

Nov. 16, 1937.

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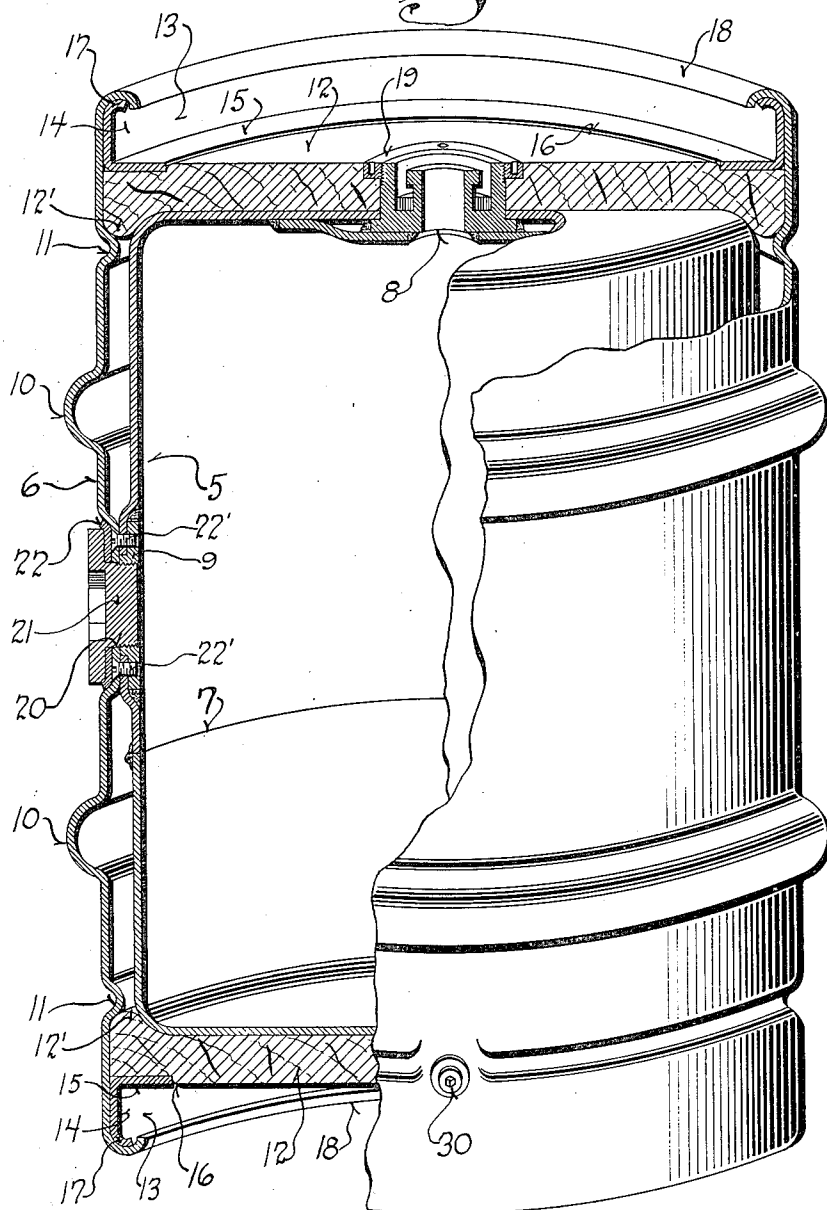
2,099,113

BARREL

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2 Sheets-Sheet 1

Fig. 1.



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Fig. 2.

