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CONTAINER CLOSURES

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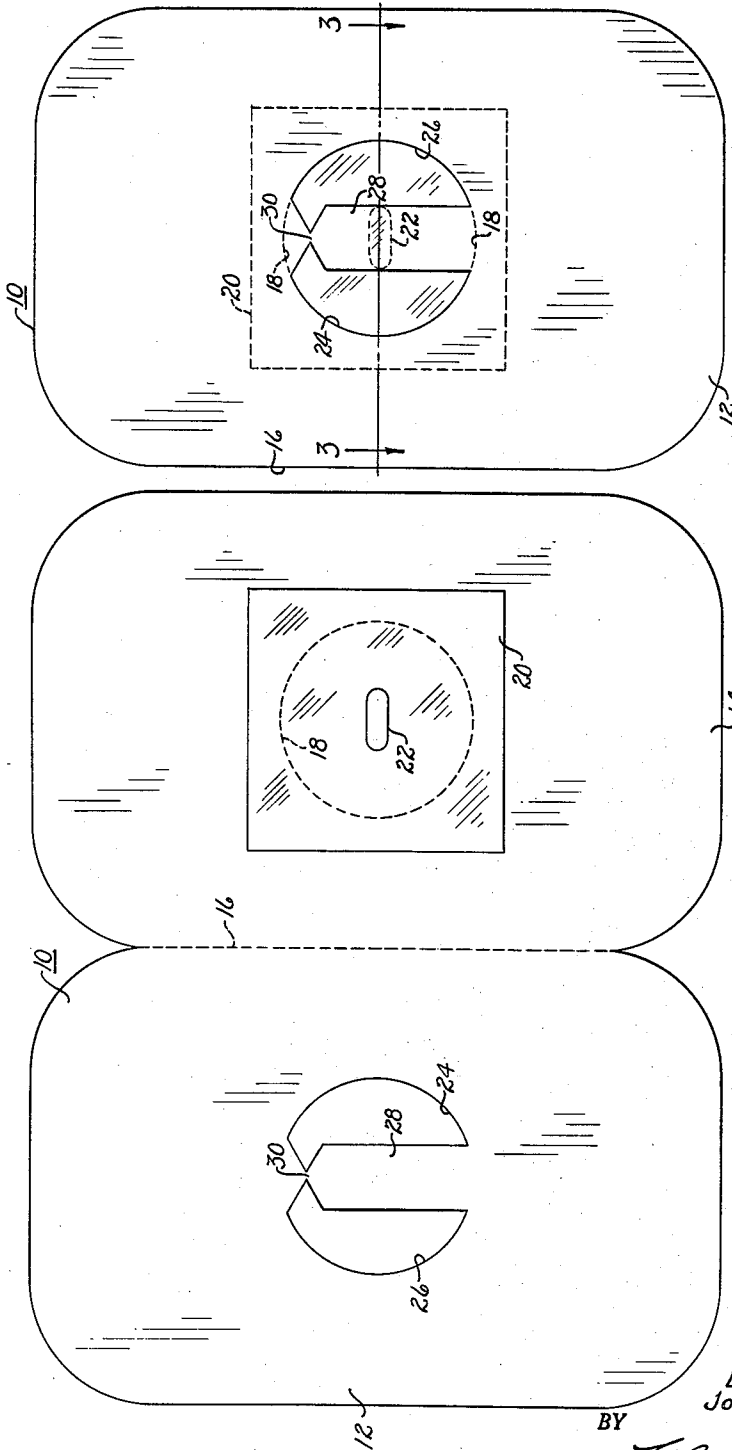


Fig. 2



Fig. 3

Fig. 1

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**CONTAINER CLOSURES**

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 Original applications Dec. 20, 1952, Ser. No. 327,132, now Patent No. 2,895,551, dated July 21, 1959, and July 5, 1957, Ser. No. 670,146, now Patent No. 3,052,588, dated Sept. 4, 1962. Divided and this application May 22, 1959, Ser. No. 815,186  
 1 Claim. (Cl. 229—62.5)

This application is a division of our copending application Serial No. 327,132 filed December 20, 1952, now Patent No. 2,895,551 of July 21, 1959, and of our copending application Serial No. 670,146 filed July 5, 1957, now Patent No. 3,052,588 of September 4, 1962, which latter application is also a division of Serial No. 327,132.

Our invention relates to an improved disposable porous dust container for use in a suction cleaner.

The practical utilization of disposable porous dust containers, rather than the conventional cloth dust bag which is emptied and used over and over again, is of relatively recent origin. It is highly desirable to provide a disposable container of this type with means for sealing the container prior to removing it from the cleaner in order to avoid spilling dust and other contents during its removal and disposal. Such a container is disclosed in U.S. Patent No. 2,596,808 of G. E. Lofgren issued May 13, 1952.

