

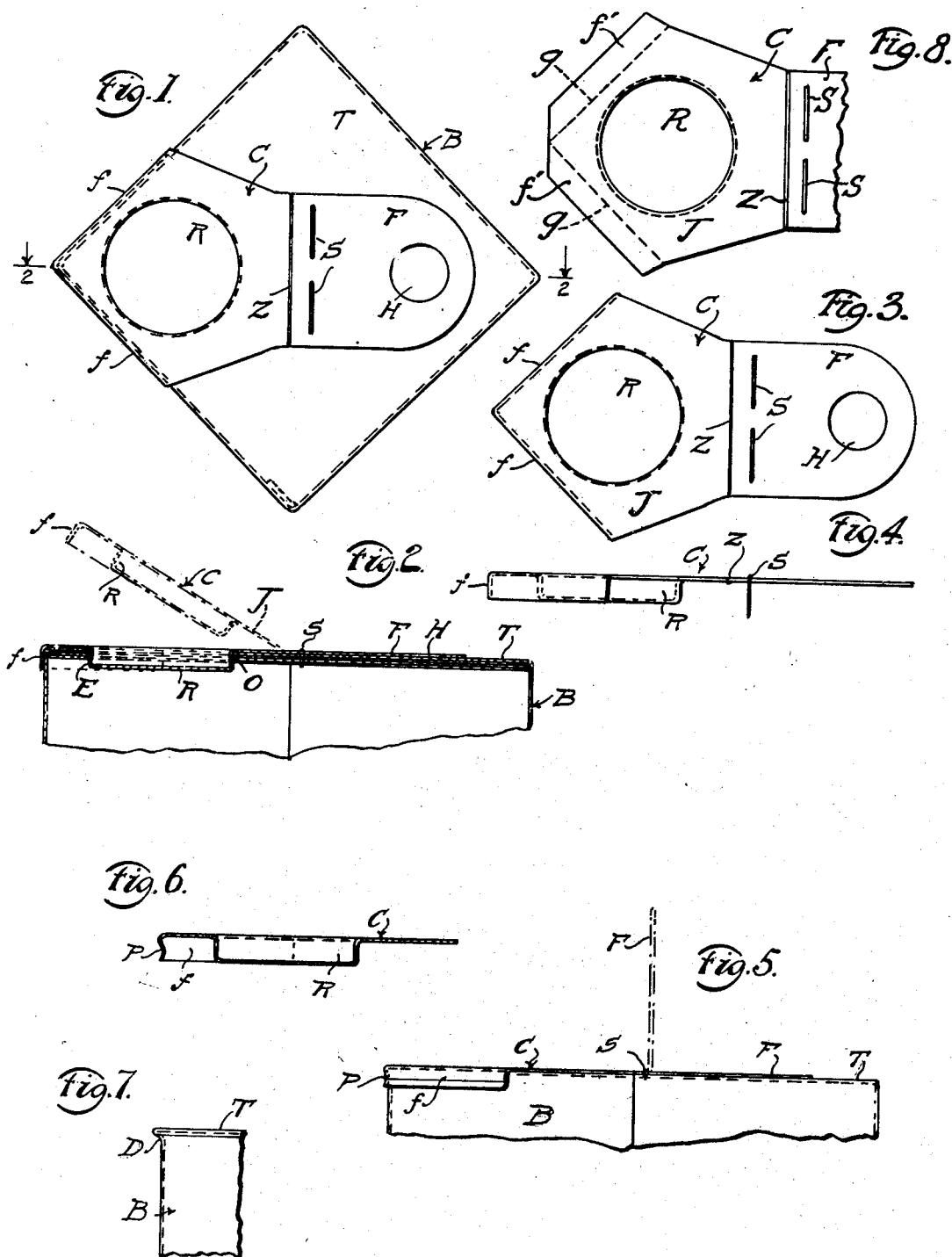
April 27, 1943.

D. BENSEL

2,317,355

PAPER BOARD CONTAINER

Original Filed Nov. 6, 1936



INVENTOR,
Durysa Bensei,

BY

Harold D. Penney ATTORNEY.

UNITED STATES PATENT OFFICE

2,317,355

PAPERBOARD CONTAINER

Duryea Bensei, Los Angeles, Calif., assignor, by mesne assignments, to American Can Company, New York, N. Y., a corporation of New Jersey

Original application November 6, 1936, Serial No. 109,439. Divided and this application August 25, 1938, Serial No. 226,777

1 Claim. (Cl. 229—17)

The present invention relates to an improvement in containers, and is especially adapted to holding liquids, though not limited to such use. The present container may be made entirely of paper board, and thus be quite economical for uses, for instance, such as holding beverages such as milk, beer and the like.

The important feature, amongst others, is in the provision of a sealing means on the present container, whereby a protected pouring aperture is provided, which when milk is packaged therein the pouring aperture and the surrounding pouring surfaces thereof are protected against contamination, in a germ-proof manner.

A further feature is in the provision of a sealing means which is easily opened, but which is sealed in a leak proof manner without adhesives and which may be opened and closed as many times as is necessary to finally empty the container.

A further advantage is the provision, on a container of this nature, of a manipulating tab, preferably of one piece with the sealing means whereby the two elements, as one, may be affixed together in joint operative positions on the top of the container.

A further feature of advantage, lies in the fact that the manipulative portions of the seal and tab lie flat on the top of the container so that a plurality of containers, when filled and sealed, may be piled on top of one another without any tendency to tip over.

