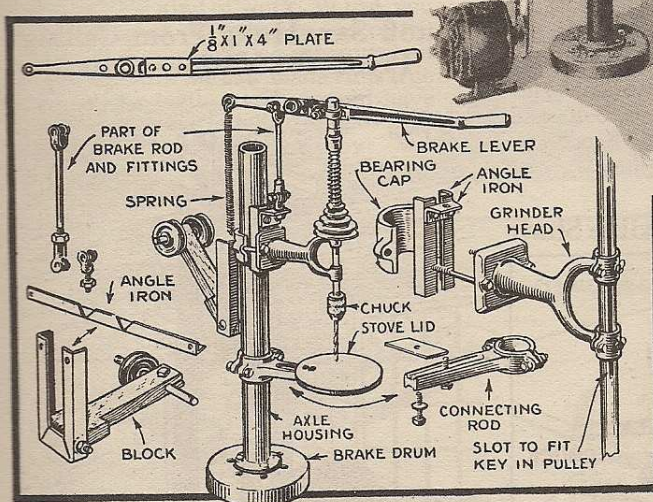
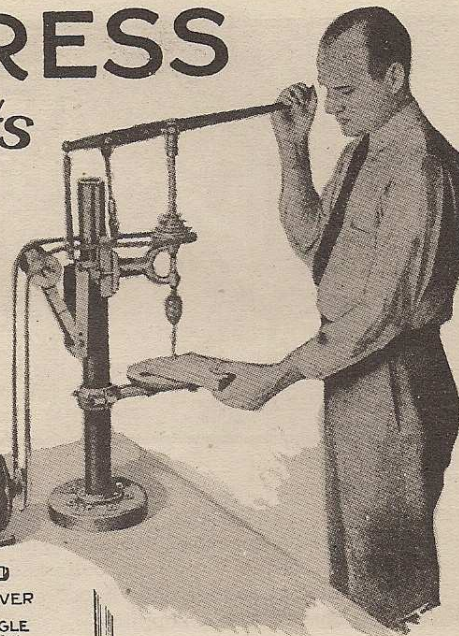


A DRILLPRESS

from Auto Parts

DRIVEN by means of a $\frac{1}{4}$ -hp. electric motor, this homemade drillpress, built mostly from old auto parts and a few items obtainable from your local dollar store, is sturdy, accurate and smooth in operation.

A cut-off portion from an axle housing is bolted to a brake drum, which, in turn, is bolted to the bench top. The spindle bearing is a small grinder head and is



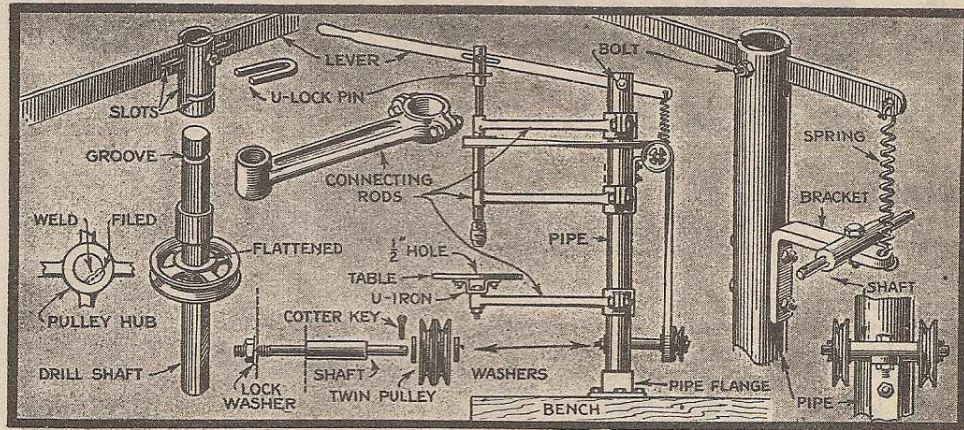
is pivoted in an angle-iron frame attached to the axle housing as shown. The lower end of the spindle is threaded for a suitable chuck, which must be purchased.

