

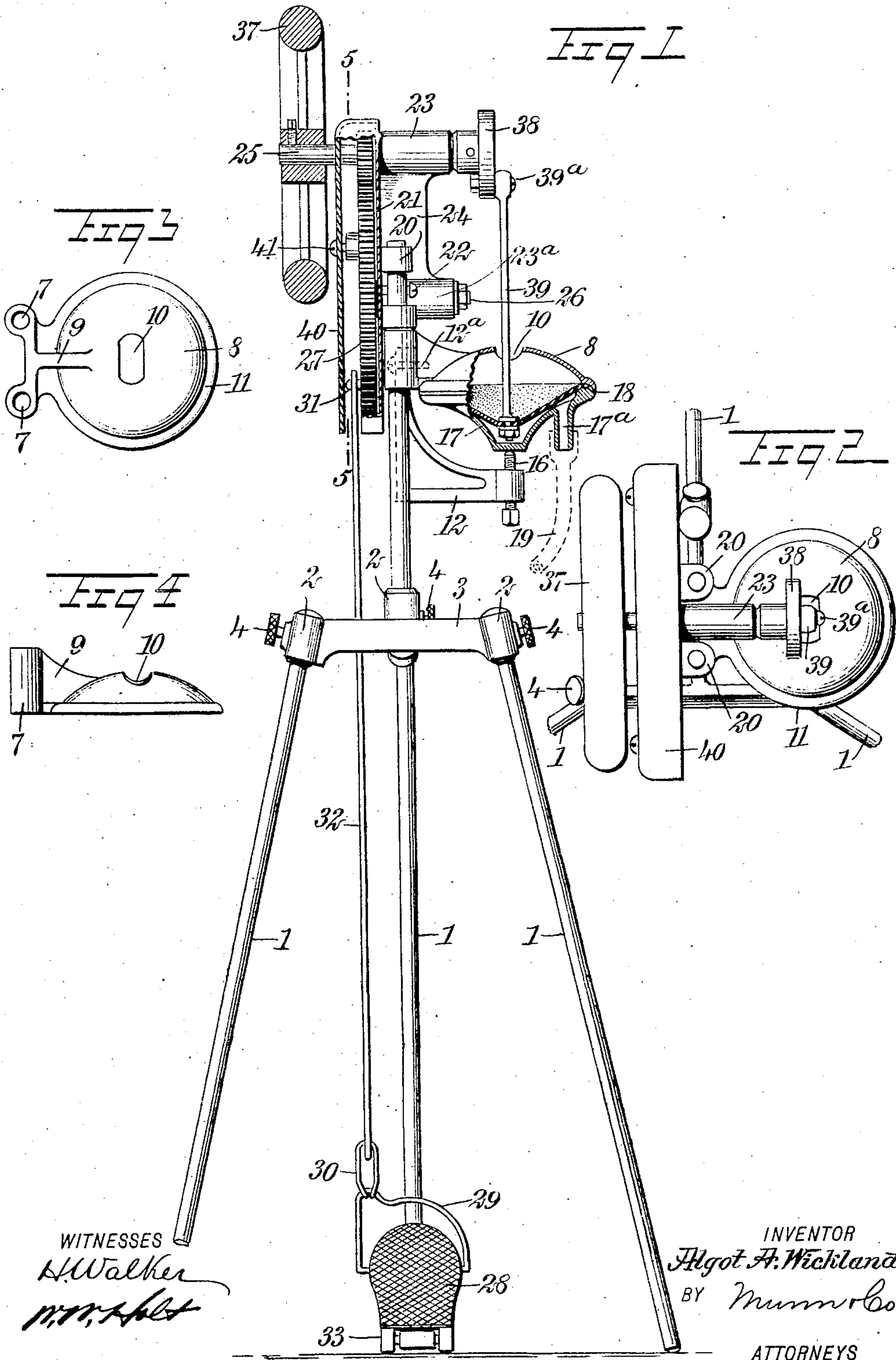
No. 854,548.

PATENTED MAY 21, 1907.

A. A. WICKLAND.
PNEUMATIC MASSAGE MACHINE.

APPLICATION FILED APR. 21, 1906.

