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PATENTED JULY 2, 1907.

J. C. VETTER.
ELECTRICAL APPARATUS.
APPLICATION FILED AUG. 24, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

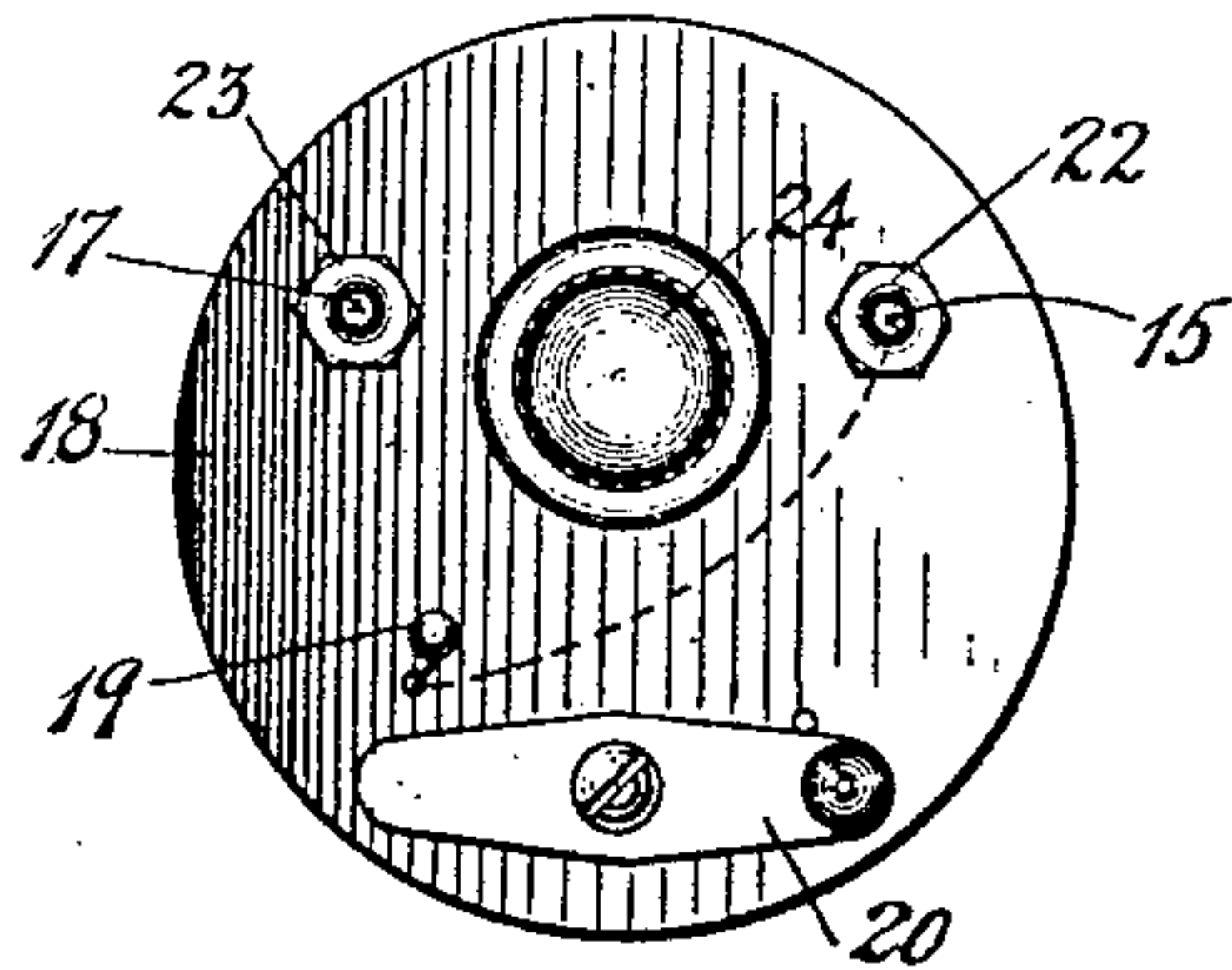


Fig. 3.

