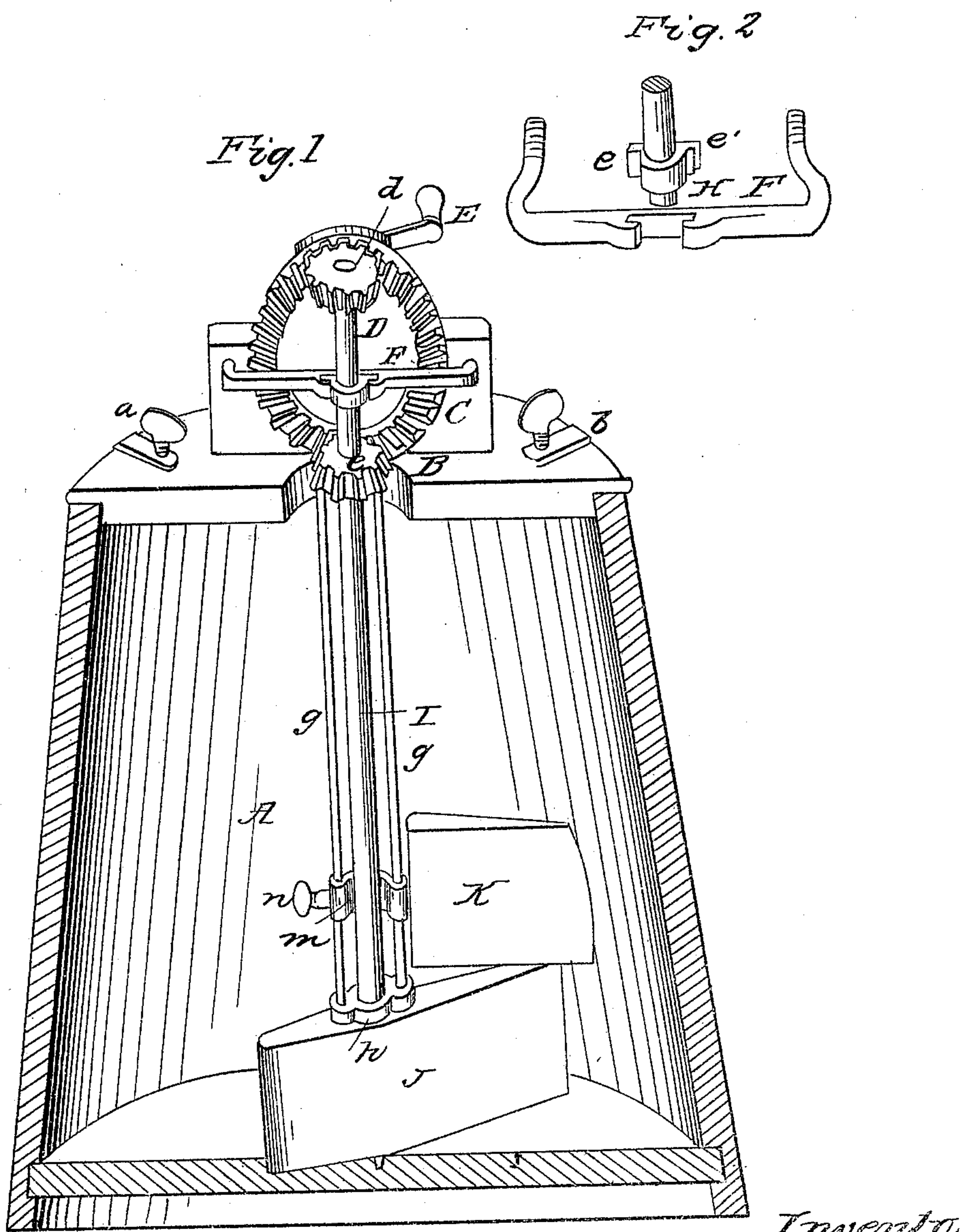


C. R. TUTTLE.

Churn.

No. 37,016.

Patented Nov. 25, 1862.



Witnesses  
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# UNITED STATES PATENT OFFICE.

C. R. TUTTLE, OF NEW BRIGHTON, PENNSYLVANIA.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **37,016**, dated November 25, 1862.

*To all whom it may concern:*

Be it known that I, C. R. TUTTLE, of New Brighton, in the county of Beaver and State of Pennsylvania, have invented a new and Improved Churn; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents in perspective an axial section of a churn embodying my invention. Fig. 2 represents in perspective a fragment of the central dash-rod, its journal-box, and metallic support or bracket.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to expedite the removal of the dasher from the churn when it is desired to inspect the contents of the vessel or to cleanse either the dasher or vessel or both after a churning, and with equal facility to adjust the former within the latter in proper working order when desired for use, and also to enable one dasher to be adjusted relatively to the other to adapt the churn with equal efficiency to churn a large or small amount of cream, and, further, to enable the upper dasher to be used for gathering the butter; and to these ends the invention consists—

First, in supporting the upper end of the central dash-rod at a point midway between the pinion-wheels in a box which is furnished on two opposite sides with dovetail or wedge shaped projections adapted to fit corresponding grooves in the metallic support or bracket, and thereby to hold the dash-rods in position to have their pinion-wheels properly gear into the main driving gear-wheel.

