Dec. 15, 1959 L. A. PSATY ET AL 2,917,215

ARTICLE OF MANUFACTURE

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FIG. 1.

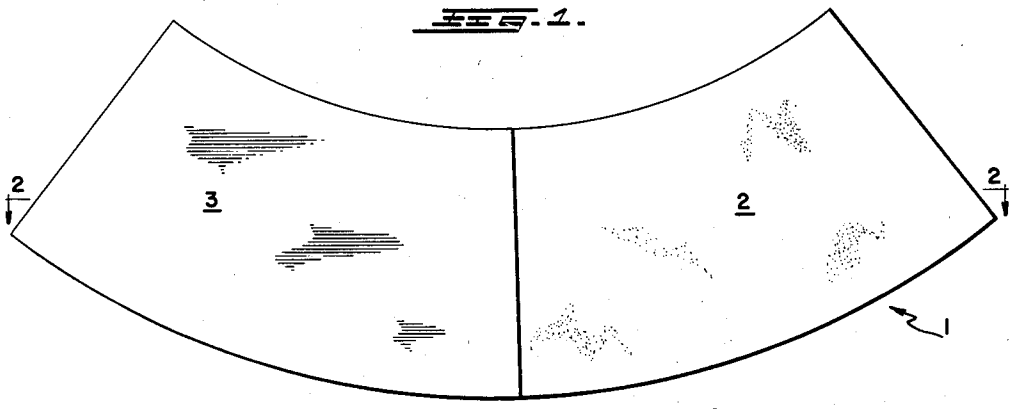




FIG. 2.

FIG. 3.

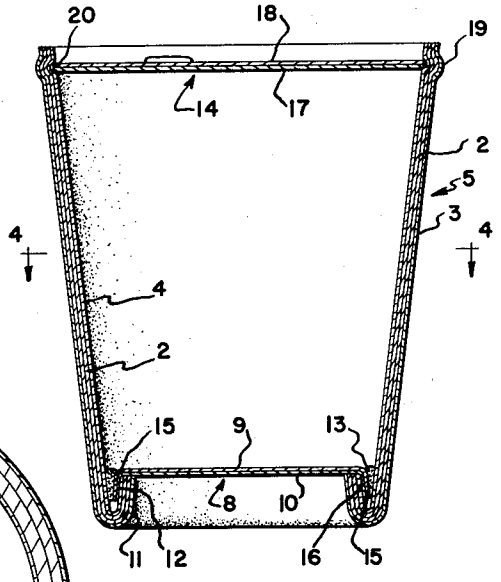
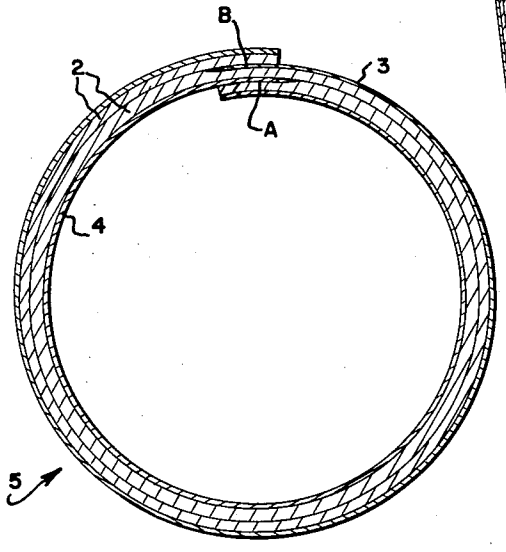


FIG. 4.



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ARTICLE OF MANUFACTURE

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5 Claims. (Cl. 229—1.5)

This invention relates to receptacles or containers. More particularly, it is concerned with providing a novel container or receptacle wherein the blank or strip of paperboard or paper constituting the container body has predetermined portions of each side or face covered with thin aluminum foil whereby when the blank or strip is rolled or otherwise formed into the receptacle body, the inner and outer surfaces of the body will be completely covered with foil.

