C. T. ANDERSON.

CHURN.

No. 102,354. Patented Apr. 26, 1870.

Fig. 1.

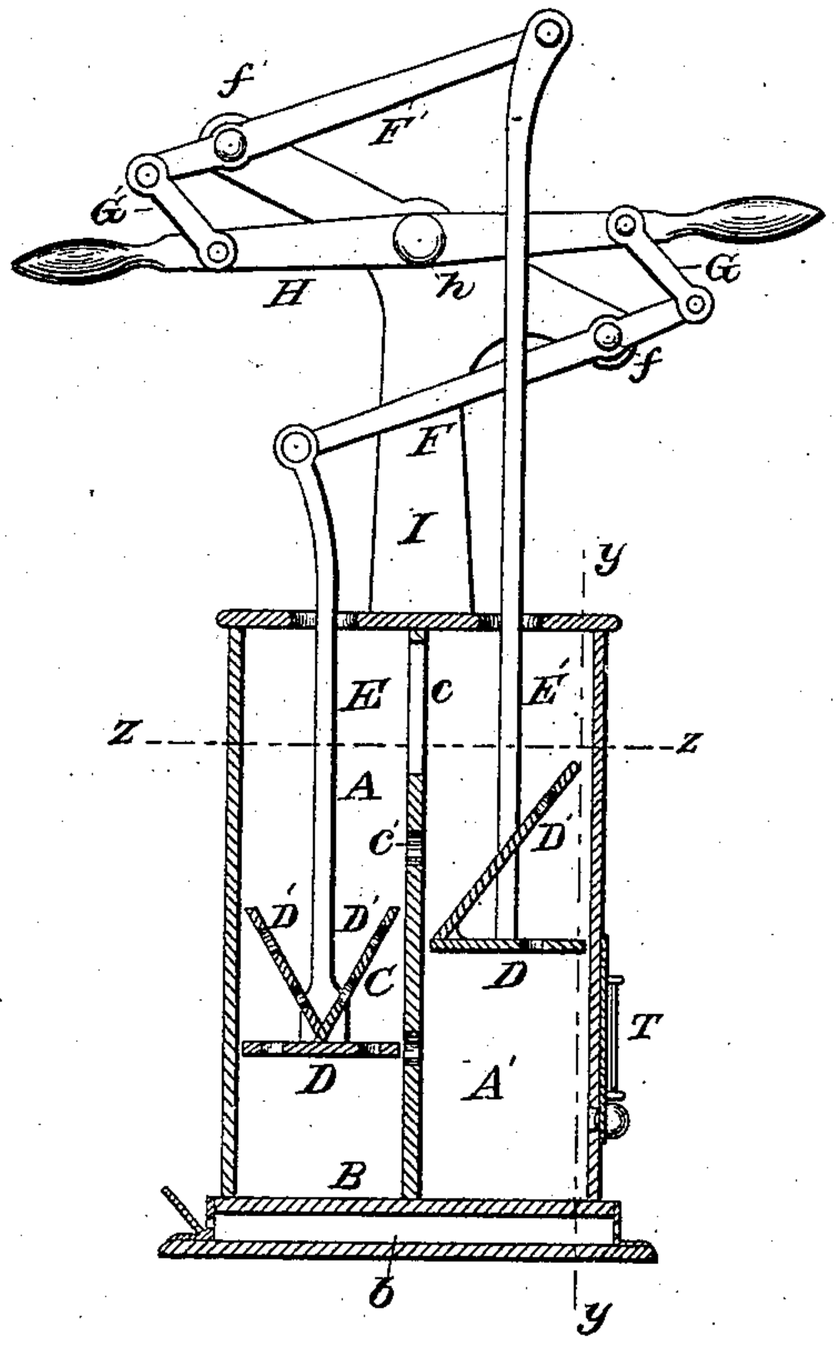


Fig. 2.

