Sept. 1, 1931. C. E. TAYLOR 1,821,486

BATTERY TERMINAL CLAMP

Filed June 18, 1928

FIG. 1

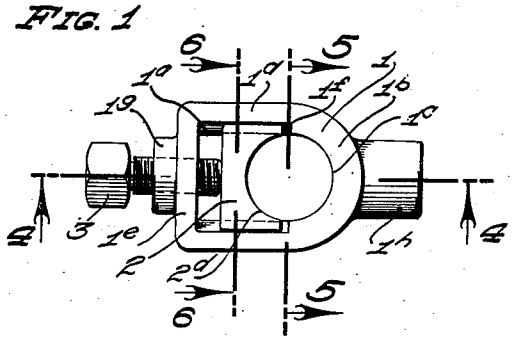


FIG. 2

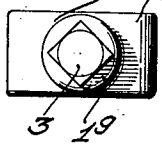


FIG. 4

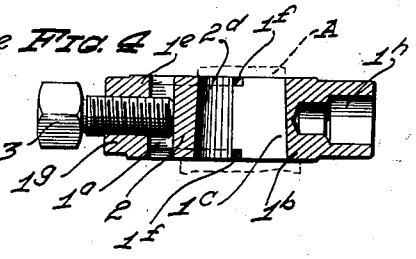


FIG. 3

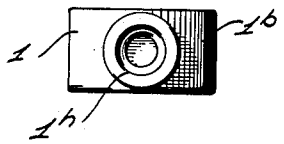


FIG. 5

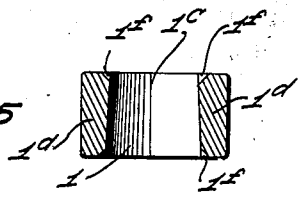
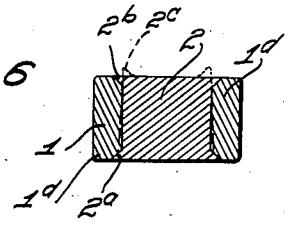


FIG. 6



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UNITED STATES PATENT OFFICE

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BATTERY TERMINAL CLAMP

Application filed June 18, 1928. Serial No. 286,427.

My invention relates to battery terminal clamps for securing electric cables or conductors to the terminal posts of storage batteries.

The objects of my invention are: first, to provide a clamp of this class which may be easily and quickly rigidly secured to a battery terminal post, and also easily and quickly disconnected and removed therefrom; second, to provide a clamp of this class which will not be distorted when securing the same to the post, and again distorted in the opposite direction when removing the same from the post; third, to provide a clamp of this class whereby, when the clamp is secured to or removed from the battery terminal post, the usual distorting or twisting force on the post or the shocks caused by pounding against the clamp, is reduced to a minimum, thus materially increasing the life of the battery and the casing therefor, as well as leaving the posts free from mars and burrs; fourth, to provide a clamp of this class whereby substantially the whole of the battery terminal post is surrounded by the clamp, thus providing a greater grip thereon, and also reducing the likelihood of corrosion of the post and the marring thereof to a minimum; fifth, to provide a clamp of this class which is very light of construction but very strong; sixth, to provide a clamp of this class which is composed of several clamp members, but so connected as to form a unitary clamp and further so connected that the parts cannot be readily separated, and further so connected that when a battery terminal post is clamped, the several parts will not be distorted; seventh, to provide a particularly simple and economical means and method of connecting two slidable members of the clamp together; and, eighth, to provide as a whole a novelly constructed clamp of this class and one which will not readily deteriorate or get out of order.

With these and other objects in view, as will appear hereinafter, my invention consists of certain novel features of construction, combination and arrangement of parts and portions, as will be hereinafter described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawings and to the characters of reference thereon which form a part of this application in which:

Figure 1 is a top side view of my battery terminal clamp in its preferred embodiment, showing the same as it appears from above when the same is secured to a battery terminal post; Fig. 2 is an end view thereof taken from the screw end of the clamp; Fig. 3 is another end view thereof taken from the cable end thereof; Fig. 4 is a longitudinal sectional elevational view thereof taken through 4—4 of Fig. 1; and, Figs. 5 and 6 are transverse sectional views thereof taken, respectively, through 5—5 and 6—6 of Fig. 1.

Like characters of reference refer to similar parts and portions throughout the views of the drawings.

The preferred embodiment of my battery terminal clamp, as illustrated in the drawings, consists of a stationary battery clamp member 1, a movable clamp member 2, and a screw 3.

The clamp member 1 is made in the form of a substantially rectangular frame, or loop member, having a longitudinal opening 1*a* therein which opening extends from the lower to the upper side. At one end of the member 1 is a seat portion 1*b* of substantially semi-circular form at the inner side of which is provided a semi-circular recess 1*c* which is tapered convergingly upwardly from the lower to the upper side of the member 1 forming a tapered semi-circular seat for receiving one side of a tapered or frusto conical battery terminal post, shown by dotted lines and designated A in Fig. 4. From the opposite sides or ends of the semi-circular portion 1*b*, extend arms or straps 1*d* which form the opposite sides of the longitudinal opening 1*a*. The extended ends of the arms or straps 1*d* are connected by a cross member or portion 1*e* which forms the end wall of the opening 1*a* opposite the end provided with the semi-circular recess 1*c*. The portions 1*b*, 1*d* and 1*e* are prefer-

ably molded together as an integral unit, as shown.