2 SHEETS—SHEET 1.



WITNESSES
H. Walker
M. H. Helt

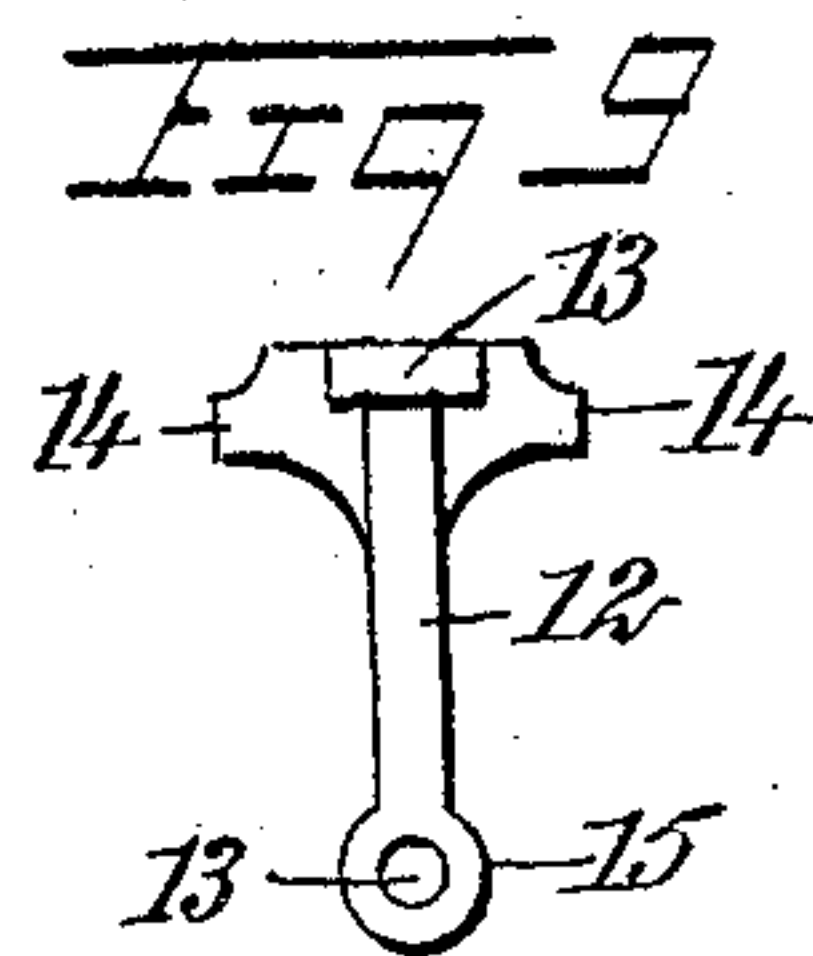
