

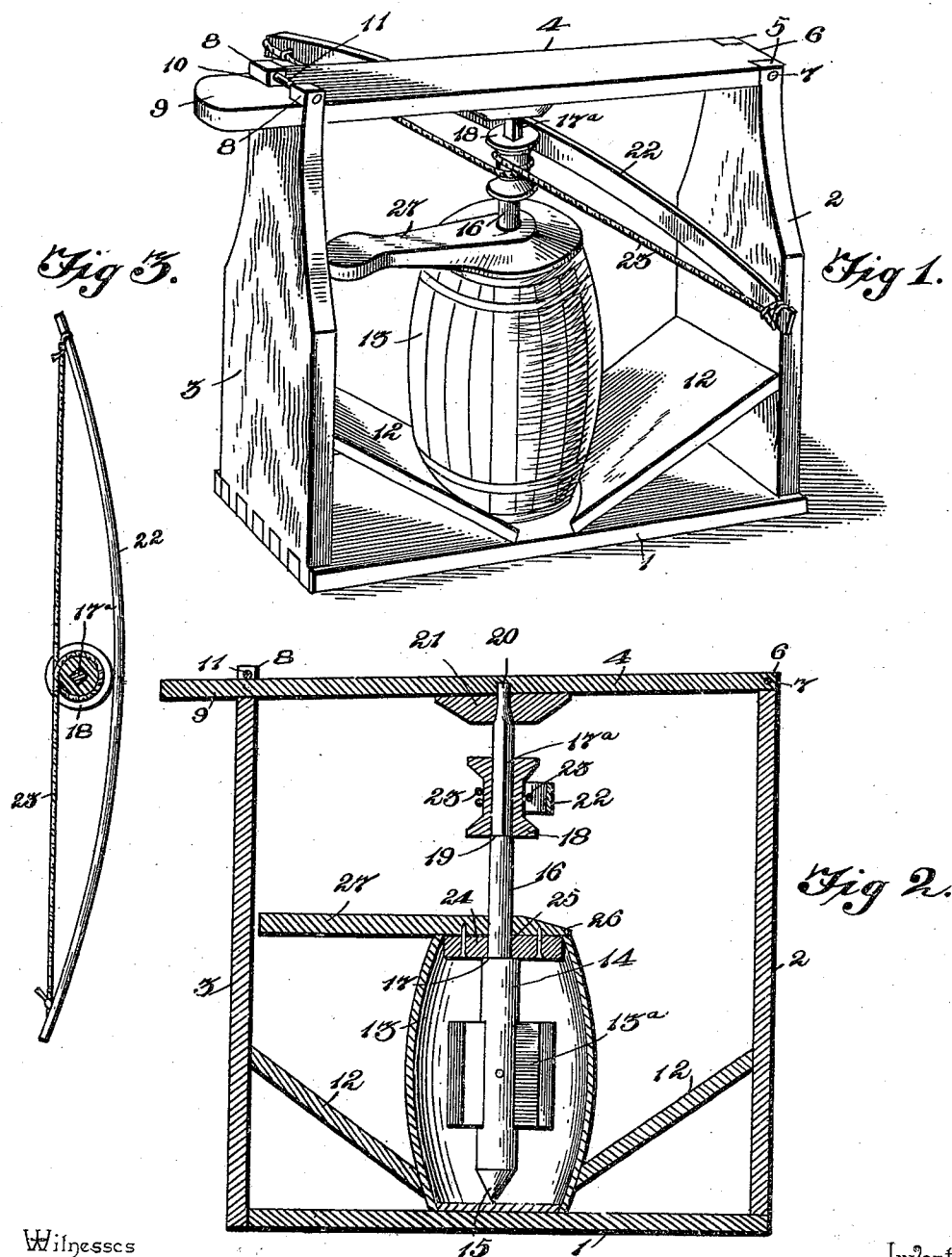
No. 684,057.

Patented Oct. 8, 1901.

W. H. GRAVES.  
CHURN.

(Application filed Nov. 8, 1899.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY GRAVES, OF SEFFNER, FLORIDA.

## CHURN.

SPECIFICATION forming part of Letters Patent No. 684,057, dated October 8, 1901.

Application filed November 8, 1899. Serial No. 736,261. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY GRAVES, a citizen of the United States, residing at Seffner, in the county of Hillsboro and State of Florida, have invented a new and useful Churn, of which the following is a specification.

The invention relates to improvements in churns.

10 The objects of the present invention are to improve the construction of churns, more especially the means for supporting the churn-body, and to provide a frame capable of conveniently and firmly holding the churn-body during the operation of the churn and of permitting the said body to be readily removed for cleaning it.

15 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.

