C. W. PATTON.

Churn.

No. 161,633. Patented April 6, 1875.

Fig. 1.

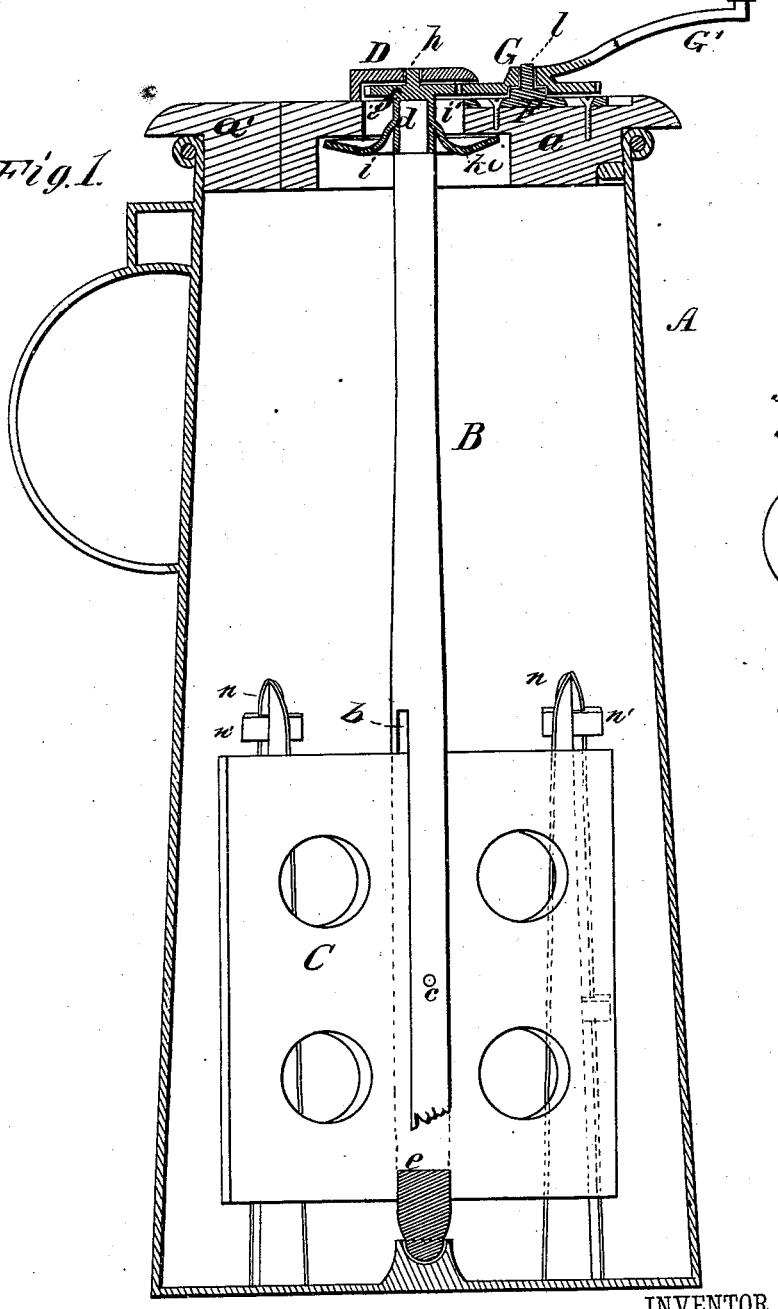
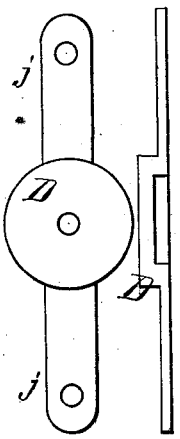


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES W. PATTON, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **161,633**, dated April 6, 1875; application filed August 15, 1874.

To all whom it may concern:

Be it known that I, CHARLES W. PATTON, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and valuable Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my churn. Fig. 2 is a detail view of the same.

This invention has relation to churns of the upright kind, wherein a rotating dasher is employed; and it consists in a circular concave disk, which is applied on the dash-rod in an opening made in the cover of the churn-box, and which prevents milk from dashing out of the box while churning, and serves, in combination with the cap-bearing, to exclude foreign matters from the box.

