

UNITED STATES PATENT OFFICE.

ASA PALMER, OF LA CYGNE, KANSAS.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **151,049**, dated May 19, 1874; application filed March 21, 1874.

To all whom it may concern:

Be it known that I, ASA PALMER, of La Cygne, in the county of Linn and State of Kansas, have invented a new and useful Improvement in Spring-Churns, of which the following is a specification:

Figure 1 is a vertical section of my improved churn, taken through the line *xx*, Fig. 2. Fig. 2 is a side view of the same, part of the cream-box being broken away to show the construction. Fig. 3 is a detail horizontal section of the dasher, taken through the line *yy*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to an oscillating churn-box, having vertical spring-supports, and secured thereto by clamping devices, constructed and arranged as hereinafter described.

A is the base-frame or platform of the churn, to the middle part of the side bars or sills of which are attached the lower ends of two upright steel springs, B, which are connected, at a suitable distance above their lower ends, by a cross-bar, C, the ends of which are securely attached to said springs, and upon which the churn-body or cream-box D rests. The churn-box D is made rectangular in form, and to its sides are attached guide-blocks E, the outer sides of which are notched or slotted to receive the inner edges of the springs B, and thus hold the box D in place upon the bar C and springs B. The upper edge of the box D is rabbeted upon its inner side to form a seat for the cover F, which has a large opening in its middle part, in which is secured a glass plate, G, to enable the progress of the churning to be seen without removing the cover. To the cover F, upon the opposite sides of the glass plate G, are attached two cleats or strips, H, to which are secured the ends of two bars, I. J is a bar or lever, which is detachably secured to the upper ends of the springs B by two pins, K, in such a position as to bear upon the bars I, and thus hold

the cover F down, and at the same time hold the cream-box D in place upon the bar C and springs B. In case the bars I should spring, from the pressure of the bar or lever J, they may be detached and reversed. In the cover F is formed an air-hole, an inch, more or less, in diameter, in which is inserted a tapering pipe, L, the lower end of which projects a little below the inner surface of the cover F, to prevent the milk from spattering out. One or both ends of the bar J should project, to serve as handles in operating the churn. M N is the dasher, which is formed by attaching the ends of a series of slats, M, to two bars, N. The slats M are set inclined, as shown in Fig. 3, to divide the milk and give it a new direction as it flows back and forth through the said dasher. The ends of the top and bottom bars N are notched or slotted to receive and fit upon ribs O, attached to the sides of the box D, so that the dasher may be held securely in place, and may be conveniently inserted and removed, as desired.

In operating the churn, it is moved back and forth, which causes the milk to pass rapidly from one end of the box D to the other, through the dasher M N, the inclination of the slats M throwing it into numerous currents and into violent agitation, bringing the butter in a very short time.

The elasticity of the springs B enables the box D to be easily oscillated, a slight push being all that is required to keep it in motion.

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

The combination of the platform A, springs B, stationary bar C, notched blocks E, and detachable bar J with each other, to adapt them to receive the cream-box D, substantially as herein shown and described.

Witnesses:

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