

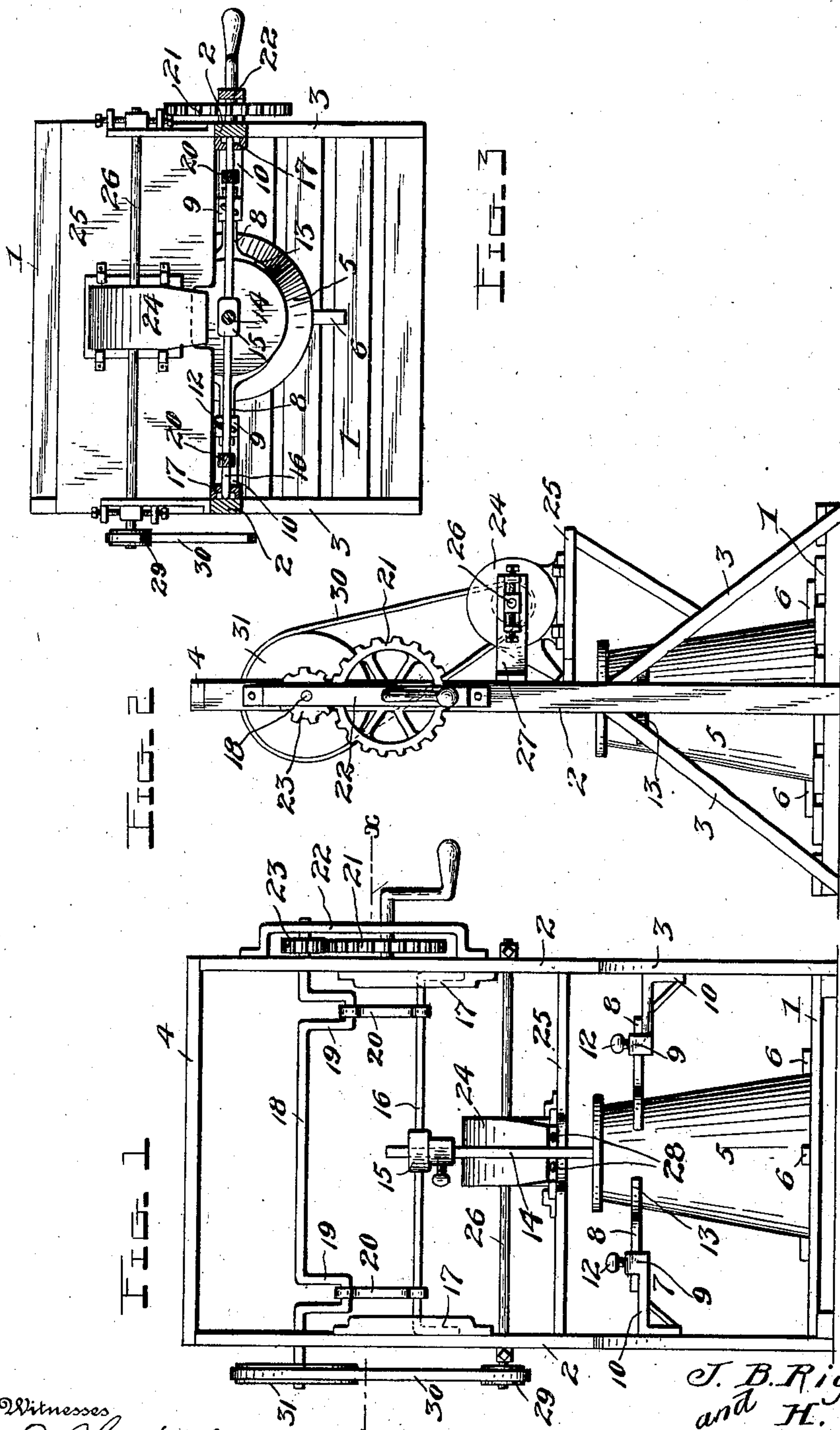
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Patented Sept. 9, 1902.

J. B. RIGGINS & H. GORDAN.
CHURN.

(Application filed May 29, 1902.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

JULIAN BUFORD RIGGINS AND HERBERT GORDAN, OF CLARKSVILLE,
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CHURN.

SPECIFICATION forming part of Letters Patent No. 708,665, dated September 9, 1902.

Application filed May 29, 1902. Serial No. 109,523. (No model.)

To all whom it may concern:

Be it known that we, JULIAN BUFORD RIGGINS and HERBERT GORDAN, citizens of the United States, residing at Clarksville, in the county of Mecklenburg and State of Virginia, have invented certain new and useful Improvements in Churns; and we do 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.

The invention relates to improvements in churns, and particularly to the class of vertically-reciprocating single-dasher churns.

15 The object of the invention is to produce a churn of the character described which will be light and easy of operation and by which the dasher will always be caused to reciprocate perpendicularly and true and which shall
20 be simple of construction, durable in use, and comparatively inexpensive of production.

