(No Model.)

M. W. HUTCHINSON.

CHURN.

No. 584,549. Patented June 15, 1897.

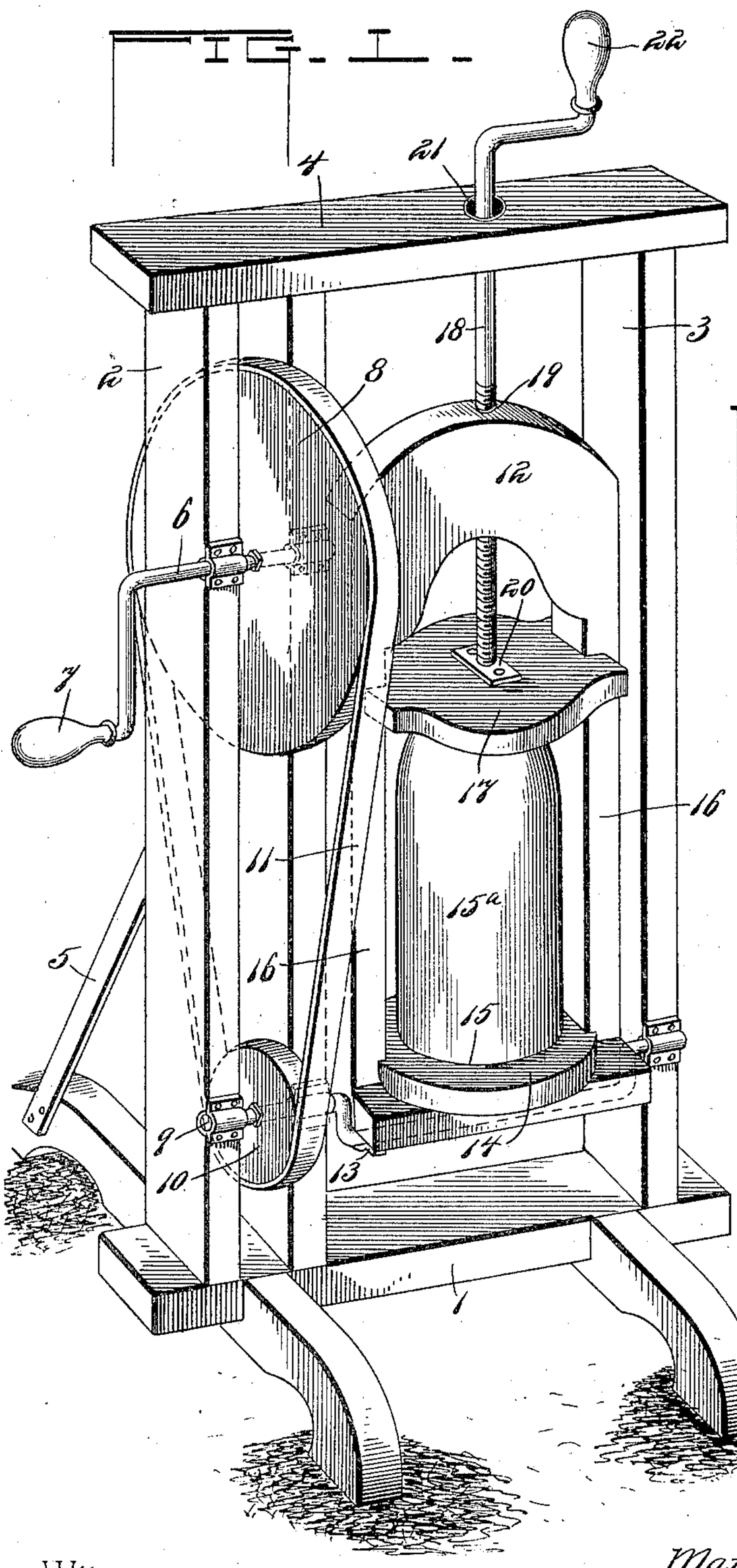
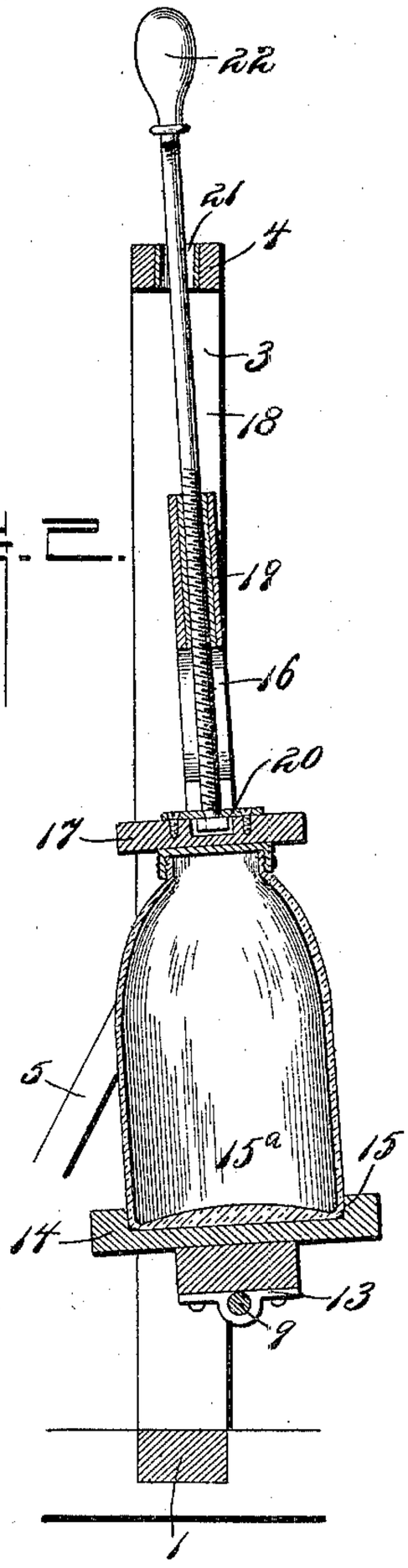


FIG. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MARIEN WALLACE HUTCHINSON, OF ADEL, GEORGIA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 584,549, dated June 15, 1897.

