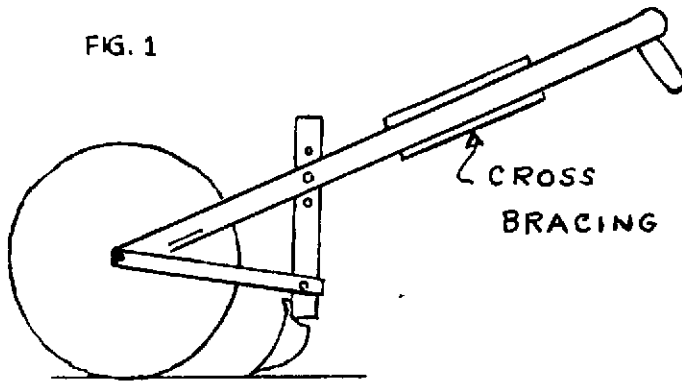


The U-bar

## 5. ONE-WHEEL PUSH PLOW

This plow is not to be used for breaking ground; it is a cultivating tool much like a hoe (Figure 1). Another term frequently used to describe this



garden tool is "wheeled hoe." Its use is justified in a large garden only, say 100×75 feet, unless you just want the fun of pushing it, which might be healthy.

The most useful attachments are the plow blade (Figure 2), the furrow opener (Figure 3), and the rake or cultivator (Figure 4).

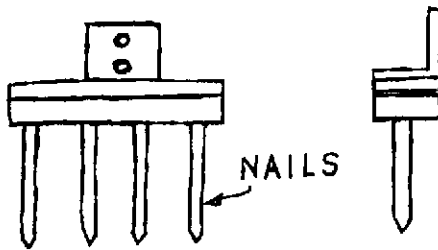
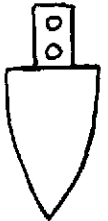


FIG. 4

FIG. 2



FIG. 3



There are two models, the high wheel (18–24 inches in diameter) and the low wheel (10–12 inches). The latter can also be a *two-wheel hoe* which can straddle a row of low plants.

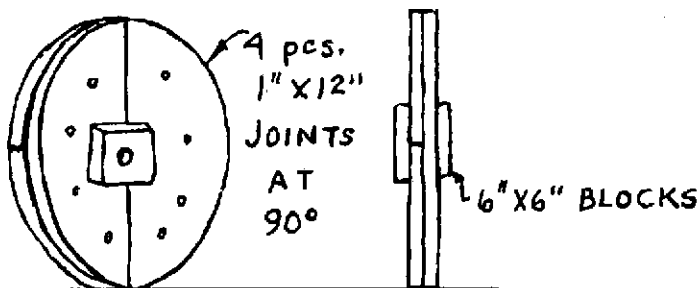


FIG. 5

The emphasis here is on the high wheeler, which is the form I have used since my youth.

The important things about the wheel are reasonable size and weight. An old bicycle wheel would probably be too light, yet the wheel should not be so heavy as to have the effect of rolling and packing the soil. A visit to your favorite junkyard should yield something suitable. If you want to make your own, cut a

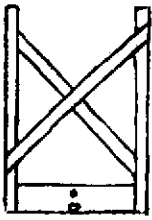


FIG. 6

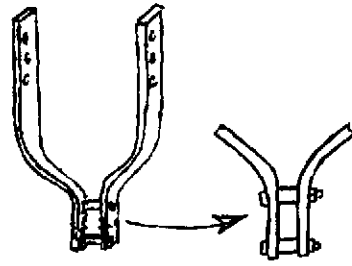


FIG. 7

wheel out of 1×12, with additional thickness for the hub, as shown in Figure 5.

Figures 6 and 7 illustrate alternative methods of supporting the attachments. Figure 7 is the better construction, but is more expensive if you must purchase new steel. If you are building this for your own use, probably only two adjustment holes will be required.

The plow blade and furrow opener (Figures 2 and 3) can be cut from steel no thinner than  $\frac{3}{8}$  inch, and preferably  $\frac{1}{2}$  inch, assuming the use of mild steel. A worn out shovel or spade may be available. Since such items are made of hardened steel, the top part would probably be sufficiently heavy for both the plow blade and the furrow opener.

The cultivator in Figure 4 is made from 50d ( $5\frac{1}{2}$  inches long) or 60d (6 inches) nails. Hardwood such as oak should be used for the lower bar. The right angle steel for mounting is wider than the "tang" in Figures 2 and 3 because, in use, there is more sideway pull on the rake.

Expend time and effort on making the handle comfortable. Several methods of making the "pistol grip" might be used. Figure 8 shows one method.

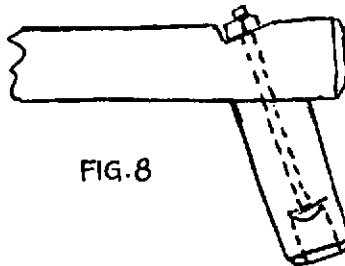


FIG. 8

Saplings of about  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches can be found so you need not buy any lumber for the frame. Smaller saplings can be used for cross bracing. Small saplings could even be formed into a wheel, if you have the patience.

Exact dimensions have not been given here because everything depends on the diameter of the wheel you select. The handle is a good place to start. Four to five feet of length will probably work out about right. The person who is to use the plow should try out the handle for length. The operator must be far enough back to avoid stepping on the cultivating tool.

The wheel might have a  $\frac{1}{2}$  inch shaft forced into it (assuming a homemade wheel), with the bearings in the handle, or the other way round, with the bearings in the wheel. In either case, be sure there is ample oil absorption by the wood in the bearing area.