

March 26, 1968

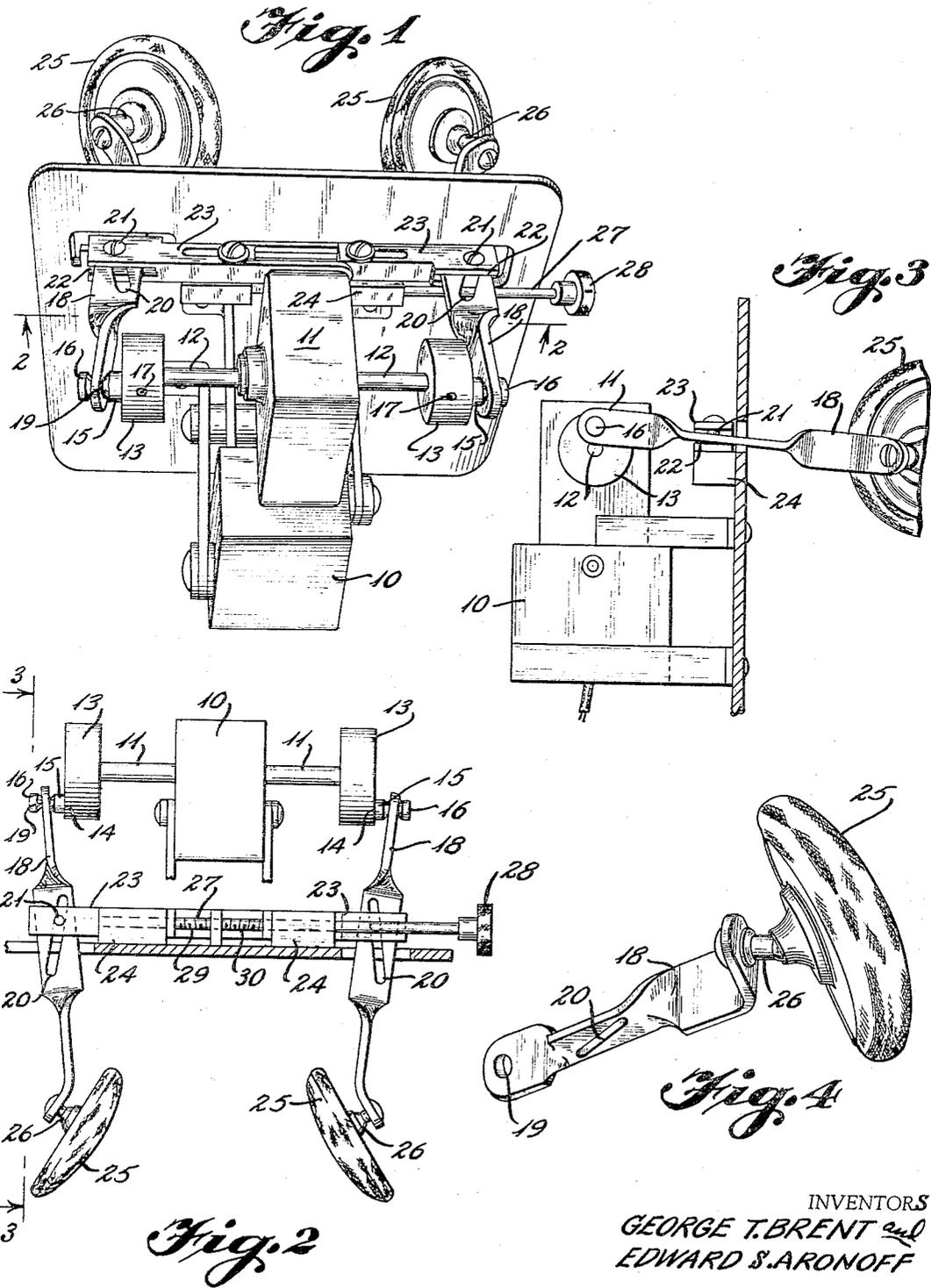
G. T. BRENT ET AL

3,374,784

MECHANICAL MASSAGE APPARATUS WITH CRANK AND SLIDE

Filed Jan. 7, 1966

2 Sheets-Sheet 1



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Fig. 5

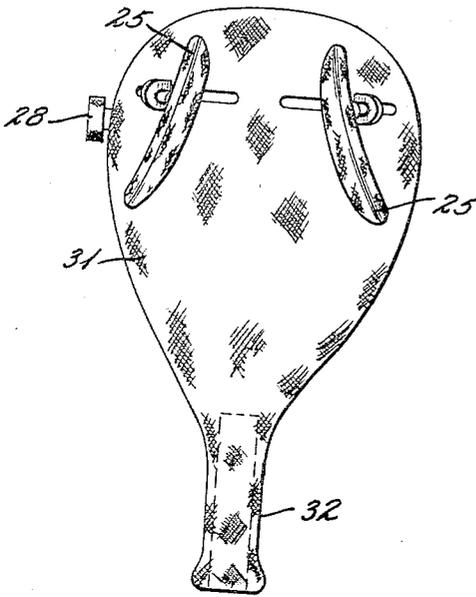


Fig. 6

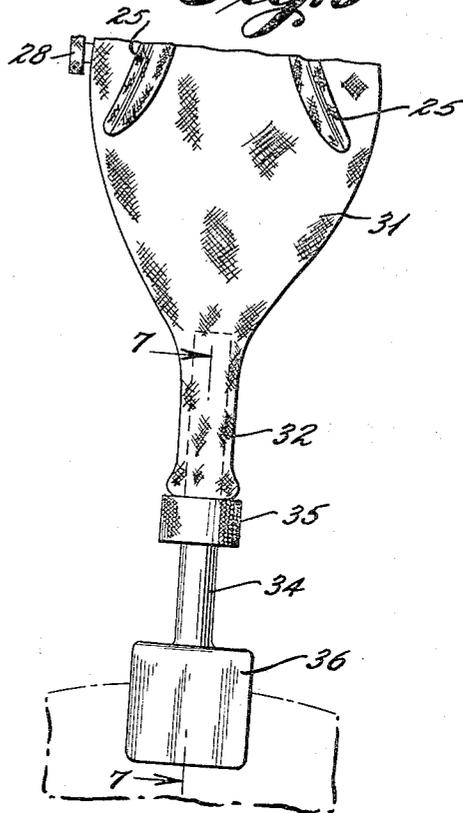


Fig. 7

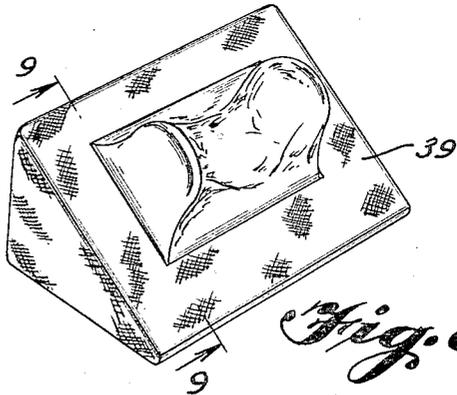
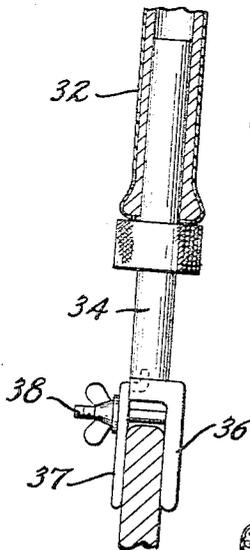


Fig. 8

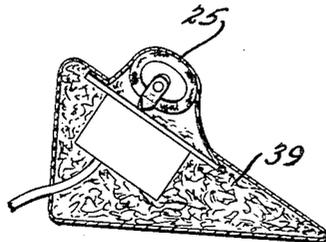


Fig. 9

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3,374,784
**MECHANICAL MESSAGE APPARATUS
 WITH CRANK AND SLIDE**

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 both of Clearwater, Fla.
 Filed Jan. 7, 1966, Ser. No. 519,209
 6 Claims. (Cl. 128—61)

This invention relates to a mechanical massager for
 both general and localized or concentrated massaging of
 various areas of the human body which usually is done
 by the hand, and includes a mechanical massager capable
 of pressing, kneading, stroking, and other such motions
 ordinarily done by the hand.

