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L. KARLIK

3,067,738

MASSAGE ROLLER

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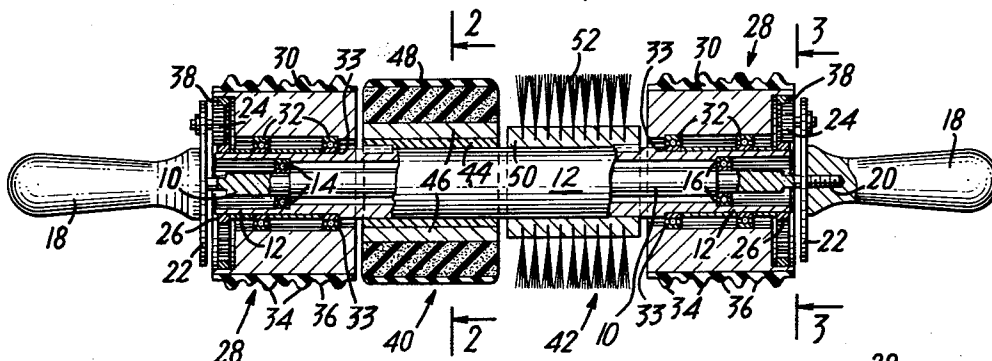


FIG. 1

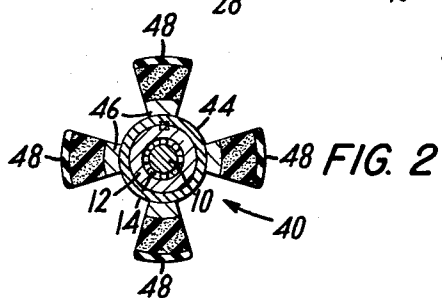


FIG. 2

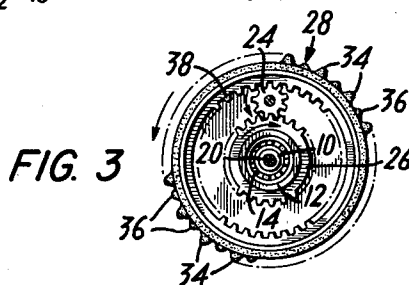


FIG. 3

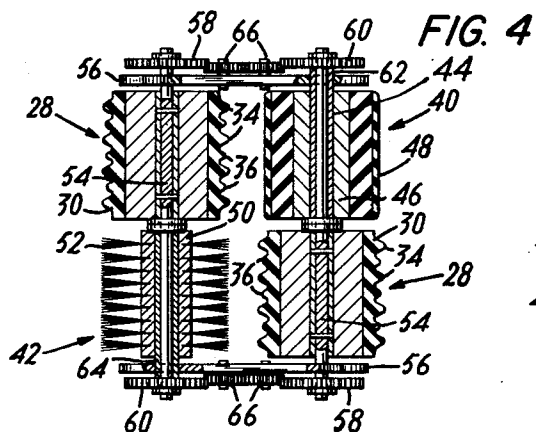


FIG. 4

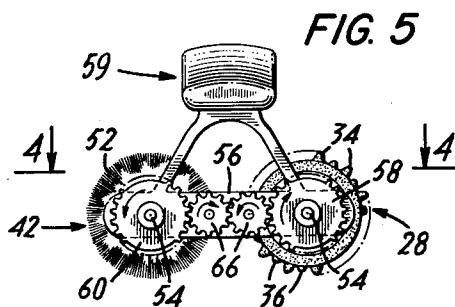


FIG. 5

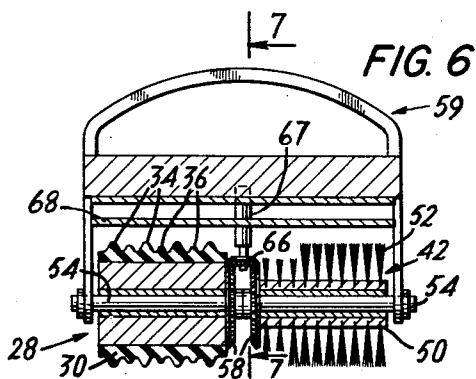


FIG. 6

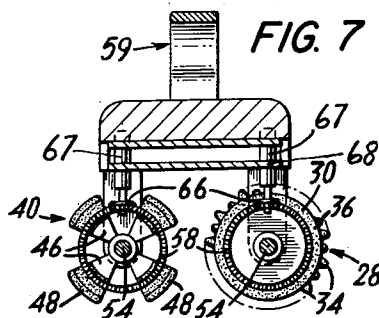


FIG. 7

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MESSAGE ROLLER

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This application is a continuation-in-part of a prior co-pending application Serial No. 856,472, filed December 1, 1959 and now abandoned.

The invention relates generally to massage rollers for massaging the body and more particularly to an improved massage roller that in operation closely duplicates simultaneously the multiple results separately obtained by the hands of a skilled masseur in a variety of different movements, and that provides in combination therewith means for additionally cleansing the surface of the skin.

