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G. W. HARPER

2,445,946

TERMINAL AND CLAMP THEREFOR

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Fig. 1.

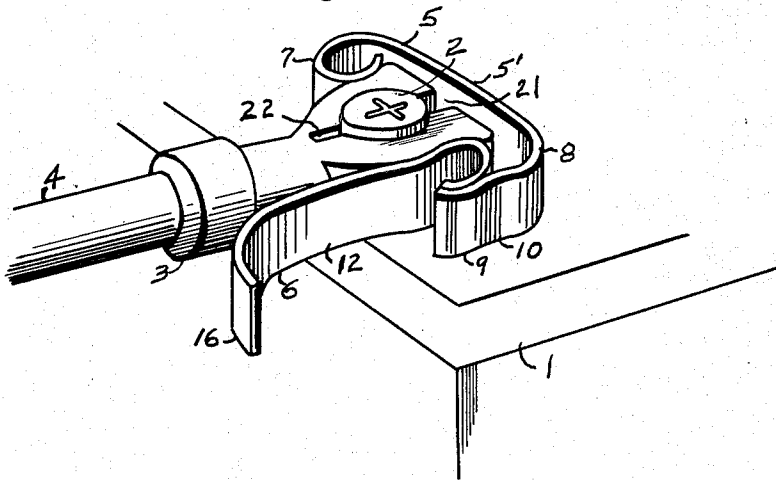


Fig. 2.

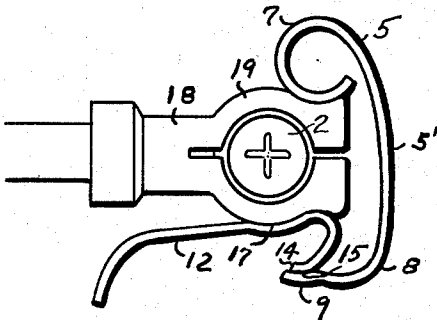


Fig. 3.

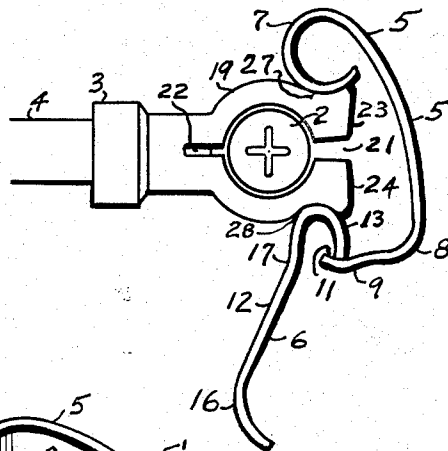
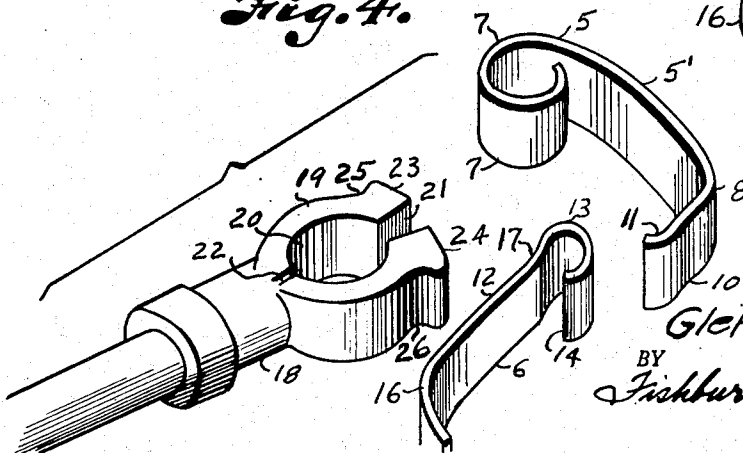


Fig. 4.



INVENTOR.
Glen W. Harper
BY Fishburn & Mullendore.
ATTORNEYS.

UNITED STATES PATENT OFFICE

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TERMINAL AND CLAMP THEREFOR

Glen Wood Harper, Manhattan, Kans.

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3 Claims. (Cl. 173-259)

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This invention relates to a terminal and clamp therefor, and more particularly to a clamp adapted for use as a battery terminal holder.

Heretofore it has been the custom to place the terminal on the battery post and clamp it in place by the use of a bolt and nut, the bolt being inserted through openings in the outer ends of the battery terminal. It is well known that with devices of this character the terminal bolt and nut will corrode, making it difficult to remove the terminal from the post.

The principal objects of the present invention are to provide a clamp which may be easily and quickly applied to a cable terminal to hold the terminal on the post of a battery; to provide a device requiring no tools for assembling it on the terminal; to provide a device which insures positive contact between the terminal and post; and to provide a device which is simple, economical to manufacture, and efficient in operation.

In accomplishing these and other objects of the invention, I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of my invention showing the clamp attached to a terminal engaging a post of a battery or the like.

Fig. 2 is a plan view of the device showing the clamp in locking position.

Fig. 3 is a view similar to Fig. 2 but showing the clamp at the beginning of the clamping operation.

Fig. 4 is a perspective view of my clamp shown in disassembled relation with a battery cable terminal.

Referring more in detail to the drawings:

1 designates a storage battery or the like having a post 2 to which a terminal 3 of a cable 4 may be engaged as will presently appear.

