Nov. 17, 1936. E. ROBINSON 2,061,291

ELECTRIC TERMINAL CONNECTER

Filed Feb. 18, 1935

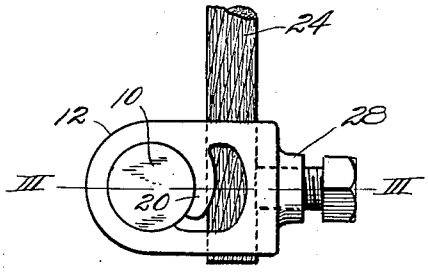


Fig. 1

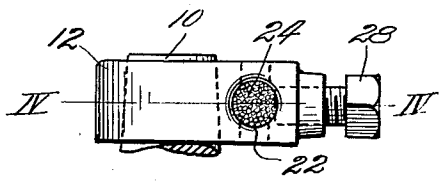


Fig. 2

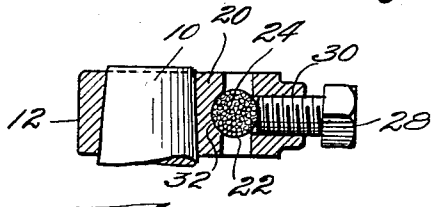


Fig. 3

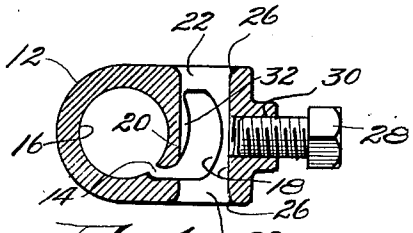


Fig. 4

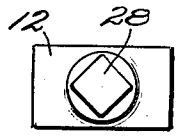


Fig. 5

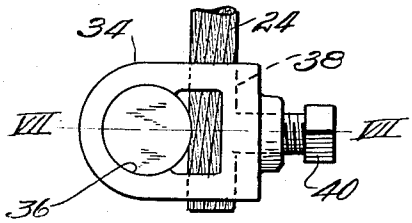


Fig. 6

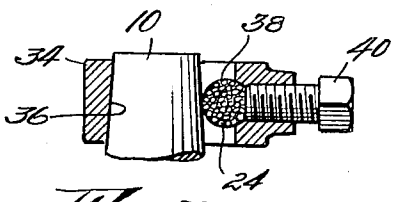


Fig. 7

INVENTOR,
Eddie Robinson.
BY
Harvey & Hamilton,
ATTORNEYS.

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ELECTRIC TERMINAL CONNECTER

Eddie Robinson, Kansas City, Mo.

Application February 18, 1935, Serial No. 7,036

4 Claims. (Cl. 173—259)

This invention relates to electrical connecters and particularly to a terminal connecter for effecting electrical connection between a conductor cable and the terminal post of a battery or the like, and is an improvement over my former invention for which I filed application for Letters Patent of the United States November 26, 1934, Serial Number 754,810.

The principal object of this invention is the provision of a terminal connecter whereby the battery post and cable are secured in a socket member by a single, adjustable means.

Another object of the present invention is the provision of a socket having an opening adapted to receive a battery post, a hole adapted to receive a conductor cable, a tongue integral with the socket and positioned between said opening and hole and adjustable means to secure said post and cable in the socket.

Other objects are simplicity and economy of construction, ease of manipulation and efficiency in operation.

With the foregoing, as well as other objects which will appear during the course of the specification in view, reference will now be had to the drawing, wherein:

Figure 1 is a plan view of a terminal connecter embodying this invention.

Fig. 2 is a side elevation of the same.

Fig. 3 is a vertical, central section taken on line III—III of Fig. 1.

Fig. 4 is a horizontal section taken on line IV—IV of Fig. 2.

Fig. 5 is an end elevation of the connecter.

Fig. 6 is a modified form of the connecter, in which the tongue is eliminated, and,

Fig. 7 is a vertical, sectional view taken on line VII—VII of Fig. 6.

Like reference characters designate similar parts throughout the several vews and the numeral 10 indicates a battery post of the conventional type, which is adapted to receive the terminal connecter to form a proper electrical connection. As shown, the battery post is frustoconical in shape to permit of easy adjustment and proper fitting of the parts. The connecter proper consists of a socket member 12, which is preferably cast or molded and made of a material of good conductivity. An opening 14 extends through the socket and is divided into two divisions 16 and 18, by means of an integral, inwardly extending tongue 20. Opening 16 is shaped to substantially fit battery post 10 and may be securely attached thereto by simply pressing tongue 20 by means hereinafter set forth.

