Dec. 15, 1925. 1,565,378

S. G. LONG

STEEL CONTAINER

Filed March 24, 1922

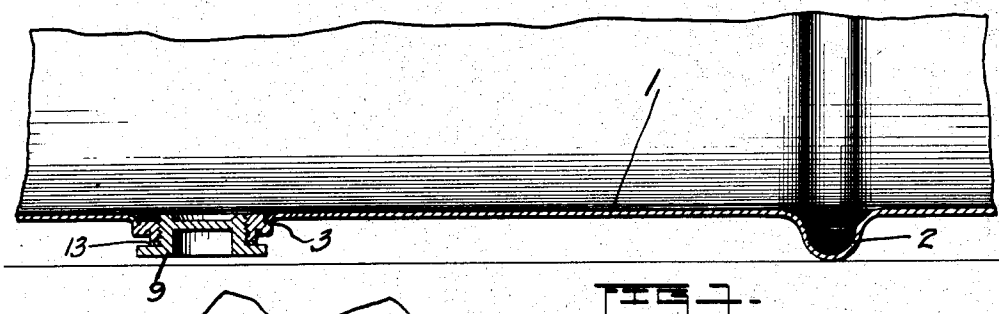


FIG. 1.

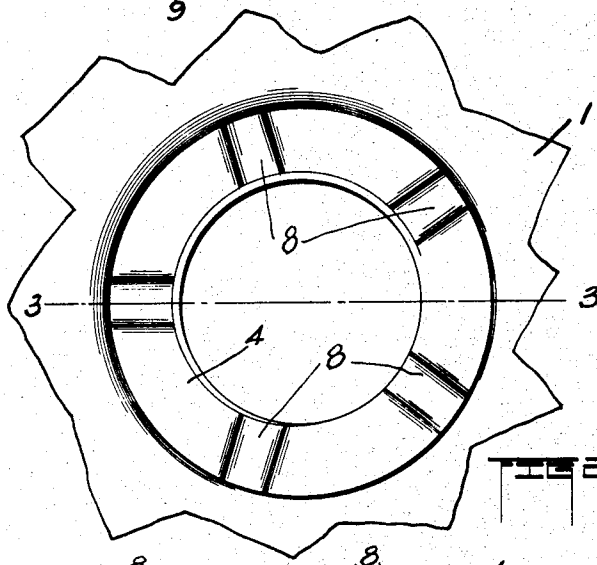


FIG. 2.

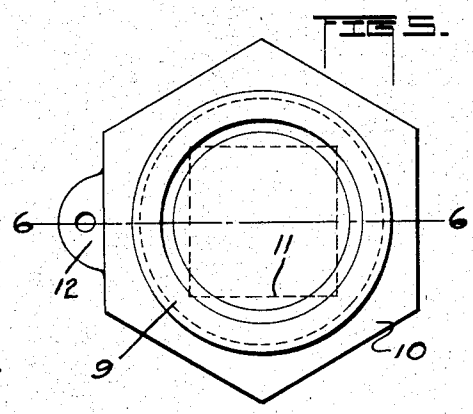


FIG. 5.

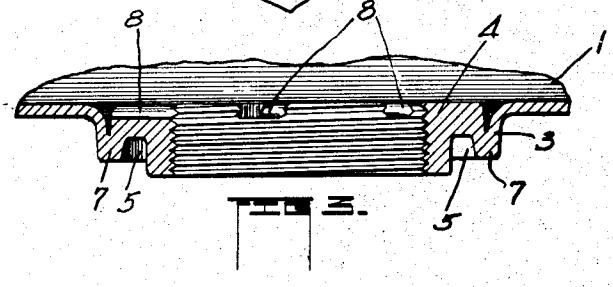


FIG. 3.

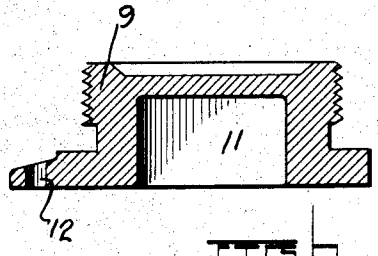


FIG. 6.

