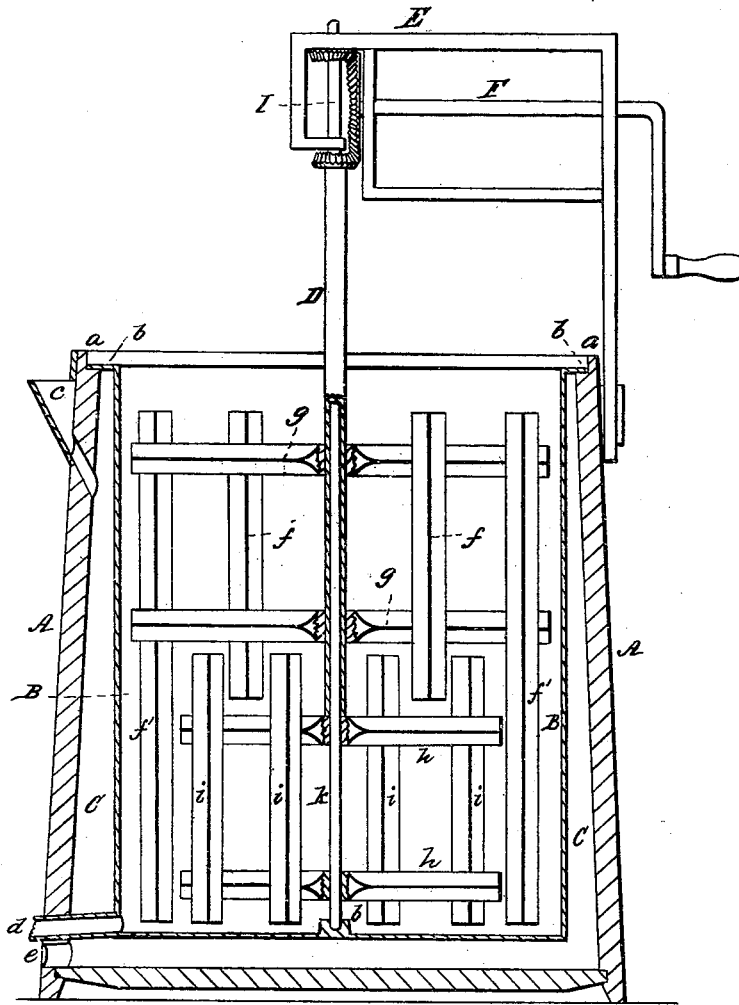


E. P. WHITCOMB.

Churn.

No. 53,912.

Patented April 10, 1866.



Witnesses:

R. D. O. Smith
Andrew Whitley

Inventor:

Edwin P. Whitcomb
By his Attorney J. B. Woodruff

UNITED STATES PATENT OFFICE.

EDWIN P. WHITCOMB, OF COLDWATER, MICHIGAN.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 53,912, dated April 10, 1866.

To all whom it may concern:

Be it known that I, EDWIN P. WHITCOMB, of the city of Coldwater, in the county of Branch, in the State of Michigan, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which the figure shows a vertical section through the center of the churn, the diamond-shaped reversed-motion beaters, the bevel-gear, and frame for giving motion to the revolving dashers.

The object of my invention is to make the most practical and efficient churn for making good butter in a northern climate at all seasons of the year.

My invention consists in combining with a water-chamber which surrounds the sides and bottom of the vessel or metal can reverse-motion diamond-shaped right-angle blades or beaters and the frame which supports the gearing to operate the same.

To enable others skilled in the art to make and use my invention, I will describe it more fully, referring to the drawings and to the letters marked thereon.

I make the tub A A in the ordinary manner, inside of which is placed a can, B B, of sheet metal, it being supported by a flange, b b, which surrounds the opening at the top, fitting in the recess a a in the tub A, so that a space or chamber, C C, is left all the way round between the tub and can, as also in the bottom. This is for the purpose of putting in water of any desired temperature, either hot or cold, to temper the cream as the season requires, this being necessary to make a good quality of butter, both in summer and in the winter season.

On one side of the tub A, at near the top, I have a funnel, c, and an opening to put in the water, and at the bottom I have an outlet, e, or spigot to draw off the water from the chamber C, and also another stop-cock or spigot, d, which communicates with the inside of the can, for the purpose of drawing off the butter-milk as it is being separated from the butter, and also the rinsing-water when cleaning the churn.

The apparatus for agitating the cream is constructed by placing square pieces of hard wood, *f f' f' f'*, in a vertical position onto horizontal diamond-shaped arms *g g*, so that one corner is notched into the arms on reverse sides, thus presenting two inclined edges to cause friction as the dasher revolves. The two outside beaters, *f' f'*, extend down to the bottom of the can B, while the other two stop at about half-way down. Below this beater is placed on a shaft or rod, *k*, which has its bearings in a socket, *l*, on the bottom of the can, another beater, similarly constructed, with horizontal arms *h h* and vertical diamond-shaped beaters *i i i i*, all of the same length, which are made to revolve in the opposite direction to the top beater, they working inside of the long beaters *f' f'*.

The top dasher is secured to a tube or hollow shaft, D, with the rod or shaft *k* passing through it, extending from the socket *l* up to the top of the frame E, which is so constructed as to make a support for the crank-shaft F and bearings for the journals of the vertical shafts D and *k* at the top, on which are the bevel-gear wheels to operate the beaters, which, by connecting with the bevel-gear I, on the crank-shaft F, the beaters turn in opposite directions.

I do not claim the double or reverse motion, neither do I claim the water-chamber which surrounds the can of sheet metal, as they have been known and used; but,

Having thus fully described my invention, what I do claim as new, and desire to secure by Letters Patent, is—

The combination of the frame which supports the gearing, the reverse-motion diamond-shaped right-angle blades or beaters, as described, with the space or water-chamber which surrounds the churn, substantially as herein set forth.

Subscribed to on this 31st day of January, 1866.

EDWIN P. WHITCOMB.

Witnesses:

JOHN ROOT,
R. MATTLAND.