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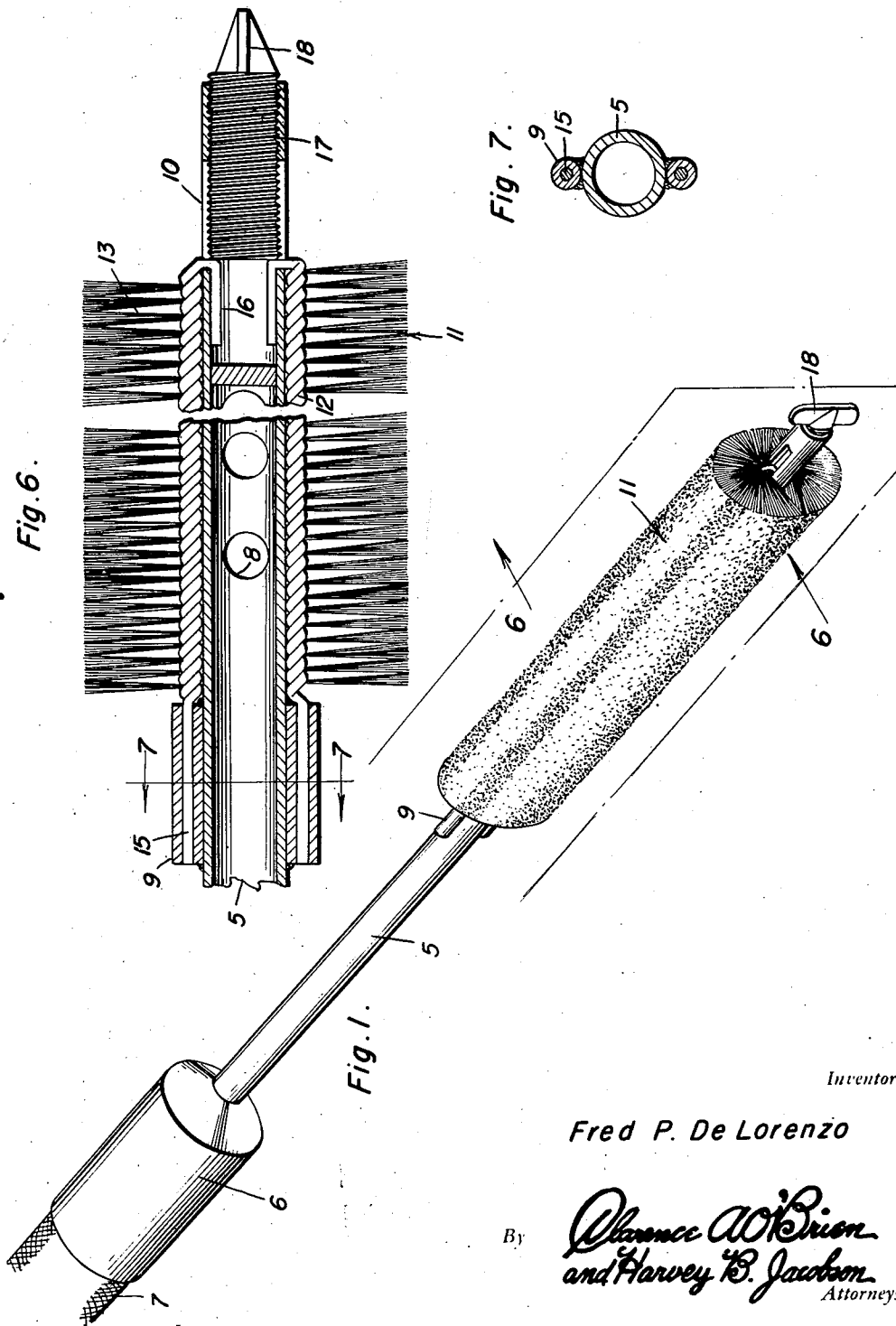
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2,606,338

