

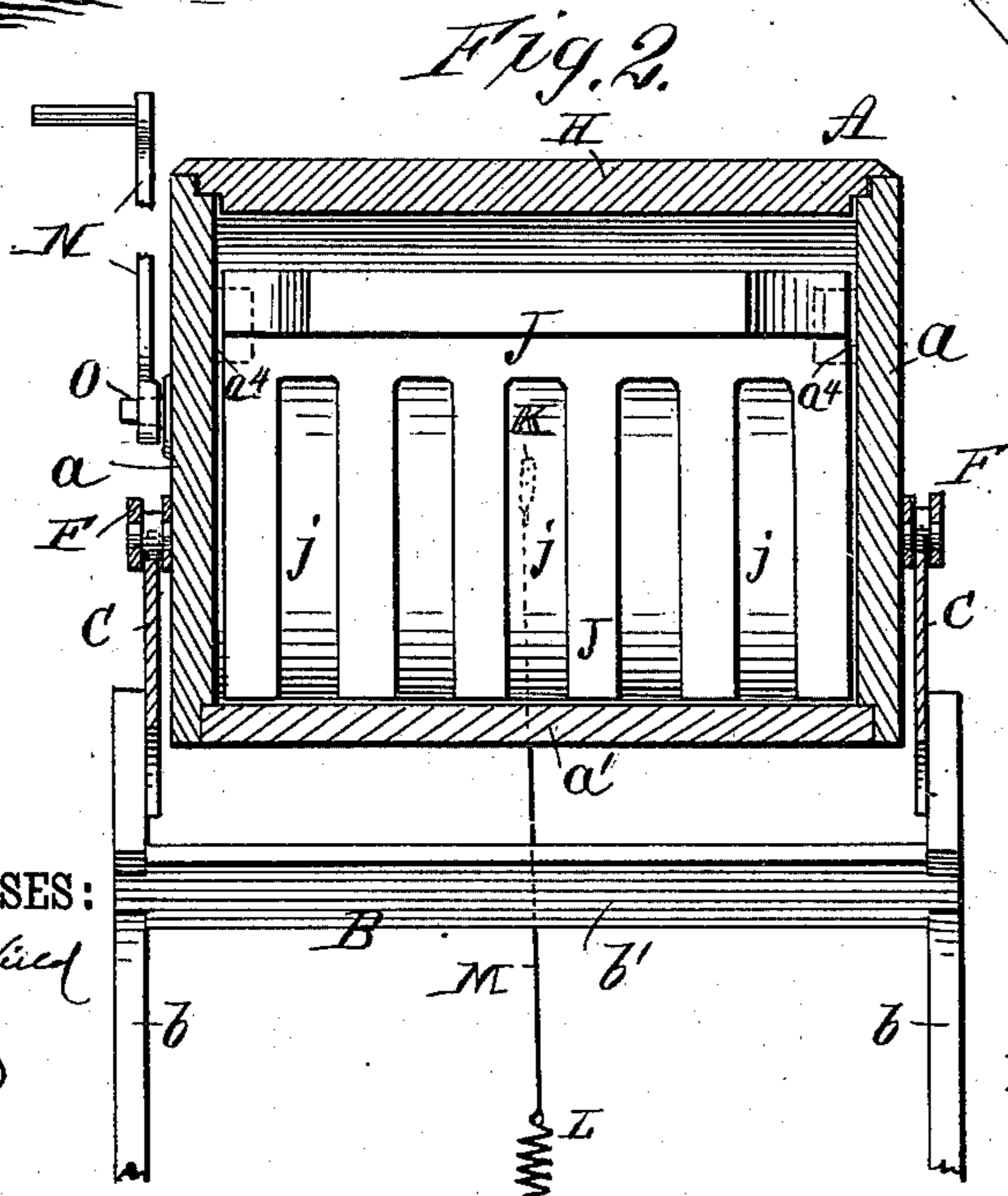
