No. 712,781. Patented Nov. 4, 1902.

F. DUWE.

COIN CONTROLLED ELECTRIC BATTERY.

(Application filed Aug. 6, 1901.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

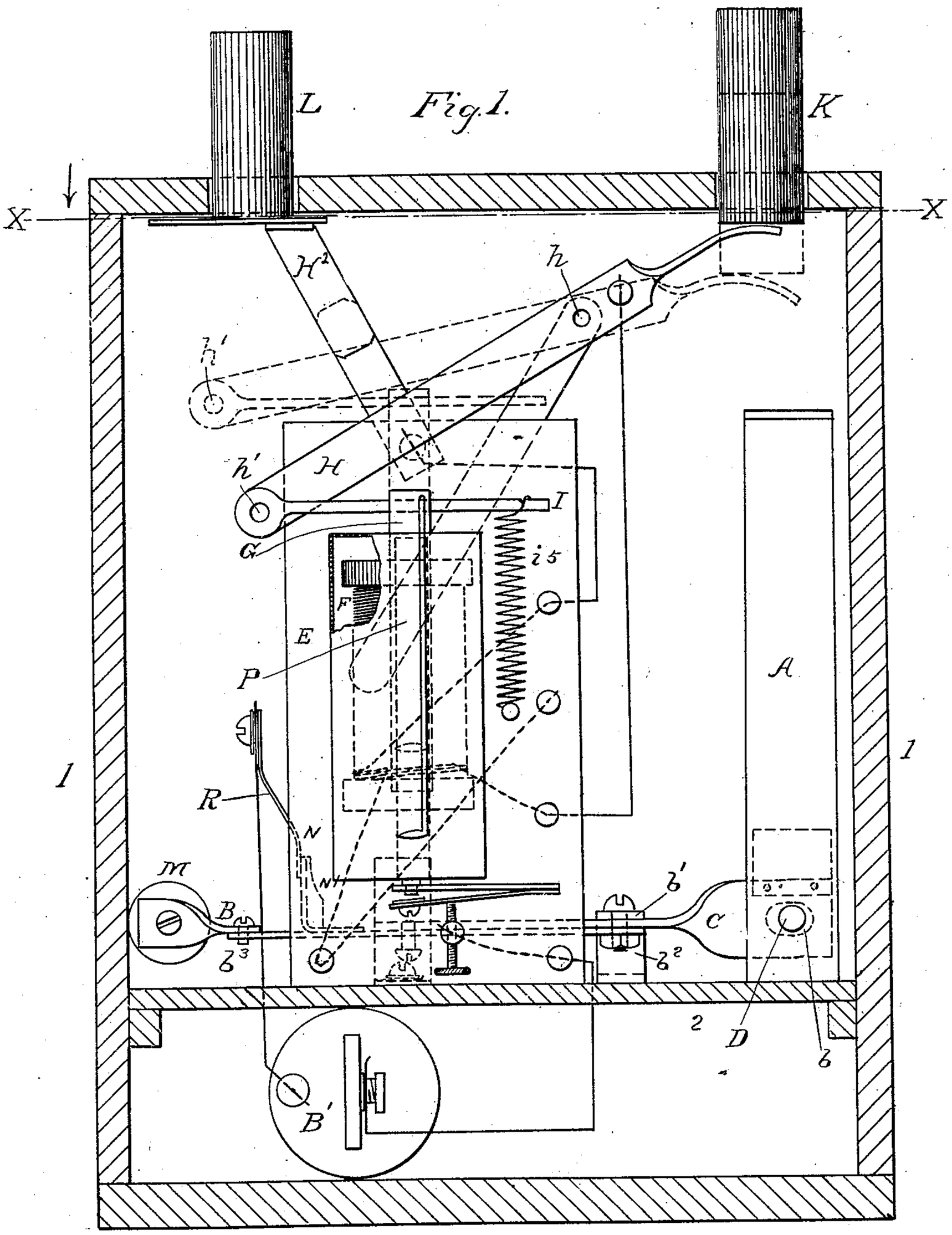

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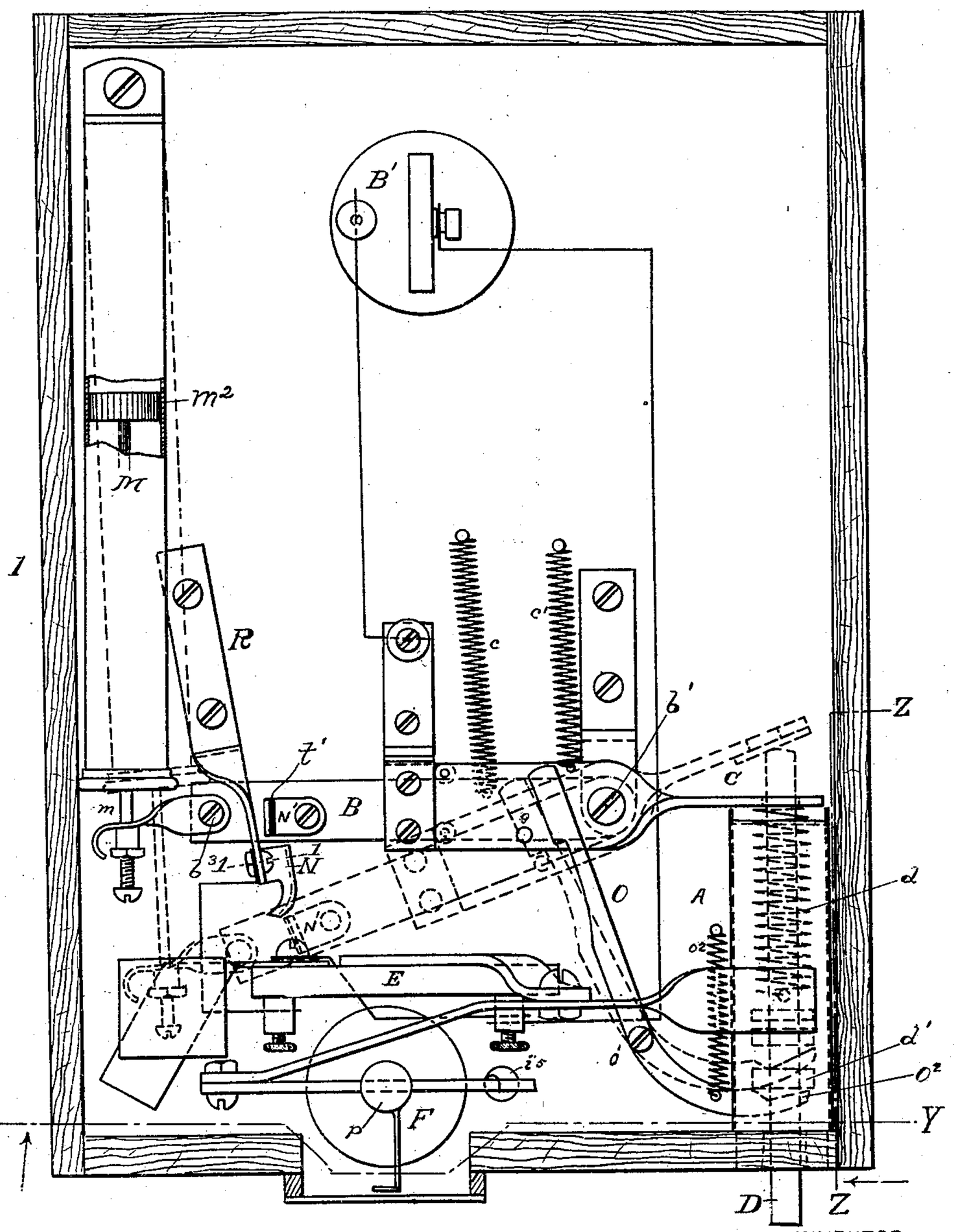
Fig. 2.



