

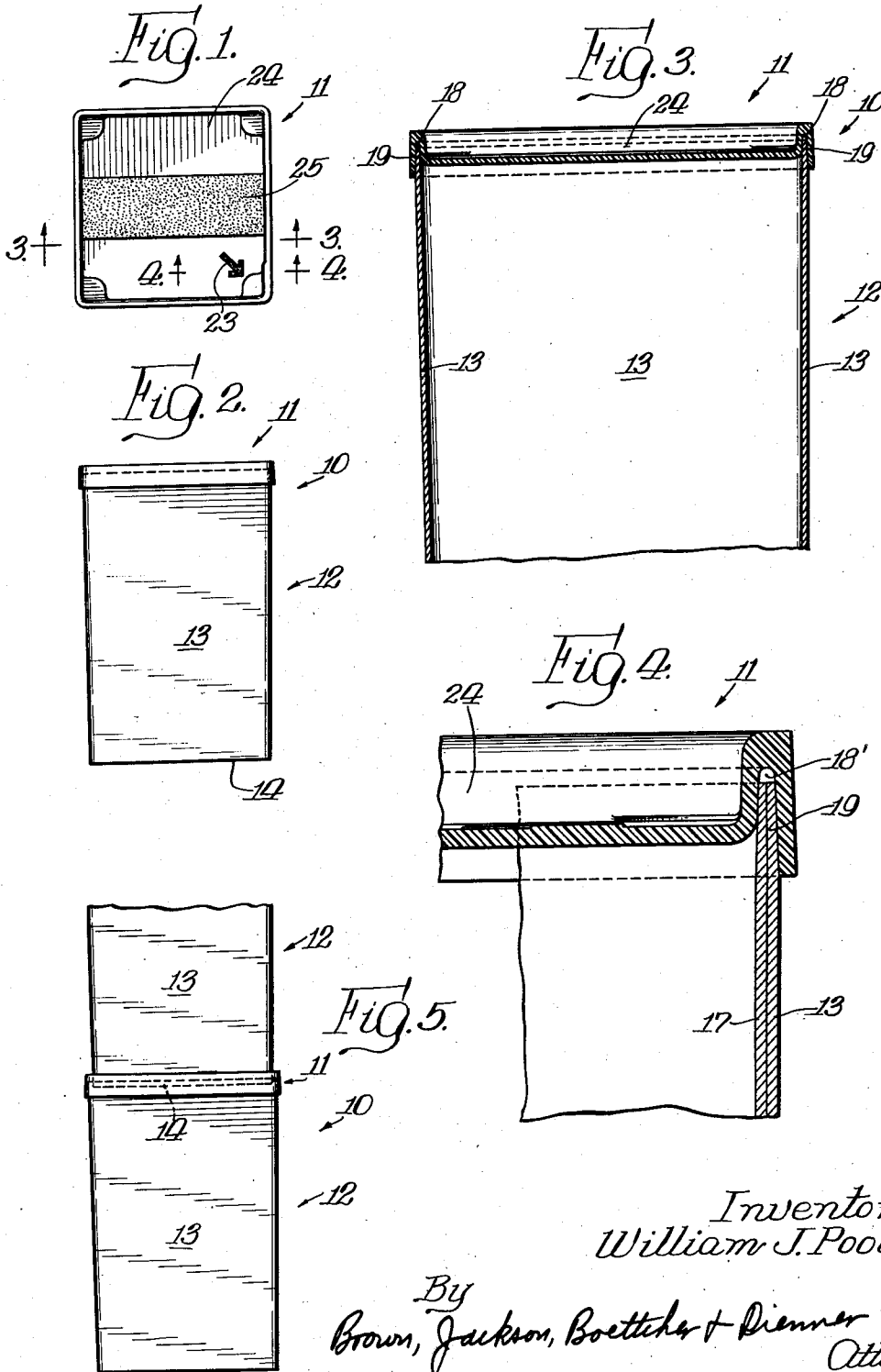
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FROZEN FOOD CARTON WITH PLASTIC LID

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## FROZEN FOOD CARTON WITH PLASTIC LID

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This invention relates, generally, to food cartons and it has particular relation to frozen food cartons.

The freezing of foods, such as vegetables, fruit, and the like, for storage and preservative purposes is becoming increasingly widespread. It is being done both commercially and domestically. An important factor in this industry is the character and cost of the cartons in which the food is packed and frozen.

