Sept. 2, 1952 C. P. BENJAMIN 2,608,709

SUCTION CLEANER ADAPTED TO CARRY CLEANER TOOLS

Filed Aug. 12, 1947 2 SHEETS—SHEET 1

FIG. 1.

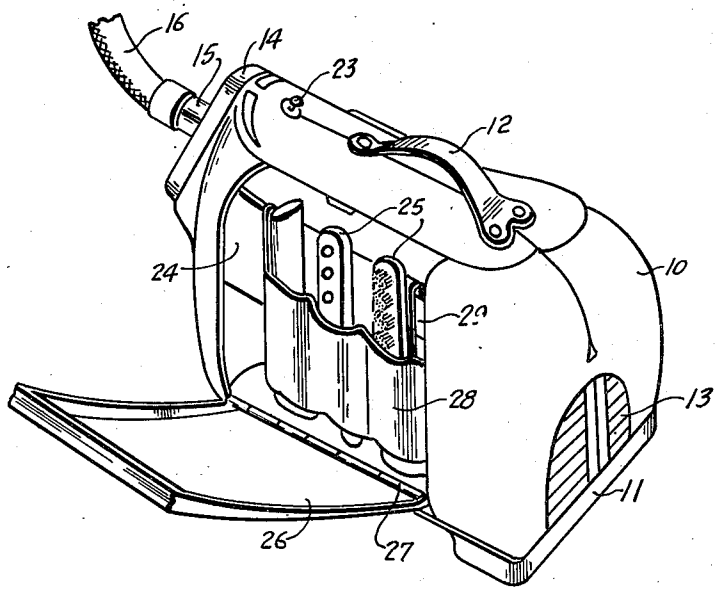
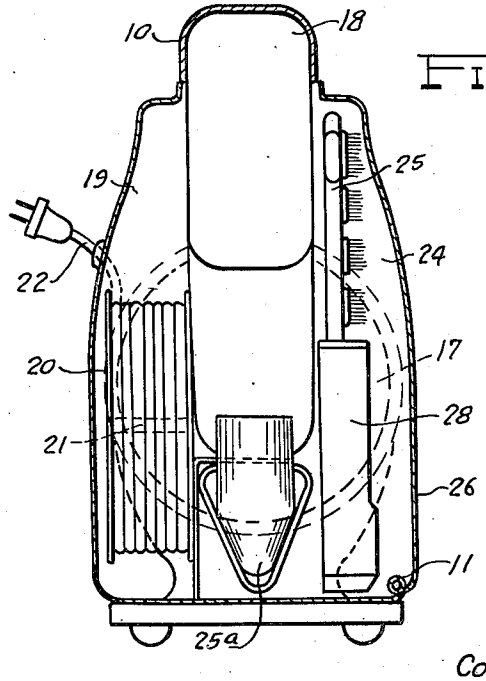


FIG. 2.



INVENTOR.
Cordelia P. Benjamin
BY
ATTORNEY

Sept. 2, 1952 C. P. BENJAMIN 2,608,709

SUCTION CLEANER ADAPTED TO CARRY CLEANER TOOLS

Filed Aug. 12, 1947 2 SHEETS—SHEET 2

FIG. 3.

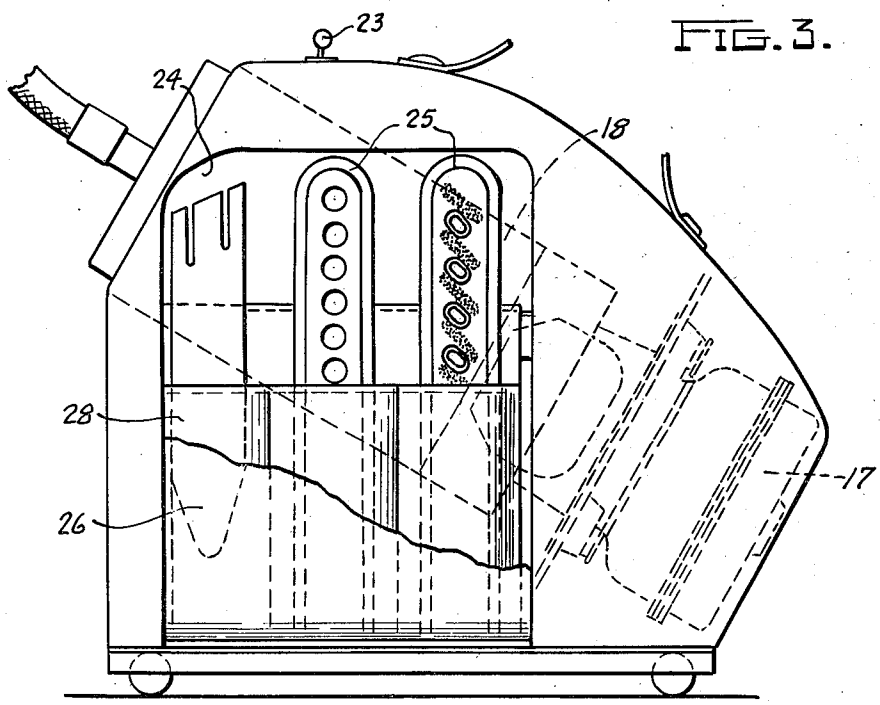
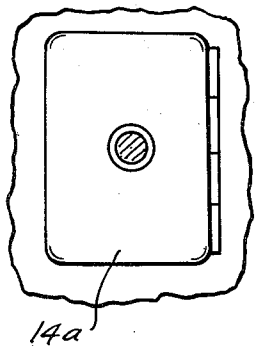