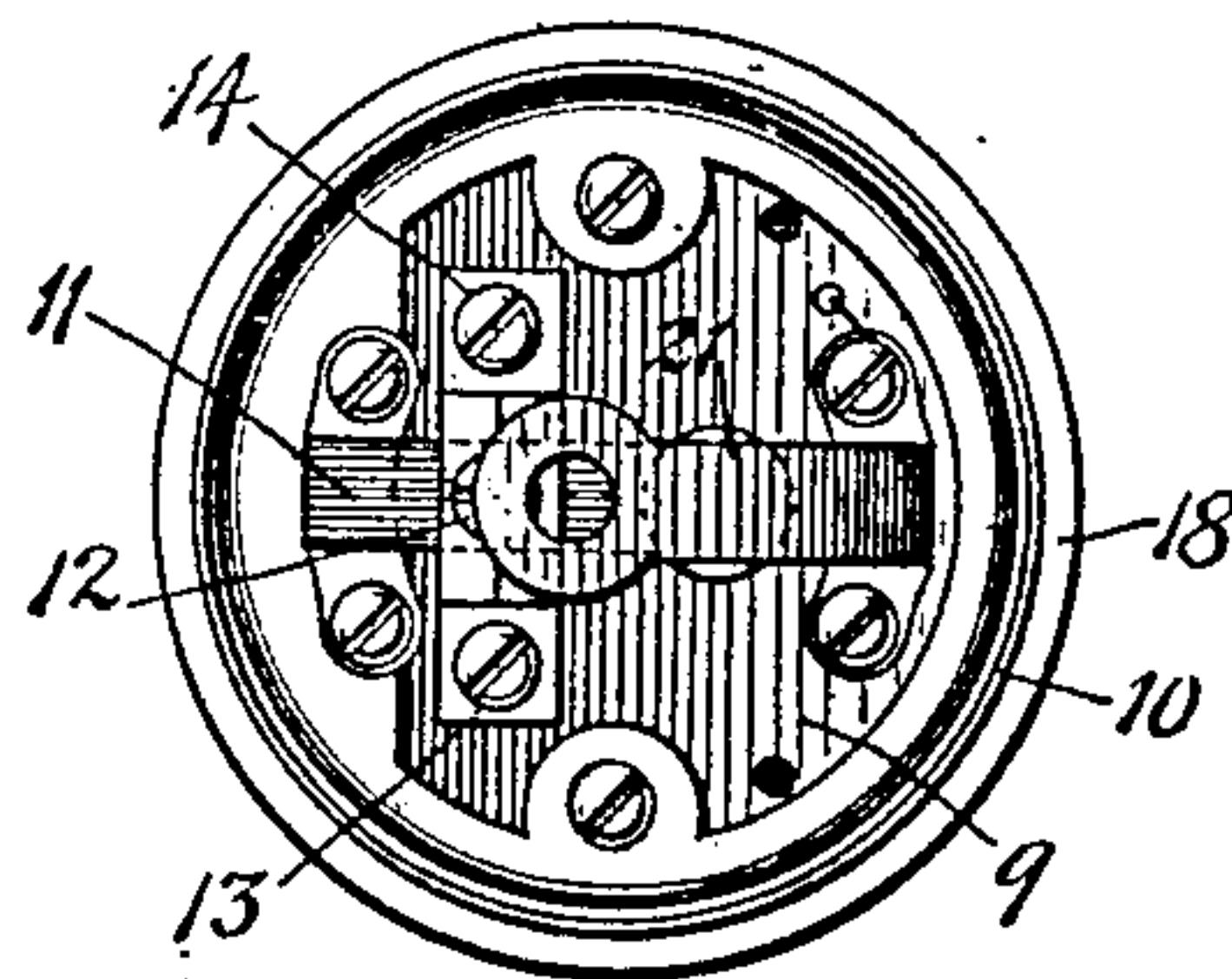


Fig. 2.

