

No. 824,424.

PATENTED JUNE 26, 1906.

J. L. HOYLE.
CHURN OPERATING MECHANISM.
APPLICATION FILED MAR. 10, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

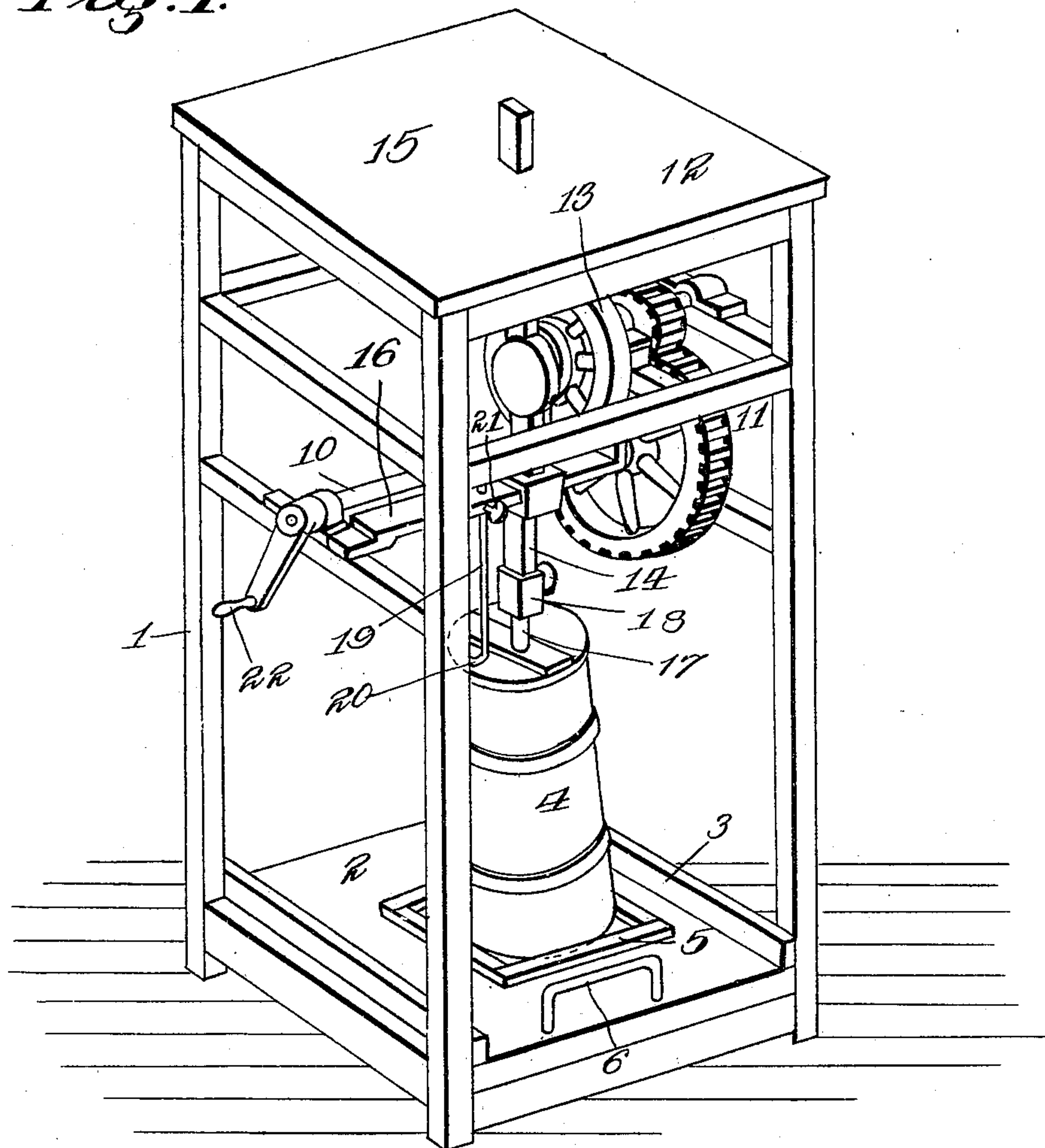
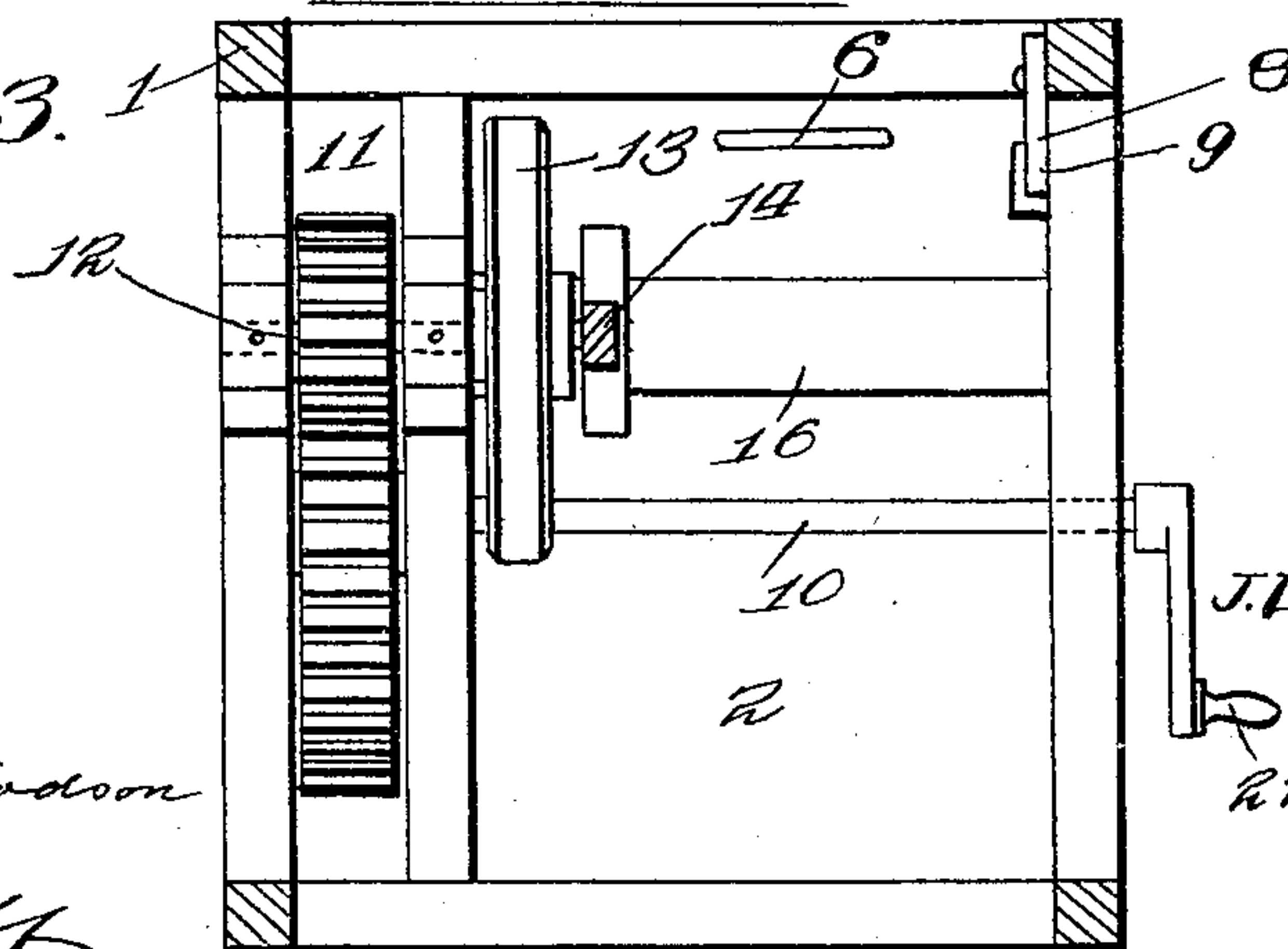


