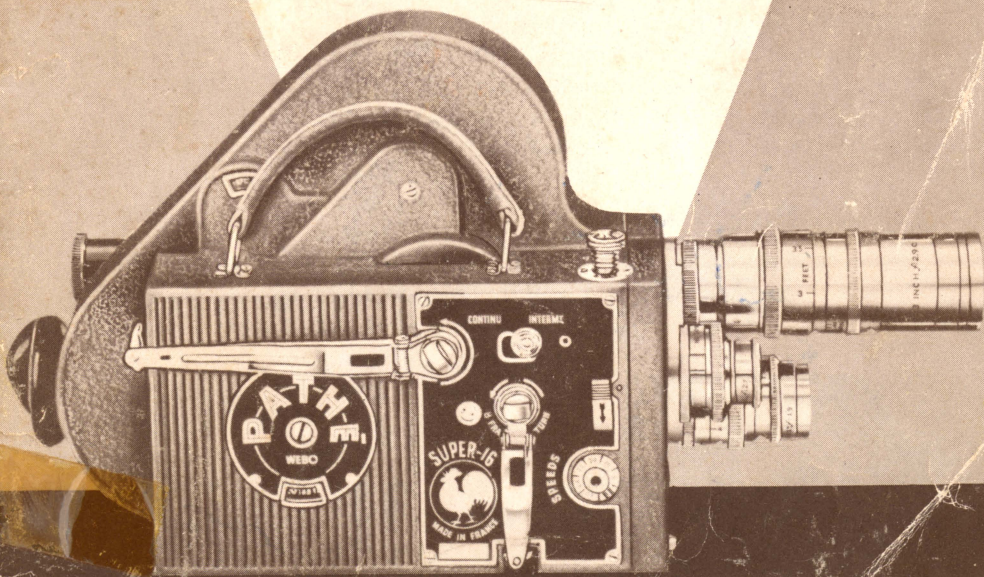


PATHE

SUPER "16"

MOTION PICTURE CAMERA



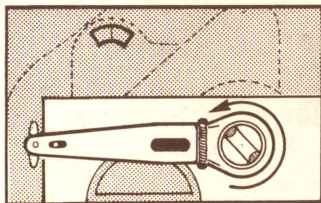
PATHÉ SUPER "16" CAMERA

The Complete 16mm Camera For The Professional And The Professionally-Minded Amateur

NOTE: For quick and easy identification of parts, turn to inside back cover and open gatefold page.

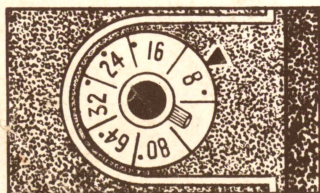
1. WINDING MOTOR

Raise winding handle and fold over against spring, engaging rectangular projection (spring shaft). Wind in direction of arrow (counter-clockwise) until warning bell is heard. Wind more slowly until the end stop is reached, about four more turns of the handle. Allow the winding handle to return to the back of the camera and fit it over the small projection on the body to hold it in place. When motor is fully unwound, forty-four full turns are required of the winding handle to the warning signal. CAUTION: *Do not overwind.*



2. SETTING SPEED

Each speed on the Pathé Super "16" is individually calibrated. The calibration mark is a red dot within the numbered segment on the speed dial. Turn the speed dial until the small red dot nearest the speed desired is alongside the red triangular index on the camera body. Do not turn the number to the triangular index, but look for the red dot in the speed block required. (Do not set to speed 80 unless film is in the camera.) Setting at a lower speed than 8 will cause the release button to lock.



8 frames per second—used to speed up slow action of clouds, ships leaving harbor and for comedy effects. Also gives twice as much exposure as normal speed, hence may be used when light is too dim for normal speed.

16 frames per second—silent speed for normal action to appear normal when screened.

24 frames per second—for films which are to have sound added to them at later date and for all commercial films.

32 frames per second—semi-slow motion. Used to film from moving vehicles to smooth action. Excellent for films of diving, golf or other sports to slow action slightly.

64 frames per second—slow motion. Used to reduce the speed of action to 1/4 normal.

