Jan. 26, 1965 E. H. WOERNER 3,167,241

BAG

Original Filed Oct. 5. 1961 2 Sheets-Sheet 1

FIG. 1.

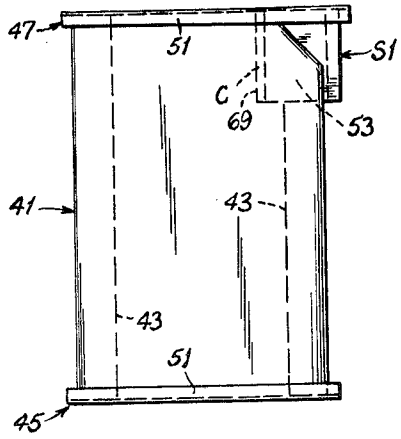
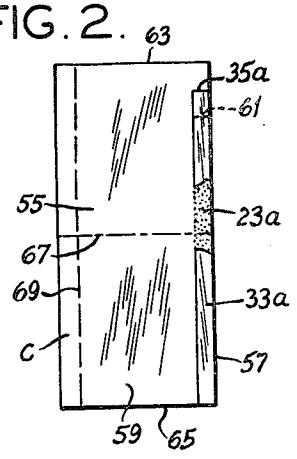


FIG. 2.



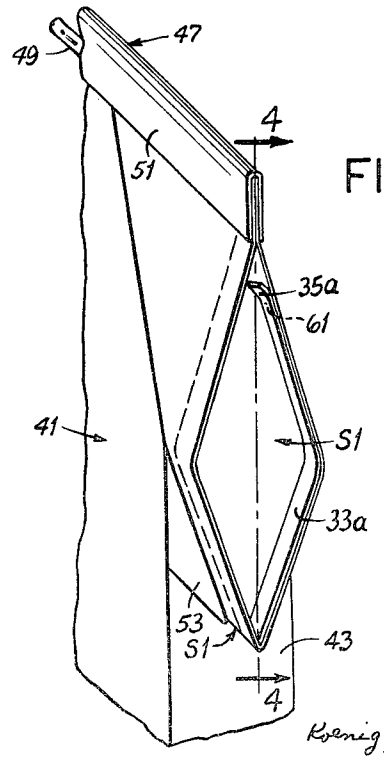


FIG. 3.

Eldon H. Woerner,
Inventor.
Koenig, Pope, Senniger and Powers,
attorneys.

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FIG. 4.

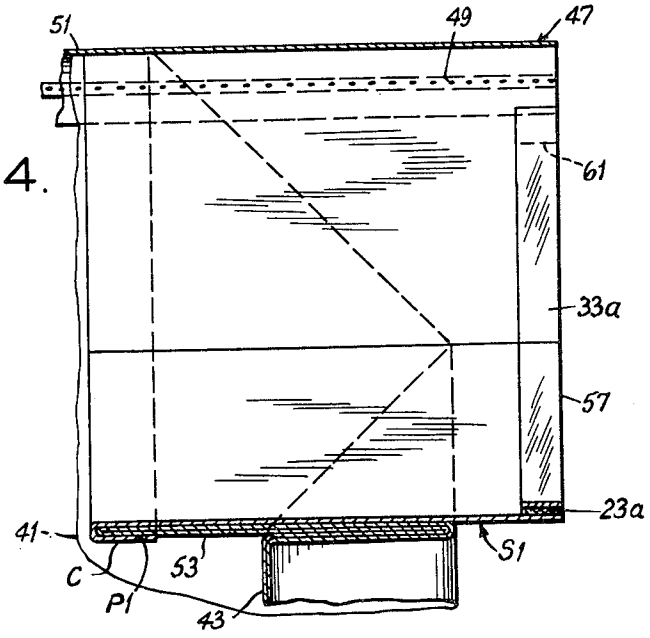
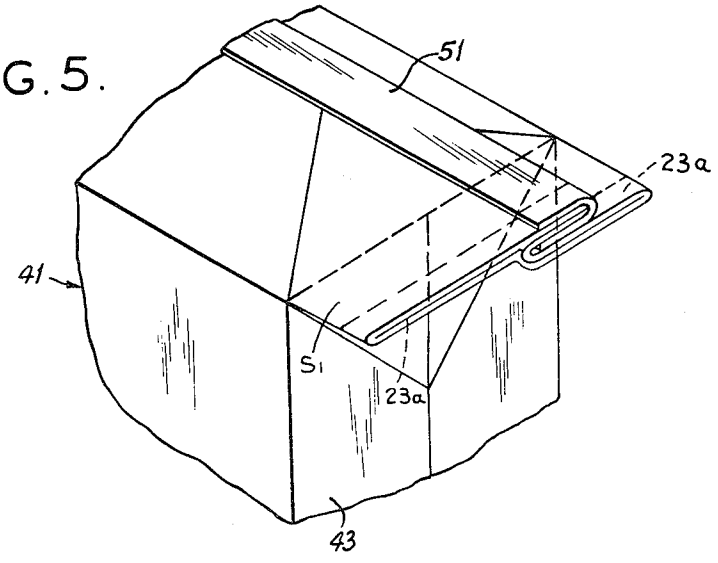