Fig. 3.



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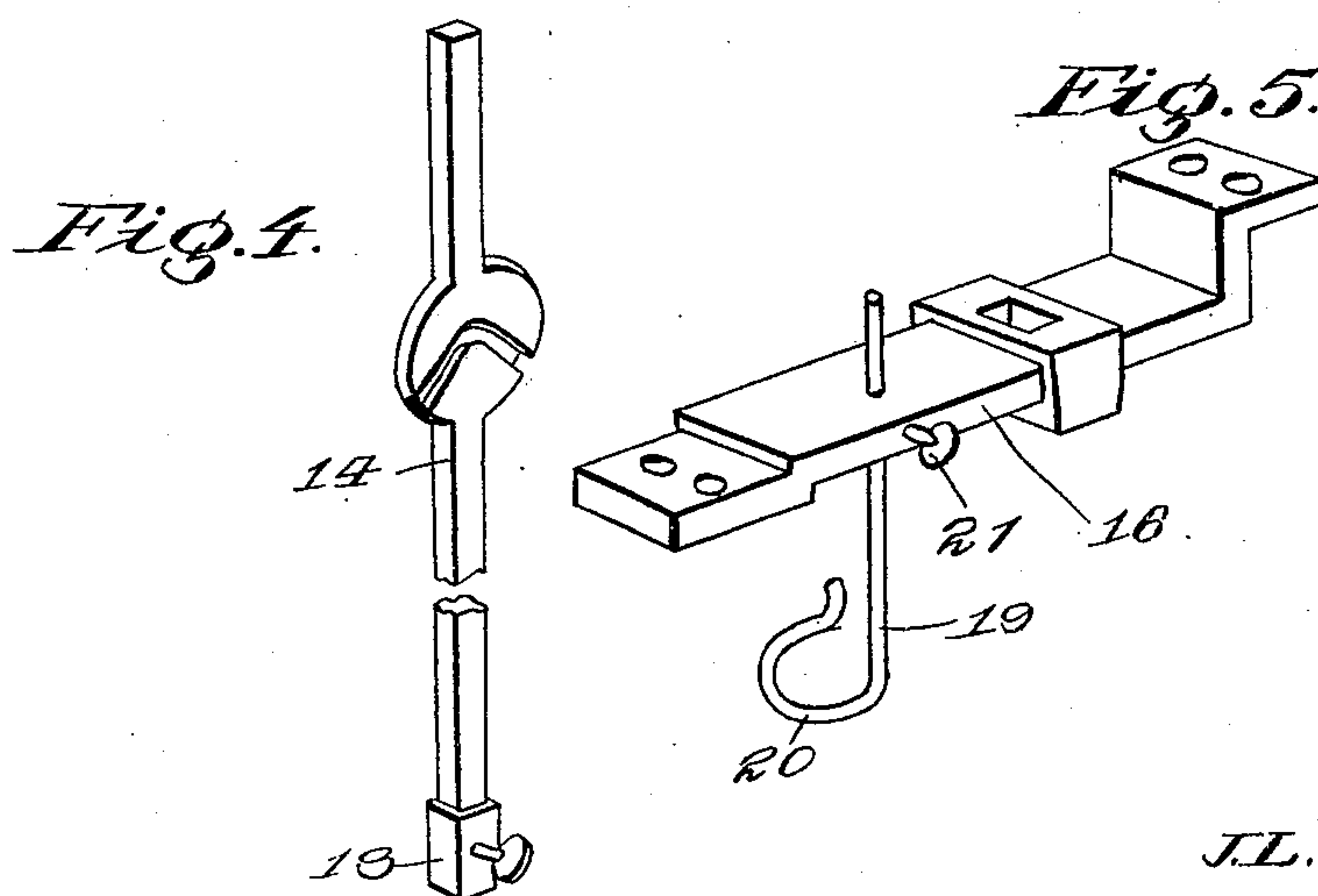