FIG. 4.



INVENTOR.
Cordelia P. Benjamin
BY
ATTORNEY

Patented Sept. 2, 1952 2,608,709

UNITED STATES PATENT OFFICE

2,608,709

SUCTION CLEANER ADAPTED TO CARRY CLEANER TOOLS

Cordelia P. Benjamin, Toledo, Ohio, assignor to Air-Way Electric Appliance Corporation, Toledo, Ohio, a corporation of Delaware

Application August 12, 1947, Serial No. 768,205

2 Claims. (Cl. 15—323)

1

This invention relates to suction cleaners of the so-called tank type, in which the machine is supported on the floor and a tube or hose leads from it to a wand or metallic tube, to the end of which is mounted a floor tool or other cleaner attachment. These attachments vary with the work to be accomplished. For example, one tool or attachment is adapted particularly for cleaning radiators, another for cleaning rugs and carpets, another for cleaning hardwood floors and the like. It has been somewhat of a problem to provide a support for these attachments to have them readily available when needed without their being cumbersome, in the way, or interfering with the desired esthetic appearance of the cleaner.

An object is to produce a suction cleaner of the above type which is provided with new and improved means for housing or supporting such cleaning attachments so that they are readily and conveniently accessible when needed, but which are concealed when not in use, and at the same time providing for their reception in the body of the cleaner casing.

Another object is to produce a suction cleaner of the above type with a chamber for receiving the cleaner attachments which is accessible by opening a door or cover forming a part of the casing or housing wall.

A further object is to produce a suction cleaner having a central working chamber in which the suction device and associated dust-collecting receptacle are disposed, a cord reel chamber at one side of the working chamber for receiving the electrical cord for supplying current to the suction unit motor, and a chamber on the other side of the working chamber for receiving the cleaner attachments, the latter chamber having an access opening closed by a door which forms a part of the wall of the cleaner housing.

Other objects and advantages of the invention will hereinafter appear, and for purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawings, in which

Figure 1 is a rear perspective view of a suction cleaner showing the door for the cleaner attachment chamber in open position;

Figure 2 is a vertical sectional view through the suction cleaner showing the arrangement of the cord reel, working and cleaner attachment chambers;

Figure 3 is a side elevation of a slightly different form of suction cleaner showing the chamber for cleaner attachments and showing the mounting of the cleaner attachments; and

2

Figure 4 is a fragmentary elevation showing an alternate form of door containing the hose-receiving nozzle, such door affording access to the dust-receiving bag.

The illustrated embodiment of the invention shown on Figures 1 and 2 comprises a suction cleaner having a housing or casing 10 supported on a suitable base 11 and having a carrying handle 12 at the top. The rear end is provided with suitable louvers 13 for the discharge of air from the suction-producing unit disposed within the housing. At the front end of the casing is a cover 14 having a nozzle 15 to receive a flexible hose 16. It will be understood that the usual wand carrying the cleaner tool is connected to the outer end of the hose, but the same is not illustrated since it forms no part of the present invention.

The form of the casing shown in Figure 3 is slightly different from that shown in Figure 1, in that the front is substantially elevated above the rear but otherwise the essential features are substantially the same. In both forms there is provided a suction unit 17 consisting of an electric motor connected to drive suitable fans (not shown). In advance of the suction cleaner is a chamber 18 disposed diagonally with respect to the housing for receiving the dust-collecting bag such as a permeable paper bag. It will be understood that the bag is inserted by uncovering the front end of the cleaner either by removing the cover 14 or by swinging the hingedly mounted cover 14a as shown in Figure 4, to open position. It will thus be apparent that the dust-laden air drawn through the hose 16 passes into the dust-collecting bag in the chamber 18, the air being discharged from the housing through the louver openings 13.

