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1,894,984

BATTERY TERMINAL CONNECTION

Filed Sept. 2, 1930

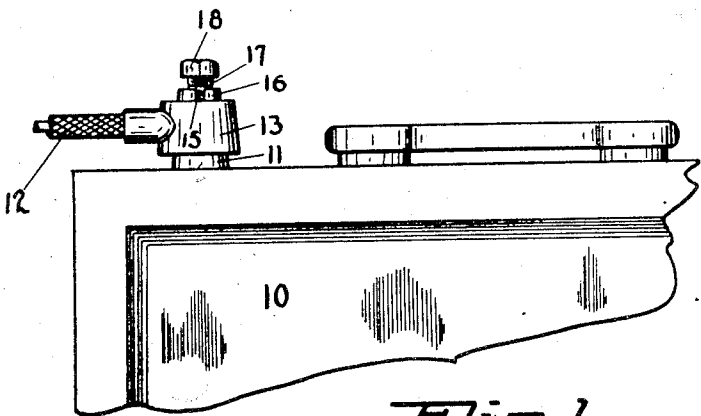


Fig. 1

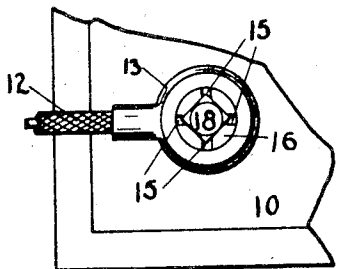


Fig. 2

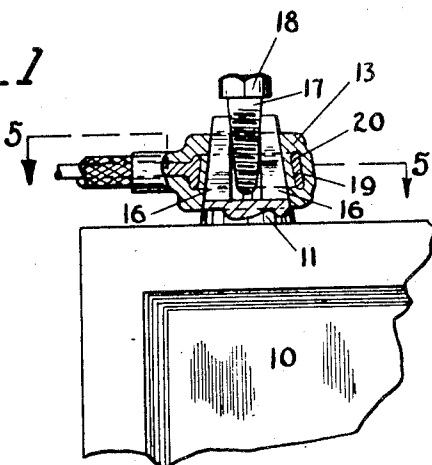


Fig. 4

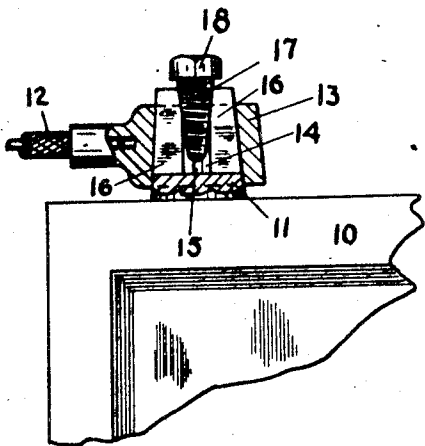


Fig. 3

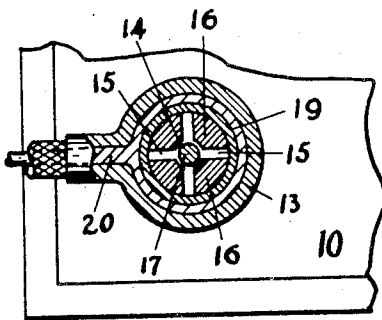


Fig. 5

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BATTERY TERMINAL CONNECTION

Application filed September 2, 1930. Serial No. 479,242.

Our present invention relates to improvements in a battery terminal connection designed to both provide and maintain a tight electrical connection between the post of the battery and the clamp for the lead or conductor.

In carrying out our invention we contemplate the provision of a hollow split binding post capable of being readily and conveniently expanded within the clamp of the lead or conductor to insure an exceptionally tight and efficient electrical contact between said parts.

Another object of our invention resides in the provision of a noncorrosive expansion element adapted to be forced into the binding post of the battery to expand the latter into effective engagement with the clamp of the lead or conductor.

