J. L. JOHNSTON.

Bung.

No. 221,827. Patented Nov. 18, 1879.

Fig. 1.

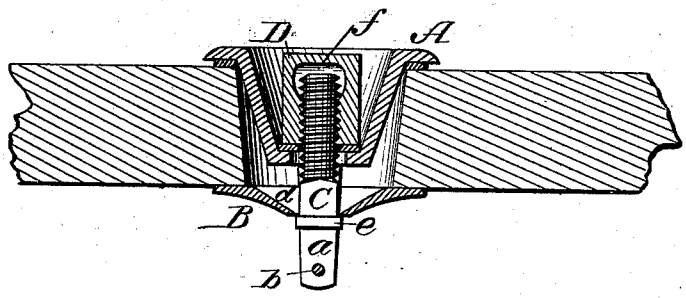


Fig. 2.

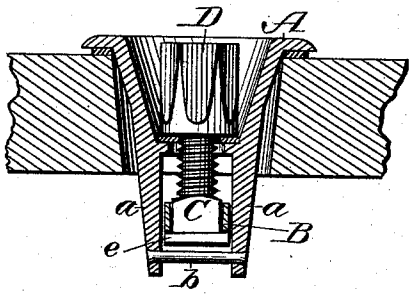


Fig. 3.

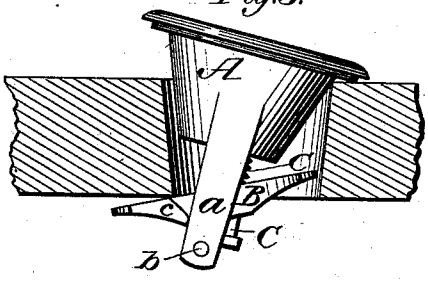


Fig. 4.

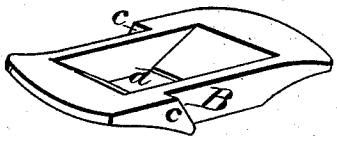
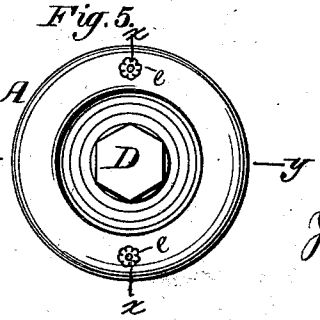


Fig. 5.



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JAMES L. JOHNSTON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BUNGS.

Specification forming part of Letters Patent No. **221,827**, dated November 18, 1879; application filed May 2, 1879.

To all whom it may concern:

Be it known that I, JAMES L. JOHNSTON, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Bungs, of which the following is a specification.

My invention relates to metallic bungs for casks and barrels; and it consists in a plug or cup adapted to be seated in the bung-hole, and provided with a yoke extending into the cask and carrying a cross-bar in which is mounted a central bolt, which serves to draw the cup to its seat and the cross-bar against the inner face of the cask; in a novel construction and arrangement of parts, whereby the bolt is prevented from dropping from its place or from rusting fast, and in other details more fully explained.

In the accompanying drawings, Figure 1 represents a longitudinal central section through my improved device on the line *x x* of Fig. 5; Fig. 2, a similar view on the line *y y* of the same figure; Fig. 3, a view illustrating the manner of inserting and removing the bung; Fig. 4, a perspective view of the cross-bar detached; and Fig. 5, a face view of the bung.

The objects of this device are to provide a bung which may be readily and properly applied to holes of different sizes, in which no part shall be capable of becoming detached and falling within the cask, in which the nut or bolt shall be firmly held against turning, in which the threaded portion of the bolt shall be protected and prevented from rusting fast, and in which the entrance of air and escape of gas shall be entirely prevented.

To this end the device consists of a conical plug or cup, A, provided with two arms, *a*, which extend inwardly through the bung-hole, and are united by a rod or stem, *b*, near their extremities, the arms serving to support and steady a tipping cross-bar, B, and the rod or stem serving to prevent its escape from between the arms.

The opposite sides of the cross-bar B are each provided with an inclined shoulder, *c*, which shoulders prevent the bar from passing endwise from between the arms *a*, but permit it to tip or swing freely therein. The cross-bar B is also formed with a central rectangular opening, *d*, to receive the square or rectangular portion of a threaded bolt, C, which is furnished with a head or enlargement, *e*, to bear against the rear face of the cross-bar, and is passed through the same, as shown in figs. 1 and 2, the ends of said opening being inclined to correspond with the shoulders *c*, in order that the bar may tip freely without coming in contact with the bolt C. The bolt C is prevented by the rod or stem *b* from dropping out of the bar B.

The threaded end of the bolt C is passed through a central opening in the plug or cup A, which is recessed in its face, as shown, and is furnished on the outside thereof with a nut or cap, D, by which the cup or plug A and the cross-bar B are drawn together.

The parts being thus constructed and arranged, the bung is applied to a cask or barrel by running the nut D back a sufficient distance to permit the cross-bar B to drop down or back between the arms *a*, when it is tipped therein, as in Fig. 3, and one end of the bar entered through the hole, as shown, the conical form of the plug or cup A permitting it to be tipped, so as to greatly facilitate the insertion of the bar. This being done, the cap or plug is pressed down to its seat, carrying the arm or bar B entirely through the hole, when it will swing into a position parallel with the face of the cask-head to which it is applied, or nearly so, its ends extending past the edges of the hole, as in Fig. 1.

By turning the nut tightly to place the cup or plug A is drawn firmly to place, and the end of the nut or cap D is likewise brought firmly to its seat, thus rendering the bung proof against the admission of air or escape of gas or liquid. In practice it is preferred to interpose a washer of leather or similar packing material between the caps and their seats, as shown.

In addition to facilitating the insertion of the bung, the conical form of the plug or cup A enables it to fit bung-holes of different diameters, which being always of circular form will be perfectly closed by the plug when drawn firmly to place.

In order that the screw-threaded portion of the bolt C which is actually traveled over by the nut D may not become rusty, the end of the nut or cap D is closed, and is provided

with an internal enlarged chamber *f*, in which is placed tallow, paraffine, or similar substance, which serves both as a preventive against rust and as a lubricant. The danger of rusting is still further averted by placing the nut outside of the cask where it cannot be acted upon by the contents thereof.

When it is desired to remove the bung, it is simply necessary to loosen the nut and run it partly off, when the bar may be tipped and drawn out as described. In order that the proper direction in which to tip the cup or plug may be at once determined I provide its face with suitable marks *e*, to indicate the position of the cross-bar B, as shown in Fig. 5.

Having thus described my invention, what I claim is—

1. The combination, in a device for closing bung-holes, of a cup or plug, A, having arms *a*, a cross-bar mounted and free to tip in said arms, and a nut and a bolt mounted in said cross-bar and adapted to draw the cap and bar together.

2. In combination with the cup or plug A, provided with connected arms *a*, and the tipping-block B, provided with shoulders *c* and opening *d*, the headed bolt C and nut D, substantially as shown.

3. In a bung, the combination of an internal support, an external plug or cap, a bolt connecting said parts, and a nut fitting and arranged to remain upon the bolt in removing the bung, and provided with an internal tallow-chamber surrounding the end of the bolt.

4. In a device for closing bung-holes, the combination of a plug or cup, a bar to extend across the hole on the interior of the cask, a bolt connecting the plug and bar, and an external nut applied to said bolt, substantially as shown.

JAMES L. JOHNSTON.

Witnesses:
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