In the annexed drawings, A designates the press-box, which is shaped like a conic frustum, and provided with a cover composed of two parts, *a a'*. B designates the dash-rod, which has a slot, *b*, diametrically through it to receive the dash-blade C, which slot is somewhat longer than the length of the blade to allow the latter to be inserted and removed readily. The blade C has a notch, *e*, in its lower edge adapted to receive a portion of the rod B at the lower end of the slot *b*, thus holding the blade firmly at its lower end. By thus notching the blade on the rod B a single pin, *c*, will complete the fastening and allow the blade to be removed for cleaning the parts. The lower end of the dash-rod B is stepped in a bearing on the bottom of the box A, and on the upper end of this rod a thimble, *d*, is secured, having fixed to it a spur-wheel, *f*, a concave disk, *k*, and a central pin, *h*. The pin *h* has its bearing in the center of a hollow cap, D, which covers the opening *i* through the cover section *a*, and which is rigidly secured upon this section by means of screws applied through the arms *j j*. Below the spur-wheel *f* is the concave disk *k*, which is circular, concave on top, and of larger diameter than the hole *i*, through which wheel *f* is passed. This concave disk *k* will prevent anything from falling through holes *i'* into the milk while churning, and it also prevents the milk from being dashed out through the holes *i'*. G designates a driving spur-wheel having a crank-handle, G', secured to it, which wheel is applied on a stud, *l*, fixed to an adjustable plate, F, on the cover-section *a*. Wheel G engages with the wheel *f*, and for this purpose an opening must be made through the cap to allow wheel G to enter it. The cap D thus holds wheel G down on its stud. Inside of the churn-box, and removably secured to its side wall, are a number of abutments, *n*, which, in cross-section, are T-shaped, and adapted to slide between lugs *n'*. The back flange of each abutment is inclined to correspond to the inclination of the wall of box A, but the front flange is vertical or parallel to the edges of the dash-blade. These blades or abutments *n* arrest the currents induced by the dash-blade, and materially aid in bringing the butter.

It will be observed that the cover to the box A is made of two parts, the largest part bearing the mechanism for operating the dash-rod, and the smaller part, *a'*, allowing inspection of the contents of the churn without removing the larger part. These two cover-sections are held in place on top of the box A by means of lugs formed on this box and grooves made in the edges of the sections.

It is obvious from the above description that my improved churn can be used to advantage in the manufacture of ice-cream.

It will be seen that the disk *k*, situated in the recess *i* of the cap *a*, is made concavo-convex, so that its outer edges will project up and nearly in contact with the upper face of the recess *i*. This construction is very important, as it will prevent any oil from the gearing or dirt falling into the cream, the former being held in the concave part of the disk, and, if thrown to the outer edge of said disk by its centrifugal action in the rotation of the churn-dasher, would impinge against the lower face of the recess *i* and be thrown back into the concave part of the disk. By placing the disk *k* in the recessed part of the cap *a* another result is attained, the convex form of the lower face of the disk guiding any milk splashed upward by the dasher to the outer periphery of

the recess *i*, where the outer edge of the disk *k* is nearly in contact with it, thereby leaving no space for the escape of milk or ingress of oil or dirt.

I am aware that a churn has heretofore been constructed provided with an inverted vessel having an opening at its top to prevent the escape of milk in the rotation of the dasher; and I therefore lay no claim to such invention, as by my construction I dispense entirely with such inverted vessel, and employ a concavo-convex disk attached to the dasher-shaft and recessed in the cap, which performs the double function of preventing the ingress of dirt and oil into the churn, or the egress of milk therefrom, whereas the inverted conical vessel disclaimed will serve to guide the milk thrown upward by the dasher through its opened end.

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

The concavo-convex disk *k*, attached to the upper end of the dasher-shaft B and arranged in an opening, *i*, in the cover *a*, in combination with the spur-wheel *f* and cap D, provided with an opening, *i'*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES WASHINGTON PATTON.

Attest:
A. G. ROBERTS,
PETER CAMPBELL.