

Sept. 21, 1937.

J. A. FARMER

2,093,979

BAG OR PACKAGE

Filed Dec. 14, 1935

2 Sheets-Sheet 1

FIG. 1.

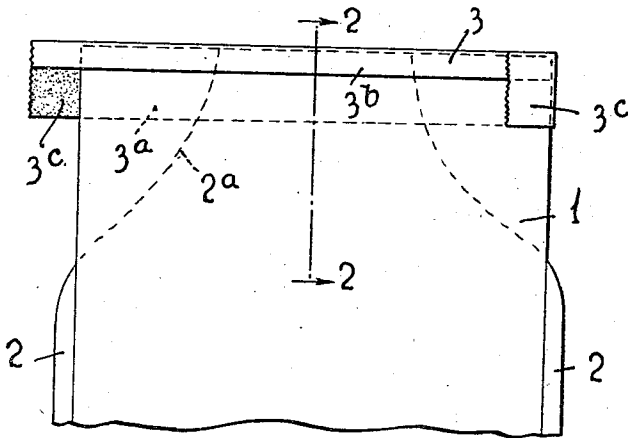


FIG. 2.

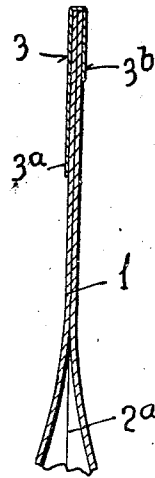


FIG. 3.

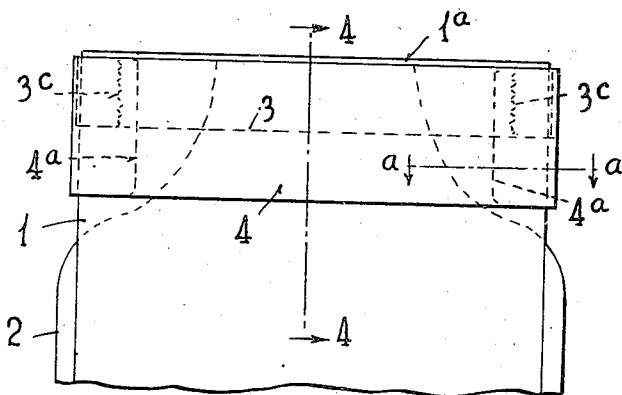


FIG. 3a.

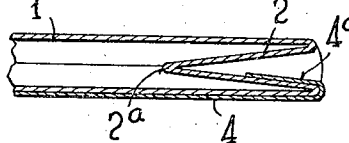


FIG. 4.



FIG. 5.

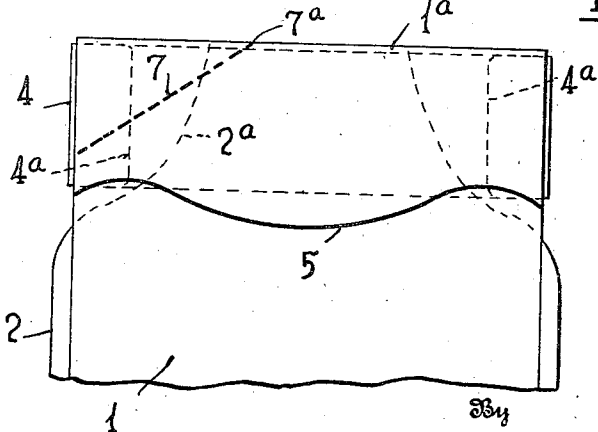
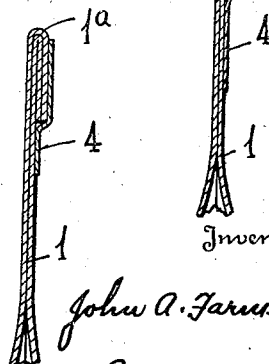


FIG. 6.



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FIG. 7.

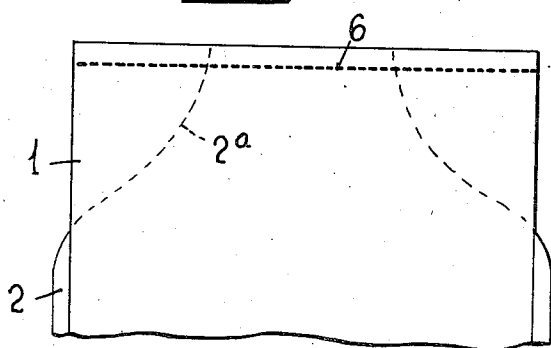


FIG. 8.

