



I N S T R U C T I O N S T O T H E U S E R

THE J·P ENGINEERING CO. LTD.
MEYNELL ROAD · LEICESTER · ENGLAND

TELEPHONE 67542 (2 lines)

TELEGRAMS: SUPERLAMO LEICESTER

OPERATING INSTRUCTIONS
for the J·P MONARCH sizes 12" & 14"

THE J.P. MONARCH Lawnmower has been designed to give a fine cutting action to impart a close trim and finish to Lawns and Sports Greens.

Simple features of adjustment together with precision engineering standards of manufacture and the use of high quality materials, combine to produce a machine of sound construction, which with proper care and maintenance, will give many years of satisfactory and reliable service.

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J·P

THE MONARCH J.P. LAWN MOWER

LUBRICATION

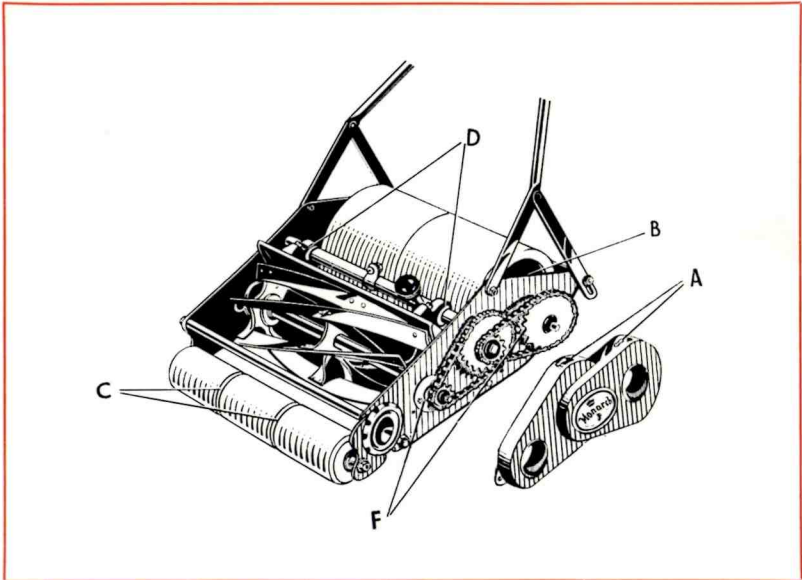


fig. 1

THE FOLLOWING OILING POINTS ON THE MACHINE SHOULD RECEIVE FREQUENT ATTENTION:—

- (a) The Transmission through the two oiling points provided on the top of the transmission in chain case.
- (b) The freewheel driving clutch on each rear drum through the oil hole in the end drum cover plates. To assist the feed of oil, tip the machine on each side when oiling, and spin each drum two or three times after oiling.
- (c) Oil the front roller by applying oil at the space provided between each roller. To assist the feed of oil, tip the machine on each side when oiling.
- (d) Apply oil to the Shear Blade adjuster at the sides of the two knife frame straps, and the adjuster bar distance pieces.

The adjuster should be worked slightly backwards and forwards with the adjusting lever two or three times, to work in the lubricant.

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- (e) The two slots at the bottom of the knife frame adjacent to the shear blade which engage the bottom cross bar should occasionally be oiled, and after applying lubrication, the knife frame should be worked up and down slightly by moving the adjusting lever backwards and forwards to assist the lubricant to work through the parts.
- (f) The main frame bearings of the rotary cutter and rear axle on the transmission side are lubricated by removing the large transmission cover, when these bearings will then be accessible.
- (g) The rotary cutter and rear axle ball races on the opposite side to that of the transmission can be lubricated through the oil holes provided in each bearing cover.

For oiling points see Figures 1 and 2.

