# G. W. BLACKWILL.
## Churn.

**No. 208,707.** **Patented Oct. 8, 1878.**

Fig. 1.

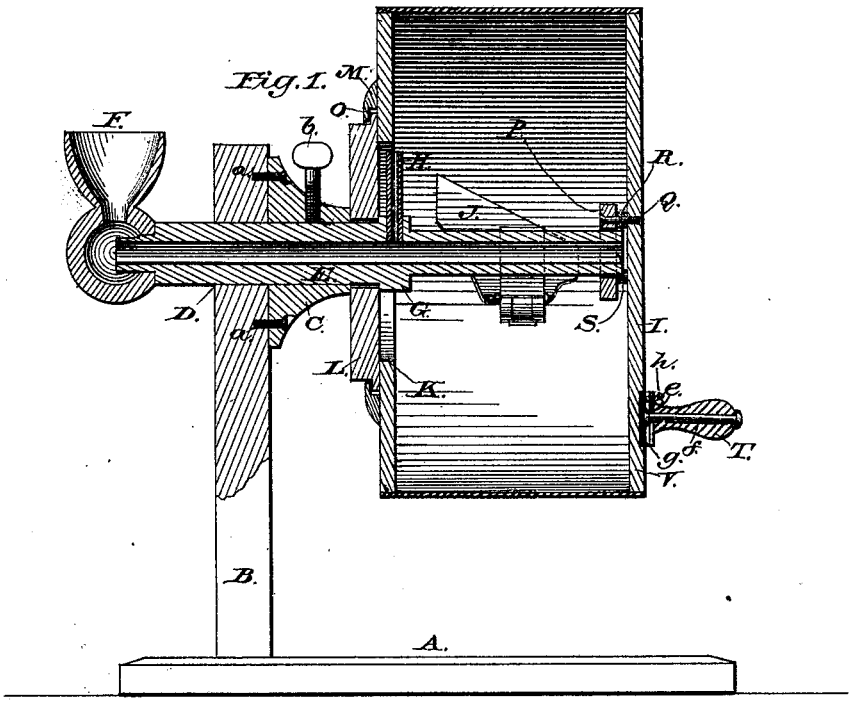



Fig. 2.

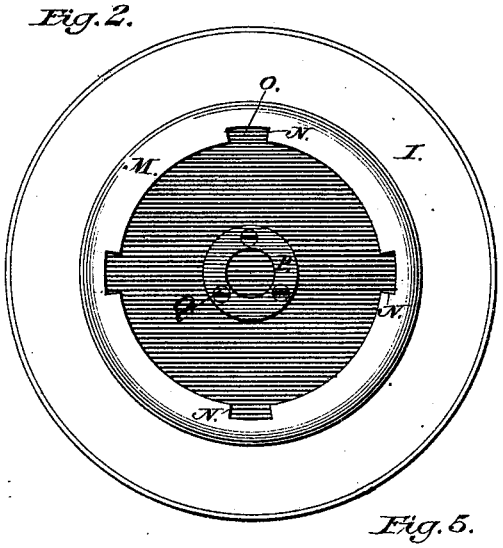



Fig. 3.

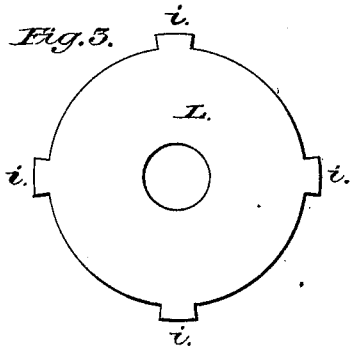



Fig. 4.

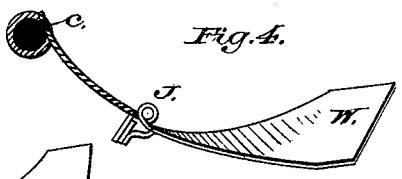
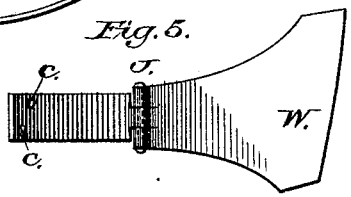



Fig. 5.




