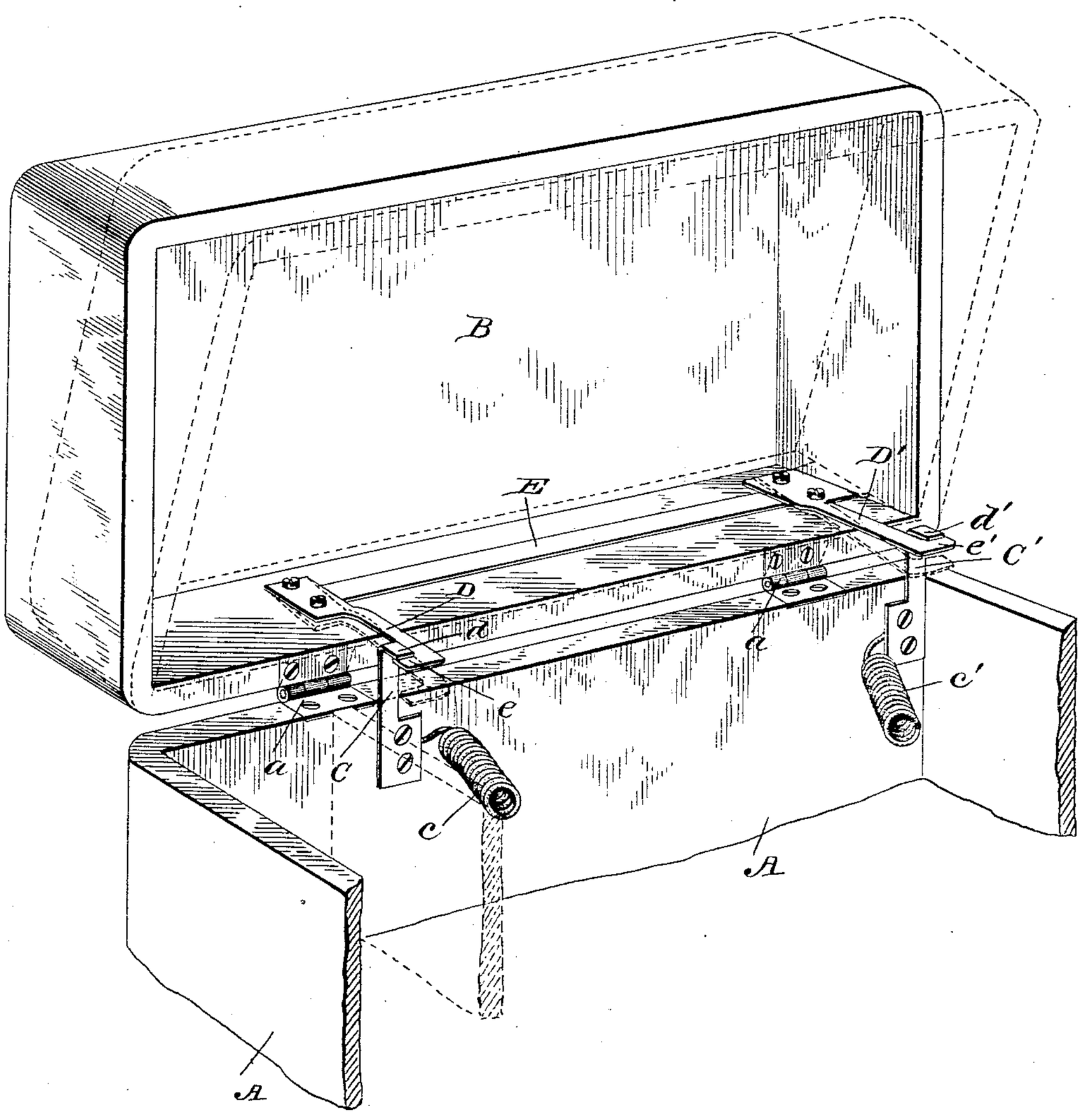
(No Model.)

H. B. COX.

RHEOTOME MECHANISM FOR MEDICAL BATTERIES.

No. 389,640. Patented Sept. 18, 1888.



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RHEOTOME MECHANISM FOR MEDICAL BATTERIES.

SPECIFICATION forming part of Letters Patent No. 389,640, dated September 18, 1888.

Application filed December 17, 1887. Serial No. 258,207. (No model.)

To all whom it may concern:

Be it known that I, HARRY BARRINGER COX, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Rheotome Mechanism for Medical Batteries; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms part of this specification.

My invention relates to an improvement in circuit closers and breakers, and more particularly to automatic rheotome or circuit closers and breakers more especially adapted for use in connection with medical batteries or the like inclosed in suitable cases or boxes.

