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T. W. RIEKE

1,915,254

BUNG SEAL FOR BARRELS

Filed March 3, 1932

Fig. 1.

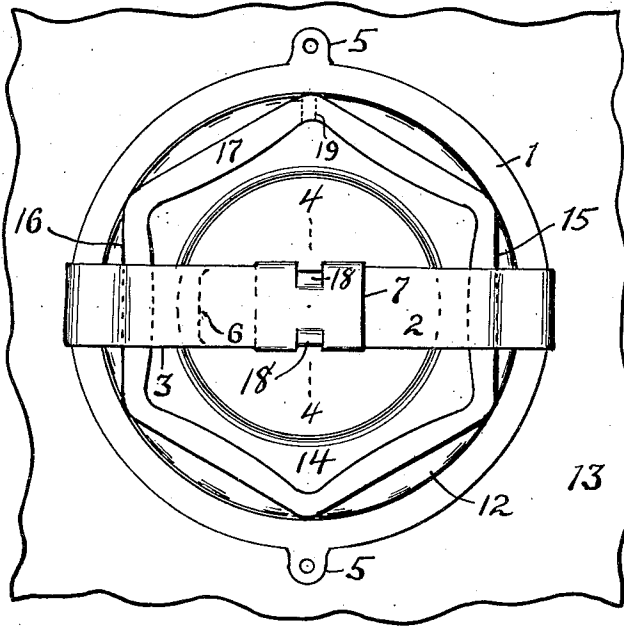


Fig. 2.

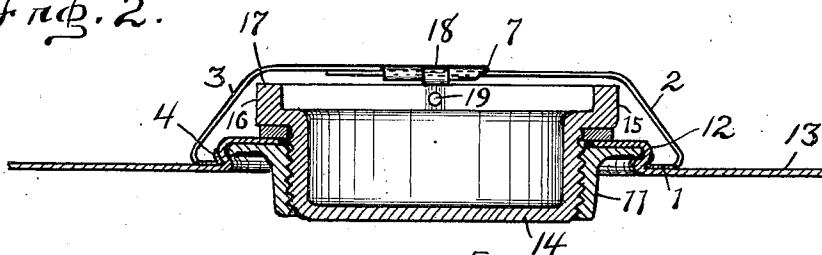


Fig. 3.

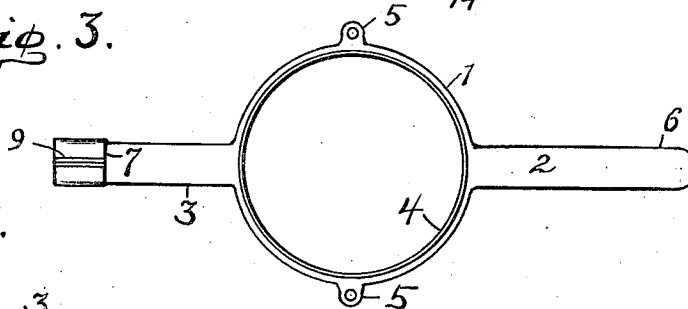
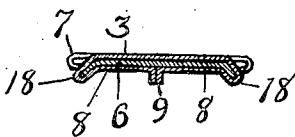


Fig. 4.



Theodore H. Rieke

INVENTOR.

BY

A. G. Burns

ATTORNEY.

UNITED STATES PATENT OFFICE

THEODORE W. RIEKE, OF AUBURN, INDIANA, ASSIGNOR TO RIEKE METAL PRODUCTS CORPORATION, A CORPORATION OF INDIANA

BUNG SEAL FOR BARRELS

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This invention relates to improvements in bung seals for barrels especially adapted for use in the shipment of goods required to be delivered in original packages. One of the objects of the invention is to provide a sealing means for the bung of a barrel constituting a non-removable part of the barrel structure and which cannot be similarly applied after original use.

In the usual practice of re-using metal barrels for shipment of volatile and inflammable commodities, such as alcohol, it is essential that the barrels be made of metal of sufficient thickness as to withstand the wear and deterioration incidental to frequent re-use. Such practice often occasions shipments to be made in barrels that have become unsafe for further use although apparently in sound condition, and invites carelessness in preparing the goods for shipment.

It has been found that new barrels made of comparatively thin metal are preferable to previously used barrels made of thicker metal for making shipments of said commodities, as their strength when new is unimpaired and amply sufficient for original use. To prevent re-use of a barrel as an original package after the first shipment has been made therein without destroying its usefulness as a previously used container is another object of the invention.

A further object of the invention is to afford a bung seal so constituted that when applied the fact of the bung being properly sealed thereby can be readily ascertained by observation from a distance without necessitating close inspection.

An illustrative embodiment of the invention is shown in the accompanying drawing, in which:—

Fig. 1 is a plan view of a bung fixture and its bung to which a seal embodying the invention is applied;

Fig. 2 is an elevation projected from Fig. 1, a portion being in section;

Fig. 3 is a plan view drawn to a reduced scale showing the seal as it is disposed preparatory to its incorporation in the barrel structure; and

Fig. 4 is a detail view drawn to an enlarged

scale showing a cross section of the seal joint on the line 4—4 of Fig. 1.

