No. 710,689. Patented Oct. 7, 1902.

W. W. M. HICKEY.

MASSAGING MACHINE.

(Application filed June 5, 1901.)

(No Model.) 2 Sheets—Sheet 1.

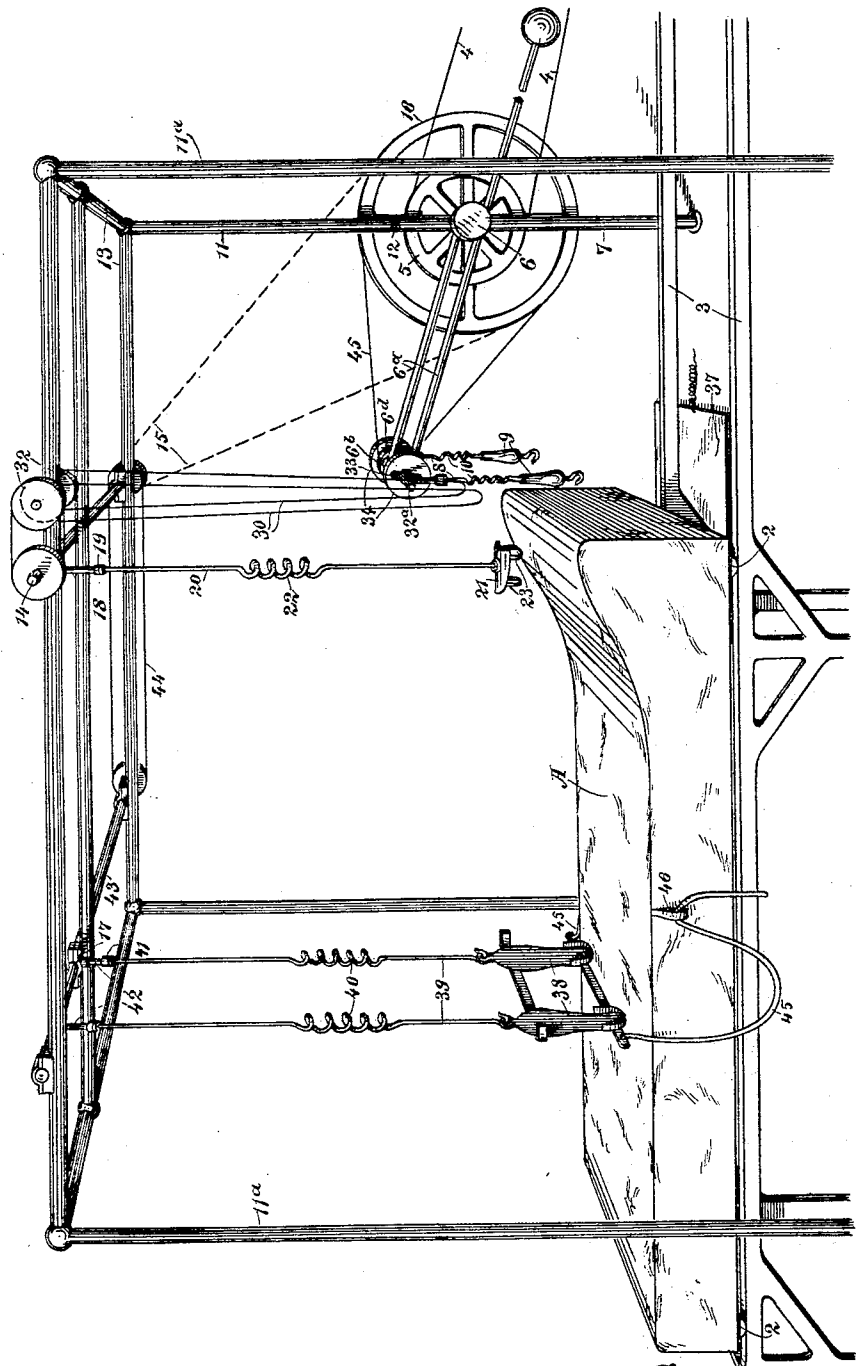


Fig. 1.

