(No Model.)

G. A. SHANNON & J. W. COYNE.

CHURN.

No. 460,314. Patented Sept. 29, 1891.

Fig. 1.

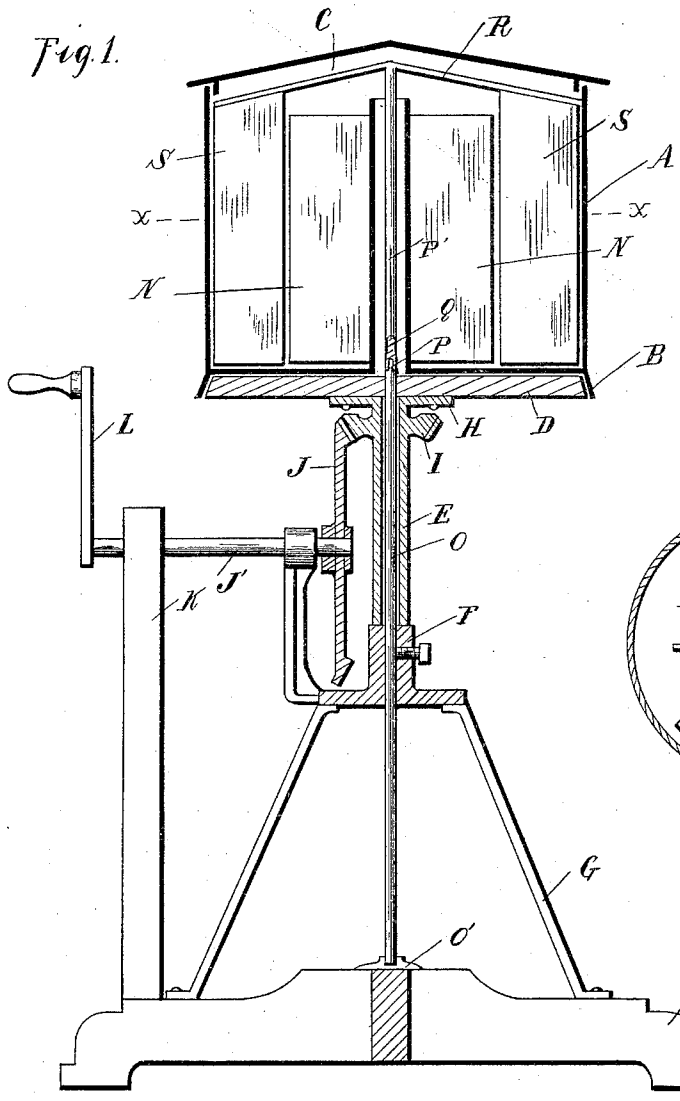
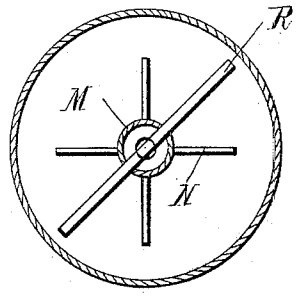


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE A. SHANNON AND JOHN W. COYNE, OF RIDGETOWN, CANADA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 460,314, dated September 29, 1891.

Application filed November 6, 1890. Serial No. 370,560. (No model.)

To all whom it may concern:

Be it known that we, GEORGE A. SHANNON and JOHN W. COYNE, subjects of the Queen of Great Britain, residing at Ridgetown, in the county of Kent and Province of Ontario, Canada, have invented certain new and useful Improvements in Churns, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in churns; and the invention consists in the peculiar construction of a churn-body having central radial dashers, stationary dashers or blades outside the radial dashers within said casing, and means for rotating the churn-body, and, further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is a vertical central section of my improved churn. Fig. 2 is a cross-section thereof on line *x x*.

A is the churn body or casing, preferably of sheet metal, of cylindrical shape, having at its lower edge the outwardly-flaring flange B and at its top a suitable cover C. This flange is adapted to rest upon the platform D, of corresponding shape to the body of the churn, and is held thereon by the frictional engagement of the flange B. This platform is supported upon a standard E, which at its lower end rests upon the bracket or bar F, supported by suitable legs G and the foot G'.

The standard E is provided at its upper edge with a suitable bracket H, by means of which the platform D is secured thereto. Immediately below this bracket is formed the beveled pinion I, which meshes with the bevel gear-wheel J upon the shaft J', journaled in the stationary brackets K and adapted to be rotated by means of the crank-handle L, all so arranged that by turning the crank-handle L a rotary motion will be imparted to the platform D and churn A.

This churn is provided with a central tubular well M, upon the sides of which are secured the blades or dashers N, extending radially therefrom. The standard E is hollow, and through this extends a vertical shaft O, stepped in a suitable bracket O' upon the foot G' of the frame This rod extends through a suitable aperture in the platform D a slight distance into the well M and is provided at its upper end with the squared bearing P.

P' is an extension of the shaft O, having at its lower end a socket Q, adapted to fit the bar P. The shaft P' carries at its upper end the cross-bar R, which extends entirely across the churn and at its ends is provided with the stationary vertical blades S, which extend to nearly the bottom of the casing and nearly fill the space between the side of the casing and the edge of the rotary blades N.

The parts being thus constructed, the cream being placed in the churn, and motion imparted to the churn-body through the crank L and the connections described, it is evident that as the churn rapidly revolves the blades N will be carried with it. The centrifugal force will cause the cream to seek the sides of the casing; but it will be prevented from turning with the casing by striking against the stationary blades S. As the volume of the cream increases at these points it will pass out beyond the inner edge of the stationary blades, where it will be cut off by being struck by the revolving blades N, which action has been found to be a most beneficial one in making the butter. When the butter is made, the case may be lifted from the platform, the stationary blades S detached, and the butter removed, and the interior of the churn then contains no complicated parts to be cleaned.

What we claim as our invention is—

In a churn, the combination, with the supporting-frame, of a tubular standard thereon, having a bracket on its upper end, a platform secured on the standard, a casing secured on the platform, a central vertical well in the casing, vertical dashers arranged radially on the well, extending the length of the same, a stationary shaft having a detachable upper end passing through the well, a cross-head on the top of the shaft, depending blades on the outer ends of the cross-head, extending to a point near the bottom of the casing and between the side walls thereof and the dashers, and means for rotating the tubular standard and casing, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE A. SHANNON.
JOHN W. COYNE.

Witnesses:
P. BOWDEN,
J. SIMPSON.