R. W. GRIFFITH.

MASSAGING IMPLEMENT.

APPLICATION FILED APR. 6, 1911.

996,924.

Patented July 4, 1911.

Fig. 1.

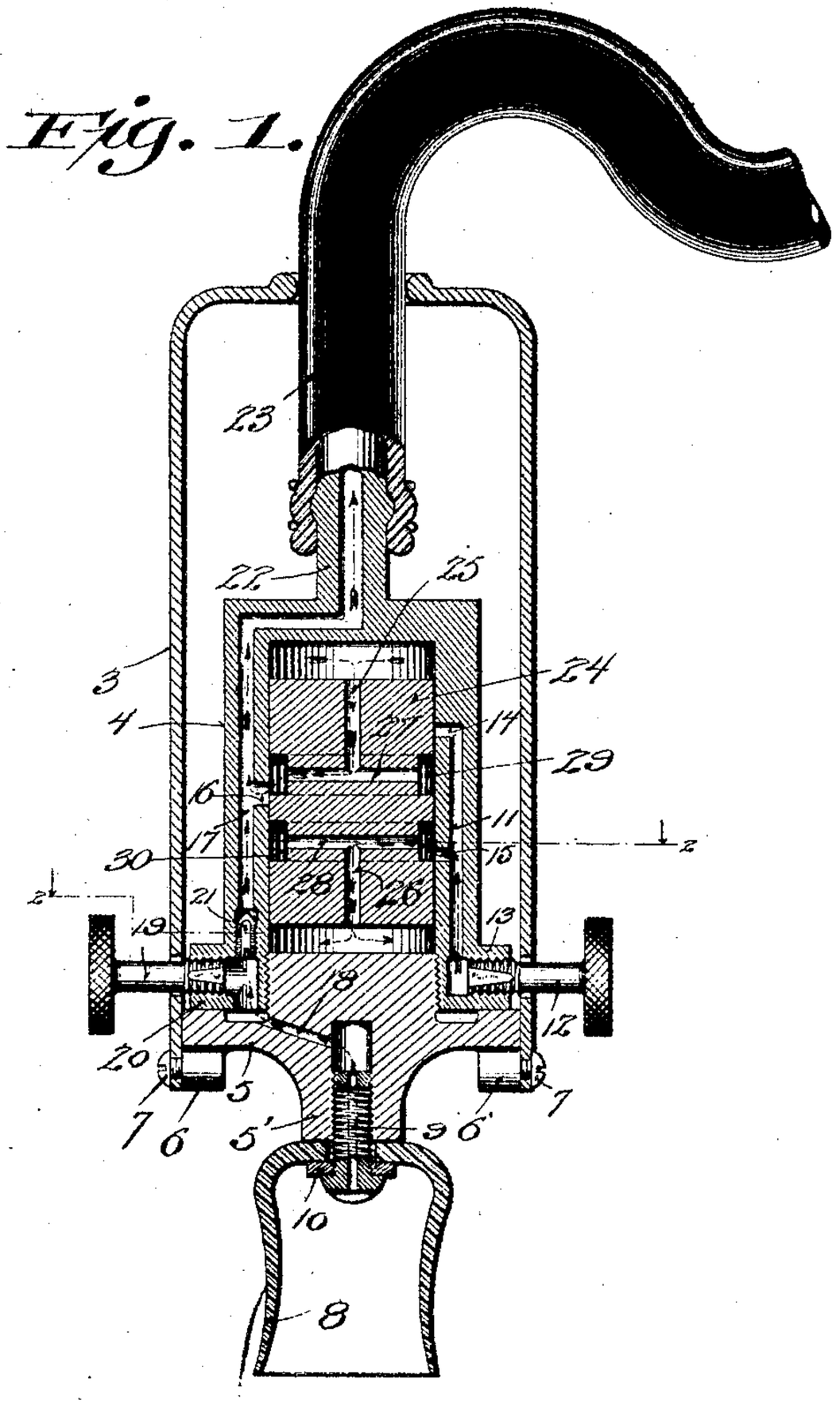
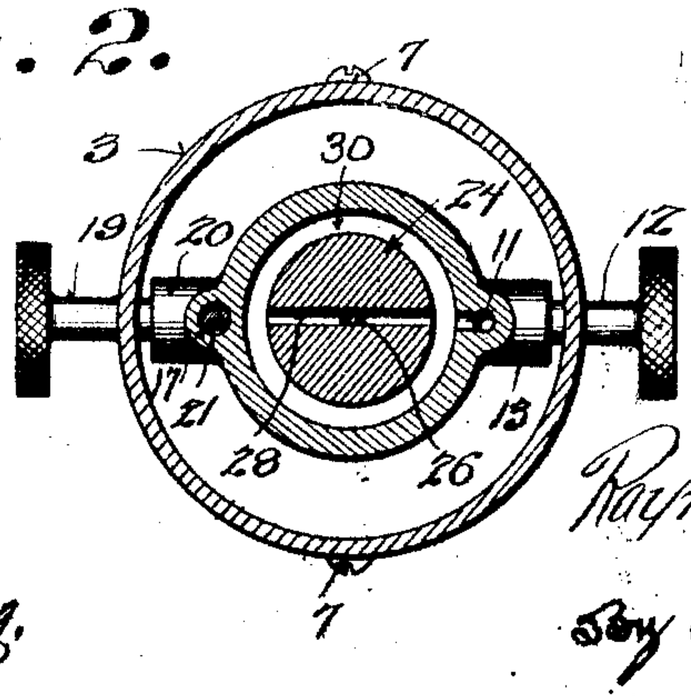


