Feb. 16, 1937. C. C. MUENTENER 2,070,674

DUST BAG

Filed Nov. 5, 1935

Fig. 1.

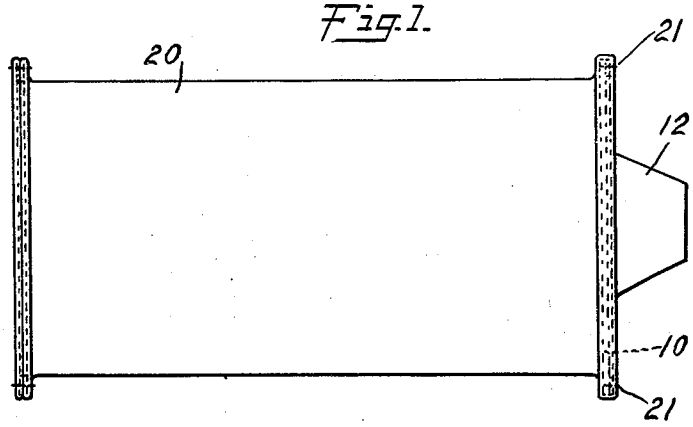


Fig. 2.

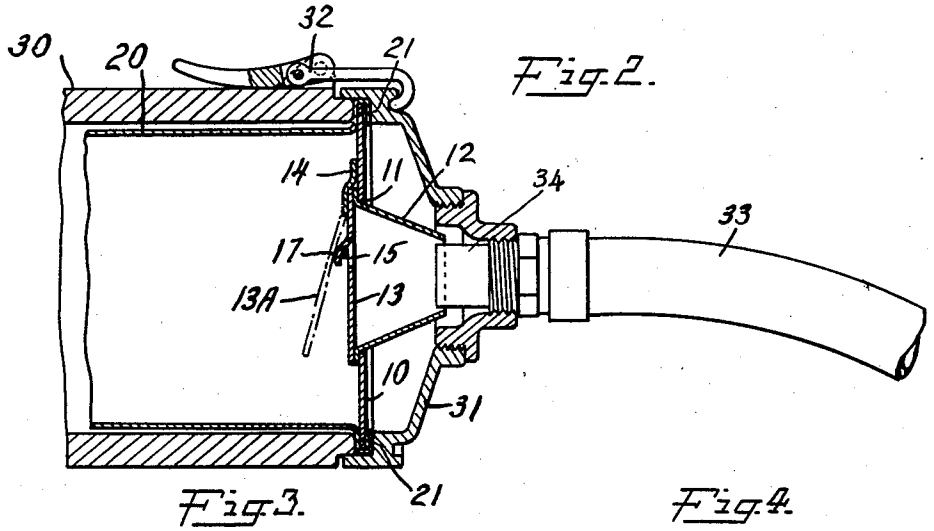


Fig. 3.

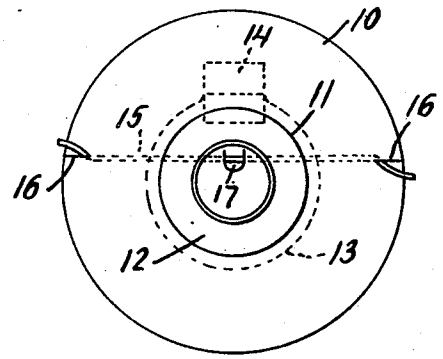
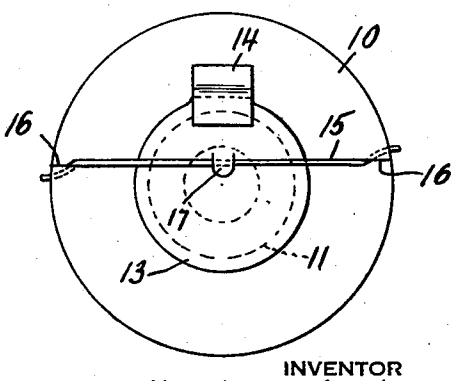


Fig. 4.



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DUST BAG

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Application November 5, 1935, Serial No. 48,286

6 Claims. (Cl. 183—40)

This invention relates to improvements in dust bags.

Its object is to provide a novel dust receptacle for vacuum cleaners which has many advantages over those heretofore available.

One of its principal objects is to provide a dust bag of such simple and inexpensive construction that it may be thrown away when filled and replaced with a new one.

Another object is to provide a dust bag with a restricted inlet opening which will prevent spilling of its contents and make it impossible for the operator to insert his hand into it.

A further object is to provide a dust bag with a self-closing inlet so that it may be handled when filled without loss of its contents.

A still further object of this invention is to improve the material of the bag itself by using porous felt instead of the materials heretofore employed.

These and other objects of the invention will appear from the following specification in which I will describe the invention, the novel features of which will be pointed out in appended claims.

