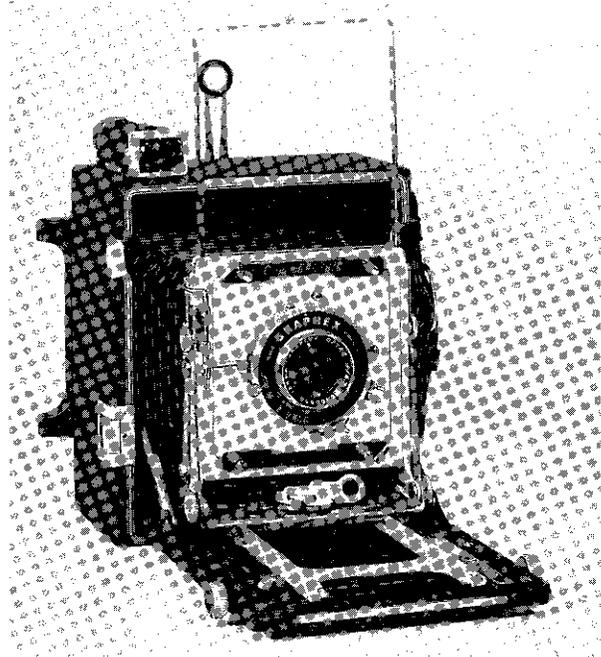
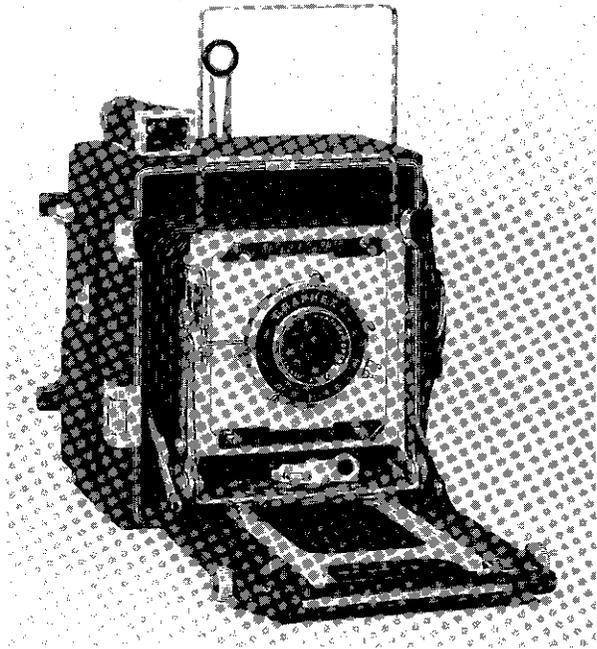


"45"

PACEMAKER SPEED & CROWN GRAPHIC

INCLUDES TEXT FOR SECTIONS 4, 5, AND 6.



GRAFLEX, INC.
A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION 
ROCHESTER 3, NEW YORK

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SERVICE - ALL PACEMAKER GRAPHIC CAMERAS
(manufactured by Graflex before 1955)

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PARTS LIST - 4x5 PACEMAKER GRAPHIC

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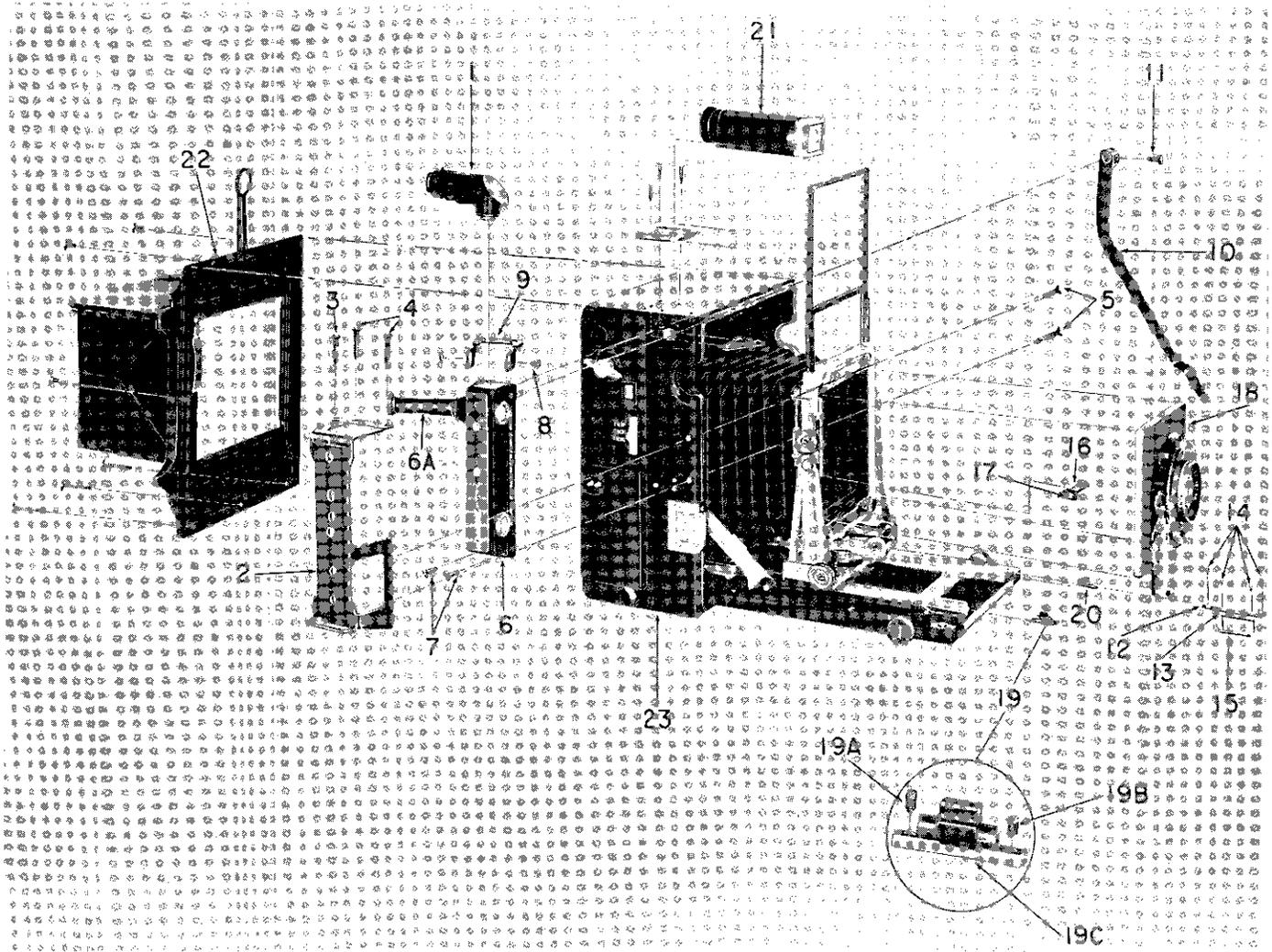


Figure 1. 4 x 5 Camera, Exploded View

- | | |
|--|---|
| 1. Focuspot | 13. Scale - Index |
| 2. Bracket - Battery case mounting | 14. Screw - Index and focusing scale |
| 3. Screw - Wood (See Parts List for dimensions) | 15. Plate - Index scale clamp |
| 4. Screw - Wood (See Parts List for dimensions) | 16. Arm - Manual trip |
| 5. Screw - Machine (See Parts List for dimensions) | 17. Screw - Machine (See Parts List for dimensions) |
| 6. Rangefinder | 18. Lensboard and Shutter |
| 6A. Eyepiece - Extension | 19. & 20. Stop Assembly Complete - Infinity |
| 7. Screw - Special | 19A. Screw - Infinity stop - pointed |
| 8. Screw - Machine (See Parts List for dimensions) | 19B. Screw - Infinity stop - flat |
| 9. Bracket - Rangefinder mounting | 19C. Stop Assembly - Infinity |
| 10. Arm Assembly - Rangefinder | 21. Viewfinder Complete with mounting clip |
| 11. Screw - Set - Rangefinder | 22. Back Complete |
| 12. Scale - Focusing (See Section 102) | 23. Camera (Reference only) |

INTRODUCTION

This section of the Graflex Service Parts Manual covers the service of the Pacemaker Speed and Crown Graphic "23", "34" and "45". The text and illustrations are based on the "45" Speed Graphic since the "23" and "34" cameras are partially identical in construction and service; however, the differences are described in the text and illustrated.

Similar parts found on the Crown Graphic are handled in the same manner.

I. OPTICAL VIEWFINDER

Information pertaining to the Optical Viewfinder can be found in Section 102.

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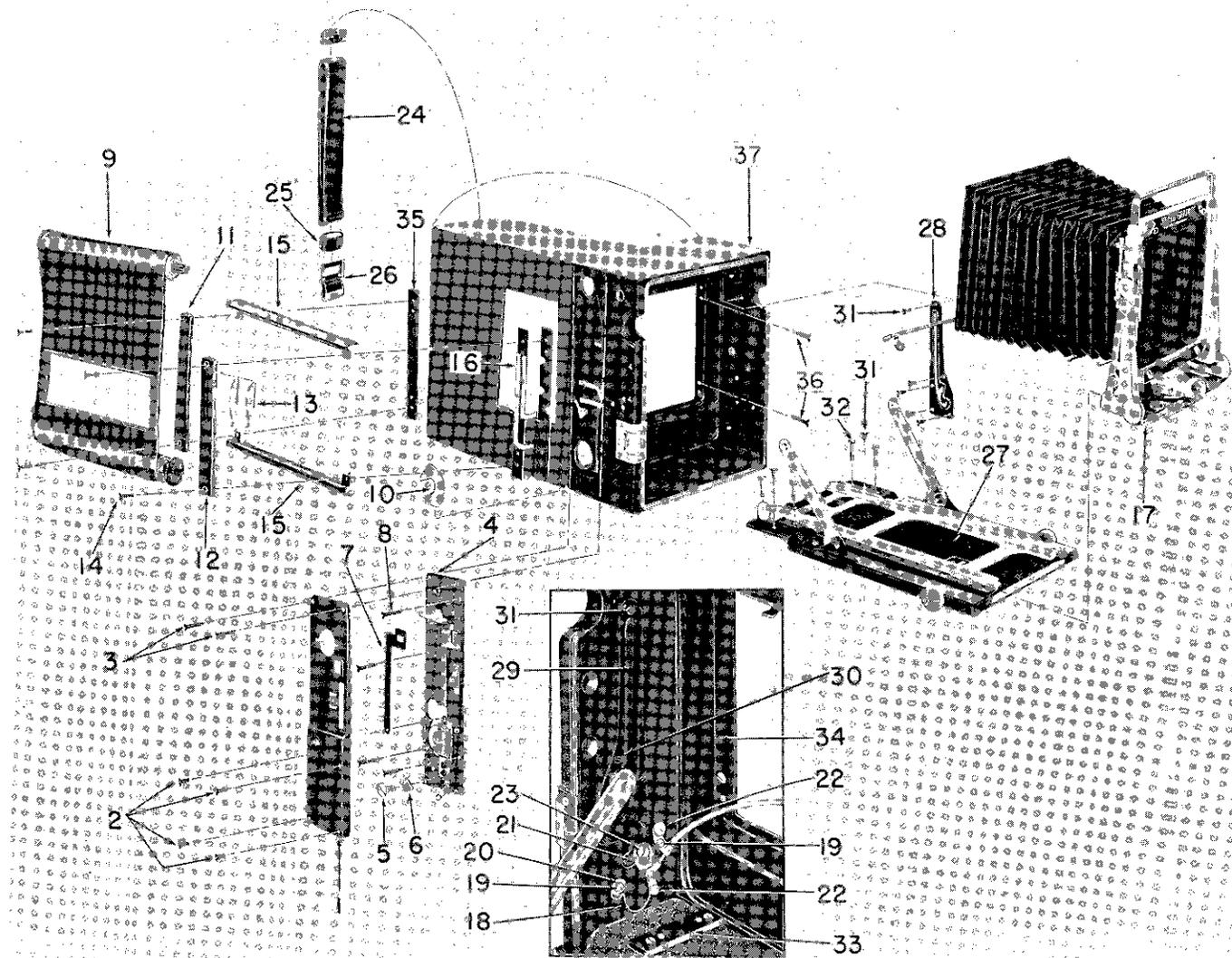


Figure 2. Basic Camera, Exploded View

II. GRAPHIC CAMERA BACK

A. DISASSEMBLY.

1. Loosen the top and bottom focusing frame spring assemblies (5 and 6, figure 3) that are secured by machine screw and washer (7).
2. Remove two short self-tapping screws (1) at the top, the long self-tapping screws (2) at the bottom, and one wood screw (3) at the right side, if used.
3. Remove the hood assembly (4) by pressing outward on the tab of the hood retainer (9).
4. Remove the two hood assembly retainers (9) and the focusing screen (11).

Note: A peepsight erecting spring is located in a cavity on the inside of the back and concealed by a peepsight spring plate.

5. To remove this spring, use a sharp pointed instrument to pry out the peepsight plate;

however, do not disassemble unless the peepsight will not stand erect.

B. CLEANING AND INSPECTION.

1. Wash the ground glass focusing screen with soap and water; rinse thoroughly and dry.
2. Examine the top and bottom focusing frame spring assemblies (5 and 6). If necessary, reform to give added pressure to the focusing panel.

Note: The hood assembly (4) is assembled with staked pins. It should not be disassembled, but replaced as a unit so that trouble-free operation can be maintained.

3. Check the focusing frame assembly (12, figure 3) and the back (17) on a machined surface plate. If these parts do not lie absolutely flat, they must be straightened.

C. REASSEMBLY.

1. Assemble the peepsight as follows:

(a) If the peepsight erecting spring has been removed from the inside frame cavity, position the new spring in the cavity with the open end of the spring at the bottom. Place the cover plate in the cavity and stake at several points along the edge.

(b) To assemble the peepsight assembly (13, figure 3) position the peepsight washer (15) over the mounting hole on the outer surface, lay the peepsight assembly (13) in the slot provided, position the peepsight cap (14), and assemble the machine screw (16). The washer and cap should lie with their flat sides toward the base of the sight. The sight should swing in the slot. Apply a touch of shellac beneath the screw head and tighten.

2. Assemble the focusing screen as follows:

(a) Place the focusing screen (11) in the focusing frame assembly (12) (polished side of the focusing screen to the outside), position a hood assembly retainer (9) at each side of the focusing frame assembly, and assemble two machine screws (10) in each retainer.

Note: The top and bottom focusing frame spring assemblies (5 and 6) are different. With the spring curving away from the focusing frame assembly, the long loop should be at the right and the straight edge of the spring toward the center.

(b) Hook the loop over the right pin, assemble the washer (8) to the left pin and slip the spring over the left pin. Lay this assembly in the back (17) and secure with a screw and lock washer unit (7) at the center of each focusing frame spring assembly.

(c) Fold the focusing hood (4): squeeze the sides together; fold the bottom upward; then fold the top down to latch.

(d) Lay the back on the camera making sure that the leather covering of the camera case is tucked under all overlapping edges of the back. Assemble the wood screw (3), if used, the long self-tapping screws (2) at the bottom and two short self-tapping screws (1) at the top.

III. GRAFLOK CAMERA BACK

A. DISASSEMBLY.

1. Remove the focusing panel frame assembly by simultaneously pressing the knurled finger pads of the upper and lower arm assembly (9 and 12, figure 4) and slide the frame to the right, free of the arm hooks.

2. Remove the long self-tapping screws at the bottom (1), short self-tapping screws at the top (2) and one wood screw (3) at the right side, if used.

3. Remove the hood assembly (4) by pressing outward on the tab of the hood retainer (5).

4. Remove the focusing screen (7) and the two hood assembly retainers (5).

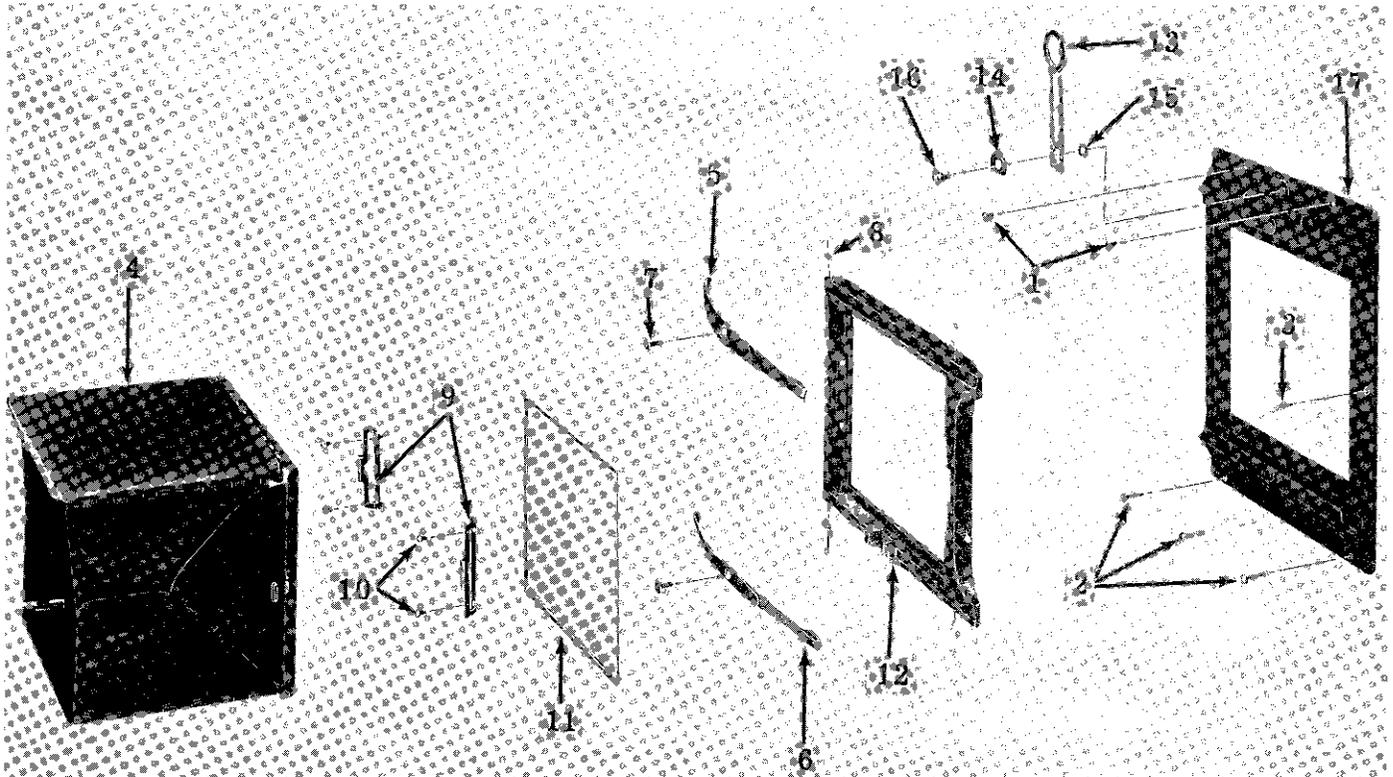


Figure 3. 4 x 5 Graphic Camera Back, Exploded View

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Note: A peepsight erecting spring (26) is located in the cavity on the inside of the back and is concealed by a peepsight spring plate (27).

5. To remove the peepsight erecting spring (26) use a sharp pointed instrument to pry out the peepsight plate (27); however, do not disassemble unless the peepsight will not stand erect.

CAUTION

When performing the next operation, hold the panel so that the spring will not fly loose into the face.

6. Pry the arm assemblies (9 and 12) from their respective bearing holes, ease each spring terminal from its associated arm tab, and remove washer (11) or (14) from the arm shafts.

B. CLEANING AND INSPECTION.

1. Wash the ground glass focusing screen with soap and water; rinse thoroughly and dry.

2. Check focusing frame (8, figure 4) and back (28) on a machined surface plate. If these parts do not lie flat they must be straightened.

C. REASSEMBLY.

1. Reassemble the peepsight as instructed in paragraph II. C. 1.

2. Lubricate the slidelocks by wiping both sides lightly with a block of paraffin wax, Federal Specification VV-P-121a. Position the slidelocks (15 and 18, figure 4) so that the slots angle to the left and toward the center. Reassemble the slidelocks, the spring (16 or 19), and the special slidelock screws (17 or 20) so that the screw shoulder fits within the slot of the slidelock.

3. Replace the arm and spring of the focusing frame as follows:

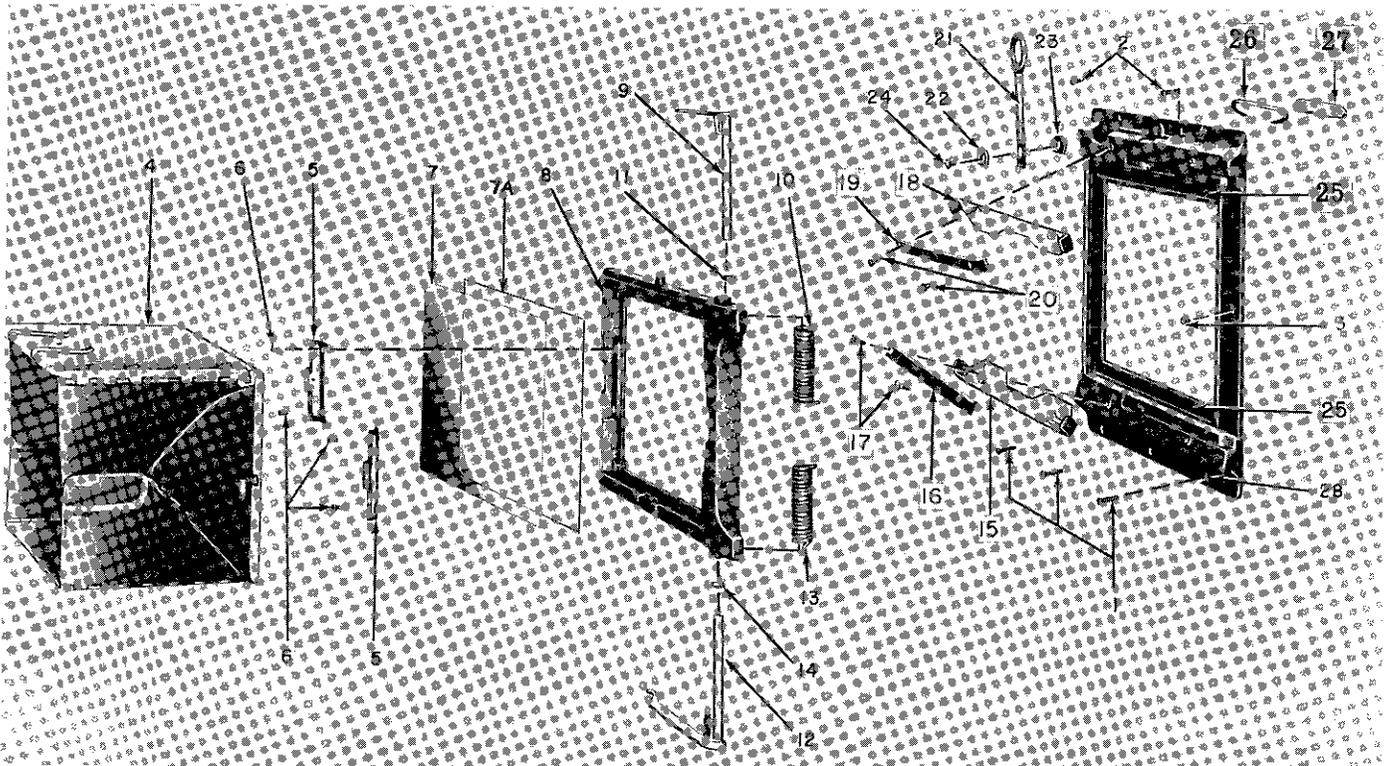


Figure 4. 4 x 5 Graflok Camera Back, Exploded View

Note: A special spring tool, fabricated from a rod 1/4 in. in diameter, about 6 in. long, will facilitate the following procedures. Drill a hole in one end of the rod to the pertinent diameter given below:

- "23" Graflok back - 0.067 in. (No. 51 drill)
- "34" Graflok back - 0.076 in. (No. 48 drill)
- "45" Graflok back - 0.086 in. (No. 44 drill)

(a) Reassemble the arms and spring by first placing one washer (11 or 14) over the arm shaft. (Spring (10) actuates the upper arm (9), and spring (13) actuates the lower arm (12)). Drop the straight end of one spring into its correct relative position in the cavity of the focusing frame (8).

WARNING

Hold the frame in a position which will prevent kick-out of the spring into the face.

Slip the tool over the formed end of the spring (or use heavy duty pliers) and wind the terminal 1/2 turn clockwise and hold. Then push the arm shaft through the outer casting hole and the spring into the center casting hole. Release the spring terminal so that it bears on the arm tab.

(b) Reassemble the focusing screen (7) with the polished side of the focusing screen to the outside. Position the hood assembly retainer (5) at each side and assemble with two machine screws (6).

(c) Fold the focusing hood (4): squeeze the sides together; fold the bottom upward; then fold the top down to latch.

(d) Lay the back on the camera and be sure that the leather covering of the camera base is tucked under all overlapping edges of the back. Assemble the long self-tapping screws (1) on the bottom, two short self-tapping screws (2) on the top, and one wood screw (3) on the right center edge, if used.

(e) Lay the frame assembly on the back and slide to the left to hook the upper and lower arms (9 and 12) under the back frame hooks.

D. EKTALITE FIELD LENS INSTALLATION.

1. This applies only to those cameras having Graflok back or die cast Graphic or Graflex focusing panels that use the metal 4-sided, removable focusing hood.

CAUTION

Do not attempt to machine the panel without proper equipment that will work within the tolerance.

2. Tools:
 - Vertical head mill
 - 1/4 to 5/16 inch end mill cutter
 - Height gauge or depth micrometer
 - Screwdriver
 - 5X Magnifier

3. Parts:
 - 31935-P1 "45" Ektalite field lens (1 req.)
 - 30414-P4 "34" Ektalite field lens (1 req.)
 - 30414-P5 "22" Ektalite field lens (1 req.)

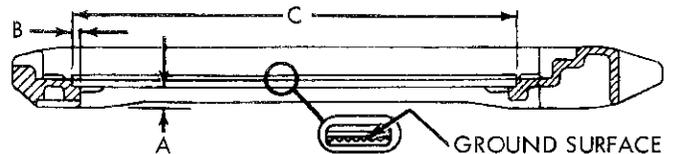
4. Proceed as follows:

(a) Remove the focusing panel and disassemble ground glass and retainers.

(b) Mill the ground glass pads to the dimensions shown in the table below.

Camera	Dimensions (See Figure 4A)		
	A*	B*	C*
"23"	**	0.059 inch (0.1497 mm)	3.290 inch (83.503 mm)
"34"	**	0.086 inch (2.182 mm)	4.144 inch (105.177 mm)
"45"	**	0.086 inch (2.182 mm)	4.860 inch (123.350 mm)

*See Figure 4A for tolerances.
 **Graphic: 0.139 inch (3.528 mm)
 Graflok: 0.139 inch (3.528 mm)
 Graflex (4 x 5 only; see table above for other sizes): 0.170 inch (4.315 mm)



- A. Top of pad to bottom of frame ± 0.002 inch (± 0.051 mm)
- B. Width of pads on ends ± 0.005 inch (± 0.127 mm)
- C. Inside length required for screen assembly ± 0.005 inch (± 0.127 mm)

Figure 4A. Ground Glass Pad Milling Dimensions

(c) If the mill cut is too deep, shim the screen assembly. Cut the shim to the width of the "B" dimension (0.086 inch) and cement in position on all four pads.

(d) Assemble the Ektalite field lens underneath the glass with the grooved side toward the frosted side of the ground glass.

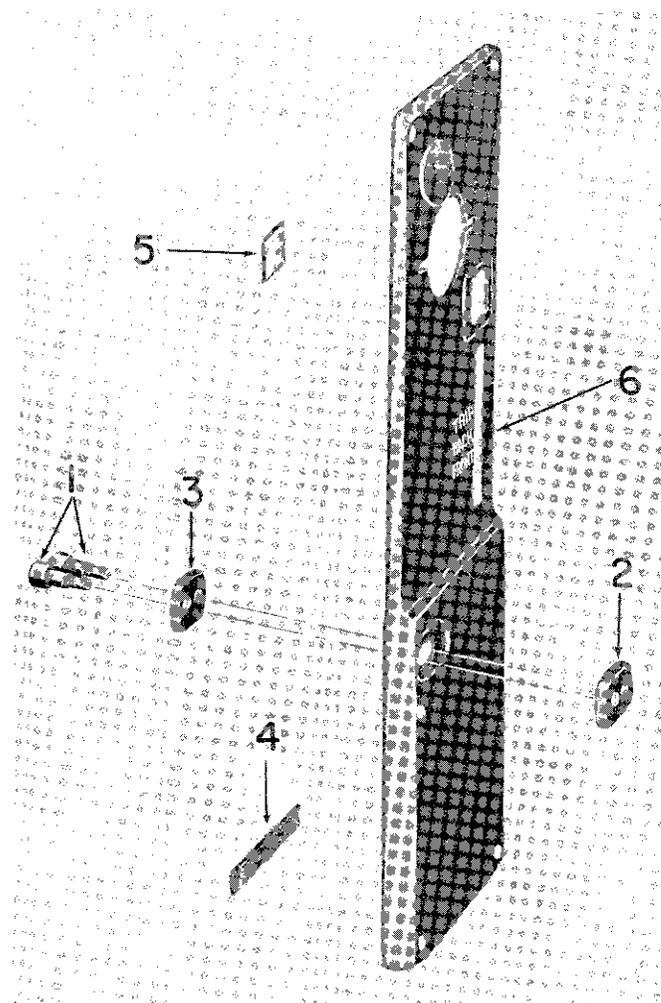


Figure 5. Shutter Plate Cover Assembly,
Exploded View

IV. FOCAL PLANE SHUTTER

Operate the shutter to check time and synchronization. The figures appearing in the shutter window are fractional parts of a second. The synchronized speeds (marked in black) are 1000, 500, 250, and T (Time) for class FP (Focal Plane) flash lamps. Unsynchronized speeds are marked in red.

A. DISASSEMBLY.

1. Shutter Plate

(a) Remove the shutter plate cover assembly (1, figure 2), that is secured by the machine screws (2) and two wood screws (3).

2. Shutter Mechanism Plate

(a) Remove the slide dial (7, figure 2) from governor stud. On the "23" Speed Graphic, the slide dial is riveted to the top bracket assembly and should not be removed unnecessarily. Remove the shaft retainer screw (5) and slowly unwind the

tension shaft retainer (6). Swing the retard cam lever assembly (17A, figure 6) forward to raise the governor. Remove four wood screws (8, figure 2) and lift the shutter mechanism plate assembly (4) from the camera.

(b) The shutter plate is disassembled in four stages; disassemble the portion necessary:

(1) Escapement, Master Gear, Winding Key. The escapement (1, figure 6) is secured by two escapement screws (2). Remove and unhook the escapement spring (3). Remove the taper pin (5), the winding key assembly (4) and then the master gear assembly (6) from the inside. Lift the shutter dial (7) from the inside.

(2) Shift Slide (8). To remove, unscrew the machine screw (9) and lock washer (10). Lift off the shift slide spring (11) and the shift side plate (12) and the shift slide spacer (13).

Note: Do not remove governor assembly (15) from the plate unless necessary.

(3) Governor. Disconnect the governor spring (14). Remove two hexagonal machine screw nuts (15B), two lock washers (15C) and two dowel studs (15A). Lift the top bracket assembly (15D) from the governor pinion assembly (15E) and take particular care to note the washers (15G) that may or may not be used. Remove the governor shoes (15F) from the pinion assembly. The bottom bracket assembly (15H) can now be removed from the plate.

(4) Lever Assembly. If the retard cam lever assembly (17A) has become bent or damaged, drill out the brass stud (17B), using a No. 50 (.070 inch dia.) drill.

3. Curtain and Rollers (9, figure 2)

(a) Tear out the tension roller seal (10), cemented around the lower tension roller gear. (This seal is no longer considered necessary and can be discarded since light seals (4, figure 5) and (16, figure 6) are sufficient protection.)

(b) Shift the curtain and roller assembly to the right, out of the camera case bearings, and lift from the camera case. Do not lose spacer washers that may or may not be used to prevent too much end play of the rollers. Do not disassemble the rollers from the curtain unless necessary. In the case of a defective roller, replace as a unit; do not disassemble.

B. CLEANING AND INSPECTION.

1. Shutter Plate Cover. Examine the shutter plate cover (1, figure 2) for dents that will obstruct the working of the dial slide (7) or governor assembly. Using a stiff brush, brush the fabric dust seal

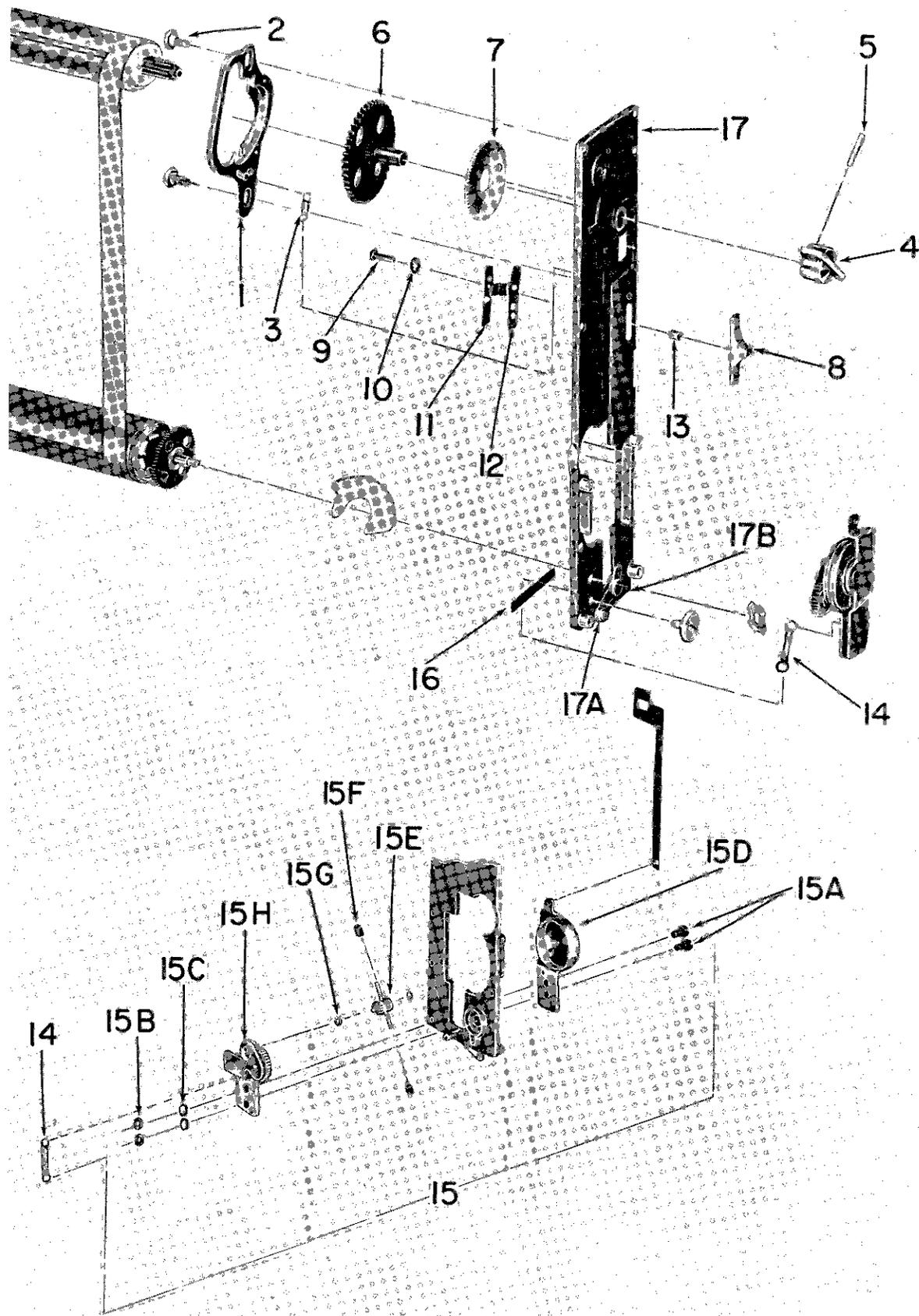


Figure 6. Shutter Mechanism Plate Assembly, Exploded View

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(4, figure 5) to remove dust and grit that may have collected.

2. Shutter Mechanism Plate Assembly.

Clean all parts of the shutter plate (figure 6) with solvent, trichlorethylene (AN-T-37a). Dry all parts thoroughly before reassembly. Check the springs (3 and 14); replace if stretched or deformed. Inspect the gears for worn teeth and loose stop pins.

3. Curtain and Rollers. Examine the curtain for pin holes, tears or weak points near the struts. If the curtain and rollers have been disassembled, remove all old cement before reassembly. Rough the brass rollers with very course sand paper. To check the curtain for distortion or stretching that will permit the curtain to run off the edge of the roller when reassembled, hang the curtain so that the top roller is absolutely level; then check the edges to see that they hang absolutely perpendicular to within 1/4 inch at the base. Replace the curtain if it has been distorted or stretched.

CAUTION

Do not allow cleaning fluid, trichlorethylene, AN-T-37a, to contact rubber shutter curtain.

4. Contacts. Check the height of the receptacle contact (27, figure 12) and the receptacle jumper (28). Both of these must be arched above the wood surface at least 3/16 inch so that they will make positive contact with the receptacle contact studs (1, figure 5). Check the curvature of the spring finger contact (13, figure 2); these contacts should be arched evenly not more than 5/32 inch above the block. If the short and long switch contacts (30 and 31, figure 12) are causing an electrical short, remove the body release plate assembly (34), paragraph VII. A. and replace the contacts.

C. REASSEMBLY.

1. Focal Plane Shutter Contacts. Reposition the jumper assembly (16, figure 2) and form the right angle tabs at a slight arch so that they will make positive contact with the case contacts (25, figure 12). Slip the spring finger contacts (13, figure 2) into the grooves from the back of the right contact block (12). Replace the machine screws (14) at the top and bottom of the right block.

2. Curtain and Roller Assembly. Assemble the gear roller to the curtain at the end which has the largest aperture. The tension drive roller is assembled to the end of the curtain having the narrowed slits. The silvered contacts are on the right curtain edge facing the spring finger contacts (13).

(a) Check the ends of the curtain for squareness; then apply cement (MIL-C-4003) to the rollers and curtain ends.

(b) Attach the ends of the curtain to the rollers; it is essential that the ends of the curtain be placed parallel to the longitudinal axis of the rollers to insure proper alignment in the roll-up.

Note: Do not replace the curtain in the camera until the cement is firmly set.

3. Shutter Mechanism Plate Reassembly.

If the governor assembly (15, figure 6) has been dismantled, lubricate by wiping the outside ends of the governor shoes (15F) and governor pinion assembly (15E) with graphite powder, AN-G-24. The governor shoes must slide freely on the cross shaft of the pinion assembly. Reassemble the governor as follows:

(a) Position the bottom bracket assembly (15H) on the lower cut-out of the plate assembly (17).

(b) Place the governor pinion assembly (15E) with the governor shoes (15F) and any washers (15G) that may have been used, in position between the top and bottom bracket assembly (15D and 15H)

(c) Secure the bracket assembly with two dowel screws (15A) and secure with lock washers (15C) and machine nuts (15B).

Note: If the governor shoes bind on either the drum container or the fiber idler gear, build up with spacer washers (15G).

(d) Hook the governor spring (14) to the bottom bracket assembly (15H) and to the lower stud on the plate assembly (17).

4. Plate Assembly.

(a) Assemble the lock washer (10), the shift slide spring (11), the shift slide plate (12) and the shift slide spacer (13) on the machine screw (9). Position this assembly in the long slot and screw on the shift slide. Turn the shift slide (8) to a vertical position and tighten the machine screw.

(b) Position the shutter dial (7) on its boss at the back of the plate.

(c) Lubricate the master gear lightly with grease, AN-G-25, and insert. Make sure that the stem gears mesh with the shutter dial.

(d) Note the taper of the pin hole of the winding key assembly (4) and position it on the master gear shaft to coincide with the taper of that hole. Assemble taper pin (5) and set the pin with a drive punch and light hammer.

(e) Attach the escapement spring (3) to the necked stud of the escapement assembly (1), and to the stud at the back of the plate assembly (17). Position the escapement (1) over its bosses and assemble the escapement screws (2).

(f) With the escapement in release position (up) make sure that the master gear stop pins cannot snap back beneath the escapement brake springs; if the latch is not positive, bend the tip of the escapement brake spring down so that it snaps 1/32 inch below the top of the stop pin.

(g) Lubricate the escapement brake spring and the escapement slide slots with grease, AN-G-6.

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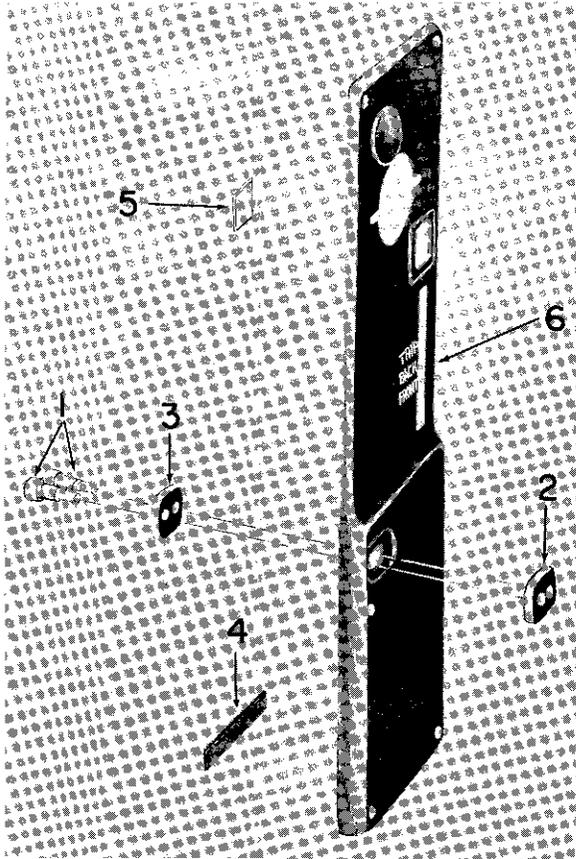


Figure 3. Shutter Plate Cover Assembly

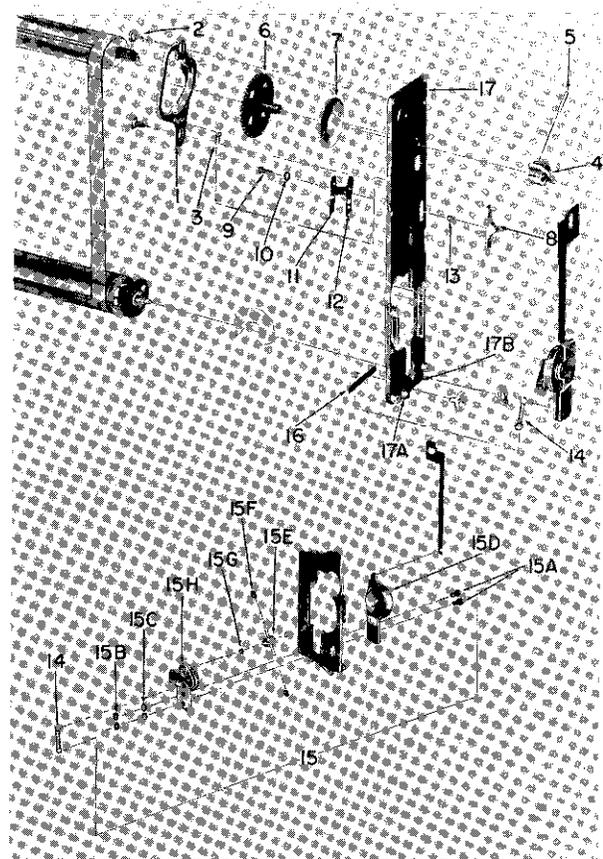


Figure 4. Shutter Mechanism Assembly

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
3-	30351G3						COVER ASSEMBLY - SHUTTER PLATE	Ref.	
-1	30359P1						. Stud - Receptacle Contact	2	
-2	30357						. Insulator - Receptacle.	1	
-3	30358						. Washer - Receptacle.	1	
-4	30846						. Seal - Dust	1	
-5	30356						. Window - Shutter Plate.	1	
-6							. Cover - Shutter Plate	NP	NHA

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
4-	30652G1						PLATE ASSEMBLY - SHUTTER MECHANISM.	Ref.	
-1	30185G1						. Escapement Assembly.	1	
-2	30187P1						. Screw - Machine (special)	2	
	---***---								
-3	30186						. Spring - Escapement.	1	

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Section 4
Parts List

Figure and Index No.	Part No.	1	2	3	4	5	Nomeclature	Qty.	Code
	30652G6N	.	.	.	.	.	Winding Key and Master Gear Assembly	1	
4-4	30681G1	.	.	.	.	.	Key Assembly - Winding	1	
	Attaching Part								
-5	30663-1	.	.	.	.	.	Pin - Taper, No. 5/0	1	
	---***---								
-6		.	.	.	.	.	Gear Assembly - Master	NP	NHA
-7	30504P1	.	.	.	.	.	Dial - Shutter	1	
-8	30297P1	.	.	.	.	.	Slide - Shift	1	
	Attaching Parts								
-9	102-2-7	.	.	.	.	.	Screw - Machine, No. 2-56 x 7/16, round hd.	1	
-10	221-2L	.	.	.	.	.	Washer - Lock, internal tooth, for No. 2 screw	1	
	---***---								
-11	30303P2	.	.	.	.	.	Spring - Shift Slide	1	
-12	30300P1	.	.	.	.	.	Plate - Shift Slide	1	
-13	30298P2	.	.	.	.	.	Spacer - Shift Slide	1	
-14	30340	.	.	.	.	.	Spring - Governor	1	
-15	30459G2	.	.	.	.	.	Governor Complete	1	
-15A	110B2-4	.	.	.	.	.	Screw - Machine, No. 2-56 x 1/4, binding hd.	2	
-15B	200-2HL	.	.	.	.	.	Nut - Machine, No. 2-56, hex	2	
-15C	221-2L	.	.	.	.	.	Washer - Lock, internal tooth, for No. 2 screw	2	
		.	.	.	.	.	Spacer - Governor	NP	NHA
		.	.	.	.	.	Pin - Dial Slide	NP	NHA
		.	.	.	.	.	Slide - Dial	NP	NHA
-15D		.	.	.	.	.	Bracket Assembly - Top	NP	NHA
-15E		.	.	.	.	.	Pinion Assembly	NP	NHA
-15F		.	.	.	.	.	Shoe - Governor	NP	NHA
-15G		.	.	.	.	.	Washer - Flat	NP	NHA
-15H		.	.	.	.	.	Bracket Assembly - Bottom	NP	NHA
-16	30301	.	.	.	.	.	Strip - Light Seal	1	
-17	30348G1	.	.	.	.	.	Plate Assembly	1	
-17A	30315G1	.	.	.	.	.	Lever Assembly - Retard Cam	1	
	Attaching Part								
-17B	30318	.	.	.	.	.	Stud	1	
	---***---								
		.	.	.	.	.	Post - Escapement Spring	NP	NHA
		.	.	.	.	.	Post - Governor Spring	NP	NHA
		Bushing - Master Gear	NP	NHA
		Bushing - Gear Roller	NP	NHA
		Plate - Shutter	NP	NHA

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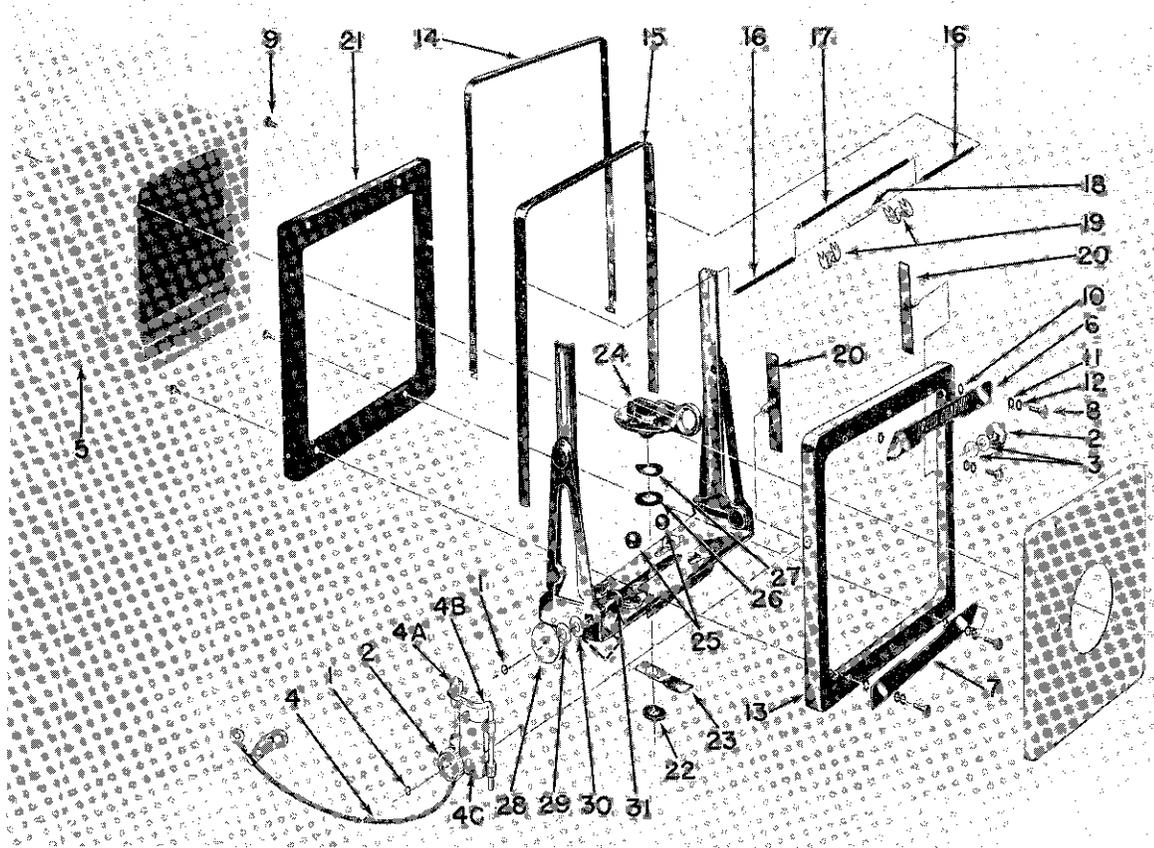


Figure 5. Front Standard Complete

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
5-	30538G5						STANDARD COMPLETE - FRONT (SPEED)	1	
	30538G6						STANDARD COMPLETE - FRONT (CROWN)	1	
-1							. Ring - Retaining (obsolete - stake threads)	Ref.	
-2	30444P1						. Knob - Clamp (frame)	2	
-3	30473-6						. Washer - Flat, 0.312 x 0.129 x 0.015, fiber	2	
-4	31131G1						. Release Assembly - Cable	1	
-4A	30843P1						. Nut - Cable Release	2	
-4B	31097P1						. Rod - Manual Trip	1	
-4C	31098P1						. Bracket - Manual Trip	1	
-5	30672G1						. Bellows Assembly	1	
	30538G5T						. Front Standard Assembly (SPEED)	1	
	30538G6T						. Front Standard Assembly (CROWN)	1	
	30538G5N						. Frame Assembly - Front Standard (SPEED)	1	
	30538G6N						. Frame Assembly - Front Standard (CROWN)	1	
-6	30472P2						. Lock - Lensboard (SPEED)	1	
	30472P3						. Lock - Lensboard (CROWN)	1	
-7	30472P5						. Lock - Lensboard	1	
	Attaching Parts								
-8	30401P1						. Screw - Machine (special)	4	
-9	30377P1						. Nut - Slidelock	4	
-10	30473-2						. Washer - Flat, 0.218 x 0.089 x 0.016	4	
-11	30473-20						. Washer - Flat, 0.203 x 0.124 x 0.010	4	
-12	30540-3						. Washer - Spring	4	
	---***---								
-13	30384P1						. Frame - Outer Front	1	
	31923G3						. Finder Complete	1	
-14	30400G1						. Finder Assembly	1	
-15	30675G1						. Frame Assembly - Finder	1	
-16	30378P2						. Plunger - Finder	2	
-17	30404P2						. Sleeve - Finder Lock Spring	1	

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Parts List

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
5-18	30438	.	.	.	.	.	Spring - Finder	1	
-19	30719P1	.	.	.	.	.	Bracket - Plunger	2	
-20	30425G1	.	.	.	.	.	Plate Assembly - Front Frame Clamp	2	
-21	30387P1	.	.	.	.	.	Frame - Inner Front	1	
	30538G5S	.	.	.	.	.	Standard Support Assembly Complete	1	
-22	30553-2	.	.	.	.	.	Nut - Machine (special).	1	
-23	30439	.	.	.	.	.	Spring - Shift Locking.	1	
-24	30537G2	.	.	.	.	.	Lever Assembly	1	
-25	300-9	.	.	.	.	.	Ball - Steel (0.2187 dia.) was p/n 30539P3.	2	
-26	30473-13A	.	.	.	.	.	Washer - Flat, 0.350 x 0.205 x 0.021	1	
-27	30540-2	.	.	.	.	.	Washer - Spring	1	
	34621G4	.	.	.	.	.	Standard Support Assembly (was p/n 30538G5R)	1	
-28	30444P1	.	.	.	.	.	Knob - Clamp (support).	2	
-29	30473-7	.	.	.	.	.	Washer - Flat, 0.312 x 0.128 x 0.012, fiber.	2	
-30	30473-10	.	.	.	.	.	Washer - Flat, 0.375 x 0.188 x 0.008, armite paper	2	
-31	31735	.	.	.	.	.	Screw - Machine (support locking).	2	
		.	.	.	.	.	Support Subassembly	Ref.	

