

How to Use the

KODAK RECOMAR

NOS. 18 AND 33



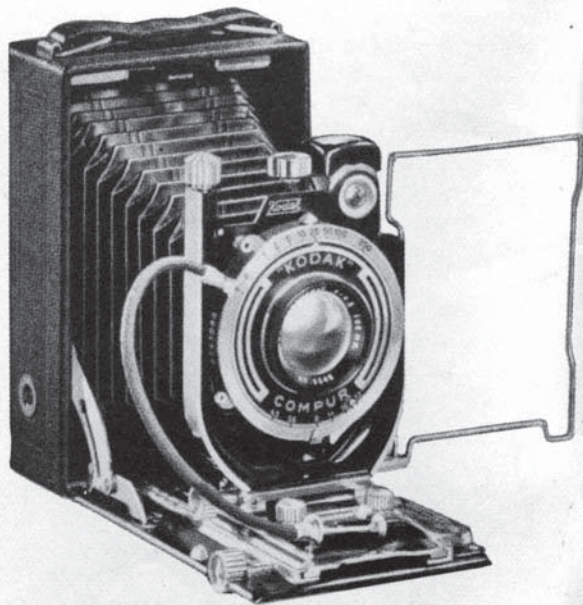
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KODAK ANASTIGMAT LENS *f*/4.5

Versatility



THE KODAK RECOMAR

THE Kodak Recomar is the complete camera. All the various types of sheet film and plates can be used with it, as well as the convenient film packs in the popular emulsions.

Besides its use for black-and-white photography it can be used for making transparencies in full color on Kodachrome and this, either in full size, or the 35 mm. (1 x 1½ inch) size, with the aid of the Miniature Kodachrome Adapter (available as an accessory). These miniature transparencies are then returned to you, ready for projection in one of the Kodaslide Projectors.

The double extension bellows, rising and falling front and ground glass screen of the Kodak Recomar are great advantages in composing the picture. The Kodak Recomar is ideally suited for making copies.

IMPORTANT

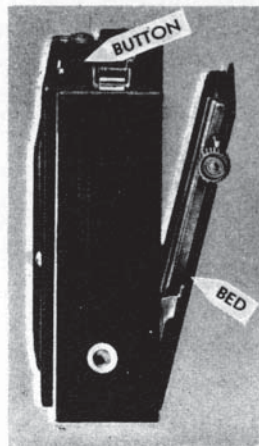
BEFORE loading your Kodak with film, and before taking any pictures with it, read these instructions carefully. Take especial care to learn how to operate the shutter, see page 5.

How to Use the

KODAK RECOMAR

OPENING THE FRONT

PRESS the **BUTTON** behind the carrying handle, and draw down the **BED** until it locks. Press the left **FINGER GRIP** to-



wards the grip on the right and draw out the **LENS STANDARD** until the **FOCUSING POINTER** strikes the catch at *Inf* on the focusing scale.

TO FOCUS THE KODAK

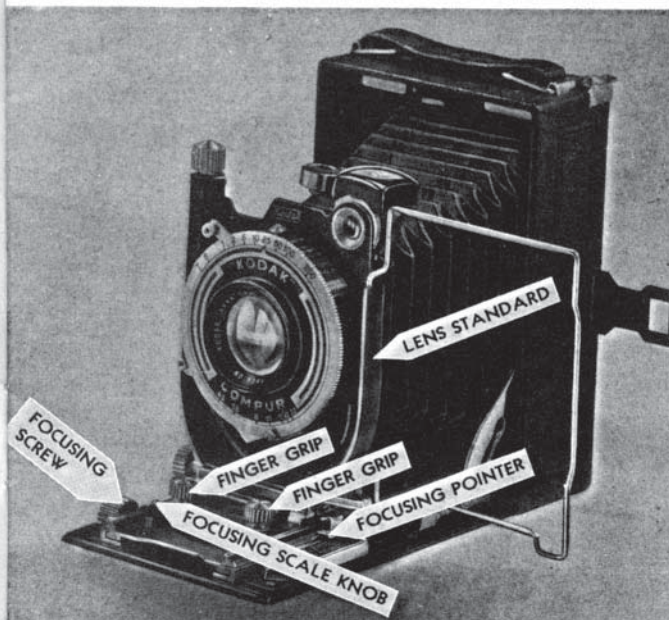
The focusing scale is marked for Infinity, 50, 25, 15, 10, 8, 6, 5 and 4 feet.

