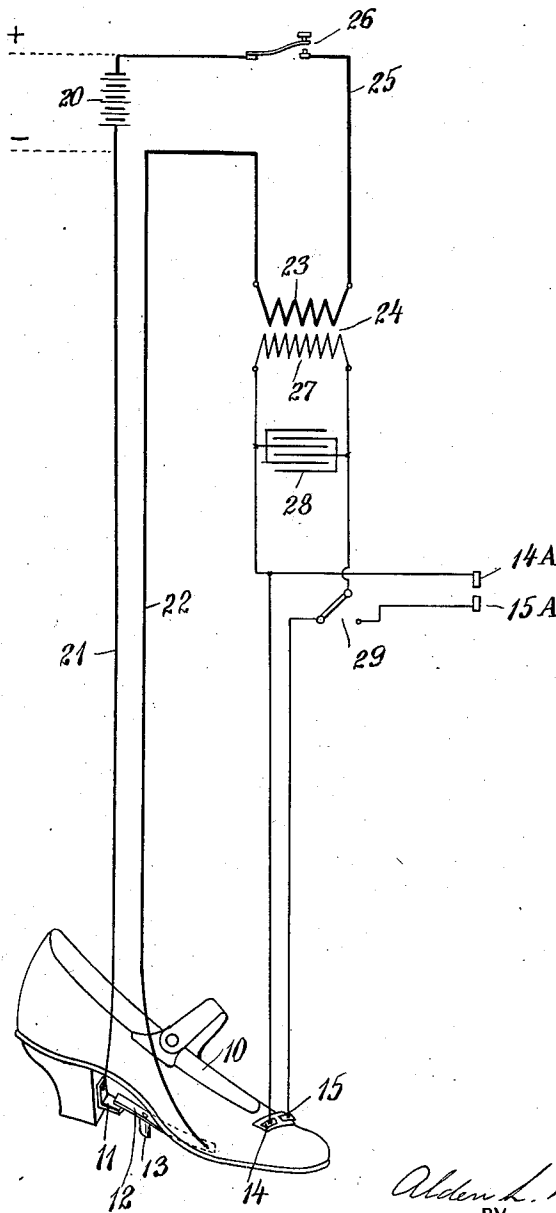


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ELECTRICAL APPARATUS FOR STAGE EFFECTS.
APPLICATION FILED MAY 6, 1911.

1,021,787.

Patented Apr. 2, 1912.



WITNESSES:

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ELECTRICAL APPARATUS FOR STAGE EFFECTS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALDEN L. McMURTRY, a citizen of the United States, and a resident of Sound Beach, Fairfield county, and State of Connecticut, United States of America, have invented certain new and useful Improvements in Electrical Apparatus for Stage Effects, of which the following is a specification.

10 My invention relates to electrical apparatus for stage effects, and its object is to provide a simple portable device which may be used to produce high tension sparks upon desired parts of the body.

15 I will describe my invention in the following specification and point out the novel features thereof in the appended claims.

The drawing shows a shoe and certain electrical apparatus adapted to be carried 20 upon the body of a dancer. This apparatus and the connecting circuits are shown diagrammatically.

In the drawing, the shoe is designated by the numeral 10. On the heel of this shoe 25 is a stationary contact 11. A movable spring contact 12 is shown affixed to the sole of the shoe projecting back to the stationary contact.

13 is a button affixed to the spring 12 and 30 projecting from it a sufficient length to raise the spring contact from the stationary contact when the shoe is upon the floor. On the top of the shoe are two fixed electrodes 14 and 15 which are separated from each other 35 to form a spark gap. This may be placed in the position sometimes taken by a buckle or bow, and may be arranged to have the appearance of an ornamental metallic buckle.

20 is a portable battery to be carried by 40 the wearer of this apparatus. A conductor 21 connects one side of this battery with the stationary contact 11. The spring contact 12 is connected by a wire 22 with one of the terminals of the primary winding 45 23 of an induction coil 24. The other terminal of this primary winding is connected by a conductor 25 through a manually operated circuit closer 26 to the battery 20. The secondary winding 27 of the induction coil is 50 connected with the two fixed electrodes 14 and 15. Between the two secondary leads may be interposed a condenser 28.

29 is a manually operated switch which may be used to change the connection of the 55 secondary winding of the induction coil from the fixed electrodes 14, 15 on the shoe

to other fixed electrodes 14^A and 15^A on some other part of the body of the wearer, such, for example, as upon the head or the breast or the waist, or upon a wand or staff carried 60 in the hands.

If it is desired to obtain the electrical supply for energizing this apparatus from the external source the battery may be omitted and flexible conductors connected 65 to the circuits as indicated by the dotted lines at + and -.

