Jan. 3, 1939. G. J. BACHMEYER 2,142,101

CONTAINER

Filed March 30, 1936 2 Sheets-Sheet 1

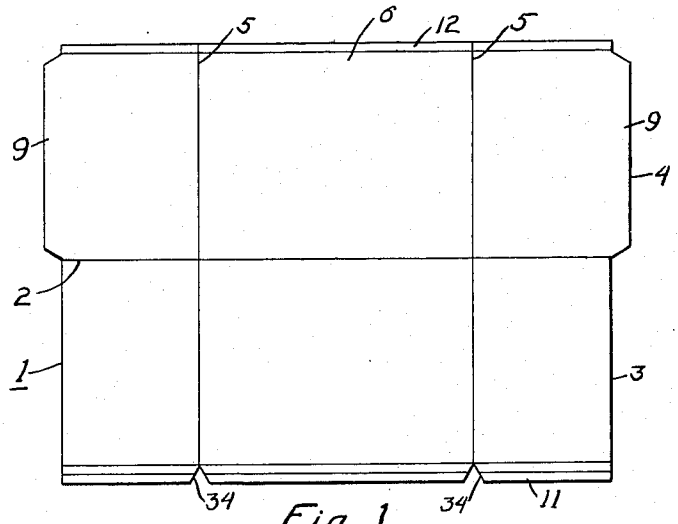


Fig. 1.

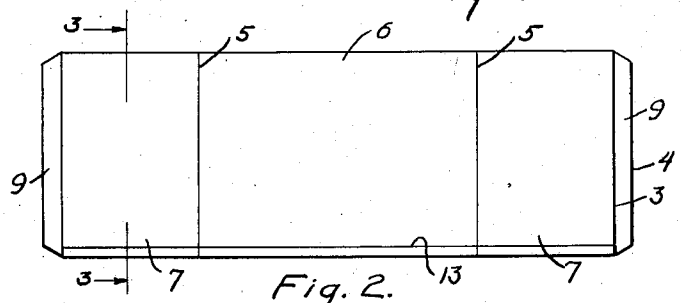


Fig. 2.

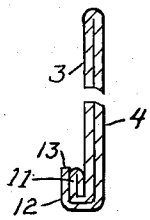


Fig. 3.

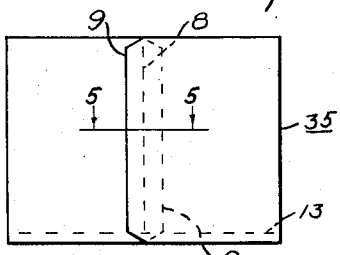


Fig. 4.

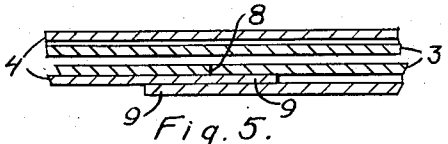


Fig. 5.

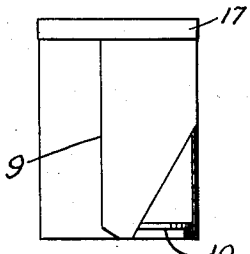


Fig. 6.

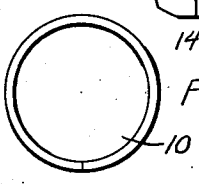


Fig. 7.

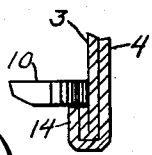


Fig. 8.

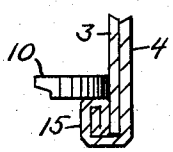


Fig. 9.

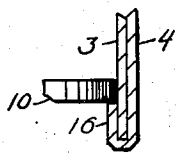


Fig. 10.

INVENTOR:
George J. Bachmeyer,
BY
Barnwell R. King,
HIS ATTORNEY.

