

The Book of the



SUPER Mk. IV
ELECTRIC MOWER



FOREWORD

THE J.P. SUPER MK. IV. ELECTRIC LAWNMOWER is made in two sizes, 15" and 17".

In the design of the machine, special attention has been given to the importance of easy service and maintenance and the construction is based on a sectional assembly system, substantially comprising the Motor Unit, the Cutter Unit, Rear Roller Unit and the Front Axle Unit, each of which can be readily removed individually from the main frame Chassis Unit.

Both models are identical in construction and incorporate the same specification, except for variation in size, and such components as are affected are specially referred to in the parts list, see pages 19-24.

It is advisable to read the instructions carefully. Proper care and attention will enable the machine to give continuous satisfactory and reliable service.

The Serial Number of the Machine and the Cutter Unit will be found on a plate attached to the side frame in each instance, and these numbers should always be quoted in correspondence.

Instructions and illustrations have been made as simple as possible, but modification in design may affect the specification necessitating some alteration without incurring to us any liability for such alteration to be made on machines already delivered.

J.P. Lawnmowers are fully guaranteed for replacement only of any part against failure proved to be due to faulty material or workmanship.



THE J.P. ENGINEERING CO. LTD.

Manufacturers of J.P. Super Lawnmowers

MEYNELL ROAD, LEICESTER, Eng.

Telegrams:
"SUPERLAMO, LEICESTER"

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LEICESTER 67542 (2 lines)

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, either 10 or 15 amp. three pin socket.
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 practice, *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.

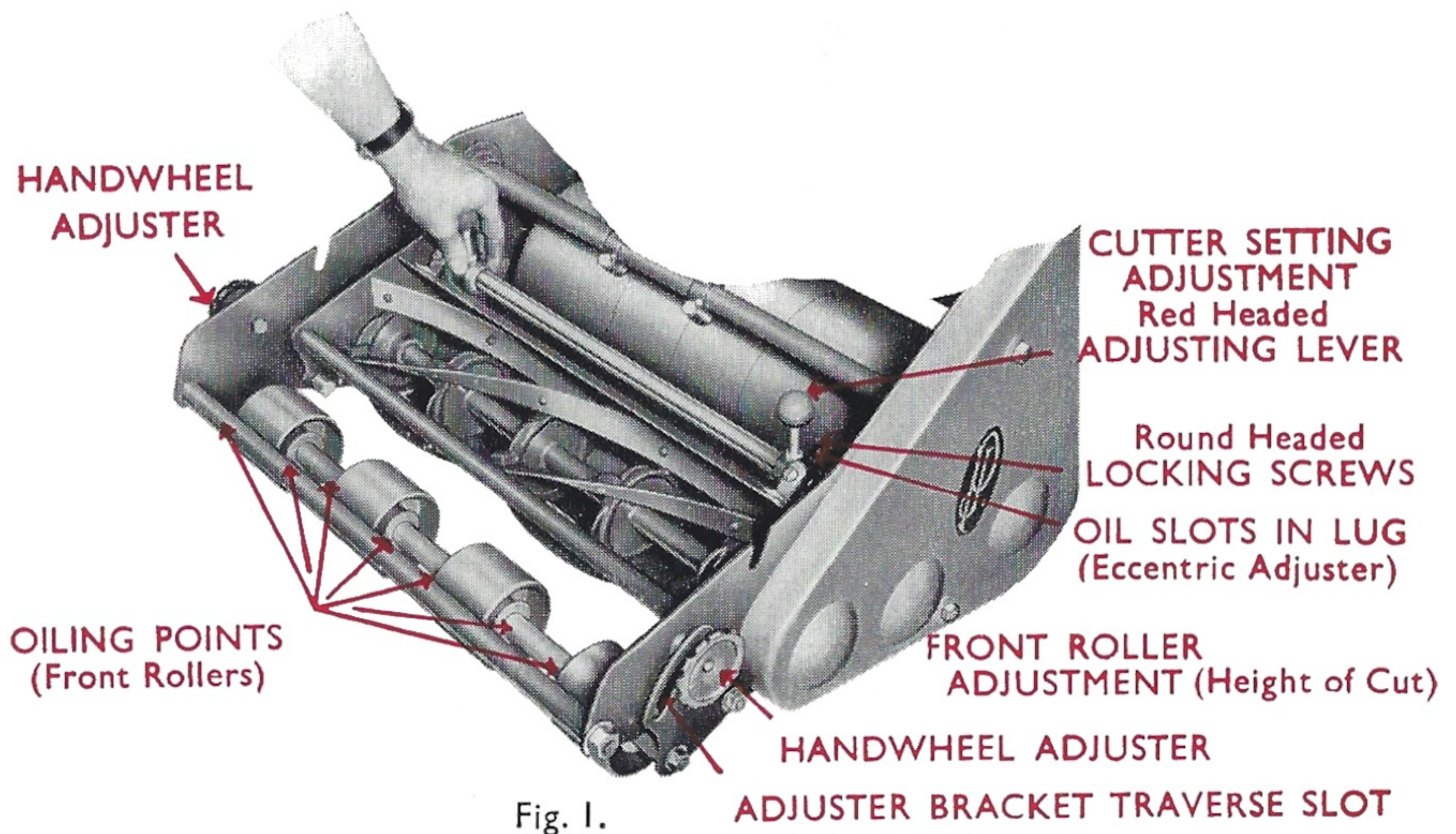
NOTE: All machines have been run and tested to check the wiring and switch control, and as far as possible every precaution has been taken to ensure that machines are despatched in first class order. It must, however, become the responsibility of the user before any machine is put into working commission, 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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SECTION A STARTING PREPARATION

I. CUTTER SETTING ADJUSTMENT

Adjust the shear blade to the rotary cutter by moving the red-headed adjusting levers on the cutting unit in the direction towards the rear roller. The adjustment should be made so that the rotary cutter will spin with a light audible contact with the bottom blade. If necessary, the adjustment can be locked in position by tightening the two round-headed screws which pass through the slotted lugs of the shear blade carrier, situated at the side of the adjusting levers. (Ref. Fig. 1).



2. SETTING FOR HEIGHT OF CUT

Adjust the front rollers by positioning in the traverse slot of the adjusting brackets after unscrewing the two handwheels and tighten up securely on to the adjusting brackets after obtaining the setting required. (Do not set too low, particularly for the first cuts of the season or at such times when the lawn may be in a soft condition). (Ref. Fig. 1).

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3. FIXING THE GRASSBOX

If using the grassbox, this should be attached to the machine by placing the two projecting pins (one on each side of the box) into the slots seen on the leading edge of each chassis side frame. The rear part of the box is then lowered until the slot in the grassbox plate engages and rests on the front main tie bar.

When emptying and replacing the grassbox always switch off the motor for safety, to stop the rotary cutter from revolving.

4. TO COMMENCE CUTTING

With the cutting setting and front roller adjustments made and grassbox fixed, the revolving of the rotary cutter can now be started by operating the motor switch, and the machine can be put into motion by gently raising the driving clutch lever situated on the right handlebar and retaining this in the raised position.

To stop the machine simply release the lever.

SECTION B LUBRICATION

The following oiling points on the machine should receive careful attention when the machine is in constant use during the cutting season.

I. REAR ROLLER (Every two months) (Use Medium Oil)

The centre section gear case chamber of the rear roller is an assembly in two halves and contains the epicyclic speed up gears which run in an oil bath inside the gear case chamber. The oil should be kept to its level by periodically applying a charge of oil every two months into the gear case. Access to the oiling point is made by first unscrewing the hexagon brass cover screw which can be seen in the recess of the centre section rear roller (Ref. Fig. 2). Care should be taken to clean away all dirt and grit before removing the hexagon screw. The amount of oil to be applied should be about half an egg-cupful. Afterwards replace the screw and tighten securely.

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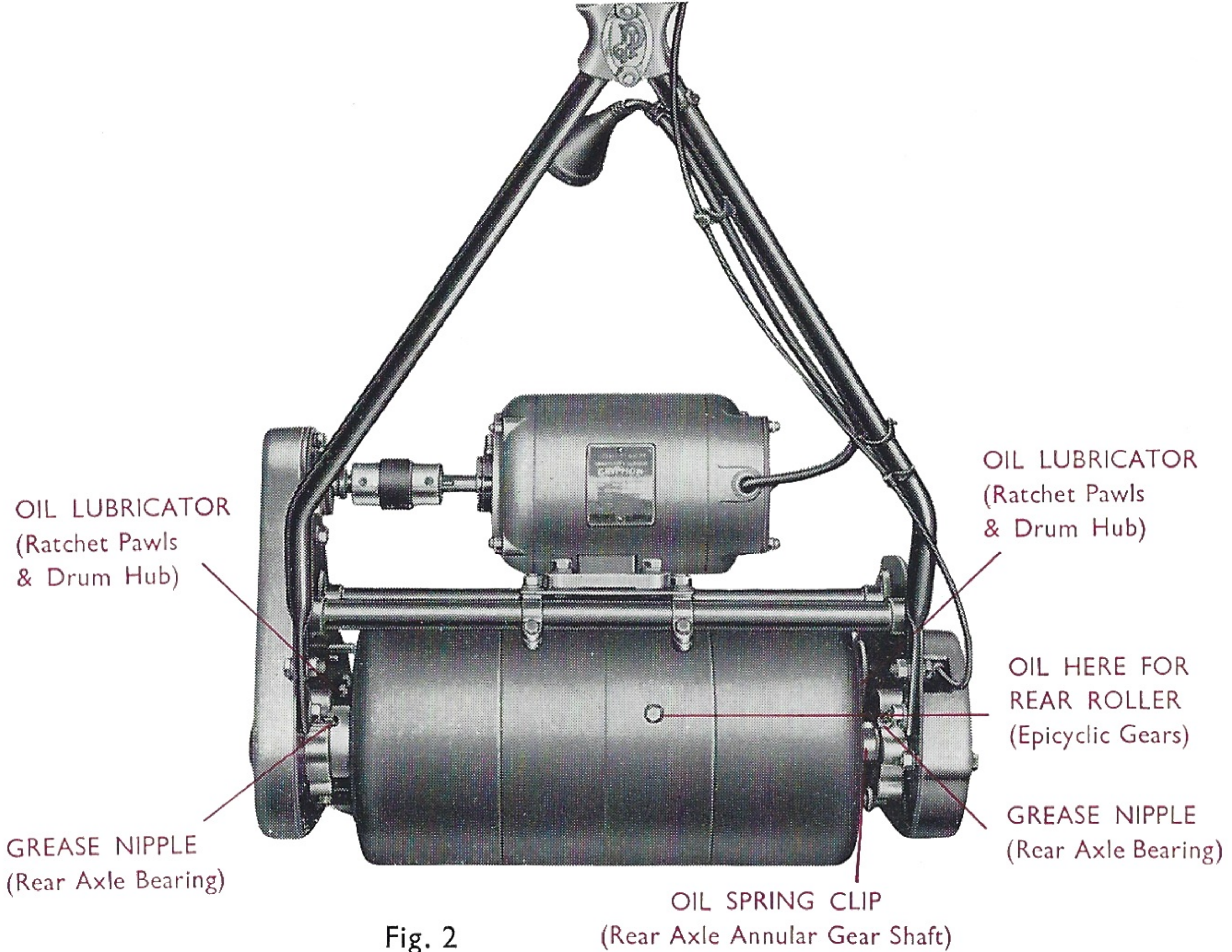


Fig. 2

2. RATCHET PAWLS AND DRUM HUBS OF THE REAR ROLLER (Every two weeks) (Use Medium Oil)

Projecting from the side face towards the centre of each drum will be seen two oilers which provide access for lubrication to the rear roller driving pawls and the drum hub bearing sleeve.