In the instant container, predetermined or selected areas of the opposing sides of the paperboard or paper strip or blank are also so covered with aluminum foil that when the container blank is rolled or otherwise folded to form a container or receptacle body, the metallized or foil covered portions of the container body will overlap and be in direct surface contact with the paperboard rather than with other foil covered portions. Thus, there will be a foil to paper contact rather than foil to foil contact. The metallized and paperboard portions at their points of overlap are then adhesively secured together by the use of any well known inexpensive adhesive such as microcrystalline wax, vinyl resins, asphalts, etc. This eliminates the problems heretofore present in securing foil to foil. Heretofore foil could be joined to foil only by the use of expensive adhesives and even in those instances a satisfactory joining together of the two foil surfaces in a leakproof relationship could not always be obtained.

Accordingly, it is a primary object of this invention to provide a novel container body, the opposing sides of which are covered at predetermined and selected areas with aluminum foil in such a way that when the blank is rolled or otherwise formed into a container body, the opposing sides of the blank are so overlapped with other portions of the blank that there will always be surface contact between foil and paper rather than between foil and foil.

It is a further object of this invention to provide a container body formed from a blank of paper board or paper, the opposing sides of which are so covered in a novel fashion with foil at predetermined and selected areas, that when the container body is formed from the blank, the entire outer and inner surface portions of the blank are covered with foil.

It is a further object of this invention to provide a novel container comprised of a body portion formed from a paperboard blank, with different halves of the opposing sides of the blank being covered with aluminum foil, whereby when the blank is rolled or otherwise formed into a receptacle body, a minimum amount of foil material is used to form a complete foil outer and inner facing for the container body. The container further includes a bottom member secured to the container body in a leakproof relationship by means of a suitable caulking compound.

Other objects and advantages of the instant invention will become more apparent by reference to the following detailed description when taken in conjunction with the appended drawings, wherein:

Fig. 1 is a side elevational view of a body blank used in the production of the novel container of the instant invention;

Fig. 2 is a sectional view of the blank shown in Fig. 1;

Fig. 3 is a cross-sectional view of a container formed from the blank disclosed in Figs. 1 and 2 with bottom and top cover members secured thereto; and

Fig. 4 is a cross-sectional view of the formed container shown in Fig. 3 when taken along lines 4—4 thereof.

As indicated particularly in Figs. 1 and 2, the blank 1 from which the main portion of the container body is formed is generally comprised of an elongated strip of paperboard or paper 2 which may be of arcuate configuration. Approximately one-half of one side or face is covered with a facing 3 of thin, plain or embossed aluminum foil of a thickness ranging preferably between .0003" to .0010", while the opposing half of the opposite side or face of the paperboard sheet 2 is covered with a similar thin aluminum foil facing 4.

When the blank is rolled to form the generally tubular container body 5 as indicated in Figs. 3 and 4, the foil facing 4, for example, depending on how the blank is rolled, will form an entire metallized interior exposed wall or face, while the foil facing 3 will form an entire metallized outer exposed face or surface for the container body 5. At the same time, the paperboard sheet 2 will form an intermediate layer of double thickness for the container body 5.

Particular notice is taken of the two joints A and B which are formed at the points of overlap between the free edges of the covered blank 2 when they are drawn together. As indicated in Fig. 4 the overlap of the blank portions at joint A is such that the paperboard portion 2 of the blank 1 will be in contact with the inner foil facing 4, while at the joint B the paperboard sheet 2 is in contact with the exterior foil facing 3. Any inexpensive adhesive, such as microcrystalline wax, vinyl resins, asphalts, etc. may be employed to secure the paperboard portion 2 of the container body 5 to the foil facings 3 and 4 at the joints or seams A, B in a satisfactory leakproof relationship. These joints may also be offset with respect to each other to further minimize leakage and in any event, a layer of paperboard will always advantageously separate the joints because of the manner in which the body is formed.

