

(No Model.)

D. LINES & C. T. LONG.

CHURN.

No. 343,771.

Patented June 15, 1886.

Fig. 2.

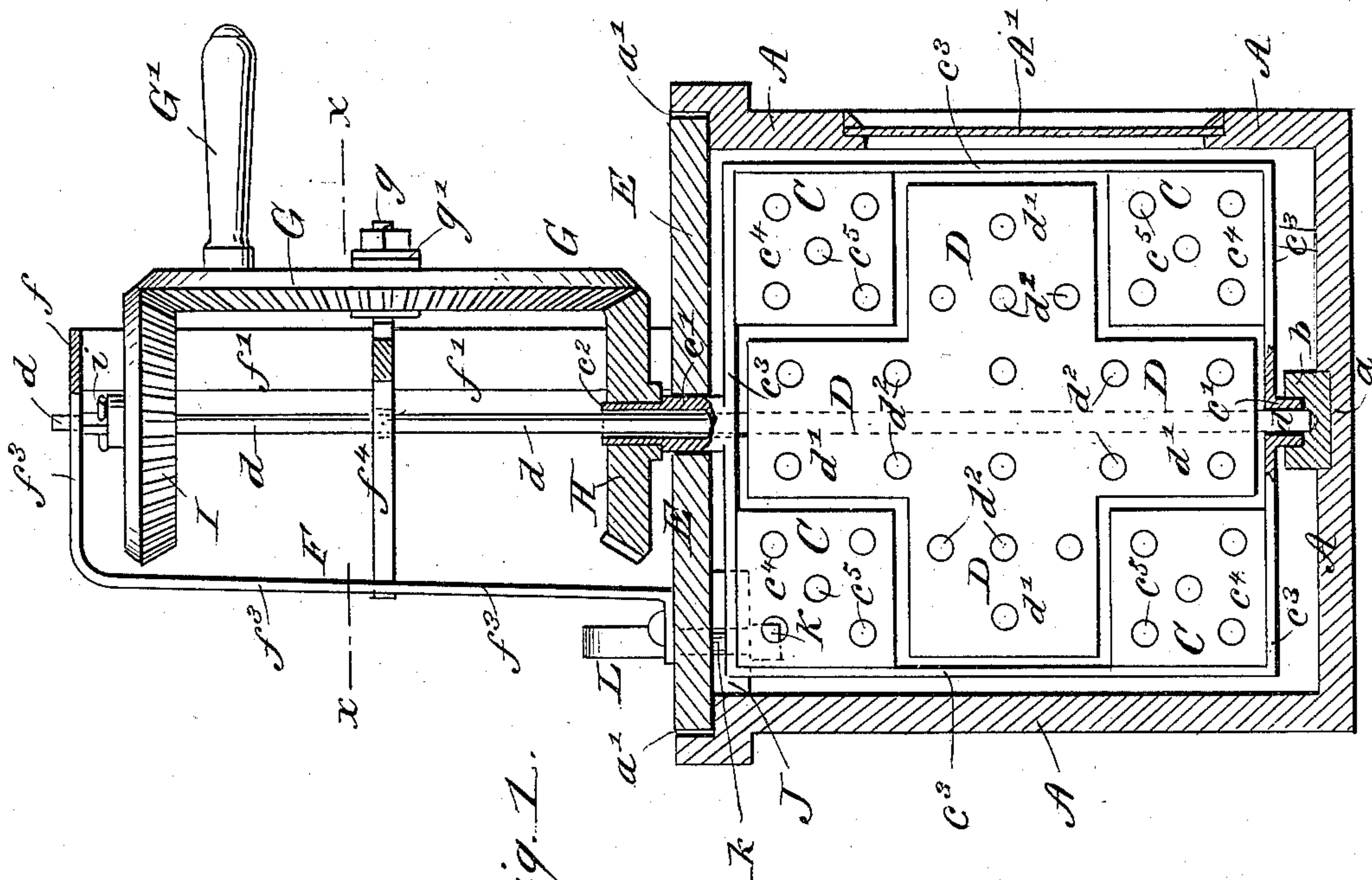
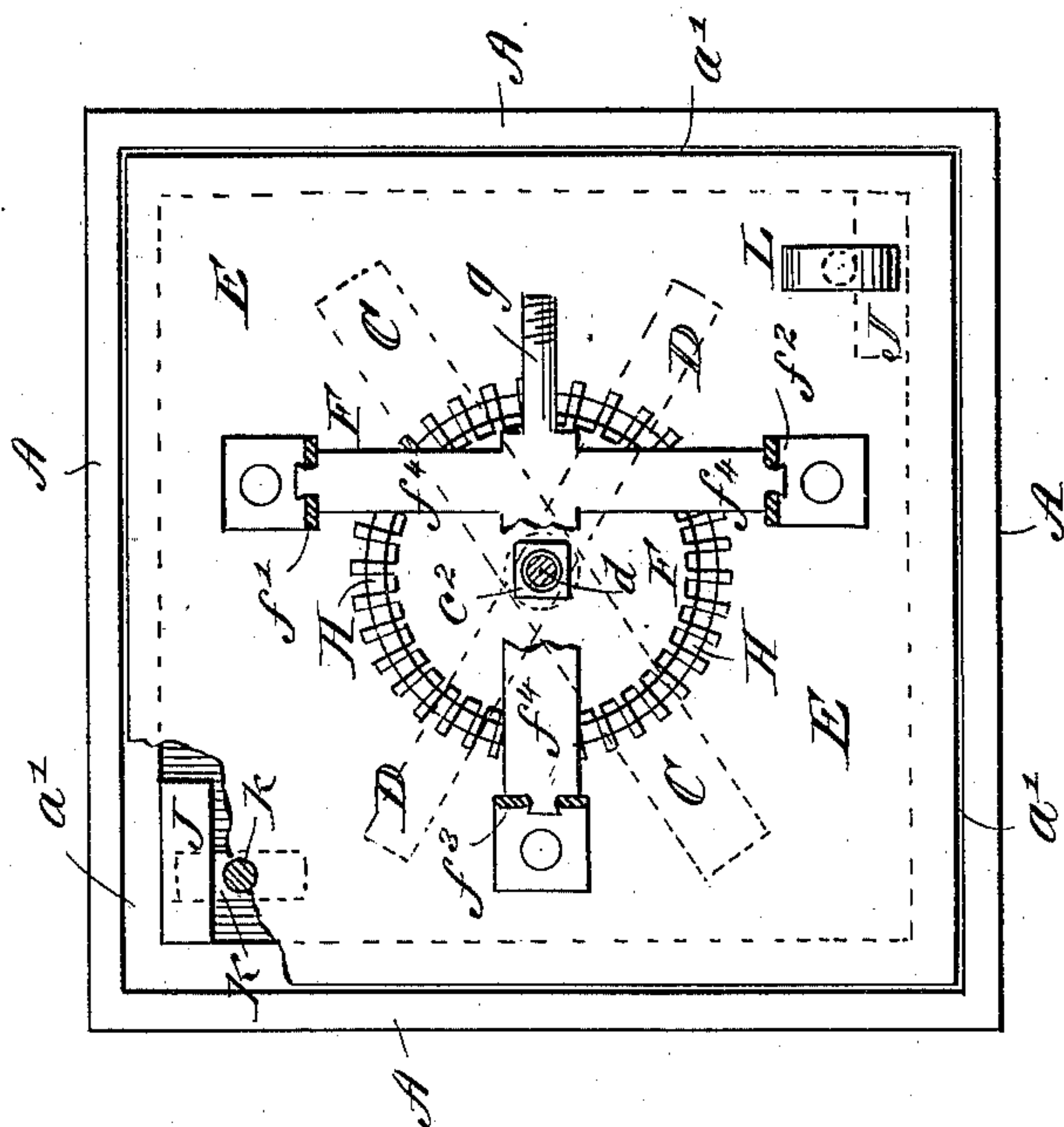


