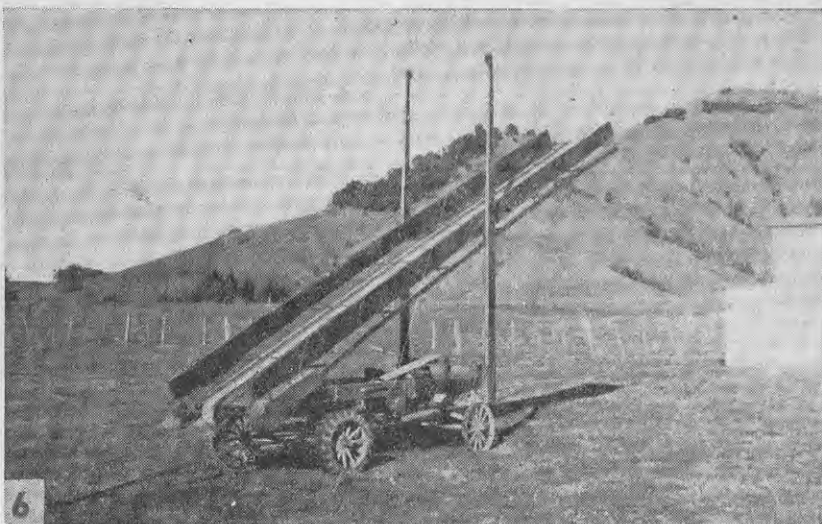# Hay Elevator

It will be noted that it is fitted with a tractor drawbar. The ratchet elevating wheel is mid-way on the chassis between the front and rear wheels.

Fig. 2 shows the other side, and the belt drive from the engine to the main elevator gearing.

In Fig. 3 the two lifting or elevating poles have been fitted in their metal guides on either side of the frame. For lifting the two hinged sections apart it will be noted that the wire rope is first attached near the end of the section being lifted. When the top section has been lifted right over, as the operator is shown doing in Fig. 4, a prop is placed under the opened section, and the cable moved to a set of holes nearer the uprights. Then when the crank is turned both sections can be lowered or raised together.

Fig. 5 shows a close-up of the elevating mechanism. Usually it is necessary for a rope to be attached to the top of the section being raised, and this is steadied by another man, as it comes over top dead centre between the two uprights. The reason for this is fairly obvious. With a considerable part of the weight in the air the machine is then in its most unstable form.

Fig. 6 shows the erected outfit, and Fig. 7 the endless 5in. 5-ply canvas conveyor belt to which the elevating battens are attached, approximately 4ft. 2in. apart.

Fig. 8 shows the belt-tensioning gear beneath the top of the elevator platform as it is when in working position. The pulley is in a slide, and a fulcrumed lever can be set where required. The power is transmitted through the lever to the slide (slide end) through two gear wheel segments. A 1½ h.p. engine drives the elevator.

In operation hay is swept up to the elevator and one man with a hay fork directs it forward in a continuous stream on to the endless belt conveyor. The outfit has been used very successfully over several seasons, and there are several other home-made machines working on the same principle and doing good work in the Nelson district.

—D. M. E. MERRY, Instructor in Agriculture, Nelson.