

E. W. STODDARD.
 RETAINER FOR CONTAINER CLOSURES.
 APPLICATION FILED MAY 14, 1914.

1,198,166.

Patented Sept. 12, 1916.

Fig. 1

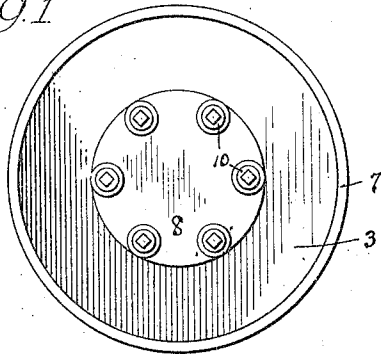


Fig. 5

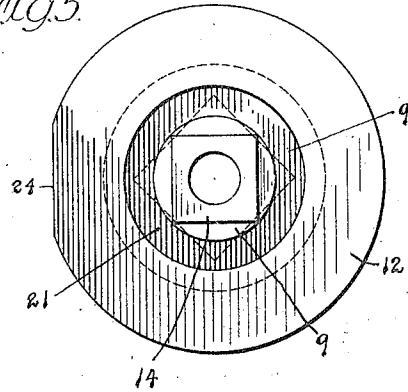


Fig. 2

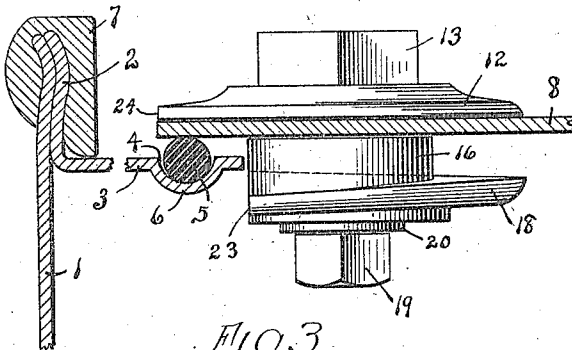


Fig. 4

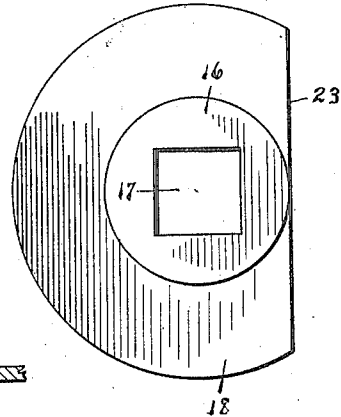
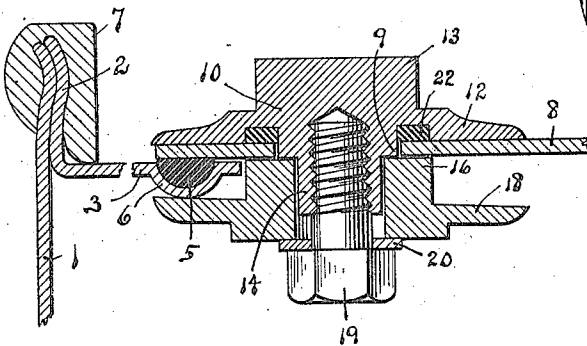


Fig. 3



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UNITED STATES PATENT OFFICE.

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RETAINER FOR CONTAINER-CLOSURES.

1,198,166.

Specification of Letters Patent. Patented Sept. 12, 1916.

Application filed May 14, 1914. Serial No. 838,431.

To all whom it may concern:

Be it known that I, EDWARD W. STODDARD, a citizen of the United States, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Retainer for Container-Closures, of which the following is a specification.

This invention relates to means for securing removable closures for barrels, kegs and other containers, in position, and its object is to provide a closure retainer which shall be simple, strong and reliable, and which can be manufactured at comparatively low cost.

This invention consists, in combination with a container having an inwardly extending circumferential flange partially closing one end or side, of a closure adapted to extend over the inner edge of said flange, and a series of retainers revolubly mounted on the closure and adapted to position the closure on the flange, said retainers being provided with circumferential wedges to engage the inner or lower side of the flange of the container to secure the closure in position.

