

The Book of the



ELECTRIC  
LAWN MOWER





## FOREWORD

**I**N the production of the J.P. ELECTRIC LAWN MOWER the most desirable features of J.P. design have been incorporated to give a smooth-running machine, easy to control and simple to adjust.

A high-precision engineering standard of interchangeable accuracy in manufacture is maintained, using only the best and most suitable materials.

Proper care and attention to the running and adjustment instructions will ensure the best results and enable you to enjoy the satisfaction of reliable, efficient and trouble-free service.



**THE J.P. ENGINEERING CO. LTD.**

*Manufacturers of J.P. Super Lawn Mowers*

**MEYNELL ROAD, LEICESTER, Eng.**

Telegrams :  
"SUPERLAMO, LEICESTER"

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LEICESTER 27542 (2 lines)

# THE ELECTRIC J. P. LAWN MOWER

## The J.P. Electric Lawn Mower Instructions

### PREPARATION FOR THE INSTALLATION OF THE MACHINE

1. Please make sure that the voltage of the motor of your machine, which is stamped on the motor specification plate, is suitable for your local electric supply. This is an *A.C. Motor* and will not run on D.C. supply.
2. The machine is fitted with a three-core cable, with one wire marked EARTH WIRE (green), and should be suitably connected to an earthed 5 amp. three-pin socket, or if run from a 15 amp. socket, this must be sub-fused at 5 amps.
3. The machine should *never be run* or connected to a *light socket*, or any other connecting point which is not suitably earthed.
4. If you are in any doubt as to whether your plug point and electrical supply arrangement to connect up with the machine cable is correct, and in accordance with the approved electrical practise, *you should consult your electrical contractor for his advice.*
5. *The hose pipe should never be used* about the machine or the motor for the purpose of cleaning, and when the machine is not in use do not leave the plug out of the switchbox socket on the machine.

NOTE : All machines have been run and tested to check the wiring and switch control, and as far as possible, every precaution has been taken to ensure that machines are despatched in first-class order. It must however, become the responsibility of the User before any machine is put into working commission, to see that every care is taken which will ensure that it is properly installed for electric power. Furthermore, it is at all times advisable and important for the user to see that the electrical installation is maintained in good order and periodically checked by his Electrical Contractor, particularly before commencing mowing after winter storing.

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## **LUBRICATION**

*The following oiling points on the machine should receive attention :*

### **I.—BACK ROLLER (Every two months)**

The centre section of the back roller contains the epicyclic speed-up gears that run in an oil bath charged before delivery. The oil should be kept to its level by recharging with the equivalent of a dessert spoonful of oil every two months, proceeding as follows :

First unscrew the two hexagon nuts and take off the clutch cover. Tip the machine over on to its side. In the centre of the clutch drum will be seen a small hexagon-headed screw marked "OIL". Remove the oil screw and apply oil in the hole in the shaft. Replace the screw and tighten up securely.

### **Ia.—CLUTCH OR ANNULAR GEAR SHAFT (Every two weeks)**

This shaft is lubricated through the flip-flap lubricator situated on top of the rear boss of the small side frame. A small charge of oil is sufficient. Close the flap afterwards to prevent the entrance of dirt.

Oil the drum ratchets through the two holes in each end of roller, pushing in the brass sealer with the end of the oil-can nozzle.

### **2.—CUTTER DRIVING CHAIN (Every two months)**

Unscrew with the slotted end of the box spanner the large screwed cover, Part No. 1-4. Oil the chain with a light lubricating oil. Replace the cover and screw it up tight to prevent leakage.

### **3.—MOTOR COUPLING SHAFT BEARING (Every two months)**

Unscrew and take off the two cap nuts of the motor side frame—the motor shaft ball bearing is then accessible for re-greasing. Good quality thick grease should be applied. Replace the bearing cap, screw up nuts secure and tight.

### **4.—SMALL CUTTER BALL BEARING (Every two months)**

Unscrew with the slotted end of the box spanner the screw cover in the small side frame. Good quality thick grease should be applied after first removing all traces of dirt and grit from frame. Replace the cover and screw up tight.

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## 5.—CHAIN CASE CUTTER SHAFT BEARING (Every two months)

Apply grease at the grease nipple point provided, seen on top of the bearing housing, with the grease gun supplied in the tool kit.

## 6.—REAR AXLE BEARING FOR PINION SHAFT (Every two months)

Unscrew and remove the two nuts which hold the large transmission cover. Remove the cover and turn the machine on its side with the transmission side uppermost. Near the centre of the large V-pulley will be seen a small hole stamped "Oil," which should be applied at this point, allowing a couple of minutes for the oil to seep through the bearing. Replace the transmission cover, screw on nuts and secure tight.

## 7.—MOTOR SHAFT BEARINGS (Every two months)

On the motor will be seen two Stauffer lubricators, one mounted on each bearing. These should be filled with grease

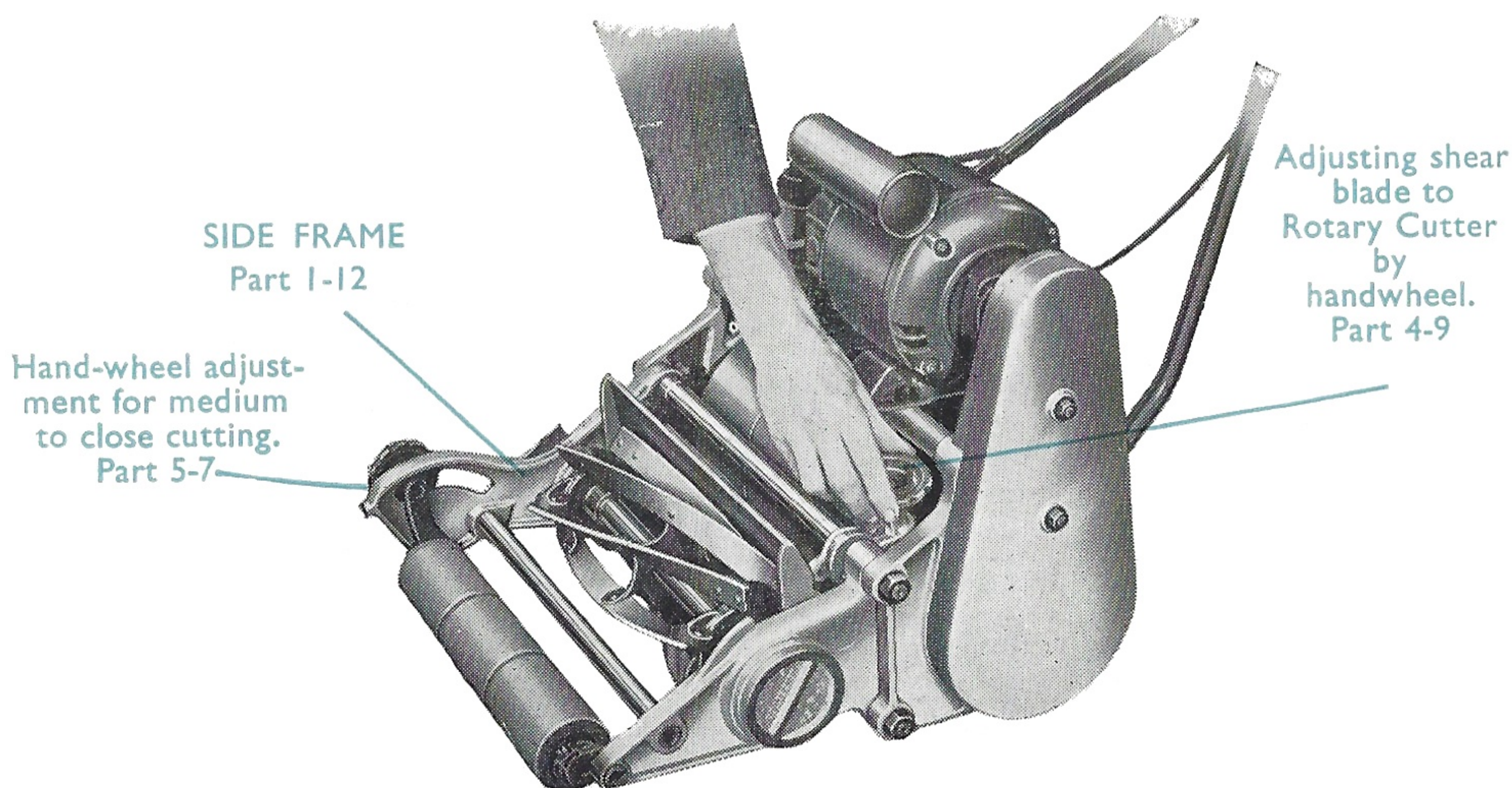


Fig. 1

# **THE ELECTRIC J. P. LAWN MOWER**

and screwed down three or four turns every two months and, when empty, unscrew the cap and fill with grease and replace the cap.

