Aug. 18, 1953 L. C. BROOKS 2,649,238

CONSUMER TYPE CONTAINER

Filed Feb. 17, 1950 3 Sheets-Sheet 1

Fig. 1.

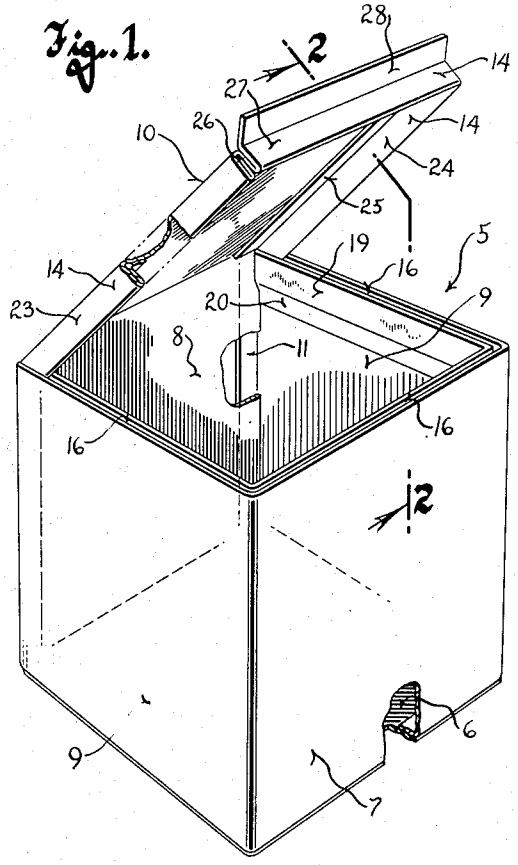



Fig. 2.

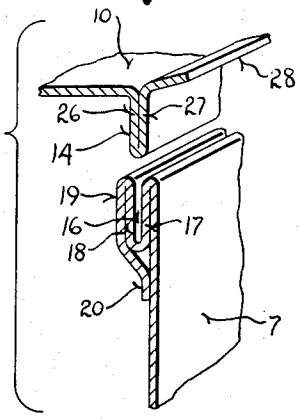



Fig. 3.

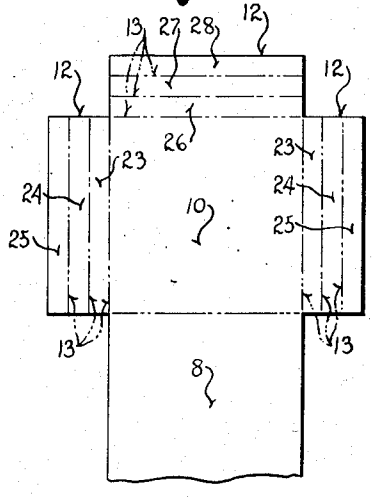
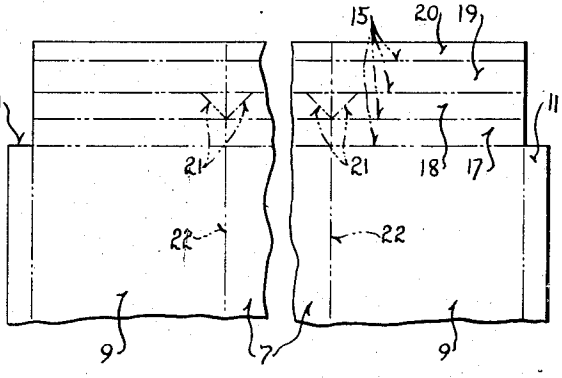



Fig. 4.




Inventor
Lewis C. Brooks
By Dashiell Jones
Attorney

Aug. 18, 1953 L. C. BROOKS 2,649,238

CONSUMER TYPE CONTAINER

Filed Feb. 17, 1950 3 Sheets-Sheet 2

Fig. 5.

