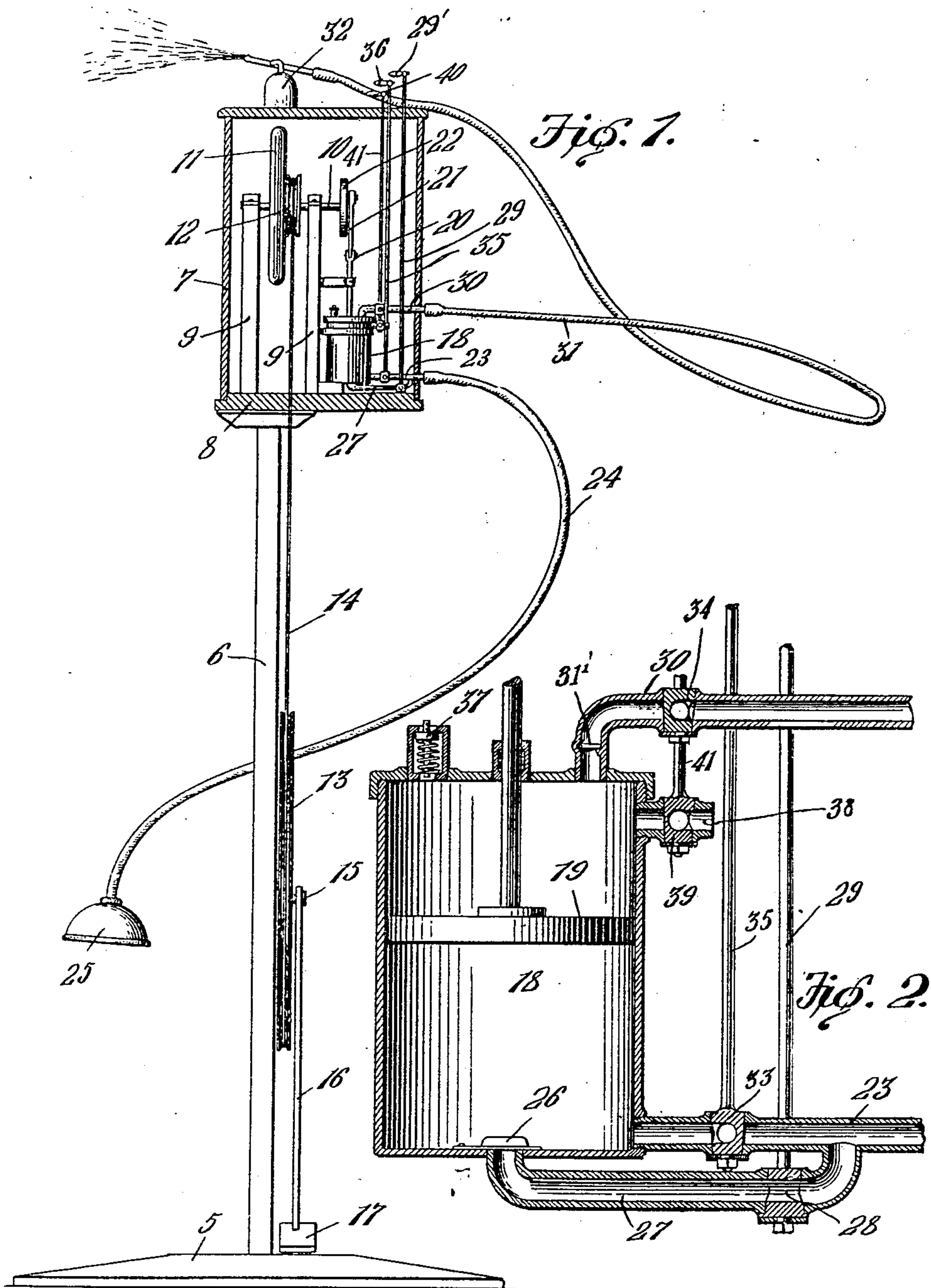


No. 868,600.

PATENTED OCT. 15, 1907.

W. D. DAVENPORT.
MASSAGE MACHINE.
APPLICATION FILED JULY 5, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WALTER D. DAVENPORT, OF KAUFMAN, TEXAS, ASSIGNOR OF ONE-HALF TO JOE PATE, OF KAUFMAN, TEXAS.

MASSAGE-MACHINE.

No. 868,600.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed July 5, 1906. Serial No. 324,909.

To all whom it may concern:

Be it known that I, WALTER D. DAVENPORT, a citizen of the United States, residing at Kaufman, in the county of Kaufman and State of Texas, have invented a new and useful Massage-Machine, of which the following is a specification.

This invention relates to massage machines and has for its object to provide a comparatively simple, and inexpensive machine of this character for massaging the skin and scalp thereby to promote circulation of the blood and maintain the skin in the normal and healthy condition.

A further object of the invention is to provide means for applying a liquid antiseptic to the affected parts so as to render the skin soft and moist and thus prevent undue friction on the latter during the massaging operation.

