

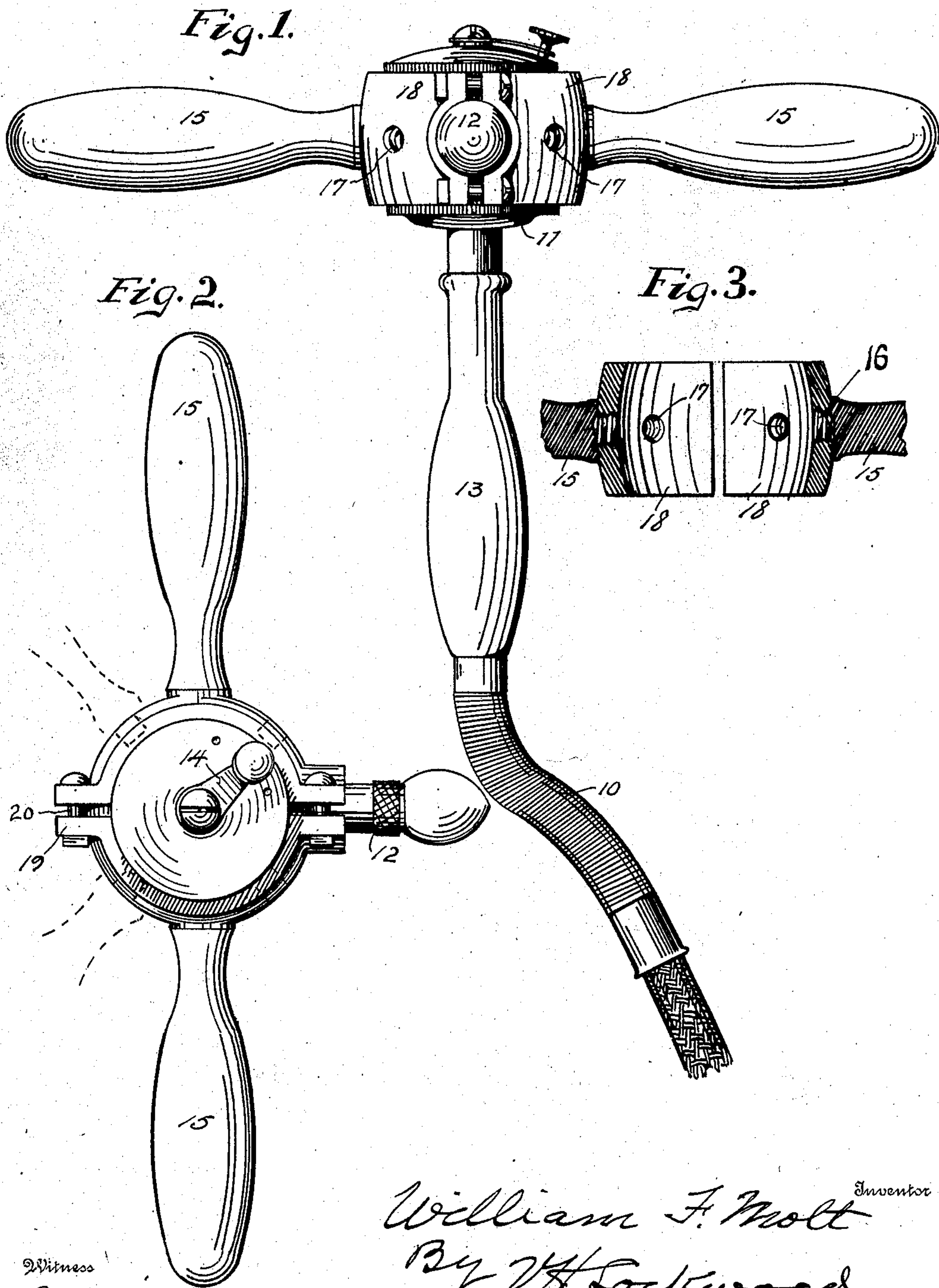
No. 815,728.

