Nov. 28, 1939. A. M. BOOTHBY ET AL 2,181,545

CONTAINER AND CLOSURE THEREFOR

Filed Oct. 23, 1936

Fig. 1.

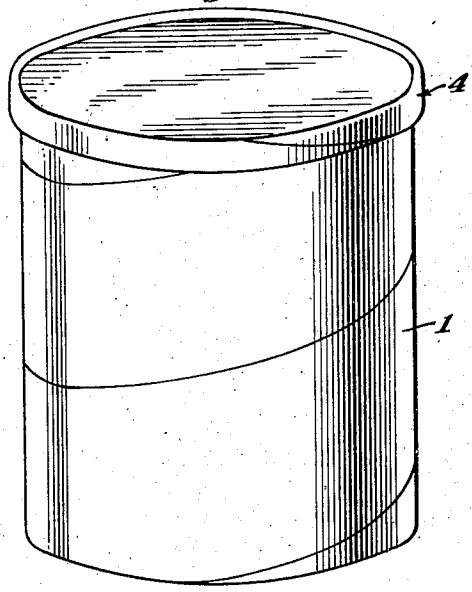



Fig. 3.

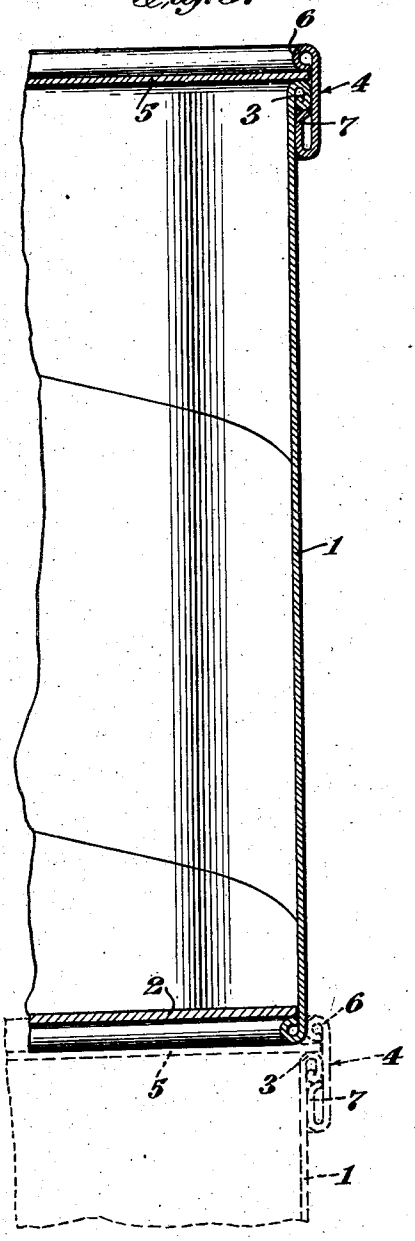



Fig. 2.

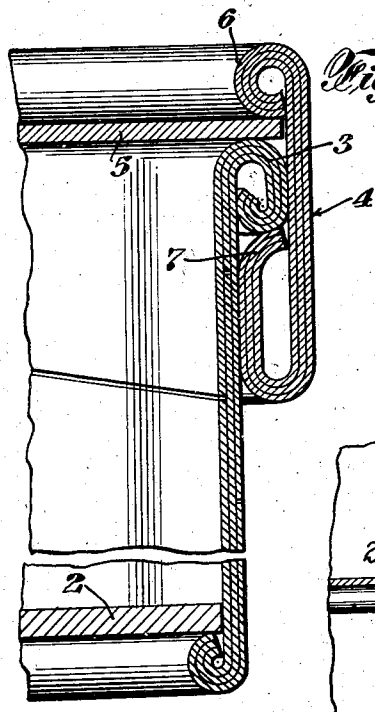
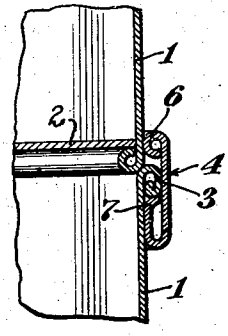



Fig. 4.




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# UNITED STATES PATENT OFFICE

2,181,545

## CONTAINER AND CLOSURE THEREFOR

Albion M. Boothby, Newton, and Marshall E. Gazette, Boston, Mass., assignors, by mesne assignments, to President and Directors of The Manhattan Company, New York, N. Y., a corporation of New York, as trustee for Gibson Patent Containers, Ltd.

Application October 23, 1936, Serial No. 107,120

7 Claims. (Cl. 229—5.5)

This invention relates to paper containers and a closure therefor. The invention is particularly useful in containers of relatively large size adapted for storage and shipment of bulk goods, and especially where the goods are to be dispensed from the containers. It is to be understood that the term "paper" is intended to cover paper or the like fibrous sheet materials or other suitable sheet materials readily adapting themselves to the type of construction herein disclosed.

