No. 780,588. PATENTED JAN. 24, 1905.

J. WALBER.

CHURN OPERATING MECHANISM.

APPLICATION FILED NOV. 2, 1904.

FIG. 1.

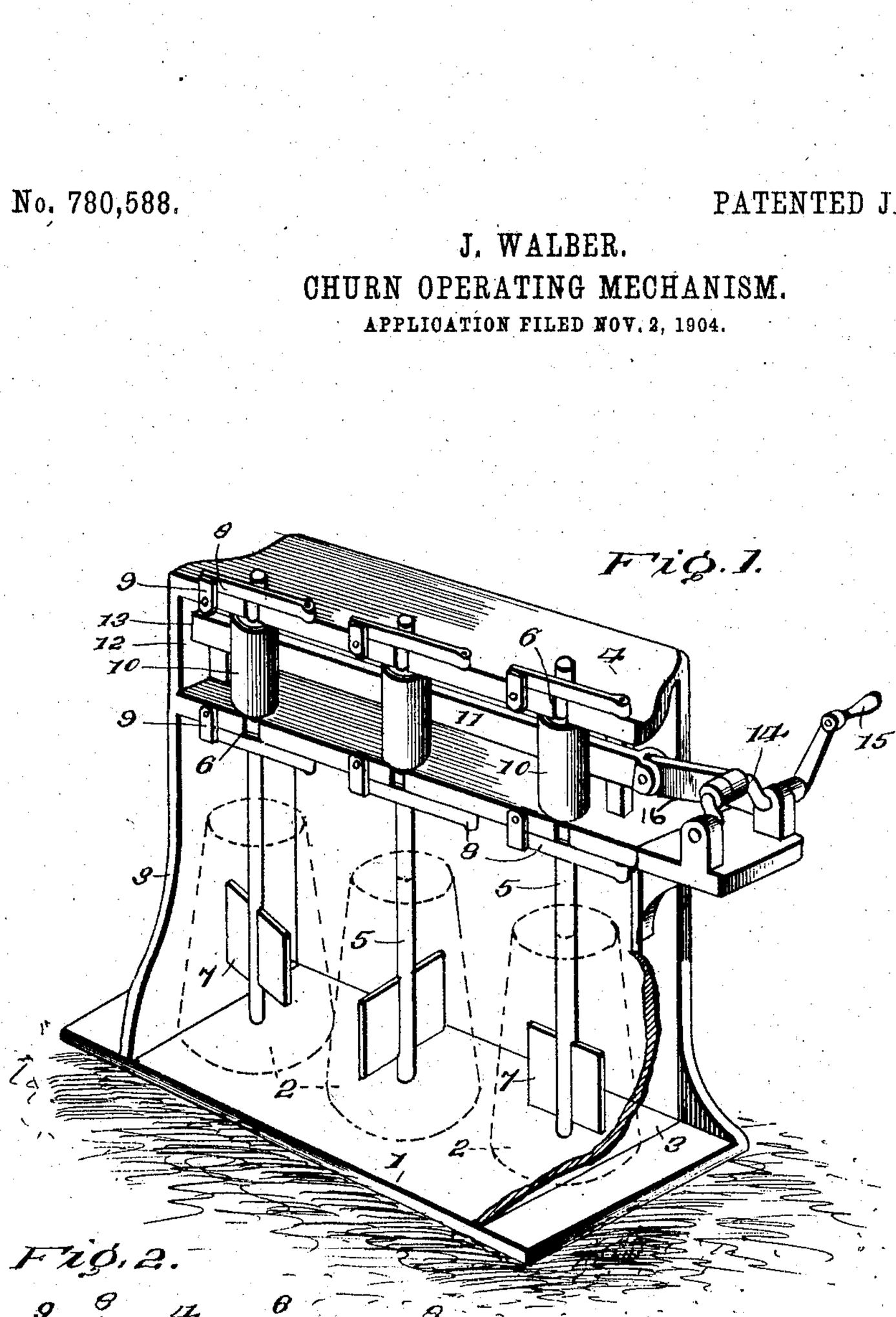


FIG. 2.

