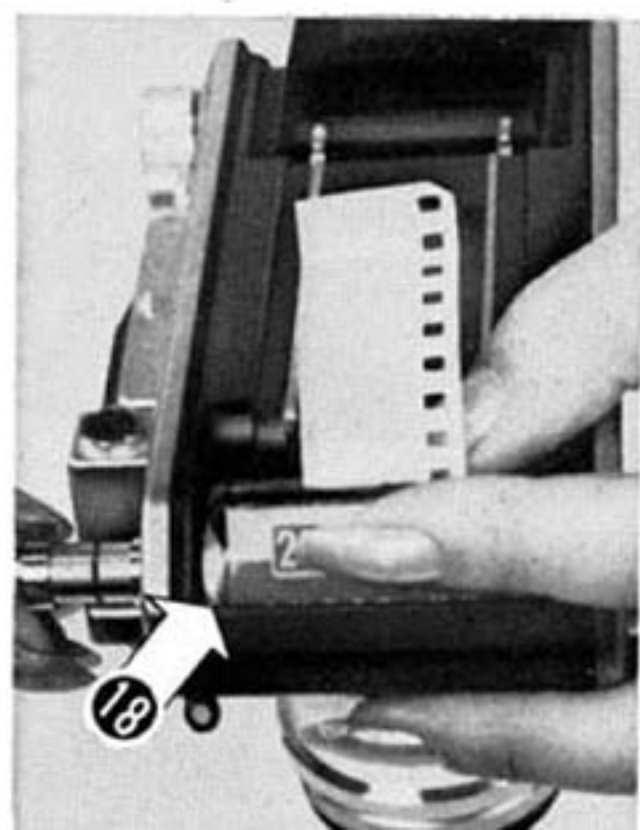
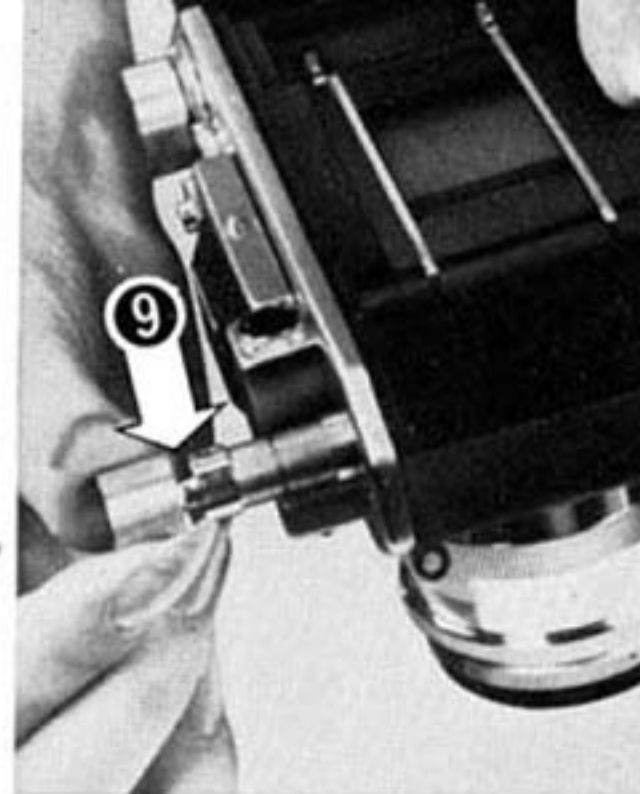
3. Turn the film winding knob.

7. Release the shutter button.



LOADING FILM

Open the back of the camera by pulling out the rear cover lock ⑩. Thoroughly pull out the film rewinding knob ⑨ completely, place the film cartridge into its position ⑱, and push back the rewinding knob. Draw out a few inches of the film and insert it into the slit of the take-up spool ⑳. Slowly turn the film winding knob ④ clockwise and make sure that both sprockets ⑲ have properly caught the perforations of the film. Again make sure that the film is being properly transported on to the take-up spool, and then close the back pushing down the rear cover lock.



PREVENT LOOSENING OF FILM

- Set the rewinding clutch at A, and turn the film rewinding knob clockwise until a slight resistance is felt to prevent loosening or warpage of the film.

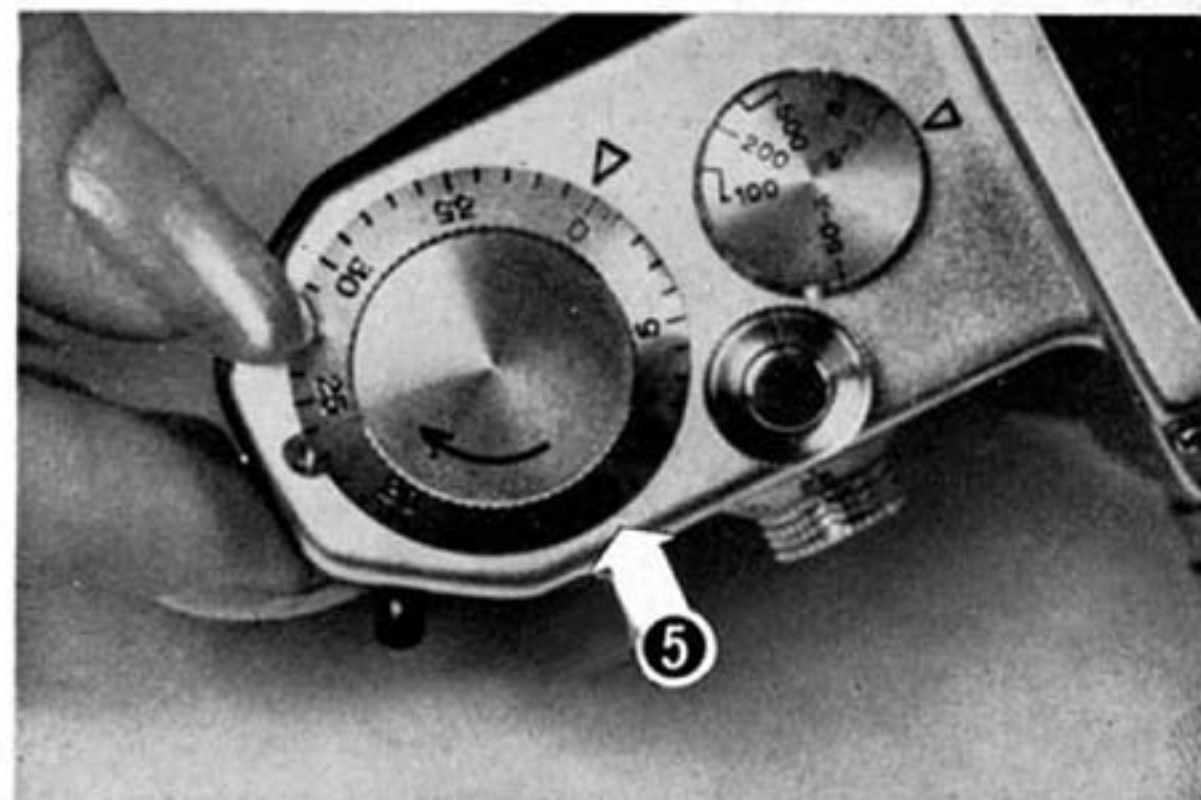
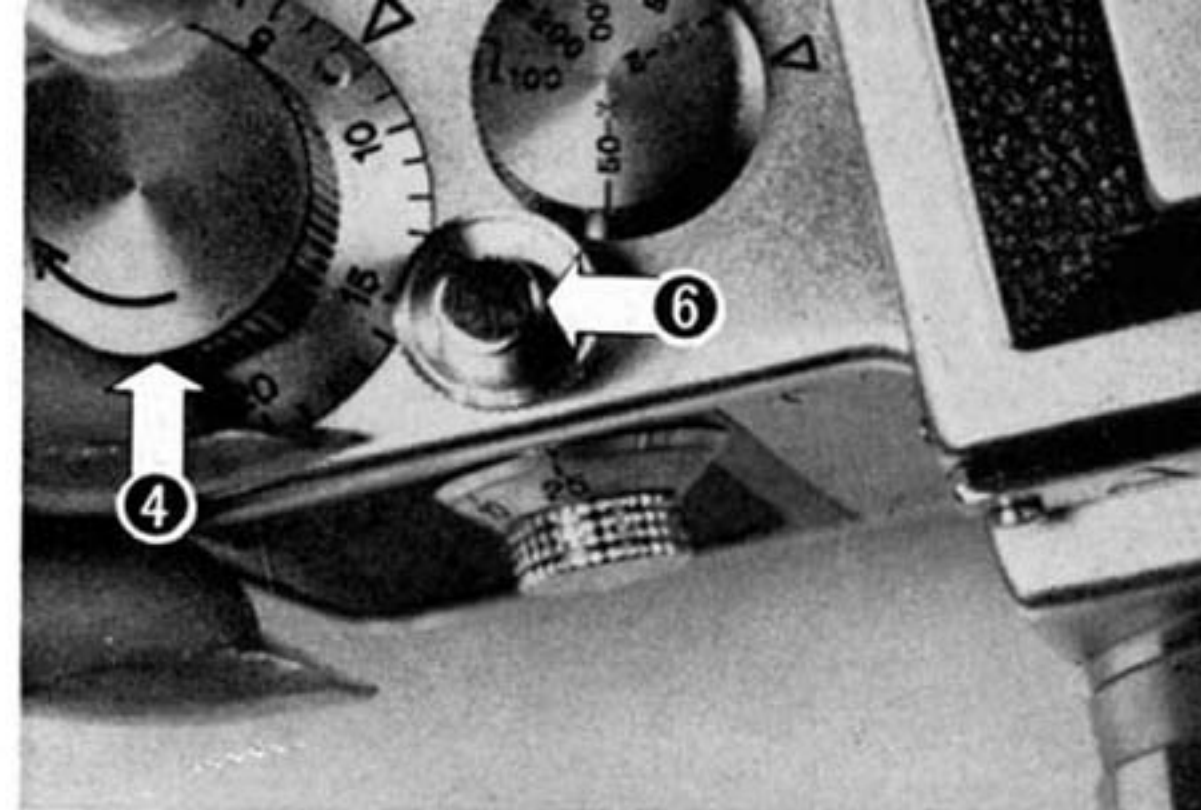
Although the film loading has now been completed, the length of the film which was drawn out of the cartridge while loading can not be used for picture taking; so, turn the film winding knob ④ and release the shutter button ⑥ alternately twice. Set the figure 0 on the exposure counter dial ⑤ to the index by turning the counter.

