Sept. 27, 1949. E. ANDERSON 2,483,169

RECEPTACLES WITH SELF-CLOSING MOUTH

Filed Oct. 4, 1945

Fig. 1

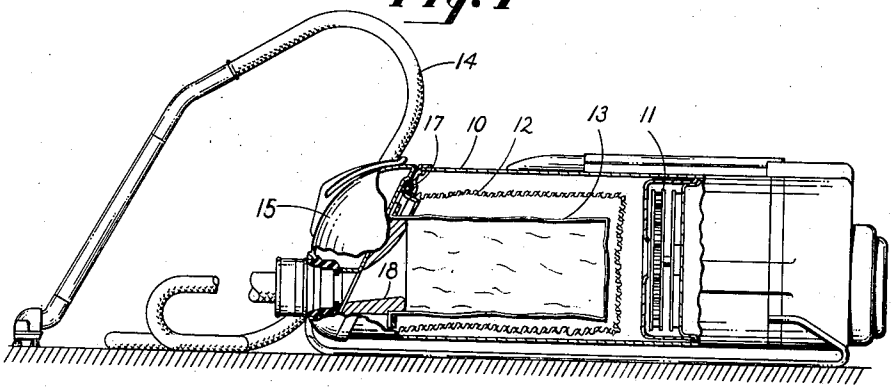


Fig. 2

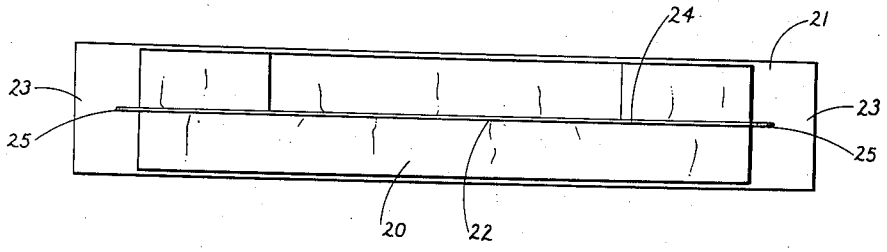
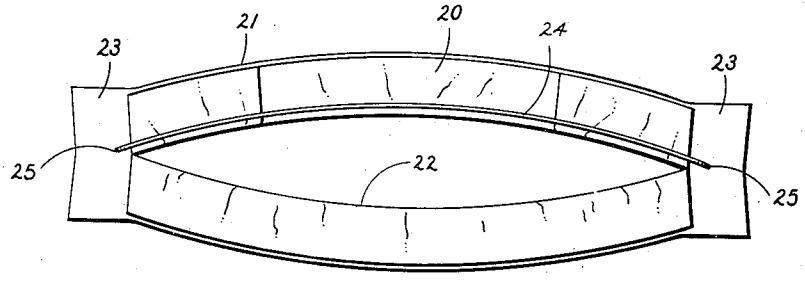


Fig. 3



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Patented Sept. 27, 1949

2,483,169

UNITED STATES PATENT OFFICE

2,483,169

RECEPTACLES WITH SELF-CLOSING MOUTH

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Application October 4, 1945, Serial No. 620,334

2 Claims. (Cl. 229—62)

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My invention relates to bag-like receptacles and more particularly to dust collecting receptacles for use in vacuum cleaners.

Among the objects of my invention is to provide a self-closing mouth structure for a receptacle of this nature, whereby the receptacle is automatically sealed when removed from the cleaner so as to prevent the spilling of dirt. The self-closing structure also may be utilized to retain the receptacle in proper position within the cleaner.

Another object of my invention is to provide a receptacle having the above characteristics which may be manufactured cheaply so that the receptacle may be thrown away when filled with dirt, thus eliminating the necessity of emptying the dirt therefrom.

These objects are attained by securing a flat strip of resilient material, such as rubber, to the open end of a bag made of porous paper, or other suitable material, the strip being formed with a slit, the resiliency of the material tending to keep the slit closed at all times, thus providing the bag with a self-closing mouth.

Numerous other objects of the present invention will be apparent from a consideration of the following specification taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a transverse vertical section of one embodiment of the present invention;

Fig. 2 is an end view of the bag shown in Fig. 1 with the mouth in closed position; and

Fig. 3 is a view similar to Fig. 2 showing the bag mouth in open position.

