

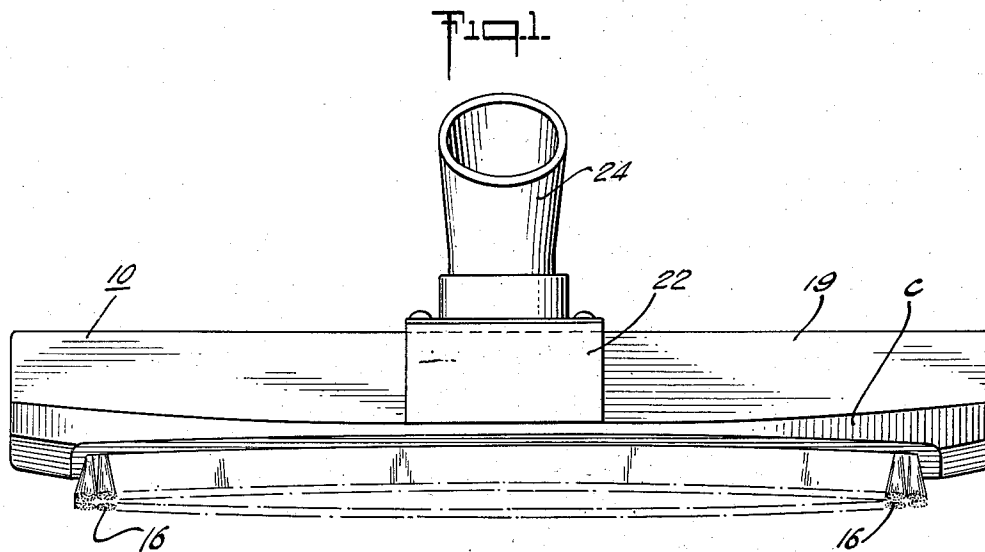
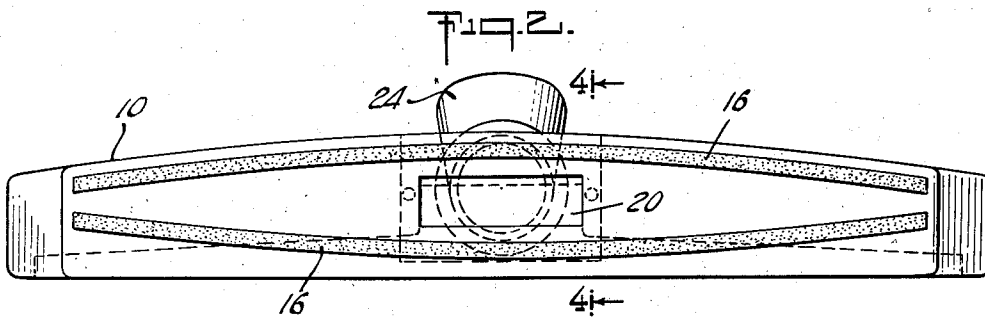
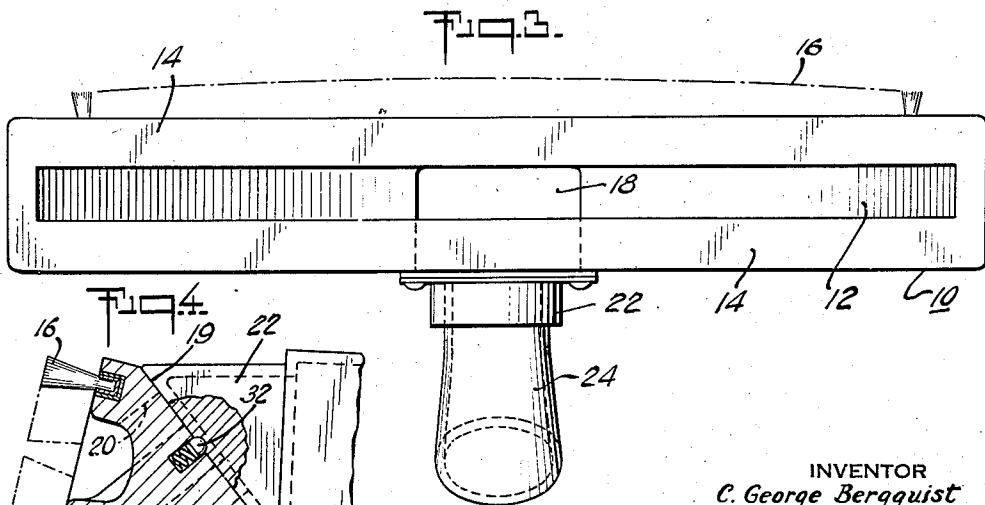
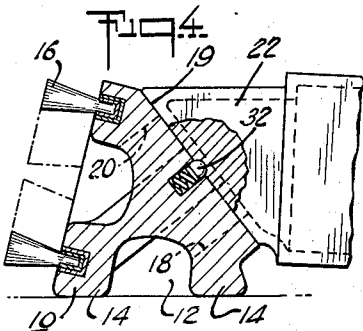
July 29, 1958

