Nov. 24, 1959 W. L. CORY 2,914,065

SCALP MASSAGING DEVICE

Filed Aug. 17, 1956 2 Sheets-Sheet 1

Fig. 1.

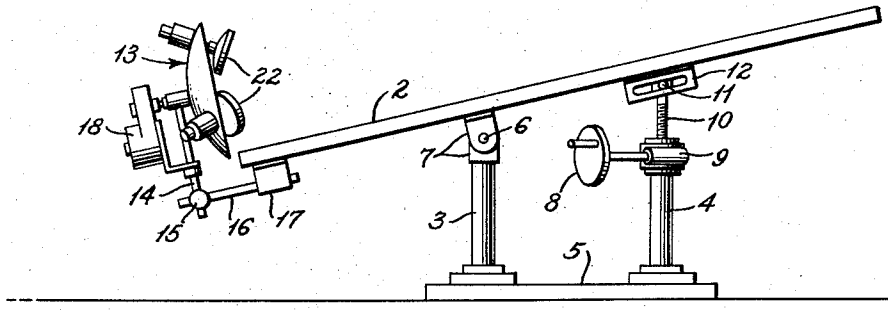
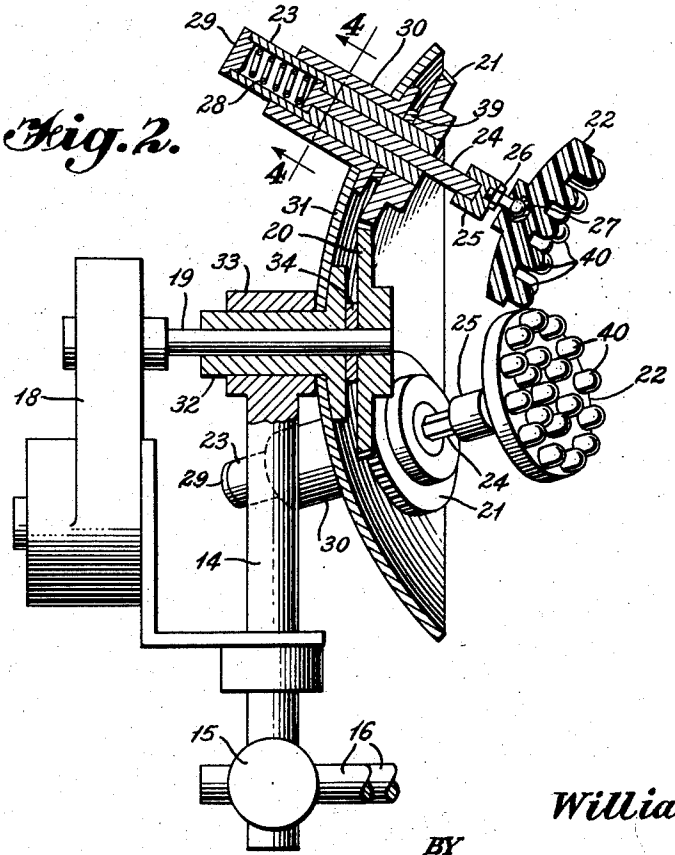


Fig. 2.



INVENTOR.
William L. Cory
BY
Stevens, Davis, Miller & Mosher
ATTORNEYS

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Fig. 3.

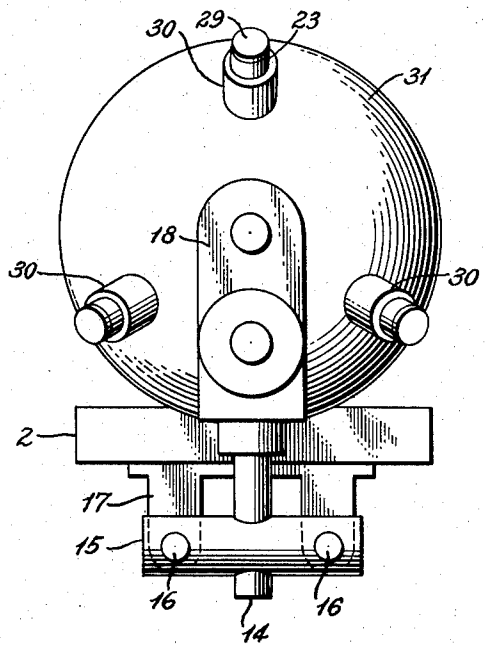


Fig. 4.

