(No Model.)

P. KALLEN.

CHURN.

No. 410,103. Patented Aug. 27 1889.

Fig. 1.

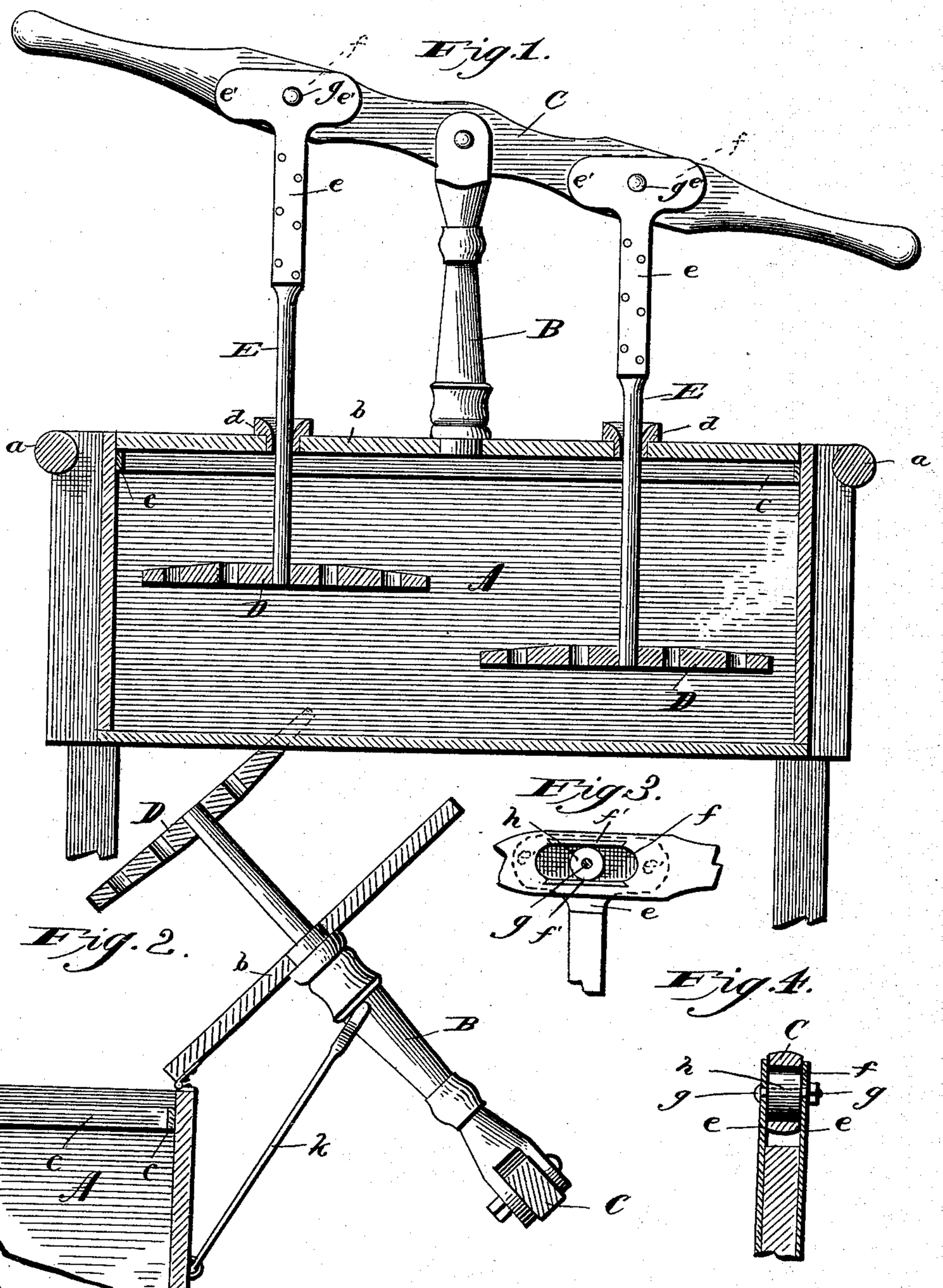

Fig. 2.

