

- [54] **HEAD VIBRATOR**
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- [52] U.S. Cl. **128/36**
- [51] Int. Cl. **A61h 1/00**
- [58] Field of Search 128/34-36, 65, 44, 62, 45

2,914,065 11/1959 Cory 128/45

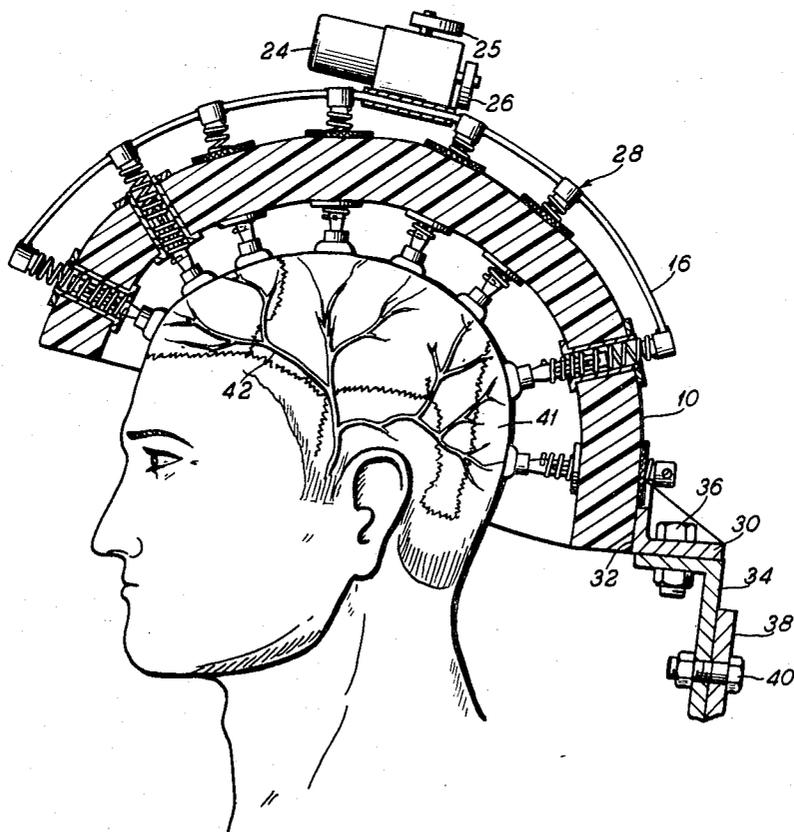
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[57] **ABSTRACT**

A head vibrator in which a plurality of massaging fingers are biased towards the skull of the user so that each finger accommodates to the variations in the skull configurations and wherein the massaging fingers are interconnected by a network of vibration transmitting means so that vibrating means connected to said network induces oscillatory movement of the massaging fingers.

- [56] **References Cited**
UNITED STATES PATENTS
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| 2,427,610 | 9/1947 | Konig..... | 128/62 |
| 849,844 | 4/1907 | Laurence..... | 128/44 |