In the opening 1*a* is positioned the movable clamp member 2, which extends transversely across the opening between the arms or straps 1*d* and is reciprocally mounted in a longitudinal direction therein on the arms or straps 1*d*. The opposite lower and upper edges of the inner sides of the arms or straps 1*d* are beveled forming longitudinally extending recessed guide portions or ledges 1*f* inwardly from the lower and upper sides of the member 1. At the lower and upper edges of the opposite ends of the clamp member 2, are provided outwardly or laterally extending ridges or ledges 2*a* and 2*b*, respectively, which ridges or ledges are beveled at their adjacent inner sides at an angle corresponding with the beveled ledges 1*f*. These ridges or ledges ride upon the beveled ledges 1*f* and form retaining portions for holding the member 2 in position relative to the member 1 against removal and in guiding relation therewith. The lower ridges or ledges 2*a* may be molded, as described, but the upper ridges or ledges 2*b* are formed by swedging upwardly extending portions, shown by dotted lines and designated 2*c* in Fig. 6, downwardly and outwardly, after the member 2 is placed in the position shown, against the upper beveled ledges 1*f*.

The inner side of the member 2 adjacent the seat 1*c* is also provided with an upwardly tapered semi-circular seat 2*d* which is adapted to engage the opposite side of the battery terminal post.

The seat portions 1*c* and 2*d* are clamped against the opposite sides of the battery terminal post by the screw 3 which may be an ordinary set screw. This screw extends through a boss 1*g* at the outer side of the cross portion 1*e* and extends into the opening 1*a* at its longitudinal axis, engaging at its inner end the side of the clamp member 2 opposite the seat portion.

On the stationary clamp member 1 is provided, preferably by molding integrally therewith, a cable connecting post, or socket, 1*h* of any suitable construction for connecting an electric cable or conductor thereto. This connecting portion 1*h* may be either extended from the end of the member 1 in alignment with the longitudinal axis of the member 1, or from the side thereof, or therefrom at an angle.

It will be here noted that the material of which the several members are made is preferably a non-corrosive metal so as to reduce binding of the several members together to a minimum.

It will be also noted that the construction of the clamp, as shown, is such that the same may be utilized either on the positive or negative post of the battery, and may be used either as a right or left hand clamp.

Though I have shown and described a particular construction, combination and arrangement of parts and portions, I do not wish to be limited to this particular construction, combination and arrangement but desire to include in the scope of my invention the construction, combination and arrangement substantially as set forth in the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a battery terminal clamp, a clamp member having a longitudinal opening therein and longitudinal recessed guide portions at the opposite lateral sides of said opening and at the opposite sides of the clamp member, and a movable clamp member positioned in said opening transversely therewith and reciprocally longitudinally therewith, the opposite ends of the movable clamp member being provided at the opposite sides thereof with outwardly extending retaining portions adapted to extend into the longitudinally extending recessed guide portions of the first clamp member and positioned substantially flush with the upper and lower sides thereof engaged by the movable clamp member, for preventing removal of the movable clamp member from the latter.

2. In a battery terminal clamp, a clamp member having a battery terminal post seat near one end, a connecting portion at its opposite end and arms connecting the opposite sides of the seat portion with the opposite end of the connecting portion, forming a longitudinal opening in said member, the opposite edges of the sides of the arms forming the longitudinal opening being beveled from the cross portion to the seat portion, and a movable clamp member extending transversely across the opening and reciprocal longitudinally therein, the opposite ends of the movable clamp member being provided at the outer edges with outwardly extended retaining portions seating on the beveled portions of the arms, adapted to retain the movable clamp member within the opening, the upper and lower sides of the retaining portions of the movable clamp member being substantially flush with the upper and lower edges of said connecting arms.

3. A battery terminal clamp comprising a clamp member having a longitudinal opening therein, said opening extending through the upper and lower sides of the clamp member, a movable clamping block positioned in said opening transversely thereto and reciprocally movable longitudinally thereof, the ends of the clamping block being relatively wide and flat and positioned in sub-

stantial engagement with the inner side walls at the laterally opposite sides of the opening and in such manner relative thereto as to prevent turning of the block relative to the first mentioned clamp member, said clamping block having at its upper and lower sides retaining ledges extending beyond the aforementioned ends and engaging the upper and lower portions of the clamp member at the opposite sides of said opening, the upper and lower sides of the clamping block being flush with the sides of the clamp member engaged by the clamping block, and means in connection with the clamp member and the clamping block for adjusting the latter within the opening of the former for clamping a terminal post between the same.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 31st day of May, 1928.

CHARLES E. TAYLOR.