

No. 662,491.

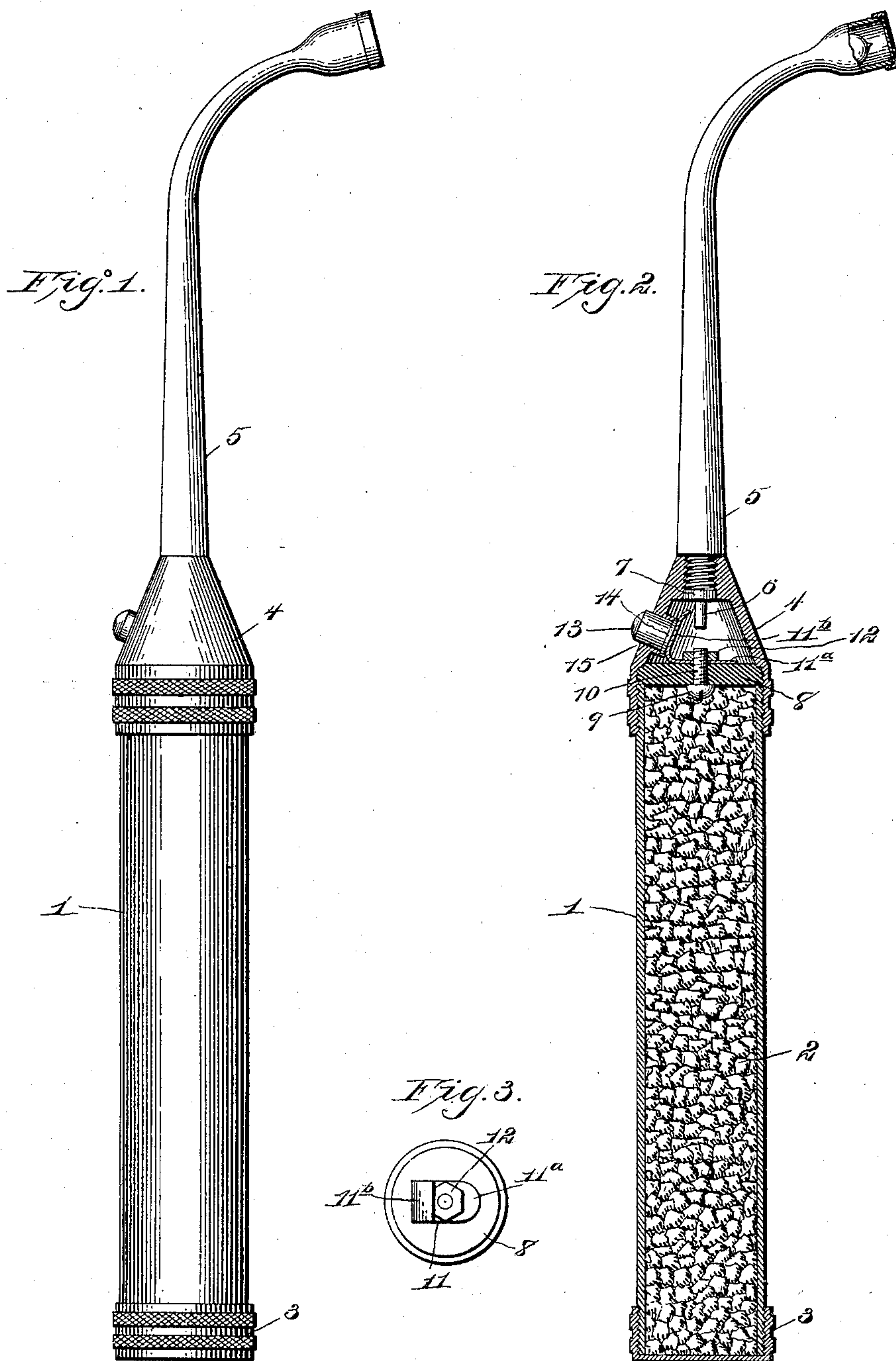
Patented Nov. 27, 1900.

J. S. MEAD.

PORTABLE ELECTRICAL DEVICE.

(Application filed Jan. 30, 1900. Renewed Oct. 24, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN SLOANE MEAD, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF  
TO WILLIAM COMERFORD, OF SAME PLACE.

## PORTABLE ELECTRICAL DEVICE.

SPECIFICATION forming part of Letters Patent No. 662,491, dated November 27, 1900.

Application filed January 30, 1900. Renewed October 24, 1900. Serial No. 34,233. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SLOANE MEAD, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Portable Electrical Devices, of which the following is a specification.