20 In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a plan view of the operating device.

25 Corresponding parts in the several figures of the drawings are designated by like characters of reference.

30 Referring to the accompanying drawings, it will be seen that I provide a supporting-frame comprising a flat base or still 1, from the opposite ends of which rise uprights 2 and 3, which are connected at their upper ends by means of a cross-bar 4. The upper end of one of the uprights—as, for instance, 2—is provided with a longitudinal notch or bifurcation, so as to form opposite upstanding ears 5, and the adjacent end of the bar 4 is provided with a longitudinally-extending reduced portion or tongue 6, pivoted or hinged between the ears 5 by means of a suitable transverse pivot-pin 7, extending through the ears and the tongue. The opposite upright 3 is also provided with similar spaced upright ears 8, between which the free end of the bar 4 is adapted to fit. It will be noted that the free end of the bar projects beyond the upright 3, so as to form a handle 9 for raising and lowering the bar, and the opposite longitudinal edges of the latter are provided with trans-

versely-alined notches 10 for the reception of the respective ears 8, so as to firmly brace the bar in its normal position. To prevent accidental upward movement of the free end of the bar, the ears 8 project above the latter and are provided with a removable pin 11, extending transversely between the ears and immediately above the arm, thereby forming a stop to prevent accidental upward movement thereof. Each of the end uprights is braced by means of an inwardly and downwardly inclined brace 12, having its upper end secured to the inner side of the upright and its lower end connected to the upper side of the base or sill 1.

Any preferred form of churn-body 13 may be employed and is designed to rest upon the base or sill 1 and to be located between the lower ends of the braces 12, the latter being recessed or formed to snugly embrace the lower portion of the churn-body for the purpose of preventing accidental lateral displacement of the latter.

75 Located within the churn-body is any preferred form of dasher 13<sup>a</sup>, having a vertical dasher-rod 14, the lower end of which is preferably pointed, as at 15, and bears against the bottom of the churn-body. Adjacent the upper end of the churn-body the dasher-rod is reduced and of cylindrical form, as indicated at 16, and forms an annular stop-shoulder 17, located immediately below the upper end of the churn-body. Upwardly from the upper end of the portion 16 the dasher-rod is made angular, as at 17<sup>a</sup>, upon which is removably fitted a spool or drum 18, the lower end of which rests upon the shoulder 19, formed by the angular portion 17<sup>a</sup>. The upper end 20 of the dasher-rod is cylindrical in shape, so as to form a pivot or journal, and is mounted in a suitable socket formed in the under side of the cross-bar 4. Should the latter be too thin for the proper mounting of the dasher-rod, a suitable step-bracket 21 is secured to the under side of the body and receives the upper end of the dasher-rod.

100 The means for operating the dasher comprises a bowed spring-arm 22, having a bow-string or flexible connection 23 secured to the opposite ends thereof, the intermediate portion of the string being wound upon the spool

or drum 18 and the latter located between the string and the bowed arm. By reciprocating the bow the frictional engagement of the bow-string with the drum will rotate the latter and in turn also operate the dasher, as will be understood.

Removably fitted to the upper open end of the churn-body is a cover 24, fitting within the churn and provided with a central opening 25 for the reception of the cylindrical portion 16 of the dasher-rod. This cover rests upon the annular shoulder 17 upon the dasher-rod and is also provided with an outer marginal flange 26, resting upon the upper edge of the churn-body. Extending laterally from the cover and projecting at one side of the churn-body is an arm or handle 27, which is to be held by the operator, so as to brace the upper end of the churn-body during the churning operation, and as the dasher-rod extends loosely through the cover the latter may be elevated by means of the handle 27, so as to inspect the interior of the churn-body. To facilitate the elevation of the cover, the spool or drum 18 is located at a suitable distance above the upper end of the churn-body.

It will be noted that the handle 27 and the operating-bow are located at opposite sides of the churn-body, so that such parts may be conveniently held in the respective hands of the operator, and thereby facilitate the operation of the churn. Moreover, the flexible element 23 extends in opposite directions

from the same side of the spool or drum and forms the chord of the arc provided by the bow, the opposite ends of the latter being connected to the respective ends of the flexible element, so that said bow normally maintains a tension upon the flexible element, so as to prevent slipping of the latter upon the spool or drum and to obtain the maximum operating effect thereon. Moreover, the flexible cord or element forms a permanent operative connection with the spool, and also the latter forms the sole support of the operating device, whereby the parts of the latter may be removed as a whole from the dasher shaft or stem without disturbing any of said parts, and thereby maintaining the latter in their proper relations one to the other in order that the operating device may be conveniently replaced upon the shaft.

What I claim is—

In a churn, the combination of a frame, having a base, opposite uprights, downwardly-inclined transverse braces extending inwardly in opposite directions, from the respective uprights to the base, and a churn-body seated upon the base and embraced by the lower ends of the braces.

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

WILLIAM HENRY GRAVES.

Witnesses:

JAY NYE,

F. A. W. HAMMOND.