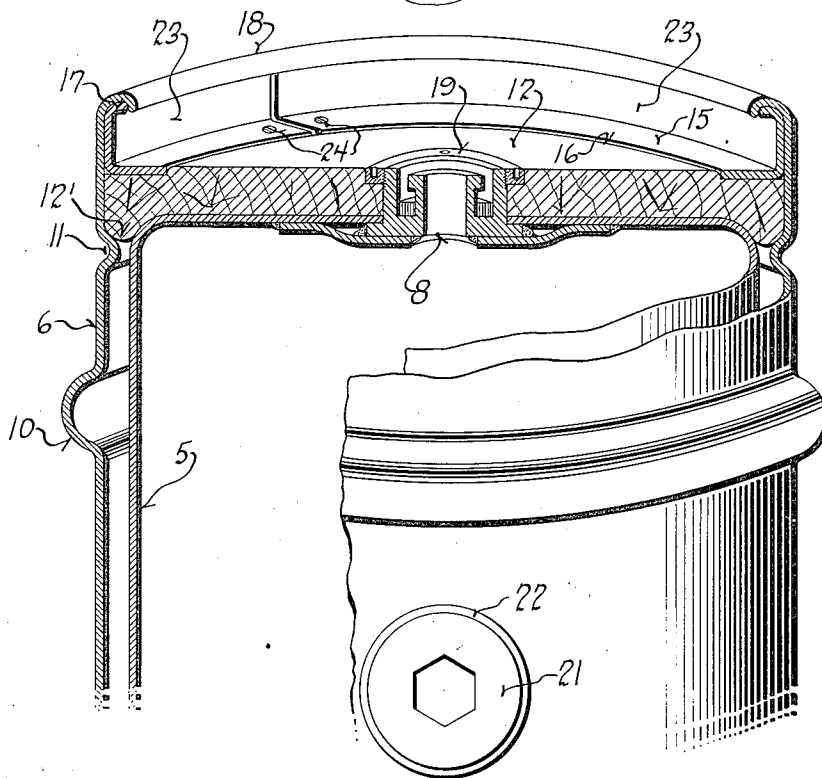
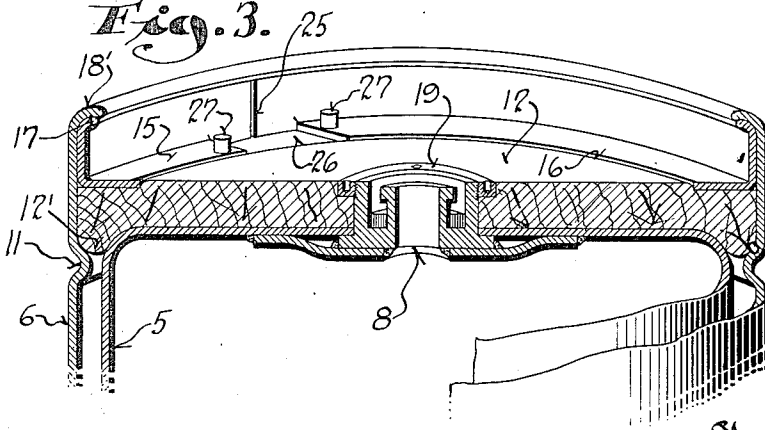


Fig. 3.



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UNITED STATES PATENT OFFICE

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BARREL

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3 Claims. (Cl. 220-10)

This invention relates to certain new and useful improvements in barrels and refers more particularly to metal beer barrels.

Barrels of this type comprise an inner container within an outer shell spaced from the inner container to afford insulation. Heretofore, these two component parts of the barrel have been permanently connected by welding which made it extremely difficult to open the barrel for the purpose of repairing leaks.

To avoid this difficulty, this invention has as one of its objects to provide a barrel in which the inner and outer shells are readily detachably connected.

Another objectionable feature of past barrel constructions is the necessity for driving the bung in place. This had a tendency to loosen the pitch from the inner walls of the barrel. The present invention overcomes this objection by the provision of a threaded cap or closure for the bung opening.

In this connection, it is an object of this invention to provide a construction at the bung opening, whereby the application of the closure plug or cap affords a tight readily releasable connection between the inner container and the outer shell.

With a view toward facilitating opening of the barrel for purposes of repair, and also to provide a cushioned or shock absorbing suspension for the inner container, this invention contemplates as another object the provision of removable wooden heads for the barrel, which engage the inner container to firmly hold the same against shifting with respect to the shell.

A further object of this invention resides in the provision of novel means for removably securing the wooden heads in place.

With the above and other objects in view, which will appear as the description proceeds, my invention resides in the novel construction, combination, and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated two complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a barrel embodying this invention, parts thereof being broken away and in section;

Figure 2 is a perspective view partly in section showing a modified embodiment of the invention; and

Figure 3 is a view similar to Figure 2, illustrating another modification of the invention.

Referring now more particularly to the accompanying drawings in which like numerals indicate like parts throughout the several views, the numeral 5 designates the inner container of the barrel and the numeral 6, the outer shell. The inner container is of conventional construction and consists of two end to end cup-shaped sections welded together as at 7.

The conventional practice both in wood barrels and in metal barrels is to line the interior with pitch. This requirement may be obviated by making the inner container of aluminum which, with the present construction, is entirely feasible as the outer shell is so constructed as to afford adequate protection for an aluminum inner container.

One end of the inner container has a tap fitting 8 secured thereto, through which the contents of the barrel are withdrawn in the conventional manner, and the side of the container is provided with the usual bung opening. Adjacent the opening, the inner container is pressed out to accommodate an internally threaded flanged collar 9 which is secured thereto. It is noted that the outer end of the collar is flush with the adjacent outer wall of the bulged container portion. This permits a close fit between the container and the shell at the bung opening without interfering with the free removal of the container from the shell.

The outer shell 6 consists essentially of a cylinder of sheet steel provided with annular reinforcing beads 10 encircling the medial portion of the barrel and smaller inwardly directed beads 11 near the ends of the barrel. The diameter of the outer shell is large enough to leave a substantial space between it and the inner container to afford an insulating space. This space may be left open or filled with a suitable insulating medium.

Closing the ends of the shell are wooden heads 12. These heads fit snugly within the shell and are provided with annular rounded flanges 17, which extend into the space between the container and the shell, contacting the peripheral edges of the container and the adjacent walls of the beads 11. The wooden heads thus hold the inner container against shifting with respect to the shell.