10 Claims, 8 Drawing Figures



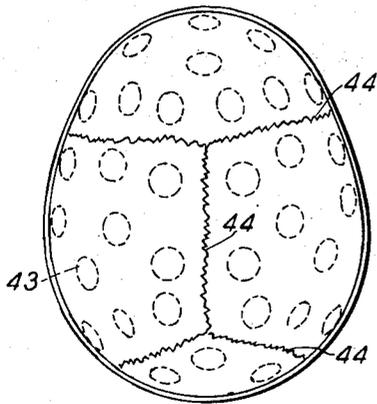


Fig. 3

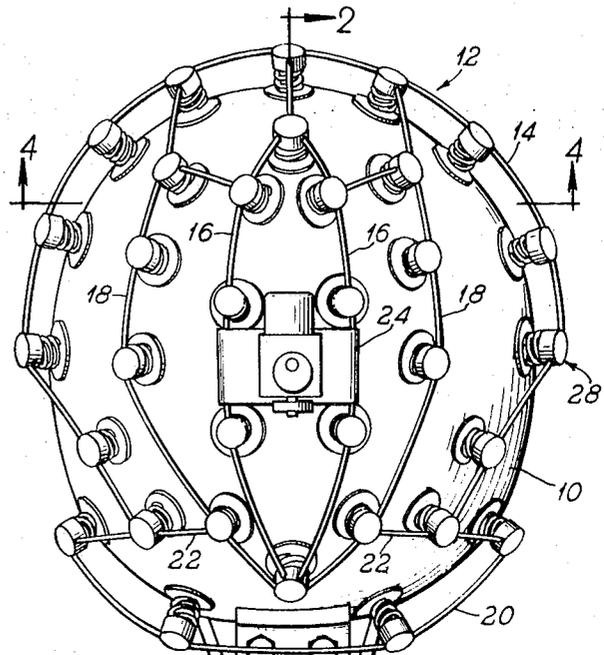


Fig. 1

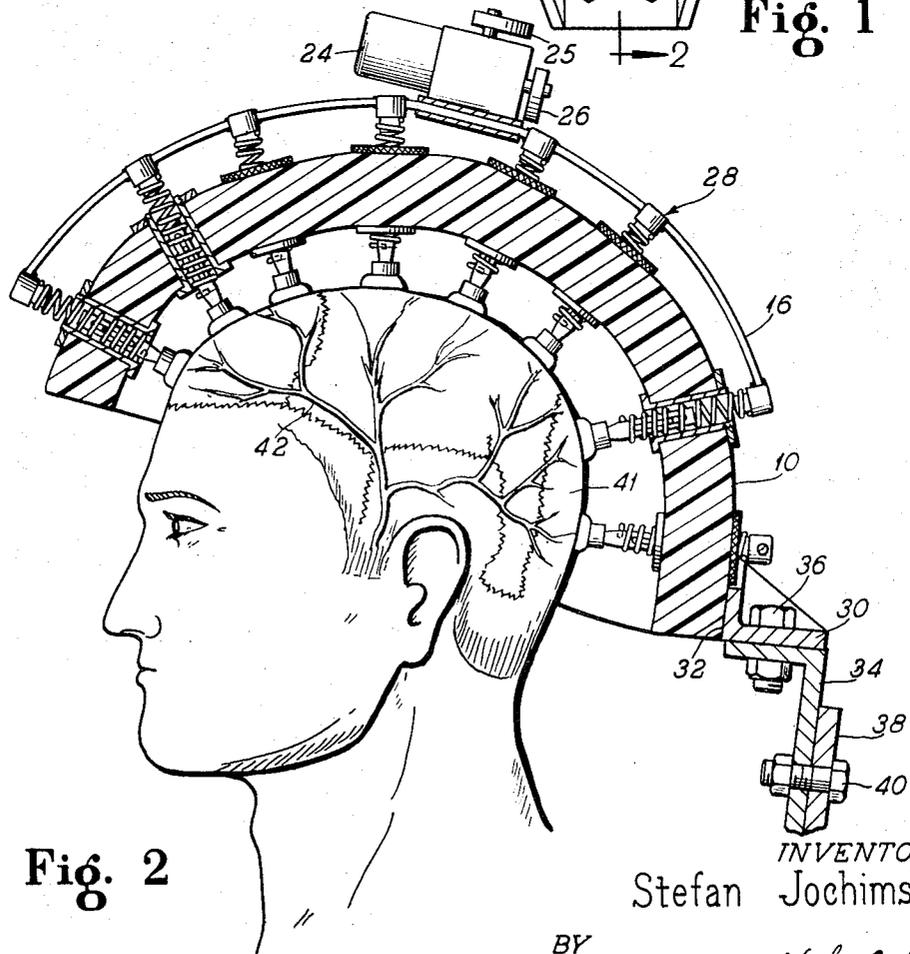


Fig. 2

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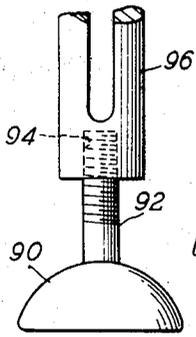