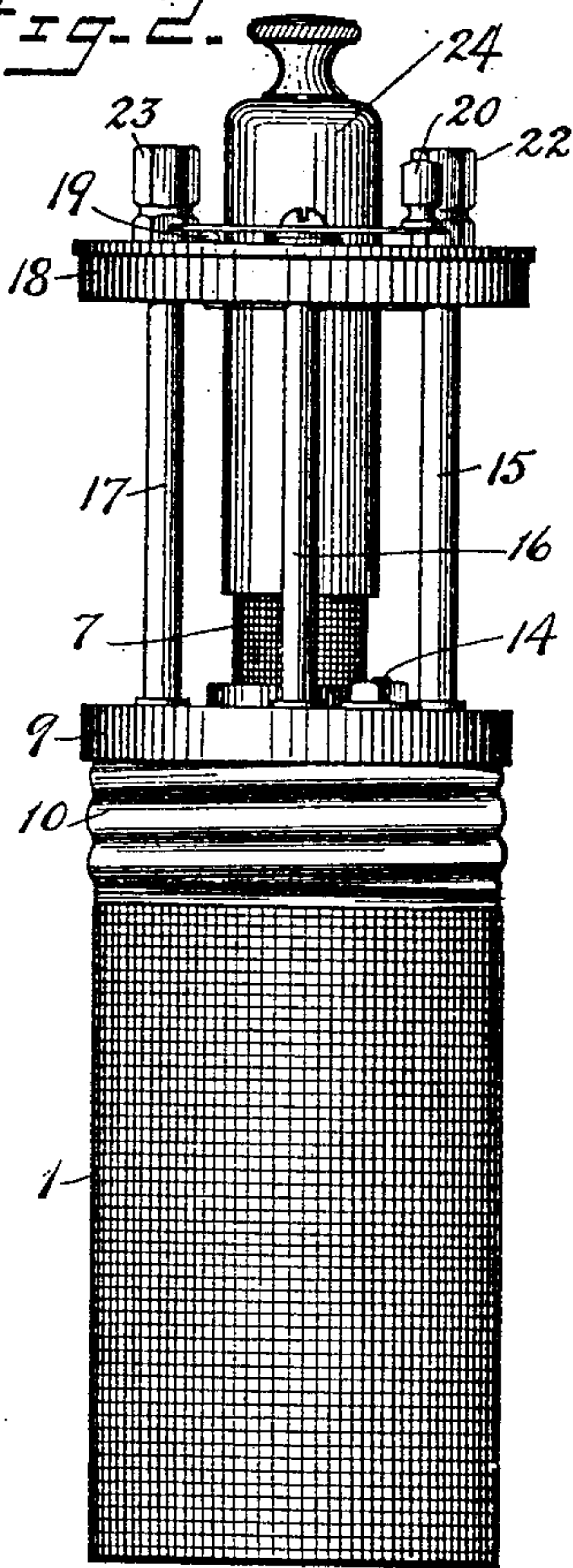
