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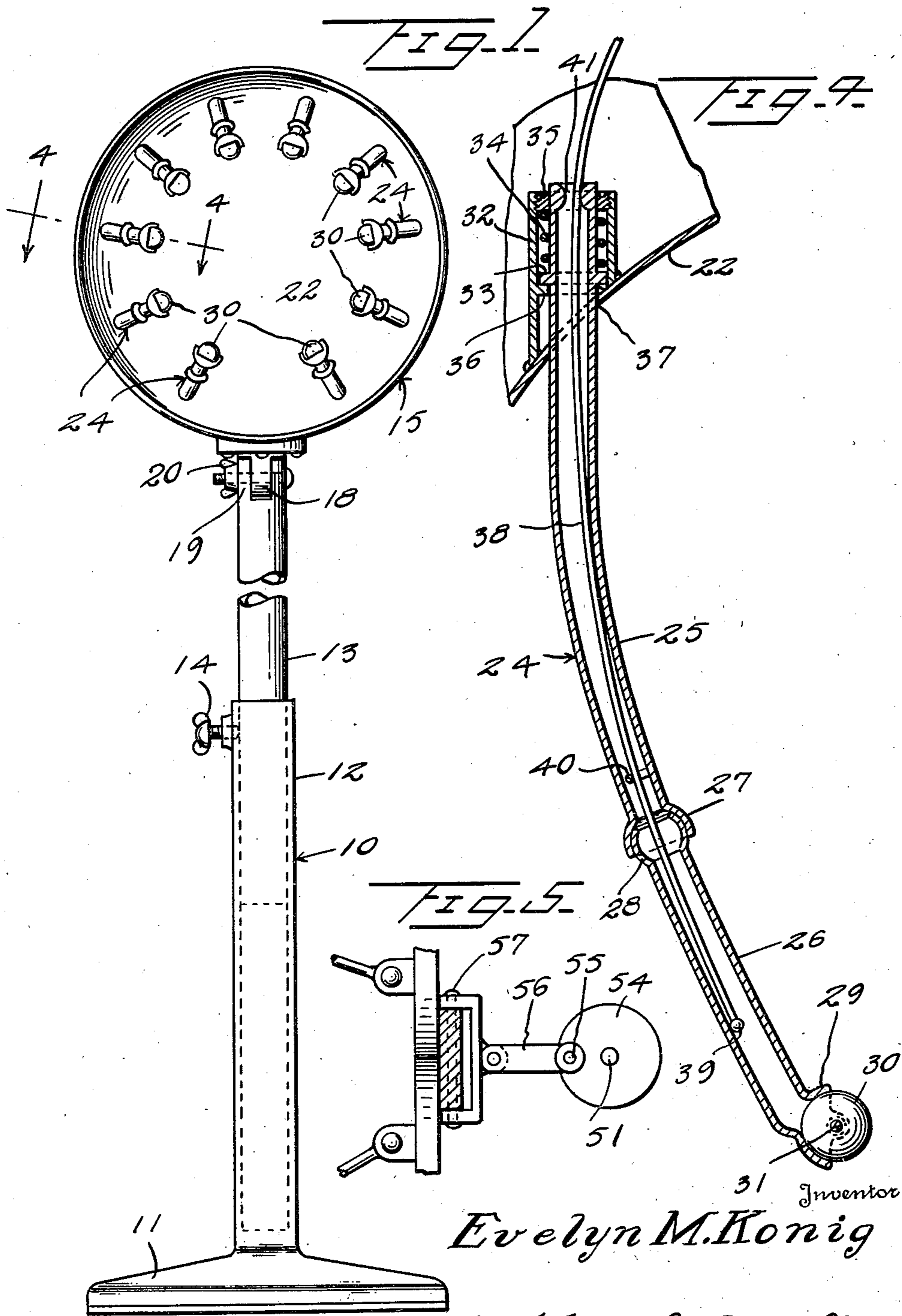
E. M. KONIG

2,427,610

ELECTRICAL MASSAGING DEVICE.