Fig. 3.

Fig. 4.

Witnesses
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PETER KALLEN, OF FORT WAYNE, INDIANA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 410,103, dated August 27, 1889.

Application filed February 9, 1889. Serial No. 299,242. (No model.)

To all whom it may concern:

Be it known that I, PETER KALLEN, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Churns, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of my improved churn closed; Fig. 2, a similar view of a portion of one side of the churn opened; Fig. 3, a detail view showing connection between upper end of dasher-rods and vibrating lever, and Fig. 4 a vertical sectional view of the same.

The invention relates to that class of churns wherein two vertical dashers are employed, the dashers having imparted to them by means of a pivoted vibrating lever mounted upon the cover of the churn an alternate reciprocating movement; and it consists in certain novel features of construction and arrangement of parts, that will be fully hereinafter specified, and particularly pointed out in the claim appended.

The object of the invention is essentially to so improve and simplify the construction of the churn that the working parts will operate more smoothly and regularly, and last for a greater length of time without renewal or repair, as will presently more fully appear.

In the accompanying drawings, the letter A designates the body or box of the churn, which is suitably supported and provided with handles *a a* and a hinged lid or cover *b*, this cover being adapted to fit snugly within the churn-body to prevent leakage, and supported upon a suitable flange or shoulder *c* upon the interior of the same. Upon the top of the cover at or near its center is erected a post or standard B, bifurcated at its upper end to receive the vibrating lever C, the pivotal or fulcrum pin of this lever passing through the upper end of the post and through the lever.

D D designate the vertically-reciprocating perforated dashes affixed to the lower ends of the dasher-rods E E, which latter pass up through perforations in the cover, and are pivotally attached to the lever C. The rods E are guided in their vertical movements by means of the shouldered bushings *d*, set in perforations in the cover. The upper ends of the dasher-rods are preferably rectangular in cross-section, and have each secured upon two of their opposite sides vertical metallic plates *e e*, which extend up upon opposite sides of the vibrating lever, closely embracing the same. Passing horizontally through the upper ends of the embracing plates *e* and through horizontal slots *f f*, formed in the adjacent portions of the vibrating lever, are the connecting-bolts *g g*. Journaled loosely upon these bolts *g* are the anti-friction rollers *h h*, which work in the above-mentioned horizontal slots *f* in the levers. Formed integral with the plates *e*, at or near their upper ends, are lateral extensions or ears *e'*, which project in opposite directions and rest against the flat sides of the lever. By this manner of attaching the dasher-rods to the vibrating lever the former will always remain and work in a perfectly vertical position, and work smoothly and evenly without undue friction or wear. By thus permitting the dasher-rods to work always in a true vertical line slots and large apertures through the cover are avoided, thus effectually providing against leakage of the liquid. The oppositely-projecting ears serve not only to assist in guiding the vibrating lever in its movements and preventing lateral vibration, but also to keep out dust and dirt from the slots, and thereby prevent undue wear upon the bearings and rollers.

If desired, the bearing-faces of the slots *f* may be provided with wearing-plates *f'*, as shown in Fig. 3.

To support the cover when thrown back to an inclined position to allow the liquid to drip back in the churn, I may employ a suitable pivoted brace or support *k*, as shown in Fig. 2.

What I claim, and desire to secure by Letters Patent, is—

The combination of a churn-body provided with a perforated cover, a post erected on the cover, a vibrating lever C, pivoted upon this post and provided with longitudinal slots *f*, the wearing-plates *f'*, secured in these slots, the dasher-rods provided with dashers, the plates *e e*, secured upon opposite sides of

the dasher-rods and projecting above the same, and embracing the slotted portions of the said lever C, these plates being provided with oppositely-projecting wings *e'*, adapted to cover the slots in the lever C, pins *g*, passing through the plates *e* and the slots in the lever C, and anti-friction rollers *h*, journaled upon the pins *g* and working in the said slots, as and for the purposes described.

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

PETER KALLEN.

Witnesses:
WM. J. WELSHIMER,
W. H. WARD, Jr.