March 25, 1941. O. LEE 2,235,935

BATTERY TERMINAL CLAMP

Filed Dec. 16, 1939

Fig. 1

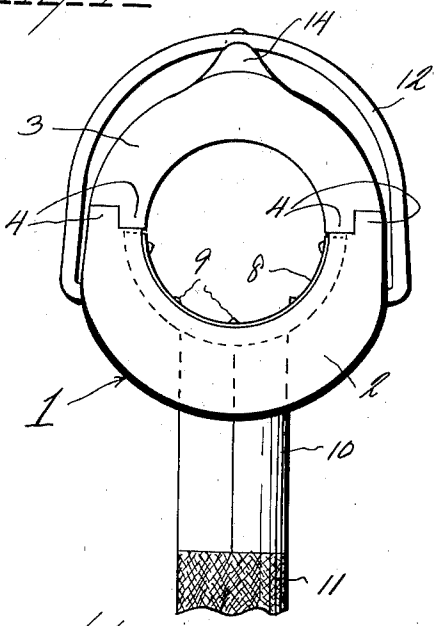


Fig. 4

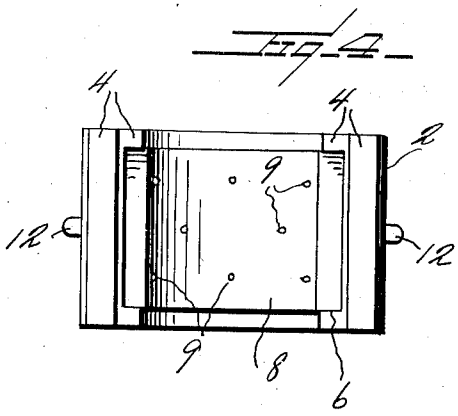


Fig. 2

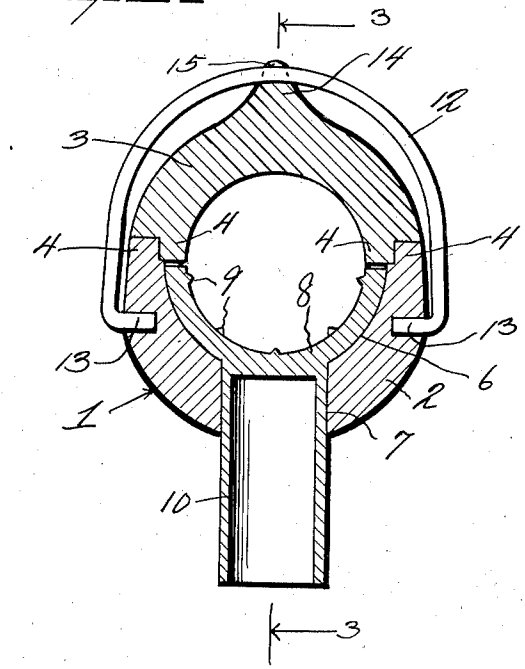
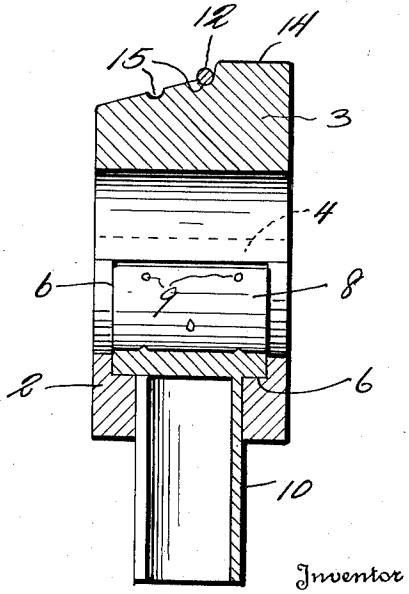


Fig. 3



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BATTERY TERMINAL CLAMP

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4 Claims. (Cl. 173—259)

This invention relates to battery terminal connectors and pertains to improvements in connectors designed for quick attachment to and detachment from a terminal post.

The primary object of the present invention is to provide a battery cable clamp or connector which is so designed as to resist the effects of the battery acid and to be easily and quickly attached to and detached from the battery terminal post whereby the usual annoyances of terminal corrosion are avoided and the battery cable may be removed when desired without danger of breakage or damaging the terminal post of the battery.

Another object of the invention is to provide a non-corrodible battery cable clamp which is formed in two parts which are joined together in such manner that they may be easily and quickly attached to a terminal post or detached therefrom.

The invention more specifically comprises a clamp of substantially annular form and divided in two parts, one of the parts carrying a contact plate and means for attaching a current conducting cable thereto, together with a latching or securing means by means of which the other part may be clamped in position to hold the two parts in battery terminal post clamping relation.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a view in top plan of the clamp.

Figure 2 is a horizontal sectional view through the clamp.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Figure 4 is a view looking into one of the sections of the clamp toward the contact plate.

Referring now more particularly to the drawing, the numeral 1 generally designates the body portion of the clamp of the present invention. This body is preferably formed of a material which will resist corrosion when brought into contact with the acid solution of the battery and such material may consist of hard rubber, or a synthetic product of one of the various types which are on the market, an example of which is pyroxylin. The body is of generally annular form to receive the battery terminal post and is divided into the two sections 2 and 3. The opposing edges of these two sections are cut to form the interlocking tongues 4 and one of the two portions has the circular inner face 5 thereof cut out to form the recess 6 which leads into or communicates with the radially extending aperture 7.

