

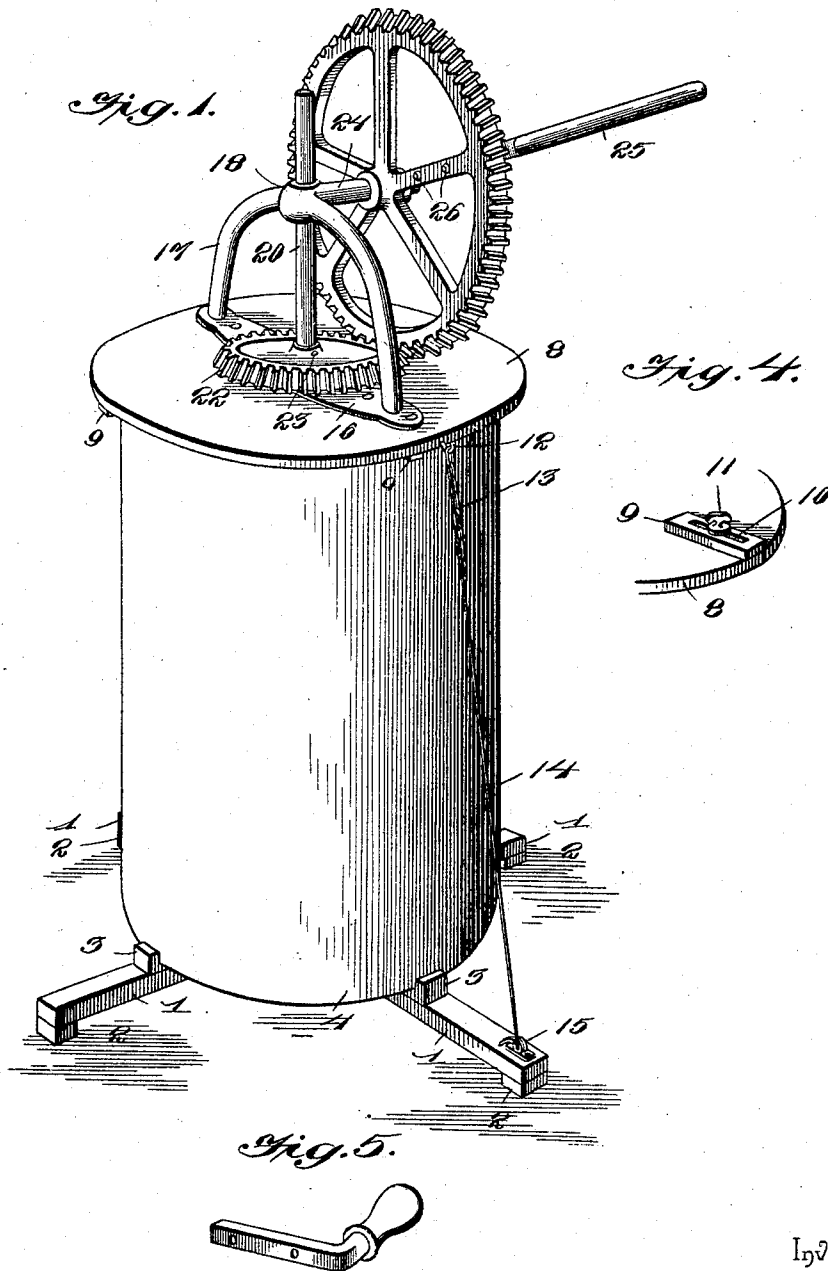
(No Model.)

2 Sheets—Sheet 1.

H. F. RAY & M. VICKERS.
CHURN.

No. 580,898.

Patented Apr. 20, 1897.



Witnesses
W. J. North.
J. E. Ray

By their Attorneys,

Investors
Henry F. Ray
Myrtle Vickers
C. A. Snow & Co.

