

AN EFFICIENT PROCESS FOR MAKING WIRE MARKING PINS

Cortland E. Young, Jr., Isaac D. Auld, Jr., and Rudolph Gaskins
 Southeastern Forest Experiment Station
 Forest Service, U.S.D.A.
 Asheville, N. C.

In forest research work it has become standard procedure to use painted wire pins to mark the position of planted seedlings. The time involved in making pins can be long and wasteful if efficient practices are not followed.

The conventional method of making pins consists of cutting a roll of wire into specified lengths with hand wirecutters and forming a loop in the end of the wire with a pair of pliers. When a sufficient number of pins are made, the top two-thirds are dipped in paint and set aside to dry.

No doubt anyone who has ever made pins has used some labor-saving scheme somewhere in the process. However, what is really needed is an efficient system from beginning to end. Such a system has been developed and is presented here in detail, with drawings. It is estimated that one-half to three-fourths of the time involved in making pins by the old conventional means can be saved by using the system outlined. The expected production rate will be 1,000 to 1,200 pins per hour.

This method requires two men; one man operates the cutting device, the other crimps the wire to make the completed pin (fig. 1). The #9 wire is fed off the roll, which is attached to a frame that permits easy wire removal. Different size rolls of wire can be used by simply placing the holding bolts in a different position on the frame. The wire can be cut into any desired length after moving the stop to a new position.

The wirecutter¹ is closed by stepping on the foot board (fig. 2). The cutter jaws are opened by the spring when foot pressure is withdrawn. The lengths of wire can be cut as quickly as the wire can be fed into the cutter jaws.

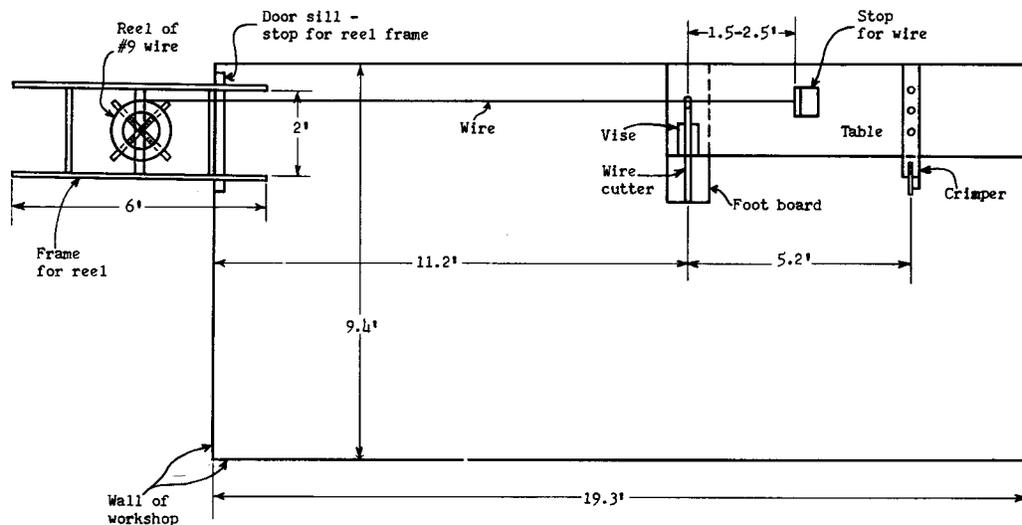


Figure 1.--Layout for making pins.

¹ The one used is actually a brush cutter or lopping shears (HKP Forester's Lopping Shears No. 2, 34 inches long).

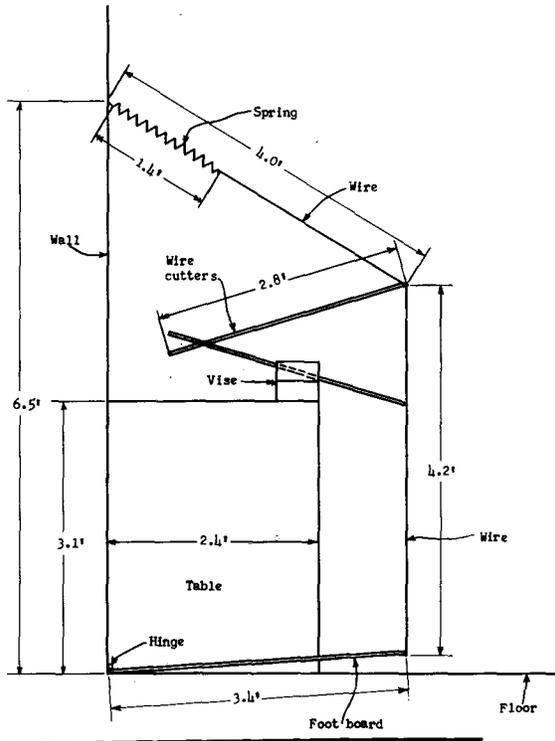


Figure 2.--Side view of wire cutting device.

The loop in the end of the pin is made with the crimper (fig. 3). Eight to ten lengths of wire can be crimped at one time. Crimping is done by placing one end of the wire between the 7/8-inch iron pipe and the metal-coated wood face (fig. 3) and bending the wire until a closed loop is made. The completed pins are slipped from the 7/8-inch pipe onto the 3/8-inch iron rod extension for temporary storage. When 50 pins have been made they are removed from the crimper and bundled with a light wire. The pins are readily stored and transported in these bundles.

The bundles of pins are painted by dipping them in blue boundary marking paint and placing them in an inclined trough to catch excess paint. The paint caught by the trough can be used again, further cutting the cost of operation. The drying process is completed by hanging the bundles on a line.

All materials were obtained locally. Modifications can easily be made, depending on the type of wirecutter used, size of table, size of room, etc. The unit can be quickly disassembled and stored when work is completed. The crimper is unbolted from the table, the wirecutter removed from the vise, and the foot board can be unhinged and placed under the table.

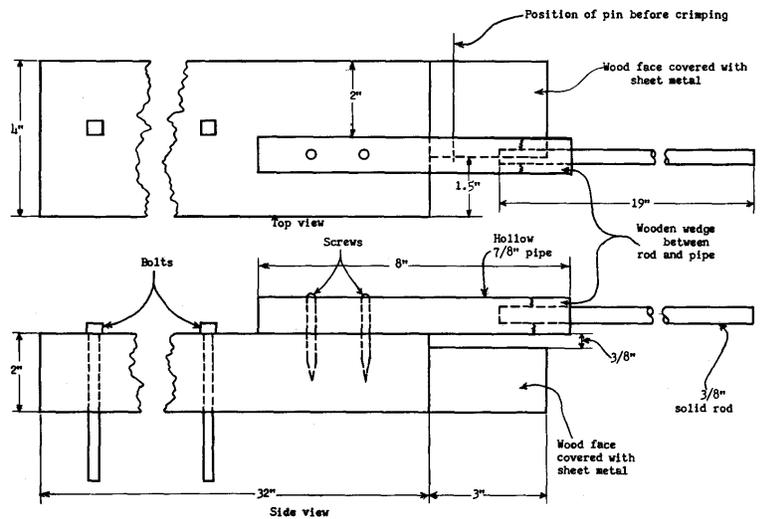


Figure 3.--Detailed views of crimper.