

SYNTHETIC RESIN FILM BAG BODY FORMED WITH SPOUT

BACKGROUND OF THE INVENTIONField of the Invention

5 The present invention relates to a synthetic resin film bag body formed with a spout portion, and more specifically to a structure of a spout of a synthetic resin film bag body.

Description of the Prior Art

As vessels filled with contents such as liquid, gel, etc.
 10 to be sold, various solid vessels formed by molding glass, synthetic resin, etc. have been so far used widely. Recently, however, parts of the vessels are now being changed from the solid-type vessels to flexible film bags from the standpoints of environmental protection and effective resource usability;
 15 that is, in order to reduce both material to be used and wastes to be not used.

Therefore, flexible square bag-type vessels have been widely used, instead of the conventional solid regular-form vessel. As one of the conventional flexible square bag, there
 20 exist such a bag that an oblique opening portion is formed on the inside of one of two junction corners between the vertical side and the upper side of the bag, in such a way as to be cut-off when the liquid or gel is required to be poured out of the bag. In general, although the above-mentioned bag is

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formed with an expanded bottom portion such as an oval-shaped bottom portion so as to be stood vertically, almost all of the bags of this type are formed into a rectangular shape having two corner portions on both the upper side ends of the bag.

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Further, in order to form the pour-out opening portion at the upper corner of the bag, since the corner portion is usually cut off to form a pour-out passage in the bag, the cut-off portion is inevitably located inside the vertical side
10 end of the bag. As a result, when the liquid or gel is poured out of the bag, the pour-out route is not determined stably, so that there exists a problem in the liquid or gel drops along the user's hand or palm or the outer surface of the bag. Therefore, it has been necessary to take care whenever liquid
15 or gel is poured out of the bag.

Further, when all the contents of the bag are poured out at the same time after the bag has been opened, there arises no problem. However, when the contents are somewhat left within the bag, since the remaining contents tend to adhere
20 onto the edge portion of the pour-out opening portion of the bag, when the adhered contents are in contact with the external air, there arises some problems in that the contents are rotten or dried into a solid substance.

SUMMARY OF THE INVENTION

With these problems in mind, therefore, it is the object of the present invention to provide a synthetic resin film bag body, by which the contents of the bag can be easily poured
5 into another vessel.

Further, another object of the present invention is to provide a synthetic resin film bag body formed with a spout portion, by which the contents can be prevented from adhering onto the end of the spout portion after the spout portion has
10 been cut off and used.

Further, the other object of the present invention is to provide a synthetic resin film bag body, by which the spout portion can be cut off accurately along the cut-off mark.

To achieve the above-mentioned object, the present
15 invention provides a synthetic resin film bag body formed by thermo-fixing two folded or overlapped films, wherein the bag body is formed with a main filling portion (1) to be filled with contents; and a beak-like spout portion (4, 5) having a spout passage (2) formed so as to extend outward from a corner
20 of the main filling portion and closed at an outer end thereof.

Here, it is preferable that the bag body (100) is further formed with a cut-off mark (6) formed so as to cross the spout portion (4); and a recessed portion (7) formed at the cut-off

mark in such a way that an inner diameter of the spout portion can be partially increased radially downward.

Further, it is preferable that the bag body (100) is further formed with two projecting stripes (12) formed so as
5 to extend along both sides of the cut-off mark.

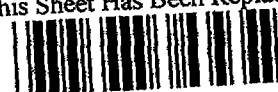
Further, it is preferable that the bag body (100) is further formed with a cutout portion (11a) formed under the beak-shaped spout portion (4) as a grip portion.

Further, it is preferable that the bag body is further
10 formed with another cutout portion (11b) formed on the upper side portion thereof.

Further, it is preferable that the bag body is further formed with at least one V-shaped notch portion (6a) formed at the cut-off mark (6) so as to cross the recessed portion
15 (7).

Further, it is preferable that the main filling portion (1) and the beak-shaped spout portion (4) are formed by thermo-fixing a melted portion (8) of the bag body (100), except the main filling portion and the beak-shaped spout
20 portion.

In the synthetic resin film bag body according to the present invention, when the contents are required to be poured out of the closed bag body, it is easy that the beak-shaped spout portion is cut off along the cut-off mark to open the



spout portion. In this case, since the spout passage is formed so as to extend from the main filling portion, the spout portion can be inserted into another vessel into which the contents are poured, so that an accurate amount of the contents can be discharged from the bag body into the other vessel.

