No. 772,959. PATENTED OCT. 25, 1904.

L. W. PULLEN.

MEDICAL BATTERY.

APPLICATION FILED FEB. 18, 1904.

NO MODEL.

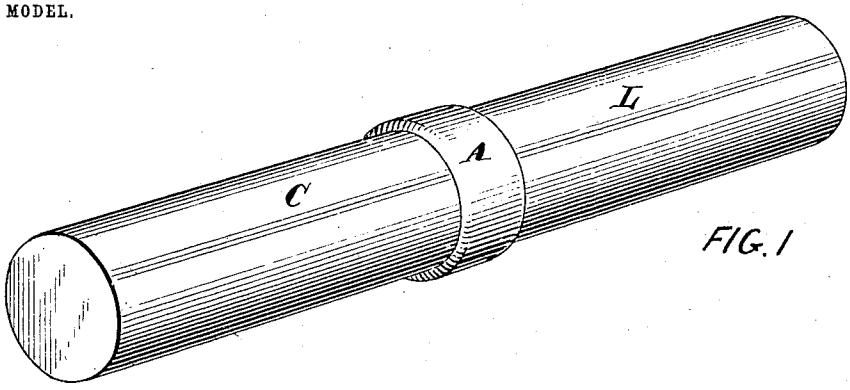

FIG. 1

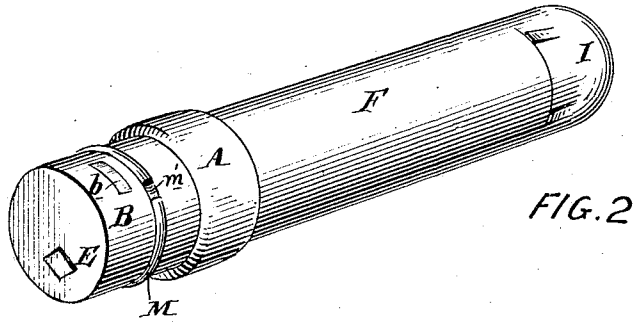

FIG. 2

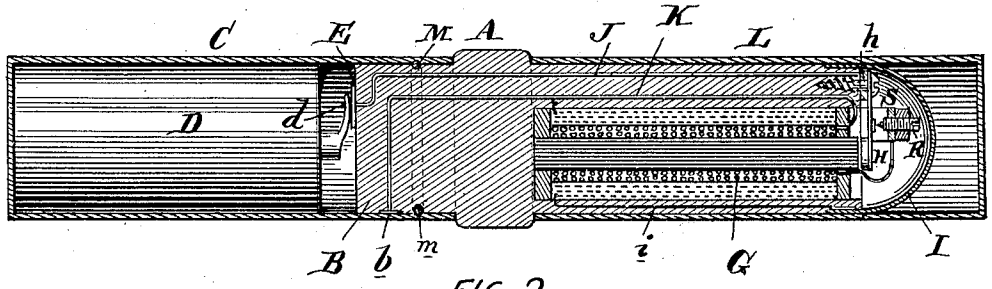

FIG. 3

Attest
R. M. Kelly.
Wm. Rooney.

Inventor
Leon W. Pullen
By his atty

No. 772,959. Patented October 25, 1904.

UNITED STATES PATENT OFFICE.

LEON W. PULLEN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO WIRELESS RAILWAY COMPANY, A CORPORATION OF THE DISTRICT OF COLUMBIA.

MEDICAL BATTERY.

SPECIFICATION forming part of Letters Patent No. 772,959, dated October 25, 1904.

Application filed February 18, 1904. Serial No. 194,195. (No model.)

To all whom it may concern:

Be it known that I, LEON W. PULLEN, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Medical Batteries, of which the following is a specification.

My invention has reference to medical batteries; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide a simple and inexpensive construction of medical battery in a portable form.

My invention consists of a core of insulating material, such as wood, provided with terminal contacts and a "faradic" or induction-coil mechanism and combined with two metallic cases fitted over the ends of said core, one of which incloses the faradic mechanism, and the other of which supports and incloses a battery of the primary or secondary types.

My invention also comprehends the making of the metallic case or tube over the faradic mechanism adjustable longitudinally for the purpose of regulating the strength of the secondary current.

The above features of my invention, together with those of minor details, will be better understood by reference to the drawings, in which—

Figure 1 is a perspective view of a medical battery embodying my invention. Fig. 2 is a perspective view of the core with the cases and battery removed, and Fig. 3 is a longitudinal section of the medical battery complete.

