No. 745,762. PATENTED DEC. 1, 1903.

T. H. BANKS.

CHURN.

APPLICATION FILED FEB. 21, 1901.

NO MODEL.

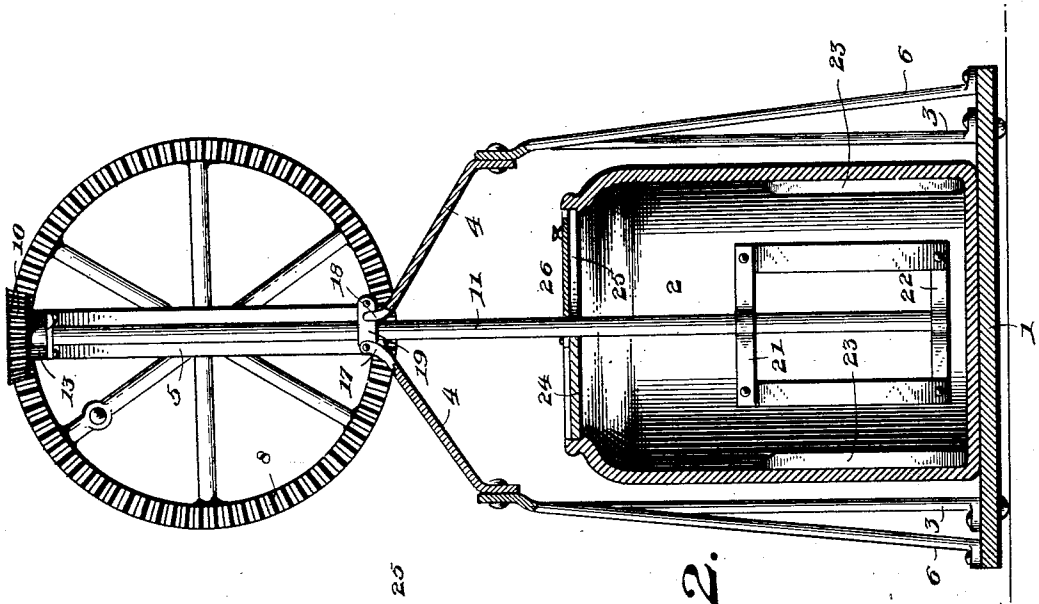

Fig. 2.

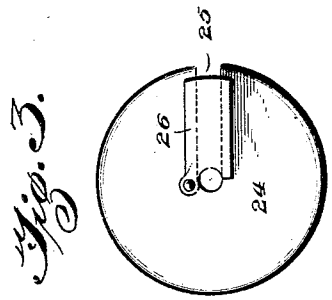

Fig. 3.

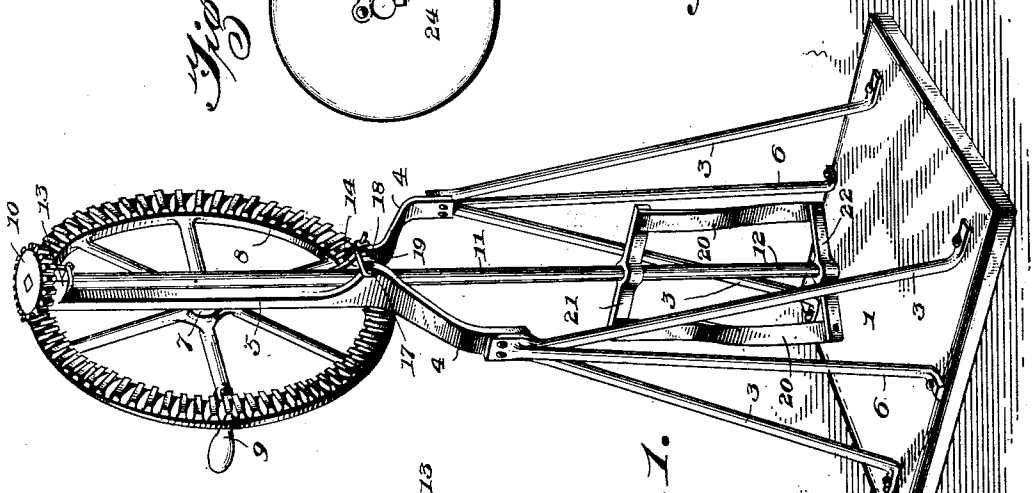

Fig. 1.

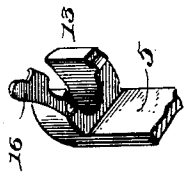

Fig. 4.

Witnesses

Leo L. Dondero

H. H. Riley

T. H. Banks, Inventor

by C. A. Snow & Co.

Attorneys

No. 745,762. Patented December 1, 1903.

UNITED STATES PATENT OFFICE.

THEODORE H. BANKS, OF SAN ANTONIO, TEXAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 745,762, dated December 1, 1903.

Application filed February 21, 1901. Serial No. 48,322. (No model.)

