F. M. PESARILLO.

SUIT VACUUM CLEANER.

APPLICATION FILED APR. 11, 1921.

1,426,765. Patented Aug. 22, 1922.

FIG. 1

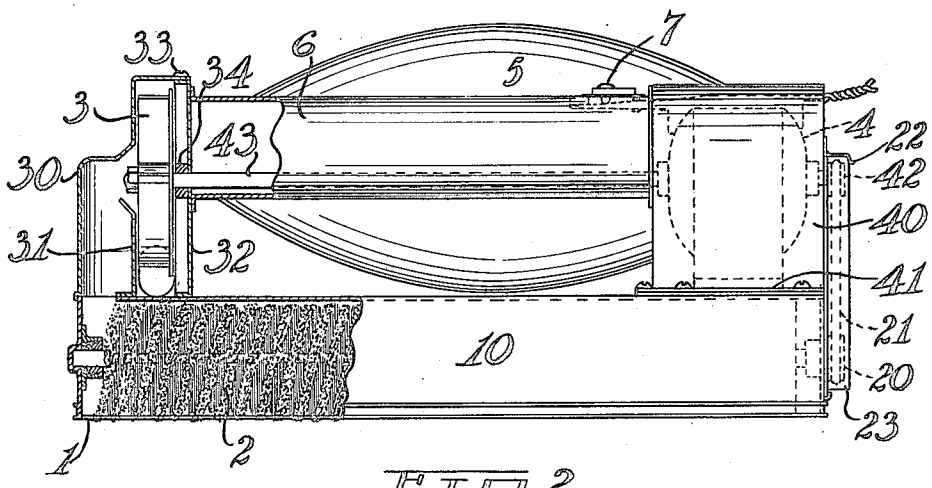


FIG. 2

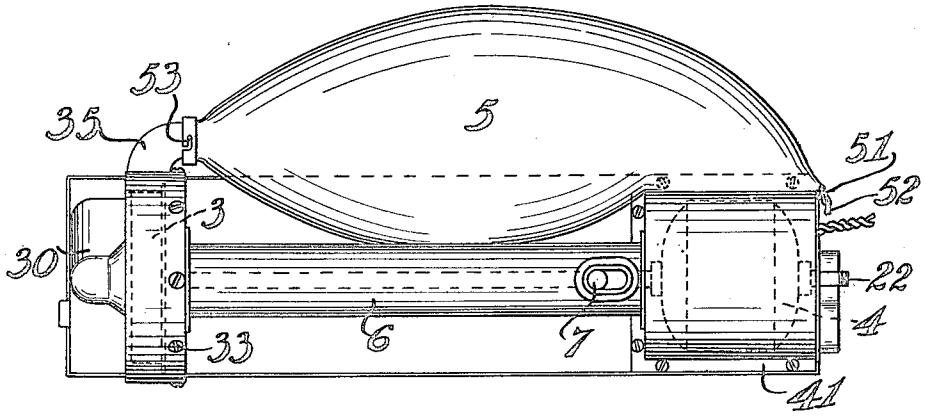


FIG. 3

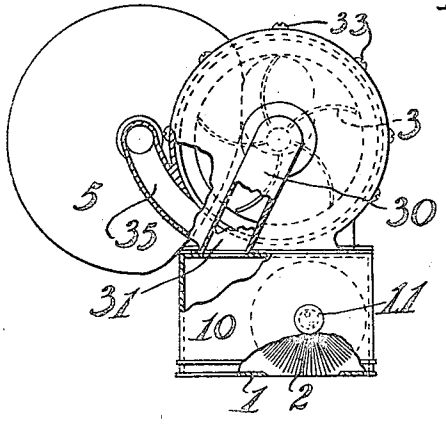
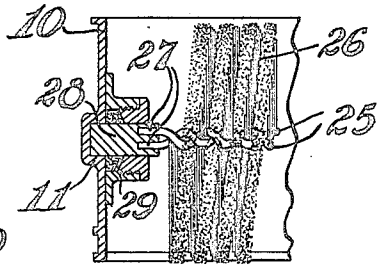


FIG. 4



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SUIT VACUUM CLEANER.

1,426,765. Specification of Letters Patent. Patented Aug. 22, 1922.

Application filed April 11, 1921. Serial No. 460,278.

To all whom it may concern:

Be it known that I, FRANCISCO M. PESARILLO, a Philippine citizen, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Suit Vacuum Cleaners, of which the following is a specification.

My invention relates to a vacuum cleaner which is intended to be used by porters in barber shops and for like uses.

The principal object of my invention is to provide a light and compact vacuum cleaner which may be employed to clean the clothes similar to but more efficiently than a whisk broom.

Another object of my invention is to provide such a cleaner which is evenly balanced and in which the control mechanism is conveniently arranged.

Another object is to provide such a cleaner wherein the parts may be cheaply made and conveniently assembled or disassembled.

Another object is to provide a brush and a bearing therefor for use in such a device, which will prevent dust particles from entering the bearing, but which may be quickly disassembled when this becomes necessary.

My invention comprises those novel parts and combinations thereof which are shown in the accompanying drawings, described in the specification, and particularly defined by the claims terminating the same.

In the accompanying drawings I have shown my invention in the form of construction which is now preferred by me.

Figure 1 is an elevation of my device with parts broken away.

Figure 2 is a plan view of the device.

Figure 3 is an end elevation with parts broken away.

Figure 4 is an enlarged detail section of the brush and bearing therefor.

