March 16, 1943. E. G. JOHNSON 2,314,219

BATTERY CLAMP

Filed Feb. 14, 1942

Fig. 1.

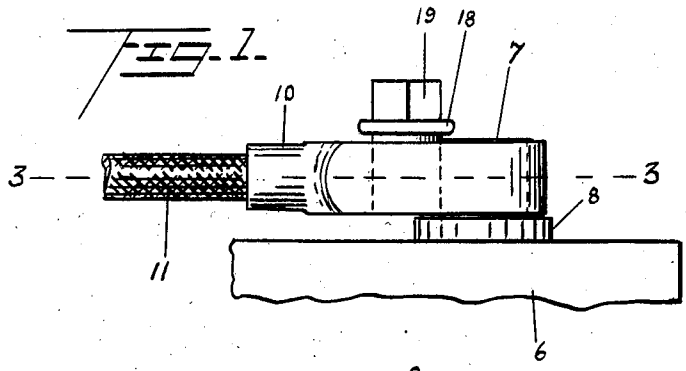


Fig. 2.

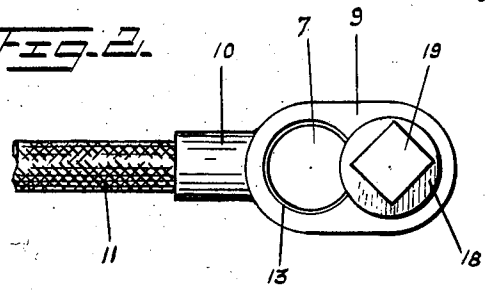


Fig. 3.

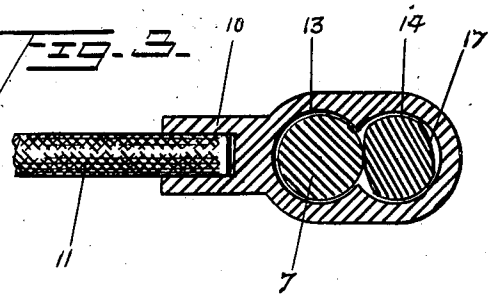
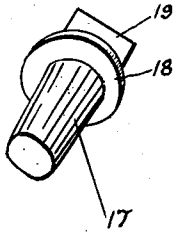


Fig. 4.



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UNITED STATES PATENT OFFICE

2,314,219

BATTERY CLAMP

Erick G. Johnson, Rock Island, Ill.

Application February 14, 1942, Serial No. 430,915

1 Claim. (Cl. 173—259)

My invention has reference to a battery clamp, and has for its chief purpose to provide a positive and durable connection between the post or terminal of an electric battery and a wire or cable leading therefrom. A marked purpose thereof is to do away with the use of any bolts or screws, or similar fasteners in the making of such connections, and thereby not only effect a considerable saving in the cost of production of the connecting parts, but also largely eliminate the danger of the parts becoming corroded and inefficient. This is specially likely to occur with the types of fasteners mentioned, which are dependent upon the use of threads for their effectiveness.

Another purpose of the invention is to provide a coupling member having a twin socket, in one of which the battery post is positioned, and the other of which is provided with a locking pin or key, which is self-fastening upon being given a partial rotation, and which at the same time makes a rigid union between the battery terminal and coupling. The sockets are identical in form, and the terminal and pin can be used interchangeably therein, to conform the same to varying conditions surrounding the battery location.

Another purpose of the invention is to provide said key piece with means for convenient operation by means of a wrench or similar tool, in positioning or releasing the same, the arrangement being such that the tool-hold part of the key projects outwardly, at the side away from the battery box, where it will not be interfered with by said battery or associated parts, and in position for convenient operation.

The invention is of simple construction, and of a type and form which makes the same easily produced from cast metal if desired, the most satisfactory metal to be used being one which possesses non-corrosive qualities.

Another purpose of the invention is to have the same of rigid formation, with no parts which are exposed so as to be weakened by corrosion, and without the use of screws, springs, or similar parts, not to be desired in devices of that character.

The above named, and other features and advantages of the invention will more fully appear from the following specification, reference being had to the accompanying drawing, in which:

Fig. 1 shows the invention in side elevation, as it appears when in use.

Fig. 2 is a plan view thereof.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 1.

Fig. 4 is a detail of the pin 17.

The reference number 6 indicates a fragmentary portion of a battery box, such as are in common use, from which projects a post or terminal 7, held by a collar 8, fixed to the box, and forming a spacer. A coupling 9 of elongated form is projected at one end into a socket 10, to receive the end of a lead wire or cable 11, which can be soldered therein at the end, or otherwise secured so as to cause the free flow of an electric current through the joint. The coupling 9 is provided with twin sockets 13 and 14, each of circular form, and merging into each other at a central point. As shown in Figs. 2 and 3 the battery post 7 is engaged in the socket 13, and is held therein by means of a pin 17 in the other socket 14, which pin is of eccentric form, and which, upon being turned, jams the post against the end wall of the socket, with the post and coupling parts rigidly united. The pin 17 is fitted with a head portion, consisting of a collar or disk 18, and a squared end 19 serving as a tool-hold, to aid in turning the pin in one direction or the other.

The pin 17 is preferably of tapered form, so as to be self-seating, and can be eccentrically formed by flattening or otherwise distorting one or both sides of the pin.

The pin may be formed of suitable material, and is sufficiently heavy to resist corrosion effects, but in case it should become reduced in diameter it can be forced a little further into the socket, and the loss compensated for.

It is to be noted that the arrangement of the invention is such that when the pin 17 is in position the end 19, or tool end thereof is at the farthest point from the battery box, and in a position to be easily reached and operated by a wrench. In some forms of clamps making use of bolts and nuts, such parts are frequently positioned at a point near the box, in a position that makes them difficult of operation with an ordinary tool.

It is also to be noted that the invention is formed of two parts only, the pin portion of which can be readily produced, and the coupling part of which is equally simple, and of a character to be easily cast or molded. No boring of holes or cutting of threads is required. It is also interchangeable, as before mentioned, and the post 7 can be positioned in the end socket, if desired, as shown in Fig. 1, with the pin 17 in the other socket for operation. The main

purpose of the collar 18 is to prevent contact of a tool with the coupling 9, while being operated.

It will be obvious that when it is desired to give attention to a battery the coupling and lead wire can be instantly disconnected from the battery post, and as quickly returned to position for use.

While the invention has been set forth herein as being designed chiefly for use as a battery connection, other kindred uses can be made thereof, where it is desired to provide for a quick connection between a pair of terminals for the passage of an electric current.

What I claim and desire to secure, is—

A battery clamp comprising a coupling adapted for connection with the lead wire of a battery, provided with twin sockets of circular form and of approximately the same diameters, extending entirely through the coupling, and merging with each other at the central part, with their axes parallel with each other, adapted for use with a battery terminal insertable in one or other of said sockets, and a locking pin of cam-shaped cross-section insertable in one or other of said sockets for engagement with a terminal inserted oppositely in the other of said sockets, to lock the same in place upon a partial rotation of the locking pin.

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