When the **LENS STANDARD** is drawn out to the Infinity line, the

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Kodak is in focus for anything about 100 feet or beyond. To adjust the focus for subjects at distances nearer than 100 feet, move the focusing scale to the right by pulling the **FOCUSING SCALE KNOB** out and away from the camera, and turn the **FOCUSING SCREW** forward until the **FOCUSING POINTER** is exactly at the line marked with the figure corresponding nearest to the distance in feet, between the camera and the *principal object* to be photographed.

The distance between the subject and Kodak 3



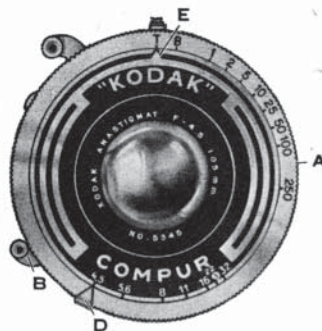
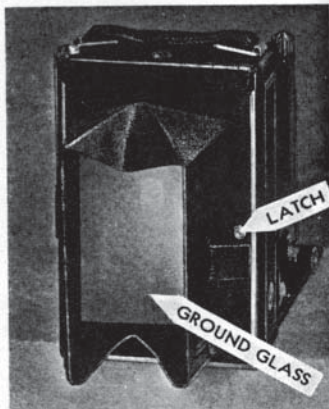
can be estimated without focusing on the ground glass or measuring, when the subject is *fifteen feet and beyond*.

For ordinary street pictures the focus may be kept at 25 feet, but where the *principal object* is nearer or farther away, the focus should be changed accordingly.

For distant views set the focus at Infinity.

FOCUSING ON THE GROUND GLASS

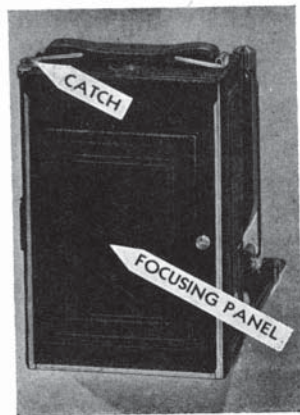
PUSH the LATCH holding the focusing hood to the right, and open the hood. Turn the collar A of the shutter until "T" is above the pointer E, then press the lever B to open the shutter. The stop opening lever D should be at $f/4.5$. Focus the Kodak moving the lens back and forth by means of the FOCUSING SCREW, page 3, until the image appears sharp on the GROUND GLASS. The eyes should be at the ordinary reading distance, from the GROUND GLASS. When focusing on a subject which has considerable depth, or on a group of



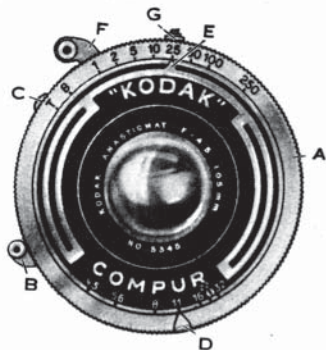
Push the CATCH away from the camera, and slide out the FOCUSING PANEL. When inserting a Combination Plate and Film Holder or the Film Pack Adapter hold back the CATCH.

THE SHUTTER

THE Compur Shutter is marked for making exposures of 1 second and $1/2$, $1/5$, $1/10$, $1/25$, $1/50$, $1/100$ and $1/250$ second on the No. 18 Recomar ($1/200$ second on the No. 33 Recomar), also Time and "Bulb" Exposures.



people in several rows, focus on the middle distance, and then stop down the lens to about $f/11$. This will make the entire picture sharp. See Depth of Field Tables, pages 10 and 11. Close the shutter.



