

D. Dutcher.

Churn.

N^o 8,143.

Patented Jun. 10, 1851.

Fig. 1.

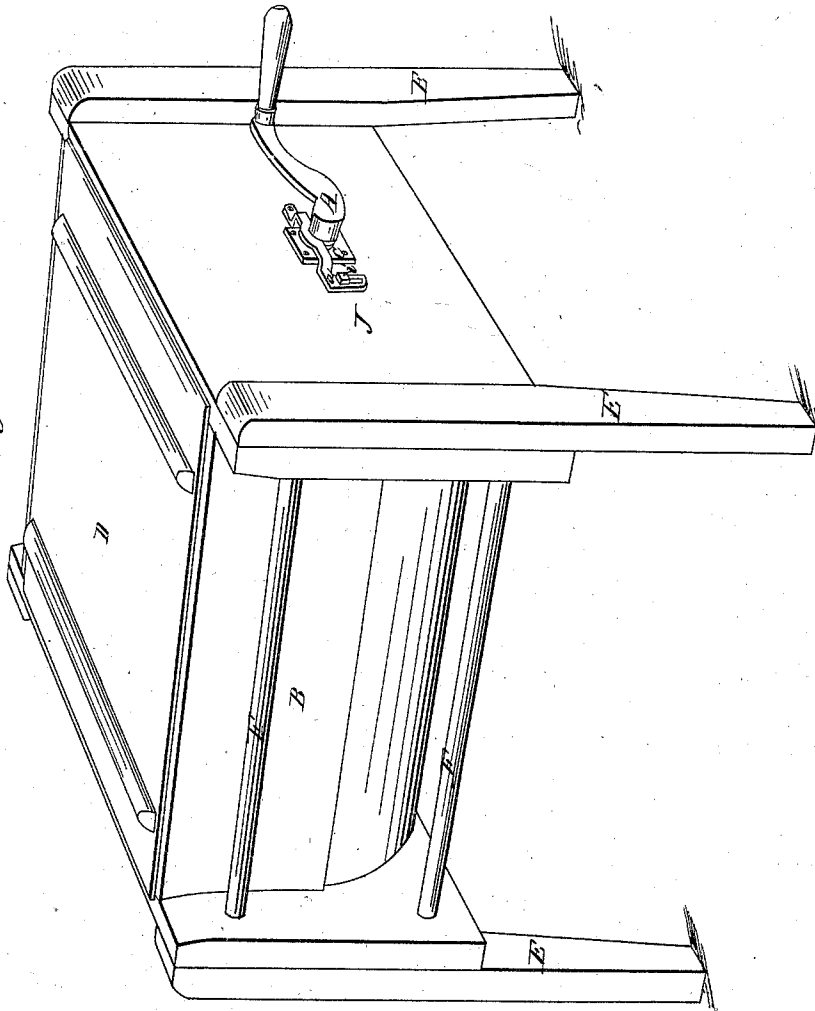


Fig. 2.

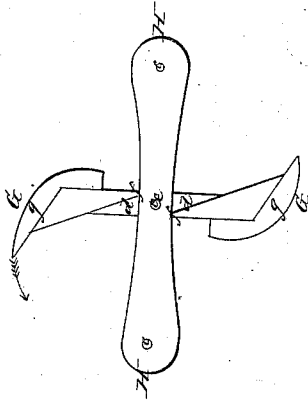
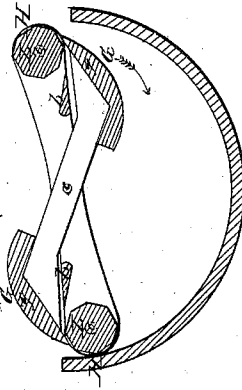


Fig. 3.



UNITED STATES PATENT OFFICE.

D. DUTCHER, OF SPRINGFIELD, NEW YORK.

CHURN.

Specification of Letters Patent No. 8,143, dated June 10, 1851; Antedated February 15, 1851.