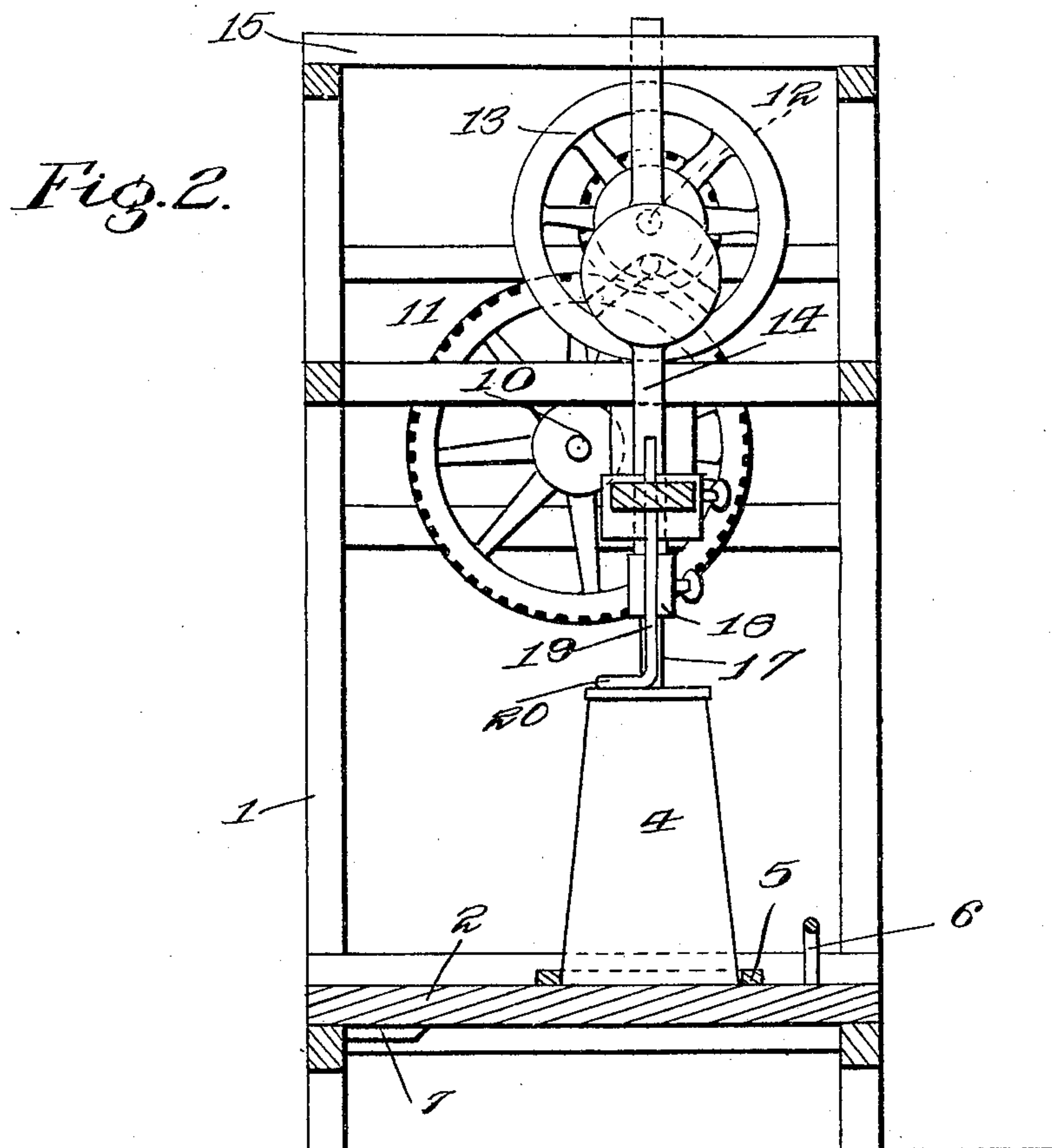
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOSEPH L. HOYLE, OF LETHA, NORTH CAROLINA.