To all whom it may concern:

Be it known that I, THEODORE H. BANKS, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in churns.

The object of the present invention is to improve the construction of churns and to provide a simple, inexpensive, and efficient one adapted to be readily operated and easily cleaned after churning and capable of enabling butter to be readily produced.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with this invention, the churn-body being removed. Fig. 2 is a vertical sectional view of the same, the churn-body being in position. Fig. 3 is a detail view of the cover of the churn-body. Fig. 4 is a detail view illustrating the construction for locking the dasher-shaft in the upper bearing.

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

1 designates a base adapted to support a churn-body 2, and rising from the base at opposite sides thereof are tapering standards 3, which are connected at the top by arms 4 of a vertical bearing-bracket 5. The tapering standards, which are supported by inclined braces 6, are adapted to prevent the churn from vibrating, and they form a rigid support for the bearing-bracket. The body of the bracket consists of a vertical bar, and the arms 4, which extend laterally from the lower end of the vertical bar, have their outer ends bent downward and bolted or otherwise secured to the inner faces of the upper ends of the tapering standards, which may be secured in any suitable manner to the base 1.

The bearing-bracket is disposed centrally over the churn-body and is provided at its center with an outwardly-extending stub-shaft 7, upon which is mounted a gear-wheel 8, having an eccentrically-arranged handle 9 and meshing with a horizontal pinion 10, which is located at the top of the bearing-bracket. The horizontal pinion is secured to the upper end of a vertical dasher-shaft 11, which carries a dasher 12 and which is detachably arranged in upper and lower bearing-recesses 13 and 14 of the bearing-bracket. The dasher-shaft may be readily removed from the bearing-bracket to enable the dasher to be taken out of the churn-body and cleaned after the operation of churning has been completed, and this construction will also admit of the pinion being permanently secured to the dasher-shaft. The upper end of the bearing-bracket is provided with a horizontal flange or extension in which the bearing-recess 13 is formed, and the dasher-shaft is retained in the bearing-recess by a horizontally-movable latch 16, pivoted at one side of the flange and provided with a tooth or engaging portion to interlock with the opposite side of the same. The pivoted latch 16 completes the bearing, and it is adapted to be readily manipulated to release the dasher-shaft. The bottom or lower end of the bearing-bracket is provided with a pair of vertical flanges forming the bearing-recess 14 and provided with notches 17 and 18 for the reception of a vertically-movable latch 19. The latch 19 is pivoted in the notch 17 and is supported in its closed position by the bottom wall of the notch 18, and it is provided with a suitable stem or handle to enable it to be readily swung out of engagement with the dasher-shaft. When the latches are released, the dasher-shaft may be readily taken out of the bearing-recesses, as will be readily apparent.

The dasher 12, which may be of any desired construction, preferably consists of a pair of vertical blades 20, connected with the dasher-shaft by upper and lower bars 21 and 22 and provided with a slight twist, as shown in Fig. 1, whereby they are adapted to operate on the contents of the churn-body to great advantage and are capable of thoroughly agitating the same. The churn-body is provided on its interior with vertical ribs or flanges 23, arranged to be engaged by the contents of the churn-body and adapted to resist any tendency of the contents to rotate with the dasher, whereby the said contents are completely agi-

tated. The ribs or flanges extend upward from the bottom of the churn-body and terminate approximately at the center of the same, and they are adapted to cause the agitation to take place near the bottom of the churn-body to prevent the contents from splashing out of the same. The churn-body, which may be of any desired construction, has a cover 24, provided with a radial slot 25, extending from one of its edges to its center to permit it to be readily placed around the shaft. The cover is also provided with a pivoted plate 26, arranged to cover the major portion of the radial slot to prevent the contents of the churn-body from splashing out of the same when the said contents are excessively agitated.

It will be seen that the churn is simple and comparatively inexpensive in construction, that it is easily operated, and that it is capable of quickly producing butter. It will also be apparent that the dasher-shaft has upper and lower bearings and that it is unnecessary to provide a bearing for the same at the bottom of the churn-body.

Instead of constructing the standards and the arms 4 of separate pieces, both of these parts, together with the braces 6, may be cut out of a single piece of flat metal or other suitable material, and I desire it to be understood that these and similar changes within the scope of the appended claim may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

In a churn, the combination of a supporting-base, a churn-body disposed thereon, spaced uprights secured to said base, a vertical bar disposed centrally over said churn-body and bifurcated at its lower end with the arms thereof connected to the respective uprights, spaced bearings carried by said centrally-disposed bar and having lateral openings therein, a crown gear-wheel vertically disposed on one side of said vertical bar, a rotatable dasher-carrying shaft mounted in said spaced bearings and provided with a pinion arranged to mesh with said gear-wheel and having the dasher arranged for operation within the churn-body, and latches pivoted to said bearings for retaining the dasher-shaft therein, said latches moving in planes at right angles to each other.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THEODORE H. BANKS.

Witnesses:
P. D. HOPKINS,
W. A. PEMBERTON.