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

RAYMOND W. GRIFFITH, OF MILWAUKEE, WISCONSIN.

MASSAGING IMPLEMENT.

996,924. Specification of Letters Patent. Patented July 4, 1911.

Application filed April 6, 1911. Serial No. 619,335.

To all whom it may concern:

Be it known that I, RAYMOND W. GRIFFITH, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Massaging Implements; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in what is herein particularly set forth with reference to the accompanying drawings and pointed out in the claims of this specification, its object being to provide simple, economical and efficient vacuum vibrator massaging implements especially designed for the use of suction cup applicators, provision being had for regulating the strength of the vibrations and the intensity of the vacuum in said applicators.

Figure 1 of the drawings represents a central longitudinal section view of one of my improved vacuum vibrators having a suction-cup applicator therewith, and Fig. 2, a transverse section of the vibrator indicated by line 2—2 in Fig. 1.

Referring by numerals to the drawings, 3 indicates a casing that is preferably employed to inclose a cylinder 4, a head 5 of the cylinder being provided with lugs 6 engaged by screws 7 that extend through apertures in said casing adjacent to an end of the same. The head 5 is shouldered and the inner shank portion thereof has screw-thread engagement with the wall of the cylinder, whereby separation of said head from said cylinder may be readily effected whenever necessary or desirable. A central outer boss 5′ of the cylinder head is longitudinally recessed to provide a socket with which to engage the shank of any suitable form of applicator. The suction-cup applicator 8 herein shown has its shank in the form of a hollow screw 9 for which the socket aforesaid is suitably threaded, and a washer 10 is interposed between the cup and the head of the screw. The cylinder has its wall provided with a longitudinal air-inlet passage 11 controlled by a screw-valve 12 engaging a port-boss 13 of said cylinder in communication with said passage, the screw being taper-slabbed upon one or both sides thereof to provide for a finely regulated area of air opening according to the adjustment of said screw. The air-inlet passage aforesaid is provided with ports 14, 15 to the bore of the cylinder equidistant from an exhaust port 16 of said cylinder. The exhaust-port leads into an air-outlet passage 17 in the cylinder-wall longitudinally of the same, and a port 18 leads from the cylinder-head socket above specified into said air-outlet passage, suction in the cup-applicator being controlled by a screw-valve 19 similar to the one 12 aforesaid and adjustable in a port-boss 20 of the cylinder-head 5. Both of the aforesaid screw-valves extend through the casing 3 to be convenient to the operator of the herein described vibrator, and a regulator valve in the form of a slabbed and pointed screw-plug 21 is engaged with a threaded enlargement of said passage back of the valve 19, the regulator valve 21 being permanently set in proportion to the normal pressure desirable in the cylinder. The air-outlet passage is continued through a rear head shank 22 of the cylinder, and a flexible tube 23 is made fast at one end on said shank, its other end being suitably connected to a suction generator not shown but common in the art to which my invention relates, said tube being run through an opening in the aforesaid casing.