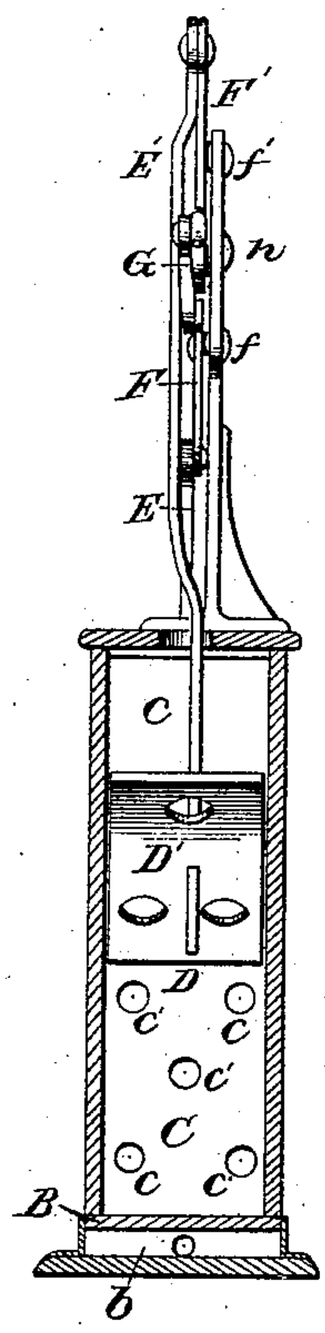
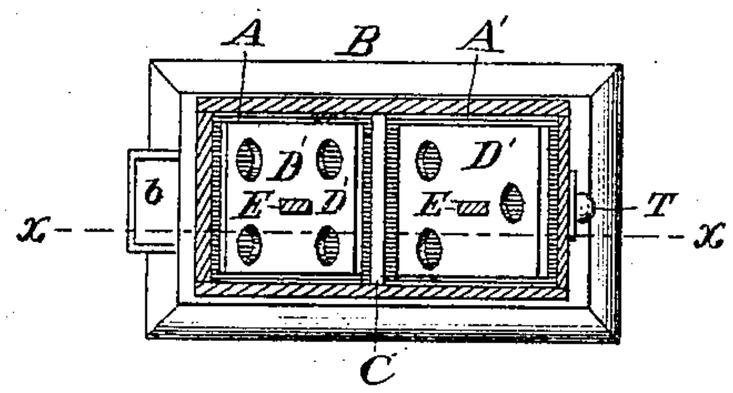


Fig. 3.



Witnesses:

W B Deming
Wm H Breretor Jr

Inventor

Charles T Anderson
by Knights Bro
Attorneys

United States Patent Office.

CHARLES T. ANDERSON, OF CLARKSBURG, MARYLAND.

Letters Patent No. 102,354, *dated April* 26, 1870.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

I, CHARLES T. ANDERSON, of Clarksburg, in the county of Montgomery and State of Maryland, have invented a new and useful Improvement in Churns, which invention is described as follows:

Nature and Objects of the Invention.

In the accompanying drawings—

Figure 1 is a vertical longitudinal section of my improved churn in the plane indicated by the line *x x*, fig. 3.

Figure 2 is a vertical section at *y y*, fig. 1.

Figure 3 is a horizontal section at *z z*, fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

The body of the churn is divided into two chambers, A A′, by a partition, C, which is formed near its upper part with a large aperture *c*, and below with a number of small apertures, *c′ c′*.

The base B is made hollow, and is preferably formed of two plates of zinc or other metal, the intervening chamber *b* serving for the reception or circulation of steam or hot water, to keep the temperature of the cream up to a proper degree in cold weather, or for cold water, to keep it cool in hot weather.

The dashers consist of horizontal and oblique plates D and D′, the lower plates D being horizontal, so as to act with direct percussion and pressure upon the cream in descending, and the upper plates D′ oblique, so as to pass easily through the cream in ascending. These upper plates are arranged either singly or in pairs, as shown.

Both the lower and upper plates are perforated, in order to produce greater frictional action on the cream.

The dasher-rods E and E′ receive a vertical reciprocating motion from levers F F′, which are fulcrummed respectively at *f* and *f′*, and are connected at their shorter ends, by rods G G′, to a double hand-lever, H, which is fulcrummed at *h* to a standard, I.

T represents a thermometer, arranged in any suitable manner for the purpose of indicating the temperature of the cream.

Operation.

It will readily be seen that the rods G G′, in connection with the short arms of the levers F F′, will act on the principle of toggle-levers, so that a given movement of the hand-lever H will impart greatly-increased motion to the long arms of the levers F F′.

A slight movement of the hand-lever in either direction will thus suffice to throw each dasher from one end to the other of its vertical stroke. This renders the operation of churning very easy, and, by reason of the combination of the levers and the connection of the two dashers, the necessity of any lifting action on the hand-lever is entirely dispensed with.

A depression of the ends of the hand-lever alternately is all that is required to throw the dashers in both directions. The chief churning action is by each dasher exerted in its descent, its lower surface being at right angles to its line of motion.

In ascending, the oblique boards or plates D′ deflect the body of cream that is above them, so as to pass easily through it and avoid throwing it forcibly upward against the churn-top.

The large opening *c* in the partition C, allows the cream thus raised to pass freely from one compartment of the churn to the other.

Claims.

The following is claimed as new:

1. The paired dashers, working in separate chambers, and each composed of a horizontal bottom plate, D, and an oblique upper plate, D′, sloping downward toward the opposite chamber.

2. In combination with the aforesaid paired dashers D D, constructed as specified in preceding clause, the arrangement of the partition C *c* and operating-levers, and rods H, G G′, F F′, E E′, all as described.

CHARLES T. ANDERSON.

Witnesses:

OCTAVIUS KNIGHT,

WM. H. BRERETON, Jr.