No. 859,424. PATENTED JULY 9, 1907.

F. C. ASCHBURNER.

VIBRATOR FOR MASSAGE PURPOSES.

APPLICATION FILED MAR. 30, 1905.

Fig. 1.

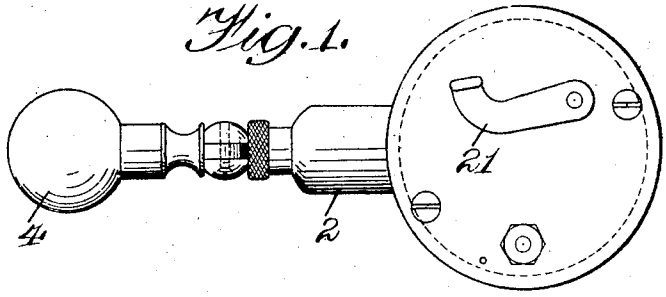


Fig. 2

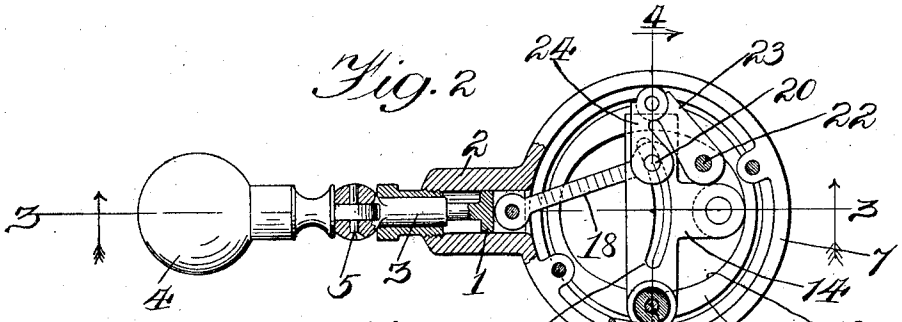


Fig. 3

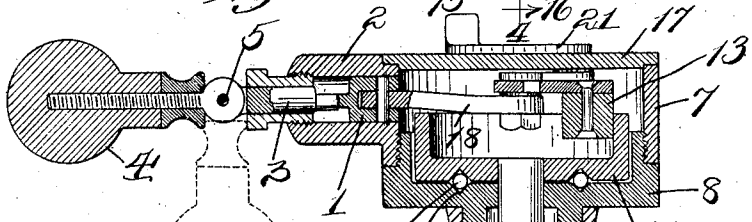
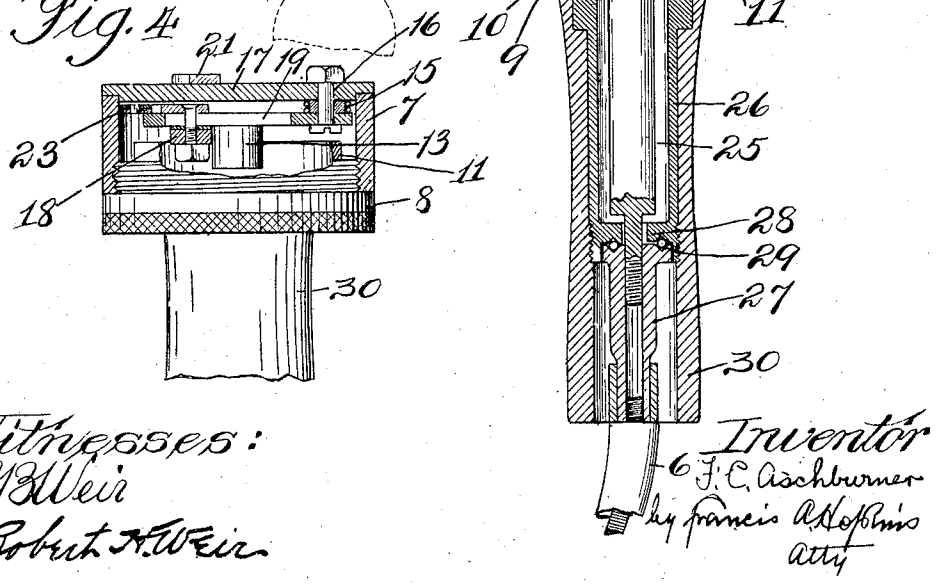


Fig. 4



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VIBRATOR FOR MASSAGE PURPOSES.

No. 859,424. Specification of Letters Patent. Patented July 9, 1907.

Application filed March 30, 1905. Serial No. 252,805.

To all whom it may concern:

Be it known that I, FREDRICK C. ASCHBURNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vibrators for Massage Purposes, of which the following is a full, clear, and exact specification.

My invention relates to massage instruments or vibrators of that character designed to produce mechanical vibration of the part of flesh or body to be treated, and it has for its object to provide an improved and efficient form of vibrator which may be readily converted from a tapping into a rubbing or smoothing form of instrument.