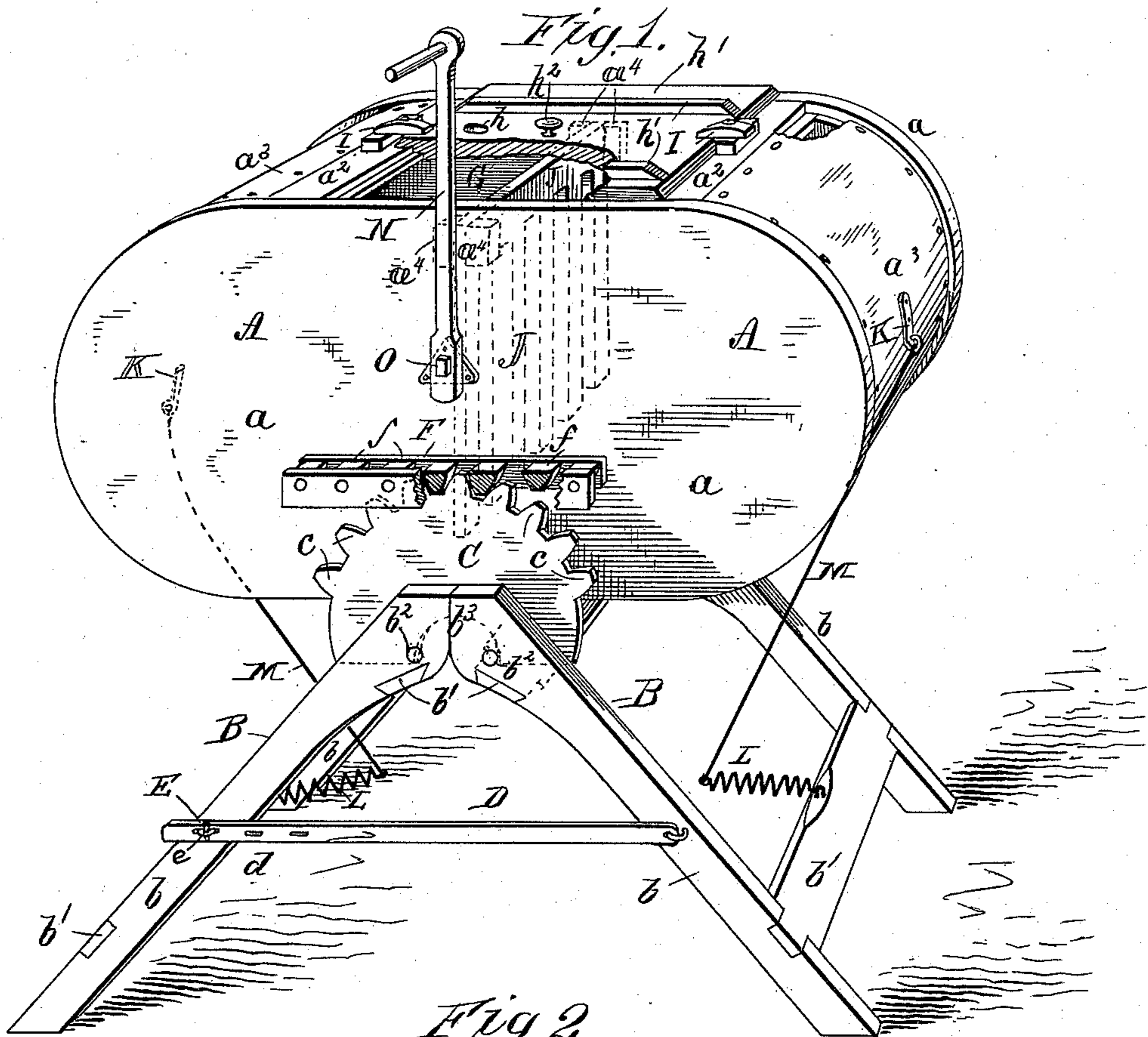
(No Model.)