WHILE LOADING FILM

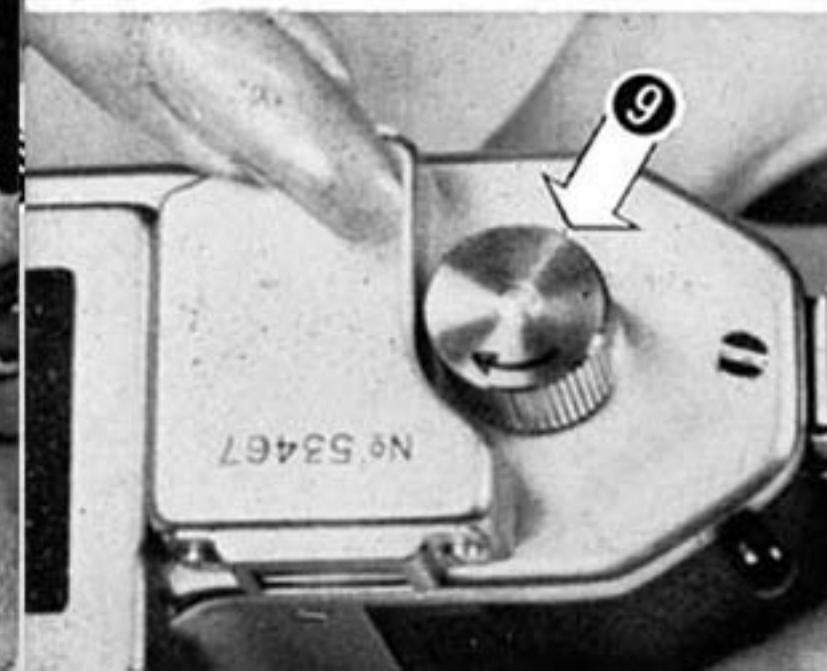
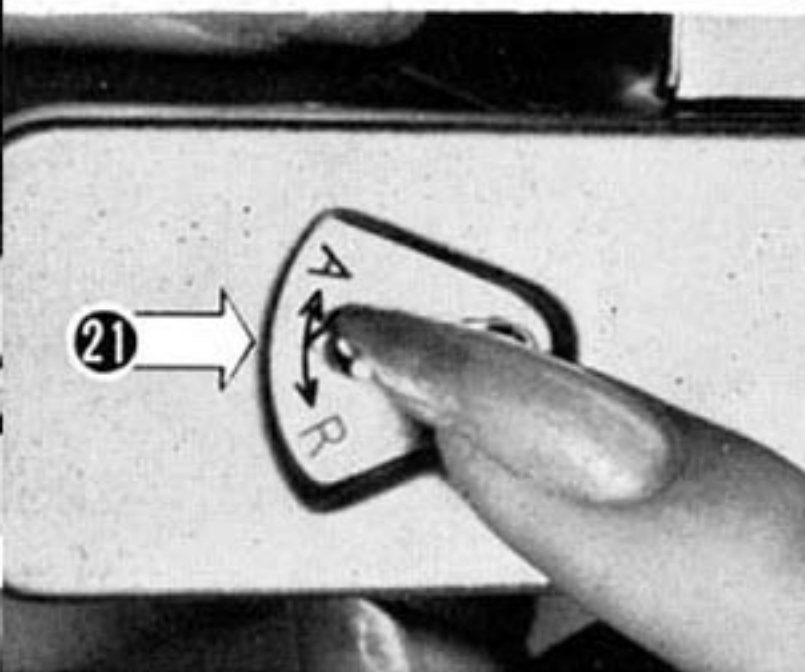
As you wind the film, the film rewinding knob automatically turns anti-clockwise. Whenever loading a film cartridge, it is recommended that you check whether the rewinding knob turns anti-clockwise when turning the winding knob. When the rewinding clutch is not set at the proper position, or when the film is off the sprockets or the take-up spool, the film may not be transported to the right direction.

Always remember:—

- Stop winding the film when you feel a tight resistance as the film is at its end.
- If you keep winding the film against the resistance, the film will come off the cartridge, and it may not be rewound into the cartridge. If the film has been wound off the cartridge, it should be removed from the camera in a dark room.



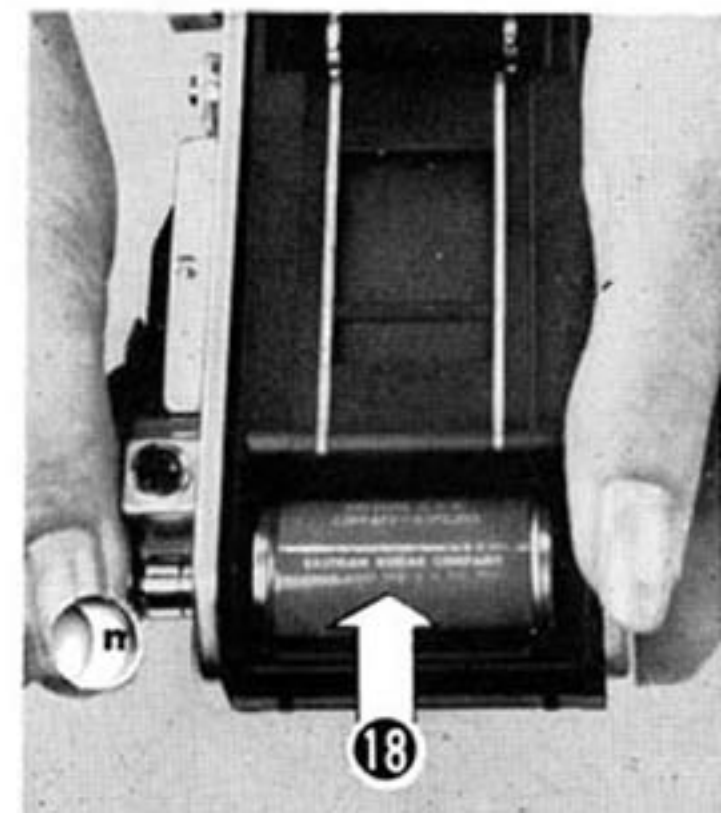
UNLOADING FILM



After the last exposure, turn the rewinding clutch ②① on the base of the camera towards R to free the sprockets. Lift the head of the rewinding knob ⑨ only half of its length and turn it clockwise. The exposed portion of the film on the take-up spool will be rewound into the cartridge. When the film has been rewound, you will feel the knob lighten or a sudden blank as the leader end of the film comes off the take-up spool. Then open the back, thoroughly pull out the rewinding knob and remove the cartridge from the camera.

- After unloading film, turn the rewinding clutch from R to its original position A. The removed cartridge should be put in a proper container to prevent its exposure to light.

- When loading or unloading film, avoid direct sun light.