The foregoing and other features of advantage will be apprehended as the description herein proceeds, and it will be obvious that modifications may be made in the structure herein without departing from the spirit hereof or the scope of the appended claim.

In the drawing,

Fig. 1 is a plan view of the preferred form of the present container showing the manipulative seal in operative position;

Fig. 2 is a fragmentary sectional view, in elevation, taken on the line 2—2, Fig. 1, looking in the direction of the arrows;

Fig. 3 is a plan view of the seal removed from the container;

Fig. 4 is a side view of Fig. 3;

Fig. 5 is a fragmentary side view of Fig. 1, showing the lifting tab in dotted position;

Fig. 6 is a broken, sectional view of the formed cup-like aperture closure portion of the seal;

Fig. 7 is a fragmentary corner view of the container top to show the rimming of the top edge;

Fig. 8 is a plan view of a modified closure tab.

The container, generally denoted by B, Fig. 1, is preferably of rectangular construction though it may also be round in cross section, and comprises four body forming panels, the opposite ends of which are each provided with an end closing flap, which are overlapped upon one another to form strong, plural ply top and bottom end closures, the top one of which T is shown in Figs. 1, 2 and 5. The sectioned view, Fig. 2, shows the plural closing flaps T, as superposed and adhered together to form a rigid multi-ply end closing assembly.

As the present form is intended to be used primarily for the transportation and dispensing of liquids, the adhesive by which the plies of flaps T may be sealed together may be paraffine, this sealing being effected after the container is immersed in molten paraffine and before it sets, thus adhering said flaps together, and rendering the container moisture and leakproof.

A bore, or access and pouring aperture O, Fig. 2 is provided through the top plies T, preferably near one corner of the container, as shown in Fig. 1, whereby the container may be filled and emptied.

In order to seal said opening O, for transportation of the package, and against inadvertent hydraulic rupture of the closure means, a pressed up blank C made of paper board, Figs. 3 and 4, is affixed by staples S, Figs. 1, 2, 3 and 4, to the top T, in operative position. This operation may be performed before the bottom flaps of the carton, not shown, are closed.

The seal C comprises two sections, one section having the depressed, cup-like aperture closing member R therein, the other section F, forming a container lifting tab, and which may have an aperture H therein and by which section F the entire device may be stapled by staples S to the container top T. The two sections of the closure are defined from one another by a traversing score line Z, by means of which the aperture closing portion J may be lifted from its sealing position, as shown dotted, in Fig. 2, with line Z acting as a hinge.

The aperture sealing portion J, in addition to having the aperture sealing cup R, is so constructed that its outer end terminates at the top edge of the container and is formed with a downwardly depending end flange f, which is frictionally engageable with the outer adjacent corner or side of the container, as illustrated in Figs. 1 and 2.

After the container has been filled, and the sealing cap portion J—R closed into operative posi-

tion upon the top T, the cap sides, as at E, Fig. 2, are bulged radially outward, so as to cause the cup to be provided with an annulus E which extends all round under the inner edge of the aperture O, and thus lock the cup in firm liquid tight fit with its aperture, but which is easily rupturable, mechanically, from the outside, to open or unseal the container, without destruction of the cup seal itself.

The container may have its top edge crimped all round, as at D, Fig. 7, and then, when the closure is in position the flange *f—f* thereof may be also crimped in as at P, Figs. 5 and 6, thus to provide a further clamping effect between the top and the sealing member, such clamping being in opposition to the under crimping of the cup sides at E. This opposed gripping of the top T between the aperture edges and edge D provides an efficient lock against inadvertent opening of seal J.

The apertured finger tab F, normally lies flat on top of the container top T, Figs. 1, 2 and 5, and may be lifted to the vertical position shown dotted in Fig. 5, by bending it at its points of attachment S—S.

In Fig. 8 is disclosed a modified closure tab J, the tab being identical with that shown in Fig. 3, with the exception that the flange *f'—f'* is not drawn as in Figs. 2 and 6, but is left flat, is cut flat on its apex and has score lines *g—g* defining the flat flaps *f'—f'* from the portion J, and which flaps may be bent downwardly on their score lines *g—g* to embrace the crimped top T at D, Fig. 7, thus to act as an alternate to the flange *f—f* of Fig. 5.

From the foregoing it will be noted that the above container is made up of two parts only, can be shipped knocked down to be erected and waxed and filled at the dairy.

This application is a substitute application for my former application Serial No. 109,439, filed Nov. 6, 1936.

What is claimed is:

- 5 A paper board container for liquids comprising
- 10 connected side wall panels; having end flaps seal-
- ingly adhered to form a top closure wall joined to
- said panels and having therein near a corner
- thereof a filling and pouring opening; the upper
- 15 margins of said panels where they join the top
- closure wall being inwardly crimped to form a
- projecting ledge at the edge of the top wall; a
- hinged closure member for said opening having
- therein a cupped part sealingly engaged in the
- 20 opening; said member including downwardly and
- inwardly crimped flanges engaged against the
- adjacent body panel portions and under said
- ledge; said section and flanges being disposed in
- covering relation with all portions of the ledges,
- 25 top wall and panel portions adjacent to the pour-
- ing opening, over which the liquid may flow in
- the pouring operation, to maintain said portions
- and the liquid clean; said cupped part having its
- bottom part of relatively wide diameter so that
- 30 the latter may be sprung into and out of the clos-
- ing position, and to cooperate with the inturred
- flanges to hold the member in place.

DURYE BENSEL.