Fig. 8

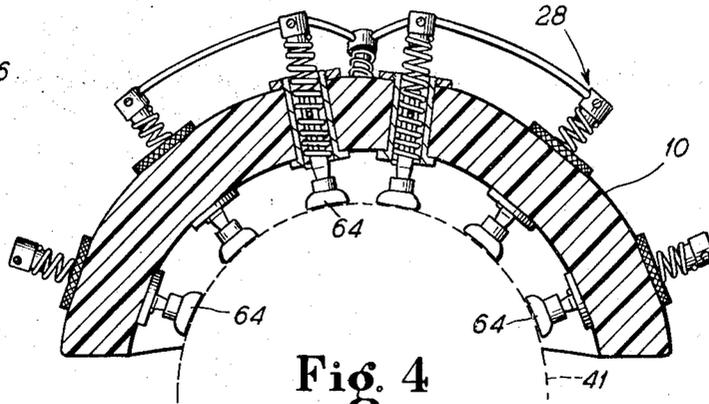


Fig. 4

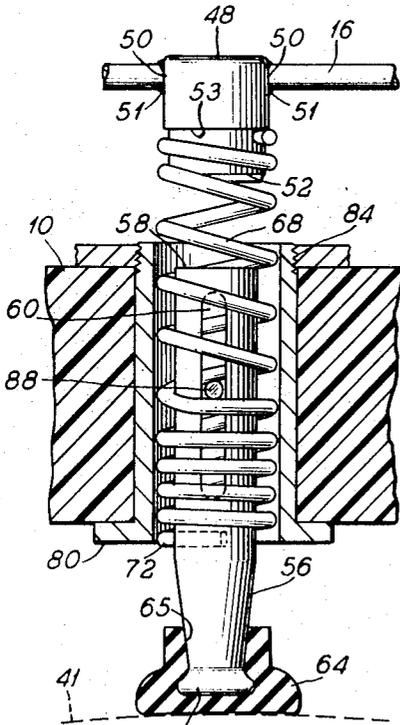


Fig. 5

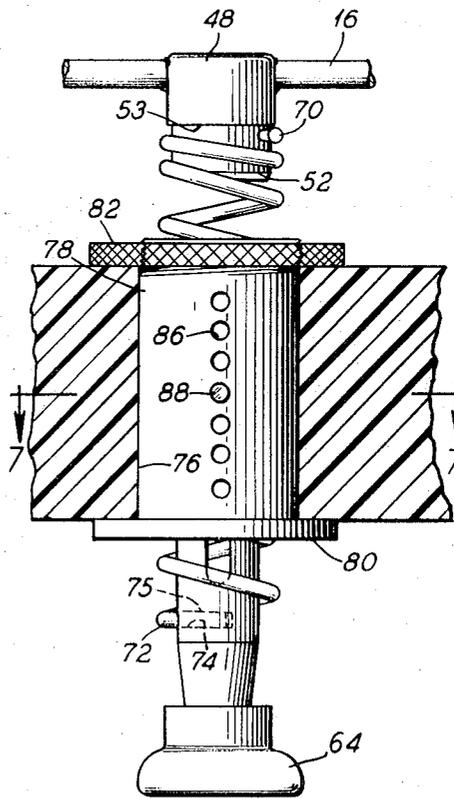


Fig. 6

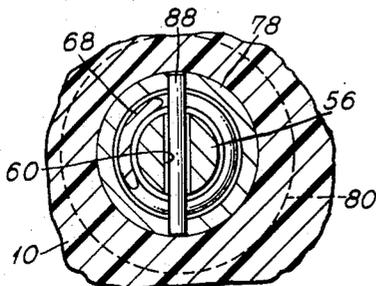


Fig. 7

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HEAD VIBRATOR

This invention relates to a head vibrator unit, in particular, it relates to a unit wherein a plurality of massaging fingers are disposed in an improved way for advantageously massaging the scalp of the user.