Jan. 3, 1939. G. J. BACHMEYER 2,142,101

CONTAINER

Filed March 30, 1936 2 Sheets-Sheet 2

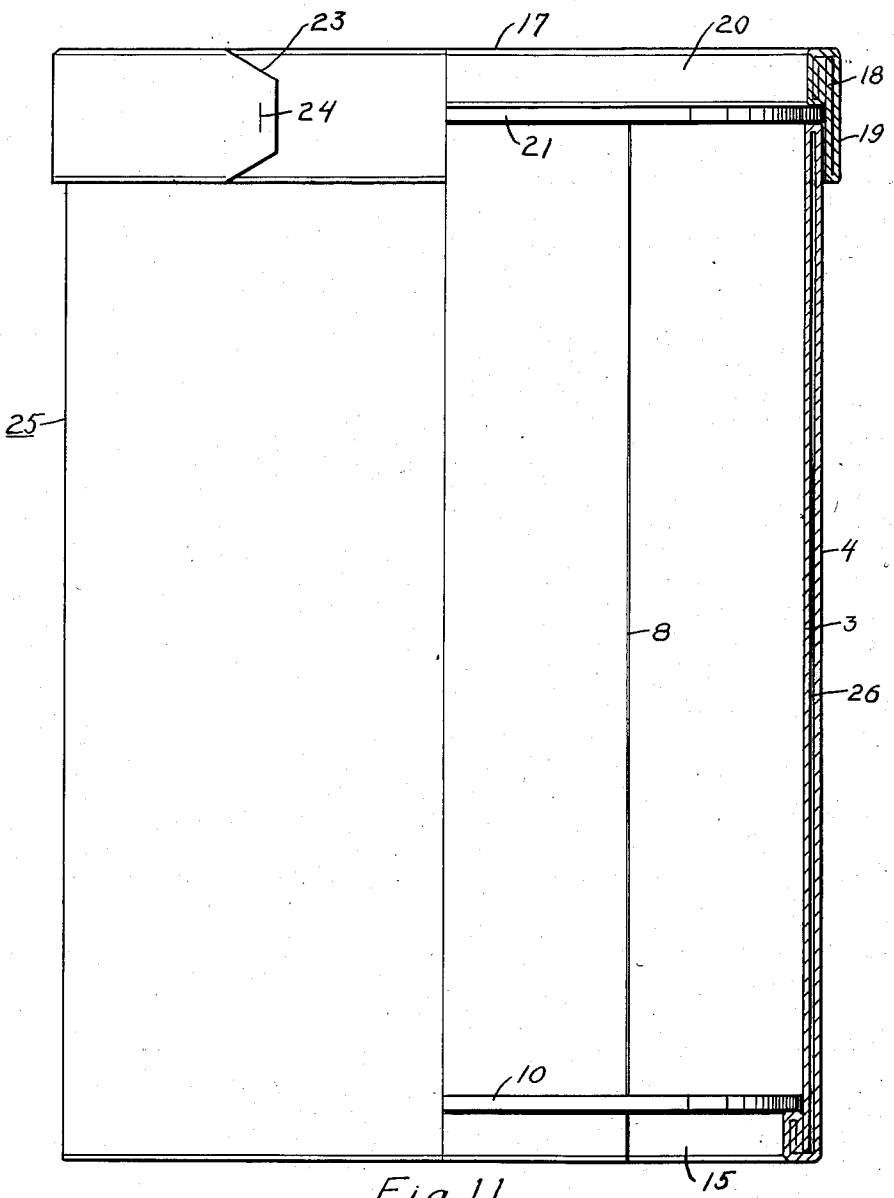


Fig. 11.

INVENTOR:
George J. Bachmeyer,
BY
Barnwell R. King,
HIS ATTORNEY.

Patented Jan. 3, 1939 2,142,101

UNITED STATES PATENT OFFICE

2,142,101

CONTAINER

George J. Bachmeyer, Kalamazoo, Mich., assignor, by mesne assignments, to Walton D. Lynch, New York, N. Y.

Application March 30, 1936, Serial No. 71,644

7 Claims. (Cl. 229—4.5)

This invention relates to containers, and more particularly to collapsible cylindrical containers made of paper board or the like.

