July 1, 1930. A. B. BOOTH 1,769,616

MASSAGE MACHINE

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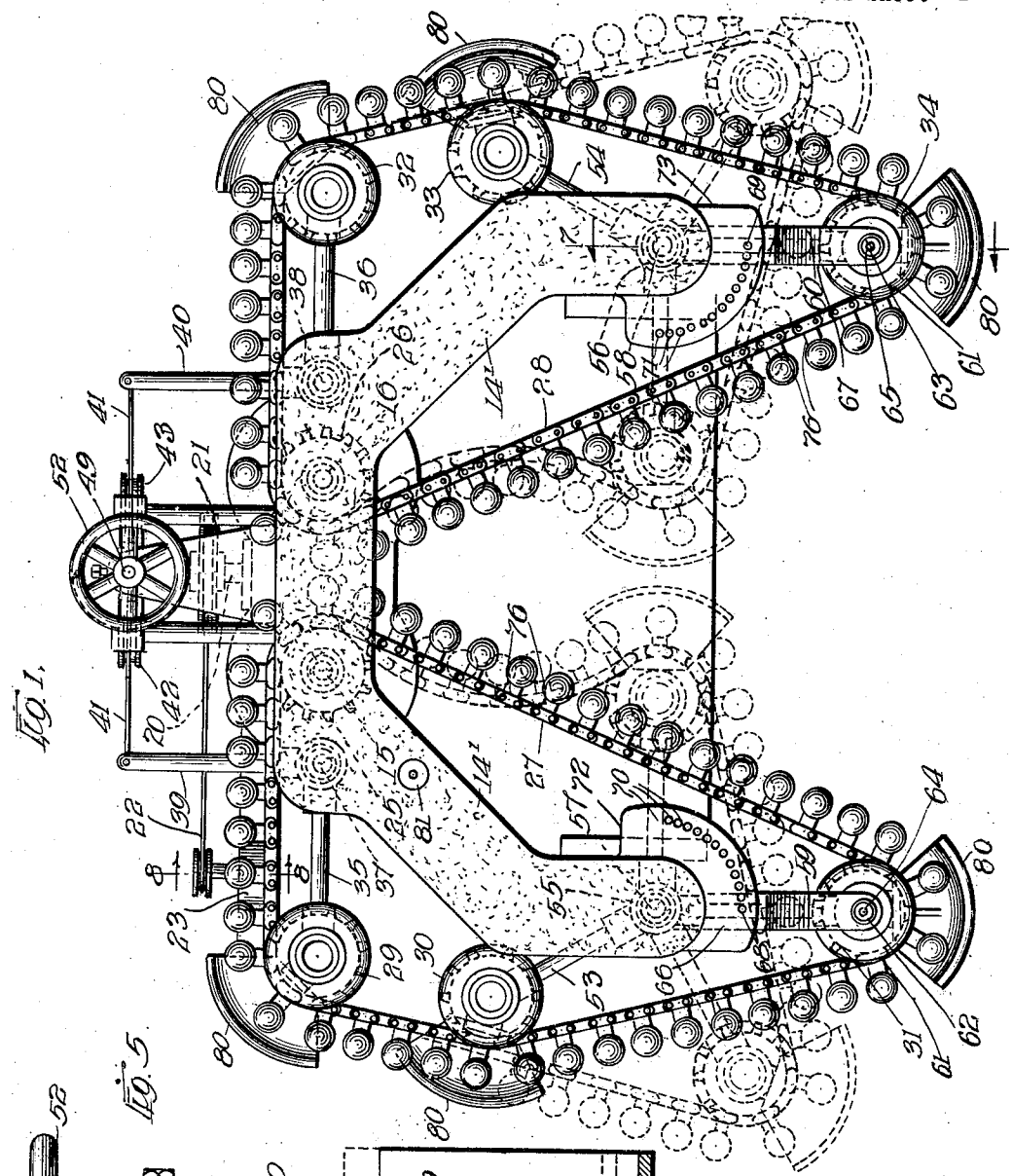


Fig. 1.

