(No Model.)

F. J. BATES.

METALLIC BUSHING AND BUNG.

No. 420,002. Patented Jan. 21, 1890.

FIG. 1.

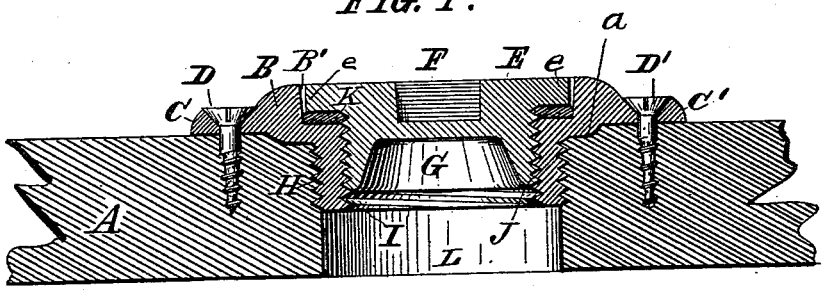
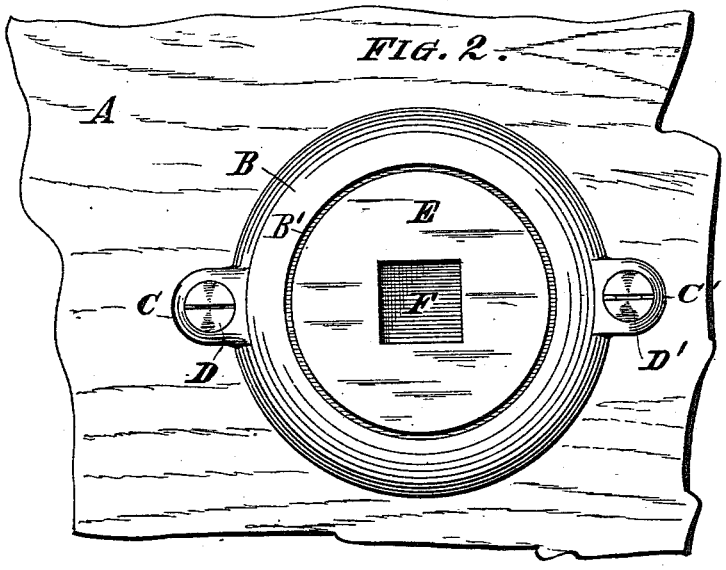


FIG. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRED J. BATES, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN F. DIEHL, OF SAME PLACE.

METALLIC BUSHING AND BUNG.

SPECIFICATION forming part of Letters Patent No. 420,002, dated January 21, 1890.

Application filed April 4, 1889. Serial No. 305,973. (No model.)

To all whom it may concern:

Be it known that I, FRED J. BATES, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on Metallic Bungs; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to improvements in metallic bushings and bungs for beer and other casks; and it consists, essentially, in the novel and peculiar combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claim.

In the drawings already referred to, which serve to illustrate my said invention more fully, Figure 1 is a transverse sectional elevation of my improved bushing and bung. Fig. 2 is a plan of the same.

Like parts are designated by corresponding letters of reference in both figures.

The object of this invention is the production of an efficient bushing and bung for beer and ale casks, cider-barrels, &c. The usual wooden bungs used in such casks are very expensive, owing to the fact that after they are once used in the casks or barrels and removed therefrom for cleaning they are usually damaged to such an extent as to render them unfit for further service. Another objection to such wooden bungs is the damage resulting to the bung-staves caused by withdrawing the bung, this being generally accomplished by striking the said stave near the bung until the latter is sufficiently started to be removed. To overcome these objections, I provide the bung-stave A with an opening L, of a size somewhat larger than those now made, and produce therein an internal screw-thread to receive the externally-screw-threaded portion H of a metallic bushing B, said bushing consisting of a body having laterally-projecting lugs C C′, punctured for the passage of wood-screws D D′, by means of which said bushing is prevented from rotating in the said stave A. In the face of this body is a shouldered depression B′ to receive the flanged portion *e* of the bung E, said bung consisting of a metallic body having an external screw-thread J, fitting the internal screw-thread I of the bushing, and a recess G underneath to relieve the bung from any excess of weight. In the face of this bung there is an angular recess F for the reception of a suitably-constructed wrench, (not shown,) by means of which said bung is inserted into and removed from said bushing B.

Between the shoulder of the recess B′ and the flange *e* of the bung is placed an elastic washer K, of rubber, leather, or other suitable material, so as to make a tight joint, it being understood that the bushing is fitted so tightly into the stave as to prevent escape of gases or liquids from that point.

The bushing is preferably made from malleable iron and the bung from common or gray iron, both metallic parts being improved by a coating of tin, zinc, or other metal.

The lugs C C′ form projections whereby the bushing may be taken hold of (by suitable implements) to screw the same into the bung-stave—an advantage not attained by the metallic bung-bushings now in use, which have a circular body and no projecting part whereby it may be handled.

Owing to the usual curvature of the staves of a cask there is difficulty in making a tight joint between the bung-stave A and the projecting flange B of the bushing. To overcome this difficulty, I form below said flange an annular projecting boss *a* and provide in the bung-stave A a corresponding recess or depression around the opening for the bush, whereby the annular boss will seat in said depression, and thereby make a positively-tight joint.

I am aware that metallic bungs and bushes have been made prior to my invention, and I do not therefore claim, broadly, such a device; but,

Having thus fully described my invention, I claim as new and desire to secure to me by Letters Patent of the United States—

The herein-described metallic bushing and bung, consisting, essentially, of a metallic body B, having punctured projecting lugs C C′, shouldered recess B′, and externally-screw-threaded portion H, and the bung proper hav-

ing the projecting flange *e*, externally-screw-threaded portion J to fit the internally-screw-threaded portion I of the bushing, recess G, and angular recess F, the said body B having below its face and adjoining the threaded portion H an annular boss *a*, fitting a corresponding depression around the bush-opening in said stave A, as and for the object set forth.

In testimony that I claim the foregoing as my invention I have hereto set my hand in the presence of two subscribing witnesses.

FRED J. BATES.

Attest:
MICHAEL J. STARK,
WM. O. STARK.