Gurney & Merrill,

Churn.

No. 112,806. Patented Mar. 21, 1871.

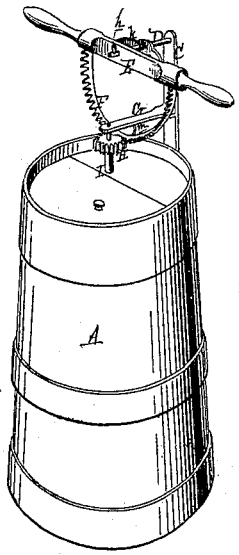

Fig. 1

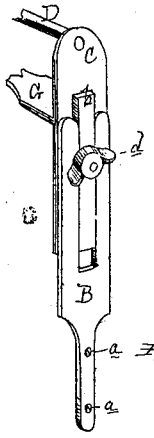

Fig. 2

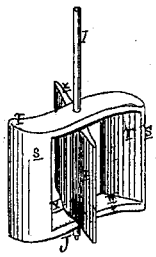

Fig. 3.

Fig. 4.

ATTEST

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HEMAN S. GURNEY AND HORACE MERRILL, OF MEMPHIS, MICHIGAN.

Letters Patent No. 112,806, dated March 21, 1871.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that we, HEMAN S. GURNEY and HORACE MERRILL, of Memphis, in the county of Macomb and State of Michigan, have invented a new and useful Improvement in Churns; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective.

Figure 2, a section, showing the adjustability of the motive mechanism.

Figure 3 is a perspective of the dasher.

Figure 4 is a cross-section, showing the method of attaching the motive mechanism to a churn the body of which is pottery-work, commonly called stone-ware.

Like letters indicate like parts in each figure.

This invention relates to that class of implements for making butter, so constructed that a most thorough and rapid release of the fatty matter from the globules of the cream is accomplished, thereby rendering the process of butter-making a short and pleasant one.

The invention consists—

First, in a dasher of novel construction, so formed that it most thoroughly agitates the cream and separates the fatty matter, which, when so separated and gathered, makes the butter.

Second, in the new and ingenious arrangement of the various parts to form a complete churn, as more fully hereinafter set forth.

In the accompanying drawing—

A represents the body or cream-chamber of a churn, preferably made of pottery or stone-ware, although wood or other suitable material may be employed in its construction.

When made of pottery-ware, the bolts *a* should be inserted through the plastic clay and remain there while the body is being burned.

By means of these bolts *a* the standard, which is bifurcated, as shown in fig. 2, is secured to the side of the body and near its top.

A plate, C, upon the rear side of which is a guide or projection, *b*, which latter fits and may have a sliding motion in the bifurcation of the standard B, is secured to said standard by means of the bolt and thumb-nut *d*, so that the plate C may be removed or replaced at pleasure.

To the front side of this standard or plate C, and at right angles therewith, is secured the rigid shaft D, upon the outer end of which the lever E has a partially-rotary vibrating movement, it being held in position on said shaft by means of the pin *h* and circular brace *k*, whose center embraces the shaft, as shown at *n*, in fig. 1.

To this lever E is secured the semicircular-toothed segment F, its ends being fastened to the lever at equal distances from the center of the latter.

A horizontal standard, G, is rigidly secured to the front side of the plate C, and projects forward at right angles with the same and parallel with the shaft D until its outer end is a little beyond the center of the body A.

Projecting from the lower side of this standard G is the guide *m*, which is designed to rest against the rear side of the segment F and compel the teeth of the latter to engage with the pinion H, which is rigidly secured to the dasher-rod I, the upper end of which is stepped in the end of the standard G, while its lower end is properly stepped in the bottom of the body.

To the lower end of this dasher-rod is secured the winged dasher J, which is constructed in the form shown in fig. 3, the wings *s* having outward-curved surfaces, *r*, at each end, and a rectangular opening, *v*, in its center, whose ends are beveled as at *w*.

These wings *s* should nearly fill the circumference of the interior of the body, and within the opening *w* and at right angles with the wings *s* is secured the shorter double wedge-shaped wings *x*.

This peculiar form of dasher is found very effective, especially when it receives a semi-rotary vibrating motion from the mechanism hereinbefore described.

The operation of this churn is so simple that a further description thereof is deemed unnecessary in this specification.

When it is desired to remove the dasher for any purpose, the thumb-nut should be loosened and the plate removed from the standard, when the cover and dasher may be taken out.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The dasher J, in combination with the rod I, when the former is constructed and operating as set forth.

2. The combination of the body A, standard B, plate C, shaft D, lever E, segment F, standard G, pinion H, rod I, and dasher J, substantially as and for the purposes set forth.

HEMAN S. GURNEY.
HORACE MERRILL.

Witnesses:
EZRA HAZEN,
ELLA HAZEN.