The class of device to which the invention is particularly adapted finds a wide use as a means for packing and shipping ice cream and other frozen edibles; the ice cream customarily being placed in the containers in fluid condition and the containers then being stacked in a freezing room and from there shipped to dealers. One popular size for such containers is 2½ gallons. Preferably, where the size is 2½ gallons or smaller, the dealers stack two or more containers one upon the other in refrigerating cabinets and dispense the ice cream from the containers as the demand arises. It has been found that in containers of this class, the closure heretofore employed become displaced in handling the filled containers for storage and shipment purposes, and that in stacking the filled containers in storage, shipment and dispensing use the superposed containers were not as stable as desired. Furthermore, when in dispensing use, as in a dealer's refrigerating cabinet, with the containers open for access with a serving dipper, the prior devices did not permit secure stacking.

An object of this invention is to provide an article possessing the advantages and free from the objections heretofore referred to; and at the same time providing an article which might be economically and commercially manufactured.

This invention consists in the novel features, arrangements and combination of parts embodied by way of example in the article hereinafter described as illustrating the preferred form of the invention, and the invention will be more particularly pointed out in the appended claims.

Further objects, features and advantages of the invention will appear from the following specification and claims taken in connection with the accompanying drawing, in which

Fig. 1 is a perspective view of a container and closure therefor,

Fig. 2 is a segmental longitudinal section showing in further particularity the structural details,

Fig. 3 is a somewhat similar view showing the relationship of a series of containers when in stacked condition while the containers remain unopened, and

Fig. 4 is a similar view illustrating the relationship as in Fig. 3, but with the containers opened.

The container is formed with a multi-ply spirally wound cylindrical side wall 1, in the lower end of which is suitably supported the bottom 2. The upper edge of the body 1 is turned over to provide a bead 3 which is preferably in the nature of a relatively loose rolled section and which preferably provides a certain degree of resiliency in the bead. While the invention contemplates container bodies of various forms, it is more especially applicable where the bodies are in collapsible form.

The closure means comprises a side wall element 4 and a cover element 5. The side wall 4 (Fig. 2) is in the form of a cylindrical band which may be made in any suitable manner but which is shown as being formed of multi-ply spirally wound paper stock, whose upper edge is turned inwardly to provide a bead 6 which is preferably in the form of a rolled edge and whose lower edge is turned inwardly to provide a bead 7 preferably in the form of a relatively loose rolled edge. The said beads 6 and 7 are spaced apart in an axial direction a distance substantially equal to the thickness of the cover member 5 plus the vertical thickness of the bead 3 so as to provide a substantially tight seal between cover 5 and bead 3, as is clearly indicated in Fig. 2; and the cover member 5, which preferably is in the form of a disc of heavy cardboard or other suitable material, is held within the side wall 4 by and between the beads 6 and 7. The lower bead 7 provides a certain degree of resiliency so that although its internal diameter is substantially less than the external diameter of the bead 3, nevertheless there is sufficient resiliency in the aggregate between the beads 3 and 7 to permit the bead 7 to be snapped over the bead 3, and when this has been done the disposition and formation of the parts are such that the disc 5 is held between the beads 6 and 3 by means of the locking action of the bead 7 beneath the bead 3. The internal diameter of the member 4 intermediate the beads 6 and 7 is substantially equal to the external diameter of the bead 3, and the internal diameters of the beads 6 and 7 are substantially equal to the external diameter of the container body 1; these dimensions being such that the band 4 snugly engages the bead 3 and the bead 7 snugly engages the exterior of the container body 1, in addition to be-

ing positioned underneath the bead 3 as previously described.

The construction of the container closure and the relationship of the disc cover 5 and band 4 provide certain additional advantages. For example, with the disc freely disposed between the beads 6 and 7 the closure means may be inserted in the reverse direction to that shown in Fig. 2, whereby the bead 6 will be positioned beneath the bead 3 and the bead 7 will be positioned above the bead 3 with the disc 5 held between the beads 7 and 3 instead of between 6 and 3 as illustrated in Fig. 2; thus permitting disc 5 to be put in with either face upwardly and hence permitting a reversal to disclose a different type of face or a face having different characteristics as indicia, instructions, etc. In either of the positions of the closure means in assembled relationship with the container it is to be particularly noted that in stacking the containers one upon the other when the closure means are in position there is provided means for holding the stacked containers in cooperative relationship as will be clearly illustrated by referring to Fig. 3, from which it will be seen that the uppermost bead (in the illustration the bead 6) is adapted for interfitting engagement so as to receive the lower end of a superimposed container. In this condition the stacked containers are very securely and firmly held in the desired relationship.

It is particularly within the contemplation of the invention that when the containers are in use, such as in dispensing ice cream or other contents therefrom, the cover member or disc 5 be removed without disturbing the band 4, thereby leaving the band 4 with its two marginal beads 6 and 7 in position as a protection for the upper edge of the container when in dispensing use, such for example as when scoops are used to remove ice cream therefrom; and in this condition the opened containers may yet be stacked one upon the other, such as in the dealer's refrigerating cabinet, as will be clearly illustrated in Fig. 4. This is particularly desirable because containers of this character may be used in multiple (as where several flavors of ice cream are packed in respectively separate containers) within a single cell or hole of a dealer's refrigerating unit and remain in stacked but open condition, so that ready access may be had to any given container with relatively little trouble.