Massaging the skull is desirable for a feeling of wellbeing, as well as health reasons. Such massaging understandably stimulates circulation in the scalp area, and it is generally viewed that such improved circulation is stimulating and helpful to the tissues of the scalp. Portable, manually operated vibrators have been commonly used for massaging the scalp and other parts of the body. Such vibrators are represented in patents such as U.S. Pat. No. 2,441,682 and U. S. Pat. No. 2,988, 084. Simulated massaging fingers for the scalp are understandably desired in view of the teachings shown in U.S. Pat. No. 2, 575,066. This last patent shows a plurality of elastomeric fingers in a flexible head covering unit designed to contact the head. The head unit is vibrated as a whole together with the plurality of fingers disposed therein in contact with the scalp.

Each of the fingers have a fixed length which results in contact with the scalp in varying degrees of effectiveness. Any massaging action to the scalp is a result of vibration of the entire unit rather than the individual massaging fingers.

The principal object of the present invention is to provide an improved head vibrator unit wherein a plurality of massaging fingers make improved contact with the scalp and result in improved massaging action of the scalp.

Yet another important object of the present invention is to provide an improved head vibrator unit which can be efficiently actuated by compact vibrating means mounted directly to the unit while realizing the advantages of improved contact and massaging action of the massaging fingers of the scalp.

Yet another important object of the present invention is to provide an improved head vibrator unit which can be placed in use by mounting said unit to different supports such as conventional holding means found on barber chairs, on stands, and the like.

Still yet another important object of the present invention is to provide a head vibrator unit of improved design in which a plurality of massaging fingers are disposed in a preferred pattern so that the finger loci on the scalp are not coincidental with skull suture junctions.

Yet a further important object of the present invention is to provide a head vibrator unit which can be accommodated to different skull configurations, including individual vibrating finger adjustment; and in which an improved network of vibration transmitting members effect oscillatory movement of all the massaging fingers in the unit.

The above objects are attained together with still other objects which will occur to practitioners upon considering the invention in the following disclosure which includes drawings wherein:

FIG. 1 is a top plan view of the head vibrator of improved design and construction;

FIG. 2 is a side elevational view taken along line 2—2 of FIG. 1, and further showing the unit positioned relative to the head of the user;

FIG. 3 is a schematic plan view representing the scalp and skull of a user, with the massaging finger loci indicated in phantom;

FIG. 4 is a sectional view, on a reduced scale along lines 4—4 of FIG. 2, with the scalp indicated in phantom;

FIG. 5 is a side elevational view of a massaging finger assembly, partly in section;

FIG. 6 is a view similar to that of FIG. 5, but showing the massaging finger in position biased fully away from the inside of the head vibrator unit;

FIG. 7 is a sectional view taken along line 7—7 of FIG. 6; and

FIG. 8 is portional side elevational view showing an alternative embodiment of the resilient working end of a massaging finger.

The use of the finger molds in the various views will indicate a reference to like structures, elements or parts, as the case may be.

Referring now to the drawings, the views of FIGS. 1 and 2, show a head vibrator unit which includes an oversized bowl shaped curvilinear member 10 adapted to be placed over the head of the user as indicated in the view of FIG. 2.

The curvilinear member may be viewed as a head shell formed from a continuous curvilinear plastic wall interrupted by a plurality of finger massaging assemblies as will be later described.

The outside or top of the shell is disposed therealong a network of vibration transmitting members shown generally as 12. This network includes a plurality of substantially rigid connecting rods, such as outer curvilinear rod 14, a pair of inner meridian connecting rods 16, a pair of outer connecting meridian rods 18, a rear, curvilinear connecting rod 20, and side connecting rods 22. The pairs of meridian rods may be considered as being in meridian parallelism, by which is meant that such rods generally follow parallel paths as do the meridians on a globe from north to south. It will be seen that outer curvilinear connecting rod 14 has side portions which also substantially follow meridian parallelism with adjoining rods 18.