Fig. 1.

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CHURN.

SPECIFICATION forming part of Letters Patent No. 343,771, dated June 15, 1886.

Application filed December 31, 1885. Serial No. 187,269. (No model.)

To all whom it may concern:

Be it known that we, DANIEL LINES and CHARLES T. LONG, both of Milano, in the county of Milam and State of Texas, have invented a new and Improved Churn, of which the following is a full, clear, and exact description.

The object of our invention is to provide a simple, inexpensive, and effective churn, which may be operated easily to bring the butter quickly, and may be cleaned thoroughly and kept in sweet condition to produce butter of high quality.

The invention consists in certain novel features of construction and combinations of parts of the churn, all as hereinafter fully set forth.

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

Figure 1 is a vertical sectional elevation of our improved churn; and Fig. 2 is a plan view, partly broken away and in section, on the line $x x$, Fig. 1, and with the main driving-gear removed.

The body A of the churn is made of stone, china, or earthenware, and preferably in the square or rectangular form shown, and in the bottom of the body is formed a recess, a , in which is placed loosely the wood block or bearing b , in which are stepped the lower gudgeon or shaft, c , of the outer dasher, C, and the lower end of the shaft d of the inner dasher, D, said shaft d passing through the gudgeon c , and also through the upper gudgeon or short hollow shaft, c' , at the top of the dasher C, said shaft c' being journaled in a hole made through the center of the churn-body cover E, which rests in a rabbet, a' , formed around the top inner edge of the churn-body.