C. G. BERGQUIST
DUAL PURPOSE NOZZLE

2,844,841

Filed June 6, 1955

2 Sheets-Sheet 1



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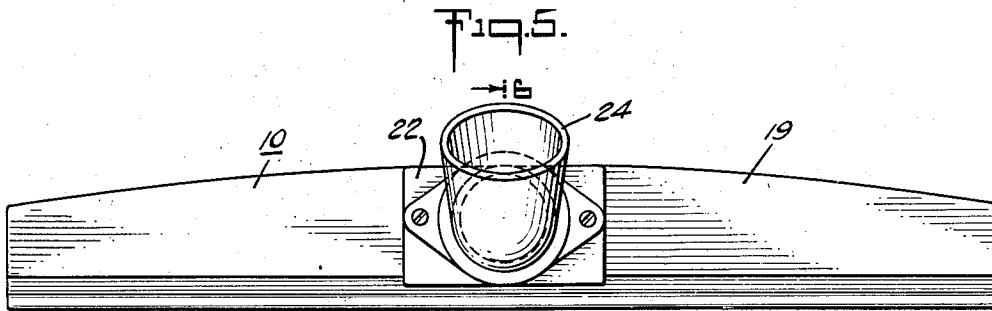
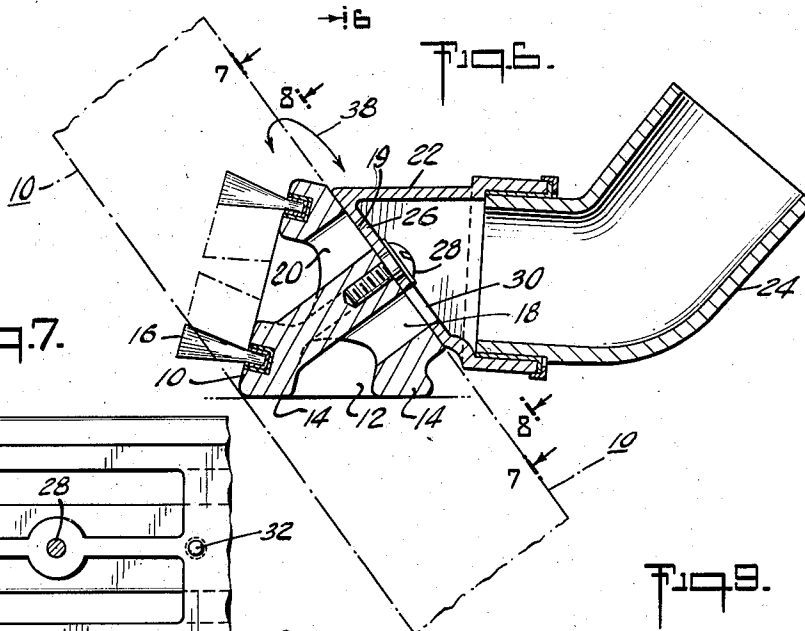
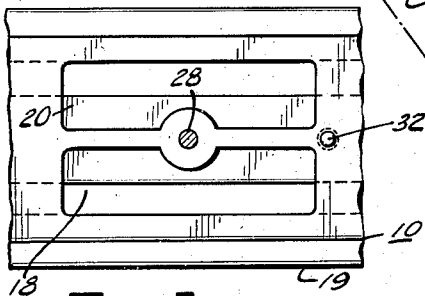
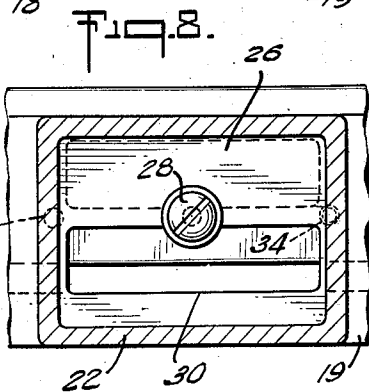
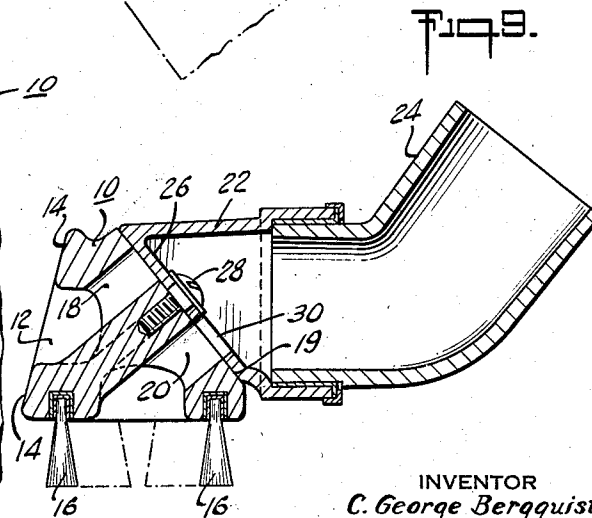
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2 Sheets-Sheet 2



