

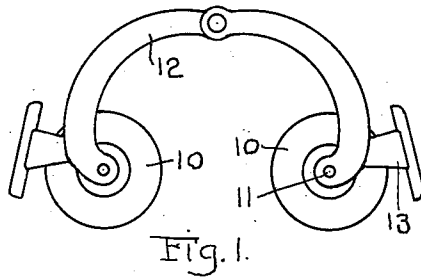
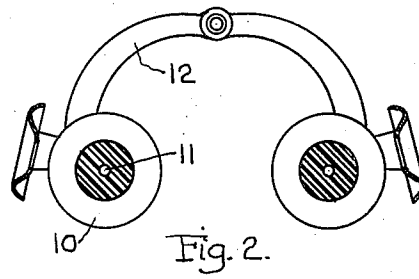
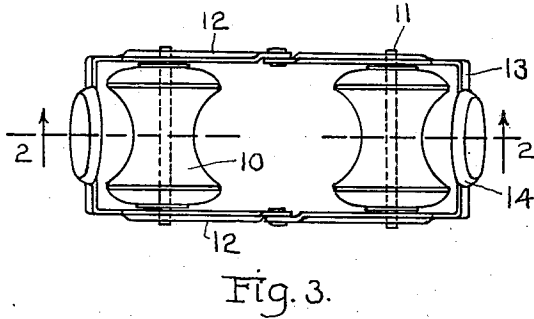
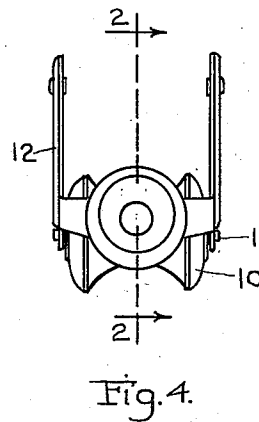
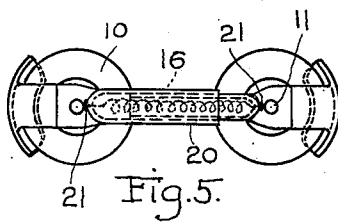
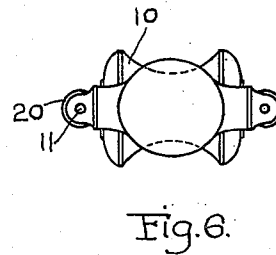
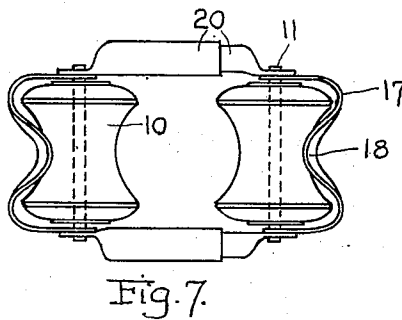
Oct. 22, 1940.

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MASSAGING DEVICE

2,219,138

Filed Feb. 3, 1939

2 Sheets-Sheet 1



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MASSAGING DEVICE

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2 Sheets-Sheet 2

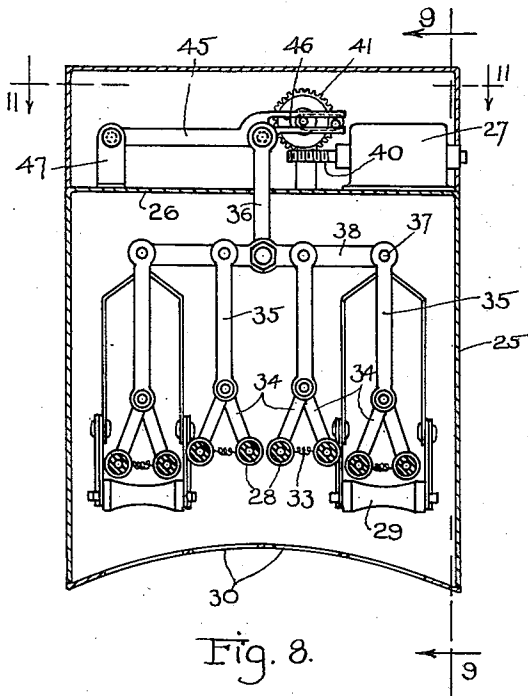


Fig. 8.