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Fig. 3.

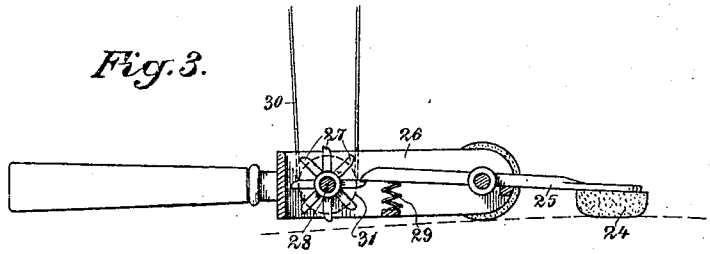


Fig. 2.

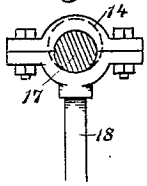


Fig. 4.

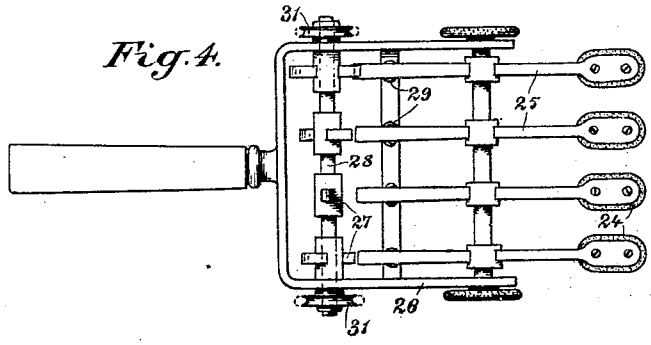
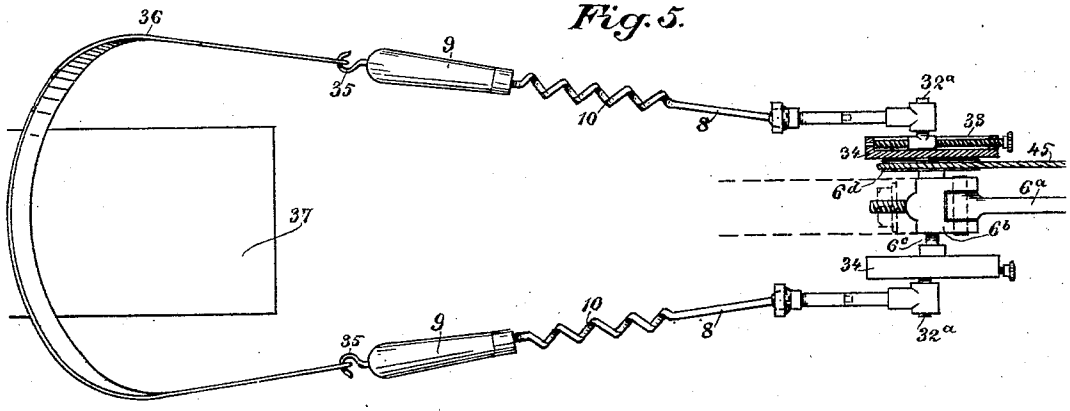


Fig. 5.



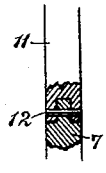


Fig. 6.

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UNITED STATES PATENT OFFICE.

WHITE WOLF M. HICKEY, OF SAN FRANCISCO, CALIFORNIA.

MASSAGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 710,689, dated October 7, 1902.

Application filed June 5, 1901. Serial No. 63,226. (No model.)

To all whom it may concern:

Be it known that I, WHITE WOLF M. HICKEY, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Massaging-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an apparatus which is especially designed for carrying out the various operations of massaging and manipulating the various parts of the body of the patient.