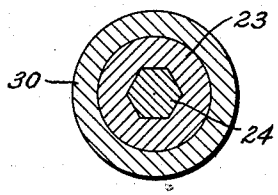
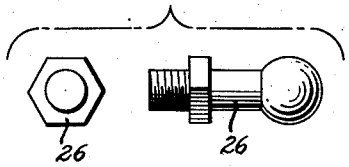


Fig. 5.



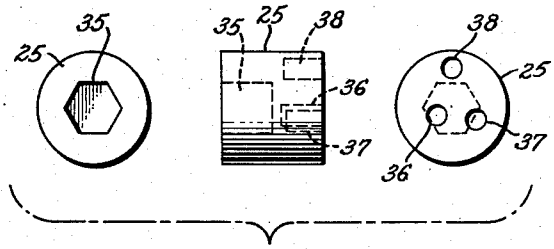


Fig. 6.

INVENTOR
William L. Cory

BY
Stevens, Davis, Miller & Mosher
ATTORNEYS

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2,914,065

SCALP MASSAGING DEVICE

William L. Cory, Oklahoma City, Okla.

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5 Claims. (Cl. 128—45)

This invention relates to massaging devices for the stimulation of blood circulation in the scalp, and more specifically to a device which massages the scalp with a multiplicity of plastic fingers moving in a gyratory manner at the same time the patient is supported with his feet elevated to cause the blood to flow toward the scalp.

It is an object of the present invention to provide a scalp massaging device which employs several massaging heads, each provided with a plurality of plastic fingers, approximately the size of human fingers, which move in a gyratory manner either in or out of phase with the motion of the fingers on the other massaging heads in order to massage the scalp and to stimulate the circulation of blood therein.

It is a further object of this invention to provide a scalp massaging device in which the patient is supported on a slanting table, the foot of which is higher than the head causing blood to flow toward the scalp. The slant of the table may be controlled by the person reclining on it, and the intensity of the pressure exerted by the plastic massaging fingers against the scalp is governed by degree of the slant of the table.

It is a still further object of this invention to provide a scalp massaging mechanism in which the amplitude of the gyratory motion of the plastic massaging fingers may be easily adjusted, and which may be used in conjunction with infra-red or ultra-violet rays which project onto the scalp to increase blood circulation.

Further objects and advantages of this invention will become readily apparent from the following detailed description of the preferred form of this invention when taken in conjunction with the appended drawings in which:

Figure 1 is an elevational view of the entire device;

Figure 2 is a fragmental vertical section of the massaging head assembly provided in the massaging device;

Figure 3 is an end view of the massaging head assembly, its supporting structure, and the table of the device;

Figure 4 is a transverse sectional view taken along line 4—4 of Figure 2;

Figure 5 is an end and side view of massaging head driving pin 26 of Figure 2; and

Figure 6 is an end and side view of driving head 25 of Figure 2.

Referring now to the drawings and more specifically to Figure 1, the massaging device provided in accordance with the present invention comprises a slanting table 2, the foot of which is normally higher than the head, upon which the patient may recline while receiving the scalp treatment. The person's feet will be elevated with respect to his head to permit blood to flow toward the head. The table 2 is supported from a base 5 by means of pedestals 3 and 4. The pedestal 3, which is mounted on base 5, supports a lower element of hinged collar 7, the upper element of which is rigidly connected to the table 2 at a point slightly forward from the center of the table 2. A pin 6 which is mounted in the collar 7

permits the upper element of the collar 7 to rotate slightly about the lower element so that the pin 6 serves as a pivot for the table 2.

