C. G. ROMAN.

CHURN. APPLICATION FILED JAN. 31, 1905. G.E. Milreany

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UNITED STATES PATENT OFFICE.

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CHURN.

No. 806,500.

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To all whom it may concern:

Be it known that I, Charles G. Roman, a citizen of the United States, 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, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to churns, and the object thereof is to provide an improved device of this class which is simple in construction and operation and which may be easily and thoroughly cleaned at all times, and by means of which the operation of churning may be performed in the shortest possible space of time and at a minimum expenditure of power.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a side view of my improved churn; Fig. 2, a sectional side view thereof, and Fig. 3 a transverse section on the line 3 3 of Fig. 2.

In the practice of my invention I provide a churn-body a, which consists of a receptacle which may be composed of earthenware, enameled metal ware or of any other suitable material and which is circular in cross-section, and the top of which is open and provided with an outwardly-curved flange or rim a^2 .

The receptacle a is provided with a detachable cover b, which may also be composed of any preferred material, but which is preferably composed of earthenware, enameled metal ware or similar material, and said cover is provided within the top portion of the receptacle a with an outwardly-curved flange or rim b², which rests upon and closely fits the flange or rim a² of the receptacle a.

Secured transversely of the top of the cover b is a metal plate or bar c, the connection of said plate or bar with the cover in the form of construction shown being made by means of screws or bolts c^2 , which are passed upwardly through said parts, and the ends of the plate or bar a are bent upwardly, as shown, at right angles thereto and turned to form upright standards c^3 and c^4 . The standard c^3 is provided with a horizontal top member c^5 , having a longitudinal slot c^6 , and

mounted in said slot and longitudinally adjustable therein by means of a nut c^7 or in any other way is a shaft c^8 , provided with a grooved belt-wheel d and mounted in the top 60 of the standard c^4 is a larger grooved belt-wheel d^2 , provided with a crank d^3 , and the wheels d and d^2 are geared in connection by a belt d^4 .

Secured in the cover b and in the trans- 65 verse plate or bar c is a vertically-arranged tube or sleeve e, through which passes a shaft e^2 , to which is secured, above the tube or sleeve e, a grooved pulley e^3 , and in the form of construction shown the shaft e^2 is provided 70 above the pulley e^3 with a threaded cap e^4 , which is screwed thereonto, and the lower end of the shaft e, which extends below the cover e, is provided with a dasher comprising in the form of construction shown a horizon- 75 tal head, cross-head, or bar e, provided with depending bars, legs, or arms e, which extend downwardly into the receptacle e approximately to the bottom thereof.

Secured to the uprights or standards c^3 and 80 c^4 , respectively, are depending dogs g and g^2 , having inwardly-directed noses g^3 and g^4 , and the flange or rim a^2 of the receptacle a is provided at diametrically opposite points with notches or recesses a^3 , and in order to con- 85 nect the cover b with the receptacle a the said cover is pressed downwardly thereonto, in which operation the cover is held so that the noses g^3 of the stationary dogs g and g^2 will pass downwardly through the recesses 90 a^3 , after which the cover is turned until the noses g^3 of the dogs g and g^2 engage the bottom of the flange or rim a^2 of the receptacle a, at which time the cover is locked in position on said receptacle.

It will be understood, of course, that the operation of churning is performed by turning the wheel d^2 by means of the crank d^3 , and the belt d^4 is passed around the pulley e^3 , which is secured to the shaft e^2 , and said shaft and the dasher are rapidly turned by turning the wheel e^2 , and in this way the operation of churning may be quickly and easily performed.

This device may also be used with slight 105 modifications as a means for freezing cream and other liquids, and various changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its 110 advantages.

It will be understood that the belt d^4 may

be tightened or loosened at any time by adjusting the shaft or axle of the wheel d in the slot c^6 , and any suitable means may be pro-

vided for driving the wheel d^2 .

The shaft e^2 is tubular in form, and the cap e^4 at the top thereof is provided with holes or openings e^5 , and in this way the body of the churn may be thoroughly ventilated when the cover b is in position.

Having fully described my invention, what I claim as new, and desire to secure by Let-

ters Patent, is—

1. A churn, comprising a casing provided with a removable cover, said cover being pro-15 vided with a centrally and vertically arranged tube which passes therethrough, a shaft mounted in said tube and provided at its upper end with a pulley and at its lower end with a dasher, said cover being also pro-20 vided on the opposite sides of said tube with uprights, belt-wheels mounted in said uprights, and a belt mounted on said wheels and passed around the said pulley, substantially as shown and described.

25 2. In a device of the class described, a receptacle provided with a removable cover, a vertically-arranged shaft passing centrally through said cover and provided at its lower end with a dasher and at its upper end with 30 a pulley, standards connected with said cover at the opposite sides of said shaft, beltwheels mounted in said standard and a belt mounted on said wheels and passed around the said pulley, substantially as shown and

35 described.

3. In a device of the class described, a receptacle, the top of which is open and provided with an outwardly-directed rim having recesses in the opposite sides thereof, a cover 40 for said receptacle which is also provided

with a rim adapted to rest on the rim of the receptacle, upright standards connected with the opposite sides of the cover, stationary dogs connected with said standards and provided with noses adapted to pass through 45 said recesses, belt-wheels mounted in said standard, a shaft passing vertically through the cover and provided at its lower end with a dasher and at its upper end with a pulley and a belt mounted on said wheels and passed 50 around the said pulley, substantially as shown and described.

4. A device of the class described, comprising a receptacle open at the top and provided with a removable cover, means for 55 locking said cover on said receptacle, a vertically-arranged shaft passing through the cover and provided at its upper end with a pulley and at its lower end with a dasher and devices connected with the cover for turning 60 said shaft, substantially as shown and described.

5. A device of the class described, comprising a receptacle open at the top and provided with a removable cover, a tubular 65 shaft passing vertically through said cover and provided at its lower end with a dasher and at its upper end with a pulley, the upper end of said shaft being also closed by a perforated cap, and devices connected with the 70 cover for turning said shaft, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 30th 75

day of January, 1905.

CHARLES G. ROMAN.

Witnesses:

C. J. KLEIN,

C. E. Mulreany.