Dec. 23, 1941. T. G. SCARDAMALIA 2,267,138

SCALP MASSAGING DEVICE

Filed March 12, 1940

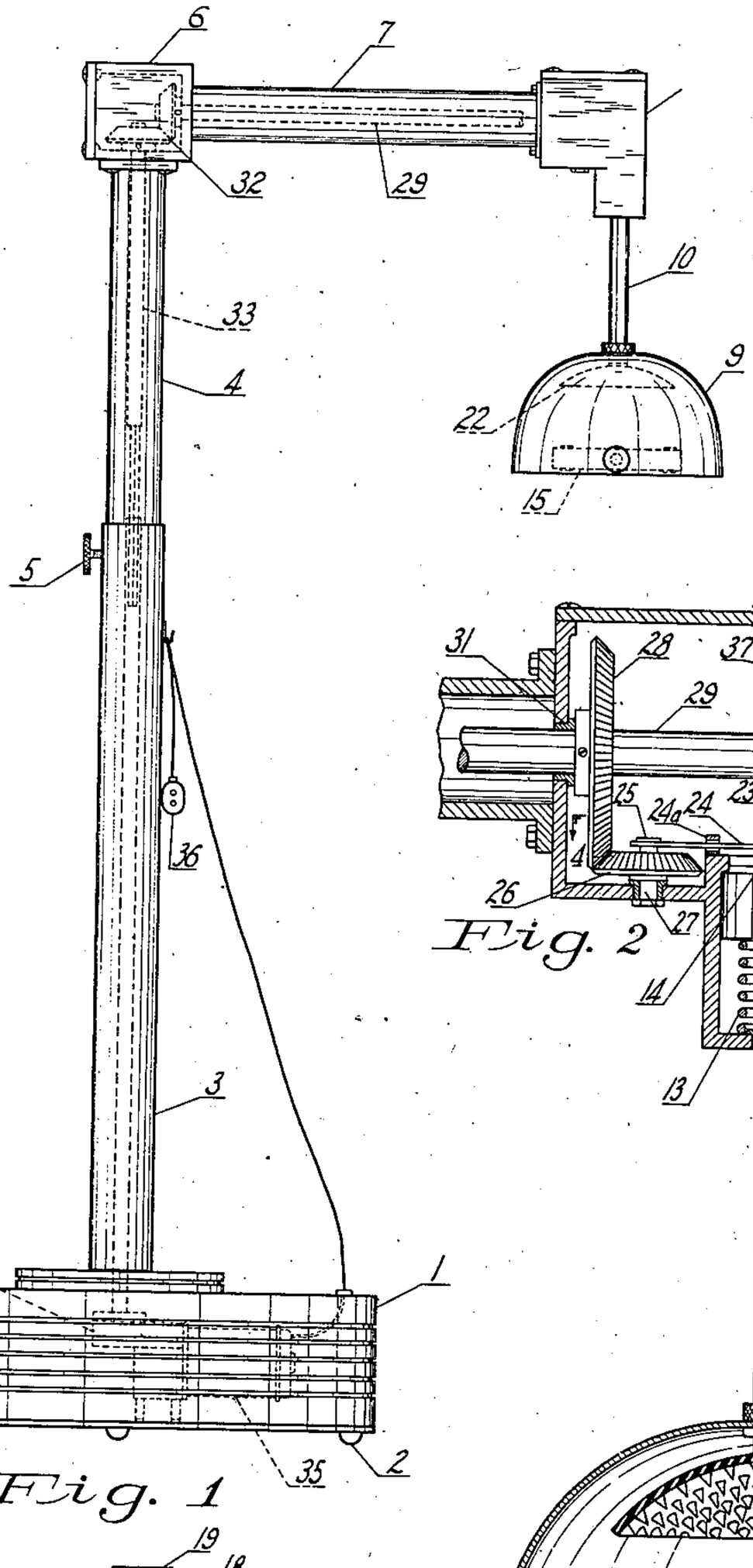

Fig. 1

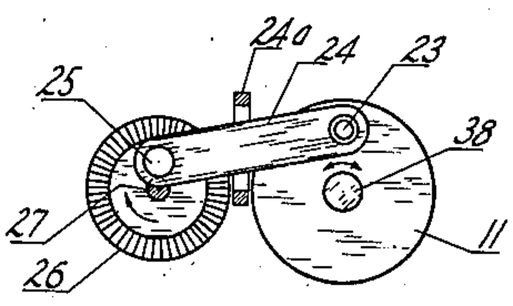

Fig. 4

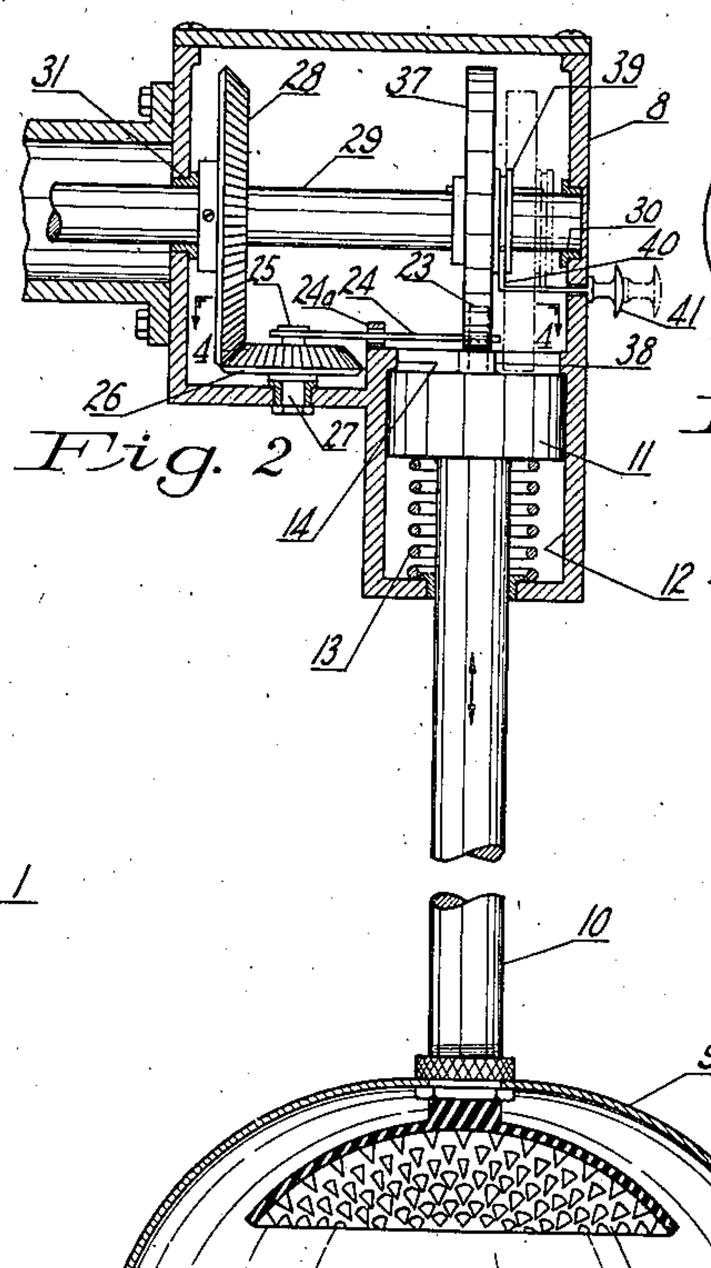

Fig. 2

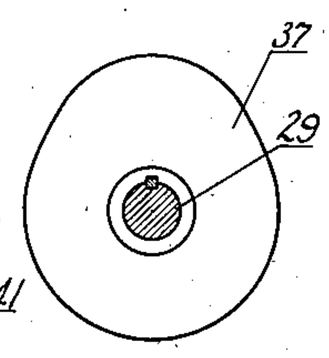

Fig. 5

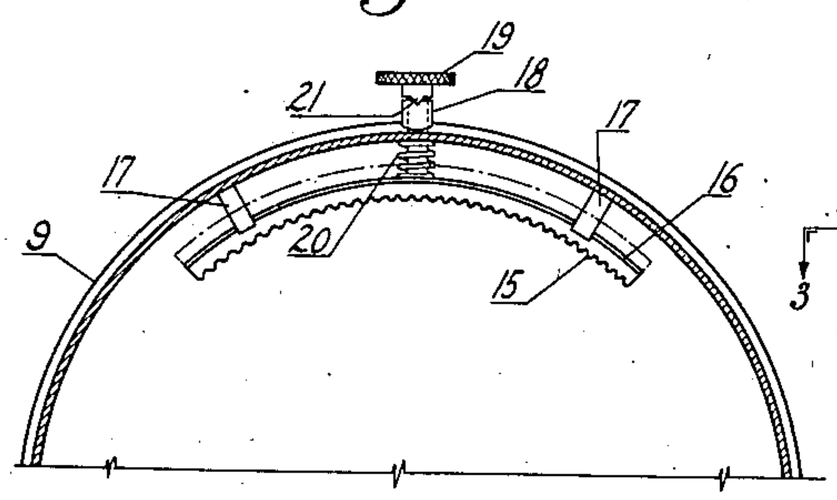

Fig. 3

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SCALP MASSAGING DEVICE

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4 Claims. (Cl. 128—49)

This invention relates to new and useful improvements in mechanical means for massaging the scalp of the human head, and it is among the objects thereof to provide apparatus suited for the purpose which shall be of simple and compact design, and which shall be provided with means for engaging the sides and bottom of the scalp at different times to subject the engaged portion to vigorous massaging action.

