

J. F. TORBETT.
CHURN.

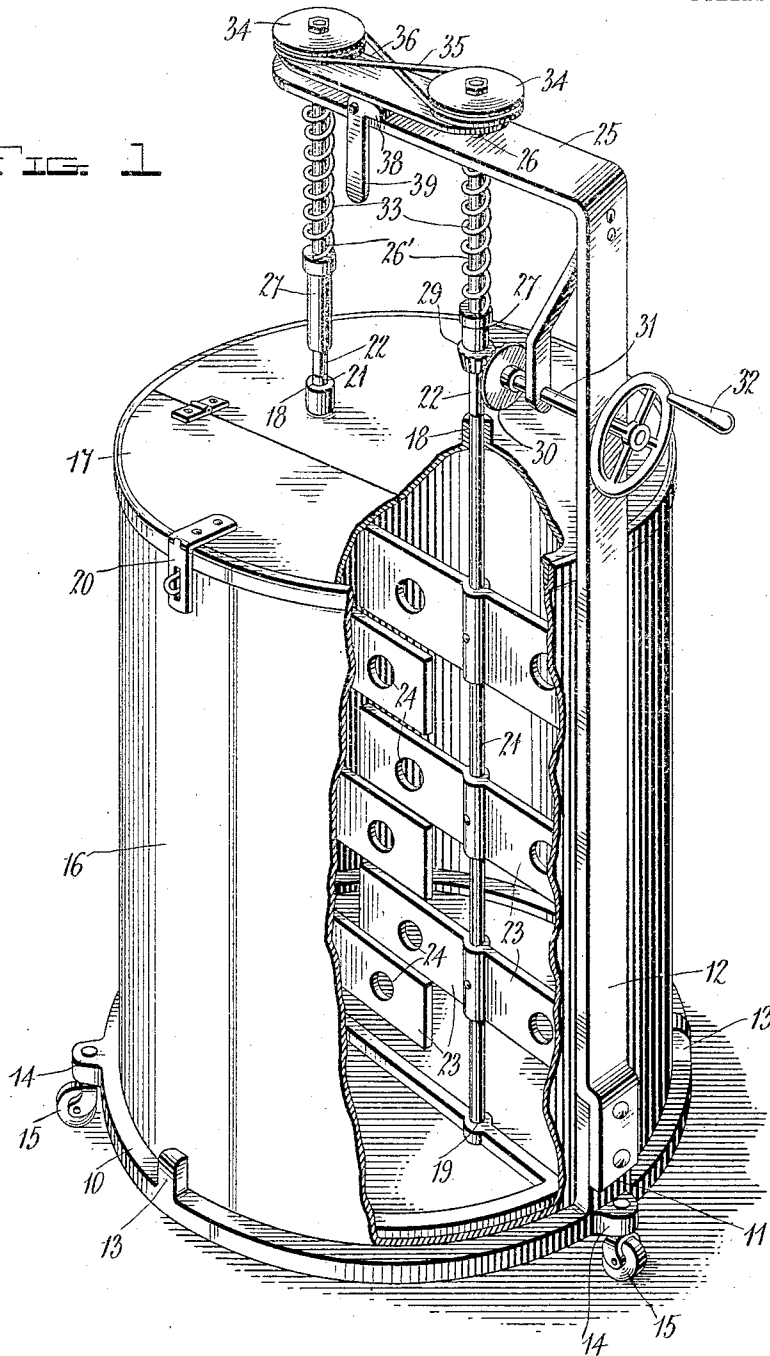
APPLICATION FILED NOV. 16, 1908.

929,900.

Patented Aug. 3, 1909.

2 SHEETS—SHEET 1.

FIG. 1



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2 SHEETS—SHEET 2.

