

D. T. WILLIAMS.  
PNEUMATIC CLEANING IMPLEMENT.  
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929,066.

Patented July 27, 1909.

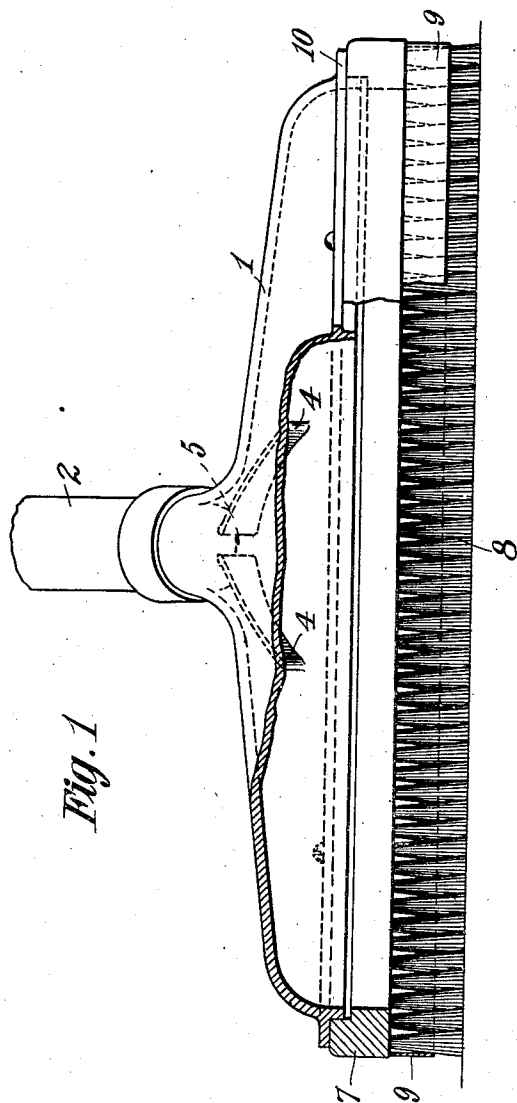


Fig. 1

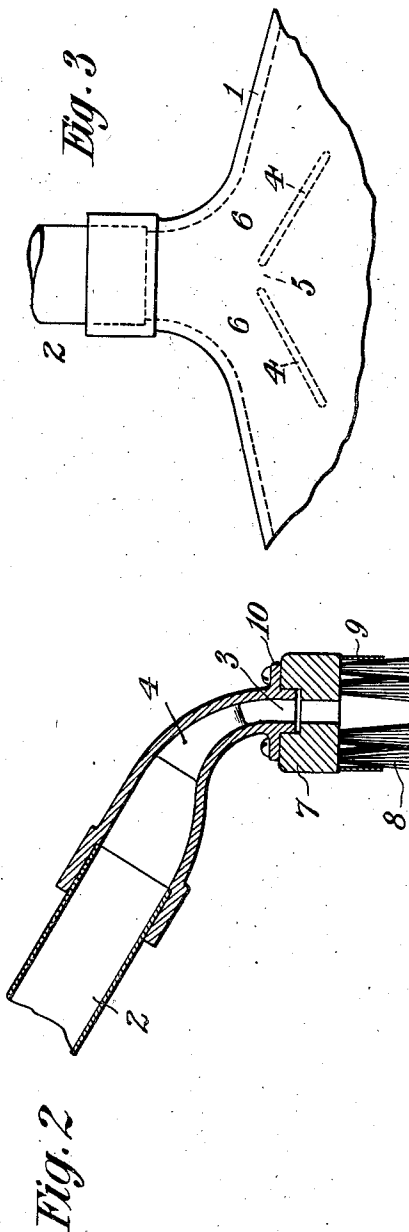


Fig. 2

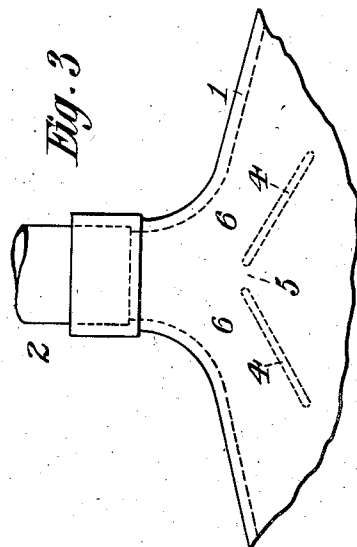


Fig. 3

Witnesses:  
Edw. W. Vaile Jr.  
J. H. King

David T. Williams, Inventor

By his Attorneys  
R. H. Sheffield, Attorney at Law

# UNITED STATES PATENT OFFICE.

DAVID T. WILLIAMS, OF PATERSON, NEW JERSEY, ASSIGNOR TO VACUUM ENGINEERING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## PNEUMATIC CLEANING IMPLEMENT.

