

ELECTRICAL PROJECTS

pieces of brass should be so adjusted that the centers of the upright portions will be exactly centered with relation to the holes in the chime bar, figure 3.

Place a hexagon brass nut on each of the upright portions of the threaded pieces of round brass. Place the $\frac{3}{16}$ -in. round steel plunger, figure 8, in the center of the coil, with the fiber tip at the top. Place the chime bar on the threaded upright pieces, and adjust the hexagon nuts for proper clearance. Place a rubber grommet in the hole near the bottom of the can for the lead wires.

Paint the can a suitable color to harmonize with the wall where it will be installed.

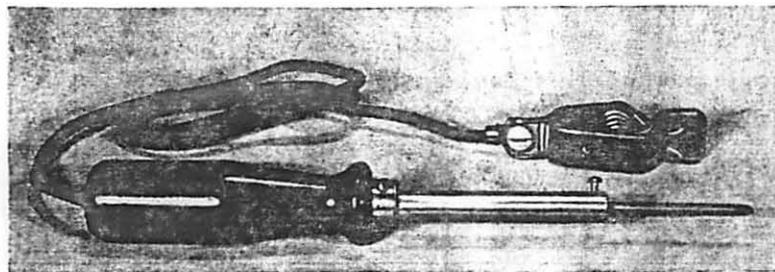
Connect the chime to a transformer or dry cells, 6 to 12 v.

Light Welding Tool

Very Special Tool

10.

SIX-VOLT WELDING TORCH



THIS welding torch will make a valuable addition to the car owner's tool kit. Either in the garage or along the highway, repairs requiring soldering, brazing, or light welding may be made quickly and securely with this torch. Its highly localized heat permits its being used in places that would be inaccessible for ordinary welding or brazing methods. In operating the welder, the clamp is connected to the ungrounded terminal of the storage battery, and the part to be repaired is connected to the grounded terminal. If the part to be repaired is already grounded to the frame of the car, no other connection is necessary. When the carbon rod is brought in contact with the part to be repaired, the tip of the rod will immediately come to a white heat. Solder or brazing rods are applied between the tip of the carbon rod and the metal directly beneath it.

MATERIALS

FIGURE

1 pc. brass tubing, round	$\frac{7}{16}$ in. i.d., $\frac{1}{2}$ in. o.d., 5 in. long	1
1 wood handle with metal ferrule	5 in.	2
1 pc. brass rod, round	$\frac{7}{16}$ in. dia., $\frac{3}{8}$ in. long	3
1 battery clamp		4
4 ft. heater cord, stranded, No. 12		5
2 machine screws, r.h. brass	6-32 x $\frac{1}{4}$ in.	
Assortment of carbon rods	$\frac{1}{8}$ to $\frac{7}{16}$ in. dia.	

OPERATIONS

1. Drill and tap the piece of brass tubing, as shown at figure 1.
2. Drill a $\frac{1}{2}$ -in. hole through the center of the wood handle, as shown at figure 2. Drill a $\frac{5}{32}$ -in. hole in the metal ferrule for a 6-32 setscrew.
3. Drill a hole through the center of the piece of round brass rod the same diameter as the carbon rod that will be used, as shown at figure 3. Drill and tap a hole through the side of the round brass piece for a 6-32 setscrew, as shown. Since carbon rods $\frac{1}{8}$ in. to $\frac{7}{16}$ in. in diameter may be used, it is desirable to provide a bushing, as shown at figure 3, for each size of carbon, excepting the $\frac{7}{16}$ -in. size.
4. Solder one end of the stranded heater cord to the end of the brass tubing, figure 1, in which the hole has been drilled 1 in. from the end.
5. Pass the cord through the hole in the handle, and secure the brass tubing to the handle with a 6-32 by $\frac{1}{4}$ -in. r.h. brass machine screw. Solder the battery clamp, figure 4, to the other end of the heater cord, figure 5.
6. Insert the brass bushing, figure 3, in the end of the brass tubing, and secure it in place with a 6-32 by $\frac{1}{4}$ -in. r.h. brass machine screw.

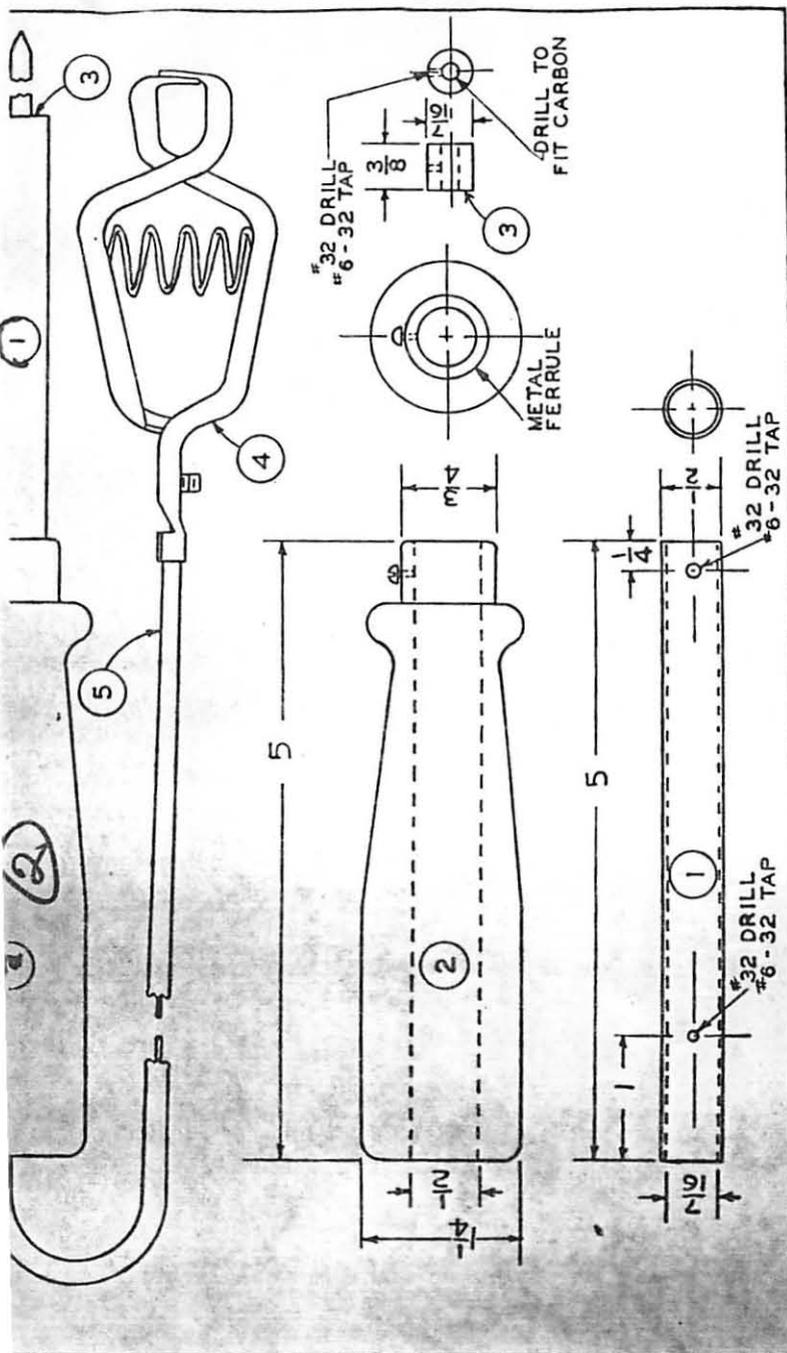


Plate 15. Six-volt welding torch

3 is CARBON Rod