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H. S. REYNOLDS

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CONSTRUCTION OF METALLIC CONTAINERS

Filed March 6, 1922

Fig. 1.

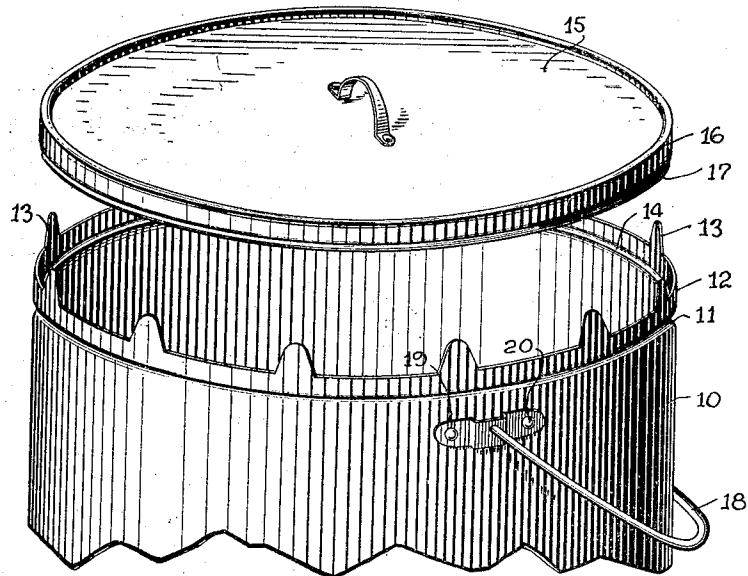


Fig. 2.

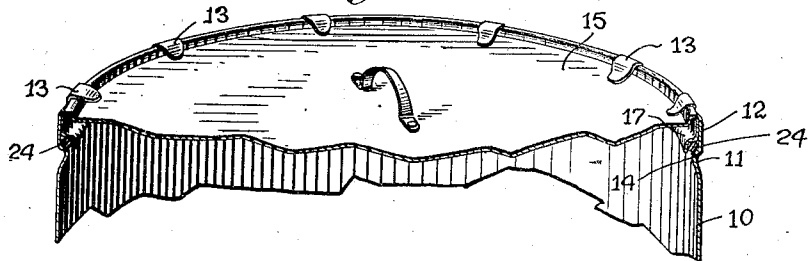


Fig. 3.

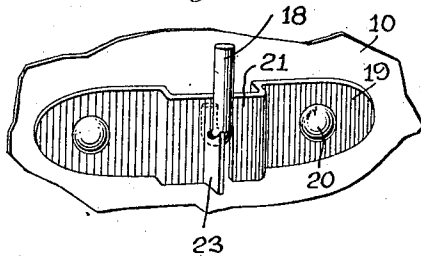
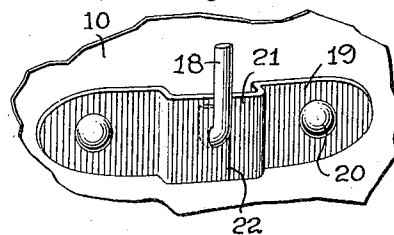


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY S. REYNOLDS, OF BROOKLYN, NEW YORK, ASSIGNOR TO MEURER STEEL BARREL COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CONSTRUCTION OF METALLIC CONTAINERS.

Application filed March 6, 1922. Serial No. 541,301.

To all whom it may concern:

Be it known that I, HENRY S. REYNOLDS, a citizen of the United States, and a resident of the borough of Brooklyn, in the city of New York, county of Kings, and State of New York, have invented an Improvement in the Construction of Metallic Containers, of which the following is a specification.

This invention relates to construction for metallic containers and the like, particularly to fluid-tight closures for the same and to the art of securing bail members to such containers.

One of the objects thereof is to provide a construction of the above nature which is inexpensive and easily made. Another object is to provide a strong and dependable construction of the above nature which is well adapted to meet the requirements of hard, practical use. Other objects are to provide a construction of the above nature formed of sheet metal and in such a manner that the metal is not severely strained and is economically used to provide a maximum containing capacity.

