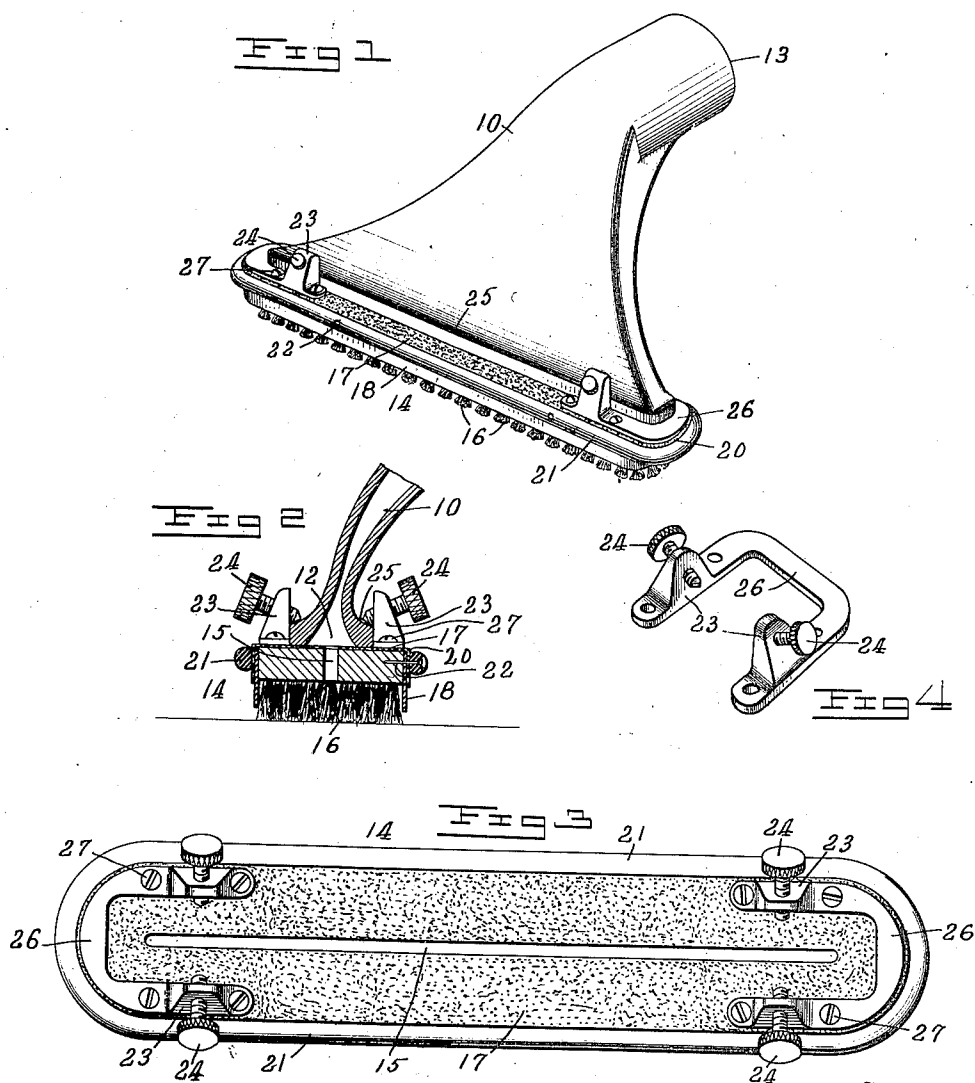


C. E. HARKER.
 SUCTION CLEANING TOOL.
 APPLICATION FILED NOV. 2, 1909.

1,041,466.

Patented Oct. 15, 1912.



- Witnesses

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UNITED STATES PATENT OFFICE.

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SUCTION CLEANING-TOOL.

1,041,466.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed November 2, 1909. Serial No. 525,929.

To all whom it may concern:

Be it known that I, CHARLES E. HARKER, a citizen of the United States, residing at Parnassus, in the county of Westmoreland and State of Pennsylvania, have invented new and useful Improvements in Suction Cleaning-Tools, of which the following is a specification.

My present invention relates to certain new and useful improvements in tools for use in connection with pneumatic or suction cleaning machines, and more particularly to a brush head adapted to be attached to the mouth end of an ordinary cleaning tool.

The object of the invention is to provide a brush head especially designed for cleaning polished floors, walls, and the like, which head may be readily and quickly attached to an ordinary cleaning tool and as readily disconnected therefrom when it is desired to use said tool without the brush.

