Dec. 13, 1938. A. B. BECHAUD 2,139,792

CONTAINER

Filed Feb. 1, 1936

FIG. 1

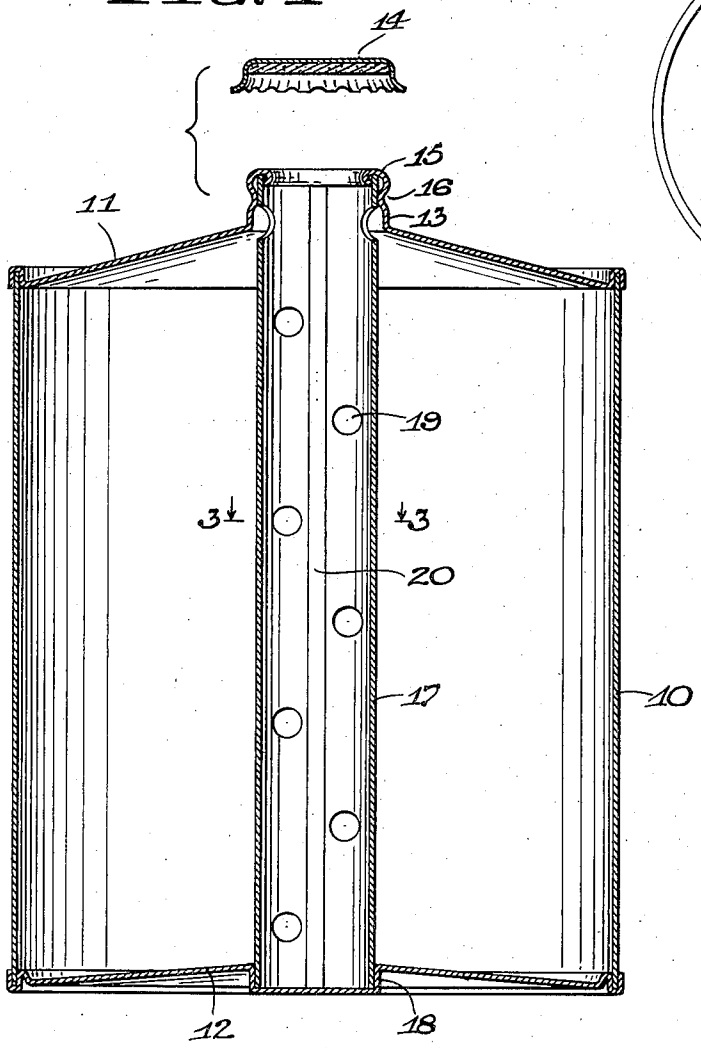


FIG. 2

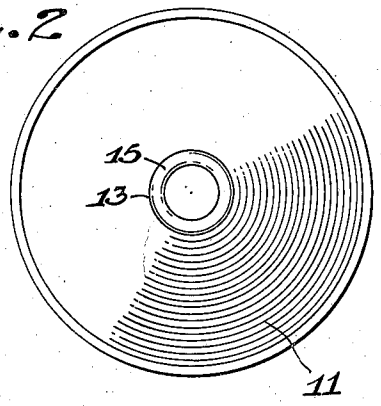


FIG. 3

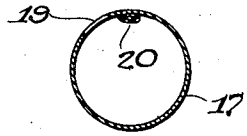


FIG. 5

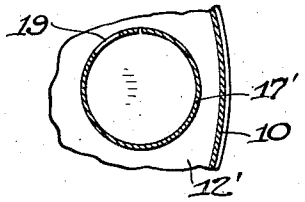


FIG. 4

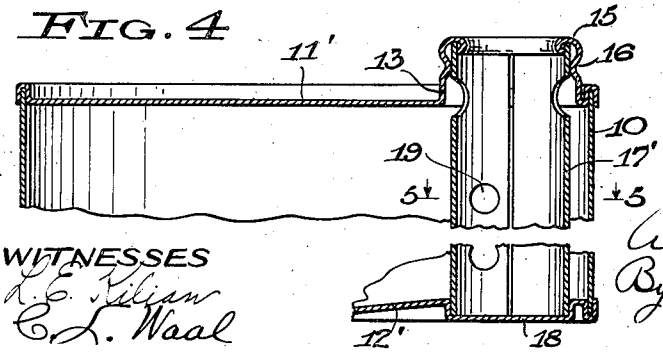
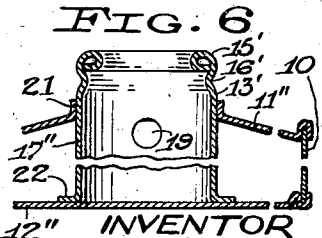