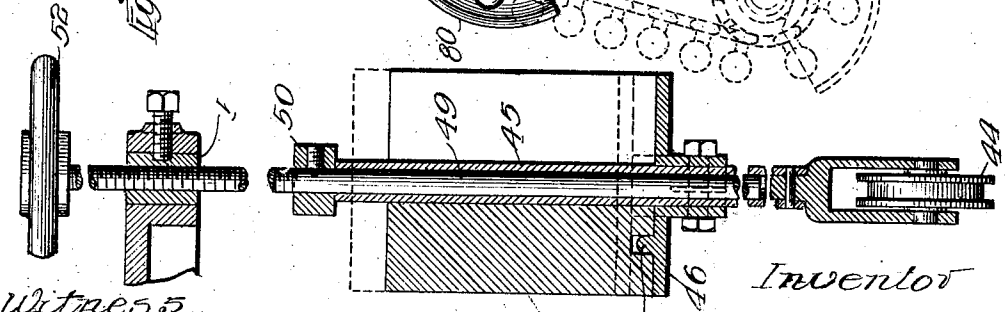


Fig. 5

Witness.

Harry A. Bolte.

Inventor

Anna B. Booth.

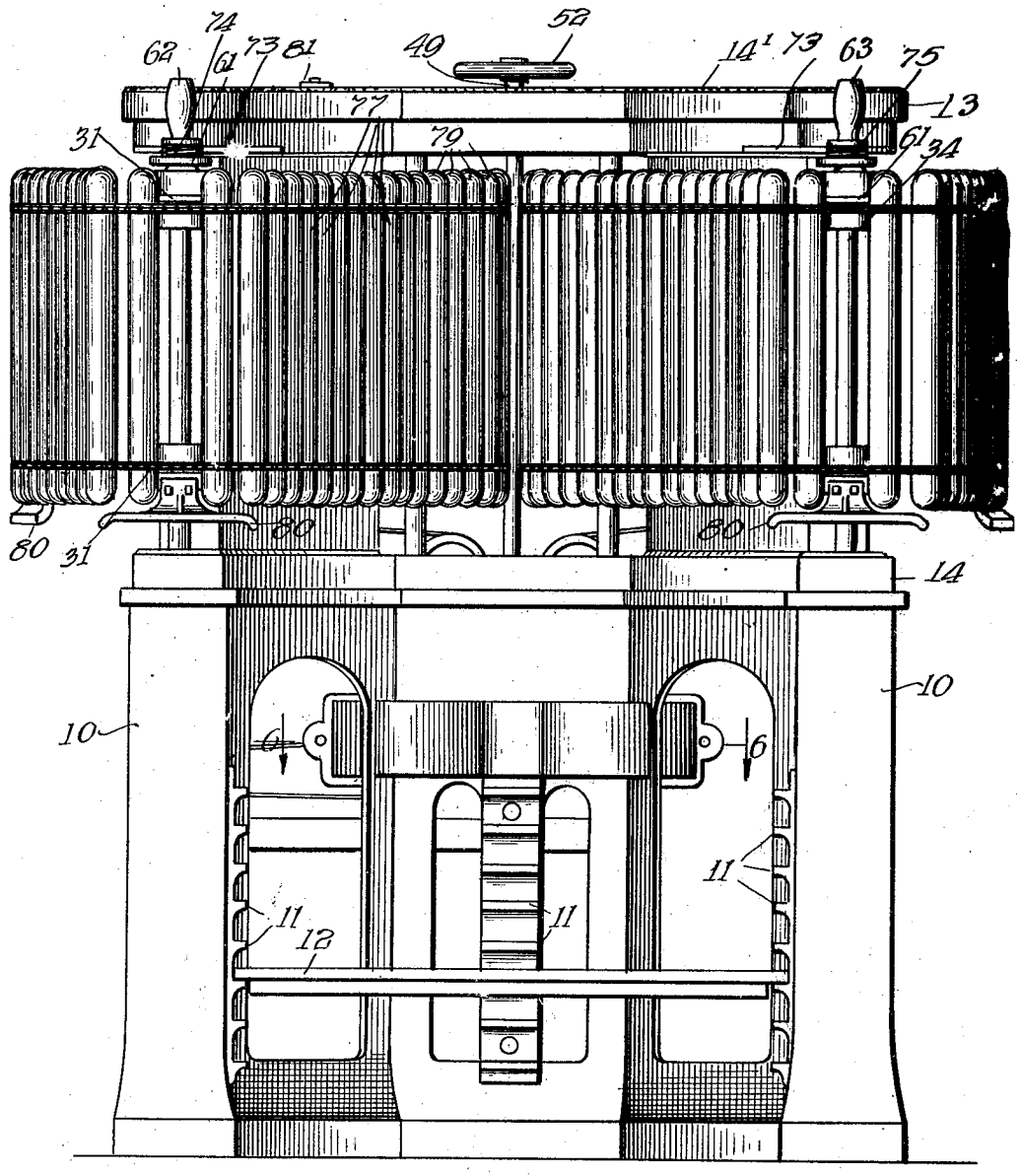
By Glenn S. Noble Atty.