Mechanical massagers heretofore produced have been
 unsatisfactory because they weren't capable of perform-
 ing the desired full hand manipulation but instead could
 only impart vibration or humming usually resulting from
 an unbalanced motor shaft or a vibrating reed.

It is an object of the invention to provide a simple,
 inexpensive practical mechanical massager capable of use
 in the home, office, automobile or wherever needed to
 relieve tensions, muscular spasms, fatigue and the like,
 and installable in existing objects, such as chairs, tables,
 pillows, beds and the like when there is need for the
 motions imparted by the hand of a trained technician,
 thereby to provide a beneficial therapeutic effect.

Other objects and advantages of the invention will be
 apparent from the following description and accompany-
 ing drawings wherein:

FIG. 1 is a perspective from the rear looking down on
 a massager illustrating one embodiment of the invention;

FIG. 2, a section along the line 2—2 of FIG. 1;

FIG. 3, a side sectional view on the line 3—3 of FIG. 2;

FIG. 4, a perspective of one of the massage pads with
 its supporting operating arm;

FIG. 5, a plan view of a massager mounted on a hand
 type holder;

FIG. 6, a massager with means for clamping it to a
 chair or other support so that a portion of the body may
 be moved into position to be operated upon the massager;

FIG. 7, a section on the line 7—7 of FIG. 6,

FIG. 8, a perspective of a massager applied to a wedge-
 shaped pillow; and,

FIG. 9, a section on the line 9—9 of FIG. 8.

Briefly stated the invention is a relatively simple, in-
 expensive, practical therapeutic massager having univer-
 sally mounted massaging pads spaced in a manner to
 engage portions of the body such as opposite sides of
 the neck, the small of the back, legs, arms, and other por-
 tions of the body, such universally mounted massage
 pads being carried on arms mounted for squeezing or
 pressing toward each other, circular, vertical, horizontal,
 and pulsing or pressing actions on a base or support with
 arms activated from a source of power in the form of an
 electric motor or gear box and cranks for imparting the
 necessary action to arms carrying the massage pads when
 the device is electrically energized with several motions
 subject to adjustable control as to speed, length, width,
 and extent.

With continued reference to the drawings a power plant
 such as a conventional electric motor 10 is provided and
 through a gear box 11 and suitable gearing therein drives
 a shaft 12 extending from each side of the gear box 11.
 On the shaft 12 crank wheels 13 are fixed, each crank
 wheel having an opening 14 offset from its center for the
 receipt of a two-part crank pin composed of a base 15
 and a head 16 with adjacent inclined facing surfaces
 tapered to form an annular groove about the crank pin.
 The base 15 and head 16 of the crank pin are secured in
 the crank wheel 13 by means of a set screw 17.

As the crank wheel 13 is rotated by the motor 10 the
 crank pin will be carried in a circular path. To the crank
 pin is attached an operating arm 18 having an opening
 19 in which the crank pin is received, the operating arm
 having an angular slot 20 in which a fixed pin 21 is
 received, such pin 21 being mounted in the bifurcated
 end 22 of a mounting member 23 attached to a base or
 support 24.

It will be understood that there are two of the rotating
 cam wheels and two of the operating arms, one end of
 each of the operating arms being attached to a crank pin,
 while the opposite end of each of the operating arms has
 universally connected thereto a massage pad 25 by means
 of a universal joint 26. Thus as the cam wheels rotate
 the operating arms will be both reciprocated and oscil-
 lated to cause the massage pads to move toward and from
 the cam wheels and toward and from each other while
 travelling in a generally circular path. This projection
 and retraction of the massage pads, as well as causing
 them to move toward and from each other, and the rotary
 motion given to each, corresponds to hand massage.