It consists in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a view of the machine. Fig. 2 is a detail of the crank-motion. Fig. 3 is a longitudinal section through the device for using mallets. Fig. 4 is a plan view of the same. Fig. 5 shows the employment of a body-belt. Fig. 6 is a detail section of the connection between the post and its extension.

The object of my invention is to provide a mechanical means for producing the various rubbing, concussive, and other movements which are employed in what is known as "massage" treatment of the person.

In my apparatus I have shown a couch or support A, which in the present case is represented as being designed for a person in a reclining position; but it will be understood that it may be adapted for partial reclining, for sitting up, or for standing, or being supported in an upright position, and this part when in future referred to will be understood to indicate any such device. This couch is mounted upon wheels or rollers, as at 2, which are adapted to travel upon a track, as at 3, so that the couch may be easily moved from any point.

The massaging may be applied to any portion of the body and is produced by various pads, supports, belts, or attachments driven from a common source of power. This may be hand or preferably an electromotor, and in the present case I have shown power from such a motor transmitted through a belt, as at 4, passing around a pulley 5, mounted upon a shaft, as at 6, and this is supported by a clamp or other fixture from a vertically-disposed post 7. To the shaft 6 are atttached bars 6^a, which carry at their other ends a cross-head 6^b. This cross-head carries a short shaft 6^c, upon which are mounted the crank-disks 34. A small pulley 6^d is also fixed to one of these disks, and a cord, belt, or chain 45 extends from it over the pulley 16 to give motion to the crank-disks 34. The handles 9 may be connected in any suitable way with the vibrating eccentric-rods 8. I have here shown the connection as being made of stiff spiral wires, as at 10, which while transmitting the movement of the handles provides for a certain amount of elasticity in the transmission. As shown in the present case, I connect with the post 7 an extension 11 by means of a pin, pivot, and socket, and a locking-pin, as at 12, passes through the joint to hold these parts rigidly. The post 11 then extends up and forms a portion of a frame, the other posts of which are marked 11^a, and at the top are suitable horizontal connecting-bars, as 13.

14 is a counter-shaft extending across the upper part of the apparatus, having a pulley over which passes a belt, as 15, the opposite end of the belt passing over a pulley 16 upon the shaft 6, previously described, so that through this power is transmitted to drive the shaft 14. This shaft is also formed with a short crank, such as is represented at 17, and from this crank a rod 18 extends a short distance and is connected by a ball-joint, as at 19, with a rod or extension 20, carrying at the lower end the hand holding device, as 21. Intermediate between the rod 20 and this handhold 21 is the spiral spring-section 22, for the same purpose as those previouly described at 10. The handhold 21 may be of any suitable or desired form. In the present case it is in the form of a flexible leather pad having straps, as at 23, through which the hand of the operator may be thrust, and the vibrations of this portion of the apparatus are transmitted to the hand of the operator. The hand is then passed over those portions of the body to which the vibratory movement is to be applied, and the couch or support A is moved backward or forward upon the track, so as to bring any portion of the body within reach of the vibrating device and the hand

of the operator. In this manner the hands may be passed over the face for the purpose of massaging the face or over various portions of the body by simply moving the couch or support within range of the operator's hands, while the vibratory movement is constantly carried on. This enables the operator to employ the massage of the hands with such effect as may be produced by the magnetism derived from the operator and to effect it with the minimum of fatigue by reason of the mechanical operation of the parts. This movement enables the operator to produce either a rubbing, patting, or concussive movement of the hands, as may be desired. The concussive movement may be still further effected by the supplemental pads or mallets, as at 24, Figs. 3 and 4. These are mounted upon fulcrumed lever-arms, as at 25, and these are carried in a handle or support, as 26. Within this same support are the tappets 27, which are here shown as arms mounted upon a revoluble shaft 28 and adapted to strike the ends of the lever-arms 25, so as to raise the pads 24, and these may be forced down again by the action of a spring, as at 29. The tension of this spring and the speed of revolution of the tappet-shaft determines the rapidity and force of the concussive movement of the pads 24. The shaft 28 is driven by belt 30 and passing around pulleys as 31 upon the shaft, and thence around other pulleys 32 in the upper part of the machine, these are again driven by belts from pulleys on the shaft 14.

