

P. EVERITT.

COIN OPERATED ELECTRICAL APPARATUS.

No. 386,919.

Patented July 31, 1888.

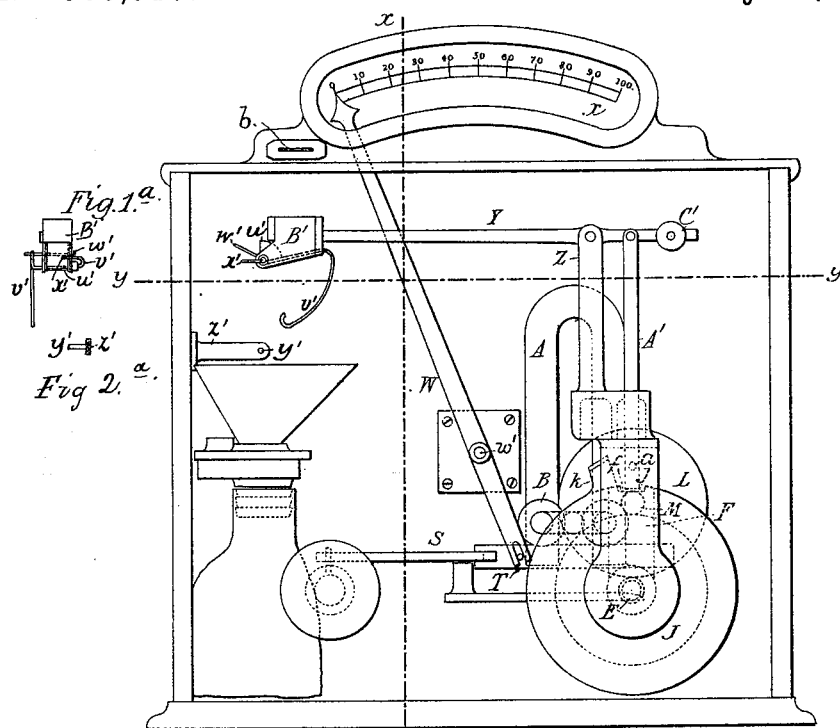


Fig. 1.

Fig. 2.

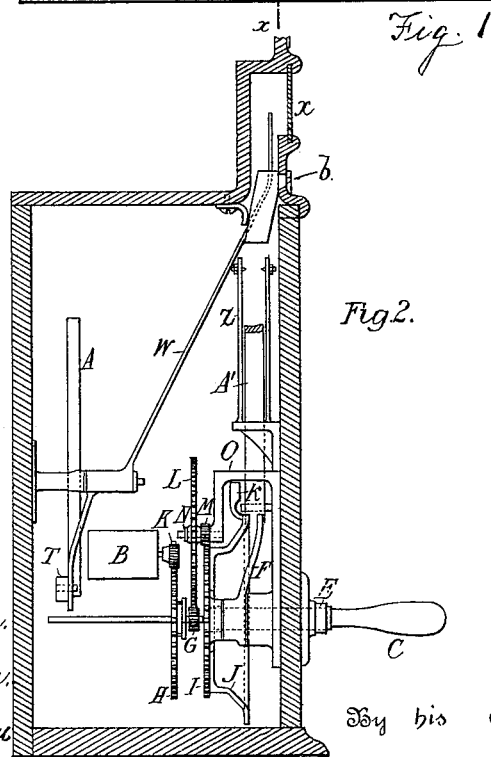


Fig. 2.

