Oct. 29, 1929. W. R. MILLER 1,733,549

HEAD FOR STEEL CONTAINERS

Filed April 12, 1928

Fig. 1.

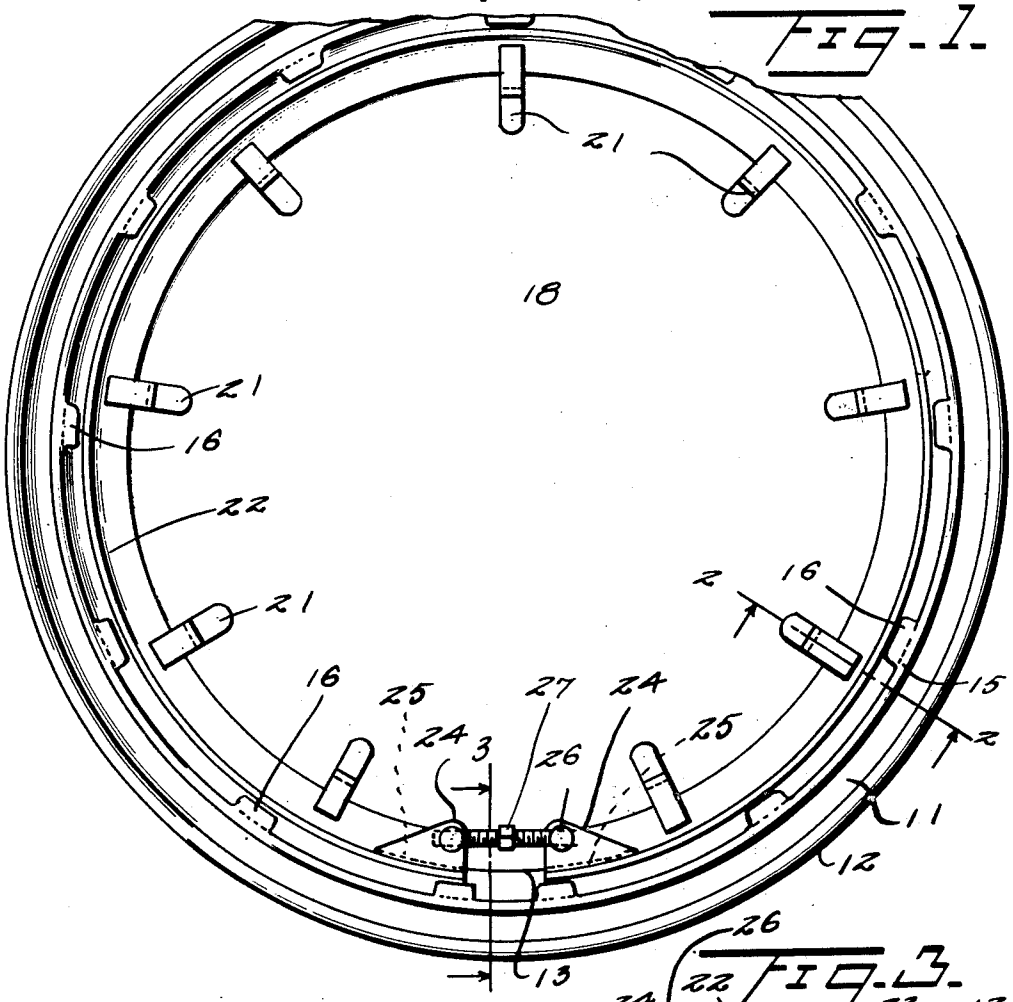


Fig. 2.

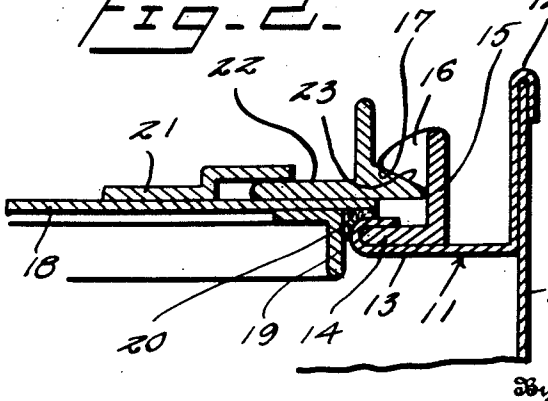
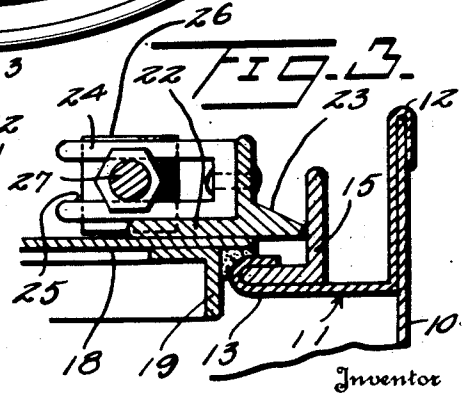


Fig. 3.