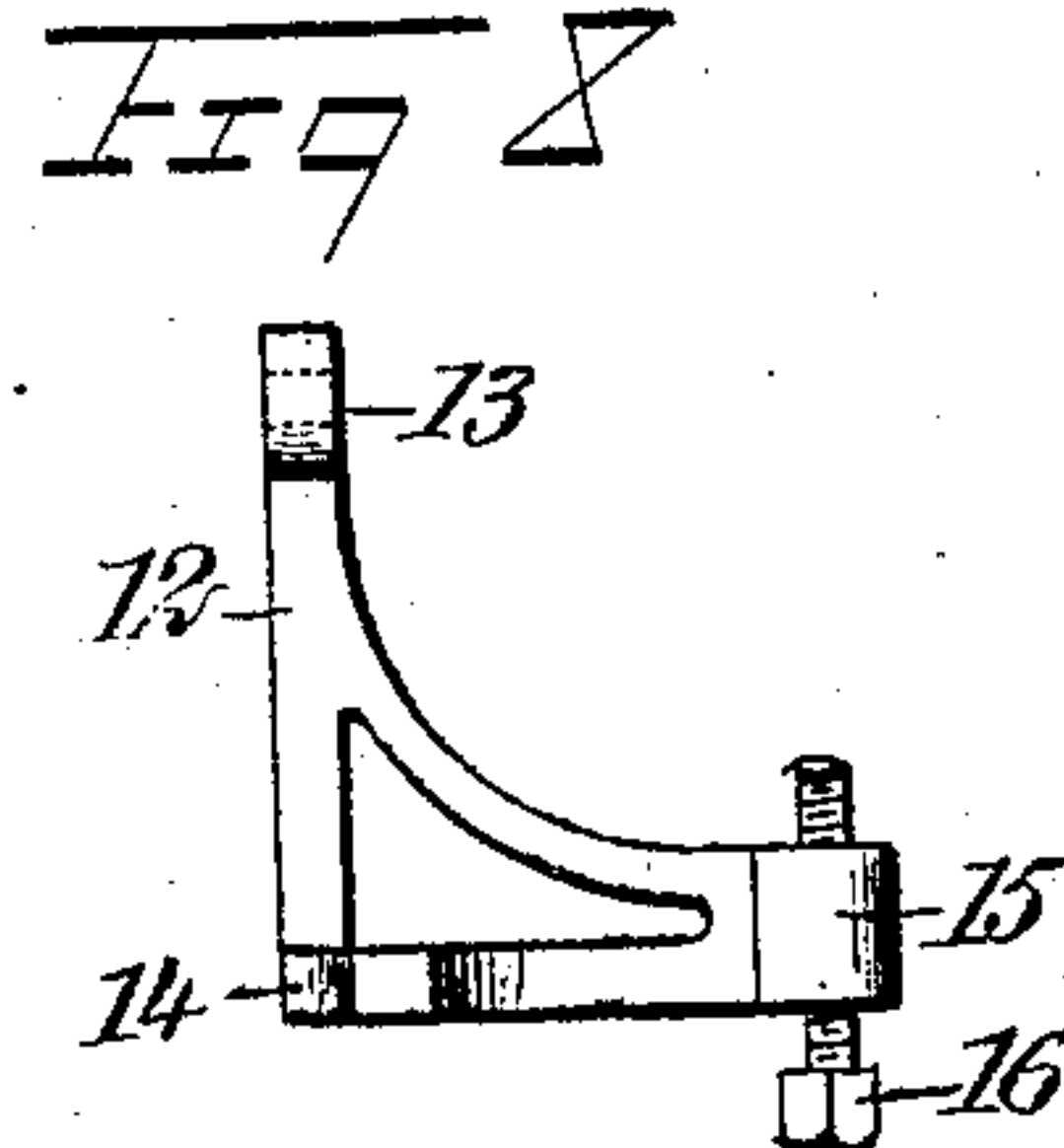
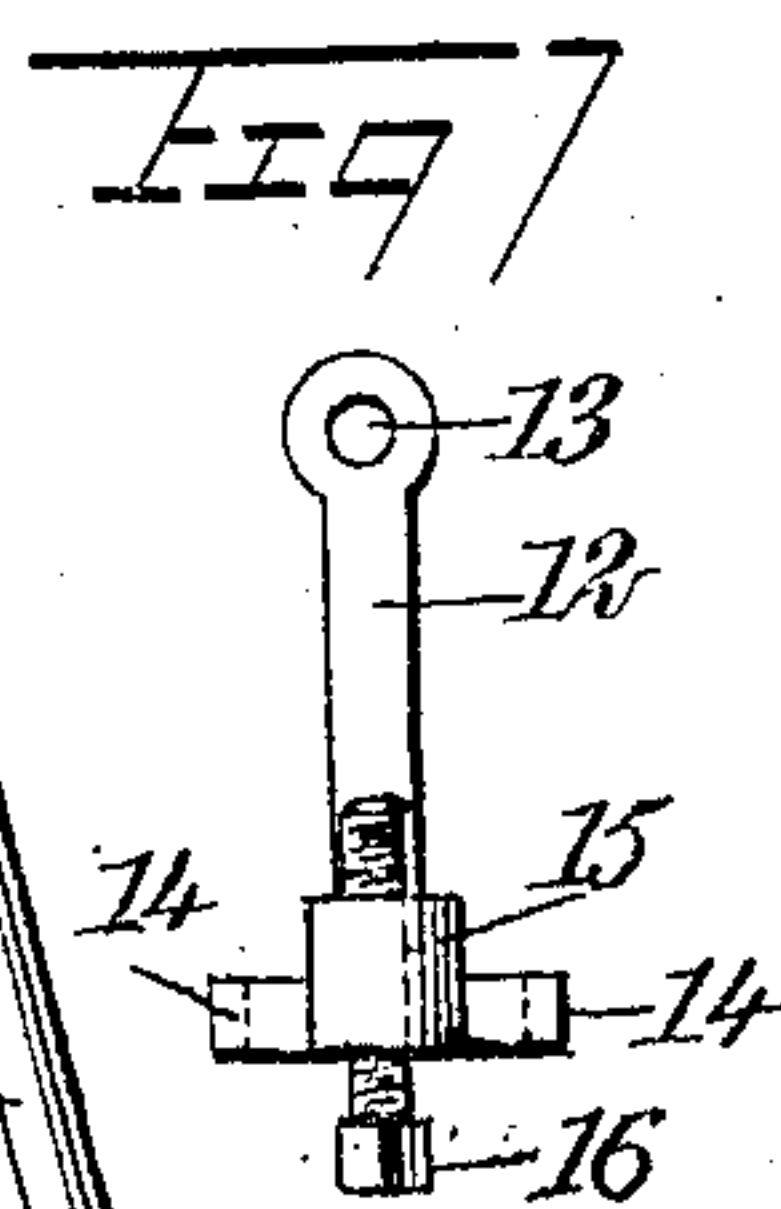