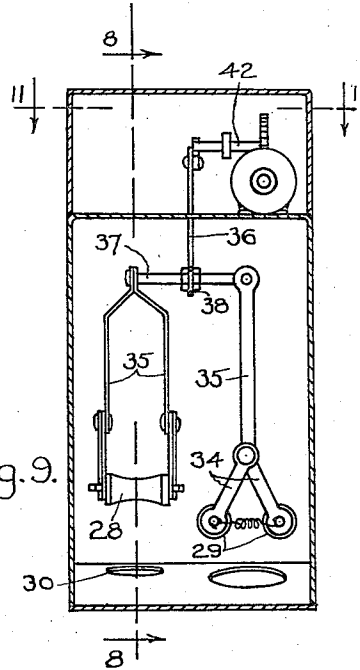


Fig. 9.

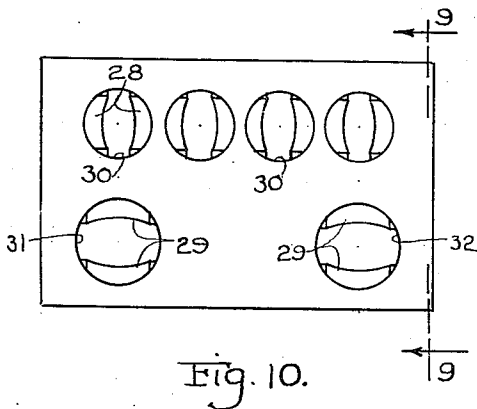


Fig. 10.

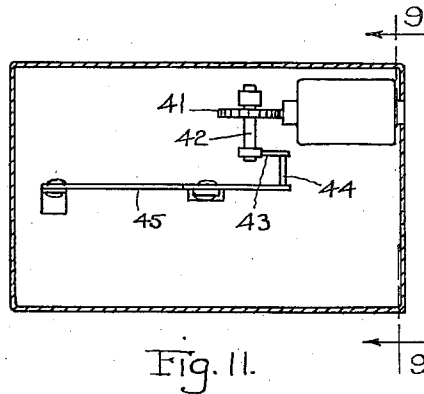


Fig. 11.

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UNITED STATES PATENT OFFICE

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MASSAGING DEVICE

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4 Claims. (Cl. 128—57)

This invention relates to massaging devices, and has for one of its objects providing a suitable device for massaging the fingers, so as to give them a tapering shape. Another object is to provide a device for the purpose by means of which a yielding pressure may be brought to bear on the fingers as the device is operated, and also to provide means by which the pressure may be varied by the operator. Another object is to apply to the device power means so that the massaging may be carried on automatically without attention of the person being operated on. Another object is to provide for massaging all of the fingers of one hand, and also the thumb, simultaneously. Other objects of the invention will be apparent from a consideration of the accompanying drawings, and the following description thereof.

Of the drawings, Fig. 1 is an elevation of a massaging device which embodies the features of my invention; Fig. 2 is a sectional view thereof along the lines 2—2 of Figs. 3 and 4; Fig. 3 is a plan view of the device; Fig. 4 is an end view thereof; Fig. 5 is an elevation of a modified form of the device; Fig. 6 is an end view thereof; Fig. 7 is a plan view thereof; Fig. 8 is a section of a power operated mechanism for massaging purposes; Fig. 9 is a sectional view thereof along the line 9—9 of Fig. 8; Fig. 10 is an end view thereof; and Fig. 11 is a view thereof along the line 11—11 of Fig. 8.