July 1, 1930. A. B. BOOTH 1,769,616

MASSAGE MACHINE

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Fig. 2.



Witness.

Harry C. White

Inventor:
Anna B. Booth.

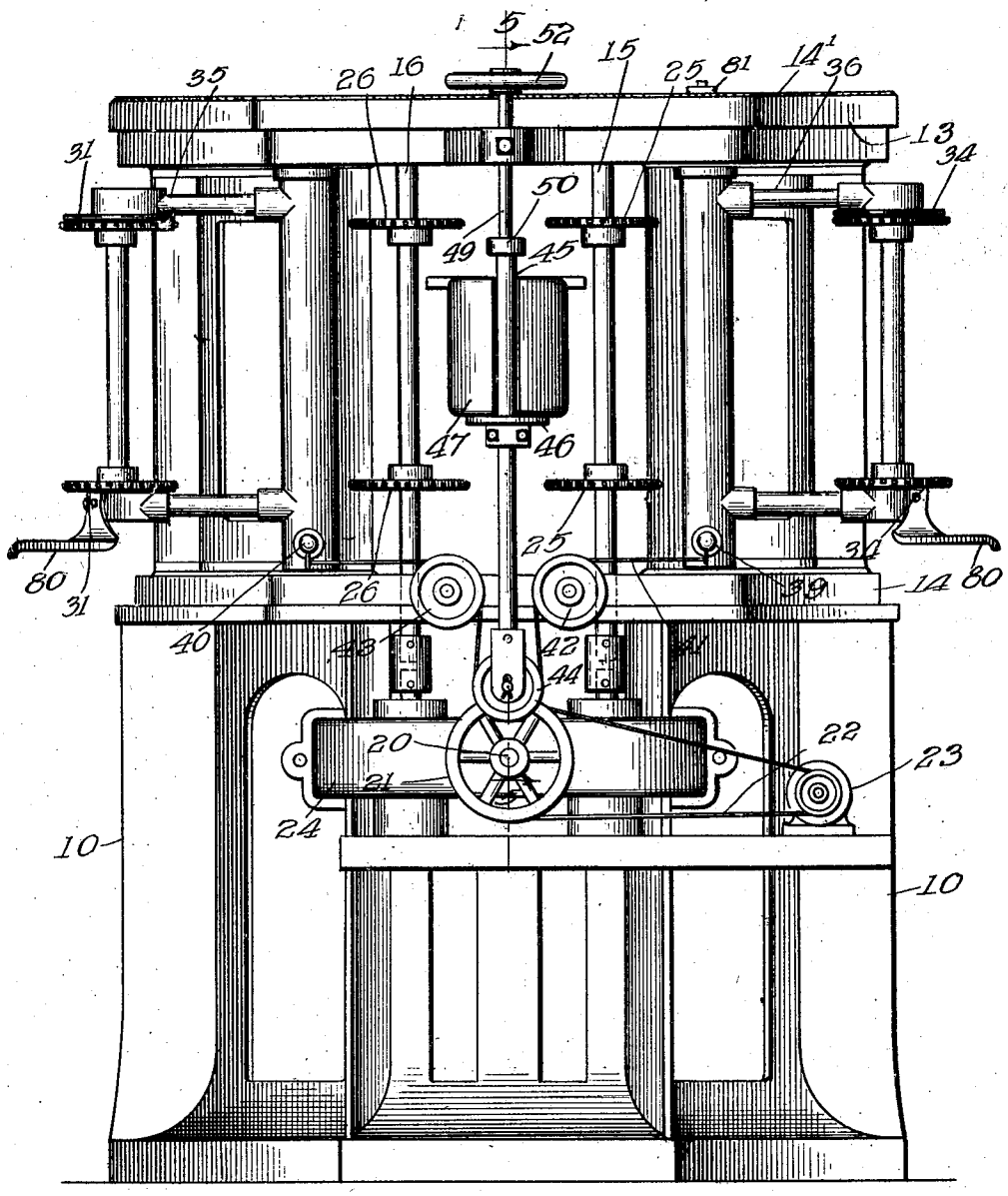
By Glenn S. Nobb, Atty.