In the accompanying drawing, Figure 1 is a plan of a cylindrical container provided with a closure or head held in position by my improved retainers. Fig. 2 is an elevation of my improved retainers. Fig. 3 is a vertical section thereof. Figs. 4 and 5 are plans of the lower and upper members, respectively, of this retainer.

Similar reference characters refer to like parts throughout the several views.

While this closure retainer is especially adapted for barrels containing liquids, it is not limited thereto, but may be used on receptacles of any desired form. The diameter of the closure may have any desired proportion to that of the container, and the number of the retainers employed will depend upon the work to be done. The container shown in the drawings is a barrel having a body 1, an annulus consisting of an upturned flange 2 and a flat flange 3, provided, if desired, with a groove 4 to receive the packing ring 5, the groove being formed by pressing down the bead 6. A circumferential clamp 7 may be employed to unite the annulus to the body.

The closure or head 8, usually a circular plate, is of sufficient size to extend over the inner edge of the flange 3, and if a packing ring 5 is employed, is sufficiently large to

extend over that also. It is formed with holes to receive the hubs 9 of the upper members 10 of the revoluble retainers. Each member 10 also has a flange 12, a head 13 to receive a wrench, and an extension 14, preferably square, to connect to the lower member of the retainer.

The lower member has a cylindrical body 16 provided with a proper hole 17 to receive the extension 14 of the upper member. A circumferential wedge or cam 18 extends from the body 16, as shown in Figs. 2, 3 and 4. A screw 19 extends into the threaded bore of the extension 14 and locks the two members together. A washer 20 may be employed if desired. It will be noticed that a portion of the wedge or cam 18 is cut away so that the edge 23 will be tangential to the body 16 at the highest and lowest points of the wedge. The retainers are so positioned on the head or closure that the bodies 16 will neatly position the closure on the flange 3.

If desired, the upper members 10 may be provided with grooves 21 to receive packing rings 22, to prevent leakage around the hubs 9.

In order to secure the head or closure in position, the retainers are all turned until the edges 23 of the lower members are substantially parallel to the adjacent edge of the head or closure. The flange 12 may be marked to indicate such position, or a short flat place 24 formed on the flange 12, as shown in Fig. 5, if desired. When the retainers are thus positioned, their lower members may all pass down through the opening in the flange 3, their cylindrical bodies 16 permitting but slight lateral movement of the closure. The retainers are then turned, by means of a wrench engaging the heads 13, to bring the circumferential wedges or cams into engagement with the lower or inner side of the flange 3, the bead 6 being engaged, if present. This will force the closure 8 against the upper or outer side of the flange 3, compressing the packing ring 5, if present. The flanges 12 of the retainers serve to stiffen the closure.

I claim:

1. The combination with a sheet metal container having near one end a grooved inwardly extending flange, a resilient packing ring mounted in said groove, a closure of larger diameter than the inner diameter of said flange adapted to rest on said packing

ring, and a series of revoluble retainers carried by said closure, each formed of outer and inner portions, each outer portion consisting of a hub extending through a hole in the closure and having a polygonal outer end whereby the retainer can be turned and a circumferential flange extending radially therefrom, the inner portion of each retainer being slidably but non-revolubly mounted on its hub and having a radial flange in the form of a circumferential wedge cut away at one side to permit the wedge to pass down within the flange on the container, and means to rigidly secure the two parts of the retainer together.

2. The combination with a sheet metal container having near one end a grooved inwardly extending flange, a resilient packing ring mounted in said groove, a closure of larger diameter than the inner diameter of said flange adapted to rest on said packing ring, and a series of revoluble retainers carried by said closure, each formed of outer and inner portions, each outer portion con-

sisting of a hub extending through a hole in the closure and having a polygonal outer end whereby the retainer can be turned and a circumferential flange extending radially therefrom, the inner portion of each retainer being slidably but non-revolubly mounted on its hub and having a radial flange in the form of a circumferential wedge cut away at one side to permit the wedge to pass down within the flange on the container, means to rigidly secure the two parts of the retainer together, said outer portions of the retainers being formed with circumferential grooves in the faces of the flanges adjacent the closure, and packing rings mounted in said grooves.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWARD W. STODDARD.

Witnesses:

EDWARD N. PAGELSEN,
HUGO W. KREINBRING.