In order to provide for a satisfactory anchorage of a bottom closure or member 8 to the lower extremity of the container body 5, the lower extremity of the container body 5 is turned or curled inwardly and upwardly to form a flange member 11. Bottom member 8 may be of laminated construction comprising an interior foil facing 9 and a paperboard base 10. Flange member 11 may also be advantageously spaced a small distance from the main portion of the container body 5 so as to form a recess 12. The bottom member 8 is provided with a downturned lip portion 15 on its peripheral edge which is insertable within the recess 12 located between the marginal flange 11 and the container body 5. After insertion of the lip portion 15 in the recess 12 the bottom member 8 and the flange 11 may be crimpd together. The inner surface 16 of the lip 15 may also be covered with one of the aforementioned adhesives to further secure the bottom member 8 to the container body.

In a further advantageous embodiment of the invention it is contemplated that a suitable moisture resistant caulking material 13 be employed for sealing the bottom member 8 to the lower extremity of the container body 5 in a leakproof relationship so that the contents of

the container will not leak through or penetrate the joint so formed by the flange 11 and lip 15. One such suitable caulking compound or material which may be mentioned is a synthetic thermoplastic resinous material known as "Polybond G 1115" made by Polymer Industries. In a further advantageous embodiment of the invention and in order to provide a sufficient anchorage for a top closure seal or disc 14 of laminated construction including an interior foil facing 17 and an outer paperboard element 18, the upper edge portion of the container body 5 is preferably rolled or folded outwardly to form a bulge or flange 19 which provides an interior retaining groove or channel 20. This grooves cooperates with the peripheral edge of the top seal or disc 14 so as to lock the disc in a closed position.

Since the container as described is provided with a protective lining of thin aluminum foil in substantially all of its parts, it may be advantageously employed as a container for frozen, processed and carry-out foods. The insulating values of the aluminum foil are used to great advantage in that they will keep the foods either hot or cold. The foil facing on the outside of the container body also enhances its insulating properties. In addition, it is also contemplated that the above described container either with or without the top may be used as a cup for hot liquids. The caulking compound employed as well as the particular overlapping joints used in forming the container body walls at the time the container body is formed will also make it substantially leakproof.

It will be obvious that various changes may be made in the container construction as disclosed without departing from the spirit and scope thereof as defined by the appended claims, wherein what is claimed is:

1. In a container construction of the type described, the combination of a container body, said container body being formed from a paperboard blank having one-half of one face completely covered with a laminate of thin aluminum foil and the opposite half of the other face also completely covered with a similar laminate of thin aluminum foil, the proportions of said laminated foil covered areas on the blank being so determined and the blank so convoluted into a generally tubular container body as to provide a complete surface of aluminum foil on the inner and outer exposed faces of the container body, the free edges of said blank also being so positioned with respect to each other and other portions of the blank during the formation of the container body that the foil covered areas overlap and are in direct surface contact with uncovered paperboard areas of the blank at the seams formed on the convoluted body, means adhesively securing the overlapped foil covered and uncovered paperboard areas of the container body blank together at the seams on the body, one end of the generally tubular body being curled to define an inwardly and upwardly directed marginal flange located at the lower extremity of the container body and spaced therefrom so as to form a recess therebetween, a bottom closure for the said container body at least one surface of which is provided with an aluminum foil facing and comprising a suitably configurated main body portion and a downwardly directed peripheral lip, said lip being inserted in the recess defined by the lower end of the container body and the inwardly and upwardly directed flange thereon, and means including a moisture-resistant caulking material securing said lip on the bottom closure within said recess in a leakproof relationship with said container body.

2. The combination defined in claim 1 wherein said foil laminate is between .0003" to .0010" in thickness.

3. The combination recited in claim 1, including a top closure disc inserted within and secured to the upper extremity of said container body.

4. The combination as set forth in claim 1, wherein the different overlapped portions of the blank are offset with respect to each other.

5. The combination as set forth in claim 1, wherein the foil laminate material is embossed aluminum foil.

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