NOTE: *Always use a good grade of thin machine oil. The J·P quality, specially refined, is obtainable from all stockists in pint tins, or direct from us.*

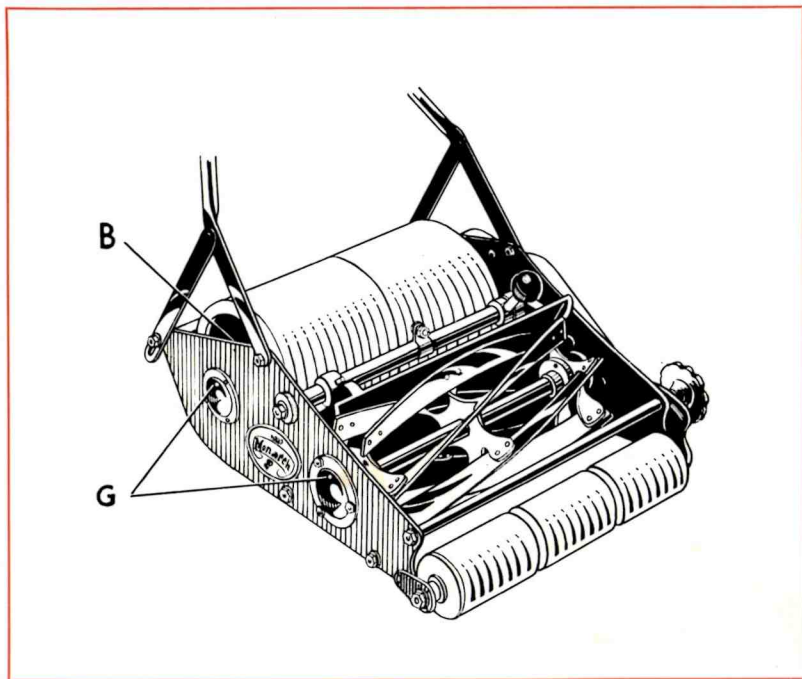


fig. 2

SETTING and ADJUSTMENT

preparatory to use

(a) Setting the rotary cutter to the shear blade

The Rotary Cutter is carefully ground and set parallel to the bottom blade, and adjustment should be made to bring the cutters into audible contact by moving the adjusting lever in the direction towards the rear axle.

A pre-setting stop is fitted to the machine—this is located on the centre of the adjuster tube. This stop determines the cutter setting—that is the adjusting lever should be moved as far as it will go until the stop comes up against the back of the knife frame.

When the mowing is completed and the machine being pushed along gravel paths after use, the adjusting lever should be moved forward to break the contact between the blades. This makes it more easy for the machine to be moved about from one place to another when not actually mowing.

(b) Adjustment for close to medium cutting

This adjustment is made by the front axle handwheel, unscrew the handwheel a couple of turns, adjustment can be made to any position on the traversed slot.

The adjustment bracket should never be set back when dealing with a heavy crop, or when mowing the lawn at the early part of the season. Latterly, as the ground gets harder, and the growth more even, the adjustment may be set further back and the machine will cut to a very close degree and finish.

For ordinary cutting, the front rollers should never be set in the lowest position unless the ground is firm and level.

After making the adjustment, be careful to re-tighten the handwheel firmly, to prevent the adjustment from moving.

(c) Handlebars

These adjust to a higher or lower position by slackening the rear tie bar retaining nuts, situated on the slot of the handlebar supporting strut, taking care to tighten the nuts securely after adjustment.

(d) Fixing the grassbox

To fix the grassbox into position, first insert the two metal wings between the chassis side frame. The box can then be lowered, with the bottom slot of the wing engaging in each of the grass box studs, and the upper slot resting on the front cross tie bar.

ADJUSTMENTS

(a) Parallelism of cutters

The machine is set and inspected before despatch to cut equally along the whole length of the rotary cutter when the contact adjustment with the bottom blade is made as explained on page 4, Section A) and no attention to correct any mis-alignment should be necessary unless the machine has been dismantled or subjected to excessive shock through fouling an obstruction, and the blades do not cut evenly along the whole length of the rotary cutter, this can be corrected by the following procedure:—

On the side of the machine opposite the transmission side will be seen a knurled handwheel which, being eccentric, will, when rotated, higher or lower the knife frame to which the bottom blade is secured, and this adjustment readily enables the bottom blade to be adjusted parallel with the rotary cutter.