80 frames per second—extra-slow motion. Used to reduce speed of action to 1/5 normal. For analyzing sports, rapid machine action, birds in flight, scientific purposes.

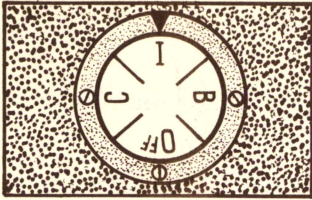
EXPOSURE TIMES

FRAMES PER SECOND (FREQUENCIES)	EXPOSURE PER FRAME	EXPOSURE METER SETTING
SHUTTER FULLY OPEN		
8	1/16 sec.	1/15
16	1/32 "	1/30 or 1/32
24	1/48 "	1/50
32	1/64 "	1/60 or 1/65
64	1/128 "	1/120 or 1/130
80	1/160 "	1/150 or 1/160
SHUTTER HALF OPEN		
8	1/32 sec.	1/30 or 1/32
16	1/64 "	1/60 or 1/65
24	1/96 "	1/100
32	1/128 "	1/120 or 1/130
64	1/256 "	1/250
80	1/320 "	1/300

3. OPERATING THE CAMERA

There are two controls to be set before the camera is run:

A. Selector Dial



On the top of the camera at the front is a chromed knob which is set by lifting and turning so the desired letter is facing the red triangular index. This knob will not make a complete rotation. The positions are as follows:

OFF—Safety, locks motor to prevent accidental starting.

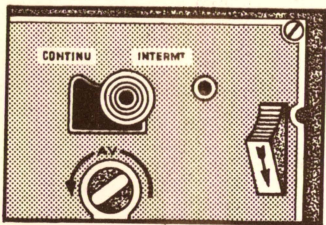
C—Ciné or motion picture operation.

I—Instantaneous, single frame.

B—Bulb exposure, single frame shutter remains open as long as release button is held down.

B. Operation Control

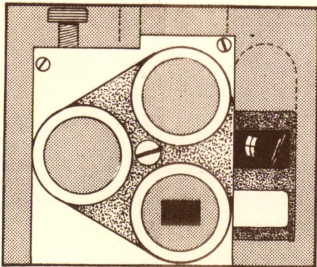
For most camera operations, the operation control is kept at INTERMITTENT. In this position, the operator may start the camera at will by pressing down on the release button. *Pressure on this button must be firm at all times.*



To lock the release button down for continuous operation so the operator may appear in the picture, the operation

control is set to CONTINUOUS. Press control down and then toward back of camera. Upon pressing the release button down firmly, it will lock and the camera will continue to run until the operation control is pressed down and returned to the INTERMITTENT position.

4. TURRET



The turret will accommodate three lenses with the standard type -"C" mounts. There is some variation in depth of the threaded portion between lenses, so they should be carefully fitted to insure seating.

To bring a lens into operating position, grasp the lenses and turn turret until desired lens is in lowermost position. Be sure the turret has snapped into correct operating position.

5. VIEWFINDERS

There are two viewfinders on the Pathé camera, one a normal optical type and the other the reflex finder.

1. The normal viewfinder (upper tube) can be used for practically all filming. The field of view seen through this finder corresponds to that obtained with the normal 1" (25mm) lens.

In center of field is a small etched rectangle to help center the subject. It also indicates field of view covered by a 3" (75mm) telephoto lens.

The eyepiece of this viewfinder may be adjusted by moving it in or out to focus the image clearly. This compensates for differences in vision.

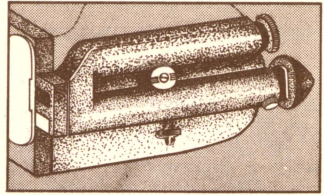
2. For very close work or for accurately framing the subject, or to determine focus for a lens, use the reflex finder (lower tube). Unlike most reflex finders, the Pathé reflex finder may be used continuously **EVEN WHEN CAMERA IS OPERATING!** This entirely eliminates parallax. Push the little lever under the lower tube back toward the rear of the camera to open the shutter inside tube.

Look into rubber eyepiece and adjust it forward or backward until the cross hairs are sharply seen. Lock eyepiece in this position with knurled thumb screw near it.

The lens may now be focused sharply on subject and careful framing easily accomplished.