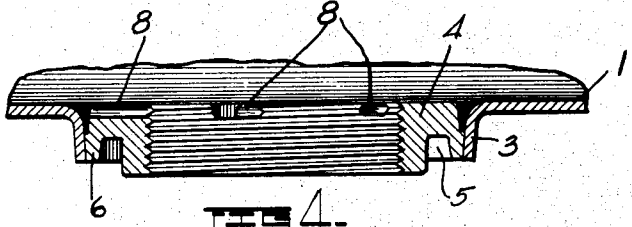


FIG. 4.

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UNITED STATES PATENT OFFICE.

SHERMAN G. LONG, OF PEORIA, ILLINOIS, ASSIGNOR TO METAL BARREL CORPORATION, OF PEORIA, ILLINOIS, A CORPORATION OF ILLINOIS.

STEEL CONTAINER.

Application filed March 24, 1922. Serial No. 546,234.

To all whom it may concern:

Be it known that I, SHERMAN G. LONG, a citizen of the United States, a resident of Peoria, in the county of Peoria and State of Illinois, have invented new and useful Improvements in Steel Containers, of which the following is a specification.

This invention has reference to improvements in steel containers of various types, including metal barrels, tanks, etc.

The invention has for its principal object to provide such containers with an opening or openings which are leakage proof and which will enable the containers to be thoroughly drained.

The invention has for a further object to flange the opening in the container preferably by stamping or punching and to provide an internally threaded drop-forged, cast or punched ring, preferably welded to the flange of the container for permanently securing the same thereto; such ring being provided with radially arranged depressions or corrugations for purposes of draining. A screw plug being provided which is adapted to engage the threads of the ring to close the opening.

That the invention may be more fully understood reference is had to the accompanying drawings forming a part of the present description, illustrating a preferred embodiment of the invention, in which:—

Figure 1 is a longitudinal sectional view on a somewhat reduced scale showing my improved opening in the wall of a metal container and the screw closing plug thereof, the view also illustrating that when used on ribbed or corrugated containers the plug does not interfere with the rolling of the container;

Figure 2 is a plan view, approximately full size, showing the face of the ring secured to the container and provided with radially arranged depressions or corrugations;

Figure 3 is a cross-section as the same would appear if taken on the line 3—3 Figure 2, the ring and flange of the container being preferably welded together;

Figure 4 is a view similar to Figure 3 except that the ring and flange have not been welded;

Figure 5 is a plan view of the screw plug adapted to have a threaded connection with the ring, and provided with a perforated ear or lip for the attachment of a shipping tag thereto, and

Figure 6 is a cross-section on the line 6—6 Figure 5.

Like characters of reference denote corresponding parts throughout the figures.

The invention is most useful in connection with metal barrels, although adapted to metal or steel containers, tanks, etc., and I therefore, wish it understood that although described in connection with metal barrels there is no intention to so limit the use of the invention.

In Figure 1 the wall of a metal barrel is designated 1 and is shown provided with an annular corrugation or depression 2 providing a strengthening rib for such barrel. In practice there are two or more such ribs provided in the barrel. At any suitable point, the barrel is provided with a flanged opening 3 punched or stamped therein, with the flange projecting outwardly and preferably at approximately right angles to the body of the barrel and acts as a reinforcement thereto. I have shown the flanged opening, preferably in the side wall of the barrel midway its ends, but it is to be understood such flanged opening may be in either end of the barrel, or at or near the ends in the side wall, or one or more such openings provided, if desired.

4 designates an internally threaded ring, which may be a drop forging, casting or a machine punched ring and said ring is formed with an annular depression 5 on one face producing the marginal flange 6, which, when the ring is inserted into the flanged opening in the wall of the container will lie in juxtaposition to the flange 3, as shown in Figure 4, and to be welded thereto, as at 7 and as shown in Figure 3, by an acetylene torch or in any other suitable manner. The opposite face of the ring, preferably that face within and flush with the inside face of the wall of the container is formed or provided with a plurality of radially disposed depressions, grooves or corrugations 8 which enable the container to be thoroughly drained, the same acting as ducts to transfer any liquid settling between the ring 4 and flange 3, by tilting the container, as will be understood.