PACEMAKER GRAPHIC "23"
SPEED & CROWN

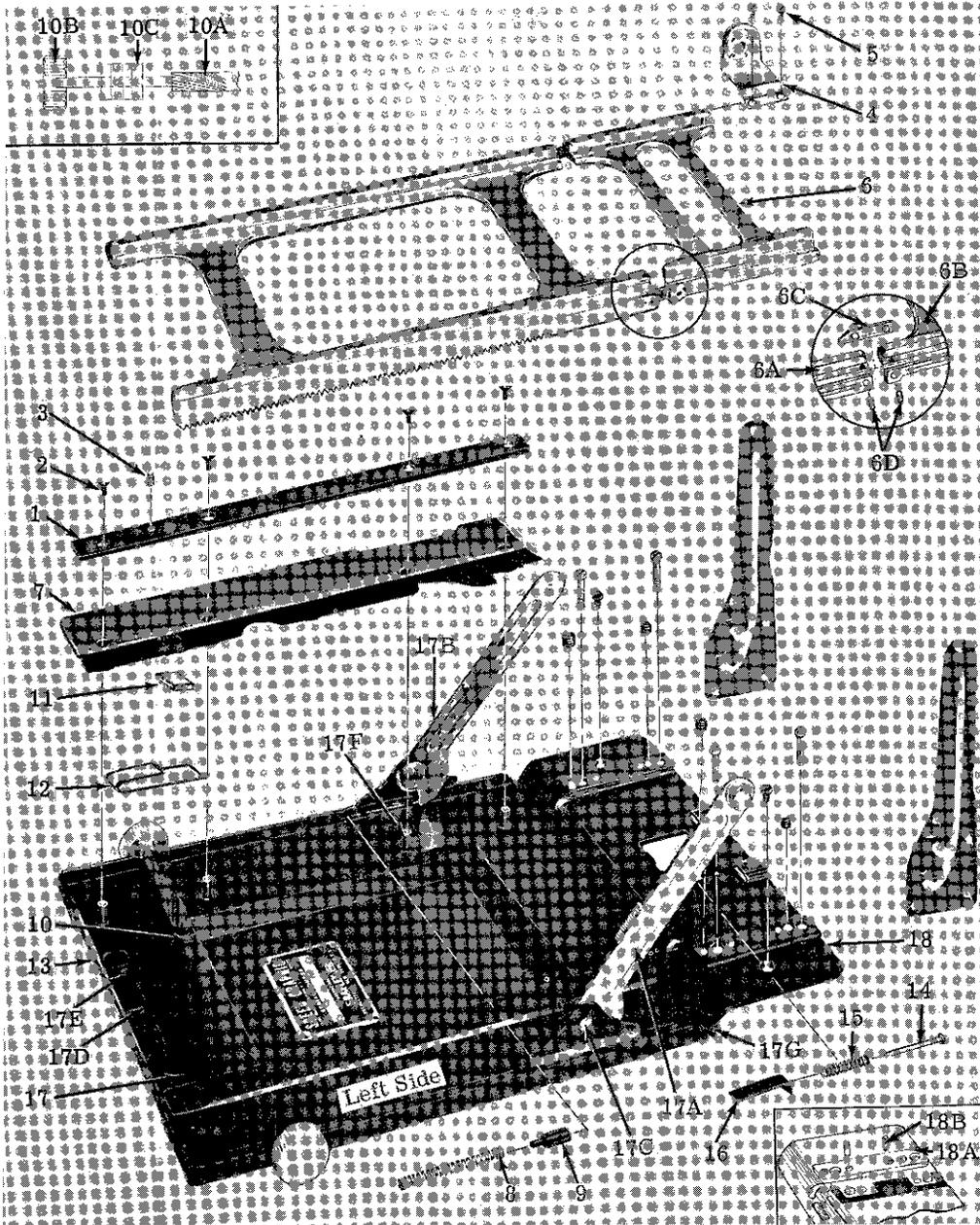


Figure 6. Bed Complete

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Parts List

Figure and Index No.	Part No.	1 2 3 4 5	Nomenclature	Qty.	Code
6-	30621G1		BED COMPLETE	1	
-1	30627P1		. Guide - Bed (left)	1	
	30627P2		. Guide - Bed (right)	1	
	Attaching Parts				
-2	31089P6		. Screw - Machine (special) Replaces p/n 31089P4	8	
-3	170A3-2A		. Screw - Set, No. 3-48 x 1/8, headless, oval point	1	
	---***---				
-4	30775G3		. Bracket Assembly - Rangefinder	1	
	Attaching Part				
-5	30830C		. Screw - Machine (special)	2	
	---***---				
	34617G1		. Yoke Complete	1	
	30655G1		. . Stop Assemboy - Right	1	
	30655G2		. . Stop Assembly - Left	1	
	30661		. . . Screw - Machine (rear).	2	
	30662		. . . Screw - Machine (front)	2	
	30819		. . . Screw - Machine (index scale).	2	
	30817P3		. . Index - Scale	1	
	30815		. . Plate - Index Scale	1	
-6	30596G3		. . Yoke Assembly	1	
-6A	30599P1		. . . Yoke - Bed Section	1	
-6B	30601P1		. . . Yoke - Case Section	1	
	30605		. . . Pin - Front Standard Stop	1	
-6C	30602		. . . Link - Yoke	2	
-6D	30603		. . . Pin - Yoke Link	4	
-7	30622P1		. Block - Bed (left)	1	
	30622P2		. Block - Bed (right)	1	
-8	30666		. Spring - Bed Brace	2	
-9	30615		. Plunger - Bed Brace	2	
-10	30621G1M		. Pinion Assembly - Focusing	1	
-10A	30606P3		. . Pinion - Focusing	1	
-10B	30612P1		. . Knob - Focusing	2	
-10C	30730P1		. . Brake - Yoke Lock	4	
-11	30829		. Plate - Brake	1	
-12	30611		. Spring - Focusing Pinion	2	
-13	31730P1		. Escutcheon - Bed	1	
-14	30638-1		. Pin - Escutcheon	1	
-15	30639		. Spring	1	
-16	30637		. Slide	1	
-17	34615G1		. Bed Assembly - Second	1	
-17A	30421G5		. . Brace Assembly - Left	1	
-17B	30421G6		. . Brace Assembly - Right	1	
	Attaching Part				
-17C	31751P1		. . Rivet (bed brace).	2	
	---***---				
	31754P2		. . Covering - Bed	1	
-17D	30506		. . Catch - Bed	1	
	Attaching Part				
-17E	30948		. . Rivet (bed catch).	2	
	---***---				
			. . Nameplate	Ref.	
	Attaching Part				
	30363-22H		. . Rivet (nameplate)	4	
	---***---				
-17F	30915P1		. . Bushing - Guide Screw	8	
-17G	30172-23		. . Pin - Hinge	1	
-18	30621G1R		. . Hinge Assembly	1	
-18A	31731P1		. . . Guide - Case (left).	1	
	31731P2		. . . Guide - Case (right).	1	
	Attaching Part				
-18B	30685-2		. . . Pin - Dowel	4	
	---***---				

PACEMAKER GRAPHIC "23"
SPEED & CROWN

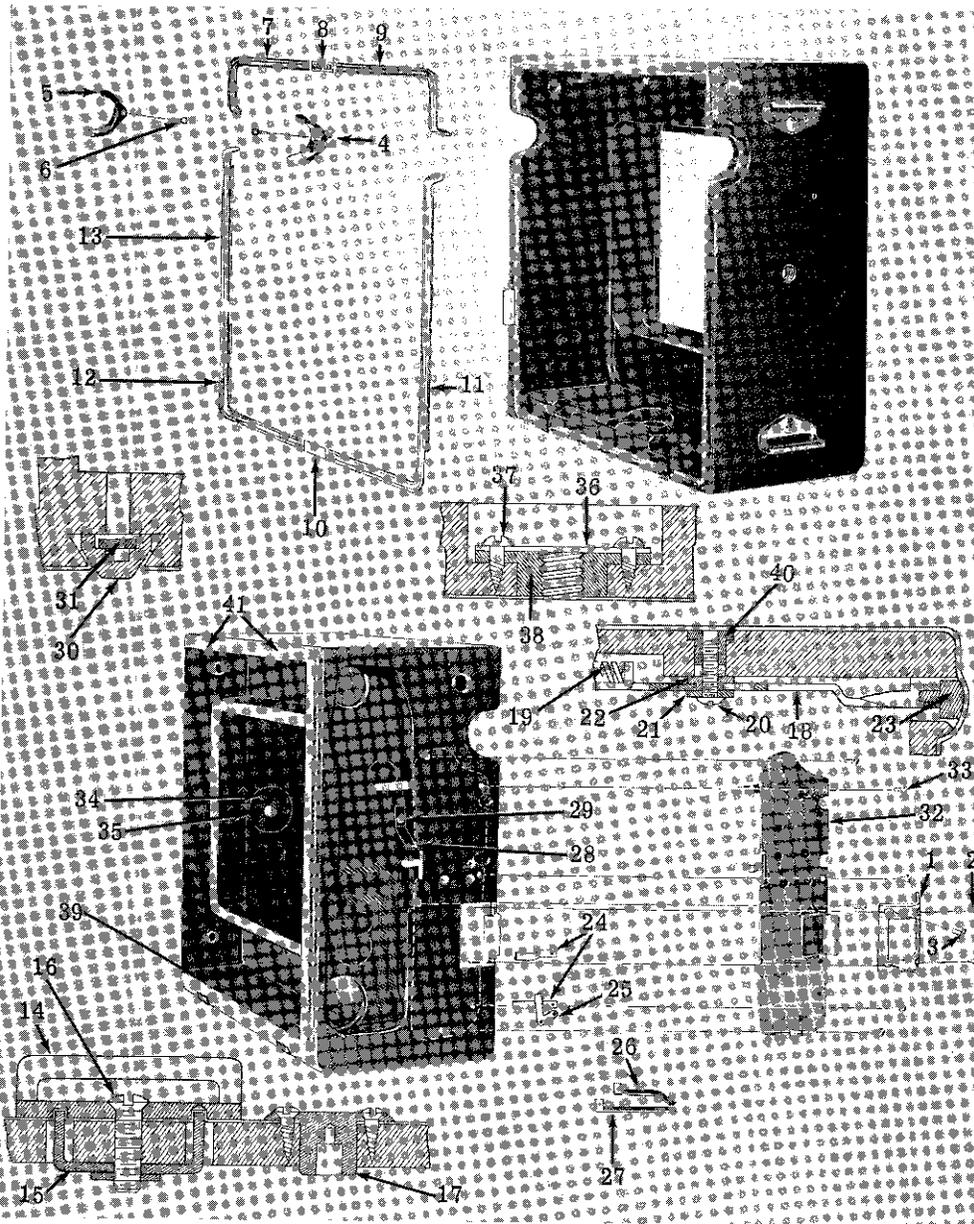


Figure 7. Body Complete

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
7-	30559G3						BODY COMPLETE - 2 1/4 x 3 1/4 SPEED GRAPHIC	1	
	30559G6						BODY COMPLETE - 2 1/4 x 3 1/4 CROWN GRAPHIC	1	
-1	30535P1						. Plate - Release Slide	1	
	Attaching Parts								
-2	152B1R4C						. Screw - Wood, No. 1 x 1/4, oval hd	2	
-3	30749P1						. Screw - Machine (special)	1	

-4	30647P1						. Escutcheon - Focusing Knob (left)	1	
-5	31135P1						. Escutcheon - Focusing Knob (right)	1	
	Attaching Part								
-6	30638-2						. Pin - Escutcheon	2	

-7	30645P2						. Moulding - Upper Right	1	
-8	30640P2						. Plate - Moulding (upper)	1	

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Parts List

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
7-9	30645P1	.					Moulding - Upper Left	1	
-10	30640P1	.					Plate - Moulding (lower)	1	
-11	30763P1	.					Moulding - Lower Left	1	
-12	30764P1	.					Moulding - Lower Right	1	
-13	30643P3	.					Moulding - Right	1	
-14	30374P1	.					Bracket - Handle	2	
							Attaching Parts		
-15	30375P1	.					Nut - Handle Bracket	2	
-16	104B6R8C	.					Screw - Machine, No. 6-32 x 1/2, oval hd	2	
	----						***----		
-17	30880	.					Bearing - Roller (Replace with p/n 30192P1 or P2. See Index 10, Figure 2)	Ref.	
-18	30557P1	.					Latch - Bed	1	
-19	30664	.					Spring - Bed Latch	1	
							Attaching Parts		
-20	102B3-4K	.					Screw - Machine No. 3-48 x 1/4, round hd	2	
-21	30473-44K	.					Washer - Flat, 0.250 x 0.099 x 0.025	2	
-22	30508	.					Collar - Bed Latch Insert	2	
	----						***----		
-23	30752	.					Button - Bed Release	1	
-24	30820	.					Contact - Case (SPEED)	2	
-25	30821	.					Contact - Receptacle (SPEED)	1	
-26	30204P1	.					Contact - Switch (SPEED)	1	
-27	30328P1	.					Contact - Switch, Long (SPEED)	1	
							Attaching Parts		
	150B0-3	.					Screw - Wood, No. 0 x 3/16, flat hd	3	
	30638-6	.					Pin - Escutcheon	1	
	150B0-2	.					Screw - Wood, No. 0 x 1/8, flat hd	2	
	----						***----		
-28	30303P1	.					Spring - Shift Slide (SPEED)	1	
							Attaching Part		
-29	150B1-3	.					Screw - Wood, No. 1 x 3/16, flat hd	1	
	----						***----		
-30	30648P1	.					Foot (SPEED)	2	
	30744P1	.					Foot (CROWN)	2	
-31	200-3SA	.					Nut - Machine, No. 3-48	4	
	32667P1	.					Covering (SPEED)	1	
	30559P85	.					Covering (CROWN)	1	
-32	30493G1	.					Plate Assembly - Body Release (SPEED)	1	
	30876G1	.					Plate Assembly - Body Release (CROWN)	1	
							Attaching Part		
-33	150B1-6	.					Screw - Wood, No. 1 x 3/8, flat hd	6	
	----						***----		
-34	30372P3	.					Socket - Tripod (side)	1	
							Attaching Part		
-35	150B2-4	.					Screw - Wood, No. 2 x 1/4, flat hd	3	
	----						***----		
-36	30721	.					Cover - Tripod Socket	1	
							Attaching Part		
-37	151B2-4	.					Screw - Wood, No. 2 x 1/4 round hd	3	
	----						***----		
-38	30372P1	.					Socket - Tripod (bottom)	1	
-39	30673P3	.					Insert - Back (SPEED)	1	
-40	31905P1	.					Insert - Bed Latch	2	
-41	30370	.					Lug - Back Mounting (SPEED)	2	
							Attaching Part		
	150B2-3	.					Screw - Wood, No. 2 x 3/16, flat hd	4	

Section 4
Parts List

PACEMAKER GRAPHIC "23"
SPEED & CROWN

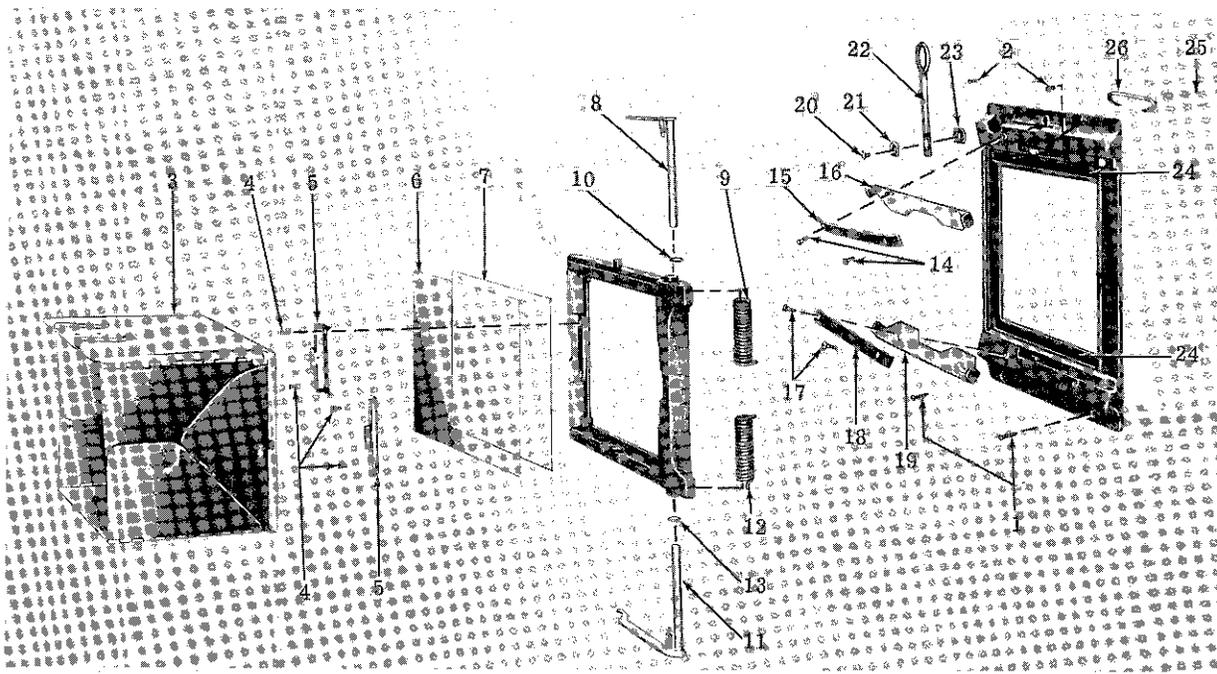


Figure 8. Graflok "23" Back Complete

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
8-	31709G22						BACK COMPLETE - GRAFLOK "23" (SPEED)	1	
	31709G23						BACK COMPLETE - GRAFLOK "23" (CROWN)	1	
-1	30921-7W						. Screw - Self Tapping, No. 2 x 1/2, pan hd (SPEED)	2	
	30921-6W						. Screw - Self Tapping, No. 2 x 3/16, pan hd (CROWN)	2	
-2	30921-6W						. Screw - Self Tapping, No. 2 x 3/16, pan hd (SPEED & CROWN)	2	
-3	30159G1						. Hood Assembly (Cat. No. 9145)	1	
	31715G8						. Frame Complete - Focusing (Cat. No. 9277)	1	
-4	100-2-3W						. . Screw - Machine, No. 2-56 x 3/16 flat hd	4	
-5	30371P1						. . Retainer	2	
-6	30414P2						. . Screen - Focusing (ground glass)	1	
-7	30414P5						. . Screen - Fresnel (Ektalite)	1	
	33837G8						. . Frame Assembly	1	
-8	31717G2						. . . Arm Assembly - Upper	1	
-9	31720P1						. . . Spring - Upper	1	
-10	30473-38K						. . . Washer - Flat, 0.250 x 0.157 x 0.10	1	
-11	31717G1						. . . Arm Assembly - Lower	1	
-12	31720P2						. . . Spring - Lower	1	
-13	30473-38K						. . . Washer - Flat, 0.250 x 0.157 x 0.010	1	
	31710G1						. Back Assembly - Second (Cat. No. 9090)	1	
-14	30939P1						. . Screw - Machine (special)	2	
-15	31714P1						. . Spring	1	
-16	31713P1						. . Slidelock - Upper	1	
-17	30939P1						. . Screw - Machine (special)	1	
-18	31714P1						. . Spring	1	
-19	31713P2						. . Slidelock - Lower	1	
-20	104B6-4C						. . Screw - Machine, No. 6-32 x 1/4, oval hd	1	
-21	30366						. . Cap	1	
-22	30369G1						. . Peepsight Assembly	1	
-23	30368						. . Washer - Flat	1	
-24	31722P1						. . Strip - Light Seal	2	
	33836G1						. . Back Assembly - First	1	
-25	30364P1						. . Plate	1	
-26	30367						. . Spring	1	
	30556-13K						. . Rivet (hook)	4	
	31712P1						. . Hook - Upper	1	
	31712P2						. . Hook - Lower	1	

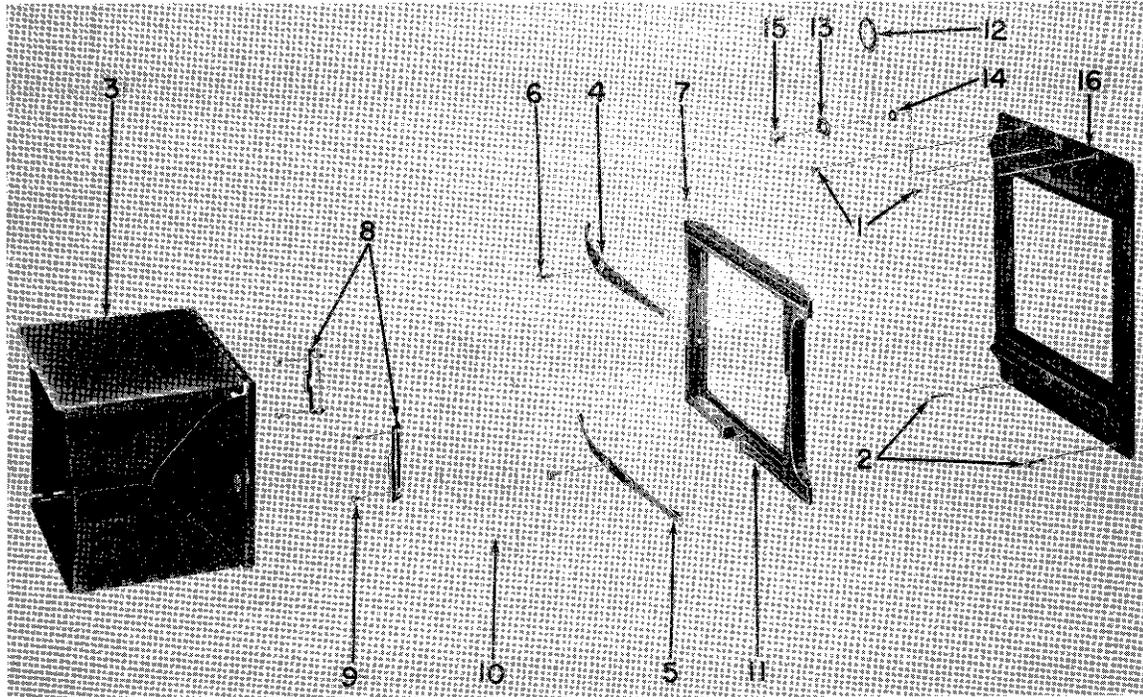


Figure 9. Graphic Back

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30313-G1						Back Complete - 2-1/4x3-1/4 Speed Graphic (See Figure 1-19)	NP	Obsolete
	30313-G5						Back Complete - 2-1/4x3-1/4 Crown Graphic	NP	Order Graflok
							Attaching Part		
9-1	30921-P5(S7)						Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed	2	.01
-2	30921-P7(S7)						Screw - Self tapping, 1/2 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed	2	.01
-1&2	30921-P6(S7)						Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Crown	4	.01
							---***---		
-3	Cat. #9145						Hood Assembly	Ref	
-4	31279-P1						Spring - Focusing frame, top	1	.28
-5	31279-P2						Spring - Focusing frame, bottom	1	.28
							Attaching Part		
-6	31270-P1						Screw - Sems unit fastener (washer w/screw, 5/16" lg., #4-40)	2	.03
-7	30473-P1(S18)						Washer - Flat, focusing frame spring, 5/32 in. OD, 0.067 in. ID, 0.005 in. thk Brass, Ebonol	.01	
							---***---		
-8	30405-G5						Frame Assembly Complete - Focusing	NP	
	30371-P1						Retainer - Hood Assembly	2	.07
							Attaching Part		
-9	100-2-3(S7)						Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal	4	.01
							---***---		
-10	30414-P2						Screen - Focusing	1	1.10
-11	30405-G4M						Frame Assembly - Focusing	NP	
	30310-G1						Back Assembly	1	6.65
-12	30369-G1						Peepsight Assembly	1	.50

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

5. Focal Plane Shutter, Mounting and Timing.

(a) Position the curtain and rollers assembly (9, figure 2) after lubricating the bearings of the rollers with grease, AN-G-25.

(b) Wind the curtain so that the open "0" aperture is showing.

(c) Rotate the winding key until "0" appears squarely in the upper half of the speed shutter dial window (5, figure 5) when the upper master gear pin is stopped against the top step of the escapement (1, figure 6).

(d) With the bottom strut of the curtain 1/4 inch from the upper inside edge of the frame, position the shutter mechanism plate assembly (4, figure 2) over the pinion ends of the curtain rollers (9). The escapement actuating lever of the concealed body release plate must contact the bottom stud of the escapement assembly (6, figure 6) and the shutter selector shift side; the shutter selector lever of the concealed body release (located near the middle) must contact the bottom shift plate side (12, figure 6). The gear of the top roller meshes with the master gear assembly (6).

(e) Swing the retard cam lever assembly (17A) forward to raise the governor assembly (15). Drop the bearing shaft of the tension roller in the lower bearing hole of the plate. At the forward edge of the plate is a narrow cut-out which fits with a raised lip on the concealed body release plate.

(f) Note the horizontal side play of each roller. If this side play is more than 1/32 inch, place 0.007-inch washers at the camera case bearing end of the shafts.

(g) With a screw driver, obtain tension on the lower roller by winding the slotted shaft counter clockwise. Hold the roller and pull the curtain out by hand several times to remove the cloth slack; then release the spring tension slowly.

(h) Position the tension shaft retainer (6, figure 2) over the shaft and start the shaft retainer screw (5). Draw a pencil line on the retainer, and using this an index, wind the slotted shaft counterclockwise to the number of turns indicated below:

"23" Speed Graphic - 4 revolutions.

"34" Speed Graphic - 5 revolutions.

"45" Speed Graphic - 6 revolutions.

(i) Tighten the shaft retainer screw so that the screw shoulder fits into the tension shaft retainer cut-out edge.

CAUTION

If it is necessary to wind the initial tension one and one-half revolutions more than have been recommended, check for possible area of binding. Check roller bearing, master gear, and governor.

(j) Wind and release the full length of the curtain several times. Check the distance of the top strut of the open aperture from the top inside edge of the case. If this distance is not 1/4 inch

from the bottom of the curtain strut to the upper inside edge of the frame, change the gear positions of the upper roller and the master gear assembly: remove the wood screws (8), lift the upper edge of the shutter mechanism plate assembly, and raise or lower the mesh of the gears by one or two teeth as necessary.

(k) Check the strut position after relocation and reassemble the wood screws (8).

(l) Replace the shutter plate cover assembly (1) and assemble two wood screws (3) at the top and four machine screws (2) at the bottom.

(m) Lay the camera face down and draw a pencil line across the center of the top roller; lift the curtain and apply a thin film of cement, MIL-C-4003, about 1/2 inch wide, below the line that shows.

(n) Wind the curtain until the smallest slit is at the top. Repeat the procedure on the bottom roller as was used to cement the top curtain.

(o) Arch the spring finger contacts (13) at least 3/16 inch above the block. The arch must be curved evenly and as long as permissible.

(p) Assemble the camera back (22, figure 1).

6. Focal Plane Shutter Check. Check focal plane shutter speeds as follows:

(a) Set the shutter at the open "0" aperture; with the camera either horizontal or vertical, the shutter opening should move slowly and smoothly across the camera. The curtain should latch in this position when the shutter release is depressed. The winding key should lock and not rotate.

(b) If the curtain movement is not smooth and even, and if the curtain does not latch when the movement is completed, the tension of the lower roller must be increased as described in paragraph IV. C. 5. The tension should be added and checked by half turns above the turns prescribed.

(c) If the equipment is available, the shutter should be tested further and more accurately with an electronic tester or stroboscopic light source.

(d) Check the flash contact of the curtain by inserting a test lamp in the battery case. Contact should be tested at settings of 1000, 500, 250, and 0. See introductory paragraph for operational procedure.

V. FRONT STANDARD

A. DISASSEMBLY.

Note: If it is not necessary to remove the bellows assembly (5, figure 8), slide the front standard from the bed and proceed with paragraph C.

1. Bellows Removal, 4 x 5 Camera.

(a) Remove the camera back.

(b) Open the camera bed (27, figure 2) and snap into normal position.

(c) On "45" cameras: Remove four machine screws (36). On "23" and "34" cameras: Remove the four wood screws (2, figure 7) holding the frame and contact assembly (1).

Section 4
Group Assembly Parts List

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
Attaching Part									
9-13	30366	.	.	.	.	.	Cap - Peepsight	1	.16
-14	30368	.	.	.	.	.	Washer - Peepsight	1	.03
-15	104B6R4	.	.	.	.	.	Screw - Machine, 1/4 in. lg., #6-32 OH Phillips drive, Brass, Chrome	1	.04
----***----									
	30364	.	.	.	.	.	Plate - Peepsight spring	1	.04
	30367	.	.	.	.	.	Spring - Peepsight	1	.07
-16	30312-P1	.	.	.	.	.	Back	NHA	

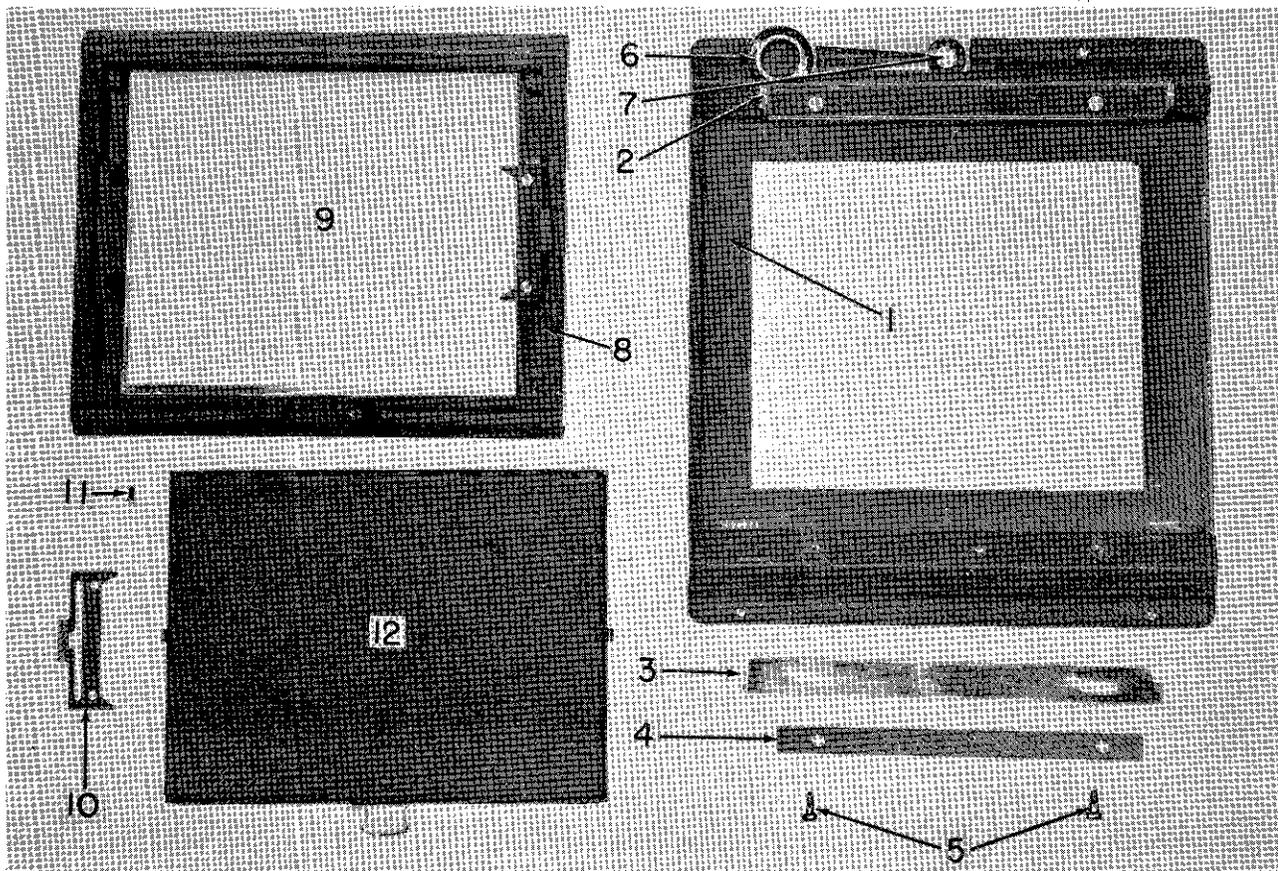


Figure 10. Graflex Back

30927-G6	Back Complete - Graflex 2-1/4x3-1/4 Speed Graphic, excluding Panel and hood (See Figure 1-19)	Ref
30927-G3	Back Complete - Graflex 2-1/4x3-1/4 Crown Graphic, excluding Panel and hood	Ref

Attaching Part

†30921-P7	Screw - Self tapping, 1/2 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed Graphic	2	.01
†30921-P6	Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed Graphic	2	.01
†30921-P6	Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Crown Graphic	4	.01

†Note: See Figure 8 for these parts.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NHA - Next Higher Assembly

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Group Assembly Parts List

Figure & Index No.	Part Number	1 2 3 4 5	Nomenclature	Units per Assembly	List Price
10-1	30930-P1	.	Back	1	5.00
-2	30938-P3	.	Slidelock - Top	1	1.00
-3	30938-P4	.	Slidelock - Bottom	1	1.00
-4	30937-P2	.	Spring - Slidelock	2	.40
			Attaching Part		
-5	30939-P1	.	Screw - Slidelock	4	.12
			-----***----		
-6	30368-G1	.	Peepsight Assembly	1	.50
			Attaching Part		
	†30366	.	Cap	1	.16
	†30368	.	Washer - Flat	1	.03
-7	104B6R4	.	Screw - Machine, 3/16 in lg., #6-32 OH Phillips drive, Brass, Chrome plate	1	.04
			-----***----		
	†30367	.	Spring - Peepsight	1	.07
	†30364	.	Plate - Peepsight spring	1	.04
	Cat. #9142		Panel Complete - Graflex focusing, including hood	Ref	
-8	30933-P1	.	Frame - Focusing	1	3.75
-9	30414-P2	.	Screen - Focusing	1	1.10
-10	30371-P1	.	Retainer - Hood assembly	2	.07
			Attaching Part		
-11	100-2-3(S7)	.	Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal	4	.01
			-----***----		
-12	Cat. #9145	.	Hood Assembly	Ref	

†Note: See Figure 8 for these parts.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

Section 4
Standard Hardware

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
<u>Standard Screws</u>						
100-2-3	S-7	Holds ground glass retainer to back frame	8-5 9-10 10-11	4 4 4	#2-56 FH 3/16"	.20
100B2-4	S-18	Holds yoke guide to bed	6-2	8	#2-56 FH 1/4"	.20
100B2-7	S-18	Spacer block screw	2-10	6	#2-56 FH 7/16"	.20
100B3-2	S-18	Holds bed brace plate	2-26	1	#3-48 FH 1/8"	.20
100B3-3	S-18	Holds bed brace plate	2-26	1	#3-48 FH 3/16"	.20
101-2-6		Holds viewfinder mounting plate to Camera	11-19	3	#2-64 FH 3/8"	.20
102B2-4	S-18	Holds bed latch into case	7-21	2	#2-56 RH 1/4"	.20
102-2-7		Holds shift slide in place	4-9	1	#2-56 RH 7/16"	.20
104B1-3	L-26	Holds shutter plate to camera	2-2	3	#1-64 OH 3/16"	.20
104-4-3	Chrome	Graflite mounting bracket	1-	1	#4-40 OH 3/16"	.20
104-4-5	Chrome	Graflite mounting bracket	1-	2	#4-40 OH 5/16"	.20
104B6-4	Chrome	Holds peepsight to camera back	8-23	1	#6-32 OH 1/4"	.40
104B6R4	Chrome	Holds peepsight assembly to back	9-15 10-7	1	#6-32 OH 1/4" Phillips	.60
104B6R8	Chrome	Handle bracket screw	7-16	2	#6-32 OH 1/2" Phillips	.80
107-2-2	Chrome	Holds manual trip arm to manual trip rod	1-14	1	#2-56 O Fil H 1/8"	.20
110-2-2	Chrome	Holds objective lens cap to viewfinder housing	11-13	2	#2-56 SS Bind H 1/8"	.20
110B2-4		Holds governor mechanism together	4-15A	2	#2-56 SS Bind H 1/4"	.40
110B3R3	S-18	Range finder mounting bracket	1-5	2	#3-48 SS Bind H 3/16"	.20
112-3R2	S-7	Holds bed brace plate	2-27	1	#3-48 O Bind H 1/8" Phillips	.20
112B3R3	S-18	Holds bed brace plates Secures bed latch	2-27 2-28 7-	1 1 1	#3-48 O Bind H 3/16" Phillips	.20
112B3R6	S-18	Holds bed brace plate	2-28	1	#3-48 O Bind H 3/8" Phillips	.20
150-1-3	P-21	Holds cable release spring to case	2-17	1	#1 FH 3/16"	.20
150B0-3	S-18	Holds long switch contact in place	7-	3	#0 FH 3/16"	.20
		Holds curtain guide to frame and contact assembly	1	6		
150B1-3	S-18	Holds shift slide spring to case	7-27	1	#1 FH 3/16"	.20

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Standard Hardware

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
150B1-6	S-18	Holds body release plate assembly to case	7-29	6	#1 FH 3/8"	.20
		Holds back to case for Graphic and Graflok backs	8-3 9-3	1 1		
150B1-8		Holds shutter mechanism to camera	2-7	4	#1 FH 1/2"	.20
150B2-3	S-18	Holds top back mounting lug in place	7-	4	#2 FH 3/16"	.20
		Holds bed brace plates in place	2-30	4		
150B2-4	S-18	Holds bed brace plates in place	2-29	2	#2 FH 1/4"	.20
		Holds side Tripod socket to case	7-32B	3		
150B2-8	S-18	Holds spring finger contact to frame and contact assembly	2-13	4	#2 FH 1/2"	.20
150B2-12		Holds frame and contact assembly to body	2-	4	#2 FH 3/4"	.40
151-1-3	P-21	Holds end of body cable release	2-18	2	#1 RH 3/16"	.20
151B0-2		Holds long switch contact in place	7-	2	#0 RH 1/8"	.20
151B1-3		Holds long and short contacts to frame and contact assembly	2-	2	#1 RH 3/16"	.20
151B2-4	S-18	Holds bottom tripod socket to case	7-32E	3	#2 RH 1/4"	.20
152B1-8	L-26	Holds shutter place to camera	2-3	2	#1 OH 1/2"	.20
152B1R4	Chrome	Holds body release plate in place	7-2	2	#1 OH 1/4" Phillips	.40
152B2R4	Chrome	Holds rear curtain bearing in place	7-18	6	#2 OH 1/4" Phillips	.40
170A3-2	P-15	Yoke lock lever limiting screw	6-3	1	#3-48 slotted headless set 1/8"	.40
170D5-2	S-7	Case guide adjustment screw	2-	4	#5-40 slotted headless set 1/8"	.80
30921-P5	S-7	Top screws that hold back to camera case on Speed	9-1	2	#2 O Bind H 3/16"	.20
30921-P6	S-7	Holds back to case on Crown	8-1&2 9-1&2 10-	4 4 4	#2 O Bind H 3/16"	.20
		Top screws that hold back to camera case on Speed	8-2 9-2 10-	2 2 2		
30921-P7	S-7	Bottom screws that hold back to camera case on Speed	8-1 9-1 10-	2 2 2	#2 O Bind H 1/2"	.20
<u>Special Screws</u>						
30187-P1		Holds escapement to shutter plate	4-2	2		1.20
30213-P1		Holds shutter mechanism to camera	2-5	1		.60

Section 4
Standard Hardware

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
30401-P1		Slidelock screw	5-8	4		1.20
30543		Front standard tilt locking screw	5-25	2		4.80
30661		Infinity stop (rear)	1-16A	2	pointed	.40
30662		Infinity stop	1-16B	2	flat point	.40
30749-P1		Holds body release plate in place	7-3	2	special	1.20
30776		Range finder mounting	1-8	2		.80
30819		Index and focus scale	1-11	4		.20
30830	Chrome	Holds range finder bracket assembly to yoke case section	6-5	2		.80
30939-P1		Holds slide lock to camera back	8-16 8-19 10-5	2 2 4	special	2.40
31089-P4		Holds yoke guide to bed	6-2	8	special 1/4" #2-56 Bind H	.20
31134	S-18	Range finder mounting	1-4	2		.20
31238		Holds curtain pressure spring to back	9-18	2		.20
31270-P1		Holds focusing frame spring to camera back	9-7	2		.40
31944		Holds lens barrel to view finder housing	11-10	2		.20
33756	Chrome	Holds objective lens cap to housing for wide angle view finder	11-	2		.80
33805		Holds sleeve and lens barrel to view finder housing	11-11	2		.80
<u>Nuts</u>						
200-2H		Holds governor mechanism together	4-15B	2		.20
200-3S		Holds case foot in place	7-37	4		.40
30375-P1		Nut for handle bracket	7-15	2		1.00
30377-P1		Nut for slidelock screw	5-9	4		.60
30553-P1		Front standard lever assembly lock nut	5-26	1		1.00
30843		Cable release nut for manual trip rod	5-4A	2		1.60
<u>Washers</u>						
221-2		Washer for #102-2-7	4-10	1		.20
		Lock washer for Nut 200-2H that holds governor mechanism together	4-15C	2		
		Washer for part #102B2-4	7-	1		
30358		Receptacle washer	3-3	1		.20

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Standard Hardware

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
30368		Peepsight washer	8-22 9-15 10-	1 1		.40
30473-P1		Washer for focusing frame spring screw	9-8	2		.20
30473-P6		Front frame clamp washer	5-3	2		.20
30473-P7		Washer for front standard locking screw	5-23	2		.20
30473-P8		Washer for part #102B2-4	7-	2		.20
30473-P10		Washer for front standard locking screw	5-24	2		.20
30473-P11		Yoke lock lever washer	6-5	AR		.20
30473-P13		Front standard lever assembly washer	5-30	1		.20
30473-P15		Curtain and rollers assembly	2-9	AR		.20
30473-P20		Washer for slidelock screw	5-11	4		.20
30473-P24		Curtain and rollers washer	2-10	AR		.20
30473-P25		Washer for body cable release end	2-	1		.20
30473-P35		Graflite mounting bracket	1-	2		.20
30473-P36		Graflite mounting bracket	1-	3		.20
30473-P38		Graflok back, panel, arm washer	8-10 8-13	1 1		.20
30540-P2		Front standard lever assembly washer	5-31	1		.80
30540-P3		Washer for slidelock screw	5-12	4		.40

Finish Code

L-26	Black wrinkle
P-15	White nickel
P-21	Cadmium
S-7	Jetal
S-18	Ebonol

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.

State quantity. Prices subject to change without notice.

