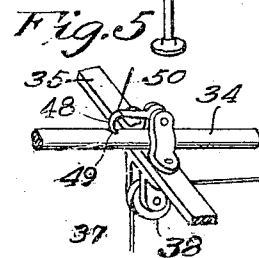
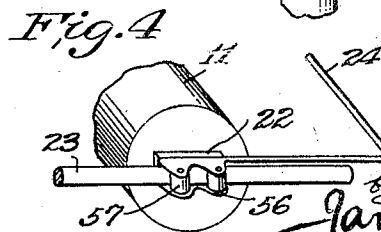
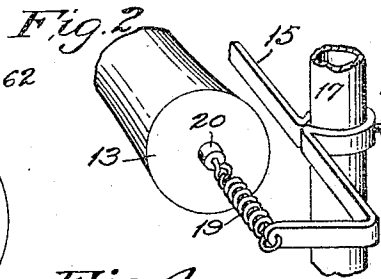
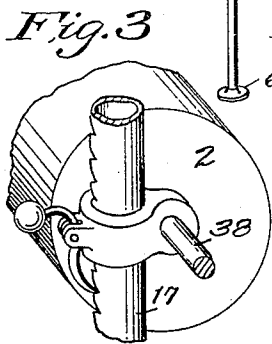
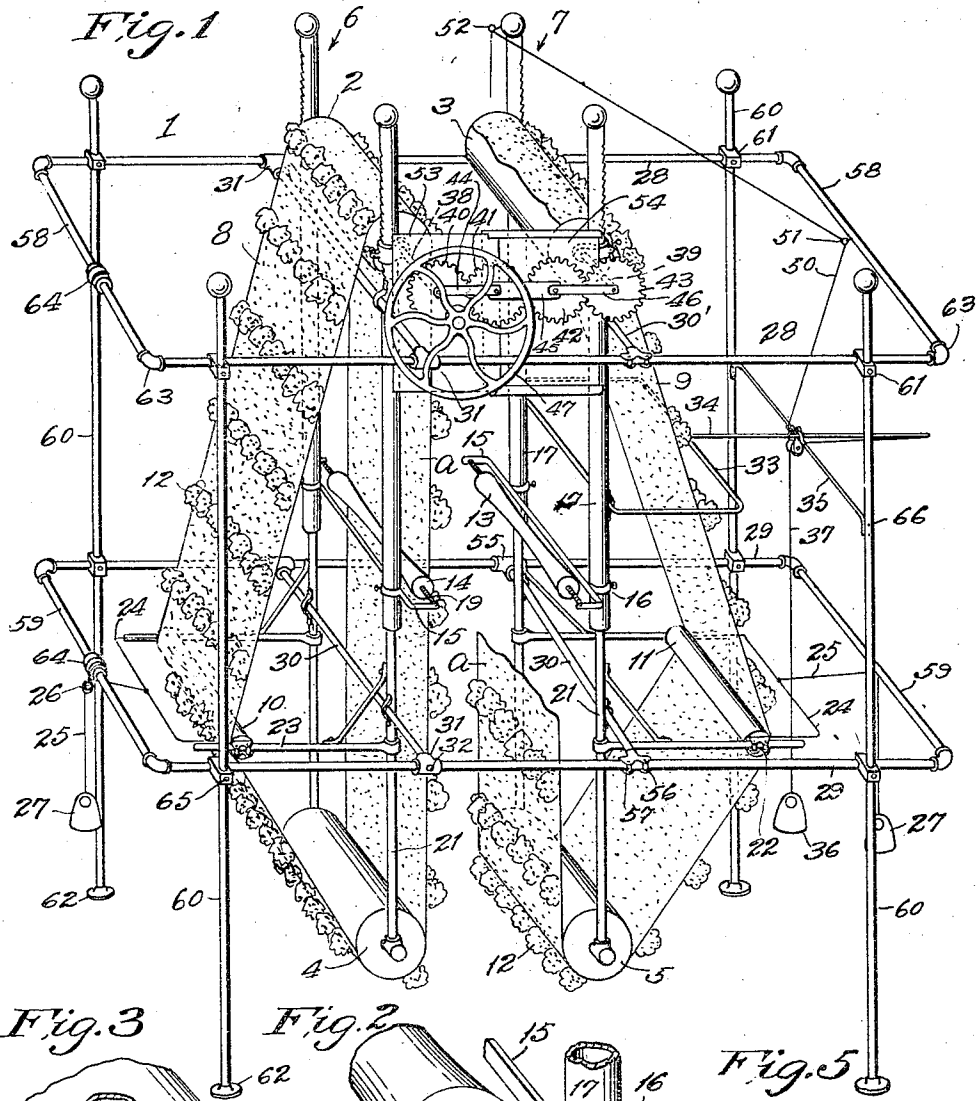