The invention consists, secondly, in supporting one of the dashers by a screw-clamp (whereby it may be adjusted higher or lower in the cream-vessel) on two rods, which are secured at their ends in the under and upper sides of a pinion-wheel and collar, respectively, said pinion wheel and collar being fitted loosely on the central dash-rod, and adapted to be revolved together in a contrary direction to that of the central dash-rod, all as will be hereinafter fully explained.

To enable others skilled in the art to fully understand my invention, I will proceed to describe its construction and operation.

A represents a wooden tub or vessel which is bound with hoops in the usual manner, and may be of cylindrical or conical form. This tub or vessel is furnished with a lid formed in two equal parts, one of which parts, B, and the only one shown in the accompanying illustration, being rigidly secured in a certain position on the top of the vessel by screw-clamps *ab*, which are attached to the vessel on the outside by staples. (Shown in dotted lines in Fig. 1.) The other part of the lid is designed to fit the tub or vessel, so as not to require any fastening to keep it in its place, and at the same time so as to be easily removable to enable the operator to inspect the contents of the vessel or for any other purpose desired. That part of the lid B which is rigidly secured to the vessel is provided on its upper side with a projection, C, which is in the form of a T, and has a hole passing horizontally through it, in which the shaft of the driving-wheel D is fitted to revolve. Said shaft at its outer end terminates in a square shank to receive a winch, E, by means of which motion is imparted to the shaft, and through it and the cog gearing to the dashers.

F is a furcated metallic support or bracket, which extends across the face of the driving-wheel, and is secured on opposite sides thereof by its prongs in the projection C. Said prongs protrude through the projection, and are made rigid by screw-nuts fitting their outer ends. The bracket F on its front side in the middle is grooved or fashioned to receive the wedge-shaped projections *c c'* of the box H, in which the upper end of the shaft I is fitted to revolve. This shaft I at its lower end is stepped into a cavity in the bottom of the tub, and has rigidly attached to it just above the step a wing or blade, J, which runs in close proximity with the bottom of the vessel. This wing or dasher J projects about two-thirds of its length on one side of the shaft I, and about one-third on the opposite side. The upper end of the shaft I is provided with a bevel pinion-wheel, *d*, which gears into the upper side of the driving-wheel C and receives motion therefrom.

*e* is a similar bevel pinion, fitted loosely upon the shaft I, and gearing into the lower side of the driving-wheel. This latter pinion is mounted on the upper ends of two rods, *g g*,



which at their lower extremities are screwed into or otherwise attached to a collar, *h*, said collar being fitted loosely on the shaft *I* and kept in a certain position thereon by a fixed collar (not seen in the drawings) on which the loose collar revolves.

*K* is a wing or dasher attached by a clamp, *m*, to the rods *g g*. This clamp is composed of a metal plate slightly curved, and having two parallel holes or eyes drilled through it, whereby it is adapted to slide up and down on the rods, being retained thereon at any desired height by a set-screw, *n*, which bears against one of the rods.

The power to rotate the dashers is applied to the winch, and the dashers are so geared as to revolve in contrary directions and with equal velocity. The wing or dasher *K* is arranged so that it may be adjusted higher or lower on its rods, according as it is desired to churn a large or small quantity of cream at one churning.

To gather the butter after a churning, the upper dasher should be adjusted on its rods to the top of the cream, and secured by the thumb set-screw. Then by rotating the same first in one then in the other direction the particles of butter, which always float on the cream, are collected together in one solid mass.

To unship the central shaft or dash-rod ready for removal only requires the box *H*, in which its upper end is supported, to be shoved upward on the shaft a distance equal to its depth. This withdraws the dovetail or wedge shaped projection, and leaves the shaft and its appurtenances free to be removed from the vessel. The shaft and appurtenances may be replaced in the vessel and made ready for use with the same ease and expedition that it is removed.

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

1. The box *H*, provided with dovetail or wedge shaped projections *c c'*, adapted to fit corresponding mortises in a metallic support or bracket, *F*, when combined and arranged to operate in the manner and for the purpose specified.

2. The wing or dasher *K*, and clamp *m*, provided with set-screw *n*, in combination with the rods *g g*, when arranged to operate in the manner and for the purpose specified.

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Witnesses:

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