The field of view seen in reflex finder corresponds exactly to what will appear on film, regardless of the lens in use or distance of subject. When working in daylight close tube shutter by pressing the little lever forward to prevent internal reflection from fogging the film. If the eye is kept at the reflex eyepiece during filming, there is no worry that light entering the back of the finder will fog the film, but when carrying the camera it is best to close this shutter. Because of the reflex finder the Pathé camera is better suited to perfect title-making than any other camera. Titles are always perfectly focused and exactly as they will appear on the film.

The reflex viewer makes the Pathé camera the finest instrument for scientific motion pictures. At all times the subject may be viewed exactly as the lens sees it. If the subject moves out of focus, the lens may be adjusted while the camera is running to bring it back into sharp focus. *With no other camera is this possible!*

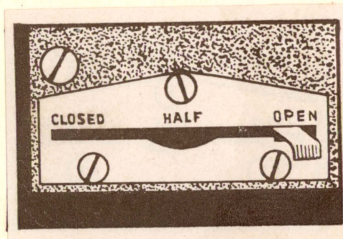


When using exceptionally long telephoto lenses on wary game, the reflex finder will show exactly what is being filmed. This is an advantage that is not difficult to appreciate by anyone who has used such a lens. Usually the finder for long telephoto lenses is not as accurate or powerful as necessary. With the reflex finder, focus and framing may be instantly checked or adjusted.

When connected to a microscope the focus and presence of correct subject matter is immediately observed through the reflex finder. While most other cameras require special optical accessories to operate with a microscope, the Pathé camera need merely be supported over the eyepiece to enable perfect micro-motion pictures to be filmed.

6. SHUTTER

The shutter in the Pathé camera consists of two blades which may be adjusted in relation to each other either at rest or in motion. This permits the operator to adjust effective width of opening from 170° to 0° (fully closed).



The opening of shutter is adjusted by moving shutter control lever situated at bottom edge of front of camera.

In open position, lever indicates maximum shutter opening. Exposure at 16 frames per second for each frame is $1/32$ of a second. ($1/50$ second at 24

frames per second.)

To operate shutter control lever, it must be lifted slightly and then moved toward the closed position. At halfway point, the shutter is half-closed and produces an exposure of $1/65$ second at 16 frames ($1/100$ at 24 frames). *At the closed position, no picture results.*

Always return shutter control lever to OPEN position as soon as possible. This will prevent shooting with a closed shutter and losing scenes.

There are many uses for the adjustable shutter; the two most important are:

1. To reduce exposure

- a) For use with very fast film in sunlight, which may require less light than smallest lens diaphragm opening admits.
- b) To make individual frames on films sharper for study purposes.
- c) To permit use of one stop larger lens opening for special purposes.

2. To produce professional scene transitions (*fades, dissolves, etc.*).

When shutter control lever is moved from OPEN to CLOSE while camera is running, scene being filmed fades out to black. When lever is moved toward OPEN, the scene fades in.

A. Fades.

USE: A fade-out is a symbol for the closing of an episode or the ending of a picture. It appears as a gradual darkening of the scene and finally a blackout. The rapidity of the fade depends on the tempo of the film; a leisurely travelogue takes a slow fade, a comedy requires a quicker fade.

The longest fade may run as long as 4 seconds while a quick fade may occur in half a second.

TECHNIC: The gradual decrease of exposure is accomplished by closing the dissolving shutter while the camera is operating. The length of the fade is determined by the rate at which the dissolving shutter control is moved. Counting seconds to yourself is the best way of timing the closing of the shutter. The camera is stopped after the fade is completed.

An almost unwritten rule requires that a fade-out be followed by a fade-in. A fade-in is used to open a film or episode.

TECHNIC: The gradual increase of exposure required to make a fade-in is obtained by starting the camera and gradually moving the dissolving shutter control from the fully closed to the fully open position.

B. Lap-dissolve.

USE: The lap-dissolve is a method of indicating a close connection in time between two scenes. The lap-dissolve may be used to connect the physical everyday world with the thoughts of a person pictured. Very often it is used to tie together smoothly a long shot (establishing shot) with its following closeup.