My device includes the general features found in most vacuum cleaners, namely, a casing 10 containing a rotary brush 2 mounted therein and having a vacuum nozzle 1; an enclosed suction fan 3, an electric motor 4, a dust receiver 5 and the usual operative connections between the motor and fan and between the motor and the brush. My invention, however, resides in the novel manner of assembling these various parts and their relation one to the other, and in the construction of the various structural details of the device.

The casing 10 forms the general support for the entire device. It has an upward extension 30 at one end thereof, and a baffle 31, which partly enclose the fan 3 and form part of the fan housing. These members 30 and 31 form, between them, the outlet conduit from the casing 10 which directs the dust gathered to the fan. These members may be made integral with the casing 10 or may be, as shown herein, welded thereto.

The motor 4 is preferably enclosed within a housing 40 which is positioned at the opposite end of the casing 10 from the fan housing 30 and is supported upon a plate 41 forming the floor of this housing. Both the plate 41 and the housing 40 are suitably secured to the casing 10 so that they may be removed therefrom when necessary.

Extending between the housing 40 and the fan housing 30 is a tubular member 6 which forms a handle by which the entire device may be lifted. Secured at an end of the handle 6 is a complemental fan housing member 32 which, together with the housing 30, completely surrounds the fan. The member 32 is suitably secured to the handle 6, as by welding, and the housing member 30 may be secured thereto by screws 33 to permit separation of these parts. A shaft 43 extends through the handle 6 from the motor 4 to the fan 3 to drive the fan. A bearing 34 may be secured in the handle 6 or to the member 32 adjacent the fan to support this end of the shaft.

At one end of the casing 10 the end of the brush projects through the casing and has secured thereon a pulley 20. A pulley 42 is secured upon this end of the motor shaft and the two pulleys 42 and 20 are connected by a belt 21 whereby the brush may be driven. A removable cap 23 encloses the belt 21 and the pulleys 42 and 20, and may be held in place by a spring clip 22.

The brush I prefer to form of two strands of wire, 25, twisted one upon the other and holding the bristles 26 and spreading them in a helical form. At the end opposite the pulley 20 the strands 25 terminate in lateral extensions 27 which are received in suitable axially extending sockets in a stub shaft 28. A bearing 11 is provided in the end of the casing 10 to receive the end of the stub shaft opposite the sockets referred to, and I may provide a packing gland 29 which would be positioned between the brush and the bearing 11 to keep the dirt out of this

bearing. The brush lies within the casing 10 adjacent the nozzle 1 so that a slight portion of its periphery may extend through the nozzle to brush the clothes which it is desired to clean.

The dust collector 5 may be a bag of any suitable design such as is common in vacuum cleaners. At one end it may be secured, as by a bayonet slot and pin indicated at 53, to the outlet 35 of the fan housing, so that it may be removed therefrom. At its other end the bag has a ring 51 secured thereto which is engageable by a hook 52 to hold this end of the bag.

A switch 7 may be mounted upon the handle 6, preferably near the end thereof. By means of this switch the motor may be turned on and off to operate the device.

By means of the device described a compact cleaner is provided which may be used by porters to brush off the clothes of customers in a barber shop or the like. The device may be controlled by the switch 7 which when turned on starts the motor. Power is communicated to the brush through the belt 21 and to the suction fan 3 through the shaft 43. The brush 2 is rotated in such a direction that it tends to carry the collected dust toward that end of the casing 10 wherein is positioned the dust outlet to the fan 3. The dust is sucked up then by the fan and delivered to the bag 5. This may be emptied at suitable intervals.

What I claim as my invention is:

1. In a device of the character described, a casing having a suction nozzle therein, an electric motor mounted at one end of said casing, a suction fan mounted upon the opposite end of said casing, a dust-receiver connected to said fan, a shaft connecting said motor and fan, and a tubular handle connecting the fan housing and the motor housing, and enclosing said shaft.

2. In a device of the character described, a casing having a suction nozzle therein, a brush rotatably mounted in said casing and having a portion of its periphery protruding through said nozzle, an electric motor mounted at one end of said casing, a suction fan mounted at the other end of the casing, a dust-receiver connected to the outlet of said fan, a dust conduit connecting the interior of said casing with the fan, drive means connecting the motor and the brush, a shaft extending between the motor and fan, and a tubular handle connecting the fan housing and the motor housing, and enclosing said shaft.

3. In a device of the character described, a brush receiving casing having a suction nozzle extending the length thereof, an electric motor and a suction fan connected to be driven thereby, and both mounted upon said casing, a brush having its bristles arranged in a helix and rotatably mounted within said casing, and extending therein adjacent said nozzle, said casing having an outlet connection to the suction fan located at one end, and means connecting the motor and brush to rotate the latter in a direction tending to convey dust particles towards the outlet connection.

4. In a device of the character described, a casing having a suction nozzle therein, an electric motor mounted at one end of said casing, a motor housing encasing and supporting said motor, and adapted to be secured upon the casing, a suction fan mounted upon the opposite end of said casing, a portion of the casing forming part of a fan housing to enclose the fan, a complemental fan housing member, a shaft operatively connecting the motor and fan, a tubular handle connecting the motor housing and the complemental fan housing member and enclosing said shaft, and a dust-receiver connected to said fan.

5. In a device of the character described, a casing having a suction nozzle therein, an electric motor mounted at one end of said casing, a suction fan upon the casing, operative connections between said motor and fan, a dust-receiver connected to the fan, a brush rotatable in said casing adjacent its nozzle, and having one end projecting from the casing adjacent the motor, a belt connecting the motor to drive the projecting end of said brush, and a removable cap enclosing said belt and the projecting ends of the brush and motor shaft.

Signed at Seattle, Washington, this 2nd day of April, 1921.

FRANCISCO M. PESARILLO.