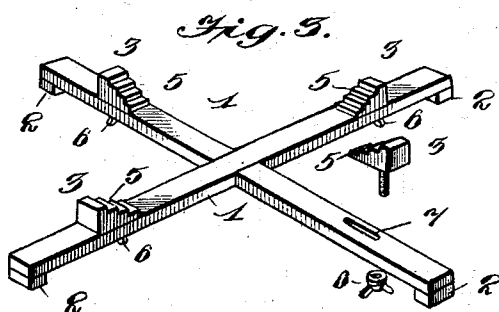
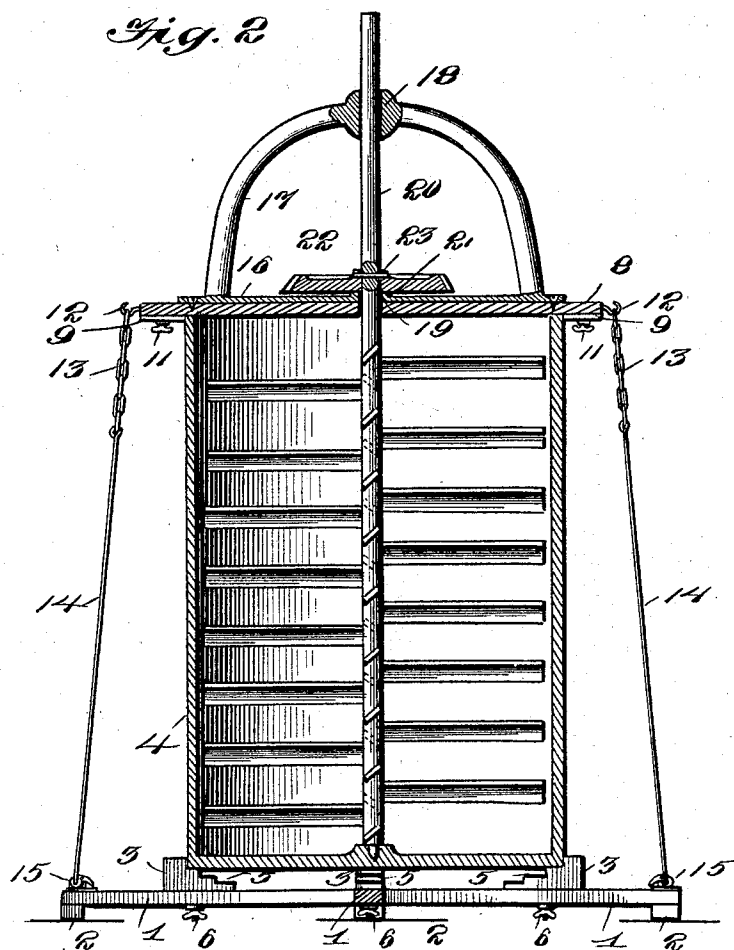
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2 Sheets—Sheet 2.

H. F. RAY & M. VICKERS.
CHURN.

No. 580,898.

Patented Apr. 20, 1897.



Witnesses
W. J. Gorth
W. J. Gorth

By *their* Attorneys,

Inventors
Henry F. Ray
Myrtle Vickers,
C. Snow & Co.

UNITED STATES PATENT OFFICE.

HENRY F. RAY AND MYRTLE VICKERS, OF MARION, KENTUCKY.

CHURN.

SPECIFICATION forming part of Letters Patent No. 580,898, dated April 20, 1897.

Application filed June 18, 1896. Serial No. 596,054. (No model.)

To all whom it may concern:

Be it known that we, HENRY F. RAY and MYRTLE VICKERS, citizens of the United States, residing at Marion, in the county of Crittenden and State of Kentucky, have invented a new and useful Churn, of which the following is a specification.

Our invention relates to churns, and has for its object to provide a simple, inexpensive, and efficient construction and arrangement of parts whereby the churn tub or receptacle is mounted, the lid is secured in place thereon, and motion is communicated to the dasher, the parts being so constructed as to provide for application to receptacles of different sizes.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with our invention. Fig. 2 is a vertical section of the same. Fig. 3 is a detail view in perspective of the base, one of the adjustable blocks being shown detached. Fig. 4 is a similar view of one of the adjustable stops for the lid, showing the contiguous portion of the lid. Fig. 5 is a view of a crank adapted to be substituted for the operating-lever for communicating motion to the driving-wheel.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The base of the improved churn consists of centrally-intersecting bars 1, provided at their extremities with feet or supports 2 and at intermediate points with adjustable rests 3, said rests being designed to support a churn-receptacle 4 and having stepped upper sides, as shown at 5, to vary the elevation of the receptacle. The means for the adjustment of said rests, as shown in the drawings, consists of set-screws 6, extending through longitudinal slots 7 in the bars forming the base and engaging the rests.