The apparatus further contemplates a simple means for converting the massaging element from a purely oscillatory movement in a horizontal plane to a vertical reciprocatory and oscillating movement, in accordance with the particular portion of the scalp of the head being acted upon.

These and other objects of the invention will become more apparent from a consideration of the accompanying drawing constituting a part hereof in which like reference characters designate like parts, and in which:

Fig. 1 is a side elevational view of scalp massaging apparatus embodying the principles of this invention;

Fig. 2 a vertical cross-sectional view partially in elevation of the massaging implement or head, and the actuating mechanism therefor;

Fig. 3 a horizontal half-section of the massaging head taken on the line 3—3, Fig. 2;

Fig. 4 a top plan view of the oscillating mechanism, taken on the line 4—4; and

Fig. 5 a side elevational view of a cam.

With reference to the several figures of the drawing, the structure therein illustrated comprises a hollow base 1 adapted for mounting on casters 2 to render it portable, the base being of an ornamental character to render it appropriate for use in beauty parlors, barber shops and the like. Extending vertically upward from the base 1 is a hollow column 3 having a telescopically arranged extension 4 which may be adjusted to different vertical positiions by a knurled thumb screw 5, a gear box or housing 6 being provided on the end of the member 4 and a horizontal arm 7 terminating in a gear box 8 extends from the box 6. A movable housing or hood 9 is secured to a shaft 10. As shown in Fig. 2, shaft 10 is provided with a piston 11 disposed in a guide cylinder 12 and biased by coil spring 13 against the shoulder 14 of cylinder 12 to normally raise the head 9 to its vertically upward extended position. A plurality of angularly spaced segment shaped massaging implements 15 may be of rubber, mounted on a suitable frame 16 which is disposed in guides 17 and adjustable by a snap lock 18 having a knurled head 19 by which it is pulled out or released, a coil spring 20 functioning to extend the frame 16 inwardly in the guide 17 when the tooth 21 is in the notch, as shown, and by pulling the latch pin 19 and turning it a partial turn, the tooth 21 will rest on top of the notched abutment to pull the frame 16 outwardly, as shown by the dotted lines. Spring 20 functions to exert a yielding pressure on the engaging face of the massage implement 15 when in operation. Also within the hood 9 is a massage implement 22 having resilient teeth or serrations for engaging the top of the scalp. It is not intended that both the side gripping elements 15 and the top element 22 contact the scalp simultaneously. When the implements 15 are employed, the hood and implements 15 are subjected to an oscillatory movement in a horizontal plane, and vertical reciprocatory movement. When the implement 22 engages the scalp, the hood and implement 22 are subjected to an oscillatory movement in a horizontal plane. In the latter case, the elements 15 are drawn outwardly by pulling the latch pin 19, Fig. 3.

The oscillatory motion of the hood is supplied through the following mechanism. Piston 11 is provided with a crank pin 23 having a connecting link 24 with a crank pin 25 of bevel gear 26 which is journalled on a stud shaft 27 in the housing 8. Link 24 is provided with a slotted guide 24a. Gear wheel 26 is engaged by bevel gear 28 mounted on a shaft 29 journalled in housing 8 at 30 and 31. Shaft 29 extends through the sleeve 7 to a pair of mitre gears 32 driven by telescopic shaft 33 extending to a transmission 34 in the base driven by a motor 35, or shaft 33 may be driven direct by the motor 35. Numeral 36 designates the control switch for the motor 35 which may be operated by the person being treated.

When the motor 35 is energized, the hood 9 will be subjected to oscillatory movement, attention being directed to the fact that in the drive of Fig. 4 the effective length of arm 24 of the crank pin 25 is such that the piston 11 will not be subjected to rotary movement, but only to an oscillatory motion as indicated by the double arrow in Fig. 4.