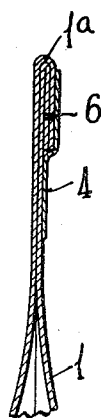


FIG. 9.

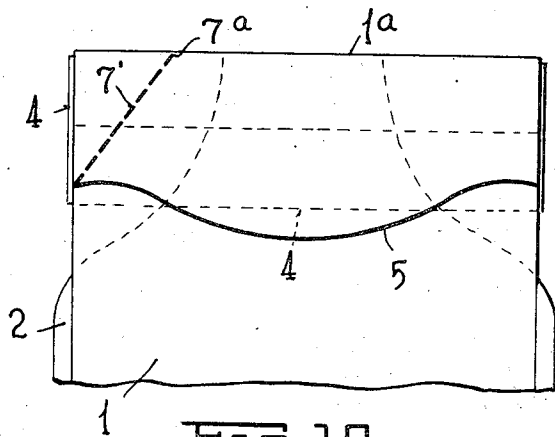


FIG. 11.

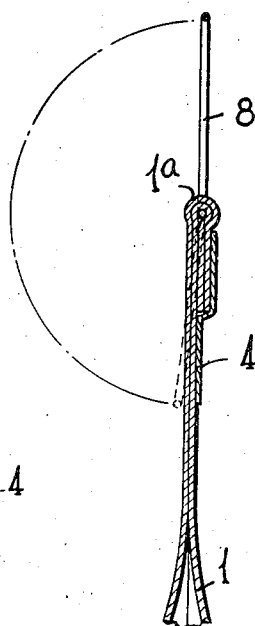
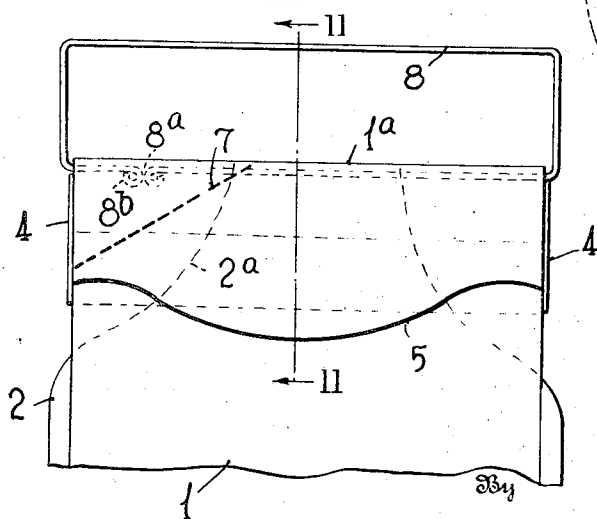


FIG. 10.



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UNITED STATES PATENT OFFICE

2,093,979

BAG OR PACKAGE

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Application December 14, 1935, Serial No. 54,477

5 Claims. (Cl. 229—62)

This invention relates to closures for bags and more particularly for bags of paper and the like such as are used in connection with the packaging and sale of finely divided material.

5 In my prior copending application, Serial No. 42,345, I have shown and described a bag closure consisting of a tab of cardboard or the like applied over the mouth of the bag and cemented on.

10 The present invention seeks to still further improve and cheapen the closure, and to this end the invention contemplates closing the bag by folding over the end thereof and securing the folded-over portions by means of a sealing strip or tape.

15 The present invention still further contemplates an additional step of first closing the mouth of the bag by primary fastening means, before folding over, and then applying a sealing strip such as above mentioned, in order to obtain an absolutely tight seal.

A further feature of the present invention consists in the provision of a handle by means of which the closed bag may readily be carried from place to place.

