

P. W. PARKER.
VACUUM CLEANING APPARATUS.
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987,820.

Patented Mar. 28, 1911.

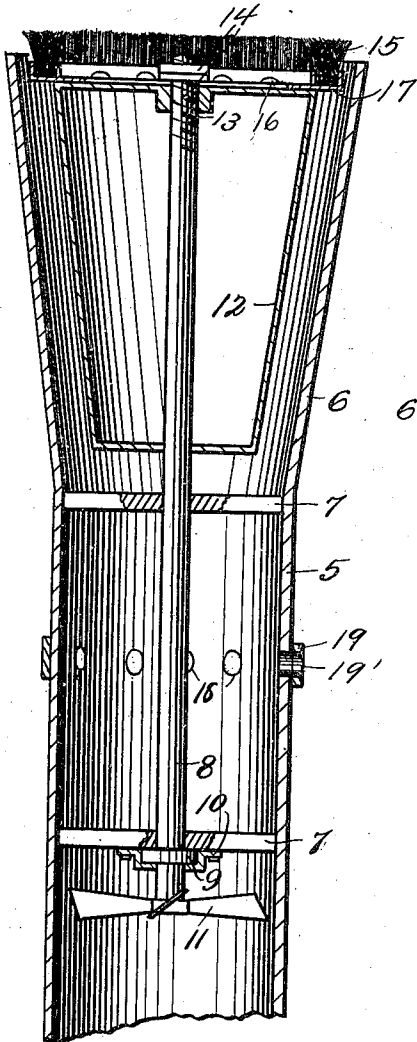


Fig. 1.

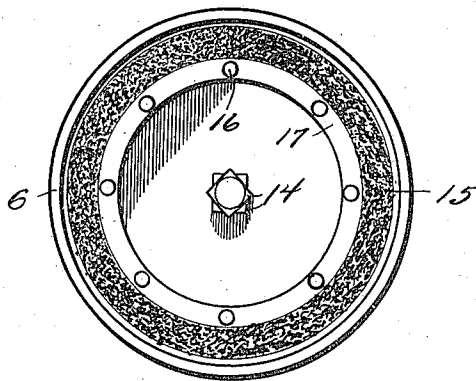


Fig. 2.

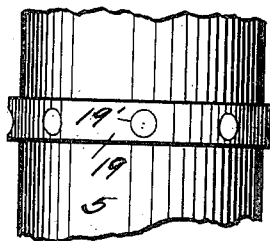


Fig. 3.

Witnesses

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To all whom it may concern:

Be it known that I, PITMAN W. PARKER, a citizen of the United States of America, residing at San Diego, in the county of San Diego and State of California, have invented certain new and useful Improvements in Vacuum Cleaning Apparatus, of which the following is a specification.

This invention relates to vacuum cleaning apparatus and more particularly to a brush head for apparatus of this character, the object of the invention being to locate a longitudinally adjustable brush in the mouth of a flaring vacuum tube or pipe in such manner that the suction may be varied by the longitudinal movement of the brush with relation to the tube.

It is also an object of the invention to provide a rotatively mounted brush and to provide additional means for varying the suction, the rotation of the brush being accomplished, if desired, by the passage of air through the suction or vacuum tube.

Further objects and advantages of the invention will be set forth in the detailed description which now follows.

In the accompanying drawing Figure 1 is a longitudinal sectional view of a brush head constructed in accordance with the invention; Fig. 2 is an end view thereof, and Fig. 3 is a side elevation of a portion thereof illustrating a vent controlling ring, hereinafter described.

Like numerals designate corresponding parts in all of the figures of the drawing.

Referring to the drawing the numeral 5 designates the suction or vacuum tube forming a portion of a vacuum cleaning apparatus. This tube is provided with a flaring mouth portion 6 and is spanned by the fixed bars 7. Mounted for rotation in these bars is a shaft 8, which is held against endwise movement by means of its collar 9, located in the housing 10. A fan or propeller 11 is mounted upon the inner end of the shaft so that the rush of air through the tube 5 will act thereupon to impart rotation to the shaft and the parts carried thereby.

A frustoconical head 12 is threaded upon shaft 8 at 13, and is bound in any adjusted position with relation to said shaft by the lock nuts 14. This head has secured thereto an annular brush 15. This brush is secured to the head by fastening devices 16 which pass through a flange 17 of the brush.

Openings 18 are formed through the wall

of the tube 5 between the frustoconical head and the fan or propeller and openings 19 adapted to register therewith are formed in a ring 19 which encircles the tube and which is mounted thereon in such manner that it may be turned to bring the openings 19 into or out of registry with openings 18 when desired.

The operation of the device is as follows:— With the openings of ring 19 out of registry, all of the air drawn into tube 5 must pass between the brush and frustoconical head and the wall of tube 5. It follows therefore that the velocity of this air will be determined by the longitudinal adjustment of the brush and head with relation to the flaring mouth portion 6 of the tube. It is apparent that the farther the frustoconical head is screwed in, the smaller will be the passage way between said head and the flaring mouth portion of the tube. A further means of controlling the suction resides in the ring 19. By turning this ring so that its openings register or partially register with the openings 18 of tube 5 the vacuum is broken to a corresponding degree and the suction is correspondingly regulated. The importance of being able to regulate and control the suction to a nicety will be apparent when it is considered that in some cases it is desired to use the apparatus upon rugs or carpets with considerable "nap", where the dirt must be drawn past considerable obstruction and where a suction of considerable force can do no harm, while in other cases the apparatus is used upon coated walls where too great a suction would be likely to remove portions of the wall coating. Rotation may be imparted to the brush by means of fan or propeller 11.

From the foregoing description it will be seen that simple and efficient means are herein provided for accomplishing the objects of the invention, but while the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth but includes within its purview such changes as may be made within the scope of the appended claims.

Having described my invention what I claim is:—

1. In a vacuum cleaning apparatus, the combination with a suction tube having a flaring mouth, of a brush mounted in the

mouth of said suction tube and longitudinally adjustable therein, and means actuated by the passage of air through said tube for imparting rotation to said brush.

5 2. In a vacuum cleaning apparatus, the combination with a suction tube having a flaring mouth, of an annular brush mounted in the mouth of said suction tube and longitudinally adjustable therein, and means
10 actuated by the passage of air through said tube for imparting rotation to said annular brush.

3. In a vacuum cleaning apparatus, the combination with a suction tube having a
15 flaring mouth, of a frustoconical brush carrying head mounted in said flaring mouth and being longitudinally adjustable with relation to said tube, and an annular brush secured to said head.

20 4. In a vacuum cleaning apparatus, the combination with a suction tube having a flaring mouth, bars spanning said suction tube, a shaft mounted in said bars, a frustoconical brush carrying head mounted upon
25 said shaft and longitudinally adjustable

upon said shaft, a brush carried by said head which projects beyond the outer end of said tube, and means for holding said shaft against endwise movement.

5. In a vacuum cleaning apparatus, the
30 combination with a suction tube having a flaring mouth, bars spanning said suction tube, a shaft mounted in said bars, a frustoconical brush carrying head mounted upon
35 said shaft and longitudinally adjustable upon said shaft, a brush carried by said head which projects beyond the outer end of said tube, means for holding said shaft
40 against endwise movement, and means mounted upon said shaft for imparting rotation to the brush carrying head, said means being actuated by the passage of air through said tube.

In testimony whereof I affix my signature in presence of two witnesses.

PITMAN W. PARKER.

Witnesses:

J. CLYDE HIZAR,
H. M. VOLLMER.