Hand-Powered DRILL PRESS

By Arthur W. Howe

THERE'S no need to place work on the floor or climb up on the bench to put enough pressure on the drill if you have a hand-operated drill press. This particular one, Fig. 1, is made from a ½-in., 2-speed breast drill, although other sizes may be substituted. Either wood or metal is used for the base. The column is a 36-in. length of 1½-in. pipe. One end is threaded for a floor flange and the other end is notched for the operating lever. The pipe should be dressed so the two tees will be a smooth fit. These tees are reamed also and the backs are drilled and tapped for a ½-in. thread. Nuts are brazed in place in the following manner: thread them onto ½-in. bolts and turn the bolts into the tees until the nuts are flush against the tees. Then braze and remove the bolts. This will align the threads. Bend and thread short lengths of rod to make the adjusting screws.

The drill-press table is assembled as shown in Fig. 2. A short length of 1½-in. pipe is screwed to the tee on the column and an identical tee is fastened to the free end. A short nipple screws to this tee and connects to a floor flange and the table. For the upper assembly, bush the tee down for ¾-in. pipe. The nipple and tee here should center over the drill-press table. The upper left-hand detail shows how the ¾-in. tee is assembled with the ⅝-in. rod. If you have a drill with a removable handle, you may be able to insert the rod and lock it with a setscrew, or you may have to braze it to the drill. The lever is a length of flat iron with a wooden handle riveted on. A linkage connecting the lever to the rod is held with locked nuts and washers. Fig. 3 shows an easy way to make a foot-feed drill.