July 1, 1930. A. B. BOOTH 1,769,616

MASSAGE MACHINE

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FIG. 3.



Witness:
Harry R. Lewhite.

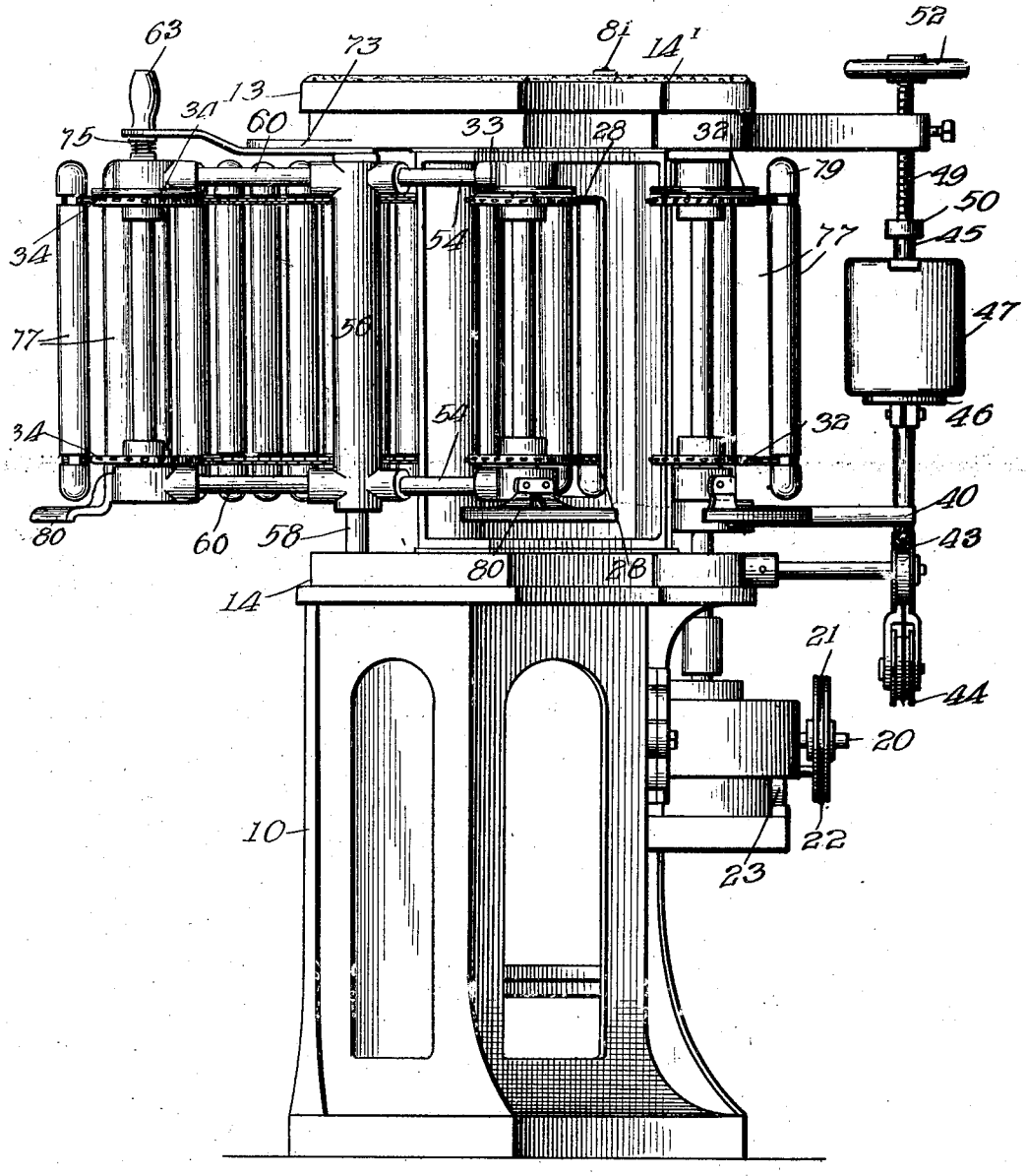
Inventor:
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July 1, 1930. A. B. BOOTH 1,769,616

MASSAGE MACHINE

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Fig. 4.