It is also the object of our present invention to embed the conducting wire into the clamp therefor, and thus prevent expansion of said clamp when the latter is subjected to the expansive pressure of the binding post, so that a tight and efficient electrical contact will always be maintained therebetween.

A further object of importance resides in the provision of a battery terminal connection of the above mentioned character, by means of which the lead or conductor can be either attached to or removed from the binding post with a minimum of time and effort.

The nature and advantages of the invention will be readily understood when the following detail description is read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawing forming part of this application like numerals of reference indicate similar parts in the several views and wherein:

Figure 1 is a fragmentary side elevation of a battery illustrating one embodiment of the invention.

Figure 2 is a top plan view thereof.

Figure 3 is a view similar to Figure 1 showing the battery connection in section.

Figure 4 is a view similar to Figure 3 of a modified construction.

Figure 5 is a sectional view on line 5-5 of Figure 4.

Referring to the drawing in detail 10 represents generally a battery of ordinary well known construction, and wherein the binding post is indicated at 11. The usual conducting wire or lead 12 is equipped with a ring-like clamp 13 designed to surround or embrace the binding post 11. In accordance with the present invention, the binding post 11 is constructed to permit of its expansion within the ring-like clamp 13, with a view of both effecting and maintaining an exceptionally tight and efficient electrical contact between said parts. While this idea may be carried into effect in various ways, we preferably construct the binding post 11 with a centrally located bore 14, which extends throughout the major portion of the length of said post, and split the post at diametrically opposite points as at 15. This provides a substantially hollow post wherein the separated sections 16 defined by the slits 15 are capable of being expanded for the purpose above mentioned.

While any suitable means may be employed to effect an expansion of said post within the ring-like clamp 13, we preferably employ a tapered plug 17 adapted to be received by the bore 14 of the post as illustrated. The upper end of the plug is provided with a square or other irregular portion 18 to accommodate a suitable tool, by means of which the plug can be conveniently twisted while inserting the plug within the bore 14 or removing it therefrom as the occasion may require. The plug itself is constructed of non-corrosive material and is preferably threaded, although it can be otherwise suitably roughened to insure effective engagement with the post 11 when inserted within the bore 14 thereof.

It is manifest that after the ring-like clamp 13 has been placed about the post 11, the latter can be easily and conveniently expanded within the clamp, thereby causing a very tight and exceptionally good electrical contact between the post 11 and the ring-like

clamp 13. Furthermore when the parts are associated as illustrated in the drawing, it is practically impossible for the clamp 13 to work loose or separate itself from the binding post 11. On the other hand the clamp 13 can be conveniently removed from the post when desired, by simply removing the plug 17, and forcing the separated sections 16 of the post toward each other a sufficient distance, to permit the clamping ring to be removed from the post by means of pliers or any other suitable tool.

In Figures 4 and 5 we have illustrated a slightly modified form of the invention wherein the binding post 11, clamping ring 13, and expansion plug 17 are of the same construction as hereinabove described, with the exception that the clamping ring 13 has the terminal end 20 of the conducting cable cast or otherwise embedded entirely in the ring. The portion surrounding the binding post is flattened as shown at 19. In other words the wire 20 is embedded within the clamping ring 13 so that no wire or metal other than the lead of the ring is exposed for direct contact with the binding post 11. The importance of this construction, however, resides in the fact that the wire 20 when embedded in the clamping ring 13 prevents expansion of the latter when it is subjected to the expansive pressure of the binding post, incident to the insertion of the plug 17 within the bore of the post. Consequently the clamping ring 13 can not be in any way distended or enlarged, under the expansive pressure of the binding post, which fact insures a tight electrical connection between these parts.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent, we desire to have it understood that we do not limit ourselves to what is herein illustrated and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

A battery terminal connection comprising an expansible binding post, a connector ring snugly embracing said post, means for expanding the latter to effect and maintain a tight electrical connection between said post and ring, and a conductor having an annular terminal end embedded within said ring and forming a reinforcing ring within the connector ring.

In testimony whereof we affix our signatures.

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