CHURN-OPERATING MECHANISM.

No. 824,424.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed March 10, 1906. Serial No. 305,424.

To all whom it may concern:

Be it known that I, JOSEPH L. HOYLE, a citizen of the United States, residing at Letha, in the county of Franklin and State of North Carolina, have invented certain new and useful Improvements in Churn-Operating Mechanisms, of which the following is a specification.

This invention consists of novel means for operating churning mechanism, the main feature of the invention residing in the peculiar arrangement of the parts of the operating means, whereby the same is simplified and actuation thereof facilitated, there being other details of construction of advantage, as will appear more fully hereinafter.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of churning mechanism embodying the invention. Fig. 2 is a vertical sectional view. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of the pitman. Fig. 5 is a detail perspective view of the guide-bar.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out this invention it is contemplated to utilize a suitable stand or support comprising a plurality of uprights 1, said uprights being suitably connected and braced in order to afford a substantial structure. A removable base or bottom 2 is provided for the support 1, being slidable horizontally in the lower portion of the latter in suitable guides or ways 3. The movable base or bottom 2 is designed to support the churn 4 (shown in full lines) and may have a suitable seat 5 on its upper side to receive said churn and prevent the latter from moving after it has once been placed in position. The bottom 2 of the stand or support is adapted to be moved back and forth thereon by means of a handle 6, being prevented from displacement therefrom, however, by reason of the provision of stops 7, attached to the under side thereof. The stops 7 engage bars connecting the uprights 1 in order to limit the movement of the part 2. To positively lock the bottom 2 in position after the churn has been placed thereon and it has been moved

into the normal location of the support or stand, a suitable latch is provided in the form of a pivoted dog 8, one end of which is adapted to engage in a recess 9 in the upper side of the bottom 2 to prevent the latter from being moved outwardly when the churning mechanism is in operation. The dog 8 is gravity movable and may be readily manipulated, so as to release the bottom 2 whenever necessary.

The operating mechanism carried by the support or stand includes a horizontally-arranged drive-shaft 10, which is mounted in suitable supporting members on the uprights on the stand, said shaft being connected by a train of gears 11 to a second shaft 12, which carries a drive or crank wheel 13. A vertically-reciprocating pitman 14 is connected with the wrist-pin of the crank-wheel 13 and is guided in its vertical movement by passing through the top 15 of the stand and the horizontal guide-bar 16. The guide-bar 16 is located intermediate of the top and bottom of the stand and is attached to the members carried by the supporting-uprights of said stand. The opening in the guide-bar 16, through which the pitman 14 passes, is intermediate the ends of said bar. The churn-dasher rod 17 is detachable from the lower end of the pitman 14 by means of a set-screw adapted to engage the upper end of the dasher-rod and passing through an opening in a side of a socket 18, which is formed at the lower end of the pitman 14 to receive the upper extremity of said dasher-rod 17. The dasher mechanism may of course be of any suitable type, as well as the churn.

Carried by the guide-bar 16 and adjustably supported in a vertical opening therein is a cover-holding member 19, which consists of a vertical rod having a lateral arm 20 projecting from its lower extremity. The rod or member 19 is adapted to be adjusted by means of a set-screw 21, mounted on the bar 16, and the arm 20 is curved, so as to have a firm bearing against the top of the cover of the churn to hold the latter in position when the mechanism is in operation.

The drive-shaft 10 is preferably operated by a crank-handle 22; but it will of course be understood that any suitable motor may be employed for actuating said shaft.

Having thus described the invention, what is claimed as new is—

1. In operating mechanism for churns, the combination of a stand or support, dasher-op

erating mechanism arranged on said support, the support being provided at its lower portion with spaced guides, a bottom adapted to carry the churn and slidably mounted in the guides aforesaid, stops attached to the under side of the bottom and adapted to abut with the stand or support to limit the outward movement of the bottom, and a dog pivoted to the support or stand and arranged to engage a recess in the top of the bottom to prevent movement of the latter when so engaged.

2. In operating mechanism for churns, the combination of a stand or support, a horizontally-arranged guide-bar attached to the support, a pitman mounted for vertical movement on said guide-bar, a churn-cover-holding device consisting of a vertical rod mounted on the guide-bar, a set-screw applied to the guide-bar to hold the rod at a desired adjustment, and a curved arm at the lower end

of the rod to bear against the cover in the manner specified.

3. In operating mechanism for churns, the combination of a stand or support including a vertically-reciprocating pitman, means for actuating said pitman, a guide-bar for guiding the pitman in its movement, a cover-holding device for preventing displacement of the cover of the churn and comprising a vertical rod passing through the guide-bar, means for adjusting said rod, and an arm extending from the lower end of the rod to bear against the cover of the churn for the purpose specified.

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

JOSEPH L. HOYLE. [L. s.]

Witnesses:

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RAY BECKHAM.