The lap-dissolve appears as one scene gradually fading away while another scene replaces it.

TECHNIC: A fade-out is made at the end of the first scene and the camera stopped when the shutter reaches its fully closed position. With the shutter kept closed, the film in the camera is wound back on the feed spool until the start of the fade-out is in the gate. The camera is then focused on the new scene and a fade-in is begun as the camera starts. The fade-in should be complete at the same point on the film as the end of the former fade-out.

The test of a good lap-dissolve is the steadfastness of the exposure on two relatively light scenes. If there is no apparent darkening or brightening during the lap-dissolve, the technic has been mastered.

7. SINGLE FRAME OPERATION *(a tripod is recommended)*

For making single frame exposures to animate dolls or cartoons, to speed up very slow action, or for special effect purposes, the single frame release is necessary.

Set Selector Dial on top of camera to "I" and OPERATION Control Button on INTERMITTENT. Every time the release button is pressed, one frame will be exposed at 1/30 second when the speed dial is set to 16 or higher. With the speed set to 8, the exposure will be 1/20 second. With speed on 16 and shutter control at 1/2 open, the exposure time will be 1/60 second.

For making time exposures of subjects requiring more than snapshot exposure, set the Selector Dial to "B" (bulb exposure). When the release button is pressed, the shutter will open and remain open until button is released. If the OPERATION control is set to CONTINUOUS, the release button will remain down and the exposure on one frame will continue until the OPERATION control is returned to the INTERMITTENT position. FOR ALL TIME EXPOSURES, SHUTTER LEVER MUST BE IN OPEN POSITION.

8. BACKWINDING (Refer to Figure B)

To make double exposures and lap-dissolves, the film already taken must be wound back onto the feed spool in preparation for a second exposure.

To backwind film, first be sure shutter is closed to prevent any exposure during rewinding. To be doubly sure, put a lens cap on the lens or cover it with palm of the hand. Selector Dial is kept at "C" (ciné). OPERATION control is set to CONTINUOUS.

Now swing up the hand crank and engage it with the rectangular shaft ending. Holding this crank tightly, press down on the release button to lock it. Now turn crank forward (clockwise) *AGAINST* the arrow direction. (Arrow points *DIRECTION* to *ADVANCE* film.) When the required amount of film has been rewound, return the OPERATION control to the INTERMITTENT position and then return the hand crank to its original position.

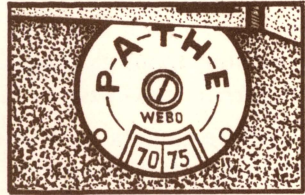
IMPORTANT: Backwinding is done against the main spring. Only as much of the film can be wound back as has been run with spring

motor since previous winding. **Be sure**, therefore, not to wind camera spring before backwinding is finished.

When the spring is wound down completely, the hand crank may be used to drive the film forward through the camera. OPERATION control is set to CONTINUOUS and release button locked down. Cranking is valuable for action that takes longer than a fully wound spring will film. Although the Pathé will run approximately 30 feet of film to one winding, there may be times when a longer run will be required. In such a case the remainder of the scene can be hand cranked. Camera must be mounted on a very steady tripod and smoothly uniform crank speed maintained (2 turns per second for 16 pictures per second) to insure satisfactory results. Turn crank in direction of arrow for forward motion.

9. FRAME COUNTER

For the purposes of accurately backwinding or keeping track of individual frames, the frame counter is consulted. One revolution counts 135 frames. The frame counter has been designed to be particularly convenient for backwinding and for use in producing lap-dissolves and other special effects. The frame counter repeats after 135 frames.



10. LOADING (*Consult Figure A*)

To load the Pathé camera, open the film chamber by turning the latch clockwise as indicated on the knob between the two finder tubes and lifting off door.

Release empty spool on upper spindle by pressing footage indicator finger toward the back of the camera as far as it will go, then pull off spool. Spool on lower spindle will lift off.

Open up the two sprocket guides by pulling out on the projecting knobs and swinging the guides away from the sprocket. Open the gate by swinging the pressure pad away from the lens by means of the finger grip at the bottom of the pressure pad until it locks open.