The switch 29 is shown with two operative positions as this is enough to illustrate the invention. But it is to be understood that 70 there may be as many pair of fixed electrodes such as 14, 15 and 14^A and 15^A as desired, and that this switch 29 may be used to direct the current to any pair of them. It is also to be understood that another such 75 arrangement as that shown may be provided for the other shoe, or that another pair of fixed electrodes may be provided for the other shoe and connected either in series or in parallel with the electrodes 14 and 15. 80

The operation is as follows: As long as the circuit closer 26 remains open, the apparatus is inoperative. But if the circuit closer 26 is closed, every time the foot on 85 which is the shoe 10 is raised from the floor as in a dance, a circuit is closed at 11, 12, through the battery and the primary winding of the induction coil 24. This is preferably of the common vibratory type, so that as soon as the spring 12 remains upon the 90 contact 11, a succession of high tension electrical impulses will be set up in the secondary winding 27, and these impulses will cause sparks to jump across the gap between the fixed electrodes 14 and 15. 95

The spring 12 is light and the button 13 upon it is of sufficient weight so that a kick while the foot is still raised from the floor will raise the spring from the stationary 100 contact, and this will result in the temporary cessation of the sparks between the electrodes.

Of course, the dancer may move the switch 29 to transfer the sparks from the electrodes 14 and 15 to the electrodes 14^A, 15^A at some 105 other part of the body, but in any case the sparks will occur in rhythm with the steps of the dance.

The effect of this arrangement, especially when used on a darkened stage and with a 110 plurality of dancers is sparkling and spectacular.

What I claim is.—

1. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a pair of electrodes at some
5 part of the dancer's body connected with said induction coil, and means automatically controlled by the movement of the foot for energizing the induction coil.

2. An apparatus arranged to be carried
10 by a dancer, said apparatus comprising an induction coil, a pair of electrodes at some part of the dancer's body connected with said induction coil, means for energizing the induction coil, and a switch on the
15 dancer's foot for controlling the energization of the coil.

3. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a pair of electrodes at some
20 part of the dancer's body connected with said induction coil, means for energizing the induction coil, a switch on the dancer's foot for controlling the energization of the coil, and a manually operated circuit closer
25 in series with said switch.

4. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a plurality of pairs of electrodes at different parts of the dancer's
30 body, a manually operated switch for connecting any one of said pairs of electrodes with said induction coil, means for energizing the induction coil, and a switch on the dancer's foot for controlling the energization of the coil.
35

5. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil having a primary and a secondary winding, a battery, a circuit between
40 the battery and the primary winding of the coil, a shoe, a circuit closer on the shoe in said circuit, and a pair of fixed electrodes connected with the secondary winding of the coil.

45 6. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil having a primary and a secondary winding, a circuit between the battery and the primary winding of the coil, a
50 shoe, a circuit closer on the shoe in said circuit, means on said circuit closer for holding it open when the shoe is on the ground, and a pair of fixed electrodes connected with the secondary winding of the coil.

7. An apparatus arranged to be carried 55 by a dancer, said apparatus comprising an induction coil having a primary and a secondary winding, a battery, a circuit between the battery and the primary winding of the coil, a shoe, a circuit closer on the shoe in
60 said circuit, said circuit closer comprising a fixed contact, a self-closing spring contact, a button projecting on the spring and arranged to cause the movement of the shoe to open the circuit closer, and a pair of fixed
65 electrodes connected with the secondary winding of the coil.

8. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil having a primary winding, a
70 battery, a circuit closer between the battery and the primary winding of the coil, a shoe, a circuit closer under the shoe in said circuit, said circuit closer comprising a fixed contact, a self-closing spring contact and a
75 button projecting from the spring and arranged to cause the movement of the shoe to open the circuit closer; a pair of fixed electrodes on top of the shoe connected with the secondary winding of the coil, and a
80 manually controlled circuit closer in said circuit.

9. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil having a primary and a secondary winding, a battery, a circuit closer
85 between the battery and the primary winding of the coil, a shoe, a circuit closer under the shoe in said circuit, said circuit closer comprising a fixed contact, a self-closing
90 spring contact and a button projecting from the spring and arranged to cause the movement of the shoe to open the circuit closer; a plurality of pairs of fixed electrodes on different parts of the dancer's body, a manually
95 operated switch for connecting any one of said pairs of electrodes with the secondary winding of said induction coil, and a manually controlled circuit closer in the power circuit.
100

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALDEN L. McMURTRY.

Witnesses:

ELLA TUCH,

ERNEST W. MARSHALL.