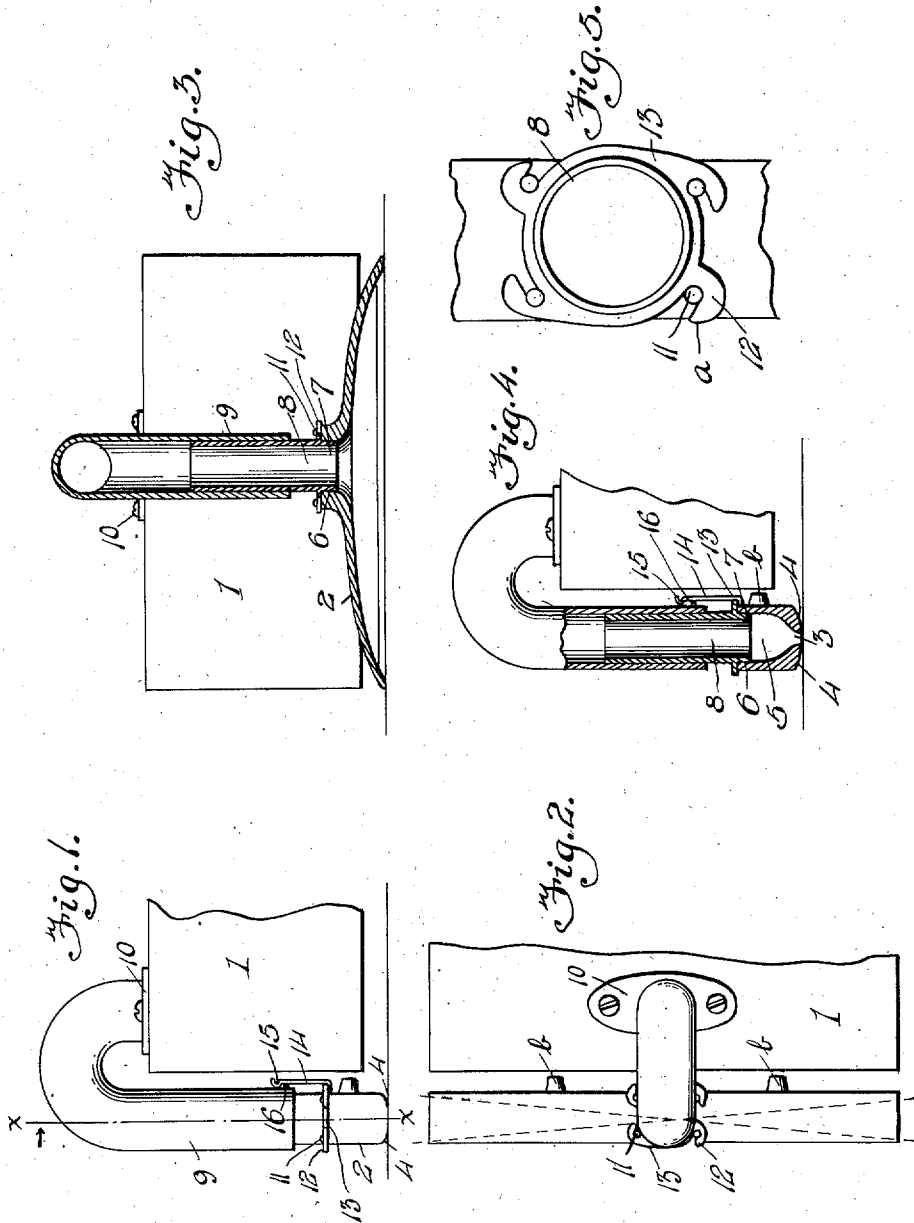


D. P. MOORE & S. B. PACK.
 SUCTION CLEANING MACHINE.
 APPLICATION FILED JAN. 27, 1910.

986,403.

Patented Mar. 7, 1911.



WITNESSES
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WARE.

SUCTION CLEANING-MACHINE.

986,403.

Specification of Letters Patent.

Patented Mar. 7, 1911.

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To all whom it may concern:

Be it known that we, DAVID P. MOORE and SAMUEL B. PACK, citizens of the United States, residing at Washington, in the Dis-
5 trict of Columbia, have invented certain new and useful Improvements in Suction Cleaning-Machines, of which the following is a specification, reference being had there-
in to the accompanying drawing.

10 This invention relates to improvements in suction cleaning machines, and has special reference to a new and improved form of suction head and self-adjusting attachment
therefor, for use in such machines and espe-
15 cially adapted for the forms of suction cleaning machines wherein the body of the machine rests upon the floor, while the suction head rests independently of the machine
though carried thereby. That is the suction
20 head is raised by the action of the irregularities of the surface traversed and falls of its own weight to yieldingly contact or en-
gage said surface. In other words, we provide a substantially vertical tubular sup-
25 port, which is attached to and in communication with the dust collecting casing of the machine, and has slidably and rotatably
connected thereto a suction head. The suc-
30 tion head is thereby permitted to rest lightly upon the surface at all times and free from the weight of the machine, or pressure ex-
erted thereon, and thus to smoothly glide
over the surface traversed, without in any
35 manner retarding the motion of the machine.