The wooden heads are removably secured in position by angle iron hoops 13 encircling the outer edge portion of the heads with their upstanding flanges 14 engaging the adjacent inner wall of the outer shell. The lateral flanges 15 of the hoops are preferably nested in annular recesses 16 in the heads, and the upstanding flanges which may be curled inwardly as at 17, are engaged under inwardly directed flanges 18

on the outer shell formed by curling the ends of the shell.

To open the barrel, the flange 18 at one end of the outer shell is curled back sufficiently to permit removal of the hoop and the wooden head, whereupon the inner container may be withdrawn.

To preclude the possibility of water leaking into the insulating space at the tap 8, the outer end of the tap has a ring nut 19 threaded thereon. The nut 19 is received in a suitable groove cut into the wooden head and upon being drawn tight, clamps the adjacent portion of the head against the end wall of the inner container to provide a fluid-tight connection.

Opposite the bung opening of the inner container, the outer shell is depressed and apertured as at 20 to accommodate a closure plug 21 which is threaded into the collar 9. The plug 21 has an enlarged head provided with a hexagonal socket. Between the enlarged head and the adjacent wall of the outer shell, a packing washer 22 is disposed. The washer 22 may be of lead or any other suitable material and affords a fluid-tight seal upon tightening of the plug. In this manner, the bung opening is closed in a convenient manner without necessitating objectionable pounding and the inner container and outer shell are securely locked together.

The inner container may be further secured to the outer shell adjacent the bung opening by a plurality of screws 22', passed through countersunk openings in the outer shell and threaded in tapped holes in the inner shell and flange of the collar 9. The screws 22' thus hold the inner container and outer shell firmly together when the plug 21 is removed to prevent water from entering the space between the inner container and outer shell during washing of the barrel.

In the event water does accumulate within the space between the inner container and outer shell, it may be drained by removing a drain plug 30 located at the bottom of the barrel.

The removable wooden heads 12 not only make it possible to conveniently remove the inner container, but also provide a cushioned shock absorbing suspension for the inner container. Also, by virtue of the degree of resilience, which wood has, it is possible to more rigidly secure the inner container against movement within the outer shell, as during the application of the wooden heads, they may be slightly compressed.

It is, of course, understood that while the use of wood for the heads is preferable, other materials which have characteristics similar to that of wood, may be employed without deviating from the spirit of the invention.

If desired, the hoops at the ends of the barrel may be formed in two half sections 23, as illustrated in Figure 2. By dividing the hoops into two separate sections, removal of the inner container is facilitated as it is only necessary to curl back a portion of the flange at the end of the outer shell. The wooden head may be destroyed to further facilitate the removal of the hoop sections 23. If desired, the hoop sections 23 may be secured to the heads by screws 24.

The removal of the hoops may be further facilitated by splitting them at one point as at 25 in Figure 3, and cutting back the adjacent ends of the lateral flanges 15 to leave a space 26. In this construction, the flange 18' of the outer shell extends down over the adjacent edge of the hoop

only a slight distance so that upon the application of a contracting force on the hoop by means of a suitable tool engaging studs 27 carried by the ends of the flange 15, the hoop may be sprung past the small ledge on the flange 18'. The annular recess 16 in the wooden head, together with the rim on the flange 18' normally holds the hoop in its expanded active position, but upon the application of sufficient contracting force, the hoop may be sprung past these ledges as will be readily apparent.

With the construction in Figure 3, it is necessary to destroy the wooden head after the hoop has been removed to permit complete disassembly of the barrel.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the art, that this invention affords a novel construction for barrels and particularly beer barrels.

What I claim as my invention is:

1. In a barrel including an inner container and an outer protecting shell, a removable head for the shell engaging the container and holding the same against shifting with respect to the shell, means to removably secure the head in the shell comprising, an inwardly directed flange on the end of the shell, a contractible hoop confined between said flange and the adjacent portion of the head, said flange having a rim on its inner portion past which the contractible hoop snaps during application and by which the hoop is held against accidental contraction.

2. In a barrel including an inner container and an outer protecting shell, a removable head for the shell engaging the container and holding the same against shifting with respect to the shell, means to removably secure the head in the shell comprising, an inwardly directed flange on the end of the shell, a contractible hoop substantially right angular in cross section confined between said flange and the adjacent portion of the head, said flange having a rim on its inner portion past which the contractible hoop snaps during application and by which the hoop is held against accidental contraction, and the head having a shoulder to engage the hoop and cooperate with the rim on the flange to hold the hoop in expanded position.

3. A metal beer barrel comprising an inner liquid-tight container formed entirely of metal, an outer protecting enclosure consisting of a substantially cylindrical metal shell encircling the inner container with a space therebetween, said shell being longer than the inner container so that the ends of the shell extend beyond the ends of the inner container, inwardly directed annular beads formed in the shell adjacent the ends of the inner container with the outer faces thereof spaced inwardly from the ends of the inner container, solid nonmetallic heads closing the ends of the shell and overlying the ends of the inner container, annular flanges on said heads extending into the space between the inner container and shell and having a snug engagement with the corners of the inner shell and the outer faces of said annular beads whereby the inner container is held against shifting and inward movement of the heads is limited by the beads on the outer shell, and means carried by the shell for removably holding said heads in place.

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