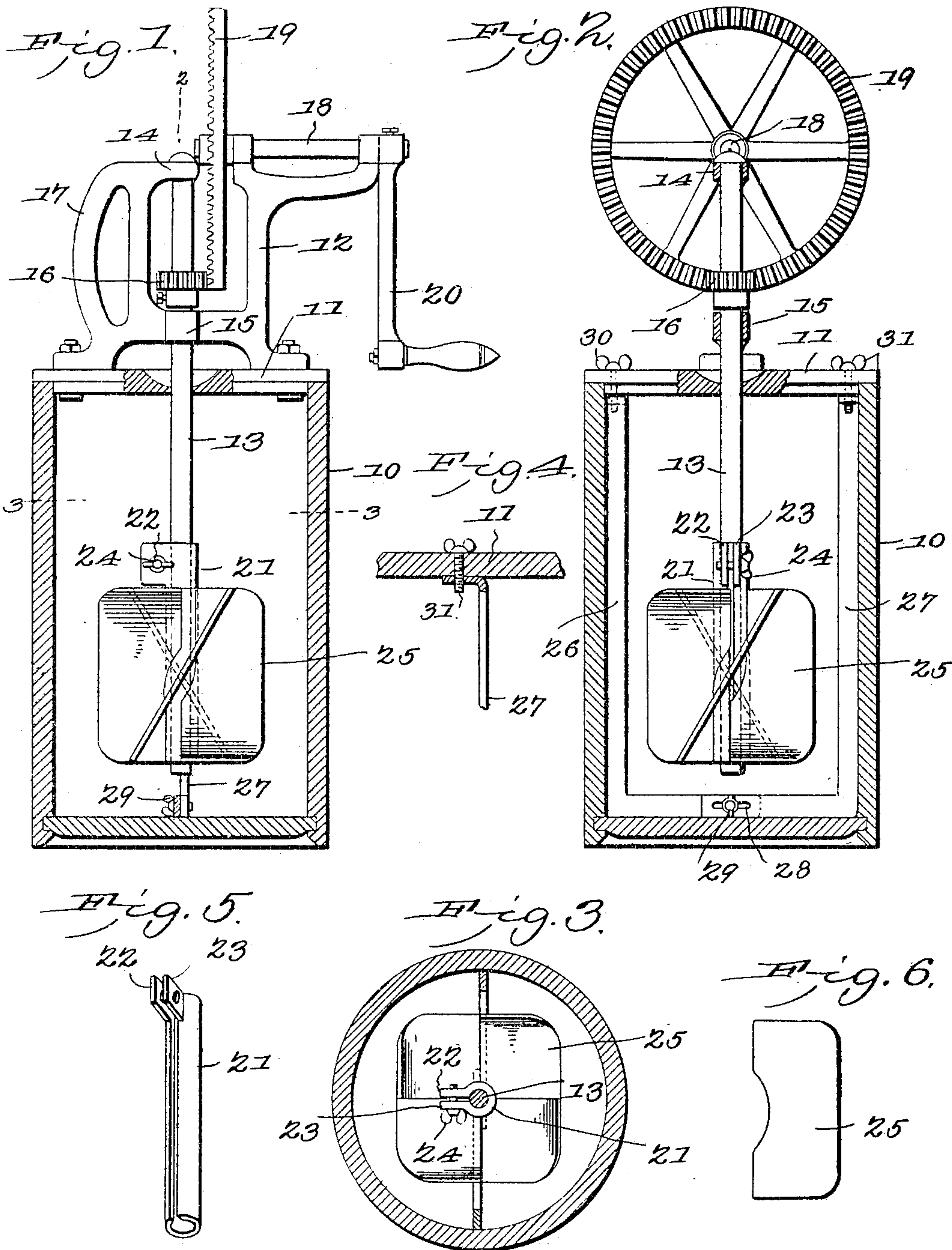


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M. M. MCGREGOR & J. H. WILLIAMS.
CHURN.

APPLICATION FILED DEC. 16, 1904.



Witnesses

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UNITED STATES PATENT OFFICE.

MONTAGUE M. MCGREGOR AND JAMES H. WILLIAMS, OF ROCKWALL,
TEXAS.

CHURN.

No. 799,076.

Specification of Letters Patent.

Patented Sept. 12, 1905.

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To all whom it may concern:

Be it known that we, MONTAGUE M. MCGREGOR and JAMES H. WILLIAMS, citizens of the United States, residing at Rockwall, in the county of Rockwall and State of Texas, have invented a new and useful Churn, of which the following is a specification.