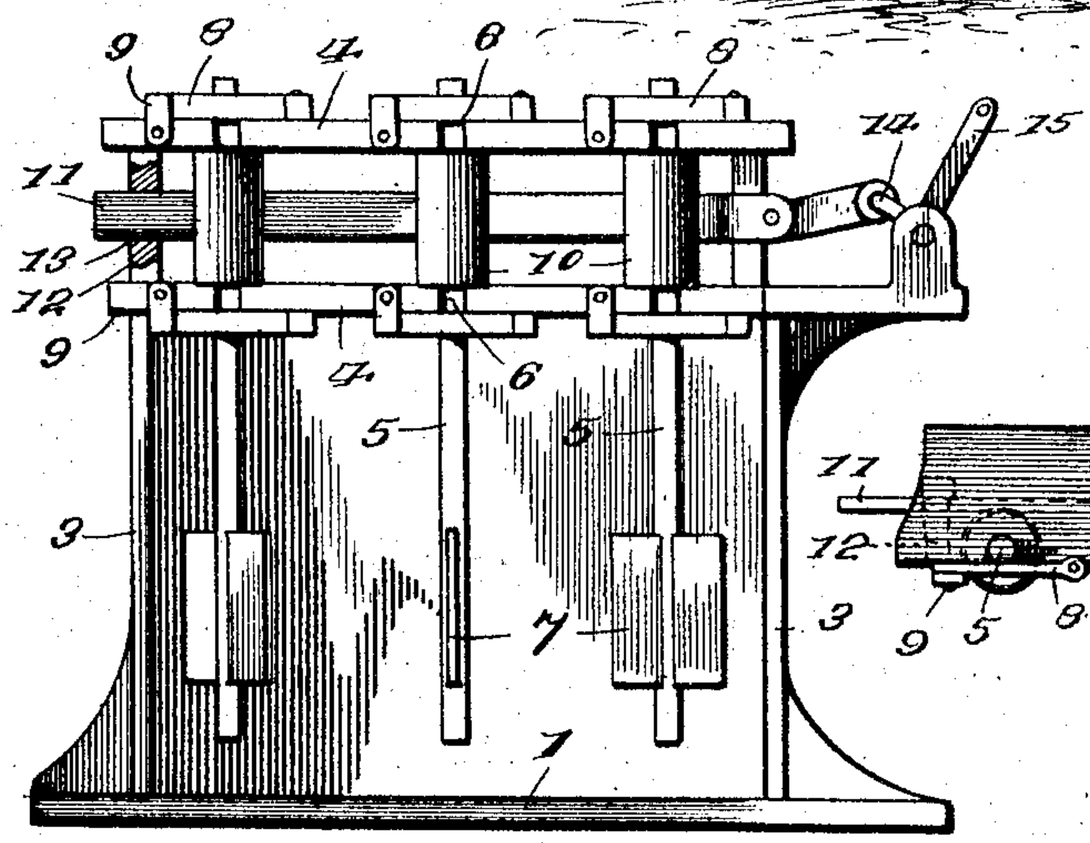
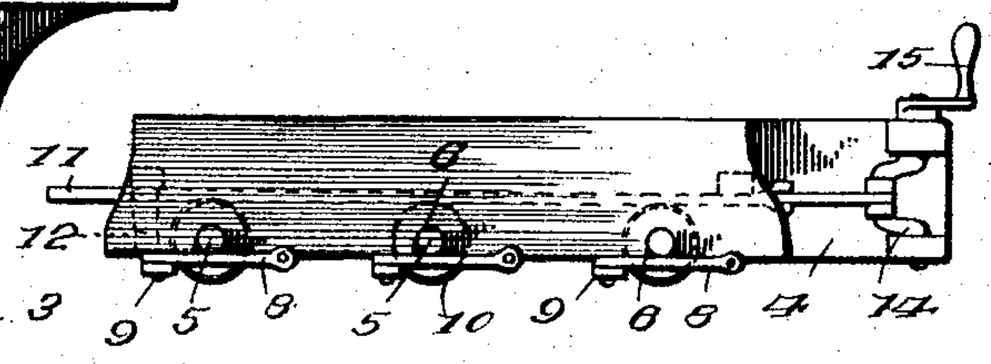


FIG. 3.



Witnesses

H. F. Woodson

Inventor

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By Richard B. Lacey, Attorneys

No. 780,588. Patented January 24, 1905.

UNITED STATES PATENT OFFICE.

JAMES WALBER, OF VINELAND, NEW JERSEY, ASSIGNOR OF THREE-FOURTHS TO DAVID D. LUCAS, OF VINELAND, NEW JERSEY.

CHURN-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 780,588, dated January 24, 1905.