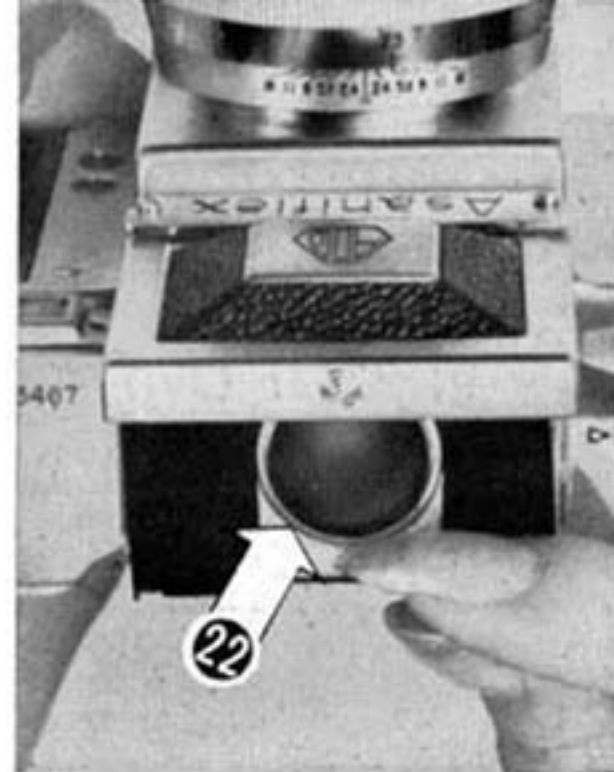
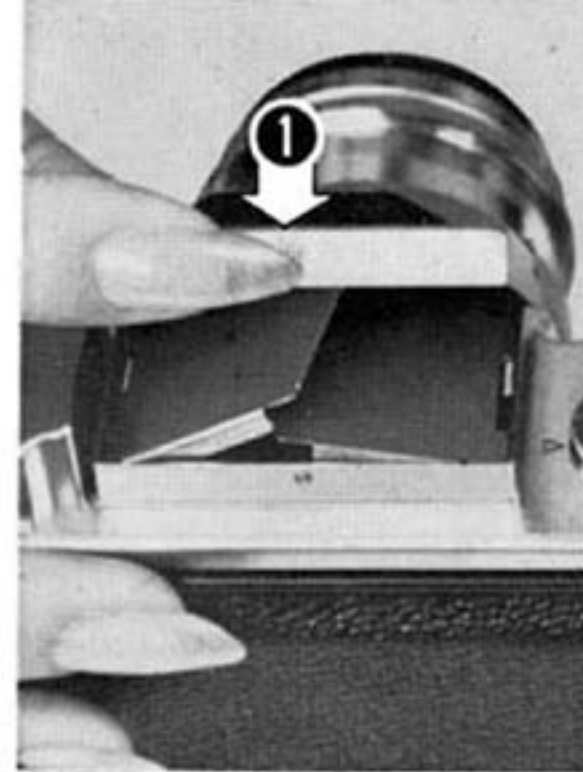


FOCUSING

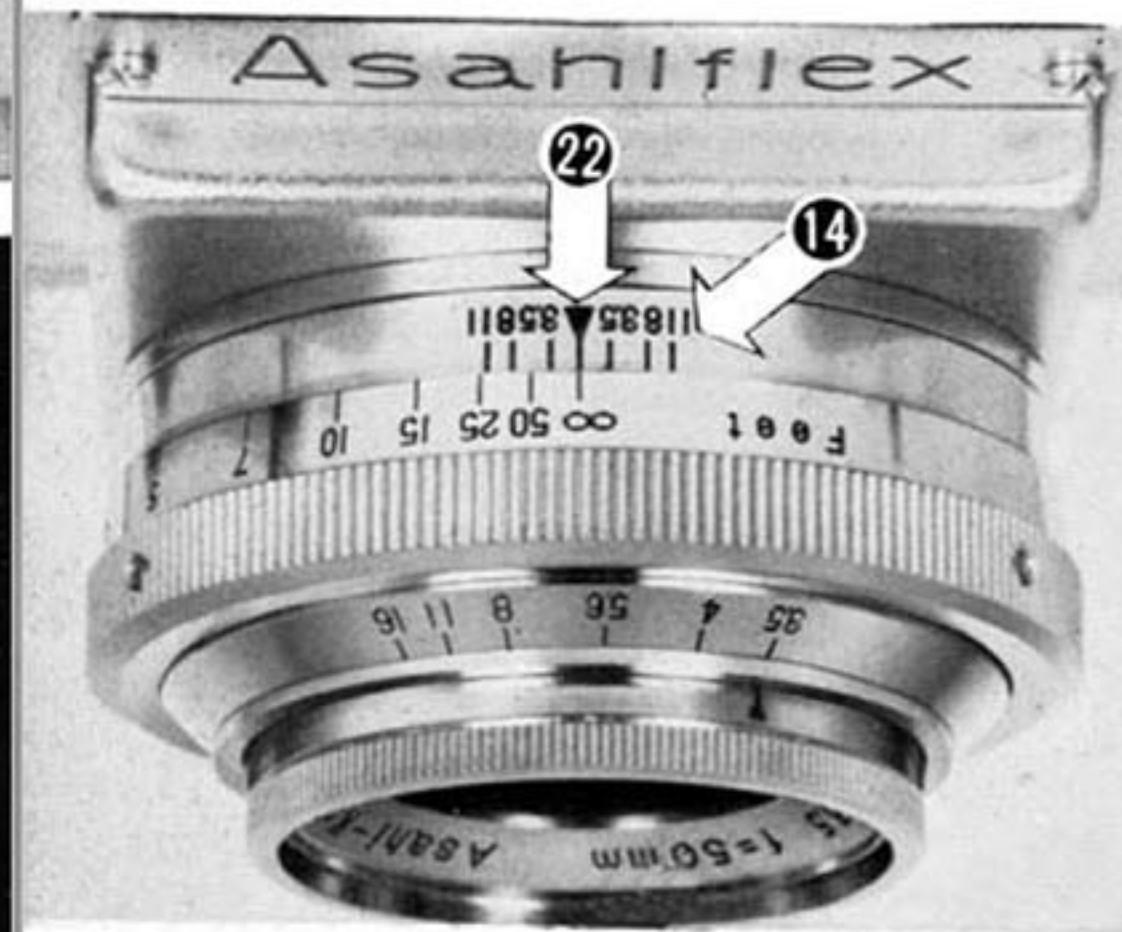
- **Before focusing through the focusing finder glass, be sure that the shutter has been cocked first.**

Remove the lens protector cap, and erect the focusing finder hood by pushing up the hood lock ①. Focusing will be made by observing the image on the focusing glass while turning the distance scale ring ⑭. When the image on the focusing glass becomes clearest, an accurate focusing will be obtained, and the same image will be produced on the film plane as the shutter is released.

To ensure accuracy in focusing, a magnifier ② is attached to the rear finder hood. The magnifier may be set parallel to the focusing glass by holding the nipple on top of the magnifier. When observing through the magnifier, keep your eye closer to the magnifier.



DISTANCE SCALE AND DEPTH OF FIELD GUIDE



The distance scale ring of 50 mm F 3.5 lens is calibrated in foot 2.5, 3, 3.5, 4, 5, 7, 10, 15, 25, 50 and infinity, while the 58 mm F 2.4 lens has a closer additional 2 ft. calibration. As the clearest image is shown on the focusing glass, the distance scale index indicates the distance to the object. The figures 3.5, 8 and 11 in case of 50 mm F 3.5 lens, and 2.4, 5.6, 8, 11, 16, and 22 in case of 58 mm F 2.4 lens, inscribed on both sides of the distance scale index mark "▲" show the lens aperture, and are used as Depth-of-Field Guide.

Every lens has a depth-of-field: When a certain object falls in correct focus, some range in the foreground and background of the object also appear in the same focus. This guide shows that at a certain distance and diaphragm setting, the range of distance scale dial covered by the two same figures of the lens aperture on both sides of the index mark "▲" can be obtained in a clear image on the film.

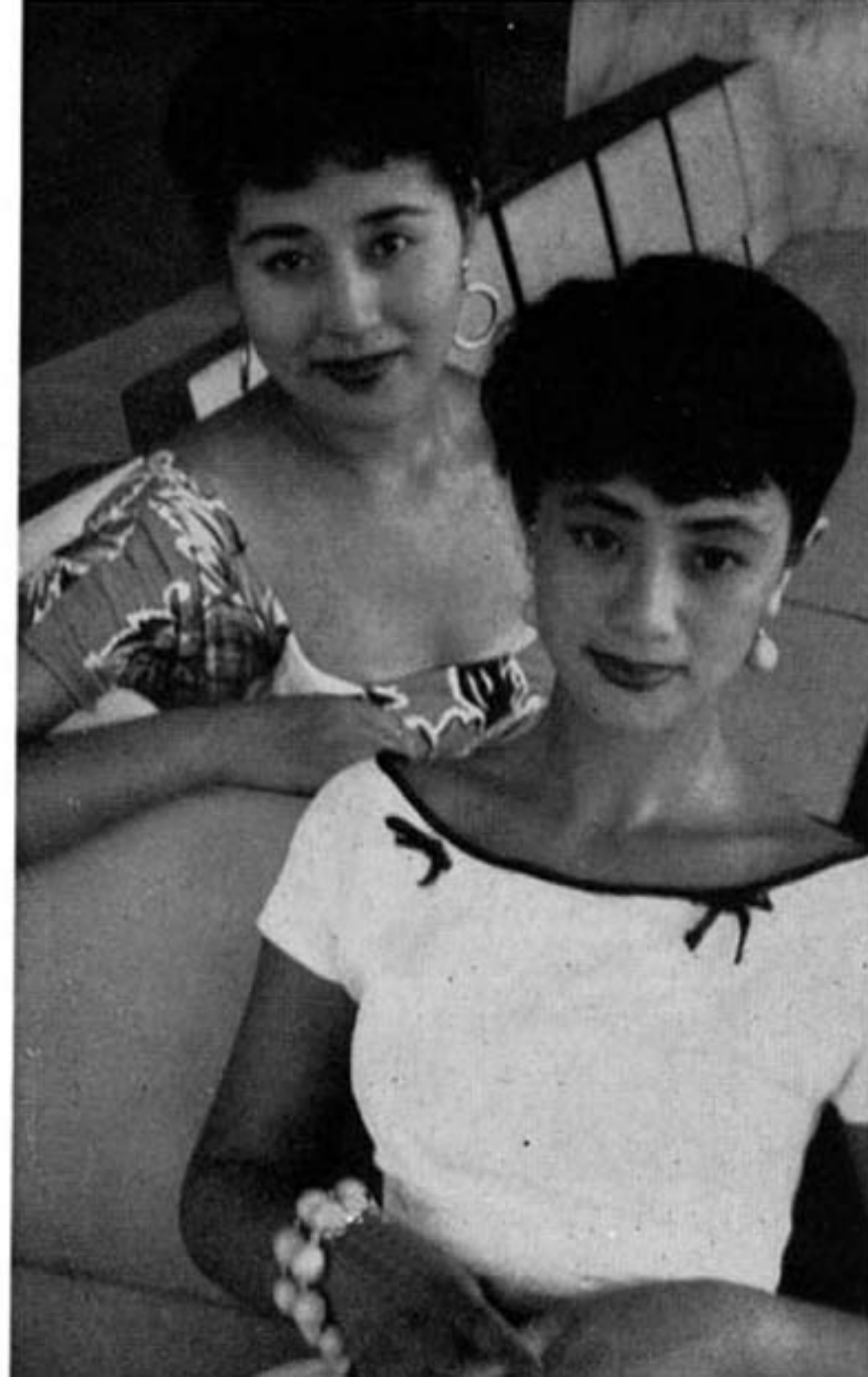
To illustrate: At distance 15 ft. with 50 mm lens and at the following diaphragm setting, the range of distance shown below is in the same depth-of-field.