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

30 Fig. 1 is a front elevation of a bag showing the first step in forming my improved closure;

Fig. 2 is a vertical section on an enlarged scale, substantially on the line 2—2 of Fig. 1;

35 Fig. 3 is a view similar to Fig. 1, but showing the bag after completion of the second or final sealing step;

Fig. 3^a is a fragmentary section on an enlarged scale substantially on the line a—a of Fig. 3, looking in the direction of the arrows;

40 Fig. 4 is a vertical section substantially on the line 4—4 of Fig. 3;

Fig. 5 is a side elevation corresponding to Fig. 3, but showing the appearance of the opposite or front side of the bag;

45 Fig. 6 is a view similar to Fig. 4, but showing a modified construction in which only a single sealing means is employed;

Fig. 7 is a view similar to Fig. 1, but showing a row of stitching employed as the primary fastening means;

50 Fig. 8 is a vertical section similar to Fig. 6, but including the fastening means shown in Fig. 7;

Fig. 9 is a view similar to Fig. 5, but illustrating a different method of cutting the bag to form a dispensing opening;

Fig. 10 is a side elevation similar to Fig. 5 but showing the bag equipped with my improved carrying handle; and

60 Fig. 11 is a vertical section on an enlarged scale on the line 11—11 of Fig. 10.

Referring to the drawings in detail, and more particularly first to Figs. 1 to 6 thereof, I designate the bag itself which may be of any suitable flexible material such as paper, cellulose sheeting, etc. It is illustrated as provided with 5 infolded portions 2 on the sides constituting gussets, the upper ends of these gussets being shown in dotted lines at 2^a.

In one method of closing and sealing a bag according to the present invention, I bring the 10 upper end portions of the bag together in flat relation and first place over the same a primary sealing strip or tape 3 which may be formed of paper, cellulose film, or the like, and which is secured in position by adhesive cement.

This strip comprises relatively long and short skirts 3^a and 3^b, which embrace the mouth of the bag, and projects at its ends a substantial distance beyond the side edges of the bag, as illustrated at 3^c at the left of Fig. 1. After the strip 20 has been applied over the mouth of the bag as described, the projecting ends are folded around and caused to adhere to the side of the bag. Although, adjacent the upper edge, where the short skirt is folded back upon itself, there is no 25 adhesion, the cement on the inside of the long skirt portion of the strip amply secures the folded ends in position. Thus, by my improved method of applying this primary sealing strip, I effectively seal not only the end but also the sides of 30 the bag mouth, thereby preventing any appreciable dusting out of powdered material.

The end of the bag having this first or primary sealing strip applied thereto, is then folded over at 1^a, as shown in Fig. 4, and a second or main 35 sealing strip 4 applied thereto. As clearly shown in Fig. 4, this sealing strip 4 forms a bond between or unites the primary strip 3 with the adjacent side wall of the bag and is preferably also secured in place by suitable adhesive cement. A 40 convenient way of doing this is to first coat the strip 4 with gum or cement and then apply it against the side of the upper portion of the folded-over bag, as shown.

Referring now particularly to Figs. 3 and 3^a, 45 it will be seen that this sealing strip 4, instead of terminating at the sides of the bag, is extended beyond the same and bent around the side folds of the bag and secured inside of the 50 gussets 2, as indicated at 4^a. This tucking in of the ends of the sealing strip into the gusset at each side of the bag, as described, results in an exceptionally strong and tight closure.

Fig. 5 shows the side of the bag opposite that 55 illustrated in Fig. 3, and I preferably place upon this side of the bag itself a diagonal dotted line 7, as in my prior copending application S. N. 36,397, filed August 15, 1935, in order to define a line of severance along which the corner of 60

the bag may be cut off so as to form a pouring opening.

As fully explained in my prior copending application Serial No. 32,422, it is necessary for this cut line 7 to extend inwardly beyond the upper end of the crease line 2^a of the gusset, as shown at 7^a in Fig. 5, in order to free the gusset so that it may be pulled out to form a pouring spout, the same as in my said prior applications. Also as shown in Fig. 5, I preferably print upon the bag a curved line such as shown at 5, to simulate the edge of a closure tab such as illustrated in my said prior application Serial No. 42,345.

I also contemplate forming a closure without the use of the primary sealing strip 3. In this case, as illustrated in Fig. 6, the upper end portions of the bag are simply folded over and secured by means of the sealing strip 4, the ends of this strip extending around into the gussets, as above described. This type of seal is satisfactory in many cases, but the type shown in Figs. 3 and 4, employing the primary strip 3, in addition to the main strip 4, may be preferred in order to substantially prevent dusting through of exceedingly fine material such as flour, or the escape of odors from material such as fertilizer.