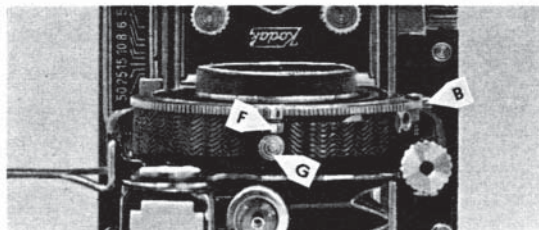
Exposures of intermediate speeds can be made from 1 second to 1/100 (except between 1/10 and 1/25) by setting the shutter between the exposure numbers on the shutter, thus an exposure of 1/75 second is made by turning the knurled collar so that the white pointer E is midway between 1/50 and 1/100. Intermediate exposures cannot be made between 1/100 and the highest speed.

Revolve the knurled collar A on the front of the shutter until the figure representing the time of exposure desired is at the white pointer E.

For all exposures from 1 second to 1/200 or 1/250 second the shutter *must* be *set* by pressing the lever F towards the top of the shutter. The exposure is made by pressing the exposure lever B or by the cable release which can be screwed into the opening C. Time and "Bulb" Exposures do not require *setting* the shutter.

THE SELF-TIMER

THERE is a release built into the shutter, for those who wish to be included in the picture.



To use the "Self-Timer," push the setting lever F, as far as it will go, then push the knob G, towards the back of the camera, now push the setting lever F, to the end of the slot. Push the exposure lever B or the push-pin of the cable release. Get into the picture. After about twelve seconds the exposure will be made.

This self-acting release cannot be used with speeds of 1/200 or 1/250 second, nor with Time or "Bulb" Exposures.

TIME AND "BULB" EXPOSURES

To make a Time Exposure the letter "T" engraved on the shutter must be at the white pointer E, and the exposure lever B or cable release C pressed twice, once to open the shutter, and again to close it.

For "Bulb" Exposures the letter "B" engraved on the shutter must be at pointer E, and the exposure lever B or release C pressed

down; the shutter remains open as long as the lever B or release C is held down.

Automatic exposures of 1 second, $1/2$, $1/5$, or $1/10$ second must not be made with the camera held in the hands. The Kodak has two tripod sockets for use with a tripod, or an Optipod.

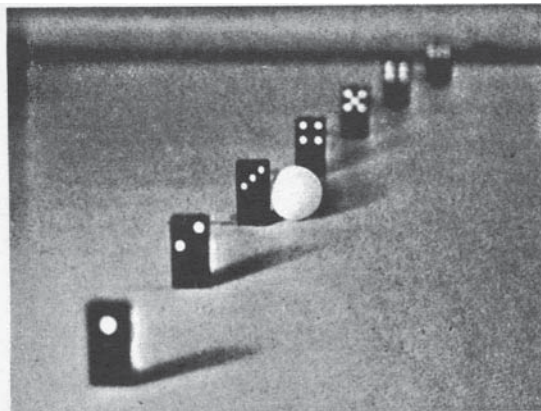
STOP OPENINGS

Stop openings regulate the amount of light passing through the lens. These openings are enlarged or reduced by moving the lever D, see page 6.

A knowledge of the comparative values of the stop openings is necessary for correctly timing exposures.

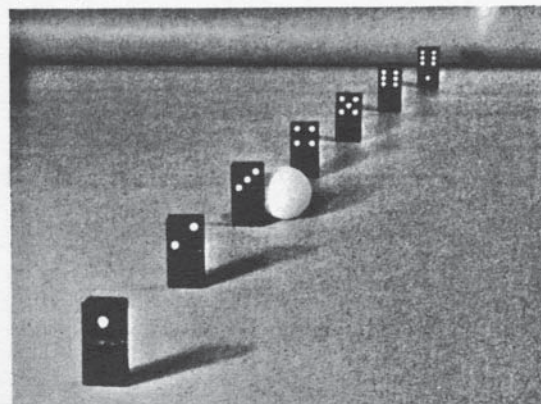
The largest stop opening is $f/4.5$. This opening allows approximately fifty per cent more light to enter than $f/5.6$. From $f/5.6$ to $f/16$ each smaller opening (larger number), admits half the light of the preceding larger stop opening. Thus if the correct exposure is $1/100$ second at $f/5.6$, then for the other stop openings the exposure should be approximately: $f/8$ and $1/50$; $f/11$ and $1/25$; $f/16$ and $1/10$; $f/22$ and $1/5$; and $f/32$ and $1/2$.