Another design for a drillpress made from auto parts is also given. In this case, a pipe flange is substituted for the brake

clamped to the housing by means of two lengths of angle iron and a connecting-rod bearing cap, as shown in the detail. A groove is milled in the spindle to take a key of a step pulley, permitting the spindle to be raised and lowered while the pulley is rotating. The drillpress table consists of a stove lid bolted to a connecting rod, which is clamped to the axle housing. An old brake lever provides a convenient handle, being attached to the upper end of the spindle and pivoted directly above the base of the grinder head, part of a brake rod and fittings being used for this purpose. A coil spring, attached to the end of the handle and to the assembly below, keeps the spindle up when not in use. Two small V-pulleys are slipped on a short piece of drill rod, which is held in a wooden block that

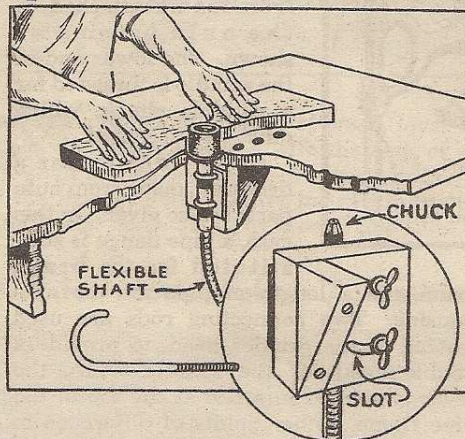
drum and a length of pipe for the axle housing. Two connecting rods are used instead of the grinder head, to provide a double head for the spindle. Also, the lever is pivoted in a slot at the top of the pipe frame. Other points of difference in the construction and assembly can be gathered from the illustrations.

To operate such a drillpress you will need an electric motor of $\frac{1}{4}$ hp. If you have an old electric motor of the type used on a washing machine or can readily obtain one, the drillpress will involve very little expense. For a chuck it is best to get one of the better known and well-made brands, as a great deal of the accuracy of a drillpress depends on the chuck. One up to $\frac{1}{2}$ in. capacity is suggested. You can use a two-belt drive or belt the drillpress



direct to the motor. In either case it is advisable to use a three-step pulley on the motor to provide speed adjustment. Accessories such as the V-pulleys, belts and chuck can be obtained from almost any dealer of home workshop supplies.

Spindle Sander Has Flexible Shaft



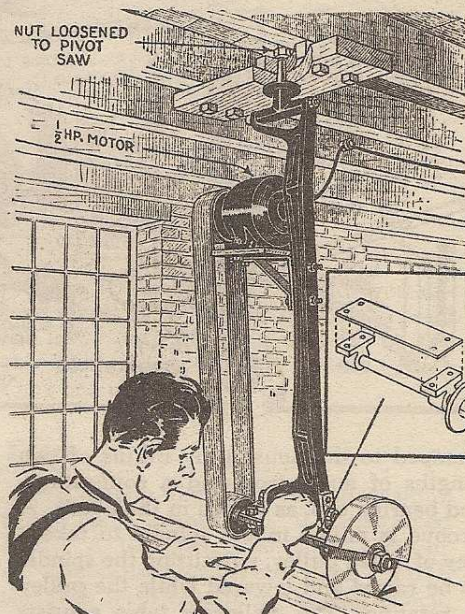
Inexpensive spindle sander with flexible shaft for edge-sanding curved and irregular work

Lathe Centers from Drills

Broken taper-shank drills can be ground easily to provide good lathe centers in less time than they can be made from rough stock. Just put the drill in one of the lathe-center holes and grind it to shape.

☛Punches and chisels for model makers can be had by grinding ice picks to shape.

Cutoff Saw Hung From Ceiling Pivots for Various Cuts



Here's a simple cutoff saw that anyone can assemble. The novelty of this setup is that the front axle of an old car is used. This is suspended from the ceiling or basement joists. The saw mandrel is attached to the lower end of the axle and the motor is mounted on a shelf supported by a flat-iron racket near the upper end of the assembly. Loosening the axle nut at the ceiling permits the saw to be turned for making a cut at almost any angle across the work without moving the latter.