April 18, 1939. D. E. LOWER 2,154,985

BASKET LINER

Filed Jan. 6, 1937 2 Sheets-Sheet 1

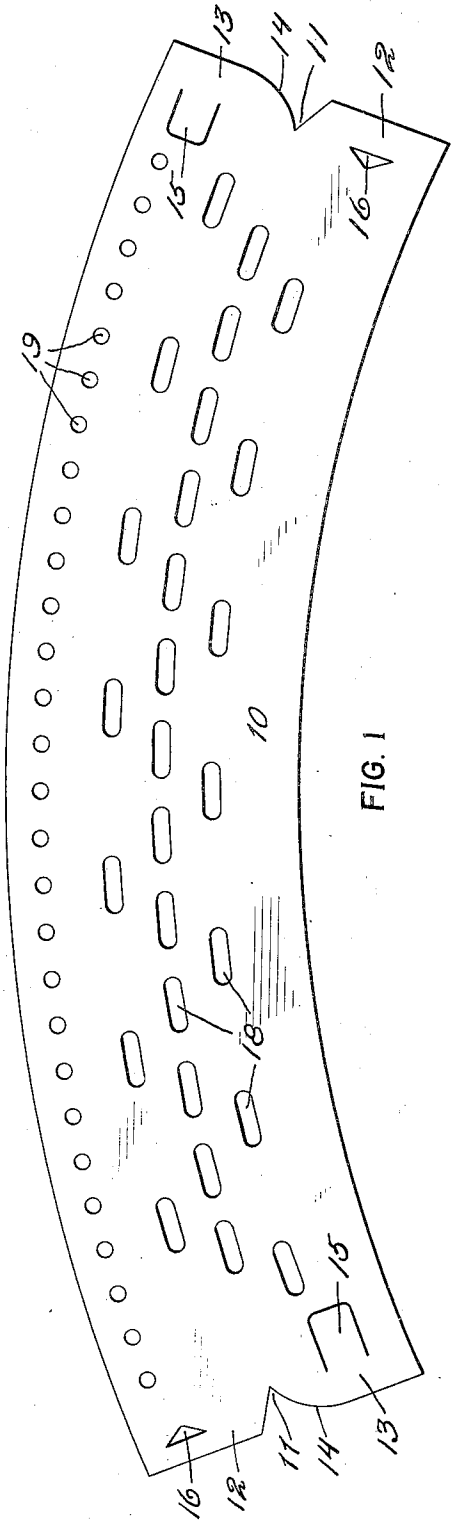


FIG. 1

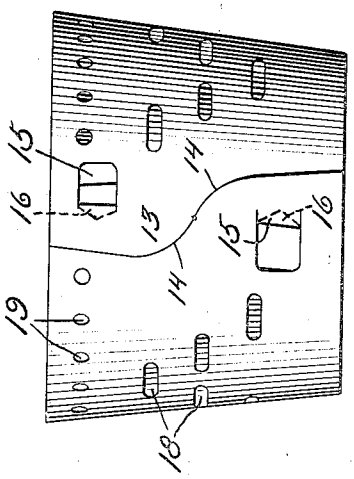


FIG. 7

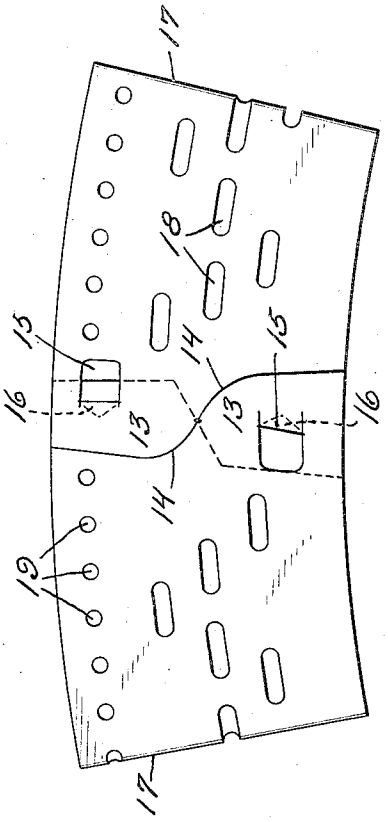


FIG. 2

Inventor
Donald E. Lower
By Ernest F. Mecklin
Attorney

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BASKET LINER

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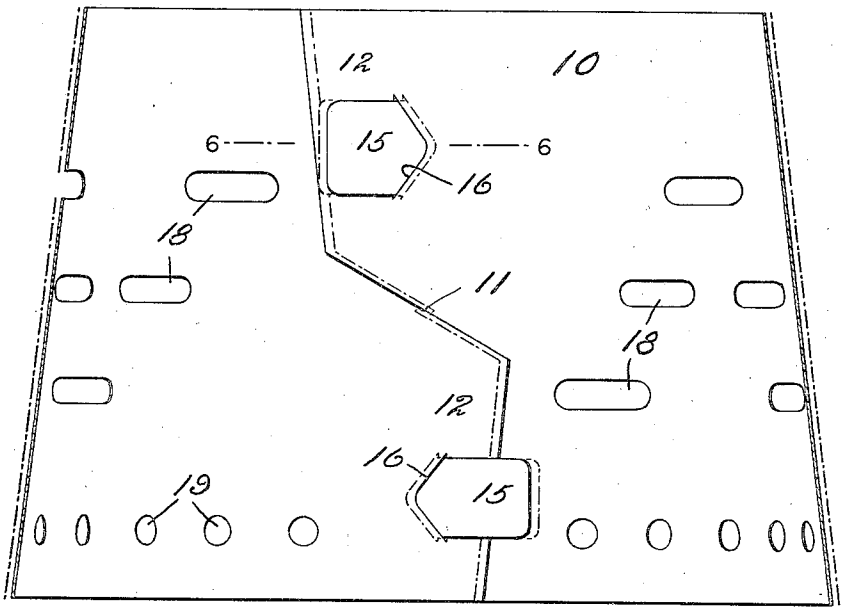


FIG. 3

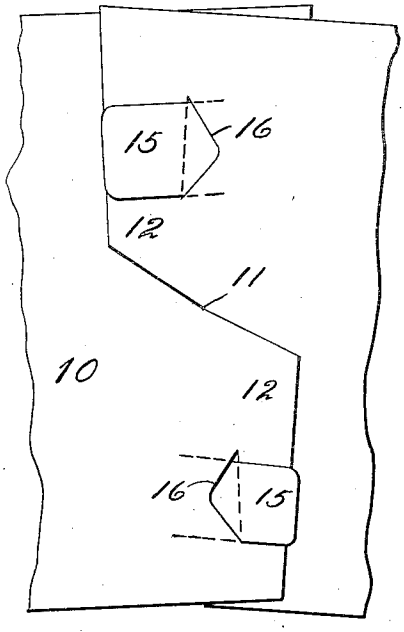


FIG. 4

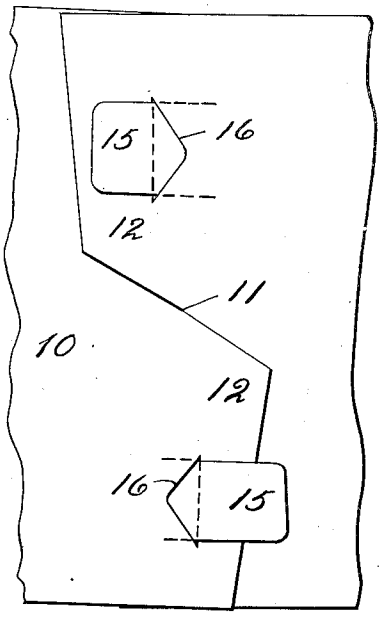


FIG. 5



FIG. 6

Inventor
Donald E. Lower
By Ernest J. Mechlin
Attorney

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UNITED STATES PATENT OFFICE

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BASKET LINER

Donald E. Lower, Aspers, Pa.

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5 Claims. (Cl. 217—3)

The invention relates to liners intended for use in connection with baskets employed for packing and shipping commodities such as fruit and vegetables.

It is well known that it is common modern practice to provide paper liners for shipping baskets so as to facilitate packing thereof and also to prevent the fruit or vegetables from coming in contact with the wooden strips, particularly the edges thereof, from which such baskets are formed. The method is to make use of what is called a facing tray which is placed upon a suitable support and which has an upstanding flange about which is embracingly disposed a paper liner of frusto-conical shape about which is, in turn, placed a frusto-conical metallic shell. The choicest articles, fruit or vegetables, are laid carefully upon the facing tray in the most orderly and symmetrical arrangement possible. The liner is then filled with the articles, after which the retaining shell is removed and the basket placed over the filled liner. This having been done the facing tray and the filled basket are inverted and the facing tray removed. The layer of fruit or vegetables placed upon the facing tray in the first place will then become the top layer in the basket and will present the most attractive appearance possible. A slatted cover is then of course placed over the top of the basket and fastened down. This makes the package ready for storage and/or shipment.

It frequently occurs that there are manufacturing variations in the sizes of the baskets and as a result the ordinary and well known liners do not always fit properly against the inner wall of the basket with the consequence that there may be either buckling or else tearing of the liner. Various expedients have been resorted to in the endeavor to remedy this defect, such for instance as making the liner of crimped or accordion-like material or providing for slippage at the connection of the ends of the liner.

It is the principal object of the present invention to provide a novel liner of a different construction which will automatically accommodate itself to baskets of somewhat different sizes.