Avoiding bright sunshine, open the roll of unexposed film and pull off about two feet of film. Drop the full roll with the square hole down over the upper spindle. Follow arrows inside the camera so the film passes from the spool over the sprocket. Engage the teeth

of the sprocket with the holes in the film and then close the upper sprocket guide. Be sure to lock it into position by pulling up knob and pressing guide right against sprocket.

Continue under the guide post and form a loop which touches upper loop guide plate before film is slid sideways into the gate. Release the pressure pad by means of the finger grip. When pressure pad is back in its original position pull film upward to make sure it is properly seated in the gate. A slight click will be heard when the claw engages in a sprocket hole.

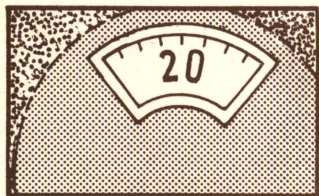
Form the lower loop so it touches the lower loop guide plate. Thread film over guide post, into under-side of sprocket and close lower sprocket guide. Smaller knob on the lower sprocket guide must be pulled out before guide will seat properly. Film is now threaded under lower film roller.

Holding empty spool in right hand with square holes away from you, insert end of film into hub slot and wind up film (black side out) by turning spool clockwise. Drop spool over lower (take-up) spindle and turn it clockwise to take up slack film.

Operate camera at 8 frames per second for a second or two to be certain film feeds smoothly and loops remain the proper size. Replace cover and lock it by turning key counter-clockwise.

Before starting to film, operate camera for about 5 seconds (80 frames on frame counter) to run off protective leader on film.

11. FOOTAGE DIAL



The footage dial indicates at all times amount of film left on feed spool. Consult it frequently. When backwinding, the footage indicator will add the amount of film replaced on the upper (feed roll) spindle.

After footage dial shows 0, operate camera for at least eighty frames more and then door may be opened. Continue to run camera until all film is on take-up spool. Remove spool and place in original carton and send to processing station.

CAUTION: Unload camera only in subdued light — never bright sunshine, or film will be fogged.

12. FIRST FILMING

(Refer to Figures A and B)

For the first filming effort, it is suggested that the following routine be tried until you have become more familiar with handling the Pathé camera.

1. Load film carefully in a shaded place as outlined in Section 10.
2. Turn the turret until the standard 1" lens is in position.
3. Set lens to ∞ (infinity) and set diaphragm according to a good exposure meter. (For color film and a subject in bright sunlight, set diaphragm to 8.)
4. Pull up and turn Selector Dial on top of camera to "C" (ciné).
5. Set OPERATION Control to INTERMITTENT.
6. Set SPEED to 16.
7. Wind camera motor fully with winding handle.
8. Sight your subject through either finder tube and press down the RELEASE button. Run the camera for at least 10 seconds on each scene. Hold it as steadily as possible. A good tripod will improve your films considerably, making them steadier and sharper.

13. LENSES

A combination of focal length or speed of lenses may be mounted on the turret. However, as a matter of experience, the following combination has proved most satisfactory for all-around work:

A wide angle lens for interiors and scenic views to encompass a wider angle than normal. (A lens less than 1" in focal length.)

A 1" (25 mm) lens for most filming. This is the standard lens. This lens produces a pleasing perspective and is the most useful lens.

A 3" (75 mm) for distant objects: sports, boats, aircraft and similar subjects. Also useful for close-ups of flowers and insects.

14. CARE OF THE PATHE CAMERA

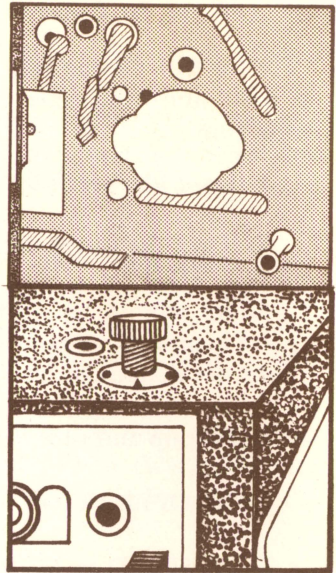
The Pathé camera is a precision mechanism and, therefore, must be given the proper amount of care. Keep it in a case at all times when not in use.

