Jan. 14, 1958 C. V. BRADY 2,819,834

BAG

Filed July 13, 1955

FIG. 1.

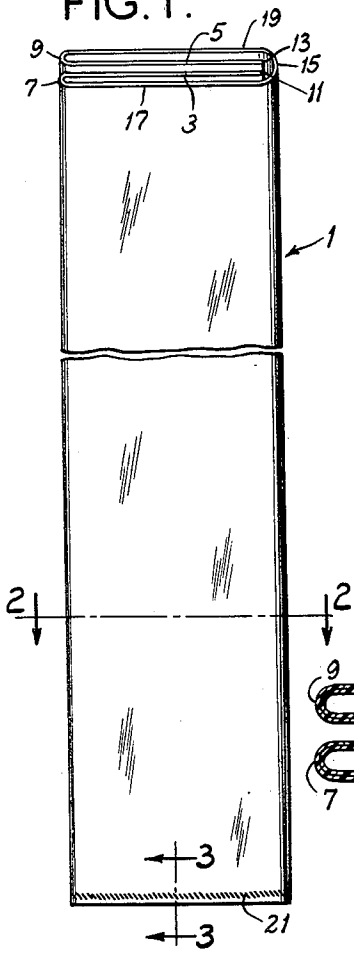


FIG. 4.

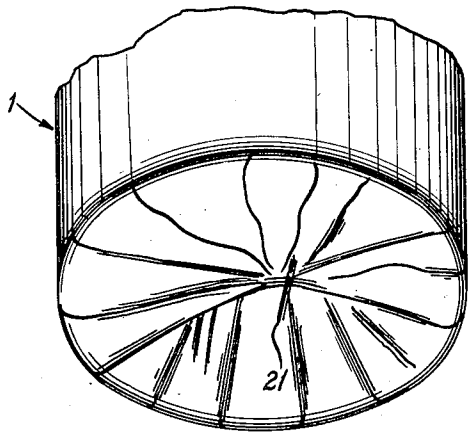


FIG. 2.

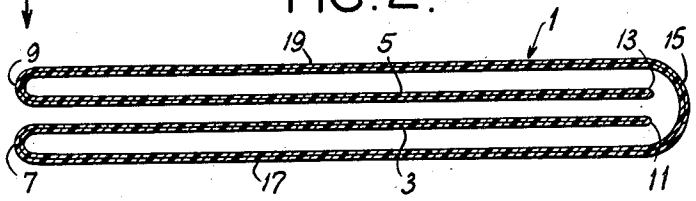


FIG. 3.

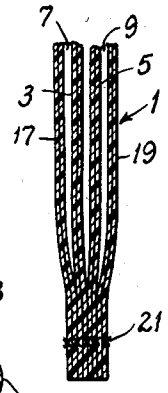
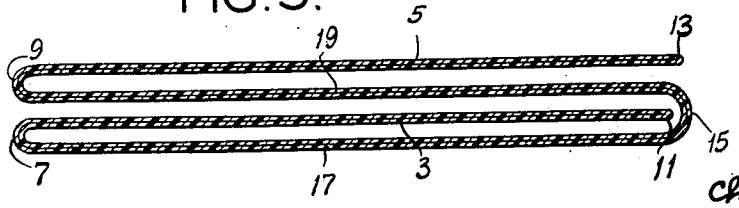


FIG. 5.



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BAG

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8 Claims. (Cl. 229—53)

This invention relates to bags, and more particularly to bags adapted for use as liners in rigid cylindrical containers such as metal or fiber drums, wooden barrels, and the like.

Among the several objects of the invention may be noted the provision of a bag particularly adapted for use as a liner in a cylindrical container (though not limited to such use) which is constructed so that when spread open it inherently assumes a cylindrical shape with a round bottom; and the provision of a bag such as described which is capable of being economically manufactured in quantity production. Essentially, a bag of this invention comprises a length of flat tubing having portions folded over on longitudinal fold lines which are spaced inward from the edges of the tubing one-quarter the width of the tubing. The tubing is further folded on its longitudinal center line so that the bag has a width corresponding to one-quarter the width of the flat tubing and comprises four superimposed two-layer portions each having a width corresponding to one-quarter the width of the flat tubing. The bag has a bottom closure securing together the bottom margins of the two layers of each two-layer portion, and securing together the two-layer portions. This construction is such that when the bag is spread open a round bottom is inherently formed. 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 claims.