It will be understood from the foregoing that where the inventive embodiment comprises a container wall 1 which is collapsible (such for example as that disclosed in our previous Patent No. 2,037,675), the cover band 4, being reinforced as it is by the beads such as 6 and 7, serves to materially reinforce the collapsible side wall 1 and hold it in substantially cylindrical condition at its upper end even after the cover 5 has been removed and regardless of the degree to which the contents have been removed.

Having thus described our invention with particularity with reference to its preferred form, it will be obvious to those skilled in the art, after understanding our invention, that other changes and modifications may be made therein without departing from the spirit and scope of our invention, and we aim in the appended claims to cover such changes and modifications as are within the scope of the invention.

What we claim is:

1. A container closure comprising a circular peripheral closure band formed of a plurality of plies of spiral wound paperboard material provided at each respectively opposite edge with an inwardly extending peripherally continuous resilient bead and a closure end positioned between said beads, the inner edges of said beads in an axial direction being spaced apart a distance substantially equal to the aggregate thickness in an axial direction of said closure end and of an outwardly extending bead on the container for which said closure is adapted.

2. A closure for a cylindrical container comprising a cylindrical peripheral closure band formed of a plurality of plies of spiral wound paperboard material provided at each respectively opposite edge with an inwardly extending peripherally continuous resilient bead and a closure end positioned between said beads, the inner edges of said beads in an axial direction being spaced apart a distance substantially equal to the aggregate thickness in an axial direction of said closure end and of an outwardly extending bead on the container for which said closure is adapted, the internal diameters of said beads being normally substantially less than the external diameter of said outwardly extending container bead.

3. The combination of a cylindrical container formed of paperboard material, said container having an outwardly extending bead at its upper extremity, and a closure comprising a peripheral band formed of a plurality of plies of spiral wound paperboard material, said plural-ply band having an upper inwardly extending bead and a lower inwardly extending peripherally continuous resilient bead and a disc positioned between said beads within said band, the dimensions and cooperative relationship of said container bead and said closure band beads being such that when said closure is in operative position said disc is positioned between the upper edge of said container and the upper bead on said closure band with the lower bead of said closure band underlying said container bead.

4. The combination of a cylindrical container formed of paperboard material, said container having an outwardly extending bead at its upper extremity, and a closure comprising a peripheral band formed of a plurality of plies of paperboard material, said plural-ply band having an upper inwardly extending bead and a lower inwardly extending bead and a disc positioned between said beads within said band, the dimensions and cooperative relationship of the parts being such that when said closure is in operative position said disc is held between the upper edge of said container and the upper bead on said closure band with the lower bead of said closure band locked beneath said container bead, said three beads cooperating to resiliently clamp said disc in sealing engagement with the upper extremity of the container.

5. The combination of a cylindrical container of substantially uniform interior diameter formed of a plurality of plies of spiral wound paperboard material, said container having an outwardly extending bead at its upper extremity, and a closure comprising a peripheral band formed of a plurality of plies of spiral wound paperboard material, said plural-ply band having an upper inwardly extending bead and a lower inwardly extending bead, and a disc positioned between said beads within said band, the dimensions and cooperative relationship of the parts being such that when said closure is in operative position said disc is positioned between the upper edge of said container and the upper bead on said closure

band with the lower bead of said closure band underlying said container bead and the upper bead on said closure band being adapted to interfit exteriorly of the lower end of another of said containers for stacking purposes.

6. The combination of a cylindrical container formed of paperboard material, said container having an outwardly extending rolled edge at its upper extremity, and a closure comprising a peripheral multi-ply paperboard band formed of a plurality of plies of spiral wound paperboard material, said plural-ply band having an upper inwardly extending rolled edge and a lower inwardly extending rolled edge and a disc positioned between said rolled edges within said band, the dimensions and cooperative relationship of said parts being such that the rolled edges of said band each have a normal internal diameter substantially less than the normal external diameter of the rolled edge of said container, the rolled edge of said container and one of the rolled edges of said band providing an aggregate resiliency permitting the former to be forced over the latter and when said closure is in operative position, said disc being positioned between the upper edge of said container and the upper rolled edge on said closure band with the lower rolled edge of said closure band underlying the rolled edge of said container.

7. The combination of a cylindrical container formed of a plurality of plies of spiral wound paperboard material, said container having an outwardly extending bead at its upper extremity, and a closure comprising a peripheral band formed of a plurality of plies of spiral wound paperboard material, said plural-ply band having an upper inwardly extending bead and a lower inwardly extending bead and a disc positioned between said beads within said band, the dimensions and cooperative relationship of the parts being such that when said closure is in operative position said disc is held between the upper edge of said container and the upper bead on said closure band with the lower bead of said closure band underlying said container bead and the upper bead on said closure band being adapted to snugly interfit exteriorly of the lower end of another of said containers for holding a plurality of said containers in superimposed interlocked condition after the closure disc of the relatively lower container has been removed.

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