PATENTED MAR. 20, 1906.

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MEANS FOR CONTROLLING VIBRATORS.

APPLICATION FILED APR. 7, 1905.

2 SHEETS—SHEET 1.



Witness  
N. Allemon  
C. Horn.

William F. Molt  
By V. H. Lockwood.

Attorney

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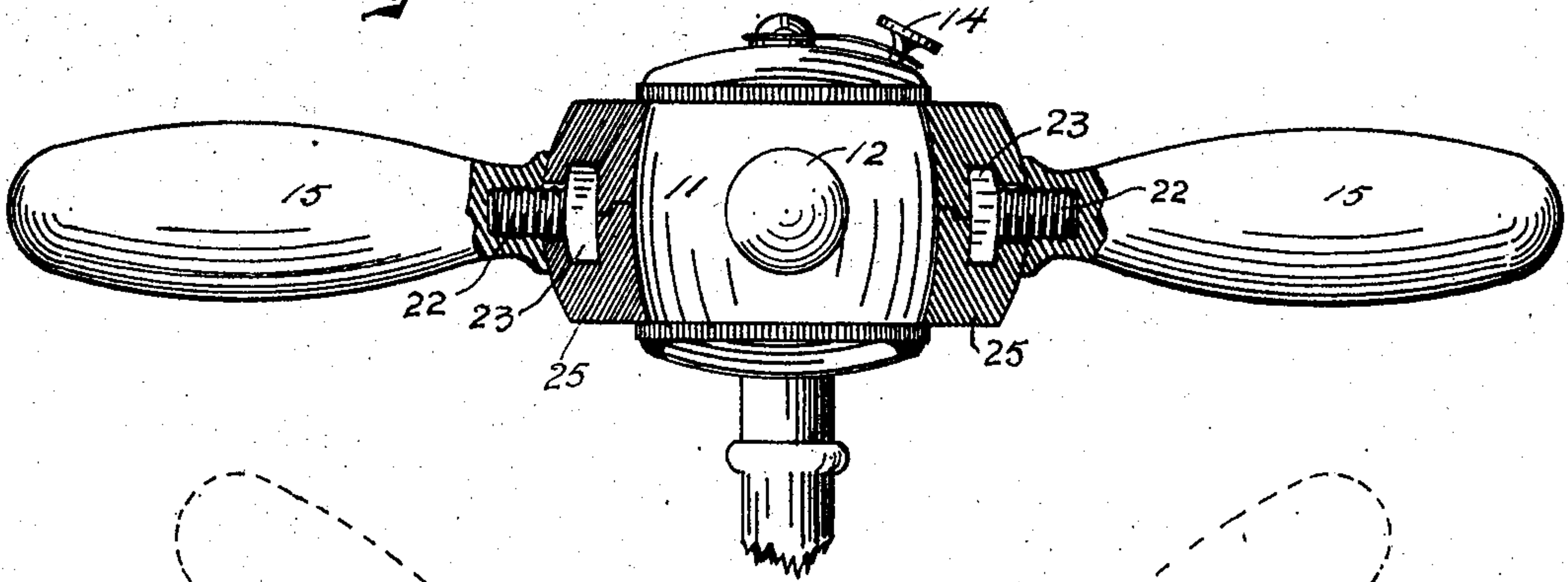
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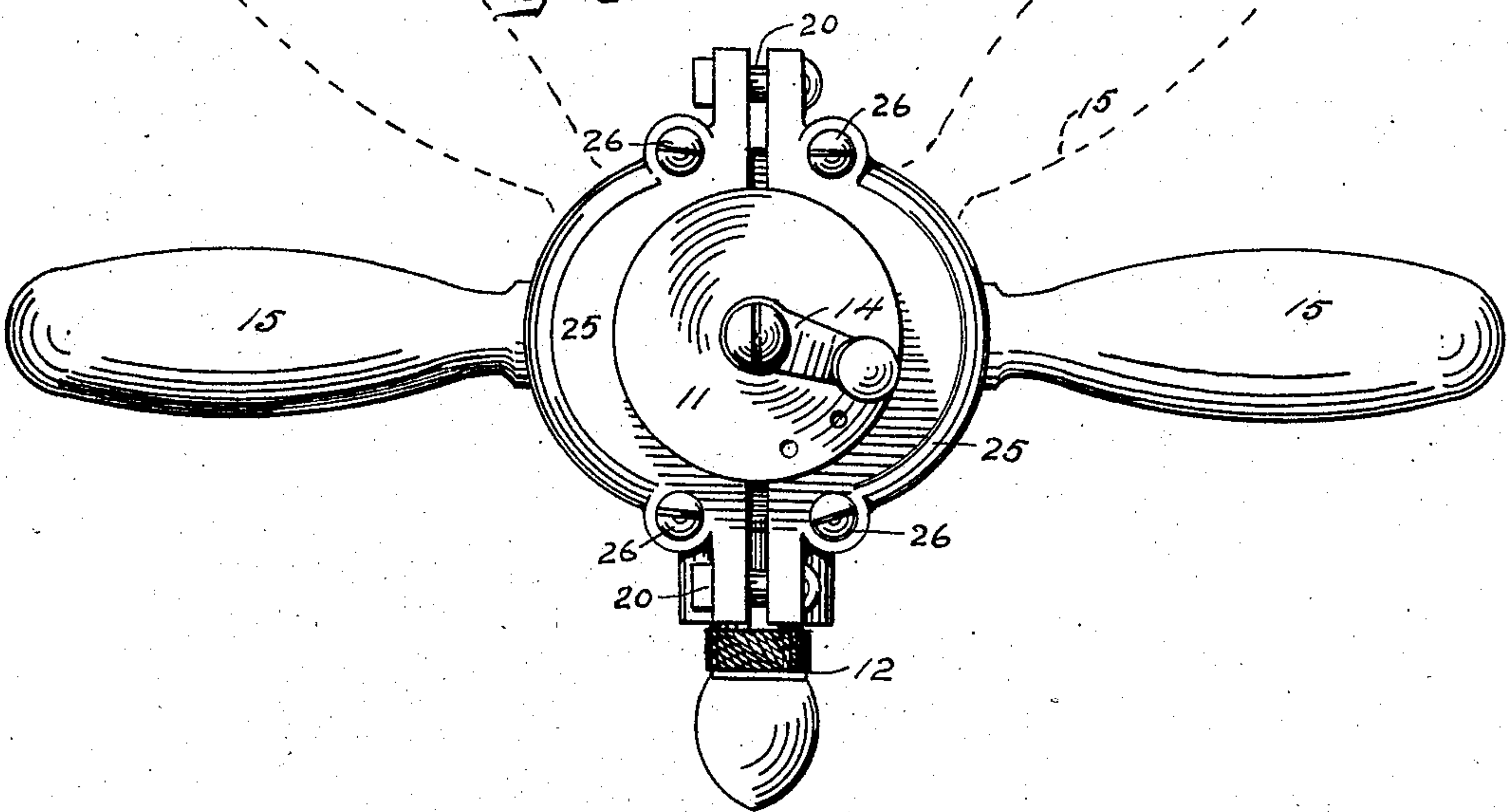
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2 SHEETS—SHEET 2.