The paired meridian rods allow improved mounting of a portable vibrator such as 24, which span an adjoining pair of meridian rods. Such a vibrator is shown with a side-to-side eccentric weight 25 and a front-to-back eccentric weight 26. Such differently disposed eccentrics allow vibration along two axes which are perpendicular to each other.

The network of connecting rods are joined to a plurality of finger massaging assemblies, each of which is shown generally as 28. The network permits transmission of vibration to all the massaging fingers which are a part of such network through rod connections. Thus, positioning a single vibrator such as 24 between adjoining meridian rods 16 will result in vibrating all the massaging fingers.

The vibrator head unit is provided with means so that such head unit can be mounted to various supports, such as those found on a barber chair, on a stand, or the like. The mounting means are shown as a gusseted shell angle 30 which is fixed to the outside of the shell by means such as a weld spot 32. The shell angle is shown joined to a connecting angle 34 by a bolt assembly 36. Such connecting angle is shown connected to a support bar 38 which may be part of a barber chair, a stand or

the like. A bolt assembly 40 joins the support bar to the connecting angle.

The view of FIG. 2 represents effective contact of the plurality of massaging fingers with the scalp and skull jointly shown at 41. The scalp blood vessels 42 are schematically indicated to illustrate how such massaging fingers stimulate circulation of the skull and scalp area. The totality of massaging fingers are disposed in a pattern indicated by the finger loci 43 of FIG. 3. It is seen that such finger loci are not coincidental with the skull junction sutures 44, and such a pattern is desired to avoid direct massaging action at such junction sutures. Normally, this is not a concern. It does, however, represent an improved aspect in the practice of the invention, especially if more vigorous massaging action is induced by more pronounced vibration means.

The construction of the massaging finger assembly may be seen by particular reference to the views of FIGS. 5-7. The assembly is shown with a head 48 which is provided with head apertures 50 to receive the ends of the connecting rods which make up the network. The ends of such rods are held in the apertures by means such as welds 51. The head is also shown with a reduced diameter stub 52 demarcated by a head shoulder 53.

Spaced from the head is an oscillatory body 56 which is elongated. The oscillatory body has a substantially flat top 58 and elongated slot 60 and a mounting bottom shown as a flanged head 62.

The flanged head frictionally holds a removable resilient cap 64 which is the resilient working end of the massaging finger assembly. The cap has a socket 65 with a reduced diameter upper opening so that the flanged head 62 may be frictionally held therein when the cap 64 is fully mounted on the end of the oscillatory body

An elongated coil spring 68 is positioned around the oscillatory body, and joins such body to the head 48. The spring is fixed to the head by a top final turn 70, and said spring is fixed to the oscillatory body by bottom final turn 72 which engages locking passage 74 in the body through engagement of terminating ends 75 of the bottom final turn 72. Such fixed coil spring normally urges or biases the oscillatory body outwardly or away from the inside of the shell 10. This position is indicated in the view of FIG. 6. The oscillatory body is moved towards the inside of the shell 10 when the cap 64 contacts the scalp 41 of the user, such position being indicated in the view of FIG. 5. The views of FIGS. 5 and 6 illustrate how the spring of the massaging finger assembly accommodates to varying configurations of the skull. Each resilient working end of each finger assembly therefore makes solid contact with the scalp for efficient massaging action. Such adjusted contact is further illustrated in the view of FIGS. 2 and 4.

