

Oct. 24, 1944.

H. O. PETERSEN
MASSAGING APPARATUS

Filed Dec. 11, 1941

2,360,975

2 Sheets-Sheet 1

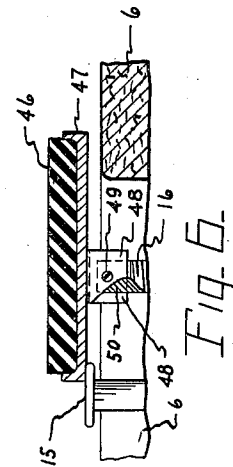
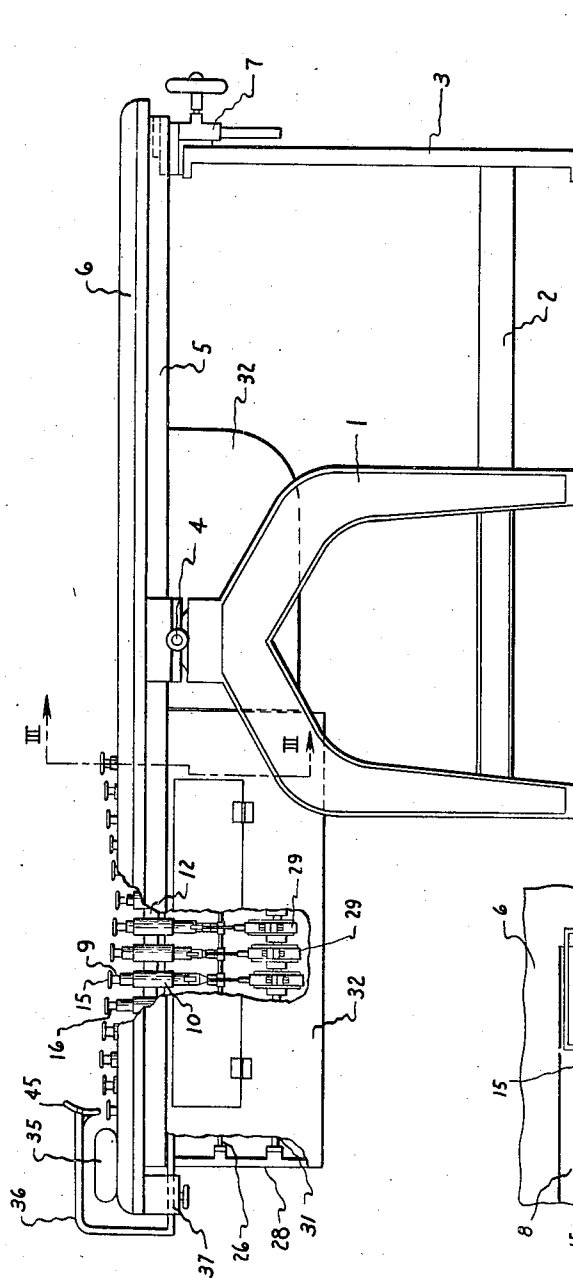


Fig. 1-

Fig. 6.

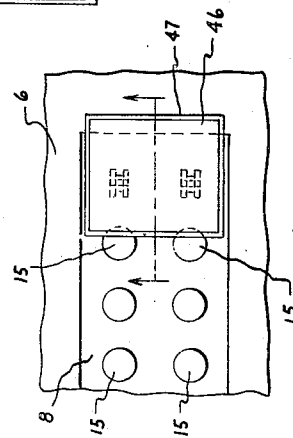


Fig. 5.