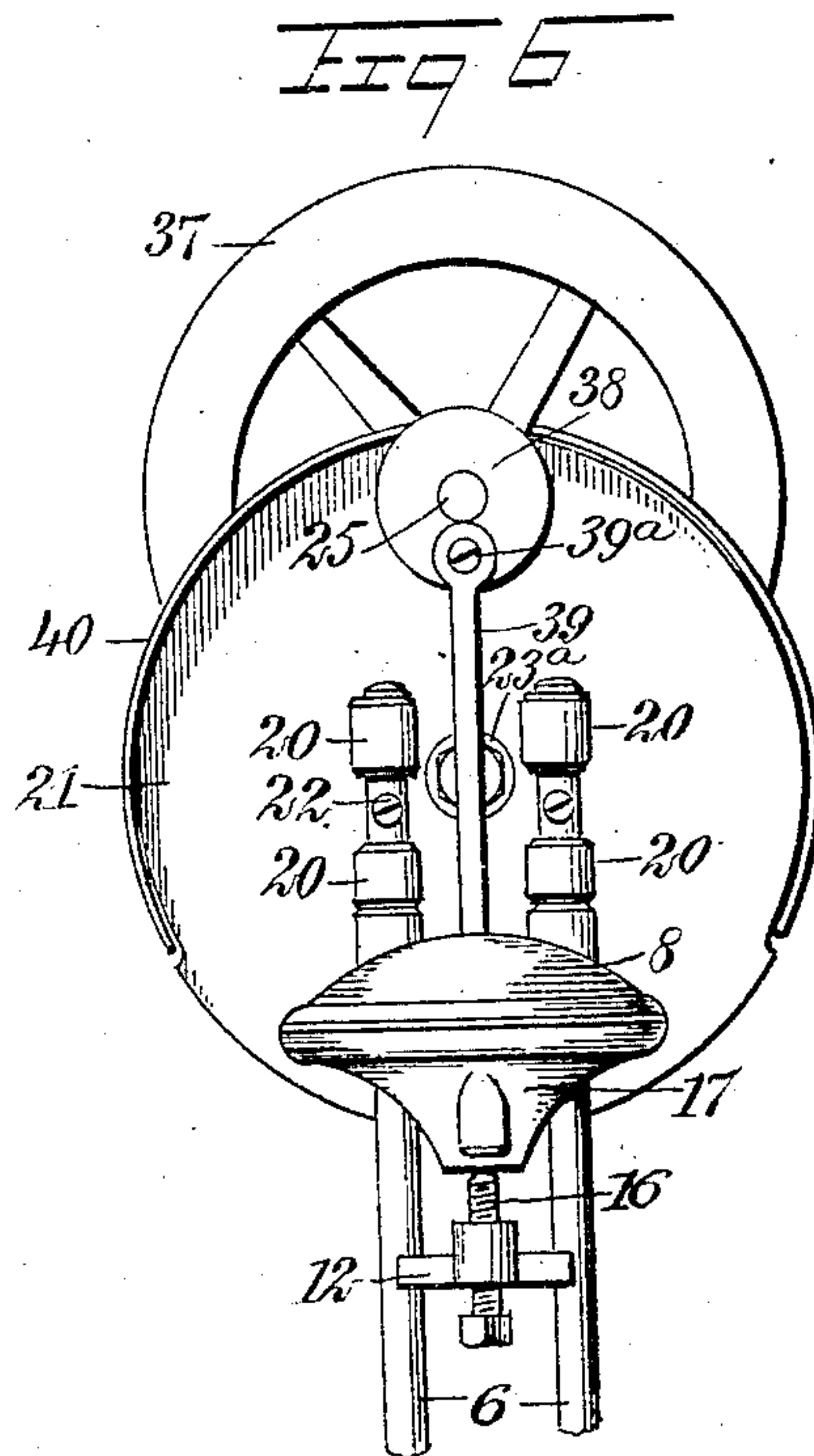
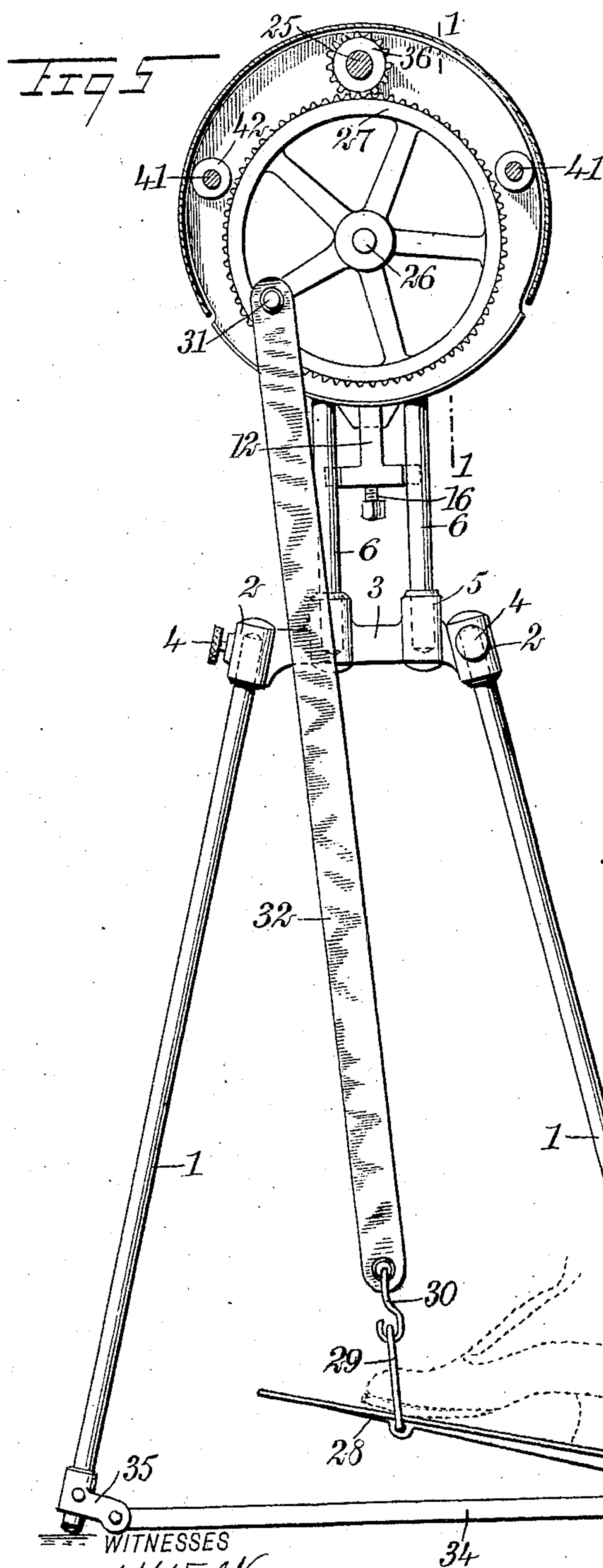
INVENTOR
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2 SHEETS—SHEET 2.