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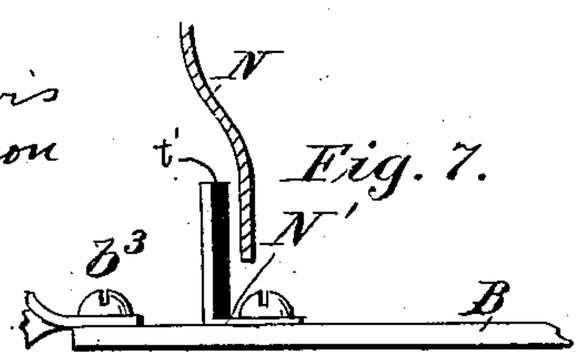

Fig. 7.

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(No Model.) 3 Sheets—Sheet 3.

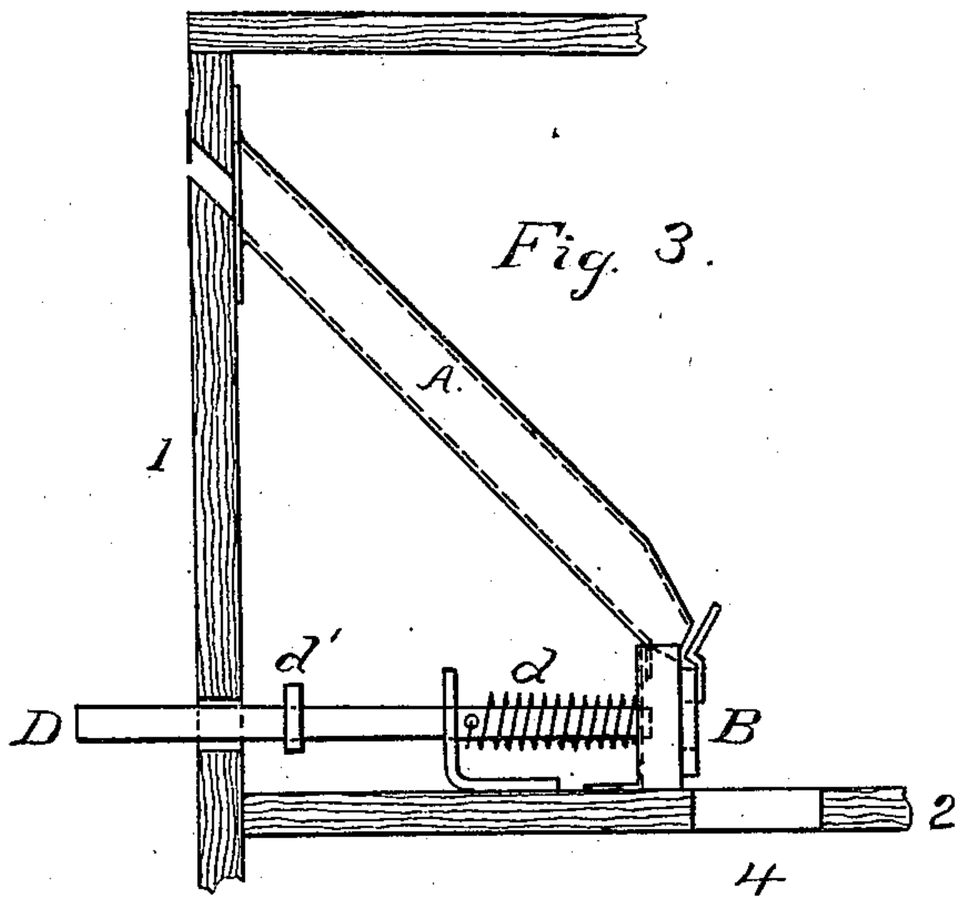

Fig. 3.