No. 929,066.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed April 30, 1908. Serial No. 430,076.

*To all whom it may concern:*

Be it known that I, DAVID T. WILLIAMS, a British subject, residing at Paterson, county of Passaic, State of New Jersey, United States of America, have invented certain new and useful Improvements in Pneumatic Cleaning Implements, of which the following is a full, clear, and complete disclosure.

This invention relates to that class of pneumatic cleaning implements in which a suction is created by means of any suitable suction apparatus so that dirt and air, or dirt, air and water are drawn from the surface being cleaned through suitable pipes or conduits. This form of my invention relates particularly to means for obtaining a thorough and efficient action of the cleaning implement, especially where the cleaning implement is made of unusual widths in order to treat a wide area of surface during a single stroke of the implement.

In cleaning implements of the class having a suction head provided with a narrow slot adapted to be passed over or contact with the surface being cleaned, it has been found that the suction tends to be created to a greater degree at the central portion of the slot than at its ends, when the length of the slot is greater than a certain dimension and when the suction conduit connects with the middle of the suction head. To obviate this objectionable feature, I have devised the construction set forth in the following specification and in the accompanying drawing, in which—

Figure 1 is a side elevation of my improved suction cleaning implement, parts being broken away to show the internal arrangement thereof. Fig. 2 is a vertical-transverse sectional view thereof, and Fig. 3 is a plan-view of a portion of the same.

Referring to the drawing, the numeral 1 indicates the casing forming the suction head which has attached thereto at a suitable angle, a suction conduit, 2. The suction head, 1, terminates in a narrow slot, 3, which may be designed, as to length and width, to accommodate the requirements of use and the amount of vacuum produced by the suction apparatus. Within the suction head, I place transverse vanes or ribs, 4, which are so located that the suction maintained in the conduit, 2, will be evenly distributed to all portions of the slot, 3. The ribs or vanes, 4,

extend from top to bottom of the interior chamber of the suction head, 1, and at their inner ends approach each other only to an extent sufficient to restrict the vacuum at the central portion of the slot, and allow the same to act more forcibly at the ends of the slot. By proportioning the opening, 5, in relation to the passages 6, between the vanes, 4, and the upper wall of the chamber in the suction head, the vacuum will be distributed evenly over the entire length of the slot.

In the form of invention shown, I have shown the suction head used in connection with a brush for dislodging the dirt from the surface being cleaned, such as walls, hard-wood, tile floors, etc. This brush consists of a back or top, 7, having bristles, 8, inserted therein, and provided with a flexible apron 9, made of leather or other flexible material which surrounds the bristles, in order to more thoroughly collect the dust and dirt dislodged thereby. This brush may be attached to the suction head by means of a flange, 10, which engages suitable fastening devices.

I do not wish to be understood as being limited to the arrangement of parts and details of construction herein set forth, for it is obvious that various changes may be made without departing from the spirit and scope of my invention. The principal features of my improved suction head may be used either with a suction head having a plain opening without a brush, or without a flexible contacting pad or packing, as is sometimes used, the improvement being applicable to all forms of suction heads where a narrow slot is utilized. It will be apparent also that more than two directive or distributing vanes may be used, depending upon the size, shape and design of the suction head, the two vanes being shown in the relations indicated merely for the purpose of illustrating the principle of my invention.

Having thus described this form of my invention, what I claim and desire to protect by Letters Patent is:

1. A vacuum cleaning implement comprising a head having an elongated suction chamber therein, said chamber having an outlet opening and an inlet slot, vanes located in said chamber between said outlet and said slot and dividing said chamber into

separate channels, and a slotted contact member on the end of said head.

2. A vacuum cleaning implement comprising a head having an elongated suction chamber therein, said chamber having an outlet opening and an inlet slot, vanes located in said chamber between said outlet and said slot and dividing said chamber into

separate channels, and a slotted brush on the end of said head.

Signed this 28th day of April, 1908.

DAVID T. WILLIAMS.

Witnesses:

WALTER S. JONES,  
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