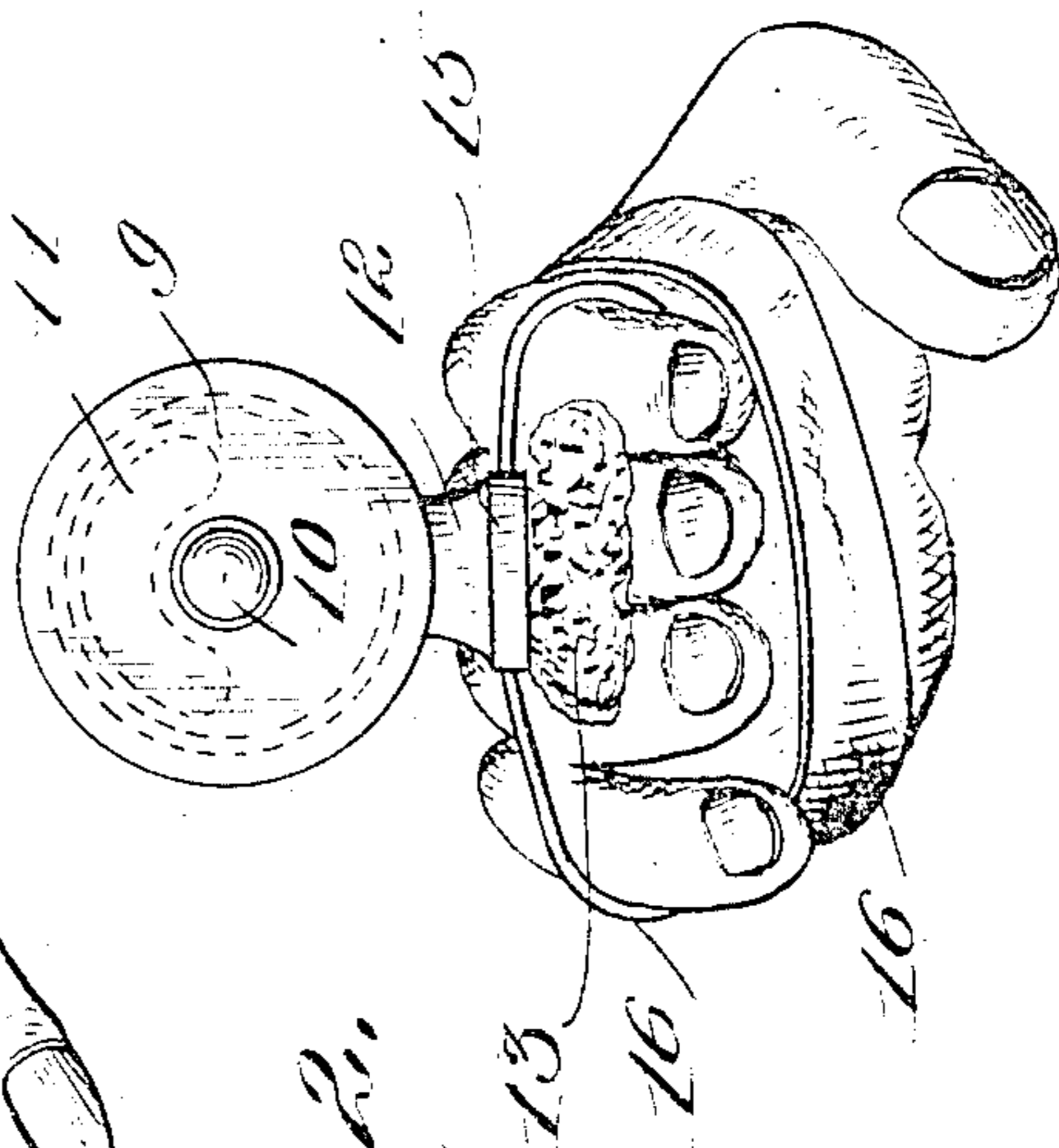