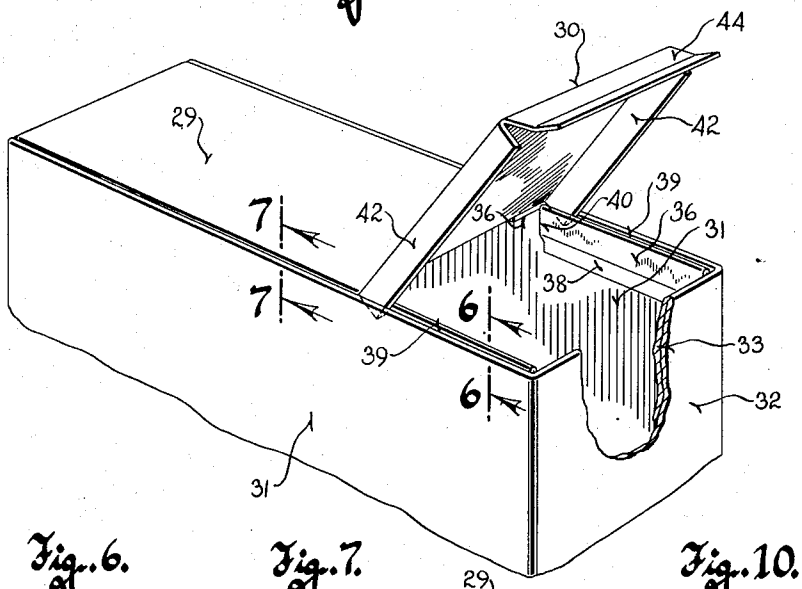



Fig. 6.

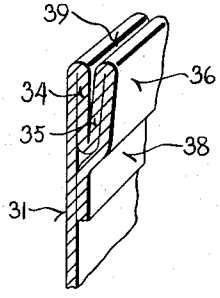



Fig. 7.

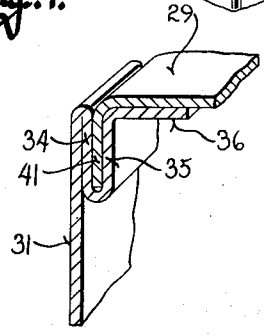



Fig. 10.

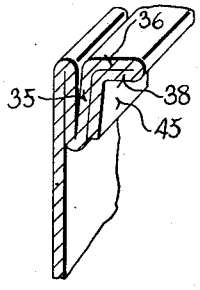



Fig. 9.

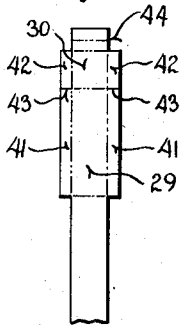
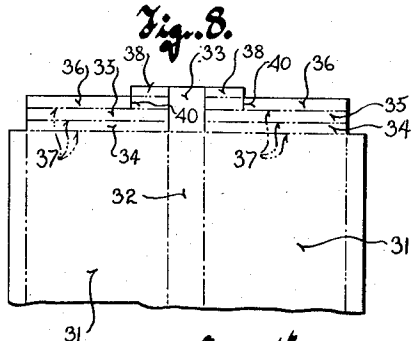



Fig. 8.




Inventor
Lewis C. Brooks
By Ira Milton Jones
Attorney

Aug. 18, 1953 L. C. BROOKS 2,649,238

CONSUMER TYPE CONTAINER

Filed Feb. 17, 1950 3 Sheets-Sheet 3

Fig. 11.

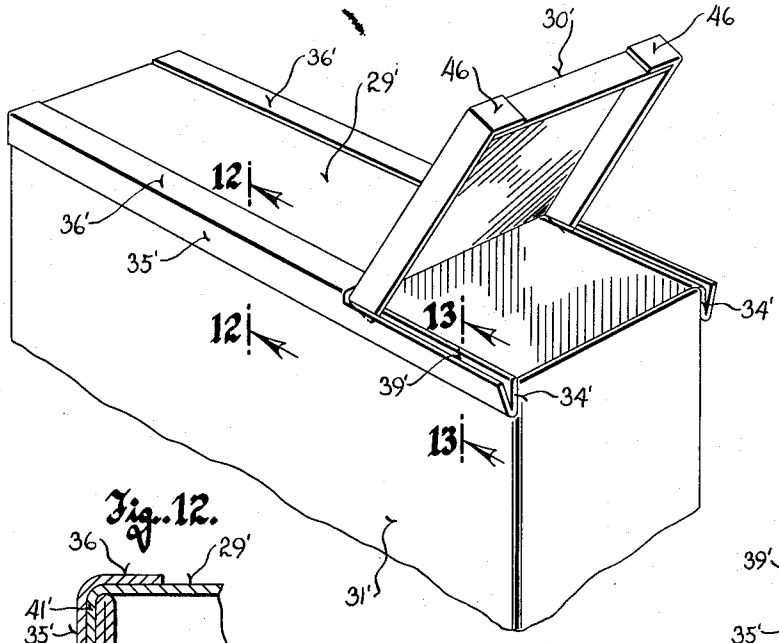



Fig. 12.




Fig. 13.

