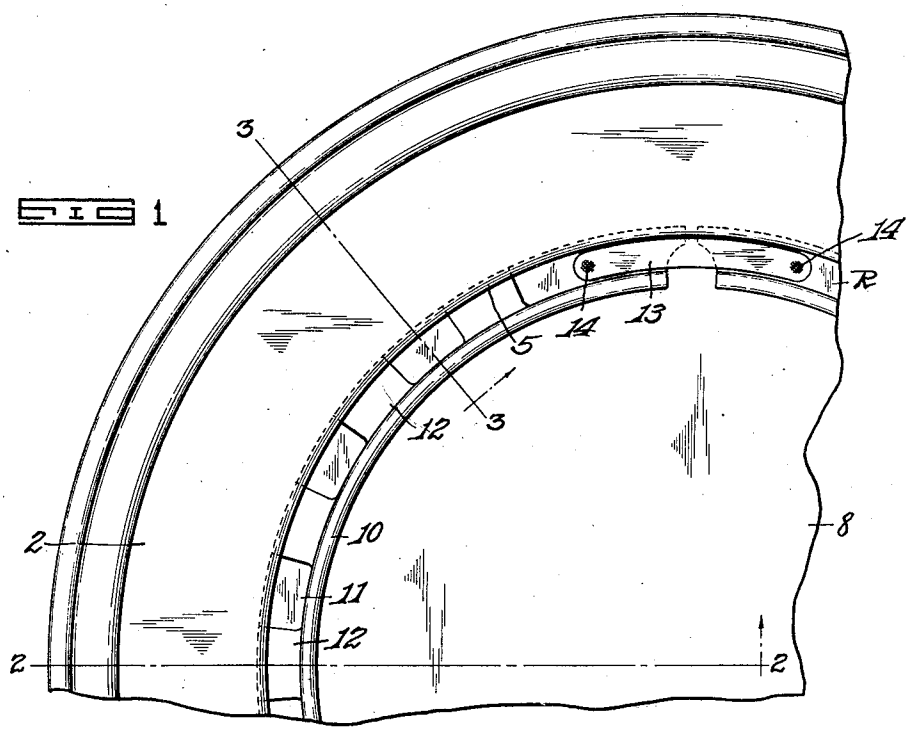
Sept. 22, 1931. C. H. ROLLASON 1,824,733

CLOSURE RETAINING DEVICE FOR DRUMS

Filed Dec. 5, 1930

FIG 1



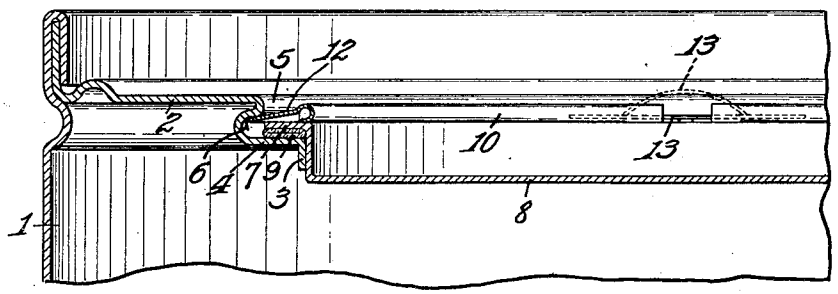
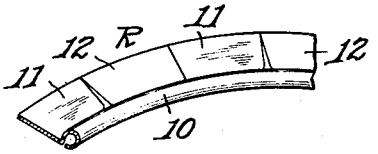


FIG 2

FIG 4



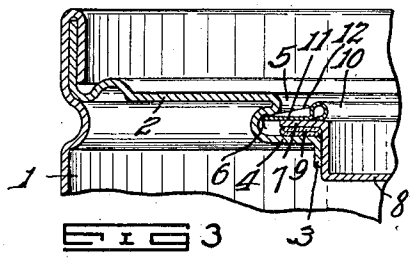


FIG 3

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Patented Sept. 22, 1931 1,824,733

UNITED STATES PATENT OFFICE

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CLOSURE RETAINING DEVICE FOR DRUMS

Application filed December 5, 1930. Serial No. 500,235.

This invention relates broadly to sheet metal drums, and more specifically to a cover-attaching means for such drums.

The primary object of the invention is to provide a simple and inexpensive form of device whereby the removable covers employed in the heads of barrels and drums are firmly retained in their closing positions.

A further object is to provide an expansible cover-retaining ring of simple construction which may readily and conveniently be expanded into and retracted from its operative position.

In describing the invention in detail, reference is herein had to the accompanying drawings, in which—

Figure 1 is a plan view of a fragmentary portion of the head end of a barrel or drum, illustrating the application of my invention;

Figures 2 and 3 are sections taken, respectively, on lines 2—2 and 3—3, Fig. 1; and—

Figure 4 is a perspective view of a broken section of the invention.

Referring to said drawings, 1 designates the body, and 2 the head of a sheet metal barrel or drum, said head having therein a circular opening through which access is had for the removal of the contents of the drum. Said opening is defined by a downwardly directed terminal flange 3 formed on a horizontal ledge 4 which occupies a level spaced downwardly from that of the head 2, as shown.

