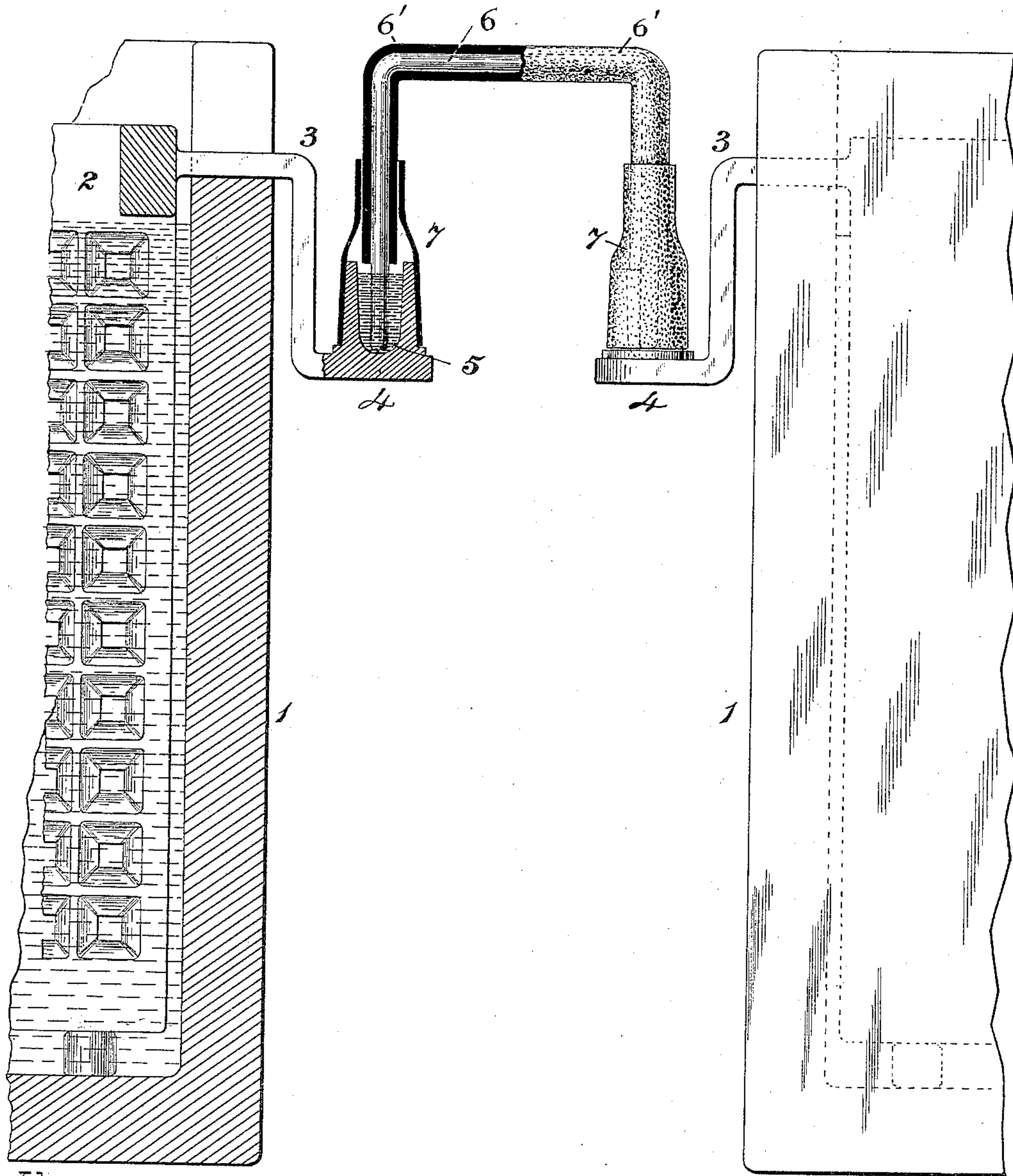


(No Model.)

S. H. BARRETT.
CONNECTOR FOR SECONDARY BATTERIES.

No. 411,370.

Patented Sept. 17, 1889.



Witnesses.

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UNITED STATES PATENT OFFICE.

SIDNEY H. BARRETT, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO THE RAILWAY ELECTRIC CAR LIGHTING AND SIGNAL COMPANY, OF NEW YORK.

CONNECTOR FOR SECONDARY BATTERIES.

SPECIFICATION forming part of Letters Patent No. 411,370, dated September 17, 1889.

Application filed May 21, 1889. Serial No. 311,540. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY H. BARRETT, a citizen of the United States, residing at Springfield, county of Hampden, State of Massachusetts, have invented a new and useful Connector for the Elements of Secondary Batteries, of which the following is a specification.

My invention relates to an improved coupler for making electrical communication between the elements of two or more secondary or other galvanic batteries.

My invention is especially designed for and will be herein described as applied to so-called storage or secondary or accumulator batteries. Its construction is such as to enable the ready connection and disconnection of elements without resorting to bolts, screws, or solder, and is, further, such as to operate as a safeguard against damage to the battery arising from excess of current from short-circuiting or other cause.

My invention is, further, such as to be flexible so as to preserve full electrical connection, notwithstanding relative disturbances of the coupled elements.

The accompanying drawing is a partially sectional elevation of a connector embodying my invention.

1 may represent parts of two adjacent cells of a secondary battery.

2 may represent portions of the contained electrodes to which is soldered or otherwise permanently fastened a copper goose-neck 3, which terminates with a cup 4 to contain mercury 5.

A U-formed wire 6, whose ends rest in the cups 4, coacts with the mercury to complete the connection. The portion of the wire above the mercury is protected by an insulating-covering 6', of rubber or other suitable material.

Waste of mercury, such as may arise from spillage or by reason of its oxidation from electrolyte fumes, is prevented by sleeves 7,

of pure rubber, whose respective ends are drawn over the cups and the rubber jackets in the manner shown.

The above-described illustration of my invention may be varied in non-essential details—for example, the projections 3 may project horizontally or have any other form. The U-formed coupling-wire may be without insulating-covering.

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

1. In a connector for secondary batteries, the combination of mercury-cups on rigid projections from the electrodes, and the immersed U-formed coupler.

2. A flexible and protected connector for secondary batteries, consisting of the combination of rigid integral projections from the electrodes to points outside of and below the cell-tops, the mercury-cups rigidly attached to the respective projections, the U-formed coupling-wire, and the protecting and flexible sleeves.

3. The connector consisting of electrode projections 3, terminating in mercury-cups 4, which receive the ends of the U-formed coupling-wire 5, and the protecting rubber sleeves 7.

4. In a connector for secondary batteries, the combination of electrode projections 3, mercury-cups 4, U-formed coupling-wire 5, having the insulating-coverings 6, and the protecting rubber sleeves 7, for the purposes set forth.

5. A connector for secondary batteries, consisting of the combination of the mercury-cup supported on a battery-electrode, a conductor inserted therein, and a guard or sleeve which surrounds both cup and conductor, as and for the purposes explained.

SIDNEY H. BARRETT.

Witnesses:

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