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VACUUM CLEANER BRUSH

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3 Claims. (Cl. 15—383)

This application is a division of our prior application, Serial No. 193,112, filed May 8, 1962, on Vacuum Cleaner Device, now abandoned.

This invention relates to a brush construction for power cleaners, such as conventional vacuum or suction cleaners, and power floor brushes.

It is a general object of the invention to provide a rotary brush construction wherein its bristles are arranged to provide an improved beating and brushing action.

The above and other objects will more fully appear from the following description in connection with the accompanying drawings, in which:

FIG. 1 is a transverse vertical sectional view through the head of a cleaner in which the brush construction is incorporated;

FIG. 2 is a bottom plan view of the head of the cleaner with the brush shown therein.

The device includes a floor traversing head 4, which as shown and described in the above identified application for patent, has a handle in the form of a hollow wand, a motor to drive the brush and means for exhausting air and dust therefrom, these features not being essential to the invention of the present application are not shown in the drawings or described with any particularity herein.

The cleaner head 4 has a bottom plate 6 which is suitably and removably secured to the upper portion 8 of the head of the cleaner.

The bottom plate 6 has an air inlet opening 10 which extends nearly across the bottom plate adjacent its forward edge. The underside of the bottom plate 6 has downwardly open air inlet grooves 12 which extend from the forward and widest portion of the bottom plate to the ends of the air inlet 10.

The forward bottom edge portion of the bottom plate 6 is also provided with a series of shell grooves 14 which extend from the extreme forward edge of the bottom plate to the forward edge of the transversely extending air inlet 10.

The grooves 12 and 14 provide an air inlet flow path coextensive with the length of the air inlet 10 and beyond its ends to the sides of the bottom plate 6 and the cleaner head 4.

Mounted in the cleaner head 4 is a brush spindle 16 provided with axles 18 which are supported by self-centering bearings 20.

The brush spindle 16 is provided with groups of bristles 22, each group being composed of bristle tufts 24 which are arranged in the form of a V, as shown in the drawing. The apex of each V-shaped group 22 is disposed in the direction of rotation of the brush spindle 16. Furthermore, each bristle group 22 is positioned ahead of or behind an adjacent group about the spindle 16. For example, if there are three bristle groups 22, as shown, they would be positioned with their apexes 120 degrees apart about the spindle 16. This formation of bristles in each group, and their staggering relationship about the spindle, provides an effective beating as well as brushing action, yet the staggering as described combines the beating action with smooth rotation.

It will of course be understood that various changes can be made in the specific relationship of the bristles while maintaining their desired functional effect, and without departing from the spirit of the invention.

We claim:

1. In a power cleaner, a floor traversing head including a hollow casing having an elongated air inlet across the bottom thereof, a rotary brush in said casing including a spindle with bristles extending therefrom, the bristles being in V-shaped groups, each group of bristles extending only part of the length of the spindle and having its end in staggered misalignment relative to the adjacent end of an adjacent group of bristles around the spindle.

2. The structure in claim 1, and the leading bristles of one group lying adjacent the trailing bristles of an adjacent group relative to the axis of said spindle.

3. The structure in claim 1, and the apex of each V-shaped group of bristles being located in the lead of the direction of rotation of said spindle.

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