The smaller the stop opening the greater is the depth of field or range of sharpness, see the tables on pages 10 and 11.



The picture above was made with the lens focused on the third domino, using a large stop opening.

In the illustration below the focus is on the third domino, but a much smaller stop opening was used. Note the increase in the range of sharpness by using a smaller stop opening.



THE DEPTH OF FIELD FOR DIFFERENT STOP OPENINGS

By "depth of field" is meant the distance or range of sharpness in front of and behind the subject focused on, within which details in the picture will be sharp and distinct.

Table for use with the Kodak Recomar No. 18

Distance Focused Upon	$f/4.5$	$f/5.6$	$f/11$	$f/16$	$f/22$
INF.	63 ft. to inf.	51 ft. to inf.	26 ft. to inf.	18 ft. to inf.	13 ft. to inf.
50 ft.	28 ft. to 238 ft.	25 ft. to inf.	17 ft. to inf.	13 ft. to inf.	9 ft. to inf.
25 ft.	18 ft. to 41 ft.	17 ft. to 49 ft.	12 ft. to inf.	10 ft. to inf.	8 ft. to inf.
15 ft.	12 ft. to 19 ft.	11 ft. to 21 ft.	9 ft. to 35 ft.	8 ft. to 95 ft.	7 ft. to 44 ft.
10 ft.	8 ft. to 12 ft.	8 ft. to 12 ft.	7 ft. to 16 ft.	6 ft. to 22 ft.	5 ft. to 44 ft.
8 ft.	7 ft. to 9 ft.	6 ft. to 9 ft.	6 ft. to 11 ft.	5 ft. to 14 ft.	5 ft. to 21 ft.
6 ft.	5 ft. to 6 ft.	5 ft. to 7 ft.	5 ft. to 8 ft.	4 ft. to 9 ft.	4 ft. to 11 ft.
5 ft.	4 ft. to 5 ft.	4 ft. to 5 ft.	4 ft. to 6 ft.	4 ft. to 7 ft.	3 ft. to 8 ft.
4 ft.	3 ft. to 4 ft.	3 ft. to 4 ft.	3 ft. to 4 ft.	3 ft. to 5 ft.	3 ft. to 6 ft.

The depth of field is not given for $f/8$ or $f/32$. The depth or range of sharpness for these two openings can be estimated by comparison.

"Inf." is the abbreviation for Infinity—meaning an unlimited distance from the lens.

THE DEPTH OF FIELD FOR DIFFERENT STOP OPENINGS

By "depth of field" is meant the distance or range of sharpness in front of and behind the subject focused on, within which details in the picture will be sharp and distinct.

Table for use with the Kodak Recomar No. 33

Distance Focused Upon	$f/4.5$	$f/5.6$	$f/11$	$f/16$	$f/22$
INF.	104 ft. to inf.	84 ft. to inf.	43 ft. to inf.	29 ft. to inf.	21 ft. to inf.
50 ft.	33 ft. to 95 ft.	31 ft. to 123 ft.	23 ft. to inf.	18 ft. to inf.	15 ft. to inf.
25 ft.	21 ft. to 32 ft.	19 ft. to 35 ft.	13 ft. to 60 ft.	13 ft. to 167 ft.	11 ft. to 50 ft.
15 ft.	13 ft. to 17 ft.	12 ft. to 18 ft.	11 ft. to 23 ft.	10 ft. to 30 ft.	9 ft. to 18 ft.
10 ft.	9 ft. to 11 ft.	9 ft. to 11 ft.	8 ft. to 13 ft.	7 ft. to 15 ft.	7 ft. to 13 ft.
8 ft.	7 ft. to 8 ft.	7 ft. to 9 ft.	6 ft. to 10 ft.	6 ft. to 11 ft.	6 ft. to 8 ft.
6 ft.	5 ft. to 6 ft.	5 ft. to 6 ft.	5 ft. to 7 ft.	5 ft. to 7 ft.	4 ft. to 6 ft.
5 ft.	4 ft. to 5 ft.	4 ft. to 5 ft.	4 ft. to 5 ft.	4 ft. to 6 ft.	4 ft. to 5 ft.
4 ft.	3 ft. to 4 ft.	3 ft. to 4 ft.	3 ft. to 4 ft.	3 ft. to 4 ft.	3 ft. to 5 ft.

