No. 641,309. Patented Jan. 16, 1900.

A. LINICK.

COIN CONTROLLED ELECTRIC BATTERY.

(Application filed Apr. 15, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 4

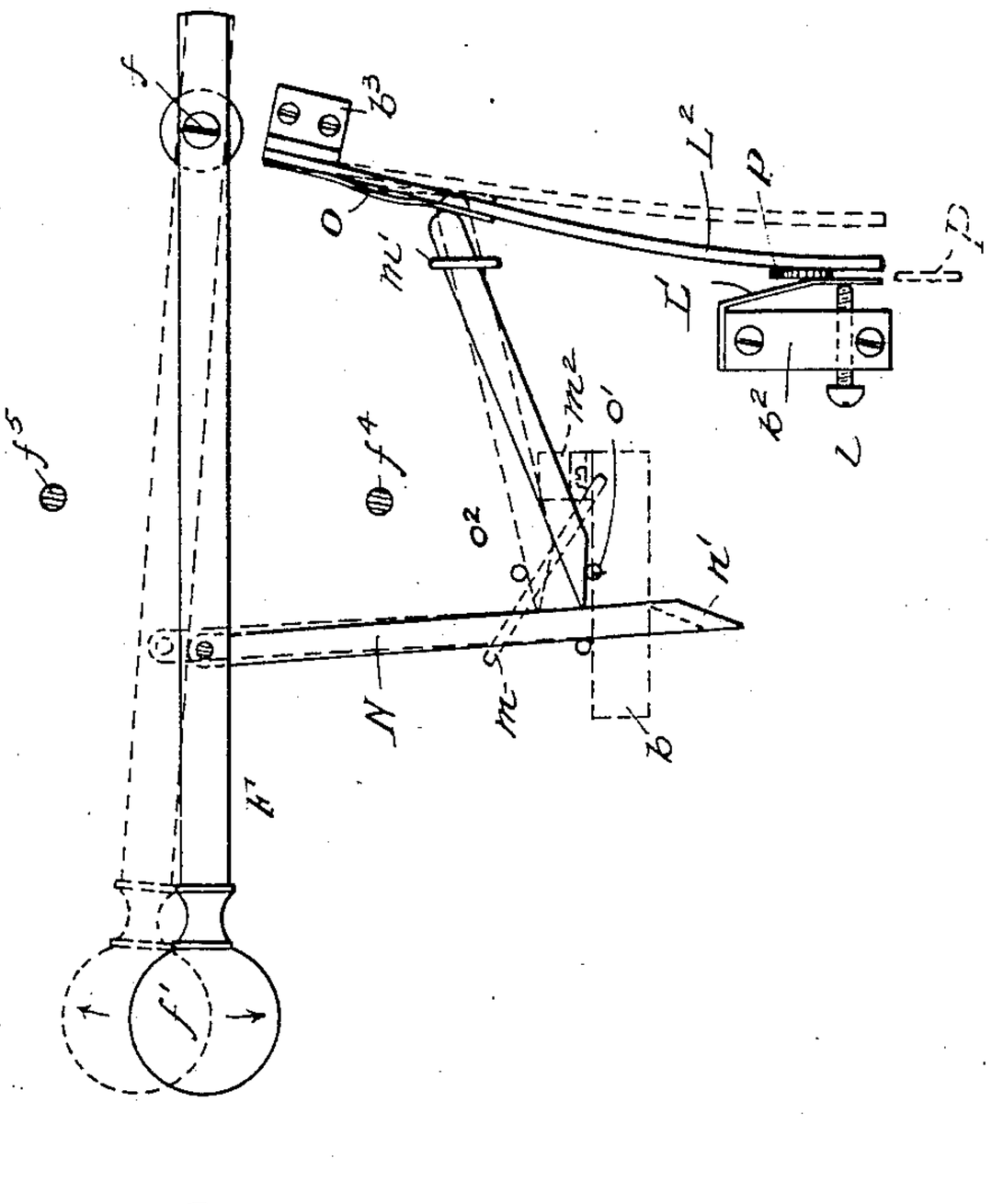
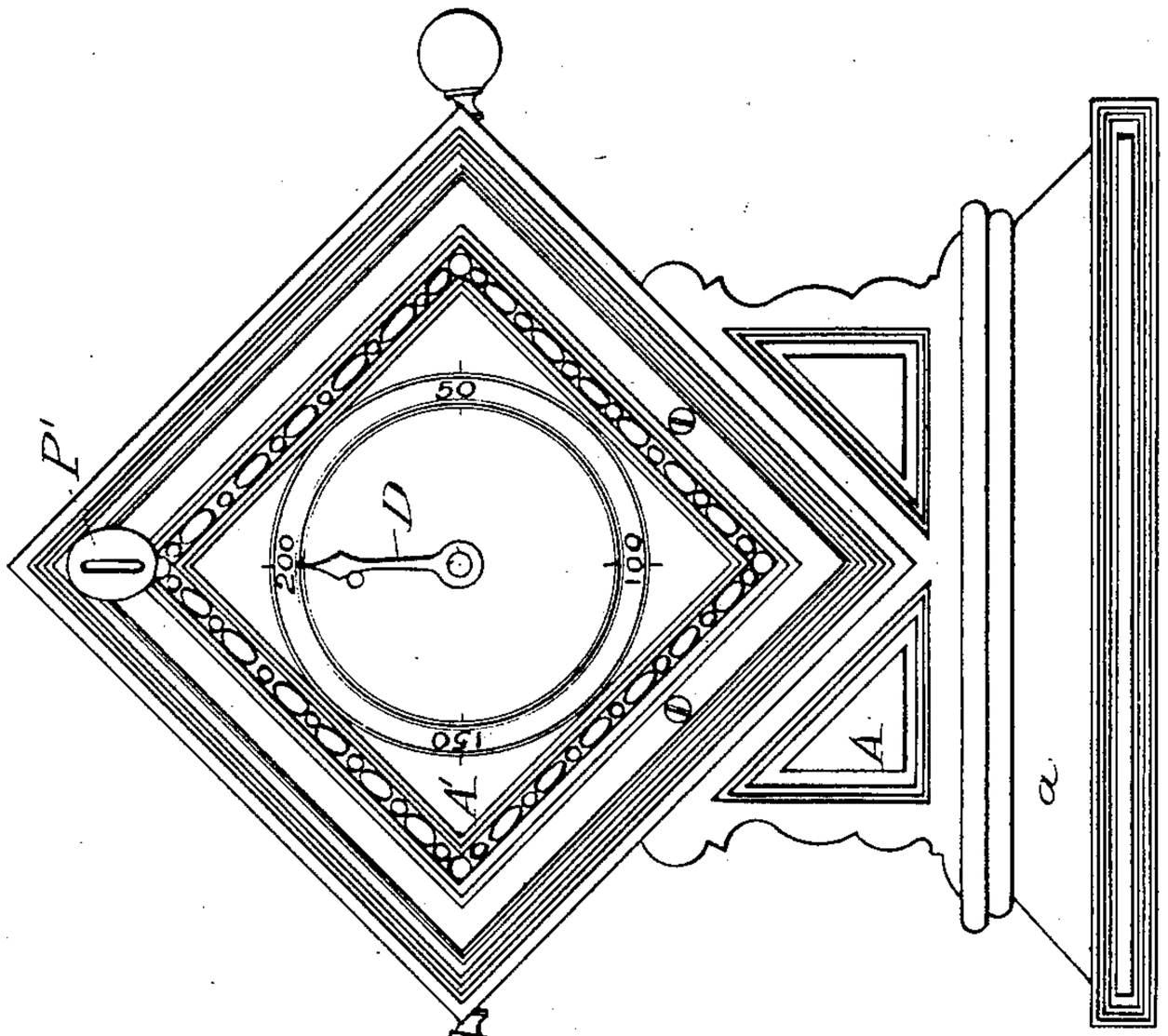


