

G. H. COATES.
 MASSAGING IMPLEMENT.
 APPLICATION FILED AUG. 9, 1906.

906,772.

Patented Dec. 15, 1908

Fig 1.

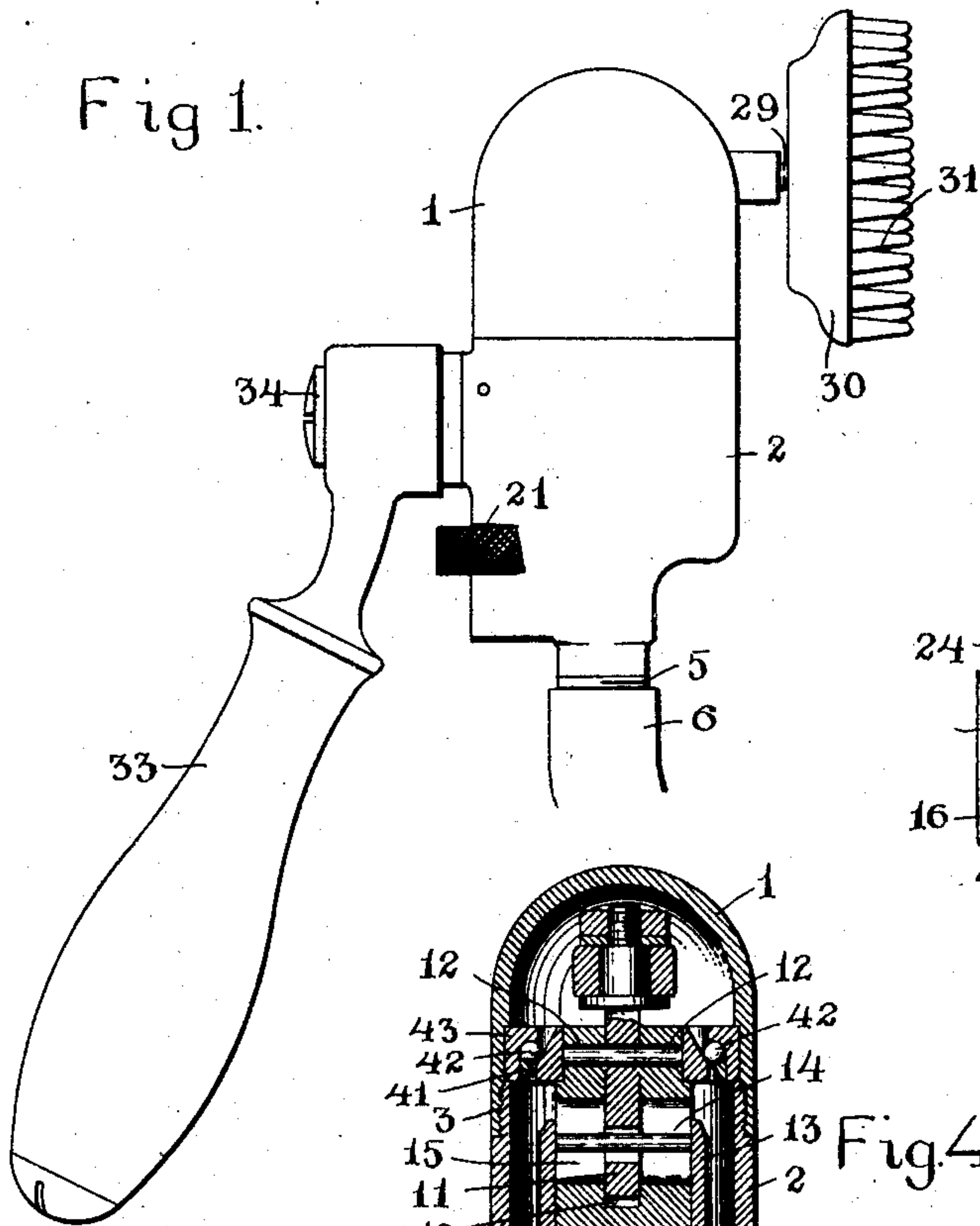


Fig. 5.