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By his Attorneys

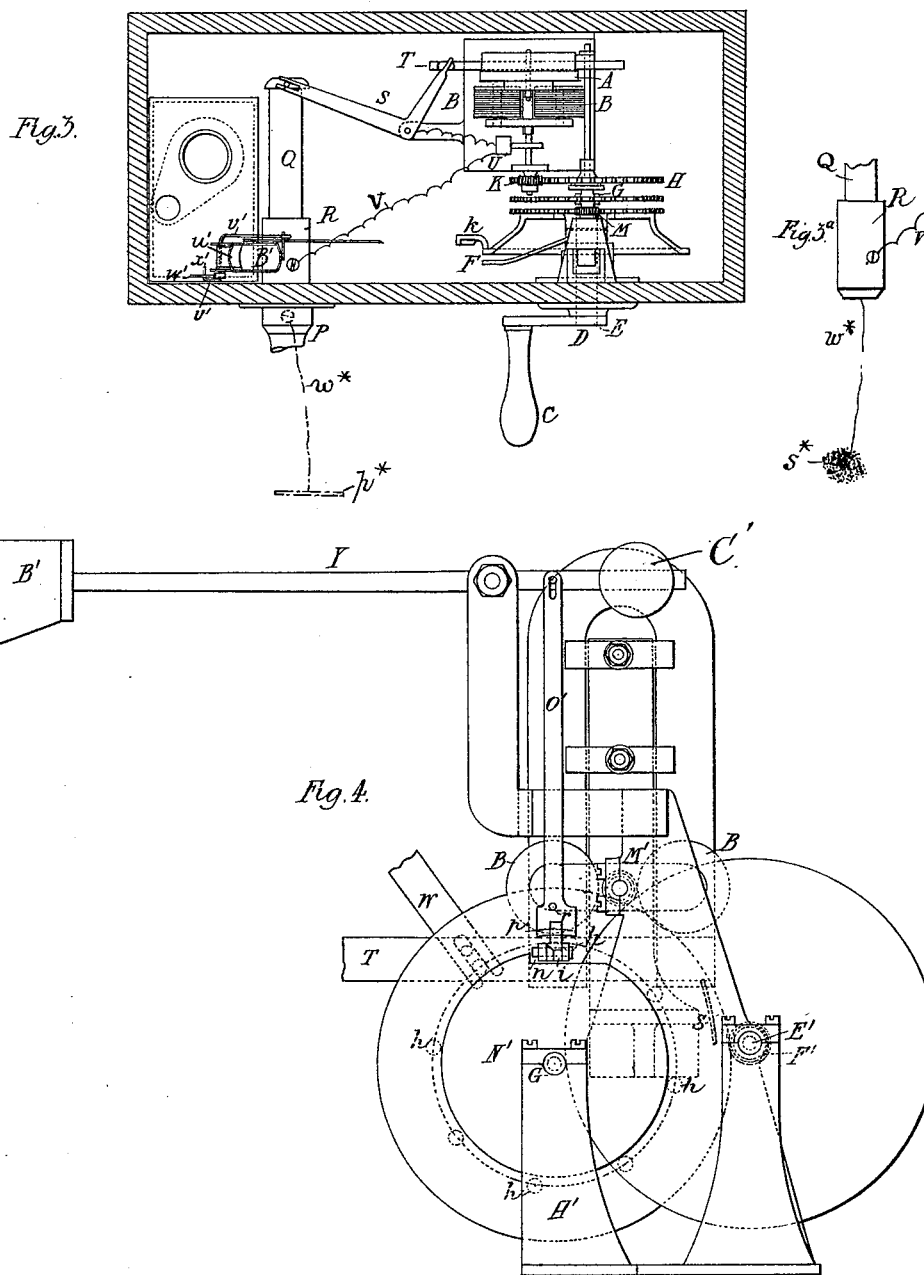
John J. Halsted & Son.

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(No Model.)

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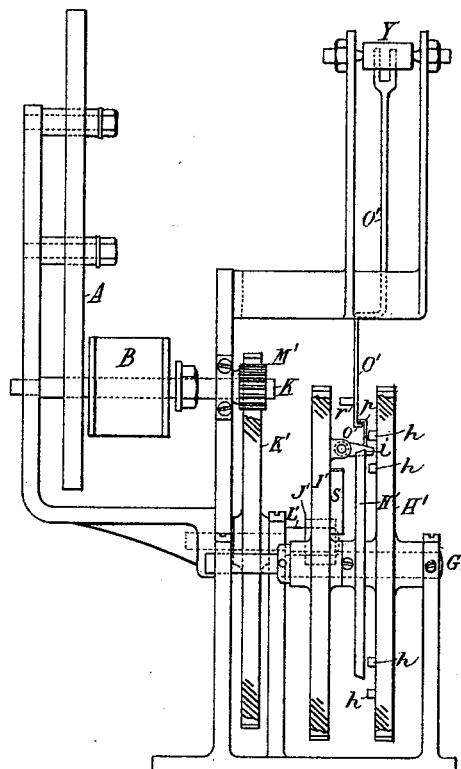
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Fig. 5.