A small charge of oil should be applied every two weeks. (Ref. Fig. 2).

3. REAR AXLE (ANNULAR GEAR SHAFT) (Use Medium Oil)

Oil should be applied to the oil hole which is situated under the spring oiling cover which fits over the rear axle sleeve on the right hand side of the machine, adjacent to the main rear axle bearing housing. The right hand side being taken as when standing between the handlebars in the working position. (Ref. Fig. 2).

4. REAR AXLE BEARINGS (Every two months)

Lubrication should be applied here with the grease gun through the two grease nipples which can be seen projecting from the two aluminium rear axle bearing housings situated one inside each of the main side frames. (Ref. Fig. 2).

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5. FREEWHEEL BEARING (Every month)

Lubrication should be applied with the grease gun through the grease nipple which is positioned at the bottom of the recess of the free wheel bearing shaft (Ref. Fig.3). It will first be necessary to remove the large transmission cover by unscrewing and taking off the two retaining nuts. The shaft on which the freewheel is mounted will then be seen and the retaining cork in the recess should be removed and at the bottom of the recess the grease nipple will be found. Replace the cork and transmission cover after greasing.

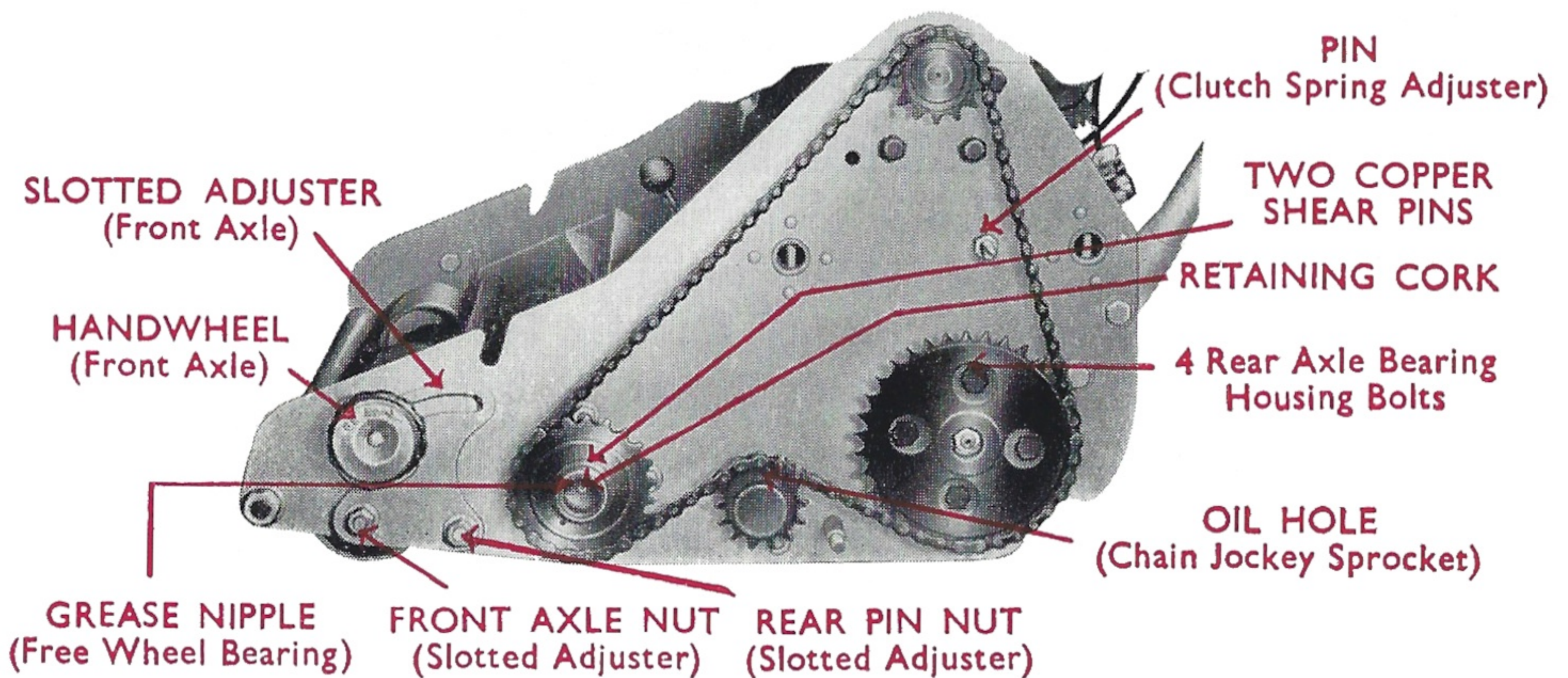


Fig. 3

6. CHAIN JOCKEY SPROCKET (Every month) (Use Medium Oil)

The chain jockey sprocket is fitted with a self lubricating bush, but it is advisable to supplement this by applying a charge of oil through the small countersunk hole which will be seen drilled through the flange of the sprocket. The chain jockey sprocket is made accessible after removing the large transmission cover. (Ref. Fig. 3).

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7. DRIVING CHAIN (Every two weeks) (Use Medium Oil)

The driving chain should be lubricated by applying oil onto and around the chain rollers. The chain is made accessible after removing the large transmission cover (Ref. Fig. 3).

8. FRONT ROLLERS (Every two weeks) (Use Medium Oil)

The front rollers are fitted with self lubricating bearings, but it is advisable to supplement this by applying a small charge of oil at each side of each roller. There is sufficient endwise movement in the assembly of the rollers where the oil should be applied (Ref. Fig. 1).

9. ROTARY CUTTER BEARINGS (Every two weeks) (Use Medium Oil)

To apply lubrication to the rotary cutter bearings, it is necessary to remove the cutter unit from the chassis. First unscrew the handwheel of the retaining pin (Ref. Fig. 4) for about half-an-inch; the cutter unit can then be moved by sliding along the tie bars as far as it will go until the cutter nut and coupling is clear of the three pins in the driving coupling. The Unit can then be taken out of the chassis by lifting in a swinging motion from the back. Now place the Unit carefully on its side, when an oil cover will be seen stamped 'Oil', and below the stamp will be found the oil hole (Ref. Fig. 5). Then turn the opposite end upwards, when a cover will be seen, again stamped 'Oil', and the oil hole will be accessible through one of the three large holes of the cutter nut and coupling (Ref. Fig. 6); a generous charge of oil should be applied on each side to each bearing. The Cutter Unit can then be replaced by placing the front slots of the cutter unit frames on the two front retaining pins projecting from each side frame. The Unit can then be carefully lowered in a downward swinging motion until the rear slots of the cutter unit frames rest on the cross tie bar. The Unit should then be moved in a lateral direction away from the retaining pin until the three holes of the cutter nut and coupling are in full engagement with the three pins of the driving coupling. Finally screw up the handwheel with the retaining pin engaging the hole in the side frame on the opposite side.

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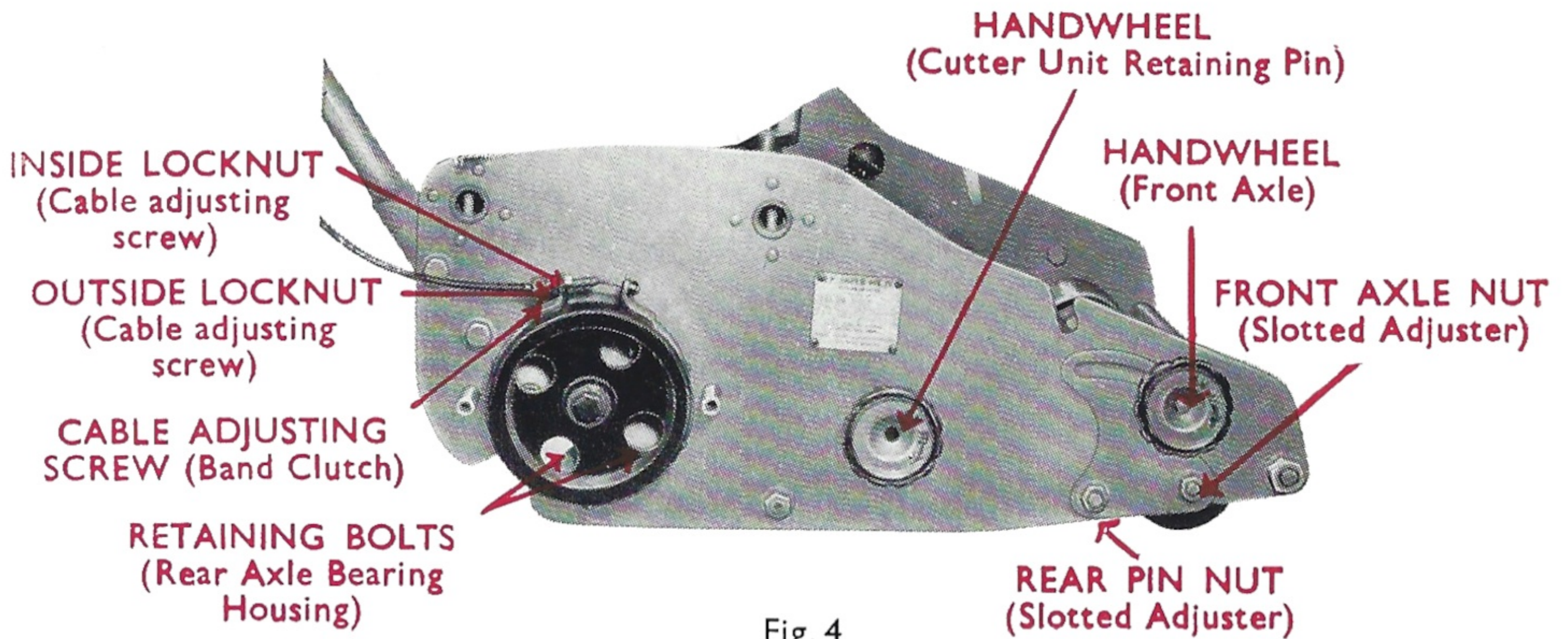


Fig. 4

10. ECCENTRIC ADJUSTER (Every month) (Use Medium Oil)

Apply a small charge of oil to the slots in the lugs which engage the eccentric adjuster. The lugs are each situated at the side of the red-headed adjusting levers (Ref. Fig. 5). When the oil is applied the adjuster should be worked in a rotary motion backwards and forwards to assist the oil flow. Lubrication at this point will always keep the adjustment free and prevent corrosion. Always see that the two round-head screws which pass through the carrier lugs are screwed up sufficiently to give good firm tension movement of the adjuster which alternatively can be locked in position if required.

