W. L. BLISS.

ELECTRIC TERMINAL CONNECTION.

APPLICATION FILED APR. 13, 1912.

1,176,942.

Patented Mar. 28, 1916.

Fig. 1.

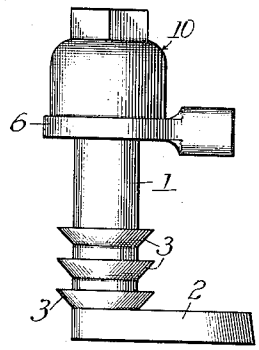


Fig. 2.

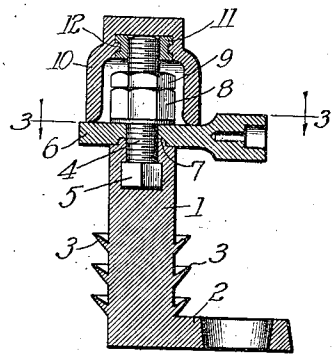
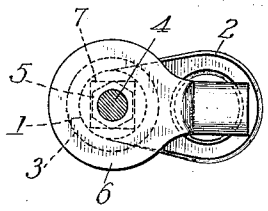


Fig. 3.



Witnesses:
Robert H. Weir
A. L. Rochwell

Inventor:
William L. Bliss:
by: Edwin B. Hopkins, Jr.
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM L. BLISS, OF NIAGARA FALLS, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE U. S. LIGHT & HEAT CORPORATION, OF NIAGARA FALLS, NEW YORK, A CORPORATION OF NEW YORK.

ELECTRIC TERMINAL CONNECTION.

1,176,942. Specification of Letters Patent. Patented Mar. 28, 1916.

Application filed April 13, 1912. Serial No. 690,576.

To all whom it may concern:

Be it known that I, WILLIAM L. BLISS, a citizen of the United States, residing at Niagara Falls, in the county of Niagara and State of New York, have invented new and useful Improvements in Electric Terminal Connections, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to electric terminal connections.

It has among its objects to provide an improved terminal connection of a simple and rugged construction wherein the terminal may be securely attached to its terminal post and readily disconnected therefrom when desired.

A further object of my invention is to provide an improved terminal connection which is especially adapted to use in connection with electric batteries wherein the parts are effectually protected from the corrosive action of the battery acid.

Other objects and advantages of my improved construction will hereinafter appear.

In the accompanying drawings I have illustrated one embodiment which my invention may assume in practice. My invention is not, however, limited to the precise construction herein shown.

In these drawings: Figure 1 shows a side elevation of the terminal connection. Fig. 2 is a central sectional view of the same. Fig. 3 is a top plan view on line 3—3 of Fig. 2, the cap and holding nuts being removed.

In the construction shown the post 1 is provided with an elongated base 2 which may be attached to a battery plate or other suitable device by any suitable means. In a preferred form this base is secured to the battery plate by burning it upon the latter. In order to prevent the battery acid from creeping up the terminal post 1, this post is provided with a plurality of annular flanges or inverted petticoats 3 arranged one above the other near its base. These petticoats are preferably tapered toward their rims as shown in Fig. 2 in order to render it more difficult for the acid to creep up over the same; the tendency being for the acid to drop off before it passes over the rims of the petticoats. A threaded member 4 is seated in the upper end of the post 1. This threaded member is preferably provided with an enlarged lower end 5 which is embedded within the post 1. If desired it may assume the form of a bolt. The member 4 serves to position the terminal 6 upon the post 1 and extends through a central perforation in the flat disk-shaped end of the terminal. In order to secure a snug fit of the terminal upon the binding post, the upper end of the post 1 is provided with a squared or otherwise irregularly shaped shoulder 7 surrounding the member 4, which fits within a correspondingly shaped recess in the under surface of the terminal. A nut 8 serves to clamp the terminal 6 snugly upon the upper end of the post 1 and this nut is locked in position by a suitable lock nut 9. In order to protect the connections from the action of the acid in the battery, the protruding upper end of the threaded member 4 is housed in a lead covering or cap 10 which is adapted to be screwed upon the upper end of the member 4. This cap is substantially cylindrical in shape and when in its adjusted position the lower rim of the same bears snugly against the upper surface of the terminal 6 in such a manner as to substantially seal the connections within the cap. The internal diameter of this cap is made slightly larger than the nuts 8 and 9 so that a filler of vaseline or other desired lubricant may be inclosed within the same in order to protect the connections. In order to enable the cap 10 to be screwed upon the end of the member 4, the cap is provided in its upper end with an internal threaded sleeve 11 adapted to receive the end of the member 4. This sleeve 11 is made of a harder metal than the cap 10 and is provided with an annular groove 12 which is adapted to receive a corresponding flange on the inner periphery of the cap to lock the sleeve securely within the lock. In order to facilitate the movement of the cap the upper end of the same is formed in the shape of a nut.

It is to be noted that by the provision of the flanges or petticoats 3 upon the base of the terminal post the ascent or creeping

of the acid to the terminal connections is effectually prevented; the acid being required to creep up over the edges of the successive petticoats in a circuitous path. Further, the terminal connections are so inclosed that access to the same by the acid is rendered exceedingly difficult. The terminal is snugly fitted upon the terminal post and accurately positioned upon the same. The cap incloses the upper end of the connections and by its snug connection with the upper surface of the terminal serves to seal the same. At the same time the cap serves as a housing for the protecting lubricant for these connections. The cap is securely fixed to the threaded member by the provision of the threaded sleeve. Further, by my improved construction this sleeve is made substantially integral with the cap, being securely locked therein. While the parts of the terminal connection are securely attached to each other and protected against the action of the acid, the parts may be readily separated when desired by simply removing the outer cap by rotating the same, and then removing the nuts upon the threaded member or bolt. It is to be noted that the arrangement of the parts is exceedingly compact and that the parts employed are of an exceedingly simple construction which enables them to be very cheaply made.

While I have in this application described one specific form of my invention as adapted to one specific use, my invention is not limited either to the precise construction shown or to the precise adaptation herein described.

What I claim as new and desire to secure by Letters Patent of the United States is:—

1. An electric terminal connection comprising a terminal post, a bolt having its head embedded in said post, means for locking a terminal against rotation upon said post, means for holding said terminal in place on said bolt, a cap inclosing the end of said bolt and said holding means and adapted to be pressed tightly against a terminal to form a liquid tight joint, and an internally threaded sleeve carried in said cap and having a groove in its outer periphery filled with the metal of said cap, said sleeve being adjustable upon the end of said bolt.

2. A battery terminal connection including a terminal post of metal substantially impervious to battery fumes, a threaded stud of hard metal having one end embedded in said post and the other end projecting therefrom, a terminal member having a portion surrounding said stud, means for holding said terminal in intimate electrical contact with said stud and said post, and a protecting means substantially impervious to battery fumes inclosing the exposed portion of said stud and said holding means and adapted to form an acid-tight contact with said terminal to prevent corrosion of said stud.

In testimony whereof, I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM L. BLISS.

Witnesses:
F. J. CALLAHAN,
C. E. MEAD.