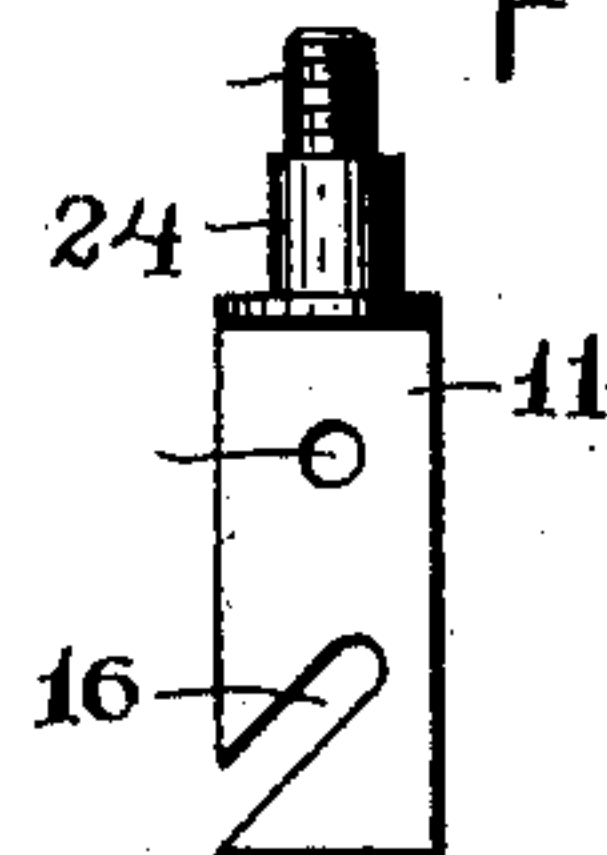


Fig. 4.

