Dec. 4, 1956 R. H. PLAMANN 2,772,823

BAG SPOUT

Filed June 28, 1954

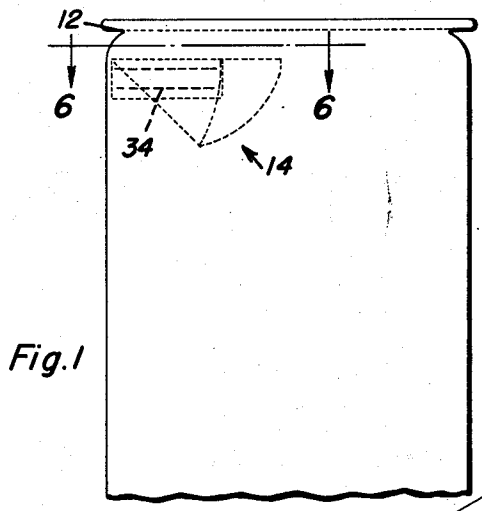


Fig. 1

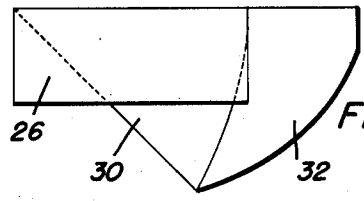


Fig. 5

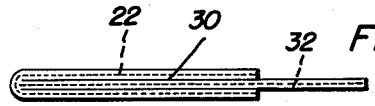


Fig. 6

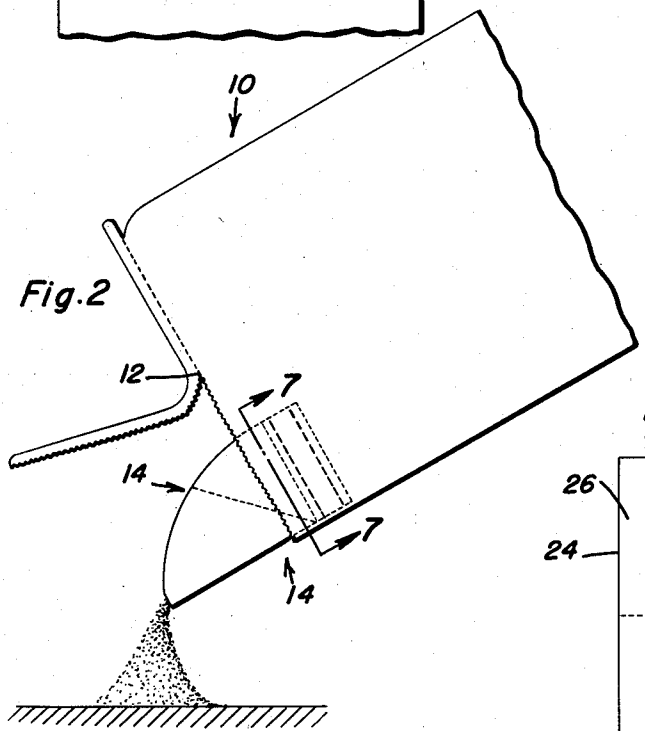


Fig. 2

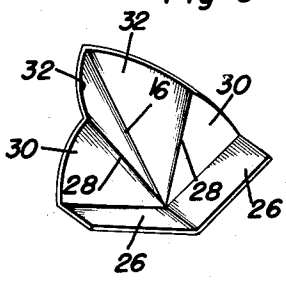


Fig. 3

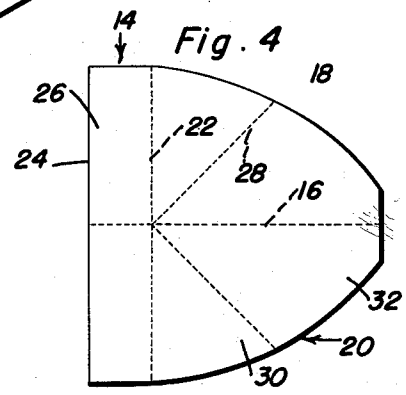


Fig. 4

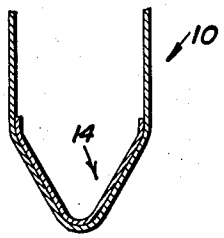


Fig. 7

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United States Patent Office 2,772,823 Patented Dec. 4, 1956

2,772,823

BAG SPOUT

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Application June 28, 1954, Serial No. 439,757

4 Claims. (Cl. 222—527)

The present invention relates to dispensing spouts, and more particularly relates to a dispensing spout for flexible bags to facilitate the pouring of material from such bags.

The primary object of the invention is to provide a foldable dispensing spout adapted to be mounted within flexible bags adjacent the tops thereof, which spout may be easily and quickly unfolded to its pouring position upon opening of the bag and which spout may be folded back into the bag and out of pouring position when it is desired to close the spout.

A further, and highly important object of the invention, is in the provision of a flexible bag spout which is disposed entirely within the bag and which will in no manner interfere with the sealing characteristics of the bag when closed, which spout will readily unfold into its pouring position upon opening of the bag.