Further, in the synthetic resin film bag body according to the present invention, since the recessed portion is formed under the spout portion and at the cut-off mark in such a way that the inner diameter of the spout portion can be partially increased radially downward, after the contents have been discharged out of the bag body, it is possible to prevent the contents from adhering onto the end of the spout portion.

Further, in the synthetic resin film bag body according to the present invention, since the two projecting stripes are formed along the both sides of the cut-off mark, it is possible to cut off the spout portion accurately along the cut-off mark.

Further, in the synthetic resin film bag body according to the present invention, since at least one V-shaped notch portion is formed at the cut-off mark, it is possible to easily torn off the spout portion.

BRIEF DESCRIPTION OF THE DRAWINGS



Fig. 1 is a front view showing the essential portion of an embodiment of the bag body according to the present invention;

Fig. 2 is a modification of the bag shown in Fig. 1;

5 Fig. 3 is an enlarged front view showing a melted portion seen when a part of one of the surfaces of the bag is peeled off;

Fig. 4 is a front view showing the essential portion of the bag with another feature;

10 Fig. 5 is an enlarged front view showing the cut-off portion shown in Fig. 4;

Fig. 6 is a cross-sectional view taken along the line VI-VI shown in Fig. 5;

Fig. 7 is a front view showing the whole bag;

15 Fig. 8 is a front view showing another modification of the bag according to the present invention;

Fig. 9 is a front view showing still another modification of the bag body according to the present invention; and

Fig. 10 is a front view showing still the other modification of the bag body according to the present invention.
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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

An embodiment of the synthetic resin film bag body according to the present invention will be described hereinbe-



low with reference to the attached drawings.

In Fig. 1, a bag body 100 is formed by thermo-fixing or thermo-bonding two folded or overlapped synthetic resin films. The bag body 100 includes a main body 101. The upper portion
5 of the main body 101 is formed as an approximately rectangular shape. The main body 101 has a main filling portion 1 and a melted portion 8. The two films are sealed up by melting a melted portion 8 surrounding a main filling portion 1 and a beak-shaped spout portion 4. Here, although the bag body 100
10 is sealed up along the melted portions 8 after having been filled with contents such as liquid or gel, when the bag body 100 is manufactured, any of the melted portion 8 is left non-melted in order to fill the bag body 100 with the contents.

In the bag body 100 of the present invention, the two
15 right and reverse sides surfaces of the bag body 100 is formed into a roughly rectangular shape, respectively excepting the bottom portion thereof, and the major portion of the bag body 100 is used as the main filling portion 1 to be filled with the contents. Further, a spout portion 4 is formed at one
20 upper end corner of the main filling portion 4 of the bag body 100.

The spout portion 4 is formed by a spout passage 2. The spout passage 2 extends outward from a corner of the main filling portion 1 and closed by a passage wall portion 3. The



passage wall extends from the melted portion 8 formed around the main filling portion 1, and further closes the outer end of the spout portion 4. Further, the spout portion 4 is formed into a beak shape 5.

5 Here, the bag body 100 is further formed with a cut-off mark 6 so as to cross the spout passage 2 of the spout portion 4. The mark is printed by a solid line or a dashed line to indicate a position at which the spout portion 4 is required to be cut away to discharge the contents of the bag body 100.

10 Here, the spout passage 2 is additionally formed with a recessed portion 7 at the cut-off mark 6 in such a way that an inner diameter of the spout portion 4 can be partially increased radially downward when the bag body 100 is kept stood for use. Therefore, it is possible to prevent the
15 contents from being dropped along the spout portion 4 of the bag body 100. In other words, when the spout portion 4 is cut off along the cut-off mark 6 and thereby the spout passage 2 is opened, since the inner diameter of the spout passage 2 is partially and sharply increased radially downward at the lower
20 end of the opening portion of the spout portion 4, it is possible to prevent the remaining contents from being dropped along the lower portion of the spout portion 4.

