

*Service Manual for*  
**SIX-20 'BROWNIE'**  
METAL-BODY BOX-FORM

**Kodak**  
EQUIPMENT  
SERVICES

JANUARY 1949

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*Service Manual for*

**SIX-20 'BROWNIE'**

METAL-BODY BOX-FORM

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MODELS COVERED BY THIS MANUAL ARE

**Six-20 'Brownie' Junior**

**Six-20 Portrait 'Brownie'**

**Six-20 Junior Super 'Brownie'**

**Six-20 'Brownie' Senior**

**Six-20 'Brownie' (1940)**

MADE BY KODAK LIMITED IN GREAT BRITAIN

THE CONTENTS OF THIS FOLDER CAN BE REMOVED AND FILED IF DESIRED IN A 3-RING 'NATIONAL' BINDER OBTAINABLE FROM MOST STATIONERS

## CONTENTS

SECTION I - Tools	...	...	...	...	...	...	2
SECTION II - Shutter	...	...	...	...	...	...	3
Operation 1: Removal and Cleaning of Shutter							
Fitting New Shutter Spring	...	...	...	...	...	...	3
SECTION III - Bodywork	...	...	...	...	...	...	4
Operation 2: Winding Key	...	...	...	...	...	...	4
Operation 3: Guide Rollers	...	...	...	...	...	...	4
Operation 4: Back Latch	...	...	...	...	...	...	4
SECTION IV - Optical Systems	...	...	...	...	...	...	5
Operation 5: Finder Mirror	...	...	...	...	...	...	5
Operation 6: Finder Glass (Brilliant or Ground)	...	...	...	...	...	...	5
Operation 7: Cleaning Lenses	...	...	...	...	...	...	5
SECTION V - Service Parts List	...	...	...	...	...	...	6

## SECTION I - TOOLS

The following general tools and supplies, obtainable locally, are recommended for the service operations described in this manual:-

- Light hammer (about 4 oz.)
- Snipe Nose 4½" Pliers
- Flat Nose 4½" Pliers
- Watchmaker's "AA" tweezers
- 3/16" Screwdriver
- Flat-Headed Punch
- Pin Punch
- 'Selvyt' Cloth
- Camel-Hair Brush
- 'Kodak' Lens Cleaner
- Dry Powdered Graphite
- Bright-Black Quick-Drying Cellulose Lacquer
- Matt-Black Quick-Drying Cellulose Lacquer
- Small Vice

A special Winding-Key Jig (Code T12) is also required. This special tool is available from Kodak Limited, Equipment Service, Wealdstone, Harrow, Middlesex. Please quote code number shown when ordering: price will be quoted on application.

## SECTION II - SHUTTER

Access to the shutter is obtained by easing off the camera front. The simple shutter mechanism of these cameras is unlikely to require other servicing than:-

- (a) Replacement of shutter spring
- (b) Cleaning

Any damage to the shutter mechanism should only be rectified by replacement of the shutter assembly complete. Repair is not practicable.

### Operation 1: Removal and Cleaning of Shutter Fitting New Shutter Spring

See Figure 1. Remove the shutter spring from its anchorages with a pair of watchmaker's tweezers. Insert nail remover between the shutter board and shutter plate. Taking care not to bend the shutter, prise up the two shutter nails. Extract the nails and remove shutter assembly from the shutter board.

To ensure smooth working of the shutter, clean the INNER surfaces of the shutter plate and blade, and polish with dry powdered graphite. All surplus graphite must be removed. DO NOT USE OIL OR GREASE.

Replace the shutter assembly on the shutter board, fitting the two nails in their previous holes. Tap home, using a light hammer and punch. Refit the shutter spring on to its anchorages.

### SECTION III - BODYWORK

Dents in the metal body of the camera may be beaten out with a light hammer, and afterwards the surface treated with a coat of bright-black, or matt-black cellulose lacquer, as requisite. Lacquer may be applied with brush or spray gun. Care should be taken whilst applying the lacquer to ensure that it does not splash onto parts of the camera not being treated. Only the minimum amount of lacquer required to cover the affected part should be applied.