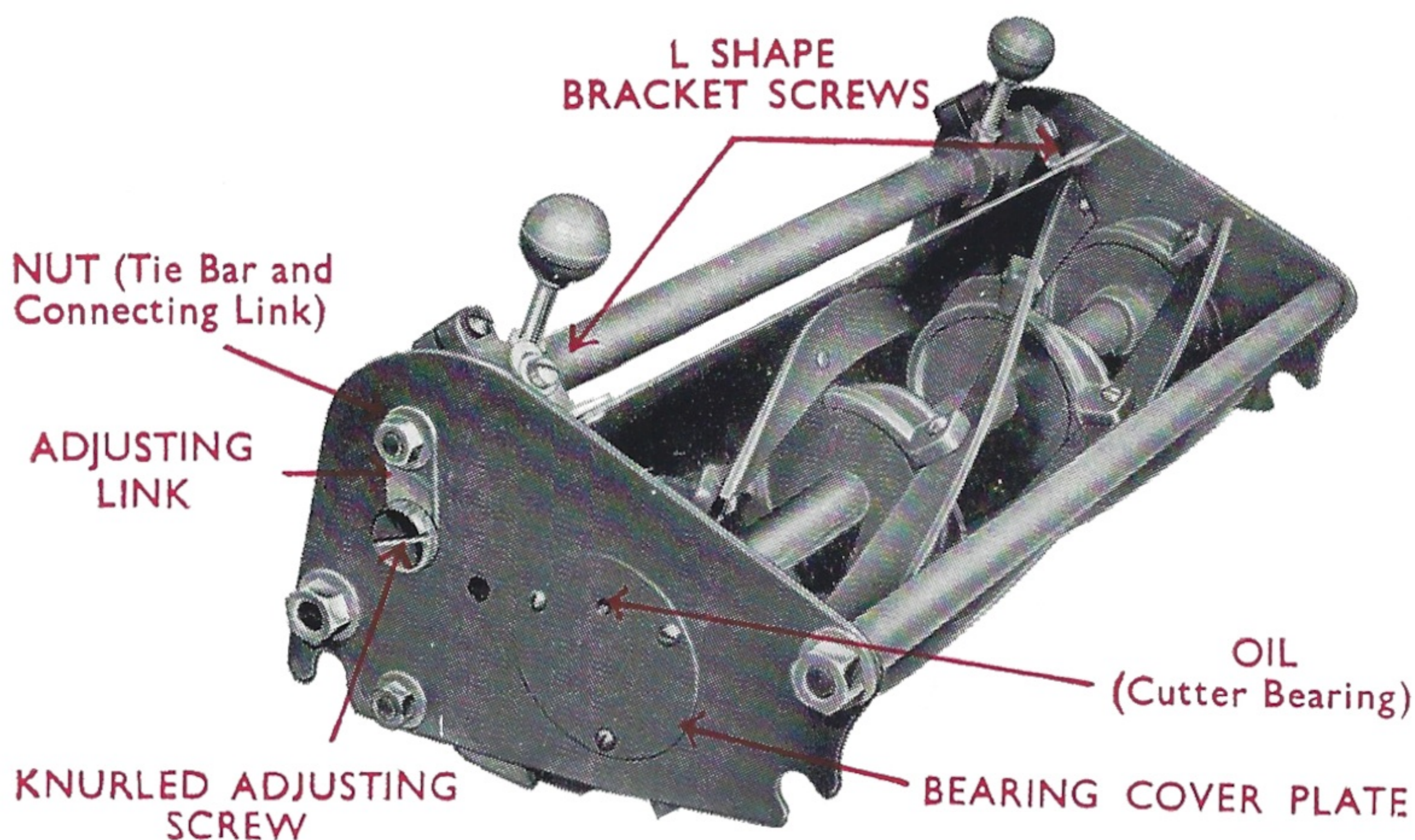


Fig. 5

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SECTION C REMOVAL OF SUB-ASSEMBLIES

Special attention has been given in the design of the machine to the importance of easy service and maintenance. With this in view, the construction has been based on a system of sectional assembly, comprising the Power Unit, Cutter Unit, Rear Roller Unit and the Front Axle Unit, each of which can be readily removed without dismantling the main frame chassis assembly.

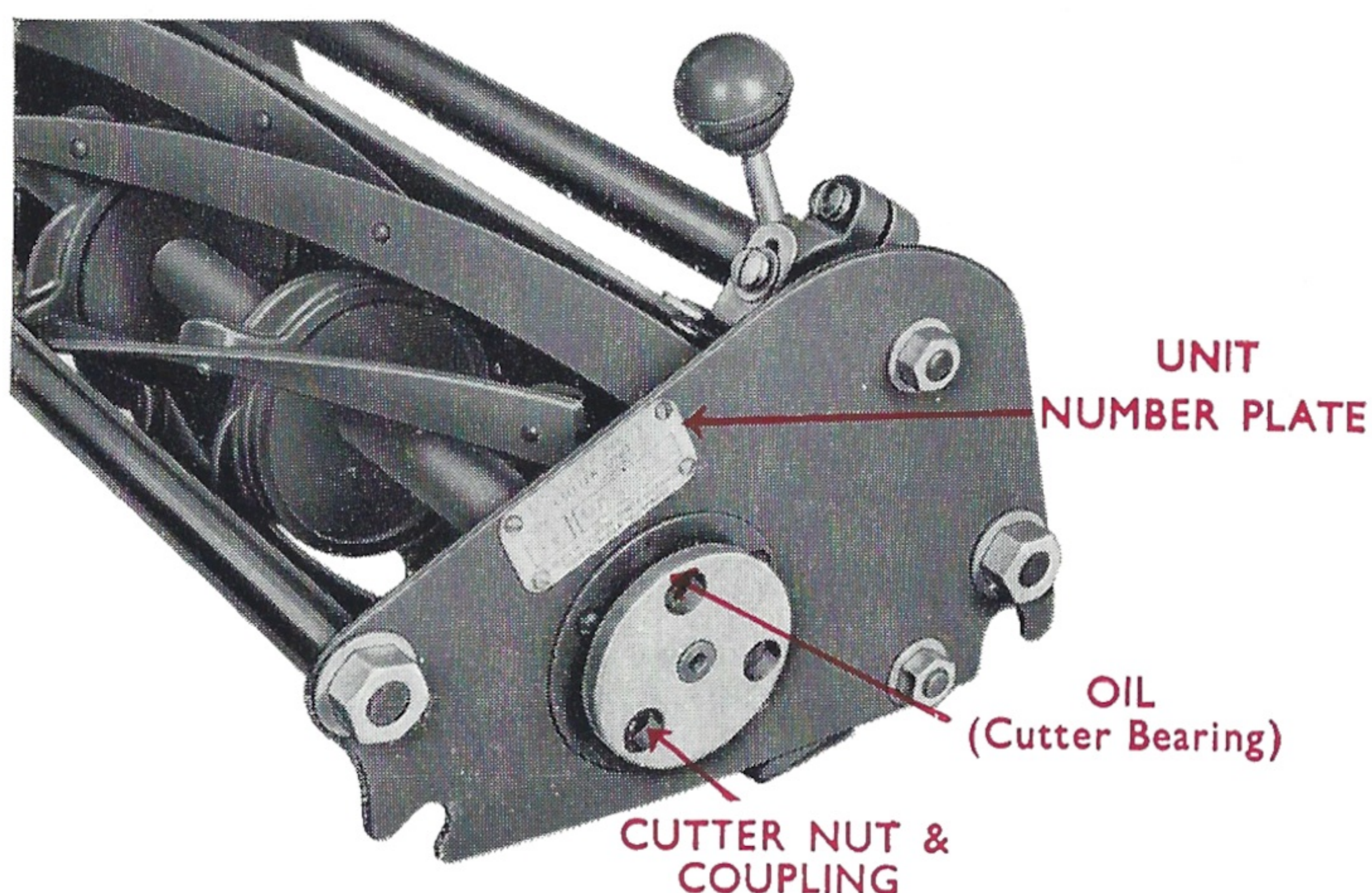


Fig. 6

I. TO REMOVE CUTTER UNIT

First unscrew the handwheel of the retaining pin for about half-an-inch (Ref. Fig. 4); the Cutter Unit can then be moved by sliding along the tie bars as far as it will go until the cutter nut and coupling (Ref. Fig. 6) is clear of the three pins in the driving coupling. The Unit can then be taken out of the chassis by lifting in a swinging motion from the back. The Cutter Unit is replaced by placing the front slots of the Cutter Unit frames on the two front retaining pins seen projecting from inside of each frame. The Unit should then be carefully lowered in a downward swinging motion until the rear slots of the cutter unit

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frames rest on the cross tie bar. The Unit should then be moved in a lateral direction away from the retaining pin until the three holes of the cutter nut and coupling are in full engagement with the three pins of the driving coupling. Finally screw up the handwheel with the retaining pin, engaging the hole in the side frame on the opposite side.

2. TO REMOVE REAR ROLLER ASSEMBLY

First remove the large transmission cover by unscrewing and taking off the two retaining nuts. Now take off the driving chain after removing the spring clip and taking out the chain connecting link. Unscrew the two retaining nuts and take off the band clutch cover on the opposite side of the machine. The cable adjusting screw of the band clutch should be removed to enable the clutch to be withdrawn from the clutch drum (Ref. Fig. 4).

The four retaining bolts which hold the rear axle bearing housings in each side frame should be unscrewed with the box spanner provided. The four holes in the band clutch drum, on one side (Ref. Fig. 4) and the four holes in the large chain sprocket on the other side make the bolt heads accessible for the box spanner to be used. (Ref. Fig. 3). After removal of the bolts, the complete axle can be taken from the chassis by lowering the projecting ends of the shaft and passing down the slots in the side frames (Ref. Fig. 7). To re-assemble, the reverse procedure should be adopted, taking care to see that all nuts are finally tight and secure.

