

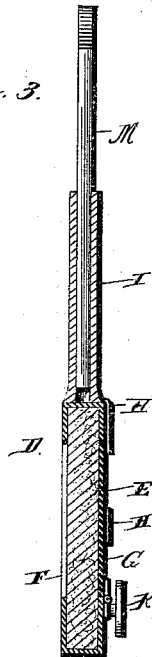
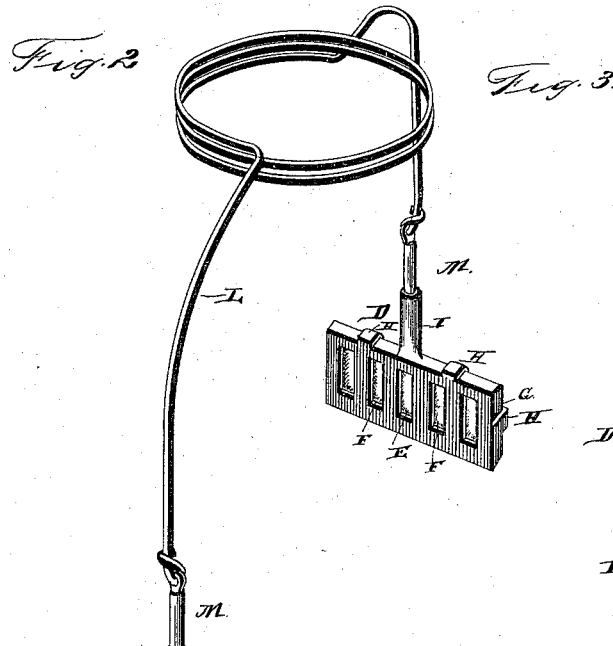
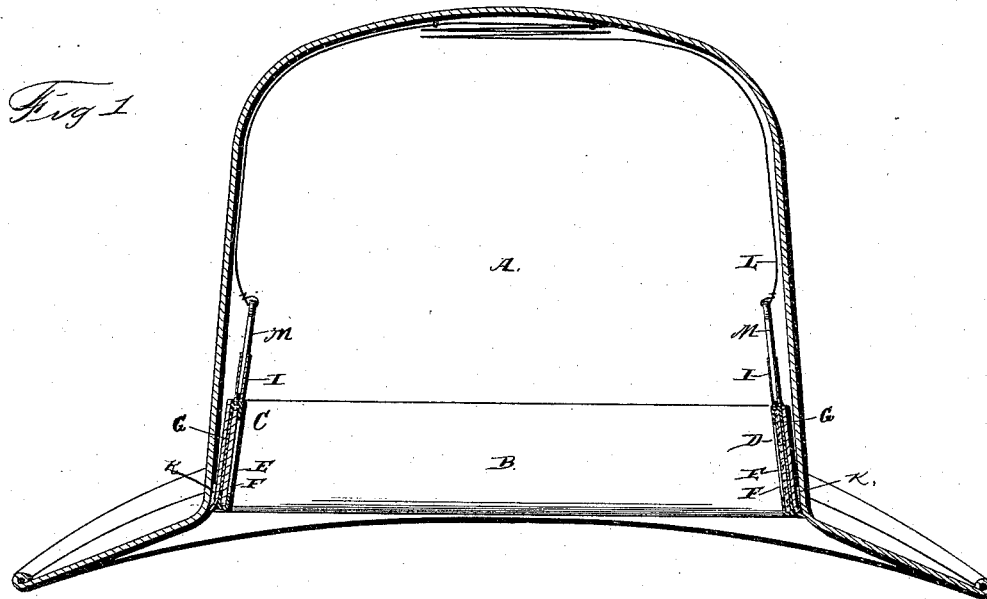
(No Model.)

E. J. MURPHY & J. FLOYD.

ELECTRO THERAPEUTIC BATTERY.

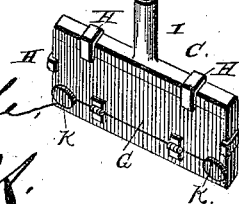
No. 383,899.

Patented June 5, 1888.



Witnesses.

Geo. H. Hoyer
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By his

Inventor.
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UNITED STATES PATENT OFFICE.

EDWARD JOHN MURPHY AND JOHN FLOYD, OF LYNCHBURG, VIRGINIA.

