

June 19, 1962

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3,039,458

ROLLING MASSAGE APPARATUS WITH ANGLE CHANGING MEANS

Filed Sept. 20, 1957

2 Sheets-Sheet 1

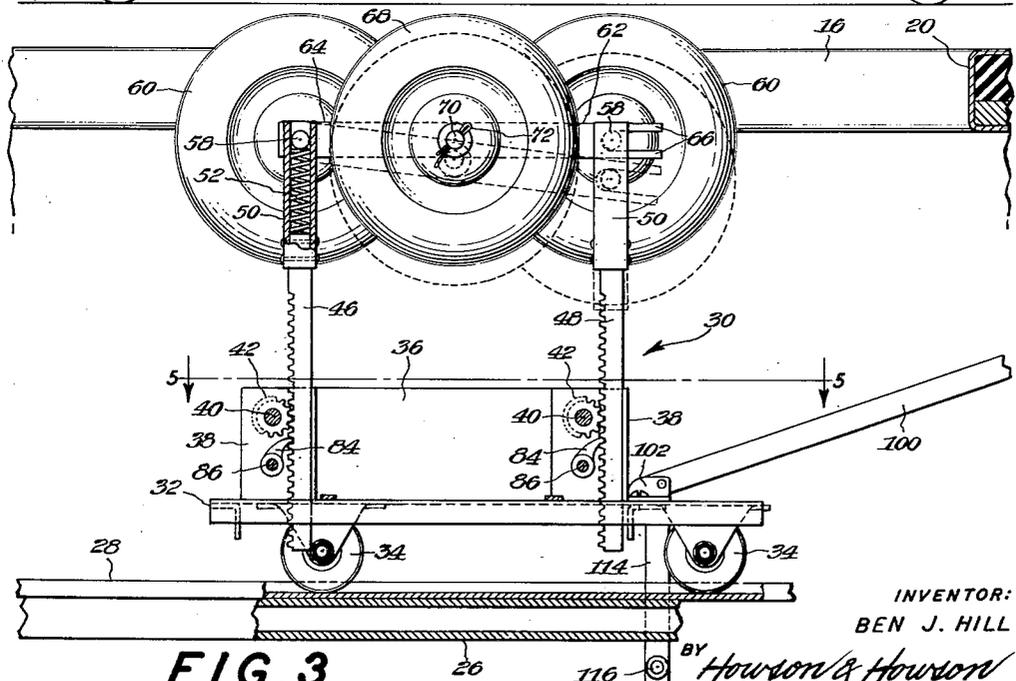
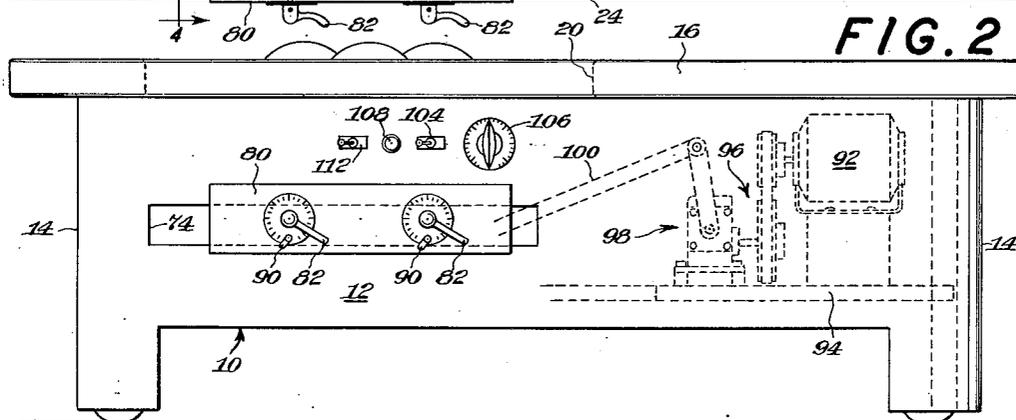
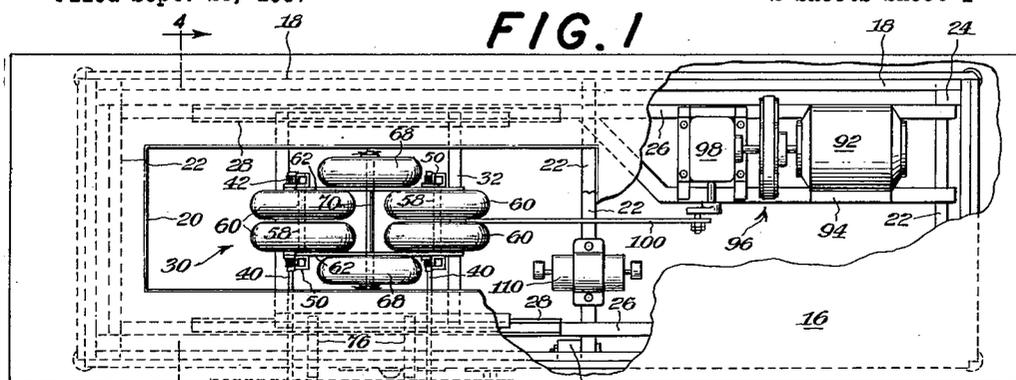


