Dec. 15, 1925. 1,566,077

B. J. DAVIDSON

CARTON

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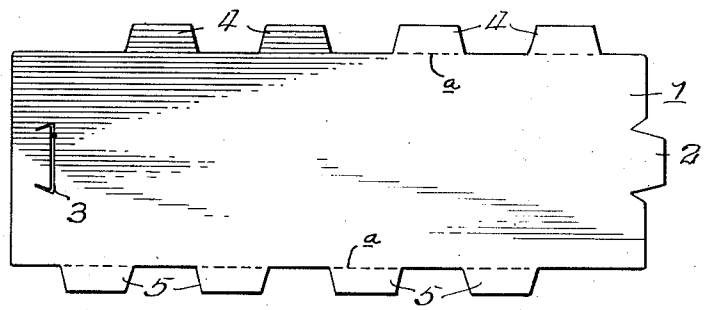


Fig. 1.

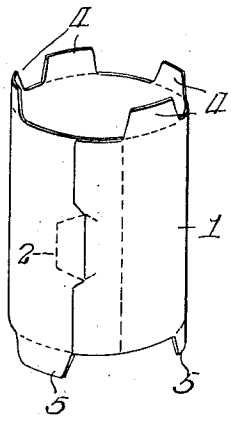


Fig. 2.

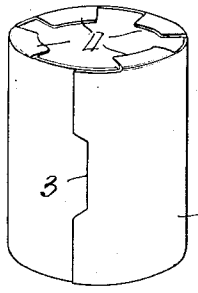
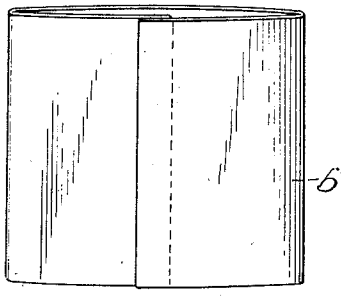


Fig. 3.

Fig. 4.



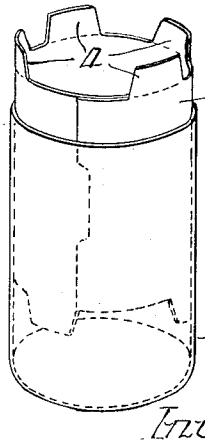


Fig. 5.

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Fig. 6.

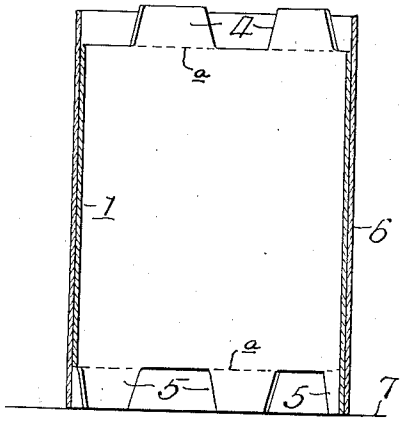


Fig. 7.

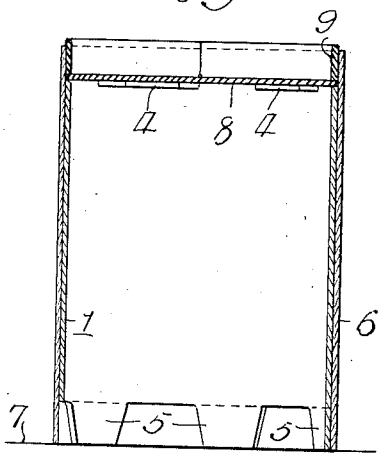


Fig. 8.

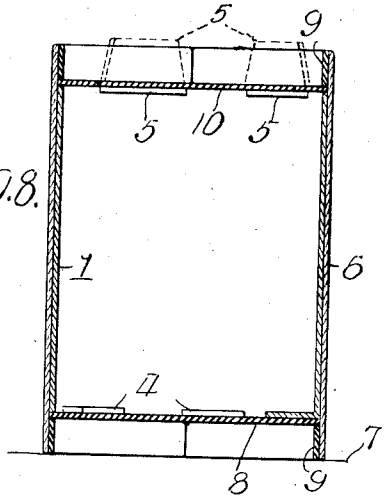
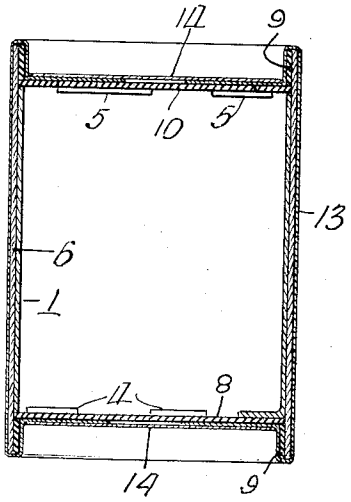


Fig. 9.