Having a screw connection with the internally arranged threads in the ring 4 is a plug 9 for closing the opening in the con-

tainer. Such plug has a polygonal shaped flange 10 to be gripped by a suitable tool and also a rectangular socket 11 for the insertion of a suitable tool, whereby the plug may be screwed into and unscrewed from the ring 4. Also, said flange 10 has a perforated ear 12 to provide for the attachment or connection of a shipping tag, as will be understood. A gasket 13 being interposed between the flange of the plug and the ring to provide a leakage proof closure.

By reference to Figure 1, it will be observed that my invention when applied to a metal barrel will in no-wise interfere with the rolling of the barrel, as the construction of the flange 3, ring 4 and plug 9 is of such a character that they project from the barrel well within the depth or thickness of the ribs 2.

Furthermore, while I have described a ring formed or provided with depressions, grooves or corrugations such as 8, welded to the flange 3, it is to be understood that the flange 6 of the ring 4 and the flange 3 of the barrel could be lock seamed or otherwise suitably connected.

What I claim is:

1. In a metal barrel provided with annular corrugations and an annular flanged opening in its corrugated wall projecting outwardly less than the depth of such corrugations, of an internally threaded ring adapted to fit within said flanged opening and provided with an encircling flange of less depth than the width of its threaded portion and of approximately the thickness of the wall of said flanged opening and secured thereto, and the inner face of said ring provided with a plurality of radial draining depressions the base walls of which normally lie approximately in the plane of the outer surface of the barrel to insure thorough draining of material contained therein.

2. In a metal barrel provided with annular corrugations and an annular flanged opening in its corrugated wall projecting outwardly less than the depth of such corrugations, of an internally threaded ring adapted to fit within said flanged opening and provided with an encircling flange of less depth than the width of its threaded portion and of approximately the thickness of the wall of said flanged opening and secured thereto, and the inner face of said ring provided with a plurality of radial draining depressions the base walls of which normally lie approximately in the plane of the outer surface of the barrel to insure thorough draining of material contained therein, a threaded plug arranged to have connection with the threads in said ring and provided with a tool engaging portion, and a gasket to lie between the tool engaging portion of said plug and the main body portion of said ring to seal the connection.

3. In a metal barrel provided with annular corrugated strengthening ribs, a flanged opening in the corrugated wall the flange of which is of less depth than said corrugations, an internally threaded ring arranged to fit within said flanged opening, its main body thickness being of greater depth than the flange of said opening and encircled by a flange partially spaced from the body of the ring and of approximately the thickness of the flange of said opening and secured thereto, the formation of the flange of said opening and said ring at the base of the flange leaving a space therebetween, and the inner face of said ring provided with a plurality of radially arranged draining depressions the base walls of which lie approximately in the plane of the outer surface of the barrel to insure thorough draining of material contained therein and settling in the space between the flange of the opening and said ring.

4. In a metal barrel provided with annular corrugated strengthening ribs, a flanged opening in the corrugated wall the flange of which is of less depth than said corrugations, an internally threaded ring arranged to fit within said flanged opening, its main body thickness being of greater depth than the flange of said opening and encircled by a flange partially spaced from the body of the ring and of approximately the thickness of the flange of said opening and secured thereto, the formation of the flange of said opening and said ring at the base of the flange leaving a space therebetween, and the inner face of said ring provided with a plurality of radially arranged draining depressions the base walls of which lie approximately in the plane of the outer surface of the barrel to insure thorough draining of material contained therein and settling in the space between the flange of the opening and said ring, a threaded plug arranged to have connection with the threads in said ring and provided with a tool engaging portion, and a gasket to lie between the tool engaging portion of said plug and the main body portion of said ring to seal the connection.

In witness whereof, I have hereunto affixed by hand this 22nd day of March, 1922.

SHERMAN G. LONG.