The illustrative embodiment of the invention comprises a form made of a single piece of thin sheet metal shaped so as to provide an anchor ring 1 and complemental sealing strips 2 and 3 integral therewith and extending from the outer margin of the ring at points thereon diametrically opposite each other. The ring 1 has an upstanding annular flange 4 at its inner margin and perforated ears 5 that project outwardly from its outer margin.

The outer end of the strip 3 has a sheath 7 open at both ends and closed at its sides, into which the outer end 6 of the strip 2 is adapted to fit snugly when inserted therein. The sheath is formed by the outer end portion of the strip 3 and lateral extensions 8 thereof that are folded inwardly. The inner margins 9 of said extensions are bent outwardly at right angles and are welded together.

The above described bung seal is applicable to that type of bung fixture in which a bung ring 11 is secured in a circular envelope or embossment 12 that is formed of the metallic wall or head 13 of a barrel. The anchor ring 1 is permanently incorporated in the barrel structure by securing it in place on the barrel head 13 with its flange 4 clinched beneath the overhanging outer periphery of the embossment 12. The anchor ring in its connection with the embossment is similar to that shown in my previous invention, patented April 28, 1931, No. 1,803,303, for Bung fixture for barrels. In the present instance the anchor ring constitutes a component part of the barrel structure and together with its integral strips form the original sealing means for the bung.

Initially the strips are disposed so as to lie flat upon the barrel head which permit filling of the barrel through the opening in the bung ring without obstruction. After filling the barrel the opening in the ring is closed in the usual manner by inserting a bung 14 therein. The strips 2 and 3 are then bent up over the flat sides 15 and 16 of the bung head 17 and their ends connected to-

gether in sealing relation by first inserting the end 6 of the strip 2 into the sheath 7 through the outer end thereof and then mutilating or shearing each side of the sheath and end 6 encased therein at points spaced apart and bending the intervening portions 18 out of alinement with the adjacent portions of the sheath whereby the sheath and inserted strip are permanently locked together. The shearing and bending operation for locking the sheath and tongues is performed by means of a tool (not shown) which may be of any suitable construction. When the strips are thus disposed removal of the bung without breaking the sealing means is frustrated.

As the anchor ring of the sealing means is a non-detachable part of the barrel structure, once the seal is broken, re-use of the barrel as an original package or of the sealing means as an original seal is prevented. Also, replacement of the sealing means by renewals thereof is prevented because of the permanent installation of the original anchor ring in the barrel structure.

After the barrel has been used as an original package and its seal is broken, the strips may be cut off and the barrel sealed as a previously used package by bending up one of the perforated ears 5 and connecting the seal wire of an ordinary seal (not shown) through its perforation and the opening 19 made in the bung head, as disclosed in the patent above identified.

When the bung has been properly sealed in place the locked connection of the ends of the strips and the bent sheared portions of the seal joint are conspicuously exposed to view on top of the bung whereby inspection thereof is facilitated.

I claim:

1. In a bung sealing means, a barrel structure having a bung fixture, a bung closing the opening of said fixture, and a form made of a single piece of thin sheet metal shaped so as to provide an anchor ring and complementary seal strips integral therewith and extending from the outer margin of the ring respectively at diametrically opposite points thereon, said ring being permanently incorporated in the barrel structure around said fixture, said strips being adapted to be folded over said bung and permanently connected together to seal the bung in place.

2. In a bung sealing means, a barrel structure having a bung fixture and bung for closing the opening in said fixture, and a form made of a single piece of thin sheet metal shaped to have an anchor member and oppositely extending seal strips, said member being permanently incorporated in the barrel structure about said fixture, and said strips being disposed to be folded over said bung and permanently connected together to seal the bung in said fixture.

3. In a sealing means, a barrel having a bung fixture and bung therein, a form made of a single piece of thin sheet metal providing an anchor member that is incorporated in the barrel structure about its bung fixture, and opposite integral seal strips one of which has at its outer end a sheath to receive the outer end of the other strip, so that upon folding said strips over said bung, inserting said other strip into said sheath and then mutilating side portions of the sheath and strip therein, said bung is sealed in place.

4. A seal for the bung of a barrel consisting of an anchor member and oppositely disposed seal strips formed of a single piece of thin sheet metal, one of said strips having at its outer end a sheath to receive the outer end of the other strip, said seal being so disposed that when said member is incorporated in a barrel structure about the bung fixture thereof, a bung placed in said fixture is sealed therein upon folding said strips over the bung, inserting said other strip in said sheath and then mutilating portions of the sheath and inserted strip.

5. In an original package sealing means, a package having a bung fixture and bung closing the opening therein, an anchor member permanently connected with said package about said fixture, oppositely extending seal strips integral with said member adapted to be folded over the top of said bung, and means for permanently securing the folded ends of said strips together to thereby seal said bung in place.

In testimony whereof I affix my signature.
THEODORE W. RIEKE.