At f 3.5	12.48 ft ~ 18.84 ft
At f 8	11.04 ft ~ 30.18 ft
At f 11	9.89 ft ~ 45.25 ft

On each of our TAKUMAR lenses, different depth-of-field guide numbers are shown according to its focal length.

Hence, when taking two or more objects of different distance, it is necessary to adjust the diaphragm properly in order to bring these objects simultaneously in focus as illustrated by the photograph.

With ASAHIFLEX, you can clearly see what is in the depth-of-field on the focusing glass. You will also see the extent of blurs that will be produced on the film.



SETTING DIAPHRAGM

After correct focusing has been obtained, the diaphragm should be set. Set the desired diaphragm dial number to the index by turning the adjusting ring.

The diaphragm rings of ASAHIFLEX standard lens, 50 mm and 58 mm, are calibrated as shown below. As also indicated, the exposure timing varies as the set diaphragm number changes.

50 mm f 3.5 lens	f 3.5	4	5.6	8	11	16
Ratio of exposure timing	1.2×		2×	2×	2×	2×

58 mm f 2.4 lens	f 2.4	2.8	4	5.6	8	11	16	22
Ratio of exposure timing	1.4×		2×	2×	2×	2×	2×	2×



While the shutter speed dial can not be used at the middle of two dial numbers, the diaphragm adjusting ring may be used even between two dial numbers. When strictly selecting the accurate exposure in color photography, determine the shutter speed first and get the correct exposure by adjusting the diaphragm.

PRE-SET DIAPHRAGM

It is sometimes hard in single lens reflex camera to obtain correct focusing when the diaphragm is set prior to focusing because of the darkness of the focusing finder glass. Hence, focusing is usually secured with the diaphragm full open, and adjusting it after focusing.

To eliminate this inconvenience of keeping your eyes off the focusing glass to set the diaphragm, ASAHIFLEX is equipped with a pre-set diaphragm ring ⑯. First, set pre-set diaphragm ring at the desired diaphragm number, and focusing will be made on the bright focusing finder glass with the diaphragm full open. Prior to shutter release, turn the diaphragm adjusting ring until it stops at the pre-set desired diaphragm dial number. Using this pre-set diaphragm ring, you need not remove your eyes off the focusing when setting the diaphragm.



To adjust the pre-set diaphragm ring :

For 58 mm f 2.4 lens—Turn the pre-set diaphragm ring and set the desired diaphragm number of this ring to the red dot.

For 50 mm f 3.5 lens—Turn the pre-set diaphragm ring and set the desired diaphragm number of this ring to the red line

SETTING SHUTTER SPEEDS

ASAHIFLEX is equipped with a focal plane shutter with the following shutter speeds :

Model IIA : T, B, 1/2, 1/5, 1/10, 1/25, 1/50, 1/100, 1/200, 1/500 sec.

Model IIB : B, 1/25, 1/50, 1/100, 1/200, 1/500 sec.

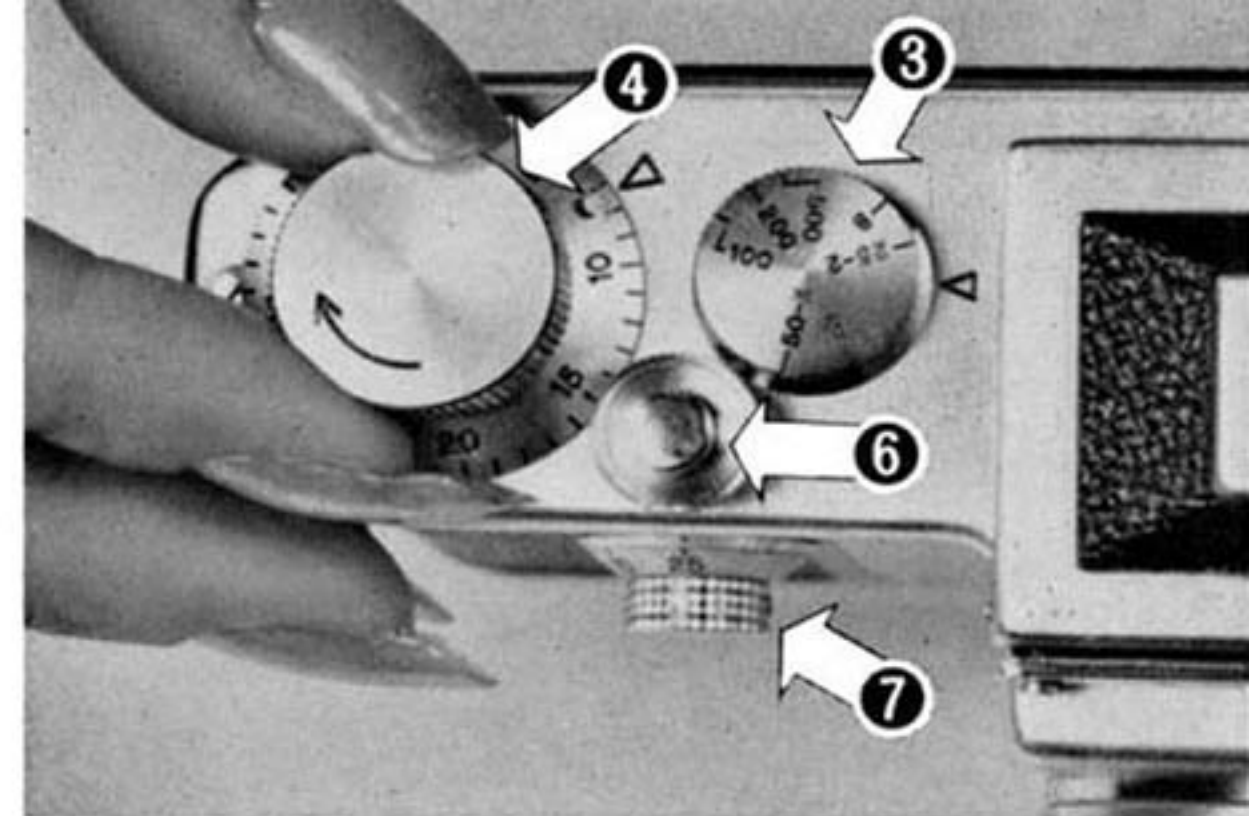
MODEL IIA

For high shutter speeds :

1. Turn the shutter cocking knob ④ clockwise until it stops.
2. Set the figure 1/25 on the slow speed shutter dial to the index.

When the slow speed shutter dial is not set at this number, correct shutter timing may not be obtained.

3. Lift the high speed shutter dial ③, turn to the right or the left and set the desired shutter speed number to the index.



For slow shutter speeds :

1. Set the figures 1/25-2 on the high speed shutter dial ③ to the index.
If this dial is not set at this position, correct slow shutter timing may not be obtained.
2. Turn the slow speed shutter dial and set it at the desired speed number.