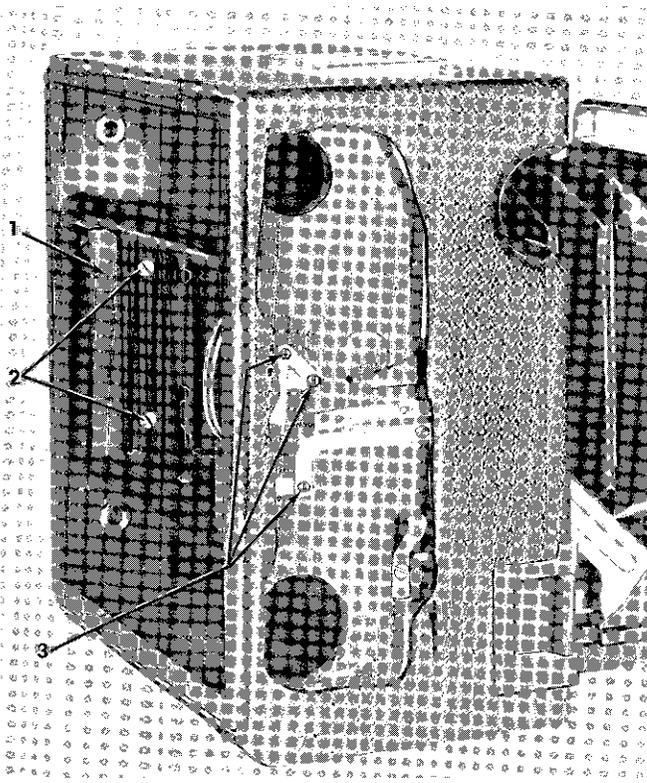


Figure 7. "23" Speed Contact Frame
Assembly Removal

(d) Withdraw several inches of the curtain from the bottom roller and remove the inside frame. It is not necessary to disassemble this frame.

Note: If it is found difficult to remove the frame and contact assembly do not attempt to force the frame out. This can be remedied by removing the shutter plate (4, figure 2), as described in paragraph IV. A. 1. and partially unscrewing the contact screws (3, figure 7).

(e) Straighten the edge of the rear metal bellows frame (crimped at each corner to the metal box frame) to remove the rear bellows frame from the camera body.

(f) Remove the bellows from the frame and support section by removing the lower slide lock (7, figure 8) that is secured by two slide lock screws (8). Swing the lower edge of the front bellows frame back and drop the upper edge free from the slide lock nut head.

2. Cable Release Assembly Removal. To replace the cable release assembly (4) proceed as follows:

(a) Remove the frame clamp knob (rising front) (2) from the right side of the front standard. Slip the manual trip bracket (4C) from the stud.

(1) On "23" cameras: Release pressure of spring (10, fig. 11) by removing wood screw (11). Remove cable mounting screw (9). From the cable mounting clip remove two wood screws (12).

(2) On "34" cameras: Release pressure of spring (10) by removing wood screw (12). Remove cable mounting screw (14). From the cable mounting clip remove two wood screws (12 and 15).

(3) On "45" cameras: Release pressure of spring (10) by removing wood screw (12) and washer (13). Remove the mounting screw (15) from the cable release lever assembly (16). Remove two wood screws (12 and 15) from the cable mounting clip.

(b) Slip the terminal end of the cable through the bellows hangers to free the cable release assembly from the main subassembly.

3. Front Sight Disassembly.

(a) Remove the knob retaining ring (1, figure 8), used on early models, from each side of the frame clamp rising front knob (2) and unscrew the knob of each side of the frame. Later models have stud threads staked. Remove the upper and lower lensboard lock (6 and 7) that are attached by slide lockscrews(8), flat washers (10 and 11) and spring washers(12).

(b) Spread the standard support assembly (34) enough to slide the lensboard frame upward and free of the channel.

(c) Lift the outer front assembly frame (13) evenly from the assembly to expose the inner parts of the frame.

Note: Disassemble the finder plunger (16) carefully so that the finder spring (18) does not throw and lose the finder plungers (16).

(d) Lift the finder (14) and the finder frame (15) from the assembly.

4. Lateral Shift Spring and Lock Lever Disassembly. The lever assembly (30) and the shift locking spring (29) are secured by the special hex nut (28). Unscrew the special nut (28) from the bottom of the standard support assembly (34) and remove the shift locking spring. Unscrew the slotted stud of the lever assembly (30), taking care not to lose the steel lock balls (31), one flat washer (32) and one lever assembly spring washer (33).

B. INSPECTION AND CLEANING.

1. Wipe the bellows (5) free of dirt on the outside with a damp cloth. Scrub the inside surface with a stiff brush (old tooth brush) and blow out all loose dirt and grit.

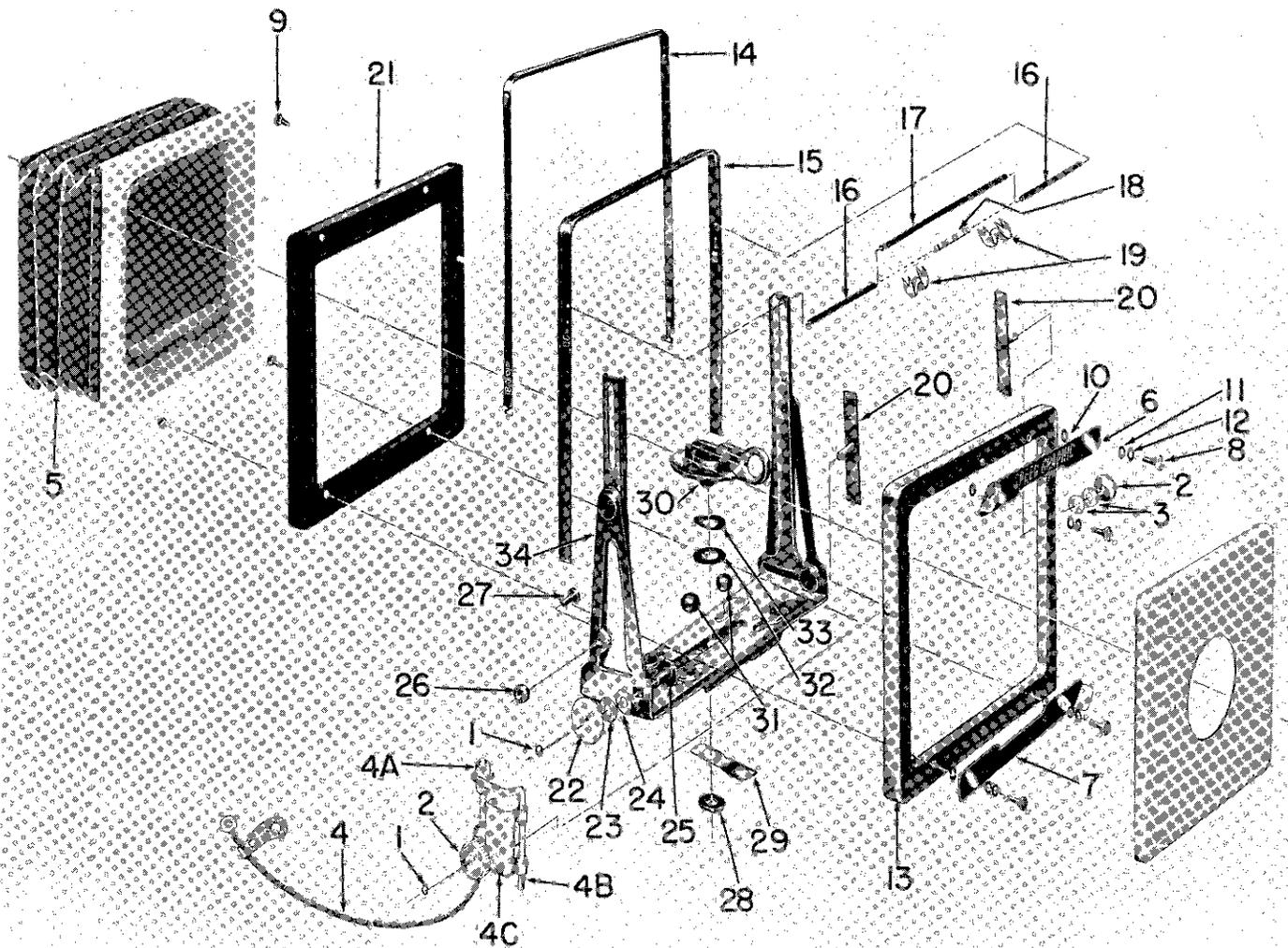


Figure 8. Front Standard, Exploded View

2. Inspect the finder frame (15); if the parallax detent holes are worn by the finder plunger (16) so that the plunger does not quickly snap into the selected parallax height, replace the finder frame (15).

3. If the finder plungers do not snap audibly in position and hold the finder frame, replace the finder spring (18).

4. Clean the sliding area of the finder (14), the finder frame (15) and the front frame clamp plate assemblies (20) in solvent (AN-T-37a) and dry before reassembly.

5. Make squareness adjustment by setting the front standard eccentric (27) and special lock head nut (26) located on each side.

Note: A height gauge, surface gauge with dial indicator, parallel blocks, and a surface plate should be used for this adjustment.

6. Remove the focusing spring screw (7, figure 3), and remove the focusing panel (12). Set the camera back on the parallel blocks, pull the front standard forward on the bed against both

infinity stops and lock. Check the height with indicator at each corner and adjust the eccentrics (27, figure 8) or relocate the infinity stop (19 or 20, figure 1).

C. REPAIR.

Note: Installation of new type bellows (part no. 31061-G3) is recommended for easier and quicker assembly; early style bellows will be discontinued. Refer to paragraph V. D. 6.

1. Straighten the crimped edges of the metal back frame.

2. Stretch the bellows to its full extension and inspect for pin holes by inserting an electric light bulb inside, being careful not to burn the inside fabric.

3. Inspect the finder (14, figure 8) and finder frame (15) for squareness. If the detent holes of the finder frame (15) have become worn by the finder plungers (16), replace the finder frame in order to hold in the desired parallax height.

D. REASSEMBLY.

1. Lateral Shift and Lock Lever. Assemble the lever assembly spring washer and the flat washer to the lever assembly (30, figure 8). Fit the two steel balls (31) into their position between the lever assembly (30) and the standard support assembly (34) and thread the lever assembly stud through the standard support assembly. Lay the shift locking spring (29) in position and assemble the special hexagon nut (28).

2. Adjusting Lock Lever. Check the front standard to determine how tightly it will lock by placing on the sliding yoke of the bed and setting the lock lever (30). It should clamp tightly enough to prevent slippage when the bellows and lens are assembled. To tighten the lock lever, loosen the lock nut (28) on the bottom side and turn the screw in a counter clockwise direction; to loosen the lock, turn the screw in a clockwise direction and then tighten the nut.

3. Lensboard Frame and Sight Reassembly. Lubricate the flat surface of each front frame clamp plate assembly (20) with grease, AN-G-6. Lubricate the sliding areas of the finder (14) and the finder frame (15) with grease, AN-G-6.

Note: Installation of a new flexible open frame finder on "45" cameras is recommended whenever replacement of the open frame finder is necessary. Refer to paragraph V.D. 4.

(a) Assemble the front frame clamp plate assembly (20) to each side of the outer front assembly frame (13). Assemble the finder to the finder frame (15) and lay in position. Assemble the finder spring (18) to the finder lock spring sleeve (17) and insert a finder plunger (16) at each end. Compress the finder plungers and drop into position between the uprights of the finder frame (15). Assemble a finder bracket (19) at each end of the finder lock spring sleeve (17) and center the middle section of the plunger bracket over the hole intended for the slide lock screw (8). Assemble the inner front frame (21) to this assembly and position the upper slide lock nuts (9) to the top rear holes. Position the flat washers (10), lay the upper lensboard lock in position and assemble the slide lock screw (8) that has been fitted with spring washer (12) and flat washer (11).

(b) Attach the frame assembly to the bellows by sliding the top edge of the front bellows frame under the slide lock nuts (9). Swing the lower edge of the front bellows frame against the frame and assemble the lower slide lock nuts through the lower bellows frame slots. Assemble the lower lensboard lock (7) and its attaching parts.

(c) To assemble the lensboard frame assembly to the standard support assembly (34), spread the upright channels and drop the lensboard frame into position with the threaded studs of the front frame clamp assembly (20) extending through the vertical section. To the stud on the left side, assemble two flat fibre washers (3) and a frame

clamp knob (2). Peen the first thread lightly to prevent loss of the knob.

4. Installation of Flexible Open Frame Finder on "45" Cameras. This change (recommended whenever replacement of the open frame finder is necessary) involves disassembly and replacement of parts of the front standard frame assembly, replacement of the rear peepsight, and reassembly. The new parts (Cat. No. 9444) required are:

Frame Clamp Plate Assembly	30425-G5
Outer Front Frame Assembly	34620-G4
Flexible Finder Assembly	34848-G1
Peepsight Carrier	34793-P1
Peepsight Assembly	34794-G1
Inner Front Frame	30385-P2

Disassemble the open frame finder assembly and camera back as described in paragraphs V.A. 1 and V.A. 3. Reassemble frame as follows:

(a) Reassemble the clamp plate and inner and outer frames as described in paragraph V.D. 3. (See figure 8A).

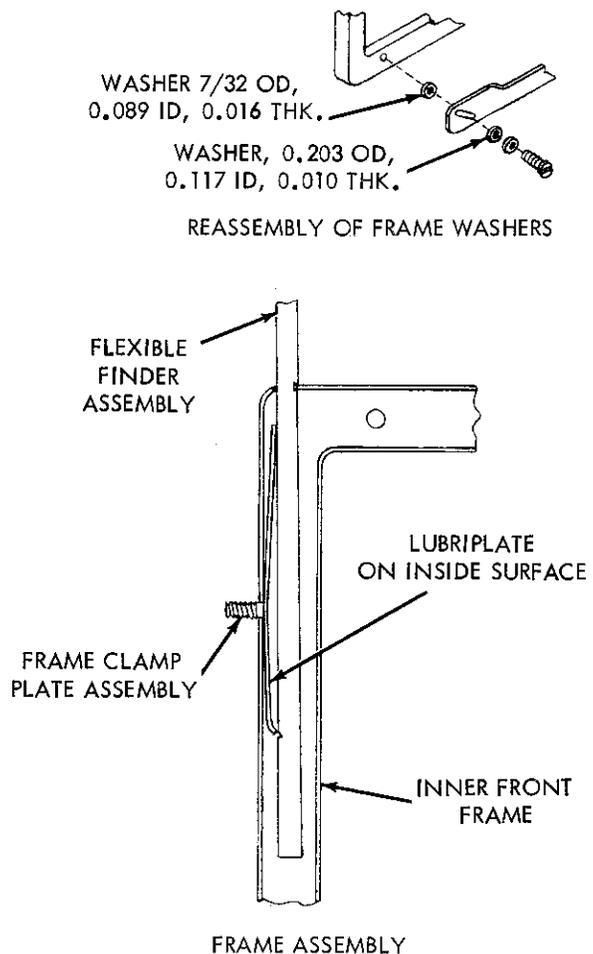


Figure 8A. Frame Reassembly

- (b) Slide the flexible finder frame assembly into the frames.
- (c) Replace the slide locks, washers, screws, and bellows as described in paragraph V. D. 3.

5. Peepsight Reassembly

Note: Steps (a) and (b) are optional.

- (a) Set up a drill press with end mill cutter and fence 4 to 7 inches high to slide the back against and modify the slot to the dimensions shown in figure 8B. (Feed very slowly or the slot may become filled).

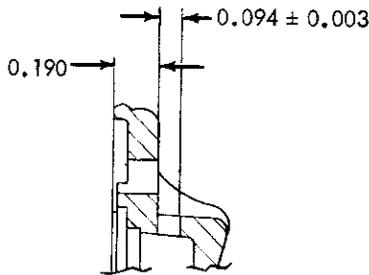


Figure 8B. Modification of Peepsight Slot

CAUTION

The casting is made of magnesium; its chips are combustible under extreme heat.

- (b) Clean milling chips and touch up with flat black paint.
 - (c) Assemble the new peepsight with its washer, cap, and screw as described in paragraph II. C. 1.
6. Bellows Replacement On "45" Cameras. Replace the early style bellows (part no. 31061-G1) with the new style bellows (part no. 31061-G3) as follows:

- (a) Remove the old bellows from the camera as described in paragraph V. A. 1.
- (b) Centrally locate two holes (1 inch center-to-center) 0.112 inch from the horizontal inside edge of the camera case partition. (See figure 8C.)

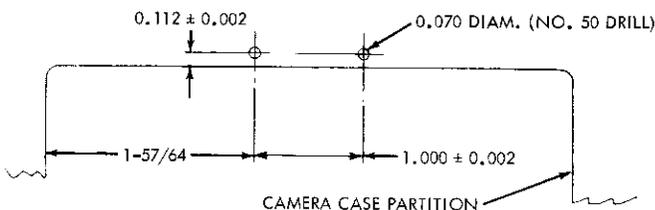


Figure 8C. Drilling Dimensions for New Bellows Installation

Note: The drilling jig shown in figure 8D will facilitate the location and drilling of the holes.

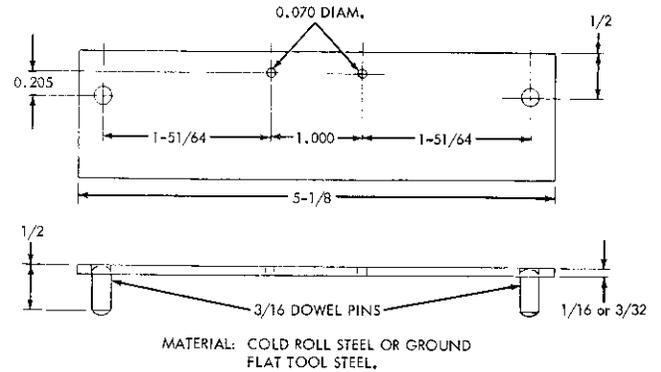


Figure 8D. Drilling Jig

- (c) Hook the sides of the rear bellows frame (slightly curved) on the camera case partition. (See figure 8E.) Pull the top and bottom of the bellows frame tightly against the partition and assemble with a bellows retaining clip (part no. 32459). The dimple in the clip should fit into the newly drilled holes.

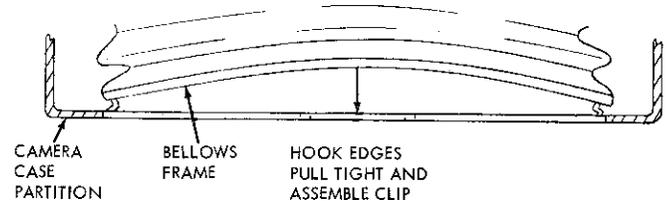


Figure 8E. New Bellows Installation

7. Cable Release Replacement. Attach the cable release assembly (4) as follows:

- (a) On "23" cameras: Attach the cable mounting clip with two wood screws (12). Place the large loop end of the spring (10), as shown in figure 11, over the stud of the body release lever, which extends inside the case, and retain by securing the end of the cable to the stud with machine screw (14). Secure the small loop end of spring (10) to camera body with wood screw (11).
- (b) On "34" cameras: Follow the same procedure as for the "23" camera. Refer to illustration in figure 11.
- (c) On "45" cameras: Attach the cable mounting clip with wood screws (12 and 15). Position the fork of the cable release lever (16) around the stud of the body release lever, which extended inside the case, and assemble the lever mounting screw (15) at the bottom of the cable release lever. Assemble the special block screw (14) to secure the lever fork in position with the body release lever stud. Assemble the washer (13) through the wood screw (12) and anchor the large loop end of the spring (10) as shown in figure 11.

(d) Thread the manual trip bracket (4, figure 8) through the bellows hangers and mount the bracket over the right front frame clamp plate stud. Assemble the frame clamp knob (2) andpeen the first thread of the stud at one point.

8. Bellows Replacement. Attach the front bellows frame as instructed in paragraph V. D. 3. (b) above.

(a) Position the rear bellows frame inside of the camera case frame and crimp the rear bellows frame to the camera frame at each of the four corners.

(b) On "45" cameras: Replace the inside frame made up of the right and left guide blocks (11 and 12, figure 2), the two curtain guides (15), the strip and spacer (34 and 35) and assemble four machine screws (14).

(c) On "23" and "34" cameras: Replace the frame and contact assembly (1, figure 7) and assemble four wood screws (2).

(d) Replace the camera back (22, figure 1) as instructed in paragraph II. C. 2. (d).

9. Cable Release Adjustment.

(a) The manual trip clamp (16, figure 1) is clamped to the manual trip rod (4B, figure 8) and the relationship of the manual trip clamp to the shutter release lever is adjusted by means of the twin cable release nuts (4A).

(b) Set the shutter shift slide (8, figure 6) so that the raised portion of the slide is opposite "FRONT". Release the shutter from the body shutter release. The shutter should be released from any position of the front standard from minimum to maximum bellows extension. Start preliminary adjustments with the minimum bellows extension and adjust the height of the manual trip rod so that the body release is set with the minimum travel.

VI. BED

A. DISASSEMBLY.

1. Removal. If it is not necessary to remove the bed (27, figure 2) from the camera body (37) proceed with paragraph VI. 2. below.

(a) Slide the front standard (17) forward and free of the bed yoke.

Note: If bellows assembly is to be removed, refer to paragraph V. A. 1.

(b) Remove the right and left bed brace plates (1, figure 11) that are secured by screws as illustrated in figure 11.

CAUTION

Hold the plate to prevent stripping the last few wood screw holes, as the bed brace arms are under spring tension.

(c) From the bed hinge, remove two wood screws (31, figure 2). Remove four yoke guide case screws (32) that are screwed into machine nuts (37, figure 12) located in the case feet (36).

(d) Lift the bed from the camera case.

2. Disassembly. Open the bed but do not lock in a horizontal position, allowing the bed to slide freely in the bed brace plates (28 and 29, figure 2). Disassemble the left side first.

(a) Remove the focusing scale (12, figure 1).

(b) On "34" and "45" cameras: Remove the bed section guide (1, figure 9) by removing machine screws (2).

(c) On "23" cameras: Remove the bed section guide (1, figure 10) by removing guide and block screws (2).

(d) Rack the yoke assembly (7, figure 9) forward until the rear case yoke section is free of the hinge guides. Lift the yoke assembly (7) from the bed.

(e) On "45" cameras: Remove block screws (9, figure 9) from the bed block (8). When the bed block is lifted from its position care should be taken so that the bed brace spring (10) does not throw and lose the bed brace plunger (11).

(f) On "23" and "34" cameras: Lift the bed block from its position, being careful that the bed brace spring (8, figure 10) does not throw and lose the bed brace plunger (9).

(g) On "34" and "45" Graphic beds: Swing the yoke lock lever (4, figure 9) clockwise so that the special fillister head screw (3) can be removed. Unscrew the yoke lock lever (4). Remove the flat washer (5) and the yoke lock sleeve (6).

(h) Follow the above steps for right side disassembly.

(i) Lift the pinion assembly (13) from the bed. Do not lose the focusing pinion springs (14) on either side.

Note: Do not disassemble the yoke assembly (7), the pinion assembly (13), or the bed assembly (15).

B. CLEANING AND INSPECTION.

1. Clean the bed, the bed blocks, and the bed section guides with a cloth moistened in solvent. Wash all other metal parts in trichlorethylene solvent and dry thoroughly.

2. Check the top surface of the bed blocks (8) with a straight edge to be sure they are absolutely flat. Check the bed section guides (1) for straightness. Check the yoke assembly for flatness in all directions.

3. Check the bed hinge for smooth operation and no binding. Replace if the hinge binds.

4. Re-cement loose leather with adhesive, MIL-C-4003, assuring that the edge of the leather is bound beneath the bed block.

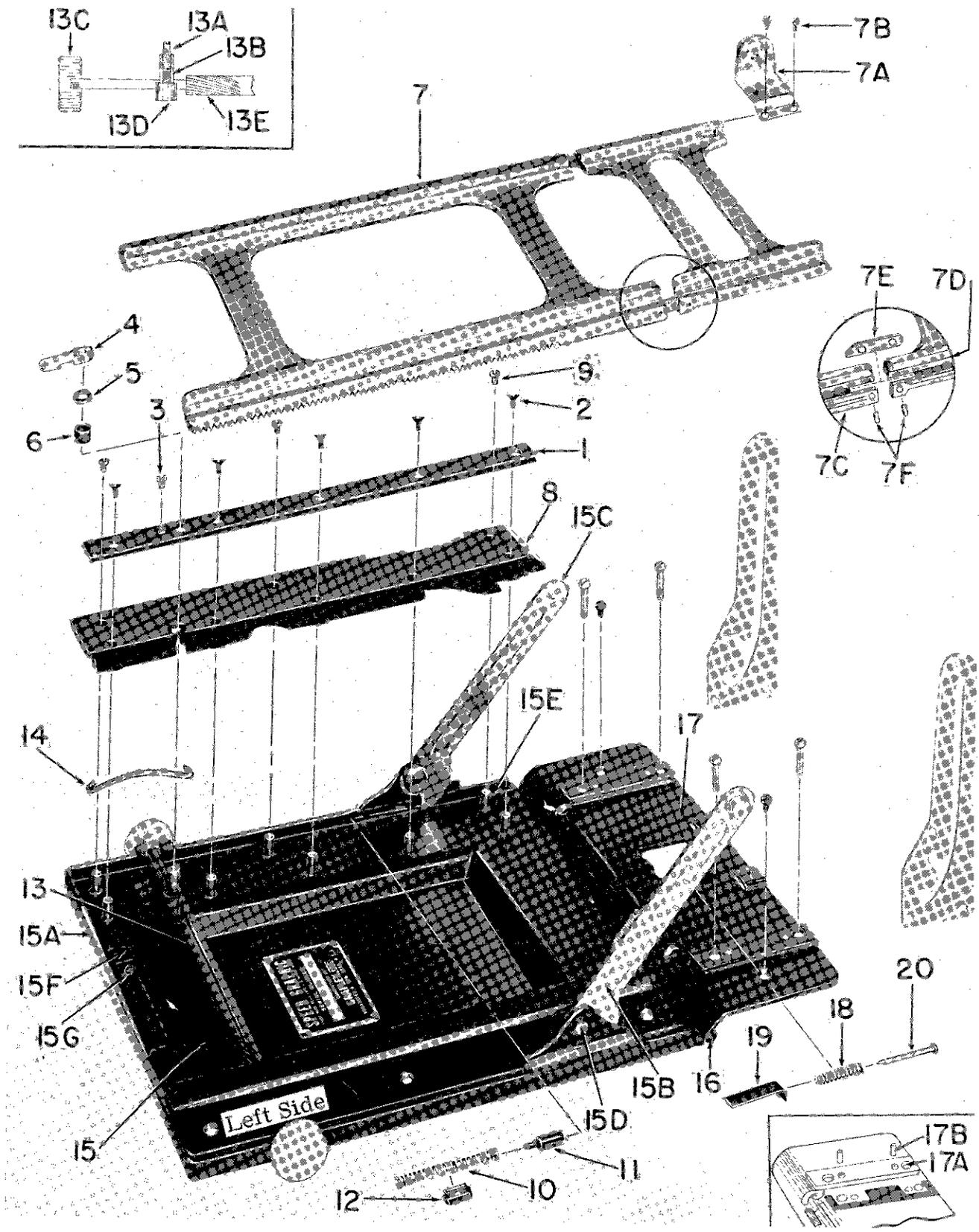


Figure 9. "34" and "45" Graphic Bed, Exploded View

C. REASSEMBLY.

1. Hinge.

(a) Wipe the sliding grooves of the case section guide (17A, figure 9) with a film of grease, AN-G-6.

(b) Wipe the sliding surface of the bed throw-out slide (19) with a film of grease, AN-G-6.

(c) Assemble the case section guide (17A) to the hinge assembly (17) by using two dowel pins (17B) in each guide.

(d) After the bed is assembled to the camera and checked by sliding the front standard from the bed to the hinge section, it may be necessary to shim the case section guide. (See paragraph VI. C. 7.)

2. Focusing Pinion.

(a) On "34" and "45" cameras: Lay the focusing pinion assembly (13) in the bed with the yoke lock post (13B) on the right hand side. Position the focusing pinion spring (14) at the extreme inside end of the pinion.

(b) On "23" cameras: Position the pinion assembly (10, figure 10) on the bed with the four yoke lock brakes (10C) close together and resting on the focusing pinion spring (12).

(c) Hold the pinion in position at this time by snapping a rubber band around the knob, across the outside of the bed, and around the other knob.

Lubrication Note: Use grease, AN-G-6, as follows:

Pinion assembly (13, figure 9): Place a reasonable amount on helical gear teeth and wipe small diameter of shaft.

Yoke assembly (7, figure 9): Wipe guide edges and place a reasonable amount on gear teeth. Roll pinion over to distribute grease in bottom teeth and wipe off excess.

Guide, right and left bed section (1, figure 9): Wipe sliding groove.

3. Block Assembly.

(a) To assemble the bed block (8) on "34" and "45" cameras, insert the stud of bed brace

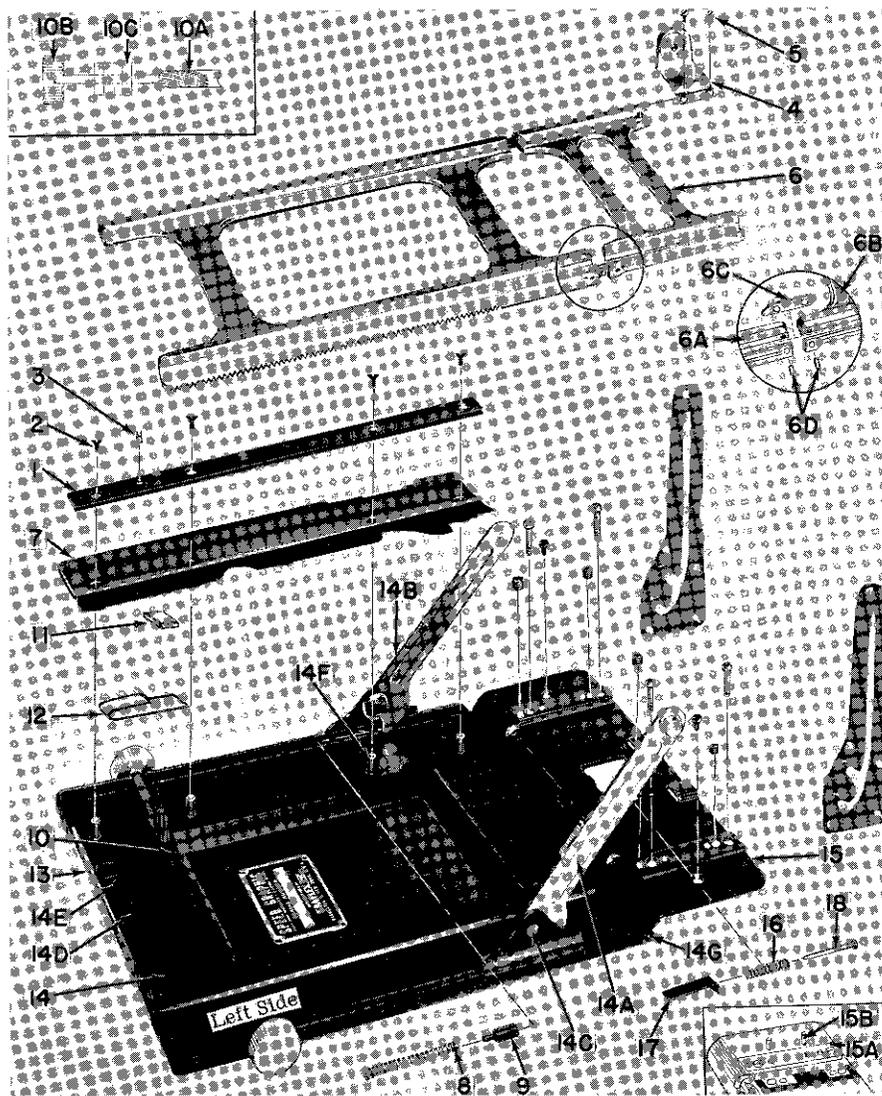


Figure 10. "23" Speed Bed, Exploded View

plunger (11) into the bed brace spring into space provided on the under side of the bed block and hold in position by use of the spring retaining clip (12) that clips around the spring and over the rib on the bottom of the block. Check the position of the focusing pinion spring (14) so that it will fit in the block cavity that is provided. Lower the block into position over the guide and block screw bushings (15E). Be sure that the edge of the leather is tucked in between the block and the bed. On "45" cameras only, assemble three bed block screws (9).

(b) On "23" cameras: Insert the stud of the bed brace plunger (9, figure 10) into the space provided on the under side of the bed block (7). Place the brake plate (11) on the cut-out portion on top of the yoke lock brake (10C) and lower the block into position over the guide and block screw bushings (14F). Assemble the bed section guide (1) and secure with four machine screws (2).

(c) Assemble the opposite bed block as instructed in the preceding paragraphs.

4. Yoke Lock Lever ("34" and "45" cameras only).

(a) Assemble the right bed section guide (1, figure 9) and attach with machine screws (2).

(b) Insert the yoke lock sleeve (6) and assemble the flat washer (5), if required. This flat washer is a spacer washer that may or may not be needed, depending on the position of the yoke lock lever when it is assembled.

(c) Assemble the yoke lock lever (4) and tighten. Note the position and if the lever does not tighten in convenient position it should be removed and the thread started in a different position; it has a triple lead thread. If it is not possible by trial and error to have the lever lock in a convenient position, one or more of the flat washers (5) should be positioned above the yoke lock.

(d) After the yoke lock lever position has been found to be satisfactory, assemble the special fillister head screw (3).

Note: Old style bed guides with countersunk holes require the flat head screw; the newer bed guides have counterbored holes and require the binding head screws. See parts list.

5. Guide Assembly and Adjustment.

(a) Position the yoke assemble forward so that the bed section guide will engage both the bed and case section of the yoke.

(b) Position the left bed section guide and assemble machine screws (2, figure 9 and 10).

(c) With the bed section guide screw (2, figure 9) loosened on both sides, slide the yoke back so that the case section will partially engage in the case section guide (17A). This will center the front section in relation to the case section. Draw both bed section guides (1) together evenly with the fingers and tighten the guide screws (2) on both sides.

(d) Check the assembly at this point by sliding the yoke assembly back and forth several times. It should work smoothly without binding or jumping. There should be enough side tension so

that the yoke will not slide by itself when the bed is held vertically.

(e) On "34" and "45" cameras: It may be necessary to readjust the guides or to increase the tension on the yoke lock post (13D). Tighten the center set screw (13A). If the set screw can not be tightened enough it will be necessary to add an additional yoke lock pad (13B) beneath the set screw.

(f) On "23" cameras: It may be necessary to readjust the guides or to increase tension on the yoke lock brake (10C, figure 10) by gently tightening the set screw (3) until the desired tension on the pinion is reached.

6. Bed Reassembly to Camera.

(a) Place the bed in position in the camera case and reassemble four yoke guide case screws (32, figure 2) that are screwed into the machine nut (37, figure 12) located in the foot (36). Assemble two wood screws (31, figure 2).

(b) Engage each bed brace with its proper bed brace plate (28 and 29). Allow the bed brace arm to slide freely in the slot and assemble the mounting screw in the old mounting hole.

Note: If any of the mounting holes have been stripped or become enlarged they should be plugged with a hard wood dowel that is cemented in place; use Federal Specification C-G-451.

(c) On "23" cameras: Attach the left bed brace plate (1, figure 11) with one wood screw (3) at the top, screw (3) at the side and screw (6) at the bottom. Attach the right bed brace plate with one wood screw (2) at the top and one wood screw (4) at the side and screw (5) at the bottom.

(d) On "34" cameras: Attach the left bed brace plate (1) with five wood screws (7). Attach the right bed brace plate with one wood screw (7) at the top and four wood screws (8) at the bottom.

(e) On "45" cameras: Attach the left bed brace plate (1) with five wood screws (7). Attach the right bed brace plate with one wood screw (7) at the top and four wood screws (8) at the bottom.

7. Checking Bed Alignment.

(a) Test the bed with a straight edge to make certain that it is level with the bottom of the case. Lay the straight edge across the bed emboss to the camera bottom. The bed brace plates may have to be moved up or down slightly to attain this level. If adjustment is necessary, first loosen the screws and try to obtain alignment without completely removing the plate.

(b) Secondly, lay the straight edge across the bed section guide and case section guide.

(c) Next check the top surface of the yoke assembly (7, figure 9). If the top surfaces of the yoke guide are not level, the front standard will not slide smoothly on the yoke. If necessary, shim the case section guide as follows:

(1) Loosen the case yoke guide screws (32) and slip the blade of a knife beneath the guide to raise it enough to insert the necessary number of shims. (On newer model "23" cameras, the

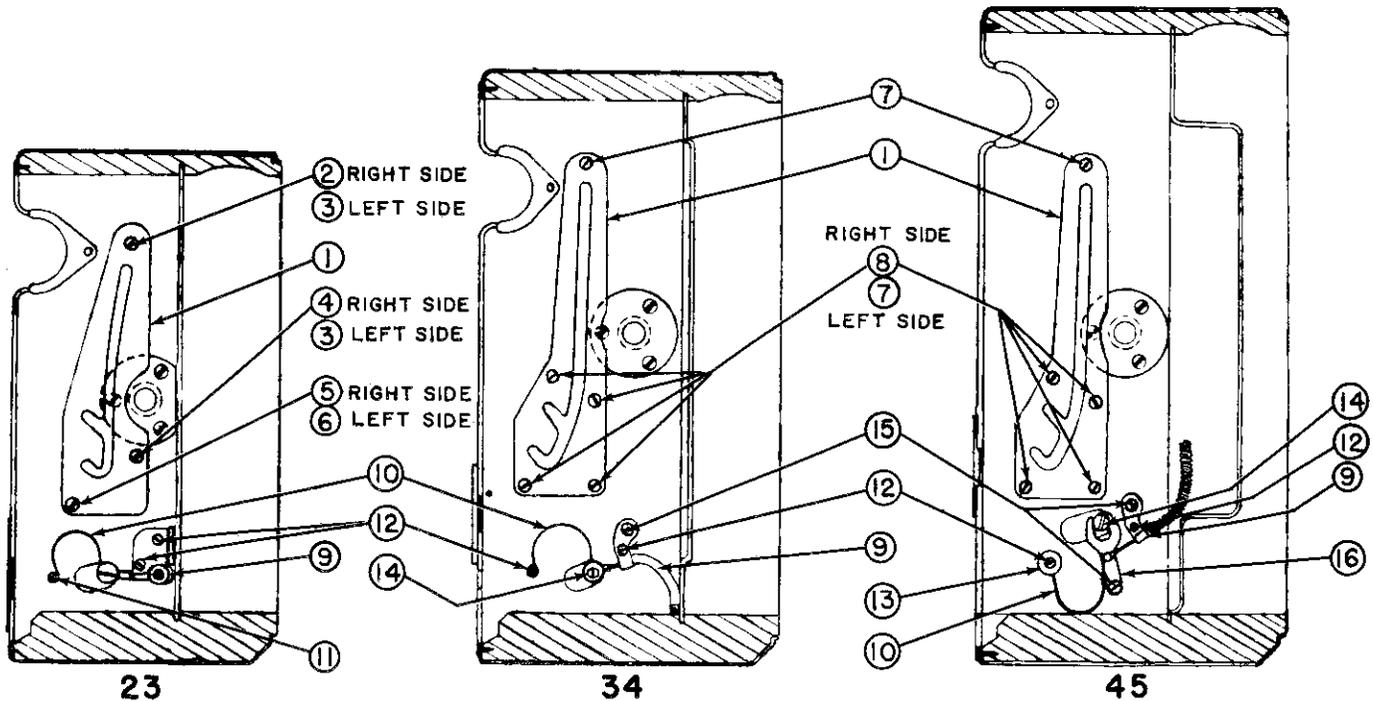


Figure 11. Right Bed Brace Plate and Cable Release Mounting

adjustment of the case yoke guide is made with the two set screws on each guide. Older model cameras require adjustment with shims.)

(2) The case yoke guide shim (33, figure 2) is available in three thicknesses; .016 inch, .040 inch and .060 inch thick; adjust as necessary by trial and error until the top surface of the yokes are level.

VII. BODY

A. BODY RELEASE PLATE.

1. Disassembly.

(a) Remove the release slide plate (1, figure 12).

(b) Remove the right focusing knob escutcheon (5) that is held by escutcheon pin (6). Pry up the right moulding (13) and the right edge of the lower right moulding (12).

CAUTION

Extreme care should be taken when the moulding is removed to avoid splitting the edge of the case when breaking the glue that holds the moulding.

(c) Remove the shutter plate cover assembly and shutter mechanism plate assembly. (See paragraphs IV. B. and C.)

(d) With a sharp knife cut the leather below the shutter plate cut-out to the bottom corner of

the camera. Cut along the lower camera corner to the front edge. Pull the leather up as far as the focusing knob cut-out.

(e) From the body cable release, remove the special block screw (23, figure 2).

(f) Remove six wood screws (35, figure 12) that secure the body release plate assembly (34), and remove the plate assembly.

2. Cleaning and Inspection.

(a) Inspect the sliding action of the shutter selector shift slide located near the back center of the plate. Pull the slide down against the spring action assuring that it returns freely, without binding or catching. All levers on the back of the plate should work freely without interference or binding.

(b) Inspect the short and long switch contacts (30 and 31). These contacts complete the focal plane synchronization circuit and are closed by pressure action from the long lever inside the plate that has the insulated spring terminal bushing. If this insulated bushing has become worn so that the lever might make contact with the short switch contact (30) the body release plate assembly must be replaced.

(c) Wash the body release plate assembly in solvent, trichlorethylene (AN-T-37a), and dry thoroughly. Lubricate with graphite powder, AN-G-24.

3. Replacement.

(a) Before replacing the body release plate assembly (34, figure 12) the mounting holes that are used to mount the rangefinder base and housing should be covered with transparent tape to prevent the tapped holes from becoming plugged with adhesive.

(b) Position the body release plate assembly (34) and assemble six wood screws (35).

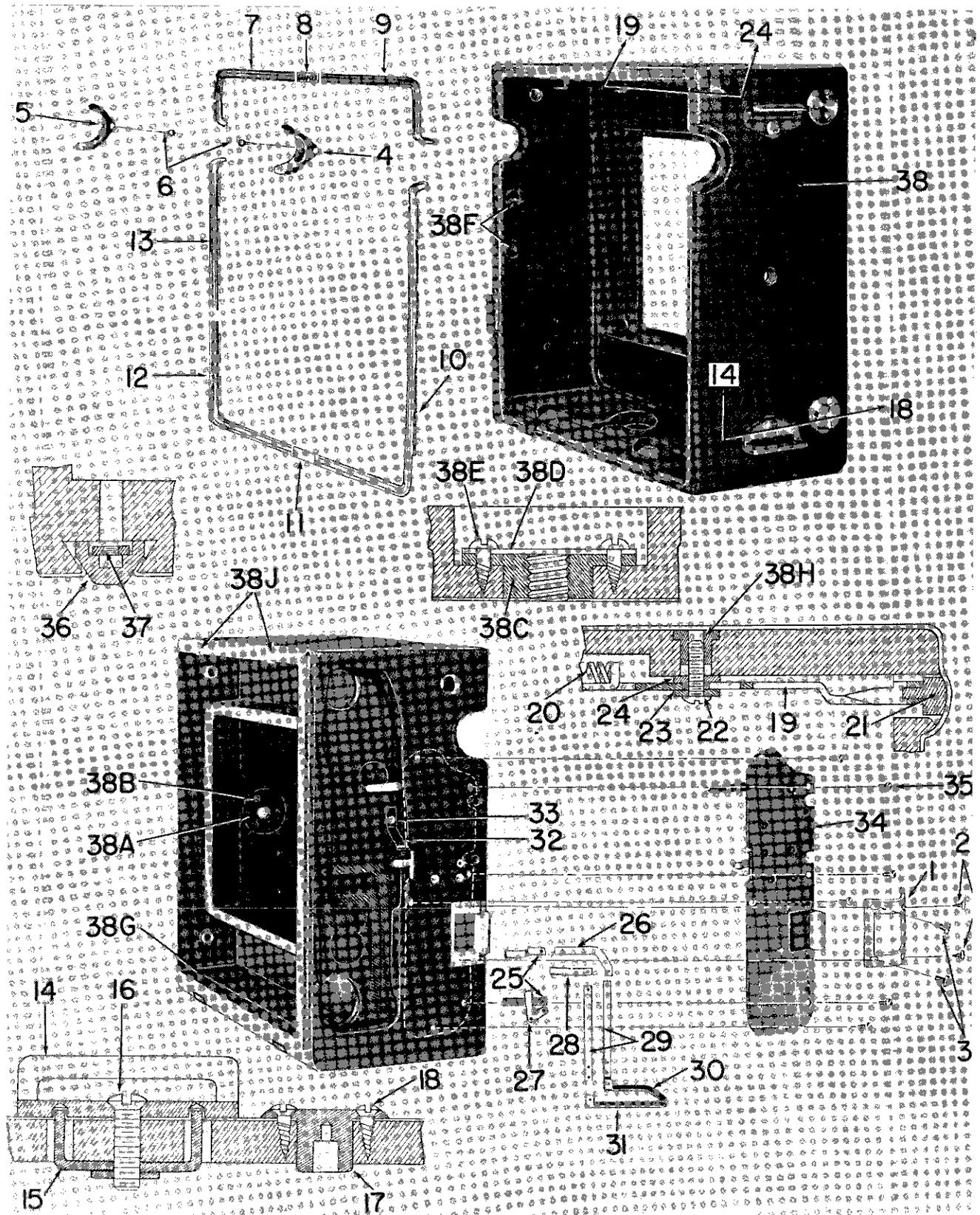


Figure 12. Body, Exploded View

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(c) Apply adhesive, MIL-C-4003, to the leather and to the body release plate and edges of the wooden case. Allow the adhesive to dry enough to become tacky and smooth the leather covering back into place.

(d) Using the edge of a knife, work adhesive into the slots at the front edge of the case, and replace the right moulding (13) and the lower right moulding (12). Replace the focusing knob escutcheon (5) that is secured with the escutcheon pin (6).

(e) Reassemble the focal plane shutter mechanism plate and adjust the timing as instructed in paragraphs IV.C. 3 and 5. Replace the rangefinder and adjust as instructed by rangefinder manufacturer.

(f) Replace the special block screw (23, figure 2).

B. TRIPOD SOCKET REPLACEMENT.

1. To remove the side tripod socket it is first necessary to remove the right bed brace plate as described in paragraph VI. A. 2. Remove the three flat head wood screws securing the tripod socket.

2. To remove the bottom tripod socket it is first necessary to remove the bed assembly (27, figure 2) as described in paragraph VI. A. 1. Remove three round head wood screws (38E, figure 12) and remove the cover plate (38D) and tripod socket (38C).

LUBRICANTS, CLEANING SOLVENTS, ADHESIVES

Materials are specified for general reference by U.S. Government Specifications. If the recommended material cannot be located, local suppliers can advise a substitute that meets the specification numbered.

<u>Compound</u>	<u>U.S. Government Specification</u>	<u>Manufacturer</u>	<u>Use or Application</u>
<u>LUBRICANTS</u>			
Graphite-Micro fine	AN-G-24	Joseph Dixon Company Dixon 48-C Jersey City 3, N. J.	Body release plate Shutter governor
Lubricant #SG4455	AN-G-25	Standard Oil of Indiana Chicago, Illinois	Shutter master gear Shutter bearings Bed pinion teeth and bearings
#107 Lubriplate	AN-G-6	Fiske Bros. Refining Co.	Bed and front standard sliding surfaces
<u>CLEANING SOLVENTS</u>			
Trichlorethylene (2nd Choice - Carbon tetrachloride)	AN-T-37a		Cleaning metal parts
<u>ADHESIVES</u>			
Adhesive 3M-EC-880	MIL-C-4003	Minnesota Mining and Manufacturing Company Detroit, Michigan	Shutter curtain to roller Covering to body
#1 Ground Joint Glue	C-G-451 (Animal glue)	Peter Cooper Gowanda, New York	Wood to wood
Wood-lock #3030	-----	National Adhesives Co.	Threads of small wood screws
Glyptal #1276	-----	General Electric Co. Pittsfield, Mass.	Threads of machine screws

PARTS LIST

The Group Assembly Parts Lists are listed in disassembly order. The list divides the components into major assemblies, their subassemblies and parts. By the use of indented columns, the relationship of the assemblies to the subassemblies and parts is obtained.