Another object is to provide a method of fastening bails to such containers that may be simply and inexpensively carried out. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, arrangements of parts, and in the several steps and relation and order of such steps all as hereinafter pointed out, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing in which is shown one of the various possible embodiments of this invention,

Figure 1 is a view of the top portion of a metal container showing the cover removed;

Figure 2 is a sectional view through the top portion shown in Fig. 1 with the cover secured in position;

Figure 3 is an enlarged view showing the means of inserting the bail shown in Fig. 1; and

Figure 4 shows the bail secured in position.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now to the drawing in detail, there is shown a container shell 10 prefer-

ably of cylindrical form. The open end or top portion only of the container is shown since it is principally within this portion that the invention resides. The shell is preferably made of one sheet of metal shaped to cylindrical form and with its vertical seams secured by a suitable means such as welding. The closure for the bottom of the shell may consist of a metal sheet properly welded into place.

Shell 10 has preferably stamped or rolled on the outside thereof a depression or groove 11 extending circumferentially around the shell near its open end. Groove 11 is preferably formed with a gradually curved contour avoiding sharp bends in the metal and the resultant danger of overstraining and cracking the same. The depression or groove 11 thus forms a circumferentially extending shoulder 14 of rounded contour on the inside of the shell. Above groove 11 the portion 12 of the shell extends vertically in substantial alignment with the rest of the shell wall below the groove and terminates in a plurality of normally upstanding tongues 13 shown in this position in Fig. 1.

The cover 15 is preferably stamped from sheet metal and is of an outside diameter equal to the inside diameter of the shell. Its edges are preferably curved upwardly to a slight extent and then over and downwardly to form an upstanding flange 16 at its periphery of substantially the width of portion 12 of the shell. At the bottom of flange 16 the metal is bent inwardly and downwardly to form a curved flange 17 adapted to mate with the curved shoulder 14 on the inside of the shell.

In Fig. 2 the cover is shown in place in the open end of the shell. A packing ring 24 of felt or other suitable material is preferably clamped between flange 17 of the cover and shoulder 14 of the shell; and the upstanding flange 16 rests snugly against the portion 12 of the shell. Tongues 13 are bent into place over the top of flange 16 and the cover is thus securely fastened in position. The curved portion of shoulder 14 joining shell wall 12, and the curved flange 17 fit the contour of packing 18 and a maximum bearing surface between the metal and the packing is provided thus insuring a positive liquid-tight closure.

It will be seen that the container as above set forth is particularly economical in the

amount of metal used in its construction and provides a maximum interior volume relative to its external dimensions. The exterior walls being in alignment throughout permit packing of a number of the containers closely together without waste of space. Furthermore, the metal is not weakened by undue distortion of the same in forming the various shoulders and flanges of the shell and cover. Also there are no sharply projecting shoulders on the inside of the container to interfere with the removal of material therefrom.

A bail 18 is shown secured to the walls of the shell by an attaching device which preferably takes the form of a strip of metal 19 secured to shell 10 by means of rivets 20. Strip 19 is preferably bent outwardly at a portion intermediate of rivets 20, as at 21, so that this portion is spaced from the wall of the shell. This spaced portion is provided with an opening to receive bail 18 and its portion below the opening is cut as at 22 (see Fig. 4) preferably in line with a vertical side of the opening. Thus there is provided a portion 23 which may be bent outwardly, as shown in Fig. 3, to permit the insertion of the curved end of the bail and may then be bent back to the position shown in Fig. 4 to lock the bail end in place. Thus the end of bail 18 may be sharply hooked or headed before attaching and after insertion is securely held in place so that it cannot slip out of its fastening.

As many changes might be made in the above arrangement and as many variations might be made in the art above described without departing from the scope of the invention, it is intended that all features herein described or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim as my invention:

1. In construction for metallic containers, in combination, a container shell having adjacent its open end an inwardly extending shoulder, and a cover for said shell having formed at its periphery a substantially upright flange adapted to rest against the wall of said shell above said shoulder, said upright flange terminating at its lower end below the body of said cover in an inwardly directed lip adapted to rest upon said shoulder and support said cover thereon.

2. In construction for metallic containers, in combination, a container shell having adjacent its open end an inwardly extending shoulder, and a cover for said shell having formed at its periphery a substantially upright flange adapted to mate with the wall of said shell above said shoulder, said upright flange terminating at its lower end in an inwardly and downwardly extending lip adapted to rest upon said shoulder and support said cover thereon.