FIG. 5.



United States Patent Office 3,167,241 Patented Jan. 26, 1965

3,167,241

BAG

Eldon H. Woerner, Peoria, Ill., assignor to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri

Original application Oct. 5, 1961, Ser. No. 143,246, now Patent No. 3,092,303, dated June 4, 1963. Divided and this application Feb. 25, 1963, Ser. No. 260,694

1 Claim. (Cl. 229—62.5)

This invention relates to bags, and more particularly to multiwall paper bags having a valve at one of the corners thereof adapted to be closed after the bag has been filled.

This application is a division of my copending application Serial No. 143,246, filed October 5, 1961, entitled Bag, issued as U.S. Patent 3,092,303, June 4, 1963.

Among the several objects of this invention may be noted the provision of a sewn bag having an improved valve construction adapted to be securely closed after the bag is filled; the provision of a valve bag having a valve sleeve which is provided with means for conveniently sealing the sleeve after the bag has been filled; the provision of a valve bag with a sleeve such as described as to which the sealing means is protected until the bag has been filled, after which the sealing means may be readily exposed for effecting sealing of the sleeve; and the provision of valve bags such as described which are economical to manufacture. Other objects and features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the constructions hereinafter described, the scope of the invention being indicated in the following claim.

In the accompanying drawings, in which one of various possible embodiments of the invention is illustrated,

FIG. 1 is a view in elevation of a sewn valve bag of this invention having a so-called intuck sleeve of this invention;

FIG. 2 is a plan view of a blank to be formed into a sleeve such as is incorporated in the FIG. 1 bag;

FIG. 3 is a trimetric view showing the sleeve of the FIG. 1 sewn bag spread open;

FIG. 4 is a section taken on line 4—4 of FIG. 3; and

FIG. 5 is a trimetric view showing the appearance of the valve corner of the FIG. 1 bag after filling and sealing, and before tucking in of the valve sleeve.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

Referring first to FIG. 1 of the drawings, there is indicated at 41 a sewn bag having a valve of this invention. Bag 41 has gusset sides 43 and sewn bottom and top closures generally designated 45 and 47. It will be understood that the bag will conventionally be a multiwall paper bag, i.e., a bag made of a plurality of plies of paper, having the usual pasted longitudinal ply seams (not shown). Each closure conventionally comprises a line of stitching 49 and an overlying folded tape 51. At one top corner of the bag is a tucked-in valve flap 53. A sleeve S1 is provided on valve flap 53. Sleeve S1 is a tuck-in sleeve, i.e., a sleeve which extends out of the bag at the valve corner of the bag, an outer part of the sleeve being folded under and tucked in between the remainder of the sleeve and valve flap 53 after the bag has been filled. Sleeve S1 is also a so-called cuffed sleeve, having a cuff C pasted at P1 (see FIG. 4) to the inner end of valve flap 53 in such manner as to provide ample space underneath the sleeve for tucking in the folded outer portion of the sleeve.

