(No Model.)

H. E. RIDER.

ELECTRICAL SOAP.

No. 564,717. Patented July 28, 1896.

Fig. 3.

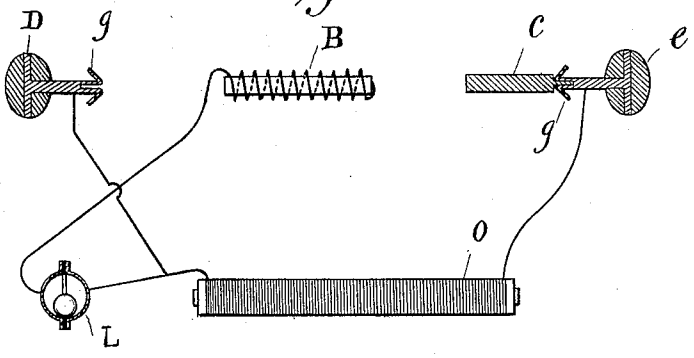


Fig. 2.

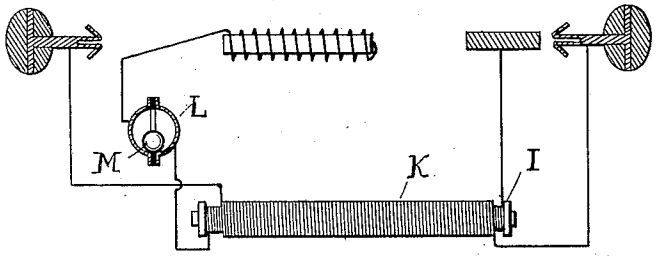
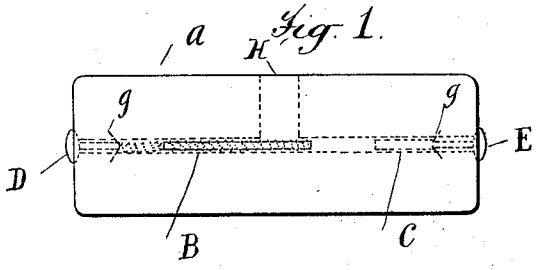


Fig. 1.



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UNITED STATES PATENT OFFICE.

HERBERT E. RIDER, OF NEW YORK, N. Y., ASSIGNOR OF FOUR-FIFTHS TO AARON ALLEN HAND, OF LAWRENCE, AND JOHN V. LAMARCHE, OF BROOKLYN, NEW YORK.

ELECTRICAL SOAP.

SPECIFICATION forming part of Letters Patent No. 564,717, dated July 28, 1896.

Application filed October 8, 1895. Serial No. 564,991. (No specimens.)

To all whom it may concern:

Be it known that I, HERBERT E. RIDER, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Electrical Soap, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

My invention relates to the curative application of electricity to the human body; and it consists in the introduction of a source of electric energy into cakes of toilet soap suitably adapted for that purpose.

I take advantage of the fact that the chemical composition of soap is such that when dissolved in water it produces a liquid having an exciting effect upon suitable metal electrodes placed in suitable proximity to form an electric battery. I propose to arrange the electrodes in a cake of soap in such a manner that they may be reached by the solution formed in the use of the same, and provided with terminals on the exterior of the soap through which the electric current is transmitted to the person of the user. I propose to employ for this purpose the elements of a simple galvanic battery or to increase the sensible effect of the electricity so produced by means of an intensifying or induction coil.

Figure 1 represents a cake of toilet soap provided with my improvement, in which the electric device consists of the elements of a simple battery. Fig. 2 shows a device for introduction into a cake of soap in which a Farradic induction-coil is provided to increase the effect of the current, and Fig. 3 represents an apparatus for like introduction in which the effect of the current is increased by an intensifying-coil.

The elements of the battery may be of any suitable metal and of any convenient construction. A convenient form is that shown in Fig. 1, in which A is the cake of soap; B, one of the electrodes composed of copper wire, having a carbon rod as a support, and C a zinc plate. Two terminals D E are provided, having heads which rest against the surface of the cake and shanks with one or more barbs *g* at their points, the barbs serving to hold the terminals in position in the soap. These barbs are preferably of flexible metal, and both the terminals are in metallic connection with the electrodes, respectively. As the soap is worn away these terminals may be pushed in and the heads kept flush with the surface of the soap. An opening H into the cake of soap is provided for the access of water to the electrodes.

When a more sensible effect is desired than will be given by the above construction, the electrodes may be connected to a primary induction-coil I and the terminals to a secondary induction-coil K, in the circuit of which primary induction-coil is placed a circuit-breaker L, which is composed of metal and is hollow and spherical, or of other convenient form, and is made in two parts insulated from each other, and having within it a movable piece of metal, as ball M, the two halves of the sphere being respectively connected to one of the electrodes and the primary induction-coil. As the soap is shifted in position the circuit is made and broken by the movement of the ball M, and at each making and breaking of the circuit a discharge is effected from the primary induction-coil through the terminals.

Fig. 3 is another form of construction in which the battery is supplemented by a single intensifying-coil O, wound about a soft-iron core. In the circuit between this coil and the battery is a circuit-breaker L, which acts to make and break the circuit of the intensifying-coil and causes electric shocks to pass through the terminals.

I do not confine myself to any particular construction of the elements of the battery, nor to any particular construction of the circuit-breaker, nor to the use of an induction-coil or intensifying-coil, nor to the particular construction of any of the parts of the apparatus. It is evident that the hole H is superfluous if one or both of the openings through which the terminals pass are made large enough to admit water.

What I claim is—

1. As an article of manufacture a piece of soap with the electrodes of an electric battery placed therein, the soap being provided with

an opening through which water may have access to the electrodes of the battery, substantially as set forth.

2. As an article of manufacture a piece of soap with the electrodes of an electric battery placed therein, and two terminals having portions exposed so as to come in contact with the person of the user, said terminals being connected respectively to the said electrodes, the soap being provided with an opening for the access of water to the electrodes, substantially as set forth.

3. The terminal E having one or more flanges or barbs at its inner end to hold it in position, substantially as set forth.

4. The terminal E provided with a head and having one or more flanges or barbs at its inner end to hold it in position, substantially as set forth.

5. As an article of manufacture a cake of soap, having battery-electrodes placed therein, a magnetic coil and circuit-breaker in circuit with said battery, and a circuit including exposed terminals, whereby a shock of increased intensity is sent through the second circuit upon the making or breaking of said first circuit, substantially as set forth.

6. As an article of manufacture a cake of soap, having two suitable electrodes placed therein, a circuit-breaker and primary induction-coil in circuit therewith, and a secondary circuit including a secondary induction-coil and exposed terminals, substantially as set forth.

7. As an article of manufacture a piece of soap having electrodes placed therein, a magnetic coil and circuit-breaker in connection with said electrodes, said circuit-breaker having a movable part operated by gravity to make and break the circuit as the soap is moved, substantially as set forth.

8. As an article of manufacture a piece of soap having the electrodes of an electric battery placed therein, and exposed terminals connected with said electrodes, substantially as set forth.

9. As an article of manufacture a piece of soap having the electrodes of an electric battery placed therein, exposed terminals connected with the electrodes, and provision for the access of water to the electrodes, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HERBERT E. RIDER.

Witnesses:
G. M. BORST,
A. L. KENT.