The shutter has now been set, and your ASAHI FLEX is ready for taking picture. What remains is releasing the shutter. The letters B and T on the shutter speed dials function as follows:

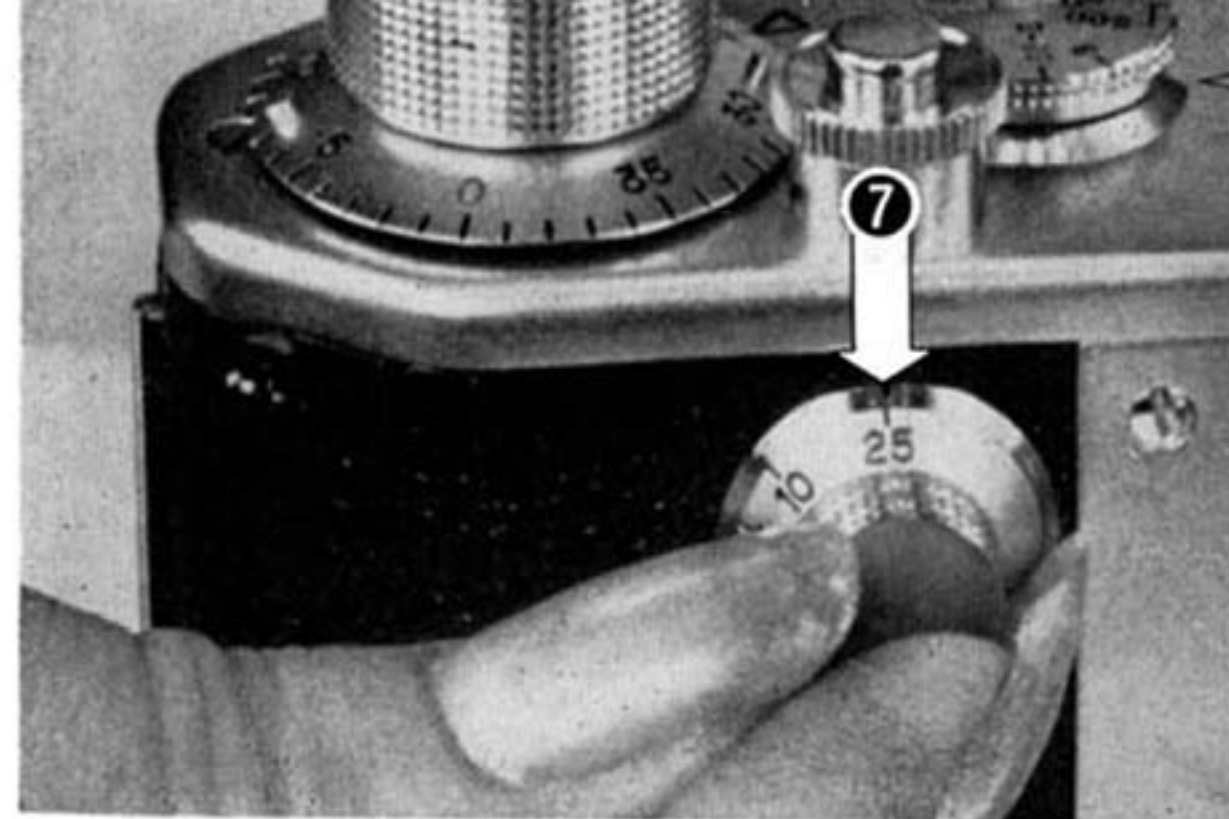
B (Bulb)—The shutter is open as long as the shutter button is pressed.

T (Time)—The shutter is open even if your finger leaves the shutter button after pressing. To close the shutter curtain, turn the slow speed shutter dial towards the dial number 1/2. This setting is used for long exposure timing.

MODEL IIB

1. Turn the shutter cocking knob clockwise until it stops.
2. Lift the shutter speed dial, turn to the right or the left and set the desired speed number to the index.

As the shutter dial is set at B, the



shutter will be full open as long as the shutter button is pressed; however, the Model IIB has no slow speed shutter with T setting. When a long timing is desired with Model IIB, unscrew the shutter ring and fix a shutter release cable with locking attachment. Thus long exposure timing may be easily obtained with this Model.

CAUTION !

1. While the shutter speed dial may be turned either way when setting, the dial indication does not show the correct shutter speed when the shutter is not cocked.
2. Shutter timing may be irregular if your finger touches the shutter speed dial while releasing the shutter.
3. When using T or B setting, use a tripod and a shutter release cable to prevent vibration of your camera.
4. Avoid keeping your camera with the shutter cocked for a long time.
5. Do not turn the film winding & shutter cocking knob while pressing the shutter release button. This will cause trouble in the shutter mechanism.

DOUBLE EXPOSURE

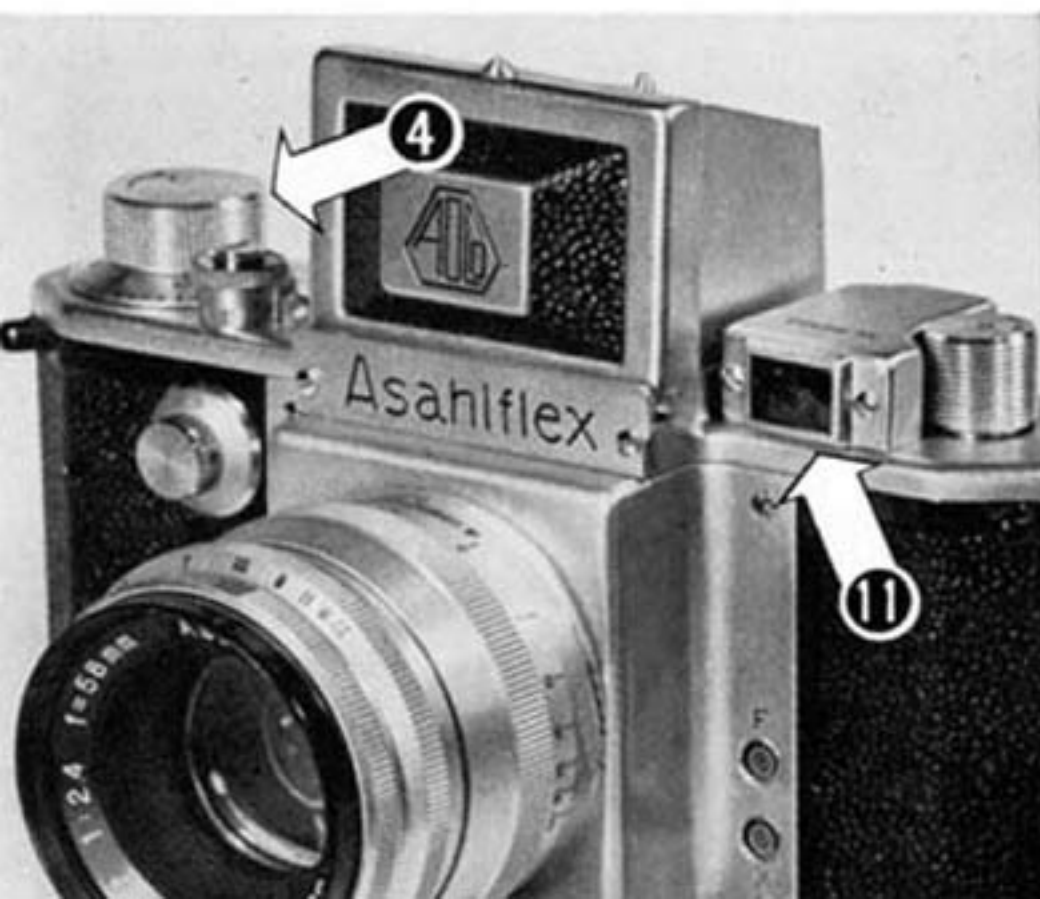
When double exposure is desired, turn the rewinding clutch ② to R after the first exposure, and turn the film winding & shutter cocking knob ④. Thus, only the shutter will be cocked, without transporting the film; the first exposed film being ready for the second exposure.

When not intending to use the camera after cocking the shutter:

1. Place the lens cap back and release the shutter.
2. And when taking pictures next time, turn the rewinding clutch to R position, and cock the shutter by turning the film winding & shutter cocking knob.

3. After the shutter has been cocked, return the rewinding clutch from R to A.

In this manner, one frame length of the film may not be wasted, nor the durability of the shutter decreased.



COMPOSING PICTURES

After focusing and adjusting the diaphragm and shutter speeds, your picture should be composed on the focusing finder glass. In ASAHIFLEX, the image appearing on the focusing glass through a reflex mirror located inside the camera will be produced exactly on the film plane. When taking color pictures, this will be very convenient to compose your pictures in color balance.

EYE-LEVEL VIEW FINDER

This eye-level view finder ⑪ may be used when taking a snap shot, or shooting a moving object. When using the eye-level view finder, set the distance scale to the object in advance. This eye-level view finder may be used at the eye-level shooting or when holding your camera vertically.

How to hold your camera

While it is important in taking pictures to give a correct exposure timing matching the brightness of the object as well as accurate focusing, it is also important as well to hold your camera steady to prevent blurs on the film caused by vibration of your camera. Shown by the picture is one of the fundamental ways of holding your camera. Pressing the shutter release button softly is also important.

- *Hold your camera steady by attaching your both arms to your body, compose the picture on the focusing glass positioning your eye close to the magnifier, and softly release the shutter. The closer your eye to the magnifier, the wider the vision through the magnifier.*



- After securing accurate focusing on the focusing glass, push down the magnifier, hold your camera down to your chest position, and then release the shutter.

COMPARATIVE TABLE OF FILM SENSITIVITY

ASA (USA)	DIN (GERMANY)	G. E. (USA)	WESTON (USA)
8	10/10	10	6
10	11/10	12	8
50	18/10	64	40
100	21/10	125	80

As the ASA number is doubled, the exposure should be reduced to half. Sensitivity ratio for ASA 50 and 100 will be 1:2.