The lid 8, which is constructed to rest upon the upper edge of the receptacle and is preferably of larger diameter than the receptacle, in order to extend beyond the exterior surface thereof, is provided upon its under surface, contiguous to its periphery, with adjust-

able stop-blocks 9 to bear against the outer surface of the receptacle, said blocks being provided with longitudinal slots 10, engaged by set-screws 11, which are threaded in the lid. The blocks may be adjusted to suit the diameter of the receptacle. Also arranged peripherally upon the lid are hooks 12, with which are engaged links 13 at the upper ends of the fastening or guy wires 14, said guy-wires being attached at their lower extremities to eccentric-hooks 15, mounted upon the base-bars near their extremities. After a link at the upper end of each guy-wire is engaged with one of the hooks 12 the eccentric is turned down to produce the proper tension of the wire, and thus securely fasten the lid upon the receptacle. The operative portions of the guy-wires may be shortened to suit the height of the receptacle by engaging different links with the hooks 12.

Secured to the upper side of the lid by means of a plate 16 is a bracket 17, terminating at its upper end in a vertical guide 18, which is in alinement with a guide 19, formed at the center of the plate 16 to receive the dasher-staff 20, and mounted upon an annular bearing 21, formed by an upstanding flange on said plate 16, is a horizontal bevel-pinion 22, which is secured to the dasher-staff by means of a transverse pin 23, engaging registering perforations, respectively, in the staff and the hub of the pinion. Projecting laterally from the upper end of the bracket is a stub-shaft 24, upon which is mounted a driving-wheel having bevel gear-teeth to mesh with the teeth of the pinion 22.

Different means may be employed for communicating motion to the driving-wheel, such as a lever 25, which is detachably secured by means of bolts 26 to one of the spokes of said wheel or a crank, such as that illustrated in Fig. 5, which may be substituted for the lever. When the lever is in use, a rocking or oscillatory movement is imparted to the driving-wheel to cause partial rotation alternately in opposite directions of the dasher, whereas when the crank is used a continuous rotary motion in a uniform direction may be imparted to said wheel.

The dasher which we have illustrated in the drawings consists of a series of radial arms carried by the dasher-staff and arranged an-

gularly with relation to the bottom of the receptacle, the inclination of contiguous arms being respectively in opposite directions, whereby simultaneous upward and downward thrust is imparted to the contents of the receptacle.

From the above description it will be seen that the construction of the device is simple and that the portion constituting our invention embodying the mechanism, exclusive of the receptacle, is applicable to a churn-receptacle either of stone or wood of any ordinary size.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described our invention, what we claim is—

1. In a churn, the combination of a base, stepped receptacle-rests mounted for radial adjustment upon the base, means for securing said rests at the desired adjustment, a lid carrying dasher-operating mechanism, and flexible connections between the lid and the base, substantially as specified.

2. In a churn, the combination of a base having bars provided with radial slots, stepped

rests mounted upon said bars to support a receptacle, set-screws extending through said slots and engaging the rests to secure the latter at the desired adjustment, a lid carrying dasher-operating mechanism, and adjustable fastening devices connecting the lid with the extremities of the base-bars, substantially as specified.

3. A combined base and receptacle-top for churns, the base being provided with a plurality of stepped rests mounted for radial adjustment, means for securing the rests at the desired adjustment, stop-blocks mounted for radial adjustment upon the under side of the receptacle-top, means for securing said blocks at the desired adjustment, a plurality of flexible connections between the periphery of the receptacle-top and the base beyond the limits of the outward movement of said rests, and means for adjusting the tension of said connections, substantially as specified.

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

HENRY F. RAY.
MYRTLE VICKERS.

Witnesses:

GEO. M. CRIDER,
W. D. WALLINGFORD.