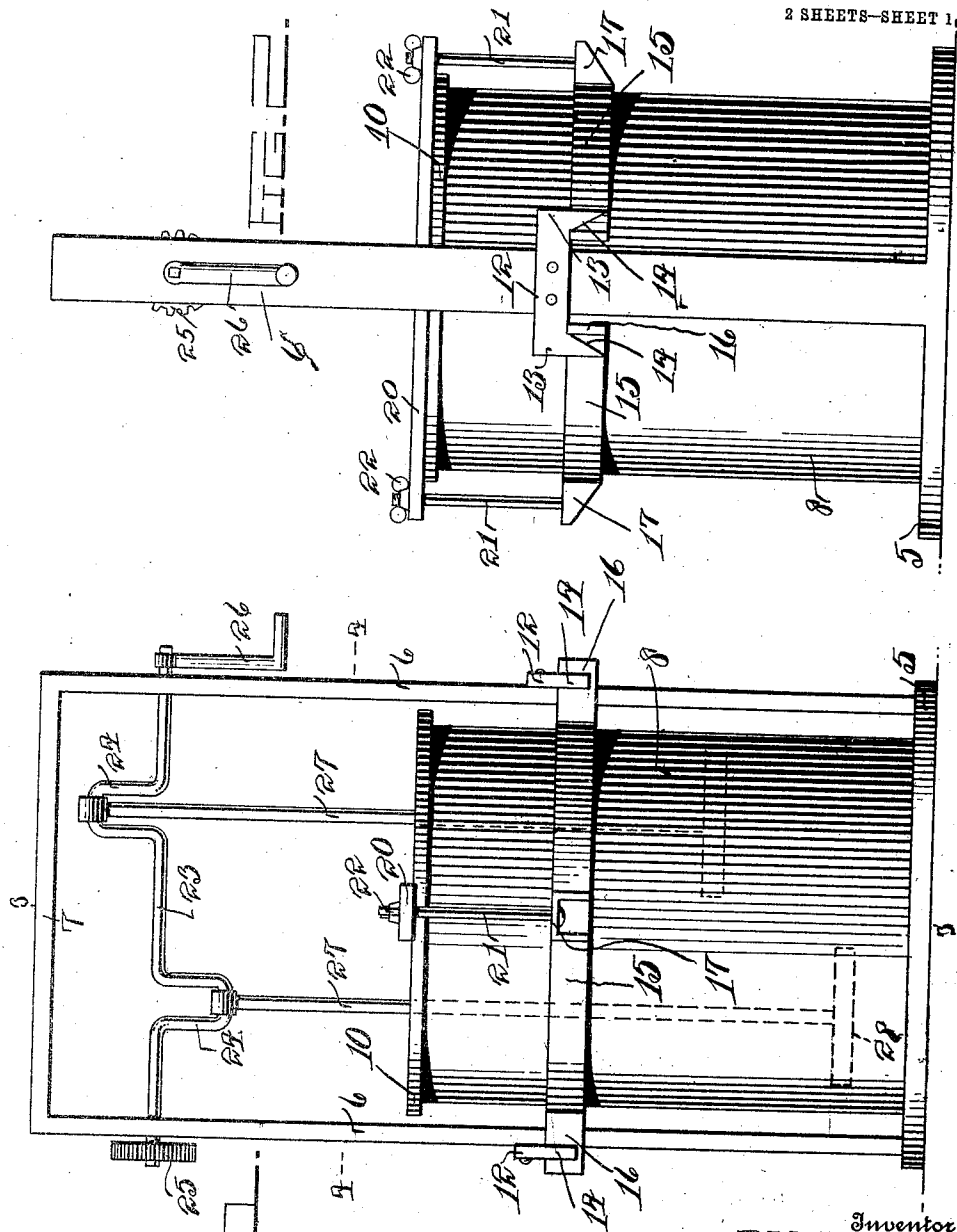


D. M. HARRISON.
CHURN.
APPLICATION FILED MAY 8, 1912.

1,053,386.

Patented Feb. 18, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS-SHEET 2.