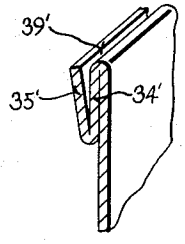



Fig. 15.

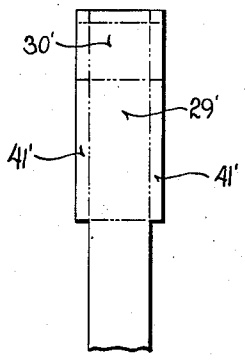
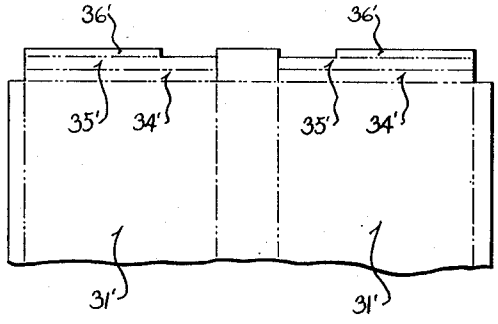



Fig. 14.




Inventor
Lewis C. Brooks
By Dewitt Jones
Attorney

Patented Aug. 18, 1953

2,649,238

# UNITED STATES PATENT OFFICE

2,649,238

## CONSUMER TYPE CONTAINER

Lewis C. Brooks, Milwaukee, Wis., assignor of one-third to Ira Milton Jones, Milwaukee, Wis.

Application February 17, 1950, Serial No. 144,685

2 Claims. (Cl. 229—23)

1

This invention relates to consumer type containers made of fiber or paper board or other suitable sheet material.

Broadly the container of this invention is of the type illustrated in Patent No. 2,398,404, issued to L. C. Brooks on April 16, 1946; and the manner in which the container of this invention is constructed is similar to that disclosed in the applicant's pending application, Serial No. 57,356, filed October 29, 1948, now Patent No. 2,626,095.

The purpose of the present invention is to provide an improved seal between the cover and body of the container and to this end the invention has as its object to provide a hinged cover for a container of the character described, all free edges of which are adapted to have a tongue and groove connection with the adjacent walls of the container body.

Another object of this invention is to provide a container of the character described wherein the desired tongue and groove connection between the cover and body is provided by interengaging flange portions formed integrally with the cover and body.

Another object of this invention is to provide a hinged closure for fiber or paper board containers and the like which may be sealed shut at the time the container is filled and which, after the seal is broken, may be opened and reclosed by the consumer as often as necessary.

With the above and other objects in view which will appear as the description proceeds, this invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claim.

The accompanying drawings illustrate several complete examples of the physical embodiments of the invention constructed according to the best modes so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a container embodying this invention;

Figure 2 is an enlarged detail sectional view through the front end of the cover and adjacent portion of the body taken substantially on the plane of the line 2—2 in Figure 1;

Figure 3 is a plan view showing the upper end portion of the cover, bottom and back forming blank;

Figure 4 is a plan view of the upper end portion of the front and side forming blank with the medial portion thereof being broken away;

2

Figure 5 is a perspective view of the upper end portion of a container illustrating a slight modification of the structure shown in Figure 1;

Figure 6 is a detail sectional view, in perspective, taken through Figure 5 on the plane of the line 6—6;

Figure 7 is a detail sectional view, in perspective, taken through Figure 5 on the plane of the line 7—7;

Figure 8 is a plan view of the upper portion of the side and front forming blank for the container illustrated in Figure 5;

Figure 9 is a view similar to Figure 8 but illustrating the upper portion of the rear, top and bottom forming blank for the container shown in Figure 5;

Figure 10 is a detail sectional view, in perspective, similar to Figure 6 but illustrating the manner in which the top edge of the container body may be reinforced;

Figure 11 is a perspective view similar to Figure 5 illustrating another adaptation of this invention;

Figure 12 is a detail sectional view taken through Figure 11 on the plane of the line 12—12.

Figure 13 is a detail sectional view, in perspective, taken through Figure 11 on the plane of the line 13—13; and

Figures 14 and 15 are plan views showing the upper portions of the blanks used in the formation of the container shown in Figure 11.

Referring now particularly to the accompanying drawings in which like numerals indicate like parts throughout the several views, the numeral 5 designates generally the body of a container of the type with which this invention is concerned and which consists of a bottom 6, a front wall 7, a rear wall 8, side walls 9 and a top or cover 10 hinged to the back wall and adapted to swing to and from a closed position. The top, back and bottom of the container are made from one blank shown in Figure 3, and the front and sides are made from another blank shown in Figure 4. These blanks are secured together by flanges 11 at the sides of the blank shown in Figure 4 which are adhered to the medial or back forming portion of the blank shown in Figure 3.