A is the core of insulating material, such as wood, and is provided with a central hub A′ with lateral projections B and F, the former being of much shorter length than the latter. The projection B is provided on its end with the contact E and on its circumference with the spring-contact *b*. Over this projection B is fitted a metallic case C, containing a battery D, the outer case of which is of zinc or formed with a conducting-surface for maintaining an electrical circuit with the case. The end of the battery D has the other terminal provided with a spring-contact *d*, adapted to press against the end of the projection B. By rotating the case C upon the projection B contact between *b* and C is maintained and contact between *d* and E is made or broken. When the battery is to be used, the contacts *d* and E are brought into contact. The case C is retained in position by a split spring-ring M on projection B snapping into a groove *m* on the interior of the case. The other projection, F, is quite long and is bored out to receive the induction-coil G, which may be of any ordinary construction. The hammer or vibrator H is supported by the end of the projection F at *h*, and the back contact R is carried in the frame S, also secured to the projection F. A cap I may fit over the end of the projection F and acts as a contact terminal for wire *i*, which is connected with one terminal of the secondary winding of the induction-coil G. The other terminal of the secondary winding is connected with the contact *b* on the projection B by wire K. The primary winding of the induction-coil has one of its terminals connected with the secondary terminal leading to the contact *b* and its other terminal connected, through the rheotome or interrupter and wire J, with the contact E on the end of the projection B. Over this projection F and induction-coil and in circuit with contact-cap I is placed a metallic case L, preferably of copper, which is adapted to be adjusted longitudinally, so as to inclose more or less of the winding of the induction-coil G, as desired, to vary the strength of the secondary current, as is well known in principle in faradic instruments.

In using this instrument the two metallic cases are employed as handles and are respectively grasped by the two hands. This completes the circuit of the secondary circuit through the body. When the case C is rotated and the contacts *d* E brought into circuit, the battery-circuit will be closed through the primary coil of the induction-coil G with the production of the induced or faradic current. The strength of this induced current is varied by sliding the case L off or on the core or projection F.

I do not confine myself to any type of bat-

tery or induction-coil or circuits and contacts, as these details may be varied without departing from the spirit of my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A medical battery consisting of a core of insulating material combined with an induction-coil mechanism, a battery and two inclosing metallic cases respectively in circuit with the terminals of the secondary coil and adapted to be grasped by the hands one of which incloses and directly supports the battery and the other adjustable longitudinally and inclosing the induction-coil mechanism.

2. A medical battery consisting of a core of insulating material combined with an induction-coil mechanism, a battery, two inclosing metallic cases respectively in circuit with the terminals of the secondary coil and adapted to be grasped by the hands one of which incloses the battery and the other the induction-coil mechanism, one of the said cases to put the battery in or out of circuit and the other case adjustable longitudinally to vary the strength of the secondary current.

3. In a medical battery a core of insulating material provided with a battery and metallic handle, combined with an induction-coil carried by the core, and a longitudinally-adjustable tubular case forming a handle inclosing the induction-coil and supported by the core.

4. In a medical battery a core of insulating material provided with a battery and metallic handle, combined with an induction-coil carried by the core, a longitudinally-adjustable tubular case forming a handle inclosing the induction-coil and supported by the core, and a switch for putting the battery into or out of circuit with the primary coil of the induction-coil.

5. The combination of the core A having insulating projections B and F, a metal case C fitting upon the projection B and containing the battery D, an induction-coil apparatus G fitted within the projection F, a longitudinally-adjustable metal case L supported upon the projection F, and electric circuits connecting the battery with the primary coil of the induction-coil and its secondary coil with the cases C and L.

6. The combination of the core A having insulating projections B and F, a metal case C fitting upon the projection B and containing the battery D, an induction-coil apparatus G fitted within the projection F, a longitudinally-adjustable metal case L supported upon the projection F, electric circuits connecting the battery with the primary coil of the induction-coil and its secondary coil with the cases C and L, and a switch for putting the battery in and out of circuit.

7. In a medical battery, a central portion having two end projections combined with two metallic cases acting as handles insulated from each other and supported respectively upon the end projections of the central portion one of which cases is adjustable longitudinally relatively to the other.

8. In a medical battery, a core of insulating material provided with a battery and metallic handle, combined with an induction-coil carried in the core, a metallic cap fitting over the end of the core to inclose the rheotome of the induction-coil and in circuit with one terminal of the secondary of the coil, and a longitudinally-adjustable tubular case forming a handle inclosing the induction-coil and supported by the core and also making a sliding contact with the cap.

9. In a medical battery, the combination of a core of insulating material, an induction-coil carried thereby, a metallic case acting as a handle rotatably supported on one end of the core, a spring-ring M to hold said case from accidental detachment, a battery arranged within the case, a switch to control the current from the battery to the induction-coil controlled by the rotatable case, a second metallic case inclosing the induction-coil and supported on the other end of the core, and circuits from the secondary coil of the induction-coil to each of the cases.

10. A medical battery consisting of two metallic cases acting as handles one of which is adjustable longitudinally relatively to the other, said case being mechanically attached and insulated from each other, in combination with a battery, induction-coil and circuits inclosed within the cases and having the terminals of the secondary coil electrically connected respectively with the two cases.

11. A medical battery, consisting of two metallic cases acting as handles one of which is adjustable longitudinally relatively to the other, said case being mechanically attached and insulated from each other, in combination with a battery, induction-coil and circuits inclosed within the cases and having the terminals of the secondary coil electrically connected respectively with the two cases, and a switch for connecting the battery in circuit with the primary of the induction-coil.

In testimony of which invention I hereunto set my hand.

LEON W. PULLEN.

Witnesses:
R. M. KELLY,
WM. ROONEY.