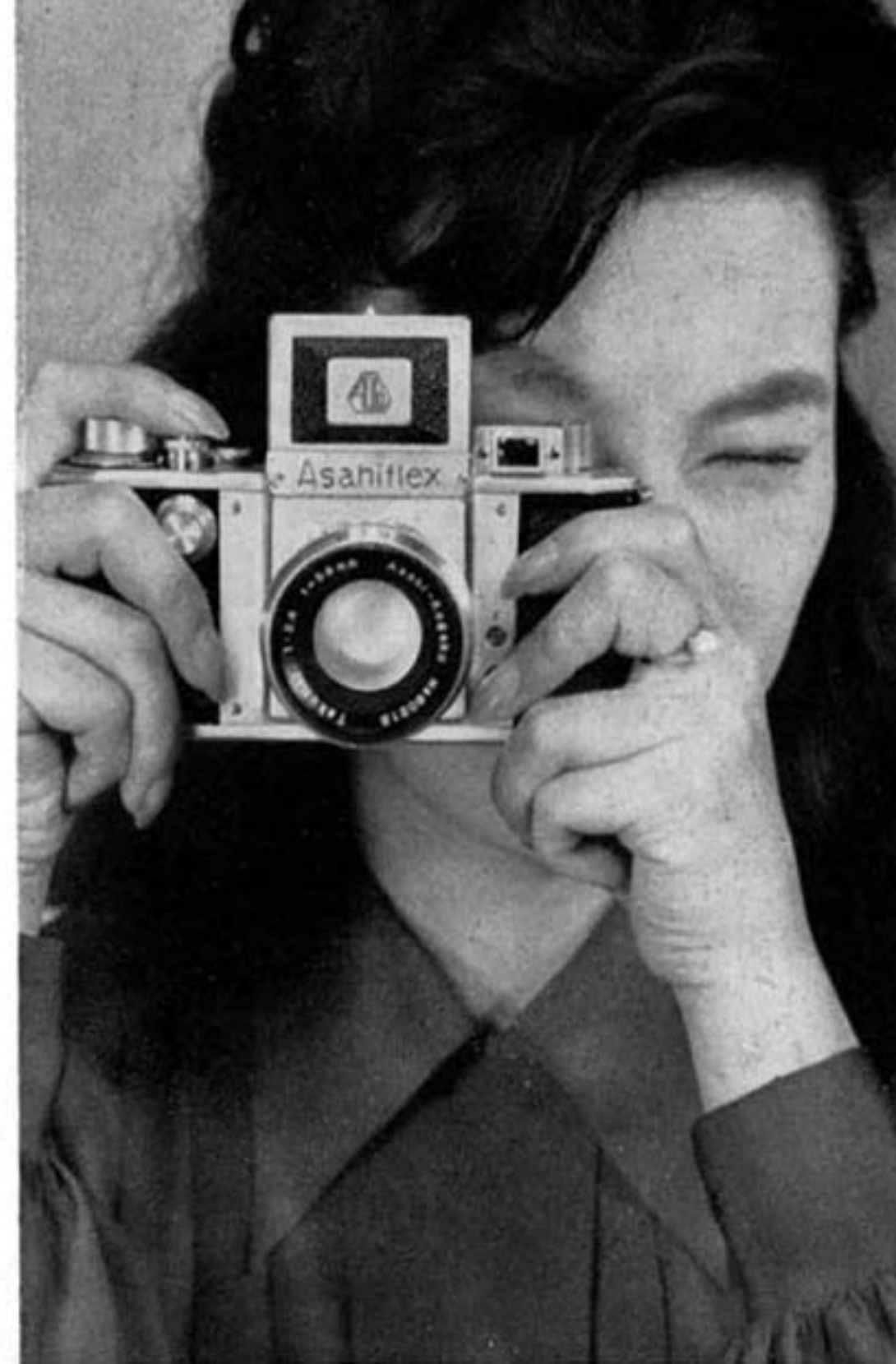
- When holding your camera vertically, first secure correct focusing through the focusing finder glass, and then compose your picture through the eyelevel view finder. Press the back of your camera to your face to prevent vibration of your camera. The picture shown on page 4 is also one of the feasible ways of holding your camera vertically.



- When holding your camera at eye level, first secure focus on the focusing glass, and then compose your picture through the eye-level view finder.

EXPOSURE TIMING TABLE FOR EACH SEASON

Season	Spring			August			Autumn			Winter		
Months	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
OBJECTS	F sec.			F sec.			F sec.			F sec.		
Broad scenery, sea, mountains, snow.	16	1/200		16	1/500		11	1/200		11	1/200	
Ordinary scenes	8	1/200		11	1/200		8	1/200		8	1/100	
Roadside snaps	8	1/200		11	1/200		8	1/200		8	1/100	
Outdoor persons	8	1/100		8	1/200		8	1/100		8	1/100	
Close-ups of above	5.6	1/100		5.6	1/200		5.6	1/100		5.6	1/100	
Persons in shade	4	1/100		5.6	1/100		4	1/100		4	1/100	
Weather	Above table applies for fair days			Slightly cloudy: 2× exposure			Cloudy: 3× exposure			Dark & Cloudy: 4× exposure		
Time	Above table applies for 10 a.m. to 02 p.m.			2× exposure for 09~10 a.m. 02~03 p.m.			4× exposure for 08~09 a.m. 03~04 p.m.					



FLASH SYNCHRONIZER

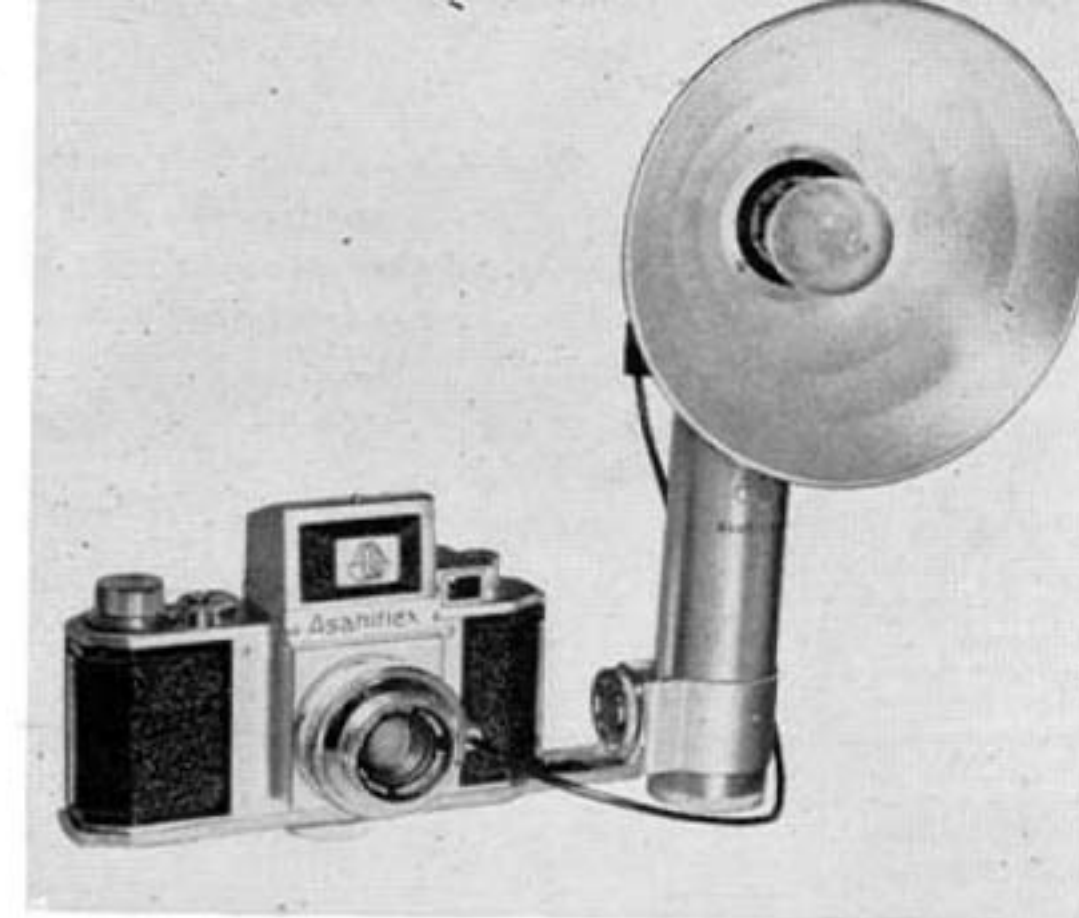
ASAHI FLEX is equipped with FP and X synchronizer terminals. Be sure that you use a correct flash bulb at the correct terminal.

FP TERMINAL (Time lag: 15 m/s)

Always use FP class flash bulbs at this terminal.

Connect the plug of the flash cord to this FP terminal and use FP bulbs. The flash will synchronize at speeds from 1/25 to 1/500.

When timing at 1/25 seconds, a larger size bulb of longer flash time is preferable.



X TERMINAL (Time lag: Zero)

At this terminal, F class bulbs, X class bulbs and strobe lights may be used according to the following table.