An important object of the invention is to provide a liner in which the meeting ends are positively locked together but yet of such construction and having such a joint that either the top or the bottom may expand or contract or that the liner as a whole may expand or contact to a limited extent.

A more specific object of the invention is to provide a liner in which the ends are connected by oppositely extending tabs cooperating with slots, the construction of the ends being, moreover, such that there may be a pivotal movement at the center thereof enabling the top or the bottom to expand or contract.

A still further object of the invention is to provide a liner provided not only with ventilating openings extending throughout its major portion but also provided near its top edge with additional openings which, when the upper edge is meshed over upon application of the cover will provide for ventilation in a vertical direction.

An additional object is to provide a liner having these advantageous characteristics and yet which will be simple and inexpensive to make, easy to use, efficient and durable in service, and a general improvement in the art.

To the attainment of the foregoing and other objects and advantages, the invention preferably consists in the details of construction and the arrangement and combination of parts to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which:

Figure 1 is a flattened out view of the liner,

Figure 2 is a plan view of the liner in flattened out condition but with the ends joined,

Figure 3 is a vertical cross section showing the liner in inverted position ready for use and illustrating, by dot and dash lines, the expansibility of the liner as a whole,

Figure 4 is a fragmentary view looking at the inner side, showing the end connection and illustrating the pivoting to permit maximum expansion of the top and maximum contraction of the bottom,

Figure 5 is a similar view but showing the pivoting to permit maximum contraction of the top and expansion of the bottom,

Figure 6 is a detail cross section taken on the line 6—6 of Figure 3,

Figure 7 is a side elevation of the liner assembled and in upright position as it would be when filled and in a basket.

Referring more particularly to the drawings I have shown the liner formed as an elongated strip or sheet 10 of flexible material such as light cardboard or its equivalent so that it will be relatively tough and able to support a column of fruit, vegetables or the like when filled. As it is intended that this strip or sheet be arranged to form a frusto-conical liner it is made in the shape of a ring-sector, that is to say the outer and inner edges are arcs of concentric circles and the ends are radial. As the ends are in-

tended to overlap they are formed with notches 11 which will interengage, and which define end portions 12 and 13, the latter of which are intended to be at the outside of the liner when the notches are interengaged. The edges 14 of the end portions 13 are curved so that when the strip or sheet is formed into a liner with the end portions 13 at the outside thereof, there will be no sharp corners or angles upon which a basket may catch when forced down into place about the liner after the latter has been filled with fruit or vegetables.

In order that the ends may be connected they are formed with tongues 15 which extend toward each other and which are adapted for insertion through slots or openings 16. The tongues 15 are located at the end portions 13, that is to say they are at diagonally opposite corners of the strip or sheet and the slots or openings 16 are therefore located at the other diagonally opposite corners. Owing to the fact that the tongues 15 extend in opposite directions, that is to say toward each other, it is apparent that when they are engaged within the slots 16 there will be a positive lock preventing disconnection of the ends while at the same time there may be a certain relative sliding movement thereof.

Though the liner is formed originally as a flat elongated strip or sheet, it is intended that it be marketed to the trade in assembled and flattened out condition, that is to say the tongues are engaged within the slots or openings 16 and the strip or sheet then folded down flat as indicated at 17 in Figure 2, the joint or connection of the ends being preferably centrally located as indicated.

When the device is to be used, it is opened up from the folded position shown in Figure 2 so that it will be in a frusto-conical shape. It is then placed, in inverted position, that is to say the large end down, upon whatever facing tray is used in accordance with the well known packing process. It is customary then to place about the liner a metallic shell of corresponding shape, after which the liner is packed with the fruit or vegetables, it being of course understood that the choice specimens are placed very carefully upon the facing tray so as to constitute the top layer. This having been done, the metal shell is removed and the basket is very promptly placed over the filled liner and pressed firmly down into place. The filled basket, liner and facing tray are then all inverted, as a whole, the facing tray removed and the basket jolted to settle the fruit or vegetables. This completes the packing operation except for folding inwardly the upper edge of the liner and placing and securing the top or cover upon the basket.