Witness.
Harry C. L. White.

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MASSAGE MACHINE

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Fig. 6.

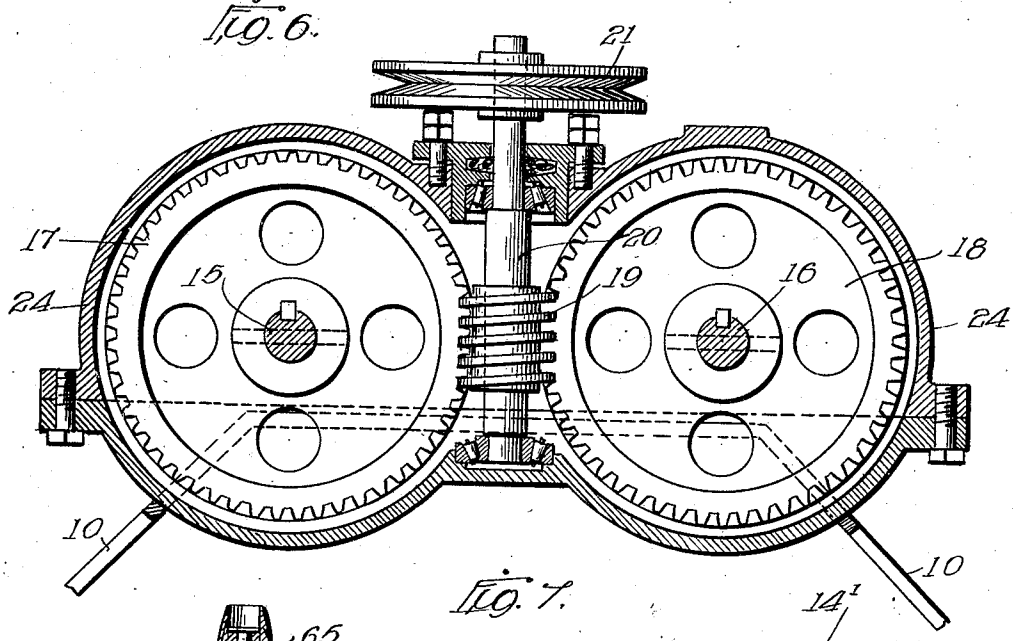


Fig. 7.

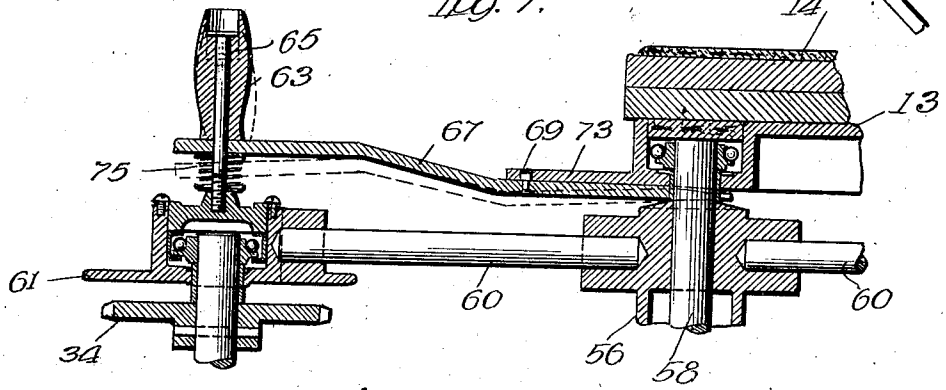


Fig. 8.

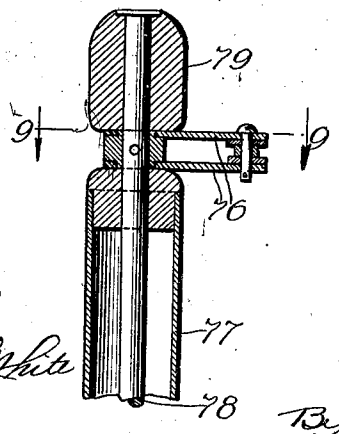
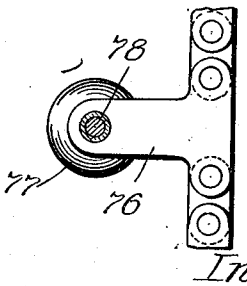


Fig. 9.