## **8.—FRONT AXLE (Frequently)**

- (a) Apply oil on the shaft at the space between the wood rollers; to facilitate the oil feed tip machine on each side.
- (b) Where light alloy metal front rollers are fitted as special, these are provided with self-lubricating bearings.
- (c) For cleaning, in addition to lubrication, the axle may be removed by unscrewing from the aluminium side frames the two supporting studs, having first removed the screwed handwheel and spring washer.

IMPORTANT : Use good quality oil. We supply a suitable J.P. brand specially refined.

## **ADJUSTMENT**

### **9.—SETTING THE ROTARY CUTTER TO THE SHEAR BLADE**

The rotary cutter works against a bottom shear blade, and the latter is adjusted and brought into contact with the rotary cutter by turning the handwheel 4-9 (Fig. 1) in the direction of arrow.

Turn the handwheel just sufficient until a light audible contact is heard as the cutter is spun round ; in spinning the cutter, keep the hand at the top of machine away from the shear blade, otherwise the fingers may be caught and badly cut.

*Do not turn handwheel too far* as this will only make a harsh contact, thereby unnecessarily increasing the wear on the blades.

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## 10.—ADJUSTING FRONT ROLLERS FOR CLOSE TO MEDIUM CUTTING

The adjustment for length the grass is to be cut is made by handwheel 5-7 (see Fig. 1). The illustration shows the machine set for cutting a heavy crop. This does not mean a hay field, extra long grass must be cut with a scythe before using the lawn-mower. This handwheel 5-7 should not be set too far back when going over the lawns for the first time in the season ; keep it well in front of the arrow mark, which is above the slot on the side frame 1-12. As the ground gets hard and firm, the lever can be set further back until the machine will be set so low that it will practically shave the lawn. This is ideal for bowling greens and tennis courts, but unless the ground is very level and hard, the lever should not be set below the arrow mark.

After moving the handwheel, be careful to re-tighten it firmly to prevent the adjustment shifting.

## 11.—REMOVING THE ROTARY CUTTER FOR SHARPENING

If proper care is taken to adjust, oil and clean the cutters as in the preceding paragraphs, the rotary cutter should work for two seasons before becoming dull. It is easily removed from the

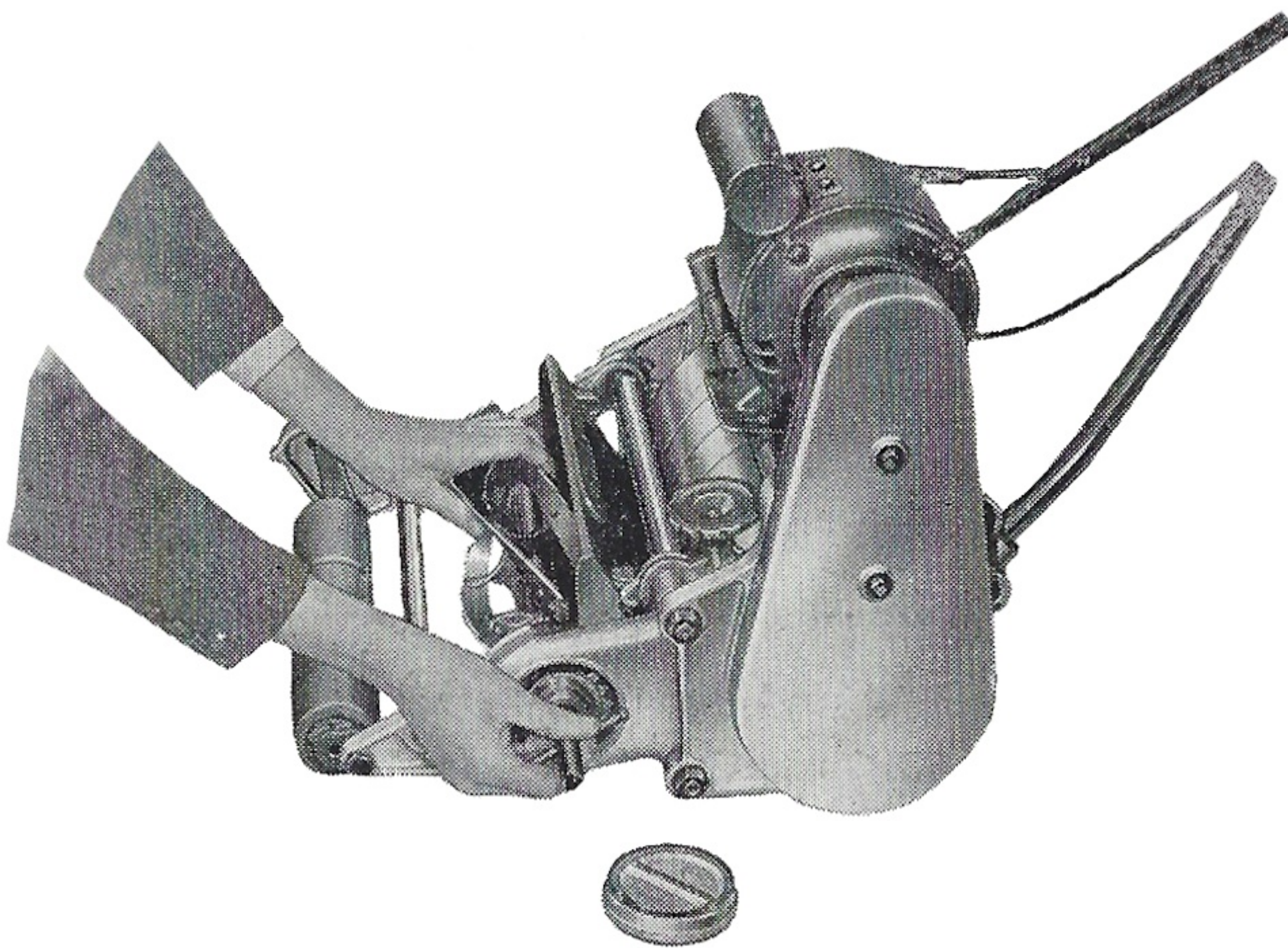


Fig. 2



# THE ELECTRIC J. P. LAWN MOWER

machine for resharpening. Illustrations 2 and 3 show how this is done. First *thoroughly* clean machine, removing *all* grit, dust and place on a large sheet of clean paper, unscrew the small screw cover 1-13, then remove the large screw cover 1-4.

In the recess of the chain wheel will be seen a cork which retains the safety shearing rivets in position, and this should first be removed. At the bottom of the recess will be seen the small cutter nut 3-3 which should be unscrewed a couple of turns with the box spanner supplied with the kit (as illustrated in Fig. 2). Then loosen the end of the spanner lightly with a block of wood to loosen the cutter shaft 3-2 ; remove the nut and with the spanner handle push the shaft inwards until the opposite end can be grasped with the left hand. Holding the cutter with the right hand, the shaft may now be drawn completely out of the machine, and the rotary cutter simply lifted from the frames as shown in Fig. 3.

Replace the shaft and nut and the caps in the machine to prevent dust getting in and, if need be, oil the shaft to prevent it rusting.