The pedestal 4, which is also mounted on base 5, supports the table 2 at a point slightly to the rear of its center by means of a threaded rod 10 which is concentrically mounted inside the pedestal 4. A pin 11, at the upper end of the threaded rod 10, projects radially from the rod 10 and fits into a slotted eye in a bracket 12 which is attached to the table 2. A crank driven wheel 8 is adapted to drive a worm wheel 9 which meshes with the threaded rod 10 to cause vertical movement of the rod 10. The patient lying on the table 2 may turn the crank on the wheel 8 so as to cause vertical movement of the rod 10, the pin 11 of which moves in the slotted bracket 12 to raise the foot of the table 2 as the table 2 rotates about the pin 6.

A multiple massaging head assembly, generally designated by the numeral 13, is mounted at the head, or lowered end, of the table 2. A vertical bar 14, which supports the head assembly 13, is connected to a horizontal cross bar 15 which in turn is supported by two longitudinal bars 16. The longitudinal bars 16 are mounted in bracket 17 which is supported by the head of the table 2. Clamping means, not shown, are employed to hold the bars 14, 15 and 16 and the bracket 17 in a tight relation.

The multiple massaging head assembly 13 is more completely shown in Figure 2. An electric motor 18, which furnishes power for the operation of the massaging heads, is connected to a drive shaft 19 which is mounted inside a bushing 32. A clamping collar 33 holds the bushing 32 on the upper end of the vertical support bar 14. A bevel gear 20 is mounted on the end of the drive shaft 19 away from the motor 18 and an antifrictional ring or thrust bearing 34 is mounted on the drive shaft 19 between the bushing 32 and the bevel gear 20 to absorb the thrust of the gear 20.

A curved massaging head support member 31 is attached to the vertical bar 14 by means of the bushing 32 and the clamping collar 33, and as shown in Figure 3, three bushings 30 are mounted on the massaging head support member 31. Each bushing 30 encases a driving collar 23 inside which a hexagonal drive rod 24 is mounted. This arrangement is shown in Figure 4. The driving collar 23 and the hexagonal drive rod 24 rotate together inside the stationary bushing 30. The drive rod 24 is pushed toward the front of the collar 23 by a spring 28 which is held inside a recessed rear portion of the driving collar 23 by a plug 29.

A bevel gear 21 is mounted on the front end of each driving collar 23 so that the bevel gears 21 will mesh with the gear 20 at a slight angle, and rotation of the drive shaft 19 will thus cause rotation of the driving collars 23 and the hexagonal drive rods 24 disposed therein. Antifrictional rings or thrust bearings 39, like thrust bearing 34, are mounted on the driving collars 23 between the gears 21 and the bushings 30 to absorb the thrust of the gear 21.

As shown in Figure 6, each drive rod 24 is adapted to fit into a hexagonal socket 35 in a driving head 25. The driving head 25 has three holes 36, 37 and 38 in its face opposite to that which possesses the socket 35. A pin 26, which is shown more fully in Figure 5, and which supports a massaging head 22, is adapted to fit in any one of the holes 36, 37, or 38. The holes 36, 37 and 38 are threaded to receive the threaded portion of pin 26, and thus hold the pin 26 firmly in one of the holes 36, 37, or 38. The nonthreaded end of pin 26 is provided with a substantially spherical portion which is adapted to fit into a hemispherical cup 27 of antifrictional material which is inserted into a plastic massage

head 22. Each massage head 22 possesses a plurality of plastic fingers 40 which are capable of massaging the scalp. The plastic fingers 40 move in a gyratory manner to massage the scalp as the massage heads 22 are forced to gyrate by rotation of the drive rods 24.

The amplitude of the gyratory motion of a massaging head 22 is determined by which of the holes 36, 37 or 38 the driving pin 26 is inserted into, with hole 38 giving the greatest amplitude, hole 37 giving a smaller amplitude, and hole 36 providing the least amplitude. The angular positions of the hexagonal drive rods 24 in sockets 35 of driving heads 25 determine the relative motion of the massaging heads 22, i.e., whether or not the massaging heads 22 move in phase or various degrees out of phase with each other.