The column titled "Figure and Index No." contains the index number (in disassembly order) of the items illustrated. Do not use the figure or index number in correspondence - - specify the catalog or part number and name. Finish should also be included where specified.

The column titled "Nomenclature" (including numbered columns) lists item nomenclature on the Graflex drawing. The assembly in the column marked "3" is a component of the first assembly which precedes it in the column marked "2" etc. The code "NP" indicates that this part is "not procurable" and that the "next higher assembly" (NHA) should be ordered. The code "AR" is used for bulk items when an indefinite amount may or may not be used "as required." The code "LP" is used when an item may be "locally purchased."

PACEMAKER GRAPHIC
SPEED & CROWN

INTRODUCTION

This section of the Graflex Service Parts Manual covers the Pacemaker Speed and Crown Graphic "45". The text and illustrations are aimed at the Speed Graphic; however, similar parts found on the Crown Graphic are handled in a like manner. The Parts List illustrates and indexes the Speed Graphic. . . similar parts for the Crown Graphic follow immediately in the list. REFER TO PART NUMBER, NOT INDEX NUMBER, IN CORRESPONDENCE AND ORDERS.

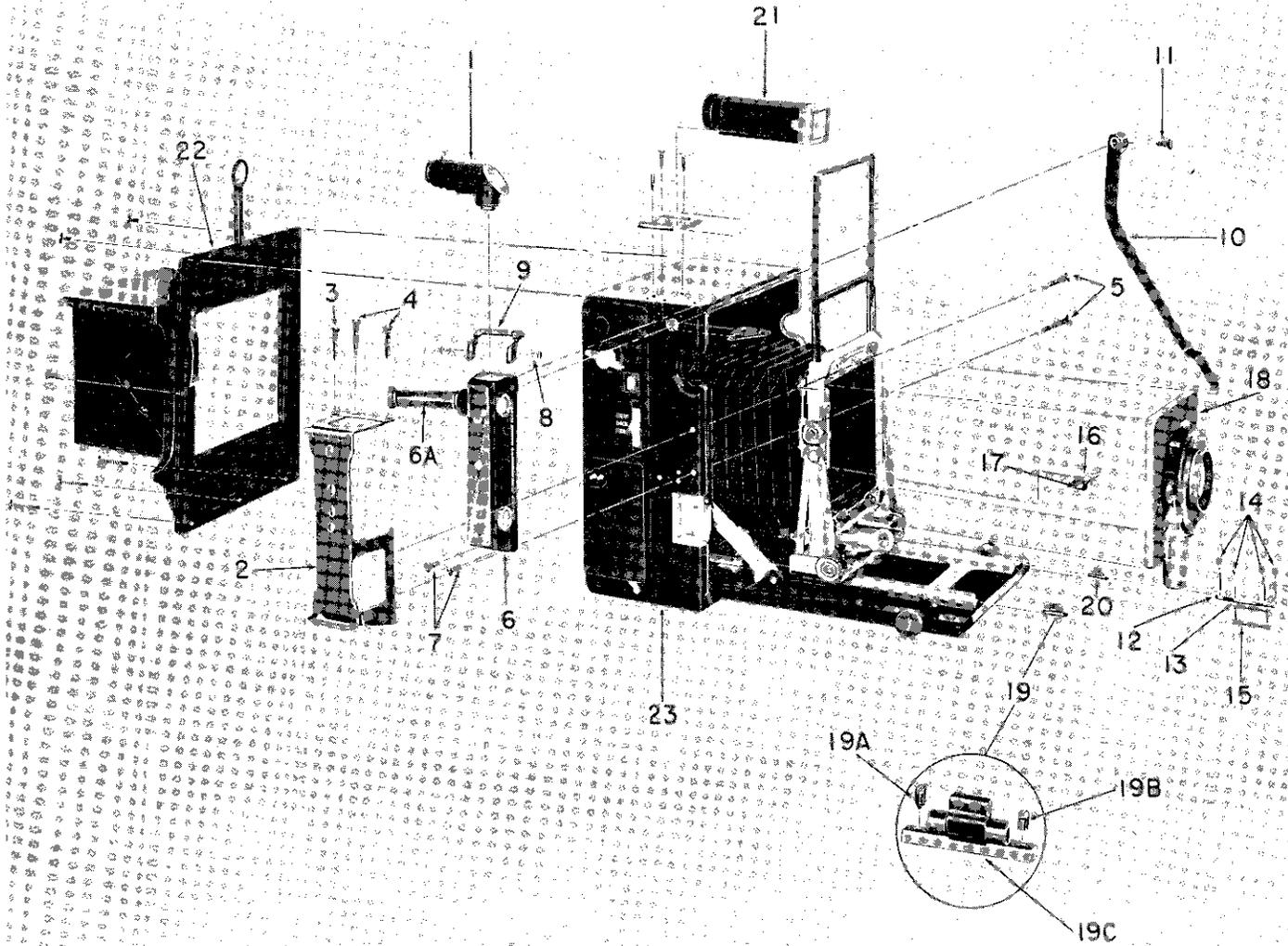


Figure 1. Camera Complete

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
1-							CAMERA - PACEMAKER SPEED GRAPHIC "45"	Ref.
							CAMERA - PACEMAKER CROWN GRAPHIC "45"	Ref.
	Cat. #3173						. Focuspot - Kalart (includes cord)	1
	31763-P1						. . Cord - Focuspot (used with Graflite B.C.) Kalart	
	Cat. #3153						p/n C-31F	1
-1	31947-P10						. . Focuspot - Kalart (Model G) Kalart p/n A29	1

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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
1-2	31284-G3 { Cat. #2753 } 104-4-3C	Bracket Assembly - Battery Case Mounting (includes attaching parts)	1
		.	.	.	.	.	Screw - Machine, 3/16 in. lg., #4-40, oval head, slotted, steel, chrome plate.	3
	30473-P36	.	.	.	.	.	Washer - Flat, 0.250 in. OD x 0.115 in. ID x 0.025 in. thick, fiber	3
	31114-P1	.	.	.	.	.	Bracket - Outer	1
	31037-P1	.	.	.	.	.	Insulator	1
	31115-P1	.	.	.	.	.	Bracket - Battery Case Mounting	1
	Attaching Parts							
-3	152B4-8	.	.	.	.	.	Screw - Wood, 1/2 in. lg., #4, oval head, slotted, brass, oxide black and black lacquer L-17. See Note	1
-4	152B4-10	.	.	.	.	.	Screw - Wood, 5/8 in. lg., #4, oval head, slotted, brass, oxide black and black lacquer L-17. See Note	2
-5	101B4-9	.	.	.	.	.	Screw - Machine, 9/16 in. lg., #4-48, flat head, slotted, brass, oxide black and black lacquer L-17. See Note	2
							NOTE: When ordering index 3, 4, or 5 for replacement include the finish	
	---***---							
-6	30827-P3	.	.	.	.	.	Rangefinder Complete (Model E-6) Kalart p/n A-513-1. See Note	1
							NOTE: When ordering for replacement specify camera and lens	
-6A	No Number	.	.	.	.	.	Eyepiece - Rubber Extension (no longer available) . . .	Ref.
	Attaching Parts							
-7	31134K	.	.	.	.	.	Screw - Machine (special)	2
-8	110B3R3	.	.	.	.	.	Screw - Machine, 3/16 in. lg., #3-48, straight side binding head, Phillips drive, brass, oxide black and black lacquer. See Note	2
							NOTE: When ordering for replacement include the finish	
	150B1-6K	.	.	.	.	.	Screw - Wood (secures top portion of rangefinder base to camera body) 3/8 in. lg., #1, flat head, slotted, brass, oxide black	2
	100B1-3K	.	.	.	.	.	Screw - Machine (secures bottom portion of rangefinder base to camera body) 3/16 in. lg., #1-64, flat head, slotted, brass, oxide black	1
	---***---							
-9	30777-P1	.	.	.	.	.	Bracket - Rangefinder Mounting	1
-10	30769-G1	.	.	.	.	.	Arm Assembly - Rangefinder (includes set screw)	1
-11	30776	.	.	.	.	.	Screw - Set (special)	1
-12	30881-P44	.	.	.	.	.	Scale - Focusing (uncalibrated) 135mm to 152mm	1
	30881-P43	.	.	.	.	.	Scale - Focusing (uncalibrated) 124mm to 129mm	1
							NOTE: Calibrated scales are not procurable separately - they must be matched to actual lens focal length	

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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
1-13	30817-P3	.					Scale - Index (126mm or shorter)	1	
	30817-P2	.					Scale - Index (127mm or longer)	1	
	Attaching Parts								
-14	30819	.					Screw - Machine (special)	4	
-15	30815	.					Plate - Index Scale	1	
	---***---								
-16	31102-P1	.					Arm - Manual Trip (#3 shutter)	1	
	31102-P3	.					Arm - Manual Trip (#2 shutter)	1	
	31102-P4	.					Arm - Manual Trip (#1 shutter)	1	
	Attaching Parts								
-17	107-2-2C	.					Screw - Machine, 1/8 in. lg., #2-64, oval fillister head, slotted, steel, chrome plate	1	
	---***---								
-18	Ref.	.					Lens and Shutter (as selected) Mounted on Lensboard	1	
	Cat. #9100	.					Stop Assemblies - Right and Left	1	
-19	30655-G1	.					Stop Assembly - Infinity (Right) includes screws	1	
-19A	30661	.					Screw - Infinity Stop (pointed, rear)	1	
-19B	30662	.					Screw - Infinity Stop (flat, front)	1	
-19C	No Number	.					Stop Assembly (less screws)	NP	
-20	30655-G2	.					Stop Assembly - Infinity (Left) includes screws above	1	
-21	30700-G1	.					Viewfinder Complete (Section 102)	1	
	Cat. #9132	.							
	Cat. #9133	.					Mounting Plate Complete - Viewfinder (Section 102)	1	
-22		.					Back Complete - 4x5 Graflok (Figure 8)	Ref.	
		.					Back Complete - 4x5 Graphic (Figure 9)	Ref.	
		.					Back Complete - 4x5 Graflex (Figure 10)	Ref.	
-23	30654-G1	.					Camera Basic - 4x5 Speed Graphic (Figure 2)	Ref.	
	30751-G1	.					Camera Basic - 4x5 Crown Graphic	Ref.	
									
2-	30654-G1						CAMERA BASIC - 4x5 SPEED GRAPHIC	Ref.	
	30751-G1						CAMERA BASIC - 4x5 CROWN GRAPHIC	Ref.	
-1	30351-G1	.					Cover Assembly - Shutter Plate (Figure 3)	1	
	Attaching Parts								
-2	104B1-3	.					Screw - Machine, 3/16 in. lg., #1-64, oval head, slotted, brass, black wrinkle L-26 on head only.	4	
-3	152B1-8	.					Screw - Wood, 1/2 in. lg., #1, oval head, slotted, brass, black wrinkle L-26 on head only	2	
	---***---								
-4	30652-G6	.					Plate Assembly - Shutter Mechanism (Figure 4)	1	
	Attaching Parts								
-5	30213-P1	.					Screw - Machine (special)	1	
-6	30212-P1	.					Retainer - Tension Shaft	1	
-7	30346-P2	.					Slide - Dial	1	
-8	150B1-8	.					Screw - Wood, 1/2 in. lg., #1, flat head, slotted, brass	4	
	---***---								
-9	30350-G1	.					Curtain and Rollers Complete	1	
	30211-G1	.					Roller Assembly - Tension	1	

NHA

See Note

See Note

NOTE: Specify finish when ordering for replacement

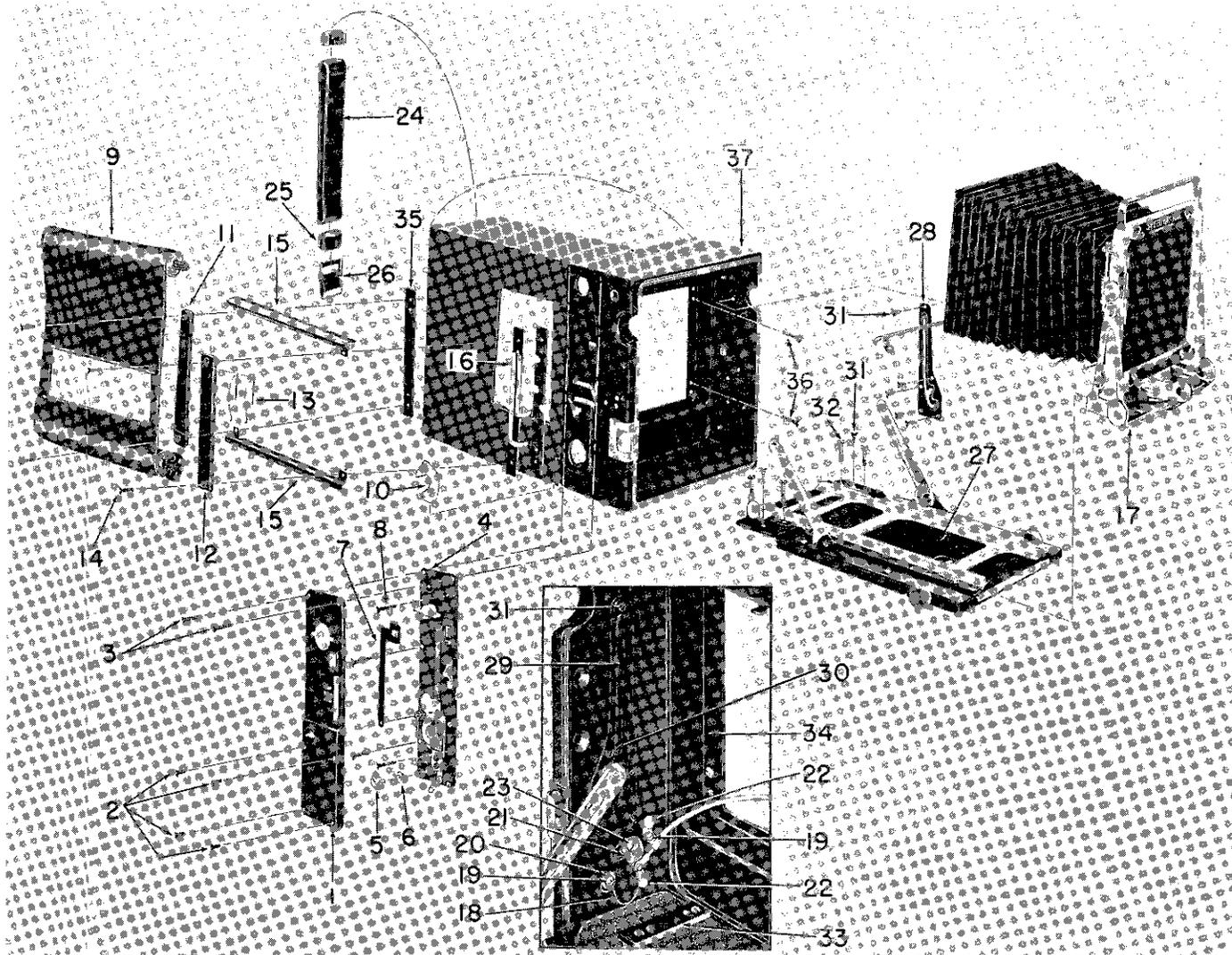


Figure 2. Camera Basic

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature.	Qty.
	30196-G3	.	.				Roller Assembly - Gear	1
	30409-G1	.	.				Curtain Assembly	1
	31112	.	.	.			Contact - Curtain	3
	Attaching Parts							
2-10	30698	.	.				Seal - Tension Roller (not required)	NP
	30473-P15	.	.				Washer - Flat, 0.281 in. OD x 0.147 in. ID x 0.010 in. thick	AR
	30473-P24	.	.				Washer - Flat, 0.281 in. OD x 0.147 in. ID x 0.020 in. thick	AR

	30192-P1	.	.				Bearing - Roller (selected fit) 0.359 in. lg (see figure 7-17)	AR
	30192-P2	.	.				Bearing - Roller (selected fit) 0.389 in. lg.(see figure 7-17)	AR
	Attaching Parts							
	152B2R4C	.	.				Screw - Wood, 1/4 in. lg, #2, oval head, Phillips drive, brass, chrome plate (see figure 7-18)	6

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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
2-11	30582-P1	.					Block - Left1
-12	30888-P1	.					Block - Right . . . . .	.1
-13	30572	.					Contact - Spring Finger . . . . .	.2
	Attaching Parts							
-14	100B2-7K	.					Screw - Machine, 7/16 in. lg., #2-56, flat head, slotted, brass, oxide black . . . . .	.4
	---***---							
-15	30632-P1	.					Guide - Curtain . . . . .	.2
-16	30893-G1	.					Jumper Assembly . . . . .	.1
-17	30538-G1	.					Standard Complete - Front (Speed) Figure 5	Ref. See Note
	30538-G2	.					Standard Complete - Front (Crown) Figure 5	Ref. See Note
	Attaching Parts							
-18	31189	.					Spring - Cable Release . . . . .	.1
-19	151-1-3A	.					Screw - Wood, 3/16 in. lg., #1, round head, slotted, steel, cadmium plate . . . . .	.2
-20	30473-P25L	.					Washer - Flat, 0.281 in. OD x 0.093 in. ID x 0.012 in. thick, steel, black oxide . . . . .	.1
	---***---							
-21	31030-G1	.					Lever Assembly - Cable Release . . . . .	.1
	Attaching Parts							
-22	151-2-3A	.					Screw - Wood, 3/16 in. lg., #2, round head, slotted, steel, cadmium plate . . . . .	.2
-23	31226-P2	.					Screw - Machine (special) . . . . .	.1
	---***---							
-24	33779-G1	.					Handle Complete . . . . .	.1
-25	33779-P3	.					Loop - Handle . . . . .	.3
-26	30305-G1	.					Snap Assembly - Handle . . . . .	.1
-27	30586-G2	.					Bed Complete (Figure 6) . . . . .	.1
	Attaching Parts							
-28	30718-P1	.					Plate - Bed Brace, Left . . . . .	.1
-29	30718-P2	.					Plate - Bed Brace, Right . . . . .	.1
-30	150B2-3K	.					Screw - Wood, 3/16 in. lg., #2, flat head, slotted, brass, oxide black . . . . .	.4
-31	150B2-4K	.					Screw - Wood, 1/4 in. lg., #2, flat head, slotted, brass, oxide black . . . . .	.8
-32	31925-P2	.					Screw - Machine (special) replaced by 33926-P2	Ref.
	33926-P2	.					Screw - Machine (special) replaces 31925-P2 . . . . .	.4
-33	30488-P1	.					Shim - Yoke Guide, Case, 0.040 in. thick	AR
	30488-P2	.					Shim - Yoke Guide, Case, 0.060 in. thick	AR
	30488-P3	.					Shim - Yoke Guide, Case, 0.016 in. thick	AR
	---***---							
-34	30895-P1	.					Strip - Mounting Insulation . . . . .	.1
-35	30896-P1	.					Spacer - Left Block . . . . .	.1
	Attaching Parts							
-36	112B2-2K	.					Screw - Machine, 1/8 in. lg., #2-56, truss head, slotted, brass, oxide black . . . . .	.4
	---***---							
-37	30559-G1	.					Body Complete (Speed Graphic) Figure 7 . . . . .	.1
	30559-G4	.					Body Complete (Crown Graphic) . . . . .	.1

NOTE: No longer available - replace with the following: (Ref. Section 7)

1 each 34754-G1 Front Standard Complete (Speed)

or

34754-G2 Front Standard Complete (Crown)

1 each 30798-G1 Cable Release Assembly

2 each 32459 Bellows Retaining Clip

1 each 34794-G1 Peepsight Assembly

1 each 34793-P1 Peepsight Carrier

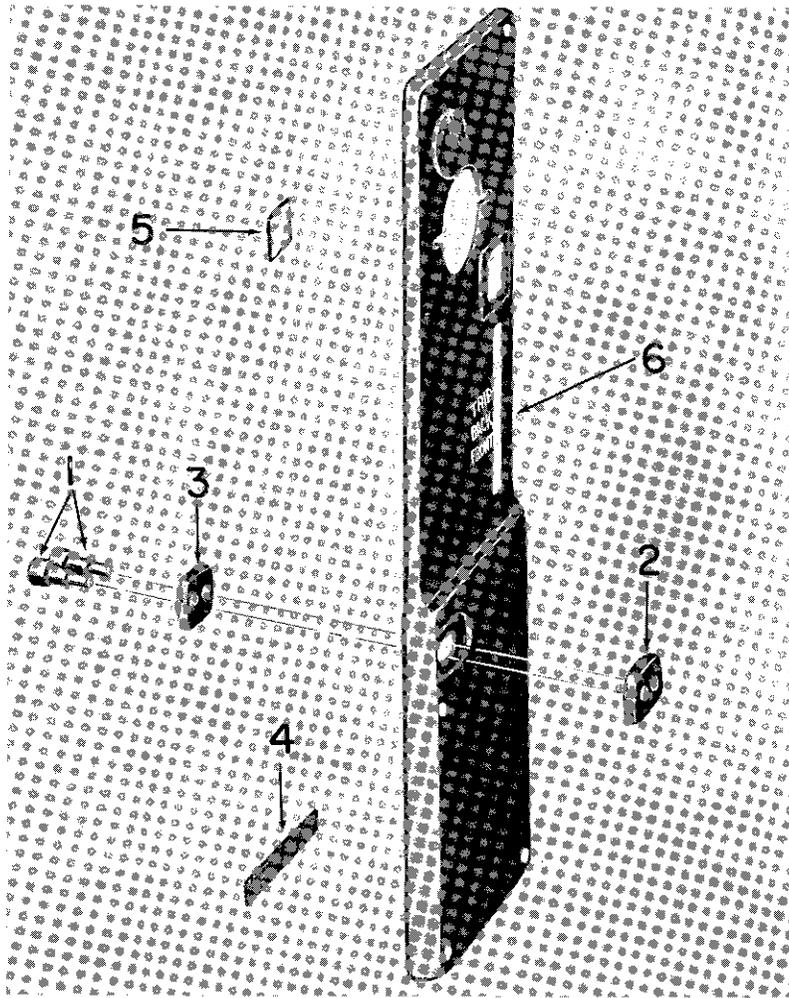


Figure 3. Shutter Plate Cover Assembly

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
3-	30351-G1						COVER ASSEMBLY - SHUTTER PLATE	Ref.
-1	30359-P1	.					Stud - Receptacle Contact	2
-2	30357	.					Insulator - Receptacle	1
-3	30358	.					Washer - Receptacle.	1
-4	30846	.					Seal - Dust	1
-5	30356	.					Window - Shutter Plate	1
-6	30353-P1	.					Cover - Shutter Plate	1

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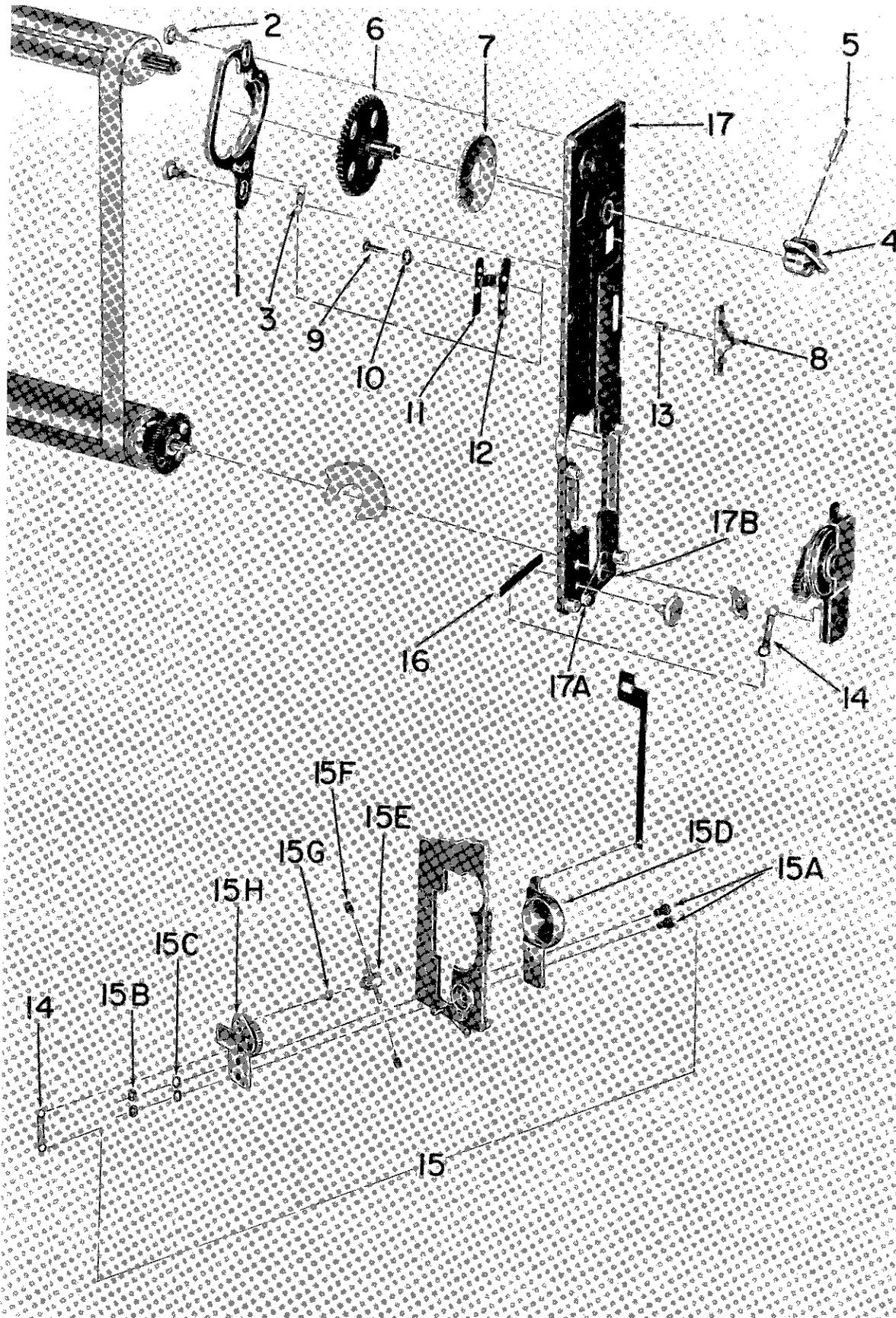


Figure 4. Shutter Mechanism Plate Assembly

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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
4-	30652-G6						PLATE ASSEMBLY - SHUTTER MECHANISM	Ref.	
-1	30185-G1						. Escapement Assembly.	1	
	Attaching Parts								
-2	30187-P1						. Screw - Machine (special).	2	
	---***---								
-3	30186						. Spring - Escapement	1	
	30652-G3N						. Winding Key & Master Gear Assembly	1	
-4	30681-G1						. . Key Assembly - Winding	NP	NHA
	Attaching Parts								
-5	30663-P1						. . Pin - Taper, #5/0, 0.092 in. dia. x 7/16 in. lg. stainless steel	1	
	---***---								
-6	30513-G1						. . Gear Assembly - Master.	NP	NHA
-7	30504-P5						. Dial - Shutter (replaces 30504-P1)	1	
	30504-P1						. Dial - Shutter (replaced by 30504-P5)	Ref.	
-8	30297-P1						. Slide - Shift	1	
	Attaching Parts								
-9	102-2-5						. Screw - Machine, 5/16 in. lg., #2-56, round head, slotted, steel	1	
-10	221-2L						. Washer - Lock, Internal tooth, for #2 screw, Shakeproof Cat, #1202, steel, black oxide	1	
	---***---								
-11	30303-P2						. Spring - Shift Slide	1	
-12	30299-P1						. Plate - Shift Slide	1	
-13	30298-P1						. Spacer - Shift Slide	1	
-14	30340						. Spring - Governor	1	
-15	30459-G1						. Governor Complete	1	
-15A	110B2-4						. . Screw - Machine, 1/4 in. lg., #2-56, straight side binding head, slotted, brass (replaces 30341)	2	
	30341						. . Stud - Dowel (replaced by 110B2-4)	Ref.	
-15B	200-2HL						. . Nut - Machine, #2, hex., steel, black oxide	2	
-15C	221-2L						. . Washer - Lock (same as index 10).	2	
	30344						. . Spacer - Governor	NP	NHA
	30320-P2						. . Pin - Dial Slide	NP	NHA
-15D	30682-G1						. . Bracket Assembly - Top	NP	NHA
-15E	30458-G1						. . Pinion Assembly - Governor	NP	NHA
-15F	30454						. . Shoe - Governor	NP	NHA
	33500-P17						. . Washer - Flat	NP	NHA
-15G	30473-P1						. . Washer - Flat	NP	NHA
-15H	30343-G1						. . Bracket Assembly - Bottom	NP	NHA
	30685-P1						. . Pin - Dowel	NP	NHA
-16	30301						. Strip - Light Seal	1	
-17	30348-G2						. Plate Assembly	1	
-17A	30315-G1						. . Lever Assembly	1	
	Attaching Parts								
-17B	30318						. . Stud	1	
	---***---								
	30184-P1						. . Post - Escapement Spring	NP	NHA
	30345-P1						. . Post - Governor Spring	NP	NHA
	30517						. . Bushing - Master Gear	NP	NHA
	30191						. . Bearing - Gear Roller	NP	NHA
	31095-P2						. . Pin - Shift Lock Slide	NP	NHA
	30360-P1						. . Plate - Shutter	NP	NHA

PACEMAKER GRAPHIC
SPEED & CROWN

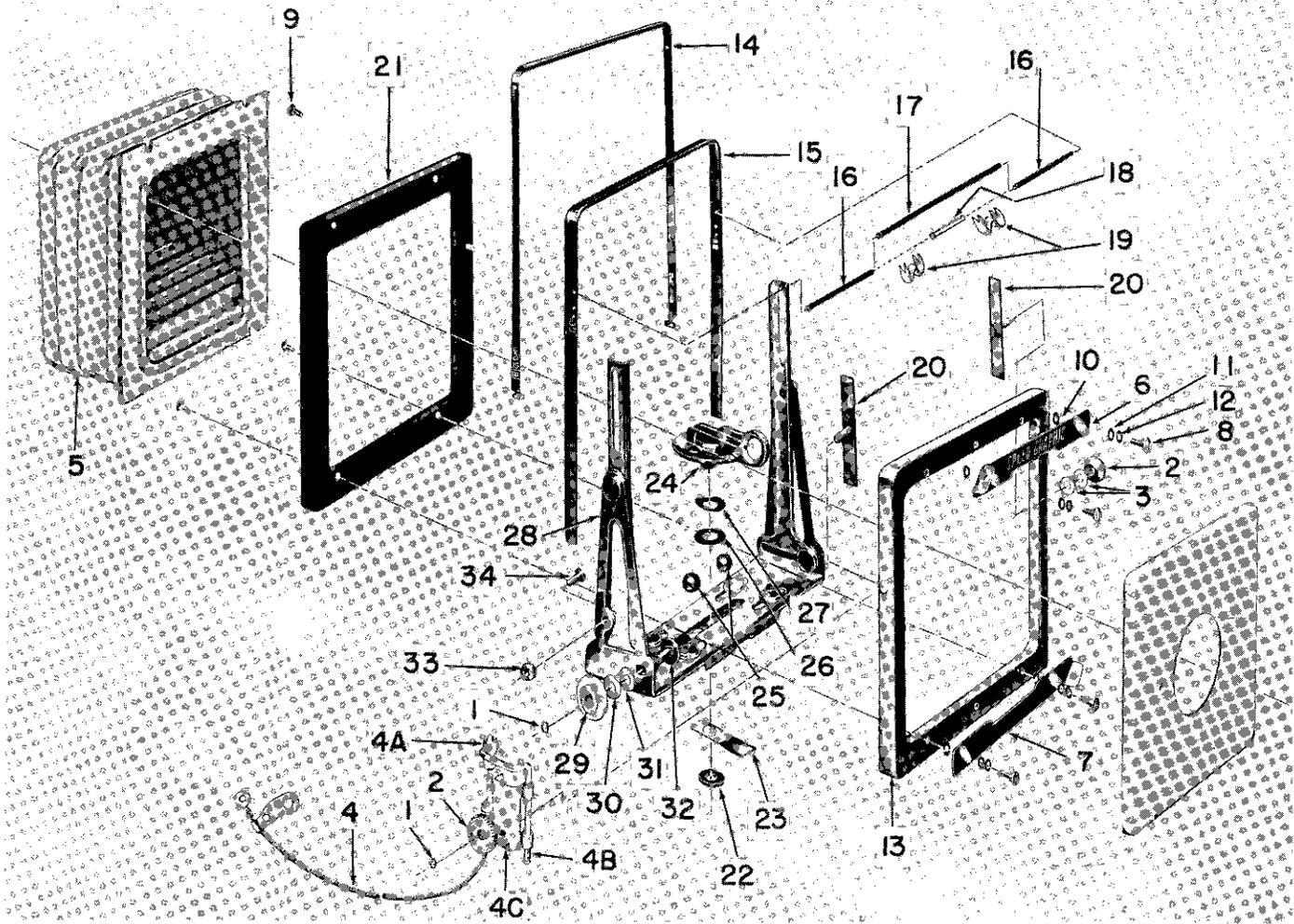


Figure 5. Front Standard Complete

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
5-	30538-G1						STANDARD COMPLETE - FRONT (Speed Graphic)	Ref.
	30538-G2						STANDARD COMPLETE - FRONT (Crown Graphic).	Ref.
-1	30442-P1						. Ring - Knob Retaining (obsolete - stake threads).	Ref.
-2	30444-P1						. Knob - Frame Clamp	2
-3	30473-P6						. Washer - Flat, 0.312 in. OD x 0.128 in. ID x 0.015 in. thick, fiber	2
-4	30798-G1						. Release Assembly - Cable	1
-4A	30843						. . Nut - Cable Release	2
-4B	31097-P1						. . Rod - Manual Trip	1
-4C	31098-P1						. . Bracket - Manual Trip	1
-5	31061-G1						. Bellows Assembly - Second (no longer available, see note) Ref.	
	31183-P1						. . Hanger - Cable Release	2
	31148-P1						. . Hanger - Cable Release	1
	31149-P1						. . Strip - Cable Release Hanger	3
	30538-G1T						. Front Standard Assembly (less bellows) Speed	1
	30538-G2T						. Front Standard Assembly (less bellows) Crown	1
	30538-G1N						. . Frame Assembly (Speed).	1
	30538-G2N						. . Frame Assembly (Crown).	1

NOTE: Replace with Bellows 31061-G3 and two Bellows Retaining Clips 32459

PACEMAKER GRAPHIC
SPEED & CROWN

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
5-6	30470-P2	.	.	.			Lock - Lensboard, Upper (Speed)	1	
	30470-P4	.	.	.			Lock - Lensboard, Upper (Crown)	1	
-7	30470-P3	.	.	.			Lock - Lensboard, Lower	1	
	Attaching Parts								
-8	30401-P1	.	.	.			Screw - Machine (special)	4	
-9	30377-P2	.	.	.			Nut - Machine (special) replaces 30377-P1.	4	
-10	30473-P2	.	.	.			Washer - Flat, 0.218 in. OD x 0.089 in. ID x 0.016 in. thick, stainless steel.	4	
-11	30473-P20	.	.	.			Washer - Flat, 0.203 in. OD x 0.124 in. ID x 0.010 in. thick, stainless steel.	4	
-12	30540-P3	.	.	.			Washer - Spring	4	
	-----***-----								
-13	34620-G2	.	.	.			Frame Assembly - Outer (same as 30538-G1M)	1	
	31923-G1	.	.	.			Finder Complete	1	
-14	31291-P1	.	.	.			Finder	1	
-15	31295-P1	.	.	.			Frame - Finder	1	
-16	30378-P1	.	.	.			Plunger - Finder	2	
-17	30404-P1	.	.	.			Sleeve - Finder Lock Spring	1	
-18	30438	.	.	.			Spring - Finder	1	
-19	30719-P1	.	.	.			Bracket - Plunger	2	
-20	31292-G1	.	.	.			Plate Assembly - Front Frame Clamp	2	
-21	30385-P1	.	.	.			Frame - Inner Front	1	
	30538-G1S	.	.	.			Standard Support Assembly Complete (same as 34754-G1S)	1	
-22	30553-P1	.	.	.			Nut - Machine (special)	1	
-23	30541-P1	.	.	.			Spring - Shift Locking	1	
-24	30537-G1	.	.	.			Lever Assembly	1	
-25	300-10	.	.	.			Ball - Steel (0.250 in. dia) same as 30539-P4	2	
-26	30473-P9	.	.	.			Washer - Flat, 0.531 in. OD x 0.270 in. ID x 0.032 in. thick, brass	1	
-27	30540-P1	.	.	.			Washer - Spring	1	
-28	34621-G2	.	.	.			Standard Support Assembly (same as 30538-G1R)	1	
-29	30436-P1	.	.	.			Knob - Support Locking	2	
-30	30473-P7	.	.	.			Washer - Flat, 0.312 in. OD x 0.128 in. ID x 0.012 in. thick, brass	2	
-31	30473-P5	.	.	.			Washer - Flat (0.010 in. thick) no longer used	Ref.	
-32	30543-P1	.	.	.			Screw - Support Locking	2	
	30473-P22	.	.	.			Washer - Flat, 0.375 in. OD x 0.218 in. ID x 0.010 in. thick, fiber	4	
-33	30440-P1	.	.	.			Nut - Front Standard Eccentric	2	
-34	30441-P1	.	.	.			Eccentric - Front Standard	2	
	30416-P1	.	.	.			Rivet - Support	NP	NHA
	30473-P5	.	.	.			Washer - Flat	NP	NHA
	30426-P1	.	.	.			Supports	NP	NHA
	30545-P1	.	.	.			Rivet - Lock Plate	NP	NHA
	30422-P1	.	.	.			Plate - Lock	NP	NHA
	30547-P1	.	.	.			Spring - Spacer	NP	NHA
	30417-P1	.	.	.			Plate - Guide	NP	NHA
	30429-P1	.	.	.			Standard - Front	NP	NHA

PACEMAKER GRAPHIC
SPEED & CROWN

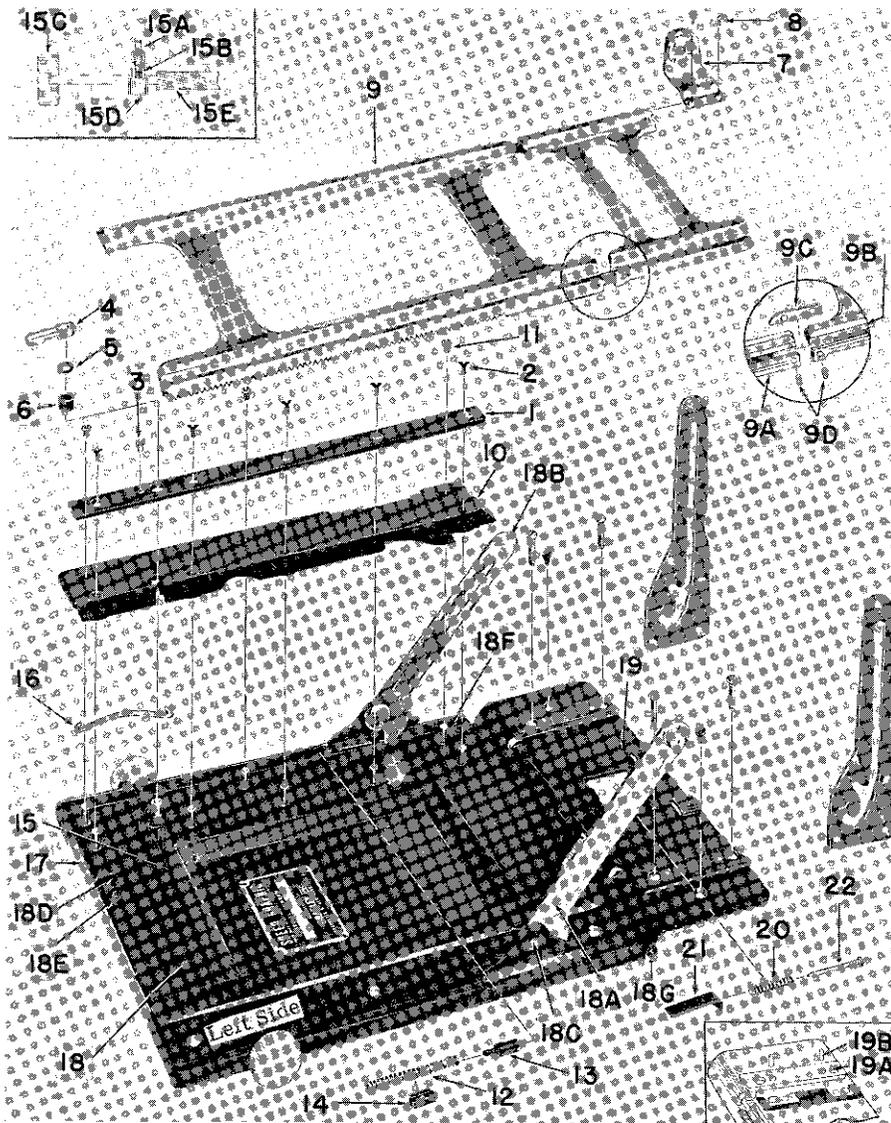


Figure 6. Bed Complete

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
6-	30586-G2						BED COMPLETE	Ref.
-1	30625-P1						. Guide, Left - Bed Section	1
	30625-P2						. Guide, Right - Bed Section	1
	Attaching Parts							
-2	31089-P6						. Screw - Machine (special) used on guides with ctr'bored	10
	100B2-4K						. Screw - Machine, 1/4 in. lg., #2-56, flat head, slotted	10
	----***----							
-3	31246-P2						. Screw - Machine (Lock Stop)	1
-4	30629-P1						. Lever - Yoke Lock	1
-5	30473-P11A						. Washer - Flat, 0.281 in. OD x 0.177 in. ID x 0.010 in.	AR
							thick, brass, cadmium plate	
-6	30628						. Sleeve - Yoke Lock	1

PACEMAKER GRAPHIC
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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
6-7	30775-G1	Bracket Assembly - Rangefinder1
	Attaching Parts							
-8	30830C	.	.	.	.	.	Screw - Machine (special) . . . . .	.2
	---***---							
-9	30596-G1	.	.	.	.	.	Yoke Assembly . . . . .	.1
-9A	30597-P1	.	.	.	.	.	Yoke - Bed Section . . . . .	.1
-9B	30600-P1	.	.	.	.	.	Yoke - Case Section . . . . .	.1
	30605	.	.	.	.	.	Pin - Front Standard Stop . . . . .	.1
-9C	30602	.	.	.	.	.	Link - Yoke . . . . .	.2
-9D	30603	.	.	.	.	.	Pin - Yoke Lock . . . . .	.4
	30617-P2	.	.	.	.	.	Block - Left Bed . . . . .	.1
-10	30618-P2	.	.	.	.	.	Block - Right Bed . . . . .	.1
	Attaching Parts							
-11	31226-P2	.	.	.	.	.	Screw - Machine (special) . . . . .	.6
	---***---							
-12	30616	.	.	.	.	.	Spring - Bed Brace . . . . .	.2
-13	31766-P1	.	.	.	.	.	Plunger - Bed Brace . . . . .	.2
	Attaching Parts							
-14	31271	.	.	.	.	.	Clip - Spring Retaining . . . . .	.2
	---***---							
-15	30586-G2M	.	.	.	.	.	Shaft Assembly - Pinion . . . . .	.1
-15A	170D3-3A	.	.	.	.	.	Screw - Set, 3/16 in. lg., #3-48, headless, slotted, flat point, steel, cadmium plate . . . . .	.1
	30630	.	.	.	.	.	Pad - Yoke Lock . . . . .	.2
-15B	30612-P1	.	.	.	.	.	Knob - Focusing . . . . .	.2
-15C	30607-P1	.	.	.	.	.	Post - Yoke Lock . . . . .	.1
-15D	30606-P1	.	.	.	.	.	Pinion - Focusing . . . . .	.1
-15E	30610	.	.	.	.	.	Spring - Focusing Pinion . . . . .	.2
-16	31730-P2	.	.	.	.	.	Escutcheon - Bed . . . . .	.1
-17	34615-G4	.	.	.	.	.	Bed Assembly - Second . . . . .	.1
-18	30421-G1	.	.	.	.	.	Brace Assembly - Left . . . . .	.1
-18A	30421-G2	.	.	.	.	.	Brace Assembly - Right . . . . .	.1
-18B	Attaching Parts							
-18C	30623-P1	.	.	.	.	.	Rivet - Bed Brace Assembly . . . . .	.2
	---***---							
	32671-P1	.	.	.	.	.	Covering . . . . .	.1
-18D	30506	.	.	.	.	.	Catch - Bed (used on early model cameras) . . . . .	.1
	Attaching Parts							
-18E	30948	.	.	.	.	.	Rivet - Bed Catch . . . . .	.2
	---***---							
	33903-P4	.	.	.	.	.	Name Plate (not available for replacement)	Ref.
	Attaching Parts							
	30363-P22H	.	.	.	.	.	Rivet - Name Plate . . . . .	.4
	---***---							
	31096-G3	.	.	.	.	.	Bed Assembly - First . . . . .	.1
-18F	30915-P1	.	.	.	.	.	Bushing - Guide & Block Screws	16
	30587-P2	.	.	.	.	.	Bed	NP
-18G	30172-P25	.	.	.	.	.	Pin - Hinge, 5.688 in. lg., 0.062 in. dia. phosphor bronze . . . . .	.1
	30433-P1	.	.	.	.	.	Hinge - Bed (see 30586-G2R for replacement)	NP
-19	30586-2R	.	.	.	.	.	Hinge Assembly . . . . .	.1
	30590-P1	.	.	.	.	.	Guide, Left - Case Section	NP
-19A	30590-P2	.	.	.	.	.	Guide, Right - Case Section	NP
	Attaching Parts							
-19B	30685-P2	Pin - Dowel, 0.082 dia. x 0.195 in. lg., stainless steel4
	---***---							

PACEMAKER GRAPHIC
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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
6-20	30639	Spring	1
-21	30637	.	.	.	.	.	Slide	1
-22	30638-P1	.	.	.	.	.	Pin - Escutcheon	1
	30433-P1	.	.	.	.	.	Hinge - Bed	Ref.