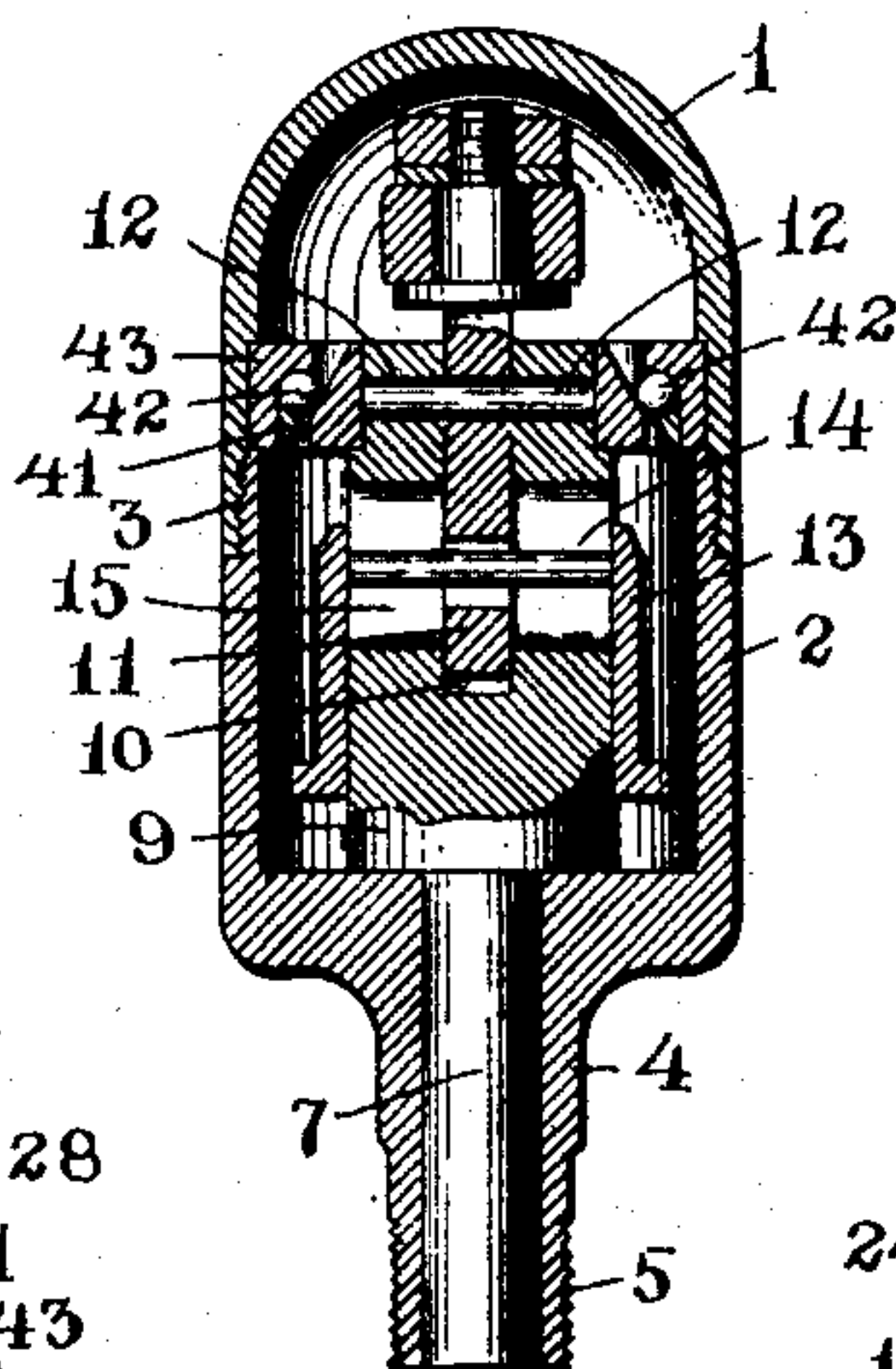


Fig. 2.