A floating piston 24 of suitable weight occupies the cylinder 4 and is provided with central longitudinal passages 25, 26 that respectively intersect transverse passages 27, 28 that lead to outer annular grooves 29, 30 of said piston, these grooves being alternately in register with the exhaust port 16 of said cylinder.

In the operation of my vacuum vibrator, air is exhausted from one end of the cylinder 4 through the longitudinal and transverse passages of the piston 24 then in communication with the exhaust-port 16 of said cylinder, while at the same time air is admitted to the other end of the said cylinder through the other longitudinal and transverse passages of said piston then in communication with a port of the air-inlet passage 11. The result is a rapid movement of the piston to the vacuum end of the cylinder and an immediate reverse movement of said piston takes place. The automatic rapid reciprocation of the piston effects the vibrations desired, and the velocity and consequent strength of these vibrations is regu-

lated by an adjustment of the valve 12 that controls the air-inlet passage 11 of the aforesaid cylinder.

I claim:

1. In a vibrator massaging implement, the combination of a cylinder the wall of which is provided with independent air-inlet and air-outlet passages longitudinally thereof communicating through ports with the cylinder-bore, a floating piston in the cylinder provided with passages through which air is simultaneously admitted to and exhausted from opposite ends of said cylinder, a control-valve for each of said passages, the outlet passage being for communication with a vacuum generator, and an applicator in connection with a head of the cylinder.

2. In a vibrator massaging implement, the combination of a cylinder the wall of which is provided with independent air-inlet and air-outlet passages longitudinally thereof communicating through ports with the cylinder-bore, a floating piston in the cylinder provided with passages through which air is simultaneously admitted to and exhausted from opposite ends of said cylinder, a screw-valve arranged to control the air-inlet passage from outside the same, a similar valve in an enlargement of the outlet passage, said outlet passage being for communication with a vacuum generator, and an applicator in connection with a head of the cylinder.

3. In a vibrator massaging implement, the combination of a cylinder the wall of which is provided with independent air-inlet and air-outlet passages longitudinally thereof communicating through ports with the cylinder-bore, a cup-applicator having a hollow shank engaging a cylinder head socket in port communication with the air-outlet passage, a valve arranged to regulate suction in the applicator, a floating piston in the cylinder provided with passages through which air is simultaneously admitted to and exhausted from opposite ends of said cylinder, a control valve for each of said passages, the outlet passage being for communication with a vacuum generator, and an applicator in connection with a head of the cylinder.

4. In a vibrator massaging implement, the combination of a casing, a cylinder supported in the casing and provided in its wall with independent air-inlet and air-outlet passages longitudinally thereof communicating with the cylinder-bore, a floating piston in the cylinder provided with passages through which air is simultaneously admitted to and exhausted from opposite ends of said cylinder, a control valve for each of said passages, a flexible tubing secured in connection with a shank of the cylinder through which said outlet passage is extended, the tube being extended through the casing for connection with a vacuum generator, and an applicator in connection with the outer head of the cylinder.

5. In a vibrator massaging implement, the combination of a casing, a cylinder supported in the casing and provided in its wall with independent air-inlet and air-outlet passages longitudinally thereof communicating with the cylinder-bore, a floating piston in the cylinder provided with passages through which air is simultaneously admitted to and exhausted from opposite ends of said cylinder, a control valve for each of said passages, a flexible tubing secured in connection with a shank of the cylinder through which said outlet passage is extended, the tube being extended through the casing for connection with a vacuum generator, a cup-applicator having a hollow shank engaging a socket provided in said outer cylinder-head in port communication with the air-outlet passage, and a valve arranged to regulate suction in the applicator.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

RAYMOND W. GRIFFITH.

Witnesses:

N. E. OLIPHANT,

L. H. MATHEUS.