To clearly understand the details of the construction, attention is invited to the ac-
companying drawings, in which:—

Figure 1 is a side elevation of our suction
40 head and its support, attached to the forward portion of a dust collecting casing or machine. Fig. 2 is a top plan view thereof.
Fig. 3 is a longitudinal section through the suction head and support on line $x-x$,
45 Fig. 1. Fig. 4 is a similar view to Fig. 1 with the lower end of the suction head support and the suction head in section. Fig.
5 is an enlarged detail view of the attaching device between the head and its tube.

50 Referring to the drawings:—The numeral 1 designates the casing of any form of portable suction cleaner, which as shown in our
above mentioned applications, is mounted
upon wheels, and is adapted to remain in the
55 same relative position to the surface trav-

ersed. In order to permit this, the suction head or nozzle 2, must be mounted so as not to chock the machine and impede the free
gliding motion of the machine. To do this,
we provide the suction head 2, which is
60 preferably made of wood, such as maple, ash, hickory, mahogany, or other tough close grained woods, and provide it with the central elongated slot or mouth 3, the walls 4,
65 being inclined or curved from the slot toward the front and rear of the head to permit the free gliding of the mouth over the carpet, floor or rug.

The mouth opens into the flaring chamber 5, which terminates in the circular aper-
70 ture or opening 6, for the removable reception of the short collar or sleeve 7, carried by the suction head carrying tube 8, which is
slidably and snugly fitted within the lower open end of the goose-neck supporting pipe
75 9, which is secured to the casing by means of the plate 10. It will thus be seen that the tube 8, is allowed a vertical sliding move-
ment within the lower end of the pipe 9, and the nozzle will also be allowed a swinging
80 movement at each end toward and away from the casing with the tube 8, as a central point or axis, as per dotted lines Fig. 2. We
have found by practice that the rotary action
85 of the tube, assists greatly in the sliding motion between the parts, it being demonstrated that it is easier to move the tube within the
pipe by this action than by a straight up
and down movement, and we therefore prefer
90 to permit this action, which will automatically be caused by the movement of the machine as the suction head is pushed or
pulled over the surface.

In order to permit the use of various width
95 nozzles or suction heads, we provide each head with the series of studs or headed pins 11, which are adapted to seat within the
hooks 12, carried by the flange 13, of the tube 8, it simply being necessary to turn the
tube 8 until the pins or studs are beyond the
100 ends a of the hooks at which time the sleeve 7 may be withdrawn from the head or nozzle, and another nozzle or head substituted.
To prevent too great a rotation to the suction head, we employ the two rubber buttons
105 or bumpers, which oppose the end of the casing.

To prevent the falling out of the tube 8 and the consequent dropping of the suction
head, which will fall downwardly and hold
110

itself upon the surface traversed of its own weight, or by gravity, we employ the catch 14, which is carried by the tube 8 and is provided with the stop 15, which rests upon the inner face of the pipe 9, and is prevented from falling too far by means of the stud or stop 16, formed upon the pipe 9.

It will thus be seen that we provide a self-adjusting suction head and support, which will permit the suction head of its own weight to fall and accommodate itself to the surface traversed, or be raised by said surface traversed, this action being automatically accomplished as the suction cleaning machine is moved to and fro over the surface.

What we claim, as new is:—

1. The combination with a portable suction creating device of a suction head carried by the same, and a connection between the device and the suction head consisting of two tubes, one of said tubes leading from the device and the other from the suction head, the said tubes forming a guiding and telescoping connection to present the mouth of the suction head at all times to the surface being cleaned, and permit elevations in the surface traversed to impart an upward movement to the suction head.

2. The combination with a portable suction creating device, of a suction head carried by the same, and a connection between

the device and the suction head, consisting of two tubes, one of the tubes leading from the device and the other from the suction head, and one of the tubes slidingly and rotatably fitting the other tube to permit the suction head to rotate and rise and fall while passing over irregularities as the machine is moved over the surface being cleaned.

3. The combination with a portable suction creating device, of a vertical downwardly opening pipe rigidly connected to the suction creating device, and a suction head provided with a tube rigidly connected thereto and slidably and rotatably connected with said pipe.

4. The combination with a portable suction creating device, of a vertical downwardly opening pipe rigidly connected to the suction creating device, a suction head provided with a tube rigidly connected thereto and slidably and rotatably connected with said pipe, and means for limiting the rotary movement of the suction head.

In testimony whereof we affix our signatures in presence of two witnesses.

DAVID P. MOORE.
SAMUEL B. PACK.

Witnesses:

A. M. PARKINS,
CARROLL BEALE.