March 19, 1968 J. C. RANKIN 3,373,739

APPARATUS FOR MASSAGING THE SCALP WITH ROTATING BRUSHES

Filed May 10, 1965 2 Sheets-Sheet 1

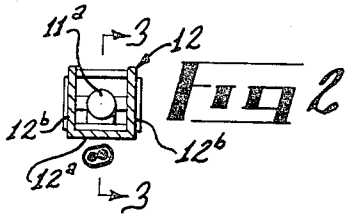


Fig 2

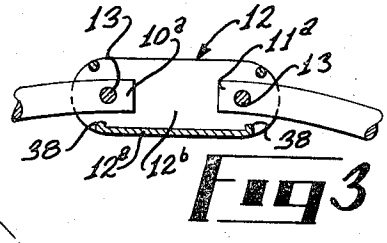


Fig 3

Fig 1

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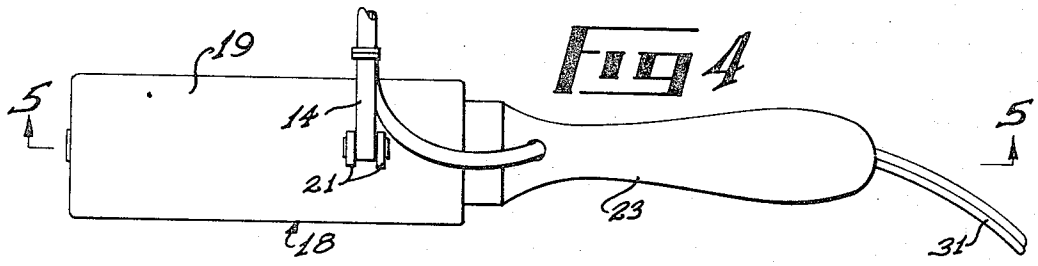


