(No Model.)

W. DOBSON.

CHURN LID.

No. 243,866. Patented July 5, 1881.

Fig. 1.

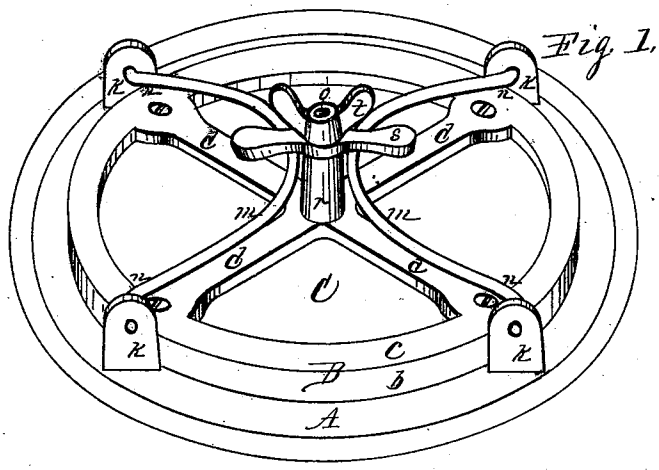


Fig. 2.

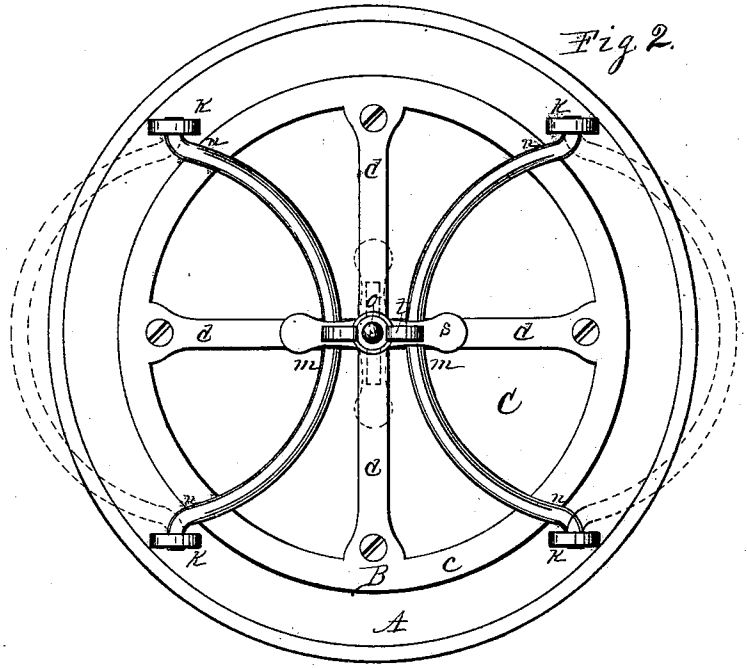
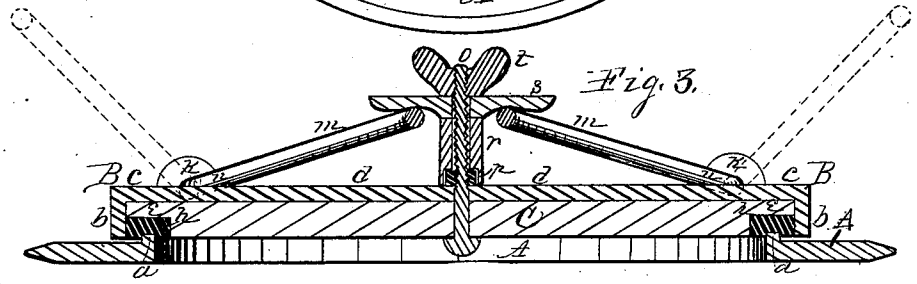


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM DOBSON, OF ROCKFORD, ILLINOIS, ASSIGNOR TO BLAKEMAN & DOBSON, OF SAME PLACE.

CHURN-LID.

SPECIFICATION forming part of Letters Patent No. 243,866, dated July 5, 1881.

Application filed May 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DOBSON, a citizen of the United States, residing at the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Churn-Lids, of which the following is a specification.

My invention relates to improvements in removable lids for churns or other vessels.

The object of my invention is to provide a cheap and reliable fastening for removable lids of vessels, especially vessels of barrel or other staved forms; and it consists, mainly, in the employment of pivoted levers of bale or handle form, in connection with a ring-head and removable lid, which, in connection with other improvements, will be hereinafter more fully described.

In the accompanying drawings, Figure 1 is an isometrical representation of a ring-head and removable lid mounted thereon, embodying my invention, of which Fig. 2 is a plan view, and Fig. 3 is a transverse vertical central section.

