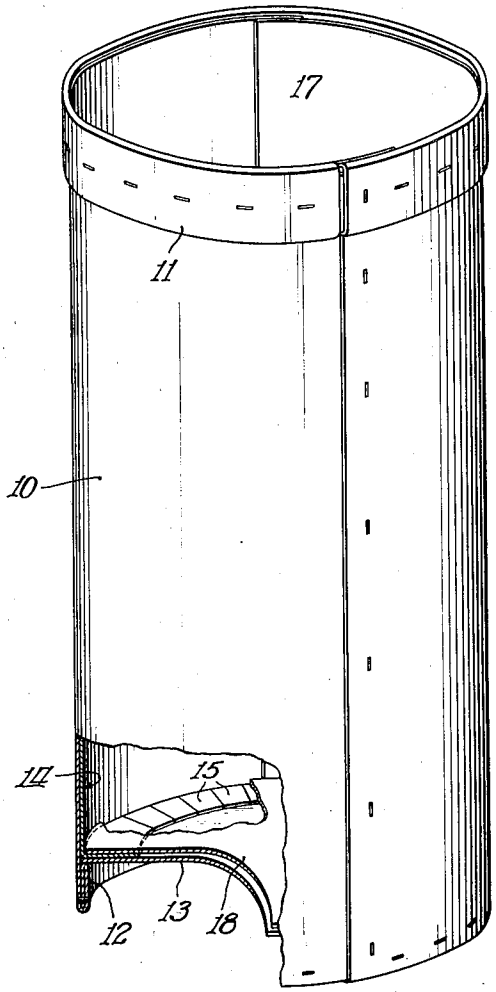
Sept. 5, 1933. D. B. POTTER 1,925,674

CONTAINER

Filed April 24, 1931

Fig. 1



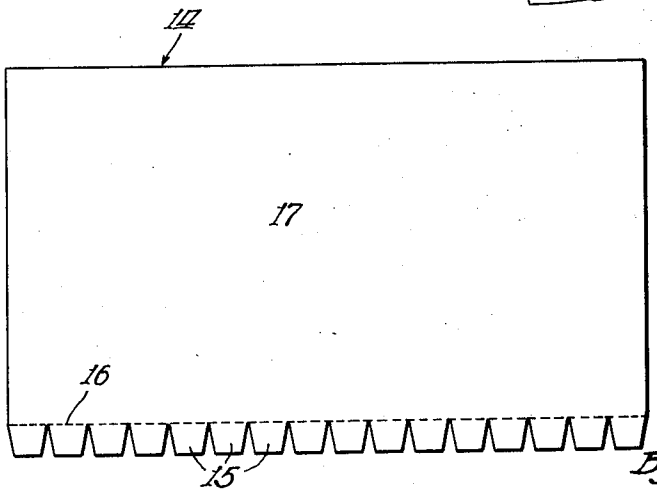


Fig. 2

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UNITED STATES PATENT OFFICE

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CONTAINER

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Application April 24, 1931. Serial No. 532,404

3 Claims. (Cl. 229—5.5)

The present invention relates to collapsible cylindrical containers and more particularly to containers of this type formed from paper or fibre board.

One object of the present invention is to provide a collapsible fibre or paper board container combined with a liner which can be quickly and economically manufactured from a blank of sheet material and which is adapted to be loosely inserted within the container and be held in place without the use of glue or similar securing means.

Another object is to provide a sanitary liner of the class described, particularly adapted for use within cylindrical collapsible containers used for containing food stuffs such as ice cream and other solidified liquids, which can be easily and quickly placed in operative condition within a container and effectively prevent leakage of the contents.

A further object is to provide a liner of the class described which, in addition to serving as a liner, also serves to materially strengthen the entire container.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawing:

Fig. 1 is a perspective view of a container, with certain parts broken away for the sake of clearness, showing the liner of the present invention in place therein; and

Fig. 2 is a plan view of the blank from which the liner is formed.

Similar reference numerals throughout the several views indicate the same parts.

The present invention provides a light, durable container of simple and inexpensive form which may be stored or shipped in a collapsed or knock-down condition. The invention as disclosed comprises an outer collapsible body member and a bottom closing disc therefor, combined with a simple and efficient form of liner fitting within the outer member and adapted to be held in place by a second disc which serves as a bottom for the liner.