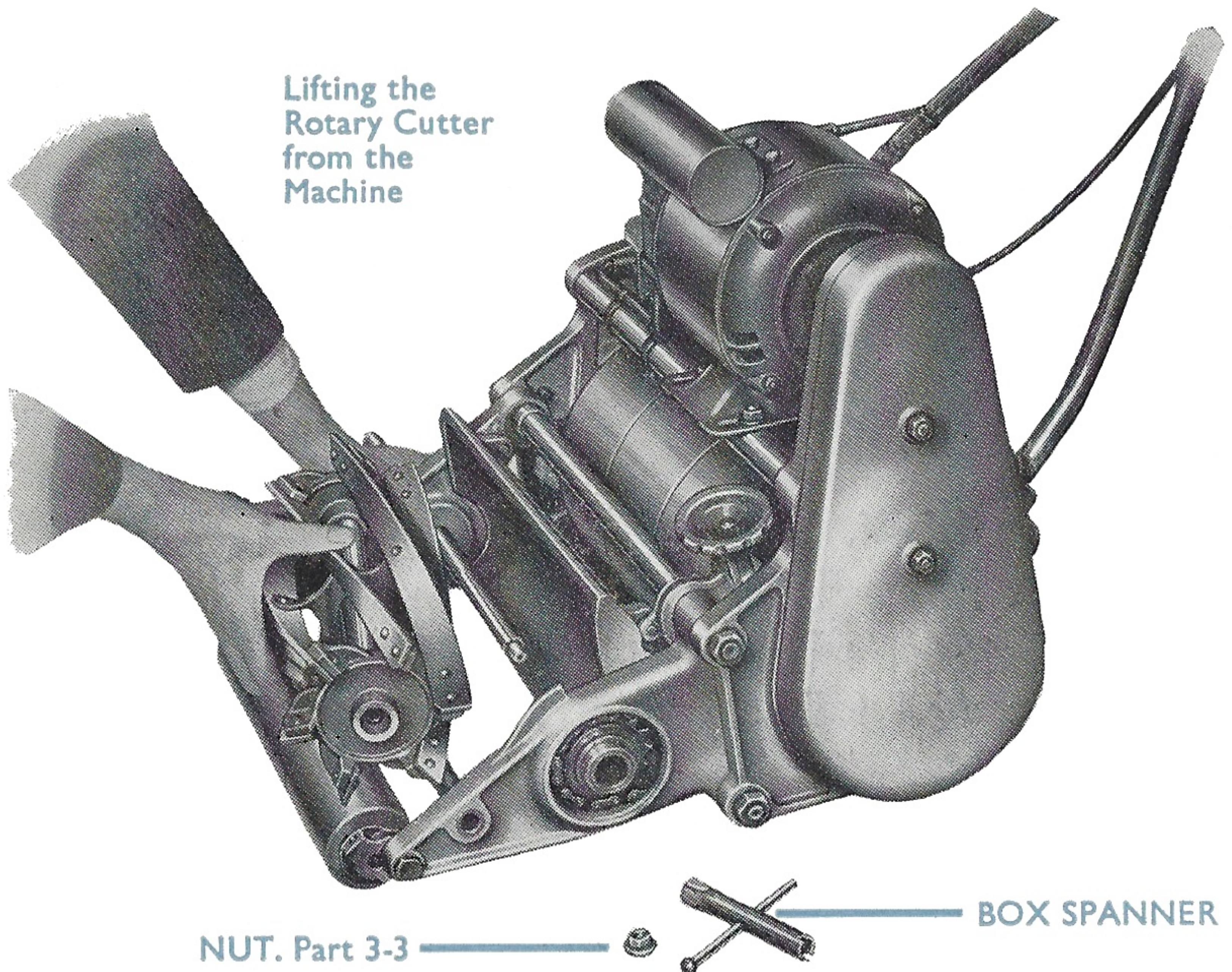


Fig. 3

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## 12.—REPLACING THE ROTARY CUTTER

Before putting the cutter back, examine the cone ends and carefully remove *all* trace of dirt and grit. It will be found that one end has three keyways formed in it. Place this end over the projecting cone of the sprocket wheel sleeve 3-4, which may be seen in the chain gear box side, and will be recognised by three keyways similar to those in the cutter. Insert the shaft 3-2 from the other side of the machine, turning it to bring its grooves opposite the keyways in the cutter and sprocket wheel sleeve (a mark is provided on the edge of the hub of the rotary cutter to correspond with similar marks on the projecting cone of the sprocket wheel sleeve to facilitate this), then push it firmly home, refit the shaft nut and screw up tight. Replace cork into the recess of the chain wheel, also the large and small covers and screw up tight.

NOTE : The slightest trace of dirt or grit on shaft or the cones of cutter will throw it out of true.

## 13.—REVERSING THE SHEAR BLADE

When the front edge of shear blade is worn, it should be reversed to the opposite side. To do this, lay the machine on its side and using a wide screwdriver, take out the shear blade screws. Then lift the blade off the frame face, *clean and oil both faces*, turn blade round with the new edge to the rotary cutter. Insert screws and half tighten, then finally screw up each one hard and tight. Adjust for alignment, if necessary, to instruction (Parallelism of Cutters, para. 14).

## 14.—PARALLELISM OF CUTTERS

The mower is set and locked before despatch to cut equally along the whole length of the blades when adjusted as per paragraph 9, page 5. It should not need further setting unless it has been dismantled or subjected to excessive shocks, or through the rotary cutter fouling an obstruction. To correct any misalignment of the rotary cutter with the shear blade, proceed as follows :

Turn the machine over or stand it on end, loosen for about two turns the cotter nut that is seen projecting from one end of

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the bearing of the knife frame ; then tap the cotter inwards to free it. Now slightly rotate the phosphor-bronze eccentric bearing in the frame by using a suitable punch in the small holes. Rotate in the direction required to bring the bottom blade parallel with the rotary cutter, testing the parallelism of the cutters by cutting with a strip of paper until the knives cut evenly at each end. Re-lock the frame cotter nut after setting.

## 15.—INSTRUCTIONS FOR REMOVING THE MOTOR

First release the rubber cable clips from the handlebar which hold the two feet length cable with socket. Then unscrew the front and rear bolts which hold and position the motor on the crossbar members (front and rear). Unscrew the nuts and take out the three flexible coupling bolts which connect the motor shaft. The motor can then be taken complete from the machine.

## 16.—TO REPLACE MOTOR

The motor should be assembled on the two cross members, resting on the two brass saddle washers at the front, and the two brass saddle washers plus two distance pieces at the rear.

With the motor now in position *but not tightened up*, replace the three flexible coupling bolts and screw up tight. Then screw down the crossbar motor bolts and tighten up, taking care to see that the motor is in correct lineable position.

NOTE : If your machine is fitted with a one-part rubber and metal bonded coupling, all that is necessary to remove the motor is to unscrew the two Allen screws seen on one half of the coupling boss, and slide the motor along the tie-bars. The reverse applies for replacement.

## 17.—CLUTCH ADJUSTMENT

The driving clutch is of the band type, with a Ferodo lining, operating on a brake disc. No adjustment should become necessary until after extensive use. The evidence of the need for clutch adjustment will be that it becomes sluggish and does not readily take up the drive of the machine when the control lever on the handlebar is gripped. To correct this, proceed as follows :

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Remove the clutch cover by taking out the two screws. Slacken off the locknut between the inside flanges of the clutch band for two or three turns. Then screw up the opposite locknut which is seen underneath the knurled head of the adjuster. This will take up the cable slack and wear on the clutch band. Make sure to tighten up the nuts securely after adjustment. The clutch should then be tested for drive and if there is still a sluggish tendency the adjustment procedure should be repeated until satisfactory drive is obtained.

NOTE : When operating the machine as a self-propelled unit, the clutch lever should always be gripped tight. For tortuous work, as already explained, the machine can be used with the motor switched on and the machine pushed, without use of the clutch lever.

## 18.—IMPORTANT: SAFETY PRECAUTION

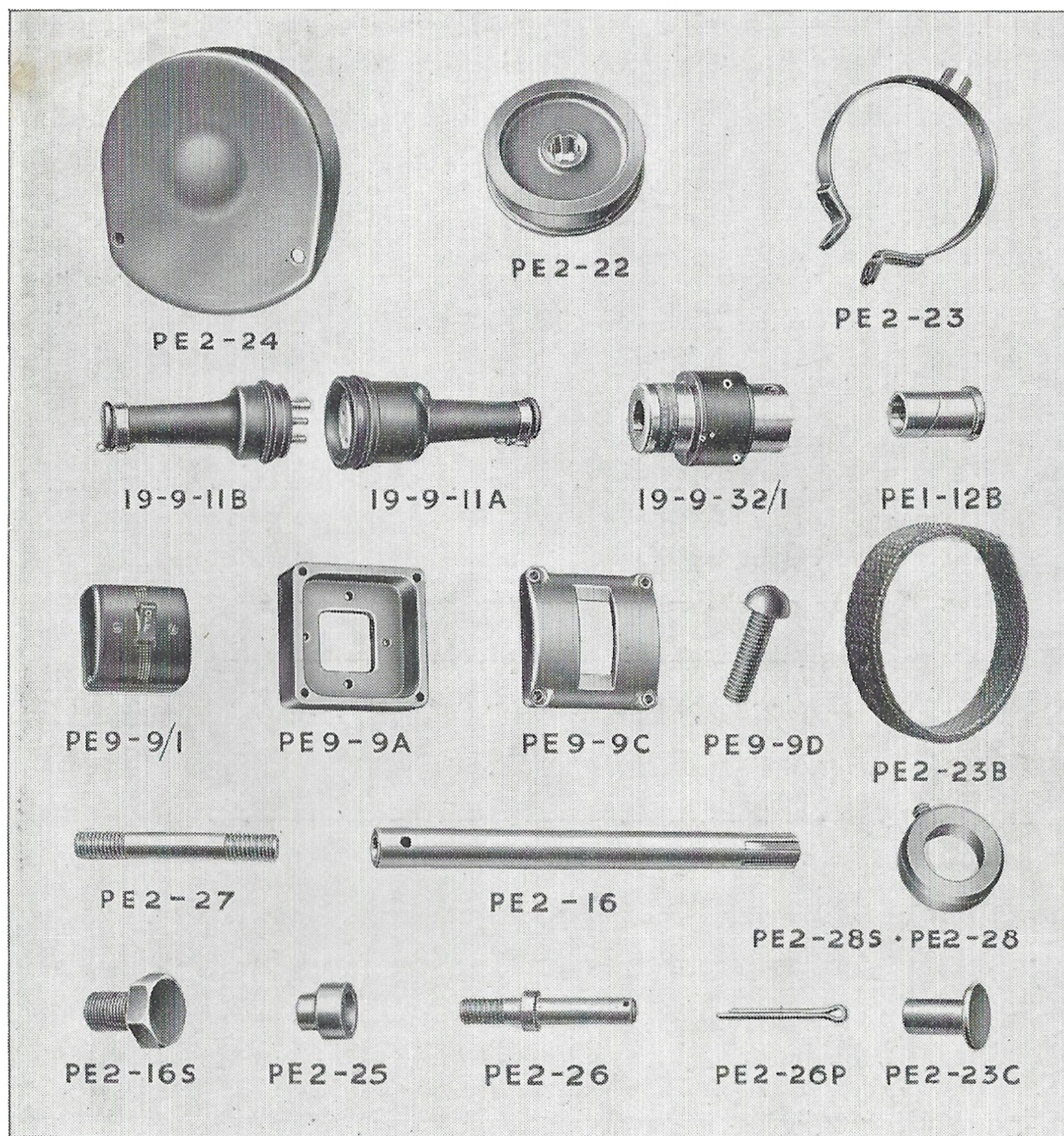
As a precaution against accident, always switch off the motor to stop the cutters revolving before emptying and replacing the grassbox.