#### Operation 2: Winding Key

Pull-out winding key to full extent. Open camera back and withdraw the inner body. With screwdriver, prise up the lugs behind winding key on inside of camera, straighten the lugs with pliers and withdraw the key complete.

On cameras with disc-type winding keys, pull open new key and place in position with lugs locating into the existing holes in the camera body. Slide key disc into slot of winding-key jig, and place jig spigot into a vice. Bend over lugs with a screwdriver. On cameras with other types of winding keys, place new key in position with lugs locating into the existing holes in the camera body, turn camera on its side, rest key on a bench, bend over lugs with screwdriver.

#### Operation 3: Guide Rollers

If either guide roller shows any sign of corrosion, replace it. Bend back the guide-roller bush at each end of the guide roller as little as required to release the roller. Refit a new roller, and ensure that after bending back each bush, it revolves easily but without excessive end-play.

Note. Make sure that there is an empty spool placed ready for use in the camera, before returning it to the customer.

#### Operation 4: Back Latch

Open rear of camera, support the hinged back and tap away the two rivets on the back latch. Fit new back latch with new rivets.

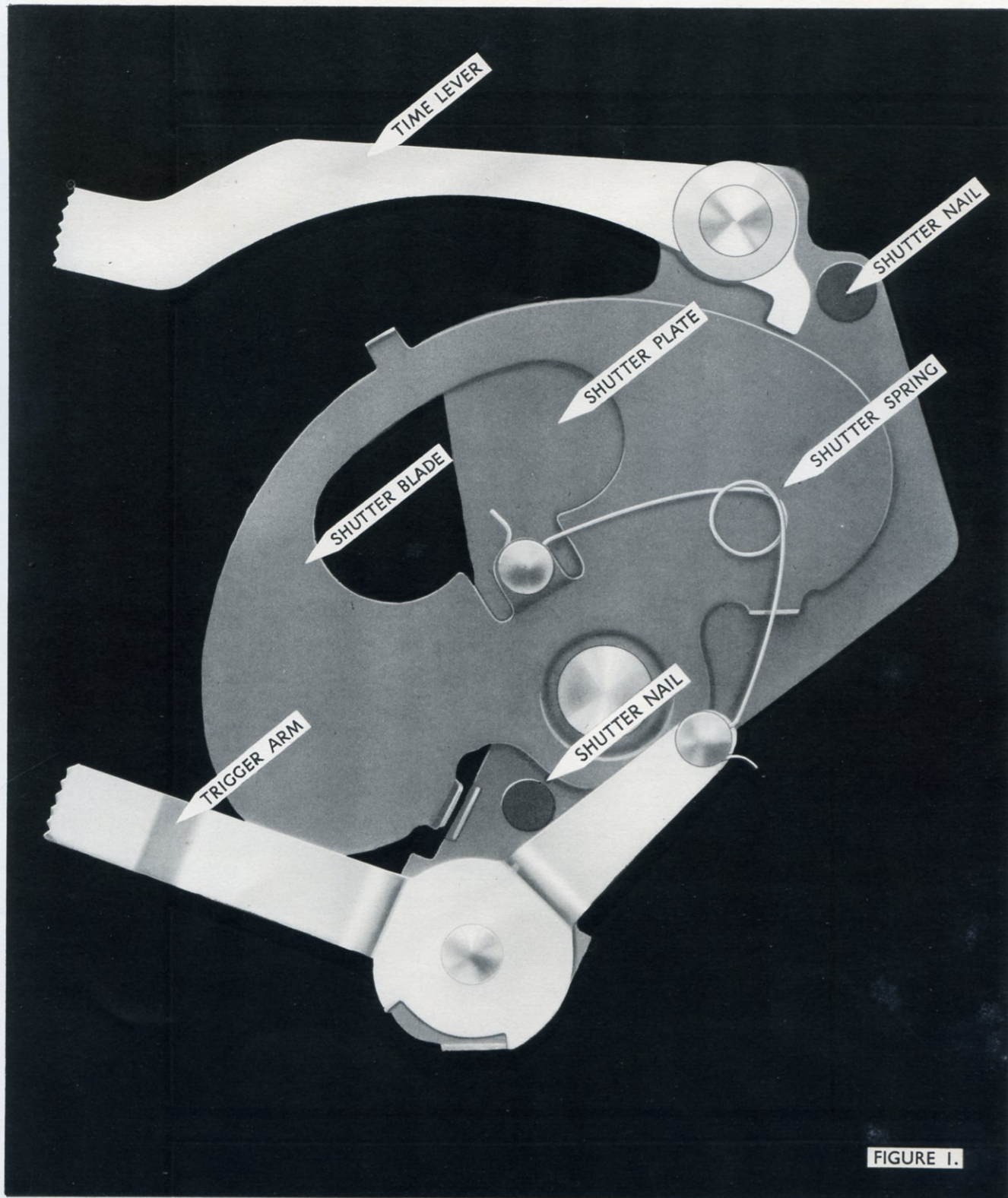


FIGURE 1.

## SECTION IV - OPTICAL SYSTEMS

Damage to camera lens or finder lenses, or displacement of these lenses in their mountings, can only be remedied by replacement of the case-front-section assembly complete. Repair is not practicable. In the unlikely event of one of these cameras not taking sharp pictures, and there being no sign of displacement of lens or damage to case-front-section assembly, the whole camera should be sent to Kodak Limited, Equipment Service for optical test. It is not practicable to attempt any such test without special equipment, which cannot be made generally available. Service to the optical systems of this series of cameras should be limited to the following operations:-

### Operation 5: Finder Mirror

Remove camera-front. With screwdriver, open up the lug which holds the mirror in position. Remove mirror. To replace, reverse procedure.