Application filed November 2, 1904. Serial No. 231,114.

To all whom it may concern:

Be it known that I, JAMES WALBER, a citizen of the United States, residing at Vineland, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Churn-Operating Mechanism, of which the following is a specification.

This invention comprises improvements in operating mechanism for churns, and is especially designed for use in operating a gang of churns, being herein described and shown applied in this manner.

The main object of the invention is to produce a mechanism of the above type embodying a maximum simplicity, whereby the device may be cheaply constructed.

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.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the application of the invention in actual use. Fig. 2 is a front elevation of the mechanism. Fig. 3 is a top plan view showing more clearly the relative arrangement of the parts.

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 the invention a suitable frame or support is provided, the same comprising, essentially, a base 1, upon which the churns 2 (shown in dotted lines) are disposed, sides 3, and upper and lower transverse plates 4, in which the dasher-stem 5 of each churn 2 is mounted. The plates 4 extend transversely between the sides 3 of the support, and these plates are provided with vertical bearings 6, formed by notching or cutting away the outer edge portions thereof, the dasher-stems 5 being mounted in said bearings 6 and adapted for rotary movement in actuating the dashers 7. The dashers 7 may be of any type suitable for the purposes of the invention. The dasher-stems 5 are each held in proper position in the bearings 6 by means of flat springs 8, secured at one end to the plates 4, the other end being free, but adapted to be engaged by catches 9 in order that the said springs may be held against the portions of the stems 5 adjacent the bearings. The pressure of the springs 8 when same are engaged by the catches 9 is sufficient to maintain the dasher-stems in their bearings 6, the dasher 7, however, being readily removable by disengaging the catches 9 from the springs with which they coöperate, this operation releasing the stems 5, so that same may be quickly displaced. Two springs 8 are provided for each stem, one spring being secured upon the upper plate and the other spring below the lower plate 4. A rubber sleeve 10 or the like is carried by each stem 5 of the several dashers 7, and this sleeve is fitted about its respective stem at a point between the plates 4. The springs 8 not only perform the function above described, but the pressure of these springs is also utilized to hold the stems 5 in a position in which they may be readily actuated by a reciprocating bar 11, mounted in one of the sides 3, and the vertical plate 12, situated between the horizontal plates 4 and adjacent the other side 3. The side 3 of the support and the plate 12, in which the horizontal bar 11 is mounted, are cut away or recessed, as shown at 13, so as to receive said bar 11, the latter passing in rear of the stems 5 and freely adapted for reciprocation in such position. The springs 8, engaging the stems 5, serve to hold the sleeves 10 in frictional contact with the bar 11, thereby insuring full movement of the stems in actuating the dashers carried thereby. The bar 11 is reciprocated by a crank-shaft 14, provided with a handle 15, which may be readily turned by the operator, said crank-shaft 14 being connected with one end of the bar 11 by a pitman 16. The crank-shaft 14 is mounted in suitable bearings upon one of the sides 3, as shown most clearly in Fig. 2 of the drawings.

From the foregoing it will be noted that the various parts of the invention and arrangement thereof are exceedingly simple, and the device may be operated readily by a person having average intelligence. The actuation of the handle 15 will impart a reciprocal movement to the bar 11, and said bar being in frictional contact with the sleeves 10 of the stems 5 will impart a vibratory movement to said stems in a manner clearly seen. To remove or replace a dasher, it is only necessary to disengage the catches 9 from the spring with which they coöperate, said catches being pivoted centrally thereof, so as to be readily turned down out of the way of the springs.

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

In churn-operating mechanism, the combination of a support comprising a base, sides, upper and lower plates between the sides and provided with bearings, a series of dashers, stems extended from the dashers and mounted in the bearings of the plates aforesaid, a vertical plate adjacent one of the sides of the support, a horizontal bar mounted in said vertical plate and the remote side of the support, said bar passing in rear of the dasher-stems and adapted for reciprocal movement, a crank-shaft, a pitman connecting the crank with the horizontal bar aforesaid, friction-sleeves mounted upon the dasher-stems between the upper and lower plates, flat springs secured to the upper and lower plates at one end and bearing against the dasher-stems at a point between their ends to hold said dasher-stems in position and the friction-sleeves thereof in contact with the horizontal reciprocatory bearings, and catches engaging the springs aforesaid for the purpose specified.

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

JAMES WALBER. [L. S.]

Witnesses:
H. LEWIS,
ROY S. LEWIS.