A still further object of the invention is to provide a pouring spout for paper, cloth and other type bags which necessitates no modification of the conventional sealing processes for such bags and further necessitates no structural modification of the conventional bags for its use.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is an enlarged view of the upper portion of the bag to which the pouring spout of the present invention is attached;

Figure 2 is a view of the bag with the top opened and the spout extended to its pouring position;

Figure 3 is a perspective view of the spout per se in its partially unfolded position;

Figure 4 is a top view of the blank from which the spout is formed with the fold lines of the blank to form the spout being designated in dotted outline;

Figure 5 is a side elevational view of the spout in its folded position;

Figure 6 is a top view of the spout in its folded position; and

Figure 7 is a cross-sectional view of the spout forming portion taken substantially along section line 7—7 of Figure 2.

In the packaging of fertilizer and other granular materials in heavy paper, cloth and other type bags, when such bags are opened for dispensing the contents therefrom, considerable difficulty is encountered in pouring the contents into any specific area, this difficulty being increased when it is desired to pour the granular material, such as fertilizer, into a fertilizing attachment or into a utensil used to refill an attachment hopper. It is almost impossible to perform such operation with the ordinary bag without spilling a certain amount of the granular material on the ground.

In accordance with the present invention, a flexible

or pliable bag 10 of a conventional nature is shown, being sealed at its upper end as by means of the stitching 12. Mounted within the bag is a foldable spout 14.

When the stitching on the top of the bag is ripped and the bag is opened, as shown in Figure 2, the spout 14 is extended or unfolded to its pouring position to guide the contents of the bag as such contents are dispensed from the bag.

The pouring spout 14 is initially, as shown in Figure 4, in the shape of a semi-elliptical blank, the blank having a longitudinal fold line 16 along the longitudinal or major axis thereof throughout its length to divide the same into equal portions 18 and 20.

The blank is also provided with a transverse fold line 22 parallel to and adjacent the straight edge or minor axis 24 of the blank 14. The transverse fold line divides each of the equal portions 18 and 20 of the blank into a rectangular section 26 and the pouring spout section defined by each of the portions 18 and 20 bounded by the fold line 22 and the major portion of the longitudinal fold line 16.

The blank is further provided with a diagonal fold line 28 on each of the spout sections extending from the section of the longitudinal and transverse fold lines 16 and 22, respectively, to the peripheral edge of the spout section dividing each spout section into inner and outer portions 30 and 32, respectively.

To fold the spout, the blank 14 is first creased along the longitudinal fold line 16 so that the outer portions 32 of the spout sections are brought into abutting relation with one another. Then, the inner portions 30 are folded in superposed relation on the abutting outer portions 32 and the rectangular sections 26 are folded on top of the inner portions 30 so that they are parallel to the longitudinal axis designated by the fold lines 16 of the spout.

When so folded, the rectangular sections 26 comprise flaps which are attached by means of staples or stitching or the like 34 to the inner surface of the bag adjacent and parallel to the top of the bag.

Normally, when the bag is closed, the shape of the bag maintains the flap 14 in its folded position, as shown in Figure 1, which is somewhere between the complete folded position shown in Figure 6 and the partially opened position shown in Figure 3.

Upon opening of the bag and flexing the bag for pouring, the spout 14 unfolds to its open position wherein the pouring spout serves as a guide for dispensing material from the bag.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. In combination with a flexible bag, a foldable pouring spout disposed within the bag and attached to the inner surface of the bag wall, said spout comprising a semi-elliptical-shaped blank, said blank having a longitudinal fold line along the longitudinal axis thereof dividing the same into equal portions throughout its length, said blank having a transverse fold line thereacross adjacent the straight edge thereof dividing each equal portion into a rectangular section and a spout section, the rectangular sections being attached to the bag wall substantially parallel to the top of the bag, the spout sections being free from attachment to the bag, said blank having a diagonal fold line on each spout section extending

from the intersection of said longitudinal and transverse fold lines to the peripheral edge of each spout section dividing each spout section into inner and outer portions, said rectangular sections being foldable toward parallel relation with one another upon folding of the inner portions of the spout sections toward the outer portions, said spout sections being received between said rectangular sections upon folding of the spout.

2. In combination with a bag having means adjacent the top thereof for opening the same, a foldable pouring spout attached to the interior surface of the bag and being disposed completely below said opening means in its folded condition, said spout comprising a pair of generally rectangular panels foldably joined to one another along one edge and being fixedly attached to said bag, a pouring spout portion foldably joined to the upper edges of said panels and being free from attachment to the bag, said portion being disposed betwen said panels when the spout is in folded position, and being movable to an open position extending above the top of the bag when the bag is opened.

3. In combination with a flexible bag having a score line across the top portion thereof for opening the bag, a foldable pouring spout disposed within the bag and attached to the inner surface of the bag below the score line, said spout comprising a semi-elliptical, shaped blank, said blank having a longitudinal fold line along the longitudinal center line thereof, said blank having a transverse fold line thereacross generally parallel to said score

line dividing the same into a spout section and a pair of generally rectangular sections, said rectangular sections being attached to said bag and said spout being free from attachment to said bag, said rectangular sections being movable toward a position parallel to one another and said spout section being disposed below said score line and between said rectangular sections when the spout is in its folded position, said spout section being movable to an open position extending beyond said score line.

4. In combination with a flexible bag having an openable top, a foldable pouring spout attached to the interior surface of the bag, said spout comprising a generally rectangular portion attached to the inner surface of said bag and having the top edge thereof generally parallel to the top of the bag, a spout forming portion foldably attached to the top edge of said rectangular section and disposed below said top edge in its folded position, said spout forming portion being unfoldable to a pouring position extending above the top of said bag when the bag is opened.

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