NOTE: Early Model Body Complete Illustrated

7-	30559-G1	.	.	.	.	.	BODY COMPLETE - SPEED GRAPHIC	Ref.
	30559-G4	.	.	.	.	.	BODY COMPLETE - CROWN GRAPHIC	Ref.
-1	30545-P1	.	.	.	.	.	Plate - Release Slide	1
	Attaching Parts							
-2	152B1R4C	.	.	.	.	.	Screw - Wood (early models) 1/4 in. lg., #1, oval head, Phillips drive, brass, chrome plate	2
-3	30749-P1	.	.	.	.	.	Screw - Machine (special)	2
	---***---							
-4	30647-P1	.	.	.	.	.	Escutcheon - Left	1
-5	31135-P1	.	.	.	.	.	Escutcheon - Right	1
	Attaching Parts							
-6	30638-P2K	.	.	.	.	.	Pin - Escutcheon, 0.042 in. dia. x 1/4 in. lg., round head, brass, oxide black	2
	---***---							
-7	30645-P6	.	.	.	.	.	Moulding - Upper Right	1
-8	30640-P2	.	.	.	.	.	Plate - Moulding, Top	1
-9	30645-P5	.	.	.	.	.	Moulding - Upper, Left	1
-10	30641-P1	.	.	.	.	.	Moulding - Lower Left	1
-11	30640-P1	.	.	.	.	.	Plate - Moulding, Bottom	1
-12	30642-P1	.	.	.	.	.	Moulding - Lower Right	1
-13	30643-P1	.	.	.	.	.	Moulding - Right	1
-14	30374-P1	.	.	.	.	.	Bracket - Handle	2
	Attaching Parts							
-15	30375-P1	.	.	.	.	.	Nut - Handle	2
-16	104B6R8C	.	.	.	.	.	Screw - Machine, 1/2 in. lg., #6-32, oval head, Phillips drive, brass, chrome plate	2
	---***---							
-17	30192-P1	.	.	.	.	.	Bearing - Roller (see 30654-G1)	Ref.
	30192-P2	.	.	.	.	.	Bearing - Roller (see 30654-G1)	Ref.
	Attaching Parts							
-18	152B2R4C	.	.	.	.	.	Screw - Wood (see 30654-G1)	Ref.
	---***---							
-19	30511-P1	.	.	.	.	.	Latch - Bed (early model cameras)	1
	31729-P2	.	.	.	.	.	Latch - Bed (later model cameras)	1
-20	30664	.	.	.	.	.	Spring - Bed Latch (early model cameras)	1
-21	30507	.	.	.	.	.	Button - Bed Release (early model cameras)	1
	31907	.	.	.	.	.	Button - Bed Release (later model cameras)	1
	Attaching Parts							
-22	102B2-4K	.	.	.	.	.	Screw - Machine, 1/4 in. lg., #2-56, round head, slotted brass, oxide black (early model cameras)	2
	110B3R3K	.	.	.	.	.	Screw - Machine, 3/16 in. lg., #3-48, straight side binding head, Phillips drive, brass, oxide black (later model cameras)	1
	221-2L	.	.	.	.	.	Washer - Lock (early model cameras)	2
-23	30473-P8K	.	.	.	.	.	Washer - Flat, 0.240 in. OD x 0.090 in. ID x 0.025 in. thick brass, oxide black (early model cameras)	2
-24	30508	.	.	.	.	.	Collar - Bed Latch Insert (early model cameras)	2
	---***---							

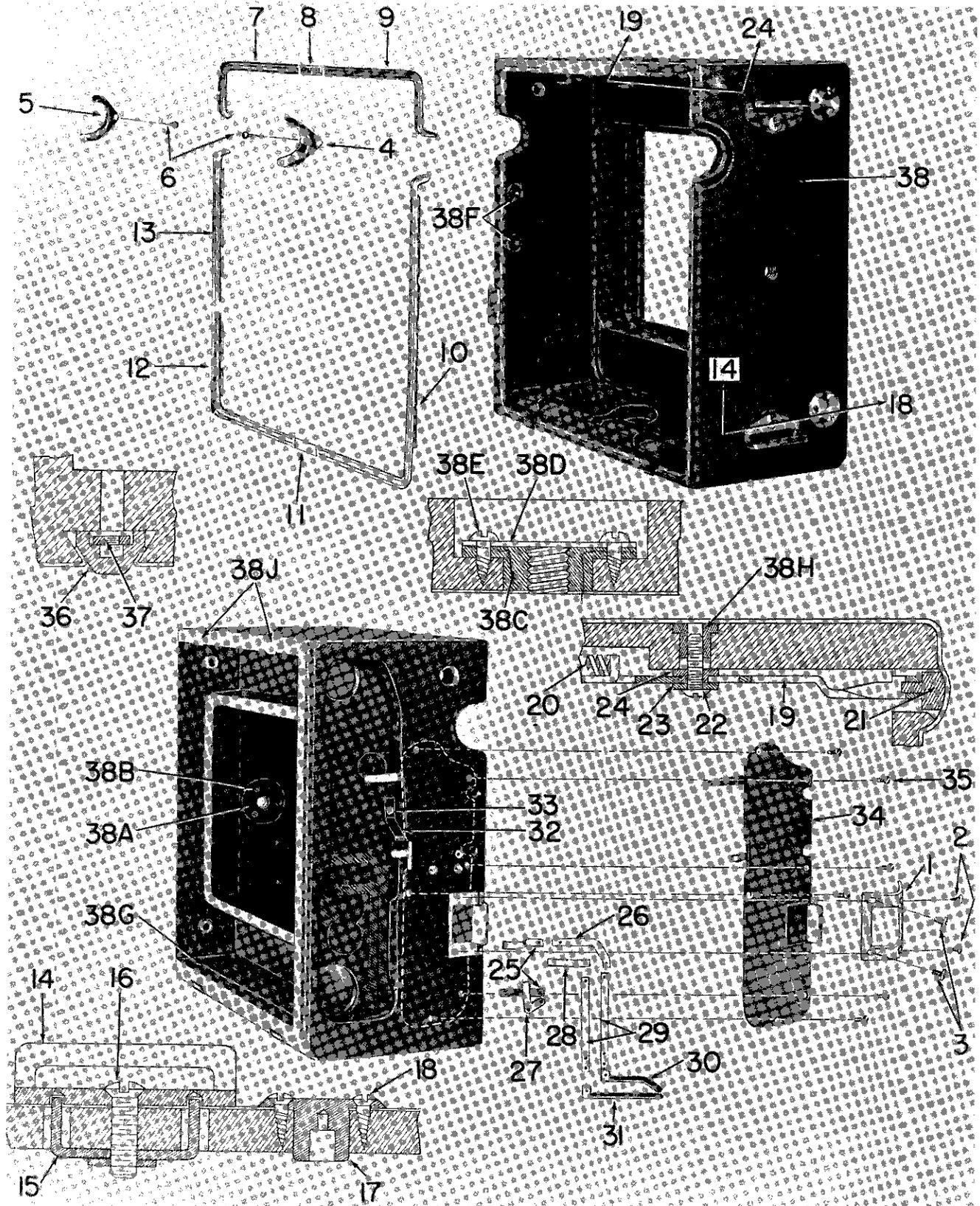


Figure 7. Body Complete

PACEMAKER GRAPHIC
SPEED & CROWN

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
7-25	30820	.					Contact - Case (early model cameras)	2	
-26	30304	.					Jumper - Contact	1	
-27	30822	.					Contact - Receptacle	1	
-28	30491-P1	.					Jumper - Receptacle	1	
-29	30561	.					Jumper - Switch	2	
-30	31269	.					Contact - Switch (short)	1	
-31	31268	.					Contact - Switch (long)	1	
	Attaching Parts								
	151B0-2	.					Screw - Wood, 1/8 in. lg., #0, round head, slotted, brass (7 used on early model cameras)	5	
	30638-P6	.					Pin - Escutcheon, 0.035 in. dia. x 1/8 in. lg., round head	1	
	----***----								
-32	30303-P1	.					Spring - Shift Slide	1	
	Attaching Parts								
-33	150B1-3	.					Screw - Wood, 3/16 in. lg., #1, flat head, slotted, brass	1	
	----***----								
-34	30525-G1	.					Plate Assembly - Body Release (Speed Graphic)	1	
	30874-G1	.					Plate Assembly - Body Release (Crown Graphic)	1	
	Attaching Parts								
-35	150B1-6	.					Screw - Wood, 3/8 in. lg., #1, flat head, slotted, brass	6	
	----***----								
	32668-P1	.					Covering	1	
-36	30747-P1	.					Foot - Case (Speed Graphic)	2	
	30899-P1	.					Foot - Case (Crown Graphic)	2	
-37	200-3SA	.					Nut - Machine, #3-48, square, steel, cadmium plate	4	
-38	30560-G2	.					Body Assembly (Speed Graphic)	NP	
	30716-G1	.					Body Assembly (Crown Graphic)	NP	
-38A	30372-P2	.					Socket - Tripod, Side	1	
	Attaching Parts								
-38B	150B2-4	.	.				Screw - Wood, 1/4 in. lg., #2, flat head, slotted, brass	3	
	----***----								
-38C	30372-P1	.	.				Socket - Tripod, Bottom	1	
-38D	30721	.	.				Cover - Tripod Socket	1	
	Attaching Parts								
-38E	151B2-4	.	.				Screw - Wood, 1/4 in. lg., round head, slotted, brass	3	
	----***----								
-38F	31186	.	.				Insert - Encircling Bracket	2	
-38G	30673-P1	.	.				Insert - Back Mounting, Bottom	1	
-38H	30509-P1	.	.				Insert - Bed Latch (#2-56) early model cameras	2	
	31905-P1	.	.				Insert - Bed Latch (#3-48) later model cameras	1	
-38J	30370	.	.				Lug - Back Mounting (early model cameras)	2	
	30673-P4	.	.				Insert - Back Mounting, Top (later model cameras) replaces 30370	1	
	Attaching Parts								
	150B2-3	.	.				Screw - Wood (used with 30370) 3/16 in. lg., #2, flat head, slotted, brass	4	
	----***----								

NHA
NHA

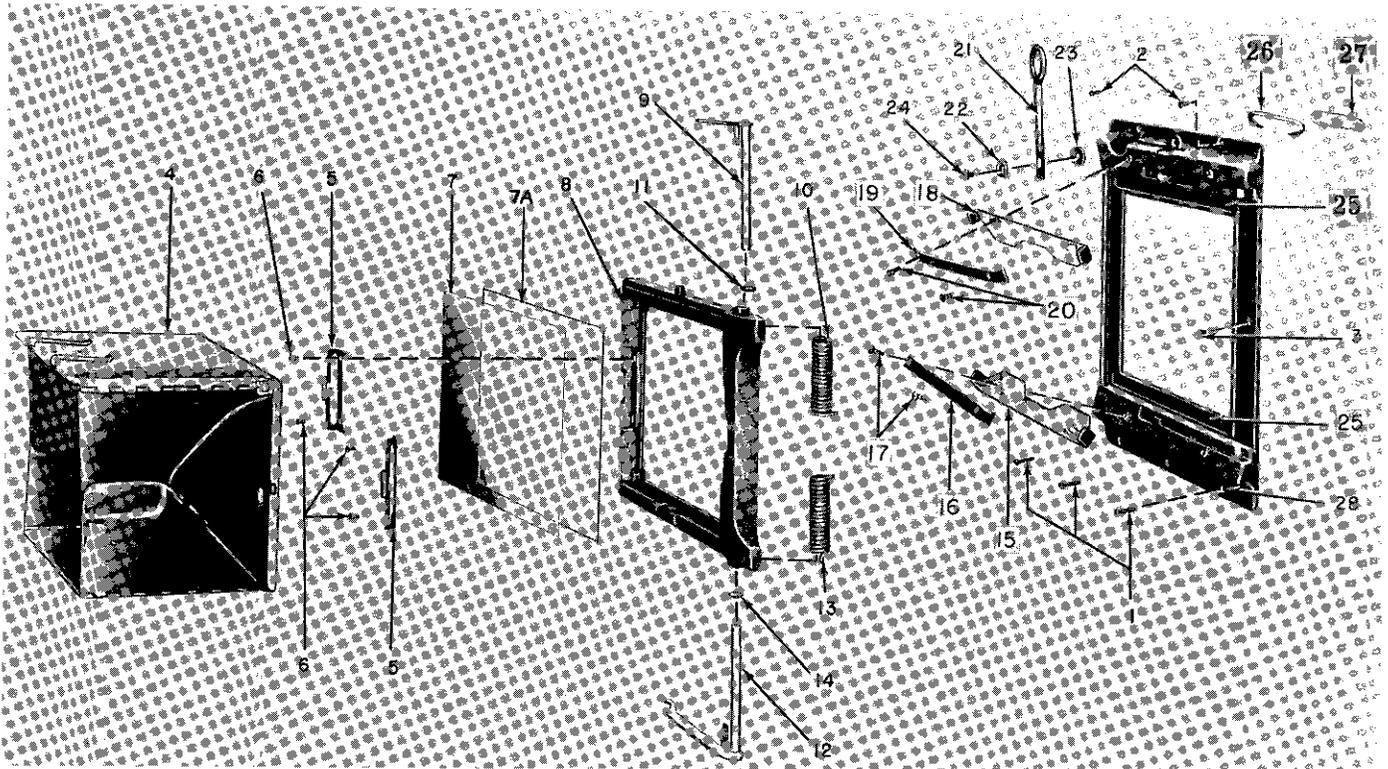


Figure 8. Back Complete, 4x5 Graflok

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
Back Complete								
8-	31709-G9						BACK COMPLETE - 4x5 GRAFLOK (For Speed Graphic) Replace with 34796-G1. See Section 7, Figure 9	Ref.
	31709-G12						BACK COMPLETE - 4x5 GRAFLOK (For Crown Graphic) Replaced by 34796-G2. See Section 7, Figure 9	Ref.
	Attaching Parts							
-1	30921-P7W	.					Screw - Self Tapping, 1/2 in. lg., #2, binding (pan) head, slotted, steel, black oxide and clear lacquer (Speed)	3
	30921-P6W	.					Screw - Self Tapping, 3/8 in. lg., #2, binding (pan) head, slotted, steel, black oxide and clear lacquer (Crown)	3
-2	30921-P6W	.					Screw - Self Tapping (Speed & Crown)	2
-3	150B1-6K	.					Screw - Wood, 3/8 in. lg., #1, flat head, slotted, brass, oxide black (Speed & Crown)	1
	---***---							
-4	30159-G3	.					Hood Assembly (Cat. #9147)	1
	31715-G4	.					Frame Complete - Focusing (with Ektalite) Cat. #9281	1
	31715-G3	.					Frame Complete - Focusing (without Ektalite) Replace with 31715-G4	Ref.

PACEMAKER GRAPHIC
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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
8-5	30371-P1	.	.				Retainer.	2	
	Attaching Parts								
-6	100-2-3W	.	.				Screw - Machine, 3/16 in. lg., #2-56, flat head, slotted, steel, black oxide and clear lacquer	4	
	---***---								
-7	30414-P1	.	.				Screen - Ground Glass	1	
-7A	31935-P1	.	.				Screen - Ektalite (used in 31715-G4).	1	
	33837-G4	.	.				Frame Assembly - Focusing (used with 31715-G4).	1	
	33837-G3	.	.				Frame Assembly - Focusing (used with 31715-G3) Replace with 33837-G4 and 31935-P1	Ref.	
-8	31915-P2	.	.				Frame - Focusing (used with 33837-G4)	1	
	31915-P1	.	.				Frame - Focusing (used with 33837-G3) Replace with 31915-P2 and 31935-P1	Ref.	
-9	31717-G6	.	.				Arm Assembly - Upper	1	
-10	31916-P1	.	.				Spring - Upper.	1	
-11	30473-P53K	.	.				Washer - Flat, 0.312 in. OD x 0.219 in. ID x 0.010 in. thick, brass oxide black	1	
-12	31717-G5	.	.				Arm Assembly - Lower.	1	
-13	31916-P2	.	.				Spring - Lower.	1	
-14	30473-P53K	.	.				Washer - Flat (same as index 11)	1	
	31710-G3	.	.				Back Assembly - Second (Replace with 31710-G7. See Section 7, Figure 9).	Ref.	
-15	31920-P1	.	.				Slide Lock - Lower.	1	
-16	30937-P3	.	.				Spring.	1	
	Attaching Parts								
-17	30939-P1	.	.				Screw - Machine (special)	2	
	---***---								
-18	31920-P2	.	.				Slide Lock - Upper	1	
-19	30937-P3	.	.				Spring.	1	
	Attaching Parts								
-20	30939-P1	.	.				Screw - Machine (special)	2	
	---***---								
-21	30369-G2	.	.				Peepsight Assembly	1	
	Attaching Parts								
-22	30366	.	.				Cap	1	
-23	30368	.	.				Washer - Flat.	1	
-24	104B6-4C	.	.				Screw - Machine, 1/4 in. lg., #6-32, oval head, slotted, brass, chrome plate.	1	
	---***---								
-25	31722-P3	.	.				Strip - Light Seal.	2	
	33836-G3	.	.				Back Assembly - First (Replace with 33836-G7 and order Peepsight Assembly 34794-G1, Peepsight Carrier 34793-P1, Washer 30368. See Section 7, Figure 9.)	Ref.	
-26	30367	.	.				Spring	1	
-27	30364-P1	.	.				Plate - Peepsight Spring	1	
	31712-P2	.	.				Hook - Lower	NP	NHA
	31712-P1	.	.				Hook - Upper	NP	
	31914-P1	.	.				Back	NP	NHA

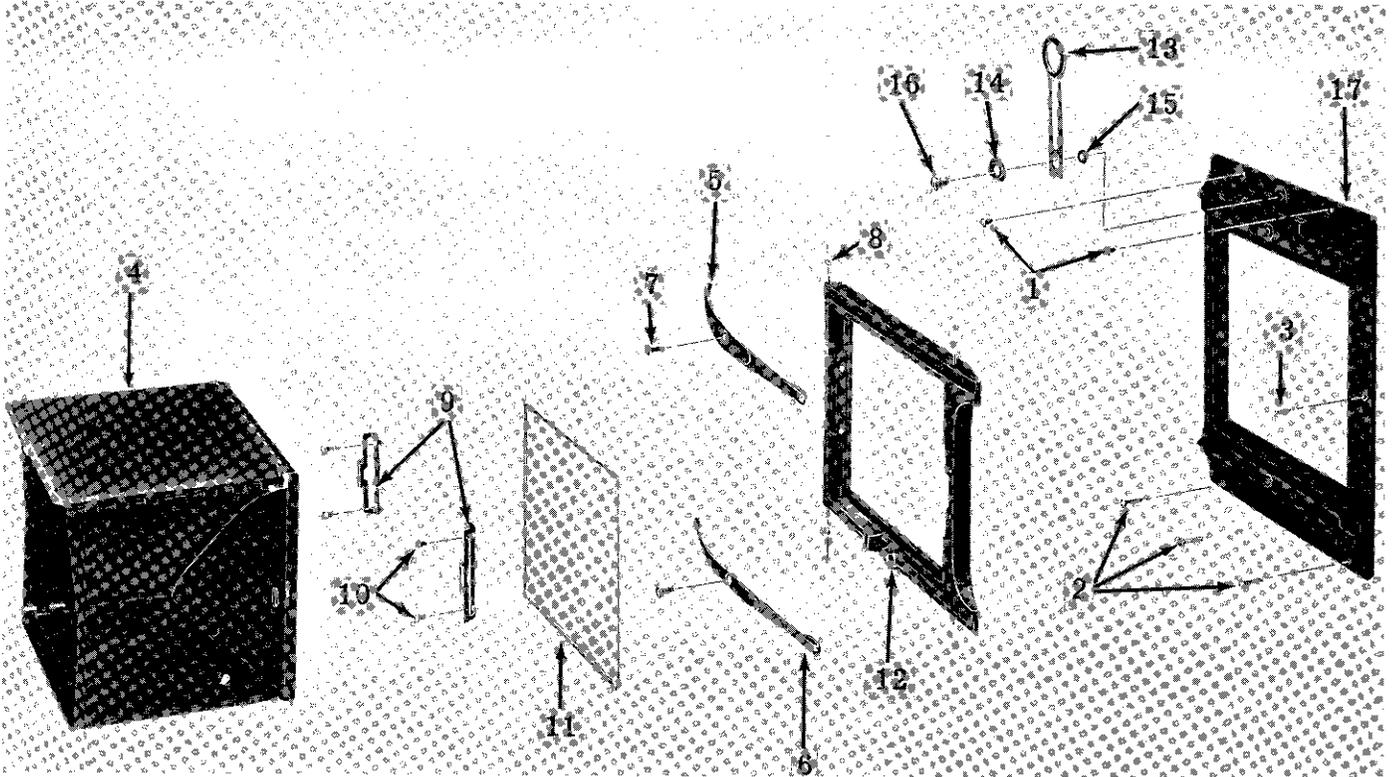


Figure 9. Back Complete, 4x5 Graphic

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
9-	30313-G4	BACK COMPLETE - 4x5 GRAPHIC (For Speed Graphic)						No longer available. Replace with Graflok	Ref.
	30313-G3	BACK COMPLETE - 4x5 GRAPHIC (For Crown Graphic)						No longer available. Replace with Graflok	Ref.
	Attaching Parts								
-1	30921-P6W	.					Screw - Self Tapping, 3/8 in. lg., #2, binding (pan) head, slotted, steel, black oxide and clear lacquer (Speed & Crown)	2	
-2	30921-P7W	.					Screw - Self Tapping, 1/2 in. lg., #2, binding (pan) head, slotted, steel, black oxide and clear lacquer (Speed)	3	
	30921-P6W	.					Screw - Self Tapping (Crown) same as index 1	3	
-3	150B1-6K	.					Screw - Wood, 3/8 in. lg., #1, flat head, slotted, brass, oxide black (Speed & Crown)	1	
	---***---								
-4	30159-G3	.					Hood Assembly (Cat. #9147)	1	
-5	30415-G5	.					Spring Assembly - Top	1	

PACEMAKER GRAPHIC
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Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.	
9-6	30415-G6	Spring Assembly - Bottom	1	
	Attaching Parts								
-7	31270-P1	.	.	.	.	.	Screw - Sems Fastener (For replacement order 112-4R5W and 221-4W)	Ref.	
	112-4R5W	.	.	.	.	.	Screw - Machine, 5/16 in. lg., #4-40, truss head, Phillips drive, steel, black oxide and clear lacquer	2	
	221-4W	.	.	.	.	.	Washer - Lock, Internal tooth, for #4 screw, steel, black oxide and clear lacquer	2	
-8	30473-P1K	.	.	.	.	.	Washer - Flat, 0.156 in. OD x 0.067 in. ID x 0.005 in. thick, brass, oxide black	2	
	---***---								
	30405-G4	.	.	.	.	.	Frame Assembly - Focusing.	1	
-9	30371-P1	.	.	.	.	.	Retainer	2	
	Attaching Parts								
-10	100-2-3W	.	.	.	.	.	Screw - Machine, 3/16 in. lg., #2-56, flat head, slotted, steel, black oxide and clear lacquer	4	
	---***---								
-11	30414-P1	.	.	.	.	.	Screen - Ground Glass	1	
-12	30405-G4M	.	.	.	.	.	Frame Subassembly - Focusing	1	
	30310-G3	.	.	.	.	.	Back Assembly (replaces 30310-G4) No longer available. See Note	Ref.	
	30310-G4	.	.	.	.	.	Back Assembly (replaced by 30310-G3)	Ref.	
							NOTE: For replacement order Back Assembly 31710-G7 and Focusing Frame Complete 31715-G4. See Section 7, Figure 9		
-13	30369-G2	.	.	.	.	.	Peepsight Assembly	1	
	Attaching Parts								
-14	30366	.	.	.	.	.	Cap - Peepsight	1	
-15	30368	.	.	.	.	.	Washer - Flat	1	
-16	104B6R4C	.	.	.	.	.	Screw - Machine, 1/4 in. lg., #6-32, oval head, Phillips drive, brass, chrome plate	1	
	---***---								
	31239-P1	.	.	.	.	.	Spring - Curtain Pressure (used with 30310-G4)	1	
	Attaching Parts								
	31238	.	.	.	.	.	Screw - Machine (special)	2	
	---***---								
	30364-P1	.	.	.	.	.	Plate - Peepsight Spring	1	
	30367	.	.	.	.	.	Spring - Peepsight	1	
-17	30156-P1	.	.	.	.	.	Back (used with 30310-G3)	NP	NHA
	30156-P2	.	.	.	.	.	Back (used with 30310-G4)	NP	NHA

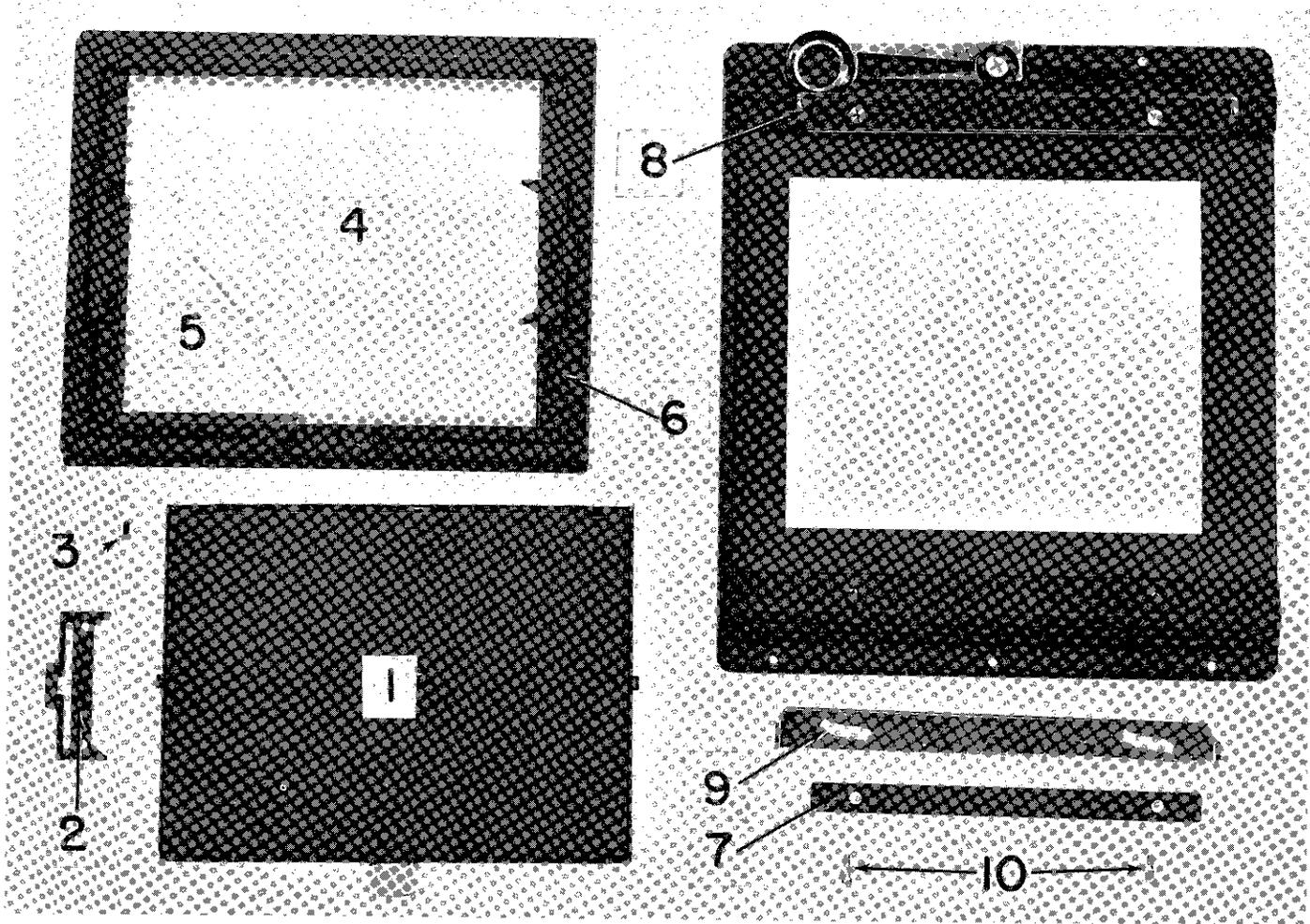


Figure 10. Back Complete, 4x5 Graflex

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty.
10-	30927-G4P						BACK COMPLETE - 4x5 GRAFLEX (For Speed Graphic) Replaced by 30927-G8P and is also discontinued	Ref.
	30927-G1P						BACK COMPLETE - 4x5 GRAFLEX (For Crown Graphic) Replaced by 30927-G7P and is also discontinued	Ref.
	Attaching Parts							
	30921-P6W	.					Screw - Self Tapping (top mtg.) 3/8 in. lg., #2, binding (pan) head slotted, steel, black oxide and clear lacquer (Speed & Crown)	2
	30921-P7W	.					Screw - Self Tapping (bottom mtg.) 1/2 in. lg., #2, binding (pan) head, slotted, steel, black lacquer and clear lacquer (Speed)	3
	30921-P6W	.					Screw - Self Tapping (bottom mtg.) Crown	3
	30934-G4	.					Panel Complete - Focusing (includes Ektalite and hood)	1
	30934-G1	.					Panel Complete - Focusing (includes hood less Ektalite) Replaced by 30934-G4	Ref.

-1	30159-G3	.	.				Hood Assembly (Cat. #9147)	1

PACEMARKER GRAPHIC
SPEED & CROWN

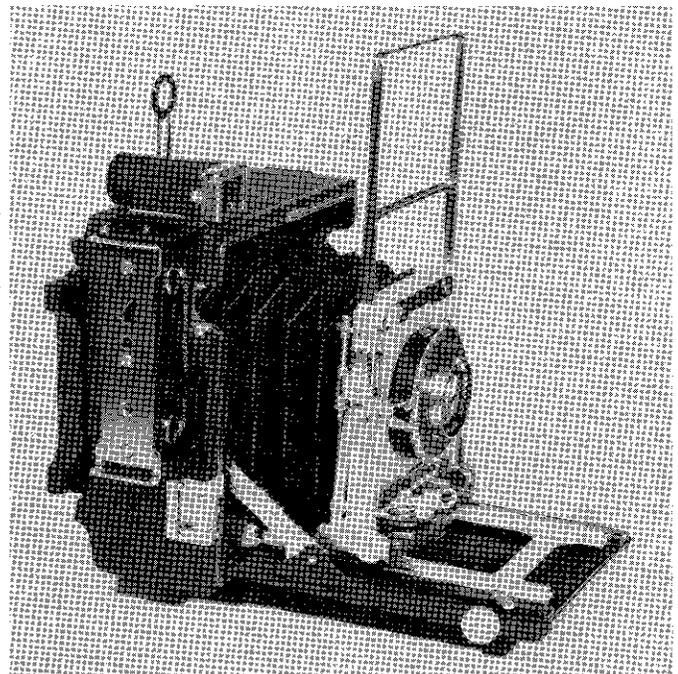
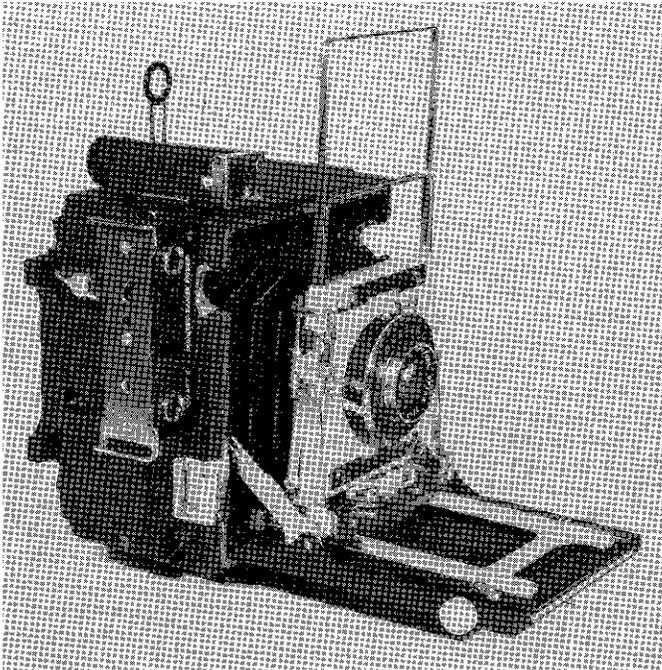
Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Qty
	30934-G4R	.	.	.	.	.	Panel Assembly (with Ektalite)	1
	30934-G1R	.	.	.	.	.	Panel Assembly (no Ektalite) No longer available . .	Ref.
-2	30371-P1	.	.	.	.	.	Retainer	2
	Attaching Part							
-3	100-2-3W	.	.	.	.	.	Screw - Machine, 3/16 in. lg., #2-56, flat head, slotted, steel, black oxide and clear lacquer	4
	---***---							
-4	30414-P1	.	.	.	.	.	Screen - Ground Glass	1
-5	31935-P1	.	.	.	.	.	Screen - Ektalite (used in 30934-G4R)	1
-6	30931-P2	.	.	.	.	.	Frame - Focusing (used with Ektalite)	1
	30931-P1	.	.	.	.	.	Frame - Focusing (used with no Ektalite) No longer available. Replace with 30931-P2 and 31935-P1	Ref.
	30927-G4	.	.	.	.	.	Back Assembly (Replace with 30927-G8. See Section 7, Figure 10)	Ref.
-7	30937-P1	.	.	.	.	.	Spring - Slide Lock	2
-8	30938-P1	.	.	.	.	.	Slide Lock - Top	1
-9	30938-P2	.	.	.	.	.	Slide Lock - Bottom	1
	Attaching Part							
-10	30939-P1	.	.	.	.	.	Screw - Machine (special)	4
	---***---							
	30369-G2	.	.	.	.	.	Peepsight Assembly	1
	Attaching Parts							
	104B6R4C	.	.	.	.	.	Screw - Machine, 1/4 in. lg., #6-32, oval head, Phillips drive, brass, chrome plate	1
	30366	.	.	.	.	.	Cap - Peepsight	1
	30368	.	.	.	.	.	Washer - Flat	1
	---***---							
	31239-P1	.	.	.	.	.	Spring - Curtain Pressure (used on early models) . .	1
	Attaching Part							
	31238	.	.	.	.	.	Screw - Machine (special)	2
	---***---							
	30364-P1	.	.	.	.	.	Plate - Peepsight Spring	1
	30367	.	.	.	.	.	Spring - Peepsight	1
	30928-P1	.	.	.	.	.	Back	NP

NHA

NOTE: Formerly listed as Cat. #9055 and consisted of the following:
Back Assembly and Panel Assembly (with Ektalite).
Did not include the Hood Assembly or the screws for mounting the Back to the camera.

"34"

PACEMAKER SPEED & CROWN GRAPHIC
PARTS LIST



GRAFLEX, INC.
Rochester 8, New York

TABLE OF CONTENTS FOR SECTION 5

Maintenance text for the "34" Pacemaker Speed and Crown Graphic is contained in Section 6.

Title	Page
Battery Case Mounting	2
Rangefinder Mounting	3
Camera - Basic	4
Cover Assembly - Shutter Plate	6
Plate Assembly - Shutter Mechanism	6
Standard Complete - Front	8
Bed Complete	10
Case Complete	12
Back Complete - Graflok	14
Back Complete - Graphic	16
Back Complete - Graflex	18
Standard Hardware	20

PARTS LIST

The Group Assembly Parts Lists are listed in disassembly order. The list divides the components into major assemblies, their subassemblies and parts. By the use of indented columns, the relationship of the assemblies to the subassemblies and parts is obtained.

The column titled "Figure and Index No." contains the index number in disassembly order of the items illustrated. Do not use the figure or index number in correspondence. . . specify the catalog or part number and name.

The column titled "Part Number" contains the Graflex part and drawing number, or the catalog number of the item listed.

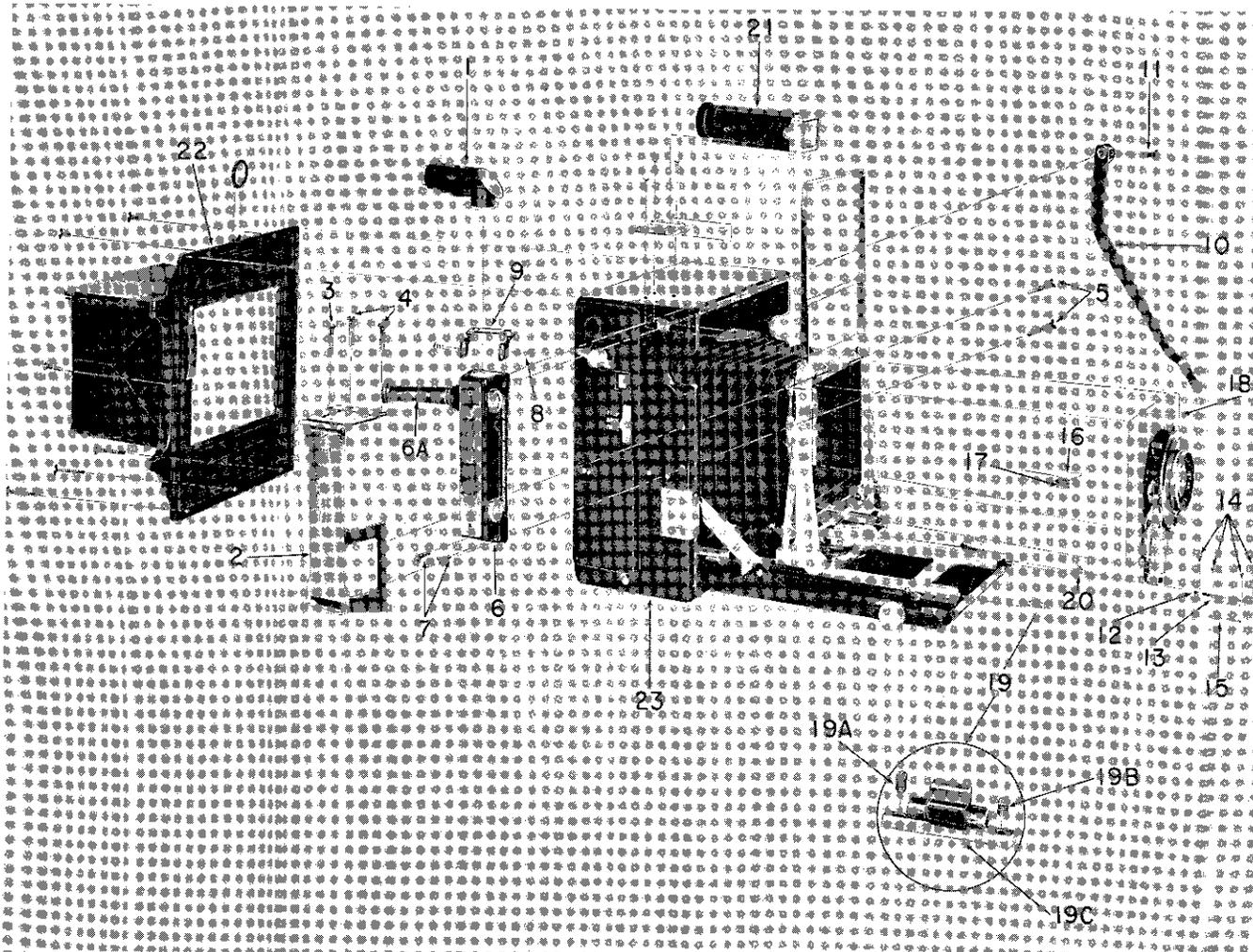
The column titled "Nomenclature" (including numbered columns) lists item nomenclature on the Graflex drawing. In this column the relationship of the item listed to the final assembly is indicated. If the nomenclature begins in the column marked "4", this item will be a component of the first assembly above which precedes it in column marked "3". The assembly in the column marked "3" will be a component of the first assembly which preceded it in the column marked "2" etc.

The column titled "Units per Assembly" lists the quantity required at that assembly. . . it is not necessarily the total. When the quantity figure is omitted, the code "AR" or "NP" will appear. The code "AR" is used for bulk items when an indefinite amount may or may not be used "as required". The code "NP" is used for items that are part of a riveted assembly and the next higher assembly should be ordered as these parts are "not procurable".

The column titled "List Price" contains the list price for each item. The prices listed are for one item. . . not the quantity listed in the preceding column. When the price is omitted, the code "NP" will indicate that this part is "not procurable" and that the next higher assembly should be ordered.

INTRODUCTION

This section of the Graflex Service Parts Manual covers the Pacemaker Speed and Crown Graphic "34". The text and illustrations are aimed at the Speed Graphic; however, similar parts found on the Crown Graphic are handled in a like manner. The Parts List illustrates and indexes the Speed Graphic, similar parts for the Crown Graphic follow immediately in the text. REFER TO PART NUMBER, NOT INDEX NUMBER, IN CORRESPONDENCE AND ORDERS.



**Figure 1. Camera Complete

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
Camera - Pacemaker Speed Graphic "34"									
1-1	No number	.					Focuspot Assembly	1	See Price List
Battery Case Mounting									
-2	Cat. #2753	.					Bracket - Battery case mounting and attaching parts	1	See Price List
	31114-P1	.					Bracket - Outer	NHA	
	31037-P1	.					Insulation	NHA	

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NHA - Next Higher Assembly

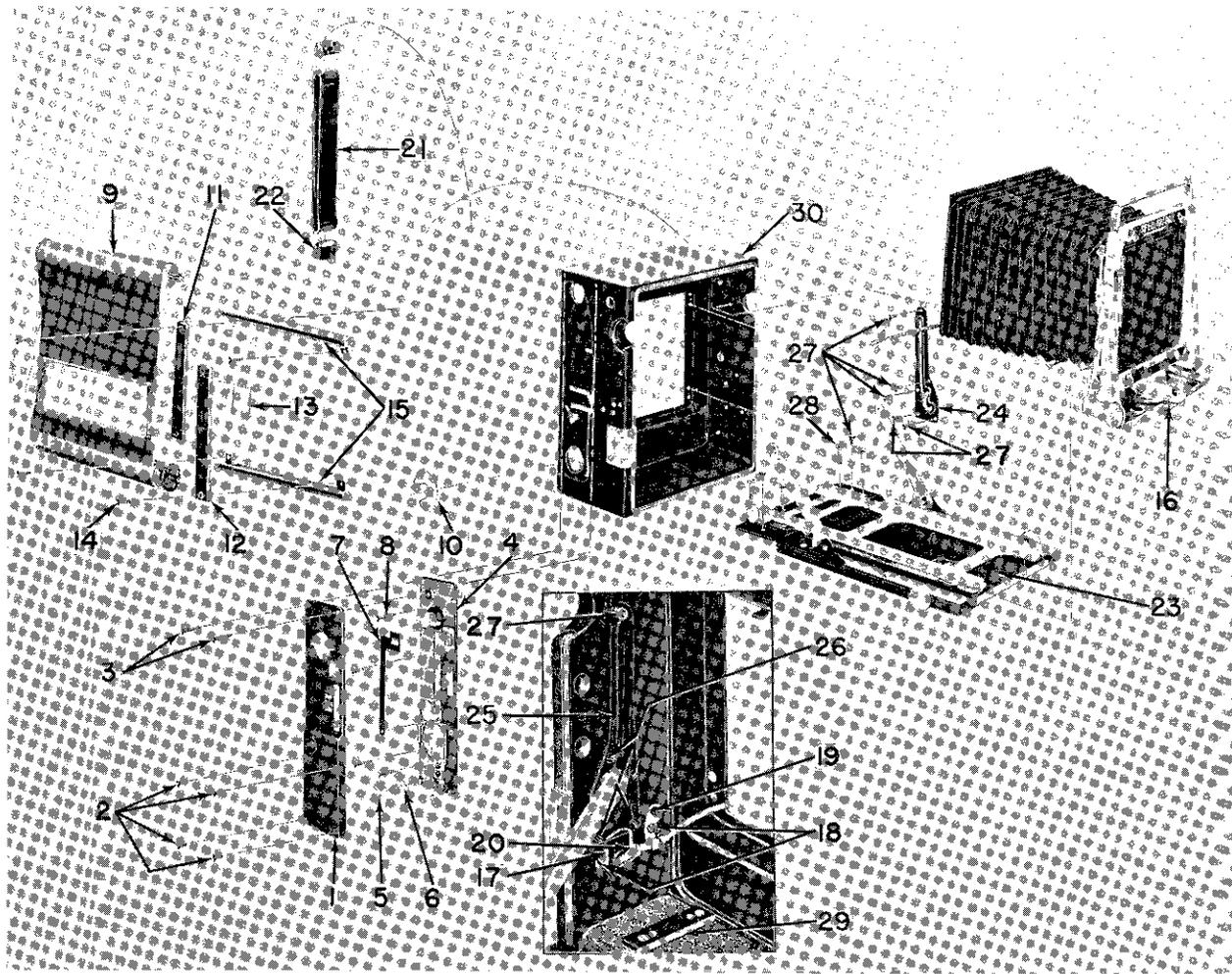
**"45" Pacemaker Graphic illustrated to show assembly of parts.

