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2,025,201

LINER

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Fig. 1.

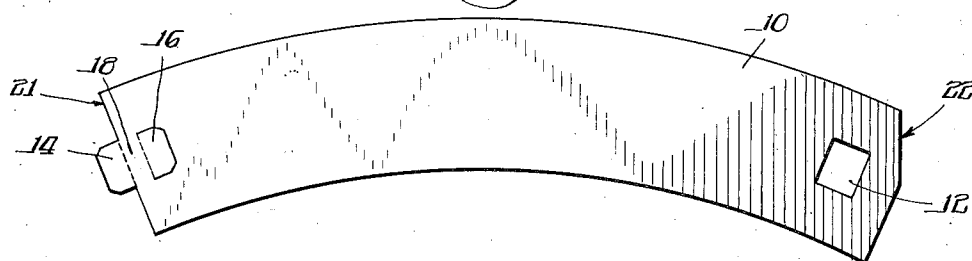


Fig. 2.

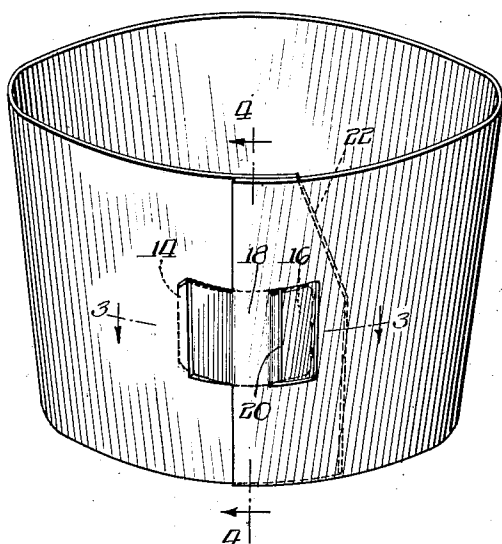


Fig. 4.

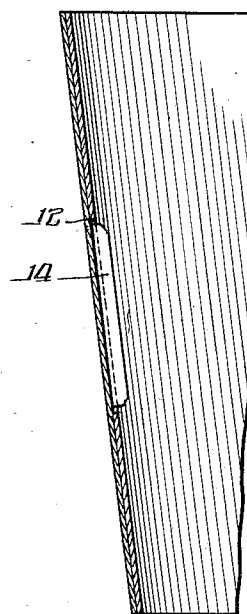
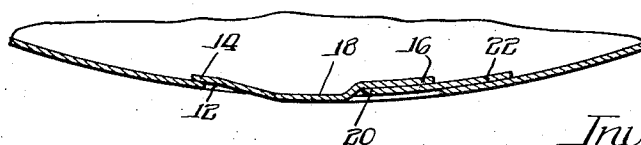


Fig. 3.



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UNITED STATES PATENT OFFICE

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LINER

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6 Claims. (Cl. 217—3)

This invention relates to liners, and has been illustrated as embodied in one suitable for use in packing fruit or vegetables according to the well known method of packing in which a ring shaped liner is placed on a facing form with the small end of the liner up, whereupon it is filled with fruit, after which an inverted basket is placed over the filled liner and the entire assembly is turned over so that the fruit that was arranged on the facing form appears at the top of the basket, the facing form of course being removed.

Usually a reinforcing shell is placed around the liner while the fruit is being packed into the liner, but the shell is removed before the basket is placed over the liner, and therefore it is necessary that the liner be sufficiently strong to retain the fruit when the reinforcing shell is removed. It is desirable, however, that when the liner with the basket around it is inverted, it should yield sufficiently to conform to the basket, and that if necessary to this end it should break readily.

Although liners which would serve the functions outlined have been known heretofore, they have not been as simple to manufacture as would be desired, and it is therefore the object of the present invention to provide a liner which would accomplish all the functions mentioned and which at the same time was capable of more economical manufacture than heretofore without inconvenience in its use.

The present invention proceeds upon the theory of providing a pair of tabs on one end of the liner blank of such size and position that they may be easily grasped with one hand and bent to a position for insertion in a hole in the other end of the liner blank, the hole preferably being large enough to permit a fairly extensive sliding movement between the two ends of the liner, and yet being small enough to make it impossible for the tabs to pass therethrough without being bent. If the movement provided by the slippage is not sufficient, the desired rupture of the liner is assured by the fact that the edge of the hole will in effect cut into the narrow strip between the tabs.

With this scope in view, the invention may consist of certain novel features of construction and operation, as will be more fully described and particularly pointed out in the specification, drawing and claims appended hereto.

