United States Patent

[11] 3,565,324

[72] Inventor **Rune Gurien Alex Odenhagen**
Malmo, Sweden

[21] Appl. No. **779,560**
[22] Filed **Nov. 27, 1968**
[45] Patented **Feb. 23, 1971**

[73] Assignee **AB Akerlund & Rausing**
Lund, Sweden

[32] Priority **Apr. 29, 1968**
[33] **Sweden**
[31] **5766/1968**

[54] **TROUGHLIKE PACKAGE HAVING SUPPORTED CORNERS AND A PROJECTING FLANGE**
8 Claims, 5 Drawing Figs.

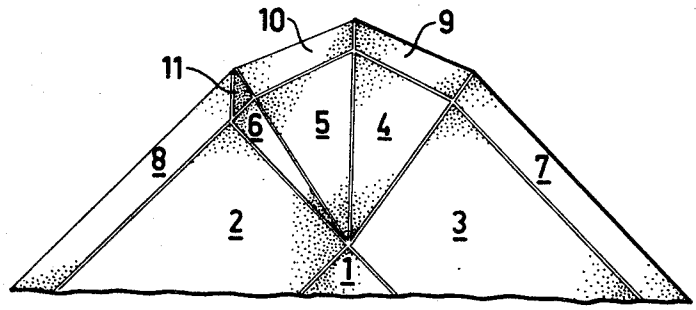
[52] **U.S. Cl.** **229/31, 229/32**
[51] **Int. Cl.** **B65d 5/24**
[50] **Field of Search** ..... 229/31, 31 (i), 32

[56] **References Cited**
UNITED STATES PATENTS

260,604	7/1882	Palmer	229/31
1,959,613	5/1934	Carson	229/31
2,407,118	9/1946	Waters	229/31X
2,643,812	6/1953	Lange	229/31
2,781,159	2/1957	Copeman	229/31X
2,808,192	10/1957	Rasin	229/31
3,038,634	6/1962	Cheeley	229/31X

Primary Examiner—David M. Bockenek
Attorney—Pierce, Scheffler & Parker

ABSTRACT: A traylike container having folded triangular corners and at least one projecting folded triangular panel for adding support to the corner construction of the container.



PATENTED FEB 23 1971

3,565,324

SHEET 1 OF 2

Fig. 1

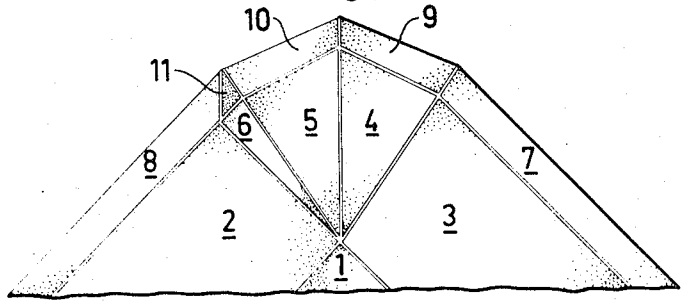


Fig. 2

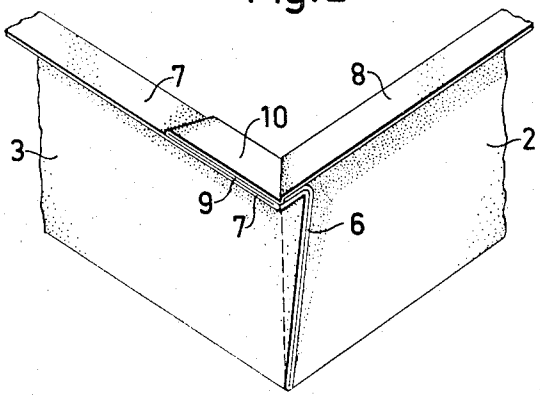
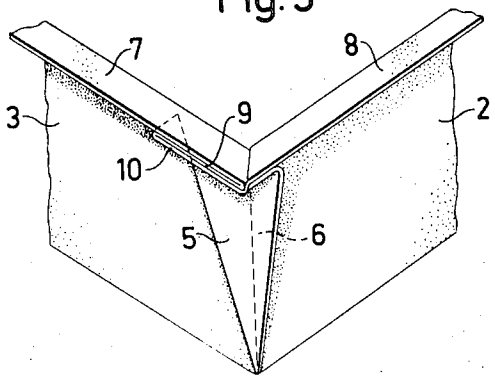