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price	
	Attaching Part									
	104-4-3	.	.	Screw - Machine, 3/16 in. lg., #4-40 OH Steel, Chrome plate				3	.01	
	30473-P36	.	.	Washer - Flat, 0.250 in. OD, 0.115 in. ID, 0.025 in. thick fiber				3	.01	
	----***----									
	31115-P1	.	.	Bracket - Battery case mounting				NP		
	Attaching Part									
1-3	152B4-8(S18)	.	.	Screw - Wood, 1/2 in. lg., #4 slotted OH Brass, Ebonol				2	.01	
-4	152B4-10(S18)	.	.	Screw - Wood, 5/8 in. lg., #4 slotted OH Brass, Ebonol				1	.01	
-5	101B4-9(S18)	.	.	Screw - Machine, 9/16 in. lg., #4-40 FH Brass, Ebonol				2	.01	
	Range Finder Mounting									
-6		.	.	Range finder less attaching parts				Ref		
-6A	No number	.	.	Eyeiece - rubber extension				Ref		
-7	31134(S18)	.	.	Screw - Special, 0.218 in. lg., #2-56 OH Brass, Ebonol				2	.01	
-8	110B3R3(S18)	.	.	Screw - Machine, 3/16 in. lg., #3-48 SS Bind H, Phillips Brass, Ebonol				2	.01	
-9	30777-P1	.	.	Bracket - Range finder mounting				1	.95	
-10	30769-G2	.	.	Arm Assembly - Range finder				1	1.60	
	Attaching Part									
-11	30776	.	.	Screw - Set, Range finder, 1/4 in. lg., #5-40 Hex H, hanger point				1	.06	
	----***----									
-12	30881-P7	.	.	Scale - Focusing, uncalibrated (NOTE: Calibrated scales are not procurable separately. . . they must be matched to actual lens focal length. See Section 101.)				1	.75	
-13	30817-P1	.	.	Scale - Index (See Section 101)				Ref		
	Attaching Part									
-14	30819	.	.	Screw - Index and focus scale				4	.01	
-15	30815	.	.	Plate - Index scale clamp				1	.10	
	----***----									
-16	31101-P1	.	.	Arm - Manual trip #3 shutter - 3-1/4x4-1/4 Graphic				1	.35	
	31102-P1	.	.	Arm - Manualtrip #2 shutter - 3-1/4x4-1/4 Graphic				1	.35	
	31102-P2	.	.	Arm - Manual trip #1 shutter - 3-1/4x4-1/4 Graphic				1	.35	
-17	107-2-2	.	.	Screw - Machine, 1/8 in. lg., #2-64 O Fil H Steel, Chrome plate				1	.01	
-18		.	.	Lensboard & shutter				1		
-19 & 20	30655-G1	.	.	Stop Assembly Complete - Infinity				2	.60	
-19A	30661	.	.	Screw - Infinity stop - pointed (rear)				1	.03	
-19B	30662	.	.	Screw - Infinity stop - flat				1	.03	
-19C	30655-P1	.	.	Stop Assembly - Infinity				2	.60	
-21	30700-G1	.	.	View finder Complete (See Figure 11)				Ref		
-22	30313-G2	.	.	Back Complete - 3-1/4x4-1/4 Graphic (See Figure 9) Excluding panel and hood, for Speed				Ref	Obsolete order Graflok	
	30313-G6	.	.	Back Complete - 3-1/4x4-1/4 Graphic, Excluding panel and hood, for Crown				Ref		
	30927-G4	.	.	Back Complete - 3-1/4x4-1/4 Graflex (See Figure 10) Excluding panel and hood, for Speed				Ref		
	30927-G1	.	.	Back Complete - 3-1/4x4-1/4 Graflex, Excluding panel and hood, for Crown				Ref		
	31709-G9	.	.	Back Complete - 3-1/4x4-1/4 Graflok (See Figure 8) for Speed				Ref		
	31709-G12	.	.	Back Complete - 3-1/4x4-1/4 Graflok, for Crown				Ref		

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable



**Figure 2. Basic Camera

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30654-G2						Camera - Basic, 3-1/4x4-1/4 Speed Graphic (See Figure 1-23)	Ref	
	30751-G2						Camera - Basic, 3-1/4x4-1/4 Crown Graphic	Ref	
2-1	30351-G2						. Cover Assembly - Shutter plate (See Figure 3)	1	2.60
							Attaching Part		
-2	104B1-3						. Screw - Machine, 3/16 in. lg., #1-64 OH Brass, (L-26 finish head only)	4	.01
-3	152B1-8						. Screw - Wood, 1/2 in. lg., #1 OH Brass, (L-26 finish head only)	2	.01
							----***----		
-4	30652-G2						. Plate Assembly - Shutter mechanism (See Figure 4)	1	26.00
							Attaching Part		
-5	30213-P1						. Screw - Shaft retainer	1	.05
-6	30212-P1						. Retainer - Tension shaft	1	.02
-7	30346-P1						. Slide - Dial	1	.15
-8	150B1-8						. Screw - Wood, 1/2 in. lg., #1 FH Brass	4	.01
							----***----		
-9	30350-G2						. Curtain & Rollers Complete	1	14.80
							Attaching Part		
-10	30698						. Seal - Tension roller (on older models)	1	.05

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30473-P15	.					Washer - Flat, 0.287 in. OD, 0.147 in. ID, 0.010 in. thick Brass.	AR	.01
	30473-P24	.					Washer - Flat, 0.287 in. OD, 0.147 in. ID, 0.020 in. thick Brass.	AR	.01
	---***---								
	30211-G3	.	.				Roller Assembly - Tension	1	4.85
	30196-G2	.	.				Roller Assembly - Gear	1	3.35
	30409-G2	.	.				Curtain Assembly.	1	6.00
	31112	.	.				Contact Curtain.	3	.05
	30880	.	.				Bearing - Roller (for replacement use 30192-P1 or P2).	NP	
	30192-P1	.	.				Bearing - Roller (Selected fit) 0.359 in. lg. (See Figure 7-17) (for replacement of 30880 only).	AR	.60
	30192-P2	.	.				Bearing - Roller (Selected fit) 0.389 in. lg. (See Figure 7-17) (for replacement of 30880 only).	AR	.60
	Attaching Part								
	152B2R4	.	.				Screw - Wood, 1/4 in. lg., #2 OH Phillips drive, Brass, Chrome (See Figure 7-18) (for replacement purposes only).	AR	.01
	---***---								
	30885-G2	.	.				Frame and Contact Assembly (not shown)	1	5.25
	Attaching Part								
	150B2-12	.	.				Screw - Wood, 3/4 in. lg., #2 FH Brass.	4	.02
	---***---								
	30826-G1	.	.				Frame (not shown)	1	3.75
2-11	30584-P1	.	.				Block - Left	1	.35
-12	30887-P1	.	.				Block - Right.	1	.35
-13	30573-	.	.				Contact - Spring finger	2	.04
	Attaching Part								
-14	150B2-8	.	.				Screw - Machine, 1/2 in. lg., #2 FH Brass, Ebonol.	4	.01
	---***---								
-15	30633-P1	.	.				Guide - Curtain	2	.20
	Attaching Part								
	150B0-3	.	.				Screw - Wood, 3/16 in. lg., #0 FH Brass, Ebonol	6	.01
	---***---								
	30889-P2	.	.				Contact - Long.	1	.10
	30898	.	.				Contact - Frame	1	.05
	Attaching Part								
	151B1-3	.	.				Screw - Wood, 3/16 in. lg., #1 RH Brass	2	.01
	---***---								
-16	30538-G3	.	.				Standard Complete - Front (See Figure 5) Speed Graphic.	1	39.60
	30538-G4	.	.				Standard Complete - Front - Crown Graphic	1	39.60
	Attaching Part								
-17	31189	.	.				Spring - Cable release	1	.20
-18	151-1-3(S7)	.	.				Screw - Wood, 3/16 in. lg., #1 RH Steel, Jetal.	1	.01
-19	151-2-3 (P21)	.	.				Screw - Wood, 3/16 in. lg., #2 RH Steel, Cadmium plate.	1	.01
-20	30949	.	.				Screw - Cable release	1	.01
	---***---								
21	33779-G1M	.	.				Handle Assembly	1	3.00
	33779-G1	.	.				Handle Complete	1	1.85
-22	33779-P3	.	.				Loop - Strap (Included with 33779-G1)	2	
-23	30586-G1	.	.				Bed Complete (See Figure 6)	1	38.00
	Attaching Part								
-24	30718-P1	.	.				Plate - Left - Bed brace.	1	.50
-25	30718-P2	.	.				Plate - Right - Bed brace.	1	.50
-26	150B2-3(S18)	.	.				Screw - Wood, 3/16 in. lg., #2 FH Brass, Ebonol (For attaching 30718-P2)	4	.02
-27	150B2-4(S18)	.	.				Screw - Wood, 1/4 in. lg., #2 FH Brass, Ebonol	8	.02
-28	31925-P2	.	.				Screw - Yoke guide, case	4	

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable
AR - As Required

Figure and Index No.	Part Number	Nomenclature	Units per Assembly	List Price
2-29	30488-P1	. Shim - Yoke guide, case, 0.040 in. thick	AR	.01
	30488-P2	. Shim - Yoke guide, case, 0.060 in. thick	AR	.01
	30488-P3	. Shim - Yoke guide, case, 0.016 in. thick	AR	.01
	---***---			
-30	30559-G2	. Case Complete - Speed Graphic (See Figure 7)	Ref	
	30559-G5	. Case Complete - Crown Graphic	Ref	

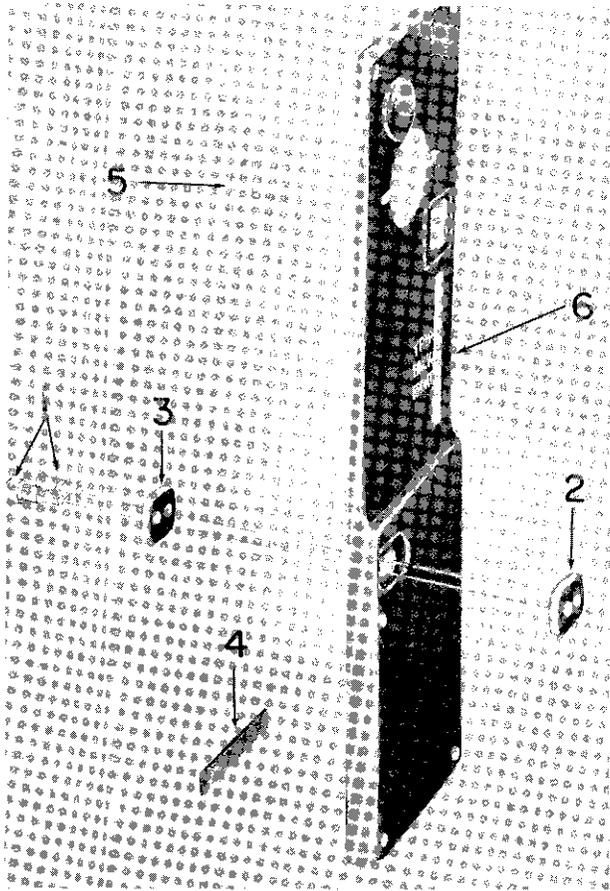


Figure 3. Shutter Cover Plate

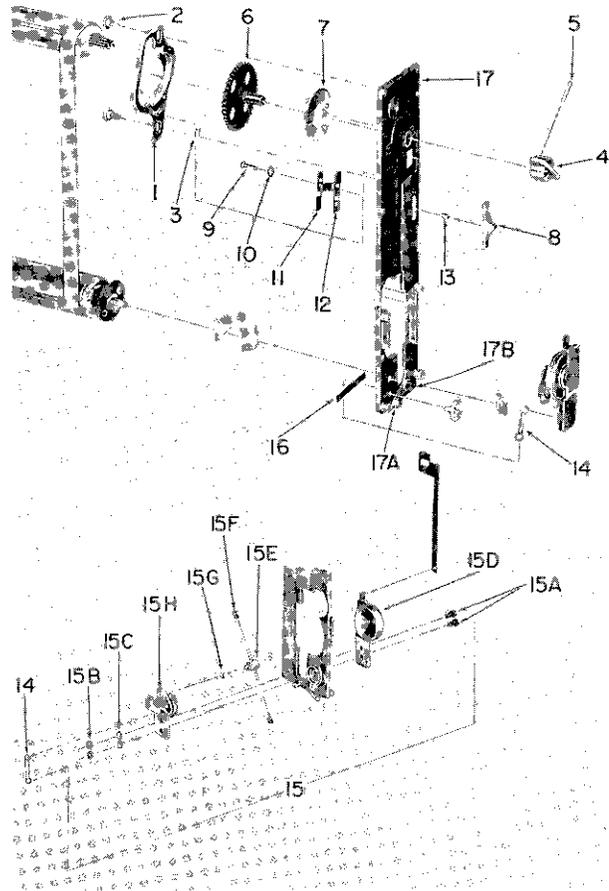


Figure 4. Shutter Plate

3-1	30351-G2	Cover Assembly - Shutter plate (See Figure 2-1)	Ref	
-2	30359-P1	. Stud - Receptacle contact	2	.10
-3	30357	. Insulator - Receptacle	1	.05
-4	30358	. Washer - Receptacle	1	.05
-5	30846	. Seal - Dust	1	.05
-6	30356	. Window - Shutter plate	1	.10
	30354-P1	. Cover - Shutter plate	NP	

SHUTTER PLATE

4-1	30652-G2	Plate Assembly - Shutter mechanism (See Figure 2-4)	Ref	
	30185-G1	. Escapement Assembly	1	.65

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

NP - Non Procurable
AR - As Required

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
							Attaching Part		
4-2	31087-P1	.	.	.	.	.	Screw - Escapement	2	.08
							-----***-----		
-3	30186	.	.	.	.	.	Spring - Escapement	1	.04
	30652-G2N	.	.	.	.	.	Winding key and master gear assembly	1	4.60
-4	30681-G1	.	.	.	.	.	Key Assembly - Winding	1	.95
							Attaching Part		
-5	30663-P1	.	.	.	.	.	Pin - Taper, standard #5/0, 0.092 in. dia x 7/16 in. lg., Stainless Steel	1	.01
							-----***-----		
-6	30513-G1	.	.	.	.	.	Gear Assembly - Master	NP	
-7	30504-P5	.	.	.	.	.	Dial - Shutter	1	.60
-8	30297-P1	.	.	.	.	.	Slide - Shift	1	.40
							Attaching Part		
-9	102-2-5	.	.	.	.	.	Screw - Machine, 5/16 in. lg., #2-56 RH Steel	1	.01
-10	221-2	.	.	.	.	.	Washer - lock, 3/16 in. OD, 0.086 in. ID, 0.012 in. thick Steel, Jetal (S7)	1	.01
							-----***-----		
-11	30303-P2	.	.	.	.	.	Spring - Shift slide	1	.15
-12	30299-P1	.	.	.	.	.	Plate - Shift slide	1	.50
-13	30298-P1	.	.	.	.	.	Spacer - Shift slide	1	.04
-14	30340	.	.	.	.	.	Spring - Governor	1	.05
-15	30459-G3	.	.	.	.	.	Governor Complete	1	8.50
-15A	110B2-4	.	.	.	.	.	Screw - Dowel, 1/4 in. lg., #2-56 SS Bind H, Brass	2	.02
-15B	200-2H	.	.	.	.	.	Nut - Machine, #2-56 Hex Brass, Jetal (S7)	2	.01
-15C	221-2	.	.	.	.	.	Washer - Lock, 3/16 in. OD, 0.086 in. ID. 0.012 in. thick Steel, Jetal (S7)	2	.01
	30344	.	.	.	.	.	Spacer - Governor	NP	
-15D	30682-G1	.	.	.	.	.	Bracket Assembly - Top	NP	
-15E	30458-G1	.	.	.	.	.	Pinion Assembly - Governor	NP	
-15F	30454	.	.	.	.	.	Shoe - Governor	NP	
-15G	30473-P1	.	.	.	.	.	Washer - Flat, 5/32 in. OD, 0.067 in. ID, 0.005 in. thick Brass	NP	
-15H	30343-G1	.	.	.	.	.	Bracket Assembly - Bottom	NP	
	30335-G1	.	.	.	.	.	Idler Assembly - Governor	NP	
	30683-G1	.	.	.	.	.	Bracket & Bearing Assembly - Bottom	NP	
	30338	.	.	.	.	.	Stud	NP	
	30685-P1	.	.	.	.	.	Pin	NP	
-16	30301	.	.	.	.	.	Strip - Light seal	1	.02
-17	30348-G3	.	.	.	.	.	Plate Assembly	1	6.00
-17A	30315-G1	.	.	.	.	.	Lever Assembly - Retard cam	1	.50
							Attaching Part		
-17B	30318	.	.	.	.	.	Stud	1	.03
							-----***-----		
	30184-P1	.	.	.	.	.	Post - Escapement spring	NP	
	30345-P1	.	.	.	.	.	Post - Governor spring	NP	
	30517	.	.	.	.	.	Bushing - Master gear	NP	
	30191	.	.	.	.	.	Bearing - Gear roller	NP	

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

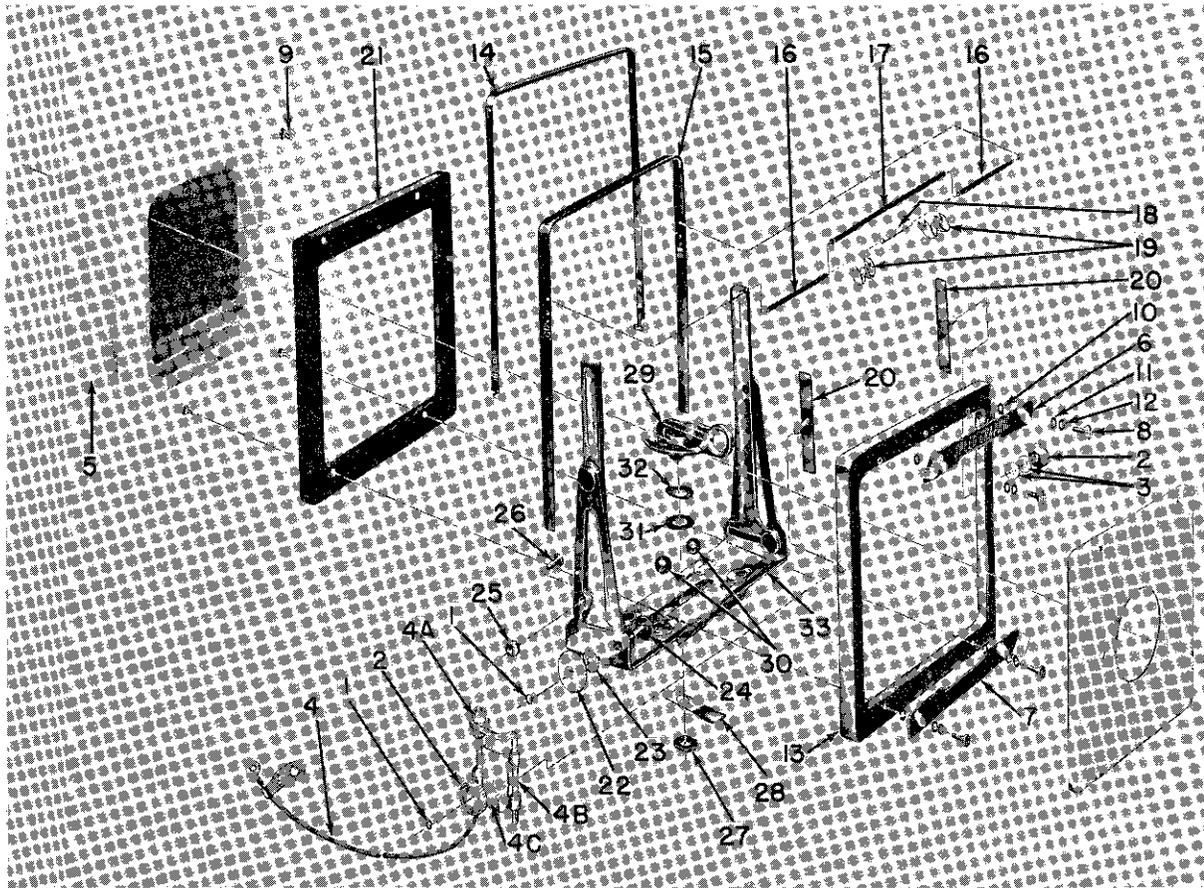


Figure 5. Front Standard

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30538-G3						Standard Complete - Front (See Figure 2-16) Speed Graphic . . .	Ref	
	30538-G4						Standard Complete - Front, Crown Graphic	Ref	
5-1	30442-P1						. Ring - Knob retaining (Obsolete - Stake threads).	NP	
-2	30444-P1						. Knob - Frame clamp	2	.25
-3	30473-P6						. Washer - Flat, 5/16 in. OD, 0.128 in. ID, 0.015 in. thick fiber	2	.01
-4	30798-G3						. Release Assembly - Cable	1	3.50
-4A	30843-P1						. . Nut - Cable release	2	.14
-4B	31097-P1						. . Rod - Manual trip.	1	.20
	Attaching Part								
-4C	31098-P1						. . Bracket - Manual trip.	1	.30
	-----***-----								
	30839						. . Body - Cable release	1	.25
	30844-P1						. . Stem - Cable release	NP	
	30841						. . Spring - Cable.	NP	
	30840-P1						. . Bushing - Cable release	NP	
	30836-P3						. . Casing - Cable release	NP	
	Attaching Part								
	30792-P1						. . Clip - Cable release.	NP	
	30837-P3						. . Cable - release	NP	
	30857						. . Terminal - Cable release	NP	
	-----***-----								
-5	31062-G1						Bellows Assembly - Second	1	12.25
	31183-P1						. . Hanger - Cable release, 3-1/16 in. lg.	1	.08
	31183-P2						. . Hanger - Cable release, 2-7/16 in. lg.	1	.08
	31183-P3						. . Hanger - Cable release, 1-1/16 in. lg.	1	.08

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

NP - Non Procurable

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price	
	Attaching Part									
	31149-P1	.	.	.	.	.	Strip - Cable release hanger, 3-1/2 in. lg.	1	.08
	31149-P2	.	.	.	.	.	Strip - Cable release hanger, 2-3/4 in. lg.	1	.08
	31149-P3	.	.	.	.	.	Strip - Cable release hanger, 2-3/8 in. lg.	1	.08
	30671-G1	.	.	.	.	.	Bellows Assembly	NP	
	30538-G3T	.	.	.	.	.	Front Standard Assembly - 3-1/4x4-1/4 Speed Graphic	1	24.00
	30538-G4T	.	.	.	.	.	Front Standard Assembly - 3-1/4x4-1/4 Crown Graphic	1	24.00
	30538-G3N	.	.	.	.	.	Frame Assembly - Front standard, 3-1/4x4-1/4 Speed Graphic	1	10.80
	30538-G4N	.	.	.	.	.	Frame Assembly - Front standard, 3-1/4x4-1/4 Crown Graphic	1	10.80
5-6	30471-P2	.	.	.	.	.	Lock - Lensboard, upper, Speed Graphic	1	.65
	30471-P3	.	.	.	.	.	Lock - Lensboard, upper, Crown Graphic	1	.65
-7	30471-P4	.	.	.	.	.	Lock - Lensboard, lower	1	.65
	Attaching Part									
-8	30401-P1	.	.	.	.	.	Screw - Slidelock	4	.08
-9	30377-P1	.	.	.	.	.	Nut - Slidelock	4	.05
-10	30473-P2	.	.	.	.	.	Washer - Flat, 7/32 in. OD, 0.089 in. ID, 0.010 in. thick Stainless Steel	4	.01
-11	30473-P20	.	.	.	.	.	Washer - Flat, 0.203 in. OD, 0.117 in. ID, 0.010 in. thick Stainless Steel	4	.01
-12	30540-P3	.	.	.	.	.	Washer - Spring, 0.203 in. OD, 0.117 in. ID, 0.031 in. thick Stainless Steel	4	.02
	---***---									
-13	30538-G3M	.	.	.	.	.	Frame - Outer front assembly	1	1.60
	31923-G2	.	.	.	.	.	Finder Complete	1	4.75
-14	30812-G1	.	.	.	.	.	Finder Assembly	1	2.25
-15	30675-G2	.	.	.	.	.	Frame - Finder	1	2.35
-16	30378-P3	.	.	.	.	.	Plunger - Finder	2	.02
-17	30404-P3	.	.	.	.	.	Sleeve - Finder lock spring	1	.15
-18	30438	.	.	.	.	.	Spring - Finder	1	.05
-19	30719-P1	.	.	.	.	.	Bracket - Plunger	2	.08
-20	30425-G1	.	.	.	.	.	Plate Assembly - Front frame clamp	2	.50
-21	30386-P1	.	.	.	.	.	Frame - Inner front	1	1.00
	30538-G3S	.	.	.	.	.	Standard support assembly Complete	1	13.25
-22	30436-P1	.	.	.	.	.	Knob - Support locking	2	.25
-23	30473-P7	.	.	.	.	.	Washer - Flat, 0.312 in. OD, 0.128 in. ID, 0.012 in. thick fiber	2	.01
-24	30543-P1	.	.	.	.	.	Screw - Support locking	2	.35
	30473-P22	.	.	.	.	.	Washer - Flat, 0.375 in. OD, 0.218 in. ID, 0.010 in. thick fiber	4	.01
-25	30440-P1	.	.	.	.	.	Nut - Front standard eccentric	2	.25
-26	30441-P1	.	.	.	.	.	Eccentric - Front standard	2	.25
-27	30553-P1	.	.	.	.	.	Nut - Special	1	.08
-28	30541-P1	.	.	.	.	.	Spring - Shift locking	1	.32
-29	30537-G3	.	.	.	.	.	Lever Assembly	1	2.00
-30	30539-P4	.	.	.	.	.	Ball - Steel, 0.250 in. dia	2	.01
-31	30473-P9	.	.	.	.	.	Washer - Flat, 17/32 in. OD, 0.265 in. ID, 0.032 in. thick Brass	1	.03
-32	30540-P1	Washer - Lever Assembly - spring, 17/32 in. OD, 0.265 in. ID, 0.007 in. thk 5/16 in radius Spring Steel	1	.03	
-33	30538-G3R	Standard Support Assembly	1	8.00	

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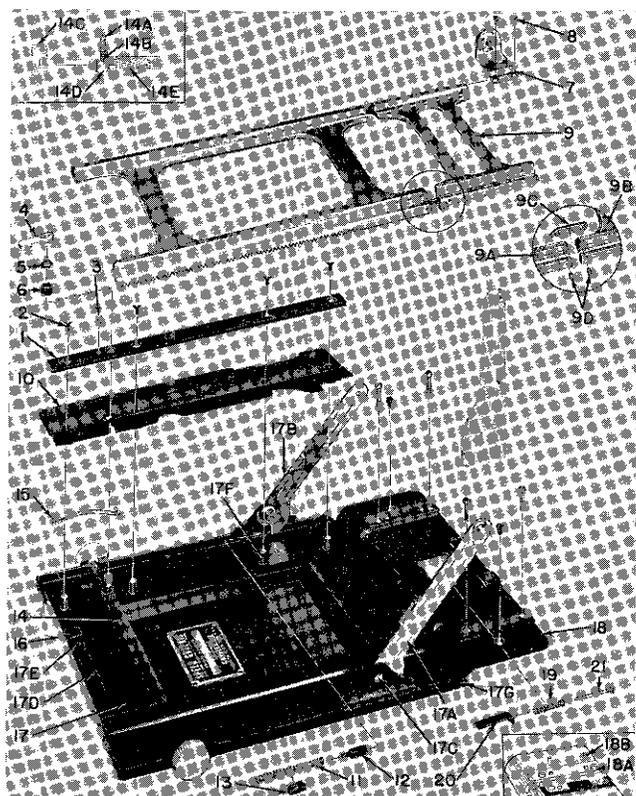


Figure 6. Bed Complete

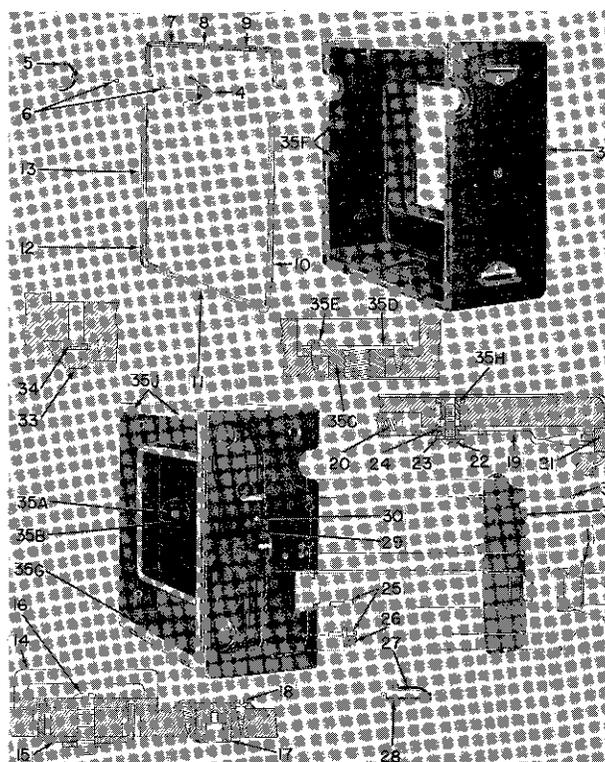


Figure 7. Case Complete

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30586-G1						Bed Complete (See Figure 2-23), Speed Graphic	1	38.00
	30586-G3						Bed Complete (See Figure 2-23), Crown Graphic	1	38.00
6-1	30626-P1						. Guide, left - Bed section	1	1.00
	30626-P2						. Guide, right - Bed section	1	1.00
	Attaching Part								
-2	100B2-4(S18)						. Screw - Machine, 1/4 in. lg., #2-56 FH Brass, Ebonol	8	.01
	31089-P4						. Screw - Machine, special, 1/4 in. lg., #2-56 Bind H, Brass, Black lacquer	8	.02
	---***---								
-3	31246-P2						. Screw - Special Fil H.	1	.01
-4	30629-P1						. Lever - Yoke lock	1	.35
-5	30473-P11						. Washer - Flat, 9/32 in. OD, 0.177 in. ID, 0.010 in. thick Brass, White nickel (P15)	AR	.01
-6	30628						. Sleeve - Yoke lock	1	.05
	34617-G3						. Yoke Assembly - Complete	1	15.75
-7	30775-G2						. Bracket Assembly - Range finder	1	1.00
	Attaching Part								
-8	30830						. Screw - Machine, 0.145 in. lg., #1-64 FH Brass, Chrome	2	.05
	---***---								
	30655-G1						. Stop Assembly - Right, infinity	1	.60
	30655-G2						. Stop Assembly - Left, infinity	1	.60
	30661						. Screw - Infinity stop, pointed (rear)	1	.02
	30662						. Screw - Infinity stop, flat	1	.02
	30655-P1						. Stop Assembly - Infinity	1	.55
	30817-P2						. Scale - Index	1	.10
	30815						. Plate - Index scale	1	.10

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AR - As Required

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Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	Attaching Part								
	30819	.	.	.	.	.	Screw - Scale	2	.01

6-9	30596-G2	.	.	.	.	.	Yoke Assembly	1	14.75
-9A	30598-P1	.	.	.	.	.	Yoke - Bed section	1	9.25
-9B	30600-P1	.	.	.	.	.	Yoke - Case section.	1	4.00
	30605	.	.	.	.	.	Pin - Front standard stop.	1	.01
-9C	30602	.	.	.	.	.	Link - Yoke	2	.10
-9D	30603	.	.	.	.	.	Pin - Yoke link.	4	.01
	30619-P3	.	.	.	.	.	Block - Left bed, Speed Graphic	1	1.65
	30619-P4	.	.	.	.	.	Block - Left bed, Crown Graphic	1	1.65
-10	30620-P3	.	.	.	.	.	Block - Right bed, Speed Graphic.	1	1.65
	30620-P4	.	.	.	.	.	Block - Right bed, Crown Graphic	1	1.65
-11	30616	.	.	.	.	.	Spring - Bed brace	2	.08
-12	31766-P1	.	.	.	.	.	Plunger - Bed brace	2	.08
	Attaching Part								
-13	31271	.	.	.	.	.	Clip - Spring retaining.	2	.08

-14	30586-G2M	.	.	.	.	.	Shaft Assembly - Pinion.	1	3.85
-14A	170D3-3	.	.	.	.	.	Screw - set, 3/16 in. lg., #3-48 slotted, flat point, Steel, Nickel plate.	1	.02
-14B	30630	.	.	.	.	.	Pad - Yoke lock.	2	.02
-14C	30612-P1	.	.	.	.	.	Knob - Focusing.	2	.30
-14D	30607-P1	.	.	.	.	.	Post - Yoke lock	1	.40
-14E	30606-P2	.	.	.	.	.	Pinion - Focusing.	2	2.25
-15	30610	.	.	.	.	.	Spring - Focusing pinion.	2	.05
-16	31730-P2	.	.	.	.	.	Escutcheon - Bed	1	.10
-17	34615-G3	.	.	.	.	.	Bed Assembly - Second	1	10.75
-17A	30421-G1	.	.	.	.	.	Brace Assembly - Left	1	1.50
-17B	30421-G2	.	.	.	.	.	Brace Assembly - Right	1	1.50
	Attaching Part								
-17C	30623-P1	.	.	.	.	.	Rivet - Bed brace assembly.	2	.08

	32670-P1	.	.	.	.	.	Covering - Vinyl	1	1.35
-17D	30506	.	.	.	.	.	Catch - Bed.	1	.10
	Attaching Part								
-17E	30948	.	.	.	.	.	Rivet - Bed catch.	2	.01

	33903-P3	.	.	.	.	.	Name Plate.	NP	
	Attaching Part								
	30363-P22	.	.	.	.	.	Rivet - hollow type - special	NP	

	31096-G2	.	.	.	.	.	Bed Assembly - First.	1	6.00
-17F	30915-P1	.	.	.	.	.	Bushing - Guide & block screw	8	.03
	30588-P1	.	.	.	.	.	Bed.	NP	
	Attaching Part								
-17G	30172-P24	.	.	.	.	.	Pin - Hinge, 4.035 in. lg., 0.0475 in dia., Steel, Jetal.	1	.08

-18	30586-G1R	.	.	.	.	.	Hinge Assembly	1	1.50
	30590-P1	.	.	.	.	.	Guide - Left - Case section	NP	
-18A	30590-P2	.	.	.	.	.	Guide - Right - Case section	NP	
	Attaching Part								
-18B	30685-P2	Pin - Dowel 0.082 in. ⁺ .0003 in. x 0.195 in. lg. Stainless Steel	4	.01

	30434-P1	Hinge - Bed.	NP	
-19	30639	Spring.	1	.05
-20	30637	Slide.	1	.16

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Figure and Index No.	Part Number	Nomenclature	Units per Assembly	List Price
Attaching Part				
6-21	30638-P1	. Pin - Escutcheon.	1	.01
CASE COMPLETE				
	30559-G2	Case Complete - 3-1/4x4-1/4 Speed Graphic (See Figure 2-37) .	Ref	
	30559-G5	Case Complete - 3-1/4x4-1/4 Crown Graphic	Ref	
7-1	30534-P1	. Plate - Release slide	1	1.00
Attaching Part				
-2	152B1R4	. Screw - Wood, 1/4 in. lg., #2 OH Brass, Chrome plated, Phillips drive	2	.03
-3	30749-P1	. Screw - Machine, Slide release plate, special	2	.07

-4	30647-P1	. Escutcheon. left - Focusing knob (Crown requires 2)	1	.25
-5	31135-P1	. Escutcheon, right - Focusing knob (Speed only)	1	.25
Attaching Part				
-6	30638-P2	. Pin - Escutcheon, 0.042 in. dia x 1/4 in. lg., Ebonol (S18)	2	.01

-7	30645-P4	. Moulding - Upper right.	1	.65
-8	30640-P2	. Plate - Moulding, top, "Graflex"	1	.10
-9	30645-P3	. Moulding - Upper left.	1	.65
-10	30761-P1	. Moulding - Lower left	1	.80
-11	30640-P1	. Plate - Moulding, bottom	1	.10
-12	30762-P1	. Moulding - Lower right	1	.65
-13	30643-P2	. Moulding - Right.	1	.60
-14	30374-P1	. Bracket - Handle.	2	.40
Attaching Part				
-15	30375-P1	. Nut - Handle bracket	2	.10
-16	104B6R8	. Screw - Machine, 1/2 in. lg., #6-32 OH Phillips drive, Brass, Chrome plate	2	.05

	30882	. Bearing - Roller (for replacement use 30192-P1 or P2)	NP	
-17	30192-P1	. Bearing - Roller, Selected fit 0.359 in. lg. (for replacement of 30882 only)	AR	.60
	30192-P2	. Bearing - Roller, Selected fit, 0.389 in. lg. (for replacement of 30882 only)	AR	.60
Attaching Part				
-18	152B2R4	. Screw - Wood, 1/4 in. lg., #2 OH Phillips drive, Brass, Chrome plate (for use with 30192-P1 or P2)	AR	.01

-19	30511-P2	. Latch - Bed	1	.25
-20	30664	. Spring - Bed latch	1	.05
-21	30507	. Button - Bed release	1	.05
Attaching Part				
-22	102B3-4(S18)	. Screw - Machine, 1/4 in. lg., #3-48 RH Brass, Ebonol	2	.01
	221-3	. Washer - Lock, 7/32 in. OD, 0.099 in. ID, 0.016 in. thick Steel	2	.01
-23	30473-P44	. Washer - Flat, 0.250 in. OD, 0.099 in. ID, 0.025 in. thick Brass.	2	.01
-24	30508	. Collar - Bed latch insert	2	.02

-25	30820	. Contact - Case	2	.05
-26	30821	. Contact - Receptacle	1	.05
-27	30563-P1	. Contact - Switch, short	1	.15
-28	30562-P1	. Contact - Switch, long	1	.15

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PACEMAKER GRAPHIC "34"
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Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
							Attaching Part		
	150B0-3	.					Screw - Wood, 3/16 in. lg., #O FH Brass	4	.01
	151B0-2	.					Screw - Wood, 1/8 in. lg., #O RH Brass	2	.01
		---	---	---	---	---	***		
7-29	30303-P1	.					Spring - Shift slide, case	1	.15
							Attaching Part		
-30	150B1-3	.					Screw - Wood, 3/16 in. lg., #1 FH Brass	1	.01
		---	---	---	---	---	***		
-31	30524-G1	.					Plate Assembly - Body release, Speed Graphic	1	9.25
	30875-G1	.					Plate Assembly - Body release, Crown Graphic	1	7.20
							Attaching Part		
-32	150B1-6	.					Screw - Wood, 3/8 in. lg., #1 FH Brass	6	.02
		---	---	---	---	---	***		
	30532-G1	.	.				Slide Assembly - Release	NP	
	32666-P1	.	.				Covering - Vinyl, Speed Graphic	AR	2.25
	30559-P81	.	.				Covering - Vinyl, Crown Graphic	AR	2.25
-33	30746-P1	.	.				Foot Case, Speed Graphic	2	.25
	30745-P1	.	.				Foot Case, Crown Graphic	2	.25
-34	200-3S	.	.				Nut - Machine, #3-48 square, Cadmium plate (P-21).	4	.03
	30693-G1	.	.				Case Assembly - Speed Graphic	NP	
-35	30697-G1	.	.				Case Assembly - Crown Graphic	NP	
-35A	30372-P2	.	.				Socket - Tripod, side	1	.20
							Attaching Part		
-35B	150B2-4	.	.				Screw - Wood, 1/4 in. lg., #2 FH Brass Ebonol (S 18)	3	.01
		---	---	---	---	---	***		
-35C	30372-P1	.	.				Socket - Tripod, bottom	1	.20
-35D	30721	.	.				Cover	1	.05
							Attaching Part		
-35E	151B2-4	.	.				Screw - Wood, 1/4 in. lg., #2 RH Brass, Ebonol	3	.01
		---	---	---	---	---	***		
-35F	31186	.	.				Insert - Battery case mounting	2	.08
-35G	30673-P2	.	.				Insert - Back mounting, bottom, Speed Graphic only	1	.04
-35H	31905-P1	.	.				Insert - Bed latch	2	.05
-35J	*30370	.	.				Lug - Back mounting (replaced by 30673-P4).	2	.10
	*30673-P5	.	.				Insert - Back mounting, top, Speed Graphic only	1	.05
							Attaching Part		
	*150B2-3	.	.				Screw - Wood, 3/16 in. lg., #2 FH Brass, Ebonol	4	.03

*NOTE: Part No. 30370, Lug, is for older 3-1/4x4-1/4 Speed Graphic and has been replaced with Insert, part no. 30673-P5 on the newer cameras. Screws 150B2-3 are needed only when Lug, part no. 30370 is used.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.

State quantity. Prices subject to change without notice.

NP - Non Procurable

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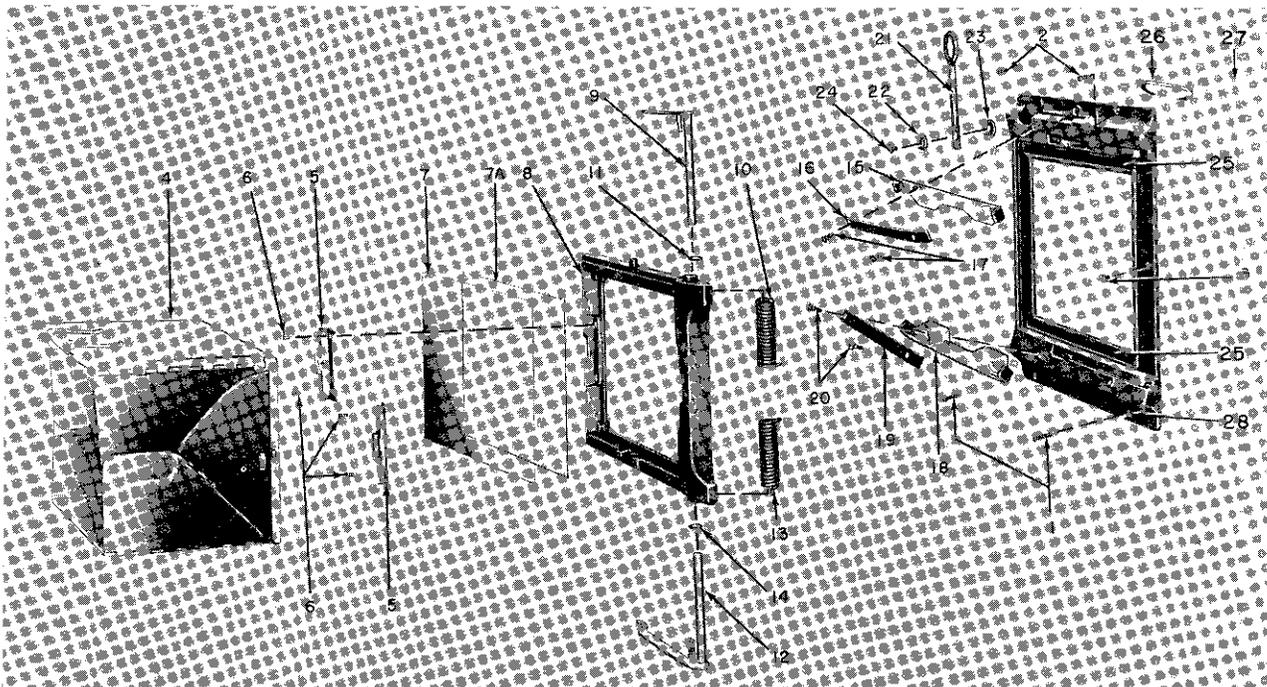


Figure 8. Graflok Back

Figure and Index No.	Part Number	Nomenclature	Units per Assembly	List Price
	31709-G3	Back Complete - Graflok - 3-1/4x4-1/4 Speed Graphic with Ektalite, including panel & hood	Ref	
	31709-G4	Back Complete - Graflok - 3-1/4x4-1/4 Crown Graphic with Ektalite, including panel & hood	Ref	
Attaching Parts				
8-1	30921-P7	. Screw - Self tapping, 1/2 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Speed Graphic	2	.01
-2	30921-P6	. Screw - Self tapping, 3/16 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Speed Graphic	2	.01
-1 & 2	30921-P6	. Screw - Self tapping, 3/16 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Crown Graphic.	4	.01
-3	150B1-6	. Screw - Wood, 3/8 in. lg., #1 FH Brass, Ebonol	1	.01
-----***-----				
-4	Cat. #9146	. Hood Assembly.	Ref	
	31715-G2	. Frame Assembly - Without Ektalite (replace with Cat. #9280).	NP	
	Cat. #9280	. Frame Assembly - With Ektalite (less hood)	Ref	
-5	30371-P1	. Retainer.	2	.06
Attaching Part				
-6	100-2-3	. Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal (S-7)	4	.01
-----***-----				
-7	30414-P3	. Screen - Ground Glass focusing	1	1.10
-7A	30414-P4	. Screen - Ektalite	1	4.50 3.15
-8	31922-P1	. Frame - (replace with 31922-P2 plus Ektalite screen part #30414-P4).	NP	
	31922-P2	. Frame - For Ektalite	1	6.00
-9	31717-G4	. Arm Assembly - Upper	1	.90
-10	31919-P1	. Spring - Upper.	1	.25

NOTE: The Ektalite screen can be used only on Frame #31922-P2 and as a part of Frame Assembly Catalog #9280.

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Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
8-11	30473-P52	. .					Washer - Flat, 0.312 in. OD, 0.189 in. ID, 0.010 in. thick Brass, Ebonol (S-18)	1	.01
-12	31717-G3	. .					Arm Assembly - Lower	1	.90
-13	31919-P2	. .					Spring - Lower	1	.25
-14	30473-P52	. .					Washer - Flat, 0.312 in. OD, 0.189 in. ID, 0.010 in. thick Brass, Ebonol (S-18)	1	.01
	31710-G2	. .					Back Assembly - Excluding panel & hood	1	14.65
-15	‡31920-P2	. .					Slidelock - Upper	1	.95
-16	30937-P3	. .					Spring	1	.12
							Attaching Part		
-17	30939-P1	. .					Screw - Slidelock special	2	.12
							-----***----		
-18	‡31920-P1	. .					Slidelock, Lower	1	.95
-19	30937-P3	. .					Spring	1	.12
							Attaching Part		
-20	30939-P1	. .					Screw - Slidelock special	2	.12
							-----***----		
-21	30369-G2	. .					Peepsight Assembly	1	.50
							Attaching Part		
-22	30366	. .					Cap	1	.16
-23	30368	. .					Washer - Flat	1	.03
-24	104B6-4	. .					Screw - Machine, 1/4 in. lg., #6-32 OH, Brass, chrome plate	1	.10
							-----***----		
-25	31722-P2	. .					Strip - Light seal	2	.10
	33836-G2	. .					Back Assembly - First	1	4.85
-26	30367	. . .					Spring	1	.07
-27	30364-P1	. . .					Plate	1	.04
-28	31921-P1	. . .					Back	NP	

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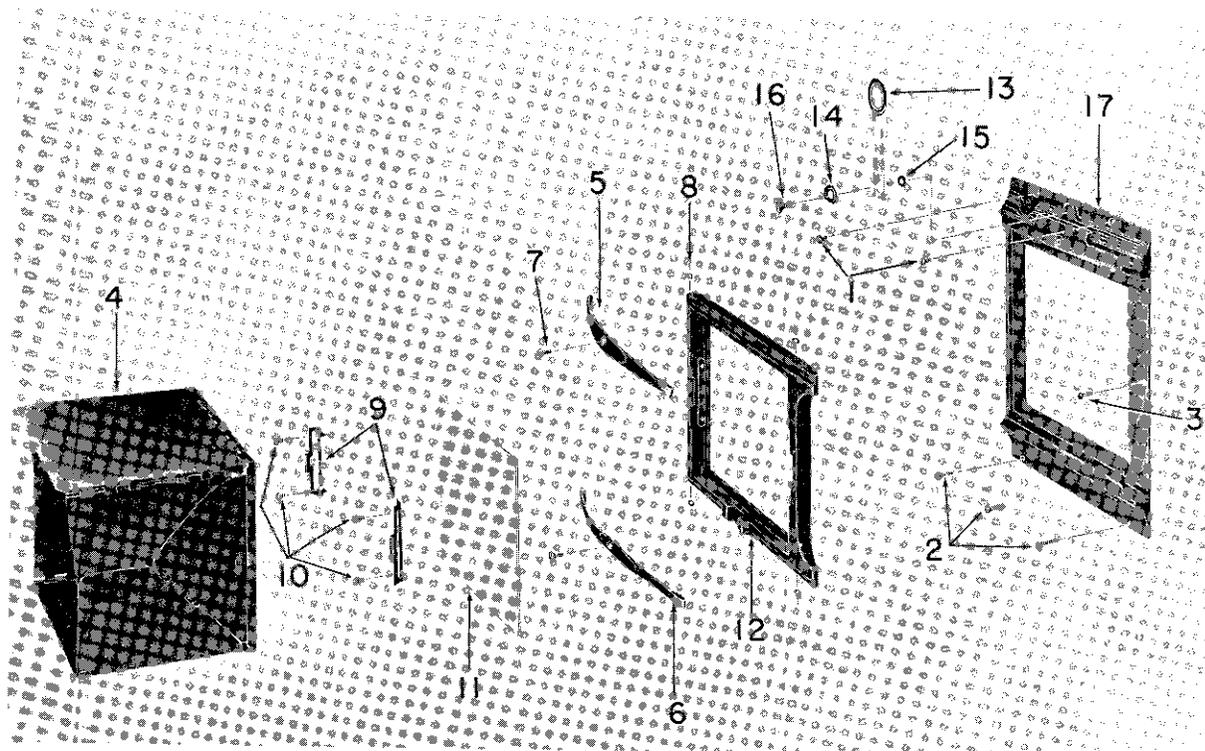


Figure 9. Graphic Back

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30313-G2						Back Complete - 3-1/4x4-1/4 Speed Graphic (See Figure 1-22)	NP	Obsolete
	30313-G6						Back Complete - 3-1/4x4-1/4 Crown Graphic	NP	Order Graflok
							Attaching Part		
9-1	30921-P6	.					Screw - Self tapping, 3/16 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Speed	2	.01
-2	30921-P7	.					Screw - Self tapping, 1/2 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Speed	2	.01
-1 & 2	30921-P6	.					Screw - Self tapping, 3/16 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Crown	4	.01
-3	150B1-6	.					Screw - Wood, 3/8 in. lg., FH Brass, Ebonol (S-18) for Speed and Crown	1	.01
							---***---		
-4	Cat. #9146	.					Hood Assembly	Ref	
-5	30415-G7	.					Spring Assembly - Focusing frame, top	1	.48
-6	30415-G8	.					Spring Assembly - Focusing frame, bottom	1	.48
							Attaching Part		
-7	31270-P1	.					Screw - Sems unit fastener (washer with screw, 5/16 in. lg., #4-40)	2	.03
-8	30473-P1	.					Washer - Flat, focusing frame spring, 5/32 in. OD, 0.067 in. ID, 0.005 in. thick Brass, (Ebonol (S-18))	2	.01
							---***---		
	30405-G8	.					Frame Assembly Complete - Focusing (with Ektalite)	1	10.50
	30405-G6	.					Frame Assembly Complete - Focusing (without Ektalite)	1	6.00
-9	30371-P1	.					Retainer - Hood Assembly	2	.07
							Attaching Part		
-10	100-2-3	.					Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal (S-7)	4	.01
							---***---		

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Group Assembly Parts List

Figure and Index No.	Part Number	Nomenclature					Units per Assembly	List Price
		1	2	3	4	5		
9-11	30414-P3	.	.	Screen - Ground glass focusing.			1	1.10
	‡30414-P4	.	.	Screen - Ektalite (not shown)			1	4.50
-12	30405-G6M	.	.	Frame Assembly - Focusing (for use with Ektalite)			1	5.00
	30405-G8M	.	.	Frame Assembly - Focusing (for ground glass only)			1	5.00
	30310-G2	.	.	Back Assembly			1	7.35
-13	30369-G2	.	.	Peepsight Assembly			1	.50
		Attaching Part						
-14	30366	.	.	Cap - Peepsight			1	.16
-15	30368	.	.	Washer - Peepsight			1	.03
-16	104B6R4	.	.	Screw - Machine, 1/4 in. lg., #6-32 OH Brass, Chrome, Phillips head			1	.04
		---***---						
	30364	.	.	Plate - Peepsight spring			1	.04
	30367	.	.	Spring - Peepsight			1	.07
-17	30311-P1	.	.	Back			NHA	

‡Note: The Ektalite Screen can be used only with Frame Assembly #30405-G8.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NHA - Next Higher Assembly

