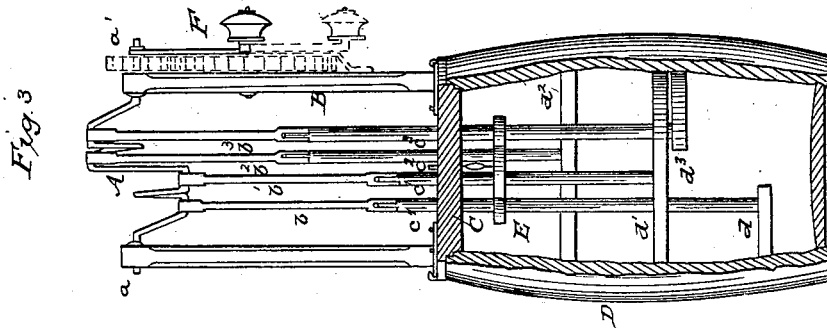
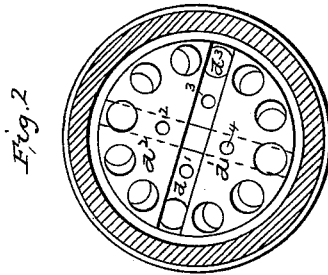
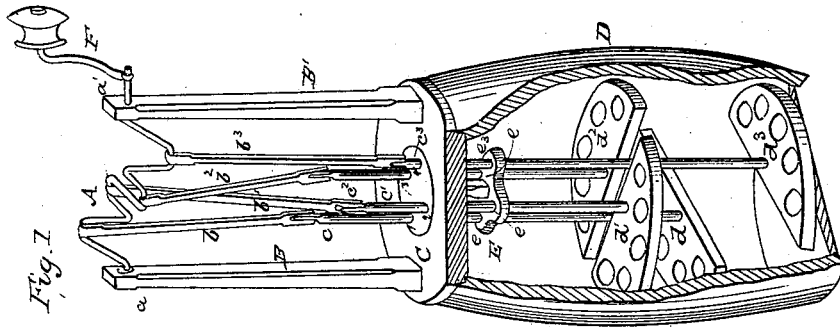


H. HUTCHISON.

Churn.

No. 48,815.

Patented July 18, 1865.



Inventor  
Henry Hutchison  
By his Attorney  
Baldwin & Son

# UNITED STATES PATENT OFFICE.

HENRY HUTCHISON, OF THREE RIVERS, MICHIGAN.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 48,815, dated July 18, 1865.

*To all whom it may concern:*

Be it known that I, HENRY HUTCHISON, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my churn with a portion of the barrel broken away to show the dashers, rods, and guide. Fig. 2 is a horizontal section through the churn, and Fig. 3 is an elevation of the churn with a portion of the barrel broken away.

The common churn as generally used is a vessel in the shape of a frustum of a cone, in which the cream is agitated by means of a perforated circular board attached to a long rod, which is worked up and down through an orifice in the lid of the vessel; but such churns require much power and agitate the milk slowly and irregularly and require too much time to produce butter economically.

Now, it is the object of my invention to remedy these defects, and to separate the oily parts of milk or cream from the caseous and serous by four separate sectional dashers that shall be worked with less power than the single dasher, and produce the butter more rapidly; and to this end my invention consists, first, in the use of a four-armed crank to work sectional dashers; second, in the employment of a fixed guide to give the rods that operate the dashers a proper support and secure a truly vertical movement to the dashers.

I construct a four-armed crank, A, and mount it in suitable bearings, *a a'*, in uprights B and B', supported securely on the cover C of the barrel of the churn D. A pitman, *b b' b'' b'''*, is attached severally to one of the four cranks of the four-armed crank A, and are all of the same length, having an open slot and pin at their lower end. Four rods, *c, c', c'', and c'''*, are severally pivoted to the pitmen *b, b', b'', and b'''*, pass through the orifices 1, 2, 3, and 4 in the cover C, and to the bottom of each rod is attached a perforated sectional dasher, *d, d', d'', and d'''*, of nearly a semicircular form in the example shown in the drawings, though this

form may of course be varied without departing from the spirit of my invention.

Secured by a central support beneath the center of the cover I place the guide E, having four orifices, *e, e', e'', and e'''*, through which the rods *c, c', c'', and c'''* freely vibrate. This guide is so placed and held that the openings through it and through the cover shall be in vertical lines, that the rods that move therein may always move perpendicularly and keep the dashers of one rod from striking the rod of any other dasher or against the sides of the churn.

The operation of my invention is as follows: When the crank is turned by the arm F, or by a pulley, or by gearing, as shown in red lines in Fig. 3, from any power-motor, it will impart a rotary motion to each crank of the four-armed crank, and these will severally vibrate the rods and dashers connected by the pitmen to the cranks in such a manner that each pair of the sectional dashers will approach and recede from each other alternately, and thus keep up an active and uniform agitation of the milk or cream, expose each particle to a large surface of atmospheric air, and thus produce the separation of the butter rapidly; and it is obvious that as the dashers are broken into sections they will move through the contents of the churn with less resistance than a single dasher occupying nearly the whole width of the vessel.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination, in a churn, of the four-armed crank A with four sectional dashers arranged quadrilaterally, substantially as and for the purpose specified.

2. The combination, with the four-armed crank, the pitmen, rods, and dashers, of the stationary guide E, arranged within the churn substantially as described, for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

HENRY HUTCHISON.

Witnesses:

F. DOWNING,  
HIRAM GASKIN.