This invention relates to that class of portable electrical devices in which a casing is employed to contain a storage battery and form a handle to which the stock carrying the electrical instrument proper is attached and by which said instrument may be manipulated.

The object of the invention is a construction in which the means for making and breaking the electrical connection will be so disposed as to secure that economy of space so necessary in these hand devices, provide for the making and breaking of the electric circuit at will and in a manner most convenient to the gripping-hand, and so place the button of the circuit-closer that it may project from the exterior of the device and yet be protected from being accidentally pressed.

The invention therefore consists, primarily, in providing the battery-case or handle portion of the instrument with a tapering or conical cap portion adapted to form the means of connection to the battery-case of the various instrument-stocks which may be used therewith and having provided within said connecting portion the means for making the electrical contact with a conductor of the stock, the said means being operated from without by a button carried by such connecting portion.

The invention also consists in certain other novel features in the arrangement and construction of parts, all as hereinafter described, and pointed out in the appended claims.

In the accompanying drawings the invention has been represented in its application to a curved stock carrying a small incandescent lamp, such as are used for examining a person's throat.

Figure 1 is a view in side elevation; Fig. 2, a section taken through the case or handle and its cap or connecting portion, and Fig. 3 a top or plan view of the insulator-disk carrying the circuit-closer.

The case or handle 1 is preferably in cylindrical form and constructed of metal for the purpose of forming thereof a conductor for making the electrical contact with the chemicals or battery compositions 2 stored therein and completing the electric circuit, as will be more particularly pointed out hereinafter. The bottom of said case may be closed permanently or provided with a screw-cap 3. The upper end of the case is provided with screw-threads and closed by the screw-threaded tapering cap portion 4, which is adapted to receive in its tapered end the stock 5. This stock is provided with a contact-terminal 6, suitably insulated, as at 7, the circuit being formed with the lamp or other electrically-operated device by a conductor (not shown) leading from the said contact-terminal and by employing the stock as a conductor to complete the circuit in conjunction with the tapering connecting portion 4, which is primarily designed for that purpose, and the case.

Within the connecting or cap portion is provided an insulator-disk 8, suitably secured therein, which serves to partition the cap and close the opening of the case and form the proper mounting for the means by which the contact-terminal 6 is brought into connection with the battery composition 2 to complete the circuit. This circuit-connecting means comprises a contact 9, which, as shown, is the head of the binding-screw 10, extending through the insulator-disk at its center and from the under side, whereby contact is made with the battery composition, and a spring contact-piece 11 in the form of an acute angle, having the base member 11<sup>a</sup> resting upon the insulator-disk and secured thereto by the contact or binding screw 10 and its nut 12 and having its yielding arm or member 11<sup>b</sup> paralleling the side of the tapering inclosing cap 4 in near proximity thereto, thus bringing the end of said contact member substantially in the center of the cap, where upon slight forward pressure it will make connection with the contact-terminal 6, thereby completing the electrical circuit.

The member 11<sup>b</sup> is of a width sufficient to form ample bearing for the push-button 13, which is provided with a flange 14 and held



within the opening 15 by said member, so as to normally protrude from said opening.

From the above description it will be seen that construction of device of the above-described character is provided by which, from the manner of arrangement of the several parts, the form of the connecting-cap, and the form and simplicity of the contact-making parts contained therein, the objects heretofore pointed out as being important in this character of device and being the claims of the invention are effectually accomplished.

What I claim, and desire to secure by Letters Patent, is—

15 1. An electrical, hand appliance, comprising a battery-case, a conical or tapering cap for closing said case at one end, adapted to receive an instrument-stock and electrically connect the same with the case, an insulator-disk located within said cap, a yielding contact-arm mounted on said disk in electrical connection with the battery and adapted to contact with a contact-terminal of the stock,

and a push-button located within the tapering side of said cap, substantially as described 25 and for the purpose set forth.

2. An electrical, hand appliance, comprising a battery-case, a conical or tapering cap for closing said case at one end, adapted to receive an instrument-stock and electrically 30 connect the same with the case, an insulator-disk located within said cap, a yielding contact-arm mounted on said disk and having substantially the incline of the tapering side of the cap, the same being in electrical connection with the battery, and a push-button 35 held between said contact-arm and cap, and operating within an opening in the tapering portion of said cap, substantially as described and for the purpose set forth. 40

In testimony whereof I affix my signature in presence of two witnesses.

JOHN SLOANE MEAD.

Witnesses:

FRED KERNTOPF,  
JOHN LEWIS.