HAND TOOL FOR BENDING A WIRE END

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This application discloses a hand tool for bending an end of a thick wire into an ogee form, something that cannot be done by any commonly available hand tool.

The hand tool hereof is particularly useful in forming the mounting ends of peg board hooks, thus enabling convenient bending by a hand tool of cut pieces of wire into peg board hooks without the use of machinery or special equipment not ordinarily available.

For an understanding of the tool hereof, reference should be had to the specification which follows and which refers to the appended drawing.

In this drawing:

Fig. 1 shows a conventional peg board hook mounted in a peg board shown in dotted lines;

Fig. 2 is a fragmentary perspective view of the tool per se;

Fig. 3 is a top plan view of Fig. 2; on arrow 3;

Figs. 4 and 5 are elevation views on arrows 4 and 5 of Fig. 3;

Fig. 6 is a section view on line 6—6 of Fig. 3 and illustrates one of the two bending operations.

There are on the market at present a large variety of peg board hooks having different formations at their lower ends for mounting a variety of objects but characterized by the fact that the upper ends which mount the hooks in the holes of a vertical peg board are all alike and of ogee form. The forming of these wires ends in ogee form is something that cannot easily be done by the ordinary mechanic, with his commonly available hand tools such as pliers, wrenches, hammers, wire cutters, etc. The present invention provides a quite inexpensive hand tool of convenient size which can be part of the tool kit of the ordinary mechanic and which can easily be used by him for forming the ogee ends of wires and which enables him to form his own peg board hooks.

The wire that is used for peg board hooks may be either steel or aluminum, the latter preferably, and is approximately 0.15 inch thick and the tool hereof has been designed for use with such wire.

Fig. 1 shows in dotted lines a peg board 10 having perforations 11 with one of them shown as receiving the upper or ogee formed end 12 of a peg board hook 14.

Figs. 2 to 6 show the tool 20, the latter having an elongated body 21 about nine-sixteenths inches in diameter and about four inches long and having a transverse end wall 22 containing a longitudinally extending socket providing means 23 laterally spaced from the side wall 24 of the body. The tool also has an abutment 25 extending longitudinally beyond the end 22 of the body and spaced longitudinally from such end by a transverse slot 26.

The dimension of the slot measured longitudinally of the body, as well as the dimension of the socket providing means 23 measured transversely of the body are both larger than the thickness of the wire to enable the wire end to be received within the socket providing means and to move through the slot. However, these dimensions are only very slightly larger than the thickness of the wire so that the wire end is closely received in both the socket providing means and the slot. For example, the socket 23 may be about 0.16 inch in diameter, and the slot 26 may be about 0.16 inch in vertical dimension. Sockets 23 may be about 1/4 inch in diameter. The abutment 25 is integrally connected to the body by a connecting portion 27 which is laterally spaced from the slot 26. The slot itself is laterally spaced from the socket providing means.

The end 22 of the body provides an anvil for the first bend A of the wire 30 whose end 31 is then in the socket providing means 23 as shown in Fig. 5. The outer wall of the abutment 25 provides an anvil for the second bend B of the wire 30 whose end 31 is then also in the socket providing means 23 as shown in Fig. 5. The two bends are formed separately and successively (Fig. 6, Fig. 5) while the wire end 31 is in the socket providing means 23, and the latter provides a grip means for the wire end 31 while the two bends A, B are being formed.

It will be observed that a single socket 23 provides the socket providing means and thus the socket 23 provides a pivot for the wire end 31 while the wire is being moved transversely or rotated between the first bending shown in Fig. 6 and the second bending shown in Fig. 5.

The abutment 25 is shown as an arcuate wall curved around but radially spaced from the socket 23.

Thus, the operation of forming the ogee form of the wire is extremely simple and is as follows: A wire end 31 of a straight piece of wire 30 as shown in Fig. 6 is inserted into the socket 23 and then the first bend is formed as shown in Fig. 6, the wire being bent downward. Thereupon, while the wire end 31 is still in the socket 23, the wire, previously vertical as shown in Fig. 6, but now horizontal, is rotated 90° around the socket 23 as a pivot with the horizontal wire riding in the slot 26 until it reaches the connecting portion 27. Thereupon the wire is bent upwardly (Fig. 5) from the horizontal to form the second bend. The bent wire is now rotated back out of the slot 26 (to the position of Fig. 6) and then removed from the tool with the ogee bend properly formed in the wire.

It will be observed that the lateral distance from the anvil or outer surface of abutment 25 to the socket 23 is sufficient to provide a second bend B in the wire which corresponds to the thickness of the peg board 10, such second bend being the part of the peg board hook that lies in the hole 11. Since it is possible to have a variety of thicknesses of peg boards, and there are on the market at present, two thicknesses of peg board, 1/4 inch and 3/8 inch respectively, the distance previously mentioned may be for example either 1/8 inch or 1/4 inch. Thus, it is possible that two different tools may be required for responding to the two different thicknesses of peg board now available. However, for the purposes of illustration, we have shown simply a single end tool without regard to the possibility that the opposite end of the body 21 may be formed similarly to the end shown but with a different dimension 23—25 than as shown.

Now having described the hand tool hereof, reference should be had to the claims which follow for a determination of the scope of the invention.

I claim:

1. A hand tool for bending an end of a thick wire into an ogee form, comprising an elongated body having a transverse end wall containing a longitudinally extending socket providing means laterally spaced from the side wall of the body, and an abutment extending longitudinally beyond the end of the body and spaced longitudinally from such end by a transverse slot, the dimension of the slot, measured longitudinally of the body, and the dimension of the socket providing means, measured transversely of the body, both being larger than the thickness of the wire but only very slightly larger for closely re-
ceiling the wire, the abutment being integrally connected to the body at the end thereof by a connecting portion laterally spaced from the slot, the slot being laterally spaced from the socket providing means, the end of the body providing an anvil for the first bend of the wire whose end is then in the socket providing means, the outer wall of the abutment providing an anvil for the second bend of the wire whose end is then also in the socket providing means, both bends being formed separately and successively while the wire end is in the socket providing means, the latter providing a grip means for the wire end while the two bends are being formed.

2. A tool according to claim 1 wherein the socket providing means comprises a single socket which provides a pivot for the wire end while the wire is being moved between the first and second bending portions.

3. A tool according to claim 2 wherein the abutment is an arcuate wall curved around but radially spaced from the socket.

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