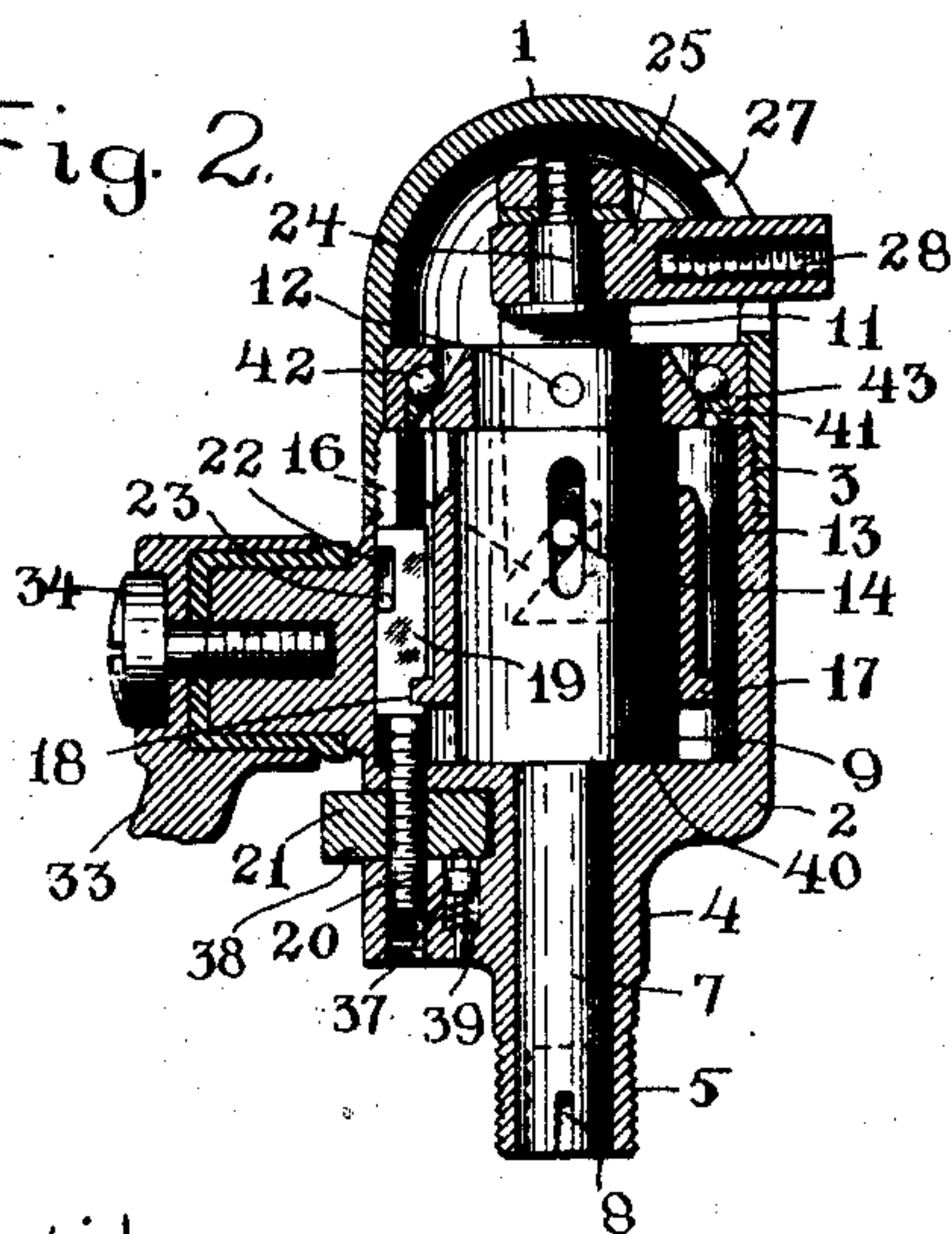
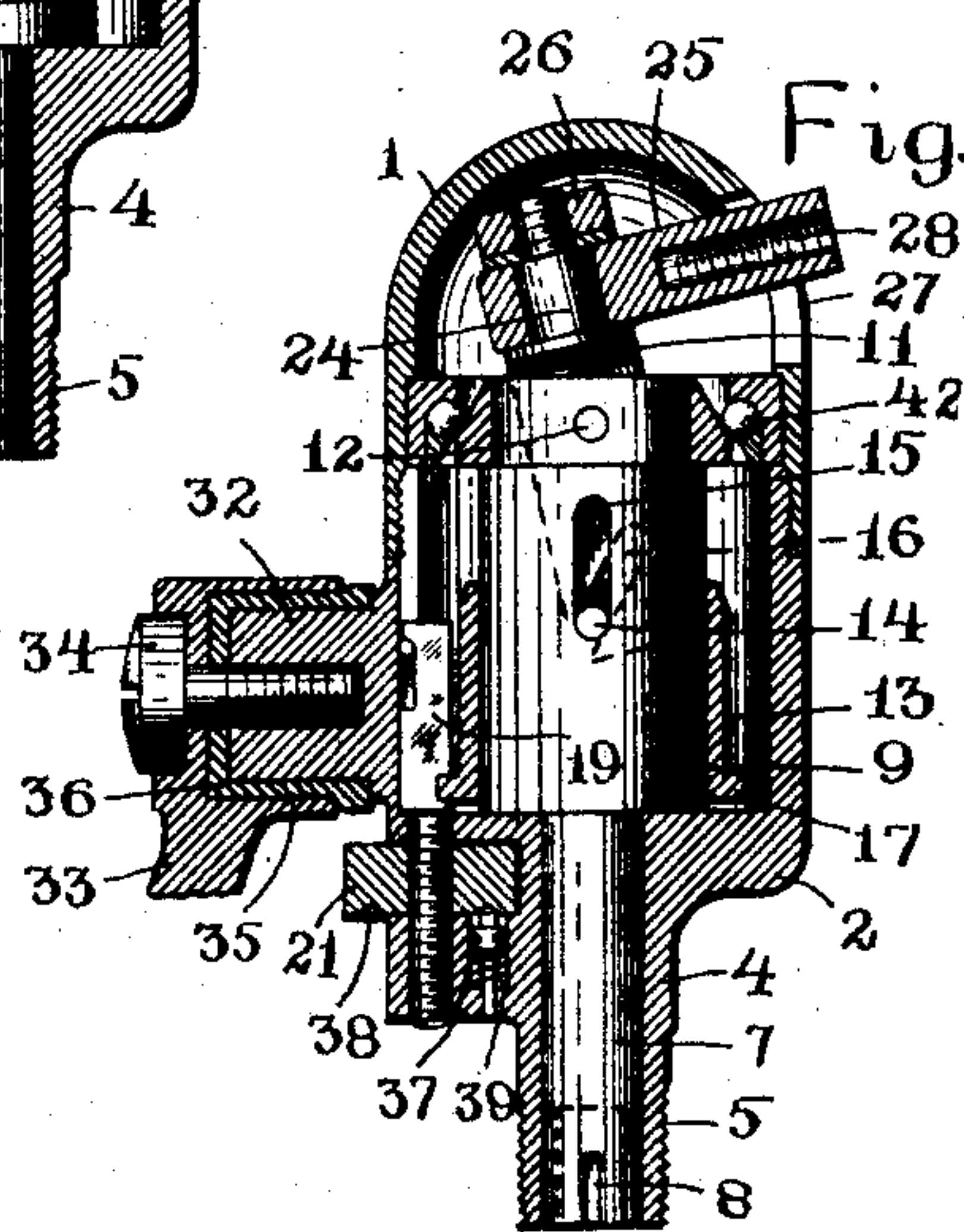


