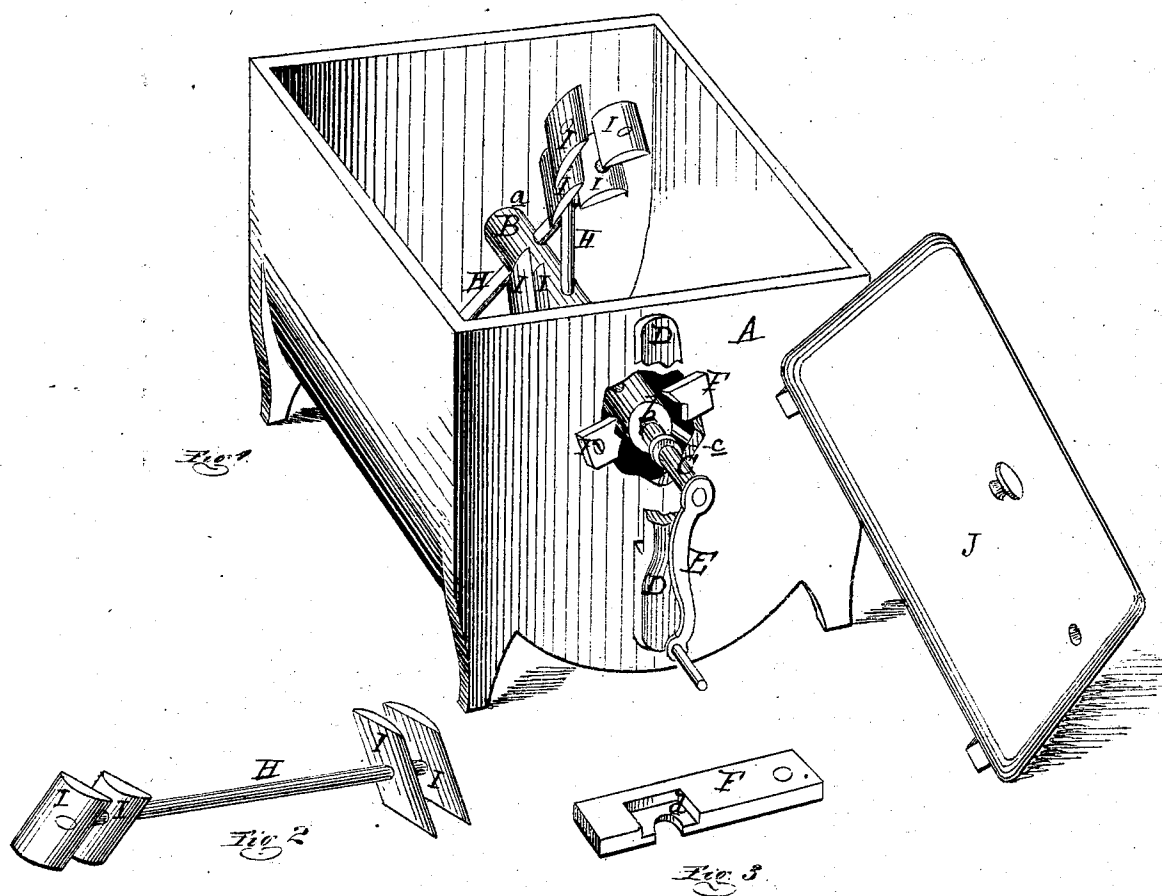


JOHN JACKSON.

Improvement in Churns.

No. 116,194.

Patented June 20, 1871.



ATTEST

Wm. L. Church
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INVENTOR

John Jackson
per Atty
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UNITED STATES PATENT OFFICE.

JOHN JACKSON, OF COOPERSVILLE, MICHIGAN.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 116,194, dated June 20, 1871.

To all whom it may concern:

Be it known that I, JOHN JACKSON, of Coopersville, in the county of Ottawa and State of Michigan, have invented a new and useful Improvement in Rotary Churns; and I 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 of my device with the cover removed and a portion of one side of the body broken out to show some of the parts. Fig. 2 is a detached view of one of the dasher-rods with the dashers attached. Fig. 3 is a detached view of the catch.

Like letters refer to like parts in each figure.

The nature of this invention relates to the construction of an improved rotary churn, wherein a horizontal shaft is provided with three arms through said shaft, and with dashers arranged in pairs upon each end of said arms, so arranged that were the paddles connected together they would form an entire convolution of a screw, by means of which a much greater agitation of cream is had than can be obtained with dashers as ordinarily constructed. The invention consists in the peculiar construction and arrangement of the shaft, its arms, and the dashers connected therewith, all as more fully hereinafter described.

In the accompanying drawing, A represents a churn-body with a semicircular bottom. B is a shaft journaled at one end into the side of the churn at *a*, and the shaft is the length of the interior width of said churn. The opposite end of this shaft is provided with a recess, *b*, to receive the end of the shorter crank-shaft C, which is journaled into the recessed support D, (which is broken away in the drawing at this point,) and it is provided with a collar, *c*, which, when the two sections of the shaft are connected, as above described, rests against the outside of the churn-body. The crank E, and any suitable power, gives motion to the shaft. F is a stop, provided with a recess, *d*, upon its rear side; is pivoted to the churn-body, (as shown in Fig. 1,) and operates under the recessed support D. It is designed, when the two sections of the crank are connected, that the recess *d* shall engage with the collar *c* and hold the shaft in place.

When it is designed to remove the shaft for cleaning or other purposes the stop should be disengaged from the collar, when the portion of the shaft connected with the crank may be withdrawn from the recess in the end of the shaft B, when the latter may be readily and easily removed.

H are the dasher-rods, three in number, placed equidistant from each other through the shaft B, at different angles, or screw-shaped, the shaft being hexagonal for the purpose of affording a guide so that the builder can readily secure the rods at the proper angle. I are the dashers or paddles, flat on their inner and oval on their outer sides. These are secured in pairs to each end of the rods H, as shown in Fig. 2, a short distance apart, and at an angle of about thirty-five degrees with the shaft, so arranged that if they were all connected they would form a perfect convolution of a screw around the shaft and at the ends of the rods. By this arrangement the cream is most thoroughly agitated and broken up.

The cover J is shown detached and resting against one corner of the churn.

The advantages claimed for a churn of this description are: First, it requires but little power to rotate the shaft and its attachments. The paddles or dashers, being made oval on one side and flat on the other, enter the cream in the form of a wedge, thus requiring but little power to force them through. Second, the paddles, being placed at an angle as described, when they enter the cream force it to one side as well as upward, thus giving it a whirling motion into the air, thereby producing the greatest commotion with the least number of revolutions. Third, the rods, by being secured at different angles, as described, allow some of the paddles at all times to remain in the cream, thus giving a uniform motion to the dash, when it is revolved, without the aid of a balance-wheel.

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

In churns, the shaft B, rods H, and paddles or dashers I, when constructed and arranged relatively to each other, substantially as and for the purposes herein set forth.

Witnesses:

JOHN JACKSON.

H. J. BENEDICT,
J. E. MARTIN.