Witness.

Harry C. White

Inventor:

Anna B. Booth

By Glenn S. Noble Atty.

Patented July 1, 1930 1,769,616

UNITED STATES PATENT OFFICE

ANNA B. BOOTH, OF RICHMOND, INDIANA

MASSAGE MACHINE

Application filed January 29, 1927. Serial No. 164,474.

This invention relates to improvements in the type of machine shown in the patent to J. P. Gardner, No. 1,305,595, June 3, 1919. The patented machine was designed so that it required an attendant or operator to operate the same, the patient or person being treated having but little actual control of the machine. This was found in actual use to be somewhat objectionable and the present machine is designed so that it may be operated by the patient.

The objects of this invention are to provide an improved massage or body treatment machine of the character indicated; to provide a machine of this character, all of the functions of which may be controlled or operated by the person being treated in the machine; to provide an improved arrangement for supporting and guiding the roller supporting chains; to provide an improved locking device for locking the chain adjusting arms; to provide an improved arrangement for adjusting the tension on the chains; to provide an improved frame and means for supporting a platform therein; to provide an improved covering for the top of the frame, to provide an improved chain and motor construction; and to provide such other novel features and improvements as will appear from the following description.

In the accompanying drawings illustrating this invention;

Figure 1 is a top plan view;

Figure 2 is a front view;

Figure 3 is a back view;

Figure 4 is a side view with portions of the chains and rollers omitted;

Figure 5 is a sectional detail taken on the line 5—5 of Figure 3;

Figure 6 is a sectional detail taken on the line 6—6 of Figure 2;

Figure 7 is a sectional detail taken on the line 7—7 of Figure 1;

Figure 8 is a sectional detail taken on the line 8—8 of Figure 1; and

Figure 9 is a section taken on the line 9—9 of Figure 8.

In the particular form of the invention as shown in these drawings, the machine is provided with a frame 10 which is preferably made in sections, as shown, for convenience in manufacture, shipping, and installation. The base or lower portion of the frame has a plurality of projections 11 for supporting a platform 12 on which the person taking treatment, and who will hereafter be designated as the "patient", may stand or sit. This platform may be adjusted at different heights or may be removed so that the patient can stand on the floor.

The upper portion of the frame is provided with horizontal members 13 and 14 in which most of the operative parts are mounted. The upper horizontal member 13 is provided with a covering 14′ of cork or cork composition or other suitable material on which the patient may rest his arms. Two driving shafts 15 and 16 are mounted at the back of the frame and are driven by any suitable driving mechanism. These shafts may be driven in either the same or opposite directions, may be driven continuously in either direction, or may be oscillated or reversed in order to give different movements to the massaging devices. In the present instance, these shafts are provided respectively with worm gears 17 and 18, (Figure 6) which are driven by a common worm 19 which is mounted on a shaft 20 having a pulley 21 which is driven by a belt 22 from a motor 23. The driving gears are mounted in a housing 24 on the main frame, which is adapted to retain oil or grease for lubricating these parts. The motor may be of the reversing type in order to reverse the movement of the massage devices or to reciprocate the same. The shafts 15 and 16 are provided respectively with pairs of sprocket wheels 25 and 26, two chains 27, 27 engage with the sprockets 25, and two other chains 28, 28 engage with the sprocket wheels 26. The chains 27 pass around three other sets of sprocket wheels 29, 30, and 31. The chains 28 pass around three other sets of sprocket wheels 32, 33, and 34. The sprocket wheels 29 and 32 are respectively carried by arms 35 and 36 which are secured to shafts 37 and 38 which have their bearings in the frame and which are provided with rearwardly projecting arms 39 and 40 by means

of which they may be swung in order to press the sprocket wheels against the chains.

