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PATENTED DEC. 5, 1905.

J. H. SHRUM.
CHURN.

APPLICATION FILED JUNE 10, 1905.

2 SHEETS—SHEET 1.

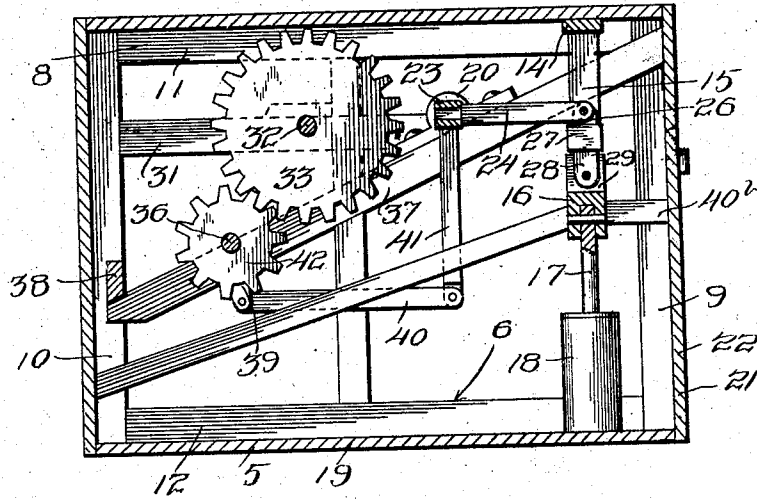


Fig. I.

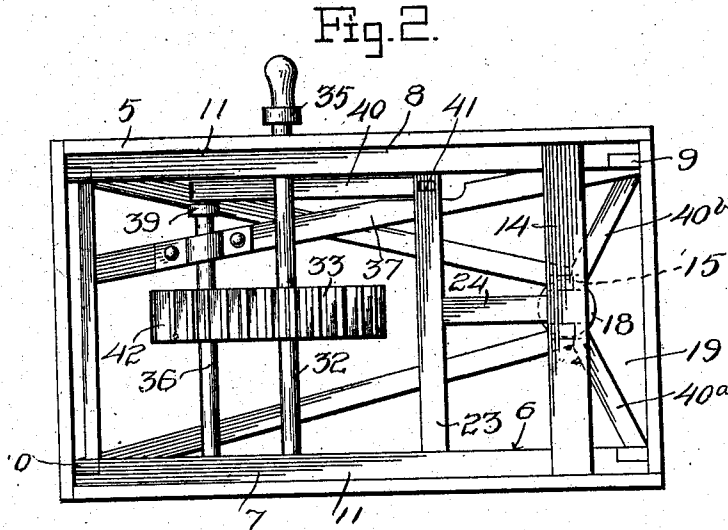


Fig. 2.

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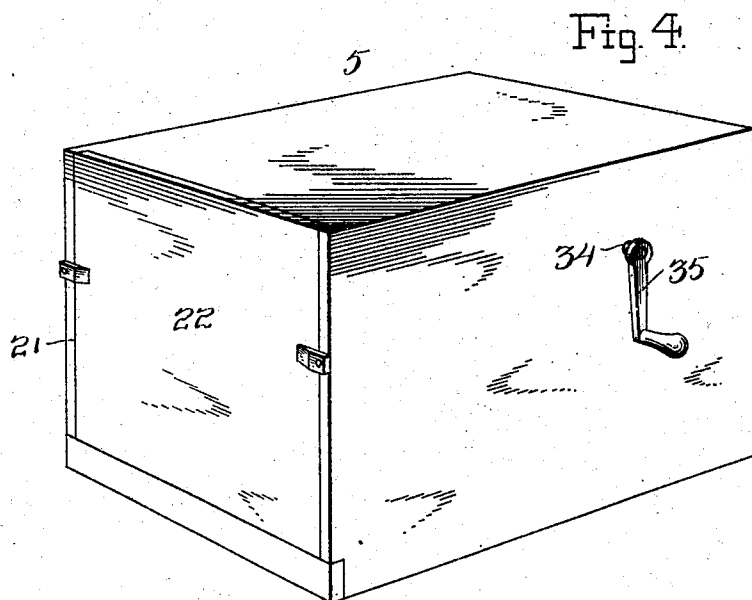
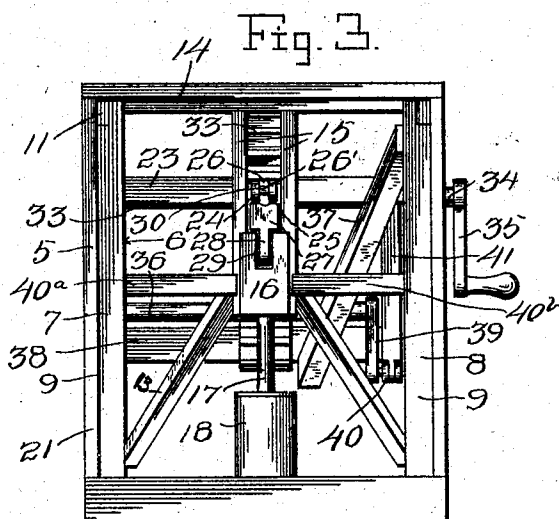
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JONAS H. SHRUM, OF MONTEREY, MISSOURI.

CHURN.

No. 806,586.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed June 10, 1905. Serial No. 264,642.