To all whom it may concern:

Be it known that I, DAVIS DUTCHER, of the town of Springfield, in the county of Otsego and State of New York, have invented a new and useful Improvement in Churns; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1, represents a perspective view of my churn when ready for use. Fig. 2, an end view of the dasher while churning. Fig. 3, a section through the dasher and bottom of the churn, and showing its position when used for collecting, pressing and rolling the butter. Fig. 4, represents a vertical longitudinal section through the center of the box, spindle, and crank of the churn, and showing the dasher in place.

Similar letters in the several figures represent the same parts.

The nature of my invention consists in an arrangement of floats and rollers so arranged, as that when used for churning, the arms upon which the floats and rollers are arranged, will stand at right angles, or nearly so, to each other, both the floats and rollers answering the purpose of agitating and breaking up the cream; and when the motion of said floats and rollers are reversed by the crank, for the purpose of collecting, pressing and rolling the butter, the floats will fall back, by the resistance of the cream, upon the rollers, presenting a curved surface for directing the particles of butter toward the rollers, by which they are caught between said rollers, and the sides of the churn and pressed and rolled together, and divested of all extraneous matter.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

On the posts E, I arrange a box, the sides B, and bottom of which is curved, so as to be adapted to the rotary motion of the floats or dasher; the ends J, being perpendicular. In the center of one of the ends J, is placed an iron plate C, through which passes a spindle which is attached to the crank A, said spindle being square at its inner end, and fitting into a corresponding square hole

in the arm (H, Fig. 4) of the dasher. When said spindle is in place the latch *a*, is let down, it being guided by a slot in its arm, through which is placed the set screw *i*, the head of which set screw holds said latch firmly in place. On the spindle near its junction with the crank, is turned a groove, into which the latch *a*, fits, and which fastens the spindle firmly in place when in use, and allows it to be easily removed, for the purpose of cleaning the dashers, or taking out the butter. D, is the lid of the churn.

F, F, are iron rods, running through from end to end of the frame outside of the churn for the purpose of giving it the required strength.

In Figs. 1 and 2, H, H, represent the stationary arms (there being one at each end of the churn) that is to say—stationary on the spindle, being governed entirely by the motion of the crank, into the ends of which arms are placed the rollers I, I, represented here as having eight sides, but which may have any number, which rollers have journals *c*, *c*, resting in said arms, and upon which journals they rotate when the dasher is in motion. Extending from arm to arm are angular strips *b*, *b*, let into said arms flush, the edge being presented to the cream when churning. These strips answer the double purpose of bracing the arms, and assist in agitating the cream. Attached to the arms H, H, by means of the pins *e*, *e*, and upon which they move, are other arms G, G, which have a transverse gain cut in them as shown at *d*, Fig. 2, and upon which arms are placed the floats *g*, *g*, which when moving in the direction of the arrow in Fig. 2, are forced back by the resistance of the cream until the shoulders *f*, in said gains, are brought up against the sides of the arms G, G, where they are firmly retained and held, by the resistance of the cream as before described, and being in the proper position for churning. When the butter has formed, the motion of the dasher is reversed, and moved in the direction of the arrow Fig. 3, the arms G, G, with their floats are forced by the resistance of the cream down upon the stationary arms H, H, the curve of the floats when in this position corresponding with the curve of the rollers I, I, and both the floats and rollers corresponding to the

cylindrical form of the churn, so that the particles of butter are directed by the curvature of said floats, against the sides of the churn, where it is caught by the rollers I, I, and pressed, and rolled into lumps. This operation is continued until the butter is gathered, when the milk may be drawn off at the bottom of the churn, by a faucet, pin or otherwise, and water may be added, and the butter washed, cleaned of the milk, and pressed, and roller ready for use, thus performing the whole process of churning, gathering and working the butter without removing it from the churn.

15 Having thus fully described my inven-

tion, what I claim therein as new and desire to secure by Letters Patent, is—

The combination and arrangement of the arms H, H, with their rollers I, I, which are controlled by the crank, and the swinging arms G, G, with their floats *g, g*, kept in proper place both in churning, and gathering and working the butter by the resistance of the cream, as herein described and shown, and for the purposes herein represented.

DAVIS DUTCHER.

Witnesses:

A. B. STOUGHTON,
SAMUEL BRERETON, Jr.