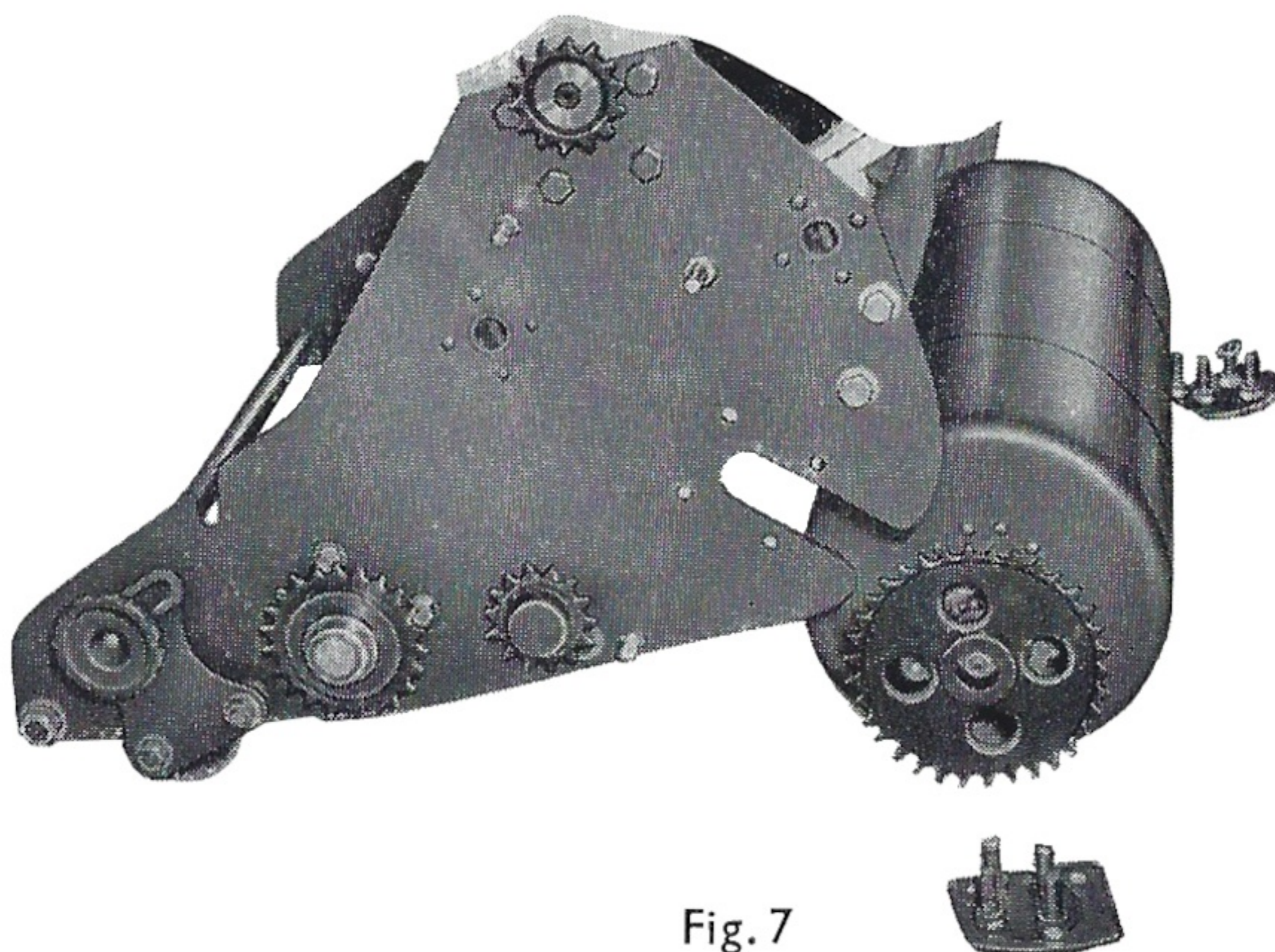


Fig. 7

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3. TO REMOVE FRONT ROLLER ASSEMBLY

Unscrew and take off the two front handwheels (Ref. Fig. 1). Then unscrew and take off the two nuts on the traverse slotted adjuster on the transmission side (Ref. Fig. 1). The slotted adjuster on the transmission side can then be withdrawn endwise from its engagement with the rear pin and the front axle. Now unscrew the nut of the *rear pin only* off the slotted adjuster on the opposite side (Ref. Fig. 3). The axle complete with rollers and one slotted adjuster still attached can be taken endwise clear of the studs away from the chassis (Ref. Fig. 8).

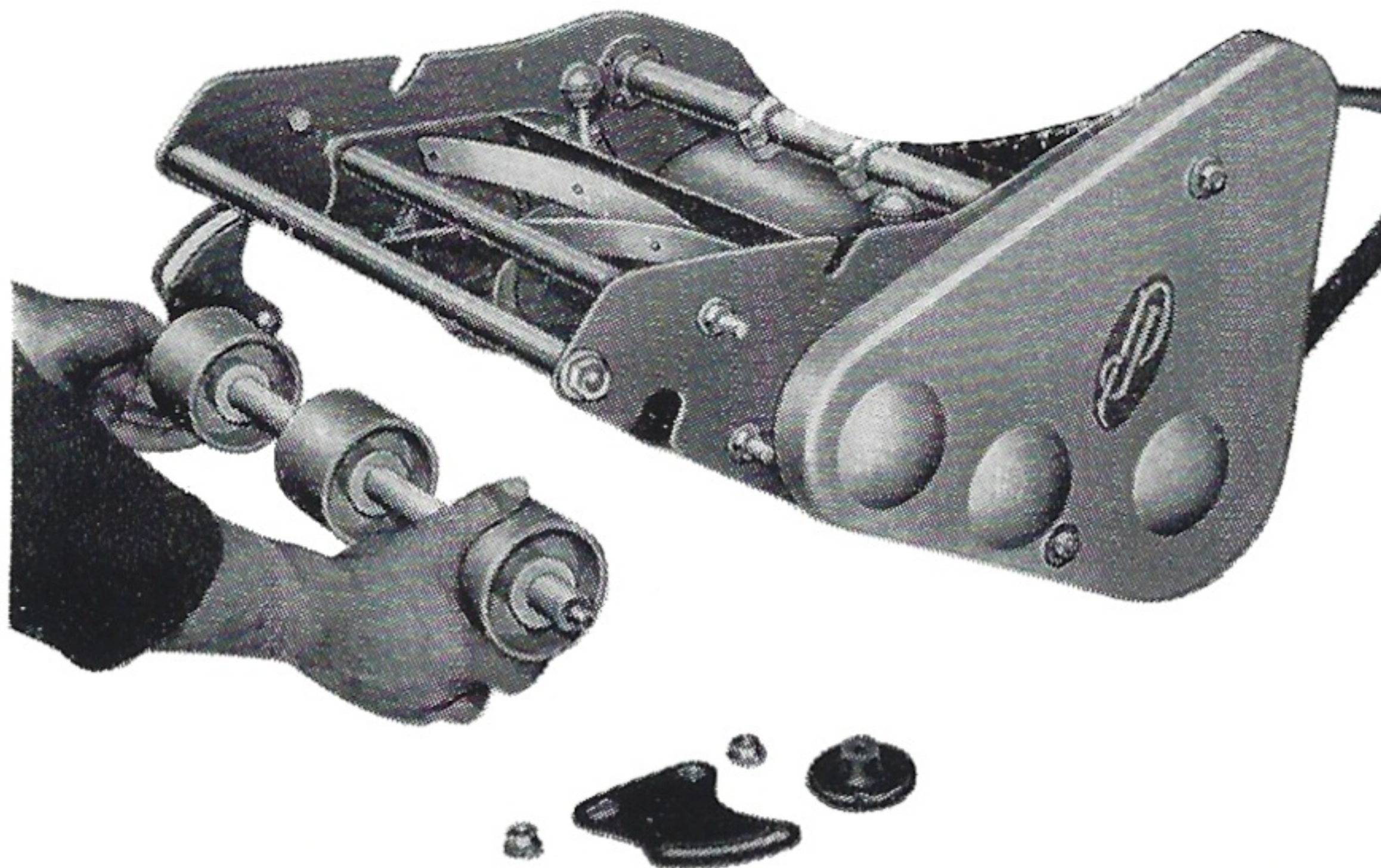


Fig. 8

SECTION D ADJUSTMENTS

I. SETTING THE ROTARY CUTTER TO SHEAR BLADE

The rotary cutter works against a bottom shear blade which is attached to the blade carrier and the latter is adjusted and brought into contact with the rotary cutter by carefully moving the red-headed adjuster levers in the direction towards the rear roller until a light audible contact is heard when the cutter is rotated; **it is important when rotating the cutter to set the adjustment, to keep the hand at the top of the cutter away from the shear blade, otherwise fingers may be caught and badly cut.**

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Do not set the cutters with too harsh a contact, as this will only increase wear on the blades and obtain no better cutting results. To minimise the possibility of disturbing the setting, the adjustment can be locked into position by tightening with a screwdriver the two round-head screws which pass through the slotted lugs of the shear blade. (Ref. Fig. 1).

Please note that the two locking screws must be released before attempting to move the red-headed adjuster levers. If the adjustment is not locked in position, the locking screws should be screwed up at least sufficient to ensure that the adjuster moves under reasonably tight tension. Otherwise, if they are loose and the adjuster movement is too easy, the cutter setting might alter, but this will not occur if the instructions are carefully carried out and the machine is used after setting as already stated with either the eccentric blade adjustment locked or the adjusting levers under good movable tension.

2. PARALLELISM OF CUTTERS

The Cutter Unit is set on assembly to cut equally along the whole length of the spiral blades when adjusted as per paragraph 1, Section D, and should not need any further setting unless the unit has been dismantled or subjected to excessive shock, or through the rotary cutter fouling an obstruction.

To correct any out of parallel relation of the rotary cutter with the shear blade, proceed as follows; first remove the cutter unit from the chassis. Stand the unit on the back flat edge of unit frames, then slightly move the red-headed adjuster levers in a rotary forward direction to move the shear blade away from the rotary cutter. Unscrew for a turn the nut of the tie bar and connecting link on the left hand side of the unit (Ref. Fig. 5). The slotted knurled adjusting screw at the bottom of the adjusting link should then be slightly rotated (Ref. Fig. 5). This rotating action will adjust the shear blade carrier in an upward and downward direction away from the edge of the rotary cutter spiral blade.

It will readily be seen that this adjustment enables a parallel relationship to be made between the edge of the shear blade and the periphery of the rotary cutter for the whole length along the blade. After making the parallel adjustment, it should then be checked by

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adjusting the shear blade to the rotary cutter by moving the red-headed levers until a light audible contact is made.

Cutting parallelism should then be checked with a strip of ordinary brown paper, by cutting from end to end. **Great care should be exercised to keep the fingers clear of the blades when adjusting and testing for cutting.**

After the correct parallel cutting adjustment has been made, the hexagon nut of the tie bar and the adjusting link should be locked up tight and secure.

3. DRIVING CHAIN (JOCKEY SPROCKET)

The driving chain should be checked periodically to see that it is adjusted correctly, as after sustained use, it might be found on inspection that some slackness in the fit of the chain over the sprockets has been caused through wear or stretch.

Excessive slackness is not a good condition for the working of the chain, in addition to which this can cause noise through a slack whipping chain fouling the inside of the transmission cover. Correction can be made by the adjustment of the chain jockey sprocket as follows:—first remove the large transmission cover, the jockey sprocket mounted on its spindle will then be seen situated between the cutter freewheel and the large rear axle sprocket (Ref. Fig. 3). The spindle of the sprocket is engaged in a slot in the side frame and the nut of the spindle which can be seen on the inside of the side frame should be unscrewed for a turn, this will enable the sprocket to be moved in an upwards direction to take up any excess slackness of the chain. Do not set the adjustment to make the chain too tight, as this will cause unnecessary stretch and wear; there should be just a little slackness in a correctly adjusted chain. After making the adjustment, see that the jockey sprocket spindle nut is very tight and secure.