Referring now to the drawings, numeral 10 indicates a vacuum cleaner casing housing a conventional motor fan unit 11 and a dust separating member including a cloth bag 12 and a paper dust bag 13 of the present invention located within the cloth bag 12. The motor fan unit produces flow of air from left to right through the casing 10 as shown in Fig. 1, drawing air through a flexible hose 14 connecting in the inlet opening of the front cover 15. When the machine is in operation air enters the casing 10 with intrained dust and dirt removed from the rug or other surface being cleaned. The dust and dirt is separated from the air as the latter passes through the paper bag 13 and the clean air flows through the cloth bag 12 and out through the rear end of the housing 10. As shown in Fig. 1, the cloth bag 12 is secured to the housing 10 by engagement with a gasket 17 mounted between the housing 10 and the front cover 15. The paper receptacle 13, however, is secured on

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the front cover 15 independently of the housing 10 by engagement with an internal boss 18 surrounding the suction opening. The boss 18 is of an external configuration conforming to the configuration of the receptacle opening when the mouth thereof is distended as hereinafter discussed. With such configuration of the boss 18, the self-closing tendency of the bag mouth will act to resiliently retain the bag in sealing contact with the boss.

The bag body 13, which is preferably formed of porous paper or other like inexpensive material, may be of substantially rectangular cross section when in distended position. The mouth of the bag, however, is formed to provide flat parallel side walls, as by suitable cutting and forming in the manufacturing process or by inwardly folding side gussets not shown. A closure element 21 comprises a simple flat strip of resilient material such as rubber, the strip being provided with a central straight slit 22 which terminates inwardly of the ends 23 of the strip. The flat parallel side walls of the bag, adjacent to the mouth thereof, extend through the slit 22 and are folded outwardly to provide flanges 20. These flanges are secured in any suitable manner, as by gluing or stapling, to the front face of the closure element 21, on either side of the slit 22. The structure is completed by a provision of a wire lifting handle 24 which is preferably of arcuate configuration, its ends 25 being inserted through the ends 23 of the strip 21 beyond the ends of the slit 22. Thus, the handle may be folded to lie in the plane of the strip 21 or it may be raised vertically in line with the slit when the bag is to be carried thereby.

The operation of the present device is believed to be clearly understandable from the foregoing description. When the bag is to be applied to the boss 18, the sides of the strip 21 are flexed outwardly to space the sides of the slit 22 to provide an aperture of the configuration substantially as shown in Fig. 3. The receptacle will then be slipped over the boss 18 and will retain its position thereon by virtue of the resiliency of the material of the strip 21. If desired, a bead may encircle the end of the boss 18 under which the sides of the slit may engage to thus secure the bag to the boss 18. The cover 15 is applied in the normal manner and the cleaning operations may follow. When it is desired to remove the bag the cover is removed and with it the bag still attached thereto. Thereafter a simple withdrawal of the mouth of the bag from the boss 18 will result in an automatic

closing of the bag mouth and the bag fully closed may be conveniently transported for disposal by carrying with the handle 24.

It will, of course, be understood that the invention is in no way limited to the specific structure or details herein set forth and that numerous changes and modifications may be resorted to without departure from the spirit or scope of the invention as outlined in the appended claims.

What I claim is:

1. A receptacle comprising a bag having flexible walls defining a mouth portion, a single one-piece strip of self-sustaining resilient material formed with a slit therethrough, the length of said slit being at least equal to the width of the collapsed mouth portion, means for securing the free end of one of said flexible walls to said strip adjacent to one side of said slit, and means for securing the free end of another of said flexible walls to said strip adjacent to the opposite side of said slit, the resiliency of said material tending to maintain said slit and mouth portion closed.

2. A receptacle comprising a bag having flexible walls defining a mouth portion, a single one-piece flat strip of self-sustaining resilient material formed with a slit extending therethrough in the direction of the thickness of said strip, the lengthwise extent of said slit being substantially

parallel to the lengthwise extent of said strip, said flexible walls extending through said slit, means for securing the free end of one of said walls to the flat surface of said strip on one side of said slit, and means for securing the free end of another of said walls to the flat surface of said strip on the opposite side of said slit, the resiliency of said material tending to maintain said slit and said mouth portion closed.

EMIL ANDERSON.

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