A further object is to provide means for regulating the suction in the vacuum cup and means for imparting a vibratory motion to the skin.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a side elevation partly in section of a massage machine constructed in accordance with my invention. Fig. 2 is a vertical sectional view of a portion of the machine.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The machine consists of a suitable base or support provided with an upright or standard which forms a support for a casing or housing, the latter being preferably rectangular in shape as shown and formed of wood, metal or other suitable material.

Secured to the base or floor of the housing is a pair of spaced uprights in which is journaled a transverse shaft having a balance wheel mounted for rotation thereon and provided with a pulley operatively connected to a similar pulley through the medium of a belt or chain. The belt pulley is journaled on a stud extending laterally from the standard and is provided with a crank pin connected by a pitman to a foot operated lever or treadle mounted in any suitable manner on the base as shown.

Arranged within the housing is an air cylinder or

pump in which is mounted for reciprocation a piston the free end of which is pivotally connected at to a pitman eccentrically pivoted on the crank pin of a disk or wheel carried by the operating shaft, whereby when the treadle is operated a reciprocating motion will be imparted to the piston.

Secured to one end of the cylinder is a pipe section to which is secured a detachable tube or pipe the free end of which is provided with a vacuum cup of any approved construction. The cylinder is provided with a check-valve and secured to the cylinder at said valve is a branch-pipe the opposite end of which communicates with the pipe as shown, there being a suitable turning plug or valve arranged in the branch pipe and provided with a rod extending through the top of the housing and terminating in an operating handle, as shown.

Communicating with the top of the cylinder is a fluid supply pipe having connected therewith a flexible tube the opposite end of which is secured to an atomizer. The pipe is provided with a two-way valve to which is secured a vertical rod the free end of which extends through the top of the housing and is provided with an operating handle. Air is admitted to the upper end of the cylinder through a downwardly opening spring pressed valve, and communicating with the upper portion of the cylinder and threaded in the side walls thereof is a waste-pipe provided with a two-way valve operated by means of a handle which also preferably extends above the top of the casing or housing, as shown, there being a similar valve in the pipe and operatively connected with the rod so that by turning the handle both valves may be actuated.

The operation of the device is as follows: When it is desired to cause a direct suction on the skin or other portion of the body to be treated the valve is turned so as to close the pipe and the valve moved to open position by turning the handle in which event the upward movement of the piston will suck the air through the tube and thence through the branch tube to the cylinder thus creating a vacuum in the cup, the air within the cylinder on the down stroke escaping through the valve to the atmosphere and valve automatically closing during such down stroke.

If it is desired to impart a vibratory motion to the skin the valve is closed and the valves and moved to open position thus causing the flow of air to impart a pulsating movement to the skin.

When it is desired to moisten the skin during the massaging operation the valve is moved to open position thereby causing the air to flow through the pipe and tube to the atomizer on the up-stroke

of the piston, the air being admitted to the upper portion of the cylinder through the valve 37 on the down-stroke of said piston and the influx of air through pipe 31 being prevented by a one way check valve 31'.

5 When the atomizer is not in use the valve 34 is moved to closed position and the valve 39 to open position thus permitting the air to flow freely to and from the cylinder through the pipe 38. It will thus be seen that the suction exerted on the skin or other parts 10 affected may be regulated by adjusting the valve 33 while the pulsating or vibratory movement imparted to the skin may be regulated by adjusting the valve 28. The waste-pipe 38 by permitting a portion of the air to escape from the valve 39 reduces the pressure 15 on the piston 19 on the up-stroke of the latter and thus allows free operation of said piston.

From the foregoing description it is thought that the construction and operation of the device may be readily understood by those skilled in the art and further 20 description thereof is deemed unnecessary.

Having thus described the invention what is claimed is:

1. In a massage machine, an air pump, a vacuum cup, a main pipe connecting the same, a valve in the main pipe, a 25 branch pipe connecting the pump and main pipe, and a valve in said branch pipe.

2. In a massage machine, an air pump, a vacuum cup, a main pipe forming a source of communication between the pump and vacuum cup, a branch pipe connecting the main

pipe and pump, respectively, and valves operating within 30 said pipes.

3. In a massage machine, an air pump, a vacuum cup, a main pipe forming a source of communication between the pump and vacuum cup, a branch pipe connecting the pump and main pipe, valves for controlling the fluid in 35 said pipes, a waste-pipe communicating with the pump and a valve operating within the waste-pipe.

4. In massage apparatus, an air pump, a vacuum cup, a main pipe connecting the two, a suction inlet valve between the pipe and the pump, a manually operable valve in 40 the pipe, a branch pipe connecting the main pipe to the pump, and a controlling valve in the branch pipe.

5. In a massage machine, a housing, a pump disposed within the housing, a vacuum cup, a main pipe forming a source of communication between the pump and vacuum 45 cup, valves for controlling the fluid within the supply pipe and each provided with a rod extending through the walls of the housing and provided with an operating handle, and means for operating the pump.

6. In a massage machine, a housing, a pump disposed 50 within the housing, a vacuum cup, a main pipe forming a source of communication between the pump and vacuum cup, a branch pipe connecting the pump and the main pipe, valves for controlling the fluid in said pipe and provided with operating handles extending through the walls 55 of the housing, and means for operating the pump.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WALTER D. DAVENPORT.

Witnesses:

LEE R. STROUD,
GEO. G. SHAW.