Extending transversely through socket 10 is another opening or hole 22 which is of a size and shape suitable to receive the standard wire conductor cables used in battery service. The cable 24 shown is of the twisted wire type and need not be provided with any special end fitting. The walls of the socket at the outer ends of hole 22 are slightly flared as at 26 to facilitate easy insertion of the wire cable. It will be observed that the cable may be inserted from either side of the socket.

Means for securing the cable and post against accidental displacement is provided through the means of a set screw 28 which is adjustably mounted in the threaded opening 30 formed in socket 10 at right angles to transverse hole 22. It will be observed that when the socket is in position on the battery post and the cable inserted as shown in Fig. 1, the set screw may be adjusted inwardly to contact the outside edge of the cable and force it against tongue 20 which will, in turn, be forced against the wall of post 10.

It is apparent that this single means of securing the parts together will exert any desired amount of pressure to give proper contacting of all surfaces, thus producing an efficient and easily operated connection between the terminals. Since socket 12 is made of a single piece of material, with no slits extending inwardly from the outer surface thereof, a connecter of extremely sturdy construction is produced.

Referring to tongue 20, it will be observed that the surface adjacent hole 22 is concave at 32 to conform to the bore of said hole, thus producing a cradle effect to receive cable 24, as clearly shown in Fig. 3. When so positioned, the cable will be held against transverse movement as the set screw is brought to the clamping position.

While the hole 22 has been shown with its axis at right angles to the axis of the battery post opening, yet it is evident that this angled relation might be varied to conform to certain requirements not here shown, and without departing from the spirit of the invention.

Figs. 6 and 7 illustrate a modified form of the connecter, in which the tongue 20 has been eliminated and wherein the battery post and conductor cable are in tangential relation, thus making it possible to materially shorten the connecter and also obtaining a direct contact between the two terminals. Socket 34 in the modified structure is provided with an opening 36 and a transversely disposed hole 38; also set screw 40 which is adapted to be adjusted to contact cable 24 to force it against battery post 10, as

clearly shown in the two views. In this modified form cable 24 is forced against battery post 10, thus causing it to flatten out sufficiently to make a good contact between these two current-carrying terminals.

In removing either of these two types of clamps, all that it is necessary to do is to unscrew the set screw 28 which will permit the removal of the cable 24 or the separating of the socket from the battery post. Either of these operations may be accomplished without the other.

It is very evident that this connecter as shown and described is simple and sturdy in construction, may be easily positioned in operative relation with the terminals or removed therefrom and functions to produce a practical and sufficient connection between the terminals.

What I claim is:

1. A terminal connecter comprising a socket having an opening formed therethrough to receive a battery post; a hole extending through said socket adapted to receive a conductor cable; a tongue positioned between said opening and hole; said socket having a threaded opening provided therein that intersects with the cable hole; and a set screw in the threaded opening, bearing against the said conductor cable, adjustable to secure said post and cable in said socket, said tongue having walls in engagement and conforming in contour with contacted portions of the post and cable.

2. A terminal connecter comprising a socket having an opening formed therethrough to receive a battery post; a hole extending through said socket transversely to the axis of said opening and adapted to receive a conductor cable; a tongue having one end integral with said socket and the other end free and disposed within the confines thereof between said opening and hole to form a portion of the wall of each; and means for securing said post and cable in said socket, said tongue having a transversely arched face to engage the battery post and a longitudinally arched face to engage the conductor cable.

3. A terminal connecter comprising a socket having an opening formed therethrough to receive a battery post; a hole extending through said socket adapted to receive a conductor cable; a bendable tongue integral with said socket positioned between said opening and hole and having a concave face adjacent said hole to engage the battery post; and means adjustable to clamp said post and cable in said socket with the tongue therebetween, said tongue being movable alternately into the said opening and said hole upon manipulation to alter the sizes thereof during application of the socket.

4. A terminal comprising a socket having a substantially frusto-conical opening adapted to receive a battery post; a hole formed through said socket in angled relation to said opening and adapted to receive a terminal cable; a tongue extending between said opening and hole adapted to be in contact with said post and cable and having opposed walls conforming in contour with the post and cable respectively; and a set screw adjustable to move transversely in said hole and toward said opening, said tongue being integral with the socket, having a free end and bendable as pressure is exerted by the set screw whereby to establish effective contact between the battery post and cable.

EDDIE ROBINSON.