The top forming portion 10 of the blank shown in Figure 3 has flanges 12 extended from its three free edges. These flanges are longitudinally scored as at 13 to enable the same to be folded upon each other to provide the tongues 14; and the blank shown in Figure 4 is scored as at 15

to enable the top edges of the front and side walls of the container which it provides to be folded as shown in Figure 2 to provide the groove 16 of the tongue and groove connection.

The score lines 15 define four adjacent parallel strips 17, 18, 19 and 20 and these strips, in the finished container, are disposed with respect to each other as follows:

The strip 17 overlies the upper edge of the container wall (front or side) to which it may be adhered. The strip 18 which is of the same width as the strip 17 overlies the strip 17 and is not adhered thereto and preferably is slightly spaced therefrom to provide the tongue 16. The strip 19 which is wider than the strips 17 and 18 overlies the strip 18 and extends down beyond the same to enable the strip 20 to lie flat against the inner face of the container wall to which it is adhered. If desired, the strips 18 and 19 likewise may be adhered to each other.

The groove 16 extends around the two front corners of the container as shown and to enable forming these corners the strip 18 is diagonally scored as at 21 upwardly and outwardly from the intersection of the corner defining scores 22 with the score line dividing the strips 17 and 18. These diagonal scores 21 enable the strips 18 and 19 to be folded upon themselves at the corners as required to continue the groove 16 around the corners.

The flanges 12 at the sides of the cover 10 are divided into three parallel strips 23, 24 and 25 by their score lines 13 and these strips are disposed with respect to each other as follows:

The inner strips 23 are folded down at right angles to the top 10; the middle strips 24 are folded in flat against the strips 23 to which they are adhered; and the outer strips 25 are bent at right angles and adhered to the underside of the cover 10.

The three adjacent parallel strips 26, 27 and 28 into which the flange 12 at the front edge of the cover is divided by its score lines 13 are disposed with respect to each other as follows:

The inner strip 26 is bent down at right angles to the cover 10; the strip 27 is bent back up flat against the outside of the strip 26 to which it is adhered; and the strip 28 is folded down over the outer face of the front wall 7 after the container is filled, being releasably secured by pressure sensitive adhesive or any other suitable means. Upon breaking the seal holding the strip 28 down against the front of the container the strip 28 provides a convenient tab by which lifting force may be applied to the cover. Obviously, of course, the tongue and groove junction described facilitates sealing the cover closed, which may be done by means of wax or any other suitable sealing medium, and affords a tight fitting, reclosable cover for the container.

The bottom wall 6 like the top 10 is hinged to the back 8 and is secured to the front and side walls, either in the same way as the top wall 10 is joined thereto or in any other suitable manner.

As illustrated in Figure 5 the closure of this invention is especially well adapted for containers such as those used to package breakfast cereals where a partial opening of the top wall is desirable. In this case the major portion 29 of the top wall is fixed and the hinged portion 30 thereof has a tongue and groove connection only with the side walls 31 of the container. Thus the blank shown in Figure 8 which forms the side walls 31 and the front wall 32 has a three strip flange extending fully across the top of each side wall panel and an unscored flap 33 projecting from the front wall panel 32.



The three strip flanges are divided into their three strips 34, 35 and 36 by parallel score lines 37 and for that part of the width of the side walls at which the pouring opening is to be located the flanges have a fourth strip 38. These strips of the flanges are folded upon themselves to produce the grooves 39 as follows:

The strips 34 are folded down against the inner faces of the side walls 31 to which they may be adhered; and the strips 35 are folded back up over the strips 34 but are not adhered thereto to thus define the grooves 39. The strips 36 are cut as at 40 to divide the same into front and rear sections, the front sections being as long as the fourth strips 38. These front portions of the strips 35 are folded down and adhered to the strips 35 and the fourth strips 38 are folded down against the inner face of the side wall 31 and adhered thereto. This construction is shown in Figure 6.

The rear portions of the strips 36 instead of being folded down against the strips 35 lie flat against the underside of the top wall portion 29 to which they are adhered, and the top wall portion 29 has side flanges 41 received and secured between the strips 34 and 35. This construction is illustrated in Figure 7. The flap 33 which is not scored is folded down flat against the inside of the front wall 32 to which it is adhered.

Like the fixed cover portion 29, the front or hinged cover portion 30 has side flanges 42 defined from the flanges 41 by cuts 43. These side flanges 42 provide the tongues of the tongue and groove connections and thus enter the grooves 39 as the hinged cover portion is swung down into its closed position.

