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SUCTION BRUSH FOR VACUUM CLEANERS

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The present invention relates to vacuum cleaning devices, and more particularly to a suction brush therefor.

According to the invention all parts of the brush, such as the brush body proper, the suction mouthpiece, and the shank for attaching the brush to a suction tube, are made of a single piece of an elastic material such as rubber, and the bristle tufts are directly secured thereto. The suction opening is preferably so designed that a skirt consisting of the same elastic material and surrounding the base portion of the brush bristles in the form of a protective sleeve, is integral with the other parts of the brush.

The accompanying drawing exemplifies an embodiment of the invention in a part-sectional side elevation. 1 is a disk-shaped brush body having in its central portion a suction opening 2. The body 1 is provided with a skirt 3 forming a suction mouthpiece and a connection member or shank 4 serving to attach the device to the suction tube of a vacuum cleaner or the like. A set of bristles 5, consisting of several rows of tufts, surrounds the suction opening 2. From the outer edge of the brush body 1 extends a thin-walled skirt 6 in the downward direction and encloses the base portion of the outermost row of bristle tufts. This skirt holds the bristles together and serves as protection. The parts 1 to 4 and 6 of the brush form a single piece of elastic material, preferably rubber, and the bristle tufts 5 are secured thereto.

A suction brush according to the invention adapts itself readily to surfaces and nooks of any shape to be cleaned due to the fact that not only the body portions of the brush but also the individual tufts may bend into various positions relative to one another. As the inner skirt forming the suction mouthpiece as well as the protective outer skirt follow the movements of the tufts, they ensure a proper suction effect regardless of the deformed shapes which the brush may assume, by preventing the deforming of the brush from producing excessive cleavages between the bristle tufts and by preventing smaller cleavages from diverting the proper inflow of the suction air. The flexibility, relative to one another, of the tufts and all other parts of the brush renders the brush suitable for the cleaning of objects requiring a particularly careful handling. Due to the same construction, the brush is largely unaffected by mechanical stresses and therefore has a long life even in cases of ill-usage. Making the entire body portion of the brush from one piece of rubber and securing the tufts directly thereto also facilitates and simplifies considerably the manufacture of the brush.

What is claimed is:

1. A hollow suction brush for vacuum cleaners, comprising a tubular shank for attaching the brush to a suction conduit, a brush body connected with said shank, a set of bristle tufts arranged on said body in concentric rows surrounding the opening of said shank, an inner skirt completely surrounding the opening of said shank and projecting from said brush body within the innermost of said rows of tufts so as to form a suction mouthpiece, and an outer skirt forming a protective sleeve closely and completely surrounding the outermost of said rows of tufts, said shank, said brush body, said inner skirt and said outer skirt consisting of one single piece of soft and flexible material having recesses for receiving the ends of said tufts, and said tufts engaging said recesses and being attached to said piece.

2. A hollow suction brush for vacuum cleaners comprising a tubular shank for attaching the brush to a suction conduit, a brush body connected with said shank, at least one row of bristle tufts arranged on said body surrounding the opening of said shank, an inner skirt completely surrounding the opening of said shank and projecting from said brush body along the inside of said row of tufts so as to form a suction mouthpiece, and an outer skirt also projecting from said brush body, said outer skirt forming a protective sleeve closely surrounding the outermost portion of said row of tufts, said shank, said brush body and said inner and outer skirts consisting of one piece of soft and flexible material having recesses for receiving the ends of said tufts and said tufts engaging said recesses and being attached to said piece.

3. A structure as set forth in claim 2 in which said inner skirt is shorter than said outer skirt and in which said inner row of tufts is shorter than the outer row.

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CERTIFICATE OF CORRECTION.


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June 6, 1944.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 1, second column, line 45, claim 3, for the claim reference numeral "2" read ---1--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 12th day of February, A. D. 1946.

Leslie Frazer
First Assistant Commissioner of Patents.

(Seal)