<div>Speeds</div> <div>Terminal</div>	$\frac{1}{500}$	$\frac{1}{200}$	$\frac{1}{100}$	$\frac{1}{50}$	$\frac{1}{25}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{2}$	<i>B</i>
FP	<i>FP Class (Large size)</i>								
	<i>FP Class (Small size)</i>								
X					<i>F Class</i>				
						<i>M Class</i>			
					<i>Strobe Lights</i>				

To obtain satisfactory synchronization with electronic flash, it is preferable to set the shutter speed slower than 1/25 of a second.

When using a synchronized flash at daytime as well as at night time or in dark places, you can always obtain a bright picture as shown by the photograph even when taken against the main light.



Taken with synchronized flash.

INTERCHANGING LENS

To have several lenses of different focal lengths freely interchangeable according to the objects will be as though you had several different cameras. With a lens of about 50 mm focal length, the minute details of the object may not be taken clearly, while a lens of longer focal length will produce pictures of completely different nuance.



Thus, interchanging the lens of your camera will present varieties of fascinating pictures even with one camera.

Single lens reflex camera has the special feature in easy interchangeability of lens, having no trouble of parallax or the necessity of changing view finder as in the case of other cameras with coupled range finder.

Six TAKUMAR interchangeable lenses with superior optical performance are available for your ASAHIFLEX. All these interchangeable lenses being of screw-in type, they can be easily interchanged.



50 mm f 3.5

58 mm f 2.4

83 mm f 1.9

DIFFERENCE OF ANGLE OF TAKUMAR INTERCHANGEABLE LENS

100 mm f 3.5

135 mm f 3.5

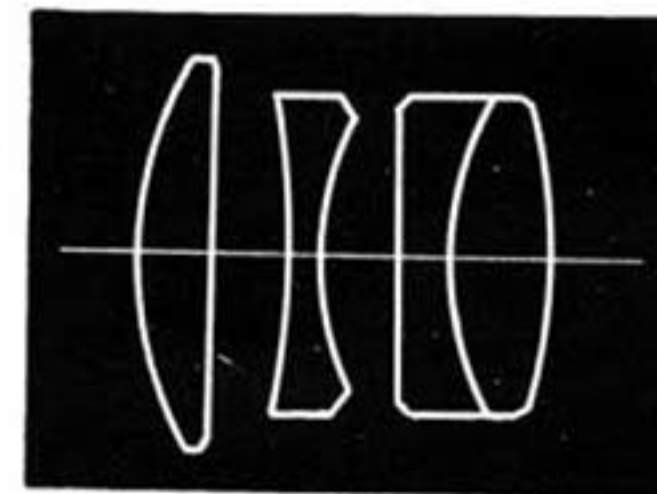
500 mm f 5



Standard TAKUMAR 50 mm F 3.5

Lens element	4
Minimum lens aperture	16
Distance scale	2.5 ft~50 ft, and infinity
Angle of view	46°
Weight	6.3 ozs (180 grs)
Equipped with pre-set diaphragm adjusting ring.	

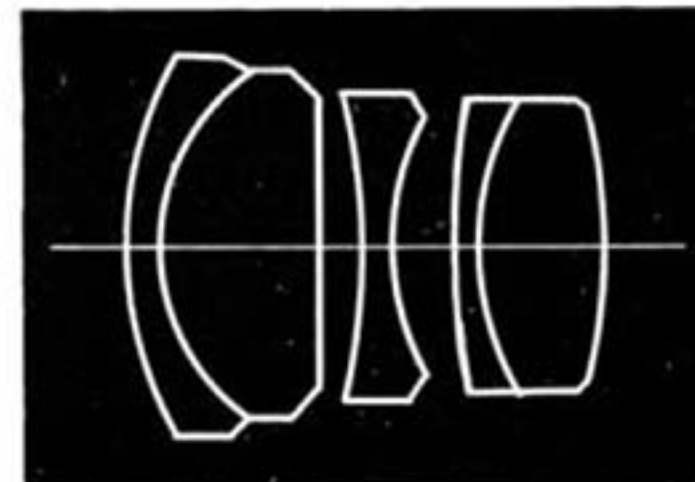
Standard lens of Tessar type, especially corrected against astigmatism and chromatic aberration. Most suitable for close-ups and reproduction because of the wide angle vision, as well as for scenery, persons, snaps, etc.



Standard TAKUMAR 58 mm F 2.4

Lens element	5
Minimum lens aperture	f 22
Distance scale	2 ft~50 ft and infinity
Angle of view	41°
Weight	7 ozs (200 grs)
Equipped with pre-set diaphragm adjusting ring.	

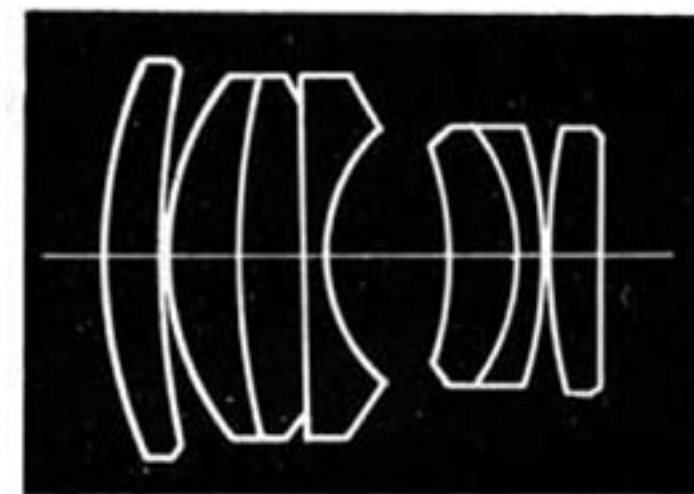
Sensational standard lens of f2.4 ever produced with 5 lens elements. The focal length is designed at 58 mm for single lens reflex camera, having excellent resolving power. Especially designed for color photography because of the increasing popularity of color pictures.



TAKUMAR 83 mm F 1.9 long focal length

Lens element	7
Minimum lens aperture	f 16
Distance scale	3.5 ft~100 and infinity
Angle of view	29°
Weight	12.3 ozs (350 grs)
Equipped with pre-set diaphragm adjusting ring.	

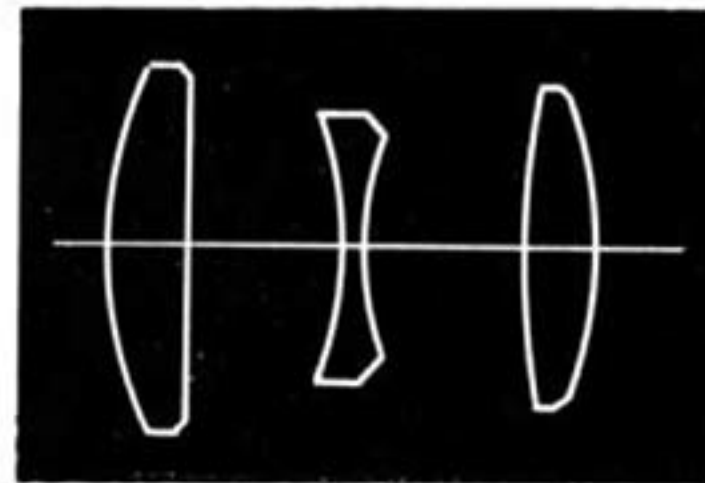
Unique among the TAKUMAR lenses. Along with the TAKUMAR 135 mm telephoto lens, aberrations are reduced to the ultimate value shown by wave optics. Especially the spherical aberration is smaller than any lens made in Japan. Most suitable for portraits, night photography, stage pictures as well as for general photographs.



TAKUMAR 100 mm F 3.5 long focal length

Lens element	3
Minimum lens aperture	F 16
Distance scale	4.5 ft~100 ft, and infinity
Angle of view	24°
Weight	9.8 ozs (280 grs)
Equipped with pre-set diaphragm adjusting ring.	

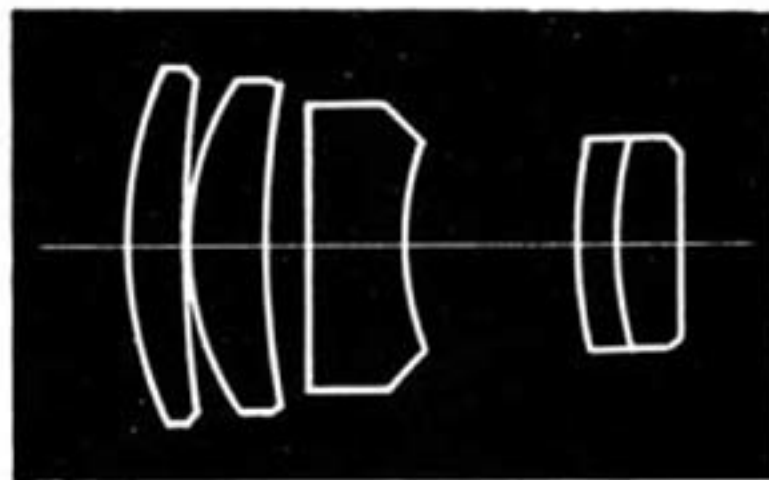
Although composed of 3 elements, aberrations are satisfactorily corrected. Recommended for taking sceneries, portraits, news pictures, etc.