4. CLUTCH ADJUSTMENT (REAR AXLE DRIVING CLUTCH)

The main driving clutch is mounted on the end of the rear axle spindle, opposite the transmission side. The clutch assembly comprises a cast iron drum inner member which works with, and is

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encircled by, a steel brake band lined with Ferodo, which operates dry (no lubrication of any kind is required).

Adjustment is provided for tightening the band on the inner member should this be necessary through wear. First remove the aluminium clutch cover by unscrewing and taking off the two hexagon-headed screws seen on the outside of the cover. It will then be seen that the Bowden cable connects the two ends of the protruding lugs of the steel band, passing through the knurled adjusting screw.

To take up any slackness which might be causing lack of drive, the lock nut on the adjuster screw situated between the two clutch band lugs should be unscrewed for three or four turns; the knurled adjuster screw should then be turned in an anti-clockwise direction at the same time retaining the nut situated between the knurled head of the screw with a spanner (Ref. Fig. 4). This will close the band and take up any wear or slackness.

Adjustment should be made so as to give ample freedom of clutch movement when the clutch operating lever on the handlebar is in the free position. See that the lock nuts are tight and secure after making adjustment. Replace clutch cover and screws.

DISMANTLING SECTION

TO REMOVE ROTARY CUTTER FROM CUTTER UNIT

First see that the bottom shear blade is adjusted quite clear of the rotary cutter. Now remove the grassbox deflector shield by unscrewing and taking out the two round-headed screws which screw through the small L shaped brackets into the knife frame carrier lugs. (Ref. Fig. 5). The deflector can then be taken from the unit by withdrawing in a forward circular motion. Unscrew and take off the cutter coupling nut—this is the part which has three holes and screws on the end of the cutter shaft (Ref. Fig. 6). (Please note this is a left-hand thread). It is only necessary to remove one of the Unit side frames and this is the side to which the Unit number plate is attached (Ref. Fig. 6).

Unscrew and take off the four hexagon tie bar nuts which screw up to the side plate on the same side as the cutter coupling nut. The side

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frame can now be tapped off complete with the cutter ball race, clear of the ends of the tie bars and rotary cutter shaft.

Unscrew the three round-headed screws and remove the bearing cover plate on the opposite side of the Unit (Ref. Fig. 5). The rotary cutter can now be taken out by withdrawing the end of the rotary cutter shaft from the bearing (Ref. Fig. 9). It may be necessary to tap the rotary cutter shaft out of the bearing, but this should be done by tapping a piece of hard wood on the end of the shaft.

(Do not use a metal punch on the end of the shaft, if the machined centre of the shaft is damaged, this could cause trouble in the regrinding, as the cutter is mounted on the centres for the grinding operation and must run absolutely true.)

Great care should be exercised to keep the fingers away from the bottom shear blade when the cutter is being removed.

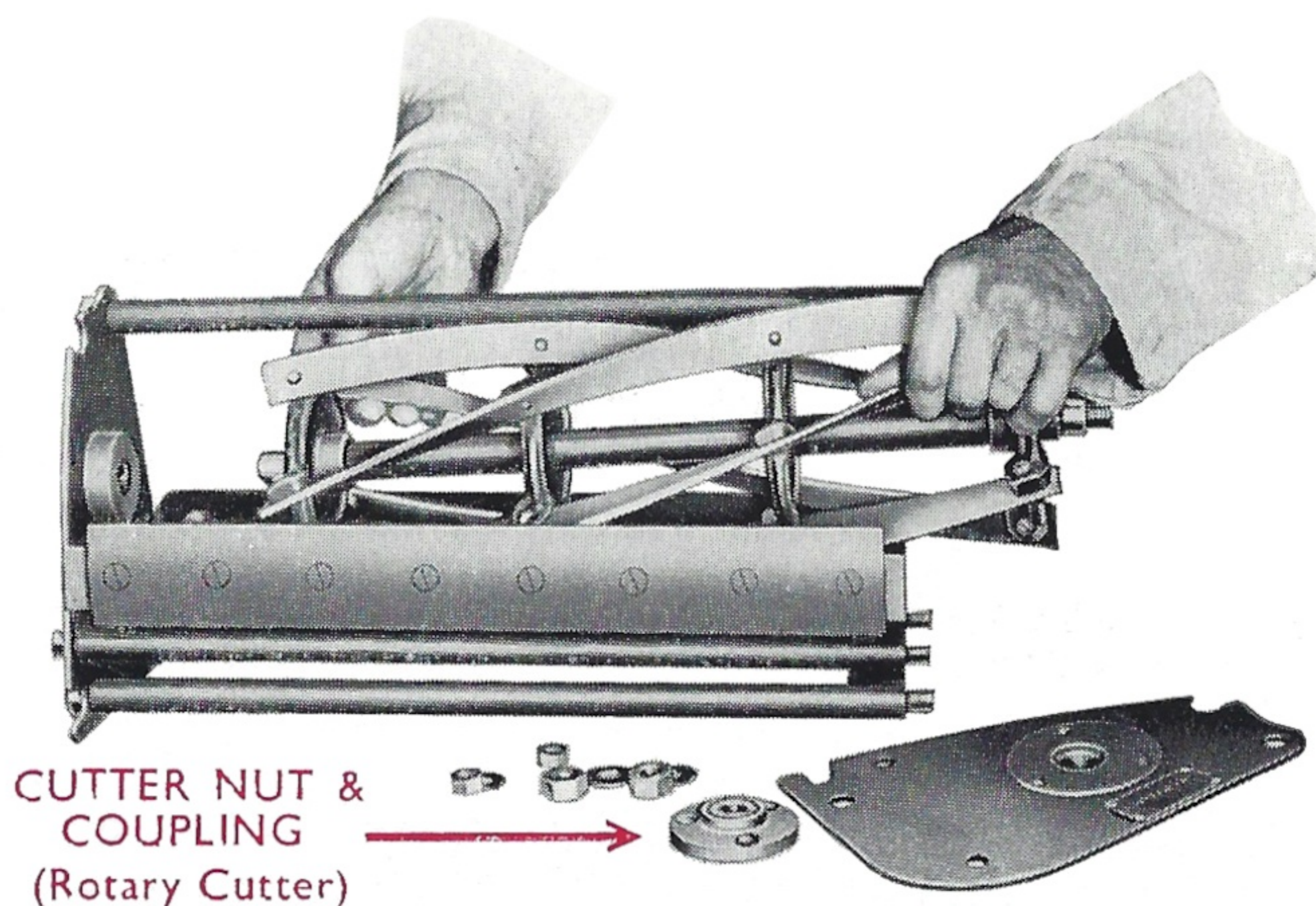


Fig. 9

TO REPLACE THE ROTARY CUTTER IN THE CUTTER UNIT

First see that the bottom shear blade is adjusted quite clear from the rotary cutter. Then insert the plain end of the rotary cutter shaft into the cutter bearing and tap this lightly as far as it will go from the opposite threaded end of the cutter shaft, with a piece of hardwood.

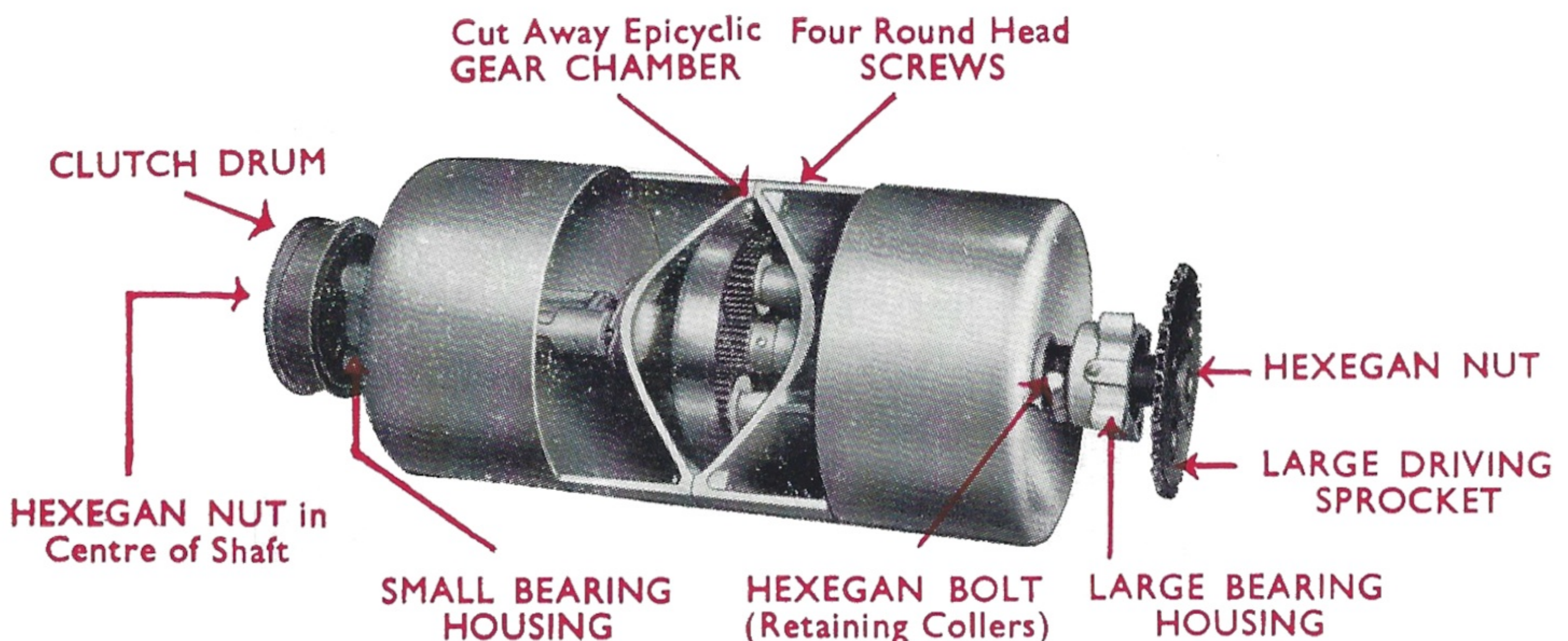
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Now place the Unit side plate on to the end of the four tie bars and also with the ball race engaging the screwed end of the cutter shaft. See that the plate is tapped on square and then assemble the washers and screw on the four hexagon-headed nuts and finally screw up tight. Replace the rotary cutter deflector shield and enter the screws through the L slots into the carrier lugs and screw up tight. After replacing the cutter, the parallel relationship of the cutter with the shear blade should be checked. Please refer to Parallel Instructions, paragraph 2, Section D. (Check Cutter Unit to sit square (no endwise rock) on tie bars in chassis.)