To the top of the cover E is fixed a tripod-frame, F, formed of two metal bars or plates, $f' f^2$, arching over at f to meet each other at the top of the frame, and a third bar or plate, f^3 , connected with the arched top f , and bent horizontally and then downward to the cover; and about at the center of the frame is fitted the horizontal three-armed brace f^4 , which is riveted to the bars $f' f^2 f^3$, and at the center, next the side braces, $f' f^2$, is provided

with a gudgeon or short shaft, g , on which is journaled the main driving gear-wheel G, which is held on the shaft by the washers and nut g' . (See Fig. 1.)

On the squared upper end, c^2 , of the upper part, c' , of the shaft of the outer dasher, C, is fitted the lower bevel-pinion or gear-wheel, H, and on the upper part of the inner dasher-shaft, d , which is journaled in the top of the tripod-stand F, is fitted loosely the upper bevel-pinion or gear-wheel, I, which is held in place by a pin or key, i , passed through the shaft d above it. Both bevel-gears H I, when the churn is in working condition, mesh with the driving-gear G; hence the revolution of said gear by a person grasping its handle G' will rotate the dashers C D in opposition or reverse directions, as will readily be understood.

In diagonally-opposite corners of the churn-body A are provided lips or lugs J J, beneath which buttons K K, fixed to shafts $k k$, passing through the churn-cover, may be turned by their upper finger-pieces or handles, L L, for locking the cover E firmly to the body A, and the buttons may readily be turned back clear of the lugs to allow the cover to be removed.

It will be seen that the entire driving-gearing is supported on or over the churn-body cover and quite at the center of the cover; hence the driving-gears G H I may be operated rapidly for most effective working of the dashers without danger of upsetting the churn, and the entire gearing lifts away from the stone churn-body, allowing the latter to be cleaned thoroughly, as hereinafter more fully explained.

The dasher C consists of an outer rectangular frame, c^3 , in the corners of which are fixed the plates or blocks c^4 , which are perforated, as at c^5 , and in the cross-shaped opening of the dasher C the dasher D is fitted, said dasher having projecting side parts, $d' d'$, which fit between the plates or blocks c^4 of the dasher C, and are perforated, as at d^2 .

It is obvious that as the dashers C D are rotated in reverse directions by the driving-gearing, as above described, the corner blocks, c^4 , of the dasher C will force the milk toward the center of the churn-body, where it will be met and more thoroughly agitated by the side parts, d' , of the dasher D, and this, in connec-

tion with the forcing of the milk through the perforations $c^5 d^2$ of the dashers, will break up the globules of the milk and bring the butter very quickly. When the churning is finished, 5 the pin or key i will be removed from the shaft d , and the buttons K will be turned to release the cover E , which then will be lifted from the churn-body A , and will carry with it the driving-gears $G H I$, leaving the dashers and their 10 shafts in and above the body, and the dashers then may be lifted from the body, and the block or step-bearing b will also be removed therefrom, and these several parts of the churn may then be cleaned conveniently and thoroughly, and the stone churn-body will always 15 keep sweet, which wood or metal churn-bodies will not do; hence there is a much better chance of always making butter of the first quality and value.

20 After being cleaned the dismembered parts may very easily and quickly be assembled again in positions for use, as shown in Fig. 1 of the drawings and above described.

If preferred, a pane, A' , of glass may be 25 fitted in a side of the churn-body, through which the operation of the churn may be seen.

By means of the tripod-frame with the three-armed brace the churn-receptacle is held steady and the pressure equalized thereon, 30 the same thus being prevented from tilting or upsetting by the action of the dasher, while with the central dasher-shaft passing cen-

trally through the said frame the former is held perfectly perpendicular, preventing the same from bending, as would likely be the case, especially if of light construction and 35 otherwise disposed.

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

In a churn, the combination, with the body or receptacle and its cover, of the dasher having a frame provided with inner apertured or perforated corner blocks and journaled in the body or receptacle, and a second apertured or 40 perforated cross-shaped dasher journaled within the other dasher, the tripod-frame comprising the arched meeting side bars, and a third connecting-bar having an aperture, through which the upper end of the inner 50 dasher-shaft passes, the three-armed brace having a gudgeon or shaft carrying the handled gear-wheel and the pinions, one connected to the shaft of one dasher and the other connected to the shaft of the other dasher, 55 said pinions jointly gearing with the said gear-wheel, substantially as and for the purpose set forth.

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