In order to provide a constant tension on the chains, a rope or cable 41 is secured to the outer ends of the arms 39 and 40 and passes over guide wheels or pulleys 42 and 43 and is engaged by a central pulley 44, (Figures 1 and 3). The pulley 44 is mounted at the lower end of a tube or pipe 45 (Figure 5) which has a disk 46 secured thereto for supporting a weight 47. This weight is preferably slotted at one side in order to permit it to be readily placed on the disk and is held in position by a projection 48. This weight may be made in sections if desired in order to vary the constant pressure or tension on the chains. A threaded rod or screw 49 projects downwardly into the tube 45 and carries a collar or projection 50 which is adapted to engage at times with the upper end of the tube. This screw passes through a nut 51 which is securely held in the main frame, and the upper end of the screw is provided with a wheel or handle 52 for turning the same. The rod 49 serves as a bearing or support for the tube so as to hold it in vertical position, and the tube is free to slide upon the same. When the screw is turned so that the collar 50 is out of engagement with the tube, the tension on the chains will be due to the weight 47 and connected parts. However, if more tension is desired, as for giving greater pressure on the body, as will presently appear, the screw may be turned down so that the collar will press on the tube and the tension may be increased to any desirable extent. It will be noted that the wheel 52 projects up at the back of the machine where it may be readily operated by the patient.

The pairs of sprocket wheels 30 and 33 are carried respectively at the outer ends of arms 53 and 54 which project outwardly from the tubular bearing members 55 and 56 which are secured to shafts 57 and 58 rotatably mounted in the main frame (Figure 7).

The sprocket wheels 31 and 34 are respectively carried at the outer ends of arms 59 and 60 which project outwardly from the bearing members 55 and 56 (Figures 1 and 4). The arms 59 and 60 are moved or swung in order to change the relative positions of the chains, as for adjusting the massage devices to the body; and the arms carrying the sprockets 30 and 33 are so proportioned in length and arranged at such an angle to the arms 59 and 60 that the sprockets 30 and 33 will take up substantially all of the slack which may be due to the swinging of the sprockets 31 and 34, or in other words so that there will be little or no change in the tension on the chain due to the movement of these sprockets.

The various sets of guide sprockets are secured to shafts which are mounted in bearings at the outer ends of the arms, as shown particularly in Figure 7, and these bearings are preferably provided with protecting disks or flanges 61 which are adapted to prevent the patient from accidentally sticking his fingers into the sprockets.

In order to swing the arms 59 and 60 with the parts connected therewith, I provide handles 62 and 63 which are carried on pins 64 and 65 which project upwardly from the bearings, as shown in Figure 7. These parts are locked in position by locking arms 66 and 67 which have holes at their outer ends for engagement with the pins 64 and 65 and which are bifurcated at their inner ends for engagement with the shafts 57 and 58. The locking arms are provided with pins or projections 68 and 69 which are adapted to engage respectively with series of holes 70 and 71 in plates or segments 72 and 73 which project outwardly from the upper portion of the main frame. The outer ends of the arms 66 and 67 are held in normally raised position by springs 74 and 75. When the patient desires to swing the arms to adjust the chains, he presses down on the handles 62 and 63 which releases the pins or catches 68 and 69 and then swings the arms with the parts connected therewith to the desired position and releases the handles 62 and 63, whereupon the projections 68 and 69 will again enter the holes in the segments to lock the parts in adjusted position.

The chains are provided at intervals with brackets or projections 76 (Figures 8 and 9) which carry the rollers 77. These rollers or massage devices may be made of any suitable material and mounted on the chains in any desired manner, but in the present instance rods or pintles 78 are secured to the projections 76 and the massage members are rotatably mounted on such rods. These massage members comprise tubular central portions having bearings on the rod and short end sections 79 which are also rotatably mounted on the rod. The end sections are preferably rounded at their extremities in order to provide substantially hemispherical massaging portions which are found useful in manipulation on certain parts of the body.

The several lower guide sprocket bearing members are provided with segmental guards 80 which extend out below the lower ends of the rollers (Figures 1 and 3) and tend to support the rollers in the event that the chains become slack and thereby prevent the chains from disengaging the sprockets. They also serve as a further protection to prevent the patient from inserting his fingers between the lower chains and sprockets.

In the operation of the machine, the patient may remove the platform and stand on the floor or may adjust the platform and stand or sit, or otherwise dispose of himself

in order to bring that portion of the body which is to be massaged into engagement with one or both sets of rollers. The switch 81 for starting the motor is preferably placed in a convenient position so that the patient may start the machine either before getting into it or after adjusting the same. In some instances, the arms at the front of the machine are swung inwardly, as shown in dotted lines in Figure 1, so that the opposite reaches of the massage belts or chains substantially encircle the body, as shown in dotted lines in Figure 1. During such adjustment the weight 47 acting through the cable 41 and the arms 39 and 40 will tend to hold the arms 35 and 36 so that the sprockets 29 and 32 will press against the chains 27 and 28 and hold them closely in engagement with the driving and guide sprockets. When the opposite reaches of the chains are curved around the sides of the body, the tension on the chains and consequently the pressure of the massage devices against the body may be increased to any desired extent by turning the screw 49, as heretofore described. The machine is adapted for giving various kinds of treatment and for massaging different portions of the body, but as the use of such machine is well understood at the present time, further description is not necessary.