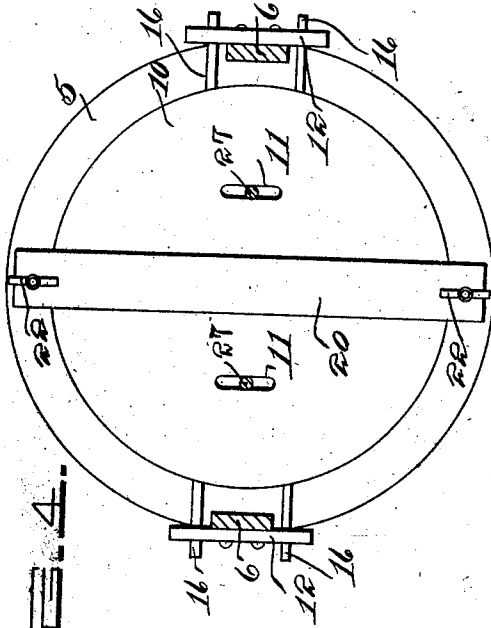


FIG. 4.

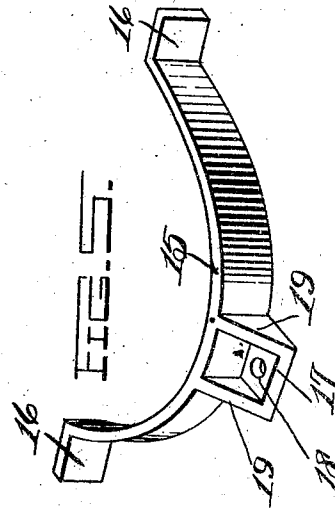


FIG. 5.

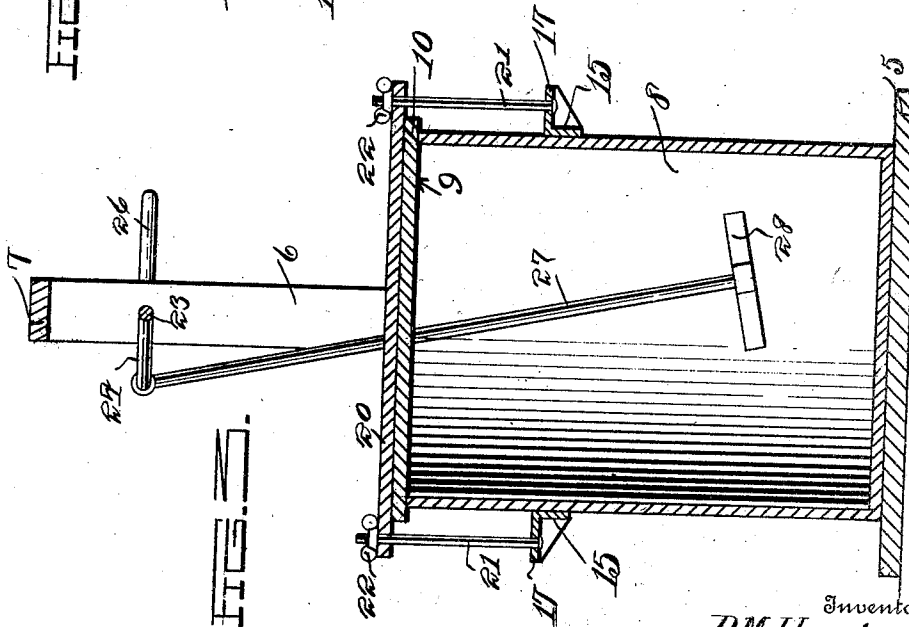


FIG. 6.

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UNITED STATES PATENT OFFICE.

DAVID M. HARRISON, OF DIXON, TEXAS, ASSIGNOR OF ONE-HALF TO HARVEY C. WILLIAMS, OF DIXON, TEXAS.

CHURN.

1,053,386.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed May 8, 1912. Serial No. 695,978.

To all whom it may concern:

Be it known that I, DAVID M. HARRISON, a citizen of the United States, residing at Dixon, in the county of Hunt, State of Texas, 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 improvements in churns.