Witnesses

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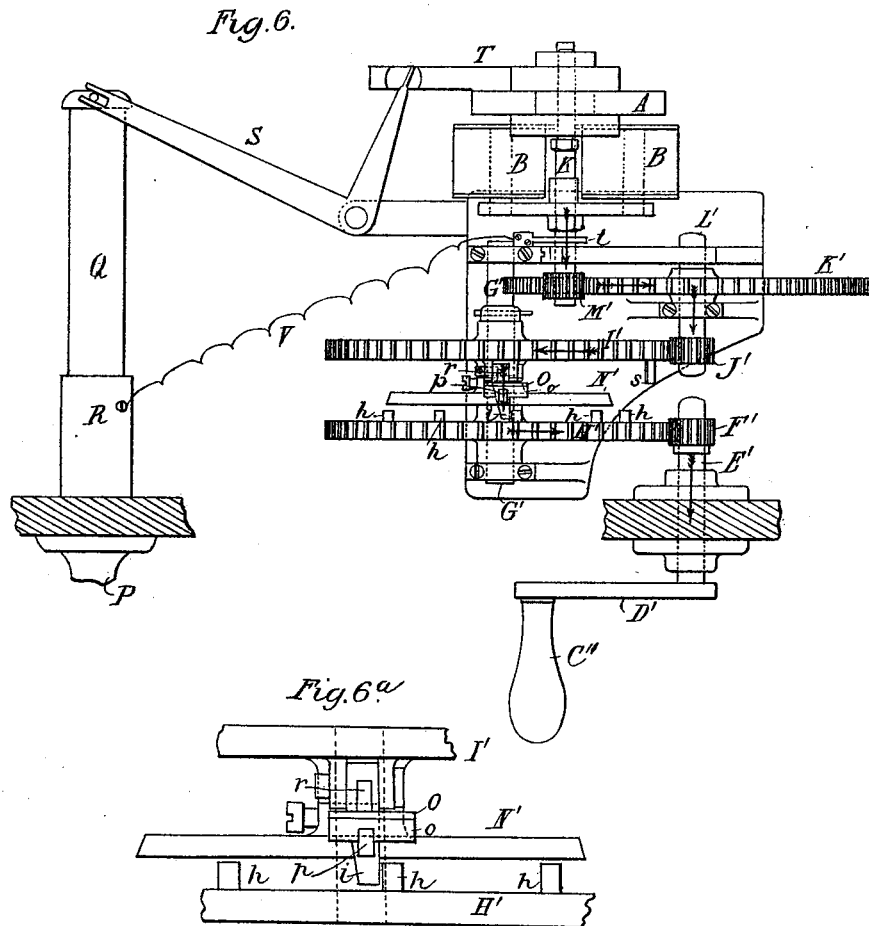
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# UNITED STATES PATENT OFFICE.

PERCIVAL EVERITT, OF LONDON, ENGLAND.

## COIN-OPERATED ELECTRICAL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 336,919, dated July 31, 1888.

Application filed February 4, 1888. Serial No. 263,002. (No model.)

*To all whom it may concern:*

Be it known that I, PERCIVAL EVERITT, a subject of the Queen of Great Britain, residing at London, England, have invented certain new and useful Improvements in Coin - Operated Electrical Apparatus; 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 drawings, and to letters of reference marked thereon, which form a part of this specification.