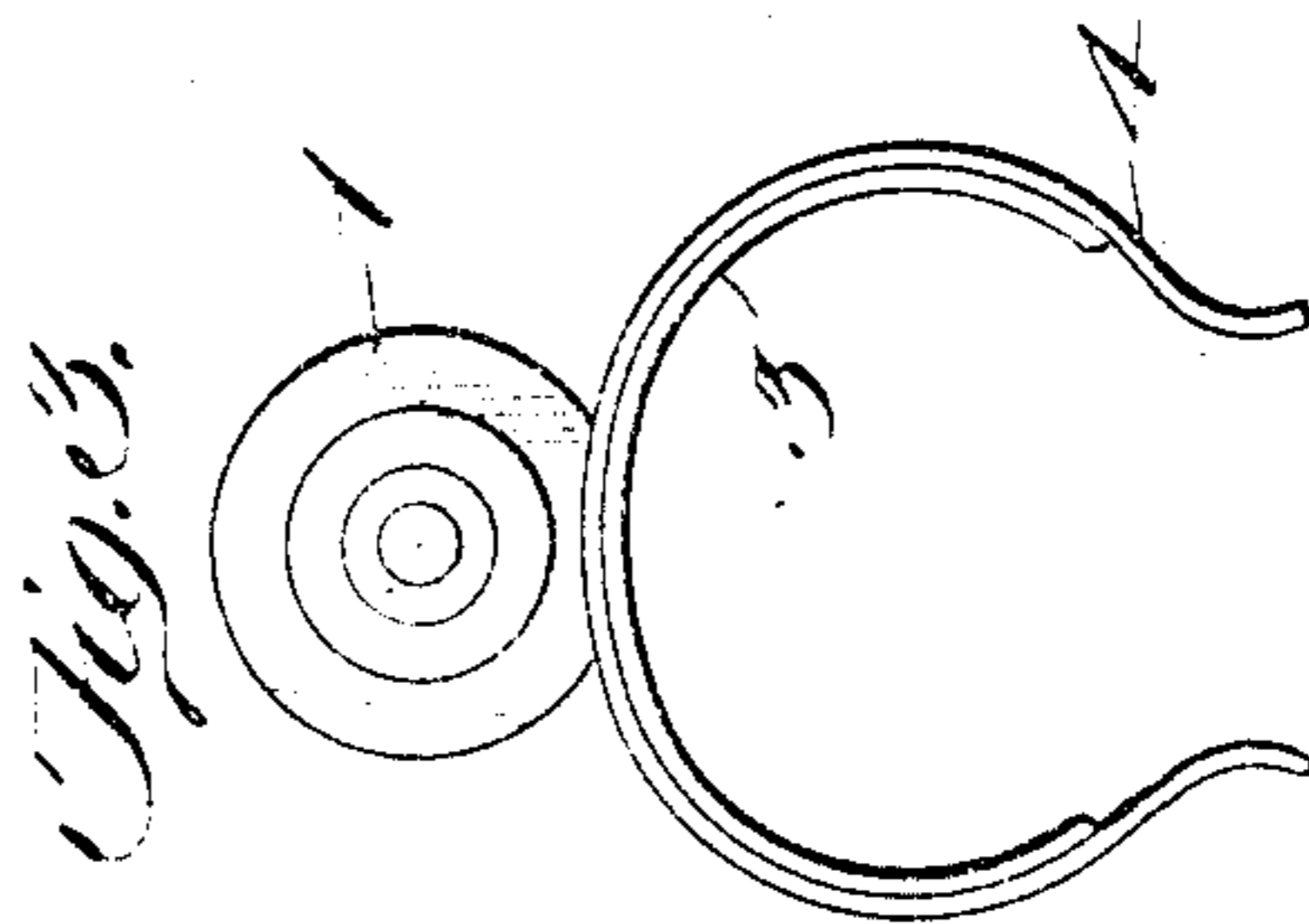
