

comes into close contact with the ledger plates.

### Points to Watch

Points to watch when sharpening mower knives are as follows:—

1. Maintain the original width of bevel. A narrow, blunt bevel does not cut well, and a wide, keen bevel is too easily nicked in use.
2. Maintain the original angle of shear. Try to grind the new cutting edge parallel to the old one.
3. Do not overheat the metal and draw the temper. To guard against this it is necessary to keep the section moving on the stone and not to apply too much pressure.

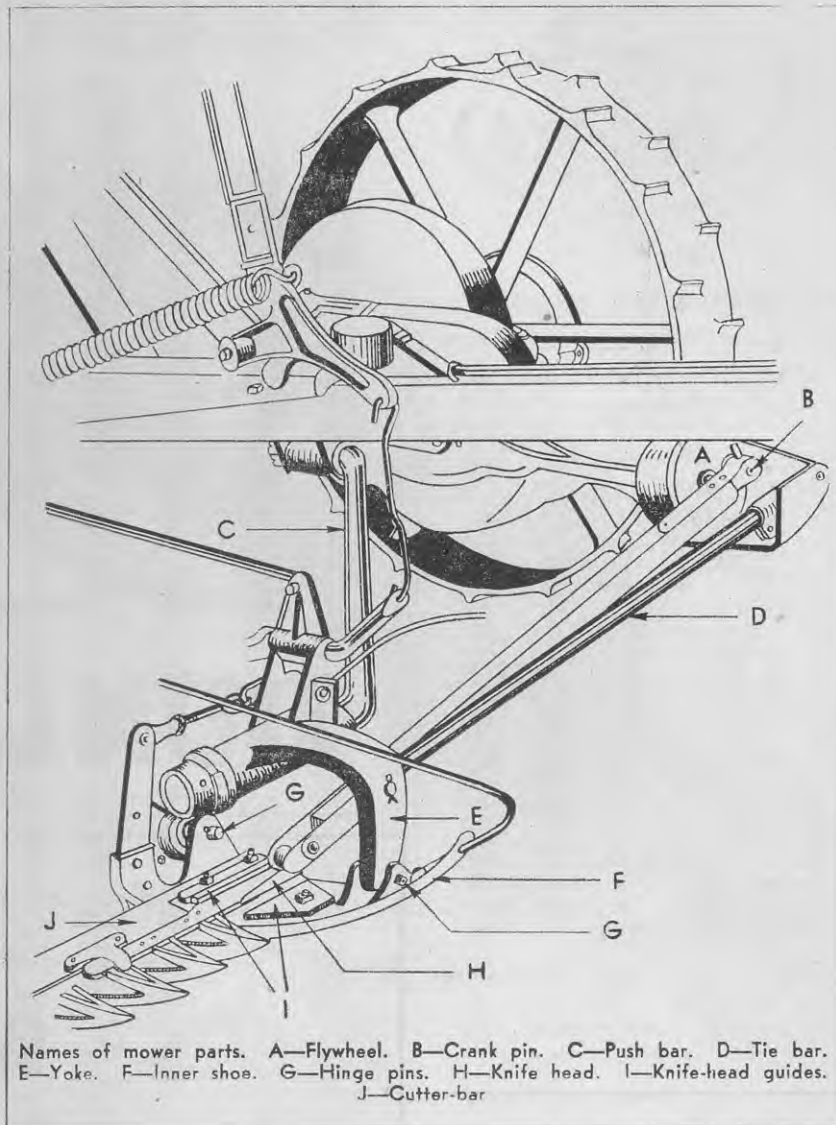
Any sections that are badly worn or chipped should be replaced. The knife can be held in a vice and the old section removed by cutting the rivets with a cold chisel. The practice of levering the old section off is inclined to distort the rivet holes in the knife bar. When riveting the new section on place the back of the knife on an anvil and swell the rivet with a few heavy blows and then round off the end. Do not overdo the rounding off and spread the head of the rivet, as this merely weakens it. With the older American type of mower it is better to buy a new knife rather than to replace all the sections on the old one. However, with the new English models the difference in price is too great. The knife should be examined periodically for loose rivets, especially in the knife head, where there is more vibration and wear.

### Cutter-bar Parts

Sharpening the knife has little effect if ledger plates are in bad condition. Ledger plates, which are replaceable hard steel plates with serrated edges and which fit on to each finger to form the cutting edge, are not found on later British models imported to this country. Instead, the finger is made of a harder steel and has a non-replaceable smooth cutting edge. It is stated that this type has been used in England for a number of years and has been found quite satisfactory there.

Ledger plates which are worn smooth or round on the surface should be replaced. The finger should be held firmly and the rivet punched out. When the new plate is being fitted make sure it fits well into its position. It may be necessary to grind a little off the plate to do this. When the new plate has been riveted into place make sure that none of the counter-sunk rivet head projects above the surface of the plate. After all the ledger plates have been inspected the fingers must be adjusted so that the ledger plate surfaces are in line. A piece of light cord can be stretched across the surfaces of all the ledger plates to check the alignment and the fingers can be bent up or down by hammering the thick part of the fingers or packed with thin shims to raise or lower them. The knife clips should be hammered down so that there is about 1/32in. between the clip and the knife and the wear plates are slid forward to force the points of the knife sections down on to the ledger plates. Adjust the wear plates so that they do not bind but just have a working clearance.

## CARE OF THE FARM MOWER



Names of mower parts. A—Flywheel. B—Crank pin. C—Push bar. D—Tie bar. E—Yoke. F—Inner shoe. G—Hinge pins. H—Knife head. I—Knife-head guides. J—Cutter-bar

Before hammering down knife clips remove the knife from under the clip, but slide it back to check the clearance of each clip. It is important that the sections should rest square, level, and hard down on the ledger plate, and it may be necessary again at this point to raise or lower slightly, individual fingers by hammering or by using a piece of pipe as a lever.

If the knife-head guides are allowed to get worn, excessive vibration and chattering of the knife head occurs and this is likely to be the cause of a broken pitman. The knife-head guides can be adjusted by removing shims from beneath them so that there is only a good working clearance between the knife heads and the guides. If a knife is bent, it can be straightened by hammering it on a flat surface. A bent knife will bind and so increase the wear and also the

friction. The knife should be carefully inspected for bends, flatwise or edgewise.

### Fitting New Fingers

When fitting new fingers to the cutter-bar make sure that the wings of the finger each come into contact with a wing on the two neighbouring fingers. These wings ensure that the finger is held firmly in its correct position. If the wing is too long, a little should be ground off it, or if it is too short, it can be drawn out by hammering it on an anvil. Adjustable skids on both the inner and outer shoes will become worn in time, but these can be built up by welding or replaced.

### The Lead Angle

The cutter-bar when not cutting and with the mower at rest does not project exactly at right angles to the path of the mower. A small amount of