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C. C. TAYLOR
SCALP TREATING DEVICE
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Fig. 1.

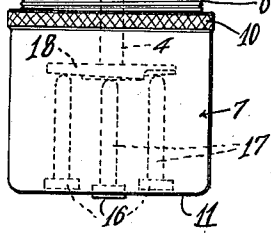


Fig. 2.

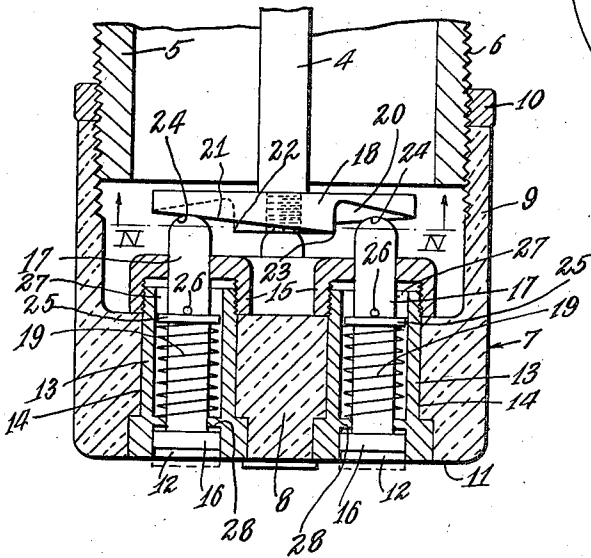
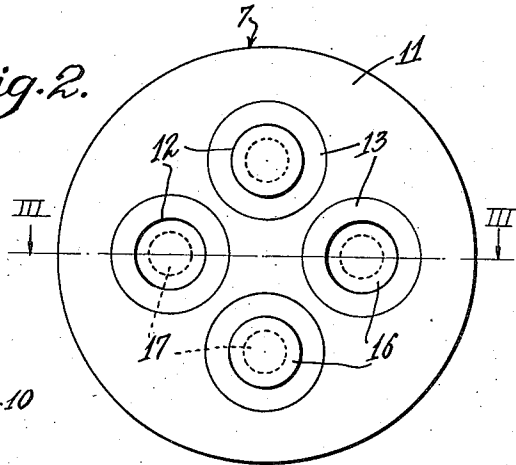


Fig. 3.

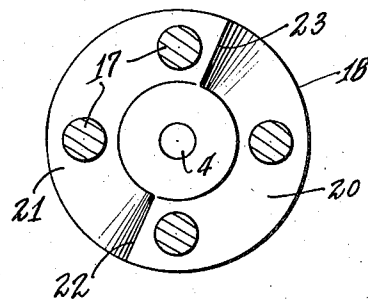


Fig. 4.

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UNITED STATES PATENT OFFICE

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SCALP TREATING DEVICE

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1 Claim. (Cl. 128—55)

This invention relates to a device for treating one's scalp for the purpose of increasing the circulation of blood to stimulate the growth of hair.

One of the objects of the invention is to produce a device of this kind which is of very simple construction and which will operate to subject the scalp to a succession of light blows and also to provide for forcing air against the scalp when the blow is struck; also to provide means for subjecting the scalp to a partial vacuum effect immediately after the blow has been struck.

A further object of the invention is to provide simple means for subjecting the scalp, at a plurality of points, to sudden reverses of pressure; that is to say, alternately forcing the air against the scalp with a development of a partial vacuum at the same point.

Other objects of the invention will appear hereinafter.

The invention consists in the novel parts and combinations of parts to be described hereinafter, all of which contribute to produce an efficient scalp treating device.

A preferred embodiment of the invention is described in the following specifications, while the broad scope of the invention is pointed out in the appended claim.

In the drawing:

Figure 1 is a side elevation of a scalp treating device embodying my invention;

Fig. 2 is a bottom plan of the device to illustrate the face that is applied to the scalp;

Fig. 3 is a vertical cross section, taken on the line 3—3 of Fig. 2, with the upper portion of the apparatus broken away; and

Fig. 4 is a bottom plan of a cam which I prefer to employ for actuating the plungers that subject the scalp to light blows. This view is taken on the line 4—4 of Fig. 3, looking upwardly and showing the upper ends of the plungers through which this section passes.