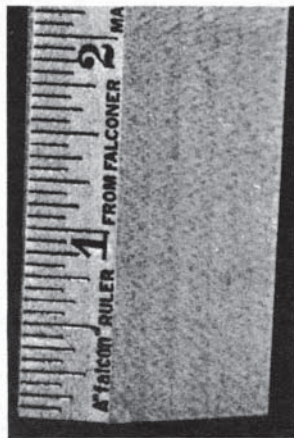
The depth of field is not given for $f/8$ or $f/32$. The depth or range of sharpness for these two openings can be estimated by comparison.

"Inf." is the abbreviation for Infinity—meaning an unlimited distance from the lens.

DEPTH OF FIELD

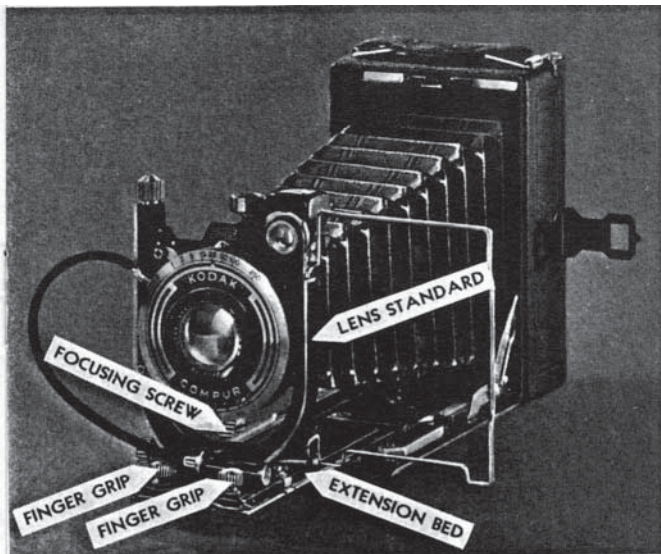
DEPTH of field is the distance or range of sharpness from the nearest to the farthest objects that will appear reasonably sharp in the negative or print. It depends upon the distance between the subject and lens, the focal length of the lens, (the shorter the focal length of a lens, the greater its depth of field,) and the size of the stop opening used—the smaller the opening the greater the depth of field or range of sharpness, see the tables on pages 10 and 11.

USE OF THE DOUBLE EXTENSION BED



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AFTER having drawn the focusing scale to the right with the FOCUSING SCALE KNOB (page 3), the full extension is obtained by drawing out the LENS STANDARD by the FINGER GRIPS as far as it will come, that is, to the end of the track. Then extend the bellows by racking out the EXTEN-



SION BED by means of the FOCUSING SCREW.

Focusing must be done on the ground glass. The long bellows draw when used with the regular lens permits photographing small objects in *almost* their actual size. This is shown by the photograph of the ruler, which was made with a No. 33 Kodak Recomar with the bellows drawn out to its full extension. The double EXTENSION BED also permits the making of large head and shoulder portraits. When making use of the double EXTENSION BED for copies or close-

