

IMPROVED HARVESTING METHODS

EQUIPMENT SURVEY NOTES

CROSS-HAUL LOADING DEVICE

Logging truck motors are used to power simple cross-haul loaders that are often built locally. These loaders are used by small operators on trucks or truck and semitrailer units. Although commercially built winches are used, many operators build their own from automobile parts.

The cross-haul loading winch is made by mounting an automobile rear-axle assembly across the truck frame back of the cab, as shown in figure 1, A. The wheel-hub and brake mechanism on the driver's side is used as a clutch, and the opposite end as the winch. A cable spool is attached to the brake drum. This spool should accommodate about 60 feet of 3/8-inch wire rope. The diameter of the drum should not be less than 7 inches for 6 by 37 or 11 inches for 6 by 19 wire rope.

A driven sprocket with 31 teeth is keyed to the drive-shaft stub extending out of the differential. A roller chain of 1-inch pitch connects to a six-tooth drive sprocket (a) (fig. 1, B) on the power-take-off shaft (c). Two bearings (b) support the shaft (c), and a cross brace (d) must be added for attaching one bearing. In figure 1, B, (e) is the main drive shaft and (g) is the transmission housing of the truck.

To operate, the cable is pulled off the spool, through the two sheaves (c) (fig. 1, A), across the truck bed, over the log, and back under it to the truck frame where it is hooked. The operator engages the power take-off, and then applies the brake to the assembly, whereupon the drum revolves and reels in the cable. This causes the log to roll up the skids. Since this is a single-line cross haul, care must be used to get the cable over the middle of the log.

E. W. Fobes
September 1953

(Revision of Report R899-24
by C. J. Telford, Small-
Mill Specialist)



Report No. 1637-54

- A** LEGEND:
- a - BRAKE LEVER
 - b - DRUM FOR CABLE
 - c - SHEAVES FOR CABLE
- B**
- a - SPROCKET
 - b - BEARINGS FOR POWER TAKE-OFF SHAFT
 - c - POWER TAKE-OFF SHAFT
 - d - SPECIAL METAL CROSS SUPPORT
 - e - MAIN DRIVE SHAFT OF TRUCK
 - f - SUPPORT OF MAIN DRIVE SHAFT
 - g - GEAR HOUSING

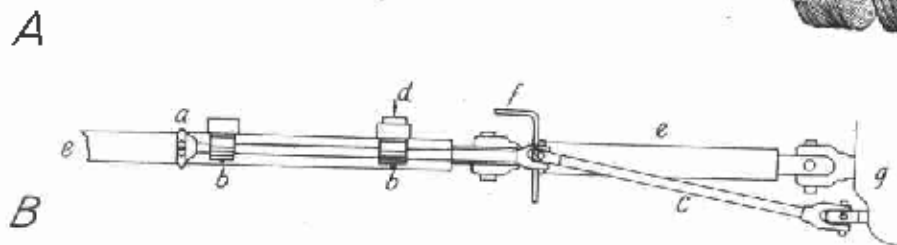
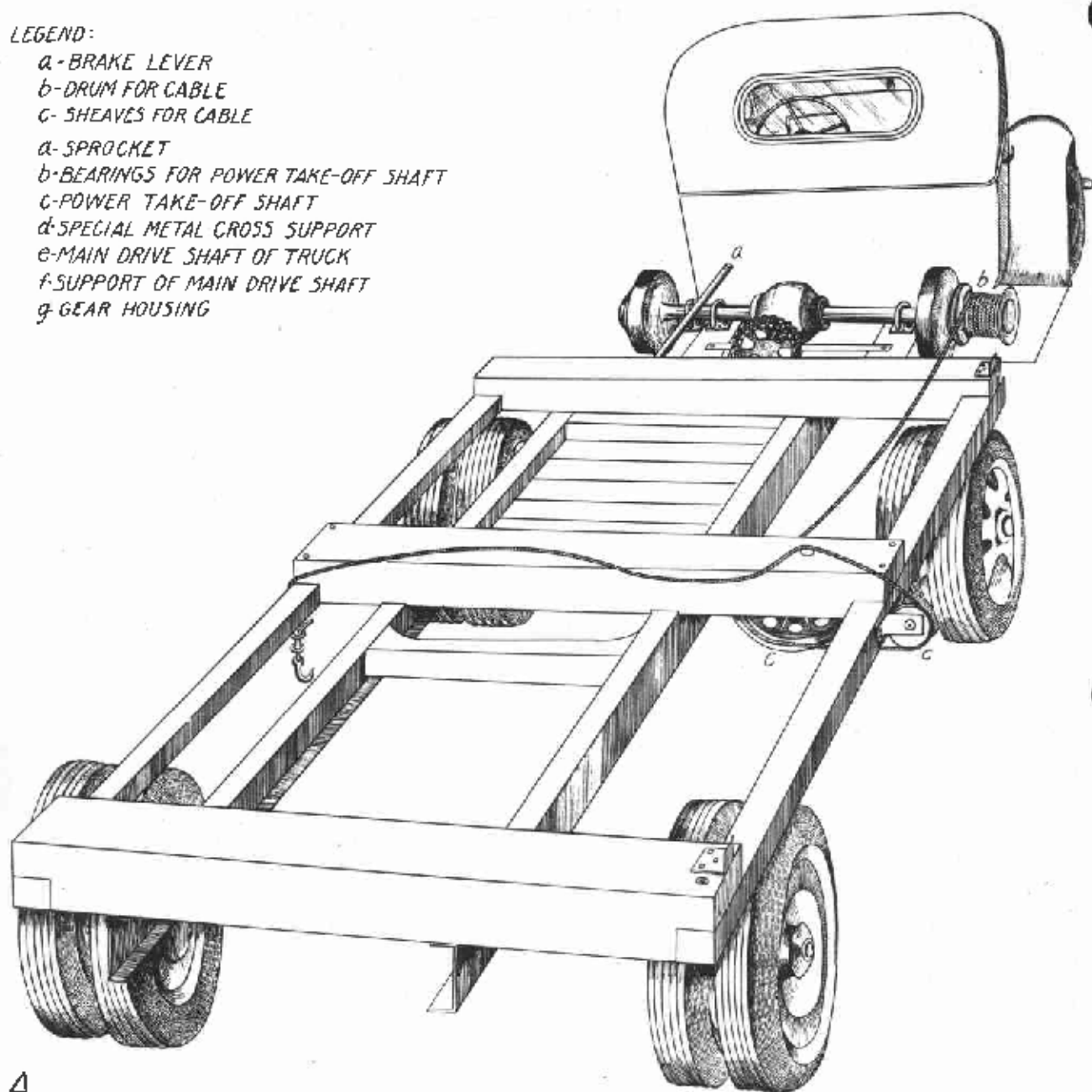


Figure 1. -- **A**, cross-haul loading device mounted on truck frame;
B, shaft details between power take-off and sprocket.