Fig 4

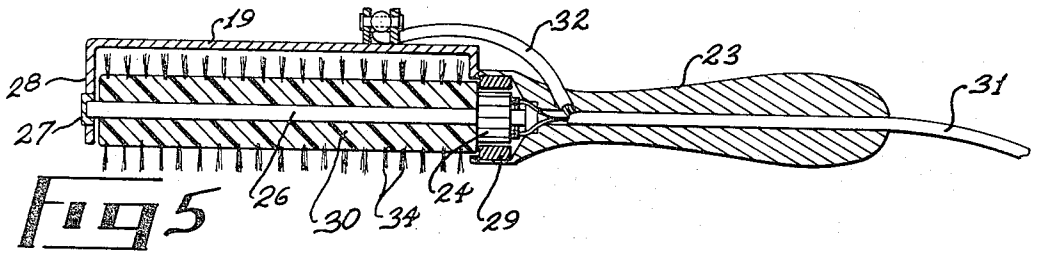


Fig 5

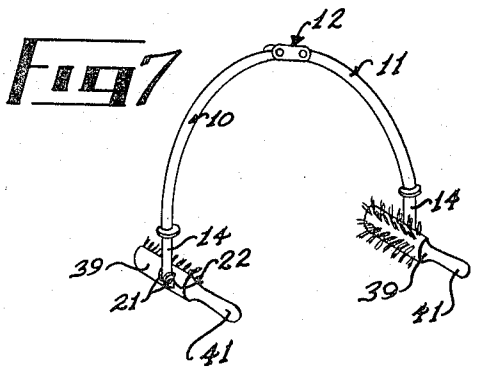


Fig 7

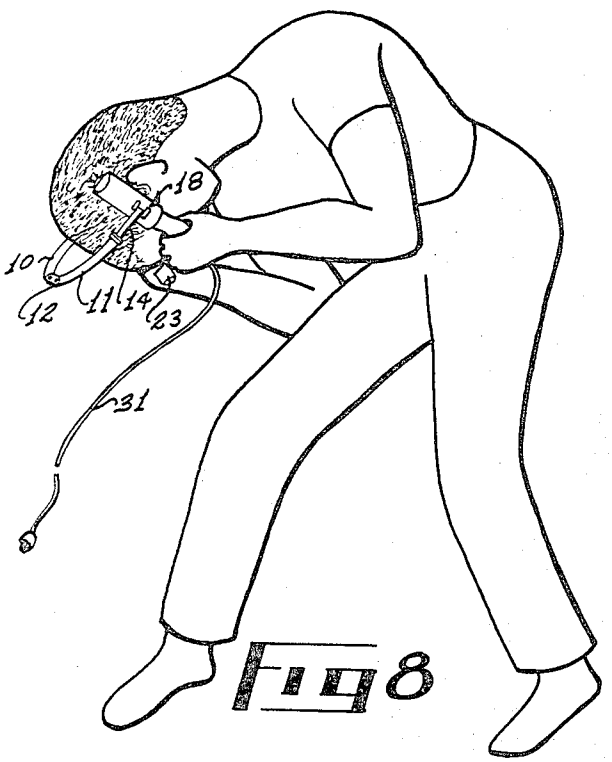


Fig 8

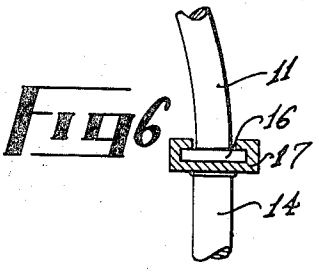


Fig 6

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3,373,739

APPARATUS FOR MASSAGING THE SCALP WITH ROTATING BRUSHES

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6 Claims. (Cl. 128—56)

ABSTRACT OF THE DISCLOSURE

Apparatus for massaging and exercising the scalp of the head embodying a pair of downwardly and inwardly curved arms, on the lower ends of which are mounted either hand operated or motor driven brushes, the brushes being mounted for universal movement relative to the head, and handles immediately associated with the brushes by means of which the brushes may be moved inwardly and upwardly while rotating the same, thus to exercise the scalp.

This invention relates to apparatus for massaging and exercising the scalp of the head for the purpose of stimulating the flow of blood to the roots of the hair, thereby exercising and toning the hair itself.

It is generally accepted that the loss of hair and continued loss of hair, particularly among males, is due to the fact that for some reason unknown to medical science, but generally with increasing age, the scalp becomes drawn tautly over the skull. It is theorized by some that this tautness causes the individual blood vessels feeding each hair to be starved, whereby the roots of the hair, being deprived of their life-giving fluids through the blood stream, simply die and fall out.

It has likewise been theorized and generally recognized that regular and vigorous exercise of the scalp is beneficial in maintaining and restoring circulation to the roots of the hair. However, such exercise heretofore has taken the form of manipulations on the scalp which tend further to stretch it, such exercises being commonly performed with the tips of the fingers, vibrating pad-like machines, etc.

With all the foregoing in mind, and with the idea that deep down circulation of the blood to the individual roots of the hair in fact is beneficial for such roots (although certainly, I do not claim that my invention grows hair), I have provided a simple and efficient apparatus for getting such deep massaging of the scalp. Briefly, my invention proceeds upon the theory that by engaging the sides of the head generally in the temple areas with a set of brushes of the like and then moving those members upwardly in pressing contact with the scalp, the scalp is caused to flex, wrinkle and knead, in an upward direction, thus imparting considerable movement and energy to the scalp, well beneath the skin. In other words, by manipulating these brushes or massaging elements from lower positions toward the crown of the head, the scalp is "buckle-flexed," kneaded or rolled upwardly, resulting in a most unusual type and degree of massage which has the effect of loosening the scalp and permitting the blood vessels therebeneath to supply the roots of the hair of the scalp. Further, I provide means to prevent the massaging elements from directly contacting the crown of the head, upon completion of the upward movement thereof. Still further, the massaging units, which may be rotary brushes or brushes which are hand operated through a relatively small arcuate turn upon each upward stroke, are mounted in universal manner so that on the upward stroke they lie against the head in proper manner.

Apparatus illustrating features of my invention is shown in the accompanying drawings forming a part of this application, in which:

FIG. 1 is a front elevational view showing my improved apparatus applied to the scalp of a human head, the dotted line position indicating the position of the parts upon full upward movement thereof;

FIG. 2 is a detail sectional view taken generally along line 2—2 of FIG. 1 and slightly enlarged;

FIG. 3 is a detail sectional view taken generally along line 3—3 of FIG. 2;

FIG. 4 is a side elevational view, partly broken away and showing one of the motorized brush massage units;

FIG. 5 is a detail sectional view taken generally along line 5—5 of FIG. 4;

FIG. 6 is a detail fragmental sectional view through one of the universal joint members on the lower ends of the supporting frame;

FIG. 7 is a perspective, small scale view of a non-motorized version of my improved apparatus; and,

FIG. 8 is a diagrammatic view showing one method of using my improved device.

Referring now to the drawings and more particularly to FIGS. 1 to 6 inclusive, my improved apparatus comprises a supporting framework embodying a pair of downwardly curved arms **10** and **11** disposed to straddle the head. The arms **10** and **11** may be made of rod-like material and may be pivoted at their upper ends **10**^{a} and **11**^{a} to a common connecting member **12**. The member **12** may be generally U-shaped in cross section as shown in FIG. 2 and may embody a lower wall section **12**^{a} and side walls **12**^{b}. The ends **10**^{a} and **11**^{a} of the arms **10** and **11** are pivotally connected to the side walls **12**^{b} by means of cross pins **13**. The wall **12**^{a} extends outwardly beneath the pivot pins **13** a distance sufficient to form stops by engagement with the arms **10** and **11**, thus to limit inward movement of the lower ends of the arms substantially to the dotted line position shown in FIG. 1.