Referring more particularly to the parts, the device preferably comprises a small electric motor 1 which can be held and manipulated by means of a handle 2 that projects out from one side of the motor casing. The electric motor is supplied with electric current through an electric cord 3 and extends inwardly through the handle. The motor shaft has an extension shaft 4 (see Fig. 3) and this shaft is housed in a tubular extension or sleeve 5 which extends out from the lower side of the motor casing and which is preferably provided with screw threads 6. This sleeve 5 supports an applicator head 7 which may be formed of any suitable material, but which I prefer to

form of glass. The body of this applicator head 7 is in the form of a relatively thick disc 8 from which an integral sleeve 9 extends upwardly and this sleeve is threaded internally for attachment to the sleeve 5.

The applicator head 7 can be locked in any desired adjusted position by means of a locknut or ring 10 which is also received on the threads 6 and which is used as a jam-nut to be tightened against the upper end of the sleeve 9 after the same has been adjusted to the desired position.

The head 7 has a smooth, lower face 11, through which a plurality of small chambers 12 are formed, which chambers are preferably in the form of bores of small diameter formed in the bushings 13, respectively. These bushings are received in counterbored openings 14 in the head and their inner ends extend beyond the disc 8 of the head and are threaded to receive clamping collars 15 that screw onto the threaded inner ends of the bushings. In each chamber 12 a small piston or head 16 is reciprocated at a rapid rate, and these pistons 16 constitute the forward ends of plungers 17, respectively, the rear ends of which are guided through the collars 15. These plungers 17 are reciprocated through the agency of the extension shaft 4. In the present instance they are reciprocated through the agency of a cam 18 and return springs 19. I prefer to provide four of the chambers 12 and these are disposed circumferentially about the axis of the shaft 4. The cam may have any desired form, but in the present instance it is a double cam of disc form; that is to say, this cam has two diametrically opposite cam faces 20 and 21 which incline circumferentially between two diametrically opposite radial shoulders 22 and 23. The inner ends of the plunger 17 have rounded noses 24 that rest against the inclined cam faces 20 and 21. As the cam is rotated by the shaft 4 the cam face drives the plunger forward at a high velocity until the corresponding shoulder 22 or 23 passes the rounded nose 24 of the plunger, whereupon the spring 19 of the plunger quickly withdraws it or returns it from its forward position. The springs preferably thrust against small washers 25 held in place by small pins 26, respectively. The springs are received in an annular chamber 27 formed between the plunger and the bore of the bushing, and the outer end of each spring thrusts against a shoulder 28 which projects in from the bore of the bushing and which operates also as a stop for the inward movement of the plungers.

The plungers have a very small travel but are

reciprocated at a very high speed. At the limit of their forward stroke they project slightly beyond the face 11 of the head 7. The pistons 16 preferably fit closely in the bores so that when 5 they come forward the air in the chamber 12, in advance of the piston, is forced against the scalp; and, on the return stroke, each piston 16 will develop a partial vacuum in the chamber if the face 11, around the edge of the chamber, is held 10 against the scalp. In this way the scalp will be subjected to a succession of very rapid and light blows and as the blow is struck air is forced against the scalp. As pointed out above, as each 15 plunger withdraws, partial vacuum will be formed in the chamber 12 if the edge of that chamber is held against the scalp.

What I claim is:

In a scalp treating device, the combination of a head having a face to rest against the scalp, a plurality of bushings set in said head through said face, each bushing having a chamber in its 5 outer end, a plunger mounted in each bushing with its outer end fitting in its corresponding chamber, a cam mounted in said head for moving said plungers in one direction, and springs for 10 moving the plungers in the other direction, the outer end faces of said plungers operating to strike the scalp on their outstrokes.

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