(No Model.)

J. BRADBURN.

CHURN.

No. 306,465. Patented Oct. 14, 1884.

Fig. 1.

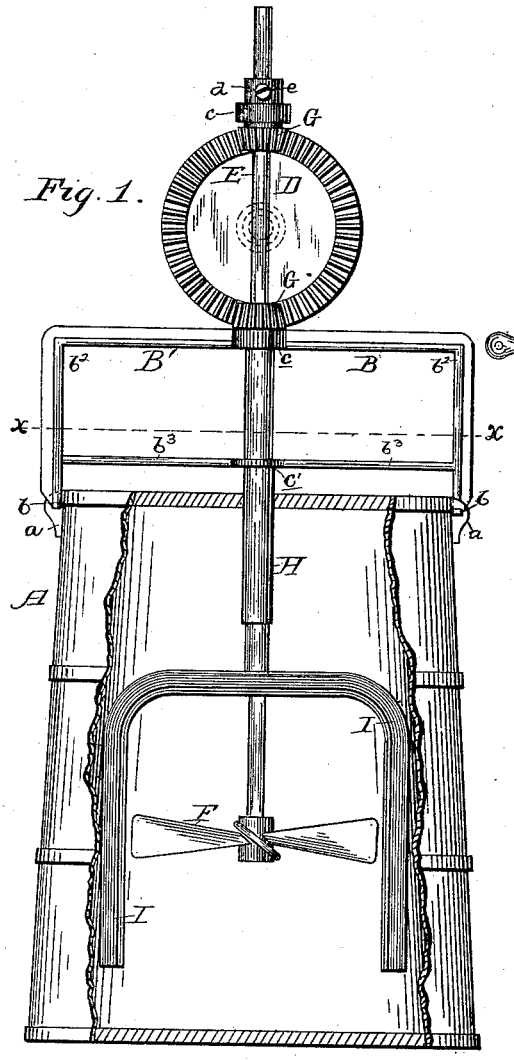


Fig. 2

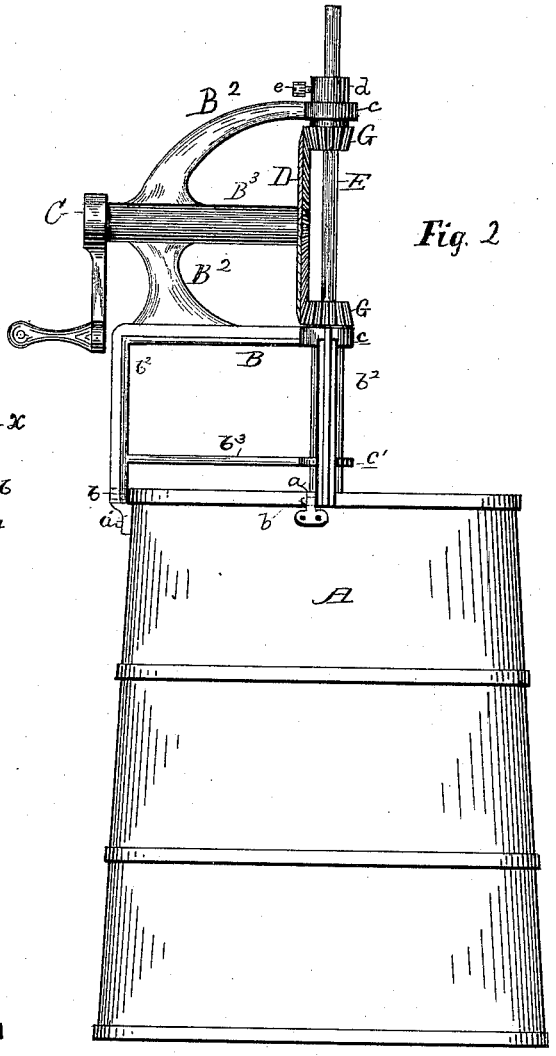


Fig. 3.

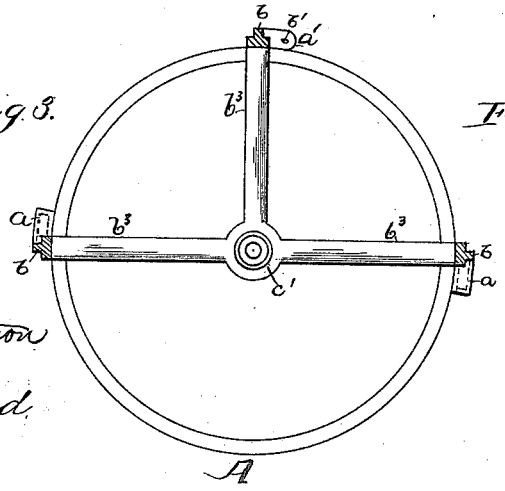
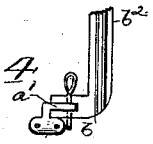


Fig. 4.