The front of the cover portion 30 has a two strip flange 44, the inner strip of which is adapted to lie flat against the outer face of the front wall of the container body and be adhered thereto while the outer strip thereof may be left loose from the front wall to provide a convenient pull-up tab.

If desired, the sides of the pouring opening may be reinforced by a shoulder construction such as that shown in Figure 10 which, however, entails the provision of a fifth strip 45; and instead of having the strips 36 lie flat against the strips 35 this construction places the strips 36 horizontally and secures the fourth strips 38 against the undersides of the strips 36, the fifth strip 45 being adhered to the second strips 35.

Obviously, as pointed out hereinbefore in connection with the embodiment shown in Figure 1, the hinged cover portion 30 may be sealed in its closed condition by wax or any other suitable sealing medium with which the overlying strips or flanges of the tongue and groove connection may be coated.

The embodiment of the invention shown in Figure 11, as to the form of the container, is like that shown in Figure 5, the major distinction being that the tongue and groove connection between the hinged portion of the cover and the side walls of the container is on the exterior rather than the interior of the container.

With this arrangement the stationary portion 29' of the cover has its side flanges 41' telescoped over the exterior of the side walls and in fact over the downturned strips 34' thereof, and the strips 35' overlie the outer faces of the side

flanges 41' so that the third strips 36' may be folded over the top portion 29' as especially shown in Figure 12.

To form the grooves 39' on the exterior of the side walls the scored flanges extending across the side walls 31' have only two strips in their front sections and these two strips 34' and 35' are arranged as shown in Figure 13. The hinged portion 30' of the front cover, as before, has downwardly directed flanges on its side and front edges but in this case these downwardly directed flanges are connected together at the corners as at 46.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in this art that this invention provides an improved cover construction for consumer type containers, and that the tongue and groove connection employed therein enables the attainment of a tight seal and at the same time provides a convenient reclosable cover.

What I claim as my invention is:

1. A consumer type container, comprising: front, back, side, bottom and top walls, the top and bottom walls being hinged to the back wall by folds and with the back wall constituting one integral blank; the front and side walls being hingedly connected by folds and together constituting another integral blank; means securing said blanks together along the side edges of the back and side walls; means securing the unhinged edges of the bottom wall to the adjacent edges of the front and side walls; and means for securing the unhinged edges of the top wall to the adjacent edges of the front and side walls, said means comprising downwardly directed flanges on the top wall providing tongues, and a plurality of parallel adjacent strips integral with the front and side walls and coextensive with the perimeter thereof, one of said strips being folded down from the top edges of the front and side walls to overlie the same, a second strip being folded up from the bottom edge of said first strip and overlying said first strip to provide grooves into which said tongues fit, and a third strip being folded down from the top of the second strip and overlying and adhered to the same and extending beyond the adjacent portion of the front and side walls and being adhered thereto.



2. The consumer type container set forth in claim 1 further characterized by the fact that said downwardly directed flanges on the top wall comprise three parallel adjacent strips at each of the side and front edges of the top wall, the first of said strips being bent down from the top wall, the second of said strips having its portions which are at the sides of the top wall bent back up and overlying and adhered to the inner faces of the first strip and having its portion which is at the front edge of the top wall bent back up and overlying and adhered to the outer face of the first strip, and the third strip having its portions which are at the sides of the top wall underlying and adhered to the underside of the top wall and having its portion which is at the front edge of the top wall adapted to lap over the front face of the front wall of the container and be removably adhered thereto, and when detached therefrom to provide a pull-up tab for the top wall.

LEWIS C. BROOKS.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 347,646 | Schmidt | Aug. 17, 1886 |
| 1,234,480 | Kondolf | July 24, 1917 |
| 1,351,278 | Billstein | Aug. 31, 1920 |
| 1,962,043 | Usher et al. | June 5, 1934 |
| 1,975,444 | Block | Oct. 2, 1934 |
| 1,986,145 | Goodyear | Jan. 1, 1935 |
| 2,181,837 | Snyder et al. | Nov. 28, 1939 |
| 2,342,564 | Van Saun | Feb. 22, 1944 |
| 2,382,819 | Richards et al. | Aug. 14, 1945 |
| 2,398,404 | Brooks | Apr. 16, 1946 |
| 2,409,673 | Glascoff, Jr., et al. | Oct. 22, 1946 |
| 2,417,550 | Guyer | Mar. 18, 1947 |