The self-sealing closure for the dust container shown in this patent includes a substantially stiff cardboard disc secured to one end of a bag made of porous material such as paper. The disc is formed with a substantially circular inlet opening of a proper size to accommodate an inlet conduit for introducing dust-laden air into the bag. A patch of thin stretchable material, such as sheet rubber, is secured to the disc over the inlet opening therein and is provided with a normally small aperture centered with respect to the inlet. The nature of the sheet rubber is such that this aperture may be enlarged by the introduction of the inlet conduit, but will return to its normal size upon withdrawal of the conduit. In order to substantially close this aperture a strip or tongue of flexible material, such as light cardboard, extends across the rubber sheet and the aperture therein so as to be forced through the aperture when the inlet tube is inserted. When the inlet tube is withdrawn this strip of cardboard remains within the aperture so as to substantially seal the latter.

The present invention constitutes an improvement over the above described closure. Instead of using a single sheet of cardboard for the disc of the closure, we provide two layers by forming attached discs from one sheet and then folding one disc over on the other. It is almost impossible to prevent curl in a sheet of cardboard, but by laminating two layers of the same sheet together face to face the tendency of one layer to curl in one direction is counteracted by the tendency of the other layer to curl in the opposite direction. Also, by making the disc of two layers, each layer is only one-half the thickness of the total and consequently the sheet material used may be thin enough so that the sealing tongue may be integral with one of the layers, instead of a separate strip as is shown in the above-mentioned patent. Furthermore, in accordance with our invention, the rubber sheet material is located between the two layers of cardboard. This

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makes it possible to more securely affix the rubber sheet and also results in a better appearance, inasmuch as the edges of the rubber sheet are concealed from view.

Further objects and advantages of our invention will be apparent from the following description when considered in connection with the accompanying drawing which forms a part of this specification and of which:

FIG. 1 is a view showing the two parts of a container closure before they are folded over;

FIG. 2 is a top view of a finished container closure; and

FIG. 3 is a cross-sectional view taken on the line 3—3 of FIG. 2.

Referring to the drawings, reference character 10 designates generally a piece of cardboard or similar material which has preferably been cut from or stamped out of a sheet of such material. It includes generally rectangular discs 12 and 14 which are integral with each other and are delineated by a line 16 which preferably is a score line or partial cut. Disc 14 is formed with a substantially circular opening 18. Secured to the disc 14 so as to completely cover the opening 18 is a patch of elastic sheet material 20, such as sheet rubber. The patch 20 is formed with a normally small aperture 22 which is substantially centrally located with respect to the opening 18. Patch 20 is preferably secured to the disc 14 by gluing.

Disc 12 is formed with two openings 24 and 26 which are separated from each other by a strip or tongue of material 28 which is integral with the rest of the disc and at one end is formed with a narrow section 30. In reality, the openings 24 and 26 constitute a circular opening of the same diameter as opening 18, but divided by the diametrically extending tongue 28.

In FIG. 2 there is illustrated the finished container closure which is obtained by folding the discs 12 and 14 face to face along the score line 16 so that the disc 12 lies on the top of the disc 14, glue being employed to laminate the two discs together to form a single stiff disc with the patch of rubber 20 disposed therein. As appears from FIGS. 2 and 3, the width of tongue 28 is at least as great as the larger dimension of the aperture 22 in the rubber, and is positioned so as to completely cover this aperture.

Due to the fact that the completed disc consists of two pieces cut from the same sheet of cardboard and folded over on each other, any tendency to curl is counteracted and neutralized. Also, the thinner stock of cardboard which may be used makes it possible to have the tongue 28 integral with one of the discs, while still being flexible enough to be inserted through the aperture 22 during use, as is described in the above-mentioned Patent No. 2,596,808. Furthermore, laminating of the rubber patch 20 between the discs 12 and 14 of the cardboard makes it possible to more securely glue it in place and also conceal the edges of the patch, thus improving the appearance of the container closure.

While we have shown one more or less specific embodiment of our invention, it is to be understood that this has been done for the purpose of illustration only and that the scope of our invention is not to be limited thereby, but is to be determined from the appended claim.

What we claim is:

A container closure comprising a pair of apertured discs integral with each other and folded face to face with their apertures in registry, a tongue integral with one of

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said discs extending across the aperture of said one disc, a patch of resilient sheet material laminated between the adjacent faces of the discs and formed with a smaller aperture in registry with the apertures of the discs, the major dimension of said smaller aperture being substantially the same as the width of said tongue, and means for securing the discs in folded position with said patch therebetween and with said tongue extending over said smaller aperture therein.

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## References Cited in the file of this patent

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