In the accompanying drawings, in which several of various possible embodiments of the invention are illustrated,

Fig. 1 is a perspective view of a bag of this invention;

Fig. 2 is an enlarged section taken on line 2—2 of Fig. 1, thicknesses being exaggerated;

Fig. 3 is an enlarged section taken on line 3—3 of Fig. 1, thicknesses again being exaggerated;

Fig. 4 is a perspective view showing the Fig. 1 bag spread open; and,

Fig. 5 is a view showing a modified version of the bag.

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

Referring to the drawings, Fig. 1 shows a bag of this invention, generally designated 1, which is particularly adapted for use as a liner in a container of round cross section (though not limited to such use). The bag is shown as being formed from a length of flat (ungusseted) heat-sealable plastic tubing, such as polyethylene tubing. The girth of the tubing corresponds generally to the inside perimeter of a round container in which the bag is to be used as a liner. As shown, the tubing is seamless, but it will be understood that it could be a type of tubing that is formed by longitudinally folding a web of heat-sealable plastic sheet material to bring its margins into overlapping relation and longitudinally heat sealing these margins. Accordingly, the term "tubing" as employed herein refers to either seamless or seamed tubing.

In accordance with this invention, the tubing has portions 3 and 5 folded over on longitudinal fold lines 7 and 9 which are spaced inward from the edges 11 and 13 of the tubing one-quarter the width of the tubing. The tubing is further folded on its longitudinal center line 15. As shown in Figs. 1 and 2, this folding is such that portions 3 and 5 are brought inside of outer portions designated 17 and 19. As a result of the folding, the bag has a width corresponding to one-quarter the width of the flat tubing and comprises the four superimposed portions 17, 3, 5 and 19. Each of these portions comprises two layers of the material and has a width corresponding to one-quarter the width of the flat tubing. The tubing, folded as described, is transversely heat sealed at one end as indicated at 21 (see Figs. 1 and 3) to form a bottom closure securing together the bottom margins of the two layers of each of the two-layer portions 17, 3, 5 and 19, and securing portions 17 to 3, 3 to 5 to 19. When the resultant bag is opened, as upon filling with a fluent material, it inherently assumes a cylindrical shape with a round bottom, as illustrated in Fig. 4.

While, as above described, the bag 1 is made of heat-sealable plastic such as polyethylene, it will be understood that it may be made of other materials, and that if made of other materials it may have any suitable conventional closure other than the heat-sealable closure 21.

Fig. 5 shows a modification of the Fig. 1 bag in which instead of having the portions 3 and 5 folded over on the same face of the tubing, portion 3 is folded over on one face and portion 5 is folded over on the other face of the tubing. Then when the tubing is folded on line 15, portion 3 is located between portions 17 and 19, and portion 5 is located on the outside of portion 19, instead of having both portions 3 and 5 located between portions 17 and 19. Otherwise the bag shown in Fig. 5 is made the same as the Fig. 1 bag, and it also opens into cylindrical shape with a round bottom.

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.

I claim:

1. A bag comprising a length of flat tubing having portions folded over on longitudinal fold lines which are spaced inward from the edges of the tubing one-quarter the width of the tubing, and said tubing further being folded on its longitudinal center line so that the bag has a width corresponding to one-quarter the width of the flat tubing and comprises four superimposed two-layer portions each having a width corresponding to one-quarter the width of the flat tubing, and said bag having a bottom closure in which the bottom margins of the two layers of each two-layer portion are secured together, and in which the two-layer portions are secured together.

2. A bag as set forth in claim 1 wherein said folded-over portions are both folded over on the same face of the tubing.

3. A bag as set forth in claim 2 wherein the folding on the longitudinal center line is such that the said folded-over portions are disposed inside of outer portions of the bag.

4. A bag as set forth in claim 1 wherein one folded-over portion is folded over on one face of the tubing and the other folded-over portion is folded over on the other face of the tubing.

5. A bag comprising a length of flat heat-sealable plastic

tubing having portions folded over on longitudinal fold lines which are spaced inward from the edges of the tubing one-quarter the width of the tubing and said tubing further being folded on its longitudinal center line so that the bag has a width corresponding to one-quarter the width of the flat tubing and comprises four superimposed two-layer portions each having a width corresponding to one-quarter the width of the flat tubing, and said bag having a heat-sealed bottom closure in which the bottom margins of the two layers of each two-layer portion are secured together, and in which two-layer portions are secured together.

6. A bag as set forth in claim 5 wherein said folded-over portions are both folded over on the same face of the tubing.

7. A bag as set forth in claim 6 wherein the folding

on the longitudinal center line is such that the said folded-over portions are disposed inside of outer portions of the bag.

8. A bag as set forth in claim 5 wherein one folded-over portion is folded over on one face of the tubing and the other folded-over portion is folded over on the other face of the tubing.

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