FIG. 2

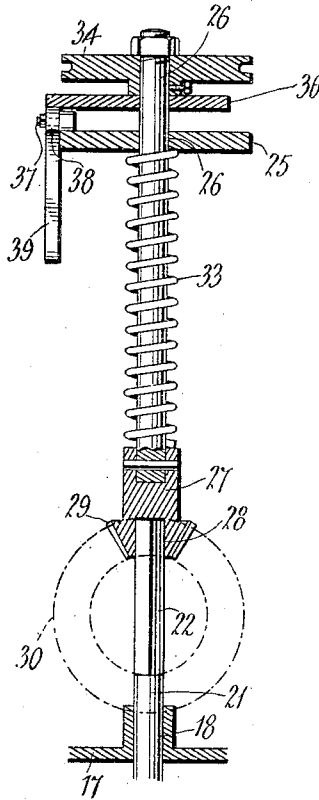


FIG. 3

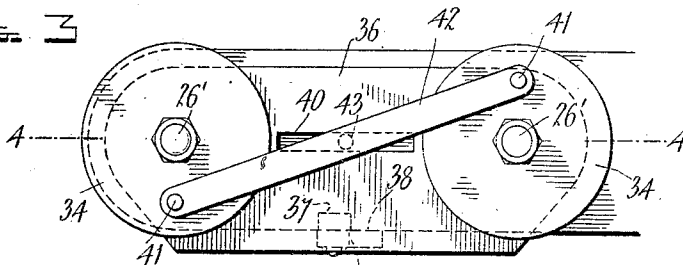
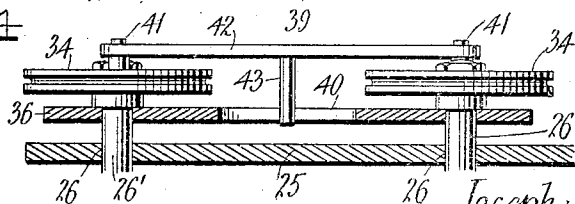


FIG. 4



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UNITED STATES PATENT OFFICE.

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CHURN.

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Specification of Letters Patent.

Patented Aug. 3, 1909.

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To all whom it may concern:

Be it known that I, JOSEPH F. TORBETT, a citizen of the United States, residing at Piney Flats, in the county of Sullivan, State of Tennessee, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to churns and its principal object is to provide an improved general construction for the churning mechanism adapted to be actuated either by hand or power.

Another object of the invention is to provide a detachable connection of improved character between the actuating mechanism and the churn dashers.

A third object of the invention is to provide a churn which is readily portable.

With the above and other objects in view, the invention consists in general of a base provided with a series of rollers, a churn body supported on said base, rotary dashers arranged within the churn body, and a detachable mechanism adapted to actuate said dashers when attached thereto.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically pointed out in the claims.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a perspective view of a churn constructed in accordance with this invention, a portion of the churn body being broken away to show the interior. Fig. 2 is a detail section taken transverse the arm which supports the actuating mechanism, the view being arranged to show the manner of detaching the operating mechanism from the dashers. Fig. 3 is a detail of a modified form of connection between the two dasher shafts. Fig. 4 is a section partially in elevation on the line 4—4 of Fig. 3.

The numeral 10 indicates the base of the churn support and is preferably in the form of a flat casting. At 11 is provided an upstanding lug having suitable bolt holes therein for the purpose of attaching an arm 12 which supports the actuating mechanism. Other lugs 13 are also provided on the base 10

in order to hold the churn body in place when in position on the base. Caster lugs 14 are formed around the churn base 10 and suitable casters 15 are supported in these lugs. These casters are preferably three in number although any desired number may be used.

Upon the churn base 10 is mounted a body 16 preferably cylindrical in form and provided with a top 17 having suitable openings 18 arranged to receive the dasher shafts. The body 16 is further provided with bottom bearings 19 for the lower end of the dasher shafts. In order to secure the top 17 to the body 16 there are provided suitable locking lugs 20 of any desired character. The churn is arranged for two dasher shafts so that there are two of the bearings 18 and two of the bearings 19 equally spaced on either side of the center line of the churn body. Within these bearings 18 and 19 is mounted a pair of shafts 21 provided with squared upper ends 22 which project above the top 17. Upon each of these shafts is rigidly mounted a plurality of dasher blades 23 so arranged that the ends of the dasher blades on one shaft are spaced to pass between the paths of the dasher blades on the other shaft. Each of these dasher blades is provided with a pair of openings 24 arranged substantially midway between the end of the blade and the axis of the shaft 21.

The arm 12 is provided with a laterally extending portion 25 wherein is formed a pair of bearings 26 in alinement with the bearings 18 and 19. Supported in these bearings and rotatable and slidable therein is a pair of operating shafts 26' each having at its lower end a collared sleeve 27 rigidly attached and provided with a squared socket 28 arranged to fit over the square end 22 of the shaft 21 with which the shaft carrying said socket is in alinement. Mounted upon the shaft 26' which is nearest the vertical portion of the arm 12 is a beveled pinion 29 arranged to mesh with a beveled gear 30 supported on a shaft 31 carried in a bearing formed in the arm 12. The outer end of this shaft 31 is provided with means for rotating the same as indicated in the present instance by the crank handle 32. It is to be understood that in the use of the larger sizes of this machine a belt pulley may be substituted for the crank handle 32.