Filed Nov. 24, 1944

2 Sheets-Sheet 1



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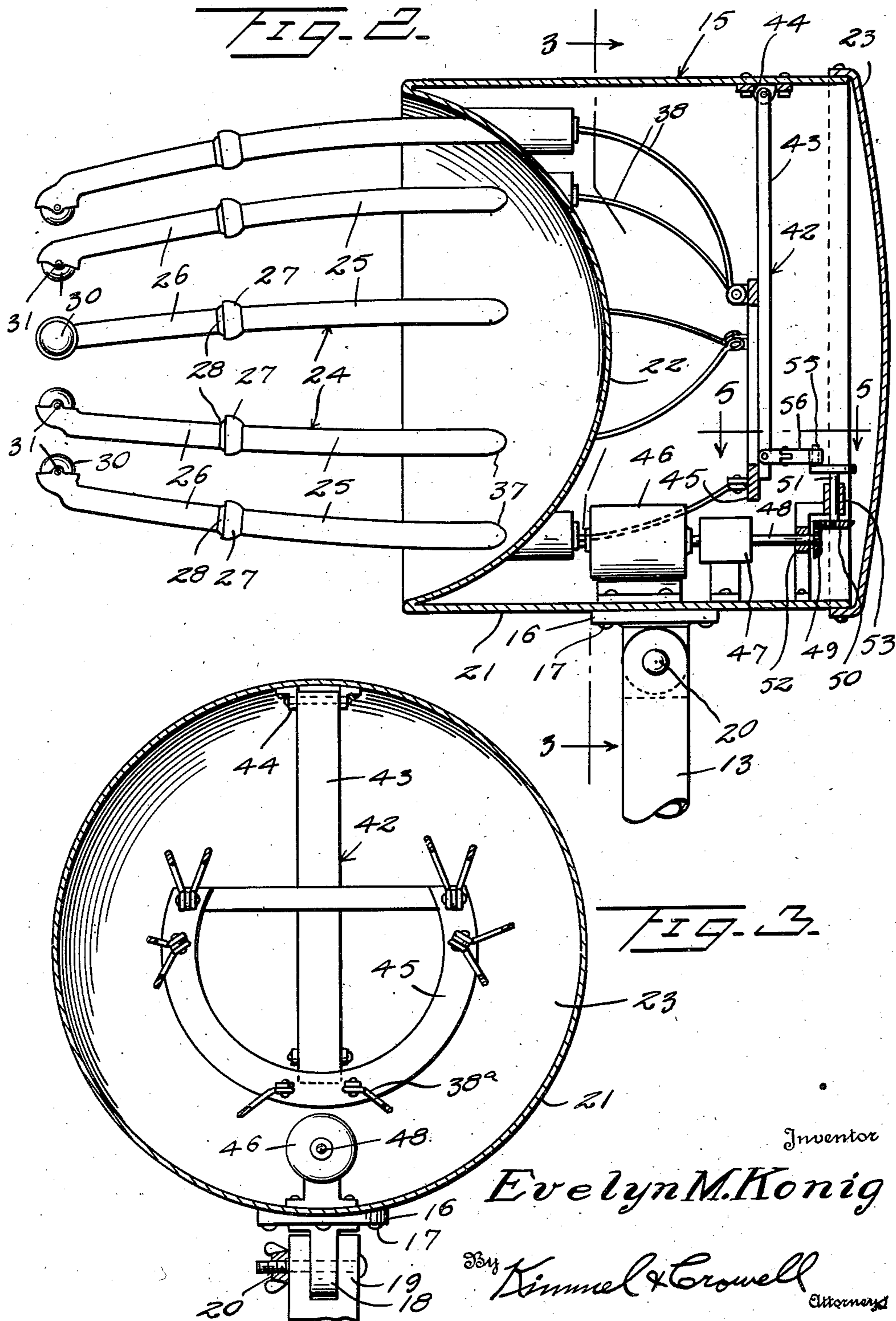
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UNITED STATES PATENT OFFICE

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ELECTRICAL MASSAGING DEVICE

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3 Claims. (Cl. 128—62)

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This invention relates to electrical massaging devices.

An object of this invention is to provide an electrically operated massaging device simulating the action of fingers in massaging the head.

Another object of this invention is to provide a device of this kind including a plurality of massaging fingers which are adapted to bend lengthwise as they reciprocate during the massaging action.

A further object of this invention is to provide a device of this kind which is of simple construction and which can be readily adapted to different sizes of heads.

With the foregoing objects in view, and others which may hereinafter more fully appear, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically described, and illustrated in the accompanying drawings wherein are shown embodiments of this invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention, as claimed.

In the drawings:

Figure 1 is a detail front elevation, partly broken away, of a massaging device constructed according to an embodiment of this invention.

Figure 2 is a fragmentary vertical section of the device.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a sectional view taken on the line 5—5 of Figure 2.

Referring to the drawings the numeral 10 designates generally a standard which is formed of a base 11 and extensible telescoping standard members 12 and 13. The extensible member 13 is adapted to telescope within the standard member 12, and is held in vertically adjusted position by means of a set screw or clamping member carried by the lower standard member 12.

A massaging head, generally designated as 15, is mounted on the standard 10, being secured to the standard 10 by means of a plate 16 fastened to the head 15 by fastening members 17.

A bearing or ear 18 extends downwardly from the base 16, and engages between a bifurcated upper end 19 of the standard member 13, and the head 15 is held in adjusted position by means of a clamping member 20 engaging through the bifurcations 19, and the lug or bearing 18. In this manner the head 15 may be tilted in any predetermined position.