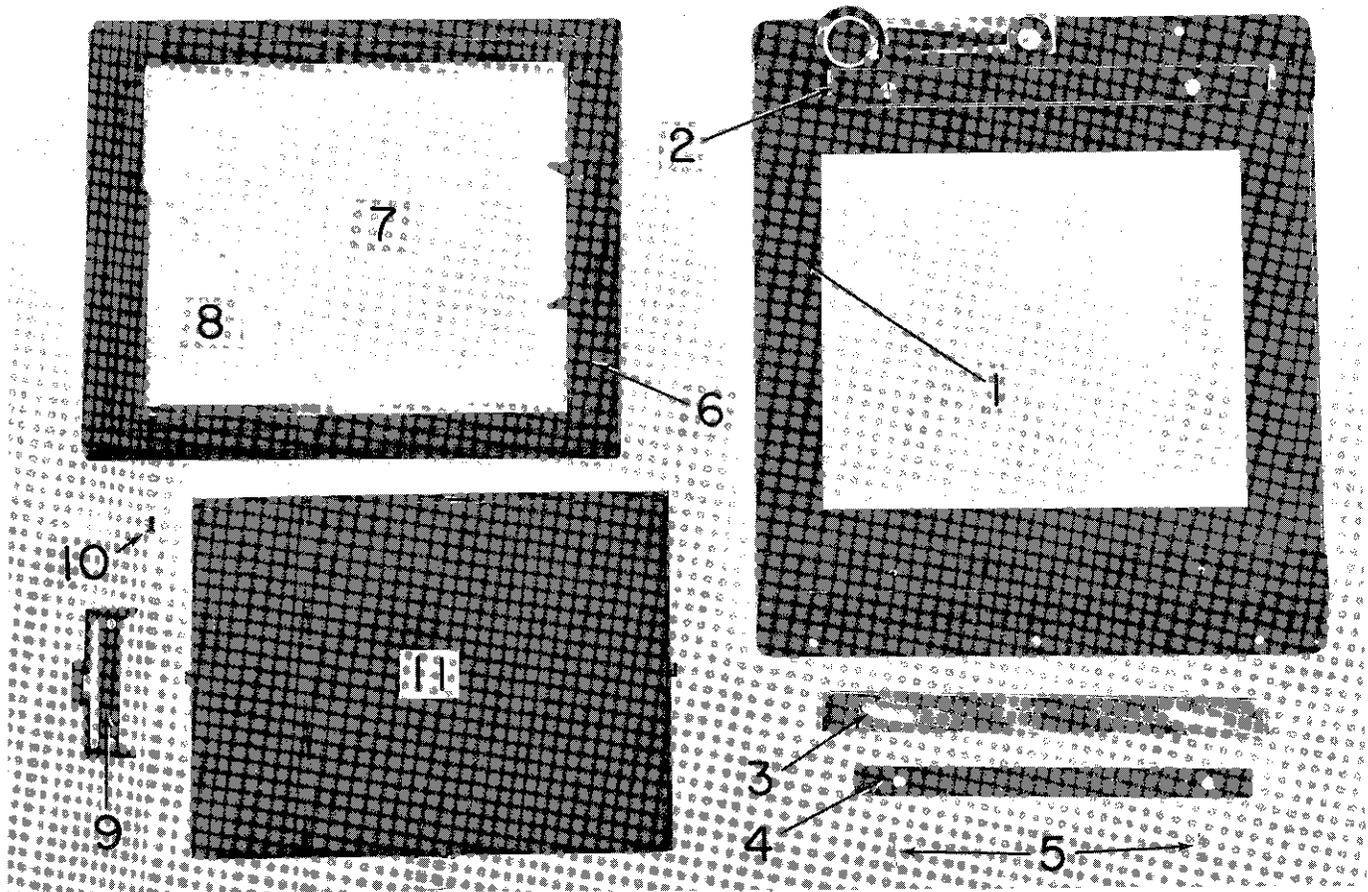


Figure 10. Graflex Back

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30927-G5						Back Complete - Graflex - 3-1/4x4-1/4 Speed Graphic, excluding panel & hood	Ref	
	30927-G2						Back Complete - Graflex - 3-1/4x4-1/4 Crown Graphic, excluding panel & hood	Ref	
							Attaching Part		
	30921-P6						. Screw - Self tapping, 3/16 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Speed Graphic	2	.01
	30921-P7						. Screw - Self tapping, 1/2 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Speed Graphic	2	.01
	30921-P6						. Screw - Self tapping, 3/16 in. lg., #2 O Bind H, Steel, Jetal (S-7) for Crown Graphic.	4	.01
10-1	30929-P1 30930-P1						. Back	1	5.65
-2	30938-P1						. Slidelock - Top	1	1.00
-3	30938-P2						. Slidelock - Bottom	1	1.00
-4	30937-P1						. Spring - Slidelock	2	.40
							Attaching Part		
-5	30939-P1						. Screw - Slidelock	4	.12
							†30369-G2 . Peepsight Assembly.	1	.50

†NOTE: See Figure 8 for these parts.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Figure and Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price	
		Attaching Part								
	†30366	.	Cap.					1	.16	
	†30368	.	Washer - Flat.					1	.03	
	104B6R4	.	Screw - Machine, 3/16 in. lg., #6-32 OH Phillips drive, Brass, Chrome plate					1	.04	
		-----***-----								
	†30367	.	Spring - Peepsight.					1	.07	
	†30364	.	Plate - Peepsight spring.					1	.04	
	30934-G2		Panel Complete - Graflex focusing, without Ektalite, including hood.					NP	Order Cat. #9045	
	Cat. #9045		Panel Complete - Graflex focusing, with Ektalite, including hood.					Ref		
	30932-P1	.	Frame - Focusing - for use without Ektalite (replace with part #30932-P2).					NP		
10-6	30932-P2	.	Frame - Focusing - for use with Ektalite					1	5.00	
-7	30414-P3	.	Screen - Focusing.					1	1.10	
-8	*30414-P4	.	Screen - Ektalite.					1	4.50	
-9	30371-P1	.	Retainer - Hood Assembly					2	.07	
		Attaching Part								
-10	100-2-3	.	Screw - Retainer.					4	.01	
		-----***-----								
-11	Cat. #9146	.	Hood Assembly.					Ref		

*NOTE: The Ektalite screen can be used only on Frame part #30932-P2 and as a part of Focusing Panel, Cat. #9045

†NOTE: See Figure 8 for these parts.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

Section 5
Standard Hardware

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
<u>Standard Screws</u>						
100-2-3	S-7	Holds ground glass retainer to back frame	8-6 9-10 10-10	4 4 4	#2-56 FH 3/16"	.20
100B2-4	S-18	Holds yoke guide to bed	6-2	8	#2-56 FH 1/4"	.20
101B4-9	S-18	Holds Graflite encircling bracket to camera	1-5	2	#4-48 FH 9/16"	.20
102B3-4	S-18	Holds bed latch into case	7-22	2	#3-48 RH 1/4"	.20
102-2-5		Holds shift slide in place	4-9	1	#2-56 RH 5/16"	.20
104B1-3	L-26	Holds shutter plate to camera	2-2	4	#1-64 OH 3/16"	.20
104-4-3	Chrome	Graflite mounting bracket	1-	3	#4-40 OH 3/16"	.20
104B6-4	Chrome	Holds peepsight to camera back	8-24	1	#6-32 OH 1/4" Phillips	.40
104B6R4	Chrome	Holds peepsight assembly to back	10- 9-16	1 1	#6-32 OH 1/4" Phillips	.60
104B6R8	Chrome	Handle bracket screw	7-16	2	#6-32 OH 1/2" Phillips	.80
107-2-2	Chrome	Holds manual trip arm to manual trip rod	1-17	1	#2-56 O Fil H 1/8"	.20
110-2-2	Chrome	Holds objective lens cap to viewfinder housing	10-	2	#2-56 SS Bind H 1/8"	.20
110B2-4		Holds governor mechanism together	4-15A	2	#2 SS Bind H 1/4"	.40
110B3R3	S-18	Rangefinder mounting	1-8	2	#3-48 SS Bind H 3/16" Phillips	.20
150B0-3	S-18	Holds long switch contact in place Secures curtain guides	7- 2-	4 6	#0 FH 3/16"	.20
150B1-3		Holds shift slide spring to case	7-30	1	#1 FH 3/16"	.20
150B1-6	S-18	Holds body release plate assembly to case Holds back to case for Graphic and Graflok backs	7-32 8-3 9-3	6 1 1	#1 FH 3/8"	.20
150B1-8		Holds shutter mechanism to camera	2-8	4	#1 FH 1/2"	.20
150B2-3	S-18	Holds top back mounting lug in place Holds bed brace plates in place	7- 2-26	4 4	#2 FH 3/16"	.20
150B2-4	S-18	Holds bed brace plates in place Holds side tripod socket to case	2-27 7-35B	8 3	#2 FH 1/4"	.20
150B2-8	S-18	Holds blocks to contact frame	2-14	4	#2 FH 1/2"	.20
150B2-12		Holds frame assembly to camera	2-	4	#2 FH 3/4"	.40
151-1-3	S-7	Holds end of body cable release spring	2-18	2	#1 RH 3/16"	.20
151-2-3	P-21	Anchors end of cable release in place	2-19	1	#2 RH 3/16"	.20

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Standard Hardware

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
151B0-2		Holds contacts to body	7-28	2	#0 RH 1/8"	.20
151B1-3		Holds contacts to contact frame	2-	2	#1 RH 3/16"	.20
151B2-4	S-18	Holds bottom tripod socket to case	7-35E	3	#2 RH 1/4"	.20
152B1-8	L-26	Holds shutter plate to camera	2-3	2	#1 OH 1/2"	.20
152B4-8	S-18	Holds Graflite encircling bracket to camera	1-3	2	#4 OH 1/2"	.20
152B4-10	S-18	Holds Graflite encircling bracket to camera	1-4	1	#4 OH 5/8"	.20
152B1R4	Chrome	Holds body release plate in place	7-2	2	#1 OH 1/4" Phillips	.40
152B2R4	Chrome	Holds rear curtain bearing in place	7-18	AR	#2 OH 1/4" Phillips	.40
170D3-3	P-15	Adjusts tension on pinion pad	6-12A	1	#3-48 slotted headless set 3/16"	.20
30921-P6	S-7	Holds back to case on Crown	8-2	4	#2 Self tapping Pan H	.20
			9-1 & 2	4		
			10-	4		
		Top screws that hold back to camera case on Speed	8-2	2		
			9-2	2		
			10-	2		
30921-P7	S-7	Bottom screws that hold back to camera case on Speed	8-1	2	#2 Self tapping Pan H	.20
			9-1	2		
			10	2		
<u>Special Screws</u>						
30187-P1		Holds escapement to shutter plate	4-2	2		1.20
30213-P1		Holds shutter mechanism to camera	2-5	1		.60
30401-P1		Slidelock screw	5-8	4		1.20
30543-P1		Front standard tilt locking screw	5-24	2		4.80
30661		Infinity stop (rear)	1-19A	2	pointed	.40
30662		Infinity stop	1-19B	2	flat point	.40
30749-P1		Holds body release plate in place	7-3	2	special	1.20
30776		Rangefinder mounting	1-11	1		.80
30819		Index and focus scale	1-14	4		.20
30830	Chrome	Holds rangefinder bracket assembly to yoke case section	6-7B	2		.80
30939-P1		Holds slidelock to camera back	8-17	2	special	2.40
			8-20	2		
			10-5	4		
30949		Holds end of cable release to body release	2-20	1		.20

Section 5
Standard Hardware

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
31089-P4		Holds yoke guide to bed	6-2	2	Special 1/4" #2-56 Bind H	.20
31134	S-18	Rangefinder mounting	1-7	2		.20
31238		Holds curtain pressure spring to back	9-16	2		.20
31246-P2		Yoke lock lever limiting screw	6-3	1	Special Fil H	.20
31270-P1		Holds focusing frame spring to camera back	9-7	2		.40
31925-P2		Yoke guide case screw	2-28	4		.40
<u>Nuts</u>						
200-2H		Holds governor mechanism together	4-15B	2		.20
200-3S		Holds case foot in place	7-34	4		.40
30375-P1		Nut for handle bracket	7-15	2		1.00
30377-P1		Nut for slidelock screw	5-9	4		.60
30440-P1		Front standard eccentric nut	5-25	2		3.60
30553-P1		Front standard lever assembly lock nut	5-27	1		1.00
30843-P1		Cable release nut for manual trip rod	5-4A	2		1.60
<u>Washers</u>						
221-2		Washer for 102-2-5	4-10	1		.20
		Lock washer for Nut 200-2H that holds governor mechanism together	4-15C	2		
		Washer for part 102B2-4	7-	2		
221-3		Lock washer for part 102B3-4	7-22	1		.20
30358		Receptacle washer	3-3	1		.20
30368		Peepsight washer	8-23	1		.40
			9-15	1		
			10-	1		
30473-P1		Washer for focusing frame spring screw	9-8	2		.20
30473-P2		Washer for slidelock screw	5-10	4		.20
30473-P6		Front frame clamp washer	5-3	2		.20
30473-P7		Washer for front standard locking screw	5-23	2		.20
30473-P9		Washer for front standard locking screw	5-31	1		.40
30473-P11		Yoke lock lever washer	6-5	AR		.20
30473-P15		Curtain & rollers washer	2-10	1		.20
30473-P20		Washer for slidelock screw	5-11	4		.20

PACEMAKER GRAPHIC "34"
SPEED & CROWN

Section 5
Standard Hardware

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
30473-P22		Front standard tilt locking washer	5-24	4		.20
30473-P24		Curtain & rollers washer	2-10	AR		.20
30473-P36		Graflite mounting bracket	1-	3		.20
30473-P44		Washer for part 102B3-4	7-23	2		.20
30473-P52		Graflok back, panel, arm washer	8-11 8-14	1 1		.20
30540-P1		Washer for front standard locking lever	5-32	1		.40
30540-P3		Washer for slidelock screw	5-12	4		.40

Finish Code

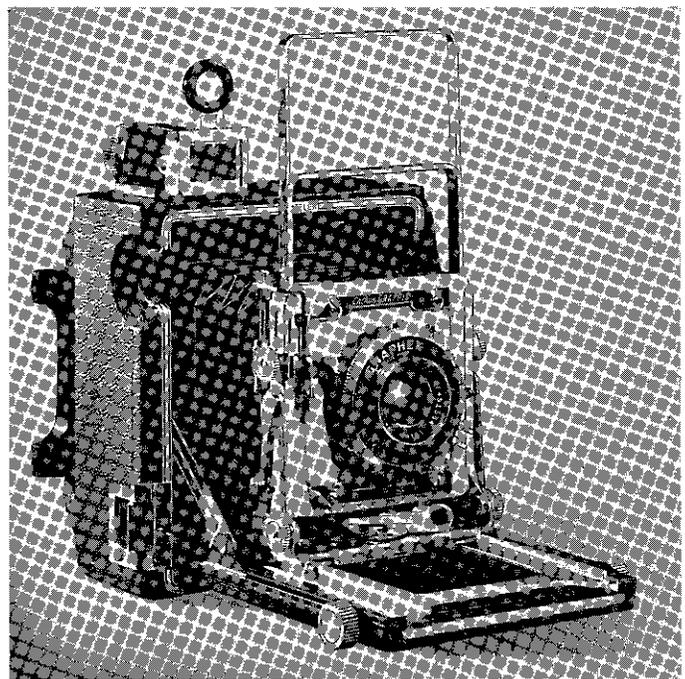
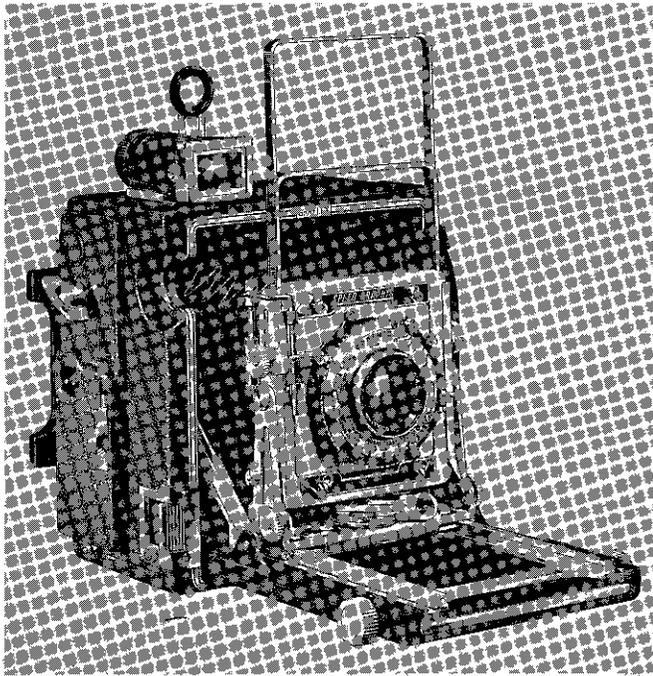
L-26 Black wrinkle
P-15 White nickel
P-21 Cadmium
S-7 Jetal
S-18 Ebonol

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.

State quantity. Prices subject to change without notice.

"23"

**PACEMAKER. SPEED & CROWN GRAPHIC
PARTS LIST**



GRAFLEX, INC.
Rochester 8, New York

TABLE OF CONTENTS FOR SECTION 4

Maintenance text for the "23" Pacemaker Speed and Crown Graphic is contained in Section 6.

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PARTS LIST

The Group Assembly Parts List is listed in disassembly order. The list divides the components into major assemblies, their subassemblies and parts. By the use of indented columns, the relationship of the assemblies to the subassemblies and parts is obtained.

The column titled "Figure and Index No." contains the index number in disassembly order of the items illustrated. Do not use the figure or index number in correspondence. . . specify the catalog or part number and name.

The column titled "Part Number" contains the Graflex part and drawing number, or the catalog number of the item listed.

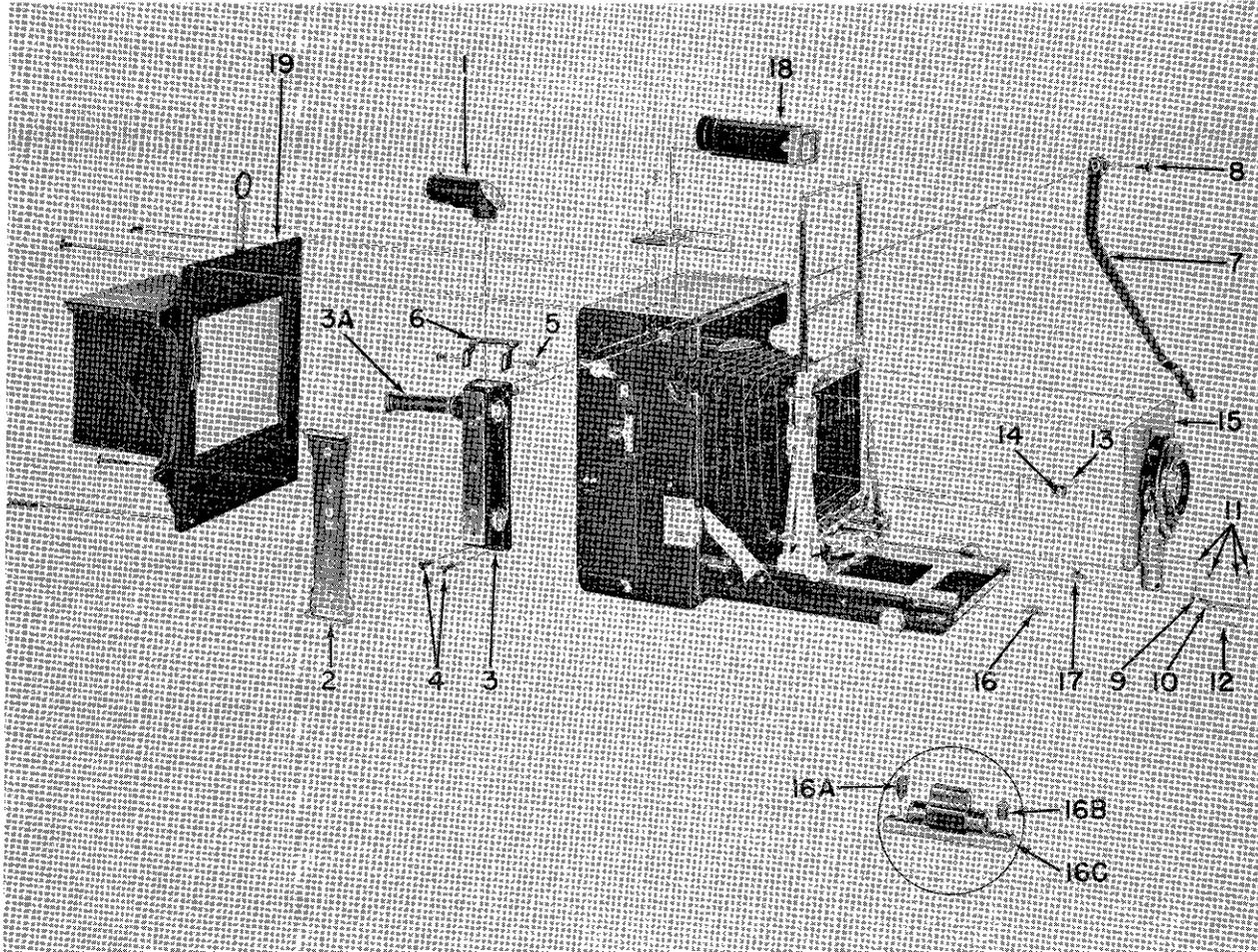
The column titled "Nomenclature" (including numbered columns) lists item nomenclature on the Graflex drawing. In this column the relationship of the item listed to the final assembly is indicated. If the nomenclature begins in the column marked "4", this item will be a component of the first assembly above which precedes it in the column marked "3". The assembly in the column marked "3" will be a component of the first assembly which preceded it in the column marked "2" etc.

The column titled "Units per Assy." lists the quantity required at that assembly. . . it is not necessarily the total. When the quantity figure is omitted, the code "AR" or "NP" will appear. The code "AR" is used for bulk items when an indefinite amount may or may not be used "as required". The code "NP" is used for items that are part of a riveted assembly and the next higher assembly should be ordered as these parts are "not procurable".

The column titled "List Price" contains the list price for each item. The prices listed are for one item, not the quantity listed in the preceding column. When the price is omitted, the code "NP" will indicate that this part is "not procurable" and that the next higher assembly should be ordered.

INTRODUCTION

This section of the Graflex Service Parts Manual covers the Pacemaker Speed and Crown Graphic "23". The text and illustrations are aimed at the Speed Graphic; however, similar parts found on the Crown Graphic are handled in a like manner. The Parts List illustrates and indexes the Speed Graphic, similar parts for the Crown Graphic follow immediately in the list. REFER TO PART NUMBER, NOT INDEX NUMBER, IN CORRESPONDENCE AND ORDERS.



**Figure 1. Camera Complete

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
Camera - Pacemaker Speed Graphic "23"									
1-1	No number	.	.	.	.	.	Focuspot Assembly	1	See Price List
Battery Case Mounting									
-2	Cat. #2754	.	.	.	.	.	Bracket - Battery Case Mounting and attaching parts.	1	See Price List
	31114-P1	.	.	.	.	.	Bracket - Outer	NHA	
	31037-P1	.	.	.	.	.	Insulation	NHA	

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

NHA - Next Higher Assembly

**"45" Pacemaker Graphic illustrated to show assembly of parts.

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Group Assembly Parts List

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
Attaching Part									
	104-4-3	.	.	Screw - Machine, 3/16 in. lg., #4-40 OH Steel, Chrome plate				1	.01
	104-4-5	.	.	Screw - Machine, 5/16 in. lg., #4-40 OH Steel, Chrome plate				2	.01
	30473-P35	.	.	Washer - Flat, 0.500 in. OD, 0.218 in. ID, 0.062 in. thk Steel, Ebonol.				2	.01
	30473-P36	.	.	Washer - Flat, 0.250 in. OD, 0.115 in. ID, 0.025 in. thk Armit paper.				3	.01
Range finder Mounting									
1-3		.	.	Range finder less attaching parts				Ref	
-3A	No number	.	.	Eyepiece - rubber extension.				Ref	
-4	31134	.	.	Screw - Special, 0.218 in. lg., #2-56 OH Brass, Ebonol.				2	.01
-5	110B3R3	.	.	Screw - Machine, 3/16 in. lg., #3-48 SS Bind H, Phillips, Brass, Ebonol.				2	.01
-6	30777-P1	.	.	Bracket - Range finder mounting				1	.95
-7	30800-G1	.	.	Arm Assembly - Range finder				1	1.50
Attaching Part									
-8	30776	.	.	Screw - Set, Range finder, 1/4 in. lg., #5-40 Hex H, hanger point				1	.06
-9		.	.	Scale - Focusing, uncalibrated. (Note: Calibrated scales are not procurable separately - they must be matched to actual lens focal length.)				Ref	See Section 101
-10	30817-P	.	.	Scale - Index, blank				Ref	See Section 101
Attaching Part									
-11	30819	.	.	Screw - Index and focusing scale.				4	.01
-12	30815	.	.	Plate - Index scale clamp				1	.10
-13	31099-P2	.	.	Arm - Manual trip #2 shutter - 2-1/4x3-1/4 Graphic				1	.35
	31099-P1	.	.	Arm - Manual trip #1 shutter - 2-1/4x3-1/4 Graphic				1	.35
-14	107-2-2	.	.	Screw - Machine, 1/8 in. lg., #2-64 O Fil H, Steel, Chrome plate				1	.01
-15		.	.	Lensboard & Shutter				Ref	
-16&17	30655-G1	.	.	Stop Assembly Complete - Infinity (See Figure 6)				Ref	
-16A	30661	.	.	Screw - Infinity stop - pointed (rear)				Ref	
-16B	30662	.	.	Screw - Infinity stop - flat				Ref	
-16C	30665-P1	.	.	Stop Assembly - Infinity				Ref	
-18	30700-G1	.	.	View finder Complete (See Figure 11)				Ref	
-19	30313-G1	.	.	Back Complete - 2-1/4x3-1/4 Graphic (See Figure 9), Excluding panel and hood, for Speed				Ref	Obsolete - order Graflok
	30313-G5	.	.	Back Complete - 2-1/4x3-1/4 Graphic, Excluding panel and hood, for Crown.				Ref	
	30927-G6	.	.	Back Complete - 2-1/4x3-1/4 Graflex (See Figure 10) Excluding panel and hood, for Speed				Ref	
	30927-G3	.	.	Back Complete - 2-1/4x3-1/4 Graflex, Excluding panel and hood, for Crown				Ref	
	31709-G22	.	.	Back Complete - 2-1/4x3-1/4 Graflok (See Figure 8), for Speed				Ref	
	31709-G23	.	.	Back Complete - 2-1/4x3-1/4 Graflok, for Crown				Ref	

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

PACEMAKER GRAPHIC "23"
SPEED & CROWN

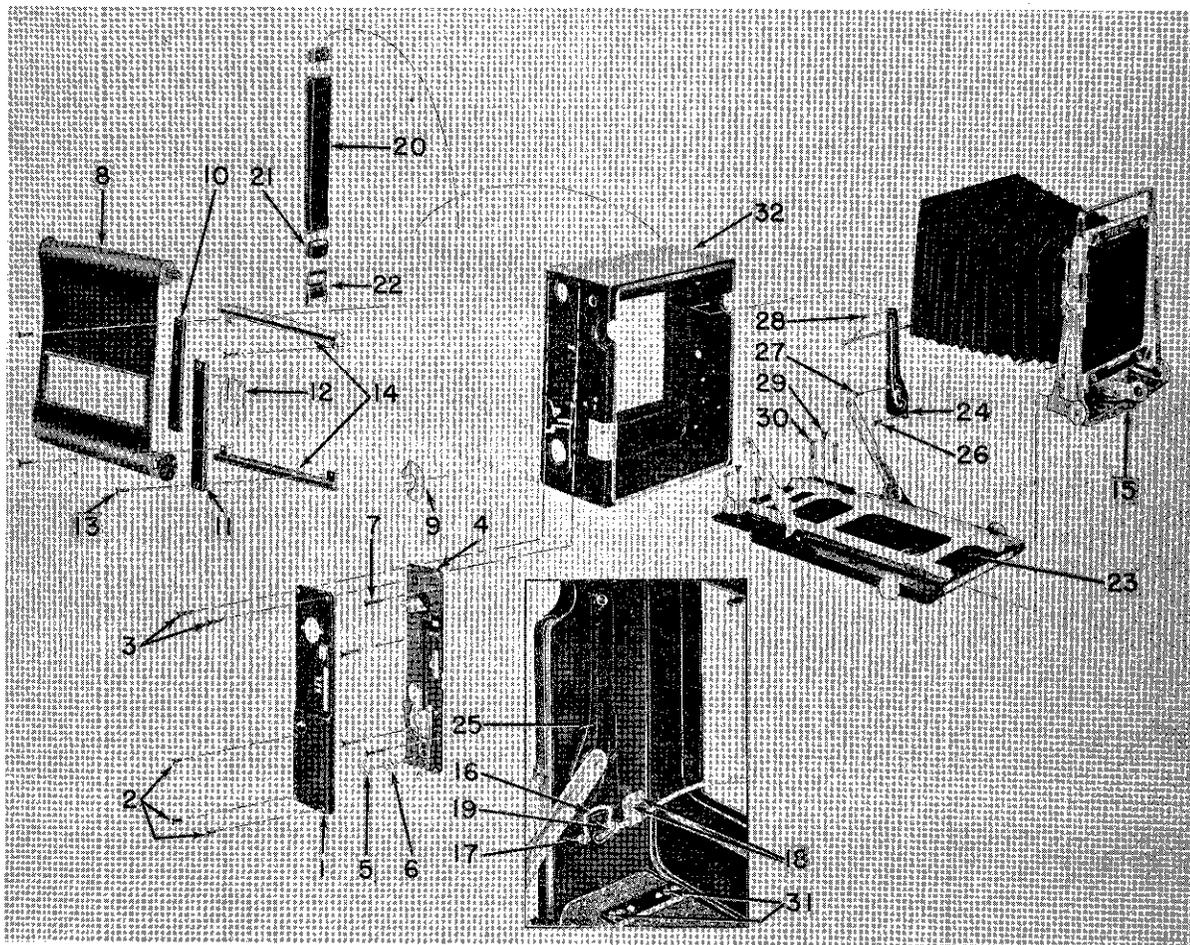


Figure 2. Basic Camera

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30654-G3						Camera - Basic 2-1/4x3-1/4 Speed Graphic (See Figure 20) . . .	Ref	
	30751-G3						Camera - Basic 2-1/4x3-1/4 Crown Graphic.	Ref	
2-1	30351-G3						. Cover Assembly - Shutter plate (See Figure 3)	1	2.25
							Attaching Part		
-2	104B1-4(L26)						Screw - Machine, 3/16 in. lg., #1-64 OH Brass, (L-26 finish - head only)	3	.01
-3	152B1-8(L26)						Screw - Wood, 1/2 in. lg., #1 OH Brass, (L-26 finish - head only)	2	.01

-4	30652-G1						. Plate Assembly - Shutter mechanism (See Figure 4)	1	24.50
							Attaching Part		
-5	30213-P1						. Screw - Shaft retainer	1	.05
-6	30212-P1						. Retainer - Tension shaft.	1	.02
-7	150B1-8						. Screw - Wood, 1/2 in. lg., #1 FH Brass	4	.01

-8	30350-G3						. Curtain & Rollers Complete	1	13.25
							Attaching Part		
-9	30698						. Seal - Tension roller (on older models)	1	.05
	30473-P15						. Washer - Flat, 0.287 in. OD, 0.147 in. ID, 0.010 in. thk brass	AR	.01
	30473-P24						. Washer - Flat, 0.287 in. OD, 0.147 in. ID, 0.020 in. thk brass	AR	.02

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
AR - As Required

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Group Assembly Parts List

Figure & Index No.	Part Number	1 2 3 4 5	Nomenclature	Units per Assembly	List Price
	30211-G2	. .	Roller Assembly - Tension	1	4.25
	30196-G1	. .	Roller Assembly - Gear	1	3.25
	30409-G3	. .	Curtain Assembly.	1	5.00
	30555	. . .	Contact curtain.	3	.05
	30880	. .	Bearing - Roller (For replacement use 30192-P1 or P2)	NP	
	30192-P1	. .	Bearing - Roller (Selected fit) 0.359 in. lg., (See Figure 7-17) (For replacement of 30880 only)	AR	.60
	30192-P2	. .	Bearing - Roller (Selected fit) 0.389 in. lg., (See Figure 7-17) (For replacement of 30880 only)	AR	.60
	Attaching Part				
	152B2R4	. .	Screw - Wood, 1/4 in. lg., #2 OH, Phillips drive, Brass, Chrome (See Figure 7-18)	6	.01

	30885-G1	. .	Frame and Contact Assembly (not shown)	1	5.00
	Attaching Part				
	150B2-12	. .	Screw - Wood, 3/4 in. lg., #2 FH Brass	4	.02

	30760-G1	. .	Frame (not shown)	1	3.45
2-10	30577-P1	. .	Block - left	1	.35
-11	30886-P1	. .	Block - right	1	.35
-12	30573	. .	Contact - Spring finger	2	.04
	Attaching Part				
-13	150B2-8	. .	Screw - Machine, 1/2 in. lg., #2 FH Brass, Ebonol	4	.01

-14	30634-P1	. .	Guide - Curtain	2	.20
	Attaching Part				
	150B0-3	. .	Screw - Wood, 3/16 in. lg., #0 FH Brass, Ebonol	6	.01

	30889-P1	. .	Contact - Long.	1	.10
	30890	. .	Contact - Frame	1	.05
	Attaching Part				
	151B1-3	. .	Screw - Wood, 3/16 in. lg., #1 RH Brass	2	.01

-15	30538-G5	. .	Standard Complete - Front (See Figure 5) Speed Graphic	1	33.35
	30538-G6	. .	Standard Complete - Front - Crown Graphic	1	33.35
	Attaching Part				
-16	31189	. .	Spring - Cable release, Speed Graphic only	1	.20
-17	150B1-3	. .	Screw - Wood, 3/16 in. lg., #1 FH Steel, Cadmium plate, Speed Graphic only	1	.01
-18	151-1-3	. .	Screw - Wood, 3/16 in. lg., #1 RH Steel, Cadmium plate	2	.01
-19	30949	. .	Screw - Cable, special.	1	.01
	30473-P25	. .	Washer - Flat, black screw, 0.281 in. OD, 0.093 in. ID, 0.012 in. thk steel.	1	.01

-20	30757-G2M	. .	Handle Assembly.	1	2.75
	30757-G2	. .	Handle Complete	1	1.50
-21	30738-P1	. .	Loop - Strap	2	.04
-22	30305-G1	. .	Snap Assembly - Handle	1	1.15
-23	30621-G1	. .	Bed Complete (See Figure 6)	1	33.35
	Attaching Part				
-24	31750-P3	. .	Plate - left, Bed brace.	1	.45
-25	31750-P4	. .	Plate - right, Bed brace.	1	.45
-26	100B3-2	. .	Screw - Machine, right side, 1/8 in. lg., #3-48 FH Brass	1	.01
	‡150B2-3	. .	Screw - Wood, right side, 3/16 in. lg., #2 FH Brass	1	.02
	100B3-3	. .	Screw - Machine, left side, 3/16 in. lg., #3-48 FH Brass	1	.01
	‡150B2-4	. .	Screw - Wood, left side, 1/4 in. lg., #2 FH Brass	1	.02
-27	112-3R2	. .	Screw - Machine, right side, 1/8 in. lg., #3-48 O Bind H, Phillips	1	.01
	‡150B2-3	. .	Screw - Wood, right side, 3/16 in. lg., #2 FH Brass	1	.02

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable
AR - As Required

Section 4
Group Assembly Parts List

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Figure & Index No.	Part Number	Nomenclature	Units per Assembly	List Price
	112B3R3	. Screw - Machine, left side, 3/16 in. lg., #3-48 O Bind H, Phillips	1	.01
	‡150B2-4	. Screw - Wood, left side, 1/4 in. lg., #2 FH Brass	1	.02
2-28	112B3R6	. Screw - Machine, right side, 3/8 in. lg., #3-48 O Bind H, Phillips	1	.01
	112B3R3	. Screw - Machine, left side, 3/16 in. lg., #3-48 O Bind H, Phillips	1	.01
	‡150B2-4	. Screw - Wood, right and left side, 1/4 in. lg., #2 FH Brass . . .	2	.02
-29	150B2-4(S18)	. Screw - Wood, 1/4 in. lg., #2 FH Brass, Ebonol	2	.02
-30	31925-P2	. Screw - Yoke guide case.	4	.03
-31	170D5-2(S7)	. Screw - Set, 1/8 in. lg., #5-40 slotted, Flat point, Steel, Jetal	4	.05
	-----***-----			
-32	30559-G3	. Case Complete, Speed Graphic (See Figure 7)	Ref	
	30559-G6	. Case Complete, Crown Graphic	Ref	

‡Used on older model cameras without inserts for machine screws.

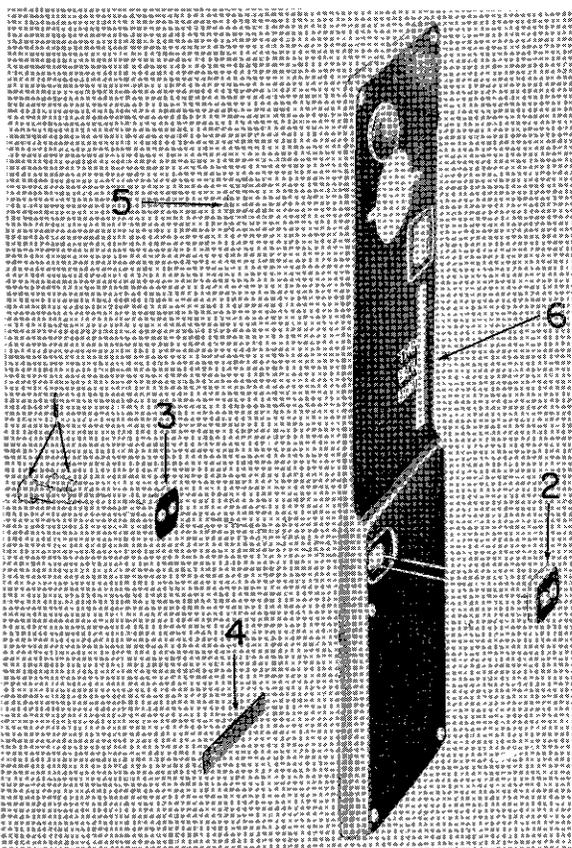


Figure 3. Shutter Cover Plate

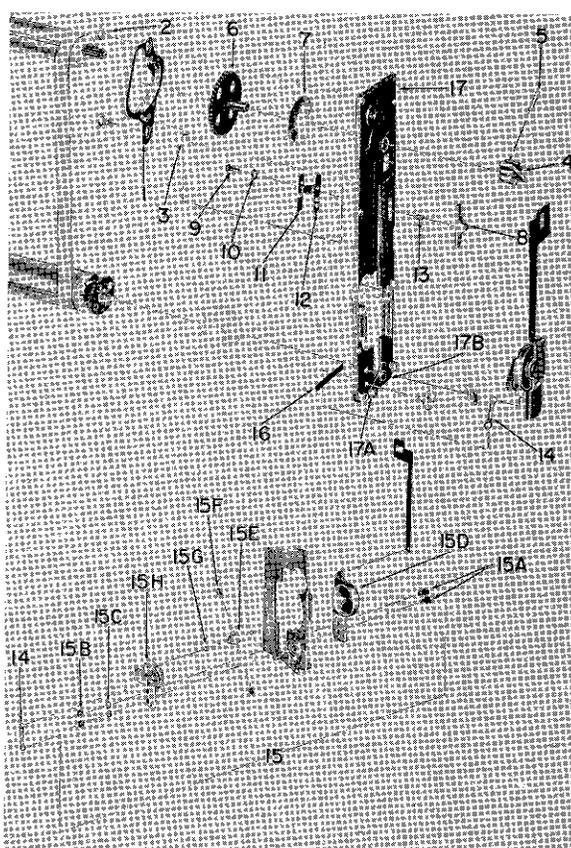


Figure 4. Shutter Plate

	30351-G3	Cover Assembly - Shutter Plate (See Figure 2-1).	Ref	
3-1	30359-P1	. Stud - Receptacle contact	2	.10
-2	30357-	. Insulator - Receptacle	1	.05
-3	30358	. Washer - Receptacle	1	.05
-4	30846	. Seal - Dust.	1	.05
-5	30356	. Window - Shutter plate	1	.10
-6	30355-P1	. Cover - Shutter plate	NP	

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Figure & Index No.	Part Number	1 2 3 4 5	Nomenclature	Units per Assembly	List Price
SHUTTER PLATE					
	30652-G1		Plate Assembly - Shutter mechanism (See Figure 2-4)	Ref	
4-1	30185-G1		. . . Escapement Assembly	1	.65
			Attaching Part		
-2	30187-P1		. . Screw - Escapement	2	.08

-3	30186		. . Spring - Escapement	1	.04
	30652-G3N		. . Winding key and master gear assembly	1	4.60
-4	30681-G1		. . Key Assembly - Winding	1	.95
			Attaching Part		
-5	30663-P1		. . Pin - Taper - std #5/0, 0.092 in. dia x 7/16 in. lg., Stain- less Steel	1	.01

-6	30513-G1		. . Gear Assembly - Master	NP	
-7	30504-P1		. . Dial - Shutter	1	.60
-8	30297-P1		. . Slide - Shift	1	.40
			Attaching Part		
-9	102-2-7		. . Screw - Machine, 7/16 in. lg., #2-56 RH Steel	1	.01
-10	221-2(S7)		. . Washer - Lock, 3/16 in. OD, 0.086 in. ID, 0.012 in. thk Steel, Jetal	1	.01

-11	30303-P2		. . Spring - Shift slide	1	.15
-12	30300-P1		. . Plate - Shift slide	1	.50
-13	30298-P2		. . Spacer - Shift slide	1	.04
-14	30340		. . Spring - Governor	1	.05
-15	30459-G2		. . Governor Complete	1	8.80
-15A	110B2-4		. . Screw-Dowel, 1/4 in. lg., #2-56 SS Bind H, Brass	2	.02
-15B	200-2H(S7)		. . Nut - Machine. #2-56 Hex, Brass, Jetal	2	.01
-15C	221-2 (S7)		. . Washer - Lock, 3/16 in. OD, 0.086 in. ID, 0.012 in. thk Steel, Jetal	2	.01
	30344		. . Spacer - Governor	NP	
	30347-P1		. . Slide - Dial	NP	
			Attaching Part		
	30320-P1		. . Pin - Dial slide	NP	

-15D	30682-G1		. . Bracket Assembly - Top	NP	
-15E	30458-G1		. . Pinion Assembly - Governor	NP	
-15F	30454		. . Shoe - Governor	NP	
-15G	30473-P1		. . Washer - Flat, 5/32 in. OD, 0.067 in. ID, 0.005 in. thk Brass	NP	
-15H	30343-G1		. . Bracket Assembly - Bottom	NP	
	30335-G1		. . . Idler Assembly - Governor	NP	
	30683-G1		. . . Bracket and Bearing Assembly - Bottom	NP	
	30338		. . . Stud	NP	
	30685-P1		. . Pin	NP	
-16	30301		. . Strip - Light seal	1	.02
-17	30348-G1		. . Plate Assembly	1	5.60
-17A	30315-G1		. . Lever Assembly - Retard cam	1	.50
			Attaching Part		
-17B	30318		. . Stud	1	.03

	30184-P1		. . Post - Escapement spring	NP	
	30345-P1		. . Post - Governor spring	NP	
	30517		. . Bushing - Master gear	NP	
	30191		. . Bearing - Gear roller	NP	

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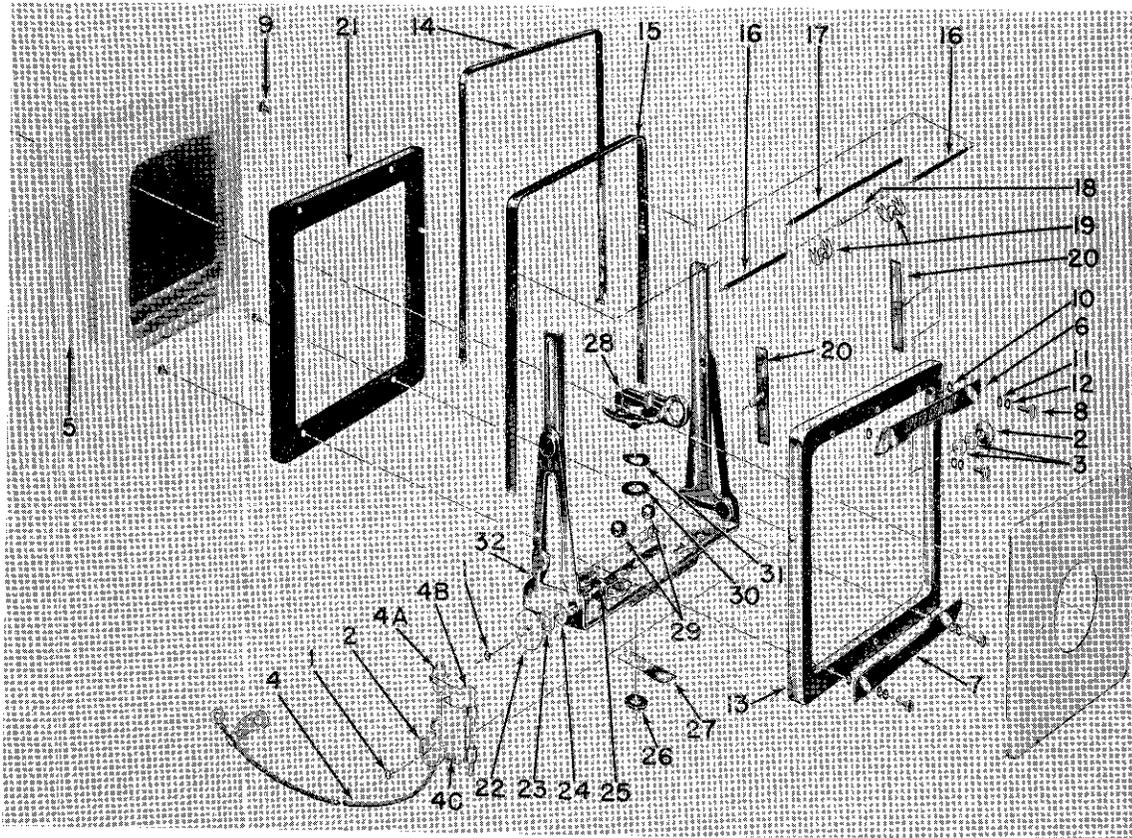


Figure 5. Front Standard

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30538-G5						Standard Complete - Front (See Figure 2-17) Speed Graphic . . .	Ref	
	30538-G6						Standard Complete - Front, Crown Graphic	Ref	
5-1	30442-P1						. Ring - Knob retaining (Obsolete - Stake threads).	NP	
-2	30444-P1						. Knob - Frame clamp	2	.25
-3	30473-P6						. Washer - Flat, 5/16 in. OD, 0.128 in. ID, 0.015 in. thk fiber	2	.01
-4	31131-G1						. Release Assembly - Cable	1	3.50
-4A	30843-P1						. . Nut - Cable release	2	.14
-4B	31097-P1						. . Rod - Manual trip.	1	.20
							Attaching Part		
-4C	31098-P1						. . Bracket - Manual trip.	1	.30

	30839-						. . Body - Cable release	1	.25
	30844-P1						. . Stem - Cable release	NP	
	30841						. . Spring - Cable.	NP	
	30840-P1						. . Bushing - Cable release	NP	
	30836-P4						. . Casing - Cable release	NP	
							Attaching Part		
	31132-P1						. . Clip - Cable release.	NP	
	30837-P4						. . Cable - release	NP	
	30857						. . Terminal - Cable release	NP	
	31133-P1						. . Arm - Cable straightener	NP	
-5	30672-G1						. Bellows Assembly.	1	11.00
	30538-G5T						. Front Standard Assembly - 2-1/4x3-1/4 Speed Graphic.	1	22.50
	30538-G6T						. Front Standard Assembly - 2-1/4x3-1/4 Crown Graphic	1	22.50

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PACEMAKER GRAPHIC "23"
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Group Assembly Parts List