## 20.—REPLACING THE SAFETY COPPER SHEARING PINS

There are two copper safety shearing pins which engage the cutter bearing sleeve and the sprocket sleeve, and these are accessible by unscrewing the large screw cover at the end of the cutter on the main chain case side frame. In the event of an obstruction fouling the cutters during the working of the machine, the two rivets which are fitted will be caused to shear, and this action greatly assists in preventing damage to cutter blades and transmission by absorbing the shock of the obstruction.

To replace the shear pins, first remove the cork in the recess of the sleeve and get the holes of the two sleeves in line, when the sheared portions can be knocked through with a small punch from the outside of the sleeve into the recess. Take particular care to see that no portion of any pin is left inside the chain case. Two new shear pins can now be fitted—these should be inserted from the inside with the head of the rivet in the recess. Replace the cork to prevent the pins dropping out and screw up the chain cover tight.

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## SUPPLEMENTARY GROUP

- |                            |                                  |
|----------------------------|----------------------------------|
| PE 1-12B—Brass Bush        | PE 2-27—Stud                     |
| PE 2-16—Annular Gear Shaft | PE 2-28—Collar                   |
| PE 2-16S—Oiler Screw       | PE 2-28S—Setscrew                |
| PE 2-22—Brake Drum         | PE 9-9/1—Switch                  |
| PE 2-23—Brake Band         | PE 9-9A—Switch Base              |
| PE 2-23B—Brake Lining      | PE 9-9C—Switch Cover             |
| PE 2-23C—Rivet             | PE 9-9D—Switch Cover Screw       |
| PE 2-25—Nipple Seating     | 19-9-11A—Socket                  |
| PE 2-26—Anchor Stud        | 19-9-11B—Plug                    |
| PE 2-26P—Split Pin         | 19-9-32/1—Rubber Bonded Coupling |

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SPECIAL NOTE: *The preceding pages omit Section 19, as this does not apply to the latest type electric models.*

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## 21.—ATTACHING GRASSBOX

The fitting-on of the grassbox is shown in Fig. 4. The notches in the two metal wings, 6-6, 6-7, of the grassbox fit on the cross rod 1-7, that lies between the front rollers and the cutter, and the toes of the wings fit under the frame bosses. See that the box is well down on the rod or it may foul the cutter, which is a bad thing for both.

## 22.—STORING AND OFF-SEASON CARE

Upon completion of the mowing and before putting the machine away, clean off all clinging grass or dirt. Wipe the rotary cutter and shear blade with an oily rag, this should be done to prevent rusting and will help to keep the cutters sharp.