In the drawing, which illustrates an embodiment of the device, and wherein like reference characters are used to designate like parts,

Figure 1 shows the liner blank;

Figure 2 is a perspective view showing the liner with its two ends joined together;

Figure 3 is a fragmentary cross-section along the line 3—3 of Figure 2; and

Figure 4 is a fragmentary vertical cross-section along the line 4—4 of Figure 2.

Although my invention may take many forms, only one has been chosen for illustration. In this form the liner blank 10 is shaped substantially as shown in Figure 1 with a large, more or less rectangular hole 12 in one end thereof, and with two tabs 14 and 16 formed in the other end thereof in the arrangement clearly shown in this figure. The hole 12 is of a height slightly greater than the height of the tabs 14 and 16, and these tabs are preferably slightly tapered at their ends so as to facilitate their insertion through the hole 12. The height of the tabs 14 and 16 is preferably greater than the width of a man's hand, and the strip 18 between these tabs is preferably around one and one-half inches width, so that the tabs may be easily grasped in a man's hand, the fingers engaging one tab and the thumb the other. Grasping the tabs in this manner automatically bends them so that they may be inserted through the hole 12, whereupon the tabs are released and the liner is in the form shown in Figure 2.

The width of the hole 12 is preferably equal to slightly less than the width of one of the tabs 14 or 16 plus the width of the strip 18. By width is meant the dimensions of the parts named in the circumferential direction of the liner. This has the result that when the liner is in its fully extended position, as in Figure 3, with the edges 20 of the hole 12 drawn substantially against the strip 18, the tab 16 will not be able to escape through the hole 12. The large size of the hole 12, however, will permit a sliding movement of the two ends of the liner almost as long as the width of a tab. It will also permit the insertion of the tabs through the hole with a minimum amount of bending of the tabs. If a sliding movement permitted as described is not sufficient for the liner to accommodate itself to the basket, the strip 18 and the edge 20 or the opposite edge of the hole have a mutually cutting tendency so that the necessary rupture is insured. Furthermore, the occurrence of this rupture at the point of overlap is insured so that even after a complete rupture the contents of the basket are entirely surrounded by the liner, the extensive overlapping portions providing adequate room for expansion.

The liners may be manufactured with extreme cheapness, since only one operation is necessary, namely the cutting of the blank and the simultaneous cutting of the tabs and the hole 12 in the blank. The joining of the two ends of the liner is so easy as not to be an objectionable factor in the use of the liner.

Further economy of manufacture can be obtained by terminating the upper left end of the blank with the edge 21, thereby omitting the end of the liner which would otherwise project beyond the tab 14, of course leaving the tab 14 intact. In like manner the further corner of the blank may terminate with the edge 22, since the portion cut off would not add materially if at all to the strength of the liner. The entire width of the liner blank would then be from the edge 22 to the extreme tip of the tab 14 and the liner could be made from stock of that width.

It is to be understood that many other embodiments of the invention, including some in improved form, will be apparent, and in the course of time more will be devised by those skilled in the art. It is not desired that this invention be limited to the details described, for its scope includes all such forms or improvements as come within the spirit of the following claims construed as broadly as the prior art will permit.

What is claimed is:

1. A blank for a basket liner, having at one end a pair of tabs foldable on a strip connecting said tabs and arranged in such position and having such size that both tabs may be easily grasped and simultaneously bent by one hand, the other end of said liner having at least one opening therein capable of receiving said tabs.

2. A blank for a basket liner, having at one end a pair of tabs foldable on a vertical strip connecting said tabs and arranged in such position and having such size that both tabs may be easily grasped and simultaneously bent by one

hand, the other end of said liner having at least one opening therein capable of receiving said tabs; said tabs being tapered at their ends to facilitate their insertion into said opening, but being nearly of the height of the opening for about half of their length, whereby proper aligning of the ends is assured.

3. A blank for a basket liner, having at one end a pair of tabs foldable on a vertical strip connecting said tabs and arranged in such position and having such size that both tabs may be easily grasped and simultaneously bent by one hand, and the other end of said liner having at least one opening therein capable of receiving said tabs; said opening having a width almost equal to but slightly less than the combined width of one tab and the width of the strip between said tabs.

4. A blank for a basket liner, having at one end a pair of tabs foldable on a strip connecting said tabs, and the other end of said liner having at least one opening therein capable of receiving said tabs.

5. A blank for a basket liner, having at one end a pair of tabs foldable on a strip connecting said tabs, and the other end of said liner having at least one opening therein capable of receiving said tabs; said tabs being of substantially equal width.

6. A blank for a basket liner, having at one end a pair of tabs foldable on a strip connecting said tabs, and the other end of said liner having at least one opening therein approximately midway between the top and bottom thereof capable of receiving said tabs, one corner of the blank adjacent said opening being cut off along a line substantially parallel to a radius of the curvature of the blank located midway between the ends of the blank.

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