

(No Model.)

G. P. CLARKE.
MAGNETO ELECTRIC MACHINE.

No. 446,661.

Patented Feb. 17, 1891.

Fig. 2.

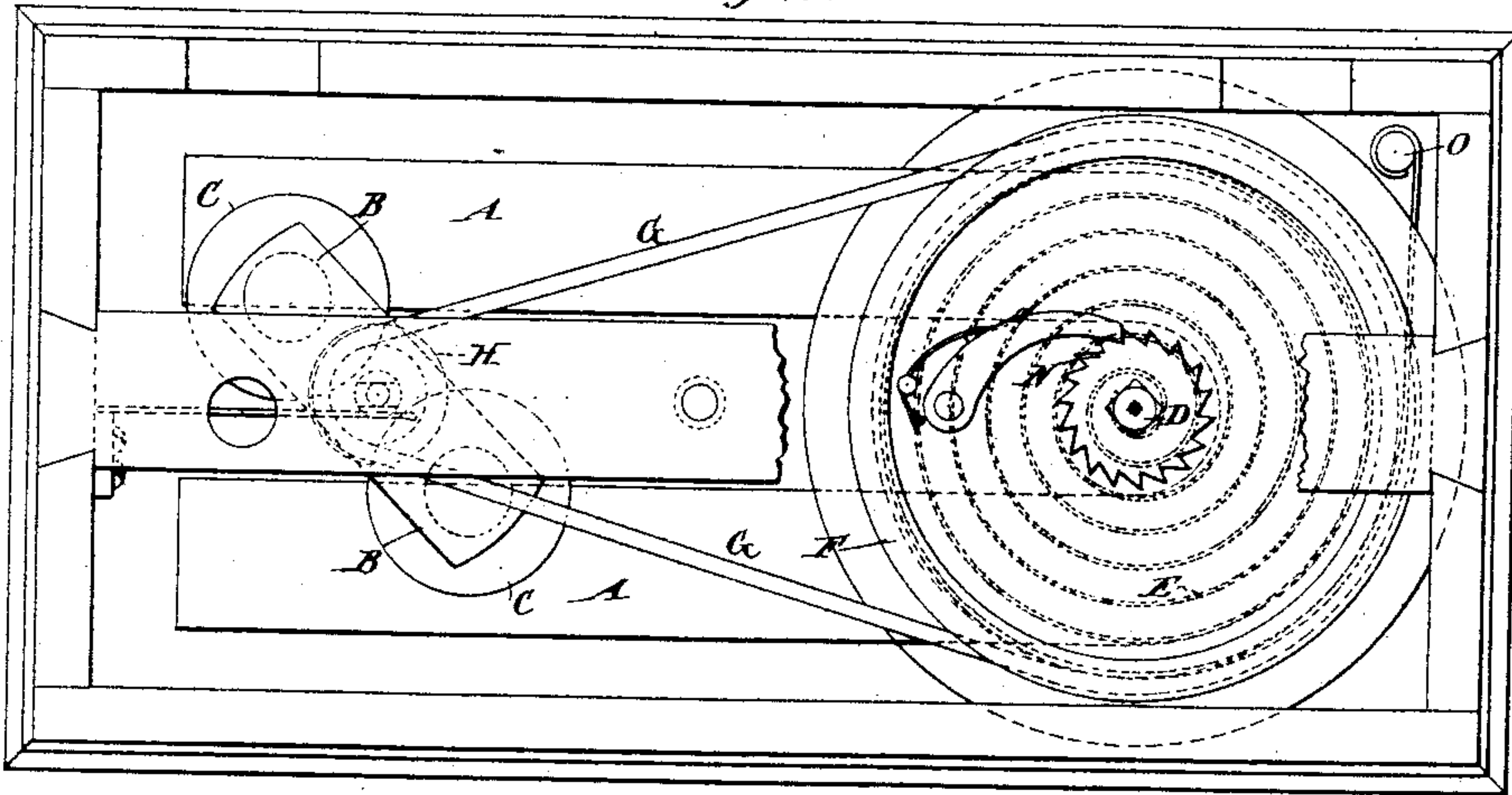
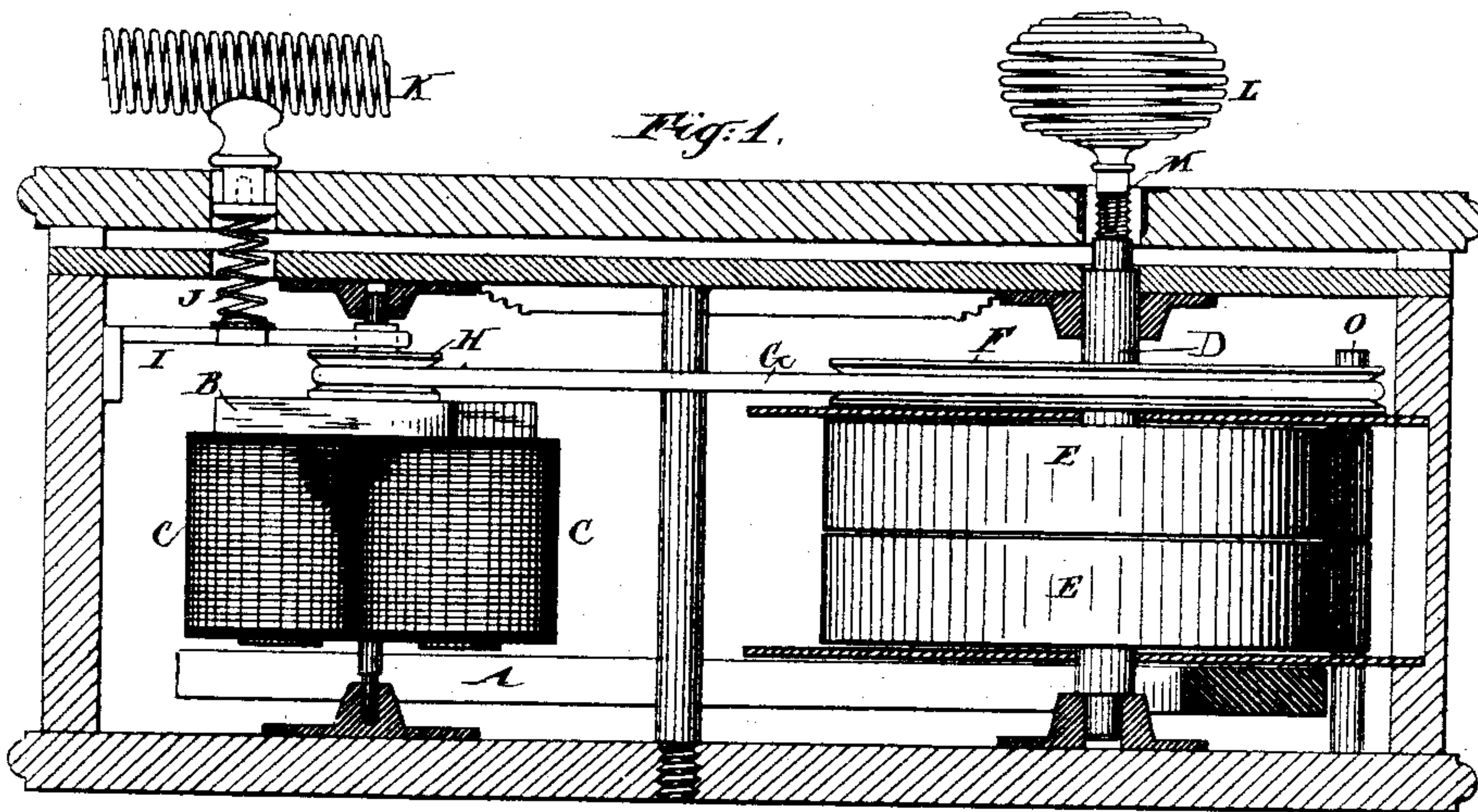


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE P. CLARKE, OF NEW YORK, N. Y.

MAGNETO-ELECTRIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 446,661, dated February 17, 1891.