**IMPORTANT :** Store the machine in a DRY tool shed, and protect the electrical equipment from wet and moisture.

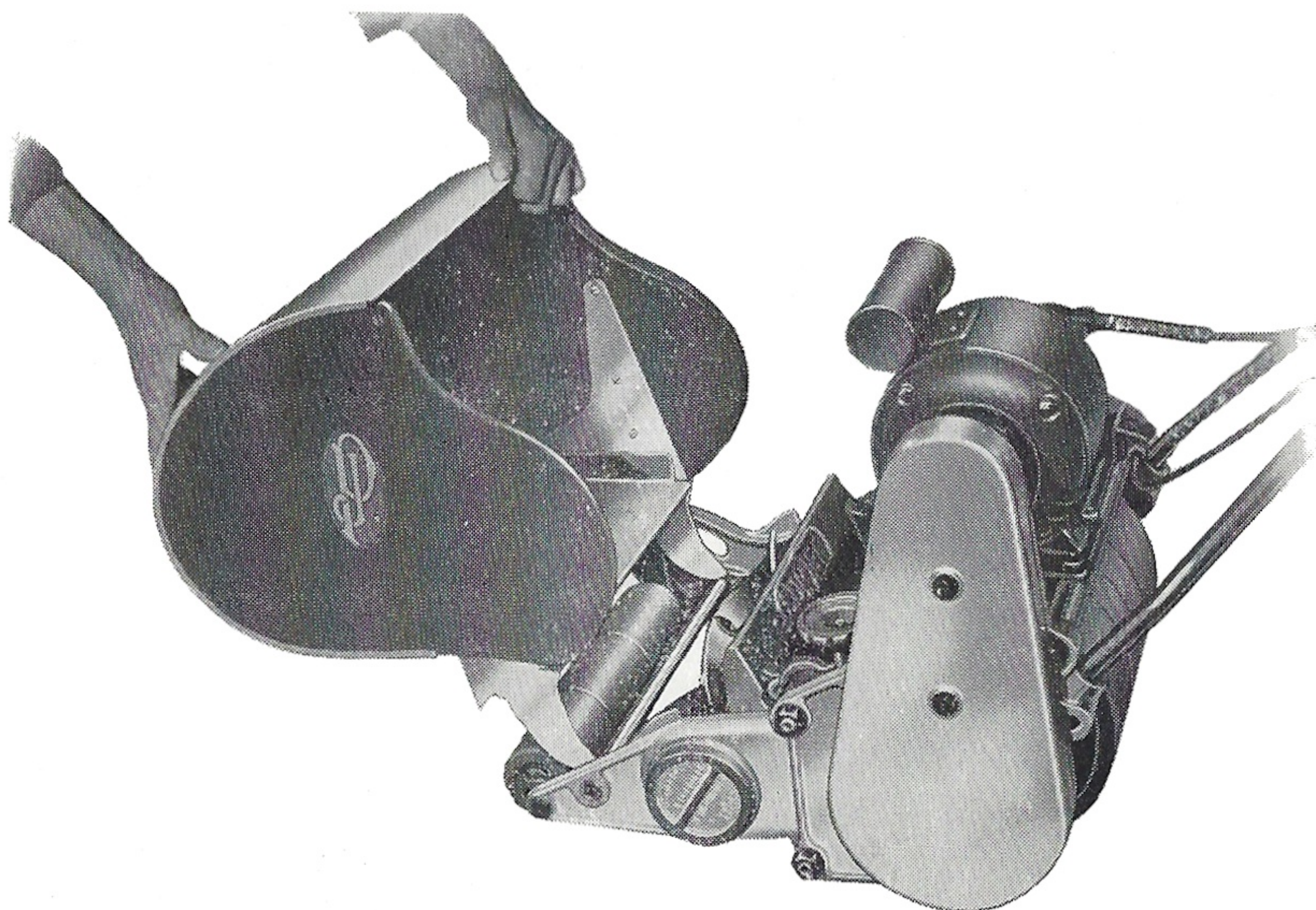


Fig. 4

# THE ELECTRIC J. P. LAWN MOWER

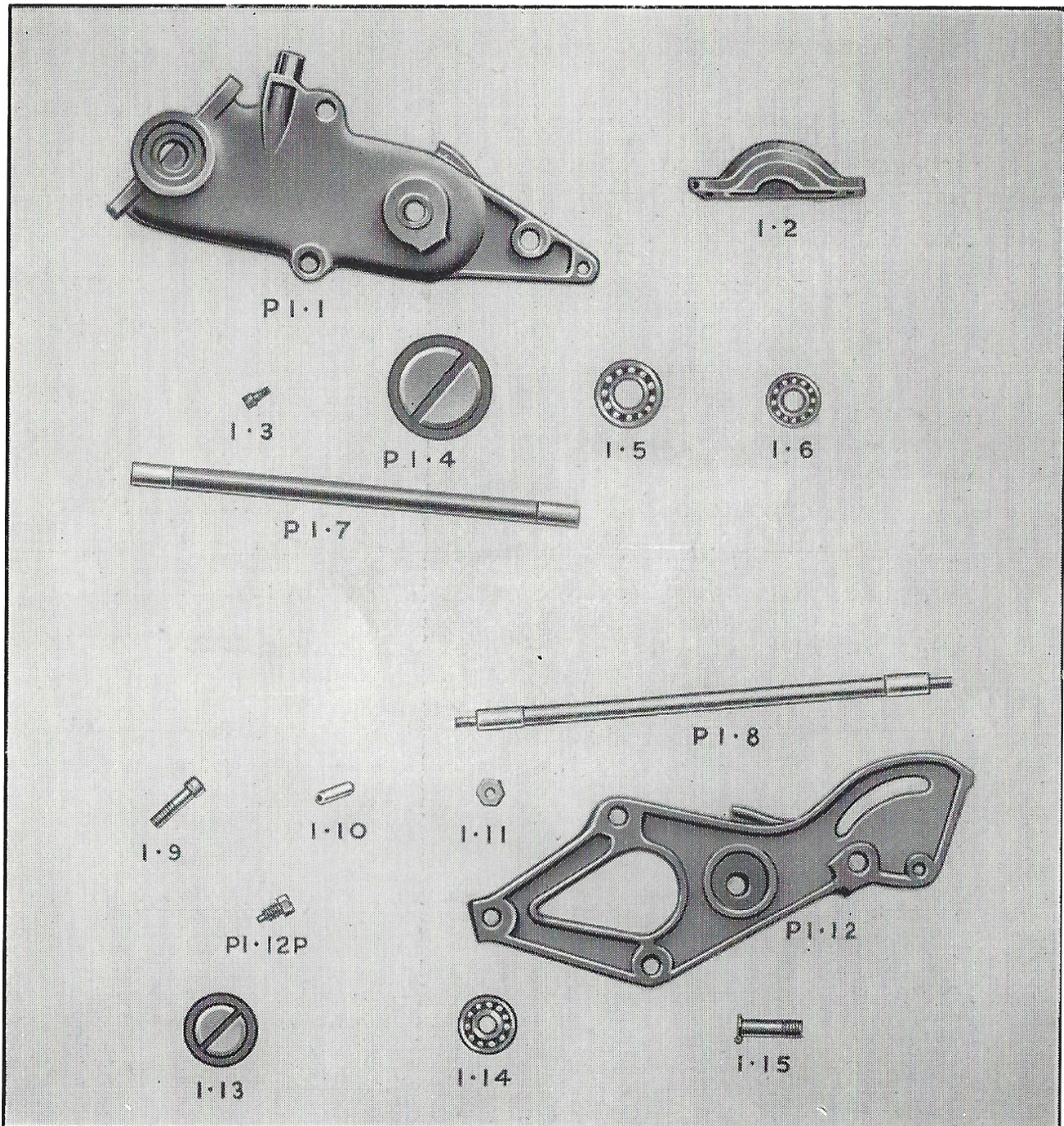
## AFTER-SERVICE AND INSTRUCTIONS FOR ORDERING SPARE PARTS

1. We have available a first-class overhaul and repair Service Department, fully equipped with modern facilities. Consult your Dealer with regard to your requirements or, in case of difficulty, contact us direct.  
Always see that the machines and cutters returned for overhaul and regrinding are properly packed and labelled *with the name and address of the sender securely attached*. On request, we will despatch a crate for the return of your machine for works overhaul and service attention.
2. The main parts are illustrated in Plates 1-8 and the comprehensive list of components is quoted with the respective part numbers. Always give part number and description in full.
3. When ordering spare parts, always quote the number of the machine, which you will find stamped on the front edge of the main chain case side frame ; it is important that the prefix letters and the serial number reference are quoted in full to ensure that the correct parts are despatched. *Always quote the machine number in correspondence.*
4. All machines and component parts must be consigned to us, carriage paid, addressed to the "Service Department" ; goods returned by rail are consigned Carriage Paid. Old and worn out parts sent as patterns which we consider are obsolete and of no further use are not returned unless we are specially requested to do so at the time they are sent to us.
5. If required, we are prepared to submit an estimate before proceeding with any repairs. If the estimate is not accepted, we may make a small charge to cover mechanic's time in dismantling and inspection for report.
6. Estimates must be treated as approximate only. We reserve the right to include additional parts should they be found necessary on further examination to make the repair a satisfactory job.
7. Special thin shear blades are required and fitted to Bowling Green Models only, and these should be referred to as "No. 3 Razor Type."



# PARTS LIST

ALWAYS INSIST ON GENUINE J.P. SPARES

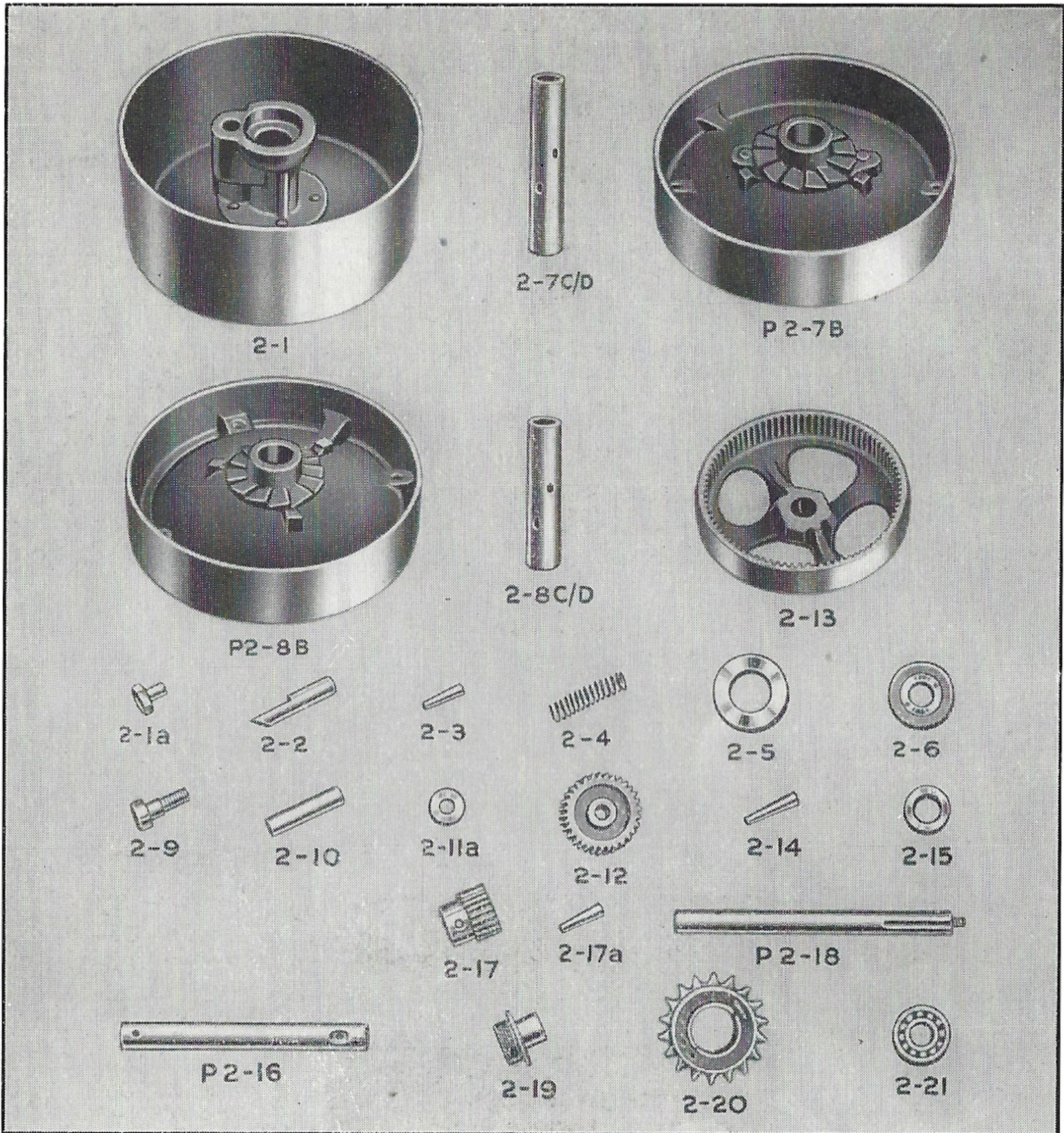


## GROUP 1-0

PI-1—Chaincase Side Frame  
I-2—Chaincase Cap  
I-3—Chaincase Cap Screws  
PI-4—Chaincase Bearing Cap  
I-5—Ball Race  
I-6—Ball Race  
PI-7—Front Tie Bar  
PI-8—Main Tie Bars  
PI-8N—Main Tie Bar Nuts  
PI-8W—Main Tie Bar Washers