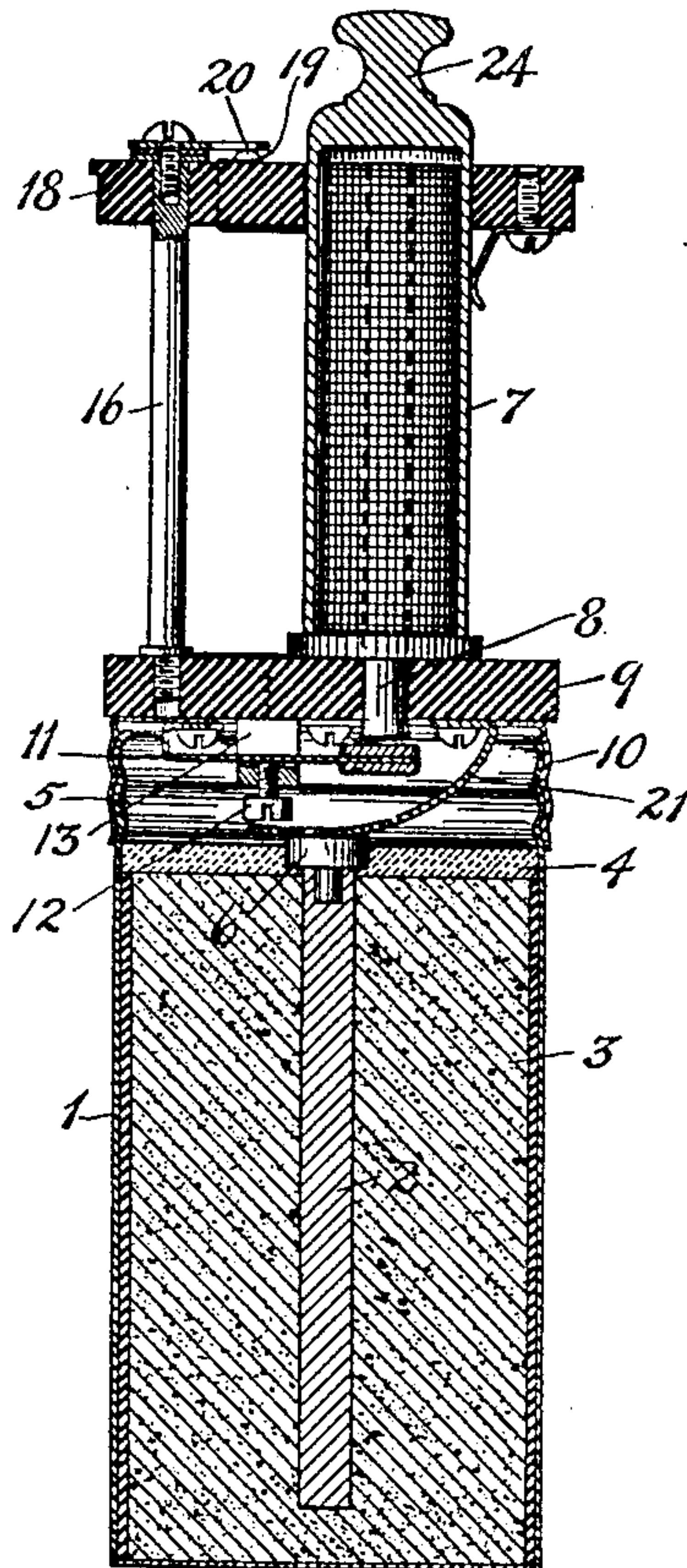