The clamping device embodying the features of my invention consists of a body member 5 and a locking bar 6. The body and locking bar are preferably made of spring steel having considerable resiliency, but at the same time being strong enough to exert a clamping force as will later be shown.

The body 5 has an elongated portion 5' with one end curved to form a substantially semicylindrical portion 7 to provide spring to the clamping member. The opposite end of the body is rounded as at 8 to form an end 9 and is curved slightly inwardly as indicated at 10, thence slightly outwardly and then inwardly, the extreme outer end being turned slightly inwardly to form a recess

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portion 11 near the extreme outer end of the body member.

The locking bar consists of an elongated body 12 also made of spring steel as described in connection with the body member, and has one end rounded to form a hook portion 13 to engage the end 9 of the body member. The end of the hook portion is bent slightly inwardly as indicated at 14, and the outer side of the end of the hook portion is adapted to engage in the recess portion 11 of the end 9 as indicated at 15 (Fig. 2), when the locking bar is engaged with the body in locking position on a battery terminal. The opposite end of the locking bar is turned transversely forming a handle portion 16 on the locking bar. It will be noted that the body 12 of the locking bar is recessed slightly as indicated at 17 (Fig. 2), for engaging with the battery terminal when the locking bar and body of the clamp are in locking relation to the terminal.

The battery cable terminal is attached to the cable in the usual manner and comprises a shank 18 and an enlarged end portion comprising a rounded head portion 19. The head is provided with an opening 20 adapted to receive the post 2 of the battery and the head is provided with a longitudinal slot 21 so that there will be a resiliency in the head so that the terminal may be easily placed over the post. It will be noted that the outer portion of the slot 21 is slightly larger than the inner portion as indicated at 22 (Fig. 3). The head has outwardly extending portions 23 and 24 provided with indentations or recessed portions 25 and 26 for a purpose later described.

Operation of a device constructed as described is as follows:

The head 19 of the battery cable terminal is spread so that the bore opening 20 will fit over and engage the post 2 of the battery. The inner edge of the substantially semi-cylindrical end portion 7 of the body 5 of the clamp is engaged in the recess 25 of the terminal as indicated at 27 (Fig. 3). The extreme outer edge of the hook portion 13 of the clamping bar 12 is engaged with the recess 11 in the end 9 of the body member with the rounded portion of the hook 13 engaged in the recessed portion 26 of the terminal as indicated at 28 (Fig. 3). Inward pressure is applied to the handle 16 which will exert pressure on the head of the battery terminal as indicated at 27 and 28 (Fig. 3), and continued inward pressure will cause the locking bar to assume the position shown in Fig. 2, drawing the head together so that the terminal will be held firmly on the battery post. The recessed portion 17 of the locking bar

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will engage the rounded portion of the head and the hook portion of the bar will have its slightly rounded outer portion engaging in the recess 11 of the body of the clamp, thus rigidly retaining the locking bar and body in clamping relation on the terminal.

The inwardly turned portion of the extreme outer end of the end 9 of the body member 5 will provide the recess 11 so that the extreme outer end of the hook portion 13 will engage therein and the spring-like tension of the body member will prevent the locking bar from being disengaged. However, regardless of any corrosion of the terminal, the parts may be disengaged by outward pressure on the handle 16 and the head sprung apart for disengaging from the post for disassembling the terminal from the post.

It will be obvious from the foregoing that I have provided an improved terminal and clamp therefor which may be quickly and easily assembled and disassembled from a battery post as above set forth.

What I claim and desire to secure by Letters Patent is:

1. In a device of the character described comprising, a cable terminal, said terminal having a head provided with an opening adapted to engage a post of a battery, said head having a longitudinal slot located centrally of said head terminating at said opening and providing outwardly extending arms having recessed portions on the outer surface of said head, a clamp for anchoring said terminal to the battery post, said clamp including a body of spring metal having a substantially semi-cylindrical portion adapted to engage in the recess on one side of said head and its opposite end turned transversely inwardly and having a recessed portion on its inner face, and an arm having a hook on one end engaging in said recess on said transversely turned portion and the recess in said terminal for exerting inward pressure on said terminal.

2. In a device of the character described comprising, a cable terminal, said terminal having a head provided with an opening adapted to engage a post of a battery, said head having a longitudinal slot located centrally of said head and ex-

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tending inwardly to a point beyond said opening and providing outwardly extending arms having recessed portions on the outer surface of said head, a clamp for anchoring said terminal to the battery post, said clamp including a body of spring metal having a substantially semi-cylindrical portion adapted to engage in the recess on one side of said head and its opposite end turned transversely inwardly and having a recessed portion on its inner face, and an arm having a hook on one end engaging in said transversely turned portion and the recess in said terminal for exerting inward pressure on said terminal.

3. In a device of the character described comprising, a cable terminal, said terminal having a head provided with an opening adapted to engage a post of a battery, said head having a longitudinal slot located centrally of said head and providing outwardly extending arms having recessed portions on the outer surface of said head, a clamp for anchoring said terminal to the battery post, said clamp including a body of spring metal having a substantially semi-cylindrical portion adapted to engage in the recess on one side of said head and its opposite end turned transversely inwardly and having a recessed portion on its inner face, and an arm having a hook on one end engaging in said recess on said transversely turned portion and the recess in said terminal for exerting inward pressure on said terminal, said arm having a recess adjacent the hook to conform to the head of said terminal.

GLEN WOOD HARPER.

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