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EXPOSURE CORRECTIONS FOR CLOSE-UP PICTURES

DISTANCE FROM LENS TO SUBJECT WITH KODAK REC- OMAR NO. 18	DISTANCE FROM LENS TO SUBJECT WITH KODAK REC- OMAR NO. 33	FACTOR FOR INCREASE IN EXPOSURE	EFFECTIVE APERTURE WITH DIAPHRAGM SET AT							
			f/4.5	f/5.6	f/8	f/11	f/16	f/22	f/32	
22½ inches	29 inches	1.5	5.5	6.9	9.8	13.5	20	28	40	
14 "	17¼ "	2.0	6.3	8	11	16	22	32	45	
11¼ "	14½ "	2.5	7.1	8.8	12.5	17.5	25	36	50	
9½ "	12½ "	3.0	7.8	10	14	19	28	40	56	
*8¼ "	*10¾ "	4.0	9	11	16	22	32	45	64	

*Example: Should you be using the Kodak Recomar No. 18 and the distance from subject to lens is 8¼ inches or if you are using the Kodak Recomar No. 33 and this distance is 10¾ inches and the diaphragm lever is at f/16 on your shutter, the effective aperture would be f/32, and you would have to give four times the exposure f/16 requires.

ups, there is a change in the effective f / marking on your lens. The table on page 14 gives the changes in the effective aperture at several close-up distances. It also gives you the number of times you should increase the exposure.

THE VIEW FINDER

THE VIEW FINDER (page 18) shows what will appear in the picture, but on a much reduced scale.



Look into the finder from directly over the center of it and include what is wanted by turning to the right or left.

Only what is seen in that part of the finder within the dotted lines, will appear in a vertical picture.



To make a horizontal picture, turn the finder and hold the Kodak in the horizontal position. Only what is seen in that part of the finder within the dotted lines in the lower illustration, will appear in a horizontal picture.

THE WIRE FRAME FINDER

In addition to the brilliant VIEW FINDER (page 18) the camera is equipped with a WIRE FRAME FINDER. This consists of a folding peep SIGHT

attached to the side of the camera and the wire frame. To use this finder raise the SIGHT and swing out the wire frame as shown on page 18. Hold the camera with the SIGHT as close to the eye as possible and frame your picture within the wire frame of the finder. All vertical lines in the subject should be kept parallel with the vertical wires of the finder, when holding the camera either in the vertical or horizontal position.

HOLD THE KODAK LEVEL

THE Kodak must be held level. If all the subject cannot be included in the finder without tilting the lens upwards, move backwards until it is all included *with the camera held level*. The spirit level attached to the VIEW FINDER is a great help for holding the camera level.

If the subject is below the normal height, like a small child or a dog, the Kodak should be held down level with the center of the subject.

When making instantaneous exposures or snapshots, hold the Kodak firmly against the body (or hold it very steady with the hands if using the WIRE FRAME FINDER), and when pressing the push-pin of the cable release (if it is attached to camera) or the exposure lever, hold the breath for the instant. If Kodak is moved during the exposure, the picture will be blurred.