As a further modification, I propose to employ a row of stitching as the primary fastening means, in place of the strip 3. This is shown in Fig. 7, in which the row of stitching is indicated at 6, and may be applied by means of any suitable type of sewing machine. The end of the bag, having first been closed by the stitching, is then folded over as shown in Fig. 8, and sealed by means of the sealing strip 4, the same as in Figs. 3 to 6.

For the effective dispensing or scattering of some types of finely divided materials such as certain garden supplies or powdered insecticides, a pouring spout such as above described is undesirable. For such materials, I prefer to place the diagonal line of severance in such a position that, when the corner is cut off along such line, the gusset is not released. This is illustrated in Fig. 9, in which the cut line 7', formed on the bag wall, intersects the bag end at a point 7^a lying outside of the fold line or crease 2^a of the gusset. In this case, the cutting results in forming a pair of narrow openings or slits through which the powdered material may be dusted and uniformly dispensed, as shown in my prior co-pending application Serial No. 42,345, filed September 26, 1935.

I have found that the type of closure herein illustrated, namely, a closure which comprises folding over the end portions of the bag, affords an unusually simple and efficient means for attaching a carrying handle. This is illustrated in Figs. 10 and 11, in which the handle, indicated by the character 8, is shown as comprising a bail or loop of stiff wire or the like. This loop is interrupted or broken at the point 8^a. The loop is shown as substantially rectangular, but may be of almost any desired shape except that the lower portion thereof should be straight. The handle loop is applied by inserting it in the fold 1^a of the bag, as clearly shown in Figs. 10 and 11. In other words, the end portions of the bag are simply folded around the straight portion of the wire loop and then secured in position. In Fig. 11, the folded end portions of the bag are shown as secured by the strip 4, but, so far as this method of attaching the handle is concerned, the folded-over portions may be secured by other means. Also, of course, I contemplate employing a handle of this character in connection with the types

of closure shown in Figs. 3, 4, 7 and 8, as well as Fig. 6.

It will be noted that, by virtue of the fact that the portion of the wire loop enclosed within the fold of the bag is straight, the loop may swing around this straight portion as an axis into a position at either side of the bag, as indicated in dotted lines in Fig. 11. In this way, the handle may be turned into a position so that it lies flat against the bag and thus does not interfere with the packing of the filled bags in cartons for shipment or storage.

It will be noted also that the break 8^a in the wire loop is located within the fold relatively close to one side of the bag. This makes it possible, by pushing the handle toward the side of the bag adjacent the break, as, for example, the left, as viewed in Fig. 10, to disengage the short end of the straight portion of the handle from the fold of the bag, and then the long end can be readily withdrawn. Obviously the handle must be removed before the corner can be cut off along the dotted line 7 to form a pouring opening.

Finally, as shown in Fig. 10, I prefer to round or bend over the abutting ends of the straight portion of the wire loop, as indicated at 8^b, in order to avoid sharp points which might be likely to injure the hand of the user.

What I claim is:

1. A package comprising a flexible, bellows-sided bag having infolded portions at the sides constituting gussets, the end portions of the bag walls, including said gussets, being brought together at the top in flat relation and folded over, and a sealing strip secured to the folded-over portion and adjacent bag wall, and having its ends extending around the side folds of the bag and into said gussets, and cemented thereto.

2. A package comprising a flexible, bellows-sided bag having infolded portions at the sides constituting gussets, the end portions of the bag walls, including said gussets, being brought together at the top in flat relation, primary fastening means securing said end portions in bag-closing position, the said end portions, carrying said primary fastening means, being then folded over, and a sealing strip bonding said folded-over portion to the adjacent bag wall.

3. Means for closing the mouth of a bag comprising a sealing strip straddling the same, said strip having relatively long and short skirts cemented to opposite sides of the bag, the ends of said strip projecting beyond the side edges of the bag and being folded around the same and cemented in position.

4. A package comprising a flexible bag having the end portions of its walls brought together at the top in flat relation, and folded over, and means for securing them in such folded position, one of said bag walls, adjacent said fold, having thereon means simulating a closure tab of sheet material, and also having, within the area of such simulated closure tab, a mark defining a diagonal line of severance along which line the corner of the folded end of the bag may be cut off to provide a pouring opening.

5. A package comprising a flexible bag, the end portions of the bag walls being brought together at the top in flat relation, a transverse row of fastening means securing said end portions in bag-closing position, said end portions thus secured together being then folded over, and a sealing strip bonding said folded-over end portions to the adjacent bag wall.

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