Application filed December 26, 1896. Serial No. 617,051. (No model.)

To all whom it may concern:

Be it known that I, MARIEN WALLACE HUTCHINSON, a citizen of the United States, residing at Adel, in the county of Berrien and State of Georgia, have invented a new and useful Churn, of which the following is a specification.

My invention relates to churns, and has for its object to simplify and improve the construction of devices of this class and provide means for securing a combined reciprocatory and oscillatory movement of the receptacle, and to provide simple and efficient means adapted to perform the dual function of guiding the receptacle carrier or holder and securing the receptacle in place thereon.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a churn constructed in accordance with my invention. Fig. 2 is a vertical transverse section of the same.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

The frame of the churn embodying my invention comprises a base 1, having side uprights 2 and 3, the upright 2 being preferably duplicated to form an intermediate parallel-sided space, and a cross-bar 4 connecting the upper ends of the uprights. Suitable braces 5 may be employed to insure steadiness of the uprights.

Mounted in suitable horizontally-alined bearings on the double upright 2 is a driving-shaft 6, having an operating crank or handle 7, carrying a driving-wheel 8, and operatively connected with this driving-wheel is a horizontal crank-shaft 9, mounted in alined bearings near the lower ends of the uprights. Any suitable means may be employed for communicating motion from the driving-wheel to the crank-shaft, such as a pulley 10 on the latter, connected by suitable gearing, as a belt 11, with the driving-wheel.

Arranged for reciprocatory and vibratory movement within the supporting-frame is a receptacle carrier or holder 12, mounted at its lower end, which is provided with suitable bearings 13 upon the offset portion of the crank-shaft 9, and having a platform 14, with a central depression for the reception of the bottom of the churn-receptacle 15. The carrier or holder is preferably provided with parallel sides 16, forming guides between which the receptacle is seated, and terminally mounted upon these guides for vertical movement independently of the carrier or holder is a follower 17, adapted to bear upon the top of the churn-receptacle and hold the latter in its seat on the platform. The means illustrated in the drawings for operating this follower consists of a feed-screw 18, threaded in a countersunk nut 19 in the upper end of the carrier or holder and swiveled at its lower end in a socket-plate 20 in the upper side of the follower. It is my object, however, to arrange this feed-screw to perform the additional function of guiding the upper end of the receptacle carrier or holder and thus dispense with auxiliary means for this purpose, and hence the feed-screw is arranged centrally and vertically of the carrier and is extended through a guide-opening 21 in the cross-bar 4. The upper end of this combined feed-screw and guide-rod may be fitted with a crank or handle 22, as illustrated, or with any other equivalent means, whereby rotary motion may be imparted thereto to accomplish the adjustment of the follower after the receptacle has been seated upon the platform.

From the above description it will be seen that in addition to a reciprocatory movement the receptacle carrier or holder receives a lateral or vibratory movement by reason of the direct connection or mounting of the lower end of the carrier upon the offset portion of the crank-shaft, the upper end of the carrier being, however, guided to receive only a linear or reciprocatory movement. Thus the lower end of the carrier or holder, contiguous to which the receptacle is arranged, is the point of application of motion and has an approximately rotary movement regulated in throw by the movement of offset of the crank-arm.

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

Having described my invention, what I claim is—

1. In a churn, the combination with a supporting-frame, a crank-shaft mounted therein, and means for communicating rotary motion to the crank-shaft, of a receptacle carrier or holder guided for linear movement at one end and fulcrumed at the other end upon the offset portion of the crank-shaft, whereby a combined reciprocatory and oscillatory movement is imparted to the carrier, substantially as specified.

2. In a churn, the combination with a supporting-frame, a crank-shaft and means for operating the same, of a receptacle carrier or holder mounted at one end upon the offset portion of the crank-shaft to receive rotary motion therefrom, and a guide-rod arranged at the other end of the carrier and fitted in a guide-opening for reciprocatory and vibratory movement, whereby the carrier receives a combined reciprocatory and vibratory movement, substantially as specified.

3. In a churn, the combination with a supporting-frame, a crank-shaft, and means for communicating rotary motion to the crank-shaft, of a receptacle carrier or holder mounted at one end upon the offset portion of the crank-shaft, a follower mounted upon the carrier to engage and hold a receptacle seated on the platform of the carrier, and a feed-screw connected with the follower to communicate motion thereto and hold the same at the desired adjustment, said feed-screw being extended longitudinally through a fixed guide-opening in the supporting-frame, and capable of a reciprocatory and vibratory movement therein substantially as specified.

4. In a churn, the combination with a supporting-frame having a cross-bar, of a crank-shaft mounted parallel with said cross-bar, means for communicating rotary motion to the crank-shaft, a receptacle carrier or holder mounted at one end directly upon the offset portion of the crank-shaft to receive rotary motion therefrom, a follower mounted on the carrier, and a feed-screw mounted upon the carrier and connected with the follower whereby the latter may be adjusted to engage and hold a churn-receptacle seated in the carrier, the feed-screw being extended at the opposite end of the carrier from the crank-shaft through a guide-opening in said cross-bar in which it fits loosely, whereby the carrier is guided at one end for linear movement and receives rotary movement at the other end, substantially as specified.

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

MARIEN WALLACE HUTCHINSON.

Witnesses:

L. F. SINEATH,

L. G. MCKINNY.