In addition, it is also preferable to form two V-shaped notch portions 6a at the cut-off mark 6 on both the upper and



lower sides of the melted portion 8, as depicted in Fig. 5, so that the spout portion 4 can be torn off more easily by the user's hand. Since these V-shaped notch portions 6a are formed, in this embodiment, when the bag body 100 is torn off
5 for use along the cut-off mark 6, it is possible to securely cut off the spout portion 4 at such a position where the recessed portion 7 can be located at the lower end of the cut-off end of the spout portion 4. Further, in this case, it is necessary to match the molecular arrangement of the synthetic
10 resin film of the bag body 100 with the tearing direction of the V-shaped notch portions 6a.

Further, it is also preferable to form two projecting stripes 12, as depicted in Figs. 5 and 6, so as to extend along both sides of the cut-off mark 6, respectively in order
15 that the spout portion 4 can be opened accurately along the cut-off mark 6, that is, the cut-off line is not dislocated away from the cut-off mark 6 and located between the two projecting stripes 12, whenever the bag body 100 is torn away.

Here, various modifications can be made according to the
20 shapes of the spout portion 4 formed into the beak shape 5.

In the first modification shown in Fig. 7, the top end portion of the beak shape 5 is flush with the upper side of the bag body 100.

In the second modification shown in Fig. 8, the top end



portion of the beak shape 5 is flush with the upper side of the bag body 100. Further, a cutout portion 11a is formed under the beak shape 5. This cutout portion 11a can separate the outer end of the spout portion 4 more securely from the vertical side 9 of the bag body 100. The shape of this cutout portion 11A is of V-shape or trapezoidal shape as shown. When the cutout portion 11a is formed into a trapezoidal shape, it is possible to use this cutout portion 11a as a grip portion 10 of the bag body 100.

10 In the modifications shown in Fig. 9, a triangular cutout portion 11b is further formed on the upper side of the bag body 100, in the first modification shown in Fig. 7.

In the modifications shown in Fig. 10, a triangular cutout portion 11b is further formed on the upper side of the bag body 100, in the second modification shown in Fig. 8.

As described above, in the synthetic resin film bag according to the present invention, since the bag body 100 is formed with the spout portion in such a way that the beak-shaped portion thereof projects from the bag body 100, it is possible to easily pour the contents into another vacant vessel by inserting the spout portion into the vacant vessel, without leaking the contents out of the bag body 100.

Further, since the beak-shaped portion of the spout portion projects outward from the bag body 100, even if the

another vacant vessel is apart from the beak-shaped portion,
it is possible to securely determine the direction that the
contents are discharged from the bag body 100 to the vessel.

Further, when any of the contents are required to be left
5 remaining in the bag body 100, since the recessed portion is
formed at the beak-shaped portion of the spout portion, it is
possible to prevent the contents from remaining at the opening
end of the spout portion.

Further, since two projecting stripes are formed on both
10 sides of the cut-off mark, it is possible to open the spout
portion accurately along the cut-off mark whenever the spout
portion is torn off, without being dislocated from the cut-off
mark.

Further, since the two V-shaped notch portions are formed
15 at the cut-off mark, it is possible to easily torn off the bag
body A accurately and securely along the cut-off mark.

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WHAT IS CLAIMED IS:

1. A synthetic resin film bag body formed by fixing two folded or overlapped films, comprising:

5 a main body having a main filling portion (1) to be filled with contents and a first fixed peripheral portion (8) surrounded said main filling portion;

a beak-shaped spout portion (4,5) having a spout passage (2) formed so as to extend outwardly from a corner of the main
10 filling portion and a second fixed peripheral portion (3) surrounding said spout passage.

2. The synthetic resin film bag body of claim 1, further comprising:

a cut-off mark (6) formed so as to cross the spout portion
15 (4); and

a recessed portion (7) formed at the cut-off mark in such a way that an inner diameter of the spout portion can be partially increased radially downward.

20 3. The synthetic resin film bag body of claim 1, further comprising two projecting stripes (12) formed so as to extend along both sides of the cut-off mark.

4. The synthetic resin film bag body of claim 1, further



comprising a cutout portion (11a) formed under the beak-shaped spout portion (4) as a grip portion.

5. The synthetic resin film bag body of claim 1, further comprising another cutout portion (11b) formed on the upper side portion thereof.

6. The synthetic resin film bag body of claim 2, further comprising at least one V-shaped notch portion (6a) formed at the cut-off mark (6) so as to cross the recessed portion (7).

7. The synthetic resin film bag body of claim 1, wherein said first fixed peripheral portion (8) and said second fixed peripheral portion (3) are formed by thermo-melting process.

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