Fig. 1



Witnesses:
Geo. L. Goetz
Thomas P. Pemberton.

Inventor
Adolph Linick.
By his Atty., Wm. N. Rowe,

No. 641,309. Patented Jan. 16, 1900.

A. LINICK.

COIN CONTROLLED ELECTRIC BATTERY.

(Application filed Apr. 15, 1899.)

(No Model.) 2 Sheets—Sheet 2.

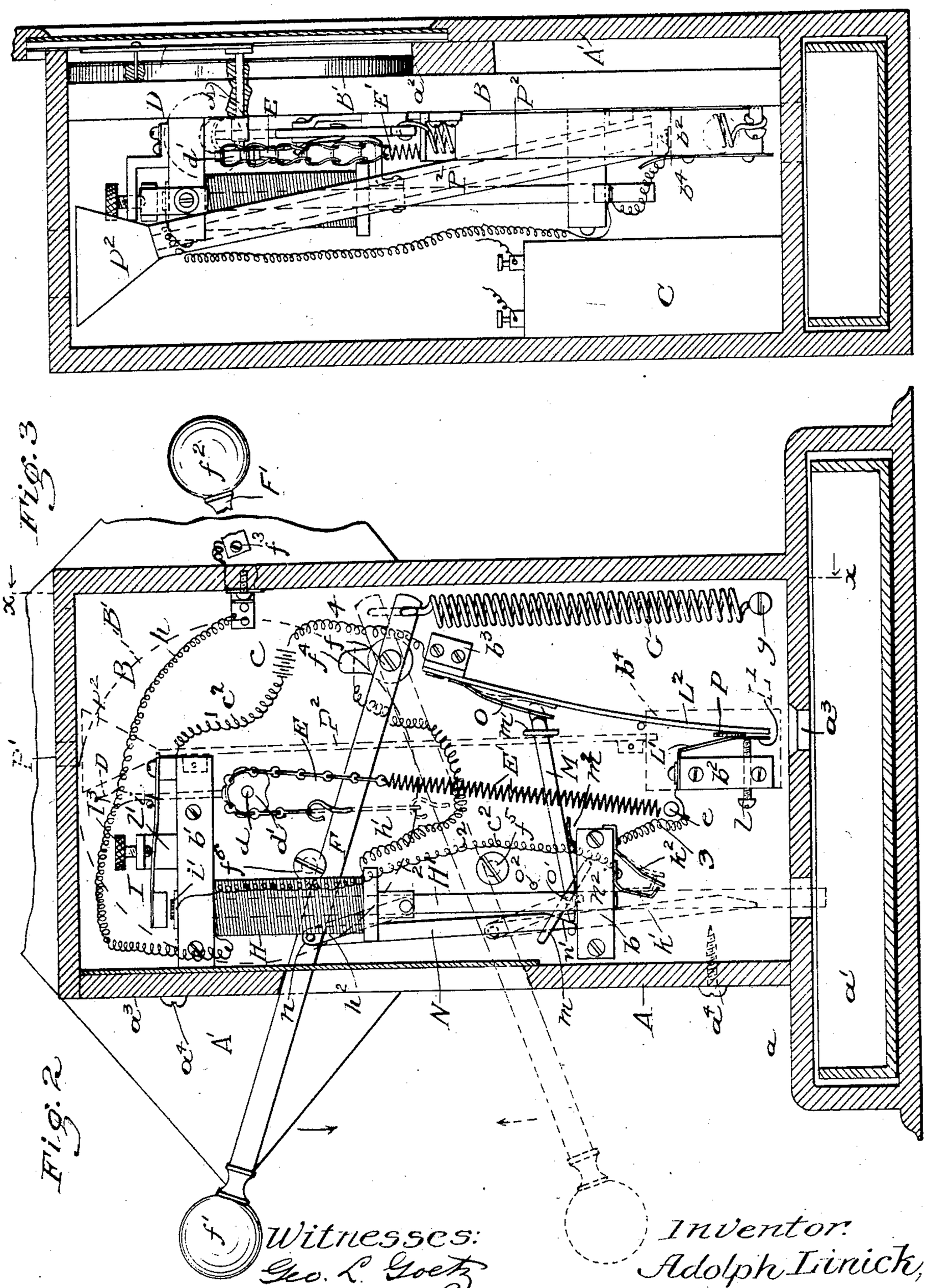


Fig. 3

Fig. 2

Witnesses:
Geo. L. Goetz
Thomas P. Pemberton.