Fig. 4.



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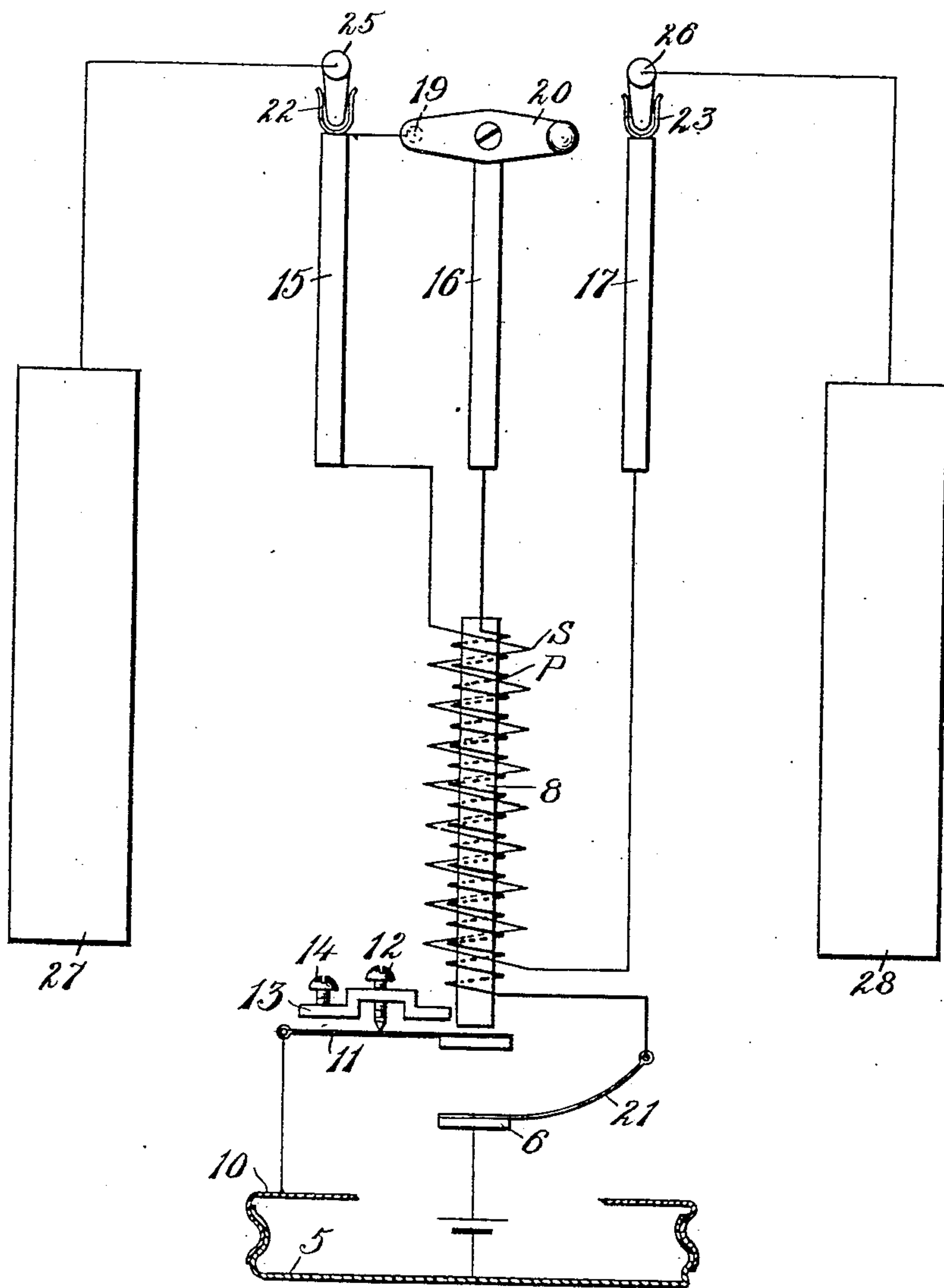
DECLASSIFICATION

1. 2

APPLICATION FILED AUG. 24, 1905.

2 SHEETS—SHEET 2.

Fig. 5.



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ELECTRICAL APPARATUS.

No. 859,029.

Specification of Letters Patent.

Patented July 2, 1907.

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To all whom it may concern:

Be it known that I, JOSEPH C. VETTER, a citizen of the United States, residing at Coney Island, Kings county, State of New York, have invented certain new and useful Improvements in Electrical Apparatus, of which the following is a full, clear, and exact description.

My invention relates to electric apparatus, and particularly to improvements in the construction of so-called induction apparatus.

The object of my invention is to provide an induction apparatus particularly to be used with a cell to which it may be readily attached and, which shall be simple and economical, and yet strong and durable, the parts being so arranged as to be protected against accident or meddling during operation, and yet capable of such control and adjustment as is necessary with apparatus of this character.

The invention consists in improvements the principles of which are illustrated in the accompanying drawings.

Briefly, it comprises an induction apparatus, which comprises a coil or spool having two heads, the upper one of which carries the controlling and regulating mechanism, and the lower one of which carries the screw-threaded member, and the vibrator mechanism, the two heads being connected by rigid rods which also serve as parts of the primary and secondary circuits and a cell having two exposed terminals one of which is screw-threaded and adapted to be removably secured to the induction apparatus.