Formed in said head intermediate the plane thereof and the outer portion of the ledge 4 is an inwardly directed bead 5 which overhangs said outer portion of the ledge, presenting a downwardly facing shoulder 6 that occupies suitably spaced relation to said ledge, as shown.

Said ledge 4 is designed for the reception thereon of an outwardly directed annular flange 7 formed on a closure 8 which is adapted to be removably mounted within the close embrace of the opening-defining flange 3 of the head, a gasket 9 being preferably interposed between said flange 7 and said seating ledge.

For depressing said closure 8 into firmly seated relation to said ledge 4, or for compressing the interposed gasket 9, and for securely retaining said closure in place, an expansible and contractible split ring, designated generally by the character R, is provided. Said ring is constructed of sheet metal and possesses a novel form, being shaped from a flat sheet metal blank and being adapted, as it is expanded, to enter in partially underlying relation to the shoulder 6.

Provided about the inner periphery of said ring and occupying a position in and above the bottom plane of said ring is a continuous stiffening roll or bead 10. The body of said ring is shaped throughout its length to provide a succession of short alternately disposed flat panels 11 and inclined panels 12, the former being located in a common horizontal plane and the latter being formed by thrusting upward relatively spaced lengths of said body to occupy planes which incline from said horizontal plane at or adjacent to the outer periphery of the ring to approximately the plane of the top surface of said bead 10. Thus, said ring in effect constitutes a wedge which, entered as aforesaid beneath the shoulder 6, acts as it is expanded to depress the closure 8 and its flange 7 relative to the seating ledge 4 of the head 2.

To provide means whereby said split ring may conveniently be expanded into closure-retaining position, a strap 13, preferably of soft malleable iron, normally having upwardly arched form, as shown in dotted lines in Fig. 2, is mounted upon the upper surface of said ring in connecting relation to the meeting ends of the latter, its opposite ends being suitably attached to the opposite meeting ends of the ring, as by welds indicated at 14, Fig. 1. In its said arched form, said strap 13 maintains the ring contracted to the extent that it is readily entered past the ledge-overhanging bead 5 of the drum head to a position wherein it rests upon the closure flange 7. The ring is then expanded by flattening the arch of said strap, effected by downwardly directed blows of a hammer or mallet applied thereto.

To effect withdrawal of the retaining ring, the latter is contracted by means of a suitable instrument adapted to be introduced be-

neath the flattened strap and employed to bend the latter upward for drawing the ring ends together.

What is claimed is—

1. A closure retaining device comprising a split expansible ring of sheet metal shaped to provide a plurality of alternate horizontal and inclined panels, the inclined panels inclining upwardly toward the inner peripheral edge of the ring from the plane of the horizontal panels at points adjacent to the outer peripheral edge of the ring.

2. A closure retaining device comprising a split expansible ring of sheet metal shaped to provide a plurality of alternate horizontal and inclined panels, a bead formed about the inner peripheral edge of said ring and disposed in and above the plane of said horizontal panels, the inclined panels extending upwardly toward the plane of the top surface of said bead from the plane of the horizontal panels adjacent to the outer peripheral edge of the ring.

3. A closure retaining device comprising a split expansible ring of sheet metal shaped to provide a plurality of alternate horizontal and inclined panels, a bead formed about the inner peripheral edge of said ring and disposed in and above the plane of said horizontal panels, the inclined panels extending upwardly toward said bead from the plane of the horizontal panels at or adjacent to the outer peripheral edge of the ring.

4. A closure retaining device comprising a split expansible ring of sheet metal shaped to provide a plurality of alternate horizontal and inclined panels, a bead formed about the inner peripheral edge of said ring and disposed in and above the plane of said horizontal panels, the inclined panels extending upwardly toward said bead from the plane of the horiznotal panels at or adjacent to the outer peripheral edge of the ring, and a metal strap mounted upon and connecting the meeting ends of said ring, said strap normally having upwardly arched form and being adapted to be flattened for expanding said ring.

5. A sealing device for the closures of containers having seating ledges with overhanging shoulders, said closures having flanges for resting upon said seats, said device comprising a split sheet metal ring having an inner peripheral bead and having the body thereof shaped to form a plurality of alternate horizontal and inclined panels, the inclined panels extending upwardly toward said bead from the plane of the horizontal panels at or adjacent to the outer peripheral edge of the ring, said inclined panels being adapted to ride against the said overhanging shoulder to effect depression of said ring during expanding movements of the latter.

6. A sealing device for the closures of containers having seating ledges with overhanging shoulders, said closures having flanges for resting upon said seats, said device comprising a split sheet metal ring having an inner peripheral bead and having the body thereof shaped to form a plurality of alternate horizontal and inclined panels, the inclined panels extending upwardly toward said bead from the plane of the horizontal panels at or adjacent to the outer peripheral edge of the ring, said inclined panels being adapted to ride against the said overhanging shoulder to effect depression of said ring during expanding movements of the latter, and a malleable metal strap attached to and connecting the meeting ends of said ring, said strap normally having upwardly arched form and being adapted for flattening to effect expansion of said ring.

In testimony whereof, I affix my signature.

CHARLES H. ROLLASON.