

## CARE OF THE FARM MOWER

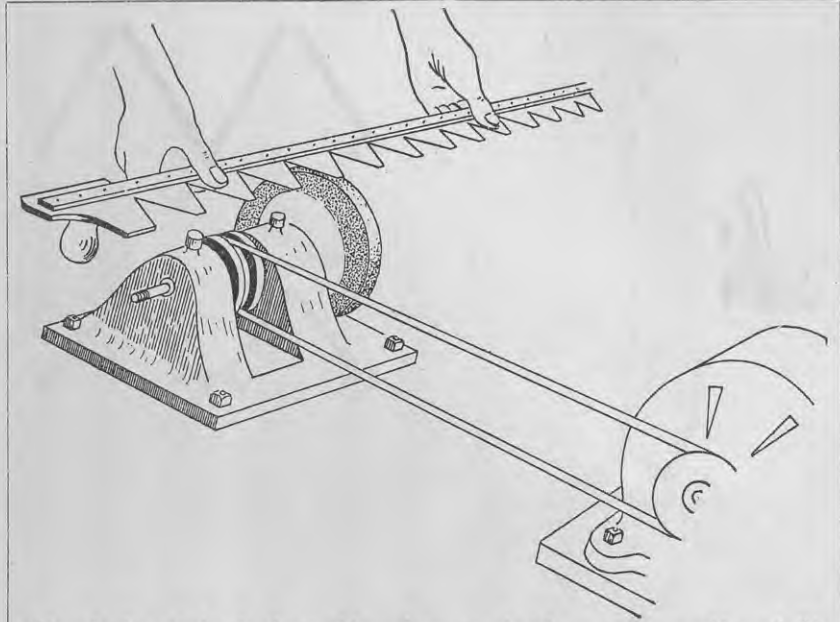
lead is applied so that the outside end of the cutter-bar is slightly ahead of the inside end. This lead is approximately  $\frac{1}{4}$  in. for every foot of length of the cutter-bar; that is, for a 4ft. 6in. bar there would be about  $1\frac{1}{4}$  in. lead and for a 6ft. bar about  $1\frac{1}{2}$  in. As the mower becomes worn this lead will decrease so that there will probably be a lag and this will also mean that the pitman rod and the knife are not in the straight line which is required when the mower is at work. This lag is very often due to worn hinge pins and these can be built up or replaced. On some mowers the rear hinge pin is fitted with an adjustable bush, or the lead can be altered by adjusting the lengths of the push and tie rods. To check the lead of the cutter-bar set up the mower in the cutting position on a flat piece of ground. If it is a horse mower, raise the pole and support it in the cutting position, that is, about 32in. above the ground, and pull back on the cutter-bar to take up any slack. Tie a string to the head of the pitman rod and run it out over the knife, keeping it parallel to the pitman. Then check the lead angle.

### Register

The register should be adjusted so that at the end of each stroke the centre of each section of the knife should coincide with the centre of the finger. The main thing that determines the register is the length of the pitman rod. The pitman may have been replaced by one that is not the correct length or perhaps it is of the metal type which is adjustable in length and requires adjusting. The register can also be altered by lengthening or shortening the tie bars and shifting the yoke washers.

### Lubrication

Lubrication or the lack of it is one of the chief factors determining the length of life of a mower. The wrist-



Although this grinder is shown driven from an electric motor, a machine of this type can be conveniently mounted on the tractor and driven from the belt pulley.

pin bearing on the crank wheel should receive frequent lubrication while working. It is worth while stopping to grease it every 1 $\frac{1}{2}$  hours. The gear-box should be filled to the level of the crank shaft with a good brand of gear oil. Care should be taken to see that no water is allowed to enter it. The oil should be drained out and replaced at least once a season. All the other lubrication points should receive daily attention, but on mowers with V-belt

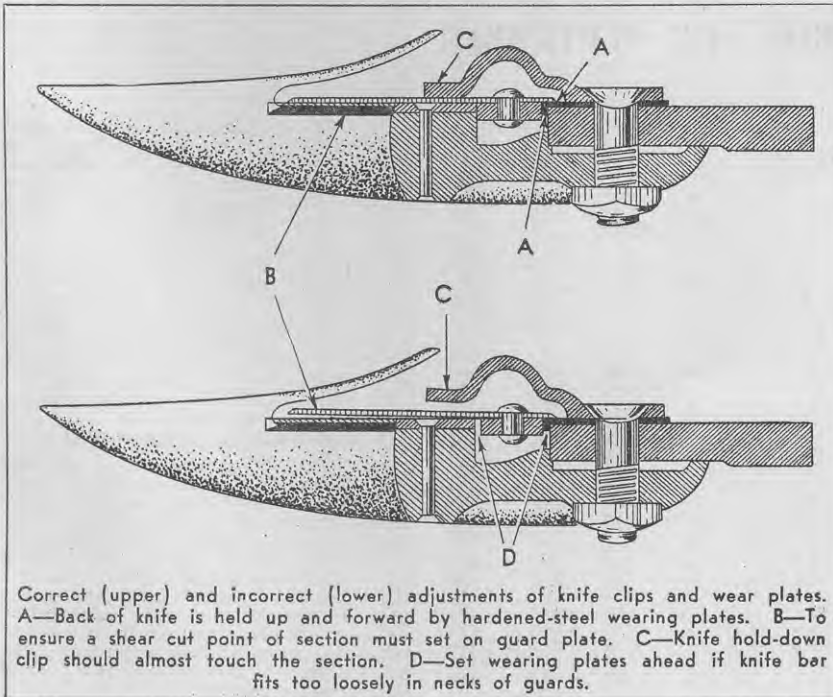
drives no oil should be allowed to get near the belts. A drop of oil applied to all the points in the usual complicated system of levers which raise and lower the cutter-bar will make for easier operation and reduce wear. The hinge pins should also be oiled.

### Safety Release

Most tractor-mounted mowers are fitted with a safety release which will allow the blade to swing back if it strikes an obstacle. The release should be adjusted so that it will release before any damage is done. Similarly on all power mowers the slip clutch should be adjusted so that it will slip as soon as any part becomes jammed or broken and before any further damage is done. The balance spring on the lifting mechanism should be correctly adjusted. This spring reduces the effort required to raise the knife and also reduces the weight on the outer shoe and thereby cuts down the draught. If this spring is adjusted too tightly, the outer shoe will tend to rise and will not follow the contour of the ground. On the other hand, if the spring does not have enough tension on it, the knife will be very difficult to raise. Most makes of mower provide in different ways for the various adjustments mentioned earlier, so that the best source of information on any machine is the operator's handbook, and this should be referred to when any trouble is experienced with the machine.

### Worn Bearings

The machine should be inspected at intervals for worn bearings. These are easily detected when there is side play in any of the shafts that drive the knife. Worn bearings should be removed and new bearings should be carefully fitted in their place. The pinions and gears in the gearbox should also be examined to see that



Correct (upper) and incorrect (lower) adjustments of knife clips and wear plates. A—Back of knife is held up and forward by hardened-steel wearing plates. B—To ensure a shear cut point of section must set on guard plate. C—Knife hold-down clip should almost touch the section. D—Set wearing plates ahead if knife bar fits too loosely in necks of guards.