ELECTRO-THERAPEUTIC BATTERY.

SPECIFICATION forming part of Letters Patent No. 383,899, dated June 5, 1888.

Application filed February 16, 1888. Serial No. 264,207. (No model.)

To all whom it may concern:

Be it known that we, EDWARD JOHN MURPHY and JOHN FLOYD, citizens of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Improvement in Therapeutic Batteries, of which the following is a specification.

Our invention relates to an improvement in therapeutic batteries adapted to be worn in the hat of a patient for the cure of headache; and our invention consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and more particularly pointed out in the claims.

Figure 1 is a vertical longitudinal sectional view of a hat provided with a therapeutic battery embodying our improvements. Fig. 2 is a detailed perspective view of our improved therapeutic battery. Fig. 3 is a detail sectional view of the same.

A represents a hat, of the usual construction, having the lining B.

The battery comprises two cases, C D, made, respectively, of copper and zinc. Each of the said cases is filled with absorbent material, (indicated by the letter E,) and the said cases are provided on their inner sides with openings F, through which the said absorbent material is exposed. Woolen cloth or flannel will preferably be employed for the absorbent fillings for the casings; but other suitable absorbent material may be used in lieu thereof, if desired. Each case is provided with a hinged back, G, which is adapted to open and permit the absorbent material to be inserted or removed, and the sides of the cases are provided with projecting ears or lugs H, which are adapted to be turned over the free edges of the hinged doors when the latter are closed, so as to secure the doors in position. The upper side of each casing has a hollow tubular projection, I, of conducting material, and from the rear side of each case, near the lower edge thereof, projects a pair of buttons, K, which are adapted to engage suitable button-holes worked in the lining of the hat, or in the hat itself, as may be preferred.

L represents an insulated conducting-wire, of suitable length, to the ends of which are attached a pair of conducting-pins, M, which pins are adapted to be inserted in the tubular

projections I, and to make electrical contact therewith.

The operation of our invention is as follows: One of the cases is secured in the front of the hat and the other in the back of the hat, as shown in Fig. 1, and arranged in such a position as to be caused to bear against the forehead and back head of the wearer. The wire L is then secured in the crown of the hat and the pins M are inserted in the tubular projections I, and a small quantity of suitable dilute acid is poured into the casings, so as to saturate the absorbent. When the wearer puts the hat on his head, the copper and zinc casings come in contact with opposite sides thereof, and electrical action is immediately started in the battery, the current passing from the positive case to the negative case, and the return-current passing directly through the head and brain of the wearer, as will be readily understood.

The perspiration or moisture from the head of the wearer is absorbed by the absorbent filling in the battery-cases, and serves to promote the generation of electricity. When it is desired to discontinue the electrical action, one or both of the pins M are removed from the projection or projections, thereby interrupting the current.

A therapeutic battery thus constructed is extremely cheap and simple, is readily arranged in the hat of the patient or detached therefrom, and will be found of great utility in relieving headaches.

Having thus described our invention, we claim—

1. The therapeutic battery comprising the sections C D, made of suitable metals, provided with the absorbent filling, having the buttons K to connect them to a hat, and provided with a conducting-wire, substantially as described.

2. In a therapeutic battery, the case made of suitable metal, having the openings F on one side, and provided with a hinged back adapted to be opened to admit the insertion or removal of an absorbent filling, substantially as described.

3. In a therapeutic battery, a case made of suitable metal, having openings left on one side, and provided with projecting studs or spurs H, and having the hinged back adapted to be

opened for the insertion or removal of an absorbent filling, said spurs or projections H being adapted to be bent over the back when the latter is closed, substantially as described.

5 4. A therapeutic battery comprising the cases D C, made of suitable metals, and having the absorbent fillings, and the tubular projections I, in combination with the conducting-wire L, having the pins M, adapted to be inserted in said tubular projections, substantially as described.

10 5. A therapeutic battery comprising the cases C D, made of suitable metals, having the

buttons K to connect them to a hat, and having the tubular projections I, in combination with the conducting-wire having the pins M, to be inserted in the said projections, as set forth. 15

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

EDWARD JOHN MURPHY.
JOHN FLOYD.

Witnesses:

THOS. F. STEARNES,
W. B. GILBERT.