WITNESSES:

W. T. Robertson

E. A. Bond.

INVENTOR

John Bradburn

BY

T. J. W. Robertson

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN BRADBURN, OF WAYNE, MICHIGAN.

CHURN.

SPECIFICATION forming part of Letters Patent No. 306,465, dated October 14, 1884.

Application filed February 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN BRADBURN, of Wayne, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in churns, by means of which a better result is obtained than is had by the use of churns as ordinarily constructed.

The invention consists in the peculiar construction of its parts and their combination, as more fully hereinafter described and claimed.

Figure 1 is a front view, with the churn-body broken away. Fig. 2 is a side view; Fig. 3, a section on the line *x x* of Fig. 1, and Fig. 4 a detail of one of the fastening devices.

In the accompanying drawings, which form a part of this specification, A represents the cylindrical body of a churn, upon the outer wall of which, and near the top on opposite sides, there are secured the loops *a*, and on another side is secured an ear, *a'*.

B is a three-armed standard-frame, provided with lugs *b*, two of which are designed to engage with the loops, and thereby secure the standard to the body of the churn, and one of said lugs is slotted to receive the ear *a'*, and is provided with a hole, *b'*, through which and a corresponding hole in the ear *a'* a pin may be passed to lock the frame in position. At the the center of this standard it is provided with hollow bearings *c*, vertical to each other, as shown. This frame, it will be noticed, is composed of the arms B', from one of which rises the overhanging bracket B^2, from which extends the arm B^3, forming a bearing for the shaft C. The other arms B' extend at right angles to the one carrying the overhanging bracket, and from each of these arms B' there extends downwardly the arms b^2, and near their lower ends these arms b^2 are provided with brace-bars b^3, running parallel with the arms B', and uniting at the center of the standard to form a hollow bearing, C', for the shaft H, near the center of its length.

In churns of this class, as heretofore constructed, there has been but one short bearing for the lower pinion. This has been found to be very objectionable, for the reason that the bearing being so short it soon wears away and the pinion wabbles around. This difficulty is overcome by the use of my frame B, by means of which I furnish two bearings for the shaft H, which steadies the same and prevents the pinion from wabbling.

C is a crank-shaft, upon which is secured the driving-wheel D, a vertical shaft, E, carrying at its lower end the dasher-wheel F, which is made in the form of a three-bladed propeller-wheel.

Stepped within the hollow bearings *c* are the the hubs of the pinions G, which engage with the driving-wheel and give motion to the shaft E and the dasher-wheel attached thereto in one direction, and to the hollow shaft H, to which the arms I are secured, in the opposite direction. A collar, *d*, and set-screw *e*, above the upper hollow bearing, allows the vertical shaft E, which is inclosed in the shaft H, to be vertically adjusted independent of the arms I, as may be required for the different quantities of cream operated on at different times. No such vertical adjustment is required for the shaft H, as its arms are of sufficient length to obviate the necessity of any change. The circumference of the dasher-wheel being less than the internal diameter of the churn-body leaves room for the arms of the shaft H to pass between the body and dasher-wheel, and prevents any portion of the cream from becoming stagnant outside the said wheel.

I am aware of Patents Nos. 88,016 and 150,734, and make no claim to the construction shown therein as forming part of my invention.

I am also aware of the Patent No. 276,290, for an egg-beater, granted to C. Schrebler, April 24, 1883, and make no claim to the construction shown therein as forming part of my invention.

What I claim as my invention is—

1. In a churn, the frame B, having arms B', overhanging bracket B^2, integral with one of said arms, arms b^2, extending downwardly therefrom, and the brace-bars b^3, running parallel with the arms B', said arms B' radiating from a common center, forming a bearing, *c*, and the brace-bars b^3 also radiating from a

common center, forming a bearing, c', substantially as and for the purposes specified.

2. The combination, with the shaft C, driving-wheel D, pinions G, and shaft E, of the shaft H, and the standard-frame B, having arms B′, forming a bearing for said shaft H, and the brace-bars b^3, forming a bearing, c', whereby said shaft H has two bearings in said standard-frame between the pinion G and the top of the churn, substantially as and for the purposes specified.

JOHN BRADBURN.

Witnesses:
H. S. SPRAGUE,
J. PAUL MAYER.