FIG. 6



WITNESSES

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Patented Dec. 13, 1938 2,139,792

UNITED STATES PATENT OFFICE

2,139,792

CONTAINER

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Application February 1, 1936, Serial No. 61,912

10 Claims. (Cl. 220—1)

The invention relates to containers for beer and other substances, and has for an object to provide a strong, light-weight and inexpensive container which will withstand capping pressure without buckling or distortion and resist internal pressure without bulging.

The invention further consists in the several features hereinafter described and claimed.

In the accompanying drawing, illustrating certain specific embodiments of the invention,

Fig. 1 is a sectional elevation of one form of container constructed in accordance with the invention;

Fig. 2 is a top plan view of the container of Fig. 1;

Fig. 3 is a detail sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a sectional elevation of a modified form of container;

Fig. 5 is a detail sectional view taken on the line 5—5 of Fig. 4, and

Fig. 6 is a sectional elevation of another modified form of container.

In that form of container or can shown in Figs. 1 to 3, 10 designates a sheet metal can body which is here indicated to be of cylindrical shape, although other shapes may be used. The can body is secured at its upper edge to a sheet metal top member 11, and at its lower edge to a sheet metal bottom member 12, the edges being seamed together in any usual manner. The top member is here shown to be conically formed and has a central neck or spout 13 which forms a filling and pouring opening. The neck is adapted to receive a suitable closure, here indicated to be a crown cap 14. An inturned top flange or bead 15 on the neck forms a seat for the cap, and the neck has a peripheral groove 16 below the top bead to receive the crimped edge of the cap.

The top and bottom members 11 and 12 are connected by a supporting member, preferably of columnar shape and in the form of a tube 17, to take the capping pressure and in some instances to resist internal pressure tending to bulge the ends of the can. The upper end of the tube fits snugly within the neck 13 and is embraced within the rolled top bead 15, the top wall of the bead resting against the upper edge of the tube. The lower end of the tube engages the bottom member 12, and by way of example is here shown to fit snugly within a circular recess formed by a cup-like portion 18 stamped into the bottom member 12. If desired, the tube may be soldered or otherwise secured to the neck 13 and bottom member 12, especially in cases where the tube is to form a tension member to resist internal pressure in the can. The bottom of the cup-like portion 18 lies in substantially the same plane as the bottom edges of the can, so as to rest on a suitable table or other support during the capping operation. The tube forms a filling and emptying conduit on passage for the can and is apertured to communicate with the interior of the can, as by means of perforations 19, one or more of which are near the neck 13 to facilitate filling and emptying of the can. The tube is here shown to have a rolled lock seam 20, although the tube may be seamless, if desired. If a lock seam is used it may terminate short of the upper end of the tube, so as to avoid interference with the formation of the rolled bead 15.

While the neck is here shown to be formed integrally with the top wall of the can, in some instances the upper end of the tube itself may form the neck, as hereinafter described, particularly when a seamless tube is used.

The inner surfaces of the can may be coated with pitch or other lining material, as usual, to avoid contact between the metal and the contents of the can.

In the modified form of container or can shown in Figs. 4 and 5, the neck 13 is formed on a substantially flat top member 11' and is placed near a side wall of the can. A perforated tube 17' is left with an open seam and is engaged top and bottom in the same manner as the tube 17, the lower end of the tube 17' being seated in a cup-like portion 18 of a bottom member 12'.

In the modified form of container or can shown in Fig. 6, the can body 10 is secured to top and bottom members 11'' and 12'', respectively. The top member is secured, as by soldering, to a perforated tube 17'' generally similar to the tube 17, the tube 17'' fitting in and projecting through an opening 21 in the top member. The projecting upper end of the tube forms a neck 13' with a rolled top bead 15', similar to the top bead 15 of Figs. 1 and 4, and a peripheral groove 16', similar to the groove 16 of Figs. 1 and 4. The lower end of the tube is provided with an annular flange 22 engaging the bottom member 12'', which is substantially flat. The flange 22 may or may not be fastened to the bottom member, as desired, the tube being capable of resisting capping pressure without such fastening. However, the tube is soldered or otherwise fastened to the bottom wall if the tube is to form a tension member for resisting internal pressure in the can. If desired, the tubes 17 and 17' of Figs. 1 and 4, respectively,

may be flanged to engage flat bottoms in the manner shown in Fig. 6.