Surrounding each of the shafts 26' is a spring 33 normally forcing the shaft downward, the spring being held between the col-

lared end of the sleeve 27 and the under side of the lateral projection 25 of the arm 12.

In the form of the device shown in Fig. 1, the upper ends of the shafts 26' are provided with grooved belt pulleys 34 and a crossed belt 35 serves to connect the two so that one of the shafts will rotate in one direction and the other shaft in the other direction. Between the lower side of the belt pulleys 34 and the arm 25 is a lifting plate 36 having openings therein through which passes the shafts 26'. A pin 37 is formed on the arm 25 and on this pin is supported a bent lever, one arm of which is indicated at 38 and passes beneath the plate 36, lying between that plate and the arm 25. The other arm of this lever extends downward as shown at 39.

In the form shown in Fig. 3 the plate 36 is provided with a slot 40 and the wheels 34 are provided with upstanding pins 41. A lever 42 connects the pins 41 and is provided with a downwardly extending pin 43 which passes through the slot in the plate 36. The lever 42 is thus arranged to produce a reversal of the motion of one shaft from that of the other in the same way as the crossed belt.

In the operation of the device, when it is desired to disconnect the actuating mechanism the arm 39 of the bent lever is raised. This raises the arm 38 and with it the plate 36 which in turn raises the shafts 26' so that the sleeves 27 disengage from the squared ends 22 of the shafts 21. The can may then be removed for cleansing or removal of its contents. When the device is in use, the rotation of the member 32 actuates the shaft 31 which in turn, through the gear 30 and pinion 29 rotates one of the shafts 26', the other shaft being rotated by means of the gearing on top of the arm 25.

It is obvious that minor changes may be made in the form and construction of this invention without departing from the material principles thereof. It is not, therefore, intended to confine the invention to the exact form herein shown and described but it is wished to include all such as properly come within the scope thereof.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:—

1. In a churn, a base, an arm mounted on said base, a churn body removably supported on the base, a pair of shafts mounted in said body, squared ends formed upon said shafts, a second pair of shafts slidably and rotatably mounted on said arm in alinement with the first mentioned pair of shafts, collars provided with squared sockets carried on the lower ends of said shafts, said sockets being adapted to fit over the squared ends of the dasher shafts, springs mounted between said collars and the overhanging arms normally

forcing said second pair of shafts downward, means to rotate said second pair of shafts, and a lever arranged to draw said second pair of shafts out of engagement with the first pair of shafts.

2. In a churn, a base, an arm supported on said base, a lateral extension formed on said arm and extending over said base, a churn body removably supported on the base, a pair of shafts mounted in said churn body, spaced dashers on said shafts, the dashers on one shaft having their ends intersecting the paths of the ends of the dashers on the other shaft, and being in staggered relation thereto squared ends formed on said shafts, a second pair of shafts slidably and rotatably mounted in alinement with the first-mentioned pair of shafts on said arm, collars provided with sockets formed at the lower end of the second pair of shafts, means to rotate one of said second pairs of shafts, means to connect said shafts and cause the same to rotate in opposite directions, a plate provided with apertures adapted to receive said shafts, a bent lever mounted on the overhanging portion of the arm and projecting beneath the plate, and springs mounted between said collars and the overhanging arm normally forcing the shafts downward.

3. In a churn, a base provided with a plurality of rollers, an arm projecting upwardly from said base, a lateral portion formed on said arm and extending over said base, a churn body removably held upon the base, a pair of shafts vertically mounted in said churn body, dashers provided with openings through their outer ends rigidly attached to said shafts, the dashers on one shaft being in staggered relation to the dashers on the opposite shaft, squared ends formed on said shafts, a second pair of shafts rotatably and slidably mounted in the overhanging portion of the arm, collars formed on the lower ends of said second pair of shafts provided with sockets adapted to receive the squared shafts, springs held between said collars and the under side of said arm, belt pulleys held upon the upper end of said second pair of shafts, a plate provided with openings there-through held between said arm and the belt pulleys, a bent lever provided with an arm projecting beneath said plate and the second arm projecting at an angle to the first, a crossed belt connecting said belt pulleys, and means to rotate one of said shafts and actuate the churn.

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

JOSEPH F. TORBETT.

Witnesses:

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