Among the different kinds of electric machines heretofore in use are the following: magneto-electric machines in which the electric current has been generated by the revolution of a coil of wire in close proximity to the magnet by means of a crank, and having two metallic handles, one of which is connected to the positive wire and the other to the negative wire of the machine. A great disadvantage of this construction is that the person to whom the shock is to be given cannot operate the machine to produce the shock, as both of his hands will be engaged in holding the two handles and another person will be required to turn the crank to generate the current.

Another kind of electric machine is that in which the current is generated by means of the weight of a person standing on a movable platform. The disadvantage of this construction is that it is very expensive, as considerable mechanism is required to put the machine in operation to produce the current.

Still another kind of electric machine is that which produces the current by means of a battery; but this form also has its disadvantages, as the battery becomes weaker and weaker by time and use and the chemicals require to be constantly renewed.

By my present invention all of the forenamed disadvantages are overcome; and it consists, generally, of a magneto-electric machine in which the electric circuit is completed through the handle which produces the current. Such a construction requires much less mechanism than is needed in the foot or platform machine, it does not grow weaker and weaker nor require renewal of its parts, as in the battery-machine, and it allows the person

who is to receive the shock to operate the machine himself, which the above-named construction, having a crank and two separate handles, will not allow.

Two illustrations of the manner in which my invention may be practiced are given below, and in the accompanying drawings, Figure 1 is front elevation of one form of machine, by which my invention may be practiced, having the front plate of the case removed. Fig. 1<sup>a</sup> shows detached views of the bucket and its coin-releasing devices. Fig. 2 is a transverse vertical section of the same through line *x x* of Fig. 1, and Fig. 2<sup>a</sup> a cross-section through the bracket and showing its pin which assists in releasing the coin from the bucket. Fig. 3 is a horizontal section through the line *y y* of Fig. 1, Fig. 3<sup>a</sup> a detail. Fig. 4 is an elevation of the working mechanism of another form of machine by which my invention may be practiced. Fig. 5 is an end view, and Fig. 6 is a plan view, of the same; Fig. 6<sup>a</sup>, a detail enlarged of a part of Fig. 6.

Referring to Figs. 1, 2, and 3, A is the permanent magnet; B B, the revolving coils or electro-magnets, the rotating of which in proximity to the poles of the permanent magnet generates the electric current.

C is a handle connected to a crank, D, for revolving the electro-magnets through intermediate gearing, and through which the current is adapted to pass from the electro-magnets to the metallic handle C.

E is the driving-shaft, which is adapted to be operated by the crank D, and attached to said shaft are the arm F, pinion G, and gear H. Loosely hung upon said shaft E, between arm F and pinion G, is a gear, I, to one side of which is secured a drum, J. The gear H engages with the pinion K, which drives the electro-magnets. The pinion G engages with gear L, to which is secured a pinion, M, which engages with the gear I, said gear L and pinion M running loosely on a stud, N, secured to the ratchet O. The revolution of the shaft E by means of the crank D rotates the arm F, the pinion G, and gear H. In the free end of the arm F is a notch, *f*, and in the periphery of the drum J is a corresponding notch, *j*, and adjacent to said notch is a projection, *k*, (see Fig. 1,) said notches and projec-

tion being for purposes hereinafter to be described.

P is a handle, to which is attached a rod, Q, which is adapted to slide in a fixed sleeve, R. To the opposite end of said rod from the handle P is attached one end of a bell crank lever, S, the other end of said lever being loosely connected to the armature T and adapted to slide said armature.

The electric connection between the handle P and the commutator U may be made by means of a wire, V, connecting said commutator with the sleeve R.

A pivoted index-finger, W, pivoted at *w*', is loosely attached at its lower end to the armature T, its upper end being adapted to show upon a dial, X, the strength of current.