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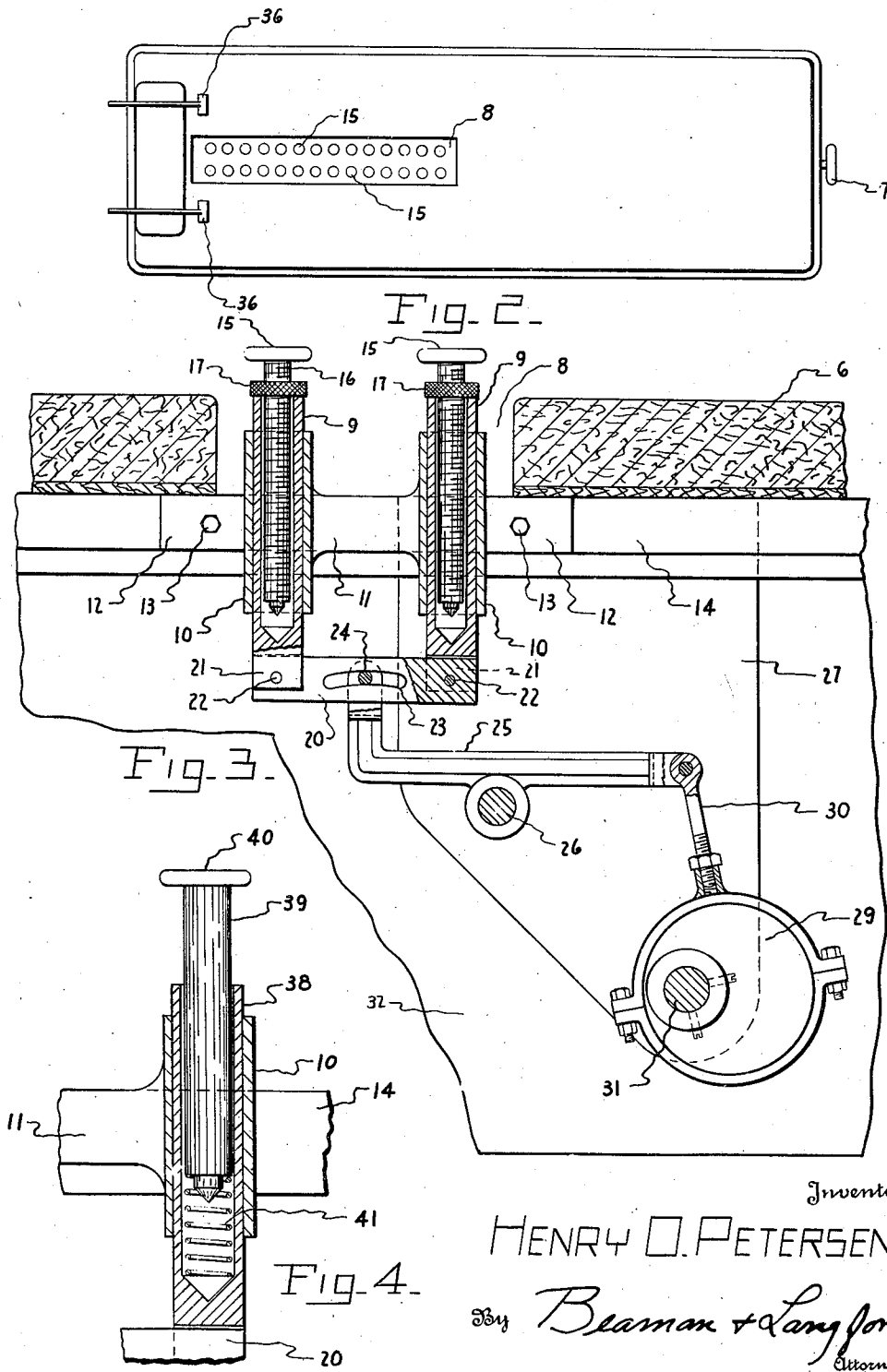
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2 Sheets-Sheet 2



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MASSAGING APPARATUS

Henry O. Petersen, Jackson, Mich.

Application December 11, 1941, Serial No. 422,480

2 Claims. (Cl. 128—51)

The present invention relates to a massaging table and more particularly to a device for mechanically massaging the spine of a patient.

Massaging with a device according to the present invention not only provides a more vigorous and rythmical action than may be provided manually, but also after initial adjustment, leaves the masseur free to perform other work.

An object of the invention is to provide mechanical apparatus for massaging the spine of a patient.

Another object of the invention is to provide massaging apparatus for massaging a patient with an undulating action.