FIG. 3

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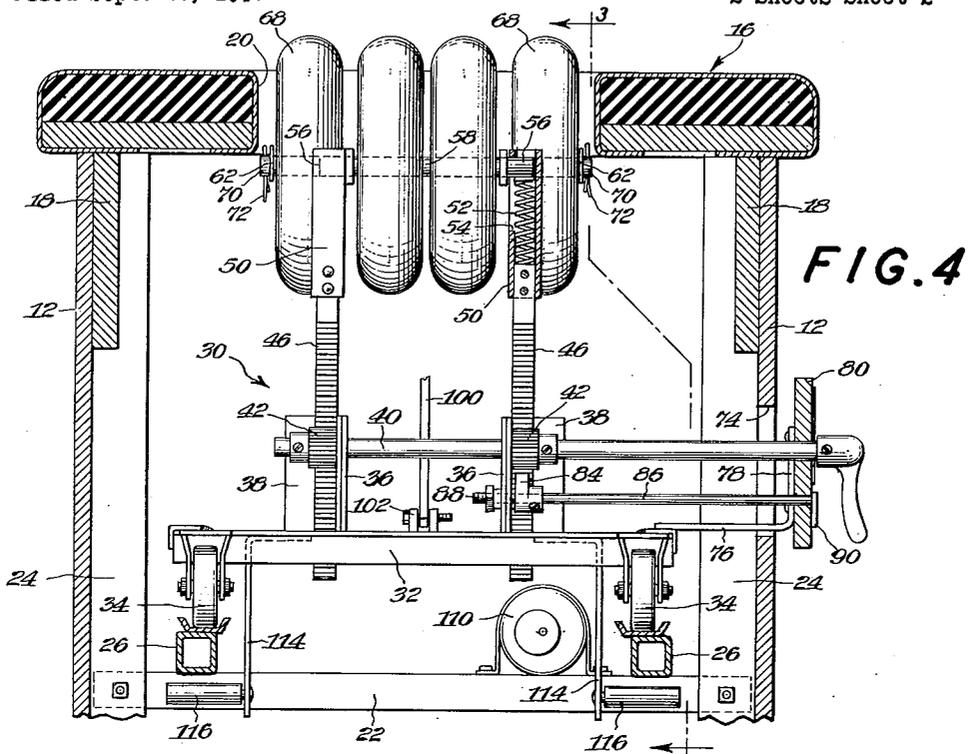


FIG. 4

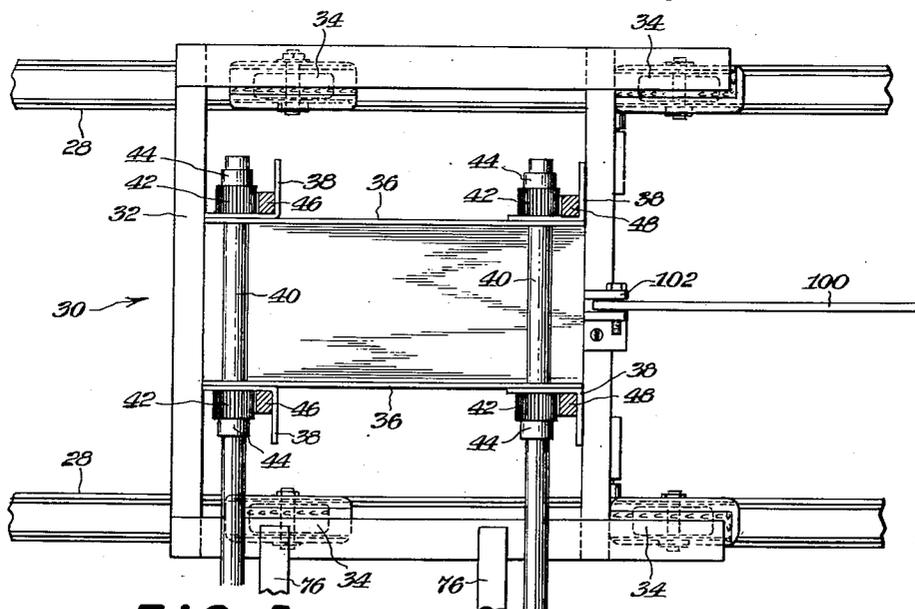


FIG. 5

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ROLLING MASSAGE APPARATUS WITH ANGLE CHANGING MEANS

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 Filed Sept. 20, 1957, Ser. No. 685,098
 4 Claims. (Cl. 128-57)