Tele-photo TAKUMAR 135 mm F.3.5

Lens element	5
Minimum lens aperture	F 16
Distance scale	6 ft~200 ft, and infinity
Angle of view	18°
Weight	17.5 ozs (500 grs)
Equipped with pre-set diaphragm adjusting ring.	

Aberrations reduced to the ultimate value along with the TAKUMAR 83 mm lens. Even with the diaphragm full open, the resolving power is excellent, producing brilliant brightness to every corner of the picture. Indispensable for long distance or portraits. Capable of close-ups of animals or plants at a distance.



Tele-photo TAKUMAR 500 mm F 5

Lens element 2
Minimum lens aperture F 16
Distance scale
25 ft~1000, and infinity
Angle of view 5°
Weight 51 LBS
(2.85 kg)
Equipped with rack-pinion
focusing adjustor.

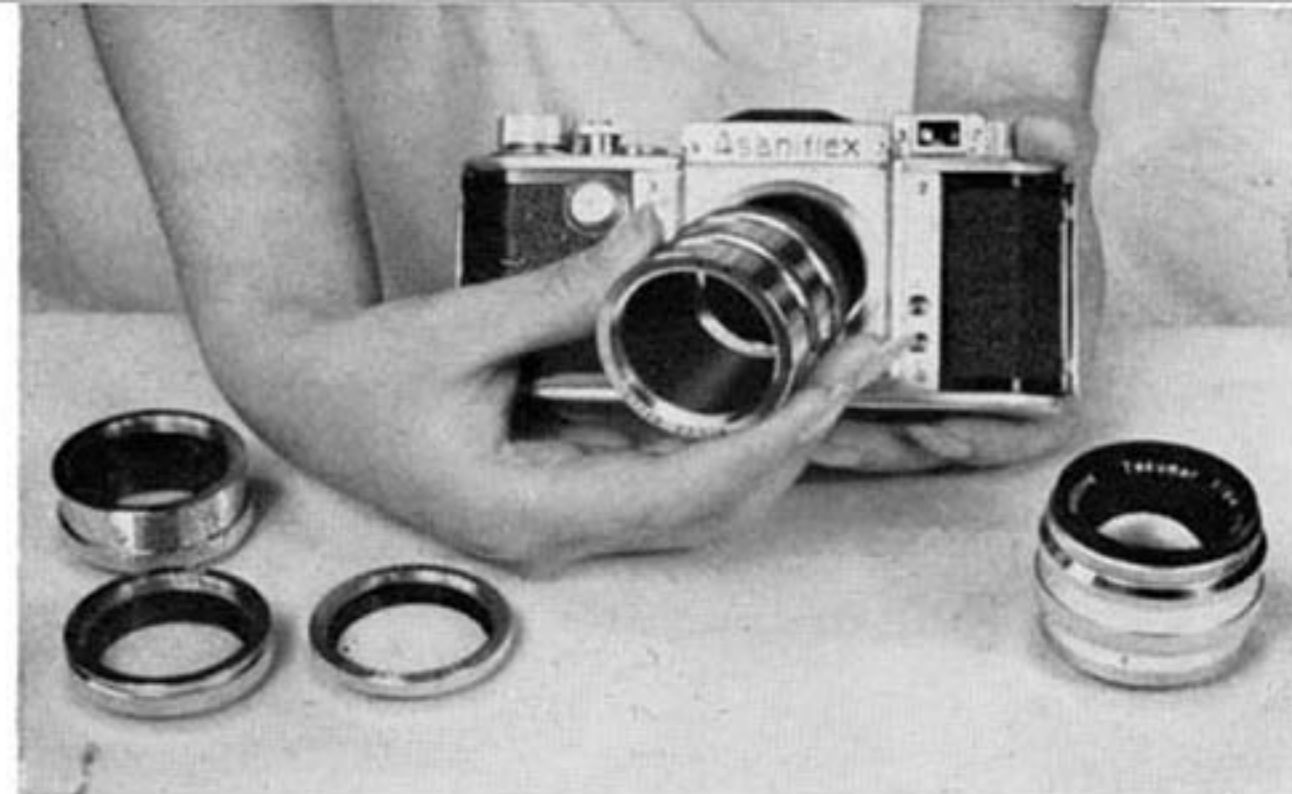
Comparatively light, small and portable for its long focal length of 500 mm. Capable of taking interesting and unique pictures of long distance, snaps, scenarios, stage scenes, etc., that other lenses may not be able to represent.

- When taking distant objects, or using slow speed shutter, use of our shutter release cable is recommended to prevent vibration of your camera or blurs on your pictures. See page 16 for details of attaching a release cable to your camera.



CLOSE-UPS

Extension tubes of one set in four pieces and ASAHI bellowscope are available for your ASAHIFLEX. By properly inserting the extension tubes or the bellowscope between the camera body and the lens, close-ups may be simply and easily made. When used for 100 mm or 135 mm lens, close-ups at a distance may be made, and will open a new field in animal and plant photographs. What should be borne in mind in close-ups, however, is the change of exposure factor: Longer exposure must be given than in ordinary photography. With the distance of 60 cm from the film plane to the object as the basic figure, the exposure should be



1.7 times longer at 40 cm, and 5 times longer at 20 cm. For further details, see the table attached to the extension tube.

While other types of cameras have the trouble of parallax when shooting at a close distance, **ASAHIFLEX is non-parallax.** Hence, ASAHIFLEX is most suitable and recommended for close-ups.

REPRODUCTION

When reproducing documents, etc., use proper extension rings as in close-ups according to the size of the object. Reproduction may be achieved successfully by observing the focusing glass and adjusting the composition on the focusing glass. It is highly recommended in this case to use ASAHI-FLEX Reproduction Kit capable of giving even illumination over the object. The carrying case of this kit serves as reproduction mat, on which a post and pantagraph are erected easily. The camera may be lifted or lowered simply together with the pantagraph, facilitating focusing and composition. Furthermore, the pantagraph on which the camera is fixed can be positioned at any angle, and close-ups of small objects at any angle may be obtained up to life-size. ASAHI-FLEX Reproduction Kit is recommended for copying books, documents, drawings, etc.



MICROPHOTOGRAPHY

Microphotography has hitherto been considered as being very difficult. By use of an ASAHI-FLEX Microphotographic Adaptor, microphotography can be easily and simply obtained by observing the image on the focusing finder glass, as in close-ups or reproduction by ASAHI-FLEX. This adaptor simply connects the camera to a microscope.

ASTRO-PHOTOGRAPHY, SPECTRO-PHOTOGRAPHY, RÖNTGENGRAM.

As in close-ups or micro-photography by ASAHI-FLEX, attach a pertinent adaptor to your instrument, and you can easily focus by observing the image on the focusing finder glass. For its versatility, ASAHI-FLEX is most suited and popular in the fields of medical and scientific research.



FOR PROPER MAINTENANCE

Damp and dirt are taboo in keeping your camera. In rainy seasons especially, it is necessary to keep your camera in dry air. Keeping your camera in a can together with desiccative will be preferable.

Body

When used outdoors, or on a rainy day or on a beach, your camera will be easily exposed to dirt, rain or sea water splashes, and these will eventually cause stains or rusts on your camera as well as to the lens. Wipe off the dirt with a soft brush or a dry soft piece of cloth. Never use oil, and do not touch the shutter curtain with sweaty fingers.

Mirror

Be careful not to wipe off the thin film on the mirror surface or to dislocate the accurate position of the mirror. Only when extremely necessary, use spray air or a soft feather to wipe the mirror surface.

Lens

When dusty, wipe it with a soft brush or a piece of feather. When extremely necessary, use a stick with a clean soft piece of cloth wound around its top. Wet it with alcohol or ether, and slowly wipe the lens from the center in a whirl. Do not wipe the lens with force or with a dirty piece of cloth as it will cause flaws to your lens.

Asahiflex MODEL II

TYPE	Single lens reflex
USED FILM	35 mm film
PICTURE SIZE	24 mm × 36 mm (Leica size) 20 or 36 exposures.
STANDARD LENS	TAKUMAR 50 mm F 3.5 (Helicoid lens barrel with pre-set diaphragm adjusting ring) TAKUMAR 58 mm F 2.4 (Helicoid lens barrel with pre-set diaphragm adjusting ring)
SHUTTER	Focal plane shutter. IIA - T, B, 1/2, 1/5, 1/10, 1/25, 1/50, 1/100, 1/200, 1/500 sec. IIB - B, 1/25, 1/50, 1/100, 1/200, 1/500
FOCUSING	Focusing is secured by turning the lens barrel, observing the image produced on the focusing finder glass through a reflex mirror. Focusing range (when extension tube not used): 58 mm F 2.4 2 feet - infinity 50 mm F 3.5 2.5 feet - infinity
FINDER	Eye-level view finder equipped in addition to the reflex focusing finder glass.
SYNCHRO-FLASH	Flash synchronized; with X & F terminals. (European tip)
DOUBLE EXPOSURE PREVENTION	Coupled film winding and shutter cocking prevents double exposure. (If desired, double or multiple-exposure can be made by turning the rewinding clutch to R.)
LENS INTER-CHANGEABLE	Screwfit type with Asahiflex Lens mount.



Model IIA f 2.4 58 mm



Model IIB f 3.5 mm