Clean out the camera interior occasionally with a soft dry cloth to remove dust and particles of film. Clean out the gate carefully.

The lenses should be cleaned occasionally with a soft, dry brush and lens tissue. Once in a while unscrew one of the lenses, and, with a soft, dry brush, remove dust from the diagonal glass plate over the film aperture. This plate reflects light from the lens into the reflex finder so it must be kept absolutely clean and scratch-free. Examine it carefully to be sure it is clean. Exercise extreme care when cleaning this glass.

After using the camera and removing the film, allow spring to become unwound by running camera until it stops. Then wind three or four turns of the winding handle and camera is ready to be stored.

After using approximately 50 to 100 rolls of film, place one drop of good camera oil in the 7 oiling points shown. It is a good idea to oil the camera anyway if it has been out of operation for a month or more. Operate the camera for a few minutes to distribute the oil. Wipe off any excess around the oil holes.



Memoranda

Memoranda

**OPEN THIS FOLD
FULL WIDTH
FOR
ILLUSTRATIONS
WHILE READING
INSTRUCTIONS**

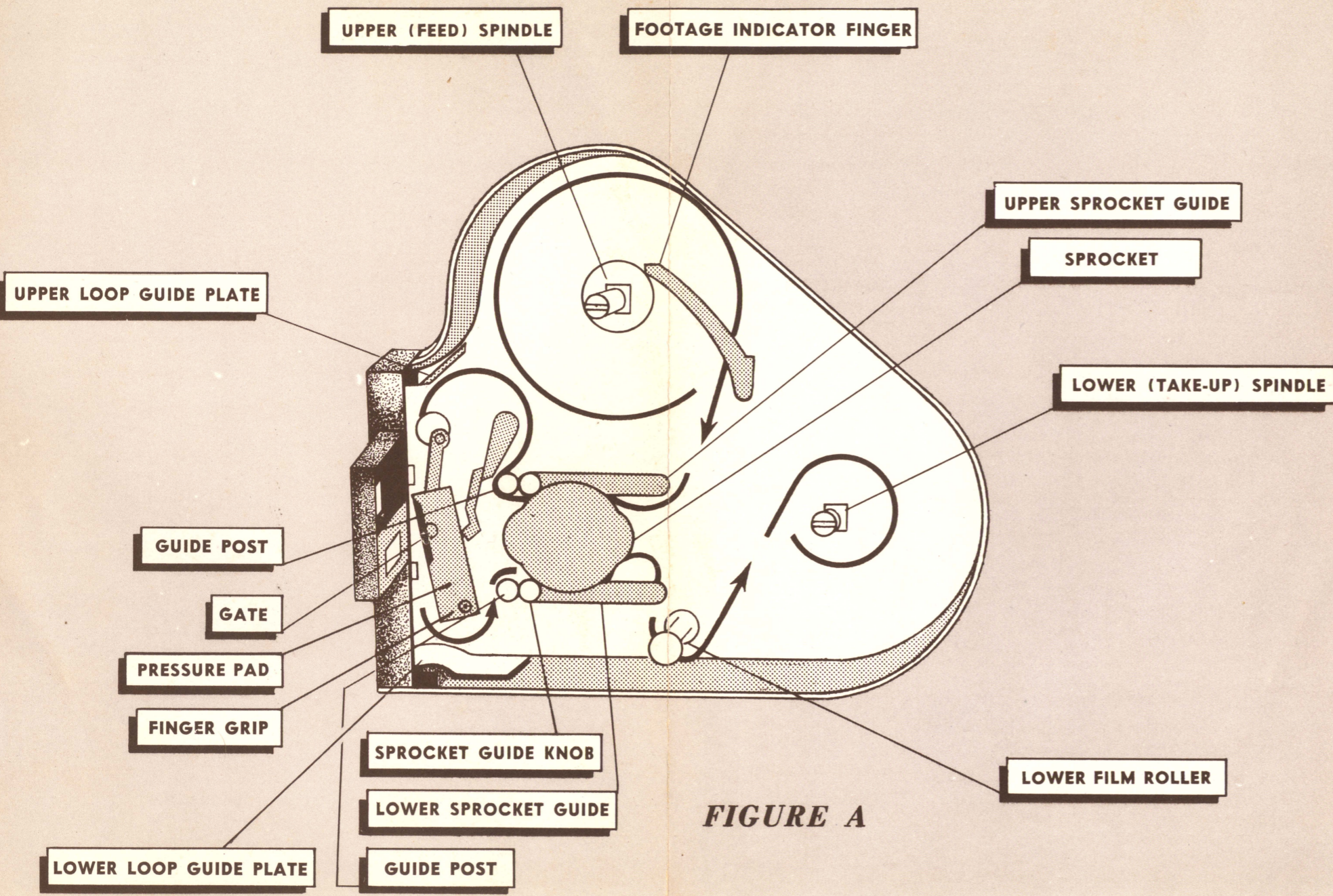


FIGURE A

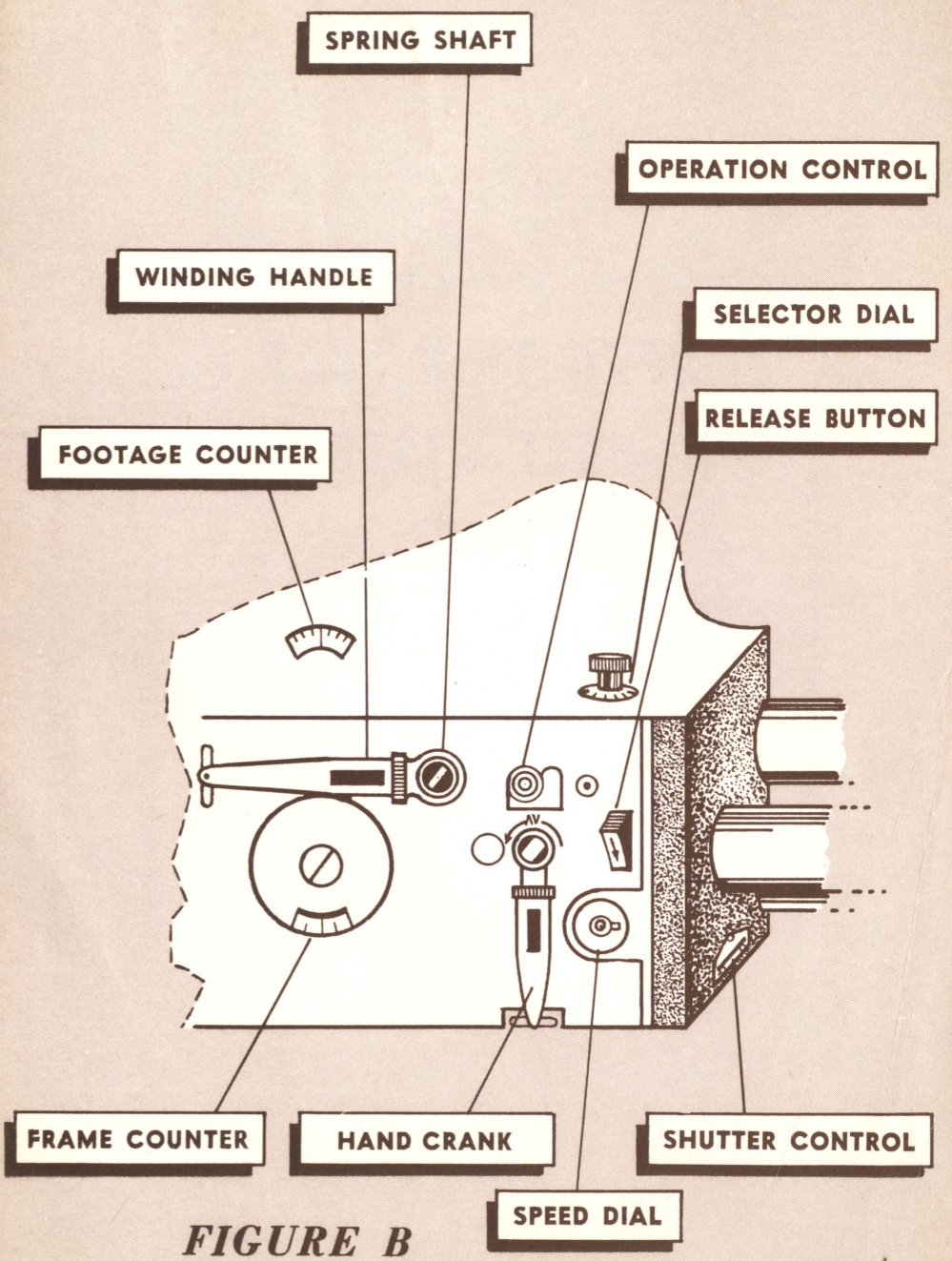


FIGURE B

Camera Record

(for Insurance Purposes)

Pathe Super "16", Serial No. 7656

Lenses:

F.L.	f:	Make	Serial No.
17" M/M		WOLLENSAK	803232
25" M/M	1.5	"	427623
75" M/M	2.5	"	936963
152.4" M/M	4/5	^{EY MAX} BELL & HOWELL	360645
	f.1.5	WOLLENSAK	

Camera Registration Card mailed Nov. 6, 1952
(Date)

Camera purchased 10-30-52 from STERLING-HOWARD
(Date)

Exposure Meter: NORWOOD DIR. Serial No. 10400

