

M. C. DOWLING.
CHURN.
APPLICATION FILED MAR. 25, 1916.

1,198,529.

Patented Sept. 19, 1916.
2 SHEETS—SHEET 1.

Fig. 1.

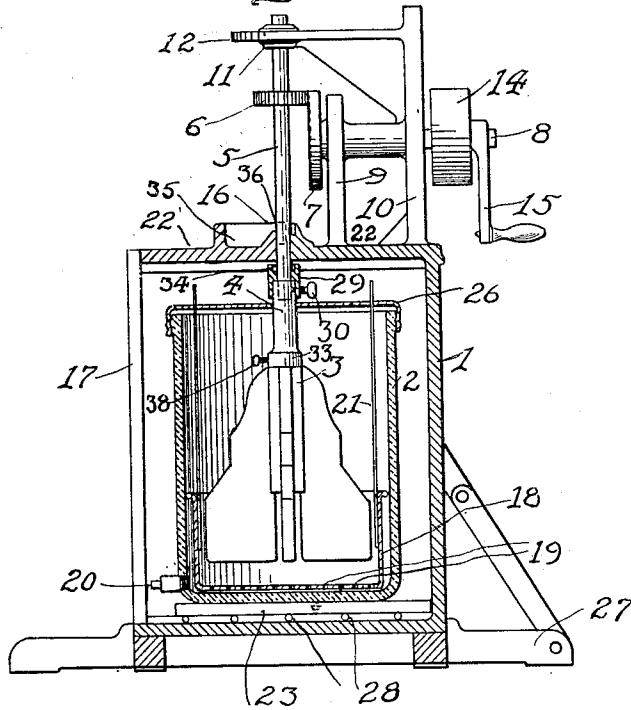


Fig. 2.

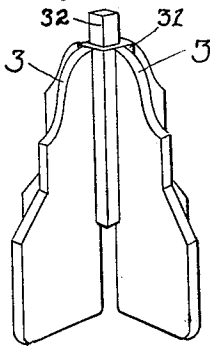
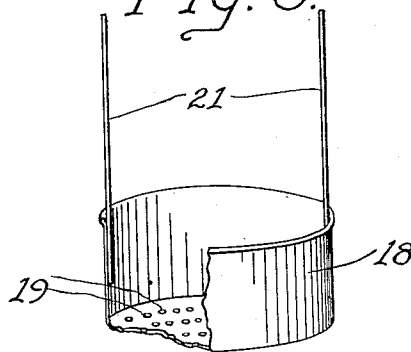


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

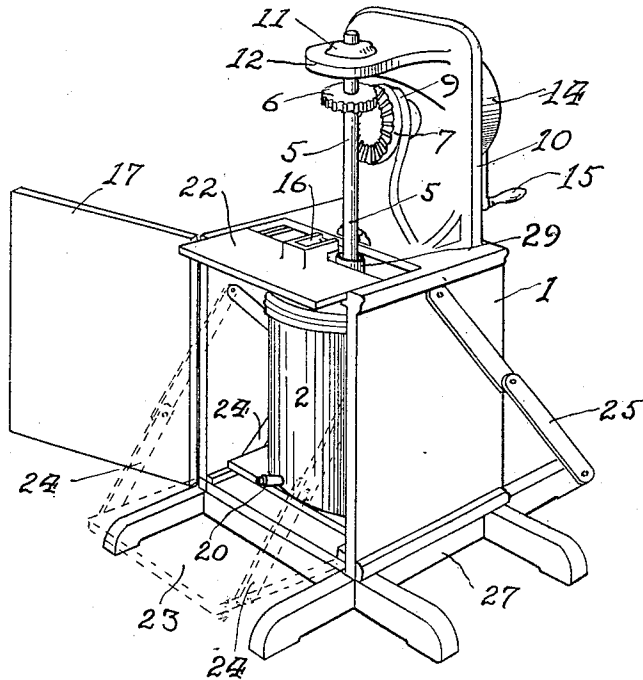
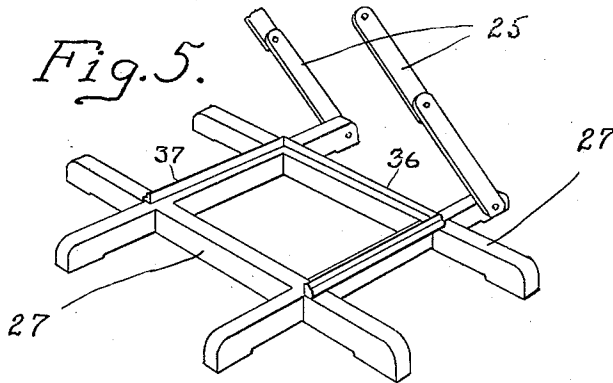


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CHURN.

1,198,529.

Specification of Letters Patent.

Patented Sept. 19, 1916.

Application filed March 25, 1916. Serial No. 86,811.

To all whom it may concern:

Be it known that I, MOSES C. DOWLING, a citizen of the United States, residing at Kenney, in the county of Dewitt and State of Illinois, have invented new and useful Improvements in Churns, of which the following is a specification.

My invention relates to new and useful improvements in churns and applies more particularly to the type of churns employing a rotating agitating member.

