

Sept. 21, 1937.

J. A. FARMER

2,093,977

BAG CLOSURE

Filed July 20, 1935

2 Sheets-Sheet 1

FIG. 1.

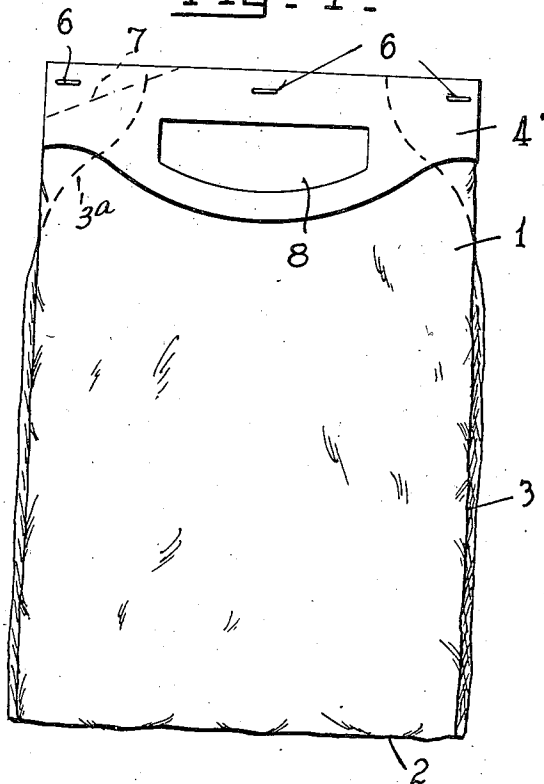


FIG. 2.

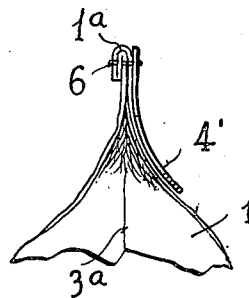


FIG. 3.

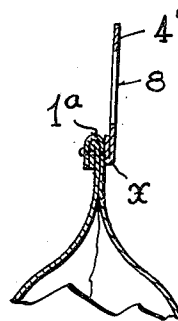


FIG. 4.

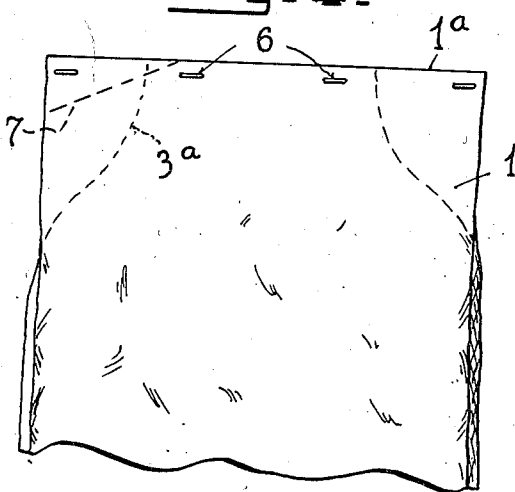
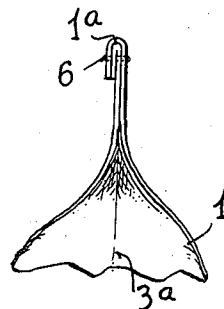


FIG. 5.



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2 Sheets-Sheet 2

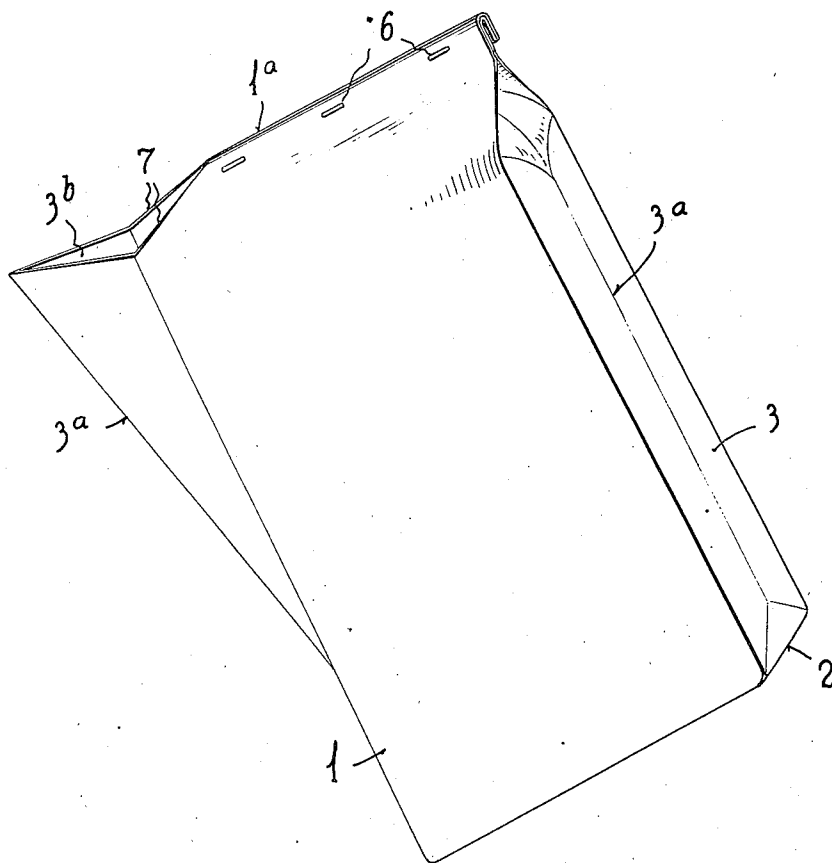


FIG. 6.