At the lower ends of the arms **10** and **11** I provide extensions or lower sections **14**. The sections **14** are secured to the lower ends of the arms **10** and **11** by means of the male and female coupling elements **16** and **17** shown in detail in FIG. 6. Thus, the extensions **14** are free to rotate generally in a plane embodying the longitudinal axis of the lower ends of the arms **10** and **11**.

Mounted on the lower ends of the extensions **14** are the brushing or massaging units indicated generally by the numeral **18**. In view of the fact that each of these units is identical a description of one will suffice for both. First, it will be noted that each unit embodies an outer arcuate casing or housing **19**. Outstanding lugs **21** are provided on the housing. A pin **22** passes through these lugs **21** and through the lower end of the extensions **14**. Thus, the entire housing is substantially universally mounted relative to the head to be operated upon.

Each housing has a forwardly extending handle **23**. Located generally at the junction between the handle **23** and the housing **19** is the armature **24** of an electric motor having a shaft **26** carried thereby and journalled at **27** in an end wall **28** of the housing **19**. The field winding is indicated diagrammatically at **29**. Current for the motor **24** is supplied through leads **31** which enter the end of the handle **23** as shown. A branch lead **32** carries current to the opposite one of the motors of the unit **18**, the lead **32** being secured to the frame members **10** and **11** by clips **33** as shown in FIG. 1.

Surrounding the shaft **26** is the body portion **30** of an elongated, generally cylindrical brush carrying bristles **34**. Thus, when the motor **24** is energized the brush turns. Further, as shown clearly in FIG. 1 the righthandmost brush as viewed in that figure rotates clockwise in the direction of arrow **36** while the lefthand one operates counterclockwise in the direction shown by the arrow **37**.

I have found that it is important to select the proper length, size and stiffness of bristles in order for my im-

proved device to be fully effective. By way of example, I have found that a brush embodying nylon bristles of about .025 inch in diameter, and having a length from the body portion **30** of about one inch is entirely satisfactory. This strength and length of bristle affords adequate scalp manipulation without uncomfortable stiffness. A speed of about 120 r.p.m. appears to be satisfactory.

From what has been described it is now possible to explain fully the method of using my improved apparatus. First, while the user may effectively employ my improved device in a sitting, or upright standing position, it sometimes is advantageous to employ the same while bending over, that is, with the head generally lowered as shown in FIG. 8. At all events, whatever the position of the operator's body he grasps the handles **23** in his hands and with the motors energized and the brushes turning in the direction of the arrows **36–37**, that is, with adjacent surfaces moving upwardly, the user applies the brushes to the lower portion of the head generally in the area of the temples. Starting in this area the brushes are pushed more or less firmly inwardly, depending upon the amount of exercise desired and the comfort thereof, and both hands are moved upwardly, simultaneously, bringing the brush units generally to the position shown in dotted lines of FIG. 1. At this position the lower sides of the arms **10** and **11** contact the ends **38** of the wall **12b** of the coupling unit **12**, thus automatically limiting any further inward movement of the brush units. During the upward movement of the units the scalp of the head is "buckle-flexed," rolled or kneaded in an upward direction, producing deep-down exercise thereof. Furthermore, since the brush units are universally mounted relative to the supporting arms **10** and **11**, the user is quite easily enabled to maintain the same in contact with the general contour of the head during the upward motion. Having reached the upper limit of the stroke as indicated by the engagement of the arms with the stops **38**, the user continues the up movement until the bristles are clear of the head, whereupon he opens the unit, pulls the brushes down and places them against the head just above the ears and commences the stroke again. Again, the oppositely rotating brush surfaces engaging opposite sides of the head, in combination with the upward and inward movement of the brushes, remaining in contact with the head, assure the rolling and kneading of the scalp as herein mentioned, consequently stimulating the flow of blood through the blood vessels in the subcutaneous layers of the scalp. Further, such kneading and upward rolling motions imparted to the scalp tend to loosen it, not as heretofore attempted, by pressing it downwardly, but by the kneading and rolling action in an upward direction. The degree and amount of stimulation may be regulated by the user of the device by the amount of inward pressure that he applies to the handles. Since the adjacent surfaces of the brushes rotate upwardly, the tendency is for the units to move down the head. Manually pushing the brushes upwardly while they are attempting to roll downwardly greatly magnifies the "buckle-flexing" of the scalp.

