

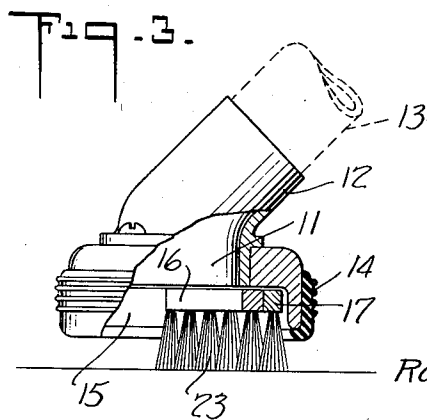
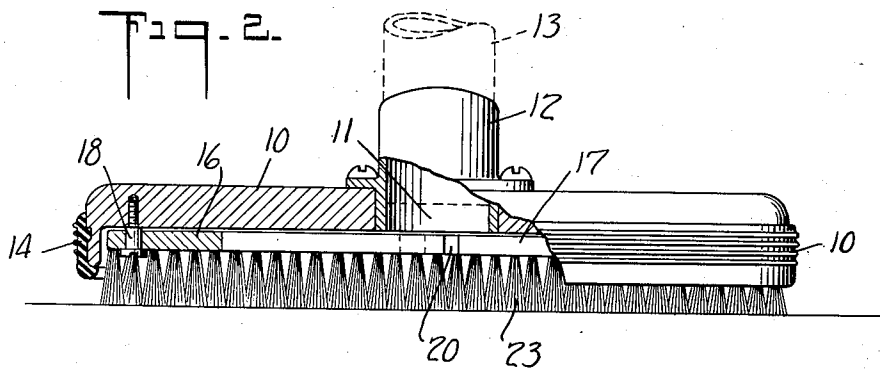
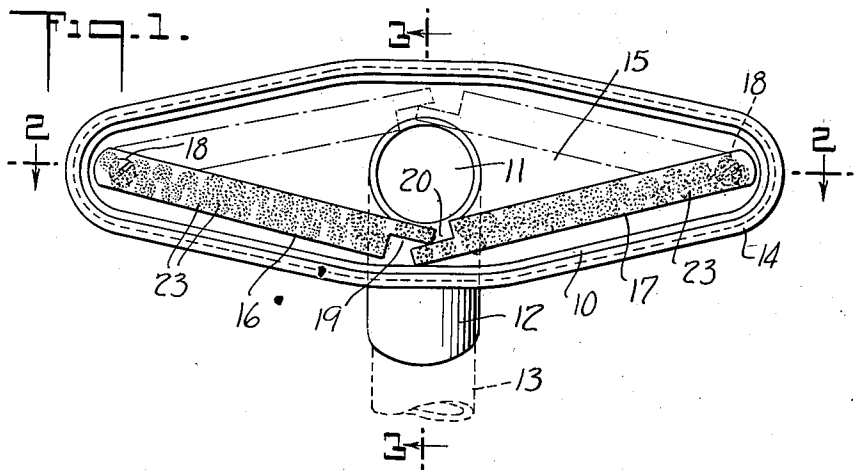
Nov. 21, 1939.

R. P. MORTENSEN

2,180,930

VACUUM CLEANER

Filed Jan. 10, 1938



INVENTOR  
Rasmus Peder Mortensen  
BY  
Thomas L. Betts  
ATTORNEY

## UNITED STATES PATENT OFFICE

2,180,930

## VACUUM CLEANER

Rasmus Peder Mortensen, Copenhagen, Denmark,  
 assignor to Electrolux Corporation, Dover, Del.,  
 a corporation of Delaware

Application January 10, 1938, Serial No. 184,195  
 In Germany January 11, 1937

5 Claims. (Cl. 15—158)

My invention relates to a vacuum cleaner and more particularly to an improved cleaning device for use in connection therewith.

In accordance with my invention one or more brush members are movably mounted within the mouth of a nozzle member and so arranged as to be moved relative to the nozzle body when the nozzle as a whole is moved back and forth over a surface to be cleaned.

Further objects and advantages of my invention will be apparent from the following description considered in connection with the accompanying drawing which forms part of this specification, and of which—

Fig. 1 is a bottom view of a nozzle in accordance with my invention;

Fig. 2 is a cross-sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 is a cross-sectional view taken on the line 3—3 of Fig. 1.

Referring to the drawing, reference character 10 designates a nozzle body, which may be made of wood or metal, and which is provided with an outlet 11 to which is secured a suction conduit 12 adapted to be connected to a suction conduit 13. If desired, a rubber bumper 14 may be disposed around the edge of body 10 in order to serve as a protection against marring furniture or the like.

