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E. G. MELRATH

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BARREL OR DRUM FLANGE UNIT

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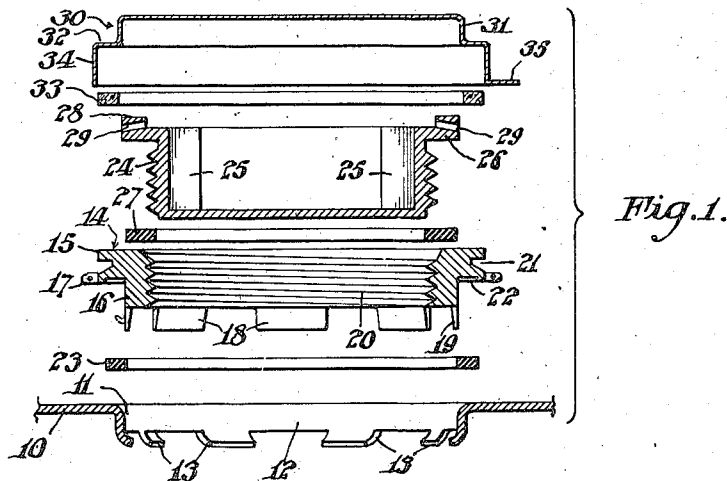


Fig. 1.

Fig. 2.

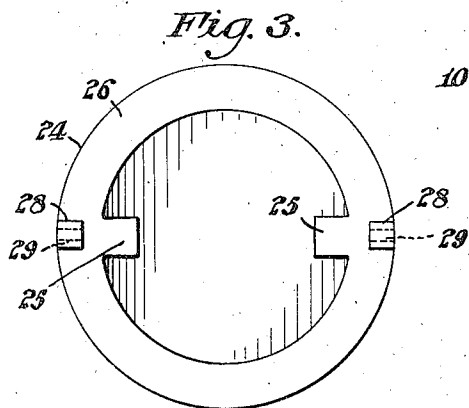


Fig. 3.

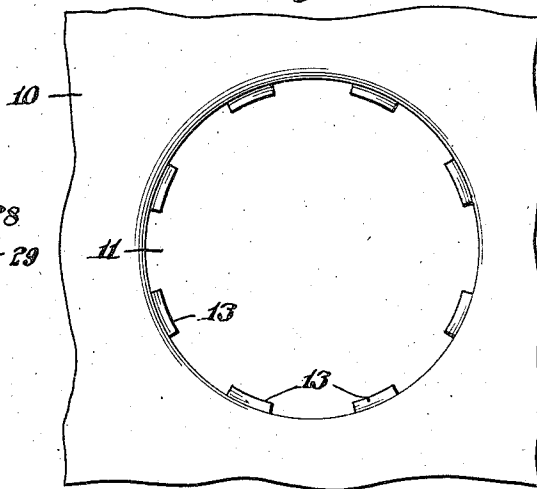
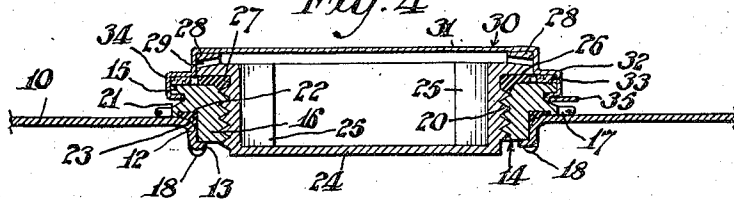


Fig. 4.



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UNITED STATES PATENT OFFICE

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BARREL OR DRUM FLANGE UNIT

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Application October 2, 1935, Serial No. 43,138

1 Claim. (Cl. 220—39)

My invention relates to new and useful improvements in a barrel or drum flange unit consisting of sput of unique construction, a bung having threaded engagement with the sput and a sealing cap co-acting with said bung and sput which must be destroyed before the bung can be removed to obtain access to the contents of the barrel or drum.

The present invention embodies the features of the sput set forth in my co-pending application Ser. No. 19,643, filed May 3, 1935.

One of the objects of this invention is to provide an assembly of parts that make a unit for connection with a metal barrel or drum.

Another object of the invention is to provide sealing of the several joints between the elements of the unit whereby leakage is prevented.

A further object of the invention is to construct the parts in such a manner that the perimeter of the cap is turned into a groove so that said cap cannot be removed without mutilation.

With these and other objects in view, this invention consists of the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawing forming a part of this application, in which:

Fig. 1 is a sectional view of the several parts or elements constituting the invention illustrated in separated relation.

Fig. 2 is a fragmentary outer face view of a wall of the barrel or drum to which the sput is to be fastened.

Fig. 3 is an outer end view of the bung.

Fig. 4 is a sectional view of the sput unit assembled on a drum wall.

In carrying out my invention as herein embodied, 10 represents a wall of a container, such as the head or head plate of a metallic or partially metallic barrel or drum, but it is to be understood that the use of the terms "head" or "head plate" is to in no way limit the use or place of use of the invention and also the use of the terms "barrel" and "drum" is not to be taken as limiting the application of the invention to only these types of containers.