Inventor:
Adolph Linick,
By his Atty:-
Wm. H. Rowe.

UNITED STATES PATENT OFFICE.

ADOLPH LINICK, OF CHICAGO, ILLINOIS.

COIN-CONTROLLED ELECTRIC BATTERY.

SPECIFICATION forming part of Letters Patent No. 641,309, dated January 16, 1900.

Application filed April 15, 1899. Serial No. 713,088. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH LINICK, 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 Electric Batteries, of which the following is a specification.

My invention relates to what is generally termed "coin-controlled medical batteries," designed to indicate the intensity of the current produced by the machine and transmitted to the operator, and thereby test the degree of current receivable by each person operating the machine.

The object of my invention is to provide certain simple novel mechanical means for directly fluctuating and controlling both the intensity and the duration of the current by the movement of one of the handles, to provide a simple and inexpensive machine for the purpose specified which will stand rough usage and not get out of order, to provide novel and reliable mechanical means for breaking the electric circuit the moment the operator yields his hold or pressure upon the handle of the machine, thus causing him to lose further control of the electric current until another coin is deposited in the machine, to provide simple means for supporting the mechanism and connecting it to the casing which will admit of the ready removal and replacement thereof for adjustment and repairs, and to provide features incidental to the said object and to certain other objects hereinafter appearing; and my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which said objects are attained, as will hereinafter appear with reference to the accompanying drawings and be more particularly pointed out in the specification.

In the drawings referred to, Figure 1 is a front elevation of my improved machine; Fig. 2, a sectional elevation thereof, with the casing broken away, viewing the back of the machine and showing the mechanical parts inclosed within the casing and in their normal position and showing the operating-handle and its parts by dotted lines in their depressed position; Fig. 3, a transverse vertical sectional elevation in line $x\,x$ of Fig. 2; and Fig. 4, a diagrammatic view of the operating-handle and certain connecting parts shown by full lines in a middle position while being depressed and holding the coin, the current being closed, and by dotted lines in the middle position released and the coin dropped, the current thereby being broken.

A rectangular casing A is supported on a base a, containing a money-drawer a', and carries a face-plate A', having a circular opening a^2 therein to receive a snugly-fitting dial-block B', supported upon and projecting from the face of a rectangular frame-board B, upon the back of which is secured the mechanism for handling the coin and for controlling the current, the said board and mechanism being thus readily applied to and removed from the casing, one side a^3 thereof being removably secured thereto by screws a^4, the mechanism and battery C, also contained within the casing, being thus inclosed and protected and easily accessible at all times.

The face-plate A' is graduated, and an index-needle D, secured to an arbor d, passing centrally through the dial-block B' and carrying a sprocket-pinion d' upon its inner end, is caused to traverse the face of the dial by means of a chain E passing over the sprocket-pinion d' and connected at one end to a spiral spring E' and at the other end to the vibrating lever F, the said spring and lever each being supported upon the frame-board B, a pin e connecting the end of the spring to the board and a pivot-pin f supporting the lever F near the end thereof upon the board, the short end of said lever nearest the pivot-pin being connected to one end of the spiral spring G, secured by screw g to the frame-board, and the longer end of said lever being fitted with a ball f' or other suitable handle by means of which the lever may be vibrated and the index-needle moved around the dial.

A fixed handle F' and a ball f^2 are secured by screw f^3 to the frame-board and is connected by secondary wire h to an induction-coil H, a secondary wire h' also being connected to the vibratory handle-lever F near its pivot-pin f by a contact-plate f^4 and to the induction-coil, thus conducting the current from the coil through both of the handles to the operator. Primary or battery wires c^2 are intercepted or broken by spring contact-plates k' k^2, each secured at one end to the

under side of frame-block *b* and operated upon and brought together at their free ends by the shield-stem H′ of the induction-coil and also intercepted by the coin-holding contact-plates L′ L², which together receive and hold the coin at all times unless pressed apart by a novel means (hereinafter described) when acted upon by the return or release movement of the vibratory handle.