W. H. D. SPEARS.
 MASSAGE MACHINE.
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1,008,215.

Patented Nov. 7, 1911.



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UNITED STATES PATENT OFFICE.

WILLIAM H. D. SPEARS, OF LOS ANGELES, CALIFORNIA.

MASSAGE-MACHINE.

1,008,215.

Specification of Letters Patent.

Patented Nov. 7, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM H. D. SPEARS, a citizen of Canada, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Massage-Machine, of which the following is a specification.

The object of this invention is to provide an apparatus which may be used independently of or in connection with bath tubs in private residences, hotels, sanatoriums and public baths for the purpose of applying suitable friction to the surface of the human body, either dry or wet, with maximum ease. The invention is designed for use with or without an attendant.

The accompanying drawings illustrate the invention.

Figure 1 is a perspective view of a massage machine constructed in accordance with this invention, and with parts in position for operation. Portions are broken away for clearness of illustration. Fig. 2 is an enlarged fragmental perspective detail of one of the pressure rollers. Fig. 3 is an enlarged fragmental detail of the adjustable belt supporting roller. Fig. 4 is an enlarged fragmental detail of one of the belt tighteners. Fig. 5 is an enlarged fragmental detail of one of the catches for the belt frame adjusters.

The main frame 1 is preferably made of metallic pipes and fittings, which may be enameled or otherwise ornamented. The belt supporting and driving rollers 2, 3, are arranged in parallelism with each other at the top of the frame and the bottom belt guiding rollers 4, 5, are arranged in parallelism near the bottom of the frame. The length of the belt rollers 2, 3, 4, 5, is less than the width of the main frame so that when the main frame straddles a bath tub, not shown, the lower rollers may be inserted into such tub. Said belt rollers are mounted on the main frame by means of two belt frames 6, 7, that are practically alike and that are relatively movable; the frame 7 being mounted to move horizontally on the main frame. Around one pair of top and bottom rollers is an endless friction belt 8 and around the other pair of top and bottom rollers is an endless friction belt 9. Belt tighteners 10, 11, are provided for said friction belts, and said belt tighteners are movable relative to the main frame, the belt

frames, and each other. On each of the friction belts transverse rolls 12 are arranged projecting outwardly from the belts away from the belt rollers. Said rolls may be made of any suitable material as towel-ing, cotton waste, sponges, etc. In the drawings the rolls are shown as made of sponges fastened to the belt. The belts 8, 9, may be made of canvas, Turkish toweling or any other suitable fabric.

Vertically adjustable pressure rollers 13, 14, are mounted on the belt frames 6, 7, by brackets 15 that are secured by clamps 16 to the upper member 17 of the telescopic posts of the belt frames. Said pressure rollers 13, 14, are mounted on said brackets by springs 19 that are fastened to the opposite ends of the axes 20 of the rollers respectively, and connect the same to the roller brackets. The belt rollers 4 and 5 are journaled to the lower ends of the lower members 21 of the telescopic posts of the belt frames.

The belt tightening rollers 10 and 11 are supported by sliding journal boxes 22 which are mounted to slide on guide-arms 23 that are fixed to the lower members 21 of the belt frame posts; and said journal boxes are connected and moved by loops 24 that extend around the belts and are connected by lines 25 led over pulleys 26 to tension devices as the weights 27 which hold the belt tightening rollers away from each other and from the belt rollers, thus tightening the belts.

