

(No Model.)

J. HULTZ.

CHURN.

No. 338,172.

Patented Mar. 16, 1886.

Fig. 1.

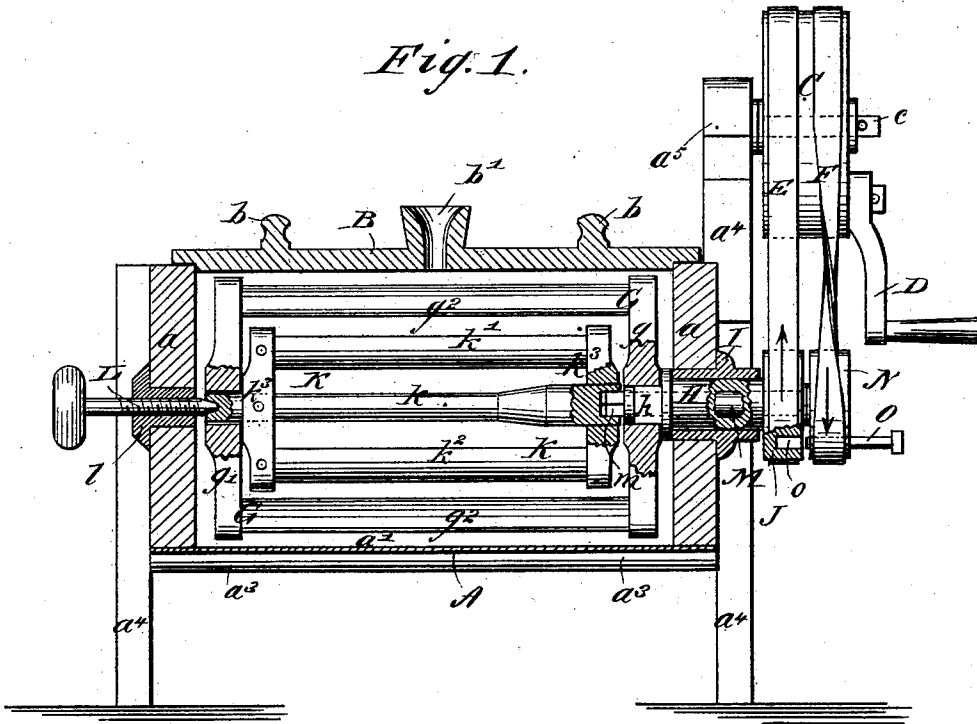
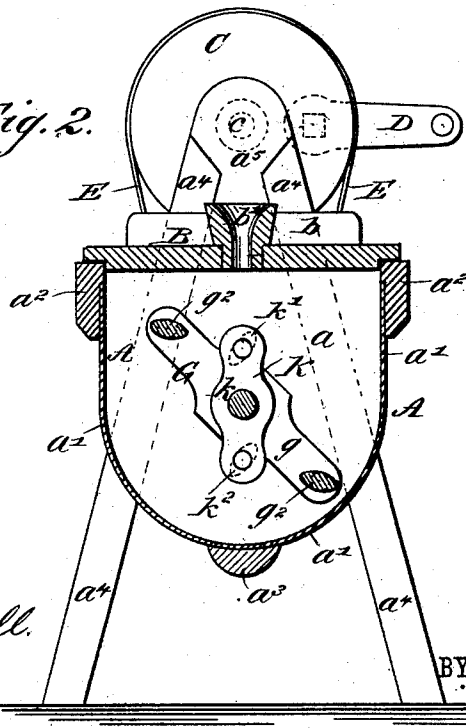


Fig. 2.



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CHURN.

SPECIFICATION forming part of Letters Patent No. 338,172, dated March 16, 1886.

Application filed December 9, 1885. Serial No. 185,136. (No model.)

To all whom it may concern:

Be it known that I, JAMES HULTZ, of Greeley, Anderson county, Kansas, have invented a new and useful Improvement in Churns, of which the following is a full, clear, and exact description.

My invention relates to churns, and has for its object to provide a simple, inexpensive, and durable churn, which may be operated to bring the butter quickly and to gather and wash the butter easily and thoroughly, and which also may be quickly and conveniently cleaned.

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

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 the figures.

Figure 1 is a longitudinal vertical sectional elevation of the churn with parts broken away, and Fig. 2 is an end view showing the churn-body and dashers in cross-section.