Massage at the hands of a masseur comprises different useful procedure of movements in a rhythmical way. Some of the hands, manipulations may be made by a massage device. Heretofore massage rollers have reproduced only the up and down pressure movements.

It is an object of the invention to provide a combination massage roller having a variety of elements with reverse rotary movements for duplicating the effects of the variety of hand movements of a masseur.

A feature of the improved massage roller is the provision of an additional stroking roller for therapeutic measure in developing a stroking massage and an additional brush roller for developing a reflex stroking massage and cleaning the deciduous skin and dirt raised by massage.

Other objects and features and a fuller understanding of the invention may be had by referring to the following description and claims, taken together with the accompanying drawing, in which:

FIGURE 1 is a longitudinal cross-sectional view of a species of the invention;

FIGURE 2 is a transverse cross-sectional view taken along the section line 2-2 of FIGURE 1;

FIGURE 3 is a transverse cross-sectional view taken along section line 3-3 of FIGURE 1;

FIGURE 4 is a partial longitudinal cross-sectional plan view of a second species of the invention;

FIGURE 5 is an end view of the species of the invention shown in FIG. 4;

FIGURE 6 is a longitudinal vertical cross-sectional view of a third species of the invention, and

FIGURE 7 is a transverse cross-sectional view taken along section line 7-7 of FIGURE 6.

Referring to FIGURES 1, 2 and 3, the invention consists of frame means for holding, applying and mounting a pressure roller with a stroking roller and brush roller respectively in a column of pairs of rollers comprising a sleeve 12 concentrically mounted on a shaft 10 for rotation around the longitudinal axis, ball races 14 being positioned between shaft 10 and sleeve 12 adjacent each oppositely disposed end with shoulder abutments 16 to retain the sleeve on the shaft in a rotatable position. The sleeve 12 extends axially to the end of the rollers 28 at each shaft end. Handles 18 are respectively connected to the ends of the shaft by projections 20 which extend oppositely beyond the sleeve ends. Circular arms 22 are also fixed to the shaft projections 20 adjacent the handles 18.

A gear train comprises: internal ring gears 38 mounted into one of the recessed outer ends of the pressure rollers 28; intermediate pinion gears 24 mounted for rotation on the arms 22 radially spaced from and parallel to the longitudinal axis of rotation of the sleeve 12; and a spur gear 26 fixed to each of the sleeves 12 to be engaged by the associated pinion gear 24 to reversely rotate said

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sleeve 12 with the attached stroking roller 40 and brush roller 42 from the meshed ring gears 38 of the pressure rollers 28 when said pressure rollers are journaled by frictional contact with the body.

Rollers 28 are pressure rollers to appropriately apply a rhythmic light and heavy pressure and kneading massage by up and down movement of the elastic material covering 30 with a firm contact with the body. The pressure rollers are respectively mounted for rotation on the end portions of the sleeve 12 adjacent the arms 22 by means of ball races 32 that are exteriorly mounted on the sleeve end portions with shoulder abutments 33 of the sleeve 12 and roller 28 to retain said rollers rotatable on the sleeve. The covering 30 is ridged alternately with two sets of high ridges 34 and low ridges 36, one set of which peripherally extends axially and the other of which peripherally extends circumferentially to provide a plurality of high and low ridge intersections that define radially outward extending projections, to give by the application to the tissues an alternate and intermittent compression by compressing them against underlying bony surfaces. The corrugations formed by the axially and circumferentially extending ridges of the rollers 28 form a nonskid surface that causes the rollers 28 to rotate on their bearing races 32 when the rollers are pressed against the body and drawn along parallel thereto by handles 18 which are firmly held against rotation.

Two rollers 40 and 42 are mounted fast on the sleeve 12 for reverse rotation therewith. The roller 40 is a stroking roller for duplicating the stroking massage movements of a hand massage and comprises a hub or cylindrical center portion 44 that is fixed on the sleeve 12 concentric therewith and adjacent the inner end of a pressure roller 28. Four radially extending arms 46 are fixedly mounted on the cylindrical center portion or hub 44 in diametrically opposed pairs symmetrically spaced around the periphery of the center portion 44 and extending axially thereon parallel to the axis of rotation of the sleeve 12. The ends 48 of the extended resilient arm surface 46 mount soft rubberlike pads that make the overall diameter of the roller approximate that of the pressure rollers 28. Preferably the diameter of roller 40 is the same as that of the small circumferential ridges 36 of the pressure rollers 28.

Roller 42 is a brush roller for reflex stroking massage and cleaning the skin and comprises a hub or cylindrical portion 50 that is fixed to the sleeve 12 intermediate the stroking roller 40. Axially extending rows of bristles 52 are secured around the periphery of the cylindrical portion or hub 50, the bristles extending radially to form a perimeter equal preferably to that of the high ridges 34 of the pressure rollers 28.

