Feb. 12, 1957 B. HILL 2,781,040

MASSAGE APPARATUS

Filed Sept. 22, 1953

FIG. 1.

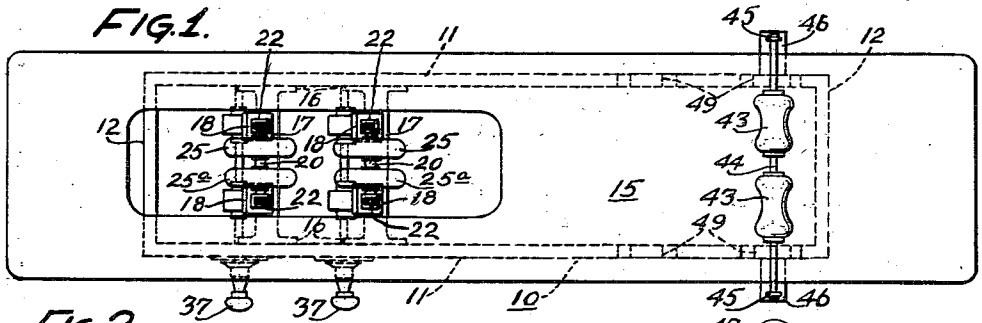


FIG. 2.

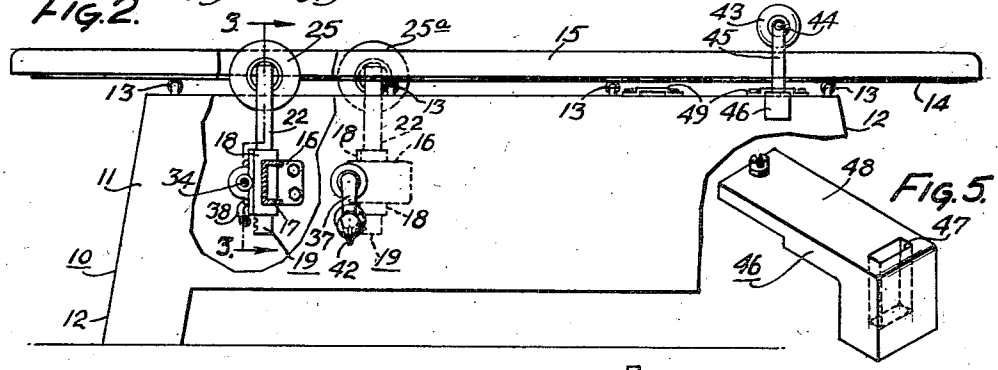


FIG. 5.

FIG. 3.

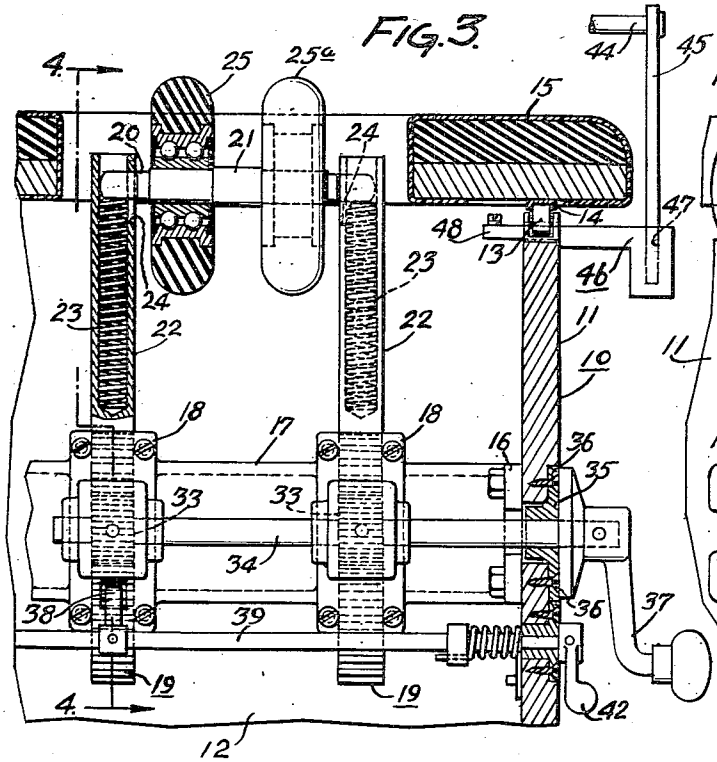
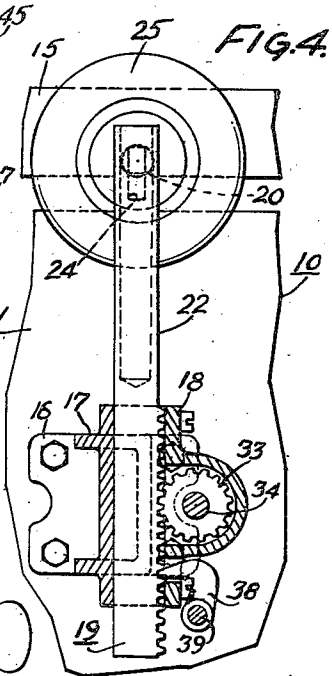