The most important feature of the invention is that when the notches 11 are interengaged and the tongues 15 inserted through the slots or openings 16 there is or may be a pivotal movement at the points of engagement of the vertices of the notches as well as relative slidability of the ends of the liner, the purpose in both instances being to enable the liner to accommodate itself to manufacturing variations in the sizes of the baskets. The relative slidability of the ends permits limited expansion or contraction of the liner as a whole as indicated by the dot and dash lines in Figure 3. The pivoting or capability of pivoting of the ends at the vertices of the notches is of great importance in that this feature coupled with the slidability of the tongues within the slots or openings 16 will permit the upper end of the liner to expand, as shown in Figure 4 or contract as shown in Figure 5, the lower end correspondingly contracting or expanding as shown in Figures 4 and 5, respectively. The expansibility or contractibility of the upper end with or without contraction of the lower end is of advantage when the open end of the basket is of slightly greater or less diameter than is proper, while the expansibility or contractibility, as the case may be, of the lower end of the liner is of advantage in the event that the bottom of the basket is of greater or less diameter than is exactly proper. The expansibility or contractibility of the liner as a whole is of advantage in the event that the entire basket is, throughout, of slightly greater or less size than is proper or expected. There need not be a true pivoting confined to the vertices of the notches as it is readily apparent that it may be considered the slidability of the tongues 15 with respect to the notches 16, combined with the prevention of disconnection of the ends that permits expansion or contraction of the top or the bottom of the liner, as the case may be. No matter how it may be considered, the fact remains that the liner is readily capable of conforming itself to baskets of slightly varying dimensions when the basket is forced down into place in surrounding relation to the liner containing the column of fruit or vegetables. Clearly this is highly desirable for the reason that if the liner could not expand to meet and fit against the wall of the basket it might tear. Similarly, if it could not contract for the same purpose it might become buckled, either of which contingencies might be detrimental to the contents.

It is another feature of the invention that the liner be formed not only with openings 18 located throughout its major portion, for lateral ventilation, but that it also be provided with a row, series or plurality of holes 19 located in comparatively slight spaced relation to its upper edge. The purpose of the holes 19 is that when the edge of the liner projecting above the top of the basket is folded inwardly beneath the top or cover they will provide for ventilation in a vertical direction, it being known that the tops or covers commonly used are of slatted construction and therefore readily permit access of air to the holes 19.

From the foregoing description and a study of the drawings it will be apparent that I have thus provided a novel and improved liner for the purpose specified which will be highly desirable and advantageous in use for the reasons set forth. The device or article may be manufactured as cheaply as those of ordinary varieties and it should therefore recommend itself to the packing trade. It is thought that from the above the construction, use and advantages will be readily apparent to one skilled in the art without further explanation.

While I have shown and described the preferred embodiment of the invention, it should be understood that the disclosure is merely an exemplification of the principles involved as the right is reserved to make all such changes in the details of construction as will widen the field of utility and increase the adaptability of the device provided such changes constitute no departure from the spirit of the invention or the scope of the claims hereunto appended.

Having thus described the invention, I claim:

1. A liner comprising an elongated sheet of flexible material having its ends formed with

substantially centrally located abuttingly engageable notches defining end portions adapted to overlap, two diagonally opposite end portions being formed with tongues extending in opposite directions, and the other diagonally opposite end portions being formed with slots for slidably receiving said tongues to permit limited pivoting of the end portions about said notches when said liner is assembled without rupture of the liner, the edges of the outermost end portions being curved adjacent the notches to avoid angular shoulders, so as to prevent catching of the liner onto the wall of a basket when inserted thereinto.

2. A basket liner comprising a ring-sector shaped sheet of flexible material adapted to have its ends connected to form a frusto-conical shell, the ends being formed with solely abuttingly engageable notches defining spaced end portions adapted to lap when the notches are engaged, two diagonally opposite end portions being formed with tongues extending toward each other, and the other diagonally opposite end portions being formed with slots for the reception of said tongues, said slots being so positioned with relation to the corresponding tongues as to permit limited expansion or contraction of the top and bottom of the liner and of the liner as a whole without rupture.

3. A basket liner comprising a ring-sector shaped sheet of flexible material adapted to have its ends connected to form a frusto-conical shell, the ends being formed with notches defining spaced end portions adapted to lap when the notches are abuttingly engaged, two diagonally opposite end portions being formed with tongues extending toward each other, and the other diagonally opposite end portions being formed with slots for the reception of said tongues, the ends being capable of pivotal movement with respect to each other about said notches, and said tongues being slidable with respect to the slots circumferentially of the shell to enable the top and bottom of the shell to expand or contract without rupture.

4. A container liner comprising an elongated sheet of flexible material having each of its ends divided to form spaced end portions, two diagonally opposite end portions being adapted to overlap the other two when the ends are connected, and tongue and slot means at said end portions for slidably connecting the ends, the tongues extending toward each other whereby their cooperation with the slots will form a lock preventing separation of the ends while permitting limited expansion or contraction of the top and bottom of the liner to enable it to conform to containers of different size or taper without rupture.

5. A liner comprising an elongated sheet of flexible material having its ends formed with notches defining end portions adapted to overlap, to diagonally opposite end portions being formed with longitudinally extending tongues, and the other diagonally opposite end portions being formed with slots for slidably receiving said tongues, the notches, tongues, and slots being constructed and arranged to permit pivoting of said end portions about said notches when said liner is assembled without rupture.

DONALD E. LOWER.