Fig. 3



Inventor

Rune Gurien Alex Odenhagen

By

Pierce, Scheffler & Parker

Attorneys

Fig. 4

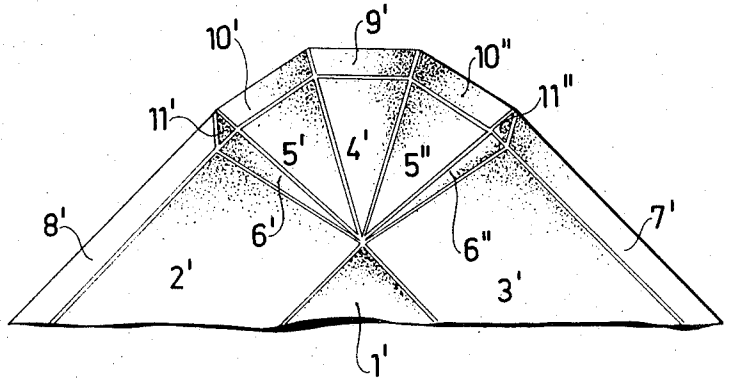
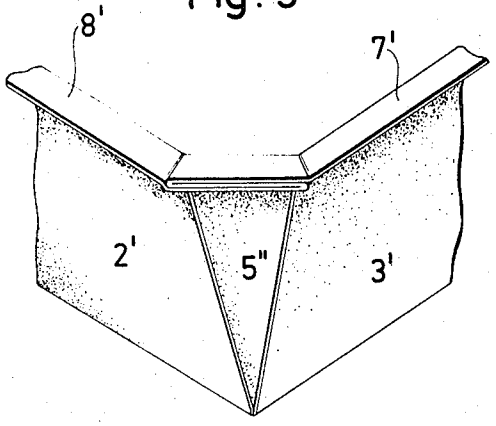


Fig. 5



Inventor

Rune Gurien Alex Odenhagen

By

Pierce, Scheffler & Parker

Attorneys

TROUGHLIKE PACKAGE HAVING SUPPORTED CORNERS AND A PROJECTING FLANGE

The present invention relates to a traylike package of plastic coated carton material and provided with supported corners and having a completely unbroken flange projecting from the opening and extending around the package, preferably all corners being provided with a triangular double-folded fin which is folded inwardly either towards the inside of the package or towards the outside thereof.

The package according to the invention is characterized in that the double-folded fin is folded inwardly in such a way against one of two package sides forming a corner that it will project some distance outside the second of these two sides, whereby this projecting portion forms a flange, which is essentially parallel to one of the said sides.

The package according to the invention is preferably intended for deep-frozen readymade food. Since a product of that kind is often filled into the package in a more or less liquid state and also in a hot state, the package must have an absolutely tight corner structure. Furthermore, since this product often contains fat and similar materials which will easily penetrate into the packaging material used, the package must have a completely unbroken interior plastic surface. In addition, it should not have any raw cut edges facing inwardly or even any spots from which carton fibers will project. Extensive experiments have shown that it is possible to comply with these requirements by providing a construction in accordance with the present invention. The construction according to the invention besides has the advantage that it complies with the above requirements in geometrically correct way, i.e. in a manner which does not make it necessary to stretch the material or to expose it to rough handling in another way.

The invention will be further described in the following with reference to the accompanying drawings showing three different embodiments of a corner according to the invention chosen by way of example.

In the drawings:

FIG. 1 shows the blank for a carton corner according to the invention spread out in a plane state;

FIG. 2 shows the same carton corner in an erected state, the above-mentioned double-folded fin being placed on the inside of the carton;

FIG. 3 shows the same corner although with the double-folded fin placed on the outside; and

FIG. 4 and 5 show in a corresponding way the invention applied to a construction, which may be said to have eight corners.

The carton corner shown in FIG. 1 is formed by a bottom panel 1, two side panels 2 and 3 and three triangular corner panels or portions 4, 5 and 6, of which panels 4 and 5 are preferably made equally large. Each of the side panels 2 and 3 and the corner panels 4, 5 and 6 are allowed to terminate in a flange panel 7, 8 and 9, 10, 11, respectively.