First unscrew for a turn the hexagon nut which locks the eccentric handwheel in position, then slightly rotate to make the necessary correction. Then bring the blades into contact by moving the adjusting lever and test for parallelism by cutting paper strip from end to end.

After adjustment has been made, make sure to lock up by tightening the nut on the tie bar, taking care that the knurled handwheel doesn't move from the position of adjustment.

(b) Tension of the shear blade adjuster

The tension of the shear blade adjuster for bringing the blades into contact, operated by the adjusting lever, can be adjusted by the screws which secure the two knife frame straps in position.

Under the front screw is a rubber compression washer which permits tension adjustment to be made. The two front screws should always be reasonably tight to give a moveable tension to the eccentric adjustment which is operated by the lever.

(c) Chain adjustment

Any necessary adjustment required by the driving chains can be effected by highering and lowering the combined intermediate centre sprocket, and the following procedure should be carried out:—

First remove the transmission chain cover. On the inside of the side frame, opposite the centre intermediate sprocket, will be seen the sprocket stud nut, and this should be slackened a turn, afterwards the sprocket stud can be highered or lowered, as desired, in the slot. Highering will tighten the chains.

After the adjustment is made, the nut should be securely tightened.

Do not make the chain adjustment too tight: a slight free slackness should be allowed.

AFTER USE AND MAINTENANCE

Removing the rotary cutter

The design of the Monarch machine provides the facility that the rotary cutter can be detached without dismantling the side frame construction of the machine, and when it is desired to remove the rotary cutter for re-grinding or service attention, proceed as follows:—

- (a) Remove the transmission cover.
- (b) Take off the front cutter driving chain by releasing the spring clip and taking out the connecting link.
- (c) Unscrew and take off the cutter shaft nut together with the small sprocket.
- (d) Unscrew and take off the nuts of the cutter bearing housing studs three on each side. The cutter housing complete with bearing can now be removed by withdrawing in an endwise outward direction. *It is important to remove the bearing housing on the transmission side first.*

The end of the cutter shaft on the opposite side should now be tapped until it passes through clear of the bearing; the housing will then come out and the cutter can be removed. In taking out the rotary cutter, *it is of great importance that the cutter shaft centres should not be damaged by the use of steel punches, as damaged centres can cause the cutters to be ground out of truth.*

Replacing the rotary cutter

- (a) Assemble the cutter between the frames by holding with the left hand and passing the threaded end of the shaft first through the large hole in the transmission side frame, taking care to see that the end spacer is assembled on the shaft.
- (b) Assemble the transmission side bearing housing on the end of the rotary cutter shaft, and screw on the three stud nuts and tighten in position. Then re-assemble the cutter sprocket, by first assembling the sprocket distance collar on the shaft up to the bearing, then the sprocket washer together with the cutter nut and tighten up complete.

Now place the opposite side bearing housing in position by engaging the bearing in the plain end of the cutter shaft. Assemble the stud nuts and tighten, and replace the inspection cover.

- (c) Replace and connect up the chain and screw on the transmission cover. When removing or replacing the rotary cutter, always see that the adjusting lever is in the forward position—that is, towards the front rollers, as far as it will go.

RE-SETTING CUTTER ADJUSTMENT AFTER REGRINDING

After regrinding, the cutter will have been slightly reduced in diameter, and it will be necessary to adjust the pre-setting stop which is situated on the centre tube, and the procedure should be as follows:—

Move the adjusting lever forward to the front of the machine as far as it will go, unscrew for a turn, the nut of the pre-setting stop. The adjusting lever should now be carefully adjusted towards the rear axle to bring the bottom blade up to contact the rotary cutter. The adjustment should be made until there is a light audible contact between the rotary cutter and bottom blade.

