L. H. WORNE.

CONNECTION FOR STORAGE BATTERIES AND THE LIKE.

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978,978.

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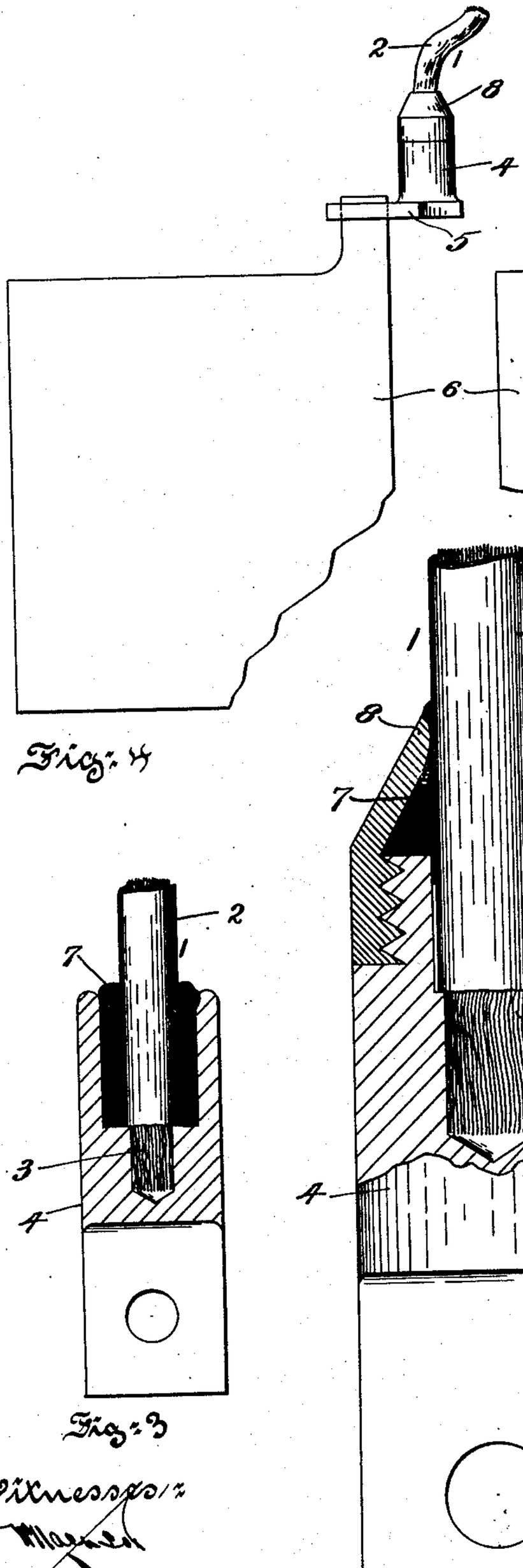

Fig. 4.

Fig. 5.

Fig. 3.

Fig. 1.

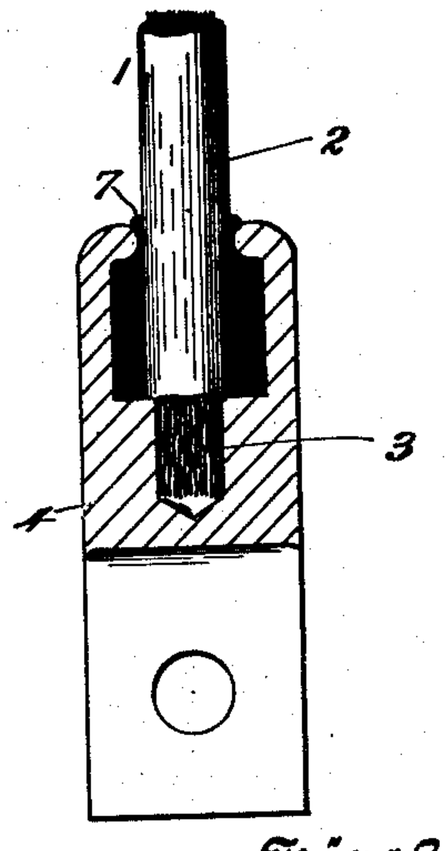

Fig. 2.

Witnesses:

Inventor:

Leonard H. Worne.