Figure & Index No.	Part Number	1 2 3 4 5	Nomenclature	Units per Assembly	List Price
	30538-G5N	. . .	Frame Assembly - Front Standard 2-1/4x3-1/4 Speed Graphic	1	9.75
	30538-G6N	. . .	Frame Assembly - Front Standard 2-1/4x3-1/4 Crown Graphic	1	9.75
5-6	30472-P2	. . .	Lock - Lensboard, upper - Speed Graphic	1	.65
	30472-P3	. . .	Lock - Lensboard, upper - Crown Graphic	1	.65
-7	30472-P5	. . .	Lock - Lensboard, lower	1	.65
	Attaching Part				
-8	30401-P1	. . .	Screw - Slide lock	4	.08
-9	30377-P1	. . .	Nut - Slide lock	4	.05
-10	30473-P2	. . .	Washer - Flat, 7/32 in. OD, 0.089 in. ID, 0.010 in. thk. Stainless Steel	4	.01
-11	30473-P20	. . .	Washer - Flat, 0.203 in. OD, 0.117 in. ID, 0.010 in. thk. Stainless Steel	4	.01
-12	30540-P3	. . .	Washer - Spring, 0.203 in. OD, 0.117 in. ID, 0.031 in. thk. Stainless Steel	4	.02
	---***---				
-13	30384-P1	. . .	Frame - Outer front	1	1.40
	31923-G3	. . .	Finder Complete	1	4.50
-14	30400-G1	. . .	Finder Assembly	1	2.25
-15	30675-G1	. . .	Frame Assembly - Finder	1	2.35
-16	30378-P2	. . .	Plunger - Finder	2	.02
-17	30404-P2	. . .	Sleeve - Finder lock spring	1	.10
-18	30438	. . .	Spring - Finder	1	.05
-19	30719-P1	. . .	Bracket - Plunger	2	.05
-20	30425-G1	. . .	Plate Assembly - Front frame clamp	2	.50
-21	30387-P1	. . .	Frame - Inner front	1	.60
	30538-G5S	. . .	Standard Support Assembly Complete	1	12.75
-22	30444-P1	. . .	Knob - Support locking	2	.25
-23	30473-P7	. . .	Washer - Flat, 0.312 in. OD, 0.128 in. ID, 0.012 in. thk. fiber	2	.01
-24	30473-P10	. . .	Washer - Flat, 0.375 in. OD, 0.187 in. ID, 0.008 in. thk. Armitage paper	2	.01
-25	31735	. . .	Screw - Support locking	2	.35
-26	30553-P2	. . .	Nut - special	1	.06
-27	30439	. . .	Spring - Shift locking	1	.20
-28	30537-G2	. . .	Lever Assembly	1	1.75
-29	30539-P3	. . .	Ball - Steel, 0.250 in. dia.	2	.01
-30	30473-P13	. . .	Washer - Flat, 0.350 in. OD, 0.205 in. ID, 0.021 in. thk. Brass, Cadmium plate (P-21)	1	.02
-31	30540-P2	. . .	Washer - Spring - Lever assembly, 13/32 in. OD, 0.203 in. ID, 0.007 in. thk. 5/16 in. radius spring steel	1	.05
-32	30538-G5R	. . .	Standard Support Assembly	1	7.50

BED COMPLETE

	30621-G1	Bed Complete (See Figure 2-27) Speed & Crown Graphics	1	36.00	
6-1	30627-P1	. Guide, left - Bed section	1	.90	
	30627-P2	. Guide, right - Bed section	1	.90	
	Attaching Part				
-2	100B2-4(S18)	Screw - Machine, 1/4 in. lg., #2-56 FH Brass, Ebonol . . . (for older models)	8	.01	
	31089-P4	Screw - Machine, special, 1/4 in. lg., #2-56 Bind H, Brass, Black lacquer (for newer models)	8	.02	
	---***---				
-3	170A3-2(P15)	Screw - Special Fil H, 1/8 in. lg., #3-48 O Point, Nickel plate	1	.02	
-4	30775-G3 30475-G1	. Bracket Assembly - Range finder	1	1.00	
	Attaching Part				
-5	30830	Screw - Machine, 0.145 in. lg., #1-64 FH Brass, Chrome . . .	2	.05	
	---***---				

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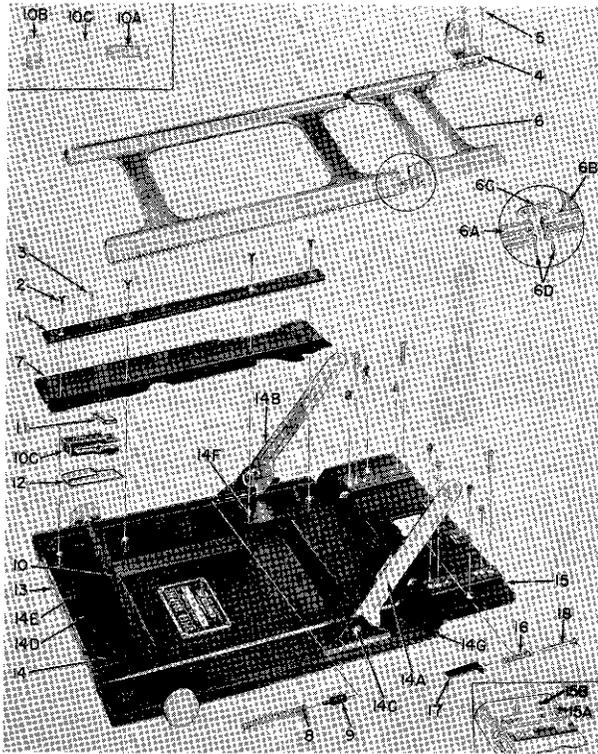


Figure 6. Bed Complete

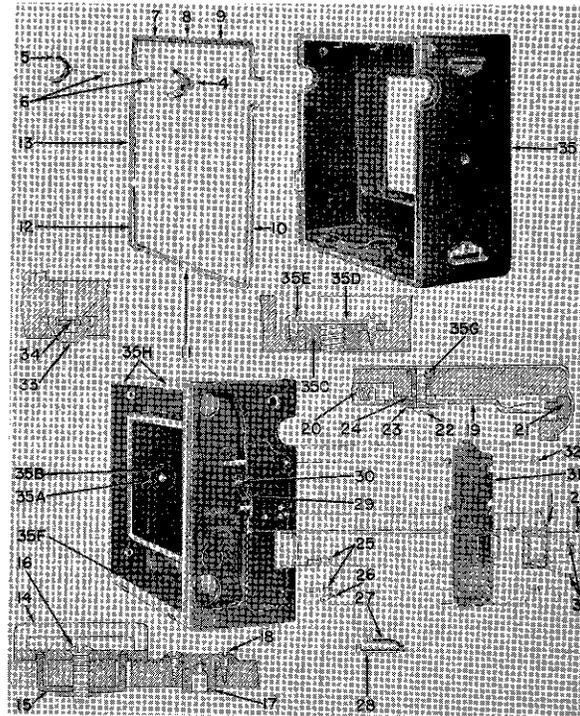


Figure 7. Case Complete

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price	
	34617-G1	.	.	.	.	.	Yoke Assembly - Complete	1	14.50
	30655-G1	.	.	.	.	.	Stop Assembly - Right, infinity (See Figure 1).	1	.60
	30655-G2	.	.	.	.	.	Stop Assembly - Left, infinity (See Figure 1).	1	.60
	30661	.	.	.	.	.	Screw - Infinity stop - pointed (rear)	1	.02
	30662	.	.	.	.	.	Screw - Infinity stop - flat	1	.02
	30655-P1	.	.	.	.	.	Stop Assembly - Infinity	1	.60
	30817-P3	.	.	.	.	.	Scale - Index	1	.10
	30815	.	.	.	.	.	Plate - Index scale	1	.10
	Attaching Part									
	30819	.	.	.	.	.	Screw - Scale	2	.01
	---***---									
6-6	30596-G1	.	.	.	.	.	Yoke Assembly	1	13.50
-6A	30599-P1	.	.	.	.	.	Yoke - Bed section	NP	
-6B	30601-P1	.	.	.	.	.	Yoke - Case section	NP	
	30605	.	.	.	.	.	Pin - Front standard stop	1	.01
-6C	30602	.	.	.	.	.	Link - Yoke	2	.10
-6D	30603	.	.	.	.	.	Pin - Yoke link	4	.01
	30622-P1	.	.	.	.	.	Block - Left bed	1	1.50
-7	30622-P2	.	.	.	.	.	Block - Right bed	1	1.50
-8	30666	.	.	.	.	.	Spring - Bed brace	2	.01
-9	30615	.	.	.	.	.	Plunger - Bed brace	2	.05
-10	30621-G1M	.	.	.	.	.	Shaft Assembly - Pinion	1	2.60
-10A	30606-P3	.	.	.	.	.	Pinion - Focusing	1	2.25
-10B	30612	.	.	.	.	.	Knob - Focusing	2	.30
-10C	30730-P1	Brake - Yoke lock	4	.02	
-11	30829	Plate - Brake	1	.02	
-12	30611	Spring - Focusing pinion	2	.02	

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PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Group Assembly Parts List

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
6-13	31730-P1	.	.	.	.	.	Escutcheon - Bed, newer models	1	.10
-14	34615-G1	.	.	.	.	.	Bed Assembly - Second	1	9.75
-14A	30421-G5	.	.	.	.	.	Brace Assembly - Left	1	1.25
-14B	30421-G6	.	.	.	.	.	Brace Assembly - Right	1	1.25
							Attaching Part		
-14C	31751-P1	.	.	.	.	.	Rivet - Bed brace assembly	2	.15

	31754-P2	.	.	.	.	.	Covering - Vinyl	1	1.25
-14D	30560	.	.	.	.	.	Catch - Bed, older models	1	.10
							Attaching Part		
-14E	30948	.	.	.	.	.	Rivet - Bed catch, older models	2	.01

	33903-P2	.	.	.	.	.	Name Plate	NP	
							Attaching Part		
	30363-P22	.	.	.	.	.	Rivet - Hollow type, special	NP	

	31096-G4	.	.	.	.	.	Bed Assembly - First	1	5.00
-14F	30915-P1	.	.	.	.	.	Bushing - Guide & block screw	8	.03
	30589-P2	.	.	.	.	.	Bed	NP	
							Attaching Part		
-14G	30172-P23	.	.	.	.	.	Pin - Hinge, 4.093 in. lg., 0.062 in. dia Phosphor Bronze	1	.08

-15	30621-G1R	.	.	.	.	.	Hinge Assembly	1	1.50
	31731-P1	.	.	.	.	.	Guide - Left - Case section	NP	
-15A	31731-P2	.	.	.	.	.	Guide - Right - Case section	NP	
							Attaching Part		
-15B	30685-P2	.	.	.	.	.	Pin - Dowel, 0.082 ± .0003 in. x 0.195 in. lg. Stainless Steel	4	.01

	30435-P1	.	.	.	.	.	Hinge - Bed	NP	
-16	30639	.	.	.	.	.	Spring	1	.05
-17	30637	.	.	.	.	.	Slide	1	.16
							Attaching Part		
-18	30638-P1	.	.	.	.	.	Pin - Escutcheon, 0.082 in. dia x 1 in. lg.	1	.01

CASE COMPLETE									
	30559-G3	.	.	.	.	.	Case Complete - 2-1/4x3-1/4 Speed Graphic (See Figure 2-37)	Ref	
	30559-G6	.	.	.	.	.	Case Complete - 2-1/4x3-1/4 Crown Graphic	Ref	
7-1	30535-P1	.	.	.	.	.	Plate - Release slide	1	1.00
							Attaching Part		
-2	152B1R4	.	.	.	.	.	Screw - Wood, 1/4 in. lg., #2 OH Brass, Chrome plate, Phillips drive	2	.01
-3	30749-P1	.	.	.	.	.	Screw - Machine, slide release plate, special	1	.07

-4	30647-P1	.	.	.	.	.	Escutcheon, left - Focusing knob	1	.25
-5	31135-P1	.	.	.	.	.	Escutcheon, right - Focusing knob	1	.25
							Attaching Part		
-6	30638-P2	.	.	.	.	.	Pin - Escutcheon, 0.042 in. dia x 1/4 in. lg.	2	.01

-7	30645-P2	.	.	.	.	.	Moulding - Upper right	1	.65
-8	30640-P2	.	.	.	.	.	Plate - Moulding, top "Graflex"	1	.10
-9	30645-P1	.	.	.	.	.	Moulding - Upper left	1	.65
-10	30763-P1	.	.	.	.	.	Moulding - Lower left	1	.70
-11	30640-P1	.	.	.	.	.	Plate - Moulding - bottom	1	.10
-12	30764-P1	Moulding - Lower right	1	.60
-13	30643-P3	Moulding - Right	1	.55
-14	30374-P1	Bracket - Handle	2	.40

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Section 4
Group Assembly Parts List

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
							Attaching Part		
7-15	30375-P1	.					Nut - Handle bracket	2	.10
-16	104B6R8	.					Screw - Machine, 1/2 in. lg., #6-32 OH Phillips drive, Brass, Chrome plate	2	.05

	30880	.					Bearing - Roller (For Replacement use 30192-P1 or P2)	NP	
-17	30192-P1	.					Bearing - Roller, Selected fit, 0.359 in. lg.	AR	.60
	30192-P2	.					Bearing - Roller, Selected fit, 0.389 in. lg.	AR	.60
							Attaching Part		
-18	152B2R4	.					Screw - Wood, 1/4 in. lg., #2 OH Phillips drive, Brass, Chrome plate.	6	.01

-19	30557-P1	.					Latch - Bed, older models	1	.35
	31729-P2	.					Latch - Bed, newer models.	1	.15
-20	30664	.					Spring - Bed latch, older models	1	.15
-21	30572	.					Button - Bed release, older models	1	.15
	31907	.					Button - Bed release, newer models	1	.05
							Attaching Part		
-22	102B3-4(S18)	.					Screw - Machine, 1/4 in. lg., #3-48 Brass, Ebonol, older models	2	.01
	112B3R3(S18)	.					Screw - Machine, 3/16 in. lg., #3-48 OH Phillips drive, Brass, Ebonol, newer models	1	.01
-23	30473-P44	.					Washer - Flat, 0.250 in. OD, 0.099 in. ID, 0.025 in. thk Brass, older models.	2	.01
-24	30508	.					Collar - Bed latch insert, older models	2	.02

-25	30820	.					Contact - Case	2	.05
-26	30821	.					Contact - Receptacle	1	.05
-27	30204-P1	.					Contact - Switch, short	1	.15
-28	30328-P1	.					Contact - Switch, long	1	.15
							Attaching Part		
	150B0-3	.					Screw - Wood, 3/16 in. lg., #0 FH Brass	3	.01
	30638-P6	.					Pin - Escutcheon, 0.070 in. dia. x 1/8 in. lg.	1	.01
	151B0-2	.					Screw - Wood, 1/8 in. lg., #0 RH Brass	2	.01

-29	30303-P1	.					Spring - Shift slide, case	1	.15
							Attaching Part		
-30	150B1-3	.					Screw - Wood, 3/16 in. lg., #1 FH Brass	1	.01

-31	30493-G1	.					Plate Assembly - Body release, Speed Graphic	1	9.00
	30876-G1	.					Plate Assembly - Body release, Crown Graphic	1	7.00
							Attaching Part		
-32	150B1-6	.					Screw - Wood, 3/8 in. lg., #1 FH Brass	6	.01

	30532-G1	.					Slide Assembly - Release	NP	
	30559-P13	.					Covering - Vinyl, Speed Graphic	AR	2.25
	30559-P85	.					Covering - Vinyl, Crown Graphic.	AR	2.25
-33	30648-P1	.					Foot Case, Speed Graphic.	2	.25
	30744-P1	.					Foot Case, Crown Graphic	2	.25
-34	200-3S	.					Nut - Machine, #3-48 square.	4	.03
-35	30694-G1	.					Case Assembly, Speed Graphic	NP	
	30695-G1	.					Case Assembly, Crown Graphic.	NP	
-35A	30372-P3	.					Socket - Tripod, side	1	.20
							Attaching Part		
-35B	150B2-4	.					Screw - Wood, 1/4 in. lg., #2 FH Brass.	3	.01

-35C	30372-P1	.					Socket - Tripod, bottom	1	.20
-35D	30721	.					Cover.	1	.05

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
AR - As Required
NP - Non Procurable

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Group Assembly Parts List

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price	
	Attaching Part									
7-35E	151B2-4	1					Screw - Wood, 1/4 in. lg., #2 RH Brass.	3	.01	
	-----***-----									
-35F	30673-P3						Insert - Back mounting, bottom, Speed Graphic only	1	.03	
-35G	31905-P1						Insert - Bed latch.	1	.05	
-35H	*30370						Lug - Back mounting (replaced by 30673-P6).	2	.10	
	*30673-P6						Insert - Back mounting, top, Speed Graphic only	1	.10	
	Attaching Part									
	*150B2-3(S18)						Screw - Wood, 3/16 in. lg., #2 FH Brass, Ebonol	4	.03	
	-----***-----									
	31905-P1						Insert - Brace plate, left side	4	.05	
	31906						Insert - Brace plate, right side	2	.05	

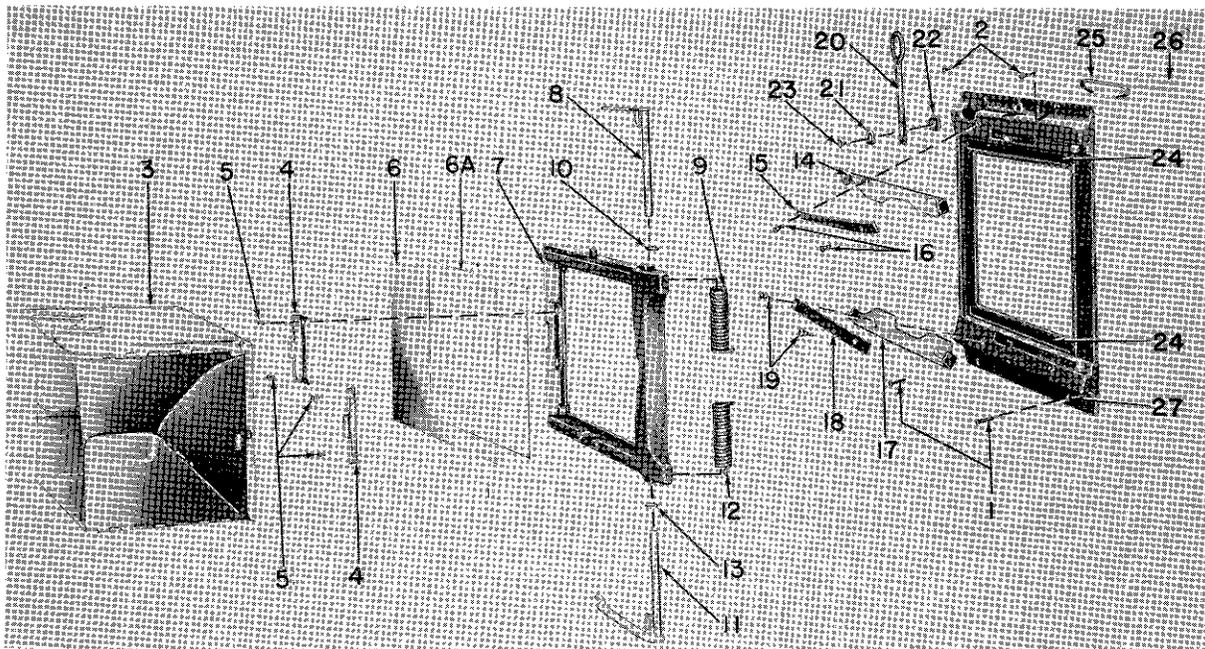


Figure 8. Graflok Back

31709-G22	Back Complete - Graflok - 2-1/4x3-1/4 Speed Graphic with Ektalite, including panel and hood (See Figure 1-19). . .	Ref
31709-G23	Back Complete - Graflok - 2-1/4x3-1/4 Crown Graphic with Ektalite, including panel and hood.	Ref
	Attaching Part	
8-1	30921-P7 (S7). Screw - Self tapping, 1/2 in. lg., #2 Oval Bind H, Steel, Jetal, for Speed Graphic	2 .01
-2	30921-P6(S7). Screw - Self tapping, 3/16 in. lg., #2 Oval Bind H, Steel, Jetal, for Speed Graphic	2 .01
-1&2	30921-P6(S7). Screw - Self tapping, 3/16 in. lg., #2 Oval Bind H, Steel, Jetal, for Crown Graphic.	4 .01
	-----***-----	
-3	Cat. #9145 . Hood Assembly.	Ref
	31715-G1 . Frame Assembly - Without Ektalite (Replace with Cat. #9277)	NP
	Cat. #9277 . Frame Assembly - with Ektalite (less hood).	Ref

Note: Lug, part no. 30370, mounted with Screws, part no. 150B2-3, is for the older 2-1/4x3-1/4 Speed Graphic. and has been replaced by Insert, part no. 30673-P6 on the newer cameras.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

Section 4
Group Assembly Parts List

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
8-4	30371-P1	.	.				Retainer	2	.06
							Attaching Part		
-5	100-2-3 (S7)	.	.				Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal	4	.01
							-----***-----		
-6	30414-P2	.	.				Screen - Ground glass focusing	1	1.10
-6A	*30414-P5	.	.				Screen - Ektalite	1	4.50
-7	31716-P1	.	.				Frame - (Replace with 31915-P2 plus Ektalite screen part #31935-P1)	NP	
	31716-P2	.	.				Frame - For Ektalite	1	6.00
-8	31717-G2	.	.				Arm Assembly - Upper	1	.85
-9	31720-P1	.	.				Spring - Upper	1	.20
-10	30473-P38	.	.				Washer - Flat, .250 in. OD, .151 in. ID, 0.010 in. thk Brass	1	.01
-11	31717-G1	.	.				Arm Assembly - Lower	1	.85
-12	31720-P2	.	.				Spring - Lower	1	.20
-13	30473-P38	.	.				Washer - Flat, 0.250 in. OD, 0.151 in. ID, 0.010 in. thk Brass	1	.01
	31710-G1	.	.				Back Assembly - Excluding panel and hood	1	13.35
-14	31713-P2	.	.				Slide lock - Upper	1	.85
-15	31714-P1	.	.				Spring	1	.15
							Attaching Part		
-16	30839-P1	.	.				Screw - Slide lock, special	2	.25
							-----***-----		
-17	31713-P1	.	.				Slide lock, Lower	1	.85
-18	31714-P1	.	.				Spring	1	.15
							Attaching Part		
-19	30939-P1	.	.				Screw - Slide lock, special	2	.12
							-----***-----		
-20	30369-G1	.	.				Peepsight Assembly	1	.50
							Attaching Part		
-21	30366	.	.				Cap	1	.16
-22	30368	.	.				Washer - Flat	1	.02
-23	104B6-4	.	.				Screw - Machine, 1/4 in. lg., #6-32 OH, Brass, Chrome plate	1	.03
							-----***-----		
-24	31722-P1	.	.				Strip - Light seal	2	.10
	33036-G1	.	.				Back Assembly - First	1	4.35
-25	30367	.	.				Spring	1	.07
-26	30364-P1	.	.				Plate	1	.04
-27	31711-P1	.	.				Back	NP	

Note: The Ektalite screen can be used only on Frame #31716-P2 and as part of Frame Assembly Cat. #9277.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

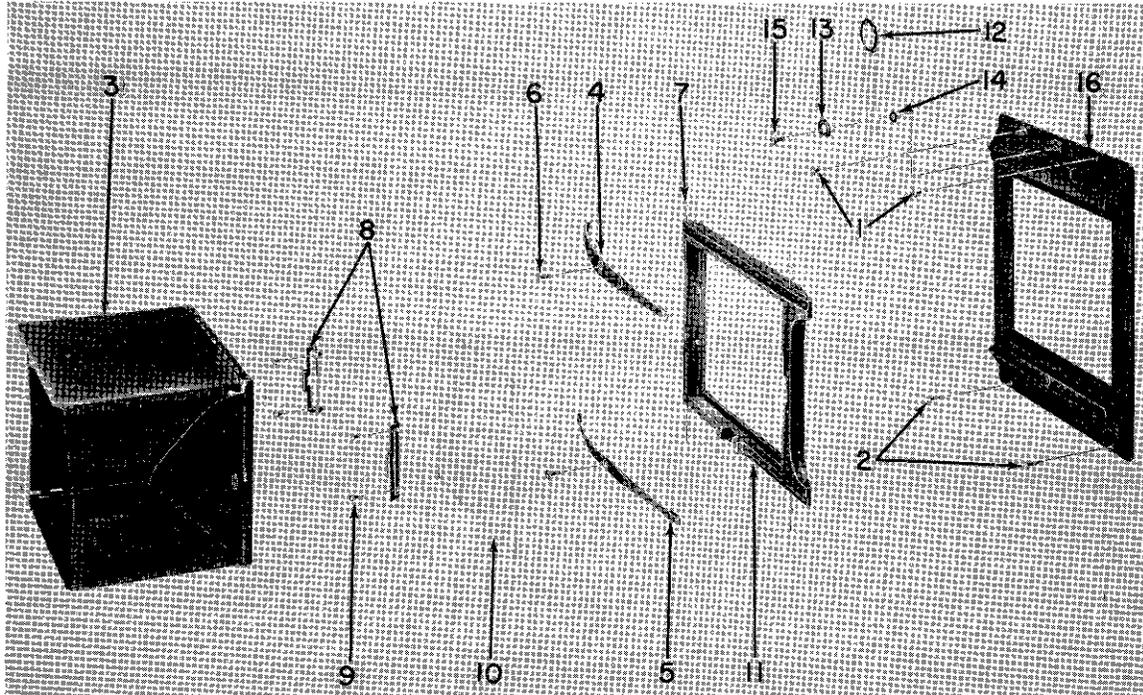


Figure 9. Graphic Back

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
	30313-G1						Back Complete - 2-1/4x3-1/4 Speed Graphic (See Figure 1-19)	NP	Obsolete
	30313-G5						Back Complete - 2-1/4x3-1/4 Crown Graphic	NP	Order Graflok
							Attaching Part		
9-1	30921-P5(S7)						Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed	2	.01
-2	30921-P7(S7)						Screw - Self tapping, 1/2 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed	2	.01
-1&2	30921-P6(S7)						Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Crown	4	.01
							---***---		
-3	Cat. #9145						Hood Assembly	Ref	
-4	31279-P1						Spring - Focusing frame, top	1	.28
-5	31279-P2						Spring - Focusing frame, bottom	1	.28
							Attaching Part		
-6	31270-P1						Screw - Sems unit fastener (washer w/screw, 5/16" lg., #4-40)	2	.03
-7	30473-P1(S18)						Washer - Flat, focusing frame spring, 5/32 in. OD, 0.067 in. ID, 0.005 in. thk Brass, Ebonol	.01	
							---***---		
-8	30405-G5						Frame Assembly Complete - Focusing	NP	
-8	30371-P1						Retainer - Hood Assembly	2	.07
							Attaching Part		
-9	100-2-3(S7)						Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal	4	.01
							---***---		
-10	30414-P2						Screen - Focusing	1	1.10
-11	30405-G4M						Frame Assembly - Focusing	NP	
	30310-G1						Back Assembly	1	6.65
-12	30369-G1						Peepsight Assembly	1	.50

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NP - Non Procurable

Section 4
Group Assembly Parts List

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
Attaching Part									
9-13	30366	.	.	.	.	.	Cap - Peepsight	1	.16
-14	30368	.	.	.	.	.	Washer - Peepsight	1	.03
-15	104B6R4	.	.	.	.	.	Screw - Machine, 1/4 in. lg., #6-32 OH Phillips drive, Brass, Chrome	1	.04
---***---									
	30364	.	.	.	.	.	Plate - Peepsight spring	1	.04
	30367	.	.	.	.	.	Spring - Peepsight	1	.07
-16	30312-P1	.	.	.	.	.	Back	NHA	

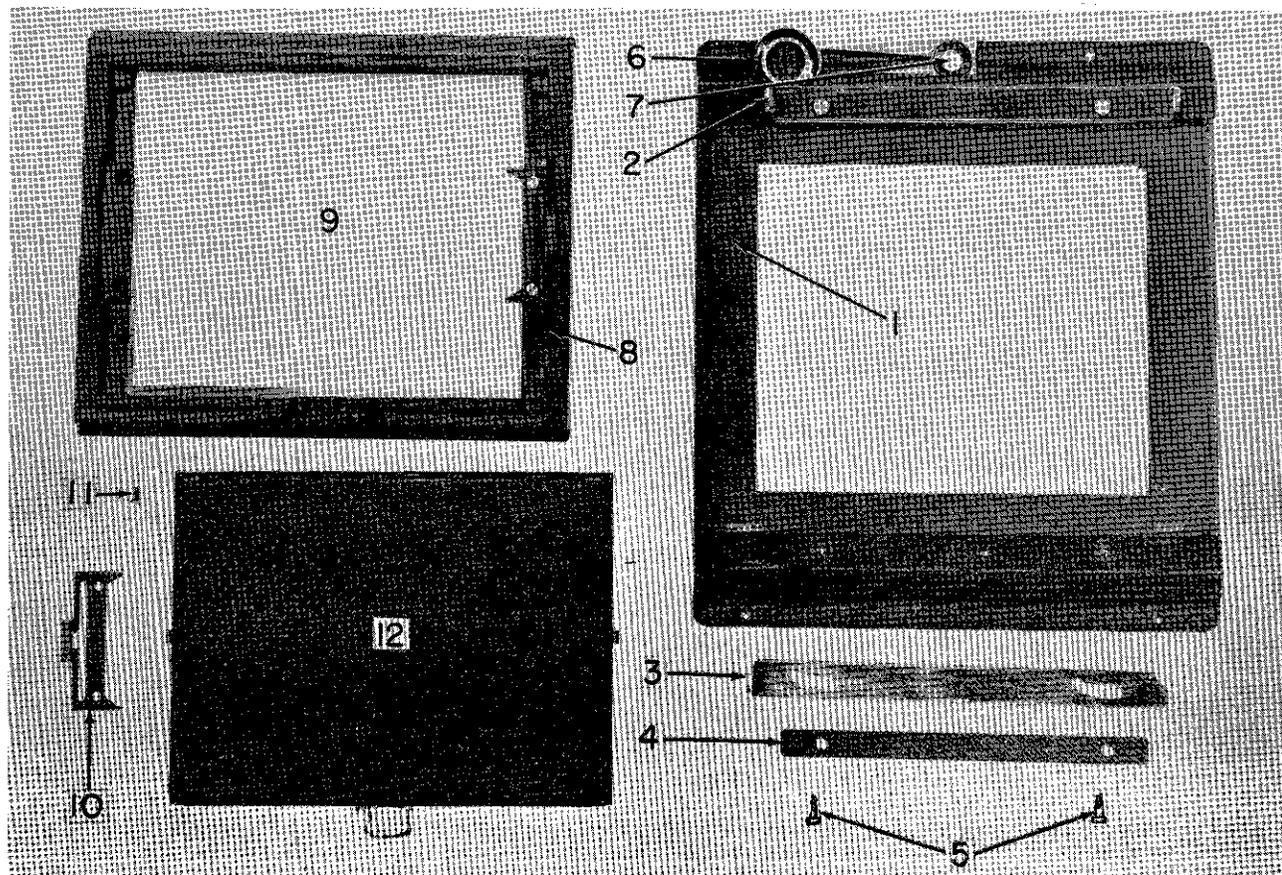


Figure 10. Graflex Back

30927-G6	Back Complete - Graflex 2-1/4x3-1/4 Speed Graphic, excluding Panel and hood (See Figure 1-19)	Ref
30927-G3	Back Complete - Graflex 2-1/4x3-1/4 Crown Graphic, excluding Panel and hood	Ref
Attaching Part		
†30921-P7	Screw - Self tapping, 1/2 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed Graphic	2 .01
†30921-P6	Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Speed Graphic	2 .01
†30921-P6	Screw - Self tapping, 3/16 in. lg., #2 Oval Bind Hd, Steel, Jetal, for Crown Graphic	4 .01

†Note: See Figure 8 for these parts.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.
NHA - Next Higher Assembly

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Group Assembly Parts List

Figure & Index No.	Part Number	1	2	3	4	5	Nomenclature	Units per Assembly	List Price
10-1	30930-P1	.	Back					1	5.00
-2	30938-P3	.	Slidelock - Top					1	1.00
-3	30938-P4	.	Slidelock - Bottom					1	1.00
-4	30937-P2	.	Spring - Slidelock					2	.40
			Attaching Part						
-5	30939-P1	.	Screw - Slidelock					4	.12

-6	30368-G1	.	Peepsight Assembly					1	.50
			Attaching Part						
	†30366	.	Cap					1	.16
	†30368	.	Washer - Flat					1	.03
-7	104B6R4	.	Screw - Machine, 3/16 in lg., #6-32 OH Phillips drive, Brass, Chrome plate					1	.04

	†30367	.	Spring - Peepsight					1	.07
	†30364	.	Plate - Peepsight spring					1	.04
	Cat. #9142		Panel Complete - Graflex focusing, including hood					Ref	
-8	30933-P1	.	Frame - Focusing					1	3.75
-9	30414-P2	.	Screen - Focusing					1	1.10
-10	30371-P1	.	Retainer - Hood assembly					2	.07
			Attaching Part						
-11	100-2-3(S7)	.	Screw - Machine, 3/16 in. lg., #2-56 FH Steel, Jetal					4	.01

-12	Cat. #9145	.	Hood Assembly					Ref	

†Note: See Figure 8 for these parts.

DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.
State quantity. Prices subject to change without notice.

Section 4
Standard Hardware

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
<u>Standard Screws</u>						
100-2-3	S-7	Holds ground glass retainer to back frame	8-5	4	#2-56 FH 3/16"	.20
			9-10	4		
			10-11	4		
100B2-4	S-18	Holds yoke guide to bed	6-2	8	#2-56 FH 1/4"	.20
100B2-7	S-18	Spacer block screw	2-10	6	#2-56 FH 7/16"	.20
100B3-2	S-18	Holds bed brace plate	2-26	1	#3-48 FH 1/8"	.20
100B3-3	S-18	Holds bed brace plate	2-26	1	#3-48 FH 3/16"	.20
101-2-6		Holds viewfinder mounting plate to Camera	11-19	3	#2-64 FH 3/8"	.20
102B2-4	S-18	Holds bed latch into case	7-21	2	#2-56 RH 1/4"	.20
102-2-7		Holds shift slide in place	4-9	1	#2-56 RH 7/16"	.20
104B1-3	L-26	Holds shutter plate to camera	2-2	3	#1-64 OH 3/16"	.20
104-4-3	Chrome	Graflite mounting bracket	1-	1	#4-40 OH 3/16"	.20
104-4-5	Chrome	Graflite mounting bracket	1-	2	#4-40 OH 5/16"	.20
104B6-4	Chrome	Holds peepsight to camera back	8-23	1	#6-32 OH 1/4"	.40
104B6R4	Chrome	Holds peepsight assembly to back	9-15	1	#6-32 OH 1/4" Phillips	.60
104B6R8	Chrome	Handle bracket screw	10-7 7-16	2	#6-32 OH 1/2" Phillips	.80
107-2-2	Chrome	Holds manual trip arm to manual trip rod	1-14	1	#2-56 O Fil H 1/8"	.20
110-2-2	Chrome	Holds objective lens cap to viewfinder housing	11-13	2	#2-56 SS Bind H 1/8"	.20
110B2-4		Holds governor mechanism together	4-15A	2	#2-56 SS Bind H 1/4"	.40
110B3R3	S-18	Range finder mounting bracket	1-5	2	#3-48 SS Bind H 3/16"	.20
112-3R2	S-7	Holds bed brace plate	2-27	1	#3-48 O Bind H 1/8" Phillips	.20
112B3R3	S-18	Holds bed brace plates	2-27	1	#3-48 O Bind H 3/16"	.20
		Secures bed latch	2-28 7-	1 1	Phillips	
112B3R6	S-18	Holds bed brace plate	2-28	1	#3-48 O Bind H 3/8" Phillips	.20
150-1-3	P-21	Holds cable release spring to case	2-17	1	#1 FH 3/16"	.20
150B0-3	S-18	Holds long switch contact in place	7-	3	#0 FH 3/16"	.20
		Holds curtain guide to frame and contact assembly	1	6		
150B1-3	S-18	Holds shift slide spring to case	7-27	1	#1 FH 3/16"	.20

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Standard Hardware

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
150B1-6	S-18	Holds body release plate assembly to case	7-29	6	#1 FH 3/8"	.20
		Holds back to case for Graphic and Graflok backs	8-3 9-3	1 1		
150B1-8		Holds shutter mechanism to camera	2-7	4	#1 FH 1/2"	.20
150B2-3	S-18	Holds top back mounting lug in place	7-	4	#2 FH 3/16"	.20
		Holds bed brace plates in place	2-30	4		
150B2-4	S-18	Holds bed brace plates in place	2-29	2	#2 FH 1/4"	.20
		Holds side Tripod socket to case	7-32B	3		
150B2-8	S-18	Holds spring finger contact to frame and contact assembly	2-13	4	#2 FH 1/2"	.20
150B2-12		Holds frame and contact assembly to body	2-	4	#2 FH 3/4"	.40
151-1-3	P-21	Holds end of body cable release	2-18	2	#1 RH 3/16"	.20
151B0-2		Holds long switch contact in place	7-	2	#0 RH 1/8"	.20
151B1-3		Holds long and short contacts to frame and contact assembly	2-	2	#1 RH 3/16"	.20
151B2-4	S-18	Holds bottom tripod socket to case	7-32E	3	#2 RH 1/4"	.20
152B1-8	L-26	Holds shutter place to camera	2-3	2	#1 OH 1/2"	.20
152B1R4	Chrome	Holds body release plate in place	7-2	2	#1 OH 1/4" Phillips	.40
152B2R4	Chrome	Holds rear curtain bearing in place	7-18	6	#2 OH 1/4" Phillips	.40
170A3-2	P-15	Yoke lock lever limiting screw	6-3	1	#3-48 slotted headless set 1/8"	.40
170D5-2	S-7	Case guide adjustment screw	2-	4	#5-40 slotted headless set 1/8"	.80
30921-P5	S-7	Top screws that hold back to camera case on Speed	9-1	2	#2 O Bind H 3/16"	.20
30921-P6	S-7	Holds back to case on Crown	8-1&2 9-1&2 10-	4 4 4	#2 O Bind H 3/16"	.20
		Top screws that hold back to camera case on Speed	8-2 9-2 10-	2 2 2		
30921-P7	S-7	Bottom screws that hold back to camera case on Speed	8-1 9-1 10-	2 2 2	#2 O Bind H 1/2"	.20
<u>Special Screws</u>						
30187-P1		Holds escapement to shutter plate	4-2	2		1.20
30213-P1		Holds shutter mechanism to camera	2-5	1		.60

Section 4
Standard Hardware

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
30401-P1		Slidelock screw	5-8	4		1.20
30543		Front standard tilt locking screw	5-25	2		4.80
30661		Infinity stop (rear)	1-16A	2	pointed	.40
30662		Infinity stop	1-16B	2	flat point	.40
30749-P1		Holds body release plate in place	7-3	2	special	1.20
30776		Range finder mounting	1-8	2		.80
30819		Index and focus scale	1-11	4		.20
30830	Chrome	Holds range finder bracket assembly to yoke case section	6-5	2		.80
30939-P1		Holds slide lock to camera back	8-16 8-19 10-5	2 2 4	special	2.40
31089-P4		Holds yoke guide to bed	6-2	8	special 1/4" #2-56 Bind H	.20
31134	S-18	Range finder mounting	1-4	2		.20
31238		Holds curtain pressure spring to back	9-16	2		.20
31270-P1		Holds focusing frame spring to camera back	9-7	2		.40
31944		Holds lens barrel to view finder housing	11-10	2		.20
33756	Chrome	Holds objective lens cap to housing for wide angle view finder	11-	2		.80
33805		Holds sleeve and lens barrel to view finder housing	11-11	2		.80
<u>Nuts</u>						
200-2H		Holds governor mechanism together	4-15B	2		.20
200-3S		Holds case foot in place	7-37	4		.40
30375-P1		Nut for handle bracket	7-15	2		1.00
30377-P1		Nut for slidelock screw	5-9	4		.60
30553-P1		Front standard lever assembly lock nut	5-26	1		1.00
30843		Cable release nut for manual trip rod	5-4A	2		1.60
<u>Washers</u>						
221-2		Washer for #102-2-7	4-10	1		.20
		Lock washer for Nut 200-2H that holds governor mechanism together	4-15C	2		
		Washer for part #102B2-4	7-	1		
30358		Receptacle washer	3-3	1		.20

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Standard Hardware

Part No.	Finish	Use	Fig. Ref.	Qty.	Description	Net per 25
30368		Peepsight washer	8-22 9-15 10-	1 1		.40
30473-P1		Washer for focusing frame spring screw	9-8	2		.20
30473-P6		Front frame clamp washer	5-3	2		.20
30473-P7		Washer for front standard locking screw	5-23	2		.20
30473-P8		Washer for part #102B2-4	7-	2		.20
30473-P10		Washer for front standard locking screw	5-24	2		.20
30473-P11		Yoke lock lever washer	6-5	AR		.20
30473-P13		Front standard lever assembly washer	5-30	1		.20
30473-P15		Curtain and rollers assembly	2-9	AR		.20
30473-P20		Washer for slidelock screw	5-11	4		.20
30473-P24		Curtain and rollers washer	2-10	AR		.20
30473-P25		Washer for body cable release end	2-	1		.20
30473-P35		Grafitite mounting bracket	1-	2		.20
30473-P36		Graflite mounting bracket	1-	3		.20
30473-P38		Graflok back, panel, arm washer	8-10 8-13	1 1		.20
30540-P2		Front standard lever assembly washer	5-31	1		.80
30540-P3		Washer for slidelock screw	5-12	4		.40

Finish Code

L-26	Black wrinkle
P-15	White nickel
P-21	Cadmium
S-7	Jetal
S-18	Ebonol

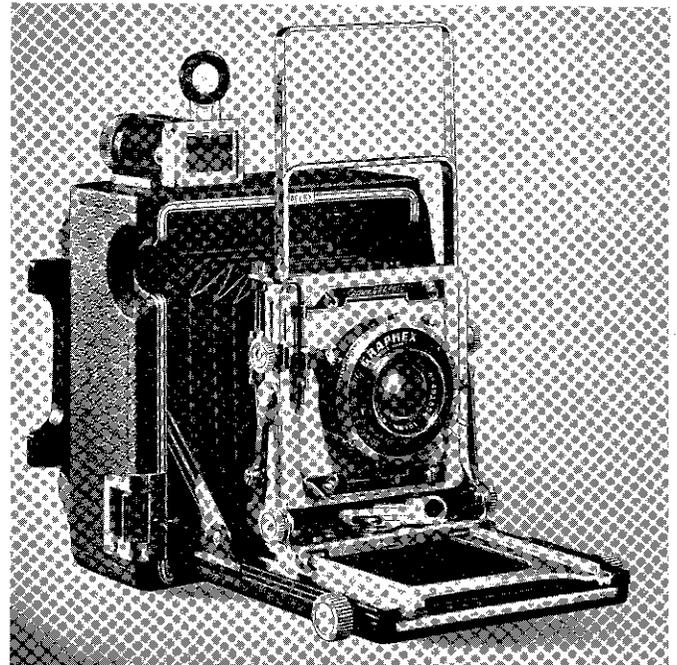
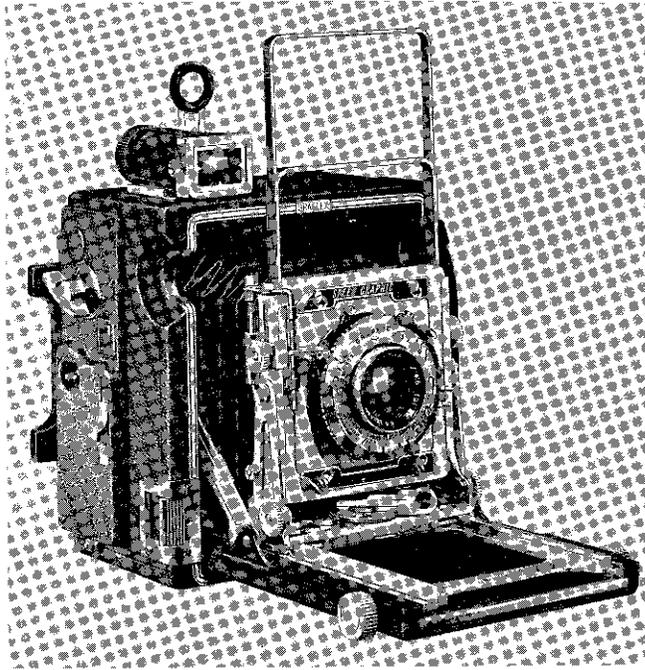
DO NOT ORDER PARTS BY FIGURE INDEX NUMBER. SPECIFY CATALOG OR PART NUMBER AND NAME.

State quantity. Prices subject to change without notice.

"23"

PACEMAKER SPEED & CROWN GRAPHIC PARTS LIST

JANUARY 1965



GRAFLEX, INC. / A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION
ROCHESTER, NEW YORK 14603

PRINTED IN U.S.A.

PARTS LIST

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Body Complete.	12
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Maintenance text for the "23" Pacemaker Speed and Crown Graphic is contained in Section 6.

PARTS LIST

The Group Assembly Parts Lists are listed in disassembly order. The list divides the components into major assemblies, their sub-assemblies and parts. By the use of indented columns, the relationship of the assemblies and parts is obtained.

The column titled "Figure and Index No." contains the index number in disassembly order of the items illustrated.

The column titled "nomenclature" (including numbered columns) lists item nomenclature on the Graflex drawing. The assembly in the column marked "3" will be a component of the first assembly which preceded it in the column marked "2" etc. The code "NP" will indicate that this part is "not procurable" and that the "next higher assembly" (NHA) should be ordered. The code "AR" is used for bulk items when an indefinite amount may or may not be used "as required."

PACEMAKER GRAPHIC "23"
SPEED & CROWN

Section 4
Parts List

Figure and Index No.	Part No.	1	2	3	4	5	Nomenclature	Qty.	Code
2-10	30192P1	.					Bearing - Roller (selected fit) 0.359 in. lg. Replaces 30880 (Ref. Figure 7-17) SPEED.....	AR	
	30192P2	.					Bearing - Roller (selected fit) 0.389 in. lg. Replaces 30880 (Ref. Figure 7-17) SPEED.....	AR	
	Attaching Part								
-11	152B2R4C	.					Screw - Wood, No. 2 x 1/4, oval hd.	6	
	---***---								
	30885G1	.					Frame & Contact Assembly (SPEED)	1	
-12	150B2-8K	.					Screw - Wood (block) No. 2 x 1/2, flat hd	4	
-13	30577P1	.					Block - Left	1	
-14	30886P1	.					Block - Right	1	
-15	30573	.					Contact - Spring Finger	2	
	150B0-3K	.					Screw - Wood (guide) No. 0 x 3/16, flat hd	6	
-16	30634P1	.					Guide - Curtain	2	
	151B1-3	.					Screw - Wood (contact long) No. 1 x 3/16, round hd ..	1	
	30889P1	.					Contact - Long	1	
	151B1-3	.					Screw - Wood (contact frame) No. 1 x 3/16, round hd .	1	
	30890	.					Contact - Frame	1	
	30760G1	.					Frame Assembly	1	
	Attaching Part								
	150B2-12K	.					Screw - Wood, No. 2 x 3/4, flat hd	4	
	---***---								
-17		.					Standard Complete - Front (Figure 5)	Ref.	
	Attaching Parts								
-18	150-1-3L	.					Screw - Wood, No. 1 x 3/16, flat hd (SPEED)	1	
-19	30473-25L	.					Washer - Flat, 0.281 x 0.094 x 0.012 (SPEED)	1	
-20	30949	.					Screw - Machine (special)	1	
-21	30473-25L	.					Washer - Flat, 0.281 x 0.094 x 0.012 (SPEED)	1	
-22	31189	.					Spring - Cable Release (SPEED)	1	
-23	151-1-3A	.					Screw - Wood, No. 1 x 3/16, round hd	2	
	---***---								
-24	30757G2M	.					Handle Complete (plastic) replace with 33779G1 & 30305G1	Ref.	
	33779G1	.					Handle Complete (leather) less snap assembly	1	
	30738P1	.					Loop (plastic)	2	
	33779P7	.					Loop (leather)	2	
-25	30305G1	.					Snap Assembly	1	
-26	31750P3	.					Plate - Bed Brace, left	1	
-27	31750P4	.					Plate - Bed Brace, right	1	
	Attaching Parts								
-28	150B2-3K	.					Screw - Wood (right side) No. 2 x 3/16, flat hd	1	
	150B2-4K	.					Screw - Wood (left side) No. 2 x 1/4, flat hd	1	
-29	150B2-3K	.					Screw - Wood (right side) No. 2 x 3/16, flat hd	1	
	150B2-4K	.					Screw - Wood (left side) No. 2 x 1/4, flat hd	1	
-30	150B2-4K	.					Screw - Wood (left & right) No. 2 x 1/4, flat hd	2	
	---***---								
-31	30621G1	.					Bed Complete (Figure 6)	1	
	Attaching Parts								
-32	150B2-4K	.					Screw - Wood, No. 2 x 1/4, flat head	2	
-33	31925P2	.					Screw - Machine (special) use 33926P2 for replacement .	Ref.	
	33926P2	.					Screw - Machine (special)	4	
-34	170D5-2L	.					Screw - Set, No. 5-40 x 1/8, headless	4	
	---***---								
-35		.					Body Complete (Figure 7)	Ref.	