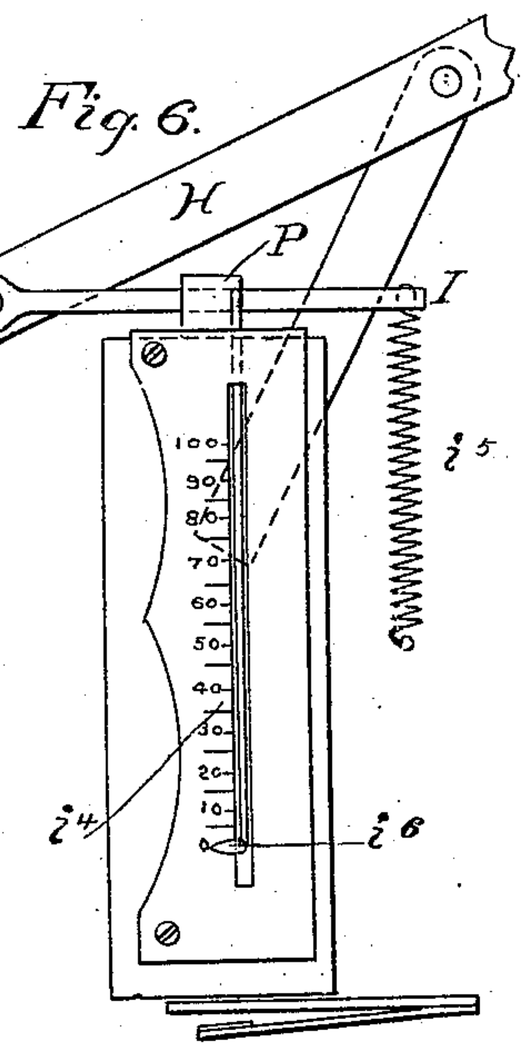

Fig. 6.

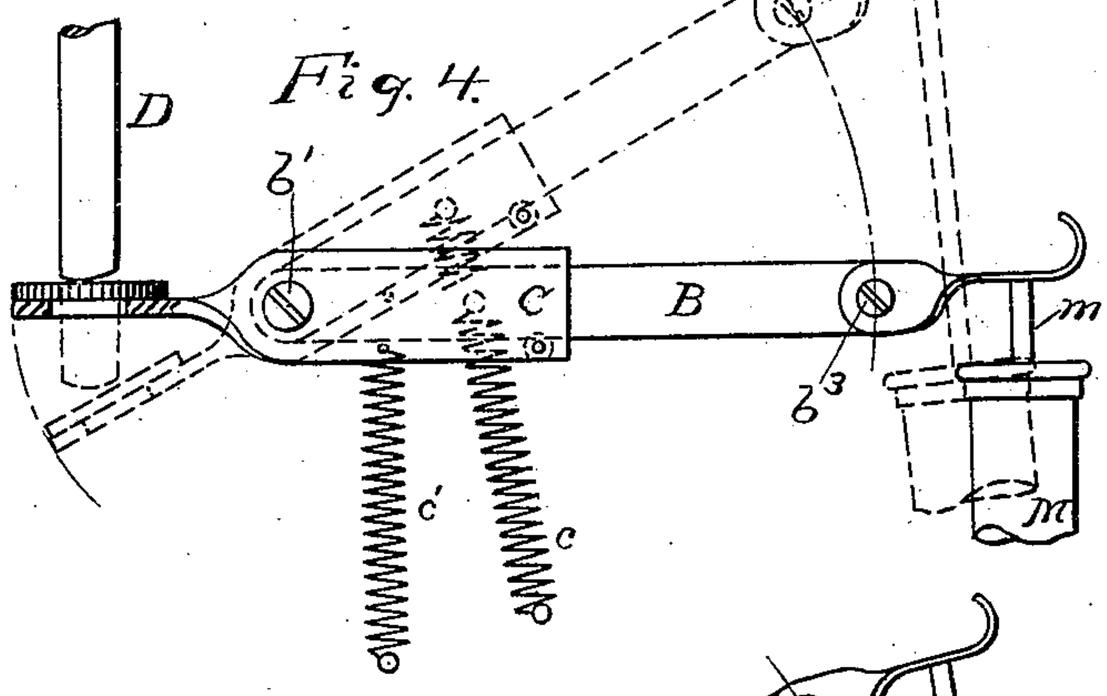

Fig. 4.