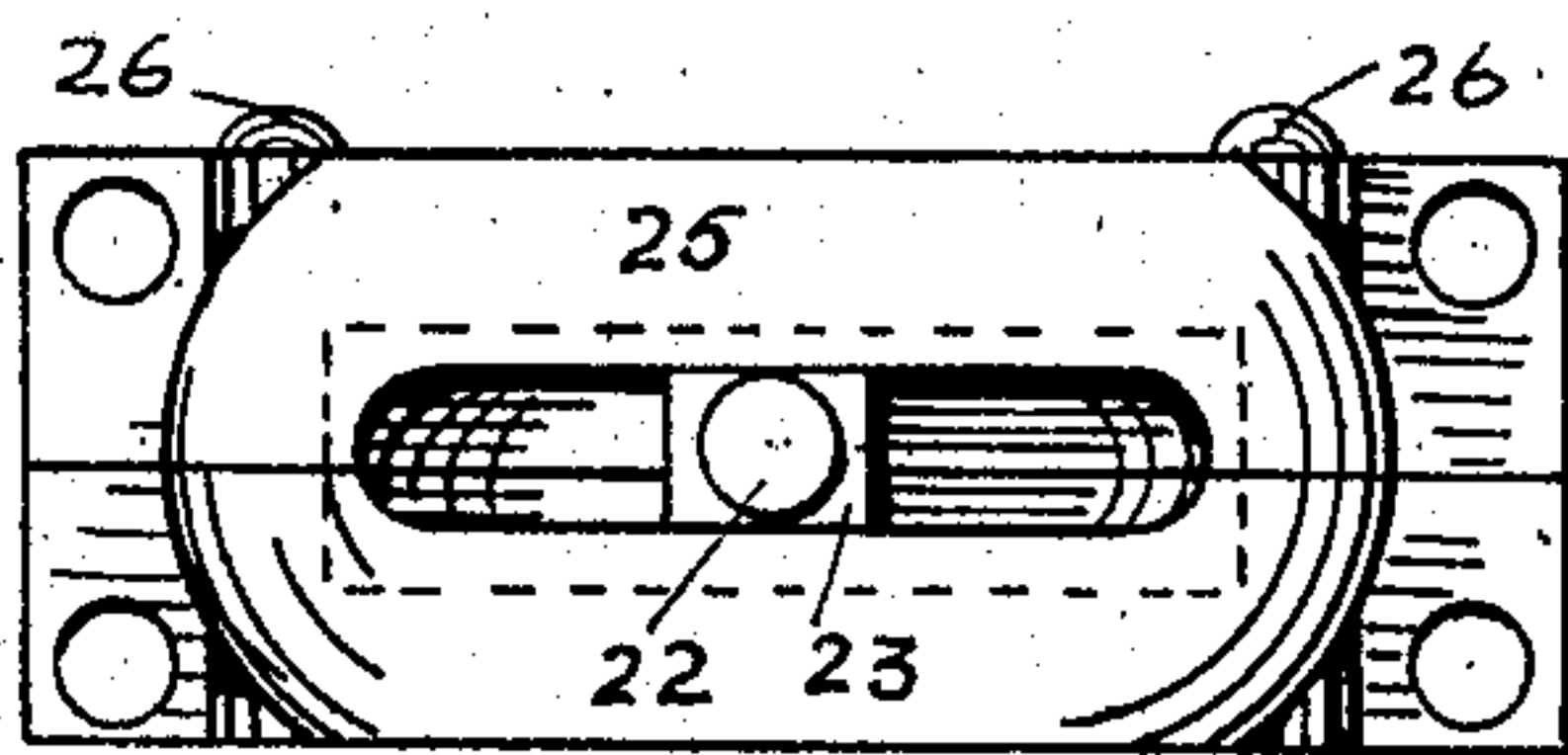
*Fig. 4.*



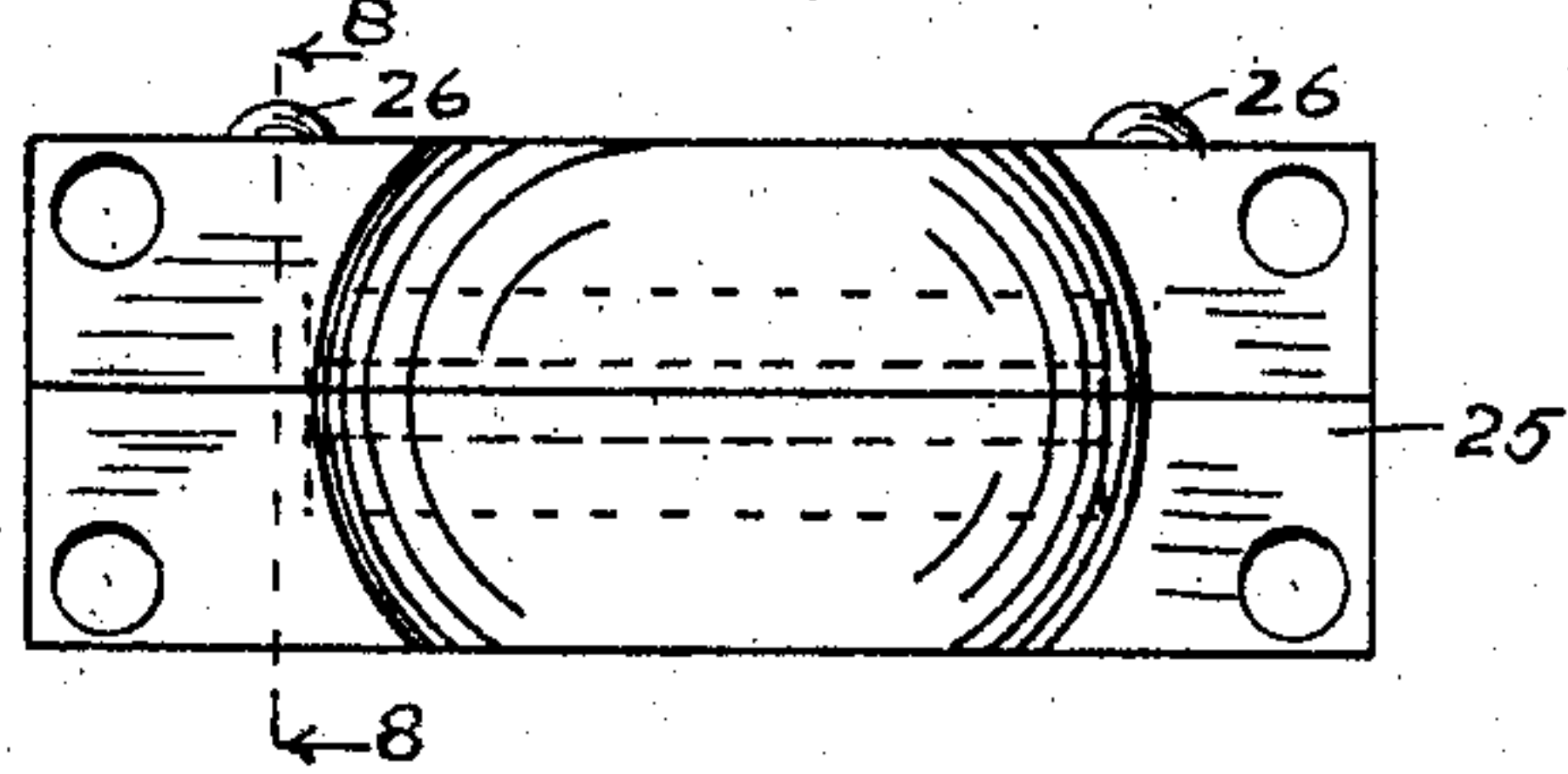
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



Witness  
H. Allmang  
C. Hoer.

Inventor  
Wm. F. Molt  
By  
V. H. Lockwood  
Attorney



# UNITED STATES PATENT OFFICE.

WILLIAM F. MOLT, OF INDIANAPOLIS, INDIANA.

## MEANS FOR CONTROLLING VIBRATORS.

No. 815,728.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed April 7, 1905. Serial No. 254,322.

*To all whom it may concern:*

Be it known that I, WILLIAM F. MOLT, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Means for Controlling a Vibrator; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

10 The object of this invention is to combine, with a portable vibrator actuated by a flexible shaft and used in the practice of medicine for treatment of and action upon various parts of the surface and of the tissues of the human body, means for preventing the vibration of the head of the instrument and maintaining the same substantially stationary, so that all the vibratory movement will be transmitted to the portion of the instrument that is in contact with the human body and in consequence the greatest possible efficiency will be obtained from the use of such instrument.

