

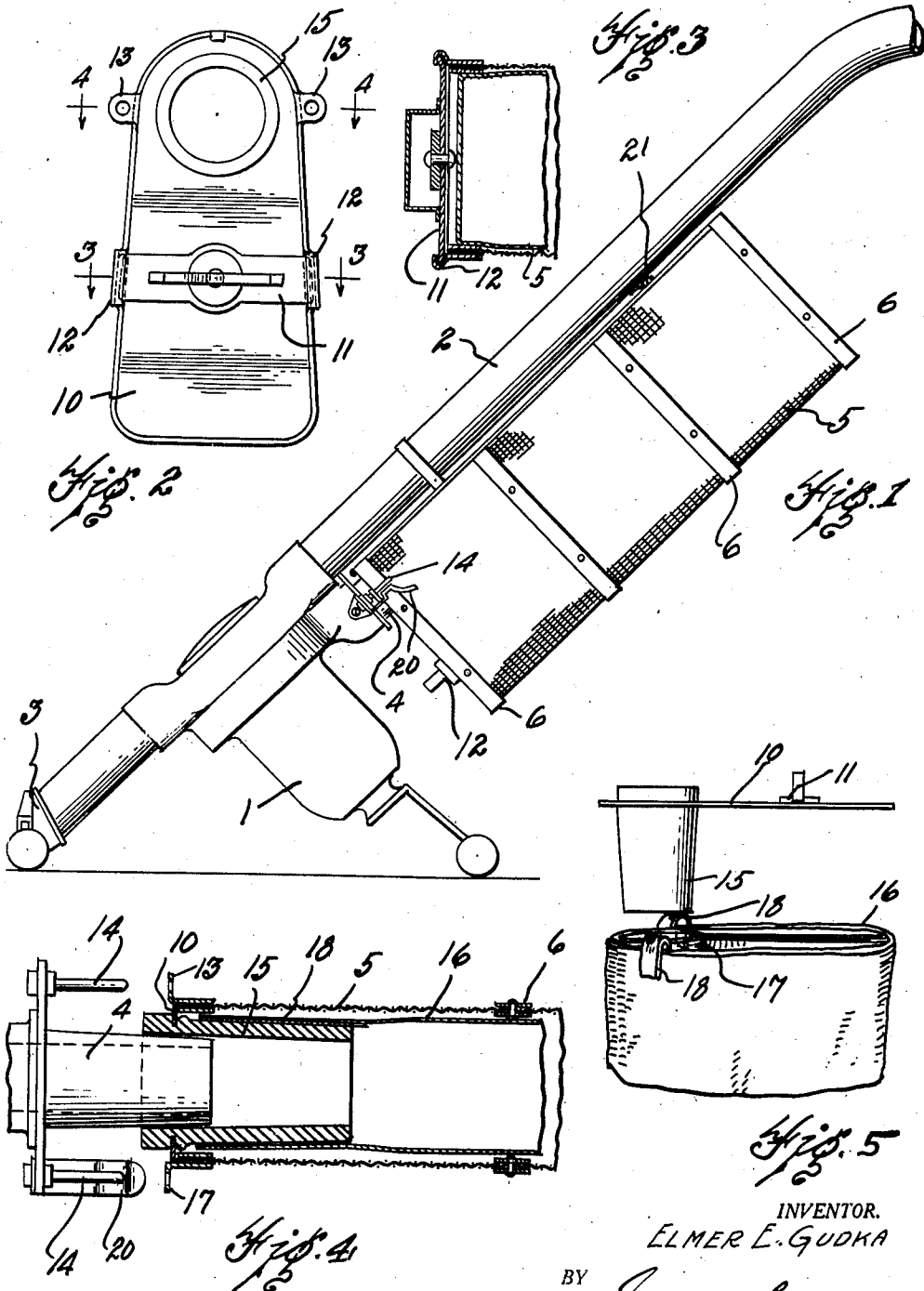
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DIRT RECEIVING RECEPTACLE FOR VACUUM CLEANERS

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DIRT-RECEIVING RECEPTACLE FOR VACUUM CLEANERS

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This invention relates to vacuum or suction cleaners, and it has to do especially with a bag or dirt-receiving receptacle for such a cleaner.

5 The practice has been to make such a bag of cloth, having a texture to retain the fine particles of dirt or dust, but which was sufficiently porous to permit the air to pass therethrough. This sort of bag has to be
10 cleaned out every once in awhile, and after a period of time fine particles of dirt collect in the interstices of the cloth, and thus there is an interference in the passage of the air through the cloth. This cuts down the draft
15 of air and accordingly reduces the efficiency of the machine.