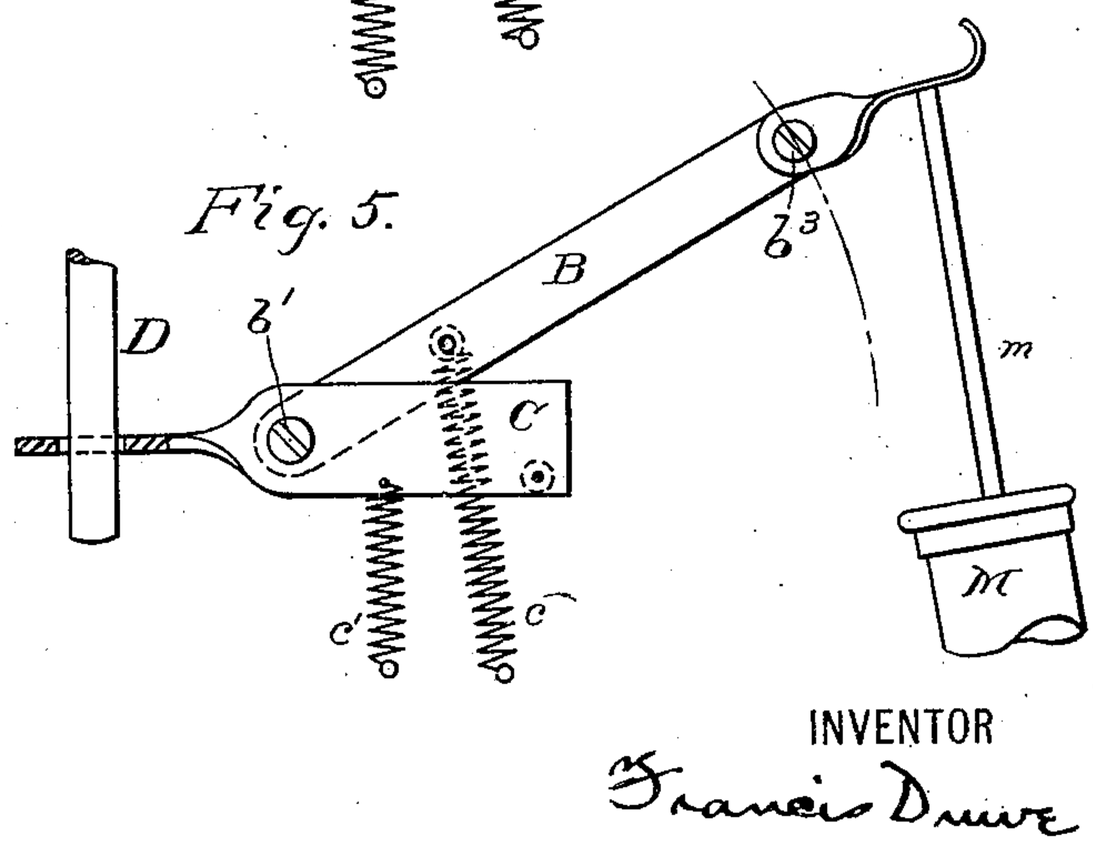

Fig. 5.

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UNITED STATES PATENT OFFICE.

FRANCIS DUWE, OF NEW YORK, N. Y.

COIN-CONTROLLED ELECTRIC BATTERY.

SPECIFICATION forming part of Letters Patent No. 712,781, dated November 4, 1902.

Application filed August 6, 1901. Serial No. 71,025. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS DUWE, a citizen of the United States, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Coin-Controlled Electric Batteries, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar characters of reference indicate corresponding parts.

This invention relates to coin-controlled electric batteries.

The object of the invention is to produce a coin-controlled electric battery which may be used to try the strength of the nerves of the operator and for divers similar purposes.

The nature of the invention will be fully understood from the following general description and the annexed drawings and will be subsequently pointed out in the claims.

