

No. 745,128.

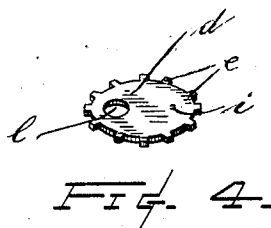
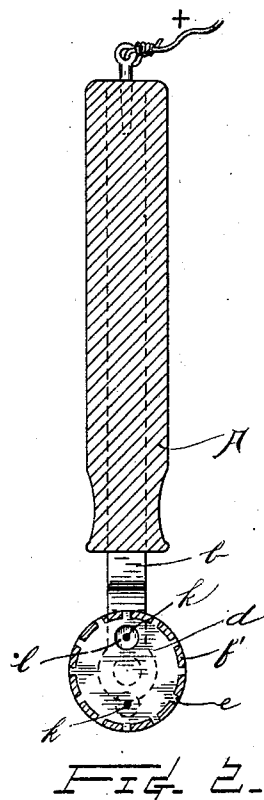
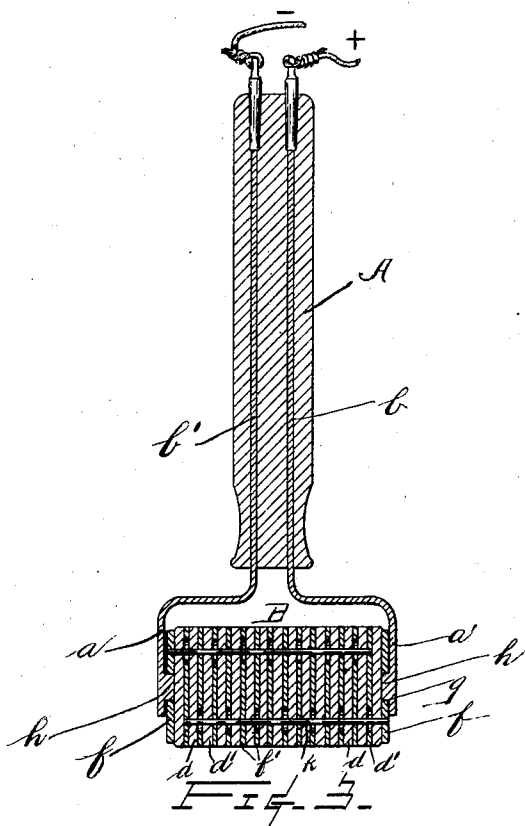
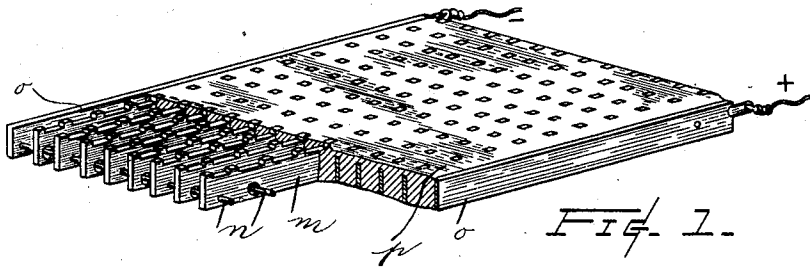
PATENTED NOV. 24, 1903.

L. WILLIAMS.

ELECTRICITY IN ELECTRIC THERAPEUTICS AND ELECTRIC TREATMENT.

APPLICATION FILED NOV. 4, 1901.

NO MODEL.



WITNESSES:

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ELECTRICITY IN ELECTRIC THERAPEUTICS AND ELECTRIC TREATMENT.

SPECIFICATION forming part of Letters Patent No. 745,128, dated November 24, 1903.

Application filed November 4, 1901. Serial No. 81,155. (No model.)

To all whom it may concern:

Be it known that I, LOUIS WILLIAMS, a citizen of the United States, residing at Seattle, King county, Washington, have invented a new and useful Device for the Use of Electricity in Electric Therapeutics and Electric Treatment, of which the following is a specification.

The invention relates to therapeutical apparatus; and its object is to produce an attachment upon the wires of a battery whereby the electric-supply current is broken up or disintegrated into a plurality of short circuits, which may be applied locally to the affected part being treated.

A further object of the invention is to provide such a device by which both a massage and an electric treatment may be coincidentally accomplished, wherein the broken currents are made to travel in predetermined directions—that is to say, either parallel with or across the nerve or muscle lines being acted upon, which would be governed by the nature of the disease or by the condition of the patient.

With these and other objects in view the invention consists in the novel details of construction and combination of parts to be fully described in the following specification and fully set forth in the claims.

Referring to the accompanying drawings, forming a part of this specification, Figure 1 is a view in perspective of a section of the screen. Figs. 2 and 3 represent, respectively, transverse and longitudinal vertical sections of the preferred form of device embodying my invention, and Fig. 4 is a perspective view of one of the separated disks shown in the other views.

In the drawings, the letter A denotes a handle, and B a cylindrical roller rotatably mounted between the reversely-bent projecting ends a a' of electric conductors b b' , extended through the said handle and respectively connected by wires + and - to the positive and negative poles of an electric or electromagnet battery. The said roller is comprised of a number of metal members or disks d and d' , provided with a plurality of points or teeth e , projecting radially therefrom, and end disks f , which are preferably without teeth and of less diameter than the outside

circumference of the teeth of the first-mentioned disks. The various aforesaid disks are assembled so as to leave spaces between, which spaces are filled with an insulating substance f' , such as vulcanized rubber. The end disks f are each formed with a central circular aperture g , which provide sockets for bearings on the inwardly-projecting trunnions h , provided on ends a and a' .

The toothed disks d and d' are separately provided with perforations i , through which wires k are passed, making electric connection between every other disk and one of the end ones, thus getting two sets of poles, of which the alternate ones are respectively positive and negative. To permit the wires k being passed through the opposite electrode without making contact therewith, I provide an aperture l , of relatively large diameter, in each of the disks d and d' , positioned, preferably, diametrically opposite the wire-contact holes i , and in assembling the various disks are disposed so that the current-conveying wires k will pass through the larger holes of the intermediate disks to be entirely clear of the metal plate thereof.

The advantages and operation of the device will be apparent from the foregoing; but it may be mentioned that as the periphery of the roller is pressed against the flesh both the positive and negative points e of the same longitudinal line act coincidentally to short-circuit electricity through the treated part between the adjacent said contact-points, and as new lines are presented in revolving successions of such multiple currents are imparted, which will travel in the same direction relative to the device.

In the modified form of my improvement illustrated in Fig. 1 I employ in lieu of the disks d and d' toothed members or bars m , through which project the wires n , as in the preferred form, and engaging the end strips o , which are connected to wires + and -. p indicates the insulating material.

Having thus fully described my invention, I claim—

1. The combination of a plurality of apertured metallic members insulated apart, and wires extending through the apertures of said members and each wire contacting with the alternate members.

2. The combination with a plurality of toothed members insulated apart, the teeth of said members extending through said insulating material, and means for passing an electric current through said members.
- 5 3. The combination with metallic members insulated from each other, said members being provided with teeth projecting through the insulating material, and wires passing through said members and contact- ing alternately therewith.

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

LOUIS WILLIAMS.

Witnesses:

WALTER H. ALLEN,
FRANK J. REHM.