It has been proposed to provide cheap replaceable bags made of porous paper which, after a considerable quantity of dirt is collected, is to be thrown away and a new bag substituted. This proposal contemplated
20 placing of the paper bag within a cloth exterior bag for lending some support for the paper bag and for protecting the same. It has been found quite difficult to place the
25 paper bag within the cloth bag so that there are no creases or folds in the paper bag, and so that a dust-tight joint is provided between the paper bag and the discharge outlet of
30 the vacuum machine. Some of these cloth exterior bags have been split down the side and provided with separable fasteners so that the same can be opened up. However,
35 the fasteners are subject to deterioration and should a fastener break, the bag opens so that the paper bag becomes exposed. Inasmuch as the paper bags are relatively fragile, the pressure of air within the same, while
40 the machine is operating, is very liable to break the bag open with the result that dirt particles are discharged over the room.

The present invention contemplates a rigid exterior container for the fragile replaceable inner containers. This exterior container
45 is advantageously made of a wire screen or mesh, and preferably it is of the same size as the contained replaceable bag when the same is expanded by a draft of air. This rigid exterior container is preferably attached to
50 the handle of the cleaner so that it will not

swing with respect thereto, thus facilitating the twisting and turning movements necessary in the operation of the vacuum cleaner.

In the accompanying drawings:

Fig. 1 is a side elevation of a vacuum cleaner equipped with a dirt container constructed in accordance with the invention. 55

Fig. 2 is an end elevation of a container showing the end which is attached directly to the vacuum machine. 60

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a section taken on line 4—4 of Fig. 2 illustrating also the outlet part of the vacuum machine. 65

Fig. 5 is a perspective view illustrating the paper bag about to be attached to the removable head of the exterior container.

In Fig. 1 there is shown a vacuum cleaner provided with a suitable motor 1, handle 2, and mouth portion 3. The motor in operation
70 sucks air through the mouth portion and discharges the same through the discharge outlet 4.

The air, together with the particles of dirt carried with it are discharged from the outlet 4 into a bag or container. The container of the present invention consists of a rigid outer member 5 preferably of wire mesh or screen. This screen may be provided with a number of reinforcements in the nature of
80 metallic bands 6. One end of the container 5 is removable to permit the insertion of a relatively cheap replaceable inner bag member such as a bag of porous paper. This removable head is shown in Fig. 2 and is referenced
85 10. The head may be provided with a rotatable locking member 11 which engages under clips 12 to lock the same to the end of the bag 5. The bag 5 may be provided with
90 apertured ears 13 for fitting over studs 14 (Fig. 4) on the vacuum machine proper.

This head also has an opening fitted with a suitable attaching member 15. This attaching member 15 may be in the form of a rubber nipple. As viewed in Fig. 5, the paper bag 16 is provided with an inlet opening 17 which may be advantageously of relatively non-expansile paper. It may also be provided with tabs 18 which may be grasped in
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order to pull the inlet member 17 over the nipple 15. Note that the nipple 15 is smaller at its discharge end so that it nicely goes into the inlet opening 17.

- 5 After the paper bag has been pulled up over the nipple 15 the same is inserted in the screen container 5 and the head 10 secured in place by means of the locking member 11. The nipple 15 is now pushed down over the
10 discharge member 4 and it will be noted by reference to Fig. 4 that this discharge member has exterior walls which converge toward its outer end so that when the nipple is placed over the member 4 the same is ex-
15 panded to form a tight joint with the paper bag.

- In placing the bag on the machine the studs 14 pass through the ears 13 and a spring clip 20 may be utilized which snaps over one of
20 the ears to hold the bag in place. The upper end of the bag may be held to the handle by a hook-and-eye engagement, as shown at 21 in Fig. 1.

- Thus, it will be seen that it is a very simple
25 matter to remove the receiving receptacle in its entirety, and replace the partially filled inner paper bag with a new one. Preferably the shape of the interior paper bag, when expanded, is substantially that of the exterior
30 rigid supporting receiver member. The particular shape and construction of the receiving bag may be varied. Also, the manner in which the bag is connected to the vacuum machine proper and the structural features of
35 the removable head for the bag may be changed without departing from the spirit of the invention. This wire mesh or screen member can be used with the screening ex-
40 posed to view, but it may be covered with suitable cloth which may add to the appearance, if the same be desirable.

- The manner in which the connection is established between the paper bag and the vacuum machine proper forms the subject
45 matter of a separate application, and while this construction is preferred, other forms of connections may be used with the wire mesh outer container.

I claim:

- 50 In a vacuum cleaner, the combination of a vacuum cleaner body, a handle member rigid with the body, an outlet spout on the body, a bag of paper or the like designed to be thrown away when filled or partially filled
55 with dust or the like, a tubular inlet portion on the bag, a substantially rigid outer container for the bag constructed to let air pass therethrough, a detachable end closure at one end of the bag having an aperture, means on
60 said closure associated with said aperture for operatively receiving the tubular inlet of the bag, said bag being adapted to be placed in the outer container after being operative-
65 ly associated with said means, means for holding the closure on the end of the outer con-

tainer, said spout being disposed in said aperture in the closure member in substantial alignment with the tubular inlet of the bag, and means for holding the outer container rigid with the handle and body member.

In testimony whereof I affix my signature.

ELMER E. GUDKA.

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