

W. W. Stillwell,

Churn.

No. 111,490.

Patented Jan. 31. 1871.

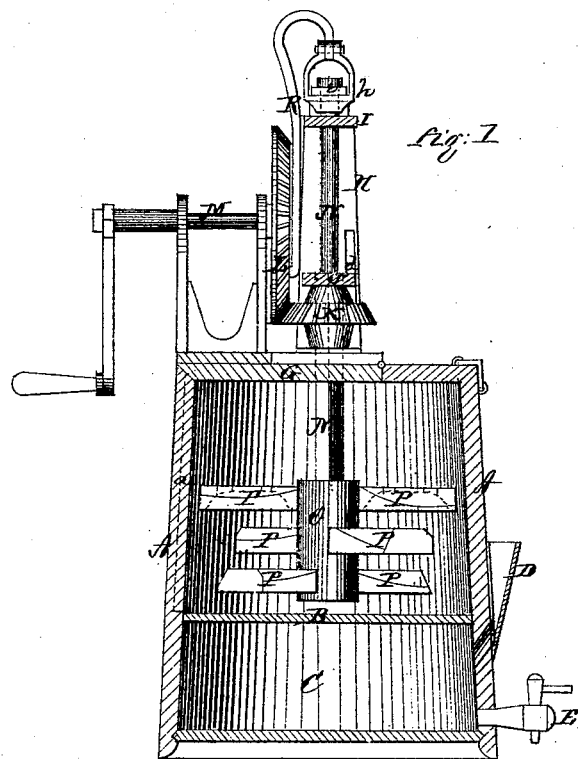


Fig. 1

Fig. 3

Fig. 2

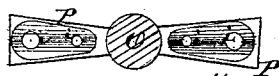
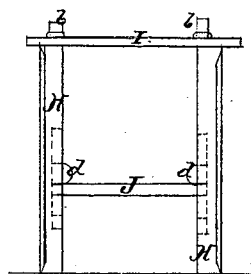
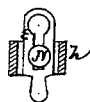


Fig. 4



Witnesses:

C. L. Evert,
J. C. Hutchinson

Inventor.

Wm W. Stillwell
per Alexander Thomson
Atty.

United States Patent Office.

WILLIAM W. STILWELL, OF OXFORD, WISCONSIN.

Letters Patent No. 111,490, dated January 31, 1871.

IMPROVEMENT IN CHURNS.

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

To all whom it may concern:

Be it known that I, WILLIAM W. STILWELL, of Oxford, in the county of Marquette and in the State of Wisconsin, have invented certain new and useful Improvements in Churns; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a churn, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my churn;

Figure 2 is a bottom view of the dasher;

Figure 3 is a side view of the frame placed on the lid, and in which part of the mechanism for operating the dashers is inserted; and

Figure 4 is a view showing the mode of connecting the dasher-shaft to the swivel.

A represents the tub, of any suitable dimensions, which is provided with a false bottom, B, forming a chamber, C, below this false bottom and the regular bottom of the tub.

The chamber or reservoir C is for the purpose of holding hot or cold water, to temper the cream.

The upper or false bottom B may be made of metal in a practical churn, which will much facilitate a right temperature.

There is a funnel, D, attached to the upper part of said reservoir, through which water may be poured to press against the upper bottom.

Likewise, a faucet, E, below, to draw off the water after the right temperature has been acquired.

The tub A is covered by the lid G, a portion of which is hinged for the purpose of examining the thermometer in relation to the temperature of the cream.

The thermometer-slides in a groove on the inside of the tub, as indicated by dotted lines at *a*, in fig. 1.

On the cover G are secured two standards, H H, the upper ends of which are cut with square tenons, *b b*.

These tenons are passed through mortises in a cross-bar, I, which thus connects the two standards. Pins are then put through the tenons *b b*, securing the cross-bar I.

At a suitable height from the cover G, on the inner sides of the standards H H, are horizontal grooves, in which is inserted another cross-bar, J, and which bar is secured in place by keys *d d*, moving in vertical grooves on the inner sides of the standards, as shown in fig. 3.

Between the cross-bar J and the cover G, and having its bearings in a box on said cover, is placed a hub, K, having beveled or miter cogs on the outside.

This hub gears with a large miter-wheel, L, upon the inner end of a crank-shaft, M, which has its bearings in suitable standards rising from the cover G.

Through the hub K passes a shaft, N, which is square for a suitable distance, and the upper end round where it has to move through the upper cross-bar I.

This shaft passes downward into the tub A, and at its lower end is secured a shaft, O, of larger diameter.

On this shaft O are secured the dashers P P, which are fan-shaped, as shown in fig. 2, whereby they occupy more space in the cream and force a greater quantity of air in at the same time.

These fan-shaped dashers are arranged spirally on the shaft O, and are beveled downward on the flaring side for raising the cream when the dashers are in motion.

They are hollowed out on the under side for forcing atmosphere into the cream in their vertical motion, with small orifices, *i i*, in the top of the dasher for emitting air into the cream.

The upper end of the shaft N, above the cross-bar I, passes into a swivel, *h*, where it is attached by means of an iron key, *e*, having an elongated slot, as shown in fig. 4. The key slides in between the ears of the swivel into a groove on the shaft, which attaches the two together.

To the swivel *h* is hinged or pivoted a pitman, R, or crank, attached to the wheel L, so that by the turning of the crank-shaft M the dashers obtain not only a rotating but also a vertically reciprocating motion.

Having thus fully described my invention,

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

1. The fan-shaped dashers P P, arranged spirally on a dasher-shaft, beveled downward on one side and hollowed out on their under side, with orifices *i i* through the top, all substantially as and for the purposes herein set forth.

2. The arrangement of the shaft N, swivel *h*, and slotted key *e*, substantially as shown and described.

3. The combination of the tub A, partition B, water-reservoir C, funnel D, faucet E, fan-shaped dashers P P, and the mechanism herein described for operating said dashers, when all the parts are constructed and arranged substantially in the manner and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of September, 1870.

WILLIAM W. STILWELL.

Witnesses:

HENRY H. TAYLOR,
STEPHEN WYANT.