Y is a coin-lever pivoted to the fixed bearing Z, and A' is a rod loosely attached at one end to said lever and adapted to slide up and down in guideways. On the end of the long arm of the lever Y is a coin-receptacle, B', and on the end of the short arm of said lever is a counterbalancing weight, C'. Secured to the side of the rod A', near its lower end, is a pin, *a*, which is adapted to be struck by the stop *k* in its revolution, riding over the top of said pin, and thus lowering the rod A' and allowing the coin-receptacle B' to rise and thus release the coin. This coin receptacle or bucket and its coin-discharging devices and their operation are as follows: The bucket B' is provided with a cam, *u*', which in its normal position closes the bottom of the bucket sufficiently to prevent the coin falling through. This cam is secured to a wire or spindle, *v*', passing through the sides of the bucket and bent at each end, as shown. Mounted loosely on the wire *v*' is the little arm or pin *w*', which rests on the bent portion *x*' of wire *v*'. When the weight of the coin dropped in bucket B' carries the bucket below the pin *y*' on the bracket *z*', the pin *w*' rides over the pin *y*' without acting on the cam *u*'; but when the bucket is returning to its normal position, by the lifting of the longer arm of lever Y through the action of rod A', as above stated, the pin *y*' depresses the arm *w*', which is resting on the bent end of the wire *v*', thereby actuating cam *u*', lifting and releasing the coin, which can then fall through the bottom of the bucket. The cam *u*' is carried back to its normal position by the weight of the wire *v*', and the bucket being relieved of the weight of the coin, the counterpoise C' restores the lever Y to its normal position, (shown in Fig. 1,) ready to receive another coin in its bucket.

The operation is as follows: In the normal condition of the machine the lower end of the rod A' will be resting in the notches *fj* of the lever F and drum J, respectively, and said drum and lever will be locked, so that they and the crank D cannot be revolved. If a coin be dropped into the receptacle B' through a slit, such as *b*, in the case, (see Fig. 1,) the rod A' will be raised out of the notches *fj*, so

that the drum J and arm F and other parts of the machine may be revolved. If the person desiring to be shocked grasps the handle P in one hand and turns the handle C with the other hand, the electro-magnets B will be revolved by the mechanism heretofore stated, and the current will be produced and completed through him. The strength of the current can then be increased or diminished by sliding the handle P forward or backward, and as the current is increased the armature will move the index-finger over the dial, thus indicating the strength of the current. The coin in the receptacle B' is released, as heretofore stated, so that when the drum has completed one revolution the rod A' drops into the notch *j*, and said notch, in connection with the notch *f*, locks the drum and said arm and prevents the handle from being turned until the rod A' is again raised by the introduction of a coin into the receptacle B'.

Referring to Figs. 4, 5, 6, and 6<sup>a</sup>, C'' is the handle and D' the crank for revolving the driving-shaft E'. Keyed to said shaft is a pinion, F'. G' is a fixed spindle, upon which are loosely hung the gears H' and I'. The pinion F' engages with the gear H', which, by a locking device, hereinafter to be described, is adapted to rotate the gear I'. This gear engages with the pinion J', and the gear K', which is keyed to the same shaft I', engages with the pinion M', which directly rotates the coils or electro-magnets B through the shaft K. The electric current is adapted to pass through the gearing and metallic connections, above stated, to the handle C''. Secured to the spindle G', and between the gears H' and I', is a disk, N', having a part of its upper portion cut away, as shown at *n*, (see Fig. 4,) and arranged in a circle on the inner face of the gear H' is a series of round pins, *h*. A small lever, *i*, is pivoted to the outer face of the gear I' in such a position that its outer end may engage with the pins *h*. O' is the vertical rod for connecting the coin-operating lever Y with the driving mechanism, and said rod is operated in a similar manner to the rod A'. (Shown in Figs. 1, 2, and 3.) The lower end of the rod O' is turned at right angles, as shown at *o*, Fig. 5, or is provided with a right-angled hook, and a similar right-angled hook, *p*, extends from the upper side of the lever *i* and is adapted to engage with the hook *o*, as shown in Fig. 5. A small pin, *r*, is secured to the side of the rod *o*', near its lower end, and a projection, *s*, is secured to the surface of the gear I' at right angles to the same. (See Figs. 5 and 6.) In the revolution of the gear I' the stop *s* is adapted to ride over the pin *r* and lower the rod O', thus raising the receptacle B' and releasing the coin in a similar manner to that described in my Patent No. 336,042, dated February 9, 1886. Electrical connection between the commutator *t* and the handle P and the operation of said handle are similar to that shown in Figs. 1, 2, and 3.