Application filed August 23, 1890. Serial No. 362,842. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. CLARKE, a citizen of the United States, residing in the city and county of New York, in the State of New York, have invented a certain new and useful Improvement in Electrical Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

The improvement applies to all that class of electrical machines—a good example of which is shown in the patent to myself and Gerard Harsin, dated June 30, 1885, No. 321,278—where a continuous current is produced by revolving an armature by power, and spring-power is introduced to maintain the rotation for a short time after the communication of motion thereto has stopped. The working parts are neatly inclosed in a case or casket.

The object of the invention is simplicity of construction, ease of access, and absence of noise with few parts. It is particularly adapted for ladies' use by reason of its silent action, small size, lightness, and adaptation for rich surfacing.

I avoid the use of wire connections and attach the electrodes conveniently upon the top of the casket. One electrode is connected and detached at will, its attachment when in use being made to the end of the power-spindle. The attachment is continuous but loose, not revolving with the spindle. I provide a great length of spring in two parts, separately coiled, and connect the shaft thus actuated with the revolving armature by a round belt running in grooved pulleys, and provide a removable handle on the main shaft to serve as the other electrode on the main shaft.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a vertical section with certain parts broken away, showing my machine as arranged for use; and Fig. 2 is a plan view of the same with the upper portion removed.

Similar letters of reference indicate corresponding parts in both the figures.

I employ a permanent magnet A, between the arms of which is mounted an ordinary revolving armature B, composed of iron, having two spools C C, wound with covered copper wire, ranging in size from No. 30 to No.

36, according to the kind of iron that the armature is made of. If of cast-iron, the copper wire must be coarser than with an armature made of Swedish wrought-iron. These two elements—the magnets and revolving armatures—are common in electrical machines. I secure upon the spindle D two long springs E E, (five feet,) Fig. 1, having twenty-five turns, and secured at the outer end by the bolt O. The winding of two long springs allows a long life of propelling-power to the armature, and secures all the desired power. It allows ample time for the application of electricity for ordinary medical purposes without a second winding. I secure upon the spindle D a V-grooved pulley F, around which the band G passes to the small V-grooved pulley H upon the spindle of the armature B, and obtain speed direct to the armature.

In order to convey electricity to the hands, I secure the current-breaker I to the side of the case, and upon this current-breaker cause the spiral spring J, Fig. 1, to impinge, conducting the electric current to the hand-electrode K, Fig. 1, which is a nearly close-wound spiral spring about one inch in diameter and of No. 14 brass wire, nickel or gold plated. Such an electrode is very pliable and delicate to the touch, and the peculiarly tasty and attractive hand-electrode conforms perfectly to the irregular surface of the hand. It is particularly adapted to a lady's hand by reason of its great capacity for yielding to gentle force. The second electrode L, Fig. 1, is of a ball-knob shape, and may be made of No. 16 wire or of sheet-brass. It is loosely connected with the spindle D by having its central pin M let into the end of such spindle, as seen by the dotted lines in Fig. 1, and may be lifted off and put back at pleasure. When not touched by the operator, it will revolve with the main spindle D. When grasped by the hand in the act of receiving electricity, it will remain stationary in the hand, owing to its loose connection with the spindle D.

When the machine is to be wound up, this electrode will be lifted off and a crank or handle placed upon the top end of the spring-spindle and operated, being checked by the common ratchet wheel and pawl N, Fig. 2.

I attach importance to the fact that the electrode L is removable and is loosely connected

to the main spindle D and removed, as required, because it avoids the necessity of making any other opening in the exterior of the case. The machine or casket presents both
5 electrodes on the top of the casket at a just convenient distance apart to serve without wires or other flexible conductors.

I claim as my invention—

10 The electrical casket described, having, in combination with the inclosing case, the main shaft, actuating spring or springs, connected armature, magnet, circuit-breaker, and a per-

manent hand-electrode K, the removable hand-electrode L, electrically but loosely connected to the driving-shaft, all adapted to
15 serve as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

GEORGE P. CLARKE.

Witnesses:

CHAS. S. BARBER,

II. A. JOHNSTONE.