In FIG. 7 I show a somewhat simplified version of my improved device. This consists essentially in substituting for the motorized units **18** hand brushes **39** which have the forwardly projecting handles **41**. Except for this substitution the unit of FIG. 7 is identical with the motorized one. However, in operation instead of the brushes rotating the user grasps the handles **14** and with the upward movement simply gives the brushes a partial twist by twisting the wrist, thus "buckle-flexing" the scalp during upward movement of the brush units. The stop means indicated at **38** is provided. Likewise, the universal mounting of the brushes is maintained through the joint **16–17** and the mounting lugs **21** and pin **22**.

In FIG. 8 of the drawings I show my improved device being used by a person with his body bent slightly forwardly and his head down. As stated, by using the device in this manner the natural flow of blood to the head is enhanced and it is believed to be more beneficial in securing and promoting flow in the blood vessels leading to the individual hairs of the head. Such position is less tiring because the arms are moved to and from raised and lowered positions in a natural fashion.

From the foregoing it will be seen that I have devised an improved apparatus for vigorously exercising, massaging and stimulating the scalp of the human head. As stated, I make no claim that my improved apparatus actually will grow hair where hair once has grown and yet has died. On the other hand, I do claim that regular and conscientious use of my improved device will so stimulate the scalp, encourage the flow of blood in underneath the skin areas and otherwise "tone-up" the scalp as to be of important benefit in a person retaining what hair he has. I have proven this to my own satisfaction. Further, I have found that providing some means to stop the massaging adjacent the crown of the head itself is important. Such means prevents pinching of the scalp in the crown area and keeps the brushes from intermeshing.

While I have shown my invention in but two forms, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. In apparatus for massaging the scalp of a human head,

(a) a pair of arms having their lower ends disposed far enough apart to straddle a human head,

(b) a scalp massage member in the form of a fore and aft elongated brush mounted adjacent the lower end of each arm for universal movement relative to the head to be massaged, said brushes being also mounted for rotational movement about their longitudinal axes, and

(c) handle means located adjacent the lower ends of the arms for moving the brushes toward each other whereby, starting with the brushes disposed along the sides of the head in the temple areas, said brushes may be moved upwardly along the head and inwardly toward each other while being rotated, thereby to upwardly flex, roll and exercise the scalp.

2. Apparatus as defined in claim **1** in which there is provided means to limit movement of the massage members toward each other.

3. In scalp massaging apparatus,

(a) a frame embodying a pair of downwardly and inwardly curved members pivoted together at their upper ends and of a length and spacing for the lower ends to lie alongside the head to be massaged,

(b) a fore and aft elongated brush mounted on the lower end of each of said members for universal movement relative to the head to be massaged and also mounted for rotational movement about their longitudinal axes,

(c) handle means immediately associated with each brush by means of which the user may press the brushes against the sides of the head and move them upwardly of the head and inwardly toward each other while rotating them, thereby flexing, working and exercising the scalp, and

(d) stop means effective to prevent the brushes from moving inwardly into contact with each other, whereby the flexing of the scalp due to inward and upward movement of the brushes stops short of the crown of the head.

4. Apparatus as defined in claim **3** in which the brushes are circular in cross-section and motorized and are driven with adjacent surfaces thereof moving upwardly, there-

by to accentuate the upward rolling and flexing of the scalp.

5. In apparatus for massaging the scalp of a human head,

(a) a pair of brushes disposed one at each side of the head,

(b) a handle projecting from each brush and by means of which the brushes may be manipulated from a position generally in the temple areas of the head upwardly,

(c) a supporting frame for said brushes embodying a pair of downwardly curved members pivoted adjacent their upper ends whereby the lower ends may move toward each other,

(d) an articulated joint connecting the brushes to the lower ends of said members, whereby the brushes may be engaged with the head during upward movement thereof, and

(e) stop means effective to limit inward pivotal movement of the curved members, thereby preventing the brushes from contacting each other at the conclusion of the upward massaging movement.

6. In apparatus for massaging the scalp of a human head,

(a) a pair of arcuate arms pivoted together at their upper ends, said arms being disposed to straddle the head to be massaged with the lower ends thereof spaced outwardly of the sides of the head,

(b) an extension mounted at its upper end on the lower end of each arm for rotation generally in the plane of the lower end of its associated arm,

(c) an elongated brush pivotally mounted adjacent the lower end of each extension for rotation generally about its longitudinal axis, whereby through the combination of said pivots the brushes are universally adjustable relative to the head to be massaged,

(d) forwardly extending handles on the brushes, and

(e) stop means on said arms limiting inward movement of the brushes toward each other.

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L. W. TRAPP, *Primary Examiner.*