C. M. & E. E. DICKEY.

CHURN.

No. 383,633.

Patented May 29, 1888.



**WITNESSES:**

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# UNITED STATES PATENT OFFICE.

CYRUS M. DICKEY AND ETTA E. DICKEY, OF NEW GARDEN, OHIO.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 383,633, dated May 29, 1888.

Application filed June 27, 1887. Serial No. 242,642. (No model.)

*To all whom it may concern:*

Be it known that we, CYRUS M. DICKEY and ETTA E. DICKEY, of New Garden, in the county of Columbiana and State of Ohio, have invented a new and Improved Churn, of which the following is a full, clear, and exact description.

Our invention relates to churns, and has for its object to provide a simple, inexpensive, and efficient rocking churn, which may be operated easily and will bring the butter quickly, and is not liable to get out of order, and may be conveniently and thoroughly cleansed.

The invention consists in certain novel features of construction and combination of parts of the churn, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a perspective view of our improved churn with parts broken away and in section, and Fig. 2 is a central vertical transverse section of the churn with parts broken away.

The frame on which the churn-body A is normally supported comprises two opposite side frames, B B, each made with opposite side bars, *b b*, and upper and lower cross-bars, *b' b'*, connecting them. Each of the bars *b b* of these frames B is pivoted at *b<sup>2</sup>* to opposite metal plates, C C, and has the lower edge of its upper abutting end slightly cut away or rounded in order to permit of the movement toward each other of the said bars for effecting the vertical adjustment of the churn-body, in the manner and for the purpose presently described. The plates C C are made about semi-circular in general form, and provided with segmentally arranged teeth *c*, which serve as direct supports for the churn-body, as hereinafter explained. To one of the frames B a metal bar or plate, D, is pivoted or held loosely at one end, and the other end portion of the bar is provided with a series of slots, *d*, into either of which a staple, *e*, on the opposite frame B may be entered, and a pin, E, is then passed through the staple outside of the bar, to lock it to place and hold the opposite

frames B B steadily to give substantial support to the churn-body. When the opposite leg-frames B B are spread apart at the bottom the greatest distance, two faces or edges of the sides of the frames at each side of the machine will meet at a central joint-line, *b<sup>3</sup>*, near the pivots, and the churn-body will then be supported in its lowermost position.

Should it be desired to raise the churn-body to accommodate a taller person working it, it is only necessary to draw the pin E and slip the bar D from the staple *e*, and then draw the lower parts of the frames B B toward each other and engage another slot *d* of the bar with the staple *e* and apply the pin E again to the staple to lock the frames for holding the churn-body in a higher position.

The churn-body is supported on the frame by two rack-bars, F F, fixed one to each side of the body by bolts or otherwise, and having teeth *f*, which mesh into or interlock with the teeth *c* of the opposite side plates, C C, held to the frames B B by the pivot-bolts *b<sup>2</sup>*, as above described.

The churn-body A is made with opposite sides *a a*, rounded at the ends, and a bottom board or plate, *a'*, and top cross-bars, *a<sup>2</sup> a<sup>2</sup>*, all fixed to the sides *a a* in any approved way, leaving them liquid-tight. The opposite end walls of the churn-body consist of wood or metal plates *a<sup>3</sup>*, which are fitted into rabbets in the parts *a a' a<sup>2</sup>*, and wherein the plates are fastened by nails or screws, so as to be liquid-tight. The opening G, left at the top of the churn-body between its sides *a a* and cross-bars *a<sup>2</sup> a<sup>2</sup>*, is quite large, thus allowing the churn-body to be charged or emptied and cleaned quickly and easily. The margin of the opening G is formed as a rabbet, into and over which the lid or cover H, which is double-rabbeted around its edges or margin, is fitted. The lid is provided with an air-inlet hole, *h*, and preferably with cleats *h'*, which prevent it from warping, and buttons I I, pivoted to the cross-bars *a<sup>2</sup> a<sup>2</sup>*, may be turned over the lid to hold it securely to place and prevent splashing or leakage of the contents of the body A at the opening G when the churn is operated. The lid H also has a knob or handle, *h<sup>2</sup>*, by which to lift it from and adjust it to the churn-body.

Within the churn-body, about at its center, is held transversely between pairs of cleats  $a^4 a^4$ , fixed to the opposite sides of the body, a comb-like partition, J, through the slots  $j$  of which the liquid contents of the churn-body are thrown by the rocking movements of the body, the partition or plate thus serving as an agitator to thoroughly and quickly break up the globules of the milk. This agitator J may be withdrawn from the churn-body to facilitate cleaning of the parts.

To each end of the churn-body a hook, K, is fixed, and to the lower cross-bar  $b'$  of each side frame, B, is attached one end of a spiral spring, L, to the other end of which is connected a cord, M, which carries at its free end an eye or loop adapted for engagement with the adjacent hook K on the same end of the churn-body. When the body A stands about level, the springs L at both ends of the frame hang loosely or out of tension, as shown in Fig. 1 of the drawings; but the springs and cords are of such length that as each end of the churn is lowered nearly or about to the full extent of the rocking movement of the churn-body on the plates C and rack-bars F the spring L at the opposite or high end of the churn will be put in tension, so that it shall by its reaction cause rebound of the churn-body to assist the operator in rocking the body on the frame, which he accomplishes by grasping a crank arm or handle N, which is fitted at its inner end to a square or flat sided pin or stud, O, fixed to one side of the

churn-body, and as will be clearly understood from the drawings. The intermeshing teeth  $f^c$  of the rack-bars and plates F C on the churn-body and its frame support hold the rocking body securely against slipping from the frame and relieve the operator from most of the weight of the rocking body and assure easy and quick movements of the body to cause the butter to come quickly.

It is obvious that when the cords M are unhooked from the churn-body the latter may be easily lifted from the frame B B, and when the bar D is released from the staple  $e$  the opposite sides of the frame may be folded together into comparatively small space to facilitate transportation or storage of the churn.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination, with the churn, substantially as described, to the sides of the body of which are secured racks, of the plates or disks provided with segmentally-arranged teeth meshing with said racks, and the supporting-frame, comprising pairs of side bars pivoted to said disks or plates and adjustably connected together, substantially as shown and described, and for the purpose set forth.

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Witnesses:

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