The main frame is provided with horizontal top rails 28 and horizontal bottom rails 29 in parallelism with each other and with cross bars 30 at right angles to the rails. One of the belt frames is supported by said cross-bars at the ends of which are provided slides 31. The cross-bars form horizontal portions of the normally fixed belt frame 6, and the slides are movable along the rails to adjust said belt frame toward and from the middle of the main frame. Said slides are provided with set screws 32 by which they may be fixed to their rails.

The belt frame 7 is freely movable along the rails 28, 29, toward and from the fixed belt frame 6. An adjusting device is connected with the movable belt frame 7 and is adapted to press said movable belt frame toward the fixed belt frame. For this purpose an open flexible roller frame 33 is pro-

vided with a push rod 34 that is parallel with the rails of the main frame and passes over a cross bar 35 of said main frame and extends beyond said cross-bar a sufficient distance to allow the horizontal frame to move the belt frame 7 toward and from the flexible belt frame a desirable distance. A tension device comprising a weight 36 swung from a line 37, rove through a sheath 38 and fastened to the end bar 34 is provided to move the movable belt frame toward the flexible frame with a gentle pressure.

The driving rollers 2 and 3 are operatably connected with each other through driving mechanism which allows adjustment of the belt frames toward and from each other. In the form shown in the drawings the shafts 38, 39, of the belt driving rollers are provided with spur wheels 40, 43, between which are mounted two intermediate spur wheels 41, 42, that are carried by links 44, 45 and 46; the links 44 and 46 connecting the journals of the intermediate gears with the journals of the roller gears; and the link 45 connecting the journals of the two intermediate gears.

In Fig. 1 the belt frames are shown spread apart to their fullest extent ready to receive the person who may step in between the belts from the farther side of the main belt frame. The pressure of the weight 36 tends to force the movable belt frame 7 toward the fixed belt frame 6 and the weight of the intermediate gears also tends to effect the same result. As the pressure is thus applied, the gears may be rotated by the driving wheel 47, thus driving both of the belts in the same direction. In some instances the belts may be driven so that they will rub upward and in other instances so that they will rub downward upon the person between them.

A latch 48 to engage a catch 49 on the push bar 34, is provided to hold the movable belt frame 7 fully retracted and a line 50 is led from said latch over pulleys 51, 52, to a point within the reach of a person between the belts, so that when any one wishes to use the apparatus without an attendant he may first move back the movable belt frame 7 until the latch holds it and he may then step in between the belts and by pulling on the line release the latch, allowing the movable belt frame to apply the required pressure. The power being applied to the driving belt the massaging operation will be effected. In order to protect the person from the gears a telescopic shield comprising two members 53, 54, is provided between the gear space and the open space between the belts. Said members are fastened to the belt frames respectively, and telescope with each other, thus allowing movement of the movable belt frame toward and from the fixed belt frame.

The cross-bars 30 of the movable belt frame are provided at one end with loose

slides 55 and at the other end with anti-friction slides 56 provided with rollers corresponding to the rollers 57 of the sliding journals 22, detailed in Fig. 4. Said anti-friction rollers 57 are intended to prevent cramping or binding of the cross-bars 30 as the belt frame is slid along the rails 28, 29.

The upper rails 28 are connected by end bars 58 and the lower rails 29 are connected by end bars 59, thus forming with the rails 28 and bars 58 a rectangular horizontal top frame, and with the rails 29 and bars 59 a horizontal bottom frame. To these two frames the corner posts 60 are adjustably fastened by clamps 61 that are adjustable along the rails and along the posts. The posts may be provided at the bottom with flanged feet 62 screwed thereonto in the usual manner of attaching feet to gas pipe posts; and the rails and bars are fastened together by elbows 63, one of said bars for each frame being formed of two sections connected by a union 64. The clamps are provided with set screws 65 and by loosening the set screws the posts may then be removed and the frames taken apart. The cross bar 35 may be removably fastened by bolts 66 to the posts that support it.

The active limbs *a* of the belts are arranged practically in parallelism with each other so that both limbs may rub the body simultaneously throughout a considerable portion of the body, and the pressure applied to the body through the belts may be varied or regulated by varying the weights which apply the pressure. For this purpose the weights may be composed of receptacles open at the top and loaded with shot or other heavy material, the quantity of which may be added to or diminished from as desired.