In the several figures, A represents a metallic disk-formed ring-head, circular in plan, provided with a central opening surrounded on its upper face by an uprising rim, *a*, designed to receive the packing of a removable head to form a close joint by compression. The outer edge of this ring-head is of suitable form to enter the groove or croze formed on the inner side of the end portions of the staves of which the vessel is formed, in substantially the same manner that heads are formed and placed in vessels of like form.

At B is represented a metallic ring formed of a vertical portion, *b*, and a horizontal portion, *c*, producing a ring in cross-section of angle-iron form, fitted to embrace the periphery, near the upper surface, of the outer portion of a suitable wood or other equivalent head. The horizontal portion *c* of this metallic ring is connected on opposite sides by suitable cross-arms, *d*, having their crossing center provided with an axial hole to receive a suitable axial bolt.

At C is represented a wood lid, fitted to enter within the vertical portion *b* of the metallic ring B of the removable head, and rest against the horizontal portion *c*, and the cross-arms *d*, to which it is suitably fixed by screws or otherwise. This wood lid is rabbeted on its outer under edge, forming a groove, *e*, between its rabbeted edge and the vertical flange *b*, in which a suitable packing, *h*, is placed in position to engage the uprising rim *a* on the inner edge of disk-like ring-head when the lid is in place thereon. The disk ring-head is provided with ears *k*, rising from its outer surface at substantially equal divisions thereon, which are perforated to receive the pivot end portions of suitable bail-formed levers.

At *m* are represented bail-formed levers, made from suitable material in the form of a bail, having their end portions pivoted in the uprising ears *k*, to swing or oscillate therein freely. From their pivot-points these bail-formed levers are curved in such a manner that when turned inward or toward the center of the head, as represented in the solid lines, their central portions will approach each other within a suitable distance to be readily spanned by a suitable button centrally pivoted. In this position the heel of the bail-formed levers, or that portion thereof near their pivoted connection with the ears, comes in contact with the outer portion of the removable lid, as represented at *n*, and operate to compress the removable lid firmly to the ring-head, to produce a close joint, and the force with which the lid is pressed to the ring-head will be regulated by the depression of the central curved portion of the bail-formed levers.

At *o* is represented a screw-bolt passed centrally upward through the lid and through the central crossing-arms, and fitted with a screw-nut, *p*, by which the lid and cross-arms are firmly clamped together.

At *r* is represented a tubular washer, fitted to drop into position on the screw-bolt.

s represents a thumb-button loosely pivoted on the screw-bolt above the tubular washer.

At *t* is represented a thumb-nut, fitted to engage the screw-threaded bolt above the pivoted button, and this nut operates to fix the vertical position of the pivoted button on the screw-bolt. The pivoted button is capable of being turned on its pivoted support to the position in solid lines to cross or overlap the bail-like levers to hold the lid clamped to the ring-head;

or to be turned to the position in dotted lines, to permit the bail-like levers to be moved to the position in the dotted lines, to permit the lid to be removed from the ring-head.

From the foregoing the construction, application, and operation of my improvement will be fully understood, and it will be seen that I produce a cheap and reliable fastening especially adapted to that class of churns known in the trade as "end-over-end revolving churns," but capable of use on perhaps nearly all barrel or stave-formed vessels requiring a removable lid having a screw fastening.

It will also be seen that the bail-formed levers serve the purpose of handles by which the vessel may be readily handled.

I claim as my invention—

1. The combination, with a ring-head, substantially as herein described, of bails pivoted to the ring-head and capable of a swinging movement, substantially as set forth.

2. The combination, with a ring-head provided with uprising ears, of bails pivoted to the uprising ears of the ring-head and capable of a swinging movement, substantially as set forth.

3. The combination, with a ring-head and a removable lid or cover, of levers pivoted to the ring-head and adapted to be swung over and engaged with the edge of the cover, and to be swung backward and disengaged therefrom, and a device for engaging the free ends of said levers and clamping the lid or cover upon the ring-head.

4. The combination, with a ring-head and a removable lid or cover, of levers pivoted to the ring-head and adapted to be swung over and engaged with the upper surface of the cover or lid, and to be swung backward clear of the same, and a rotary button for engaging the free ends of said levers and clamping the lid or cover upon the ring-head, substantially as set forth.

5. The combination, with a ring-head and a removable lid or cover, of levers pivoted to the ring-head and adapted to be swung over and engaged with the upper surface of the lid or cover, and to be swung backward clear of the same, of an adjustable clamping-device connected with the lid or cover and adapted to be engaged with and disengaged from the free ends of said levers, substantially as set forth.

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Witnesses:

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