FIG. 4.



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MASSAGE APPARATUS

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8 Claims. (Cl. 128—33)

This invention relates to mechanical means for massaging and exercising the body of a person and more particularly those parts of the body which benefit most from massage.

This invention is an improvement over my prior Patent #2,230,057, issued January 28, 1941. In that patent, means are disclosed for reciprocating a table top so that fixedly mounted rollers protruding through elongated apertures in the table top may engage the back of a person adjacent the spinal column so that as the person reclines, the relative movement of the table top with respect to the rollers causes the rollers to massage his back. One of the disadvantages of that device was that the effective pressure of one roller with respect to the other could not be varied as desired according to the needs, and furthermore, the rigid mounting of the rollers does not afford sufficient resiliency for a mild massage. I have found that these deficiencies are present also in other prior art structures.

Accordingly, a principal object of the invention is to provide mechanical means for massaging comprising a plurality of rollers resiliently mounted so as to provide a massage of limited vigor and wherein the possibility of damage to the body is practically eliminated.

A further object of the invention is to provide a massage apparatus of the stated type wherein transversely spaced rollers are disposed so that one of them will exert more pressure on the body than the other roller.

A further object of the invention is to provide a device of the stated type of convenient form and generally improved functional characteristics.

The invention resides further in certain structural details hereinafter described and illustrated in the attached drawings wherein:

Fig. 1 is a plan view of the massage apparatus of the present invention;

Fig. 2 is a vertical elevational view partly broken away of the massage apparatus of Fig. 1;

Fig. 3 is a view taken substantially on line 3—3 of Fig. 2;

Fig. 4 is a view taken substantially on line 4—4 of Fig. 3;

Fig. 5 is a view in perspective of the L-shaped bracket utilized to support the leg rollers of Figs. 1 and 2.

Reference is now made to the drawing for the details of the massage apparatus, and more particularly to Figs. 1 and 2 wherein reference numeral **10** indicates a suitable base having opposed side walls **11** and correspondingly sloped end walls **12**. Along the top edges of the side walls **11** are mounted a plurality of rollers **13** receivable in tracks **14** secured to the underside of the table top or platform **15**.

Suitable means comprising an electric motor, speed reduction pulleys and a pitman arm are provided to afford reciprocation of the platform **15**. All of these elements are fully disclosed in my prior patent and it is therefore unnecessary to illustrate or describe them in detail.

Extending between the side walls **11** and secured thereto by fastening elements **16** are channel members **17** on each of which are mounted two transversely spaced supports **18**, each of which receives a rack **19** to the upper end of which is secured a hollow rectangular tube or support **22** having a spring **23** mounted in a cavity in the upper end thereof. The upper end of each tube **22** is provided with an enlarged aperture **24** for the reception of one end of a rectangular shaft which normally rests on the top convolution of the spring **23**.

As the patient reclines face upwards on the platform and the table top **15** reciprocates, the rollers **25** and **25***a* gently knead his back, one on each side of the spine. Should he desire more pressure on one side, he may lean to one side to effect this result. The shaft **20** of the rollers **25** and **25***a* is permitted to cant, in accordance with the conformation of the back of the user as he leans, because of the resilient support provided by the springs **23**. A spring collar **21** is provided to maintain the rollers in predetermined spaced relation.