The present invention relates broadly to mechanical means for massaging and exercising portions of the human body and more particularly those regions of the body which benefit most from massage.

This invention is an improvement over the mechanism disclosed in Patent No. 2,781,040, issued February 12, 1957, and having a common assignee with the present application. In that patent, means are disclosed for reciprocating a table top, so that resiliently mounted rollers protruding through elongated apertures in the table top may engage the back of a person in the vicinity of the spinal column so that, as the person reclines, relative movement of the table top with respect to the rollers causes the rollers to massage the user's back.

One of the disadvantages of that prior device was the requirement for a substantial amount of space to permit reciprocation of the table top. It is an object of the present invention to provide a massage apparatus of this general character but wherein a stationary top is provided having reciprocable rollers extending through a top opening, and the over-all structure requiring no more space than a standard straight treatment table.

Another object of the present invention is to provide mechanical means for massaging comprising a stationary table top and a plurality of rollers resiliently mounted, and adapted for reciprocating movement of the rollers with respect to the stationary table top.

Another object of the present invention is to provide in such massage apparatus movable rollers which can be vertically adjusted with respect to the table top for greater or lesser pressure against the body portions of a user reclining on the table, and means are additionally provided for adjustably and angularly disposing a gang or plurality of such rollers extending in length-wise array over a portion of the table top.

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

Other objects and advantages of the present invention will be more readily apparent from the following detailed description of an embodiment thereof, when taken together with the accompanying drawings in which:

FIG. 1 is a top plan view of the massage apparatus of the present invention, parts being broken away for clarity;

FIG. 2 is a front elevational view of the massage apparatus;

FIG. 3 is an elevational view taken on line 3-3 of FIG. 4;

FIG. 4 is an elevational view taken on line 4-4 of FIG. 1; and

FIG. 5 is a plan view taken on line 5-5 of FIG. 3.

Referring now in detail to the drawings, reference numeral 10 designates a suitable base having opposed side walls 12 and end walls 14. Mounted on the top edges of the walls 12 and 14, is a platform or table top generally designated 16. A bracing or strengthening member 18 is preferably provided around the inner periphery of the walls to provide adequate and rigid support for the table top. A preferably rectangular shaped elongated opening 20 is provided in an area of the top or platform 16.

A plurality of transverse supports 22 are mounted on vertical braces or posts 24. Longitudinally extending box members 26 are supported on and fixed to the transverse

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supports 22 and in turn mount channel shaped roller tracks 28 thereon.

A roller carriage generally designated 30 includes a base member 32 mounted on wheels 34 which are supported in channels 28 for to and fro movement of the carriage. Spaced upright brackets 36 are secured to the base member 32. Four corner brackets 38 are secured to the brackets 36 and rotatable shafts 40 are rotatably journaled in openings through the corner brackets 38 and upright brackets 36 as clearly shown in FIGS. 4 and 5. Pinion gears 42 are fixed on shafts 40 by means of collars 44 in conjunction with the corner brackets 38.

Racks 46 and 48 in complementary pairs are confined between the corner brackets 38 and adjacent pinion gears 42 for coaction with the pinion gears. The racks 46 and 48 have hollow rectangular tubes or supports 50 secured at their upper ends and have springs 52 mounted in the free open upper ends thereof. Slots 54 are provided on the inner sides of boxes 50 to permit insertion therein of ends 56 of roller supporting shafts 58 resting on top of the springs 52. Rollers 60 are rotatably mounted on the shafts 58, which due to the remainder of the construction are resiliently supported in an obvious manner.

Arms 62 are placed on opposite sides of the rollers 60 and at one end 64 are pivotally journaled on the ends of shafts 58. The other ends are forked or bifurcated as at 66, and loosely fit over the ends of the shaft 58. Another set of wheels 68 are rotatably mounted on shaft 70 which is supported in openings in the arms 62 and held in position thereon by means of cotter pins or the like at 72. The wheels 68 are spaced outwardly of and intermediate the sets of wheels 60 as was seen in FIG. 1 of the drawings. The wheels 60 and 68 together form a longitudinally extending array of massaging wheels and preferably are of a semi-pneumatic variety.