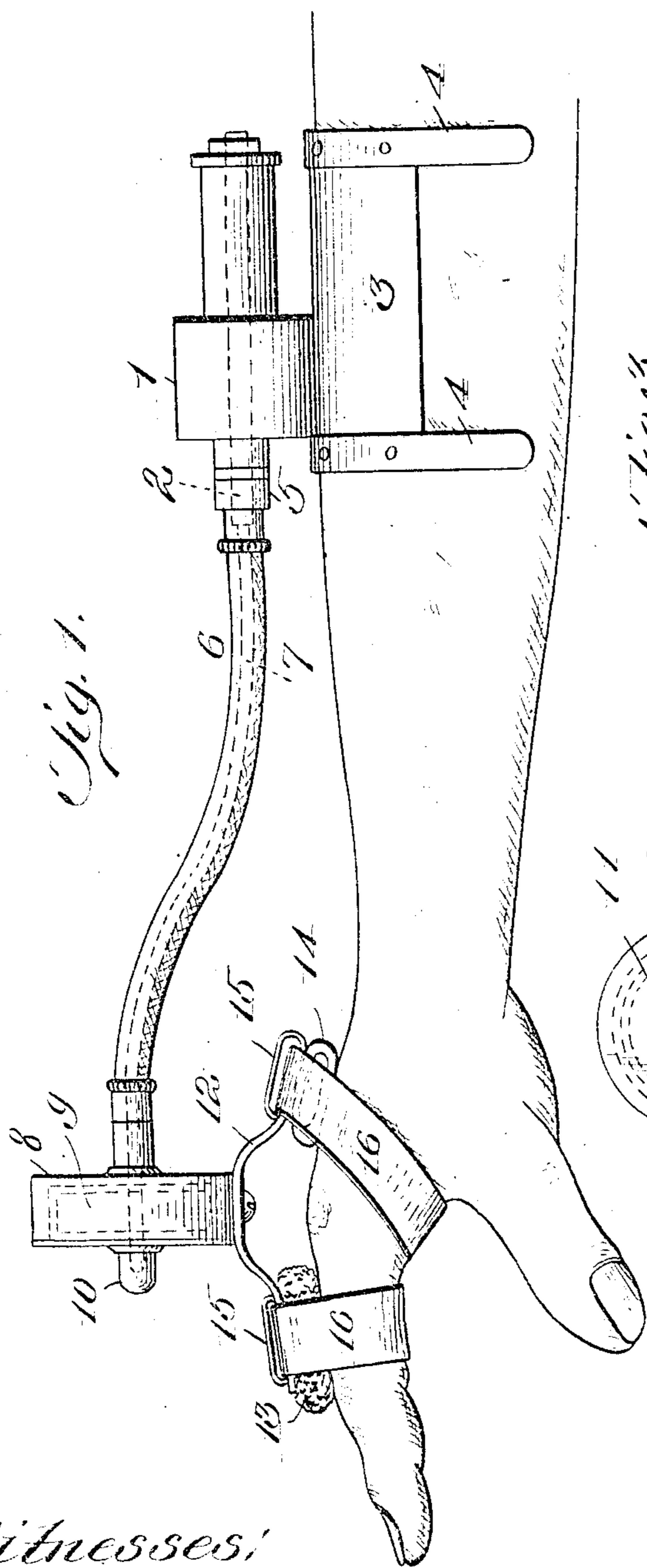