Member 10 is opened at the bottom and has a hollow interior 15 of the shape illustrated in Fig. 1, that is, comparatively wide in the middle and tapered towards each end. Pivotally mounted within space 15 are a pair of brush members 16 and 17, each of which carries brush bristles 23. Members 16 and 17 include rigid backs and may be pivoted to the body in any desired manner, as by the studs 18. The free ends of members 16 and 17 are formed with cut-away recesses 19 and 20, respectively, thus permitting overlapping of the ends of the members in all pivotal positions.

In operation, the suction conduit 13 is connected to a suitable vacuum cleaner unit provided with a source of suction and a dust separating member. When the nozzle is moved over a surface to be cleaned, the bristles 23 carried by brush members 16 and 17, contact the surface and offer a certain amount of frictional resistance to movement thereover. Consequently, when the nozzle is moved in a forward direction, this frictional resistance causes the brush members to be pivoted to the rear of the nozzle, as shown in dotted lines in Fig. 1. Movement of the nozzle in the opposite direction causes the brush bristles

to be pivoted to the forward part of the nozzle, as shown in full lines in Fig. 1. Thus, the brushes are always adjacent to the trailing edge of the nozzle and in a position to dislodge dirt which suction alone has been unable to pick up.

It will be noted that in either of the above extreme positions of the brushes, the outlet opening 11 is unobstructed so that air may flow free thereinto. Moreover, each time the position of the brushes is shifted, they pass directly under the outlet opening 11, and across the center line of the nozzle where the suction is the greatest and thus are effectively cleaned by the inrushing air.

While I have shown one more or less specific embodiment of my invention, it is to be understood that this has been done for purposes of illustration only, and that the scope of the invention is not to be limited thereby, but is to be determined by the appended claims viewed in the light of the prior art.

What I claim is:

1. In a suction nozzle for cleaning a surface, a hollow body formed with a suction intake opening, a brush member including a rigid back carrying brush bristles, and means pivotally mounting said brush member about an axis at right angles to the plane of said opening and within said hollow body with said bristles projecting through said opening, said pivotal means being located closer to one end of said brush member than to the other, whereby said brush member is pivoted within said body about said axis as the nozzle is moved back and forth over the surface.

2. In a suction nozzle for cleaning a surface, a hollow body formed with an elongated suction intake opening, a pair of brush members each including a rigid back carrying brush bristles, and means for pivotally mounting said members about axes at right angles to the plane of said opening and within said hollow body with said bristles projecting through said opening, one of said pivotal means being located adjacent to one end of each brush member and adjacent to the opposite ends of said elongated opening, whereby said brush members are pivoted within said body about said axes as the nozzle is moved back and forth over the surface.

3. In a suction nozzle for cleaning a surface, a hollow body formed with an elongated suction intake opening, narrow at the ends and wider at the center, a pair of brush members each including a rigid back supporting brush bristles, and means for pivotally mounting said members about axes at right angles to the plane of said opening and within said hollow body with said bristles

projecting through said opening, one of said pivotal means being located adjacent to one end of each brush member and adjacent to the narrow ends of said elongated opening, the free ends of said brush members being disposed in said wider central portion of said opening, whereby said brush members are pivoted within said body about said axes as the nozzle is moved back and forth over the surface.

4. In a suction nozzle for cleaning a surface, a hollow body formed with an elongated suction intake opening, a pair of brush members each including a rigid back carrying brush bristles, and means for pivotally mounting said members about axes at right angles to the plane of said opening and within said hollow body with said bristles projecting through said opening, one of said pivotal means being located adjacent to one end of each brush member and adjacent to the opposite ends of said elongated opening, whereby said

brush members are pivoted within said body about said axes as the nozzle is moved back and forth over the surface, the free ends of said brush members being oppositely recessed so as to overlap in all pivotal positions thereof.

5. In a suction nozzle for cleaning a surface, a hollow body formed with a suction intake opening on one side and a suction outlet opening on an opposite side, a brush member including a rigid back carrying brush bristles, and means for pivotally mounting said brush member about an axis at right angles to the plane of said opening and within said hollow body between said openings with said bristles projecting through said intake opening, said pivotal means being located closer to one end of said brush member than to the other, whereby said brush member is pivoted within said body about said axis as the nozzle is moved back and forth over the surface.

RASMUS PEDER MORTENSEN.