When any one of the above-described containers or cans is to be capped after filling, it is rested on a suitable support and the cap 14 is pressed onto the neck and crimped into place. The capping pressure is transmitted downwardly through the tube, which forms a strut or compression member, thus relieving the top and side walls of the container of capping pressure and avoiding distortion and buckling of the container. This permits the top and bottom walls and side walls of the container to be made of relatively thin sheet metal. The tube connecting the top and bottom walls of the container also resists bulging of these walls by internal pressure in the container. During the removal of the cap, the tube prevents distortion or buckling of the top wall and other walls of the container.

What I claim as new and desire to secure by Letters Patent is:

1. A container comprising sheet metal top and bottom walls and sheet metal side walls connecting said top and bottom walls, a closure-receiving neck on said top wall, and a tubular supporting member extending between and engaging said top and bottom walls to resist closure-applying pressure, the upper end of said tubular member being in register with said neck, and said tubular member forming a filling passage for the container and being apertured to communicate with the interior of the container.

2. A container comprising sheet metal top and bottom walls and sheet metal side walls connecting said top and bottom walls, a closure-receiving neck on said top wall, and a tubular passage-forming member extending between and engaging said top and bottom walls and being apertured to communicate with the interior space of the container, said tubular member fitting within said neck, and said neck having an inturned top bead embracing the upper end of said tubular member to transmit closure-applying pressure to said tubular member.

3. A container having a bottom wall and side walls and having a top portion with a filling opening adapted to be sealed by a closure, and a hollow supporting member in the container connecting said bottom wall and top portion to resist closure-applying pressure, the upper end of said supporting member being in register with said opening, and said supporting member forming a filling conduit for the container and being laterally apertured to communicate with the interior of the container.

4. A container having a bottom wall and side walls and having a sheet metal, closure-receiving neck at its top with a filling opening, and a supporting member in the container connecting said bottom wall and neck, said supporting member having a tubular passage-forming portion extending into said neck and being laterally apertured to communicate with the interior of the container, and said neck having an inturned top flange engaging said supporting member to transmuit closure-applying pressure to said supporting member.

5. A container comprising sheet metal top and bottom walls and sheet metal side walls connecting said top and bottom walls, said top wall having a filling opening adapted to be sealed by a closure, and a tubular passage-forming supporting member connecting said top and bottom walls and having its upper end in register with said opening, said tubular member being laterally apertured to communicate with the interior of the container and forming a support to resist pressure application of a closure to said opening.

6. A container having a bottom wall and side walls and having a top portion with a filling opening adapted to be sealed by a closure, and a tubular supporting member extending between and engaging said bottom wall and top portion to resist pressure application of a closure to said opening, and having its upper end in register with said opening, said tubular member and bottom wall having interfitting parts to position said tubular member, and said tubular member being apertured to communicate with the interior of the container.

7. A container comprising sheet metal side and bottom walls and a top portion having a closure-receiving neck, and an apertured tubular member extending between and engaging said top portion and bottom wall and fitting within said neck, said tubular member forming a support and filling passage for the container and being apertured to communicate with the interior of the container.

8. A container having a bottom wall and side walls and having a top portion with an opening, and a sheet metal plate forming a tubular passage-forming supporting member with an open seam, and providing communication with the interior of the container, said tubular member extending between and engaging said bottom wall and top portion to resist pressure application of a closure to said opening, the upper end of said tubular member fitting in said opening and being laterally confined by said opening against spreading.

9. A container having a bottom wall and side walls and having a top portion with an opening, and a tubular filling member engaging said bottom wall and extending upwardly through said opening, said tubular member being secured to said top portion and being apertured to communicate with the interior of the container, the upper end of said tubular member forming a closure-receiving neck, and said tubular member forming a support to resist closure-applying pressure.

10. A container having a bottom wall and side walls and having a top portion with a filling opening adapted to be sealed by a closure, and a tubular passage-forming supporting member in the container in register with said opening and extending between and engaging said bottom wall and top portion to resist closure-applying pressure, the lower end of said supporting member being flanged to bear on said bottom wall, said tubular member being apertured to communicate with the interior of the container.

ADOLPH B. BECHAUD.