With a view to the attainment of these ends and the accomplishment of certain other objects which will hereinafter appear, the invention consists in certain features of novelty in the construction, combination and arrangement of parts which will now be described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings—Figure 1 is an end view of my improved instrument. Fig. 2 is a similar view with the cover removed and certain parts in section. Fig. 3 is a longitudinal section on the line 3, 3 Fig. 2, and Fig. 4 is a view looking from the left in Fig. 2 with the top portion in section on the line 4, 4 Fig. 2.

1 is a cross head or other suitable reciprocating member contained in any suitable guide 2 and to the outer end of this cross head is secured a stem 3 on which is pivotally mounted a massage button or knob 4 adapted to be applied to the surface to be treated. The means of attachment of the knob 4 to the stem 3 is a hinge 5 whereby the knob may be arranged in line with the stem 3 and the direct line of movement of the cross head 1 and in which position the knob will produce a tapping movement upon the surface to be treated, corresponding in degree of vibration to the length and rapidity of stroke of the cross head 1; or if desired the knob 4 may be turned on a hinge 5, as shown in dotted lines in Fig. 3, whereby it will be at an angle to the line of movement of the cross head 1 and may be utilized for producing a rubbing or stroking action on the surface to be treated, the hinge 5 being sufficiently tight to hold the knob 4 in its various positions during use.

The cross head 1 derives reciprocal movement in the guide 2 from any suitable source of power transmitted to the cross head 1 in any suitable way, and in the exemplification of the invention shown in the drawings the source of power is supposed to be a distant motor not necessary to illustrate, transmitting its motion to the apparatus through the intermediary of a flexible shaft 6, and this in turn is connected by suitable means to the cross head 1. The guide 2 is preferably formed on a ring 7, which constitutes a part of the casing for housing the mechanism, and into the bottom of this ring is screwed a bearing plate 8 formed with a ball race 9 in which are situated antifriction rollers or balls 10 supporting a cup shaped cam 11 which has an oval shaped interior 12, as better shown in Fig. 2, and in which engages an antifriction roller 13 pinned to a lever 14 so that when the cam 11 is rotated the lever 14 will be accordingly oscillated, the roller 13 being maintained against the wall 12 by any suitable spring 15 coiled around the pivot 16 which supports the lever 14 from a cap or cover 17 secured in the ring 7. The lever 14 is connected to the cross head 1 by means of a pitman 18 so that as the lever oscillates the cross head will be reciprocated.

In order that the length of stroke of the cross head may be varied to suit different requirements, the point of connection between the pitman 18 and the lever 14 is shiftable and to that end the lever is provided with a slot 19 in which engages a pin or stud 20 that serves as the means of attachment between the pitman and the lever, and this stud 20 is connected to an operating handle 21 arranged on the exterior of the cover 17 and secured thereto by a short shaft 22 which passes through the cover and is rigidly connected to an arm 23 within the casing, and this arm in turn is connected by a hinged elbow 24 to the stud 20 so that when the lever 21 is oscillated the stud 20 will be forced back and forth in the slot 19 thereby varying the length of stroke of the cross head 1. The cam 11 is connected to the flexible shaft 6 by a shaft 25 which extends downwardly through a neck 26 on the bearing plate 8 and is screwed or otherwise secured to a journal 27, between which and an internal flange 28 in the neck 26, are interposed a number of antifriction balls or rollers 29, thus constituting an end thrust bearing for holding the cam 11 in place on the bearing plate 8 and at the same time affording an antifriction bearing for the flexible shaft 6, which is secured to the end of the journal 27 and is inclosed by a hollow handle 30 secured on the neck 26.

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

1. In an apparatus for the purpose described the combination of an angularly adjustable applicator, a reciprocal cross head to which said applicator is connected, means for reciprocating said cross head, and means intermediate the cross head and the reciprocating means for varying the length of the stroke of said cross head.

2. In an apparatus for the purpose described the combination of an applicator, a reciprocal member for vibrating said applicator, a pivoted lever operatively connected with said member for reciprocating it, and means for shifting the point of connection between said lever and its operative connection with said member whereby the length of stroke of said member will be varied.

3. In an apparatus for the purpose described the combination of an applicator, a pitman operatively connected therewith, a slotted lever, a stud secured to said pitman

and arranged in said slot, means for vibrating said lever, and means for shifting said stud.

4. In an apparatus for the purpose described the combination of an applicator, a casing, means within said casing operatively connected with said applicator for vibrating it, said means comprising two pivoted members adjustably connected, a pivoted lever on the exterior of the casing, connected with one of said interior members to shift the same for varying the length of stroke of the applicator.

5. In an apparatus for the purpose described the combination of an applicator, a stem to which said applicator is hinged, a casing having a guide for said stem, a lever pivoted in said casing, a pitman connected with said lever and said stem, a cam journaled in said casing, a neck projecting from said casing, a shaft secured to said cam and journaled in said neck, a handle inclosing said shaft, and means projecting into said handle for rotating said shaft.

6. In an apparatus for the purpose described, the combination of an applicator, a casing, a pivoted lever within the casing, a connection pivoted to the applicator and adjustably engaging the lever, means for rocking the lever to vibrate the applicator, and means located on the outside of the casing and operatively related to the point of engagement of the connection with the lever, for shifting said point to vary the stroke of the applicator.

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