Disposed within the recess 6 is an arcuate contact plate 8 of suitable metal, the concave face of which has a series of prongs or spurs 9 projecting therefrom. Integrally connected with the convex side of this contact plate 8 is a split sleeve 10 in which an end of a battery cable 11 is secured.

The depth of the recess 6 is slightly less than the thickness of the plate 8 so that when this plate is disposed in the recess, it will project slightly beyond the curved face of the inner side of the portion 2 and the plate is so disposed that its inner face from which the prong or spurs 9 project will be concentric with the curved inner side of the portion 3, thus when the two parts 2 and 3 are in assembled relation about a battery terminal post, the post will be tightly engaged by the circular interior of the clamp body 1.

The contact plate carrying portion 2 of the annular body also carries a latching bail or loop 12, the ends 13 of which are turned inwardly and pivotally engaged in the side walls of the portion 2 in the manner illustrated in Figure 2. This bail is of sufficient diameter to encircle the portion 3 which is disposed outwardly from the cable or contact plate carrying portion 2 and this portion 3 is provided with a radial forwardly extending nose 14 which is provided with a pair of transverse notches 15 in one of which the securing or latching bail is adapted to engage. When the securing bail 12 is in locking position to couple the two parts 2 and 3 of the device together, the opposing edges will be pressed firmly into abutting relation so that the interlocking tongues will be disposed one across the other and will function to prevent acid which may accumulate on the terminal post from passing laterally onto the latching bail 12.

From the foregoing it will be readily apparent that the clamp embodying the present invention is so designed that it may be easily and quickly opened or closed for detaching it from or attaching it to a battery terminal post and it will also be apparent that the resiliency of the bail 12 will be instrumental in establishing a good electrical

contact between the plate 8 and the terminal post because it will draw the two parts firmly together and force the points 9 of the contact plate into the side of the terminal post. By providing the cable sleeve 10 with the longitudinal split it will be apparent that this sleeve may be readily opened for the insertion of the end of the cable, thus facilitating connection of the cable with the sleeve while the plate is in position in the recess 6 or the cable may be extended through the aperture 7, when the part 3 is removed from the part 2 so that the sleeve 10 of the contact plate may be applied to the cable and then the sleeve may be forced back through the aperture 7 to place the contact plate 8 in position in its recess 6. Where a slightly larger terminal post than normal is encountered, the two parts 2 and 3 cannot be brought as closely together as they are shown in Figure 1, and in this case the securing bail 12 would be engaged in the one of the notches 15 which is nearest the part 3. It will be observed that the portion of the nose 14 in which the notches are formed slopes outwardly from the portion 3 of the clamp so that the notches which are formed transversely of this nose portion will be in stepped relation with respect to the body of the clamp.

I claim:

1. A battery terminal clamp comprising a relatively flat annular body formed of non-corroding non-current conducting material, said body being diametrically divided to form two portions having concave faces for disposition against a side of a battery terminal post, one of said portions having the concave face thereof recessed, a contact plate disposed within said recess, means facilitating the attachment of a cable to said plate, and a substantially U-shaped securing member pivotally attached to the said one of the portions and adapted to be swung into encircling relation with the other portion to maintain the two portions in coacting relation.

2. A battery terminal clamp comprising a relatively flat annular body formed of non-corroding non-current conducting material, said body being diametrically divided to form two completely separable portions having concave faces for disposition against a side of a battery terminal post, one of said portions having the concave face thereof recessed, a contact plate disposed within said recess, means facilitating the attachment of a cable to said plate, and a substantially U-shaped securing member pivotally attached to the said one of the portions and adapted to be swung into encircling relation with the other portion to maintain the two portions in coacting relation, the opposing faces of the two portions being formed to provide interlocking lips.

3. A battery terminal clamp comprising a relatively flat annular body formed of non-corroding non-current conducting material, said body being diametrically divided to form two portions having concave faces for disposition against a side of a battery terminal post, one of said portions having the concave face thereof recessed, a contact plate disposed within said recess, means facilitating the attachment of a cable to said plate, and a substantially U-shaped securing member pivotally attached to the said one of the portions and adapted to encircle the other portion to maintain the two portions in coacting relation, the said other portion having a ridge formed upon the convex side thereof remote from the first mentioned portion and extending axially of the body, over which said securing member is adapted to ride, said ridge having transverse notches in which the U-shaped member may engage.

4. A battery cable clamp comprising an annular body divided diametrically to form two non-current conducting portions each having a concave face for disposition against a side of a terminal post, the concave face of one portion being recessed and opening into an aperture extending radially through the portion, an arcuate current conducting contact plate positioned within said recess, a sleeve formed integral with said plate and extensible through said aperture, the sleeve being designed to receive an end of a cable, the concave surface of said plate being formed to fit the side of a terminal post, a substantially U-shaped resilient securing member pivotally attached to the said one portion of the body and adapted to be swung into enclosing relation with the other portion to maintain the two portions together in the form of an annulus, and means carried by the said other portion for engagement by said securing member whereby the securing member is placed under tension to draw the two portions together.

OSCAR LEE.