

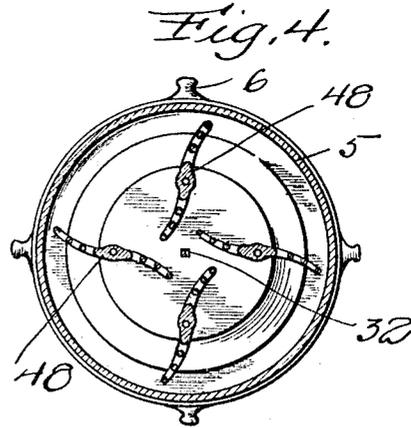
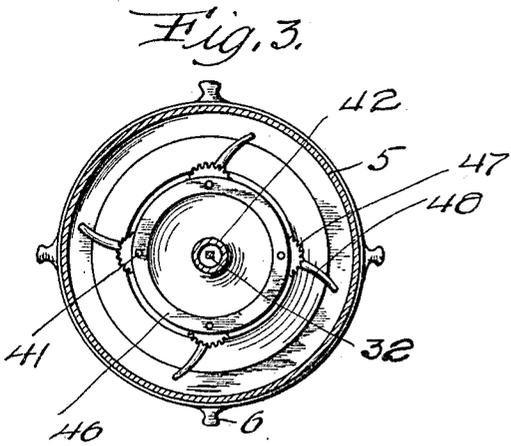
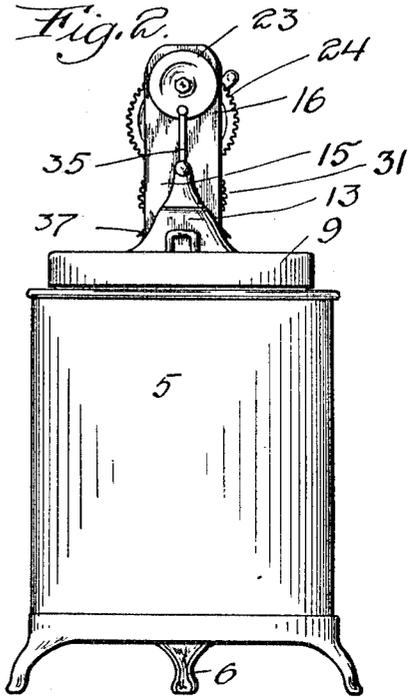
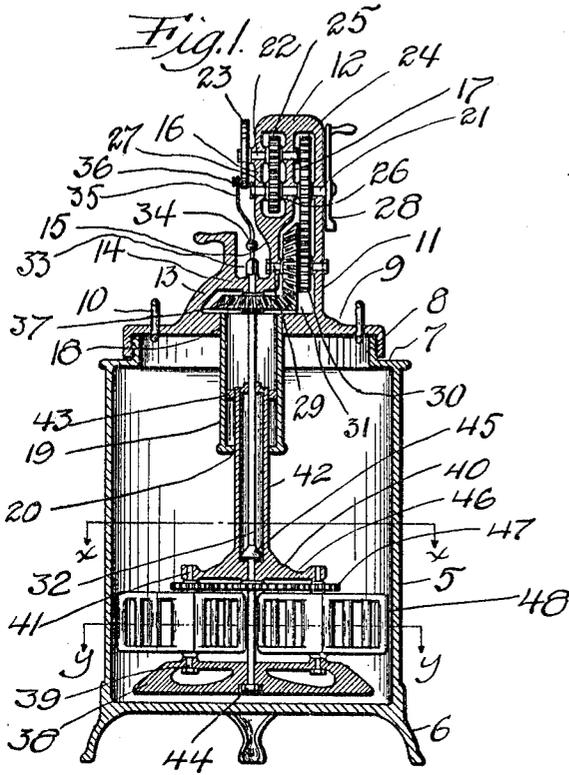
E. NADROWSKI.

CHURN.

APPLICATION FILED MAY 6, 1914,

1,107,828.

Patented Aug. 18, 1914.



WITNESSES

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EDMOND NADROWSKI, OF NEWARK, NEW JERSEY.

CHURN.

1,107,828.

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To all whom it may concern:

Be it known that I, EDMOND NADROWSKI, a subject of the Emperor of Russia, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Churns, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to churns, and has for its object to provide a device of such class, in a manner as hereinafter set forth, with a dasher mechanism to facilitate the churn operation to rapidly make butter.

Further objects of the invention are to provide a dasher mechanism for churns, which is simple in its construction and arrangement, strong, durable, efficient and convenient in its use, readily set up and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—Figure 1 is a vertical sectional view of a churn in accordance with this invention, Fig. 2 is a side elevation, Fig. 3 is a sectional plan of line X—X Fig. 1 looking in the direction of the arrows, and Fig. 4 is a sectional plan on line Y—Y Fig. 1 looking in the direction of the arrows.