Briefly, and more or less specifically stated, the invention comprises a brush-head having a relatively long and narrow slot therethrough, which slot will register with the corresponding mouth of a cleaning tool when coöperatively associated therewith, said brush-head carrying means for detachably connecting it with the cleaning tool.

My invention is especially designed to be employed in connection with a species of pneumatic or suction cleaning tools attachable to brushes which is adapted abuttingly to rest upon the flat face of the head of said brush, the point of union of the suction tool relatively to the brush being located upon the flat face and being detachable therefrom at this point, special regard being taken to provide but few parts in the means employed to secure the tool portion and brush portion together to the end that the confining walls for the corresponding registering dust-laden passages should be positively held in a rigid air-tight jointed position, enabling the combined pneumatic tool cleaner and brush to be most advantageously employed.

In order to enable others to understand, make and use my said invention I will now proceed to describe the same in detail, reference being had for this purpose to the accompanying drawing, in which—

Figure 1 is a perspective view of a known

form of cleaning tool having one of my improved brush-heads attached thereto. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a top plan view of the brush-head shown detached from the cleaning tool, and Fig. 4 is a detail.

Like reference numerals indicate the same parts in the several views.

The reference numeral 10, indicates an ordinary cleaning tool to which my improved attachable brush-head is shown applied, said tool having the usual suction mouth 12, and coupling or discharge end 13, to which a hollow handle (not shown) is usually attached.

My improved attachment comprises a brush-head 14, having provision for the passage therethrough of dust-laden air, said provision in the instance shown being in the form of a relatively long and narrow slot 15, which extends throughout substantially the entire length of the head and which is located centrally thereof so as to register accurately with the suction mouth 12 of the tool 10, when the two are associated for use as illustrated in Figs. 1 and 2.

The brush-head is provided with tufts of bristles 16, on one face and the other or upper face is provided with soft facing 17, preferably of felt, leather, rubber or the like, in order that an air-tight closure may be made between said face and the tool to which it is applied and thus avoid leakage of air when the tool is in use. I preferably attach by glue or otherwise, a flexible impervious curtain 18, around the outer edges of the brush-head and brush bristles and lap the free marginal edges 20 of the soft facing 17, over said curtain, as best shown in Fig. 2. I also prefer to attach a rubber buffer strip 21, around the marginal edge of the brush-head in order to prevent the tool from marring furniture, trimmings and the like with which it may come in contact when in use, the said buffer strip as well as the marginal edges 20 of the soft facing and the impervious curtain being secured by means of small nails 22.

One manner of means for detachably connecting the brush-head to a cleaning tool, consists, in the instance shown, in attaching to the upper face of the brush-head, and preferably, at opposite ends thereof, pairs of oppositely disposed lugs 23, through

which are passed thumb-screws 24, the ends of which are adapted to engage the marginal edges 25 of the tool 10, as shown. The screws 24 are preferably passed through the lugs 23, at an angle in order to firmly press the mouth of the tool against the brush-head and cause it to sink into the soft facing 17, whereby a close air-tight connection will be made between the parts.

10 I prefer to form each pair of lugs 23, integral with a substantially U-shaped plate 26 as shown in Fig. 4, which plates are secured to the brush-head by means of screws 27. The U-shaped plates not only afford 15 a simple and inexpensive construction, but when applied to the opposite ends of the brush-head, they materially strengthen the same and greatly lessen the tendency of the head to split, this tendency being present 20 owing to the long and narrow slot 15, formed through the head.

From the foregoing it will be seen that I provide a simple and comparatively inexpensive brush attachment for use in connection with the ordinary cleaning tools now known, and one that may be easily and quickly detachably connected with the brush.

30 I do not wish to be understood as limiting myself to the precise construction and arrangement of parts herein shown and de-

scribed, except as I may be limited by the terms of the appended claim, but reserve to myself the right to such mechanical changes or additions as fairly come within the scope of said claim.

What I claim is:

A brush attachment for a suction cleaning tool comprising a brush head adapted to engage the end of said tool and having a central long and narrow slot therethrough adapted to register with the mouth of the tool, a U-shape plate secured to each end of the brush head and adapted to fit snugly about the adjacent end of said tool, each 4 of said plates having a pair of upwardly extending lugs embracing the sides of the tool, binding screws tapped in the lugs and adapted to move against the tool whereby the head is held to the tool, a soft facing 5 carried on the upper face of the brush head and engaging the lower end of the tool to seal the connection with the same, and tufts of bristles mounted in the under face of the brush head. 5

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES E. HARKER.

Witnesses:

E. J. BAXTER,
F. C. JONES.