VACUUM CLEANING BRUSH, INCLUDING REMOVABLE BRISTLE HOLDING CORES

Filed Jan. 13, 1949

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

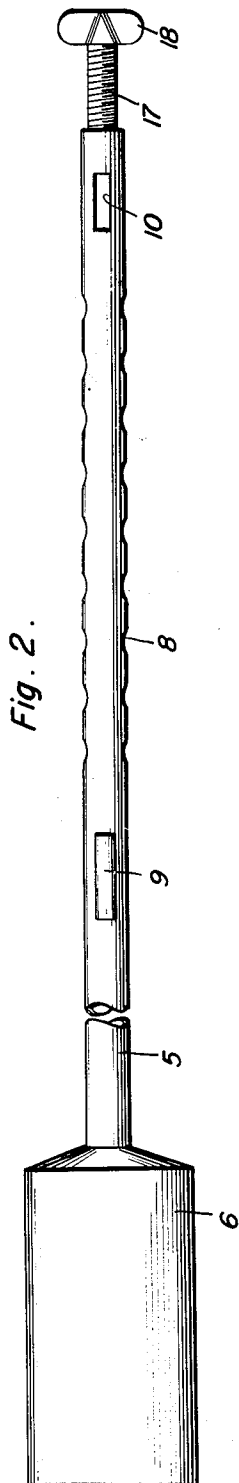


Fig. 2.

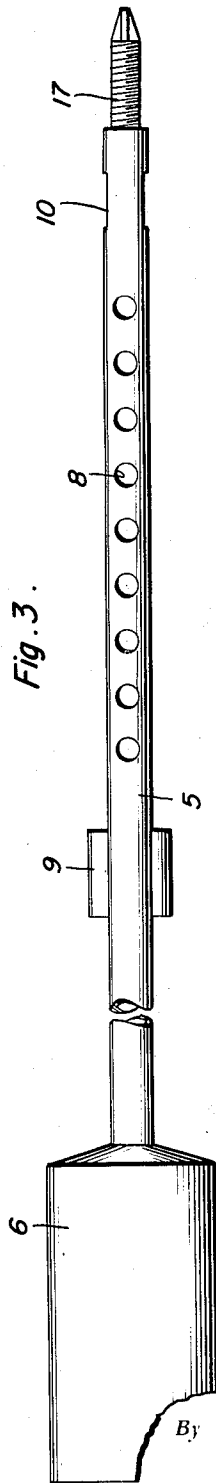


Fig. 3.

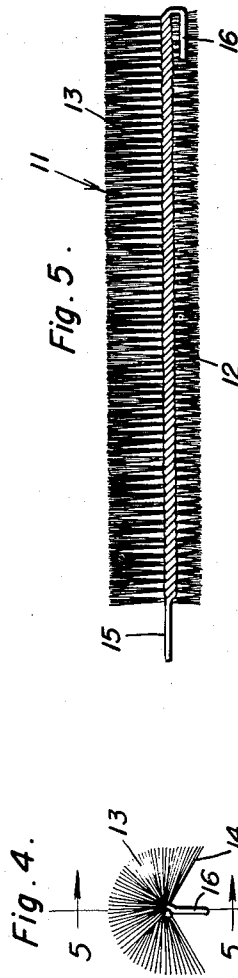


Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE

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VACUUM CLEANING BRUSH, INCLUDING REMOVABLE BRISTLE HOLDING CORES

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2 Claims. (Cl. 15—395)

1

The present invention relates to new and useful improvements in attachments for vacuum or suction cleaners and more particularly to a novel brush construction for attaching to a flexible extension hose of the cleaner.

An important object of the invention is to provide a brush for use with vacuum cleaners and designed for working in normally inaccessible places, such as between the sections of a radiator, between the convolutions of a bed spring and in other places where the usual vacuum cleaner brush will not normally reach.

A further object of the invention is to provide interchangeable bristle units for attaching to the handle of the brush whereby various types of bristles may be easily and quickly attached to and removed from the handle of the brush.