WITNESSES

H. Walker
W. M. H. Co.

INVENTOR

Algot A. Wickland

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UNITED STATES PATENT OFFICE.

ALGOT A. WICKLAND, OF CHICAGO, ILLINOIS, ASSIGNOR TO CARL ROSEN, OF CHICAGO, ILLINOIS.

PNEUMATIC MASSAGE-MACHINE.

No. 854,548.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed April 21, 1906. Serial No. 312,980.

To all whom it may concern:

Be it known that I, ALGOT A. WICKLAND, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Pneumatic Massage-Machine, of which the following is a full, clear, and exact description.

This invention is an improvement in pneumatic massage machines having, among other objects, to provide a simple and practical machine by which a rapid, pulsating and vibratory action is produced, such as required to effectively massage any desired part of the face or body.

Another object of the invention is to so construct the machine that it can be readily taken apart and the elements thereof packed in a small compass, as a suit case or the like, and be reassembled with ease when again desired to set the machine up for practical work.

A further object of the invention is to so provide for its working that the party to whom the treatment is applied can, if he or she so desires, operate the machine and apply the derma diaphragm to the face or body at the same time.

The above objects are accomplished by my invention, one embodiment of which is hereinafter disclosed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my improved machine, partly in section, to more completely disclose the details of construction, said section being taken substantially on the line 1—1 of Fig. 5; Fig. 2 is a plan view of the machine with the foot treadle removed; Fig. 3 is a plan view of a cap for the machine bellows; Fig. 4 is a side elevation of Fig. 3; Fig. 5 is a section on the line 5—5 of Fig. 1; Fig. 6 is a fragmentary view of the upper end of the machine, when looking at the opposite side of Fig. 5, and Figs. 7, 8 and 9 are, respectively, a front elevation, a side elevation, and a plan view of the bracket for clamping the two sections of the bellows together.

The numeral 1 indicates three inclined legs projecting into sockets 2 at the extreme ends of a horizontal T-shaped support 3, said legs being fixedly held in the sockets by means of set screws 4 passing transversely through them. One member of the T-shaped support 3 is provided with vertical sockets 5 spaced a suitable distance apart, and in which are engaged rods or standards 6 for supporting the main working part of the machine. Slid-able over the rods or standards 6, 6 are apertured guides 7 having projecting from one side thereof a bell-shaped cap 8 reinforced to the guides 7 by a rib 9, said cap being provided with an oblong aperture 10 at its center and a beaded edge 11 with a concave under face at its circumference. Secured by a screw 12^a to the back face between the guides 7, is a bracket 12 shown in detail in Figs. 7, 8 and 9, said bracket being substantially of L formation, with an eye 13 passing transversely through its upper end, through which the screw 12^a passes, and projecting lugs 14 with filleted edges at its lower end for partially embracing the standards 6. This bracket is also provided with a threaded boss 15 at the outer end of its horizontal arm, in which a vertical screw 16 is adapted to pass. Engaged by the screw 16 is the center of a flaring cup 17 forming the bottom of the bellows, said cup having an upper edge of an exact counterpart of the under face of the beaded edge 11, and between which is engaged the circumference of a rubber diaphragm 18. Leading from the under face of the cup 17 is a nipple 17^a, over which a rubber tube 19 for connecting the bellows with a massage diaphragm, is adapted to be forced. Slidable over the upper ends of the standards 6 above the apertured guide 7 are two alining sets of guides 20, 20 fixed to a sheet metal disk 21 forming a part of the gear casing of the machine. This disk is further secured to the standards 6, 6 by screws 22, as best shown in Figs. 1 and 6.

To one side of the disk 21 and near the top end thereof, are fixed two projecting bosses 23 and 23^a, connected by a rib 24, in which bosses spindles 25 and 26 are respectively journaled. The spindle 26 is held in its journal by a nut at the outer end thereof, as shown,

and has fixed to it at the opposite side of the disk 21 a large gear 27 adapted to be operated by a foot treadle 28 through the intermediary of a wire loop 29 passing over the treadle and engaged by a hook 30 at one side of the loop, and connected to a crank 31 on the gear, by a link 32. The front end of the treadle 28 is pivoted at 33 to a link 34, which, in turn, is pivoted to a bracket 35 carried by one of the tripod legs. Fixed to the spindle 25 is a small gear 36, meshing with the gear 27, said spindle being extended at both sides of the disk 21 where is fixed respectively to each end, a heavy fly or hand wheel 37 and a crank disk 38, the small disk being over the vertical center of the bellows and connected to the rubber diaphragm 18 therein, by means of a pitman 39 journaled on a crank pin 39^a on the disk and secured to the diaphragm, as clearly shown in Fig. 1. The gears 27 and 36 are substantially inclosed by a flanged hood 40 passing about two-thirds around the disk 21 and held to and spaced from it by screws 41 passing through the hood and into blocks 42.