To all whom it may concern:

Be it known that I, JONAS H. SHRUM, a citizen of the United States, residing at Monterey, in the county of Reynolds, State of Missouri; 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 churns, and more particularly to operating mechanism therefor, and has for its object to provide an operating mechanism of this kind which will include means for converting rotary to reciprocating motion and which will include a novel arrangement of parts.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific construction shown and described may be made within the scope of the claims and that any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a central longitudinal section of the present invention. Fig. 2 is a top plan view of the mechanism, the cover of the casing being removed. Fig. 3 is a front view with the door removed. Fig. 4 is a perspective view of the casing.

Referring now to the drawings, the present invention comprises a casing 5, which is built upon a frame 6, the latter also supporting the operative portions of the mechanism. The frame comprises rectangular side portions 7 and 8, each including front and rear uprights 9 and 10 and upper and lower horizontal connecting members 11 and 12, respectively. Diagonally-disposed brace-rods 13 are included, one in each of the side portions, and extend downwardly from the union of the upright 9 and member 11 at the upper forward corner of each side portion to points upon the rearward uprights 10, adjacent to the lower ends thereof. A transversely-extending bar 14 connects the members 11 adjacent to their forward ends, and this bar carries depending spaced guides 15, between which there is engaged a sliding cross-head 16, in which is engaged the upper end of a dasher-rod 17 of a churn 18, disposed upon the floor 19 of the casing. As shown, the casing may be opened

at its forward end 21, and a closure 22 is provided for this opening.

Journaled at its ends in pillow-blocks 20, mounted upon the braces 13 adjacent to their forward ends, there is a rock-shaft 23, having a forwardly-extending arm 24, which lies with its forward end between the guides 15 and has a slot 25 extending longitudinally thereof, which receives the upper reduced portion 26 of a link 27, having also a lower reduced portion 28, which is pivoted in a bifurcation 29, formed in the upper end of the cross-head 16. The reduced portion 26 of the link has a transverse perforation 26' therein above the arm 24, which receives a horizontal pin 30. The side portions 7 and 8 of the frame also include horizontal members 31, secured at their rearward ends to the uprights 10 and resting at their forward ends against the pillow-blocks 20, to which they are secured, and in these members 31 there is journaled a horizontal shaft 32, which carries a gear-wheel 33 and which extends outwardly of the casing, as shown at 34, this portion being adapted for the reception of a handle 35, by which it may be revolved.

A supplemental shaft 36 is journaled at one end in one of the braces 13 and at the other end in a diagonally-extending member 37, which is secured at its forward upper end to one of the uprights 9 adjacent to the upper end thereof and at its lower rearward end to a cross-piece 38, secured to the rearward upright 10 and resting against the rearward end portions of the braces 13. This diagonal member 37 slants rearwardly toward the center of the cross-piece 38. The shaft 36 extends outwardly beyond the member 37 and carries at its end a crank 39, which is connected by means of a link 40 with a depending arm 41, carried by the rock-shaft 23, and it will thus be seen that when the shaft 32 is revolved the rock-shaft 23 will be operated to reciprocate the cross-head 16 and therewith the dasher of the churn, the shaft 36 being provided with a gear 42, which meshes with the gear 33. The gear 42 is somewhat smaller than the gear 33, so that the speed of the mechanism beyond the gear 42 is increased.

The guides are provided with braces 40^a and 40^b, as shown.

What is claimed is—

1. A mechanism of the class described comprising side portions each including front and rear uprights and connecting top and bottom

members, rearwardly and downwardly inclined brace members secured to the uprights, a cross-bar secured to the top members adjacent to their forward ends, spaced depending
 5 guides carried by the cross-bar, a cross-head slidably mounted in the guides for vertical movement, an operative mechanism connected with the cross-head for operation thereby,
 10 pillow-blocks mounted upon the brace members, a rock-shaft journaled in the pillow-blocks, an arm carried by the rock-shaft and extending between the guides, connections between the arm and the cross-head for movement of the latter when the shaft is rocked,
 15 horizontal members secured at their forward ends to the pillow-blocks and at their rearward ends to the rearward uprights, a shaft journaled in said members, said shaft being arranged for rotation by exterior means, a diagonal member secured at its forward end to one of the forward uprights and connected at its rearward end with the rearward uprights, said member being slanted downwardly and inwardly of the frame, a shaft journaled in
 20 said member and in one of the diagonal brace members, multiplying gear connections between the second and third named shafts, a crank carried by the third shaft, a depending

arm carried by the rock-shaft, a link connected with the depending arm and with the crank to
 30 rock the rock-shaft when the third shaft is revolved and braces for the guides.

2. A mechanism of the class described comprising a casing, a frame within the casing, a transverse bar mounted in the frame, depending guides carried by the bar, a cross-head
 35 slidably mounted in the guides, braces for the guides, a transverse rock-shaft journaled in the frame, an arm carried by the rock-shaft and projecting between the guides, said arm
 40 having a longitudinal slot therein, a link having a reduced end engaged in the slot and projecting above the arm, a cross-pin engaged in the link above the arm, said link being pivoted at its lower end to the cross-head, a revoluble
 45 shaft, means for revolving the shaft and operative connections between the revoluble shaft and the rock-shaft, said cross-head being adapted for connection with an operative
 50 mechanism.

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

JONAS H. SHRUM.

Witnesses:

MONROE JOHNSTON,
 W. I. BAYS.