The devices in general comprise a pair of soft rollers, composed of sponge rubber or other suitable material, such as the rollers 10. An axle 11 passes through the axis of each roller and projects from each end of the roller. As shown in Figs. 1 to 4, a pair of arms 12 project outwardly from the respective ends of the axle of each roller, and are fixed to the axles or rotatably attached thereto. The arms extend outwardly from the axle preferably substantially at right angles thereto, and the outer ends of each pair of arms are pivoted, respectively to the outer ends of a similar pair of arms attached to a similar pair of axle ends. By this arrangement, it will be seen, that the finger may be placed between the rollers and they may then be pressed against the finger as much as may be desired. In order to assist in thus operating the rollers, I provide a loop 13 for each roller, having its ends fixed to the respective arms 12 of the roller and positioned on the outer side of the roller. By applying the fingers to the pair of loops thus attached to the device they readily force the rollers together against the finger being operated on so

much as may be desired. To assist in this I provide a cupped disk fixed to the central portion of each loop or yoke 13, in which the ends of the operating fingers may be placed to assist in the pressure operation.

Figs. 5 to 7 show a modified form of the massaging device, in which the arms 12 are replaced by springs 16 arranged to connect the ends of the respective axles 11. By the use of these springs the rollers are pressed against the finger being operated on without any manual pressure. However, also with this type I prefer to provide a yoke similar to the yoke 13. But in this case I prefer a yoke 17 which takes somewhat the curve of the roller; and on this yoke I have formed a cup shaped disk 18 somewhat similar to the disk 14. By curving the yoke inwardly the operating fingers are less likely to slip off of the yoke.

In order to protect the springs from injury, and to improve the appearance of the device, I prefer to enclose the springs in telescoping tubes 20. The ends 21 of the springs are preferably fixed to the respective ends of the telescoping tubes to prevent separation of the rollers, and to yieldingly draw them together when the device is in use. Although I have shown and described two springs 16 and telescoping tubes 20, yet a single spring may be used, if desired, and a single pair of tubes.

In Figs. 8 to 11 I have illustrated a machine for massaging all of the fingers of one hand at the same time. This consists of a frame, which may comprise an enclosing casing 25. Within the casing, on a partition 26 is mounted a motor which is arranged to operate a series of devices 28 and 29. The devices 28 are positioned in the casing and arranged to massage the fingers of the hand and the devices 29 are arranged and positioned to massage the thumbs. For instance, referring to Fig. 10, when the right hand is massaged the fingers enter the openings 30 and are massaged by the devices 28; at the same time the right thumb enters the opening 31 and it is massaged by the rollers 29 opposite that opening. When the left hand is operated on the fingers also enter the openings 30 and the left thumb enters the opening 32.

With this machine any suitable massaging devices may be used and any suitable operating means. I prefer the rollers 28 and 29 each pair of which is connected by a spring 33 at each end of each pair of rollers. These springs press the rollers against the fingers or thumbs with sufficient force for the purpose; but any suitable means may be used for varying the force of the

5 springs to suit individual needs. The pairs of rollers are maintained in proper relative positions by means of links 34, one end of each link being pivoted to one end of one of the rollers, and the other end of each link being pivoted to a link 35. Thus each pair of rollers has two links 34 pivoted to a link 35 and to one end of the rollers, and also two links 34 pivoted to another link 35 and also to the other end of the rollers.

10 The links 35 are all connected, in pairs, to an operating link 36 by means of rods 37 and a beam 38, to which the inner end of the link 36 is fastened, preferably non-rotatably. The link 36 is operatively connected with the motor, so as to be oscillated inwardly and outwardly as the motor rotates. These oscillations carry with the link 36 the various rollers 28 and 29, thus massaging the fingers and thumbs as much as may be desired. In this instance the means operatively connecting 20 the link 36 with the motor comprise a worm 40 and a worm gear 41 coacting therewith. To the axle of the gear, which comprises a rod 42, is fixed an arm 43. The arm carries a rod 44 which is pivotally connected to a lever 45 by means of a slot 46 in the end of the lever. The lever is pivoted by its other end to the partition 26 by means of an arm 47 fixed to the partition. As the motor operates the gear wheel 41 the lever will be oscillated, and this in turn will oscillate the rollers.