An object of my invention is to provide a churn which will be easy in operation, simple in construction and which will be convenient and sanitary in maintenance.

With these and other objects in view my invention consists of certain new and useful peculiarities in construction and arrangement of parts which will be fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the accompanying drawings wherein is illustrated the preferred embodiment of my invention like numerals of reference designate like parts throughout the several views.

In the drawings: Figure 1 is a sectional view through the churn of my invention, the drive shaft and agitator being shown full for convenience in illustration. Fig. 2 is a detail perspective view of the agitator. Fig. 3 is a detail perspective view of the butter separating device. Fig. 4 is a perspective view of the complete churn of my device, the door being open and the slide top being slightly withdrawn in order to more clearly illustrate the construction. Fig. 5 is a perspective view of the base member of my device.

Referring now to the drawings, 1 designates a cabinet provided with three side walls and a door 17 on the front side thereof, numeral 22 designating a stationary half of the top upon which is mounted the actuating mechanism by which I propel the agitator.

Numeral 2 designates a vessel in which the cream to be churned is placed, said vessel being preferably formed of glass or stone-ware, or any similar suitable material. A lid or cover such as 26 is adapted to screw on to the top of vessel 2, or fastened in any suitable way, an opening being provided in the center thereof through which connecting shaft 4 may pass.

Numeral 31 designates my preferred form of agitator, which is provided with paddle members 3, of which there are preferably

four suitably carried at right angles to each other about a central post 32. The upper end of post 32 is restricted in cross section and is formed either square or hexagon in shape. A head 33 carried on connecting shaft 4 is provided with a square or hexagon opening which is adapted to fit tightly about post 32, a set screw 38 being provided to hold the connecting shaft in place.

Numeral 29 designates a sleeve member into which the upper end of connecting shaft 4 is adapted to fit, a set screw such as 30 being provided for holding connecting shaft 4 in place therein.

5 designates a main drive shaft which also extends through sleeve member 29 and downward into connecting shaft 4, the upper end of said shaft being hollow for this purpose, set screw 30 passing through the upper end of connecting shaft 4, and being seated against the lower end of drive shaft 5.

In driving the churn of my invention I have provided a pulley 14 on a shaft 8, to which may be connected an engine or motor. I also prefer to provide a movable crank such as 15 whereby my churn may be manually operated. Shaft 8 extends at right angles to drive shaft 5, passing through a bearing provided on pedestals 9 and 10, and being provided on the inner end with a gear such as 7. Gear 7 is adapted to drive a gear 6 mounted on drive shaft 5. Drive shaft 5 is supported at its upper end in a bearing 11 carried by bracket 12.

In operating my churn it will be necessary to supply oil to bearing 11 and also to the bearing supporting shaft 8. In order that the oil may not run down drive shaft 5 and into the vessel 2, I provide an oil basin such as 35 which is carried by the front half of the top member which is designated as 22'. Member 22' is adapted to slide in and out of its closed position, in order that the connecting shaft 4 may be readily placed and replaced. An oil groove such as 36 passes around shaft 5 and is adapted to collect oil and deliver it into oil basin 35. As a further precaution, I provide an oil groove designated as 34 on the upper end of sleeve 29, which may collect oil and prevent it from finding its way into the vessel 2.

In order to separate the butter more conveniently from the cream after the process of churning, I provide a butter separator such as 18 which is provided with a bottom having perforations 19 therein. Upright

members 21 are securely fastened to the butter separator and are provided for the purpose of lifting the separator out of vessel 2. Holes are provided in cover member 26 through which upright members 21 may pass, thus allowing the butter separator to revolve with vessel 2. A faucet such as 20 is provided for draining off the buttermilk after churning.

10 In operation it will be clearly seen that upon revolving shaft 8, and with it gear 7, that the drive shaft 5 will be rotated through the medium of gear 6 thereon and that the agitator 31 will be rotated within
15 vessel 2. For convenience in removing the vessel 2 without lifting the weight thereof, I have provided a swinging shelf such as 23 which may be drawn outward along roller bearings 28 to a position such as is shown by dotted lines in Fig. 4. Numeral 24 designates the folding supporting members for said shelf.

20 In order that the churn of my invention may be more readily reduced to knockdown form, I have provided a base member such as 27 upon which cabinet 1 is adapted to rest. Base member 27 is provided with a frame designated as 37 in which the bottom of cabinet 1 is adapted to slide, said frame
25 being provided with only three sides for this purpose. In order to brace more thor-

oughly the cabinet in a stationary position while being operated, I provide brace members 25 which may be speedily pinned in place as is shown in Fig. 4 and which will support cabinet 1 in a stationary position. 35

From the foregoing description it will be readily seen that the device of my invention provides a simple and convenient churn in which provision is made for the sanitary care thereof. 40

While I have illustrated the preferred embodiment of my invention I do not wish to be restricted thereto except for such limitations as the claim may import, as it is obvious that the details of construction and arrangement of parts may be varied in many ways. 45

Having thus described my invention, what I claim is:— 50

In a churn, an agitator rotating device comprising a connecting shaft and a drive shaft united by a set screw, said drive shaft being provided with an oil collecting sleeve held in place by said set screw and adapted to collect oil descending on said shaft, substantially as described. 55

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."