The main objects of my invention are:

First, to provide a collapsible cylindrical container that may be set-up manually without the aid of tools, and which is free of metal parts, such as hoops and clamps.

Second, to provide a container of the foregoing character which is capable of holding liquids and semi-liquids even in the larger sizes, such as five and ten gallon pails.

Third, to provide a container which is specially well adapted for ice cream and the like, the walls of the container being scientifically designed to prevent the transmission of heat; and

Fourth, to provide a paper container which is simple and economical in construction, easy and inexpensive to manufacture and ship, and which is well adapted for the purpose intended.

Referring to the drawings:

Fig. 1 is a plan view of a blank, cut and scored to form the body of my container.

Fig. 2 is a plan view of the blank folded on itself to provide the inner and outer walls of the container body.

Fig. 3 is an enlarged fragmentary section of the folded blank taken on a line corresponding to line 3—3 of Fig. 2.

Fig. 4 is a plan view of the container body knocked down for shipment.

Fig. 5 is an enlarged fragmentary section of the body taken on a line corresponding to line 5—5 of Fig. 4.

Fig. 6 is a view in side elevation of the set-up container, a portion being broken away to show the construction in section.

Fig. 7 is a bottom plan view of the container.

Figs. 8, 9 and 10 are fragmentary sectional views of various modifications of the flange folds connecting the free edges of the walls and providing an internal annular seat for the end closure disc.

Fig. 11 is a view partially in side elevation and partly in section of my container.

The container body 35 is formed from a rectangular paper blank 1 and is divided by a transverse crease-score 2 into two substantially equal parts so that when the sheet is folded said parts overlap to provide an inner wall 3 and an outer wall 4. The blank 1 is also provided with vertical crease-scores 5, 5 dividing the walls into a central panel 6 and outer panels 7, the outer panels being of substantially equal width and having a combined width equal to the width of the central panel. This permits the outer panels to be folded over the central panel so that the inner edges of the inner wall 3 form a vertical butt-joint 8.

The opposite edges of the outer wall have flaps 9, 9 which are overlapped and secured together to form a lap-joint adjacent the butt-joint 8. The butt-joint 8 of the inner wall provides a smooth internal surface for the reception of an end closure disc 10 when the container is set-up. The lap-joint reinforces the butt-joint and provides convenient means for holding the parts together.

The free edge of the inner wall 3 is provided with a flange 11 which is folded inwardly on itself and cemented in place, a flange 12 on the free edge of the outer wall 4 being turned under and within the lower edge of the inner wall, and secured to the flange 11, as shown in Fig. 3. The free edges of the inner and outer walls are thus secured together, and a seat 13 is formed for supporting the bottom closure member 10. The folded flanges 11 and 12 further provide a reinforced rim at the bottom of the container body, a very valuable feature, especially for large cans. The notches 34, 34 formed in the flange 11 in line with the respective crease scores 5 facilitate the flat collapse of the container body 35 on the crease-scores 5.

In Fig. 8 I show the inner and outer walls each provided with a flange 14 consisting of a single thickness of stock.

In Fig. 9 the inner wall 3 has no flange, the flange 15 of the outer wall being rolled to provide three folds or thicknesses of material.

In Fig. 10 the inner wall 3 has no flange, while the outer wall 4 has a flange 16 consisting of a single thickness.

The steps of cutting, creasing and scoring the blank 1 to form the knocked-down body shown in Fig. 4, are preferably done in the factory by a machine, the collapsed bodies and the end closures being shipped separately. The containers are set-up by merely inserting the end closures within the bodies, each container being provided with a cover 17 which acts to hold the upper end of the body in shape. While the covers may be of any type desired, I prefer to use a cover constructed in the same manner as my container.