When the person between the belts desires to be released he may simply push the movable belt back until the latch operates to hold the belt retracted.

I claim:—

1. A massage machine comprising friction belts arranged with a space between them, and means to drive said friction belts.

2. A massage machine comprising friction belts arranged with a space between them, and means to drive said friction belts simultaneously in the same direction.

3. A massage machine comprising friction belts having limbs arranged in parallelism, and means to drive said friction belts.

4. A massage machine comprising two belts arranged with a space between them, means to drive said friction belts, and means to yieldingly hold one friction belt toward the other.

5. In a massage machine, an endless friction belt provided with flexible rolls on one face, and means to drive the friction belt.

6. A massage machine comprising two pairs of rollers, friction belts around said

rollers, means to tighten the friction belts, and means to drive the belts.

7. A massage machine comprising two pairs of rollers, friction belts around said rollers, means to tighten the friction belts, means to drive the friction belts, and means to yieldingly hold one of the friction belts toward the other belt.

8. The combination with a main frame of top and bottom rollers mounted on said frame, a friction belt around said rollers, a belt frame movable on the main frame, movable top and bottom rollers mounted on the movable belt frame, a friction belt on said movable rollers, means to yieldingly hold the movable frame and its friction belt toward the other belt, and means to simultaneously drive the belts.

9. A massage machine comprising a main frame, two telescoping frames mounted on the main frame, rollers at the tops of said telescoping frames, rollers at the bottoms of said telescoping frames, friction belts around the rollers of the telescoping frames respectively, means to rotate one of the rollers, gears on the top rollers respectively, and intermediate gears between the gears of the rollers, said gears meshing together and links connecting the gears.

10. A massage machine comprising a main frame, two telescoping frames mounted on the main frame, rollers at the tops of said telescoping frames, rollers at the bottoms of said telescoping frames, friction belts around the rollers of the telescoping frames, respectively; means to rotate one of the rollers, gears on the top rollers, respectively, intermediate gears between the gears of the rollers; said gears meshing together, links connecting said gears, and means to yieldingly hold one of the belt frames toward the other belt frame.

11. In a massage machine, upper and lower rollers, a friction belt around said rollers, a pressure roller between the belt rollers, and means to drive the rollers and belt.

12. In a massage machine, upper and lower rollers, a friction belt around said rollers, a pressure roller contacting with the belt between the belt rollers, and springs fastened

to the axes of the pressure roller to support the same.

13. In a massage machine, upper and lower rollers, a friction belt around said rollers, a pressure roller between the belt rollers, springs fastened to the axes of the pressure rollers to support the same, and means for adjusting the pressure roller up and down along the belt.

14. A massage machine comprising a belt, rollers carrying the belt, means to drive one of the rollers, and flexible rolls on the belt.

15. In a massage machine, a friction belt, a movable frame provided with rollers to carry the friction belt, means to yieldingly move the frame in one direction, and a latch to hold the frame against such movement.

16. In a massage machine, a belt, a movable frame provided with rollers to carry the belt, means to yieldingly move the frame in one direction, a latch to hold the frame against such movement, and means led from the latch whereby the person to be operated upon by the belt may release the latch while standing in position to be operated on.

17. A massage machine provided with two belts, means to drive the belts, means to move one of the belts toward and from the other belt, a latch to hold the movable belt retracted, and means leading from the latch to a position where the same may be operated by a person between the two belts to bring the machine into action.

18. A massage machine comprising a main frame, belt frames narrower than the main frame, rollers narrower than the main frame and carried by the friction belt frame, belts around the rollers and means to drive said rollers.

19. In a massage machine, a friction belt, rollers for the friction belt, telescoping frames for said rollers and means to tighten the friction belt on said rollers.

In testimony whereof, I have hereunto set my hand at Los Angeles, California this 8th day of December, 1910.

WILLIAM H. D. SPEARS.

In presence of—

JAMES R. TOWNSEND,
L. BELLE RICE.