The mounting members 23 on the base or support 24
 are relatively movable by means of a shaft 27 with an
 operating head 28 by means of which it is rotated. The
 shaft has reverse threads 29 and 30 so that when it is
 rotated the mounting members 23 will be caused to move
 toward and from each other, thus providing means for
 adjusting the distance between the massage pads 25.

In FIG. 5 is illustrated a massager in which a hand type
 holder 31 with a hand grip portion 32 carries the massager
 enabling it to be manipulated by hand when in use.

In FIG. 6 is disclosed a massager generally similar to
 that of FIG. 5, but provided with an adjustable support-
 ing shaft composed of a telescopic sleeve 34 with a clamp-
 ing ring 35 by which the length of the same can be ad-
 justed or the parts of such sleeve can be secured in rela-
 tively adjusted position. On the lower end of the sleeve
 34 is mounted a fixed jaw 36 and a movable clamping jaw
 37 with a screw and wing nut by which the jaw 37 can be
 moved relative to the jaw 36 to clamp the device onto the
 back of a chair or other support.

In FIG. 8 a massaging device as disclosed is incor-
 porated in a wedge-shaped pillow 39 with mechanism
 operating the pads externally or internally through a dia-
 phragm.

It will be apparent from the foregoing that the present
 invention may be portable, semi-portable, or non-portable
 and may be attached to a chair, table, or other device, and
 can be used readily to massage the muscles and adjacent
 tissues of various areas of the body. Also, the massager of
 the present invention has wide application for use by those
 in various walks of life, for massaging to give the proper
 exercise, stimulation, rest, and relaxation, as well as to
 tone the parts of the body which need the same, and in
 certain pursuits where parts of the body have been re-
 tained in certain positions for a long period of time,
 whether it be clerical work or strenuous work, or due to
 displacement or sub-luxation of vertebrae or whiplash in-
 juries, spinal misalignment, curvatures, out of balance
 joints, cramps in the legs and other parts of the body,
 where a massager of universal movement can treat such
 a condition and cause relaxation from fatigued muscle
 and the like in the same manner and movement as the
 human hand in massaging.

It will also be apparent that the massager of the present
 invention not only can be used appropriately on portions
 of the body through fatigue or abnormal conditions,
 whether it be light or heavy labor, domestic duties, inside
 and outside various sports, gardening and in the case of
 certain diseases such as rheumatism and arthritis, and
 other conditions of various types. It is designed to fit
 various parts of body and work in any position being

partly beneficial to calm fatigued or spastic muscles, for example, athletes who develop "charley horses," muscle fatigue, or spasms could use this instrument during time out and it can be used by those needing the same without necessarily resorting to highly professional relief with accompanying expense.

It will be obvious to one skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawings and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. A mechanical massager comprising massage elements located in a manner to engage and massage spaced portions of the body, an arm pivotally mounting each of said massage elements, each arm having an inclined slot along its length, a support, a pin extending through each of said slots and being attached to said support means connected to the end of each of said arms remote from said massage elements, and power means for rotating said last mentioned means, whereby said arms will be projected, retracted, and oscillated to impart motion to said massage elements.

2. A massager as defined in claim 1 in which said massage elements are in the form of cushion type pads and

the means connected to the ends of said arms remote from said massage elements are crank pins carried by cam wheels.

3. The structure of claim 1 in which said massage elements are cushion pads spaced to fit opposite sides of the neck and other portions of the human body and in which said pins are relatively adjustable to vary the spacing of said massage elements.

4. The structure of claim 1 incorporated in a comfort device on the order of a pillow.

5. The structure of claim 1 in which said support is provided with a portion to be conveniently carried in the hand.

6. A massager of the character defined in claim 1 having means for attaching it to a support such as a chair.

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