Fig. 3.



Witnesses

Roy D. Tolman.
 Develo Leombach.

Inventor
 George H. Coates
 By Rufus B. Fowler
 Attorney

UNITED STATES PATENT OFFICE.

GEORGE H. COATES, OF WORCESTER, MASSACHUSETTS.

MASSAGING IMPLEMENT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE H. COATES, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in a Massaging Implement, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

Figure 1 represents a side elevation of a massaging implement embodying my invention. Figs. 2 and 3 represent side elevations similar to that shown in Fig. 1, but with inclosing case and a portion of the operating parts shown in central sectional view. Fig. 4 is a central sectional view on a plane at right angles to the section shown in Figs. 2 and 3, and Fig. 5 is a detached view of the adjustable lever 11.

Similar reference letters and figures refer to similar parts in the different views.

The object of my present invention is to produce a massaging implement which may be cheaply constructed, durable in its operation and in which the movement of the massaging pad may be varied at will, and it consists in the construction and arrangement of parts as hereinafter described and pointed out in the annexed claims.

Referring to the accompanying drawings 1 and 2 denote the two parts of a metallic case or shell which are screw threaded and attached to each other at 3. The part 2 of the shell is provided with a hollow stem 4 having an external screw thread 5 to receive the inclosing case 6 of a flexible shaft. The hollow stem 4 furnishes a bearing for a rotating spindle 7, having its end hollow for a slight distance and provided with a slot 8 or other means for attaching to the spindle the end of a flexible shaft, whereby the spindle may be connected with a motor by which a rapid motion is imparted to the spindle. The inner end of the spindle is enlarged to form a cylindrical block 9 provided with a central longitudinal slot 10 to receive a lever 11 which is pivoted on a pin 12 carried by the cylindrical block 9. Inclosing the cylindrical block 9 and capable of sliding thereon, is a sleeve 13, carrying a pin 14 which passes through a slot 15 in the block 9, and also through an oblique slot 16 in the lever 11.

The sleeve 13 is provided at its lower edge with a flange 17 which engages a notch 18 in a slidable bar 19 held in ways within the case. The bar 19 is provided at its end with a screw

thread 20 which is engaged by a rotating milled nut 21 to enable the operator, by rotating the nut, to slide the bar 19 and move the sleeve 13 along the cylindrical block 9, in order to vary the position of the pin 14 in the oblique slot 16 of the lever 11, for the purpose of swinging the lever upon its pivotal pin 12. The sliding bar 19 is provided with a slot 22 on one side, inclosing a pin 23 held in the case of the instrument in order to limit the longitudinal movement of the bar.