In assembling a machine thus described, the legs 1 are placed in the sockets 2 of the support 3 and secured therein by the set screws 4. The standards or rods 6 are next placed in position and the cap of the bellows is secured to the standards by passing them down through the apertured guides 7. The gear casing and its attached mechanism is now fixed to the standards by passing them through the guides 20, and additionally securing them to the casing by the screws 22. The pitman 39, after it is attached to the crank disk 38 by the crank pin 39^a passing through it, hangs down through the oblong aperture 10 in the bellows top. The lower end of the pitman is secured to the center of the rubber diaphragm 18 between the shoulder and nut, as shown, and the bracket 12 is fixed by the screw 12^a, in which position the clamping screw 16 can be secured against the center of the cup 17 forming the bottom of the bellows, securely holding the diaphragm and making an air-tight connection between the bellows members. The hood of the gear casing is next passed over the spindle 25 and secured to the disk 21 by the screws 41. This leaves the outer end of the spindle free to receive the hand or fly wheel 37. The machine is now ready for operation when the link 32 is connected by the hook 30 with the treadle. Upon working the treadle with the foot, the large gear 27 is revolved in a well known manner, rapidly rotating the small gear 36 and the crank disk 38, storing up energy in the wheel 37 and giving the pitman 39 a positive and firm reciprocating movement. This causes an alternate compression and suction in the bottom of the bellows or cup

17 of the bellows, which is transmitted through a pipe 19 to a massage device applied to the face or some portion of the body, thereby giving the skin a rapid, pulsating and vibratory action desirable in massage treatment.

The precise embodiment of my invention is not material provided its essential characteristics are employed, as pointed out in the annexed claims.

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

1. In a massage machine, a tripod, standards carried thereby, a gear casing at one side of the standards, gears in the casing, a spindle journaled at the upper end at one side of the casing, a hand wheel fixed to the spindle at one side of the casing, a crank disk fixed to the opposite end of the spindle, a bellows carried on the standards below the crank disk, a pitman connecting the bellows with the crank disk, means for connecting the bellows with a massage device, and a foot treadle for operating the gears.

2. In a massage machine, a support, a bellows cover carried thereby, a bracket secured to the cover having means to engage a cup forming the bottom of the bellows and forcing the same to engage the circumference of a rubber diaphragm between the cover and cup, and means for connecting the cup with a massage device.

3. In a massage machine, a tripod, vertical rods carried thereon, a bellows cap having guiding apertures slidable over the rods, an L-shaped bracket secured to the cap and having a vertical screw passing through its horizontal arm, a cup adapted to be forced by the screw to engage the cap and secure the circumference of a rubber diaphragm therebetween, means for connecting the cap with a massage device and means for operating the diaphragm.

4. In a massage machine, a tripod, vertical rods carried thereon, a bellows carried by the vertical rods, a gear casing having means to slidably engage the upper ends of the rods and be fixed thereto, a counter-shaft journaled at the upper end of the gear casing, means for operating the bellows carried on the counter-shaft, means carried on the counter-shaft for driving said operating means, and means for connecting the bellows to a massage device.

5. In a massage machine, a tripod, vertical rods carried thereon, a bellows having guiding apertures slidable over the rods, a gear casing slidable over the rods and secured thereto, a counter-shaft journaled at the upper end of the gear casing, means carried on the counter-shaft for operating the bellows, means for connecting the bellows with a

message device, a gear fixed to the counter-
shaft and in the casing meshing with a larger
gear journaled therein, a crank pin carried by
the large gear, and a foot treadle adapted to
5 operate the same through the intermediary
of a link, substantially as described.
In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

ALGOT A. WICKLAND.

Witnesses:

ADOLPH D. WEINER,
MARGARET S. LYNCH.