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UNITED STATES PATENT OFFICE

2,093,977

BAG CLOSURE

John A. Farmer, Lancaster, Pa.

Application July 20, 1935, Serial No. 32,422

6 Claims. (Cl. 229-62)

This invention relates to packages or containers, and more particularly to an improved closure for bags adapted for use in connection with the sale of finely divided or fluent materials.

Among the general objects of the invention are to provide a closure by the use of which the end of the bag may be effectively sealed so as to prevent leakage, and which, when desired, may be readily cut to form an opening from which the contents of the bag may be conveniently poured or dispensed.

In my prior co-pending application, Serial No. 745,121, filed September 22, 1934, I have described and claimed a closure tab of sheet material adapted to straddle and embrace the end of a bag, and having a portion adapted to be cut off to provide a pouring opening, the bag illustrated being shown as of the satchel bottom type, having a single fold down each side, whereby the top of the bag, when sealed by means of the said closure tab, is considerably wider than the body of the filled bag.

In my said prior application, I have shown and described special means for re-sealing the pouring opening, when desired. In the present invention, which is applied to a bag of the bellows-sided type, I have found that by cutting off the corner of the bag at the proper point, I am able to so form the upper end of the gusset that, when pulled out after being cut, it constitutes an efficient pouring spout and when pushed back into its original position, provides an effective means for re-closing the pouring opening.

Furthermore, in my present invention, I also contemplate sealing the bag by a simple folding operation, without the use of any separate closure tab of sheet material, such as shown in my said prior co-pending application.

In order that the invention may be readily understood, reference is had to the accompanying drawings forming part of this specification and in which:

Fig. 1 is a front elevation of a bellows sided bag closed in accordance with one form of the invention;

Fig. 2 is a fragmentary side elevation of the package shown in Fig. 1;

Fig. 3 is a vertical section through the package illustrated in Figs. 1 and 2, showing how the tab may be bent upwardly to form a handle;

Figs. 4 and 5 are fragmentary front and side elevations, respectively, of a bag closed in accordance with another form of the invention; and

Fig. 6 is a perspective view of the form of package depicted in Figs. 4 and 5, but illustrating it as it appears when in use, and showing my novel pouring spout.

Referring to the drawings in detail, and more particularly first to Figs. 1 and 2 thereof, I des-

ignates a common form of bag, known as the bellows-sided type and having a flat bottom 2 and infolded portions 3 at each side constituting gussets. This type of bag, when opened up, presents a substantially square or rectangular appearance. The side portions of the bag are infolded along a central longitudinal crease 3^a to form the gussets.

Instead of using a V-shaped tab such as shown in my said prior co-pending application, I now propose to employ a tab comprising an unfolded piece of preferably stiff and resilient sheet material applied to one side only of the top of the bag, as shown in Figs. 1 and 2. In order to seal the bag, when a tab of this type is employed, I bring the upper ends of the bag walls together in flat relation and in substantial contact throughout a transverse zone, as before, and then fold the top portion of the bag over on itself, as indicated at 1^a in Fig. 2. The single or flat form of tab, above referred to, is indicated at 4' and this is placed against one side of the bag with its upper edge substantially coincident with the upper folded edge 1^a of the bag. A row of staples or other fastening means 6 are then passed through the folded-over portions of the bag top and the tab, so as to effectively seal the bag and secure the tab thereto. This tab 4' serves to reinforce and stiffen the upper end of the bag and cause it to stand upright, so as to present a neat, attractive appearance.

If desired, a finger opening may be formed in the tab 4', as shown at 8 in Figs. 1 and 3, and the tab may then be bent upwardly to constitute a carrying handle, as illustrated in Fig. 3, and as fully described and claimed in my prior Patent No. 2,050,967, dated August 11, 1936.

As stated in the preamble, I contemplate cutting off a corner of the filled and sealed bag along a diagonal line so as to provide a pouring opening. The approximate preferred position of such a line may be defined by a mark formed on the tab as indicated at 7 in Fig. 1, and it will be observed that one of the fastening devices 6 is preferably located between this line and the outside edge of the bag. By reference to Fig. 1, it will also be observed that the upper end of this line, where it meets the fold-line of the bag, is disposed inwardly of the crease or inner fold-line 3^a of the gusset.

It is obvious, therefore, that after the corner of the bag has been cut off along the line 7 to provide an opening, it is possible, by inserting the finger in this opening, to pull out the upper end portion of the gusset, reversing its fold about the crease 3^a and producing a pouring spout 3^b of the form clearly shown in Fig. 6. The straight upper edges of this spout, as seen in Fig. 6, correspond, of course, to the cut line 7, only their

angle to the original fold-line of the bag has been reversed.