I claim as my invention:

1. A massaging device for the purpose set forth, comprising in combination a pair of massaging rollers of rubber or the like each having an axial- 35 ly extending opening for reception of a supporting shaft, and each formed with its surface as the cylindrical development of a circular arc facing with its concavity outwards, and a supporting frame for said rollers including relatively movable frame members, journal means connect- 40 ing said frame members together at one point, other journal means on said frame members for the supporting shafts of the rollers to retain said shafts parallel to each other while permitting movement of said shafts towards and from each other, said rubber rollers and the concave surfaces thereof being of companion form and size to receive a finger of the human hand between their companion concave surfaces, together with 50 tension spring means connecting the frame members and rollers together and tending to draw them towards each other, whereby during back and forth massaging movements of the rollers with respect to the fingers said fingers are subjected to massaging effect of the rubber rollers 55 over a considerable arcuate surface of the fingers so treated, and whereby said rollers are permitted during such massaging action to continually adjust the separation between them according to the finger size being momentarily treated, substantially as and for the purpose set forth.

2. A massaging device for the purpose set forth, comprising six pairs of companion rollers of rubber or the like, the rollers of each pair being 65 formed with their surfaces in the form of cylindrical developments of circular arcs, together with means to support all said pairs of rollers with the axes of the rollers of each pair parallel to each other, while permitting relative movements of the rollers of each pair back and forth with respect 70 to each other, and while permitting lateral swinging movements of the pairs of rollers with respect

to other pairs of said rollers, said pairs of rollers being mounted with four of said pairs in alignment with each other and with the axes of the rollers of said pairs normal to such alignment, and with one pair of rollers adjacent to each end 5 of such so-aligned pairs of rollers but off-set therefrom, and with the rollers of said end pairs set with their axes parallel to such alignment, whereby the fingers of a human hand may be naturally set between the four pairs of such so-aligned rollers and the thumb of such human hand may be set naturally between the rollers of one end pair, and whereby all the fingers and the thumb of such human hand may be simultaneously subjected to massaging treatment by 15 movements relatively with respect to the pairs of rollers together with means to simultaneously reciprocate all said pairs of rolls in a direction substantially normal to the axes of the rollers, substantially as and for the purpose set forth. 20

3. A massaging device for the purpose set forth, comprising in combination six pairs of companion rollers of soft rubber or the like, the rollers of each pair being suitably formed to receive a digit of the human hand between them, together with 25 means to support all said pairs of rollers with the axes of the rollers of each pair parallel to each other, while permitting relative movements of the rollers of each pair back and forth with respect to each other, and while permitting lateral swinging movements of the pairs of rollers with respect 30 to the other pairs of said rollers, said pairs of rollers being mounted with four of said pairs in alignment with each other and with the axes of the rollers of said pairs normal to such alignment, and with one pair of rollers adjacent to each end of such so-aligned pairs of rollers and with the rollers of said end pairs set with their axes parallel to such alignment, whereby the fingers of a human hand may be naturally set 40 between the four pairs of such so-aligned rollers and the thumb of such human hand may be set naturally between the rollers of one end pair, for simultaneous massaging treatment of all said fingers and the thumb, substantially as and for the purpose set forth. 45

4. A massaging device for the purpose set forth, comprising in combination six pairs of companion rollers of rubber or the like, the rollers of each pair being suitably formed to receive a digit of the human hand between them, together with 50 means to support all said pairs of rollers with the axes of the rollers of each pair parallel to each other, while permitting relative movements of the rollers of each pair back and forth with respect to each other, and while permitting lateral swinging movements of the pairs of rollers with respect 55 to the other pairs of said rollers, said pairs of rollers being mounted with four of said pairs in alignment with each other and with the axes of the rollers of said pairs normal to such alignment, and with one pair of rollers adjacent to each end of such so-aligned pairs of rollers and with the rollers of said end pairs set with their axes parallel to such alignment, together with a housing 60 for all said parts, said housing being provided with suitable digit openings in alignment with all said pairs of rollers to thereby guide said digits between the rollers during digit insertion into the device, substantially as described. 70

MARGUERITE MORRISON.