By Augustus B. Stoughton.

Atty.

UNITED STATES PATENT OFFICE.

LEONARD H. WORNE, OF PHILADELPHIA, PENNSYLVANIA.

CONNECTION FOR STORAGE BATTERIES AND THE LIKE.

978,978. Specification of Letters Patent. Patented Dec. 20, 1910.

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To all whom it may concern:

Be it known that I, LEONARD H. WORNE, a citizen of the United States, and resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Connection for Storage Batteries and the Like, of which the following is a specification.

Objects of the present invention are to protect all parts of the connection from corrosive influences and substances; to accomplish this even though a flexible part of the connection be repeatedly bent in respect to the other parts thereof; and to enable the connection to be repeatedly bent without injury to itself and without opening up spaces for the passage of acids and the like.

To these and other ends hereinafter set forth the invention comprises the improvements to be presently described and finally claimed.

In the accompanying drawings forming part hereof Figure 1, is a view principally in central section illustrating a connection embodying features of the invention. Fig. 2, is a similar view illustrating a flexible connection embodying a modification of the invention. Fig. 3, is a similar view of an incomplete connection hereinafter referred to for purposes of description, and Figs. 4 and 5, are respectively elevational views illustrating applications of the flexible connection.

In the drawings 1, is a conductor having a protective cover 2, and a bare end 3.

4, is a non-corrosive lug which incloses the bare end 3, and the adjacent portion of the cover 2, and to which the conductor 1, is attached. The lug 4, may be, for example, burned or secured to, or made integral with the strap 5, of the plate 6, as shown in Fig. 4, or it may be bolted thereto as shown in Fig. 5. The lip of the lug which encircles or surrounds the conductor is curved as shown, so as to permit the conductor, if flexible, to be bent without undue abrasion of its cover and this lip need not tightly fit or grasp the conductor for reasons that will presently appear. Within the lug there is provided a receptacle for a viscous packing 7, as of soft rubber, cement or other material, which will not attack the covering 2, or be subject to the corrosive action of the influences to which it is exposed.

The lug is provided with means by which the contents of the receptacle or viscous packing may be in part forced therefrom so as to insure the complete filling of the receptacle and made to extend as far as may be into and through the opening by which the connection enters the lug. As shown in Fig. 1, these means comprise a cap 8, having thread and screw connection with the lug and containing within it the receptacle for the viscous packing 7. In this construction the receptacle in the cap is completely filled with the viscous packing, the cap is then screwed down onto the lug so that the viscous material fills the receptacle in the cap and exudes therefrom surrounding the cover of the conductor. In this way the receptacle being entirely full of non-corrosive packing, even though the conductor be bent back and forth, it is impossible for any corrosive liquid or substance to enter the cavity in the lug. In Fig. 3, the viscous packing is inserted in an annular space or receptacle formed in the end of the lug and around the conductor, and the end of the lug is then spun or otherwise turned down as shown in Fig. 2, so that the receptacle is surely filled and some of the packing may exude around the cover of the conductor.

What I claim is:

1. In combination an uncovered lug, the body portion of which is electrically conductive, a covered conductor extending therefrom and electrically connected therewith, a continuous annular lip extending from the body portion of the lug around the covered portion of the conductor and constricted at its margin to hold viscous material around the covered conductor, and viscous material.

2. In combination an uncovered lug having a covered conductor affixed to and projecting from the center of its end, the covered conductor being of less diameter than the portion of the lug to which it is affixed, and a lip projecting from the portion of the lug to which the conductor is affixed to form a chamber bounded by the end of the lug and the inner wall of the lip and the exterior of the conductor, and viscous material arranged in said chamber and held by the lip against the cover of the conductor.

3. In combination a lug having a covered conductor of less diameter than the lug af-

fixed to and projecting from the center of the end of the lug leaving a circular portion of the end of the lug around the conductor, a lip projecting in line with the surface of the lug and with the periphery of said circular portion and contracted toward the conductor, and viscous material arranged in the cavity formed by the lip and circular end surface of the lug and held up to the cover of the conductor.

In testimony whereof I have hereunto signed my name.

LEONARD H. WORNE.

Witnesses:

BRUCE FORD,

W. Y. KELLEY.