A side wall 12 has an elongated opening 74 longitudinally disposed with respect to the side wall and table 16. A bracket 76 is secured to the base 32 and extends outwardly through opening 74 terminating in an upward portion 78 to which is affixed a control panel 80. The shafts 40, carrying the pinions 42, are extended transversely of the base 32 and through openings formed in the control panel 80. Handles 82 are secured on the ends of the extended shafts 40 exteriorly of the control panel. Pawls or dogs 84 are mounted on shafts 86 rotatably journaled at end 88 in brackets 36 and 38. The opposite ends extend through the control panel 80 and have handles 90 thereon.

It will be understood that by rotation of handles 82 in a selective manner, through coaction of pinions 42 and racks 46, 48 the array of rollers 60 and 68 can be raised as a unit or either longitudinal extremity thereof can be raised or lowered with respect to the opposite end. The pawls or dogs permit securing of the rollers in any desired position. Due to this adjustability feature, the degree of pressure against a user's body and the location of maximum pressure can be adjusted.

The means for moving the rollers with respect to the table top or platform includes an electric motor or the like 92 mounted on base or platform 94. Power is transmitted by means of a pulley, belt system 96 through gear reduction means and pitman arrangement broadly designated 98 to shaft 100, having its free end connected in bracket 102 affixed to the base 32 for the roller array. Off/on switch means 104 are operatively connected with the motor 92 for initiating operation, and a timer mechanism 106 is preferably connected into the circuit which also includes an indicator light 108 to indicate operation of the device.

A vibrator mechanism 110 mounted on a lower brace member 22 is actuatable by switch 112 to give positive vibration to the platform through the base structure. De-

pending brackets 114 secured on opposite transverse sides of the base 32 carry at their lower ends rollers 116 which extend under box members 26 and serve the purpose of keeping the carriage or base 32 on the tracks 28.

It will be seen that in use, the height of the rollers and the angle thereof can be adjusted to conform to the back of the user, and additional resiliency is afforded because of the spring mounting of the various rollers. Due to the various control features and the resilient mounting, the massage apparatus gives a "knee-action effect" since the axis of the various rollers can be tilted and the degree of pressure can be adjusted through varying of the height of the rollers with respect to the table top. The possibility of injury to a person having a delicate spinal structure or displaced vertebrae for example, is therefore practically eliminated.

Manifestly minor changes in details of construction will be apparent to those skilled in the art without departing from the spirit and scope of the invention as defined in and limited solely by the appended claims.

I claim:

1. In a massage apparatus, a body-supporting platform having an elongated aperture therethrough, a plurality of rotatably mounted body-engaging rollers disposed in at least three longitudinally spaced rows arranged in a longitudinally and transversely extending array and having portions extending through said aperture, means for longitudinally reciprocating said rollers in said aperture and with respect to said platform to effect a massaging action on a portion of a body supported on said platform, and at least one arm member for operatively interconnecting the axes of said rollers in all said rows, said arm member having one end connected to one end of said array and the opposite end to the opposite end of the array, and means for adjusting the angular disposition of said arm member whereby said arm member may be selectively angled with respect to a body to vary and coordinate the intensity of roller pressure exerted against the body by each of said longitudinally spaced interconnected rows of rollers.

2. In a massage apparatus as claimed in claim 1, means

associated with the longitudinal ends of said array severally operable to selectively raise or lower each end of the array with respect to said platform.

3. In a massage apparatus as claimed in claim 2, said last means including upstanding racks having resilient roller axle mounts at the top thereof and rotatably mounted pinion gears associated with said racks for raising and lowering the same together with rollers supported thereby.

4. In a massage apparatus, a body-supporting platform having an elongated aperture therethrough, a plurality of body-engaging rollers disposed in rows arranged in a longitudinally and transversely extending array and having portions extending through said aperture, each of said rollers in said rows being rotatably mounted on a shaft, means for longitudinally reciprocating said rollers in said aperture and with respect to said platform to effect a massaging action on a portion of a body supported on said platform, arm members having openings at one end of the array, and bifurcated opposite ends in which the mounting shaft for rollers at the opposite end of the array are inserted, at least one roller mounting shaft rotatably supporting at least one body engaging roller mounted intermediate said arm ends and extending transversely of said end rollers, and means adjustably supporting said arm members whereby said arm members may be selectively angled with respect to a body to vary and coordinate the intensity of roller pressure exerted against the body by said body engaging rollers.

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