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O. H. BROWN

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TERMINAL FOR ELECTRIC WIRES

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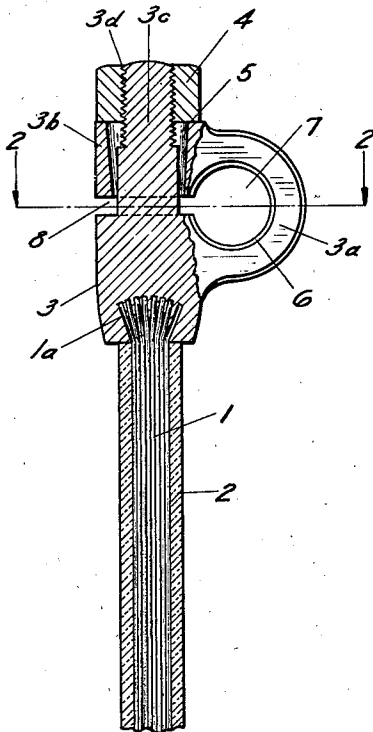


FIG-1

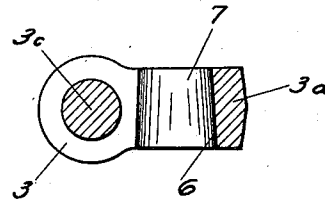


FIG-2

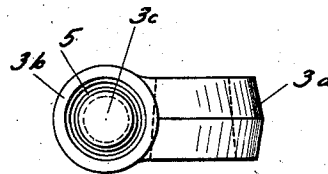


FIG-3



FIG-4

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TERMINAL FOR ELECTRIC WIRES

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My invention relates to improvements in terminals for electric wires.

The objects of my invention are:

1. To provide an improved clamp to connect the wires of an electric system to the binding posts of a battery or other source of electric current;

2. To provide a wire terminal and clamp which will avoid the necessity of using iron or brass bolts or nuts;

3. To provide a form of clamp which will reduce stretching to a minimum and eliminate or reduce the loosening of the clamp upon the binding post;

4. To provide a clamp with the smallest feasible number of parts and which can be readily die-cast.

I attain these objects by the means illustrated in the accompanying drawings, in which:

Figure 1 is a plan view of my clamp showing the body broken away and in section;

Figure 2 is a cross section of my clamp on the line 2—2 of Figure 1;

Figure 3 is an end view of my clamp with the nut, 4, omitted and showing the interior of the clamp portion in dotted lines;

Figure 4 is a cross section of the nut, 4, showing a flat topped form of thread which I prefer to use instead of the standard thread shown in Figure 1.

My clamp comprises a body, 3, of lead or a suitable alloy of lead, having an annular portion, 3^a, cast integral therewith. The outer end, 3^b, of the annular portion is provided with a tapered opening, 5. A post, 3^c, is cast integral with the body, 3, and projects outwardly through the opening, 5. The post, 3^c, is provided with a thread, 3^d, and a locknut, 4, preferably of lead or other non-corrosive material, is secured upon the threaded end of the post, 3^c.

A space, 8, is normally left between the body, 3, and the outer end, 3^b, of the clamp, to allow movement of the outer end of the clamp to tighten it upon the binding post.

The opening, 7, in the annular portion of the clamp, has its walls, 6, tapered slightly to aid in making a close fit upon the bind-

ing post of the battery and to assist in removing the clamp from the binding post.

I prefer to form my connection by casting same in a die and when so cast, a metal sleeve having its inner end tapered and its other end corresponding to the conformation of the nut, 4, is used and removed from the casting by unscrewing same, the action of the threads, 3^d, assisting to withdraw the sleeve.

The portions of the annular part, 3^a, adjacent the body, 3, and outer end, 3^b, are preferably formed considerably heavier than the remainder of the annular portion so as to aid in preventing stretching and the annular portion generally may be made as heavy as necessary to prevent stretching or it may be reinforced by embodying re-inforcing material therein when cast.

I prefer to connect the body of this terminal with the wires, 1, by inserting the ends of the wires, 1^a, somewhat spread apart, into the mold and casting the body, 3^a, around them. I have shown the ends of the wires, 1, projecting but a short distance into the body, 3, but if desired, they may extend the full length of the body, 3, and the post, 3^c, or may end at any desired point. The wires, 1, are preferably coated with insulating matter, 2, which may be supplied to the wires, 1, either before or after the body, 3, is cast. When desired, the body, 3, may be cast with an opening at the lower end and the wires inserted and soldered in the opening in accordance with the common present practice.

It is obvious that the form and proportions of my device may be varied to a considerable extent without departing from the spirit of my invention.

It is obvious, also, that this form of clamp may be cast in brass or other suitable material and used for purposes other than battery connections. The body, 3, may be cast integral with or connected to a bar or rod of brass or other material for uses entirely distinct from electrical and battery connections. It is one of the obvious advantages of my appliance when composed of lead or suitable alloy of lead, that it will not corrode. It will thus avoid, to a large extent, the accumulation of copper sulphate at the battery terminals to

which it is attached, which accumulation takes place readily where iron, brass or copper parts are used. The nut, 4, is preferably made of lead or one of its non-corrosive alloys.

In Figure 4 I have shown a wide, flat-topped thread tapered slightly, in section, which I prefer over the standard thread shown in Figure 1.

It is obvious that this form of clamp reduces to a minimum the number of parts and the number of joints in a terminal connection and by so doing, reduces the number of places where the copper sulphate may be deposited or where corrosion may take place.

I do not limit my invention to the precise form shown in the drawings, for it is obvious that the slot or opening between the ends of the annular member may be in the position shown in the drawings or it may be located opposite to the body portion to which the current-carrying wires are connected or it may be located in line with the axis of the connecting wires. I prefer, however, to use the form shown in the drawings because of its ability to resist stretching of the thinner portions of the annular member, which stretching would take place more readily when constructed in the other forms referred to.

I claim:

1. A clamp comprising a body, a threaded post united thereto, a split annular member having one end united to the body and its opposite end formed with a tapered opening adjacent and surrounding the post, the outer end of said tapered opening being the larger.

2. A clamp comprising a body, a threaded post united thereto, a split annular member having one end united to the body and its opposite end formed with a tapered opening adjacent and surrounding the post and a nut threaded upon the post the outer end of the tapered opening being the larger, adjacent the opening bearing inwardly against the end of the annular member.

In testimony whereof he affixes his signature.

OLIVER H. BROWN.