The slant of the table 2 enables the patient to elevate his feet relative to his head in order to permit blood to flow toward the scalp. The component of the patient's weight which bears against the massaging heads 22 and is balanced by the force of the springs 28 in the driving collars 23 against the massaging heads 22 increases as the slant of the table 2 is increased. Thus the slant of the table 2 governs the pressure of the fingers 40 against the scalp. In addition, the blood flow to the scalp is also increased as the slant of the table 2 increases. As a result, the patient may control the intensity of the scalp stimulation merely by rotating the crank of the drive wheel 8 to increase or decrease the slant of the table 2. Moreover, if infra-red or ultra-violet rays are employed to increase the blood circulation, they may be supported on the curved massaging head support member 31.

As shown in the drawings the rotatable drive rods 24 project radially inward from the curved support member 31 towards the position which would be occupied by the head of the patient; thus, the massaging heads 22 would contact the head of the patient at three different angles.

The employment of the specific number of massaging heads, three, in the illustrated embodiment of the present invention has special significance; by the use of this number of massaging heads, the component of the patient's weight which presses his scalp against the massaging head is evenly and automatically divided between the three massaging heads. This beneficial result arises from the basic stability of a tripod or a three-legged stool. This principle may be more closely related to the present invention by the example of a ball resting on three upright equally spaced pins each pin supporting one third of the weight of the ball.

Although the present invention has been shown and described with reference to a specific embodiment, nevertheless, various changes and modifications such as are obvious to one skilled in this art are deemed to be within the spirit, scope and contemplation of the present invention.

What is claimed is:

1. A scalp massaging device comprising several angularly arranged massaging heads for simultaneously massaging the scalp of a single subject, each massaging head being provided with a plurality of finger-like elements for massaging the scalp, each massaging head being adapted to contact a different portion of said scalp, means for imparting a gyratory motion to said massaging heads, a table to which said massaging heads are firmly attached, said table also supporting the subject who is receiving scalp treatment, and a controllable means for varying the slant of said table for exerting a variable component of the subject's weight against said massaging heads and means for urging said massaging heads resiliently against the subject's scalp.

2. A scalp massaging device comprising several angularly arranged massaging heads for simultaneously massaging the scalp of a single subject, each massaging head being provided with a plurality of finger-like elements for massaging the scalp, each massaging head being adapted to contact a different portion of said scalp, means for imparting a gyratory motion to said massaging head, a table to which said massaging heads are firmly attached, said table also supporting the subject who is receiving scalp treatment, controllable means for varying the amplitude of said gyratory motion imparted to said massaging heads, and further controllable means for varying the gyratory motion of said massaging heads relative to each other.

3. A scalp massaging device comprising a table for supporting, in prone position, a patient who is to receive scalp treatment, means for varying the slant of said table, an upright support secured to one end of said table, a plurality of rotatable rods journalled in said support and projecting radially inward towards said table, means for rotating said rods, a plurality of massaging heads each provided with a plurality of finger-like elements for massaging scalp, means for attaching each of said massaging heads eccentrically to the inner end of one of said rotatable rods, and means for urging said rods resiliently inward towards said table.

4. The improvement as set forth in claim 3 wherein said means for attaching each of said massaging heads to one of said rods includes a means for varying the eccentric relation between each said massaging head and its corresponding rotatable rod.

5. A scalp massaging device comprising several angularly related massaging heads for simultaneously massaging the scalp of a single subject, each massaging head being provided with a plurality of finger-like elements for massaging the scalp, means for imparting a gyratory motion to said massaging heads, a table for supporting the subject who is receiving scalp treatment, said table also supporting adjacent one end thereof said massaging heads, controllable means for varying the slant of said table, controllable means for varying the amplitude of the gyratory motion imparted to said massaging heads, controllable means for varying the motion of said massaging heads relative to each other, and resilient means to exert pressure on said massaging heads in accordance with the component of the subject's weight exerted against said massaging heads.

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