After adjusting the cutter, the pre-setting stop should be rotated until the bottom leaf of the stop engages up against the back of the knife frame, and in this position the lock nut of the stop should be tightened up secure.

Finally check for parallelism by testing with paper cutting, and if there is any discrepancy from end to end, this can be corrected by reference to paragraph of procedure concerning parallelism of rotary cutter.

REMOVING THE FRONT AXLE

- (a) Unscrew and take off the handwheel.
- (b) Unscrew and take off the nut on the end of the front axle shaft. The slotted adjuster can now be lightly tapped off the end of the front axle shaft at which time the axle will come clear from the opposite side.

The rollers can be removed for inspection or replacement.

REPLACING THE FRONT AXLE

Engage the small crank arm with its stud in the hole in the frame, with the rollers and distance pieces already assembled on the shaft; then assemble the slotted crank arm adjuster on the flattened end of the shaft, at the same time engaging the stud in the hole of the side frame.

Re-assemble the handwheel, washer, and tighten.

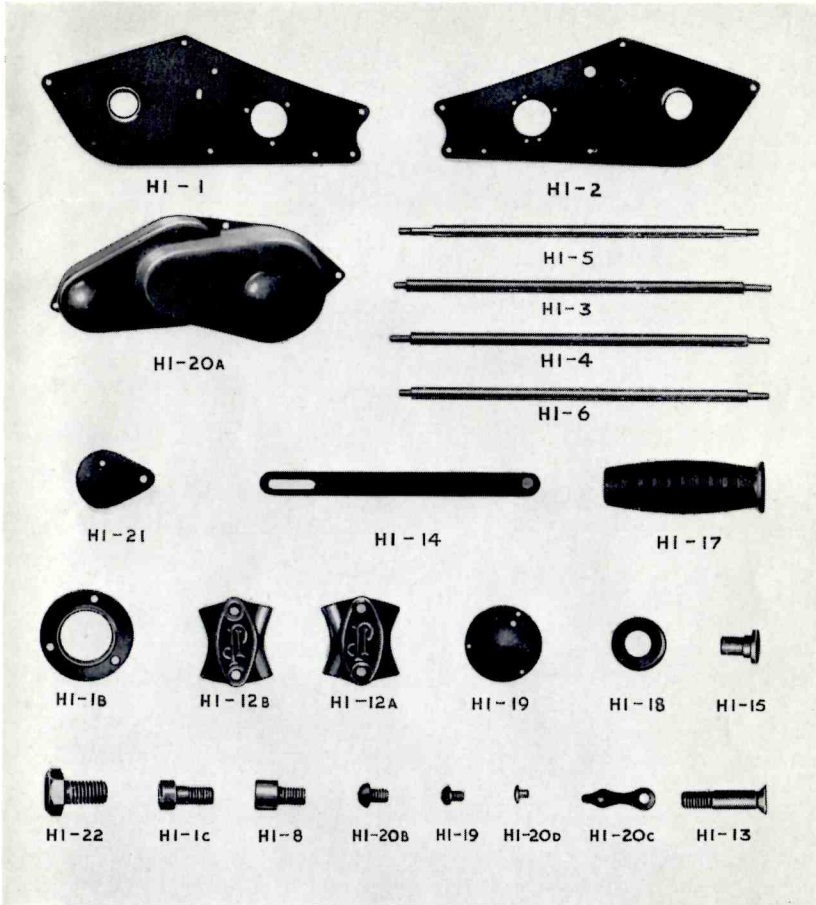
Upon completion of the mowing, clean off all clinging grass or dirt and store in a dry tool shed. NEVER USE WATER.

Care should be exercised when cleaning the machine to keep the fingers clear of the bottom shear blade and the rotary cutter blades.