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1

2,844,841

DUAL PURPOSE NOZZLE

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Application June 6, 1955, Serial No. 513,384

2 Claims. (Cl. 15—417)

My invention relates to vacuum cleaner tools and more particularly to multipurpose suction nozzles.

One of the objects of my invention is to provide a cleaning tool of this type having a triangular shape with two different suction nozzles on two of its faces, either of which may be brought into operative position with respect to the surface being cleaned by merely pivoting the nozzle with respect to a suction connection member mounted on its third face, such pivoting at the same time resulting in the establishment of a connection between the source of suction and the nozzle which is in operative position.

Further objects and advantages of my invention will be apparent from the following description when considered in connection with the accompanying drawings which form a part of this specification and of which:

Fig. 1 is a top view of cleaning tool in accordance with my invention embodying a rug nozzle and a floor brush, the formed being in operative position;

Fig. 2 is a front view of the cleaning tool shown in Fig. 1;

Fig. 3 is a bottom view of the tool shown in Fig. 1;

Fig. 4 is a cross-sectional view on an enlarged scale taken on the line 4—4 of Fig. 2;

Fig. 5 is a rear view of the tool shown in the preceding figures;

Fig. 6 is a cross-sectional view on an enlarged scale taken on the line 6—6 of Fig. 5;

Fig. 7 is a cross-sectional view on a still larger scale taken on the line 7—7 of Fig. 6;

Fig. 8 is a cross-sectional view on this larger scale taken on the line 8—8 of Fig. 6; and

Fig. 9 is a view similar to Fig. 6, but showing the floor brush in operative position.

Referring to the drawings, reference character 10 designates generally an elongated body which is substantially triangular in cross-section, as is shown particularly in Figs. 4, 6 and 9. Two of the elongated faces of body 10 are provided with section nozzles. Thus, one of the faces is provided with a lengthwise extending groove 12 bounded by lips 14 constituting a rug nozzle. The other face is provided with rows of bristles 16 suitable for cleaning a hard surface, such as a hardwood floor. These two faces are each disposed at approximately 45° with respect to the third face 19 of the body 10. A passageway 18 extends from the central portion of the groove 12 of the rug nozzle through the body 10 and terminates in a rectangular opening formed in the third face 19. A similar passage 20 extends from the space between the rows of bristles 16 and terminates in a rectangular opening in the face 19. Particularly as is shown in Fig. 7, the passages 18 and 20 are each rectangular in cross-section with the major dimension extending parallel to the lengthwise extent of the elongated body 10 and the two rectangular openings in the third face 19 are spaced from, and parallel to, each other.