It is desirable that the carton be formed of such material that it does not contaminate the food packed in it and that it does not impart any undesired taste thereto. Also, the construction should be such that a fluid tight seal is provided and it should be of such shape that it provides a good space factor to permit piling in a storage space in a frozen food locker with a minimum of waste space.

The matter of cost of the carton is an important item. This is true not only of the first cost but also in the ability to reuse the carton in part or altogether. The carton should be relatively inexpensive so that it is not out of line with the cost of other containers on the market. Preferably it is constructed so that certain parts, the cover, for example, can be reused an indefinite number of times.

Among the objects of this invention are: To provide a frozen food carton that is satisfactory from the foregoing standpoint; to employ a container and separate cover therefor which may be assembled readily in liquid tight relation; to form the cover of transparent plastic so as to permit inspection of the contents of the container; to form the container with a full open top; to provide a recess in the underside of the cover into which the upper edge of the container fits; to taper said recess and thereby provide a wedging action with said upper edge so that a liquid tight seal is obtained; to set up the container from a blank with a vertical lap-joint and to widen said recess along a limited extent in order to accommodate the double wall thickness due to the lap joint; to provide an indicium on the cover to show the location of the widened section of said recess; to provide the container and cover with rectangular cross sections in order to obtain a good space factor for storage purposes; and to taper the container and provide a recess in the upper side of the cover conforming to the container bottom in order to permit stacking of the cartons one above the other.

Other objects of this invention will, in part, be obvious and in part appear hereinafter;

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This invention is disclosed in the embodiment thereof shown in the accompanying drawing and it comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of this invention reference can be had to the following detailed description, taken together with the accompanying drawing, in which:

Figure 1 is a top plan view of the cover for a carton constructed in accordance with this invention;

Figure 2 is a view, in side elevation, of a container constructed in accordance with this invention having the cover shown in Figure 1 as its upper end;

Figure 3 is a detail sectional view, at an enlarged scale, taken along the line 3-3 of Figure 1;

Figure 4 is a detail sectional view, taken along the line 4-4 of Figure 1 and showing the wide section of the recess in the underside of the cover at the lap-joint, the showing here being at an enlarged scale; and

Figure 5 shows how the cartons constructed in accordance with this invention can be stacked one above the other.

Referring now particularly to the drawing, it will be observed that the reference character 10 designates, generally, a carton for frozen foods, such as vegetables, berries, etc. The carton 10 includes a reusable cover that is indicated generally, at 11 and formed preferably of a transparent plastic, such as polystyrene, and a container body 12 which is rectangular in cross section and which is formed of moisture resistant paperboard. For example, the container body 12 can be set up from a blank of suitably shaped waxed paperboard.

The container body 12 has side and end walls 13 which provide a square cross section. It will be understood that the walls 13 may be of different dimensions but it is preferable that they be shaped so as to maintain the rectangular cross section in order to obtain a good stacking factor. The walls 13 are tapered slightly from top to bottom in order to provide a full open top and also to permit stacking of the container bodies 12 one within the other. This tapered configuration also permits stacking of the filled cartons one above the other in a manner to be described

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presently. The container body 12 has a square bottom 14 in the particular embodiment of the invention disclosed.

When the container body 12 is set up from a blank as described the vertical meeting edges are joined by a glue flap 17, Figure 4, which provides a lap-joint with the adjacent wall 13. The blank preferably is so formed as to locate the glue flap 17 at one corner so that the lap joint is provided at this location.

With a view to providing a liquid tight seal between the cover 11 and the container body 12, the former has a peripheral recess 18, Figure 3, in its underside within which the upper edges 19 of the side and end walls 13 fit. As shown, the recess 18 is tapered upwardly so that a wedging action is provided between its walls and the upper edges 19 of the side and end walls 13. This wedging action is sufficient to provide the desired liquid tight seal.

In order to accommodate the lap-joint formed by the glue flap 17 with the adjacent wall 13, a section 18' of the recess 18 is widened, as shown in Figure 4. Since it is desirable to provide for readily locating the position of the widened section 18' of the recess 18, an indicium 23, Figure 1, is formed integrally with the cover 11. As shown, the indicium 23 may take the form of an arrow that is located on the upper side of the cover 11.