In Fig. 2 the bar 19 is shown at one end of its movement with the pin 14 moved upward in the oblique slot 16 so as to hold the lever 11 with its longitudinal axis nearly coincident with the axis of the rotating cylindrical block 9, while in Fig. 3 the bar 19 is shown at the other end of its movement, bringing the pin 14 nearly to the outer end of the oblique slot 16, and swinging the lever 11 on its pivotal pin 12 into a position at an oblique angle to the axis of the rotating cylindrical block 9.

When the parts above described are in the position shown in Fig. 2 the massaging pad will receive a minimum motion from the rotation of the spindle 7, and when the parts are in the position shown in Fig. 3 the massaging pad will be given its maximum movement.

Journaled upon a cylindrical extension 24 of the lever 11 is an arm 25 secured in position by a nut 26 and extending through a slot 27 in the side of the case. The arm 25 is provided at its outer end with a longitudinal screw threaded hole 28 to receive the stem 29 of a massaging pad 30, preferably made of rubber, and provided with a series of small flexible protuberances 31 which are applied to the surface to be massaged. The lower portion of the case 2 is provided on one side with a boss 32 to which is attached a handle 33 by means of a screw 34, but in order to prevent the vibration of the instrument, when in rapid operation, from being transferred to the hand through the handle 33, I insert between the socket 35 of the handle and the boss 32, a cup shaped packing 36 of some yielding material, preferably rubber.

The milled nut 21 is prevented from turning by the jar of the instrument by means of a frictional locking bolt 37 entering one of a series of recesses 38 in the side of the nut and pressed therein by means of a spiral spring 39.

The operation of my improved instrument

is as follows:—The pad 30 is applied to the surface to be massaged by the operator supporting the instrument by the handle 33, and a rapid rotary motion is given to the spindle 5 7 and cylindrical block 9, thereby rotating the lever 11, and causing its upper end to move in a circular path determined by the obliquity of the lever 11 relatively to the axis of the rotating spindle 7 and block 9, thereby 10 giving a rapid vibratory movement to the massaging pad 30. In order to increase or diminish the amplitude of movement of the massaging pad 30 I vary the position of the pin 14 in the oblique slot 16 by means of the 15 milled nut 21 and screw threaded bar 19, thereby varying the angle between the axis of the rotating shaft 7 and the longitudinal axis of the lever 11. The shoulder 40 of the cylindrical block 9 rests against the inner end 20 wall of the case and the opposite end of the cylindrical block carries an annular beveled ball track 41 which runs against a series of balls 42 held in a ball case 43 supported upon the inside of the upper half 1 of the casing.

25 I claim,

1. In an implement of the class described, the combination of an inclosing shell, a block arranged to rotate in said shell, a lever pivotally connected with said block, a sleeve slid- 30 able longitudinally on said block, a pin held in said sleeve and engaging through a longitudinal slot in said block an oblique slot in said lever, and screw threaded means for sliding said sleeve on said block.

35 2. In an implement of the class described,

the combination of an inclosing shell, a block arranged to rotate in said shell, a lever pivotally connected with said block, a sleeve slidable longitudinally on said block, a pin held in said sleeve and engaging through a longitudinal slot in said block an oblique slot in 40 said lever, a screw threaded bar engaging said sleeve, a nut for actuating said bar, and means for holding said nut from longitudinal movement.

3. In an implement of the class described, the combination of a rotating shaft, a lever pivotally held in the end of said shaft and provided with an oblique slot, a pin passing 50 through said slot, a sleeve inclosing said shaft and carrying said pin, and means for adjustably holding said sleeve in any desired position, comprising a sliding bar engaging said sleeve, a nut held from longitudinal 55 movement engaging said bar, and means for frictionally holding said nut from rotation.

4. In an implement of the class described, the combination of a frame supporting the operative parts of the implement and provided with a boss to receive a handle, a han- 60 dle having a cup shaped socket inclosing the end of said boss, and a yielding cup shaped packing filling the space between said boss and said handle, whereby the socket of the handle is held from contact with said boss. 65

GEORGE H. COATES.

Witnesses:

RUFUS B. FOWLER,
PENELOPE COMBERBACH.