The support or handle 26 may be made of any suitable or desired size and width, and as many of the tappet-pads or mallets 24 may be operated therein as may be desired—a series of any number from one upward—and the blows may be alternated, so as to form a continuous succession of rapid taps, which are very effective for certain parts of the operation. The length of the stroke in the handle portion of the operation may be regulated by adjustable crank-pins, as at 32^a, fitting in slots 33 in disks 34, mounted upon the driving or eccentric shaft, and by moving these eccentric-pins to or from the axial line of the shaft the length of the stroke can be regulated at pleasure.

In some cases it may be found desirable to employ a belt to be passed around the body, such as shown at 36. In this case the handles 9 are provided with hooks, as at 35, and these can be connected with the ends of the belt, the latter being passed around the body at any desired point.

The patient can stand, sit, or recline under this operation, and an electrical treatment may be simultaneously applied by placing the feet upon a metallic or other conductor 37 through which an electrical current is passing, while the other pole from the source of electrical energy may be connected through the belt with the pad.

In conjunction with the couch A, I have shown the foot-supports 38. These are made with heel-pieces, so that as the patient lies upon the couch the heels will rest in them, the soles against the soles of the supports. These latter are suspended by rods, as at 39, with the spiral elastic sections 40 interposed in their length, and they are connected by ball-bearing or other joints, as 41, with eccentric-rods 42. These rods are operated by short cranks similar to those shown at 17 and formed in a counter-shaft 43. Motion is given to this shaft by means of a belt, as 44, passing around a pulley upon the shaft and a pulley upon the counter-shaft 14, through which power is derived to rapidly rotate the shaft and produce the oscillating movement of the foot-supports 38. From these foot-supports cords or flexible connections 45 extend to and are fastened upon the sides of the couch, as at 46, so that as the couch is moved backward or forward for the purposes of hand-massage, as previously described, the foot-supports will be caused to swing in unison with the movements of the couch, and thus the feet and limbs of the patient are supported therefrom and continually subjected to the shaking action.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A massage apparatus consisting of oscillating members, a support with bearing-wheels, and tracks upon which said couch is movable with relation to the members.

2. A massage apparatus consisting of a couch mounted on rollers and adapted to be moved to and fro, a framework, a shaft journaled thereon having eccentric portions, oscillating members and rods connecting them with the eccentric portions, said rods being jointed or flexible to allow independent movements of the members.

3. A massage apparatus consisting of a movable couch, a shaft journaled with relation to said couch, with eccentric portions carried thereby, pads, rods connecting said pads with the eccentric portions, and having flexible joints and spiral elastic sections interposed in the length of the connecting-rods.

4. A massage apparatus consisting of a framework having shafts journaled thereon, belt-wheels upon said shafts, and means for transmitting motion to rotate them, a track extending beneath the framework, a couch mounted upon rollers adapted to travel upon the track, revoluble crank-shafts journaled on the framework above the couch, connecting-rods extending downwardly from the crank-shafts and transmitting their motion, foot-supports suspended from one set of the rods and hand holders suspended from the other.

5. A massage apparatus, consisting of a framework, carrying shafts having eccentric members said shafts journaled across the framework, pulleys mounted upon the shafts

and belts from which motion is transmitted to rotate them, connecting-rods having flexible joints and handles and belt attachments whereby the movement of the said eccentric members is transmitted to the body, and means for varying the length of stroke of the eccentric members.

In witness whereof I have hereunto set my hand.

WHITE WOLF M. HICKEY.

Witnesses:
S. H. NOURSE,
JESSIE C. BRODIE.