The wall or plate 10 has a round hole 11 surrounded by an inwardly projecting annular lip 12 having sections severed therefrom, inward

from its edge, to produce several spaced tongues 13, projecting radially inwardly and which are preferably equi-distantly spaced although this feature is not absolutely essential, as they may be irregularly spaced if the co-operating elements, to be presently described, are likewise so spaced. Whenever used in the description and claims for this invention the word "several" is to be considered as meaning more than two.

The sput, denoted as a whole by the reference character 14, consists of a circular body 15 having a shank or neck 16 depending from the inner circumference thereof thereby producing a shoulder or seat 17 exteriorly of and surrounding the neck.

Spaces substantially the same width as the tongues 13 on the lip of the container wall, are formed in the edge of the neck 16 to provide several spaced apart tongues 18 on the inner end of said neck which will register with the spaces between the tongues 13 on the lip 12 as will be later explained, and these tongues are preferably beveled or skived on their inner faces outward toward their lower edges when considered in connection with the illustration in Fig. 1, as at 19. Of course the outer circumference of the neck 16, including the tongues 18, is tapered to provide the necessary "draw".

The body 15 and the upper portion of the neck 16 are interiorly threaded, as at 20, and said body 15 has a circumferential groove 21 formed about it.

In the shoulder or seat 17 contiguous the neck 16 is a facing groove 22 to receive a gasket 23 which will engage the corner between the container wall and its lip, and when said gasket is compressed, due to attaching the sput to the wall, said gasket will coat with considerable areas of the surfaces of the wall and its lip to produce an efficient seal which will make a practically non-leakable joint.

In assembling the sput, the neck 16 thereof is inserted in the hole 11 in the container wall 10 with the tongues 18 of said sput in alignment with the spaces between the tongues 13 of the container wall lip and said tongues 13 in alignment with the spaces between the sput tongues 18. With the tongues of the two main elements of the invention positioned as above described, those on the sput are turned outward over the edge of the container wall lip between the tongues 13 thereof, as illustrated in Fig. 4, while the tongues of said container wall lip are turned inward over the edge of the sput neck between the tongues of the latter. This interlocks the

tongues and absolutely prevents the sput from rotating, which is particularly essential where a screw threaded bung is to be used. The tongues of the sput fasten the latter in place on the container wall so that said sput cannot be withdrawn. The turning over of the tongues during assembly draws the sput seat 17 tight against the outer face of the container wall and fixes the gasket 23 in position.

10 In actual practice, the lip is produced from the container wall so as to lie at right angles to said wall and the tongues formed on the lip project radially therefrom toward the center of the hole which is surrounded by said lip. This
15 positions the container tongues in a plane parallel with but spaced from the wall proper. Now when the sput is placed in the hole, said sput is rotated not more than one-eighth of a turn until the tongues thereon enter between the
20 tongues of the container.

A hollow or chambered bung 24 is exteriorly threaded for screwing into the sput to close the bung hole formed by said sput and inside of the chamber are lugs 25 to be engaged by a tool for
25 turning the bung. At the upper or outer end of the bung is a rim 26 which overlies the outer end of the sput with a gasket 27 between them to seal the joint. On the outer face of the rim 26 are formed projections 28 through which holes
30 29 are made permitting the bung to be wired in place if desired.

The outer end of the bung is enclosed by a cap 30 having a crown 31 which telescopes over the exposed portion of the bung, a brim 32 disposed over the outer face of the sput, beyond
35 the circumference of the gasket 27, with a gasket 33 interposed between them and a skirt 34 telescoping over a portion of the outer edge of the sput body. With the parts in position as outlined above the edge of the skirt is turned over
40 into the groove 21 so that said edge of the skirt lies flat against the under face of the top wall of the groove 21 and terminates flush with the inner wall of said groove as shown in Fig. 4. This arrangement practically prevents the
45 turned over edge of the skirt from being gripped and bent out by any tool, wherefore the contents

of the container cannot be tampered with without an indication thereof. In order to facilitate removal of the cap by an authorized person, a tab 35 is formed with the skirt of said cap and projects outside of the groove 21 parallel to the
5 turned over edge whereby easy access may be had thereto. By pulling on the tab, the cap will be torn and mutilated to such an extent that an opening will be formed to permit insertion of an instrumentality for the complete removal of
10 the cap. After the cap has been taken off, the bung can be unscrewed from the sput as usual.

From the foregoing it will be obvious that I have provided a simple; inexpensive flange unit, the elements of which coact to produce an efficient seal. Particular attention is called to the
15 fact that the joint between the sput and container wall is sealed with a gasket, the joint between the bung and sput is likewise sealed with a gasket as is also the joint between the cap and
20 the sput.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the
25 limits of the appended claim without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is:

In structure of the kind described, a container having an opening in a wall thereof, a sput
30 mounted upon said opening and having a body seated upon the container wall around said opening, said body being recessed circumferentially, a closure plug adapted to be inserted in said sput and having a rim overlapping the sput body, a
35 gasket resting on the body of the sput and centered by the rim of the closure plug, and a cap including a crown covering and loosely fitting over the outer end of the closure plug, a brim extending from said crown and engaging the
40 gasket, and a skirt projecting from the brim and surrounding said gasket, the lower portion of said skirt being turned inwardly into the recess to fix the cap to the sput and thereby clamp the gasket between the brim of the cap and the body
45 of the sput.

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