A still further object of the invention is to provide apparatus for reciprocating kneading members for a massaging table providing them as a group with an undulating action.

These and other objects residing in the arrangement, combination and construction of the parts will be apparent from the following specification when taken with the accompanying drawings, in which

Fig. 1 is a side elevation of apparatus according to the present invention, having parts broken away to show details of the operation mechanism.

Fig. 2 is a plan view of the apparatus,

Fig. 3 is a partial section on the line III—III of Fig. 1, illustrating the reciprocating mechanism for the kneading members,

Fig. 4 is a partial vertical section corresponding to a portion of Fig. 3, disclosing an alternative form of kneading member,

Fig. 5 is a plan view of a portion of an alternative form of apparatus according to the present invention, and

Fig. 6 is a section on the line VI—VI of Fig. 5.

Referring particularly to the drawings, the reference character 1 indicates a side frame member of which there are two. Suitably tied to the side frame members 1 by bars 2 is an end frame member 3. Pivotaly supported from the side frame members 1 by a shaft 4 is a table frame 5 to the top of which is secured a table pad 6. The table frame 5 is connected to the end frame 3 by suitable tilting mechanism 7 for tilting the table frame 5 about the shaft 4 as may be desired.

As shown particularly in Figs. 2 and 3, the table pad 6 and the table frame 5 are provided with an opening 8 extending longitudinally of the table and through which project a plurality of kneading members 9 guided for vertical reciprocating in a direction substantially normal to the surface of the table in sleeves 10. The

sleeves 10 are connected as by welding, for instance, to a bar 11 supported at its opposite ends by ears 12 connected by bolts 13 to cross-bars 14, only one of the cross bars 14 and bar 11 ends being shown.

Each of the kneading members 9 is provided with a body contacting area 15 directly connected to a kneading member portion 16 threaded for adjusting the height of the areas 15 with respect to the top of the table pad 6. The adjustment is provided by knurled nuts 17, threaded on the portions 16, resting on the tops of the members 9. The kneading members 9 are arranged in a plurality of pairs, the members of each pair being aligned transversely of the table top 6. The lower ends of each pair of kneading members 9 are connected together by a link 20. The specific connection between the kneading members 9 and each link 20 consists of a pair of ears 21 at the lower end of each member 9 between which the ends respectively of the link 20 are disposed and pivoted by pins 22. The clearance between the ends of the members 9 and the link 20 is very small so that only a small amount of pivoting action between the kneading members 9 and the link 20 is possible.

Each link 20 is provided with an arcuate slot 23 in which is disposed a pin 24 mounted at the end of a lever 25, each lever 25 being pivoted about a shaft 26 suitably supported at one end in a bracket 27 and in the other end in a bracket 28 disclosed particularly in Fig. 1. Each lever 25 is actuated by an eccentric 29 having an adjustable connecting rod 30 pivoted to the opposite end of its lever 25 from the pin 24. The eccentrics 29 are actuated by a driven shaft 31 journaled in the brackets 27 and 28 and driven by a motor, not shown, supported in the housing 32 disclosed in Fig. 1. As disclosed in Fig. 1 each eccentric 29 is suitably adjusted with respect to the shaft 31 so that in any one instant the areas 15 of the kneading members 9 provide as a group an undulating surface and as the shaft 31 is rotated to reciprocate the kneading members 9, the kneading members 9 as a group are given an undulating movement. However, it is to be understood that any desired adjustment may be given to the eccentrics 29. Enclosing the eccentrics 29, shafts 26 and 31 and associated structure beneath the table frame 5 is a sheet metal housing 32.

At the end of the opening 8 through which the kneading members 9 project, adjacent the end of the table pad 6, there is provided on the table pad 6 a pillow 35 for the head of the patient

disposed on the table pad 6 and at each side of the longitudinal center line of the table pad 6 there are provided shoulder supports 36 adjustable longitudinally of the table by clamps 37 so that the position of the body of a patient on the table may be adjusted longitudinally with respect to the kneading members 9 and the patient held against sliding from the table pad 6 when the table is tilted by the mechanism 7. The shoulder supports 36 are provided with shoulder contacting pads 45, which may or may not be pivotally mounted, as desired.