I-9—Cotters  
I-10—Cotter Sleeves  
I-11—Cotter Nut  
PI-12—Removable Side Frame  
PI-12P—Retaining Pin  
I-13—Sideframe Bearing Cap  
I-14—Ball Race  
I-15—Flip-Flap Lubricator  
I-23—Handlebar Tie Bar  
I-24/I—Handgrips

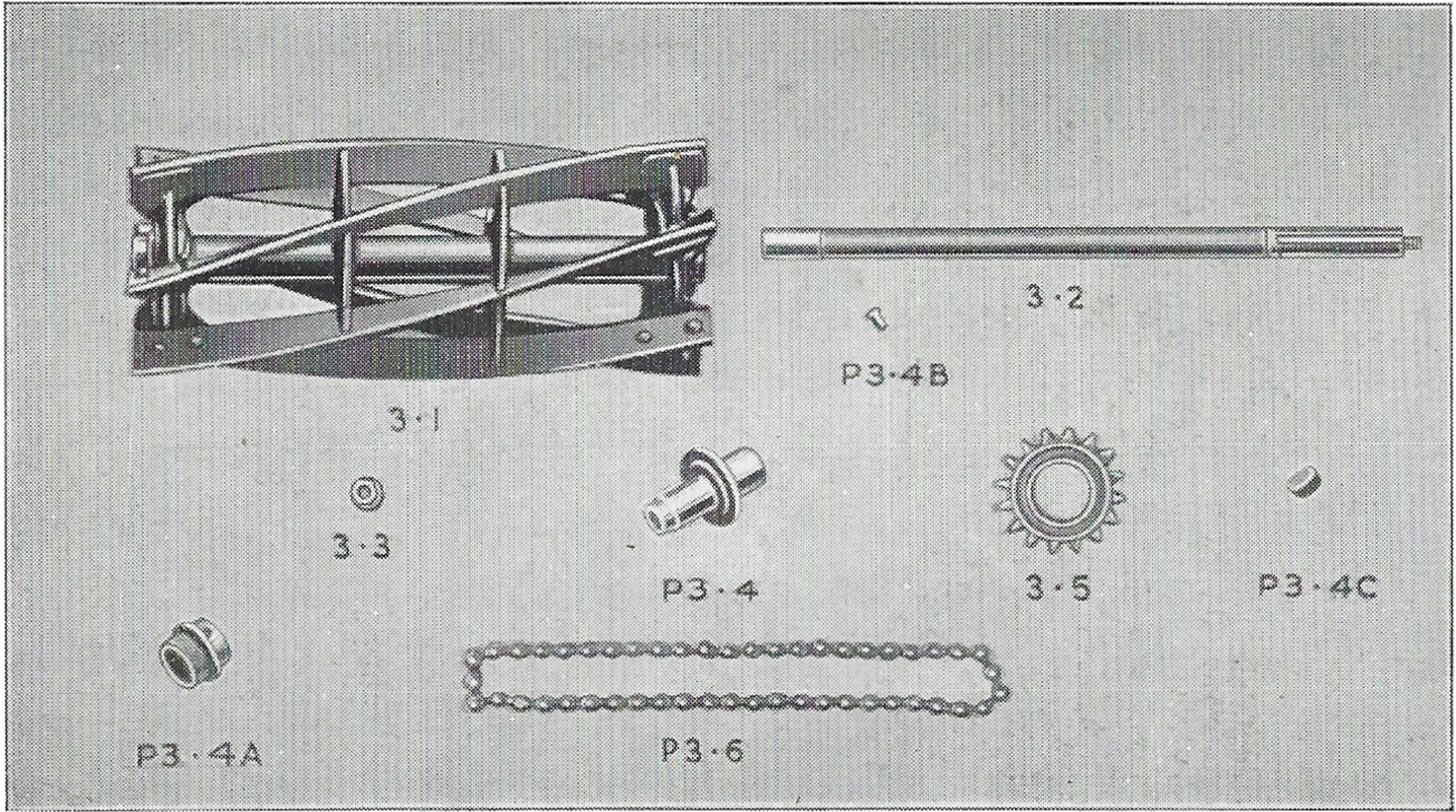
## PARTS LIST—continued



### GROUP 2-0

- |  |  |
|--|--|
| <p>2-1—Outer Drum<br/>                 2-1d—Oilers<br/>                 2-2—Plunger Pawl<br/>                 2-3—Taper Pins<br/>                 2-4—Plunger Springs<br/>                 2-5—Large Thrust Washers<br/>                 2-6—Medium Thrust Washer<br/>                 2-6E—Dowel Pin<br/>                 2-7A—Gear Case Dowels<br/>                 P2-7B—Plant Gear Case<br/>                 2-7C/D—Gear Case Tube<br/>                 P2-8B—Annular Gear Case<br/>                 2-8C/D—Annular Gear Case Tube<br/>                 2-9—Gear Case Screws<br/>                 2-10—Planet Gear Axles</p> | <p>2-11—Planet Axle Pins<br/>                 2-11A—Axle Washers<br/>                 2-11B—Axle Split Pins<br/>                 2-12—Planet Gears<br/>                 2-13—Annular Gear<br/>                 2-14—Taper Pin<br/>                 2-15—Annular Gear Washer<br/>                 P2-16—Annular Gear Shaft<br/>                 2-17—Pinion<br/>                 2-17A—Taper Pin<br/>                 P2-18—Pinion Shaft<br/>                 2-19—Freewheel Sleeve<br/>                 2-20—Freewheel<br/>                 2-21—Ball Race</p> |
|--|--|