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 on pages 9 to 12 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 side frame in front of the transmission cover; 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.
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.

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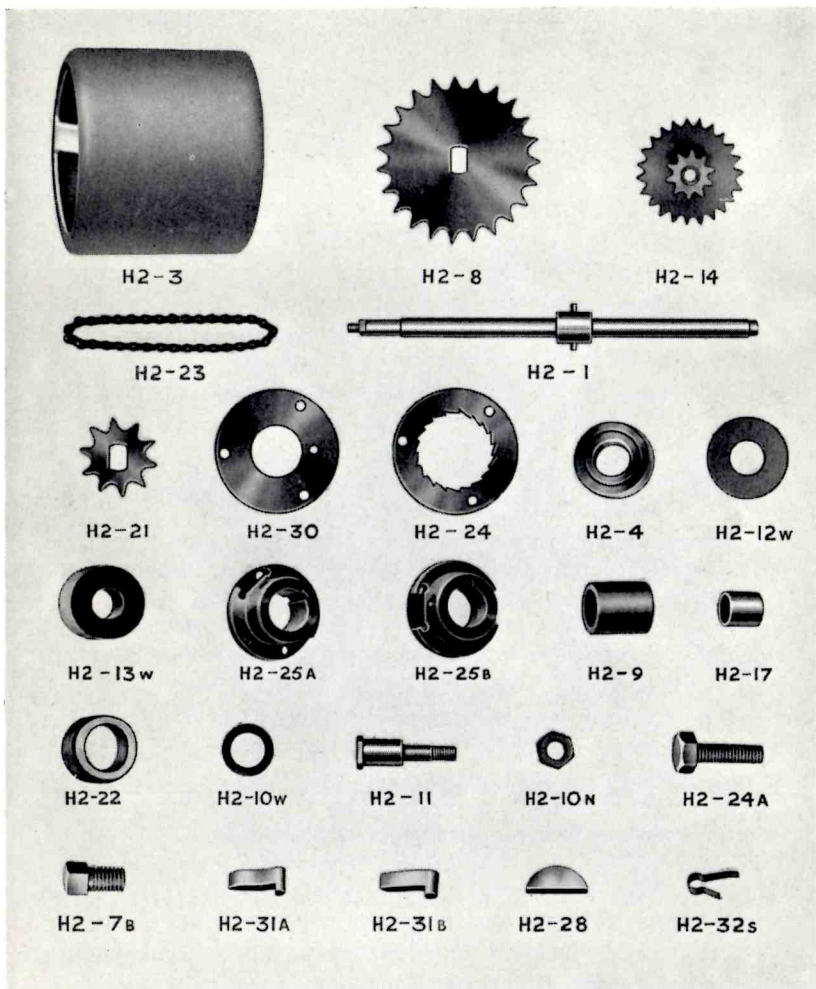


GROUP H1-0

<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
H1-1	Sideframe—Lt. Hd.	H1-13	Handlebar Clip Bolt.
H1-1B	Bearing Housing.	H1-14	Handlebar Strut.
H1-1C	Bearing Housing Bolt.	H1-15	Handlebar Strut Rivet.
H1-2	Sideframe—Rt. Hd.	H1-17	Handlegrip.
H1-3	Front Tie Bar.	H1-18	Rear Axle Bearing Cover.
H1-4	Rear Tie Bar.	H1-19	Small Domed Cover Cap.
H1-5	Lower Tie Bar.	H1-19S	Domed Cover Cap Screw.
H1-6	Knife Frame Tie Bar.	H1-20A	Transmission Cover.
H1-8	Grassbox Stud.	H1-20B	Transmission Cover Screw.
H1-9A	Handlebar—Rt. Hd.*	H1-20C	Oil Hole Cover.
H1-9B	Handlebar—Lt. Hd.*	H1-20D	Oil Hole Cover Rivet.
H1-12A	Handlebar Clip—C'sunk.	H1-21	Bearing Cover Cap.
H1-12B	Handlebar Clip—Plain.	H1-22	Handlebar Pivot Bolt.