Referring more particularly to the drawing, the outer container, in the present instance, comprises a tubular body member 10, preferably formed of medium weight flexible fibre or paper board, provided with an outer collar member 11 at the top thereof and an inner collar member 12 at the bottom thereof. A disc member 13 is disposed within the body portion 10 and rests upon the upper shoulder of the inner collar 12 and tends to maintain the body member in extended position. The body member 10 is preferably scored along two opposite vertical lines so that when the disc 13 is removed the body portion may be collapsed for shipment or storage. A more particular description of the construction of the outer container may be found in the application of Richard J. Cody, Serial No. 505,781, filed December 31, 1930, and assigned to the assignor of the present invention.

The liner, designated generally at 14, is formed from a blank of sheet material, preferably of relatively stiff and highly sized fibre or paper board, and is provided with a plurality of tapering flanges 15, 15 along one side edge thereof. A score line 16 is preferably impressed on the inner face of the blank 14 and separates the flanges 15 from the main body blank 17, as shown in Fig. 2. The height of the main body blank 17 is preferably the same as that of the container within which it is to be inserted.

In placing the liner 14 within the outer container, the liner is rolled into the form of a cylinder smaller than the container 10 and is inserted within such container so that the flanges 15, previously bent slightly inward, contact the bottom disc 13. The liner 14 is then released and it at once expands and conforms to the contour of the container. By pressing downward on the upper edge of the liner the flanges 15 are bent inward along the score line 16 until they lie at right angles to the portion 17 and in juxtaposition with the upper face of the disc 13. The flanges are preferably tapered in form so that when in place within the container they lie with their converging lateral edges in abutting relation with each other, as shown at Fig. 1 of the drawing. After the liner is in place a snugly fitting disc 18 is inserted within the container so that it lies in juxtaposition with the upper surfaces of the flanges 15. The disc 18, in addition to serving as a reinforcement for the bottom of the container also maintains the liner 14 positively in place.

It has been found that the container of the present invention has a maximum efficiency when the stock forming the outer container and the liner are approximately equal in caliper and stiffness. With such stock the liner serves to double the strength of the container and has a positive influence upon the outer container in maintaining the same in cylindrical form.

After the container has been assembled and filled, a cover, not shown, is then placed in posi-

tion on the top thereof and the container is ready for storage or shipment.

From the foregoing it is apparent that the present invention provides a collapsible, leak-proof container which may be stored or shipped in a knockdown or collapsed condition and afterward be quickly and easily assembled by hand without the utilization of staples, glue, tape or any other equivalent securing means. The co-operation of the liner and inner disc with the outer container serves to provide an extremely rigid and durable construction capable of withstanding considerable rough usage during loading and while in transit, with the result that the packed container will reach its destination without springing leaks or losing its shape. The present construction finds particular applicability in the packing of ice cream where it replaces the metal cans now so extensively used. The assembled construction, being leak-proof, effectively prevents leakage of the cream when in a soft condition before freezing.

While the present description sets forth a preferred embodiment of the invention, numerous changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A collapsible cylindrical container formed from a blank of sheet material, a disc removably supported within one end of the container and forming a bottom therefor, an inner liner member fitting loosely within the container and having its edges loosely slidable with reference to each other and resting on said disc, flanges on the end of the liner, said flanges abutting the disc and lying at right angles to the liner, and an additional disc fitted snugly within the container and in abutting relation with said flanges whereby the liner will be firmly held in place without the use of securing means.

2. A collapsible container comprising an outer wall adapted to be expanded to cylindrical form and having oppositely disposed vertical lines dividing the container into two equal portions to permit collapsing, an inturned flange formed integral with the bottom of the outer wall to provide an inner shoulder, a disc supported upon the inner shoulder to hold the outer wall in expanded condition, an inner liner separate from the outer wall and fitting within the same and having its edges loosely slidable with reference to each other, flanges on the end of said liner, said flanges abutting the disc along their entire length and lying at right angles to the liner, an additional disc adapted to snugly contact the inner face of the liner and lie in juxtaposition with the upper face of said flanges to hold the liner securely in place.

3. A collapsible container formed from a sheet of relatively stiff fibre or paper board, a liner for said container, said liner being formed from a sheet of fibre or paper board of approximately the same stiffness as that from which the container is formed, said liner adapted to fit loosely within the container with two opposite edges thereof in unsecured overlapping relation with each other, tapering flanges on one edge of the liner to form an inwardly turned rim for the bottom of the liner, said inwardly turned rim lying flat in abutting relation with the bottom of the container, and a bottom piece for the liner, said bottom piece conforming to the contour of the liner when within the container and lying in juxtaposition with the rim, whereby the liner is securely held in place.

DALE B. POTTER.