Figure 1. is a plan view of an apparatus embodying the improvements of my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a bottom view of the induction member of the apparatus. Fig. 4 is a vertical sectional view of the entire construction, assembled, but at right angles to the position shown in Fig. 2. Fig. 5 is a view in diagram showing conventionally the complete electrical connections.

1 indicates the body of the cell which is formed preferably of zinc, but may be covered on the exterior with cloth leather or other insulating material. This body forms one of the electrodes of the cell.

2 is a carbon electrode of suitable form.

3 is a paste formed for instance from pulverized carbon and manganese dioxid mixed with a saturated solution of sal ammoniac.

4 is a layer of wax or other insulating cement making the cell water tight.

5 represents a screw-threaded extension from the zinc body member 1 which forms one terminal of the cell, and 6 is a plug connected with the carbon electrode and forming the other terminal. This terminal 6 being

located within the annular rim of the terminal 5, and below the edge, is protected from accidental contact when the cell is not in use so that short-circuiting is practically impossible.

7 is an induction coil containing the usual primary and secondary windings P & S respectively.

8 is the core of the coil.

9 is an insulating member which forms the head of the coil spool.

10 is a screw-threaded member carried by the plate 9, and adapted to co-operate with the screw-threaded terminal 5 of the battery member.

11 is a spring armature member electrically connected to the member 10.

12 is an adjustable contact screw carried by the bracket 13.

14 is one of the attaching screws for the bracket 13 which passes upward through the plate 9.

15, 16 and 17 are rods projecting from the base plate 9 and secured at their upper ends to the top plate 18. This plate 18 is formed of insulating material and carries a switch contact point 19.

20 is a switch arm electrically connected to the rod 16. When the switch arm is thus in contact with point 19 the primary current may pass from the terminal 5 of the battery through the members 10, 11, 12, 13, 14, 15, 19, 20, 16 through the primary coil to spring arm contact 21 and the battery terminal 6. When the battery member is attached to the induction member and the switch arm 20 is in contact with point 19 the primary current in the coil P operates the vibrator, causing an induced current in the secondary windings 3. The terminals of the secondary coil are connected to the rods 15 and 17.

22 and 23 are nuts secured to the upper ends of rods 15 and 17, having sockets into which the plugs 25 & 26 of the conductors of the electrodes 27 and 28 may be readily inserted.

24 is an adjusting sleeve or tube co-operating with the coil 7 for regulating the secondary current.

The use of this construction will be apparent to one who is acquainted with the art. The battery may be readily attached to or detached from the induction member without the use of clamping screws or connecting wires of any kind, which is a considerable advantage when the comparatively short life of a dry cell is taken into consideration. Apparatus of this character is adapted for general household use, and is often subjected to rough treatment. The compactness and rigidity of construction renders it unlikely that injury should occur to the apparatus. The concealing and protection of the vibrator parts between the induction member and the battery member prevents tampering

and consequent derangement of the adjustment. It also keeps out dust and dirt or foreign matter which might interfere with the operation.

What I claim is:—

5 1. In an apparatus of the character described, a battery member having an annular extending terminal and a depressed terminal surrounded thereby, an induction member having an annular extending portion adapted to co-
10 operate with a similar portion carried by said battery member, and vibratory mechanism, and a spring terminal surrounded by said annular member, and inclosed and protected thereby in conjunction with said battery member.

2. An induction apparatus comprising two insulating
15 heads, a plurality of rods connecting said heads, a magnet core secured to the lower head having primary and sec-

ondary windings, an adjusting sleeve surrounding said windings and projecting through the opposite head, a battery removably secured to the lower head, a vibrator mechanism secured to the lower head, and suitable circuit connections.

3. An induction apparatus comprising an insulating head 9, an induction coil carried thereby, a vibrator mechanism carried by the opposite side of said head, a battery and extending coacting parts carried by said head and by said battery for removably securing the battery and housing and surrounding the vibrator mechanism.

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