Figure 1 of the accompanying drawings is a vertical sectional view taken on the line *y y* of Fig. 2. Fig. 2 is a horizontal sectional view showing some of the parts, taken on the line *x x* of Fig. 1. Fig. 3 is a detail view showing some of the parts, taken on the line *z z* of Fig. 2. Figs. 4, 5, and 6 are views of details more fully hereinafter described. Fig. 7 is a detail sectional view taken on the line 1 1 of Fig. 2.

The whole device is inclosed in a case or box, as 1, which may be of wood or any other suitable material. In this case near the bottom is a horizontal partition, as 2. The wide post E is fastened upright in the upper compartment, near the back of the case, and extends upward from the partition 2 toward the top of the case.

B′ designates the battery, which may be of any approved construction and is located within the case, as illustrated.

Upon the upright post E is fastened the solenoid F, in which moves the armature-core P. This core P is moved by the levers H and I. The lever H is pivoted to a fixed bearing at *h* and, upholding the movable cylindrical pole K with one end, is pivoted to the lever I at *h′*. The middle part of the lever I is attached to the core P of the solenoid F. The spring i^5 holds these parts in normal position. The cylindrical pole L is stationary, with its lower end in electrical connection with the bar H^2. These poles, levers, and bar are so connected as to form part of an electric circuit, as hereinafter more fully described. As the cylindrical pole K depresses the end of the lever H, which is pivoted at *h*, the core is raised upward out of the solenoid. As soon as pressure on the cylinder is relaxed the spring *i* draws the core down again.

A designates a coin-chute which when a coin is deposited in it conducts such coin down to opposite the opening *b* in the lever C. This lever C is pivoted on the stationary bracket b^2 at *b′*. The lever B is also pivoted on this bracket b^2 at *b′*. The lever B, which is overlapped by the lever C, extends to the cylinder M and is connected with the piston-rod *m* of this cylinder. This cylinder M, which is horizontally located in the said case 1 near the partition 2, is nearly air-tight and in it is an air-tight piston m^2, which is moved by the rod *m* and the lever B. To facilitate this there is a pivot-joint at b^3 in this lever.

The hook-lever O is pivoted at *o′* to a stationary bearing. It is formed at one end with a catch o^5, which is adapted and arranged to engage the pin *o* on the lever C. The other end of this lever O, which is bent as illustrated, extends to the bar D and is arranged to be engaged by the collar *d′* of the said bar D. This lever is held in normal position by the spring o^2. The spring *c′* holds the lever C in normal position, and the spring *c* holds the lever B in normal position, as will be more fully hereinafter described.

On the lever B is fastened a bracket N′. This bracket is formed of a plate of conducting material bent at right angles through the middle, so that when so fastened on the said lever one part of said bracket will extend upward from said lever at right angles thereto. Upon one side of this extension is fixed a surface *t′* of non-conducting material. On the other side thereof the conducting material is left uncovered. R designates a hanger, which is fixed on a stationary support in the said case a little above the line of motion of the said lever B. Upon this hanger is fixed the plate N, which depends downward, across, and nearly into the line of motion of the said lever B. This is a resilient plate. It is so bent and arranged that when the lever B

moves in one direction the non-conducting side t' of the extension of the bracket N′ will slide along against the said plate; but when the said lever moves in the opposite direction the conducting side of the bracket extension will slide along in contact with the said plate N. This part of the device, which has proper electric connections, operates as a circuit-closer, all of which will be more fully hereinafter described.

D designates a sliding bar, which is located in the case so that one end rests near the lever C, directly opposite the opening *b*. This bar is of such size that it could be pushed through the said opening without moving the lever. On this bar is formed a collar d' to act upon the hook-lever O. There is a spring *d*, arranged to hold this bar in normal position, and the end of the bar extends outside of the case.

At the top of the case and extending above it are located the movable cylindrical pole K, already described, and the stationary cylindrical pole L. These two cylindrical poles K and L are electrically connected with the battery B′ by a circuit composed in part of parts of the mechanism and in part by electric conduits connecting said parts and connecting said cylinders therewith, as is illustrated in the drawings.

