

J. C. BOYLE.
Lid or Cover for Vessels.

No. 221,150.

Patented Nov. 4, 1879.

Fig. 1.

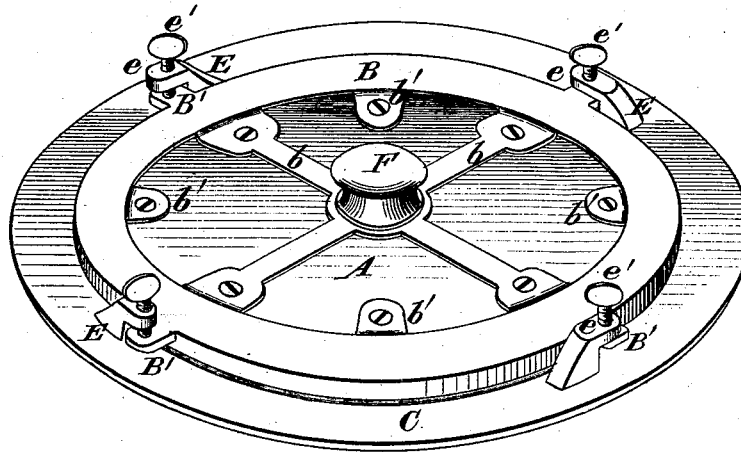


Fig. 2.

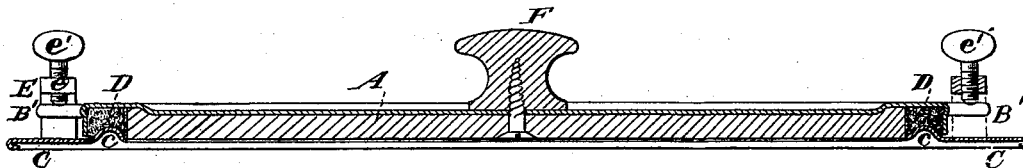
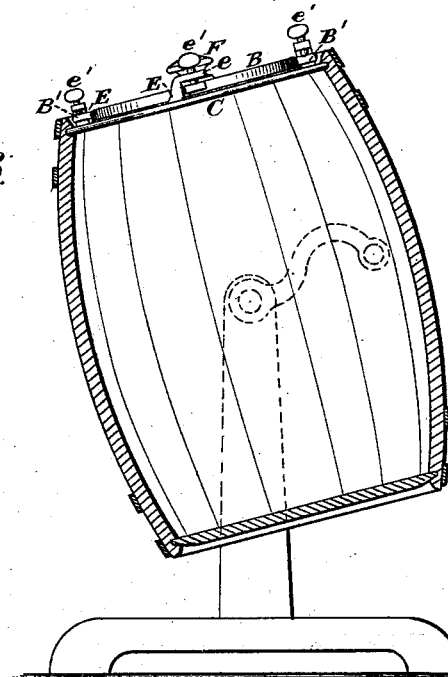


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES C. BOYLE, OF SYCAMORE, ILLINOIS.

IMPROVEMENT IN LIDS OR COVERS FOR VESSELS.

Specification forming part of Letters Patent No. **221,150**, dated November 4, 1879; application filed November 21, 1878.

To all whom it may concern:

Be it known that I, JAMES C. BOYLE, of the city of Sycamore, in the county of DeKalb and State of Illinois, have invented certain new and useful Improvements in Lids or Covers for Vessels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved lid for closing the receiving-orifices of barrel-churns, tanks, boxes, &c. Fig. 2 is a central vertical section of same; and Fig. 3 is a vertical section of a barrel-churn mounted upon a suitable frame, showing the lid secured in place.

Corresponding parts in the several figures are denoted by similar letters of reference.

This invention appertains to certain improvements in lids for closing the receiving-orifices of barrel-churns, boxes, tanks, &c.; and it consists, first, of a metallic ring or plate provided with ears and thumb-screws, in combination with a lid having lugs; and, secondly, of the lid having a metallic ring, with its outer portion bent downwardly to form, with the outer edge of the lid, a recess to receive a gasket of cork or other suitable packing, substantially as hereinafter more particularly described and claimed.

Heretofore lids for barrel-churns have been held in place by rods entering perforated ears upon the outer plate or ring, operated by an eccentric, which, in the operation of churning, have been found to be unsafe, by working loose and spilling the whole or part of the contents of the churn.

The object of my invention is to remedy this defect, and also to furnish the trade with a simple, durable, and efficient lid at a small cost.

In the annexed drawings, A marks a wooden lid, to which is secured, by means of the crucial arms *b* and lugs *b'*, the metallic ring B, having its outer portion bent downwardly

to form, with the outer edge of the lid A, a recess to receive a gasket of cork, rubber, or other suitable packing, D, said packing resting upon the rib or bead *c*, formed on the inner surface of the metallic ring or plate C.

On the outer edge of the ring B are lugs B', the purpose of which will be presently set forth.

Secured to the metallic ring C are a suitable number of ears, E having each a shoulder, *e*, projecting from the upper part of said ears, to form, with the surface of the ring C, a recess for the reception of the lugs B' of the ring B. These shoulders *e* are provided with a female screw, which receives a suitable thumb-screw, *e'*, the purpose of the latter being to secure or hold the lugs B' under the shoulders *e*.

A knob, F, is secured to the lid A, so that the latter can be easily handled.

The outer ring, C, rests in the groove made in the staves of a barrel that receives the ordinary head, as clearly shown in Fig. 3. This figure shows the lid secured in place in an ordinary barrel-churn mounted upon a suitable support or frame.

Operation: To remove the lid A from the outer ring, C, loosen the thumb-screws *e'*; turn the lid slightly to the left, which will remove the lugs B' from under the shoulders *e*, when the lid can be raised from the ring C. To secure the lid in place, rest the lid A upon the ring C, so that the lugs B' are in front or to the left of the shouldered ears E; turn the lid slightly to the right, which will bring the said lugs under the shoulders *e* of the ears E, when, by means of the thumb-screws *e'* pressing down upon the lugs, the lid will be securely held in place.

It will be seen that, by the gasket of cork or other packing being tightly pressed down on the rib or bead *c* of the ring C by means of the thumb-screws *e'* acting on the lugs B', a tight joint is formed.

When it is desired to use my lid upon box-churns, tanks, &c., the outer surface of the metallic ring or plate C is adapted to conform in shape to the box, &c., and is screwed or bolted to such receptacle, a rubber or other

packing having first been placed between the receptacle and ring to insure a tight joint.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A lid for boxes and barrels, &c., consisting of the flanged metallic ring B, having the projecting lugs B', head A, and gasket D, in combination with ring C, carrying the shoulders c,

and thumb-screws *c'*, substantially as shown and described.

In testimony that I claim the foregoing as my own I have affixed my signature in presence of two witnesses.

JAMES C. BOYLE.

Witnesses:

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