The housing thus provides a centrally disposed working chamber which includes the dirt-collecting bag chamber 18 and the suction unit 17, and such working chamber is disposed centrally of the housing. On one side of the working chamber is a cord reel chamber 19 in which is disposed a cord reel 20 mounted for rotation on a suitable shaft 21, the cord 22 carried by the reel passing through a grommet in the side of the housing and having the usual fitting to enable it to be plugged into a socket. It will be understood that the cord 22 has its opposite end connected to the electric motor forming part of the suction unit 17 for delivering electric current thereto. It will further be understood that the switch 23 at the top of the casing is suitably connected to operate the electric motor forming a part of the suction unit 17. Detail description and illustration of

the cord reel 20 is not considered necessary since they are well-known in the art, ordinarily being equipped with spring means (not shown) effective for winding the cord upon the reel when the cleaner is not being used.

On the opposite side of the working chamber is a chamber 24 for receiving cleaner attachments indicated generally at 25. In this instance, the chamber 24 extends from the base 11 to approximately the top of the housing and in horizontal dimension is somewhat less than the length of the housing. The chamber 24 is open on the outer side and such opening can be closed by a door or cover 26 which is hinged at its lower end at 27 and may be swung upwardly to close the chamber 24. It will be understood that the door cover 26, when closed, forms a part of the side wall of the housing and completely conceals the attachments from view.

In this instance, the attachments are carried by a flexible fabric sheath 28 which has the desired number of pockets to receive the individual cleaning tools and the sheath is suitably attached to a horizontal support 29 within the chamber 24. As shown in Figure 2, a cleaner 25a, ordinarily referred to as an upholstery cleaner, is fitted into a cavity at one end of the working chamber because its configuration does not lend itself readily to being mounted within the chamber 24.

From the above description it will be manifest that I have produced an exceedingly convenient mounting for cleaner attachments for suction cleaners. Access can be readily had to these attachments and when they are not in use, they are concealed in a chamber forming part of the suction cleaner housing. The arrangement of the cord reel, working and cleaner attachment chambers enables an exceedingly compact unit to be produced, utilizing all available space and providing a well-balanced structure which not only has functional advantages but contributes to neatness and symmetry of form.

It is to be understood that numerous changes in details of construction, arrangement and operation may be effected without departing from the spirit of the invention especially as defined in the appended claims.

What I claim is:

1. A suction cleaner comprising an upright casing, a suction unit fixedly mounted within the casing, a dust collecting receptacle within the casing and communicating with said suction unit, said casing having a contiguous upright chamber at one side of said suction unit, a horizontally disposed support within said chamber, a pocketed sheath carried by said support with the pockets therein disposed vertically for receiving cleaning tools, there being a side opening in said casing extending substantially from the bottom to the top thereof through which ready access to the cleaning tools carried by said sheath is had, and a hingedly mounted door for said opening, said door providing a side wall for the casing.

2. A suction cleaner comprising an upright casing, a suction unit fixedly mounted within the casing, a dust collecting receptacle within the casing and communicating with said suction unit, said casing having a contiguous upright chamber at one side of said suction unit, a horizontally disposed support within said chamber, a pocketed sheath carried by said support with the pockets therein disposed vertically for receiving cleaning tools, there being a side opening in said casing through which ready access to the cleaning tools carried by said sheath is had, a hingedly mounted door for said opening, said door providing a side wall for the casing, a second chamber on the opposite side of said suction unit contiguous thereto and in balanced relation to said sheath containing chamber, and a reel for electric cord within said last chamber.

CORDELIA P. BENJAMIN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
279,302	Wolf	June 12, 1883
978,167	Kelsey	Dec. 13, 1910
1,787,646	Smith	Jan. 6, 1931
2,042,387	Cobb	May 26, 1936
2,177,153	Ross	Oct. 24, 1939
2,313,423	Dodd	Mar. 9, 1943
2,355,034	Scott	Aug. 1, 1944

FOREIGN PATENTS

Number	Country	Date
61,996	Denmark	Mar. 6, 1944
244,822	Switzerland	June 2, 1947
550,658	France	Mar. 15, 1923
637,490	France	Jan. 30, 1928
672,668	France	Sept. 23, 1929
704,192	France	Feb. 17, 1931