3. In construction for metallic containers, in combination, a container shell having adjacent its open end an inwardly directed shoulder of rounded contour, and a cover for said shell having formed at its periphery a substantially upright flange adapted to mate with the wall of said container above said shoulder, said upright flange terminating at its lower end in a portion rounded inwardly and downwardly to mate with said rounded shoulder and support said cover thereon.

4. In construction for metallic containers, in combination, a container shell having adjacent its open end an inwardly extending shoulder of rounded contour formed by bending the metal inwardly and back upon itself, the metal being bent inwardly in a gradual upward curve to form the lower surface of said shoulder and thence outwardly in a sharper curve to form the upper surface of said shoulder the wall of said container being in substantial alignment above and below said shoulder, and a cover for said shell having an inwardly and downwardly extending flange of rounded contour adapted to substantially mate with said upper curved surface of said shoulder.

5. In apparatus of the general nature of that herein described, in combination, a container shell having a shoulder formed on the inside thereof adjacent its open end by the container wall being bent inwardly and back upon itself, the walls of said shell above and below said shoulder being in substantial alignment, and a cover adapted to fit into said open end of said shell, said cover having formed about its periphery a substantially vertical flange extending downwardly below the main body of the cover and shaped adjacent its lower portion to provide an inwardly directed flange adapted to engage said shoulder and support said cover thereon.

6. In apparatus of the general nature of that herein described, in combination, a container shell having a shoulder formed on the inside thereof and spaced from the open end thereof, said shoulder being formed by the container wall being bent inwardly and back upon itself in a gradual curve, the walls of said shell being in substantial alignment above and below said shoulder, a cover for said shell comprising a main body portion forming a closure therefor and a substantially upright flange about the periphery of said main body portion, said flange extending below said main body portion and having formed adjacent the lower portion thereof an inwardly directed rounded flange adapted to substantially mate with said rounded shoulder, and packing interposed between said rounded flange and said rounded shoulder.

7. In apparatus of the general nature of

that herein described, in combination, a container shell, a cover therefor adapted to fit within the open end of said shell having an upstanding flange formed about its periphery and extending both above and below the plane of said cover, means formed upon the interior of said shell adapted to be engaged by the lower portion of said flange below the plane of said cover thereby to support said cover, and means upon said shell adapted to engage said flange above the plane of said cover to secure said cover in place.

8. In apparatus of the general nature of that herein described, in combination, a substantially cylindrical container shell terminating at its open end in a plurality of tongues and having formed adjacent its open end an inwardly extending circumferential shoulder; and a cover for said shell having formed at its periphery an upstanding flange over which said tongues are adapted to be bent, the exterior of said flange fitting against the walls of said shell between said shoulder and said open end, the top of said flange substantially registering with the bases of said tongues, and the bottom thereof terminating in an inwardly directed lateral flange adapted to rest against said inwardly extending shoulder of said shell.

9. In apparatus of the general nature of that herein described, in combination, a substantially cylindrical container shell having an inwardly extending circumferential shoulder adjacent its open end, the walls of said shell on either side of said shoulder being in substantial alignment with each other and said walls terminating at the open end in a plurality of tongues; a cover for said shell having formed thereon a shoulder adapted to rest upon said first mentioned shoulder and having a down-

wardly extending lip adapted to register with the inner surface of the same and having a flanged end over which said tongues are adapted to be bent; and a packing ring interposed between said two contacting shoulders.

10. In apparatus of the general nature of that herein described, in combination, a metal container; a metal strip secured to the wall thereof and having a portion spaced therefrom, said spaced portion having an opening therein and being cut adjacent said opening whereby a part thereof may be bent out of position to form an elongation of said opening; and a wire bail having a hooked end adapted to be inserted between said spaced portion of said metal strip and said container wall when said cut part is bent out of position and to be locked therebetween when said cut part is in normal position.

11. In apparatus of the general nature of that herein described, in combination, a wire bail having an end bent substantially back upon itself; and a device for attaching said bent end to a container comprising a metal strip having means adjacent either end thereof for securing said strip to the wall of said container and having an intermediate portion spaced from said wall, said intermediate portion having an opening of cross section substantially equal to that of said bail and being cut from one side of said opening to its edge, forming a flap which is adapted to be bent outwardly to permit the insertion of said bent bail end to said opening and adapted to be bent back into position to lock said bail end therein.

In testimony whereof, I have signed my name to this specification this 27th day of February, 1922.

HENRY S. REYNOLDS.