Tripod: PREMIUM - Value 15.00
TYPE A, MAZE, YELLOW WRAT 83

Filters: 3 Value 15.00

Case: ~~BOLEX~~ ^{OPATHE.} CASE Value 47.00

Other equipment: REVERE SOUND PROS. CRAIG VIEWER
& RE-WINDS, GRISWOLD SPLIEER

Policy No. Ins. Co.

The Pathé Super "16" is designed to give a lifetime of faithful service. In this camera are embodied all the features a cinematographer could want. While the basic operational instructions are contained within this book, real proficiency will be achieved through experience. We are certain that this fine instrument will exceed your expectations.

If, at any time, you wish information or assistance on a special filming problem, the Pathé organization is at your service, just write to:

PATHE CINE, 521 Fifth Avenue, New York 17, N. Y.

GUARANTEE!

The Pathé Super "16" is unconditionally guaranteed against defects in workmanship and materials for two full years from the date of purchase.

PATHÉ  **CINÉ**

521 FIFTH AVENUE, NEW YORK 17, N. Y.

A DIVISION OF DIRECTOR PRODUCTS CORP.

Additional Instructions for latest model

PATHE SUPER "16" CAMERA

1. The pressure pad is equipped with a lock which must be released before the film is channelled through the gate.

Pull the steel spring back gently from the pressure pad and then open the pressure pad itself. The pressure pad will then lock open automatically while the camera is threaded. To re-lock the pressure pad, again pull back gently the small steel spring and close the pressure pad. Let the spring return to its locked position, and the pressure pad will be locked in its correct position for running.

2. Make sure when threading the camera that the claw is engaged in a sprocket hole of the film before locking the pressure pad in the closed position.
3. It is not advisable to run any motion picture camera to the end of its spring run. This can result in a blank frame or the loss of the perforation by the claw. It is suggested the camera be stopped after a maximum of 25 feet of film has been run. This is a very long spring run and it should not, under normal circumstances, be exceeded.
4. The release button on your new Pathe has been incorporated with the Selector dial for convenience and ease of operation. Its action is quite simple but must be operated in the proper manner.

To start the camera, the lower ring should be set on "C" for continuous action. The upper button is then depressed to start the mechanism. While running on "C" a quarter of a turn of the upper button - while it is depressed - will lock the mechanism in the running position. To release, a quarter of a turn in the opposite direction will suffice.

The lower dial has four settings:-

- C - continuous run
- I - instantaneous single frame exposures
- B - bulb single frame exposures
- Off - entire mechanism locked, so as not to be accidentally started.

To change settings on lower dial, depress and turn to next setting and then allow lower dial to move upward to its normal position.

To use hand crank, set lower dial on "C" and depress release button and lock by taking quarter turn. The hand crank may then be put into use.

The threaded hole stop in the release button will accept a cable release without changing operation of lower (Selector) dial.

5. A bell has been installed and will buzz if the camera is started with the variable shutter closed. If making a fade in this warning may just be ignored.