To subject the hood 9 to vertical reciprocatory and oscillatory movement to render the implement 15 effective, a cam 37 mounted on shaft 29 is moved into engagement with a boss or extension 38 of piston 11 by a trunnion collar 39 attached to the cam 37 and engaged by a fork 40 that is moved by manipulation of knob 41. When so engaged, hood 9 is subjected to vertical reciprocatory and oscillatory movement, as indicated by

the double arrows on shaft 10, Fig. 2, and piston 11, Fig. 4.

The operation of the above described mechanism is briefly as follows:

The hood 9 mounted on the telescopic columns 3 and 4 is adjustable to the position of the head of the person seated therebeneath by the adjustment through thumb screw 5. Hood 9 is adjusted so that the segmental shaped massaging implements are brought to the desired position at the side of the head.

The knob 19 is then released to bring the tooth 21 in register with the notch which brings a slight pressure to bear by the implements 15 against the head of the person receiving the treatment. Motor 35 is then energized, and through rotation of gear wheel 28 gear 26 is actuated to operate the link 24 that subjects piston 11 to oscillatory movement while cam 37, operated by shaft 29, produces the vertical reciprocatory movement. The hood 9 is subjected to vertical reciprocatory and oscillatory movement which subjects the side of the head or scalp to lively working to stimulate circulation of the blood in the scalp, the treatment being prolonged for any desired period, depending upon the intensity of treatment required.

The oscillatory motion in this operation is provided not only to aid stimulation but to create a better contact between implements 15 and the scalp. If it is desired to apply the treatment to the top of the scalp, the latch pin 19 is pulled outwardly to release the side massage implements 15, and the hood is adjusted to bring the upper implement 22 to lightly bear on the scalp of the person.

This is done after cam 37 has been disengaged from boss 38 of the piston. By adjusting the telescopic column at this point so that the massaging tips engage or contact the scalp to the degree desired, subsequently oscillatory movement imposed by the link 24 will produce the desired massaging action.

It is to be noted in Fig. 2 that the crank pin 23 is of sufficient length to permit vertical movement of piston 11 while maintaining the oscillatory movement produced by the link drive. The implement 22 is subjected to oscillatory movement to produce a vigorous massaging action when the implement 22 engages the scalp.

It is evident from the foregoing description of my invention that scalp massaging can be accomplished mechanically to apply massaging treatments to the side and/or top of the head by a simple compact device which is relatively inexpensive to construct and portably mounted to be conveniently accessible in beauty parlors, barber shops or the like.

It is further evident that such a device is useful in beneficially treating scalps to induce circulation for the maintenance of a proper and healthy hair growth.

Although one embodiment of the invention has been herein illustrated and described, it will be evident to those skilled in the art that various modifications may be made in the details of construction without departing from the principles herein set forth.

I claim:

1. In a scalp massaging device, a hood adapted to fit over the head of a person having a plurality of segment shaped massaging implements in angularly spaced relation adjacent the rim thereof, said implements being adjustable radially of the wall of the hood to yieldingly contact the sides of the head, and spring means yieldingly urging the massage implements radially inward against the scalp.

2. In a scalp massaging device, a hood adapted to fit over the head of a person having annularly disposed strips of massage implements mounted adjacent the rim thereof, said implements being adjustable radially for engagement with the side of the head, and said hood having a dome-shaped massage implement mounted in the crown thereof for engagement with the top of the head, the hood being adjustable vertically to effect a desirable degree of contact of said last named massaging implement with the head, said hood being mounted for oscillatory movement in a horizontal plane and reciprocatory movement vertically.

3. A scalp massaging device comprising a hood adapted to fit over the head of a person having massage implements adjustably mounted therein for engagement with the side of the head and having a massage implement mounted in the crown of the hood for engagement with the top of the head, adjustable means for effecting a desirable degree of contact of either of said massaging implements with the head, actuating mechanism comprising an actuating crank connected to impart oscillatory movement to the hood, cam mechanism operative to impart vertical reciprocatory movement to the hood, and means for disengaging the cam mechanism as desired.

4. In a scalp massaging device, a vertically adjustable arm, a hood mounted on one end thereof for supporting massage implements on the inner wall of the hood, a drive shaft in said arm, a motion transmutation device interposed between said drive shaft and hood, said hood being mounted for reciprocatory movement on said arm, a spring normally urging the hood to its upper position, cam mechanism engaging the hood support for actuating the hood to subject the same to reciprocatory movement vertically, a drive arm connected to said hood support and to said motion transmutation device for transmitting oscillatory movement in a horizontal plane from the drive shaft to said hood support, and means for selectively engaging or disengaging the cam actuating means.

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