The principal object of this invention is to provide a churn including a support, a body detachably mounted on the support, a closure element for the upper end of the body and a novel means for simultaneously clamping the closure element to the body and the body to the support.

Another object of the invention is to provide a churn of the character described, which is composed of a minimum number of parts, is therefore simple in construction, and is cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a front elevation of a churn constructed in accordance with my invention, Fig. 2 is a side elevation thereof, Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1, Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 1, Fig. 5 is a perspective view of one of the arcuate body clamping elements.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings, the invention comprises a support consisting of a base 5 from which projects an opposed pair of standards 6—6 which are connected at their upper ends by means of a cross bar 7.

Detachably mounted upon the base 5 and within the standard 6 is a churn body 8 having an open top 9 which is adapted to be closed by a closure element 10, said element being formed on opposite sides of its center with a pair of elongated parallel openings 11—11 adapted for a purpose hereinafter described.

In order to secure the closure element 10 to the body 8 and the body 8 to the base 5, the following mechanism is employed: Secured to each standard 6 below the closure element 10 is a horizontally disposed cam bar 12, the ends 13—13 thereof projecting downwardly in spaced relation to the standard 6 and being respectively formed with an upwardly and inwardly inclined cam face 14. An opposed pair of arcuate body clamping elements 15—15 are disposed around the body 8, and each element terminates at its ends in lateral feet 16—16 adapted to engage within an adjacent pair of cam faces 14 of the cam bars 12.

Integral with the element 15 and centrally extending outwardly therefrom is an ear 17 having a perforation 18 formed therein, said ear being further braced by means of webs 19—19. Centrally located upon the closure element 10 and projecting beyond the periphery thereof is a clamping bar 20, which is formed at its ends with suitable perforations which aline with the perforations 18 of the ears 17. Tie rods 21—21 are each disposed within an aligned pair of said perforations and winged nuts 22—22 are associated with said tie rods. It will thus be observed that when the winged nuts 22 are rotated in one direction, the tie rods will cause the arcuate body clamping elements 15 to be drawn upwardly and inwardly by reason of the contact of the feet 16 with the cam faces 14. Simultaneously therewith the tie rods 21 cause the clamping bar 20 to be drawn downwardly, thereby clamping the closure element 10 upon the open end 9 of the body 8. It will thus be observed that by means of this construction, the arcuate clamping elements 15 are caused to tightly grip the body 8 and retain the latter against movement upon the base 5.

Journalled within the standard 6 above the body 8 is a crank shaft 23 having a pair of oppositely disposed cranks 24—24 formed therein. A gear wheel 25 is fixedly secured

to one end of the shaft 23, and is adapted to be connected to a motor or other suitable driving means (not shown). A crank handle 26 is fixedly connected to the other end of the crank shaft 23 for manually operating said shaft. Connected to each crank 24 is one end of a pitman 27. These pitmen project downwardly through the openings 11 of the closure element 10, and secured to the lower end of each pitman is a dasher 28 of any suitable type.

It will be obvious from the foregoing that upon rotation of the shaft 23, the dashers 28 will be alternately reciprocated, and by means of the elongated openings of the closure element 10 a free movement will be imparted to the pitman 27.

What is claimed is:

1. The combination with a support including a base and a pair of standards, of a body detachably mounted upon the base, a closure for said body, cam arms secured to the standards, clamping elements for the body engageable with said cam arms, a clamping bar detachably mounted upon the closure element, and means connecting the body clamping members and the clamping

arm to simultaneously clamp the closure to the body and the body to the support.

2. The combination with a support including a base and a pair of standards, of a body detachably mounted upon the base, a closure for said body, a horizontally disposed cam arm secured to each standard below the closure element, the ends of each bar projecting downwardly in spaced relation to the standard and being respectively formed with upwardly and inwardly inclined cam faces, an opposed pair of arcuate body clamping elements disposed around the body, each element terminating at its ends in lateral feet engageable with a respective pair of cam faces of said cam arm, a clamping bar detachably mounted upon the closure element, and means connecting the body clamping members and the clamping arm to simultaneously clamp the closure to the body and the body to the support.

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

DAVID M. HARRISON.

Witnesses:

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T. W. CHAMBLIS.