While I have shown and described the preferred form of embodiment of my invention, it will be observed that changes may be made in the arrangement of the parts and details of construction without departing from the essential features; therefore I do not wish to be limited, to the exact form herein shown and described, except as specified in the following claims, in which I claim:

1. A massage machine having a frame comprising a lower base section and a detachable upper section, means for fastening the sections together, massage devices carried by said upper section, and power operated means mounted on said base section for actuating said massage devices on the upper section and separable driving devices for connecting the power operated means with the massage devices.

2. A massage machine having a frame comprising a lower section and a detachable upper section, means for fastening the sections together, an adjustable support mounted in the lower section, massage devices mounted in the upper section, means mounted in the lower section for actuating said massage devices and separable means for connecting the actuating means with the massage devices.

3. The combination with the oppositely disposed chains of a massage machine of the character set forth, of sprockets engaging with said chains, pivoted arms supporting said sprockets, arms arranged at an angle to said pivoted arms, and adapted to swing the same, a cable connecting the last named arms, guide sheaves for said cable, a movable sheave engaging with the cable between the guide sheaves, and a weight carried by said movable sheave.

4. In a machine of the character set forth having oppositely disposed chain belts and movable sprockets for maintaining a tension on said belts, of a cable and connecting means for swinging the sprockets, a pulley engaging with said cable, a tube carrying said pulley, a weight secured to the tube, a threaded rod engaging with the tube and engaging with the nut on the frame of the machine, means for turning said rod, and a projection on the rod adapted to engage with the upper end of the tube.

5. A combined normal tension and pressure device for a massage machine of the character set forth, comprising a pulley for engagement with a chain belt tension member, a bearing for said pulley, a tube connected to the bearing, a disk on said tube, an adjustable weight adapted to engage with said disk, a screw having its lower end telescoping with the tube, a collar on said screw for engagement with the upper end of the tube, a fixed nut on the frame engaging with the screw, and a handle for turning the screw.

6. In a machine of the character set forth having pairs of chains with massage devices carried thereby, the combination with each chain of a swinging guide wheel for adjusting the position of the chain, and a second swinging guide wheel in fixed relation to the first named wheel so that it will swing therewith and tend to prevent slackness in the chain.

7. In a device as per claim 6, the combination of a shaft, upper and lower arms pivoted on said shaft and adapted to swing together, sprockets carried by said arms, and means for swinging the arms to adjust the position of the sprockets.

8. A chain adjusting device of the character set forth comprising a shaft, a bearing member carried by said shaft, a pair of arms carried by said bearing member, sprockets mounted at the outer ends of said arms, a second pair of arms carried by said bearing member, sprockets at the outer ends of said arms, means for swinging said arms, and means for locking said arms in adjusted position.

9. In a massaging machine of the character set forth having a frame and having a pair of cooperating chains with massage devices carried thereby, the combination with a pair of sprockets engaging with said chains, of swinging arms pivoted to the frame and carrying said sprockets, a second pair of arms rigidly secured to the first pair of arms, a pair of sprockets carried by the second pair of arms and engaging with said chains, a handle secured to the first named pair of arms for swinging the same, and adjustable lock-

ing means actuated by said handle for locking the arms in position.

10. In a massaging machine of the character set forth, the combination with a frame having a projection with holes therein, of chain adjusting members pivoted in the frame, a locking arm carried by said chain adjusting members and having a projection for engagement with said holes, and a spring pressed handle for swinging the adjusting members and for actuating the locking arms.

11. The combination with a frame having a segment with circumferentially arranged recesses, of a shaft rotatably mounted in the frame, arms carried by said shaft, bearings at the outer ends of said arms, a shaft carried in said bearings, sprocket wheels on said shaft for engagement with the chains, a pin projecting upwardly from one of the outer bearings, a handle slidably mounted on said pin, a pivoted locking arm having a projection for engagement with said recesses in the segment, and a spring between the arm and bearing adapted to hold the arm in locking position.

ANNA B. BOOTH.