Pivotally mounted on the third face of the body 10

2

is a suction connection member 22 to which is rotatably connected a hollow elbow 24. Member 22 is provided with a wall 26 which is disposed at an angle of substantially 45° with respect to the axis of rotation of the elbow 24 in the member 22. The member 22 is pivotally secured to the body 10 with the wall 26 in contact with face 19 by means of a bolt or the like 28 which extends through the wall 26 and into the body 10 between the passages 18 and 20. The wall 26 is formed with an inlet port 30 disposed to one side of the bolt 28, the size and shape of the port 30 being substantially the same as the opening of either of the passages 18 or 20 in the face 19.

If desired a spring pressed detent 32 may be carried by the body 10 and adapted to cooperate with recesses 34 and 36 formed in the wall 26 so as to retain the connector member 22 in either of the two positions shown in Figs. 6 and 9, respectively, that is with the port in alignment with either the passages 18 or 20.

With the parts in the position shown in Figs. 1 through 6, it will be seen that the rug nozzle face of the body 10, that is the face including the lips 14, is in operative position for cleaning a surface. In this position the passage 18 leading from the rug nozzle is in registry with the inlet port 30 of the member 22, and hence if a source of suction is connected to the elbow 24, air will be caused to flow into the rug nozzle and through the passage 18, thus removing dirt from the surface over which the rug nozzle is moved. With the parts in this position the bristles 16 are off the floor and the passage 20 is closed. The elbow 24 may be swiveled to any extent desired in order to manipulate the nozzle, for example underneath low furniture.

If it is desired to employ the floor brush, the body 10 is rotated in either direction through 180° with respect to the connector member 22 about the axis of the bolt 28, as indicated by the arrow 38 in Fig. 6, thus bringing the parts into the position shown in Fig. 9. In Fig. 6 the intermediate position of the nozzle when it has been turned 90° is indicated by the broken lines. The movement to the position shown in Fig. 9 also brings the end of passage 20 leading from the floor brush into alignment with the port 30 and consequently air will be drawn in through the floor brush nozzle. At the same time, the lips 14 of the rug nozzle are off the floor and the passage 18 is closed by the imperforate portion of the wall 26.

As above stated, the faces of the triangular body 10 which carry the two nozzle structures are disposed at approximately 45° with respect to the third face 19. If they were arranged at exactly 45° to the third face, they would be at 90° with respect to each other, but, as is clearly shown in Figs. 4, 6 and 9, the interior angle between the two faces carrying the different nozzle structures is somewhat less than 90°. This is desirable in the event that one of the nozzle structures is a floor brush, because the bristles thereof tend to diverge and if the two nozzle faces were at 90° to each other this would mean that when the rug nozzle is in operative position, the floor brush face would extend vertically with respect to the surface being cleaned, and the downwardly diverging bristles of the lower row might contact this surface. By making the angle a little less than 90°, additional clearance is provided between these bristles and the surface, as is clearly apparent from Fig. 6.

While I have shown and described one more or less specific embodiment of my invention it is to be understood that this has been done for the purpose of illustration only and that the scope of my invention is not to be limited thereby, but is to be determined from the appended claims.

What I claim is:

1. A dual purpose suction cleaner nozzle comprising an elongated body having three angularly disposed elongated faces two of which constitute work faces disposed at approximately 45 degrees to the third face, said body having suction passages providing communication between said work faces and said third face, and said suction passages terminating in spaced openings in said third face, a suction connection member having a wall of a size and shape to cover both of said spaced openings and rotatably joined to a tube for connection with a source of suction, said wall having an opening adapted to selectively communicate with one of said suction passages, said suction connection member and said elongated body being rotatably united so that the wall of said suction connection member will cover the openings in said third face and with the axis of rotation of said tube

disposed at an angle of approximately 45 degrees to said third face.

2. The structure of claim 1 having yieldable means for maintaining the selected passage and opening in communication one with the other.

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