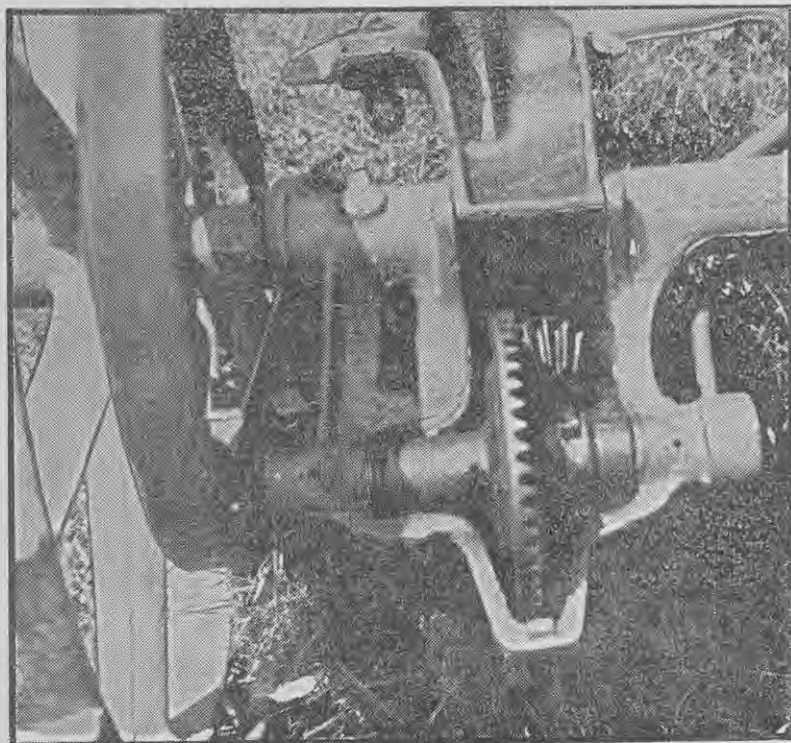


# Care of Farm Mower

**T**HE farm mower, which is probably one of the most common implements on New Zealand farms, is a machine which requires regular attention to the sharpening of the knife as well as a thorough overhaul once a season if it is to work with maximum efficiency. This article by D. F. Scott, Farm Machinery Instructor, Department of Agriculture, Auckland, describes the main points to be watched by the user if he is to get the most satisfactory results from his machine.

**T**HE bodies of the first motor-cars were adaptations of the horse-drawn buggy, using an engine instead of a horse for motive power. As time went on they gradually changed until the body of the modern car is altogether different from the prototype. Similarly, the mower, which is being adapted to the tractor instead of the horse, is undergoing changes which may not yet be finalised. The first tractor mower was simply a horse mower drawn by a tractor. Later the trailer mower was driven from the power take-off to enable the blade to be driven at high speeds independent of the ground speed, and later still came various forms of tractor-mounted mowers, some with cutter-bars in front of and some behind the rear wheels of the tractor. Some of these mowers are fitted with either one or two castor wheels, and cutter-bar lengths vary from 4ft. 6in. to 7ft. The main details of the cutting mechanism of these machines are similar, so that with only a few exceptions the maintenance is the same as that required for the horse mower.



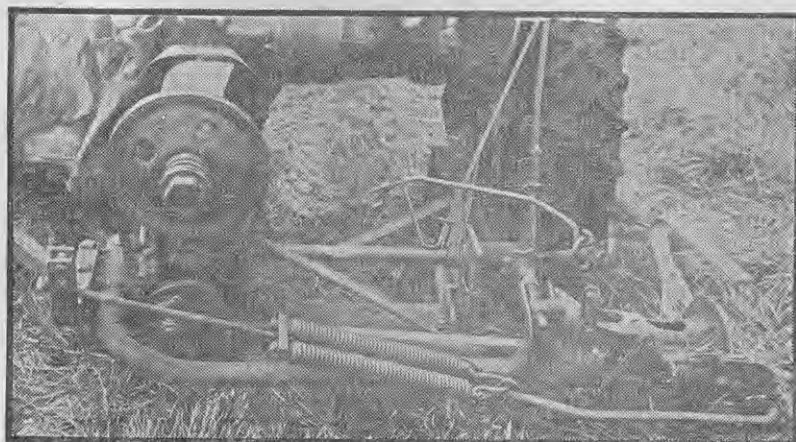
The gearbox of an older type of mower shown open. Where all gears are not enclosed in an oil bath extra care is required with cleaning and lubricating.

A mower in bad repair means up to 35 per cent. increased draught, loss of time through having to clear blockages, and a poor job done, so time spent on overhaul and repairs during the off season will save valuable time at haymaking later. A mower in good condition should have only a very slight side draught, but once the knife becomes blunt or the cutting mechanism becomes defective in some way the side draught increases enormously. With the horse mower it was most necessary to keep the cutter-bar in good order to make the job as light as possible for the horses, but there

is a tendency with power-driven machines for the operator to neglect the condition of the cutting mechanism and when the going gets hard merely to open the throttle an extra nick and carry on, with the result that the very heavy side draught on the cutter-bar is likely to strain or break the yoke casting at the head of the cutter-bar. Power mowers which have been damaged in this way are quite common and the result is that the cutter-bar lags behind its correct position and also the pitman rod and knife run out of line.

## Sharpening the Knife

A dull or improperly ground knife causes ragged cutting, rapid wear, and extremely heavy draught. The quickest and easiest way to sharpen the knife is on a power-driven emery wheel. A specially shaped stone is available for the job and this should be dressed periodically with a dressing tool to preserve its correct shape. There are also available hand-driven grinders which can be clamped on to the wheel of the mower and are so designed that the stone moves up and down the cutting edges of the knife, which is held in position by a clamp. Another very convenient way to sharpen the knife is to use one of the specially shaped emery wheels mounted on the end of a flexible shaft. Although a file can be used for the job, the steel of the section is so hard that a new file does not last long. Whichever way the sections are sharpened it will be necessary to remove the feathered edge, which will damage the cutting surfaces once the knife is replaced in the mower and



Tractor-mounted mower, showing power take-off shields, the linkage for raising and lowering the cutter-bar, the balance spring, and the means of adjusting its tension.