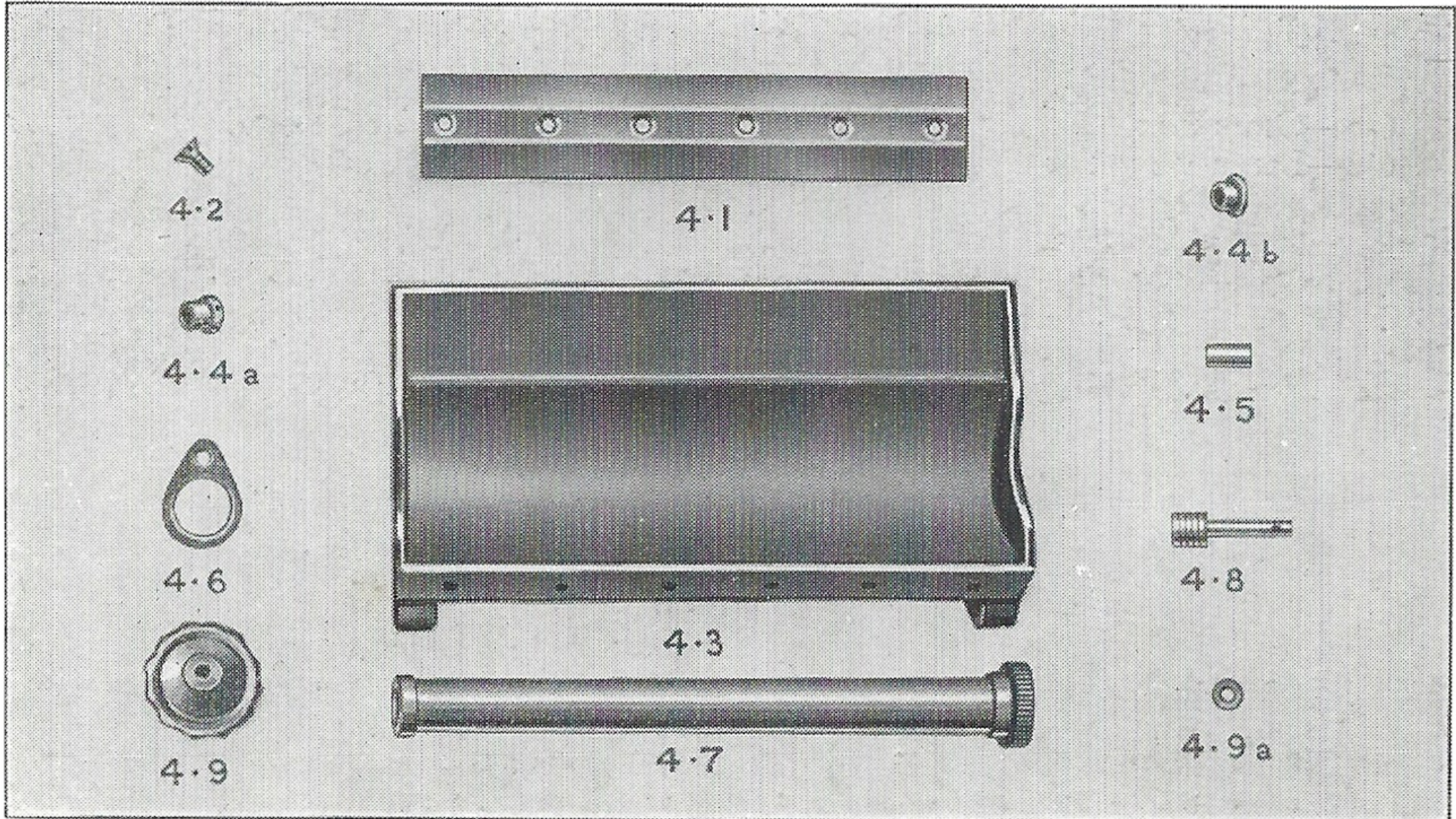
## PARTS LIST—continued



### GROUP 3-0

3-1—Rotary Cutter  
 3-2—Cutter Shaft  
 3-3—Cutter Nut  
 P3-4—Sprocket Sleeve  
 P3-4A—Sprocket Bush

P3-4B—Copper Rivets.  
 P3-4C—Cork  
 3-5—Sprocket  
 P3-6—Chain

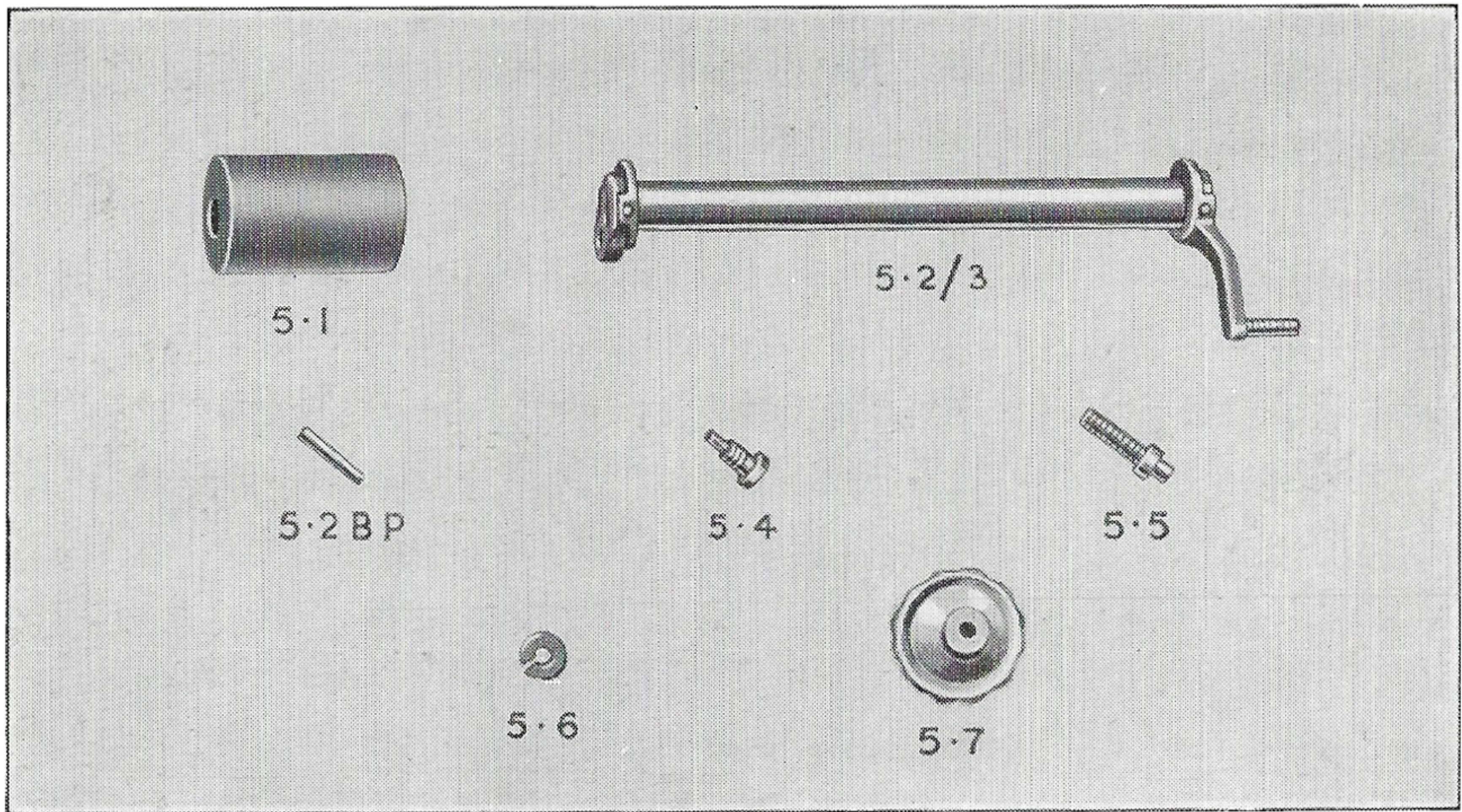


### GROUP 4-0

4-1—Ledger Blade  
 4-2—Ledger Blade Screws  
 4-3—Knife Frame  
 4-4A—Eccentric Pivot Bush  
 4-4B—Plain Pivot Bush  
 4-5—Pivot Pins

4-6—Eccentric Straps  
 4-7—Shear Blade Adjuster  
 4-8—Worm  
 4-9—Handwheel  
 4-9A—Spring Washer  
 4-10—Taper Pin

## PARTS LIST—continued



### GROUP 5-0

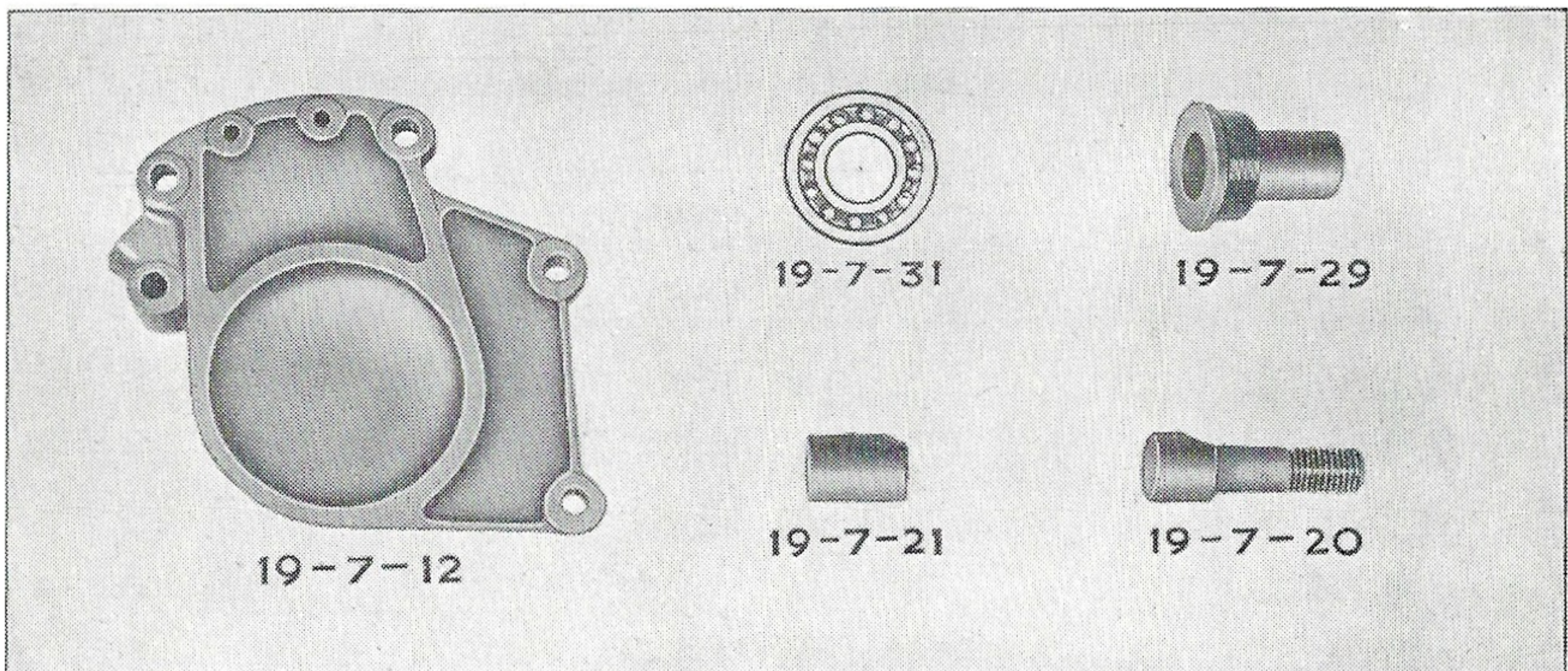
5-1—Hardwood Roller  
 5-2/3—Front Axle  
 5-2BP—Taper Pin  
 5-4—Front Axle Pivot Screw