The object of my invention is to provide a rheotome mechanism so arranged that the circuit shall be automatically closed and opened by the operation of opening and shutting the door or lid of the box or case containing the battery; and a further object is to provide a simple, cheap, effective, and automatic rheotome mechanism preferably adapted for use in medical batteries producing induced or secondary currents, and thus reduce the necessary printed instructions usually accompanying such batteries to a minimum, and also reducing the danger of injury from careless or ignorant handling.

With these ends in view my invention consists in certain novel features of construction and combinations of parts, more fully described hereinafter, and particularly pointed out in the claims.

The accompanying drawing illustrates in perspective the open portion of a case, the hinged cover for the same, and the contacts carried by the case and cover constituting the rheotome mechanism, the battery and lower front portion of the case being broken away to clearly show the rheotome mechanism.

In the drawing, the reference-letter A represents any suitable case or box containing a battery, (not shown,) and being provided with a lid or cover, B, suitably hinged at points *a a* to one edge of the open portion of the case A, and adapted to close said open portion and protect the contents from dust or injury. Stationary contacts C C′ are secured to and extend above the inner edge of the case, to which the cover is hinged, and said contacts are electrically connected with a suitable source of electrical energy by the wires *c c′*. The contacts C C′ are secured to the case at their lower portions in any suitable manner, as by screws or nails, and their upper portions extend upwardly above the upper edge of the case a suitable distance and are bent outwardly substantially at right angles to the main portion to form the outwardly-projecting contact-surfaces *d d′*. Movable contacts D D′ are secured to the inner side of the cover or lid and project downward from the hinged edge of the same opposite each stationary contact which extend upwardly from the case. The movable contacts are secured at their upper portions to the cover or lid in any suitable manner, as by screws or the like, and from thence they project downwardly beyond the lower edge of the cover, so that when the cover is closed the movable contact will extend down into the case, and the free ends of said movable contacts are bent or project laterally substantially at right angles to the main portion of the same to form the contact-surfaces *e e′*, the upper sides of which are adapted to come in electrical contact with the under sides of the contact-surfaces of the stationary contacts when the cover or lid is thrown open, as shown in full lines in the drawing. The movable contacts are electrically connected by means of the plate or wire E, secured to the inner side of the hinged edge of the cover and passing beneath the upper portions of said movable contacts. Both the movable and stationary contacts are preferably, but not necessarily, formed of flat spring metal, and the outer free ends of the movable contacts are bent slightly outward from the inner side of the edge of the cover, so that the ends of said contacts will not come in contact with the inner side of the box or the lower portions of the stationary contacts when the cover is closed.

By referring to the drawing and the foregoing description it will be clearly evident that when the cover is closed the contacts carried

by and moving with said cover will extend downwardly into the casing out of contact with the stationary contacts and the circuit will be open; but when the cover is raised the movable contacts will move upwardly with the same, and when the cover is fully opened their contact-surfaces will come in contact with the under faces of the outwardly-bent contact-surfaces of the stationary contacts, and the circuit will thus be closed and the battery set in operation, and when it is desired to break the circuit and stop the operation of the battery it is simply necessary to close the cover.

It is clearly evident that substantially my form of circuit breaker and closer could be used in connection with any other form of casing and cover than that shown and described herein, and it is also evident that numerous slight changes might be resorted to in the form and arrangement of the various parts described without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the construction herein set forth.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with a box or case and stationary contacts secured to the same and electrically connected with a source of electrical energy, of a suitable lid or cover for the case or box and contacts carried by and adapted to move with said cover and to electrically engage the stationary contacts when the cover is opened and to be thrown out of contact with the same when the cover is closed, substantially as described.

2. The combination, with a suitable case or box and contacts secured to the same and electrically connected with a source of electrical energy, of a suitable lid or cover for the case, and contacts secured to and moving with the cover, said contacts being electrically connected with each other at their main portions, whereby when the cover is thrown open the contacts carried by the same electrically engage the contacts on the case, and when the cover is closed the contacts are thrown out of engagement, substantially as described.

3. In combination, a suitable case or box, contacts secured to and extending above an upper edge of the same, a cover hinged to close or open said case or box, and contacts carried by said cover and adapted to electrically engage the before-mentioned contacts when the cover is opened, the contacts carried by the cover having their main portions electrically connected, substantially as described.

4. In combination, a suitable case or box, contacts secured to and extending above the upper edge of said box, said contacts being provided with outwardly-bent contact-surfaces, a cover hinged to said case or box, and contacts secured to said cover and extending below the lower edges of the same, said contacts being electrically connected and provided upon their outer free ends with laterally-bent contact surfaces to engage said outwardly-bent contact-surfaces of the contacts upon the case or box when the cover is opened, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HARRY BARRINGER COX.

Witnesses:
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