After the desired amount of material has been poured or dispensed from this spout, the opening may be substantially reclosed by pushing the end of the gusset, constituting the spout, back through the opening into its original position. Thus the present invention provides not only an exceptionally convenient pouring spout, but also means inherent in the package itself by which the pouring opening may be reclosed when desired. Thus, no auxiliary means for closing the pouring opening is required.

I find, in some cases, especially where the bag is made of relatively heavy paper or the like, that so far as the described method of forming the improved pouring spout is concerned, it is not necessary to use any tab at all. In such cases, after bringing the bag walls together in substantial contact throughout a transverse zone, the top of the bag may be simply folded over on itself and secured by staples 6, or other fastening means as shown in Figs. 4 and 5. When the corner of this bag is cut off along the diagonal line 7, lying between the outermost staple, and a point on the fold disposed inwardly of the crease line 3^a of the gusset, the upper end of the gusset may be pulled out of the opening thus provided to form a pouring spout, as shown in Fig. 6. It will, of course, be understood that, where the top of the bag is folded over, the diagonal cut line must extend inwardly beyond the gusset, in order to free the same. Where no tab is employed, but the end of the bag simply folded over as shown in Figs. 4 and 5, the simulation of the outline of a tab may be printed directly on the bag, for the purpose of ornamentation, if so desired.

In Fig. 1, I have illustrated the use of three staples or fastening devices 6, while in Fig. 4 I have shown four such fastening devices. The exact number is of course immaterial, but the important requirement is, first, that the outermost staples on each side pass through the infolded gussets, and second, that the inner staple or staples, at least adjacent the side of the bag which is to be cut, are so placed that they do not pass through the infolded gusset, so that the gusset, after the corner of the bag has been cut off, is left free to be pulled out.

The invention is applicable to flexible bags made of paper, cellulose sheeting, metal foil or other suitable materials or combinations thereof, and as a matter of appearance, and for display purposes, it is frequently desired to make the sealing tab of relatively stiff sheet material.

The form of package shown in Figs. 1 and 2, in which there is employed a tab disposed on one side only of the bag, lends itself readily to being folded down to form a substantially flat top, to facilitate packing in cartons, for shipping or storage purposes.

What I claim is:

1. A package comprising a flexible bag containing any desired material, the end portions of the bag walls being brought together at the top in flat relation throughout a definite transverse zone, and a tab of relatively stiff sheet material reinforcing the said end portions and secured thereto by fastening means extending through the same, said tab lying on one side only of the bag, and extending a substantial distance longitudinally thereof, whereby the top of the bag is reinforced and stiffened, but may be read-

ily folded over, to facilitate packing in cartons.

2. A package adapted to contain finely divided material and comprising a bellows-sided bag having infolded portions forming gussets, the end portions of the bag walls being brought together at the top in flat relation, with the infolded gussets between them, and folded over, and means securing them in this position, one of the bag walls having formed thereon a mark defining a diagonal line of severance along which the corner of the bag and gusset may be cut off to provide a pouring opening, such line intersecting the fold of the bag walls at a point inwardly of the fold of the gusset.

3. A package adapted to contain finely divided material and comprising a bellows-sided bag having infolded portions forming gussets, the end portions of the bag walls being brought together at the top in flat relation, with the infolded gussets between them, and folded over, and a row of spaced fastening devices securing them in this position, the outermost of which fastening devices passes through each gusset, one of the bag walls having formed thereon a mark defining a diagonal line of severance along which the corner of the bag and gusset may be cut off to provide a pouring opening, such line lying inside of said outermost fastening device and intersecting the fold of the bag walls at a point inwardly of the fold of the gusset.

4. A package adapted to contain finely divided material and comprising a bellows-sided bag having infolded portions forming gussets, the end portions of the bag walls being brought together at the top in flat relation, with the infolded gussets between them, and folded over, and a row of spaced fastening devices securing them in this position, the outermost of which fastening devices passes through the gusset and the next adjacent fastening device being spaced inwardly of the fold of the gusset, one of the bag walls having formed thereon a mark defining a diagonal line of severance along which the corner of the bag and gusset may be cut off to provide a pouring opening, such line passing between the said two fastening devices and intersecting the fold of the bag walls at a point inwardly of the fold of the gusset.

5. The herein described method of dispensing finely divided material from a bellows-sided bag having infolded, longitudinally extending gussets, and the end portions of the bag being brought together at the top in flat relation, with the gussets between them and folded over and secured in folded position, which method comprises cutting off a corner of the folded bag end and gusset portions along a diagonal line extending inwardly beyond the gusset, and pulling out of the opening thus formed the free upper end portion of the gusset to provide a pouring spout.

6. A package containing finely divided material and comprising a flexible, bellows-sided bag having longitudinally folded portions at each side forming gussets, the end portions of the bag walls being brought together at the top in substantially flat relation and folded over, the gusset at one side of the bag being infolded between them, and means for securing the said walls and gusset in this position, the gusset at the other side having its upper edges formed on a diagonal line and projecting outwardly from the bag to provide a pouring spout.

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