As is shown by FIGS. 2 and 3, the corner shown may be folded in different ways. In both cases the corner panels 4 and 5 are folded in such a way that they will form a double-folded fin which is concealed in FIG. 2 on the inside of the carton and which is fixed in FIG. 3 against the outside of the sidewall panel 3. Double-folded fins of this kind are known from several carton constructions. The present invention differs, however, from these constructions in that the double-folded fin is not completely withdrawn from the corner but has been made to project a distance outside the side panel 2. As a result hereof, a flange supporting the package is formed, which flange is essentially parallel to the side 3. The folding is done both in FIG. 2 and in FIG. 3 in such a way that the various outer marginal panels or flange panels 7 to 11 form a major and a minor bundle of material in each corner. These bundles each consists of three layers of material. The large bundle, which is formed by the panels 7, 9 and 10, is a direct extension of the major portion of the double-folded fin, while the small bundle, which is formed by the panels 8, 11 and 10, forms a corresponding extension of the supporting flange.

Due to the folding described above absolute tightness is obtained as well as absence of interior raw cut edges. In addition, a very stable corner structure is obtained, even if the package is made of relatively thin material as compared to previously known constructions of a similar kind.

The construction according to FIG. 4 and 5 does not as a principal differ from them according to FIG. 1 and 2 or 1 and 3. On account of this, the same reference numerals have been used in these FIGS., but with an addition of a prime- or a bis-sign. FIG. 4 and 5 may in this case be said to show two adjacent corners, each of which is erected after the principals shown in FIG. 1 and 3. Any more detailed explanation of these FIGS. is therefor not needed.

The invention is not, of course, limited to the embodiments shown and described above but may be varied within the scope of the following claims. Thus, the shape and location of the various panel portions forming part of the corner structure may be varied within wide limits. Furthermore, by varying the acute angle of the corner panels 4, 5 and 6 it is possible to give different inclinations of the sides of the trough. The inclination may be varied individually for the two sides forming a corner. Finally, the size of a double-folded outer fin may be reduced by part of the material in one corner being allowed to form an interior similar fin which is fixed to the inside of the package.

I claim:

1. A traylike container of plastic coated carton material comprising a bottom panel and at least three peripheral sidewalls contiguous with said bottom panel and corner panels connecting each sidewall with the adjacent sidewall, each corner panel comprising at least two contiguous triangular portions folded upon themselves and at least one triangular support panel contiguous with at least one of said triangular portions and the adjacent sidewall, a liplike flange portion extending outwardly from and continuously about the upper edge of said traylike container and being contiguous with said sidewalls, said at least two triangular portions and said at least one triangular support panel, said at least one triangular support panel being folded along the contiguous edge of the folded triangular portion so as to project outwardly from the plane of the sidewall contiguous with said at least one triangular support panel to form a support for the corner of the traylike container.

2. A traylike container as claimed in claim 1 wherein the at least one triangular support panel is smaller than the at least two contiguous triangular portions.

3. A traylike container as claimed in claim 1 wherein the area where the at least one triangular support panel is folded along the contiguous edge of the folded triangular portions comprises four layers of carton material.

4. A traylike container as claimed in claim 1 wherein each corner panel comprises two contiguous triangular portions folded upon themselves to form a double-folded fin and one triangular support panel, said double-folded fin being folded against the contiguous sidewall and said triangular support panel being folded along the contiguous edge of said double-folded fin so as to project outwardly from the plane of the sidewall contiguous with said triangular support panel to form a support for the corner of the traylike container.

5. A traylike container as claimed in claim 4 wherein said double-folded fin is folded against the inside of the contiguous sidewall.

6. A traylike container as claimed in claim 4 wherein said double-folded fin is folded against the outside of the contiguous sidewall.

7. A traylike container as claimed in claim 1 wherein the liplike flange portion extending outwardly from and continuously about the top edge of said traylike container comprises three layers at the corners formed by said folded at least two triangular portions and said folded at least one triangular support panel.

8. A traylike container as claimed in claim 1 wherein each corner panel comprises three contiguous triangular portions

folded upon themselves to form a separate triangular corner panel and two triangular support panels, each being contiguous with the adjacent contiguous triangular portion and contiguous with the adjacent sidewall, each triangular support panel being folded along the edge of the contiguous folded triangular portions to form a coplanar extension of said folded triangular portions and projecting outwardly from the plane of each adjacent sidewall to form a support for the corner of the traylike container.