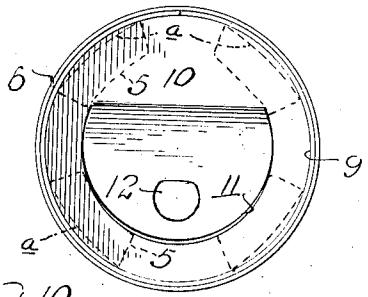


Fig. 10.

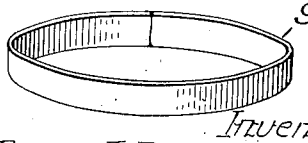
Fig. 11.





Fig. 12.

Fig. 13.



Inventor
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by Cyrus Swan, Atty.

Patented Dec. 15, 1925. 1,566,077

UNITED STATES PATENT OFFICE.

BRUCE J. DAVIDSON, OF MARSEILLES, ILLINOIS, ASSIGNOR TO NATIONAL BISCUIT COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CARTON.

Application filed April 14, 1921. Serial No. 461,311.

To all whom it may concern:

Be it known that I, BRUCE J. DAVIDSON, a citizen of the United States, residing at Marseilles, in the county of La Salle and State of Illinois, have invented new and useful Improvements in Cartons, of which the following is a specification.

This invention relates to cylindric or drum shaped cardboard containers for food products and more particularly bakery products, such as ginger snaps.

One object of the invention is to provide the inner liner with a plurality of inwardly extending flaps at both ends of the liner to form relatively wide bearing surfaces for the disc shaped heads at the ends of the container, and thus hold the heads from inward displacement when pressure is applied against them from the outside of the container.

Another object of the invention is to make use of these flaps during the assembling of the container to space the end edges of the liner from the end edges of the outer wall of the container, so that the headers may be applied, and to further use one set of flaps to hold the liner from being pushed downward while the other set of flaps are being folded inward and the header therefor applied.

In the accompanying drawings—

Fig. 1. is a plan view of the flat blank for the inner liner;

Figs. 2 and 3 show the liner bent into annular form with the flaps, in Fig. 2, projecting beyond the ends of the liner, and in Fig. 3, folded to extend inward;

Fig. 4 is a perspective view of the outer wall of the container in collapsed or flattened form;

Fig. 5 is a perspective view showing the liner partially inserted into the outer wall of the container;

Figs. 6 to 9, inclusive, show the various steps employed in assembling the parts of the container;

Fig. 10 is a top plan view of the container after the parts have been assembled; and

Figs. 11, 12, and 13 are perspective views of the bottom and top heads and one of the circular strips, respectively.

As shown in Fig. 1, the blank for the liner comprises a rectangular body portion 1 having at one side a locking tongue 2 to enter a locking slot 3 adjacent the other side of the blank, to hold the liner in tubular or cylindric form, when the flat blank is bent into that form as shown in Figs. 2, 3, and 5. The liner 1 is provided at its upper and lower ends with a plurality of laterally spaced flaps 4, 5. When the blank for the liner is bent into tubular form, the flaps 4, 5 project beyond the ends of the liner, as shown in Fig. 2.

The outer wall 6 of the carton or container, as shown in Fig. 4, is made in one piece of sheet material, such as cardboard, and is bent upon itself transversely, with its ends secured together in overlapping relation.

After the line 1 has been bent into cylindric form, as shown in Fig. 2, it is then inserted endwise into the outer wall 6, and the liner being cylindrical distends the outer wall 6 and gives and holds it in that shape also. The liner 1 with its flaps 4, 5 projecting beyond the ends thereof, has a length preferably slightly greater than the length of the outer wall 6. The liner 1 is inserted the full distance into the outer wall 6, which when placed on end on a table or other underlying support, indicated by 7 in Fig. 6, causes the end flaps 5 to contact with that support and, the liner being longer than the outer wall 6, the now upper flaps 4, 4 will project slightly above the upper edge of said outer wall, as shown in Fig. 6. This permits the flaps 4, 4 to be readily grasped and be turned or folded downward and inward on the score lines at the bases of said flaps. The flaps are folded downward to occupy positions substantially at right-angles to the body of the liner, as shown in Fig. 7. The circular head 8, which constitutes the bottom wall of the container, is then applied by being inserted flatwise into the now open upper end of the container and brought to rest on these flaps, as shown in Fig. 7. A cardboard strip 9 is then bent into annular form and inserted into the open end of the container against the head 8, as shown, and when in place projects slightly above the adjacent end of the outer wall 6, as indicated in said figure. The ends of this strip 9 abut and that holds the strip tight against the head and the outer wall 6 of the container. It is to be observed that the flaps 5 at the lower end of the liner rest or bear against the supporting surface 7 and prevent the liner 1 from being forced or displaced down-

ward when bending the flaps 4 downward or when inserting the head 8 and strip 9 in place.