REVERSING SHEAR BLADE

The shear blade has two cutting edges and when the first edge is worn it can be reversed to the opposite edge and this should be carried out in the following manner:—

First remove the Cutter Unit from the chassis (see paragraph 1 Section C) and stand the Unit on the flat edge of side frames. With a wide screwdriver, unscrew and take out the countersunk screws. Then take the blade off the frame face and carefully clean and oil both faces, turn the blade round with the new edge to the rotary cutter. Insert the screws and half tighten, then finally screw up each one hard and tight. Check the bottom blade for being parallel with the rotary cutter and adjust if necessary. (See Instruction re. Parallelism of Cutters, paragraph 2, Section D.)



REPLACING THE SAFETY COPPER SHEAR PINS

There are two copper safety shear pins which engage the freewheel sleeve and the cutter bearing sleeve (Ref. Fig. 3). The purpose of the shear pins is that in the event of an obstruction fouling the cutters during the working of the machine, the two pins which are fitted will be caused to shear and this action greatly assists in preventing damage to cutter blades and transmission by absorbing some of the shock of the obstruction by shearing.

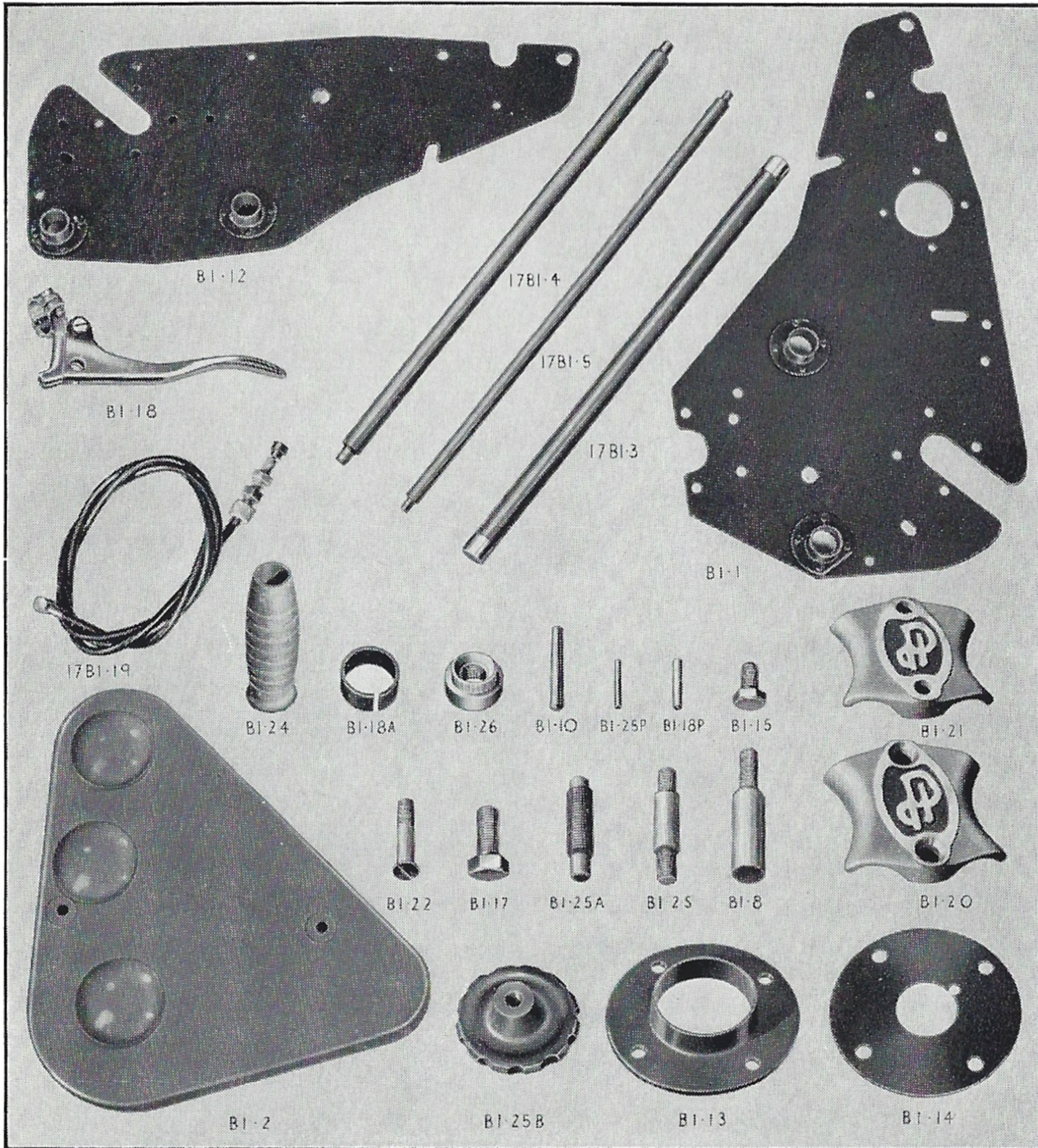
When the pins have sheared there will be no drive to the rotary cutter until replacement shear pins are fitted. To replace the shear pins, first remove the large transmission cover, then take the cork from the centre recess of the freewheel sprocket sleeve (Ref. Fig. 3) and get the four holes of the two sleeves in line when the sheared portions can then be tapped through with a small punch from the inside of the recess. Take particular care to see that no portion of any pin is left inside. Two new pins can now be fitted and these should be inserted from the inside of the recess of the sleeve with the head of the pin in the recess. Replace the cork to prevent the pins dropping out.

It will be noted that there are four sets of holes, but only two should be used at once. The purpose of four holes is to provide against possible elongation or possible wear through the action of shearing.

AFTER SERVICE AND INSTRUCTIONS FOR ORDERING SPARE PARTS

1. We can offer full overhaul and repair service facilities, to be carried out at our Works. Always see that machines and cutter units returned for overhaul and regrinding are properly packed and labelled with the name and address of the sender securely attached. The overhaul and repairs should be received by us as soon as possible after the close of the cutting season. Consult your dealer early, or in case of difficulty, write us direct.
2. The main parts are illustrated on pages 19-24 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 or the cutter unit. The serial number of the machine and the cutter unit will be found stamped on a plate attached to the side frame in each instance, and these numbers should be quoted in all correspondence.
4. All machines and component parts must be consigned to us, carriage paid, addressed to the "Service Department"; Old and worn-out parts sent as patterns, which we consider are obsolete and of no further use, are not returned unless we are specifically 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 repairs a satisfactory job.

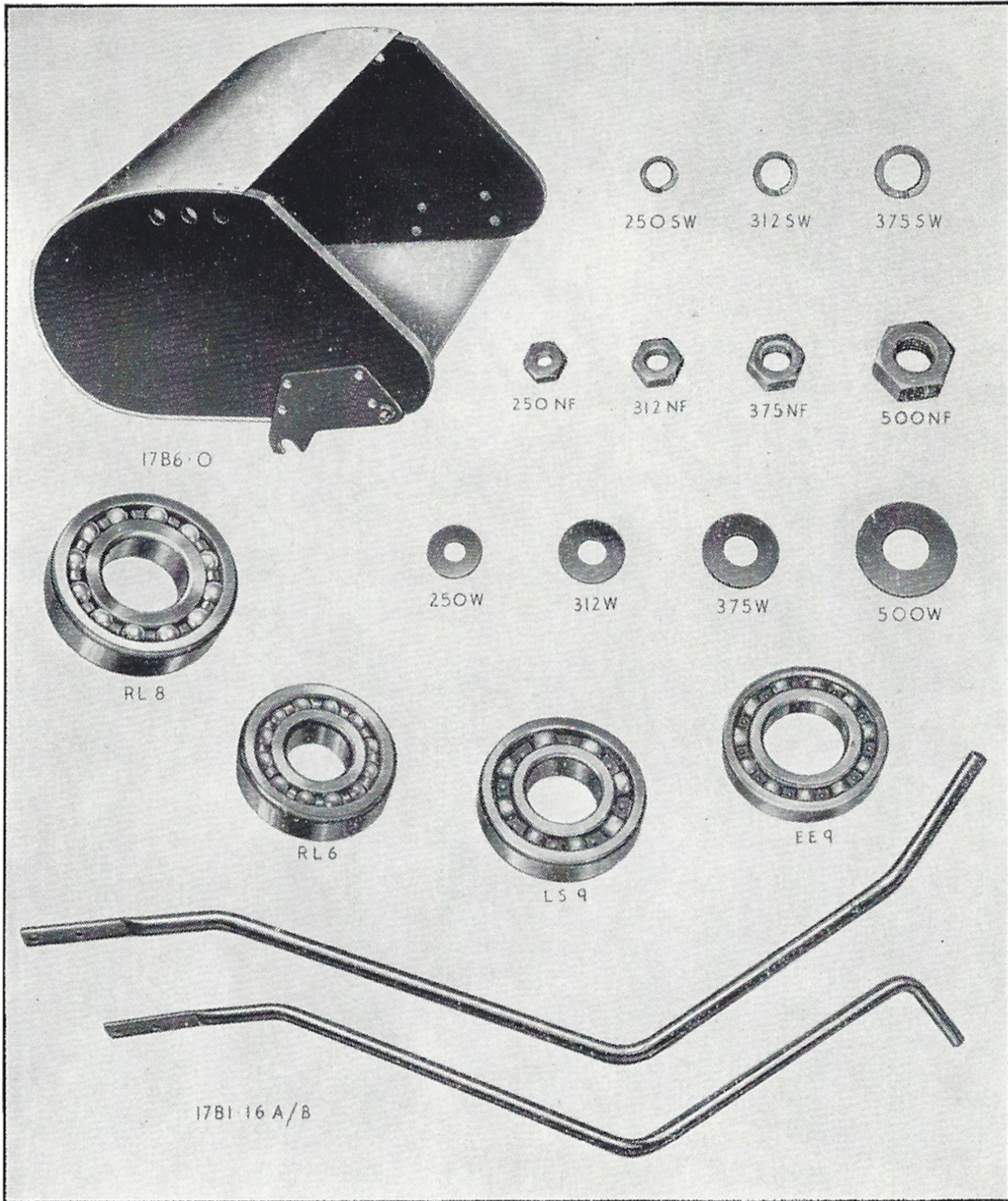
PARTS LIST



Where the Part Number is prefaced by 15 or 17 this indicates the size of the machine. Otherwise all Part Numbers are common to each size.