The induction-coil H and contact-breaker I are both supported upon a block *b′*, secured by screws to the frame-board B, and an L-plate *l′*, secured to the block *b′*, carries an adjusting-screw I³, which bears against the upper side of the contact-breaker and limits the length of its vibration in a well-known manner. The shield-stem H′ of the induction-coil is supported to reciprocate in the bearing-block *b*, secured to the frame-board, and is connected by link *h²* with the lever F, thus to reciprocate the shield by the vibratory movement of said lever, and thus expose more or less of the induction-coil in a well-known manner, the arc of movement of the lever being limited by stop-pins *f⁵ f⁶*, screwed into the frame-board. The coin-holding spring-plate L′ is supported upon a block *b²*, secured at one end to the frame-board B, and is adjusted at the other end by screw *l*, turning in the said blocks *b²* to press against the free end of the spring-plate L′, and thus control the distance maintained between the said plate and the spring-release contact-plate L² to suit the size of the coin. The plate L² is supported upon and pendent from a block *b³* of the frame-board, its free end being thus held opposite to the spring-plate L′ and adapted to be pushed away therefrom in a novel manner to drop the coin from between them by means of a push-bar M, supported by staples *m* and *m′* to move endwise with a tilting motion against the back of the frame-board, a push-finger N, pivoted at its upper end to the lever F at *n*, having a wedge end *n′* and supported at its lower end by staple *m*, which also supports the adjacent ends of the push-bar M, the latter being moved endwise by the vertical movement of the finger N in a manner as follows: When the lever F is in its normal or raised position, as shown by full lines in Fig. 2, the push-bar M will be supported at one end in the staple *m′* to rest against a relief-spring O, secured to the block *b³*, which supports the pendulous release contact-plate L², the said finger-bar being supported at the other end to rest upon a lower stop-pin *o′* in the frame-board and also to cross the staple *m* and bear against the point of the wedge *n′* upon the lower end thereof. The lever and push-finger may be pressed down to the full length of their movement, as shown by dotted lines in Fig. 2, or to any intermediate point only, as shown by full lines in diagram Fig. 4, the wedge *n′* and continued downward movement of the push-finger serving simply to move the push-bar endwise only while the latter rests upon the lower stop-pin *o′* of the frame-board, the said endwise movement of the push-bar simply acting upon the relief-spring O to compress it against the release contact-plate L² without moving the latter. When, however, the lever F is released and allowed to move upward, it carries with it the vibratory end of the push-bar M until the latter strikes the stop-pin *o²*, which prevents the said bar from being lifted beyond its operating limits. The upward movement of the vibratory end of the push-bar by contact with the finger N will move with said push-bar endwise beyond the limit of movement of the relief-spring O and press against the release contact-plate L² and move the free end thereof a sufficient distance, as shown by dotted lines, Fig. 4, to release the coin and allow it to drop from between the plates L′ L² and open the primary or battery circuit.

A spring-plate *m²* is secured to the block *b* of the frame and presses beneath the vibratory end of the push-bar M and is of sufficient strength to quickly lift the said end of the push-bar when the latter is not acted upon by the downward action of the finger N, and will also act during the slightest upward movement of said finger, which will be more readily lifted thereby to produce an endwise movement thereof, and thus quickly open or move the contact-plate L² to drop the coin and break the battery-circuit.

The battery-circuit as above described passes from the battery C, over the wire 1, the contact-breaker *i*, and thence through screw I³ and arm *l′* to the primary wire of the coil. A wire 2 connects the other end of the winding-wire of the induction-coil with the spring contact-plate *k′*, and a wire 3 connects the opposing plate K² with the coin-holding contact-plate L′, the opposite coin-holding contact-plate L² being connected by wire 4 to the other pole of the battery, thus establishing a complete primary circuit in the induction-coil when the contact-plates K′ K² and L′ and L² are brought together.