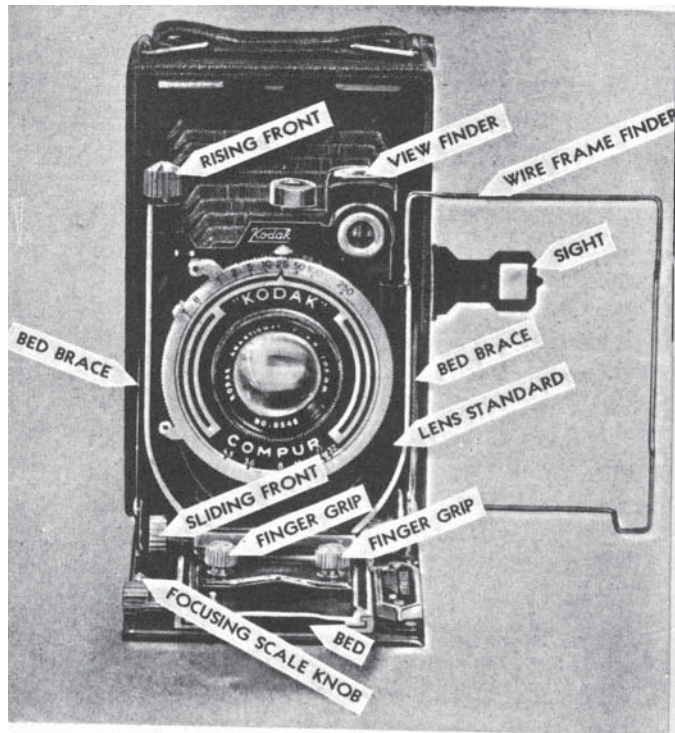
RIISING AND SLIDING FRONT

THE RISING FRONT (page 18) is used to cut out undesirable foreground or to include the top of a high building when making a vertical picture. The SLIDING FRONT is for this same purpose when making a horizontal picture.

To raise or lower the front, turn the milled screw marked RISING FRONT shown on page 18. To slide the front, turn the milled screw marked SLIDING FRONT. After using either the rising or sliding front be sure to return the lens to its original position before closing the camera. The two white dots located below the milled screw marked RISING FRONT must be in line and also the red and white dots on the LENS STANDARD directly below the shutter.

To make the entire picture sharp, when using the rising front, use a small stop opening ($f/22$ or $f/32$) and as this necessitates a comparatively long exposure, a tripod or some other firm support must be used.

When using the rising or sliding front the VIEW FINDER does not show exactly the same view that is registered on the film or plate by the lens of the camera. It is advisable to focus and compose your picture on the GROUND GLASS, see page 4. A dark cloth over the back of the camera will be a help, when focusing.



CLOSING THE KODAK

BEFORE closing the Kodak make sure that the extension bed is racked entirely back; and that the FOCUSING SCALE KNOB is pushed back so that it does not extend beyond the edge of the BED; that the VIEW FINDER is in the upright

position and the WIRE FRAME FINDER folded over to its closed position.

If the rising or sliding front has been used, the lens must be centered. The two white dots on the front standard near the rising front milled screw must be in line, and the red and white dots on the bottom of the lens standard must also be in line.

Press the left FINGER GRIP towards the grip on the right and slide the LENS STANDARD back as far as it will go.

Important: The cable release must be in position below the catch used for locking the bed of the camera. If the cable release should be between the catch and top of the Kodak, when the camera is closed, it will be impossible to open the camera. On the No. 33 Kodak Recomar the cable release should be slipped under the hook on the bar at the top of the WIRE FRAME FINDER.

Press the BED BRACES on each side of the case and raise the BED.

THE FILM

EACH camera has three Kodak Combination Plate and Film Holders for use with either films or plates. These must be loaded in a darkroom. A Film Pack Adapter is also provided.

With the No. 18 Kodak Recomar, use Eastman Sheet Film or Plates, size 6.5 x 9 cm.

With the No. 33 Kodak Recomar, use Eastman Sheet Film or Plates, size 9 x 12 cm. or 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ in., using a Holder of the proper size.

When the Film Pack Adapter is used with the No. 18 Kodak Recomar, use Kodak Film Pack (Verichrome, Super-XX Panchromatic, or Panatomic-X): V 520, XX 520 or FX 520, size 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$ inches or 6 x 9 cm. When using the kit in the Film Pack Adapter for the No. 33 Recomar, use Kodak Film Pack V 518, XX 518 or FX 518, size 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$ inches or 8 x 10.5 cm.; if the kit is *not* used Kodak Film Pack V 541, XX 541 or FX 541, size 9 x 12 cm. or 3 $\frac{1}{2}$ x 4 $\frac{3}{4}$ inches should be used.

The Kodak Eye-Level Tripod is—

Light—weighs only two pounds
versatile—legs instantly adjustable;
closed length less than two feet;
extended length over five feet.

THE Kodak Turn-Tilt Tripod Head has been specially designed as an accessory to be used with the Kodak Eye-Level Tripod. The Tripod Head may be panoramed 360° horizontally and from straight up to straight down. The special felt-to-polished-metal clutches may be adjusted to the weight of the individual camera to give a new smoothness of operation—with no locking necessary.

The camera may also be locked in any selected position by tightening the adjustment knobs.