Instead of the handle *P* shown and described in the several figures, a wire, *w*\*, may be connected to the rod *Q*, and a metal plate, *p*\*, or block, or a sponge, *s*\*, may also be attached to the free end of said wire. This will enable the person desiring to be shocked to place one connection for completing the circuit upon any portion of the body that is desired.

The case for retaining the mechanism or any portion of it may be made of glass, so that the mechanism may be seen.

The operation of this form of the machine is as follows: The parts being as shown in Figs. 4, 5, and 6, which are their normal positions, the handle *C*' may be turned as much as desired, and the gear *H*' will be revolved; but the electro-magnets will not be revolved, and no shock can be given simply by turning the handle *C*', for the gear *I*' will be unlocked from the gear *II*', as the lever *i* will be resting in the cutaway portion *n* of the disk *N*' and below and out of engagement with the series of pins *h*. (See Fig. 5.) Until said lever *i* has been raised during the revolution of the gear *H*' the pins *h* will ride above the said lever. If a coin or its equivalent be dropped into the receptacle *B*', so that the rod *O*' will be raised, by means of the trigger arrangement or hooks *o p* the lever *i* will also be raised and brought into the line of revolution of the pins *h*. When one of said pins comes in contact with said lever, the gear *I*' will be revolved, and also, through the intermediate gearing, the electro-magnets, thus producing the electric current. The coin will be released, as heretofore described, by the projection *s* and pin *r* and by the automatic mechanism above stated, or such substantially as is shown and described in my Patent No. 336,042, dated February 9, 1886. The rod *O*' and lever *i* will drop by gravity, the weight *C*' necessarily carrying down the short arm of lever *Y*, said lever then resting and riding over the periphery of the disk *N*' until it drops into the cutaway portion *n*, when it (the lever *i*) will be below the line of travel of the pins *h*, and the revolution of the disk *i* and the electro-magnets will be stopped as well as the electric current.

The position of the parts will be again as shown in Figs. 4, 5, and 6, and the current cannot be generated until another coin or its equivalent has been dropped into its receptacle.

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

1. In an electric machine adapted for giving shocks to the person and provided with magneto-electric devices, a handle connected with such devices and serving the double purpose of completing the circuit and also as a means for revolving the same to generate the electric current.

2. An electric machine adapted for giving shocks to the person and provided with magneto-electric devices, and having one handle serving for completing the circuit connected to said devices and serving as a means for revolving the same, and another handle and regulating devices connected therewith adapted for increasing or diminishing the current.

3. In an electric machine adapted for giving shocks and provided with magneto-electric devices, a coin-receiver, and a coin-operated unlocking device, a handle connected with and serving to operate the magneto-electric devices to generate the electric current, combined with means, substantially as described, serving to lock the machine and prevent its operation until the locking device acted upon by the introduction of a coin or its equivalent shall be released.

4. In an electric machine provided with magneto-electric devices and with a coin-receiver and coin-operated devices, the combination of a handle connected with and serving to operate the magneto-electric devices for generating the current, and a locking device serving to prevent such handle being operated until the introduction of a coin or its equivalent shall have released such locking device.

5. In an electric machine provided with magneto-electric devices and with a coin-receiver and coin-operated devices, the combination of one handle connected with and serving to operate the devices for generating the electric current, a locking device serving to prevent such handle being operated until the introduction of a coin or its equivalent shall have released the locking device, and another handle and regulating devices connected therewith adapted for increasing or diminishing the current and completing the circuit.

6. In an electric machine provided with magneto-electric devices and with a coin-receiver and coin-operated unlocking devices, the combination of two handles connected, respectively, to the positive and negative wires, one handle being connected with and serving when released by the agency of a coin to drive the machine for revolving the electro-magnets to generate the current, and the other handle and regulating devices connected therewith adapted to increase or diminish the current, and a locking device, substantially as described, which prevents the operation of the machine until said locking device is acted upon and set free by the introduction of a coin or its equivalent.

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