The coin P is conducted from the slot P′ at the casing to a spout P² and to a narrow space between the plates L′ L² and between the frame-board B and a plate *b⁴*, fastened to the opposite side of the block *b²*, thus making contact between the plates to close the circuits, the coin when released from the contact-plate being dropped through an aperture *a³* of the base into the money-drawer, thus breaking the circuit. It will be apparent that when the coin is inserted in the coin-spout it will drop between the contact-plates L′ L² and close the primary circuit, except at the interval between contact-plates *k′ k²*. A slight downward pressure upon the vibratory handle causes the shield-stem to completely close the primary circuit by pressing the contact-plate *k′* against the contact-plate *k²* and holds the circuit closed, thus establishing

through the induction-coil a secondary circuit in a well-known manner, which is conducted to the operator through the handles.

No clockwork is employed, and should there be any repairs needed the working parts, being all attached to the back board, may be readily removed from the casing and, if need be, sent to the factory or shop for such purpose. Only two springs are employed in the construction described—namely, one for operating the hand-lever and the other for operating the index-hand—and as both are spiral springs they are inexpensive and not liable to get out of order.

The machine may in a moment be set to be in a condition to operate either by the insertion of a nickel or a penny or any other coin, the adjustment being readily made by the means hereinbefore described. The handle F′ may be pivoted to the frame or made movable in a suitable manner instead of being fixed to the frame, if desired.

I claim as my invention and desire to secure by Letters Patent—

1. In a coin-controlled electric battery the combination of the frame with the electrode-handle supported thereon and connected with one end of the circuit, an induction-coil, a movable shield therein, a vibratory lever adapted to operate said shield and connected with the other end of the electric circuit and a coin-holding contact-plate operated by the vibrating lever, substantially as described.

2. In a coin-controlled electric battery the combination with the frame and casing, of the electrode-handle supported thereon and connected to one end of a circuit, an induction-coil and a movable shield therein, a vibratory lever connected with the other end of said circuit and shield to operate it, a spiral spring for holding the lever in its normal position and a coin-holding contact-plate in the electric circuit operated upon by the vibratory lever, substantially as described.

3. In a coin-controlled electric battery the combination with the frame and casing, of the electrode-handle supported thereon and connected to one end of a circuit, an induction-coil and movable shield therein, a vibratory lever connected with the other end of said circuit and shield to operate it and a spiral spring for holding the lever in its normal position, an index operated by said lever, and a coin-holding contact-plate in the electric circuit operated upon by the vibratory lever, substantially as described.

4. In a coin-controlled electric battery the combination with the frame and casing, of the handle supported thereon and connected with one end of the circuit, an induction-coil, a movable shield therein, an operating-lever connected with the other end of said circuit and connected to the shield to operate it, an index-shaft and a pinion thereon and a flexible connection secured to the lever and passing over the pinion, a spiral spring connected to the ends of said flexible connection and to the frame, and a coin-holding contact-plate in the electric circuit operated upon by the operating-lever, substantially as described.

5. In a coin-controlled electric battery, the combination with the frame and casing, of the handles connected to a battery-circuit and connected to said circuit, an induction-coil, a battery connected therewith, contact-plates located in said battery-circuit, a shield movable in the induction-coil and adapted to operate the cut-out to open and close the battery-circuit, and a coin-holding contact-plate in the electric circuit operated upon by one of the handles, substantially as described.

6. In a coin-controlled electric battery the combination with the frame and casing of an electrode and an operating-handle, an induction-coil, a battery-circuit, a circuit-breaker and coin-holding contact-plates operated upon by the handle to release the coin and break the battery-circuit, substantially as described.

7. In a coin-controlled electric battery, the combination with the frame and casing, of an electrode, an operating electrode-handle, an electric circuit connecting the same, coin-holding contact-plates located in said circuit, an adjustable set-screw to regulate the distance between said contact-plates, and a push-bar operated by the electrode-handle to separate said plates and release the coin, substantially as described.

8. In a coin-controlled electric battery, the combination with the frame and casing, of the electrode, the vibratory electrode-lever pivoted to the casing, the battery-circuit, the induction-coil and secondary circuit, a vibratory coin-holding contact-plate, a finger operated by the said lever and a push-bar operated by the finger to actuate the coin-holding plate, substantially as described.

ADOLPH LINICK.

Witnesses:
WM. H. ROWE,
ISAAC S. DYER.