Sleeve S1 is formed from a generally rectangular blank 55 of paper such as shown in FIG. 2. This may be kraft paper, for example.

A stripe of pressure-sensitive adhesive 23*a* (see FIG. 4) is applied adjacent one longitudinal edge 57 of the

blank 55 on one face 59 thereof. Adhesive 23*a* extends from a point 61 near but spaced from one end 63 (the upper end as viewed in FIG. 2) of the blank to the other end 65 thereof. A protective strip 33*a*, of a conventional plastic-coated paper which adheres lightly to the adhesive but which is adapted readily to be peeled away from the adhesive, covers adhesive 23*a* and extends from end 65 past the upper end of adhesive 23*a* a short distance to provide a free end 35*a*.

Blank 55 is folded on a transverse center line 67 to bring the ends of the blank coextensive with each other with the adhesive 23*a* and strip 33*a* on the inside of the folded blank. The cuff C of blank 55 is formed by folding the cuff back on a longitudinal line 69. The blank 55 is positioned on valve flap 53 with cuff C overlying the margin of flap 53 at the inner end of flap 53 with the blank extending outward over flap 53. As previously stated, cuff C is adhered to the flap by paste at P1. The upper margins of the folded blank, including the end of the protective strip 33*a* at end 65 of the blank, are caught in the top closure to form sleeve S1. Free end 35*a* of the strip 33*a* is not caught in the sewing.

The bag 41 is adapted to be filled by entering a filling spout in sleeve S1 and blowing material with which the bag is to be filled (such as a pulverized or granulated material) into the bag through the spout. Strip 33*a* protects the adhesive during the filling operation. After the bag 41 has been filled and the spout removed, free end 35*a* is grasped and strip 33*a* is stripped from adhesive 23*a*. The needle holes and thread extending through the end of strip 33*a* caught in the closure weaken the strip to such an extent that it will tear off along this weakened area when strip 33*a* is pulled. The sleeve S1 is spread horizontally flat as shown in FIG. 5, and its outer end is pressed to effect sealing thereof by adhesive 23*a*, and then folded down and tucked underneath the inner portion of the sleeve.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

A bag having a sewn closure at one end thereof, said closure including an inwardly directed valve flap at one corner of the bag at said one end, stitching extending along said one end of the bag, a valve sleeve secured to said valve flap, said sleeve being constituted by a generally rectangular blank of sleeve material having a stripe of pressure-sensitive adhesive extending generally parallel to and adjacent one end of the blank and a protective strip overlying the stripe of adhesive, said stripe of adhesive extending from one side edge of the blank across the blank more than half the width of the blank but terminating short of the opposite side edge of the blank, said protective strip extending from said one side edge of the blank across the blank and having an end portion which extends beyond and lies free of the adhesive for grasping purposes, but which also terminates short of said opposite side edge of the blank, said blank together with the protective strip being folded in half on a central fold line extending generally perpendicular to one end of the blank to form the sleeve with the stripe of adhesive and the protective strip on the inside of the sleeve extending crosswise of the sleeve adjacent said one end of the sleeve, said sleeve having its side margins caught in the stitching, said strip, adjacent its end at said one side edge of the blank, being caught in the stitching along with the side margins of the sleeve, said end portion of the strip which extends beyond

and lies free of the adhesive terminating short of said stitching for grasping purposes, said sleeve being secured to the valve flap with said one end of the sleeve constituting the outer end of the sleeve, said strip preventing sticking of the sleeve and protecting the adhesive from becoming fouled by material with which the bag is filled through the sleeve, said free end portion of said strip lying against one side of the sleeve so as not to interfere with entry of a spout in the sleeve, and said strip being adapted to be removed after the bag has been filled by grasping its said free end portion and pulling it to permit the sleeve to be

sealed by the adhesive, said strip being adapted to be torn off at the stitching.

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