Adjustment of the height of the rollers is afforded by means of pinions **33** which are mounted in spaced relation on shaft **34**, mounted in bearing plates **35** rigidly secured to each side wall **11** by means of fastening elements **36**. A handle **37** is provided to rotate the pinions **33** to raise or lower the racks as desired. Each pair of rollers is retained in an elevated position by means of a dog **38** mounted on a shaft **39** which is received in an aperture in one of the side walls **11** and is selectively rotated by the handle **42** to either retain the racks in place or permit them to drop as desired.

Massage of the legs and thighs is afforded by means of the rollers **43**, mounted in spaced relation on the shaft **44** which is supported above the surface of the platform **15** by the uprights **45**, the lower ends of which are receivable in an L-shaped bracket **46**. This bracket has an aperture **47** corresponding to the conformation of the uprights **45** to receive the latter and a leg portion **48** received in channel brackets **49**, which are secured to the top of the side walls **11**. It will be noted that an additional pair of channel brackets is provided to vary effect of the rollers **43** as desired.

It will be apparent that a massage apparatus is provided which affords a "knee-action" effect in that the axis of rotation of the rollers **25** and **25***a* may be tilted to produce any desired variation of massage effect. The possibility of injury to a person having a delicate spinal structure or displaced vertebrae is practically eliminated.

I claim:

1. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, a plurality of back engaging rollers having portions extending through an aperture through said platform, means mounting said rollers for resiliently-resisted vertical movement, means to adjust the position of said mounting means vertically, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs or thighs of a person reclining on said platform upon movement thereof.

2. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, a plurality of back engaging rollers having portions extending through an aperture through said platform, said rollers being mounted on a common support, said support being mounted to tilt from the horizontal as desired, means vertically to adjust the position of said roller support, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs or thighs of a person reclining on said platform upon movement thereof.

3. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, at least two longitudinally spaced pairs of back engaging rollers having portions extending through an aperture through said platform, the rollers of one pair being mounted on a common support and the rollers of the other pair being mounted on another common support, said supports being mounted to tilt independently of each other from the horizontal as desired, means vertically to adjust the positions of said roller supports, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs or thighs of a person reclining on said platform upon movement thereof.

4. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, a plurality of pairs of longitudinally aligned rollers resiliently mounted on said base and having portions of their peripheries extending through an elongated aperture in said platform, means vertically to adjust the position of the rollers, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs or thighs of a person reclining on said platform upon movement thereof.

5. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, a plurality of longitudinally aligned pairs of rollers mounted on said base, each roller of each pair being mounted for rotation in fixed coaxial relationship with the other roller of said pair, means mounting said pairs of rollers for resilient axial tilting movement through an elongated aperture in said platform, means vertically to adjust the position of said mounting means, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs or thighs of a person reclining on said platform upon movement thereof.

6. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, a plurality of longitudinally aligned pairs of rollers resiliently mounted on said base, each roller of each pair being mounted for rotation in fixed coaxial relationship with the other roller of said pair, means mounting said pairs of rollers for resilient

axial tilting movement through an elongated aperture in said platform, means vertically to adjust the position of said mounting means, means selectively to retain said mounting means at any desired elevation, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs and thighs of a person reclining on said platform upon movement thereof.

7. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, pairs of transversely spaced racks mounted in said base, means selectively to raise or lower said racks as desired, a pair of tubes mounted on each pair of racks, a spring disposed within each of said tubes, each of said tubes provided with a longitudinally extending slot for the reception of the ends of the respective shafts of pairs of rollers with their peripheries extending through an elongated aperture in said platform, means vertically to adjust the positions of said rollers, means selectively to retain said rollers at any desired elevation, and rollers spaced longitudinally from said first-mentioned rollers and mounted on said base in position to massage the legs or thighs of a person reclining on said platform upon movement thereof.

8. A massage apparatus comprising a base, a body-supporting platform mounted on said base for reciprocatory movement thereon, a plurality of back engaging rollers having portions extending through an aperture through said platform, means mounting said rollers for resiliently-resisted vertical movement, and means to adjust the position of said mounting means vertically.

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