This invention relates to churns and means for operating the same, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention, capable of carrying the same into practical operation, it being understood that the invention is not necessarily limited thereto, as various changes in the shape, proportions, and general assemblage of the parts may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

In the drawings thus employed, Figure 1 is a sectional side elevation, and Fig. 2 is a sectional front elevation, of the improved device. Fig. 3 is a transverse section on the line 3 3 of Fig. 1. Fig. 4 is a sectional detail illustrating the manner of securing the breaker member to the closure member. Fig. 5 is a perspective detail view of the tubular member supporting the dasher-blades detached. Fig. 6 is a detail view of one of the dasher-blades detached.

In the improved device is comprised a cream-receptacle 10 of any desired size or capacity and of any suitable material, but for the purpose of illustration is shown in cylindrical form. The receptacle is provided with a detachable closure 11, and upon this closure is mounted a bracket or standard 12, having a shaft 13 supported for rotation thereon and extending into the interior of the receptacle. The standard 12 is provided with two bearings 14 15, spaced apart for the shaft 13, and mounted upon the shaft between these bearings is a gear-pinion 16. The standard 12 is likewise provided with a hand-grip 17 on one side and a drive-shaft 18, mounted for rotation upon

the other side of the shaft 13 and its bearings, the drive-shaft having a gear-wheel 19 on the inner end for engaging the pinion 16 and an operating-crank 20 on the outer end. By this means the churn-body may be held steadily with one hand grasping the grip 17, while the other hand is employed for operating the shaft 13 through the medium of the crank 20 and its connections.

Surrounding the shaft 13 within the receptacle 10 is a cylindrical body 21, divided longitudinally along one side and with laterally-extended spaced perforated ears 22 23 at one end supplied with a transverse bolt 24 to provide means for clamping the cylindrical body at any desired point upon the shaft. By dividing the cylindrical member 21 longitudinally, as herein shown, the said member, which is preferably constructed of sheet metal, will readily engage a dasher staff or shaft of a somewhat larger diameter than the normal interior diameter of the cylindrical body, which latter will thus frictionally engage said staff or shaft and be readily retainable in any desired position thereupon without the use of means, such as set-screws, bearing directly upon the shaft or staff to the eventual injury to the latter. The clamping screw or bolt 24, which extends through the perforated ears 22 23, will serve to clamp the device securely upon the staff or shaft. Again, owing to the longitudinal opening in said member particles of butter and grease may be readily removed therefrom, and the device may be kept in a thoroughly clean and sanitary condition. The longitudinally-divided tubular blade-carrying member may, moreover, be secured upon the shaft or staff with great firmness and without tendency to wobble, owing to the edges of said member adjacent to the longitudinal slit being in direct contact with the staff throughout the length of the member, whereas a tubular undivided member applied to a shaft or staff and tightened by means of a set-screw will necessarily have a tendency to lateral movement unless the shaft be of precisely the same external diameter as the internal diameter of the tube, in which event it would be difficult to assemble or to disconnect the parts. Under the present invention the shaft may be of a diameter slightly exceeding that of the tube, which may be readily slipped into position for operation or detached, as may be required.

Attached to the cylindrical body 21 are a plurality of blades 25, disposed thereon obliquely to the longitudinal plane of the cylindrical body and partially underlapping to form a dasher member in screw-like outline, as shown. One of the blades is shown detached in Fig. 6 to illustrate its form, and in Fig. 5 a detached perspective view of the cylindrical body is shown.

10 Inserted into the receptacle 10 is a breaker member formed of two L-shaped plates 26 27, overlapping at their lower end with longitudinal slots 28 therein for receiving a clamp-bolt 29. By this means the members 26 27
15 may be adjusted laterally to cause their vertical arms to closely engage the opposite inner sides of the receptacle 10, as in Figs. 1 and 3, and thus form an effectual means for breaking up the currents of the cream caused by
20 the rapidly-rotating dasher member. At their upper ends the members 26 27 are bent laterally and connected to the cover member by clamp-bolts 30 31.

It will be noted that the dasher member and
25 breaker members are attached to the cover member and to no other part of the device, so that when the cover member is removed the receptacle 10 is left entirely free from ob-

structions, so that the removal of the butter and buttermilk and the cleaning of the receptacle can be readily accomplished. 30

The device is simple in construction, readily adjusted to all sizes of receptacles, and the dasher member also adjustable to correspond to the quantity of cream therein by merely
35 operating the single clamp-screw 24.

Having thus described the invention, what is claimed is—

In a churn, the combination with a dasher-staff supported for rotation, of a longitudi- 40
nally-split tubular blade-carrying member, of an internal diameter slightly less than the external diameter of the staff; said member being provided at one end, adjacent to the slit therein, with perforated ears, and a clamping- 45
screw engaging said ears to clamp the blade-carrying member upon the dasher-staff.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

MONTAGUE M. MCGREGOR.
JAMES H. WILLIAMS.

Witnesses:

T. B. RIDGELL,
J. O. JACKSON.