

No. 640,316.

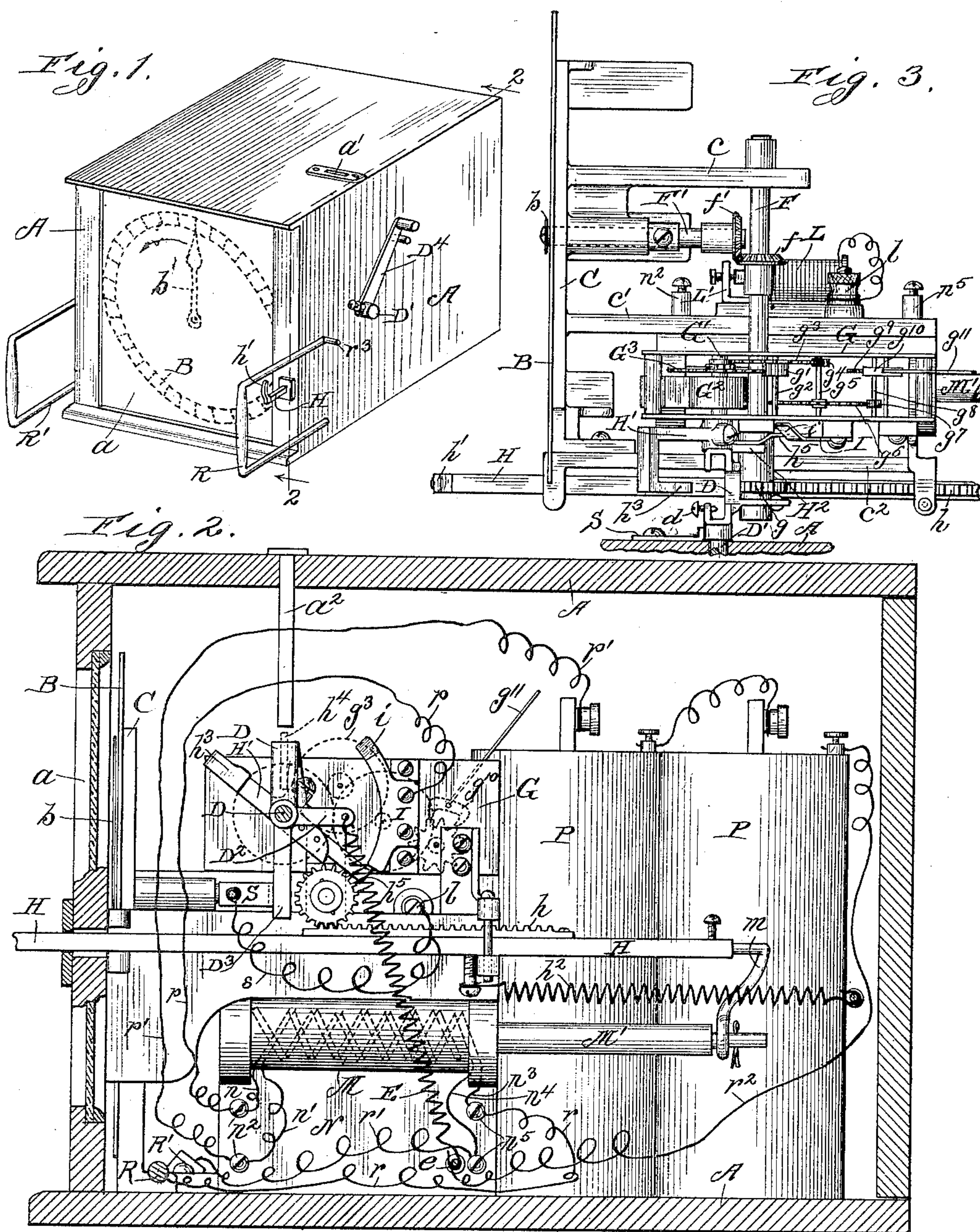
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**J. PATTERSON.**

COIN CONTROLLED ELECTRICAL APPARATUS.

(Application filed June 2, 1899.)

(No Model.)



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## COIN-CONTROLLED ELECTRICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 640,316, dated January 2, 1900.

Application filed June 2, 1899. Serial No. 719,068. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN PATTERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coin-Controlled Electrical Apparatuses, of which the following is a specification.

This invention relates to improvements in electrical apparatuses to be used for therapeutical purposes; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide an apparatus whereby an electrical current may be passed through the body of the user and the force of the current indicated, and, second, such an apparatus which shall be operated only by the deposit of a coin of a certain size.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a perspective view of my apparatus. Fig. 2 is an enlarged vertical sectional view taken on line 2 2 of Fig. 1, and Fig. 3 is a plan view of the mechanism with the batteries omitted.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the box or casing in which the operating mechanism is located and which has in its front end a glass *a*, through which the indicating-dial B may be seen, which dial may be provided with graduating marks or characters of any desired kind and number. Located within the casing A is a metal frame C, on which the various parts of the operating mechanism are mounted. The top of the casing is provided with a slot *a'*, from which extends downwardly a chute *a''*, through which a coin of the desired size and denomination may be passed when it is desired to operate the device. Directly below the lower end of the chute *a''* is located the coin-holder B, which is substantially rectangular, as shown in Fig. 3 of the drawings, and is provided with a screw *d* to be used for regulating the