In such devices as have heretofore been made and used the vibrator is mounted at the end of a flexible shaft, and the same is held by the hand in position for treatment of the desired part of the human body. In addition to said shaft and means for holding the same there has been a head containing mechanism for causing the vibratory movement with a vibratode projecting therefrom, the end of the vibratode being held against the portion of the human body desired to be acted upon.

35 The vibratory movement imparted to said vibratode may be of different kinds, such as slight and rapid reciprocation thereof or lateral vibration of the end of the vibratode or circular vibration of the end of the vibratode.

40 In any instance it is desirable that the entire vibratory movement be imparted to the end of the vibratode that is in touch with the human body, as that is the only portion of the entire device that can act upon the human body. However, as hereinafter made and used in connection with a flexible shaft the vibratory movement has been largely dissipated in the hand and arm of the operator and in the head of instrument, and consequently not imparted to the end of the vibratode in touch with the human body. Thus if one hold the instrument with his hand without my invention applied thereto and rest the end of the vibratode upon a table the end of the vibratode will not have any appreciable vibratory movement, as the table tends to

hold the end of the vibratode stationary, but the head of the vibratode and the operator's hand will be violently shaken and vibrated. Thus the latter receive the effects of the vibratory movement instead of the vibratode. Likewise, if one apply the vibratode to the human body, especially with some pressure, the human body tends to hold the vibratode stationary and prevent its vibration, and the vibration will be in the head of the instrument and the hand and arm of the operator. This is not desirable, because it produces no effect on the human body and allows of no pressure in the side to side or stretching stroke.

The object of the use of the vibrator is to agitate and move and stretch and shake the tissues of the human body at the point of contact with the vibratode. If the point of the vibratode does not vibrate under heavy as well as light pressure, the instrument is of no value, and if any of the vibratory movement is dissipated into the head of the instrument or hand of the operator and not transmitted to the end of the vibratode the instrument is proportionately rendered ineffective and unsatisfactory. Therefore the object of this invention is to prevent the vibratory movement of the head of the instrument and hand of the operator, so that all of the vibratory movement will be imparted to the end of the vibratode and the full effect thereof be utilized into action on the human body. This object is attained, broadly speaking, by combining with the head of the instrument outward or oppositely-extending weights or weight-handles of such extent relative to the size of the head that they cannot be oscillated or vibrated appreciably by the vibratory action of the device. There are various possible ways in which this feature of the invention may be embodied or carried out; but the general nature thereof will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is a front elevation of the instrument with the flexible shaft partly broken away. Fig. 2 is a plan view of the instrument with one form of vibratode connected therewith. Fig. 3 is a vertical section through the weight attachment, the weights being partly broken away. Fig. 4 is a front elevation of a modified form with parts thereof in vertical section. Fig. 5 is a plan view of the same. Fig. 6 is a side elevation of the head of the instrument with the



weight removed. Fig. 7 is an inside elevation of the means on one side for attaching the weight to the head of the instrument. Fig. 8 is a section through the two semicircular plates along the line of one of the screws that holds them together.

Referring to the details of the drawings, 10 represents a flexible shaft having on its end the head 11, which carries mechanism (not here shown) for actuating or vibrating the vibratode 12, mounted in connection therewith. The handle 13 is arranged in connection with the flexible shaft and head for holding them, and a small lever 14 is arranged on the top of the head for controlling the vibratory movement therein, so as to change the nature of such movement from longitudinal reciprocatory movement of the vibratode to lateral vibratory movement or an oscillatory movement thereof, as desired by the operator.

The mechanism so far described is old and not my invention, and therefore the details thereof are not fully shown or set forth and because the nature of the mechanism for causing the vibratory movement forms no part of my invention, nor do I wish to be limited in the use of my invention to any particular kind or arrangement of vibrator that is actuated by a flexible shaft; but my invention may be used in connection with any such vibrator and may be combined therewith in any way that might suggest itself after understanding the nature of my invention.