By operation the massage roller is moved by handles 18 over the surface of the body with a considerable degree of pressure, the amount varying in different parts, heavy over thick, fleshy masses, light over bony surfaces and thin tissues. The end pressure rollers 28 roll over the skin, rotating freely on the sleeve 12 on which they are journaled by the ball races 32. The rotation of the pressure rollers 28 rotates the attached interior ring gears 38 to drive the engaged intermediate pinion gears 24 attached to the arms 22 around their axis of rotation. The pinion gears 24 also engaging the spur gear 26 attached to the sleeve 12 rotate the sleeve 12 on the shaft 10, journaled therein by ball races 14, oppositely to the rotation of the pressure rollers and their interior ring gears 38 as shown in FIGURE 3. Rollers 40 and 42 fixed on the sleeve 12 are thus rotated oppositely to the pressure rollers 28 and thereby enhance their respective stroking and brushing actions.

Referring to FIGURES 4 and 5 a second species of the invention illustrates the rollers arranged in a column of

pairs of rollers. A pressure roller 28 and the brush roller 42 comprise one pair and a pressure roller 28 and the stroking roller 40 comprise another pair. The pairs are respectively mounted on parallel shafts 54. The pressure rollers 28 are respectively fixed on the shafts 54 for rotation therewith and the stroking roller 40 and the brush roller 42 are respectively journaled on the shafts 54 for rotation thereon. The rollers on one of the shafts 54 are reversely arranged with respect to the rollers on the other shaft. The shafts 54 are supported for rotation by two parallel arms 56 integral with a handle 59. The pressure rollers 28 are operably connected by gears 58, 66 and 60 to the adjacent roller of the next pair of rollers in column. A gear 58 is fixed on one of the two oppositely disposed ends of each of the shafts 54 for rotation from the pressure rollers 28 attached to the shafts 54, and gears 60 are fixed to axially outwardly extending sleeve portions 62 and 64 respectively of the rollers 40 and 42 for rotation with these rollers. Two pinion gears 66 are coupled with gears 58 and 60 and said gears are mounted for rotation around axes on each of the parallel arms 56, provided with a handle 59.

In operation, the device is rolled over the body by means of the handle 59. The pressure rollers 28, located oppositely on each of the respective shaft ends, rotate the shafts 54 and the respectively attached gears 58. Gears 60 are respectively rotated in a reverse direction by the gears 58 through pairs of intermeshing pinion gears 66. The rollers 40 and 42 to which the gears 60 are fixed by prolonged sleeves 62 and 64 are thus reversely rotated with these sleeves, rotatably mounted on shafts 54 to which rollers 28 are fixed.

Referring to FIGURES 6 and 7, a third species of the invention is similar to the second species in the arrangement of rollers, however, both pressure rollers 28 and the stroking and brush rollers 40 and 42 are journaled on the shafts 54 to rotate freely thereon. On the adjoining inboard sides the rollers are provided with ring gears 58 which are meshed with a spindle head gear 66, said spindle head gear being rotatably mounted in a tubular shaft 67; said tubular shaft being fixed to the arms 68 and handle 59. The pressure rollers 28 drive by the meshed gears 58 and 66 in opposite rotation the stroking and brush rollers 40 and 42 of the pairs of rollers of which it is one.

Although the invention has been described with a certain degree of particularity, it is understood that the present disclosure has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be

resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

What I claim and desire to be secured by Letters Patent is:

1. In a massage device, the combination of a pair of pressure rollers provided with high and low ridges for applying a kneading massage consisting of alternate and intermittent compression to the tissues; a stroking roller for providing stroking massage; a brush roller for providing reflex stroking massage and cleaning the skin; frame means mounting said stroking roller in alignment with one of said pressure rollers and said brush roller in alignment with the other of said pressure rollers; and a gear train mounted on said frame means and engaging said rollers to provide massaging rotation of said stroking roller and brush roller in a direction opposite that of said pressure rollers when said pressure rollers are rolled in frictional contact along the human body.

2. A device as claimed in claim 1 wherein said frame means mounts all of said rollers in coaxial alignment.

3. A device as claimed in claim 1 wherein said frame means mounts said rollers in a column of pairs.

4. In a massage device, the combination of a set of pressure rollers provided with high and low ridges for applying a kneading massage consisting of alternate and intermittent compression to the tissues; a stroking roller for providing stroking massage; frame means mounting said stroking roller in alignment with the pressure rollers; and a gear train mounted on said frame means and engaging said rollers to provide massaging rotation of said stroking roller in a direction opposite that of said pressure rollers when said pressure rollers are rolled in frictional contact along the human body.

5. In a massage device, the combination of a set of pressure rollers provided with high and low ridges for applying a kneading massage consisting of alternate and intermittent compression to the tissues; a brush roller for providing reflex stroking massage and cleaning the skin; frame means mounting said brush roller in alignment with said pressure rollers; and a gear train mounted on said frame means and engaging said rollers to provide massaging rotation of said brush roller in a direction opposite that of said pressure rollers when said pressure rollers are rolled in frictional contact along the human body.

References Cited in the file of this patent

UNITED STATES PATENTS

594,732 Fretwell Nov. 30, 1897