In operation, when a patient has been disposed on the table pad 6 and the table has been given its correct inclination about the shaft 4 by means of the tilting mechanism 7, the shaft 31 is rotated to actuate the eccentrics 29. It will be observed that the body contacting areas 15 of the kneading members 9 are slightly spaced so that the members 15 of each pair of kneading members 9 are disposed on opposite sides of the patient's spine. The exact spacing for the areas 15 will be understood by the practitioner. As the shaft 31 rotates the eccentrics reciprocate the kneading members 9 vertically to massage the spine of the patient on the table and due to the adjustment on the eccentrics 29, the pressure of the areas 15 against the body of the patient will cyclically shift from one part of the spine of the patient to another. It will be understood that the intensity of the massaging may be varied by adjusting the lengths of the threaded portions 16 and that also the character of the massaging may be varied by appropriate adjustments of the eccentrics 29 should a change in the character of massaging be desired.

An alternative form of kneading member is disclosed in Fig. 4. In this form the tubular kneading members 38 are slidably supported in the guiding tubes 10 in the same manner as are the kneading members 9 supported. The kneading members 38 are provided with spindles 39 on the top of which are disposed body contacting areas 40. The spindles 39 are resiliently projected from the tubular kneading member portions 38 by springs 41 with the result that as the body contacting areas 40 engage with the body of a patient on the table they resiliently yield against the action of the springs 41.

In Figs. 4 and 5 is disclosed an embodiment of my invention wherein an alternative form of kneading structure is employed. According to this embodiment, the last pair of kneading areas 15 in the direction of the center of the table are replaced by a single pad 46, supported in a metal frame 47. The frame 47 is provided with two pairs of downwardly projecting ears 48. Between each pair of ears 48 is pivoted by a pin 49 a flattened end portion 50 of one of the end kneading members 16. When the pad 46 is employed in

the place of the two inner body contacting areas 15, it will be understood that the apparatus may be operated to provide the kneading members 9 with an undulating motion or with any other motion desired, as above described.

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

1. A massaging apparatus comprising an elongated reclining table for receiving a patient and said table having an elongated opening in its middle throughout a portion of its length, a plurality of pairs of upright bearing sleeves arranged in a spaced series along the length of the opening and with the sleeves of each pair spaced apart and aligned transversely within the opening, a kneading member for each of said bearing sleeves provided with a stem slidably received in the bearing and having a head-like body contacting area at its upper end, a link connected across between the lower ends of each pair of kneading members, a shaft extending longitudinally beneath the table, levers rockably mounted upon said shaft adjacent to each pair of kneading members, a connection from one end of each lever to the middle portion of the link connecting the adjacent pair of kneading members, a rotatable drive shaft, a plurality of eccentrics on said drive shaft, and connections from said eccentrics to the several rocking levers.
2. A massaging apparatus comprising an elongated reclining table having an elongated opening in its middle throughout a portion of its length, a plurality of supports mounted transversely across said opening in a spaced series, a pair of guide sleeves carried in upright disposition and in spaced relation by each of said transverse supports, a kneading member for each of said guide sleeves having a stem portion slidably in the upright sleeve and being provided at its upper end with a body contacting area, links connecting transversely between the lower ends of the stems of each of said kneading members and said links provided in their middle portions with slotted openings, a shaft mounted and extending longitudinally beneath the table, a plurality of rocking levers mounted on said shaft with the opposite ends thereof extending laterally, said rocking levers being spaced along the shaft in positions corresponding to the spacing of the pairs of kneading members and corresponding levers having one end movably connected in the slot of the link of the adjacent pair of kneading members, a rotatable operating shaft extending longitudinally beneath the table, a plurality of eccentrics adjustably mounted on said operating shaft in spacing corresponding substantially to the spacing of the pairs of kneading members, and connections from said eccentrics to the remaining end of the adjacent rocking lever.

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