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G. B. FRALEY.
MASSAGE APPARATUS.

APPLICATION FILED JULY 28, 1904. RENEWED JUNE 13, 1905.



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UNITED STATES PATENT OFFICE.

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MASSAGE APPARATUS.

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Specification of Letters Patent.

Patented April 24, 1908.

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To all whom it may concern:

Be it known that I, GEORGE B. FRALEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Massage Apparatus, of which the following is a specification.

This invention relates to massage apparatus of that class wherein the movements used in massage treatment are conveniently obtained from a source of power other than that of the muscular strength of the operator and effectually administered to the patient.

The primary object of the present invention is to embody in a simple apparatus mechanism for imparting variable vibratory motion to the hand of the operator for application to a patient in any position and to support the apparatus over the back of one or both hands and adjacent portions of the arm or arms or to have the apparatus held as an entirety in connection with the hand and a part of the arm for convenience in making an application or pursuing a treatment with respect to any part of the body of the patient and permit both hands to be employed for such purpose with material advantages. In the use of the improved massage apparatus it is unnecessary to specially locate or position a patient with respect to the apparatus or to move the latter from one place to another, as heretofore required in ordinary massage mechanism.

The invention consists, essentially, of a variable vibrating mechanism adapted to be yieldingly held on the back of the hand of the operator and connected to and actuated by a motor means supported on the arm.

The invention further consists in the details of construction and arrangement of the several parts, which will be more fully hereinafter set forth.

In the drawings, Figure 1 is a side elevation of a portion of a human arm and hand, showing the improved apparatus applied thereto in operative position. Fig. 2 is a front end elevation of the same. Fig. 3 is a rear end elevation of the arm-embracing means and motor supported thereby.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The apparatus includes a motor 1 of any suitable type, preferably electric, having a shaft 2. (Shown in dotted lines in Fig. 1.) This motor is secured to a leather support 3, having spring-clasps 4 attached to the ends thereof and of such contour as to snugly embrace the arm of the operator. The shaft 2 of the motor is inclosed by a casing 5 of any suitable form, and thereto is attached a tubular sheathing 6, in which a flexible shaft 7 is movably mounted and attached at its rear end by any preferred means to the front extremity of the shaft 2 of the motor. The sheathing 6 is attached at its front end to the center of a casing 8, the shaft 7 also projecting through the casing and a vibrator 9, (shown by dotted lines in Figs. 1 and 2,) the front end of the shaft 7 being inclosed by a cap 10, also secured to the casing 8. The vibrator 9 is in the form of a metal disk and is constructed with a segmental cavity or recess 11 to cause it to run out of balance. Centrally fastened to the lower portion of the disk 8 is a spring-metal hand-plate 12, having an arched contour and provided at its front extremity with a soft sponge or pad 13 or any other suitable material. To the rear extremity of the hand-plate a soft-rubber tube 14 is attached, both extremities of the plate 12 having upper loops 15, through which elastic or other bands 16 are passed to engage the hand of the operator and hold the apparatus in the desired applied position for use.

In using the improved apparatus the support 3, with its clasp-springs 4, is applied to the arm in such position that the motor will be uppermost, and the hand is then passed through the elastic or other bands 16, and the sponge or pad 13 and cushion 14 are firmly pressed against the back of the hand at the center. It will be observed that the palm of the hand will be free for grasping or pressing upon any part of the body of the patient treated, and the vibrator being located over the center of the hand will impart through the latter to the patient the tremulous or agitating vibrations beneficial in muscular treatment by massage. The vibrator 9 and its casing 8 are held in positive position to resist displacement by the bands 16, disposed as shown, and exert a strong frictional engagement with the hand without incon-

venience of obstruction of blood circulation, particularly in view of the interposition of the cushion devices between the extremities of the hand-plate 12 and the back of the hand. After the apparatus has been applied as set forth the motor is actuated, and through its shaft 2 the flexible shaft 7 is rotated and the vibrator 9 regularly revolved within the casing 8. The speed of the several moving parts will be varied by well-known devices embodied in the motor structure, and in view of the cavity 11 in the vibrator the latter will set up the vibratory motion or pulsation required, and this pulsation will be transmitted through the resilient hand-plate 12 to the hand of the operator, and from the hand passed to the patient. Thus it will be seen that the operator is not required to exert any muscular effort in massaging a patient, and as the apparatus is supported wholly by the arm and hand of the operator or both arms and hands it can be quickly disposed over the part of the body of the patient to be treated with more effectiveness than has heretofore been obtainable.

The motor may be varied in its construction, and the several connections for the flexible shaft 7 and the sheathing of the latter will be modified at will, and, further, variations in the proportions and dimensions may be adopted without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having means at one extremity to engage a portion of the arm, and holding devices at the opposite extremity for attachment to a hand of an operator, the said holding devices carrying movable vibrating elements to bear directly against the back of the hand opposite the palm of the latter.

2. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having means at one extremity for securing it in applied position to the arm, and yielding devices at the opposite extremity for firmly engaging the back of the hand of an operator.

3. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a motor at one extremity, a vibrator at the opposite extremity operatively connected to the motor and having yielding devices connected thereto, and means for holding the said vibrator and yielding devices and motor respectively on the back portion of the hand and arm of an operator, the yielding devices directly bearing on the back of the hand when applied.

4. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a motor at one

extremity, a vibrator at the opposite extremity connected to the motor, yielding devices cooperating with the vibrator and having fastening devices attached to the terminals thereof to engage the palm of the hand of an operator, and means for holding the motor on the arm of the operator.

5. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a motor at one extremity, a vibrator at the opposite extremity, a flexible shaft connecting the motor and vibrator, a yielding transmitting-plate cooperating with the vibrator and having means to directly bear on the back of the hand of the operator, and means for holding the apparatus on the back portion of the arm and hand of an operator.

6. A massage apparatus having a motor, a vibrator operatively connected to the motor, a yielding transmitting-plate cooperating with the vibrator, a soft pad carried by one extremity of the plate, and a hollow pad attached to the opposite extremity of said plate.

7. A massage apparatus having a motor, a vibrator operatively connected to the motor, a vibration-transmitting plate cooperating with the vibrator, cushion devices carried by the opposite extremities of the plate, and holding means for the apparatus to respectively engage the hand and arm of an operator, the cushion devices bearing on the hand when the apparatus is applied.

8. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a motor, a vibrating disk connected to the motor and formed with a cavity to throw the same out of counterbalance, yielding vibration-transmitting devices cooperating with the vibrator and positively applicable to the back of the hand of the operator, and means for holding the vibrating disk and vibration-transmitting devices directly over and in contact with the back of the hand of an operator, and the motor on the arm of the latter.

9. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a motor, a vibrator means, a flexible shaft connecting the motor and means, a vibration-transmitting plate cooperating with the means, and cushion devices at opposite extremities of the plate to loosely bear on the back of the hand of the operator.

10. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a motor at one extremity, a casing at the opposite extremity with a rotary vibrator therein formed with a cavity to throw it out of counterbalance, a flexible shaft between the motor and the vibrator and engaging the center of the latter, and means cooperating with the casing for

transmitting the pulsations of the vibrator directly to the back of the hand of an operator and for holding the motor on the arm of the latter.

5 11. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a support to yieldingly embrace the arm, a motor on the support, a vibrator located at a distance
10 from and operatively connected to the motor, and a yielding plate coöperating with the vibrator and having means for attaching it and the forward extremity of the apparatus to the hand of an operator.

15 12. A massage apparatus having a support with end clasps for engaging the arm of the operator, a motor held on the support, a vibrator operatively connected to the motor, and means for holding the vibrator end of
20 the apparatus in applied position.

13. A massage apparatus completely applicable to and supported by the back portion of the hand and arm of an operator, comprising a casing having a vibrator therein,
25 which is located over the back portion of the hand, means for operating the vibrator held on a part of the arm, a yielding plate having an arched contour and intermediately connected to the casing, cushion devices carried
30 by the opposite extremities of the plate, and fastening means to engage the hand and extending over the extremities of the plate and cushion devices to maintain the latter in contact with the back of the hand.

35 14. A massage apparatus completely applicable to the back portion of the arm and hand of an operator, having a rotating disk vibrator with a cavity at one side of the cen-

ter to disturb the counterbalance, a casing inclosing the vibrator, the vibrator and its
40 casing being disposed transversely with relation to the back of the hand, an arched yielding plate connected at its center to the lower portion of the casing to extend longitudinally of the back of the hand and having
45 projecting terminals to loosely bear on the back of the hand, and means for operating the vibrator.

15. A massage apparatus completely applicable to and supported by the back por-
50 tion of the hand and arm of an operator, comprising a motor having means for holding it over the arm, a circular casing, a rotary vibrator in the casing, the casing and its vibrator having means for holding the same
55 over the back of the hand, a flexible shaft between the motor and the center of the vibrator, a sheathing for the shaft, and means connected to the casing for transmitting the pulsations of the vibrator directly to the back
60 of the hand between the fingers and the wrist.

16. A massage apparatus completely applicable to and supported by the back portion of the hand and arm of an operator, having pulsation-generating means positively
65 applicable to the back of the hand of the operator to cause a transmission of the vibrations through the palm of the hand directly to the patient.

In testimony whereof I have hereunto set
70 my hand in presence of two subscribing witnesses.

GEORGE B. FRALEY.

Witnesses:

S. E. PATTERSON.

E. D. ZECK.