5-5—Stud for Roller Adjusting Arm  
 5-6—Washer for Roller Adjusting Arm  
 5-7—Screwed Hand Wheel

### GROUP 6-0

6-0—Grass Box  
 6-6—Large Wing for Grass Box

6-7—Small Wing for Grass Box

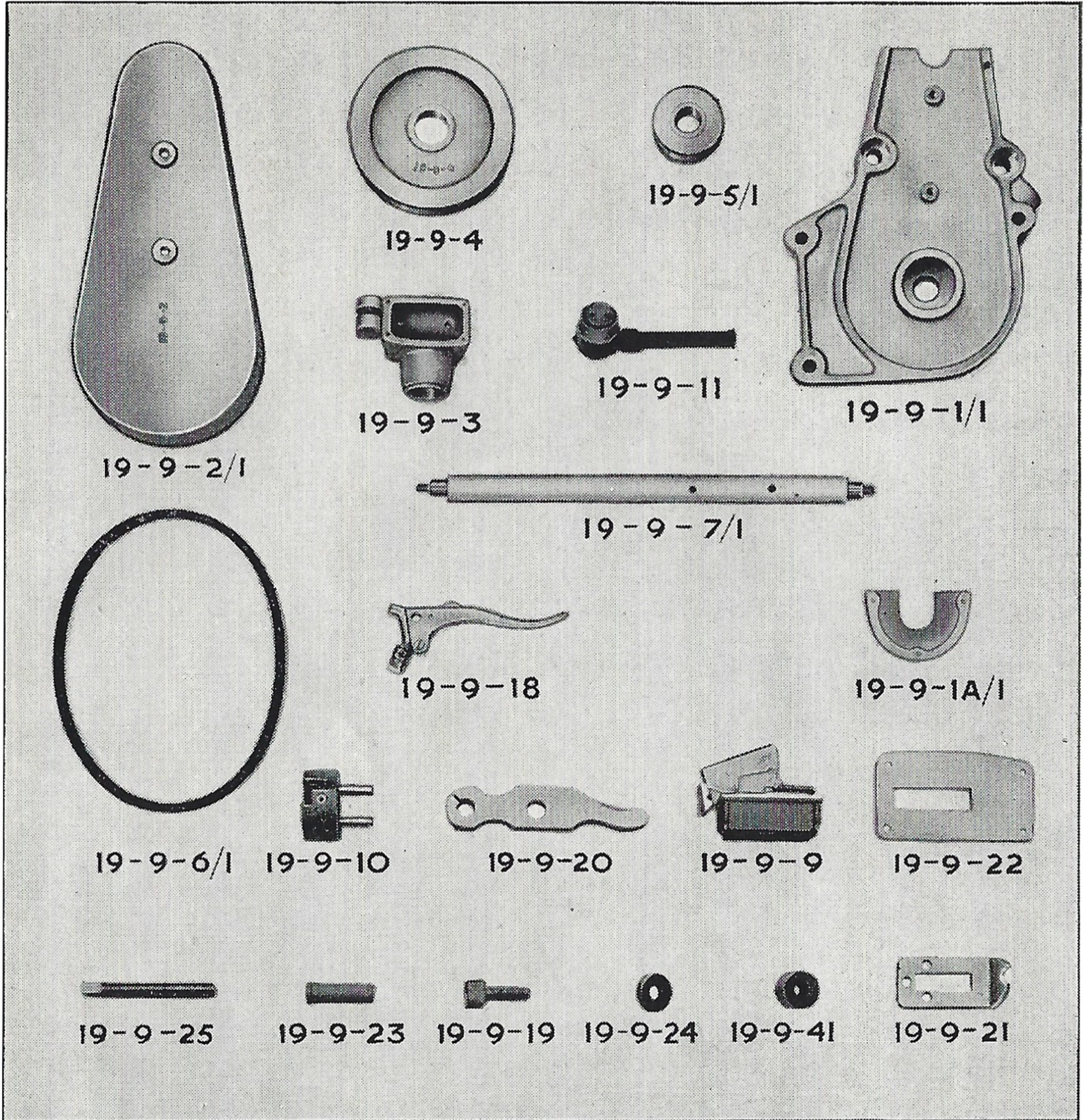


### GROUP 19-7-0

19-7-12—Side Frame—Small  
 19-7-20—Handlebar Cotters  
 19-7-21—Cotter Sleeves

19-7-29—Chainwheel Sleeve  
 19-7-31—Ball Race

## PARTS LIST—continued



### GROUP 19-9-0

- |  |   |
|--|---|
| <p>19-9-1/1—Motor Side Frame<br/>         19-9-1A/1—Side Frame Cap<br/>         *19-9-1S—Side Frame Cap Screws<br/>         19-9-2/1—Transmission Cover<br/>         19-9-3—Switch Box<br/>         19-9-4—Large Vee Pulley<br/>         19-9-5/1—Small Vee Pulley<br/>         19-9-6/1—Vee Belt<br/>         19-9-7/1—Motor Tie Bar<br/>         *19-9-8—Electric Motor<br/>         19-9-9—Switch<br/>         *19-9-9S—Screws for Switch<br/>         19-9-10—Socket Interior<br/>         *19-9-10S—Screw for Socket Interior<br/>         19-9-11—Inlet Plug<br/>         *19-9-12—Power Cable</p> | <p>*19-9-15—Rubber Sleeve<br/>         *19-9-16A—Handlebar—Rt. Hd.<br/>         *19-9-16B—Handlebar—Lt. Hd.<br/>         *19-9-17—Control Cable Complete<br/>         19-9-18—Control Lever<br/>         19-9-19—Cable Adjusting Screw<br/>         19-9-20—Operating Lever<br/>         19-9-21—Anchor Plate<br/>         *19-9-21S—Anchor Plate Screws<br/>         19-9-22—Cover Plate<br/>         *19-9-22S—Cover Plate Screws<br/>         19-9-23—Pivot Pin<br/>         19-9-24—Saddle Washer<br/>         19-9-25—Motor Set Screw<br/>         *19-9-26—Switch Box Screw<br/>         *19-9-28—Key for Motor Shaft</p> |
|--|---|

\*Not illustrated

For further parts, see over

## PARTS LIST—continued

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| *19-9-29—Cable Clip—large            | *19-9-37—Ball Race                  |
| *19-9-30—Locking Nut                 | *19-9-38—Jockey Pulley              |
| *19-9-31—Gland                       | *19-9-39—Jockey Pin                 |
| *19-9-32—Flexible Coupling           | *19-9-39w—Jockey Pin Washer         |
| *19-9-33—Coupling Shaft              | *19-9-40—Oilite Bush                |
| *19-9-34—Coupling Sleeve             | 19-9-41—Motor Distance Piece        |
| *19-9-35—Coupling Bolt               | *19-9-42—Set. Screw for Coupling    |
| *19-9-36—Woodruff Key                | Boss                                |
| *250w— $\frac{1}{4}$ Plain Washer    | *312w— $\frac{5}{16}$ Plain Washer  |
| *250NF— $\frac{1}{4}$ B.S.F. Nut     | *375NF— $\frac{3}{8}$ B.S.F. Nut    |
| *250SW— $\frac{1}{4}$ Spring Washer  | *375SW— $\frac{3}{8}$ Spring Washer |
| *312NF— $\frac{5}{16}$ B.S.F. Nut    | *375w— $\frac{3}{8}$ Plain Washer   |
| *312SW— $\frac{5}{16}$ Spring Washer |                                     |

\*Not illustrated