A further object is to combine with the churn a fan adapted to be driven by the same mechanism which drives the churn, the object
25 of the fan being to drive dust, insects, and the like from proximity to the mouth of the churn.

With the above and other objects in view, the nature of which will more readily appear
30 as the invention is better understood, said invention consists in certain novel features of construction and combination and arrangement of parts, which will be hereinafter fully described, defined in the appended claim,
35 and illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the churn. Fig. 2 is a side elevation thereof. Fig. 3 is a horizontal sectional view of the same on the
40 line *x x* of Fig. 1.

In the drawings, 1 denotes a base which is preferably formed of slats.

2 denotes standards rising from the sides of the base 1 and suitably braced thereto by the inclined braces 3. The upright standards 2
45 are connected together at their upper ends by a cross-bar 4.

5 denotes the churn-body, which is adapted to rest upon the slatted base and to be secured
50 thereon by means of clamps 6, which engage the slats forming the base. The clamps 6

hold the churn-body against forward movement, and the said body is held against side-
wise movement by means of adjustable
clamps 7, consisting of horizontally-disposed
55 arms 8, which are adapted to slide in guide-loops 9, fixed on the ends of brackets 10, bolted to the standards 2. The arms 8 are held in any adjusted position on the brackets 10 by means of set-screws 12, passing through
60 threaded apertures in the guide-loops and impinging upon the arms 8. The inner ends of said arms are provided with segmental clamping-jaws 13, which are adapted to engage the upper part of the churn-body and firmly hold
65 the same against sidewise movement. Thus it will be seen that the churn-body may be centered and securely held in any adjusted position.

14 denotes the dasher-rod adjustably secured near its upper end to a head 15, fixed
70 on a cross-bar 16, the outer ends of which are bent at right angles to the length thereof and are adapted to slide in grooves or ways 17, formed on the inner sides of the standards 2.
75

18 denotes a crank-shaft journaled in bearings on the standards 2, near the upper ends thereof. The shaft 18 is provided with crank-arms 19 at each end adjacent to the inner
80 sides of the standards 2, and to these crank-arms are connected the upper ends of pitman-rods 20, which are connected at their lower ends to the cross-bar 16.

21 denotes a master gear-wheel journaled in bearings formed on one of the standards
85 2 and in a bracket 22, fixed to said standard, as shown. The gear 21 is in mesh with a spur gear-pinion 23, fixed on the end of the crank-shaft 18. The journal of the master-gear 21 is extended a slight distance beyond
90 the bearing-bracket 22 and is provided with a crank-handle for operating the same, so that when said handle and master-gear are rotated the pinion 23 and the crank-shaft 18 will be driven and a reciprocating motion will be im-
95 parted to the churn-dasher through the medium of the pitman-rods 20 and cross-bar 16.

24 denotes a fan-casing adjustably mounted on a bracket or support 25, fixed to the rear
100 side of the standards, and 26 denotes a fan-shaft journaled in adjustable bearings mounted on arms or brackets 27, projecting rear-

wardly from said standards 2. The shaft 26 extends through the casing 24 and has mounted thereon a rotary fan. The discharge end of the fan-casing is provided with two openings 28, through which the blast from said fan is directed just above the top of the churn on each side of the dasher-rod.

29 denotes a small belt-pulley fixed on one end of the fan-shaft, and said pulley is connected by a belt 30 with a drive-pulley 31, fixed on one end of the crank-shaft 18, to rotate therewith, and thereby drive said fan-shaft and fan through the medium of the belt-pulley 29 and belt 30.

The fan-casing is adjustable to and from the churn-body, as shown, to permit the use of different-size churns, or it may be removed altogether, if desired. The dasher-rod 14 being adjustable in the head 15 permits the dasher to be raised or lowered to churn as large or small a quantity of cream as desired. The adjustable clamp for holding the churn-body will permit the use of different-sized churns and will enable the device to be used in connection with the old-style hand-dashers or any churn using a vertical dasher-rod, and while we have shown and described the device in use with a single-dasher churn it is obvious that the same may also be used in connection with vertical double-dasher churns with but slight modification of the connections.

From the foregoing description, taken in connection with the accompanying drawings,

it is thought that the construction, mode of operation, and advantages of our improved churn will be readily apparent without requiring a more extended explanation.

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

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a churn, a supporting-frame, a churn-body carried thereby and having a reciprocating dasher, rearwardly-projecting bearing-brackets fixed to said supporting-frame, a transversely-disposed horizontal shaft journaled in bearings adjustably mounted in said bearing-brackets, a fan fixed to said shaft, a shelf or bracket carried by the supporting-frame, a casing slidably mounted upon said shelf and inclosing said fan, and having discharge-openings arranged to direct a blast of air upon the top of the churn, and gearing for reciprocating the dasher-shaft and driving the fan-shaft, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

JULIAN BUFORD RIGGINS.
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Witnesses:

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