### Operation 6: Finder Glass (Brilliant or Ground)

Remove camera front. With screwdriver, open up the finder-frame lugs which hold finder glass on inside of camera. Ease out finder glass. Fit new finder glass, convex up; bend down lugs to hold in position.

### Operation 7: Cleaning Lenses

The outer surfaces of lenses and finder glasses should be carefully cleaned, care being taken not to scratch the surfaces. Dust and grit should first be removed by gently brushing with a fine camel-hair brush. If this is insufficient to clean the lens properly, gently wipe with a 'Selvyt' cloth. Wipe lightly and with a circular movement. If surfaces are finger marked or filmy, use a very little good quality lens cleaner on the cloth. 'Kodak' Lens Cleaner is a specially prepared liquid for this purpose. Do not use acids, alcohol, or a harsh linty cloth. Avoid excessive pressure and unnecessary cleaning.



## SECTION V - SERVICE PARTS LIST

When ordering Service Parts, the parts numbers must be quoted.

	<u>'Brownie' Junior</u>	<u>Portrait 'Brownie'</u> <u>'Brownie' Senior</u>	<u>Junior Super</u> <u>'Brownie' (1940)</u>
Case Rear ...	95910 3/6 each	95220 3/6 each	95220 2/6 each
Finder Frame ...	95235 -/9 each	95236 -/9 each	see below
Finder Glass ...	96394 -/3 each	97328 1/6 each	see below
Name Plate ...	not available	92999 1/6 each	see below
Name-Plate Rivets	not available	94723 -/6 dozen	95232 -/6 dozen
Shutter Assembly	95890 4/6 each	94647 1/3 each	93535 5/6 each
Winding Key ...	95904 2/- each	95221 2/6 each	see below

	<u>Junior Super</u>	<u>'Brownie' (1940)</u>
Name Plate ...	93089 1/- each	95233 1/- each
Finder Frame ...	95236 -/9 each	95235 -/9 each
Finder Glass ...	97328 1/6 each	96394 -/3 each
Winding Key ...	95221 2/6 each	93094 2/6 each

<u>All Models</u>			
Back Latch ...	...	93660	-/4 each
Back-Latch Rivets ...	...	94723	-/6 dozen
Finder Mirror ...	...	96405	-/3 each
Guide Roller ...	...	41043	-/4 each
Handle ...	...	95452	-/9 each
Roll-Holder Assembly		91773	7/- each
Shutter Nails...	...	29002	2/- gross
Shutter Spring ...	...	99802	3/- dozen

Prices are subject to Purchase Tax and normal discount, and may be altered without notice.

Address orders to Kodak Limited, Equipment Service, Wealdstone, Harrow, Middlesex.