In Figs. 1, 2, and 3 I clamp on the head 11 of the vibrator a pair of oppositely-extending weights 15. These are shown in the form of handles, and that form is preferable, as it is always desired to hold the vibrator by means of said weights; but the balancing power, or power of maintaining equilibrium, is the chief feature. The weights 15 of the head of the instrument have in their ends screws 16, that screw into holes 17 in the semicircular plates 18, which have on each end laterally-extending flanges 19, so that said plates may be clamped by the bolts 20 securely on the head of the vibrator. There are three holes 17 in each plate 18, so that the handles may be adjusted in different positions, often not opposite to each other, according to the needs in each particular case. For instance, if it be desired to press the side of the tool 12 against the human body the weights 15 might be in the position shown by dotted lines in Fig. 2, so as to enable the operator to handle the device effectively by means of said weights.

In the modified forms shown in Figs. 4 to 8 the weights are recessed and threaded to receive the screw 22 on the nuts 23, which are laterally slidable in a groove 24, formed in the adjacent inner surfaces of two semicircular plates 25, that are held together when in place by the screws 26, and the plates 25 on both sides of the head 11 are clamped to-

gether by the bolt 20, as described above. This construction enables the weights to be adjusted laterally in any desired position without removing them, but merely by loosening them slightly and changing their positions and then tightening them on the screws.

In operation the weights or handles 15 by virtue of their balancing power and weight tend to maintain an equilibrium and enable the operator to effect the necessary pressure of the vibratode against the portion of the human body being treated and to avoid at the same time the backward impulse or lost motion or vibration in the head of the vibrator and in the hands and arms of the operator. Hence the operator can transmit from the end of the vibratode to the portion of the human body being treated a greater amount of vibration with a milder impulse imparted to the tissues and with lower speed and less pressure and power than can be produced without the combination of said weights with the vibrator. They overcome the shaking from side to side of the vibrator in the lateral vibrations of the vibratode, thus enabling the operator to cause the desired stretching of the tissue with necessary pressure at the point of contact with the vibrating vibratode on the human body.

With this invention the head of the vibrator when actuated with a flexible shaft can be held stationary with ease, so that the vibrations will occur only in the vibratode. Therefore the operator has better control of his instrument and can adjust with ease and accuracy the desired amount of pressure on the portion of the body being treated. Another advantage of this arrangement resulting from the use of weighted handles adjustably mounted is that the operator can change from the side to side or stationary stroke upon the flesh to a percussion or pounding stroke by merely tilting the device from side to side. Without the weight attachments the operator is unable to control the pressure and strokes of the vibratode because they vary and have no certainty, and without the adjustable mounting of the handles he cannot change from side to end strokes, or the reverse, readily. Since the full effect of the vibration is had at the end of the vibratode, a slow operation is effective.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with the head of a vibrator actuated by a flexible shaft, of an extended weight, and means for movably securing said weight to said head.

2. The combination with the head of a vibrator actuated by a flexible shaft, of plates secured together on said head, an outwardly-extending balancing-weight movably secured to said weights.

3. The combination with the head of a vibrator actuated by a flexible shaft, of a pair



of plates clamped on said head and outwardly-extending balancing-weights removably secured to said plates.

5 4. The combination of the head of a vibrator actuated by a flexible shaft, said head having in it an arcuate groove, and an outwardly-extending weight movably secured in said groove.

10 5. The combination with the head of a vibrator actuated by a flexible shaft, of plates secured to said head with an arcuate groove in them, a weight, and means secured to said weight, that is slidable in said groove.

15 6. The combination with the head of a vibrator actuated by a flexible shaft, of two

pairs of semicircular plates, means for clamping said pairs of plates together on said head, each pair of plates having a longitudinal groove therein, a screw extending outward from said groove with a nut movable within said groove, and weights threaded and screwed upon said screws for securing said weights adjustably to said plates.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

WILLIAM F. MOLT.

Witnesses:

V. H. LOCKWOOD,  
N. ALLEMONG.