As shown by Fig. 11 the cover 17 comprises an inner wall 18 and an outer wall 19, the latter being provided with an inturned or rolled flange 20 consisting of several layers which are secured together and to the free edge of the inner wall by a suitable adhesive. A closure disc 21 is fric-

tionally fitted within the inner wall 18 in engagement with the flange 20. The flap 23 of the outer wall 19 is secured to the body of the cover by a staple 24. The cover 17 is adapted to telescope over the upper part of the container 25, as shown.

The closure disc 10 is frictionally engaged by the inner wall 3 to such an extent that a water tight joint is formed, but if desired the interior of the container may be further sealed to prevent leakage.

It will be appreciated by those skilled in the art that I provide a container of the character set forth which is strong and serviceable although made entirely of paper, there being no need for metal rims, clamps and the like. The container may be shipped knocked-down, and may be easily set-up by hand without the aid of any tool whatsoever. The set-up container has heat insulated walls, and is ideal for liquids and semi-liquids, as well as solids.

What I claim is:

1. A paper container comprising a sheet of fiber board folded on itself to form a container body having inner and outer walls, the opposite side edges of the inner wall being brought together to provide a butt-joint, the outer wall having flaps at its opposite side edges overlapped to provide a lap-joint, means securing said flaps together, the inner and outer walls having diametrically opposed crease-scores whereby to permit collapse of the walls for shipment, an end closure fitting within the inner wall and holding the body in proper shape near the bottom of the container, the lower edge of the outer wall having a flange turned under and within the lower edge of the inner wall and secured thereto and constituting a seat for said end closure, and a cover acting to hold the walls in proper shape at the top of the container.

2. The combination of a container body formed from a sheet of paper material divided by a transverse crease-score into two substantially equal parts, the sheet being folded on said crease-score to bring said parts into overlapping relation to provide an inner and an outer wall, said inner and outer walls being divided by vertical crease-scores into three panels, comprising a central panel and outer panels of substantially equal width and having a combined width equal to the width of the central panel, the outer panels being folded over said central panel so that the adjacent side edges of the inner wall form a vertical butt-joint, the adjacent side edges of the outer wall having flaps overlapped and secured together to form a lap-joint, the outer wall having a flange at its free end edge folded over and within the free end edge of the inner wall and secured thereto, and an end closure member fitted within said inner wall and engaging said flange.

3. A container body comprising a sheet of fiber board folded on itself to form inner and outer walls, the opposite side edges of the inner wall being brought together to provide a butt-joint, the outer wall having flaps at its opposite side edges overlapped to provide a lap-joint, means securing said flaps together, the inner and outer walls having diametrically opposed crease-scores whereby to collapse the walls for shipment, and the lower edge of the outer wall having a flange turned under and within and secured to the lower edge of the inner wall.

4. A collapsible container body comprising a single blank cut, scored, and folded to provide an inner wall and an outer wall disposed in overlapping relation to form an integral connecting rim at one end of the body, the outer wall having a flange folded over the other end of the inner wall and secured thereto, the inner wall having a butt-joint, and the outer wall having a lap-joint.

5. A paper container comprising a substantially rectangular blank cut, scored, and folded to provide a body consisting of a cylindrical inner wall having a vertical butt-joint, a cylindrical outer wall having a vertical lap-joint adjacent said butt-joint, the inner and outer walls being integrally connected at the upper edge of the container and providing a transversely rounded rim, and the outer wall having a bottom flange extending under and within the lower edge of the inner wall and providing a strong bottom rim and an internal annular support, and a round disc-like bottom member fitting within said inner wall and resting on said support.

6. A container body comprising a substantially rectangular blank cut, scored and folded to provide a cylindrical inner wall having a vertical butt-joint, a cylindrical outer wall overlapping said inner wall and having a vertical lap-joint providing an area of double thickness adjacent said butt-joint, the inner and outer walls being integral at the upper rim of the container, the outer wall having an upturned bottom flange providing a strong internal annular supporting rim spaced from the lower edge of the container.

7. A container body comprising overlapping integral inner and outer walls, the inner wall having a butt-joint, and the outer wall having a lap-joint overlapping said butt-joint.

GEORGE J. BACHMEYER.