The position of the coil spring 68 may be further adjusted by means associated with the massaging finger assembly. Such means are illustrated as a sleeve or continuous sidewall housing 78 positioned in closely fitting passageway 76 in the shell 10. The sleeve has an integral bottom flange 80 adapted to be positioned against the underside of the shell 10. A top flange 82 is knurled and is secured to the sleeve 78 by means of the threaded junction 84. The continuous sidewall sleeve is provided with a plurality of aligned adjusting apertures 86, and an adjusting pin such as a cotter pin 88 is selectively passed through aligned apertures on opposite

sides of the sleeve to move between adjacent turns of the spring. The oscillating body may, therefore, be adjusted by pulling the body out of the bottom opening of sleeve 78 a selected distance, and then inserting pin 88 through selected holes. The body will extend farther as lower pairs of aligned apertures are used for the pin. In a sense, the pin may be used for initial gross adjustment and the turns of the spring below the pin may be used for fine adjustment. Representative selected adjustments may be seen with the pair of finger assemblies closest to the bottom opening of the shell 10 in FIG. 2. The oscillating member at the rear of the skull extends beyond the inside of the shell farther than the member in the assembly at the front of the skull.

The resilient working end of the massaging finger assembly may also be provided in the alternative form shown in the view of FIG. 8. The resilient working end shown herein includes a hemispheric resilient member 90 fixed to the end of threaded bolt 92 which adjustably engages threaded aperture 94 in oscillatory body 96. If desired, adjustment of the spring through use of a pin or the like may be omitted, and the position of the head 90 may be adjusted simply by turning bolt 92.

The claims of the invention are now presented.

I claim:

1. A head vibrator, including an oversized curvilinear member for the head, a plurality of massaging finger assemblies mounted in said curvilinear member, a network of substantially rigid vibration transmitting elongated members positioned above said curvilinear member, said network connecting all of said finger assemblies, each of said finger assemblies extending through said curvilinear member, and each of said finger assemblies being connected to said network in spaced relationship to one another, vibrating means joined to said network to vibrate said network as a unit and all said finger assemblies, and each of said finger assemblies having an oscillatory member, a resilient working end on said oscillatory body, and means biasing said resilient working end away from the over-sized curvilinear member and towards the skull, said oscillatory body member allowing accommodation of the massaging finger assemblies to variations in the skull configuration and further enhancing vibrating movement of each oscillatory member.

2. A head vibrator which includes the features of claim 1 above, and which further includes a bracket assembly mounted to said curvilinear member, and means on said bracket assembly for mounting same to a support.

3. A head vibrator which includes the features of claim 1 above, wherein said oversized curvilinear member is a substantially rigid plastic shell having a continuous curvilinear wall interrupted by the mountings of said finger assemblies.

4. A head vibrator which includes the features of claim 3 above, wherein each massaging finger assembly is mounted in the body of the shell with the resilient working end extending beyond the inside of the shell, and a head of a finger assembly extending beyond the outside of the shell, said head being fixed to said network.

5. A head vibrator which includes the features of claim 4 above, wherein said biasing means is a coil

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spring having a top turn fixed to said head and a bottom turn fixed to said oscillatory member.

6. A head vibrator which includes the features of claim 5 above, wherein said elongated vibration transmitting members are substantially rigid rods, and wherein said network includes aligned rods in substantially meridian parallelism.

7. A head vibrator which includes the features of claim 6 above, wherein said vibrating means is a unit which spans two adjacently aligned rods, and is mounted thereto.

8. A head vibrator which includes the features of claim 1 above, wherein a plurality of massaging finger assemblies form a patten in which none of the working ends of said finger assemblies are coincidental with the skull suture junctions when the head vibrator is mounted for use.

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9. A head vibrator which includes the features of claim 1 above, wherein said oscillatory member has an elongated slot and said coil spring being disposed around said oscillatory member, and wherein the finger massaging assembly includes a continuous sidewall housing spaced from said oscillatory member, and the coil spring, said housing having a plurality of adjusting apertures and an adjusting pin movable through the elongated slot and said adjusting apertures to selectively adjust the extension of said oscillating member beyond the inside of the shell.

10. A head vibrator which includes the features of claim 9 above wherein said resilient working end is a removable cap with a socket frictionally fitting on an enlarged head of the oscillatory member.

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