

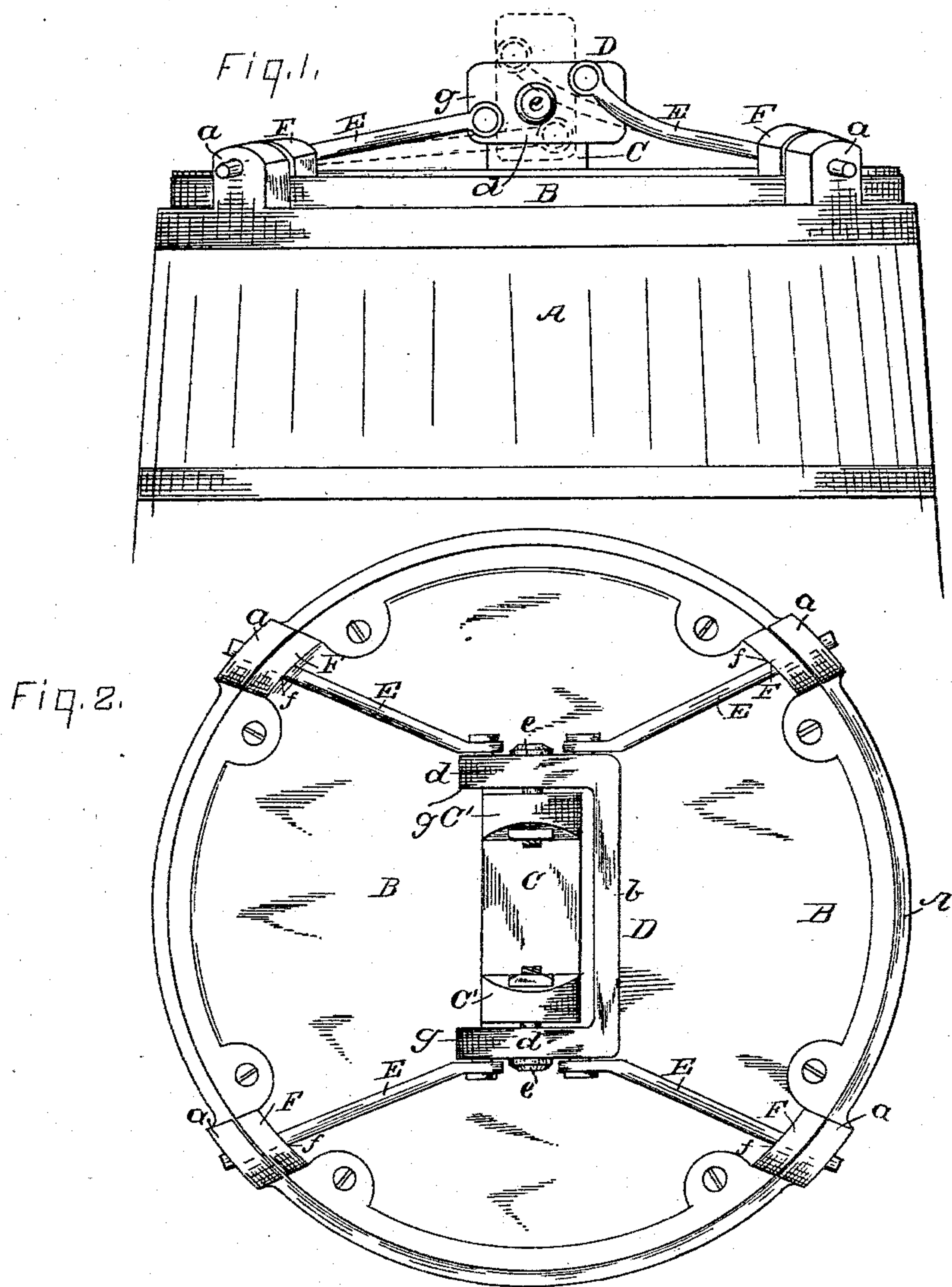
(No Model.)

J. C. AUTLEY.

CHURN COVER.

No. 325,646.

Patented Sept. 8, 1885.



WITNESSES:

Cyrus K. K.  
Charles H. Roberts.

INVENTOR:

John C. Autley  
per Manahan & Ward  
His Attys



# UNITED STATES PATENT OFFICE.

JOHN C. AUTLEY, OF ROCK FALLS, ILLINOIS.

## CHURN-COVER.

SPECIFICATION forming part of Letters Patent No. 325,646, dated September 8, 1885.

Application filed June 29, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. AUTLEY, a citizen of Great Britain, residing at Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 or figures of reference marked thereon, which form a part of this specification.