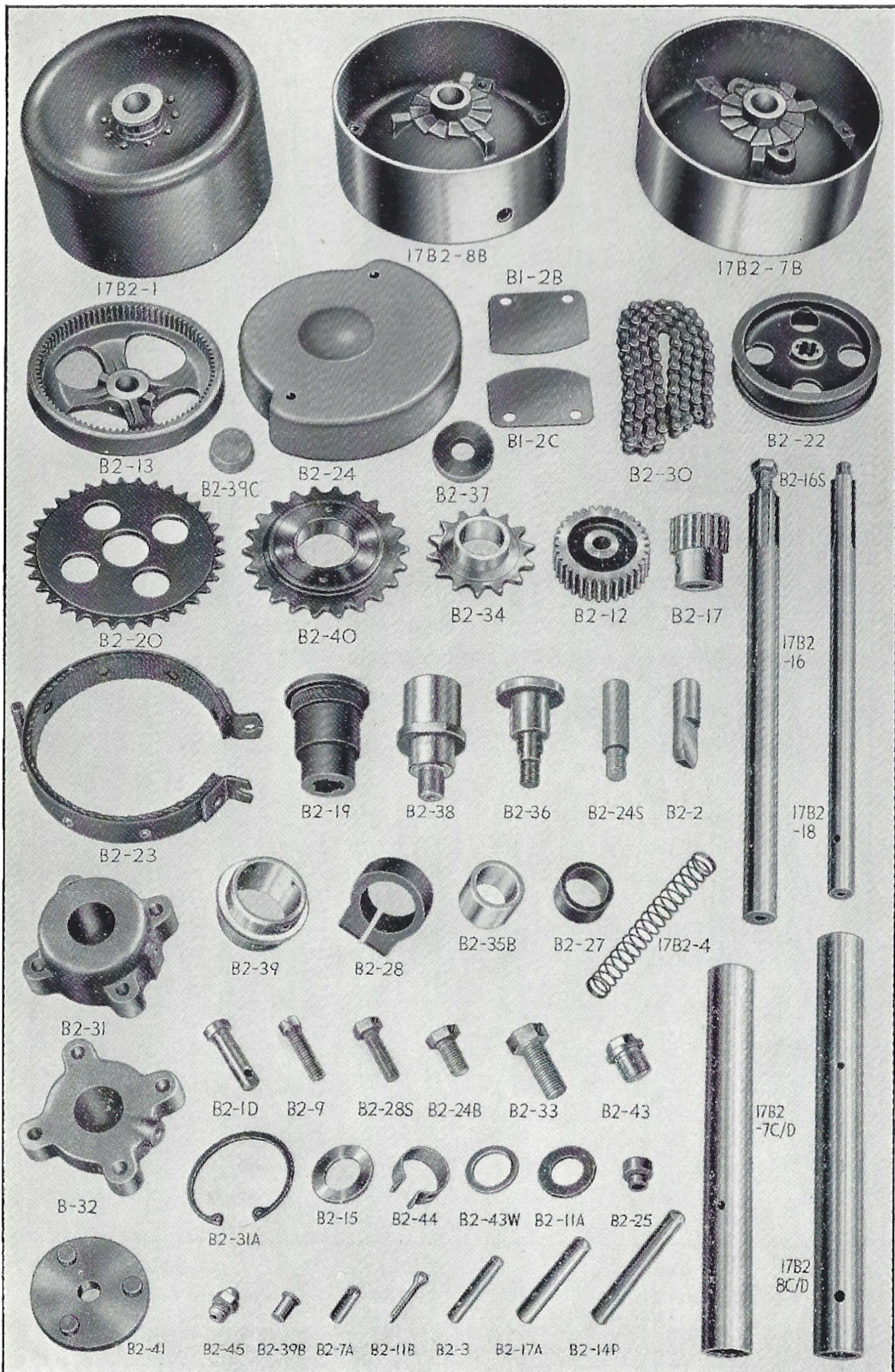
<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
B1—1	Sideframe—L.H.	B1—14	Cover Plate—Freewheel
B1—2	Transmission Cover	B1—15	Bolt—Bearing Housing
B1—2s	Stud—Transmission Cover	B1—17	Bolt—Handlebar
15B1—3	Main Tie Bar	B1—18	Control Lever—Brakeband
17B1—3	Main Tie Bar	B1—18A	Sleeve—Control Lever
15B1—4	Front Tie Bar	B1—18P	Pin—Control Lever Sleeve
17B1—4	Front Tie Bar	15B1—19	Cable—Brakeband Control
15B1—5	Lower Tie Bar	17B1—19	Cable—Brakeband Control
17B1—5	Lower Tie Bar	B1—20	Handlebar Clip—Top
B1—8	Unit Bearing Stud	B1—21	Handlebar Clip—Bottom
B1—9	Locating Block	B1—22	Bolt—Handlebar Clip
B1—10	Taper Pin—Main Frame	B1—24	Handlegrip
B1—12	Sideframe—R.H.	B1—25	Handwheel
B1—13	Bearing Housing	B1—26	Anchor Bush

PARTS LIST



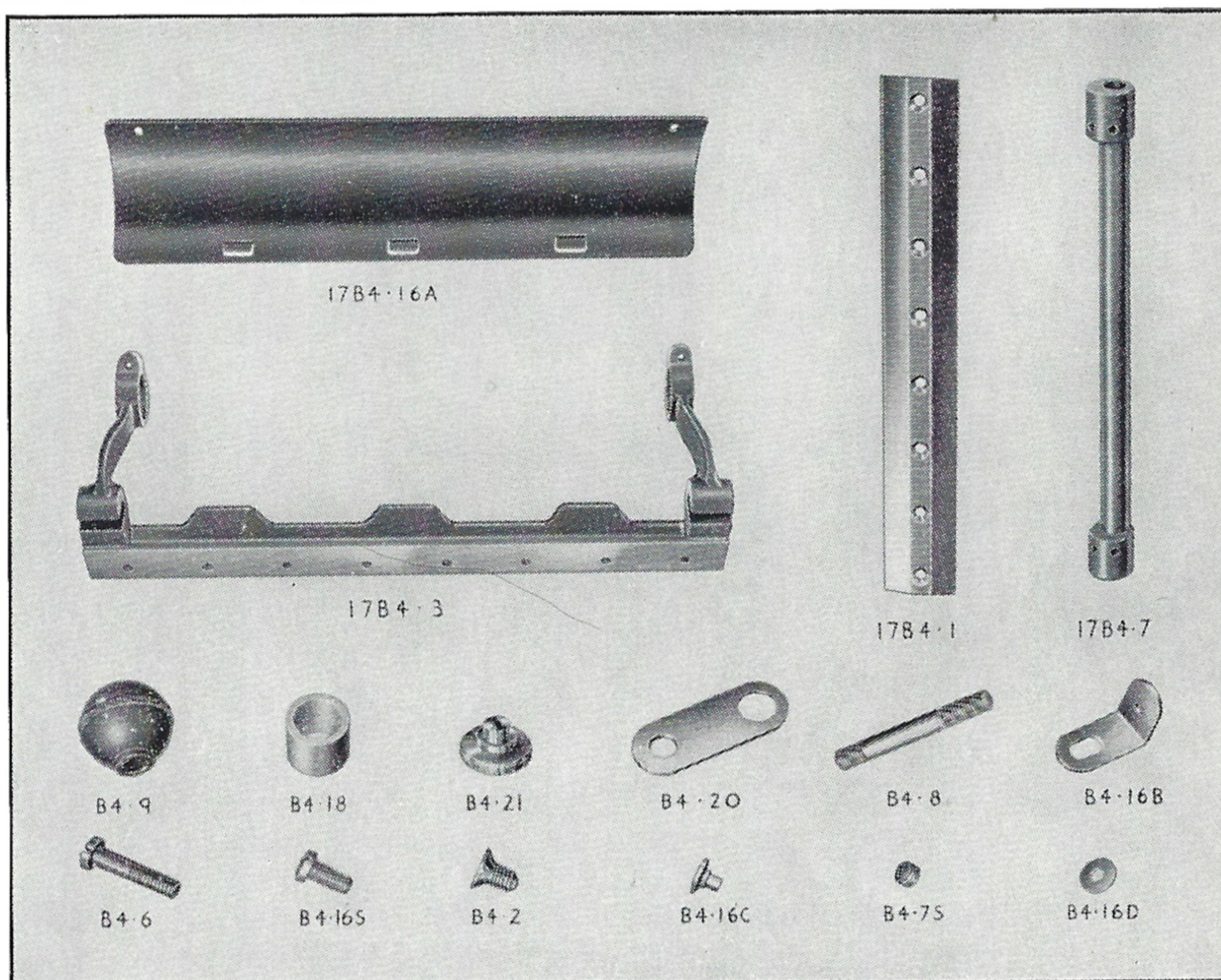
<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
EE9	Rear Axle Bearing	375 NF	$\frac{3}{8}$ B.S.F. Nut
LS9	Freewheel Bearing	375 SW	$\frac{3}{8}$ Spring Washer
RL6	Cutter Bearing	375 W	$\frac{3}{8}$ Plain Washer
RL8	Sprocket Bearing	500 NF	$\frac{1}{2}$ B.S.F. Nut
250 NF	$\frac{1}{4}$ B.S.F. Nut	500 W	$\frac{1}{2}$ Plain Washer
250 SW	$\frac{1}{4}$ Spring Washer	15B6-0	Grassbox
250 W	$\frac{1}{4}$ Plain Washer	17B6-0	Grassbox
312 NF	$\frac{5}{16}$ B.S.F. Nut	15B1-16A/B	Handlebar—L.H. & R.H.
312 SW	$\frac{5}{16}$ Spring Washer	17B1-16A/B	Handlebar—L.H. & R.H.
312 W	$\frac{5}{16}$ Plain Washer		