*Not illustrated.

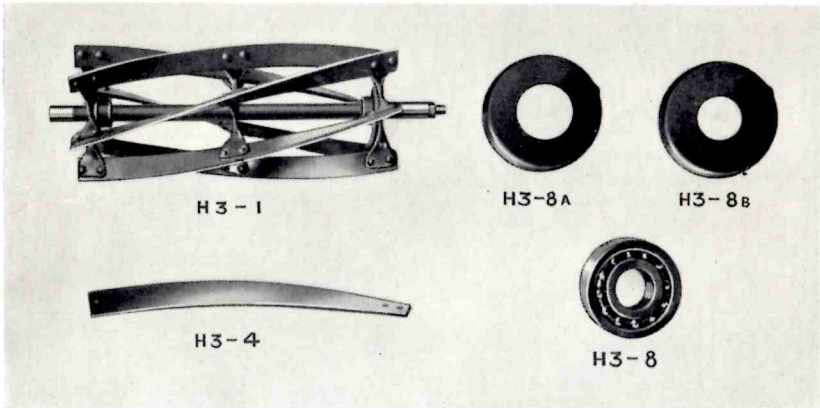
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GROUP H2-0

Part No.	Description	Part No.	Description
H2-1	Rear Axle Shaft.	H2-21	Cutter Sprocket.
H2-3	Rear Axle Drum.	H2-22	Cutter Sprocket Collar.
H2-4	Rear Axle Ball Race.	H2-23	Driving Chain.
H2-7B	Setscrew.	H2-24	Clutch Ring.
H2-8	Rear Axle Driving Sprocket	H2-24A	Clutch Ring Screw.
H2-9	Sprocket Spacing Collar.	H2-25A	Inner Clutch Member—Rt. Hd.
H2-10N	Cutter & Rear Axle Nut.	H2-25B	Inner Clutch Member—Lt. Hd.
H2-10W	Cutter & Rear Axle Washer.	H2-28	Woodruff Key.
H2-11	Intermediate Sprocket Stud.	H2-30	Cover Plate.
H2-12W	Inter. Sprocket Washer.	H2-31A	Freewheel Pawl—Rt. Hd.
H2-13W	Inter. Sprocket Collar.	H2-31B	Freewheel Pawl—Lt. Hd.
H2-14	Inter. Sprocket Complete.	H2-32S	Freewheel Pawl Spring.
H2-17	Inter. Sprocket Bush.		

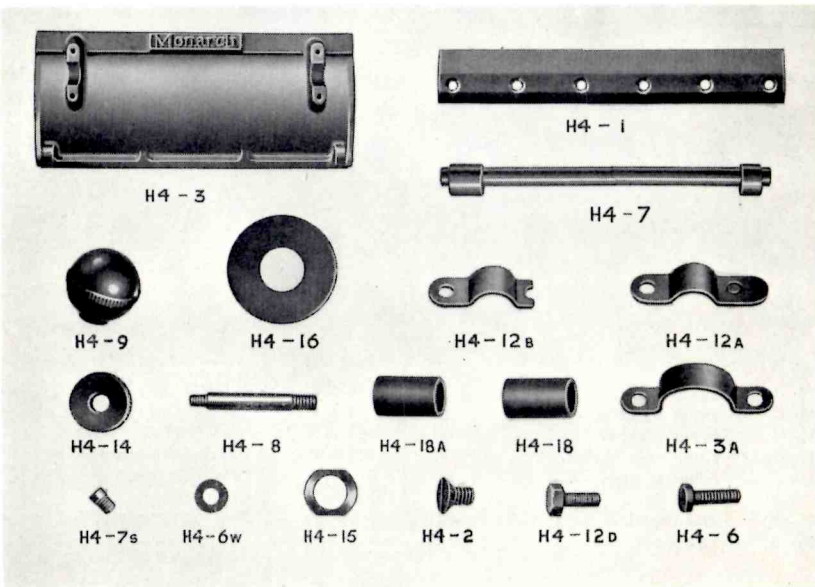
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GROUP H3-0

<i>Part No.</i>	<i>Description</i>
H3-1	Rotary Cutter Complete.
H3-4	Spiral Blade.
H3-8	Cutter Ball Race.