A still further object is to provide a brush of this character of simple and practical construction, which is strong and durable, efficient and reliable in use, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view;

Figure 2 is a side elevational view of the handle of the brush with the bristles removed;

Figure 3 is a similar view and taken at an angle of 90 degrees with respect to Figure 2 and showing the suction openings in the handle of the brush;

Figure 4 is an end elevational view of one of the removable bristle units;

Figure 5 is a longitudinal sectional view taken on a line 5—5 of Figure 4;

Figure 6 is an enlarged fragmentary longitudinal sectional view of the outer end of the brush taken on the plane 6—6 of Figure 1; and

Figure 7 is a transverse sectional view taken on a line 7—7 of Figure 6.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention the numeral 5 designates the handle of the brush which is constructed of tubular metal having a socket or coupling 6 of enlarged diameter at its rear end for attaching to the usual flexible hose extension 7 of a vacuum cleaner.

A plurality of openings 8 are formed in diametrically opposite sides of the handle 5 adjacent its outer end into which the dust laden air is

2

drawn by suction of the vacuum cleaner whose extension 7 is fitted in the socket 6.

A pair of sleeves 9 are welded or otherwise suitably secured to diametrically opposite sides of the handle 5 in a longitudinally extending direction rearwardly of the openings 8 and at 90 degrees with respect thereto. Openings 10 are formed at diametrically opposite sides of the handle 5 outwardly of the openings 8 and in alignment with the sleeves 9.

A brush unit is designated generally at 11 and comprises a twisted wire core 12 in which the bristles 13 are held, the bristles being arranged in a substantially semi-cylindrical form, except that the bristles at the side edges of the brush extend at an acute angle with respect to each other as indicated at 14 so that when a pair of the brush units are mounted at diametrically opposite sides of the handle 5 the handle will be completely enclosed by the bristles.

In mounting the brush unit 7 on the handle 5 the inner end 15 of the wire core 12 is inserted in one of the sleeves 9 and the outer end of the wire core 12 is bent rearwardly to form a hook 16 which is engaged in one of the openings 10 aligned with said sleeves.

A plug or set screw 17 is threaded in the outer end of handle 5 by means of a thumb grip 18 at the outer end of the screw to feed the screw inwardly to engage the hook 16 to clamp the hook in the opening 10, as shown in Figure 3 of the drawings.

In the operation of the device brush units 11 having a different size or length bristles 13 may be interchangeably mounted at the sides of the handle 5 to surround the handle at the portion thereof provided with the air inlet openings 8 and dust removed from a surface by the brushes will be sucked through the openings 8 into the handle 5.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A brush comprising a tubular handle having

3

an inner end and an internally threaded outer end, a sleeve spaced parallel to the handle and fixed to the outer periphery of the handle in side-by-side relation with the handle intermediate the ends of the handle, said handle having a longitudinal slot adjacent its outer end and a series of suction ports between the slot and the sleeve, a wire core, bristles supported by the core, said core resting against the outer periphery of said handle between said sleeve and said slot and including a straight inner end positioned in the sleeve and a hook at its other end engaged through the slot, and a retainer member threaded in the outer end of said handle and retaining the hook in the slot and the inner end of the core in the sleeve.

2. A brush comprising a tubular handle having an internally threaded outer end, a pair of spaced parallel sleeves paralleling the handle and secured to diametrically opposite sides of the handle intermediate the ends of the handle and in side-by-side relation with the handle, said handle having a pair of longitudinal slots therein adjacent its outer end, said slots being located in diametrically opposite sides of the handle, said slot being in longitudinal alignment with said sleeves, a pair of wire cores, a plurality of bristles supported by each of the wire cores for covering the portion of the handle between the slots and the sleeves, said cores having straight inner

4

ends received in the sleeves and the outer hook ends extending through the slots and into the interior of the handle, and a plug threaded in the outer end of said handle and engaging both hooks to hold the hooks in the slots and the straight inner ends of the cores in the sleeves, said handle having a series of longitudinally spaced suction ports between said sleeves and said plug.

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