As indicated hereinbefore, it is desirable to provide for stacking the filled cartons 10 one above the other. For this purpose a square recess 24 is provided in the upper side of the cover 11, as shown in Figures 1, 3 and 4 of the drawing, for receiving the correspondingly shaped bottom 14 of the container body 12. As shown in Figure 5 this construction permits the stacking of the cartons 10 one above the other.

The central portion 25 at the bottom of the recess 24 in the cover 11 can be roughened, as shown in Figure 1, for receiving markings to indicate the contents of the carton 10, date of packaging, etc. These markings can be removed readily so that new markings can be applied as desired.

Various types and kinds of paperboard can be employed for the container body 12. In an embodiment of the invention which has been constructed, the paperboard employed for this purpose had a thickness of .020 inch. The thickness along the lap-joint, as shown in Figure 4, would then be twice this thickness. The tapered configuration of the container body 12 not only provides the features enumerated hereinbefore but also facilitates removal of the contents thereof.

As indicated, the cover 11 is formed preferably of a transparent plastic, such as polystyrene. This material can be handled by the injection molding process so that the cost of the cover 11 is relatively small. This material does not change its characteristics in the temperature range from -20° to 120° F. It can be washed in warm soapy water for reuse.

The container body 12, when constructed as disclosed herein, can be reused at least once. Ordinarily it can be used first for the liquid or sirup packaging of food stuffs. For the subsequent use it is preferred that the food be dry packed. The cover 11 can be reused an indefinite number of times provided that it is not injured in handling.

Since certain further changes can be made in the foregoing construction and different embodiments of the invention can be made without departing from the spirit and scope thereof, it is

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intended that all matter shown in the accompanying drawing and described hereinbefore shall be interpreted as illustrative and not in a limiting sense.

5 What is claimed as new is:

1. A frozen food carton comprising, an open top paperboard body having a lengthwise lap joint extending to its upper edge, and a plastic friction cover having a downwardly opening peripheral recess tapering downwardly, said recess being of increased width for a portion of its length corresponding to said lap joint and of uniform width for the remainder of its length and fitting tightly over the upper edge portion of the wall of said body with the opposed surfaces of said recess contacting the inner and the outer surfaces of said wall for the major portion of the depth of said recess and compressing said wall between said opposed surfaces thereby providing a tight friction seal between said cover and said body.

2. A reusable plastic cover for a frozen food carton body having a lengthwise lap joint extending to its upper edge, said cover having a downwardly opening peripheral recess tapering upwardly, said recess being of increased width for a portion of its length corresponding to the lap joint of the carton body and of uniform width for the remainder of its length, for frictional engagement over the upper edge portion of the wall of the carton body.

3. A frozen food carton comprising, an open top paperboard body substantially rectangular in cross section and having at one corner thereof a lengthwise lap joint extending to its upper edge, and a substantially rectangular plastic friction cover having a downwardly opening peripheral recess tapering upwardly, said recess being of uniform width for the major portion of its extent and of increased width at a corner of said cover to accommodate said lap joint and fitting tightly over the upper edge portion of the wall of said body with the opposed surfaces of said recess contacting the inner and outer surfaces of said wall and compressing the latter between said opposed surfaces thereby providing a tight friction seal between said cover and said body.

4. A reusable cover for the body of a frozen food carton of substantially rectangular cross section and having at one corner a lengthwise lap joint extending to its upper edge, said cover being formed of plastic in one piece and comprising a cross wall substantially rectangular in plan and a member extending about the periphery of said wall comprising an inner flange and an outer flange, said flanges diverging downwardly and defining between them an upwardly tapering recess for frictional engagement over the upper edge portion of the wall of the carton body, said inner flange having an offset in its inner face at a corner of said cover to accommodate the lap joint of the carton body.

5. A reusable cover for the body of a frozen food carton, said cover being substantially rectangular in plan with rounded corners and having a peripheral member comprising an inner flange and an outer flange, said flanges diverging downwardly and defining between them an upwardly tapering recess for frictional engagement over the upper edge portion of the wall of the carton body, one of said flanges having an offset in its inner face at one corner of said cover.

6. A reusable cover for the body of a frozen food carton of substantially rectangular cross section and having at one corner a lengthwise lap joint extending to its upper edge, said cover being

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formed of plastic in one piece and substantially rectangular in plan and provided in its peripheral portion with a downwardly opening and upwardly tapering recess for frictional engagement over the upper edge portion of the wall of the carton body, said recess having an offset at a corner of said cover to accommodate the lap joint of the carton body.

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