The body A of the churn consists of opposite wooden end pieces, *a a*, and a sheet-metal plate, *a'*, bent to form the bottom and sides and held to the ends by screws or otherwise, and also by side cleats, *a² a²*, which also are fastened to the ends *a a*. A longitudinally-ranging cleat, *a³*, fastened to the ends *a a*, below the bottom plate, strengthens said plate and prevents outward bulging or sagging of it by the weight of the contents of the churn. The cover B of the churn-body is provided with cross-cleats *b b* to prevent its warping, and also has a funnel-shaped opening at *b'*, made about at its center, and through which opening the milk to be churned may be poured into the churn-body, and air may pass to the milk while being churned. The legs *a⁴ a⁴* of the churn-body at one end of it are extended upward and form braces to a block or bearing, *a⁵*, fixed to the adjacent end of the churn-body, and in which is journaled a shaft, *c*, to which the driving-pulley C is fixed, and said pulley has a crank, D, by which it may be turned to transmit power by belts E F to pulleys on the shafts of the dashers, as next described. The larger dasher, G, consists of two end bars, *g g'*, connected by side bars, *g² g²*, and by a square hole

in its end bar, *g*, is fitted to the squared end *h* of a short hollow shaft, H, which is journaled in a metal bushing or bearing, I, fitted to the end of the churn-body, and on the shaft H is fixed the driving-pulley J, around which the straight or open belt E passes from the pulley C. The other end bar, *g'*, of the dasher G has a loose bearing on the projecting end of the center bar, *k*, of the inner smaller dasher, K. The dasher K consists of the aforesaid central bar, *k*, and bars *k' k²*, one at each side of it, and all three bars connected rigidly to opposite end or head piece, *k³ k³*. The projecting end of the bar *k*, which passes through the end bar, *g'*, of the dasher G, has a conical recess in its end to receive the tapered end of a screw-shaft, L, which is threaded into a socket or bushing, *l*, fixed in the end of the churn-body, and the other end of the bar *k* has a squared socket, which fits over the squared end *m* of a shaft, M, which passes loosely through the hollow shaft H of dasher G, and has fixed to it the pulley N, over which the crossed belt F passes from the driving-pulley C. A pin, O, is passed through the pulley N, and may be pushed into a hole, *o*, in the pulley J, to cause both dashers G and K to be revolved together in the same direction.

The operation is as follows: When the dashers G K are adjusted in the churn-body, as above described, and the pin O is withdrawn from the pulley J and the churn-body is charged with milk, the crank D will be turned and the belts E F will rotate the dashers G K, respectively, in opposite directions, whereby the milk will be thoroughly agitated to cause the butter to come very quickly, and when the churning is finished the pin O will be pushed into the hole *o* of the pulley J to bind the pulleys N J to each other, and whereby when the crank D is again turned both the dashers will be rotated in the same direction to gather and wash the butter in an easy and scientific manner. By turning back the screw L both dashers may be readily removed from the churn-body, to enable all parts of the churn to be cleaned conveniently and quickly.

I am aware that churns having double dashers arranged to be rotated in reverse directions for churning, or to be locked so they ro-

tate in the same direction for gathering the butter, have before been made; hence I do not claim these features as of my invention.

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

1. The combination, in a churn, of the body A, provided with a cover, a shaft, H, mounted in a bearing at one end of the body and provided with a squared inner end, *h*, and a pulley, J, a shaft, M, journaled within shaft H and provided with a squared end, *m*, and a pulley, N, a driving-pulley, C, open and crossed belts E F, leading, respectively, from said pulley to the pulleys J N, an adjustable bearing,
10 L, in the opposite end of the churn-body, and
15 a double dasher consisting of an outer dasher, G, and an inner dasher, K, made substantially

as specified, and mounted at one end of the shafts H M, and at the other end on each other and on the bearing L, substantially as herein
20 set forth.

2. The combination, in a churn and with the shafts H M, bearing L, and dashers G K, mounted on said shafts and bearing and on each other, substantially as specified, and the
25 driving-pulleys J N, and open and crossed belts E F, of a pin, O, passed through pulley N and adapted to be entered into a hole, *o*, in pulley J, substantially as and for the purpose herein set forth.

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Witnesses:

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