PARTS LIST



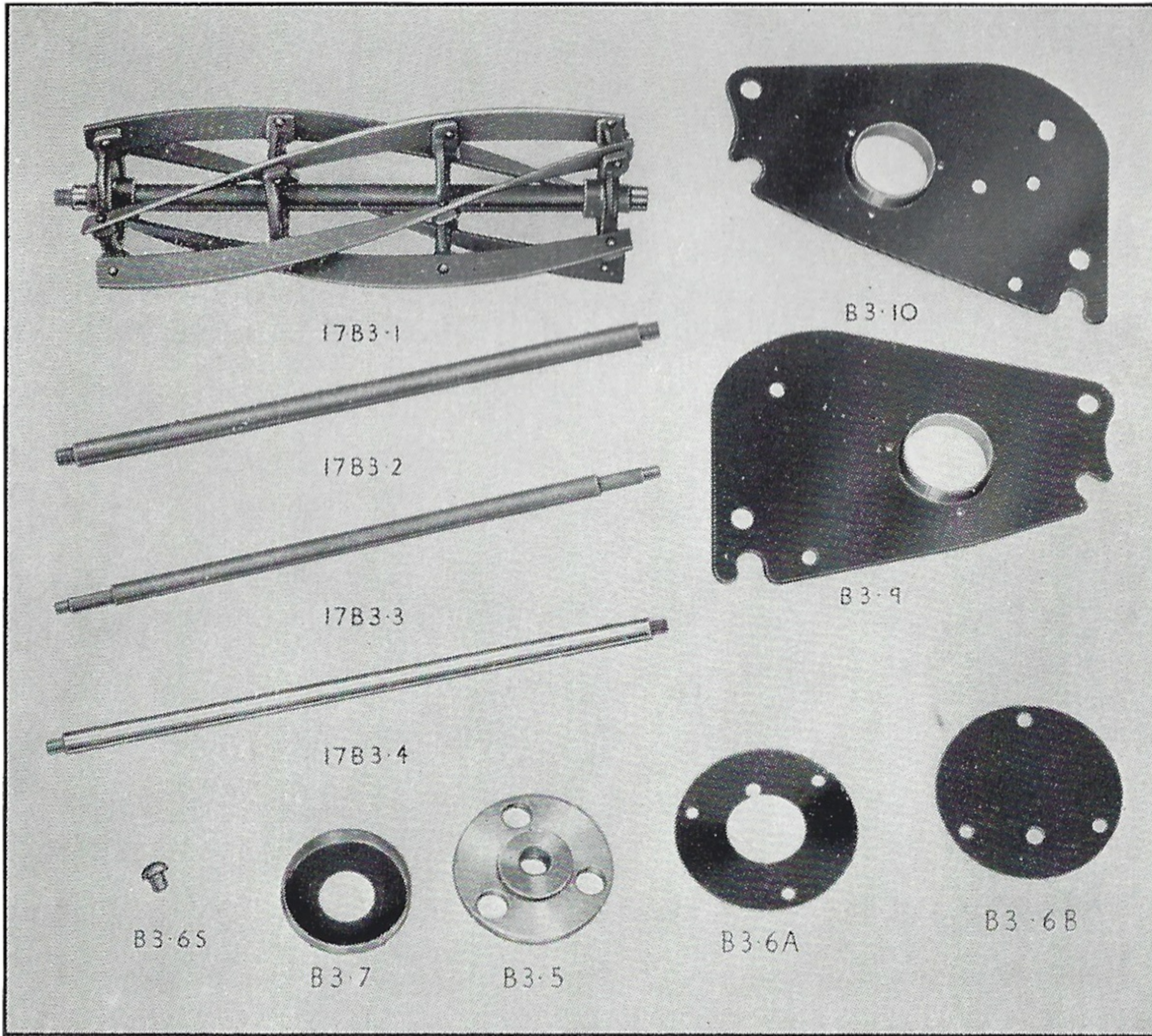
PARTS LIST

<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
B2-7A	Dowel—Half Gear Case	B2-20	Chainwheel
B2-7B	Planet—Half Gear Case	B2-22	Brake Drum
15B2-7C/D	Planet—Gear Case Tube	B2-23	Brake Band
17B2-7C/D	Planet—Gear Case Tube	B2-24	Brake Band Cover
B2-8B	Annular Gear Case	B2-24s	Stud—Brake Band Cover
15B2-8C/D	Annular Gear Case Tube	B2-24B	Belt—Brake Band Cover
17B2-8C/D	Annular Gear Case Tube	B2-25	Nipple Seating
B2-9	Screw—Gear Case	B2-27	Distance Piece—Rear Axle
B2-11A	Washer—Planet Axle	B2-28	Retaining Collar
B2-11B	Split Pin—Planet Axle	B2-28s	Locking Bolt
B2-12	Planet Gear	B2-30	Chain
B2-13	Annular Gear	B2-31	Bearing Housing—L.H.
B2-14P	Taper Pin—Annular Gear	B2-31A	Internal Circlip
B2-15	Thrust Washer	B2-32	Bearing Housing—R.H.
15B2-16	Shaft—Annular Gear	B2-33	Setscrew
17B2-16	Shaft—Annular Gear	B2-34	Jockey Sprocket
B2-16s	Setscrew	B2-35	Sleeve—Jockey Sprocket
B2-17	Pinion	B2-35B	Bush—Jockey Sprocket
15B2-1	Outer Drum—Rear Axle	B2-36	Pin—Jockey Sprocket
17B2-1	Outer Drum—Rear Axle	B2-37	Distance Piece—Jockey Sprocket
B2-1D	Oiler	B2-38	Freewheel Shaft
B2-1E	Flip-Flap Lubricator	B2-39	Freewheel Bush
B2-2	Plunger Pawl	B2-39B	Copper Rivet
B2-3	Taper Pin	B2-39C	Cork
15B2-4	Plunger Spring	B2-40	Freewheel
17B2-4	Plunger Spring	B2-41	Cutter Coupling—Chassis
B2-17A	Taper Pin—Pinion	B2-43	Plug—Oiler
15B2-18	Pinion Shaft	B2-44	Oil Hole Cover
17B2-18	Pinion Shaft	B2-45	Grease Nipple
B2-19	Sleeve—Chainwheel		



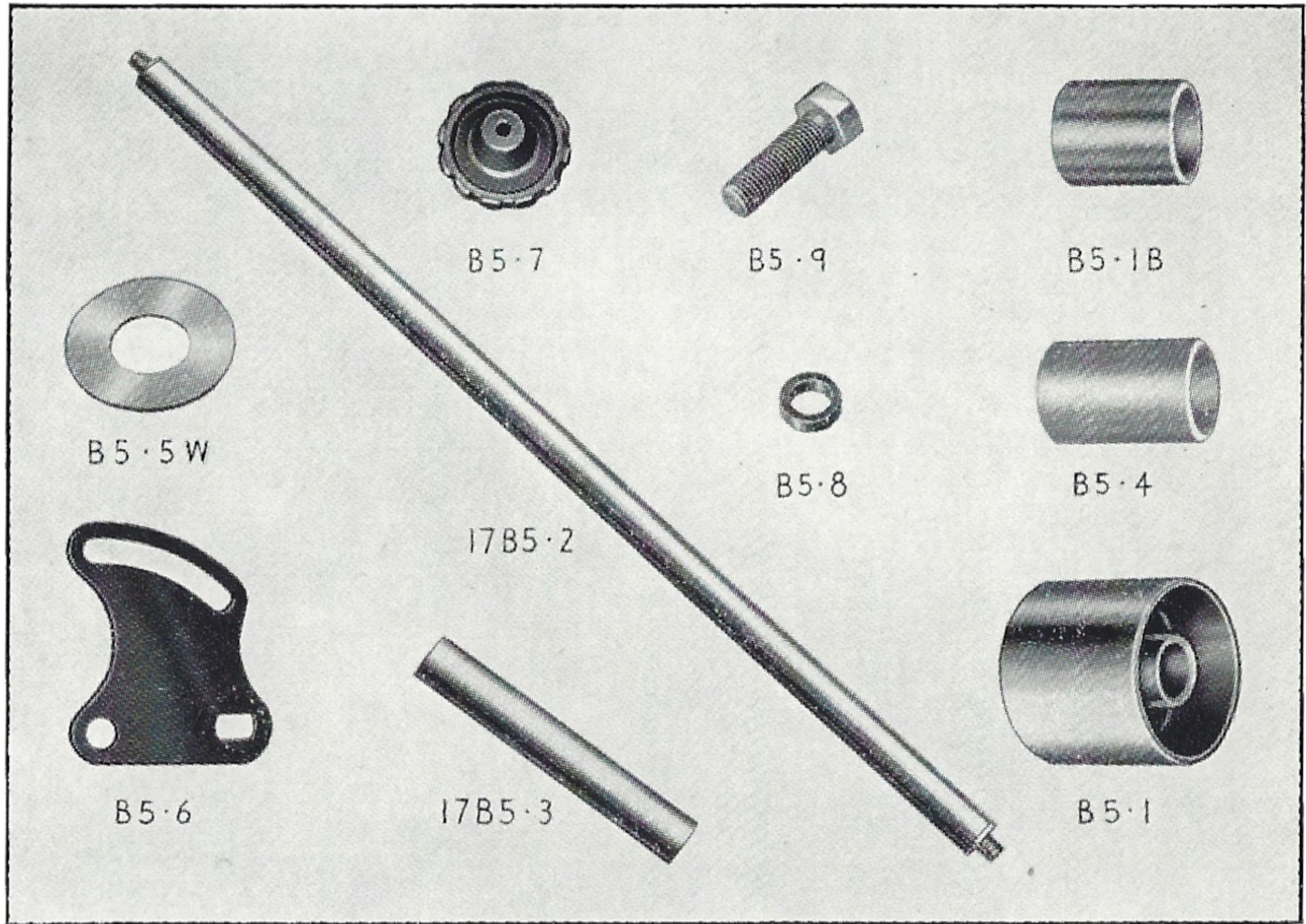
<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
17B4-16	Deflector Plate	17B4-3	Shear Blade Carrier
B4-16S	Screw—Deflector Plate	B4-6	Locking Bolt
B4-18	Spacing Collar	15B4-7	Eccentric Adjuster Tube
B4-20	Link—Alignment Lever	17B4-7	Eccentric Adjuster Tube
B4-21	Eccentric Alignment Lever	B4-7S	Grubscrew
B4-22	Unit Locating Pin	B4-8	Adjusting Handle
15B4-1	Shear Blade	B4-9	Adjusting Knob
17B4-1	Shear Blade	15B4-16	Deflector Plate
B4-2	Screw—Shear Blade		

PARTS LIST



<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
17B3—4	Unit Tie Bar—Upper	15B3—1	Cutter Unit
B3—5	Cutter Coupling—Unit	17B3—1	Cutter Unit
B3—6A	Bearing Cover Cap—Outer	15B3—2	Unit Tie Bar—Main
B3—6B	Bearing Cover Cap—Outer	17B3—2	Unit Tie Bar—Main
B3—6S	Screws—Bearing Cover	15B3—3	Unit Tie Bar—Lower
B3—7	Bearing Cover—Inner	17B3—3	Unit Tie Bar—Lower
B3—9	Unit Side Frame—L.H.	15B3—4	Unit Tie Bar—Upper
B3—10	Unit Side Frame—R.H.		

PARTS LIST



<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
B5—1	Front Roller	17B5—3	Spacing Tube—Centre
B5—1B	Bush—Front Roller	B5—4	Spacing Tube—End
15B5—2	Shaft—Front Axle	B5—5W	Washer
B5—9	Bolt	B5—6	Adjuster Arm
5B5—2	Shaft—Front Axle	B5—7	Handwheel
17B5—2	Shaft—Front Axle	B5—8	Pivot Bush
15B5—3	Spacing Tube—Centre		

Where the Part Number is prefaced by 15 or 17 this indicates the size of the machine. Otherwise all Part Numbers are common to each size.

<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
EB8—1	Electric Motor	EB8—6B	Bolt—Bearing Housing
B8—2	Eyebolt	EB8—7	Bearing Cover
EB8—2S	Setscrew	EB8—8	Adaptor—Sprocket
EB8—3	Motor Mounting Plate	B8—9	Sprocket
EB8—4	Bolt—Motor	15EB8—10	Drive Shaft
EB8—5	Coupling	EB8—17	Plug—Cable Coupling
EB8—5K	Key—Coupling	EB8—18	Power Cable
B8—5P	Taper Pin	EB8—19	Cable Clips
EB8—6	Bearing Housing	RL7	Drive Shaft Bearing