Referring to the drawing,

Fig. 1 is a side elevation of a dust bag which is made according to and embodies the present invention;

Fig. 2 is a sectional elevation of a part of the device shown in Fig. 1 inserted in the vacuum cylinder of a vacuum cleaner, parts of which are also shown in this figure;

Fig. 3 is a front elevation, and Fig. 4 a rear elevation of the end of the improved dust bag disk shown in the preceding figures.

10 designates a flat circular disk of rigid material which is constructed with a central circular orifice 11. 12 is an inlet spout in the form of a hollow truncated cone affixed to disk 10 with its larger base fitting the orifice 11. 13 is a flap valve hingedly connected at 14 to the back of disk 10. This is arranged when closed to cover the orifice 11. It is biased to close by a strip of elastic 15, the ends of which are caught and held in slits 16, 16 in the edge of the disk. It is caught under a tab 17 pressed out of the flap.

In the specific embodiment shown in the drawing, the disk 10, spout 12 and flap 13 are made of cardboard. This is done to illustrate a cheap construction and not as a limitation. For the same reason the hinge connection at 14 is shown as a piece of fabric pasted to the disk 10 and flap 13. The elastic strip 15 and its connection with the disk and the flap also illustrate an extremely inexpensive structure.

20 is a substantially cylindrical bag which I prefer to make of felt because of its low cost and its porosity. The forward or open end of this bag is folded over the edge of the disk 10 and under itself and is stitched thereto along the line 21.

In Fig. 2 the novel dust bag is shown in a vacuum cleaner. In this figure 30 designates a vacuum cylinder and 31 its head. 32 is a clamp for securing the head to the cylinder. 33 is a flexible intake tube and 34 its discharge end. It will be seen that the end of the felt bag 20 which overlies the edge of disk 10 forms a gasket between the cylinder 30 and its head and that when the head is clamped onto the cylinder the dust bag is held in place firmly. When thus positioned the discharge end 34 of the intake tube extends slightly into the inlet spout 12.

When a vacuum is created within the cylinder 30, the porosity of the bag 20 causes air and whatever dust and dirt which may be drawn through the tube 33 to be drawn into the bag 20 through spout 12 and orifice 11. The flap valve 13 will swing into some such position as that indicated at 13A (Fig. 2) during this operation.

When a sufficient amount of dirt has accumulated in the bag 20, the cylinder head 31 is removed and the bag taken out and thrown away. The flap valve 13 will then be closed so that the dust and dirt will not escape from the bag. Even without the check valve the restricted opening formed by the orifice 11 and spout 12 will facilitate the removal of the bag without spilling its contents and also make it impossible for one to insert his hand into the bag.

The various novel features disclosed herein may be used singly or together and I intend no limitations other than those imposed by the appended claims.

What I claim is:

1. A self-closing dust receiving unit for vacuum cleaners comprising a substantially flat disk constructed with an orifice, an outwardly tapered spout on one side of the disk over said orifice, a flat flap valve on the other side of the disk over the orifice, resilient means for closing said valve, and a bag of porous pliable material having an open end folded over the edge of the disk and permanently affixed thereto.

2. A self-closing dust receiving unit for vacuum cleaners comprising a substantially flat disk constructed with an orifice, an outwardly tapered spout on one side of the disk over said orifice, a flat flap valve hingedly connected to the other side of the disk and arranged to close the orifice,

said disk, spout and valve being constructed of cardboard, an elastic strip stretched across the flap valve with its end portions caught in slits in the edge of the disk, and a porous bag permanently affixed to the disk.

3. A self-closing dust receiving unit for vacuum cleaners, adapted to be inserted in the vacuum chamber of a vacuum cleaner, comprising a substantially flat disc constructed with an orifice, an outwardly tapered spout on one side of the disc over said orifice, the smaller end of said spout adapted to receive one end of the suction hose of the vacuum cleaner when the parts are in assembled position, a flat flap valve on the other side of the disc over the orifice, and a bag of porous material having an open end folded over and permanently attached to the edge of said disc.

4. A self-closing dust receiving unit for vacuum cleaners comprising a substantially flat disc constructed with an orifice forming a restricted opening, a spout on one side of the disc over the opening, a check valve over the orifice, and a self-sustaining porous bag permanently and directly affixed to the disc, said unit being detachable as a whole and adapted to be removed with its contents and thrown away.

5. A self-closing dust receiving unit for vacuum cleaners comprising a substantially flat disc constructed with an orifice forming a restricted opening, a check valve over the orifice, and a self-sustaining porous bag permanently and directly affixed to the disc, said unit being detachable as a whole and adapted to be removed with its contents and thrown away.

6. A dust receiving unit for vacuum cleaners comprising a substantially flat disc constructed with an orifice forming a restricted opening, an outwardly tapered spout on one side of the disc over said orifice, the smaller end of said spout being adapted to receive one end of the suction hose of a vacuum cleaner when the parts are in assembled position, and a self-sustaining porous bag permanently and directly affixed to the disc and extending from the disc away from the spout, said unit being detachable as a whole and adapted to be removed with its contents and thrown away.

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