Referring to the drawings in detail, 5 denotes a receptacle provided with supporting legs 6 and having its top formed with an inwardly extending annular flange 7, which terminates in a vertically disposed peripherally threaded neck 8. Detachably engaging with the neck 8 is an interiorly threaded cap 9, provided with a pair of handles 10. Formed integral with the cap 9 is a vertically disposed upright 11, having its upper end formed with a right angularly disposed portion 12, which is arranged parallel to the cap 9. Formed integral with the cap 9 opposite the upright 11 is a bracket 13 provided with an inwardly extending arm 14,

which extends parallel to the cap 9. The arm 14 terminates into a vertically disposed support 15 having a bifurcated upper end which forms a pair of arms 16 and 17, which terminate in the inner face of the angular portion 12. The cap 9, centrally thereof, is provided with an opening 18, and formed integral with the wall of the opening 18 and depending from the cap 9 and into the receptacle 5 is a casing 19 having an open top and further having a bottom provided with a centrally disposed opening 20.

Journalled in the arms 16 and 17 and upright 11 is a guide shaft 21 and journalled in the arms 16, 17, is a driven shaft 22 having one end provided with a disk 23 and its other end with a pinion 24 and intermediate its ends with a pinion 25. The operating shaft 21 has one end thereof provided with a handle 26, and intermediate its ends with pinions 27, 28. The pinion 28 meshes with the pinion 24 and the pinion 27 meshes with the pinion 25. Journalled in the support 15 and upright 11 is a transmission shaft 29, provided with a pinion 30 and a beveled gear 31. The disk 28 meshes with the pinion 30.

The dasher operating mechanism includes a rotatable and reciprocatory operating shaft 32, which is journalled in the arm 14 and extends to near the bottom of the receptacle. The upper end of the shaft 32 is formed with an extension 33 pivotally connected as at 34 to a crank 35 attached to a pin 36 carried by the disk 23. The shaft 32 is slidable through a beveled gear wheel 37, which is driven by the beveled gear 30. The connection between the beveled gear 37 and shaft 32 is such that although the shaft 32 can slide through said gear 37, yet a gear 37 will drive the shaft 32. Connected to the lower end of the shaft 32 is a dasher 38, which also constitutes a support for the lower ends of a series of vertically disposed auxiliary dasher shafts 39. Opposing the support 39 is a plate 40, in which is journalled the upper ends of the dasher shafts 41. Formed integral with the plate 40, is a vertically disposed sleeve 42 which projects through the opening 20 into the casing 19 and has its upper end provided with a packing 43 engaging the inner face of the casing 19. The shaft 32 extends down through the sleeve 42, plate 40 and is connected as at 44 to the dasher 38. The shaft 32 intermediate

its ends is provided with a collar 45 arranged in close proximity to the plate 40, and said shaft is furthermore provided in proximity to the plate 40 with a gear wheel 46, which meshes with pinions 47 carried by the auxiliary dasher shafts 39. Arranged between the plate 40, and dasher 38 and fixed to the shafts 39, so as to rotate with said shafts 39, are auxiliary dashers 48, which consist of arms of O—G curvature standing on edge and in the form of a grating. In side elevation each of the auxiliary dashers 48 is substantially rectangular. When the shaft 32 is operated, the sleeve 42, plate 40 and dasher 38 is carried around therewith. The auxiliary dashers 48 are carried with the plate 40 and dashers 38, but owing to the driving of the elements 47, through the medium of the gear wheel 46, the said auxiliary dashers revolve in an opposite direction with respect to the direction in which the dasher is operated. When the shaft 32 is rotated, it is also reciprocated due to the operation of the crank 35 through the medium of the disk 23. The reciprocating of the shaft 32 will also vertically move the main and auxiliary dashers in view of the fact that as the shaft 32 is reciprocated, the auxiliary dasher 38, plate 40 and sleeve 42 are carried therewith. When the shaft 32 is moved upwardly, the collar 44 at the end thereof will lift the main dasher 38 and when the shaft 32 is lowered, the collar 45 engaging with the plate 40 will lower the

latter carrying the sleeve 42 and dasher 38 therewith.

What I claim is:

1. A churn comprising a receptacle, a revolvable main dasher within said receptacle, a dasher operating shaft extending into said receptacle and suspending and revolving said dasher, a plurality of auxiliary dashers supported upon said main dasher, and means operated from said shaft for revolving said auxiliary dashers simultaneously with and in a direction opposite to the direction of revolution of said main dasher.

2. A churn comprising a receptacle, a main dasher, means for revolving and suspending said main dasher within said receptacle, a plurality of auxiliary dashers of O-G curvature supported upon said main dasher and in the form of gratings, and means driven from the operating means for the main dasher for revolving said auxiliary dashers simultaneously with the operation of the main dasher and in a direction opposite to the direction of movement of the main dasher, and means for reciprocating the main dasher operating means and said dashers simultaneously with the operation of these latter.

In testimony whereof I affix my signature in the presence of two witnesses.

EDMOND NADROWSKI.

Witnesses:

ANTONI MACIKIEWIC,
LYN L. ZAWARZEH.