My invention has reference to that class of barrel-churns in which the churn is supported on side journals, and the churning is accomplished by rotating the churn on its transverse axis; and my invention pertains especially to certain novel mechanism for readily and securely attaching the lid to the churn.

In the process of churning, the contents of the churn are dashed from one end of the latter to its opposite end, and as in the rapid revolution of the churn such contents strike the inside of the ends with considerable force, it is essential that the ends be strongly and tightly fastened. The removable end of the churn is the sole opening into such churn, and as frequent inspection of the cream, as to its condition and temperature, is usually necessary during the process of churning, it is important that the fastening adopted for the lid or end be one which can be quickly and readily removed and replaced. The qualities, therefore, required in the end fastening are strength and tightness when in place, and convenience in removal and replacement. These qualities I believe I have secured in a new mode and to a superior degree in my invention.

In the drawings, Figure 1 is a side elevation of a churn embodying my invention. Fig. 2 is a plan of the lid.

A is the body of a churn, provided at its upper and open end with the four equidistant ears, *a*, rigidly seated on its sides and projected slightly above its upper edge.

B is the circular lid constituting the end of the churn. As I make no claim to any change in sealing the edges of the churn under such lid, but adopt the usual and well-known mode of forcing an annular flange on the under side

of the lid down upon and slightly into an annulus of cork or other elastic substance set in the upper edge of the churn, I do not deem it necessary to show or describe such packing.

C is a fixed fulcrum rigidly seated on the center of the upper side of the lid B, constructed with a depressed center and upwardly-projecting ends *C'*.

D is a hand-lever, consisting of the central horizontal portion, *b*, and ends *d d*, extending downward from and perpendicular to such horizontal portion, and adapted, respectively, to be placed outside of and be pivoted near their center to the ends *C'* of the fulcrum C. The lever D is pivoted to the fulcrum C at two points by bolts *e*, passed horizontally through the centers of the ends *d* of such lever and the ends *C'* of the fulcrum C, and is thus adapted to be oscillated laterally upon such pivotal points, the central portion of such lever serving as a handle.

E E E E are four arms pivotally attached, respectively, at their inner ends to the outside of the ends *d* of the lever D, and extending radially from such pivotal points. Two of the arms E are attached above the pivotal point *e* and two below, whereby the outward oscillation of the lever D forces the two upper attached arms E outward in one direction, and the two lower attached arms outward in the opposite direction.

F F are four guideways seated, about equidistant from each other, near the margin of the lid B, provided with holes *f*, through which the arms E play, and by which such arms are respectively guided into the ears *a* on the churn A.

The upper surface of the arms E gradually rises from their outer extremities, and the outward forcing of such arms through the ears *a* has the effect of wedging the lid down upon the churn. The arms E are slightly curved laterally, so as to have a radial movement at their outward extremities. I give the lower extremity of the ends *d* a cam-like formation, *g*, so that by impact upon a leather pad or other elastic base upon the top of the lid B the ends *d* lock the arms E when extended; or such arms can be readily locked by one or more set-screws seated in the top of the guides F, or in any other suitable manner.

If preferred, the fulcrum *C'* of the lever D



may consist of ears C', cast or otherwise attached to the lid B.

The arms E are released by the oscillation inward of the horizontal portion of the lever D. Thus the operation of attaching or removing the lid is expeditious, simple, and effective.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

10 1. The combination of the fulcrum C, the lever D, pivoted thereto, and arms E, pivoted to such lever respectively, as shown, for the purpose described.

15 2. The combination of a fixed fulcrum, C, provided with upwardly-extended lugs or ends, the lever D, pivoted vertically on such fulcrum, and arms E, having their inner ends

respectively pivoted to such lever above and below the pivotal point of the latter, whereby the lateral oscillation of such lever drives 20 such arms radially outward, substantially as shown, and for the purpose specified.

3. The combination of the churn A, provided with perforated ears a, the lid B, fulcrum C, vertically-pivoted lever D, and radial 25 arms E, substantially as shown, and for the purpose named.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. AUTLEY.

Witnesses:

WALTER N. HASKELL,  
WALTER STAGER.

Correction in Letters Patent No. 325,646

It is hereby certified that the name of the patentee of Letters Patent No. 325,646, granted September 8, 1885; for an improvement in "Churn-Covers," was erroneously written and printed "John C. Autley," whereas said name should have been written and printed *John C. Antley*; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 27th day of October, A. D. 1885.

[SEAL.]

H. L. MULDROW,

*Acting Secretary of the Interior.*

Countersigned:

M. V. MONTGOMERY,  
*Commissioner of Patents.*