The carton or container so far formed, as shown in Fig. 7, is then inverted and placed on the supporting surface 7 with the previously upper annular strip 9 against the same, as shown in Fig. 8. By pressing downward on the now upper edge of the outer wall 6, where it is unobstructed by the now upper flaps 5 on the liner, the outer wall 6 is then slid downward over the liner, bottom head 8 and strip 9 until the bottom edge of the outer wall rests also on the table or other support. The width of the strip 9 then properly spaces the liner from the edges of the outer wall. Then the flaps 5 project slightly above the adjacent edge of the outer wall 6, as shown in dotted lines in Fig. 8, and thus may be readily grasped and be folded downward and inward on the score lines at the bases of said flaps. This causes the flaps to extend inward from the liner at substantially right-angles thereto, as shown. The head disc 10, forming the top wall of the container, is then applied against the inwardly projecting flaps 5. To hold the head 10 against these flaps, a second cardboard strip 9 is inserted in place, as shown in Fig. 8. The top head 10 has a section 11 partially severed therefrom to form a hinged lid to permit access to be had into the container by raising the lid portion 11. This has a portion 12 partially severed on a curved line from the lid 11 to permit a string or piece of twine to be looped under the same for raising the lid.

The strip 9 for the lower head 8, being in contact with the underlying surface 7, prevents the liner from being moved or pushed downward while the flaps 5 are folded inward and the top head 10 and strip 9 are applied. The flaps 5 serve the same purpose while the flaps 4 are being folded inward and the head 8 and its strip 9 are applied. Thus, the liner 1 is held from involuntary displacement at all times during the assembling of the container without the use of an adhesive or other separate means.

Fig. 10 is a top plan view of the container after the parts have been assembled in the manner described. It is to be noted that the flaps 5 extend inward and under the top head 10, and these flaps being relatively wide form a relatively wide bearing surface for the head against them. The score line or joint between each flap (4, 5) and the liner retains its substantially straight line character, and becomes a chord of a circle equal to or smaller than the outline of the head disc, which chord gives positive support to a portion of the head more solid than the edge. In Fig. 10, I have indicated the score lines by *a*, *a*. The flaps 4 at the other end of the container form the same kind of bearing surface for the head 8. This therefore gives sufficient support for the heads other than the narrow edges of the liner between the flaps, and holds the heads from being displaced inward out of position should outside pressure be applied against them in directions to force them inward. Thus exterior objects coming in contact with the heads will not under normal conditions push the heads inward and disrupt the joint between the heads and associated edges of the liner 1.

The strips 9 serve to hold the heads from outward displacement. After the parts of the container have been completely assembled, as described, the container is covered on the outside by a covering sheet 13, on which may appear the name of the manufacturing baker or such other advertising or trade data as may be desired. This sheet extends over the ends of the container and down to and on the heads as shown in Fig. 9. The marginal portions of the sheet on the heads are covered by paper labels 14, as shown in Fig. 9. The outer sheet of covering material is, in most cases, of paper and, being attached to the container, holds the strips 9 in place and consequently holds the heads against outward displacement by pressure from within.

I claim as my invention:

1. A tubular carton, comprising an outer wall, a liner having its end edges terminating short of the adjacent ends of said outer wall, inwardly extending flaps at the ends of said liner, heads applied against said flaps for closing the ends of the carton, and means for holding said heads against said flaps, the latter being long enough to project beyond the ends of said outer wall to facilitate grasping when setting up the carton.

2. A tubular carton, comprising an outer wall, a liner having its end edges terminating short of the adjacent ends of said outer wall, inwardly extending flaps at the ends of said liner, heads applied against said flaps on the outside thereof for closing the ends of said carton, and strips bent into annular form and inserted into the ends of the carton against the heads for holding the latter against said flaps, said flaps being long enough to project beyond the ends of said outer wall to facilitate grasping when setting up the carton, and said strips being wide enough to shift the liner endwise after one strip has been inserted in the container to project the flaps at the opposite ends thereof beyond the carton for grasping.

3. The method of producing a tubular carton, which consists in providing a tubular outer wall and a tubular liner with end flaps, inserting the liner into the tubular outer wall with the flaps at one end of the liner projecting beyond the adjacent end of said outer wall to facilitate grasping and

bending said flaps inward, inserting a disc shaped head into the open end of the outer wall on said flaps and holding said head against said flaps by placing an annular strip in the outer wall against said head, shifting the liner endwise through said strip to project the flaps at the opposite end of the outer wall beyond the same to permit grasping and bending said flaps inward, inserting another head into such end of the outer wall on the last mentioned flaps, and applying another strip against said last mentioned head.

In testimony that I claim the foregoing as my invention, I affix my signature this 11th day of April, A. D. 1921.

BRUCE J. DAVIDSON.