In order to show the strength of the electric current and the position of the core P in the solenoid F, a scale (designated by i^4) is fastened on the solenoid parallel to the line of motion of said core P, so that as the pole K is moved and by its connections, as hereinbefore described, moves the core an index-point i^6, attached to the said core, moves therewith on the said scale, giving the proper indications. In the example of my invention here given a slot is cut in the scale-plate, through which the index-point extends over the graduations of the scale. This may, however, be accomplished in any other convenient and available way, and the index-point may be attached to the core in any approved and available way.

When a coin has been deposited in the upper end of the coin-chute A, it slides down and stops directly behind the opening *b* of the lever C. The electric circuit is not now closed, because there is no contact between the parts N and N′. As soon as the operator pushes in the slide D it presses on the coin and carries forward the end of the lever C. This also moves the lever B into the position illustrated in dotted lines. While this is being done the non-conducting side of the bracket N′ passes the plate N, the piston is drawn forward in the cylinder M, and the hook-lever O engages the pin *o* of the lever C and temporarily holds said lever in that position. As soon as the pressure is removed from the slide D by reason of the resilience of the spring *d* it quickly returns to its normal position, the coin drops through the hole 4 into a proper receptacle, and the collar d', engaging the end of the hook-lever O, releases it from the pin *o*. As soon as the hook-lever releases the pin the lever C is drawn by the spring c' quickly to its normal position; but on account of the resistance of the air in the cylinder M the lever B, drawn by the spring *c*, returns to its normal position slowly. This motion of the lever B carries the conducting side of the bracket N′ over the face of the plate N and closes the circuit, so that if at any time while these two parts are so passing each other the operator grasps the cylindrical poles K and L one in each hand he will receive an electric current which will pass through his body from hand to hand. The strength of the current may be varied by raising or depressing the cylindrical pole K, which draws, as before described, the armature P upward and downward in the solenoid F. When the lever B has returned so near to its normal position that the parts N and N′ are no longer in contact, the action ceases. The action may be renewed as often as may be desired by putting in another coin each time and performing the operation before described.

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

1. The combination with a chute to conduct coins; a pivoted lever to receive such coins; a spring holding said lever in normal position; a sliding bar to move said lever and release said coins; a spring holding said bar in normal position; a hook-lever adapted to engage a pin on said coin-receiving lever, and temporarily hold said coin-receiving lever; a spring holding said hook-lever in normal position; a circuit-closing lever moved by said coin-receiving lever; a spring holding said circuit-closing lever in normal position; a circuit-closer operated by said circuit-closing lever; an air-cylinder; a piston and piston-rod arranged in connection therewith to retard the return motion of said circuit-closing lever; and cause it to move slowly; of cylindrical poles adapted to convey an electric current into the human body; a solenoid; a movable core within said solenoid; lever and spring mechanism, connecting said core with one of said poles, so that when said pole is moved said core will be moved in said solenoid, to vary the strength of said current; an electric battery; and electrical conductors connecting said parts with each other and with said battery; all substantially as and for the purpose set forth.

2. The combination with a chute to conduct coins; a pivoted lever formed with a pin and adapted to receive such coins; a spring holding said lever in normal position; a sliding bar formed with a collar, and adapted to move said lever and release said coins, a hook-lever adapted to engage said pin, temporarily hold said coin-receiving lever, and to be released by engagement with the said collar of said sliding bar; a spring holding said hook-lever in normal position; a circuit-closing lever,

moved by said coin-receiving lever; a spring holding said circuit-closing lever in normal position, and a circuit-closer operated by said circuit-closing lever; of cylindrical poles adapted to convey an electric current into the human body; a solenoid; a movable core within said solenoid; a scale upon said solenoid; an index-point attached to and moving with said core, and moving on said scale; lever and spring mechanism connecting said core within one of said poles, so that when said pole is moved, said core will be moved in said solenoid; an electric battery; and electric conductors, connecting said parts with each other, and with said battery; all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 20th day of July, 1901.

FRANCIS DUWE.

Witnesses:
DAVID MORRIS,
BELLE PATERSON.