The head 15 comprises a substantially cylindrical body 21, having a concave front wall 22, and a removable rear wall or cap 23. A plurality of massaging fingers 24 are carried by the

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front wall 22, and each massaging finger 24 is formed of inner and outer tubular members 25 and 26. The two members 25 and 26 are rockably connected together by means of complementary ball and socket members 27 and 28 carried by the tubular members 25 and 26 respectively. Each finger is longitudinally bent and is provided at its outer end with a ball socket 29 within which a resilient ball 30 is rotatably mounted on a pivot or shaft 31. The ball 30 constitutes a massaging member for engagement with the head, and has a substantial portion thereof projecting from the socket 29, as shown more clearly in Figure 4.

The inner tubular member 25 is slidable in a cylindrical guide sleeve 32 carried by the front wall 22 on the inner convex side thereof. The inner tubular member 25 is formed with an annular flange or rib 33 outwardly from the inner end thereof, and tubular member 25 is normally urged outwardly with respect to the guide 32 by means of a spring 34. The spring 34, at its inner end, bears against an annular nut 35 threaded into the inner end of the guide 32, and also forming a guide for the inner end portion of the tubular member 25.

Rib 33 is adapted to normally engage a stop rib or flange 36 which is carried by the inner side of guide member 32. Tubular member 25 is slidable through an opening 37 formed in the front wall 22 which is concentric to guide member 32. There may be as many of these massaging fingers 24 as may be desired, and in the present instance there are ten of these fingers which are circumferentially arranged so as to engage about the head of the person to be massaged.

The fingers 24 are pulled or reciprocated, and the outer tubular member 26 of each finger is rocked with respect to the inner tubular members of each finger by means of Bowden wires 38 which are extended loosely, as shown in Figure 4, through the inner tubular member 25 and are secured at their outer ends, as at 39, to the outer tubular member 26 at a point between the ends of the latter. A looped guide or eye 40 is carried by the inner tubular member 25 through which finger operating member 38 slidably engages and a guide 41 is formed on the inner end of each finger through which wire or operator 38 slidably engages.

The wire or operator 30 is secured to rock lever structure 42 which is carried by the housing member 21. The rock lever structure 42 includes an elongated lever 43 which is pivotally mounted on a mounting 44 carried by the upper portion of the housing member 21. The lever 43 has secured thereto an arcuate bar 45 and the inner ends of the wires or operators 38 are rockably secured to the arcuate bar 45.

Preferably, the lower operating members 38a are secured to the lower end portion of the lever structure 42 so that the lower fingers will have greater endwise movement. The positions of the remaining wires with respect to the arcuate bar 45 will determine the length of the movement of the remaining fingers.

Lever structure 42 is rocked by means of an electric motor 46 secured within the housing member 21, and motor 46 is connected to a reduction gearing 47. A shaft 48 extends from the reduction gearing 47 and has a beveled gear 49 secured thereon which meshes with a beveled gear 50 carried by the cam shaft 51.

Shaft 48 is journaled in a bearing 52 and cam shaft 51 is journaled in a bearing 53. A cam plate 54 is secured to the upper end of cam shaft 51, and has secured thereto a cam pin 55. A forked link 56 engages at one end on the pin 55, and the other or forked end of link 56 is rockably connected as at 57 to the lower end of lever structure 42.

In the use and operation of this massaging device the head is extended within the circle described by the massaging fingers 24. Inasmuch as the outer tubular members 26 may rock with respect to the inner tubular members 25 the outer tubular members will readily assume the desired position on the head, the resilient operating member of each finger acting to resiliently urge the outer finger members 26 inwardly toward the head.

When motor 46 is operated, lever structure 42 will be rocked on pivot member 44, and as lever structure 42 rocks back and forth operating members 38 will be pulled inwardly thereby drawing the fingers 24 inwardly against the tension of the springs 34. As the fingers 24 move inwardly the outer finger members 26 will swing inwardly due to the sliding movement of operator 38 through guide eye 40. In this manner the massaging balls 30 will be constantly maintained in contact with the head so that the desired massaging action simulating the massaging effected by the fingers will be provided. While the massaging fingers will normally reciprocate back and forth in a substantially straight line on the head, the person being massaged can readily shift the head so that the massaging action will extend over the entire surface of the head.

What is claimed is:

1. A massage device comprising a plurality of elongated massaging fingers, a support for said fingers, means slidably mounting said fingers on said support, each finger including an outer part and an inner part, means rockably securing said parts together, finger operating means carried by said support, and means connecting said fingers with said operating means to effect lengthwise movement of said fingers together with rocking of said outer parts, said connecting means including a Bowden wire extending into each finger and connected to said outer part.

2. A massage device comprising a plurality of elongated hollow massaging fingers, a support for said fingers, spring biased means slidably mounting said fingers on said support, each finger including an inner part and an outer part, means rockably securing said parts together, finger operating means carried by said support, and means connecting said fingers with said operating means to effect lengthwise movement of said fingers together with rocking movement of said outer parts, said connecting means extending through said inner part and connected to the inner wall of said outer part.

3. A massage device as set forth in claim 2, wherein said operating means includes a rock lever pivotally connected at one end to said support, and means securing said connecting means to said lever at predetermined positions from the fulcrum of the lever to thereby effect differential movement of certain of said fingers.

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