size of the opening therein, so as to receive a coin of the requisite size and denomination. This holder is mounted on a shaft D', suitably journaled in the casing A, and has two contact-arms D<sup>2</sup> and D<sup>3</sup>, the purposes of which will be presently explained. On the outer end of the shaft D' is fixed a crank D<sup>4</sup> for turning the coin-holder so as to set the mechanism in operation and to release the coin. To the arm D<sup>2</sup> is secured one end of the spring E, whose other end is secured to a screw or binding-post *e* in the side of the casing or box. Extending horizontally and rearwardly from the frame C are arms *c*, *c'*, and *c''*, and journaled on the arms *c* and *c''* is a shaft F, which is provided near one of its ends with a gear *g* to engage the rack-bar *h* on the upper surface of the pull rod or bar H, which passes through a suitable opening in the front of the casing and has an upturned end *h'*, by means of which the said bar may be pulled forward by the finger of the user. This bar is retracted by means of a spring *h''*, secured at one of its ends to the casing and at its other end to the bar or a screw thereon. Near the other end of the shaft F is located a bevel-gear *f*, which meshes with a similar gear *f'* on the shaft F', which shaft is journaled at right angles to the shaft F and passes through the dial-plate B and has on its outer end an indicating-hand *b*. Secured to the arm *c''* of the frame C and located thereabove is a clock-work-frame G, in which is journaled a driving-shaft G', to which is secured one end of a spring G<sup>2</sup>, whose other end is secured to the frame G or otherwise. Fixed on the end of the shaft G' adjacent to the shaft D' is a piece or casting H', which has a laterally and downwardly extending arm *h''*, against which the coin *h'* will impinge when the coin-holder is turned. This casting is provided with another arm H<sup>3</sup>, to which is secured a flat spring *h'''*, which acts on the contact-plate I, which contact-plate is provided with a deflection or bend *i* at its upper end. Mounted on the shaft G' is a gear G<sup>3</sup>, which meshes with a pinion *g'* on the shaft *g''*, which also carries a gear *g'''*, meshing with a pinion *g''''* on the shaft *g'''*, on which is mounted a gear *g''''''*, which meshes with a pinion *g''''''''* on the shaft *g''''''''*, on which is mounted another gear *g''''''''''*.



which engages the escapement-detent  $g^{10}$ , which is provided with an arm or lever  $g^{11}$  to control the same. Secured to the arm  $c'$  of the frame C is a magnet L and a circuit-breaker L' of the ordinary construction. Secured to the arm  $c'$  is a doubly-wound induction-coil M, in which is movably located a core M', whose rear end is connected to the bar or rod H by means of a piece  $m$ , as is clearly shown in Fig. 2 of the drawings. The wires  $n$  and  $n'$  of the primary winding of the said coil are secured to suitable binding-posts  $n^2$  on the piece N, by which the coil is supported, and the wires  $n^3$  and  $n^4$  of the secondary winding of said coil are secured to posts  $n^5$  on said supporting-piece. Leading from the post  $n^2$  to which the wire  $n$  is secured is a conductor  $p$ , whose other end is connected to the contact-plate I, and leading from the post  $n^2$  to which the wire is connected is a conductor  $p'$ , which is connected at its other end to one of the poles of the batteries P. Leading from the post  $n^5$  to which the wire  $n^3$  is connected is a conductor  $r$ , whose other end is connected to one end of the metal handpiece R, and leading from the post  $n^5$  to which the wire  $n^4$  is connected is a conductor  $r'$ , which is secured to the other handpiece R', which is also made of metal. Leading from the post  $e$ , to which the spring E is connected, is a conductor  $r^2$ , which is connected at its other end to one of the poles of the batteries. Leading from the contact-plate S, which is secured to the casing, is a conductor  $s$ , which is connected at its other end to the binding-post  $l$  of the circuit-breaker. The arm  $D^3$  is normally held in contact with the plate S; but as soon as the coin-holder D is turned said arm will be thrown out of contact with said plate and the circuit broken.

The operation of my apparatus is as follows: Coin is placed in the slot  $a'$  and guided by the chute  $a^2$  to the holder D, when by turning the handpiece  $D^4$  forward until it strikes the projection  $r^3$  on one of the handpieces or grips the coin will strike the arm  $h^3$  of the piece H' and turn it to almost a vertical position, in which operation the spring  $h^5$  will be forced laterally by reason of the bend  $i$  in the

contact-plate I until it passes said contact-plate, when the spring  $h^5$  will pass to the other side of said plate and contact therewith. In thus turning the arm H' the spring G of the clock mechanism will be tightened and the said mechanism put in operation, and it is apparent that as soon as the spring  $h^5$  is brought in contact with the plate I the electric circuit will be completed until the said spring is retracted to its normal position by means of the spring E, which also acts as a conductor. The current will pass from the arm  $D^2$  through the arm  $D^3$ , thence through the plate S, thence through the conductor  $s$  to the binding-post  $l$  of the circuit-breaker, thence through the frame C and the clock-work-frame G, and thence to the piece H' and through the spring  $h^5$  to the plate I, with which it contacts.

By drawing the pull-rod H forward the hand  $b$  will be turned so as to indicate on the dial-plate the force of the current, said hand being operated through the medium of the rack-bar  $h$ , shafts F and F', and their gearing.

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

The combination with the case, of an induction-coil and circuit-breaker therein, grips or handpieces on the casing and adapted to be brought into circuit with such coil, a clock mechanism located within the casing, a contact-plate secured near the clock mechanism, and having its upper end deflected, a piece fixed on the driving-shaft of the clock mechanism, and carrying a spring to contact with said plate, a coin-holder journaled on the casing, a crank on the shaft of the holder, a guide leading from the exterior of the casing to the coin-holder, a spring-actuated rod movably connected with the core of the coil and an indicating-dial whose hand is operatively connected with said core, substantially as described.

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Witnesses:

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