<i>Part No.</i>	<i>Description</i>
H3-8A	Cutter Bearing Cover—Lt. Hd.
H3-8B	Cutter Bearing Cover—Rt. Hd.



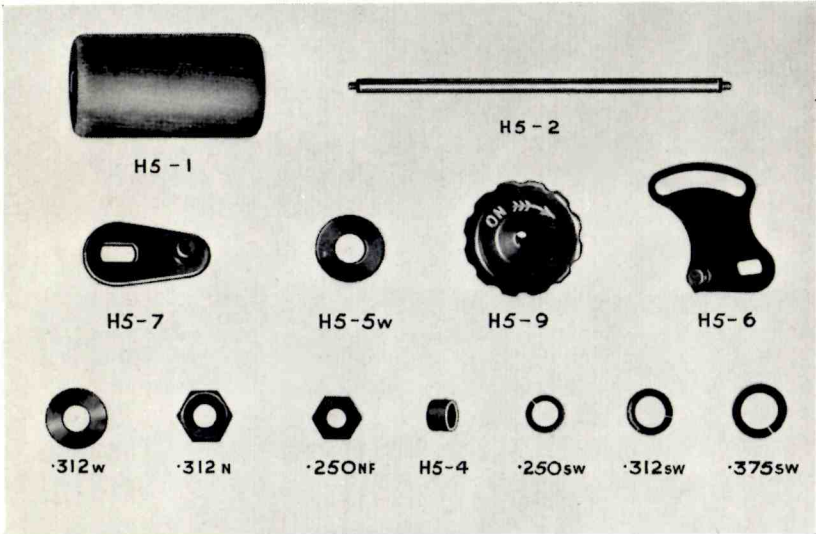
GROUP H4-0

Part Nos. described overleaf

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<i>Part No.</i>	<i>Description</i>
H4-1	Shear Blade.
H4-2	Shear Blade Screw.
H4-3	Knife Frame.
H4-3A	Knife Frame Bearing Clip.
H4-6	Locking Bolt.
H4-6W	Packing Washer.
H4-7	Shear Blade Adjuster.
H4-7S	Adjuster Set-Screw.
H4-8	Adjusting Lever.

<i>Part No.</i>	<i>Description</i>
H4-9	Adjusting Knob.
H4-12A	Cutter Setting Stop—Lower Half.
H4-12B	Cutter Setting Stop—Upper Half.
H4-12D	Locking Bolt.
H4-14	Eccentric Handwheel.
H4-15	Eccentric Shoe.
H4-16	Cover Washer.
H4-18	Spacing Collar—Long.
H4-18A	Spacing Collar—Short.



GROUP H5-0

<i>Part No.</i>	<i>Description</i>
H5-1	Front Roller.
H5-2	Front Axle Shaft.
H5-4	Spacing Tube.
H5-5W	Front Axle Washer.
H5-6	Adjuster Arm.
H5-7	Crank Arm.
H5-9	Handwheel.
H6-0	Grassbox*

<i>Part No.</i>	<i>Description</i>
250 NF	$\frac{1}{4}$ " B.S.F. Nut.
250 SW	$\frac{1}{4}$ " Spring Washer.
312 NF	$\frac{5}{16}$ " B.S.F. Nut.
312 SW	$\frac{5}{16}$ " Spring Washer.
312 W	$\frac{5}{16}$ " Plain Washer.
375 W	$\frac{3}{8}$ " Plain Washer.

*Not illustrated.

