

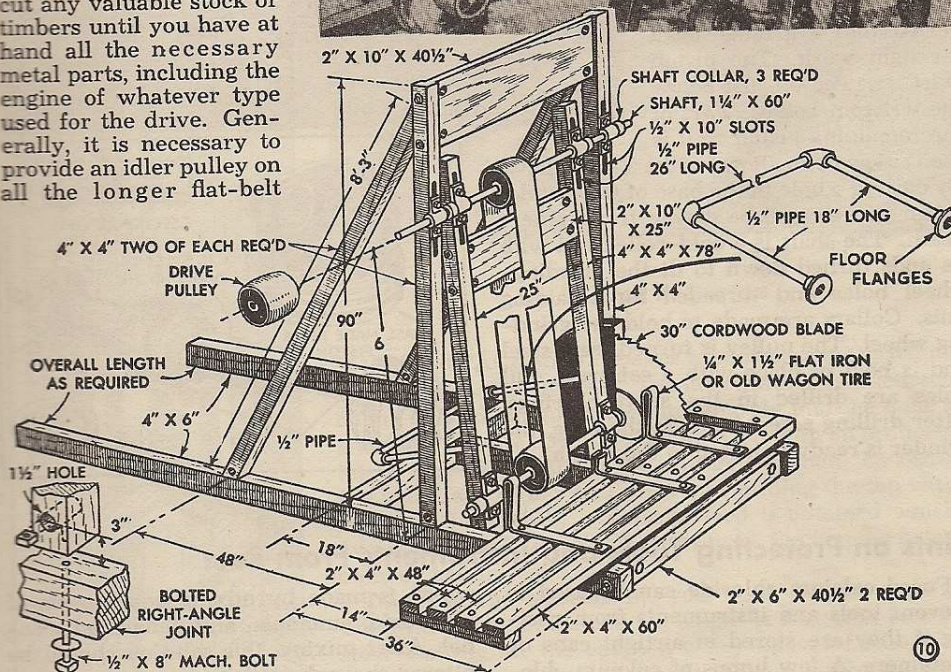
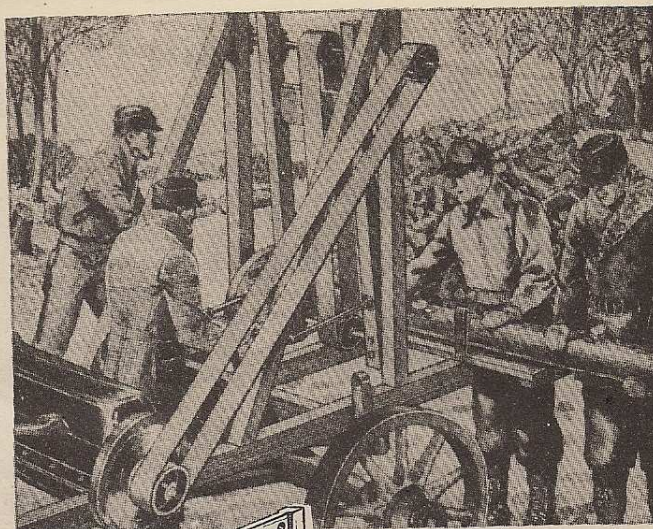
is in the operating position, Fig. 5, the table and frame are supported on legs, which are pivoted to the frame and swing downward into position. For transport, the legs are held up against the frame by means of a short chain or hook. Hardwood should be used for the legs and 2 by 6-in. hardwood for the crosspiece. When in the transport position the frame rests on U-shaped supports bolted to the front end of the tractor frame as in Fig. 7.

Carriage tables that move horizontally can be provided with rollers if desired. Fig. 8 suggests a simple way of fitting these rollers under the carriage. Disks 1/2 in. thick are cut from a piece of 3/4-in. steel shafting with a hacksaw and center-drilled to take a 10d nail loosely so the roller will turn on the nail. Holes are bored and slots chiseled in the frame piece to take the rollers as indicated. A strip of flat iron screwed to the bottom of the carriage board will make a suitable "track." Use hardwood for all frames, and finish with two coats of spar varnish or implement paint to protect the wood. Fig. 9 shows a simple and effective saw guard made from a piece of plywood and screwed to the frame back of the blade. A curved strip is screwed to the plywood edge just outside the circle of the saw teeth. Such a guard does not interfere with removing the blade, yet offers protection against one of the greatest dangers to the operator of a cordwood saw, that of a sliver or small piece of wood or other object falling on the blade when it is running.

Fig. 10 shows a cordwood saw similar to a swinging cutoff saw and designed for heavy work. This saw is intended for mounting on a truck or four-wheeled trailer and can be driven with a salvaged automobile engine. With some minor changes it can be mounted on a general-purpose tractor also. This usually can be done by bolting the rear ends of the lengthwise frame members to the rear-axle housings and supporting the forward ends by means of a cross member bolted to the front of the tractor frame. In use, the operator stands between the frame members back of the saw and swings the blade into the work. The table is stationary. Helpers handle the logs which can be cut to any convenient length for several men to carry. Blades up to 36 in. in diameter can be used, but it will be necessary to shift the upper drive shaft so that the larger-diameter blade and the mandrel will clear the table.



If you use different size blades, an adjustable stop should be provided. All shaft bearings should be provided with pressure grease fittings. Only certain of the dimensions are given on the frame. Changes necessary to adapt the design to use of salvaged pulleys, shafting and other parts must be left to the builder as dimensions must be changed to suit what one has at hand or can obtain. Some machining usually has to be done on the saw mandrel to adapt it to use with this design. Don't cut any valuable stock or timbers until you have at hand all the necessary metal parts, including the engine of whatever type used for the drive. Generally, it is necessary to provide an idler pulley on all the longer flat-belt



drives. The idler should run on the slack side of the belt nearest the driven pulley and just how it is installed depends on the type of idler and mounting you have or can obtain. When you mount the mandrel on any of the frames that are attached to the tractor, it's a good idea to provide slots so that you can shift it forward or backward. This will enable you to make the proper adjustment for table travel into the saw blade. And of course steel angles are better than wood for making almost any design of cordwood-saw frame.

Two final and important precautions:

Always make certain that the blade is tight on the mandrel before starting, and do not exceed the recommended speeds for the size blade you are using. As an example of the latter, the speed of a 30-in. blade should not exceed 1500 r.p.m. A speed of 1200 r.p.m. is safer, while larger diameter blades should run proportionately slower.

Grease-sealed ball bearings with a 1/2-in. hole make excellent collars for a shaper. Because this type of collar remains stationary, the usual burned mark is eliminated from the work.