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UNITED STATES PATENT OFFICE

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HEAD FOR STEEL CONTAINERS

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This invention relates to heads for steel containers and more particularly to a device of this character which is removable.

An important object of the invention is to provide a construction such that when the head is in applied position, a tight seal is provided and, at the same time, the head may be rapidly and easily removed.

A further object of the invention is to provide in a device of this character a construction such that the container is left substantially free, so far as the head mounting is concerned, of internal seams in which the contents of the container may collect to erode and foul the same.

These and other objects I attain by the construction shown in the accompanying drawing, wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein:—

Figure 1 is a plan view of a container having a head constructed in accordance with my invention applied thereto;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1.

Referring now more particularly to the drawing, the numeral 10 generally designates the wall of a cylindrical steel container, to the upper end of which, in accordance with my invention, I interiorly apply a sheet metal angle 11, one flange of which is rolled over the upper end of, or otherwise secured to, the container wall, as indicated at 12, and fits tightly thereagainst.

Seated upon the second flange 13 thereof is a stationary latch ring in the form of an angle iron, one flange 14 of which seats upon the flange 13 of the sheet metal angle and the other flange 15 of which extends vertically and is provided at its upper or free end, either continuously or at intervals, with enlargements 16 overlying the flange 14 and having their bottom faces inclining downwardly and outwardly. These heads form wedge elements, as will hereinafter appear.

The stationary latch ring is preferably held in applied position by reverting the inner edge of the flange 13 of the sheet metal angle over the inner edge and upon the upper surface of the flange 14 of the ring. The cover proper comprises a metallic disk 18 of greater diameter than the internal diameter of the flange 14 and of such diameter that it may pass the inner edges of the head 16. Secured to the lower face of this disk is a downwardly projecting guide flange 19 adapted to closely approach the inner edge of the flange 14. The exposed rim between this flange and the edge of the disk forms a seat for a gasket 20 which, in the applied position of the cover, will rest upon the reverted portion of the flange 13 of the sheet metal angle iron.

Secured to the upper surface of the cover are a plurality of radially extending retainer strips 21, the outer ends of which are offset upwardly from the disk and receive therebeneath a split extensible latch band 22.

This band preferably has its outer end edge beveled, as at 23, to correspond to the inclination of the under surface of the heads 16 and has secured thereto at the ends thereof mounting blocks 24 which are horizontally slotted, as indicated at 25, and have rotatably directed therethrough vertically extending pins 26. These pins have in alignment with the slots oppositely threaded openings receiving the oppositely threaded ends of a rotatable lock bolt 27.

It will be obvious that by rotating the locking bolt 27, the split band may be expanded or contracted. When fully contracted, this band has an outer diameter similar to that of the disk and when fully expanded, it has a greater diameter so that when the lid is placed in position and this band expanded, the tapered outer edge thereof, indicated at 23, will be forced beneath the tapered faces of the heads, wedging the lid or cover downwardly so that the gasket 20 is compressed and a tight seal provided about the edges of the cover. This same operation locks the cover in position. By the structure recited, a thorough seal is provided for the container and is provided without the production of any inaccessible joints in which the contents of the container may collect. Erosion of the stationary locking band or of the expansible locking band is prevented by reason of the

fact that the seal is made against that portion of the stationary locking band which is protected by the reverted portion of the sheet metal angle.

Since the construction hereinbefore set forth is capable of a certain range of change and modification without materially departing from the spirit of the invention, I do not limit myself to such specific structure except as hereinafter claimed.

I claim:—

1. In combination with a container, a stationary locking ring carried by the walls of the container at the upper end thereof, means associated with the locking ring providing inclined faces overlying the locking ring outwardly of the inner edge thereof, a cover comprising a disk adapted to clear said means and seat upon the inner edge of the locking ring, a split expansible locking ring carried by said cover having beveled faces for coaction with the beveled faces of said means to force the cover downwardly toward the stationary locking ring, said locking ring having inwardly extending pairs of vertically spaced flanges paralleling the disk at opposite sides of the split thereof, vertically extending pins rotatably engaged in said flanges and a locking bolt having oppositely threaded ends having threaded engagement with said pins.

2. In combination with a container having an annular seat, a cover to engage said seat and coacting means upon the cover and seat for forcing the cover downwardly upon the seat, the means upon the cover comprising a split expansible locking ring, a member rotatably mounted upon each of the ends of said ring and extending perpendicularly to the general plane of the ring, and a locking bolt having oppositely threaded ends, said rotatable members each having a threaded opening formed therethrough in which an end of the locking bolt is engaged.

In testimony whereof I affix my signature.

WALTER R. MILLER.