

UNITED STATES PATENT OFFICE.

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ELECTRIC BRUSH.

SPECIFICATION forming part of Letters Patent No. 771,274, dated October 4, 1904.

Application filed February 27, 1904. Serial No. 195,523. (No model.)

To all whom it may concern:

Be it known that we, ALBERT T. SANDEN and VICTOR SENCE, citizens of the United States, and residents of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Electric Brushes, of which the following is a specification, accompanied by drawings.

This invention relates to electric hair-brushes; and the objects of the invention are to improve upon the construction and efficiency of such brushes and secure a ready means of applying a current of electricity to the scalp when brushing the hair, thereby obtaining all the useful results from the application of electricity to the skin.

Further objects of the invention will hereinafter appear; and to these ends the invention consists of an electric hair-brush for carrying out the above objects embodying the features of construction, combinations of elements, and arrangement of parts, having the general mode of operation substantially as hereinafter fully described and claimed in this specification and shown in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of a brush embodying the invention. Fig. 2 is a transverse sectional view of Fig. 1 on the line *xx*. Fig. 3 is an enlarged detail view of an element of the pile and an insulator for the pile. Fig. 4 is a top plan view of the pile and a portion of the brush.

Referring to the drawings, A represents a suitable body for a hair-brush of any desired material having insulating properties. The bristles B are preferably of some suitable metal and are all connected to or in electric connection with a metallic plate C, over which in this instance is placed the insulating-plate D, preferably of rubber. The plates C and D, together with the bristles, are suitably held upon the face of the back by means of the metallic rim E held against the body A of the brush in any suitable manner, as by means of suitable pins.

The metallic or conducting bristles B are adapted to be placed in circuit with an electric accumulator or pile F. In order to accomplish this end, a metallic strip or contact

G is suitably secured in this instance to the top of the handle of the brush by suitable pins H. A metallic pin I, forming a contact, extends from the plate C through the back of the brush and affords provision for including the pile in circuit with the bristles. Another pin, J, extending from the plate or contact G, affords additional means for securing the pile in position. It will be seen that when the pile F is secured between the pins J and I an electric circuit may be completed through the hand and the head when the hair is brushed, because one pole of the pile connects with the bristles and the other pole connects with the plate or strip G, so that when the handle is grasped in the hand and the brush applied to the head a complete circuit will be made through the body. In this instance the electric pile F consists of plates of different metals placed in pairs, said pairs being insulated from each other. When the pile is dipped in weak acid or vinegar and placed in position on the brush, a difference of potential will exist between the poles of the pile, whereby an electric current may be passed through the hand and head or through other parts of the body if the brush is used for purposes other than brushing the hair.

Preferably the plates K are of copper and the plates L are of zinc, placed side by side and in contact with each other, while between each pair of plates is arranged a suitable insulator—as, for instance, a piece of blotting-paper O. Preferably the plates and the blotting-paper are provided with projecting portions P, which substantially register and serve to maintain the plates firmly in position, so that they cannot get out of alinement. At one end of the pile there is a metallic plate Q, provided with means for attaching the plate to the projecting pin I. In this instance a loop R is formed on the outside of the plate Q, adapted to slip over the pin I and place one pole of the pile in circuit with the bristles. If the plate Q is of zinc, the plate S at the other end of the pile should be of copper and likewise provided with a loop T to slip over the pin J.

Suitable means are provided for maintaining the elements of the pile together, in this

instance bands U being passed around the pile longitudinally. The bands U should be maintained out of contact with the elements of the pile, and preferably an insulator V, of 5 rubber or other suitable material, is arranged at one end of the pile, and said insulator V and the plate Q are wider than the elements, so that the bands U are maintained out of contact with the elements and electrically in- 10 sulated therefrom by reason of the insulator V.

If desired, a cover W may be hinged to the brush and provided with a catch X. The cover W prevents dust and dirt from reaching the pile. It will be seen that the pile F 15 as a whole may be removed from the brush and applied thereto as desired, and different piles of different strengths may thus be applied to the same brush, as desired.

According to this invention a neat, simple, 20 and efficient electric hair-brush is secured which is cheap to manufacture and is not liable to get out of order. A useful and stimulating effect is obtained upon the scalp, which is not so great as to injure the parts to which 25 the current is applied.

Obviously some features of the invention may be used without others, and the invention may be embodied in widely-varying forms.

30 Therefore, without limiting the invention to the constructions shown and described nor enumerating equivalents, we claim, and desire to secure by Letters Patent, the following:

35 1. The combination with a hair-brush, of an electric pile connected thereto, said pile comprising metallic plates insulated in pairs,

the pairs and insulating layers of suitable material having portions pressed outwardly therefrom and registering one with the other to maintain the plates firmly in position in 40 the pile, for substantially the purposes set forth.

2. The combination with a hair-brush, of an electric pile connected thereto, said pile having an end insulator, and bands passing 45 around the pile lengthwise to hold the elements together, said bands being maintained out of contact with the elements, for substantially the purposes set forth.

3. An electric hair-brush, comprising the 50 frame and a metallic contact extending along the handle, bristles connected to a metallic plate, pins projecting outwardly from the back of the brush, one in electrical connection with the contact extending along the handle, 55 and the other in electrical contact with the said plate to which the bristles are connected, an electric pile adapted to be removably connected to said projecting pins, whereby said pile may be placed in circuit between the con- 60 tact on the handle and the bristles, said pile comprising a plurality of compound elements suitably insulated from each other, and means for binding all of said elements together.

In testimony whereof we have signed this 65 specification in the presence of two subscribing witnesses.

ALBERT T. SANDEN.
VICTOR SENCE.

Witnesses:

F. HANSTROM,
G. McIVOR.