WITNESSES

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# UNITED STATES PATENT OFFICE.

GEORGE W. BLACKWILL, OF CEDAR RAPIDS, IOWA.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **208,707**, dated October 8, 1878; application filed September 10, 1878.

*To all whom it may concern:*

Be it known that I, GEORGE W. BLACKWILL, of Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, 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.

Figure 1 is a vertical longitudinal sectional view of a churn embodying the improvements in my invention. Fig. 2 is a plan view of the churn-body with the lid removed, showing the box for the hollow shaft in the bottom of the same. Fig. 3 is a plan view of the lid of the churn. Fig. 4 is a detail view, partially in section, of the hinged cream-arrester secured to the hollow shaft; and Fig. 5 is a plan view of the hinged cream-arrester detached.

This invention has relation to churns; and it consists of the improvements in the construction of the same, hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawing similar letters of reference indicate corresponding parts in the several figures.

A represents the base, to which an upright, B, is secured by mortise and tenon, or in any other suitable manner. Near the top of the upright B a hole, D, is bored, and upon the inner face of the upright B a collar or sleeve, C, is secured by screws *a a*. A hollow shaft, E, is secured in the sleeve C by a set-screw, *b*, and is provided with a removable cup, F, communicating with the hole in the shaft E at its outer end. A collar, G, is made upon the hollow shaft E, and a ventilating-tube, H, enters the shaft at this point and communicates with the hollow in said shaft E upon the inside of the churn-body I. Midway of that portion of the hollow shaft E that traverses the churn-body I a hinged cream-arrester, J, is secured by a screw, *c*. (Shown in Fig. 4.) The object in hinging the cream-arrester J is to permit it to be drawn out through the opening K in the top of the churn-body I when the lid L is removed by folding it.

A flanged collar, M, having recesses N, is secured to or made a part of the top of the churn-body I, so that a recess, O, is formed between the head of the churn-body I and the flanged collar M.

On the center of the bottom of the churn-body I, inside of the churn-body, is secured a box, P, by screws Q passing through spools R, interposed between the box P and the bottom of the churn-body I, so that a space is left at the open end S of the hollow shaft E, to admit water through the removable cup F and hollow shaft E for hastening the production of the butter in the process of churning.

A handle, T, is removably attached to the bottom, V, of the churn-body I, so that the churn-body may sit upon its bottom when removed from the hollow shaft E.

The lid L of the churn has lugs *i*, which enter the recesses N in the flanged collar M, and by turning the lid to the right the lugs *i* pass into the recess O and secure the lid in place, which at the same time rests against the collar G, and prevents the churn-body I from being removed from the hollow shaft E until the lid L has been removed.

The handle T has a shaft, *f*, which passes through it and a base, *e*. This base *e* slides into a recess, *g*, in the bottom V, and is secured by a set-screw, *h*, so that it may be removed when the churn-body is to be taken from the shaft and set upon the floor. The cream is placed in the churn while it sits on its bottom, and the hollow shaft E is inserted, the end S resting in the box R, but not coming in contact with the bottom V, and the lid L is put in place, the lugs *i* entering the recesses N and turned to secure it. The outer end of the shaft F is then passed through the sleeve C and the upright B, and the set-screw *b* turned down to hold it. The removable cup F is then put upon the outer end of the hollow shaft E, and the churn is ready to be operated.

The paddle portion W of the cream-arrester J curves downwardly toward the bottom V, and in operation it scrapes the cream from the inner periphery of the churn, and carries it back into the body of the cream. Water is admitted to the cream during the operation through the cup F and hollow shaft E. Air

is admitted through the cup, shaft, and ventilator.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

In a churn, the combination of the churn-body I, having lid L, provided with lugs *i*, fitting recesses N in the top of said churn-body, with the hollow shaft E having collar G, upright B, sleeve C, and set-screw *b*, substantially as and for the purpose set forth.

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

GEORGE WASHINGTON BLACKWILL.

Witnesses:

A. T. ANESILL,

CHARLES WEAN.