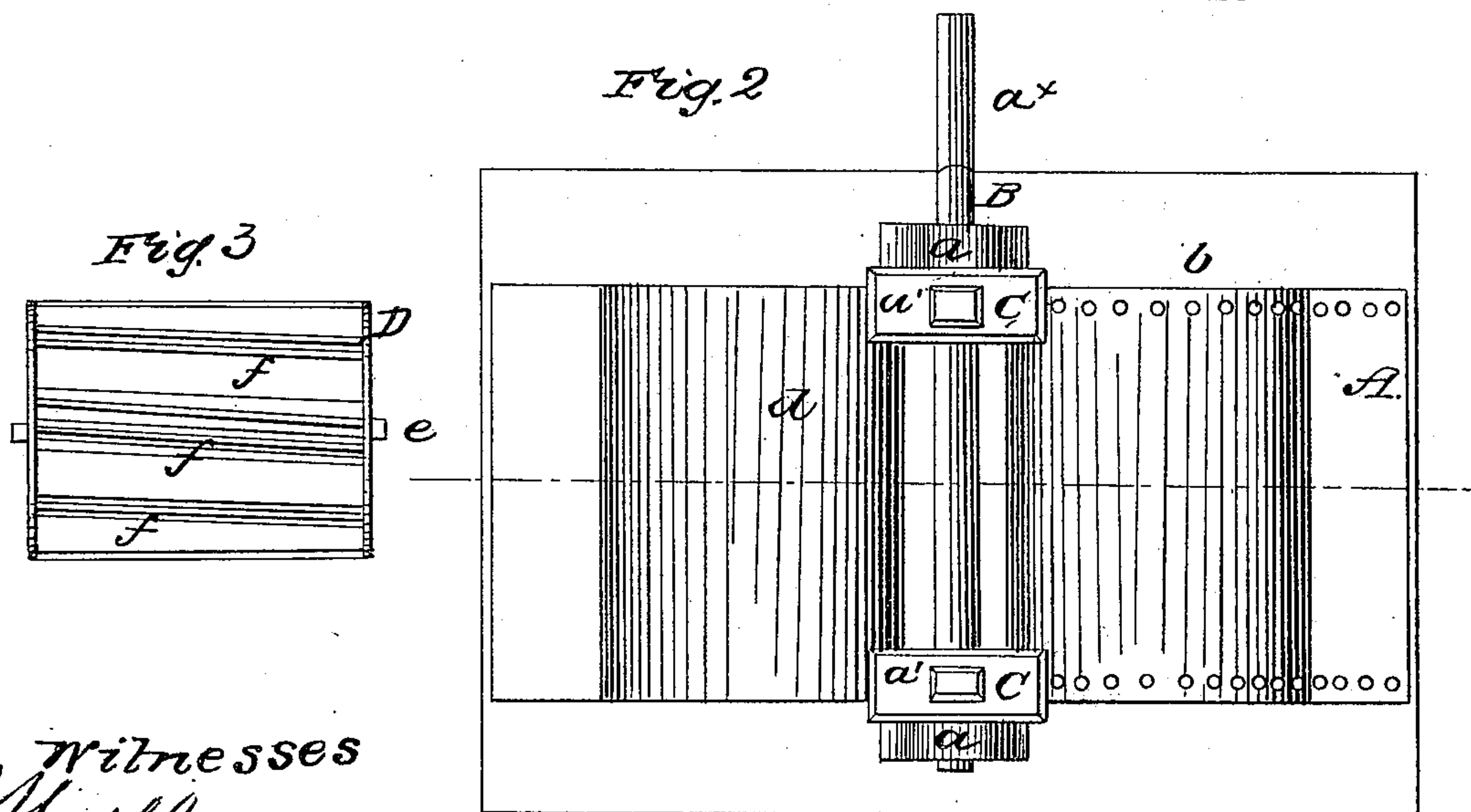
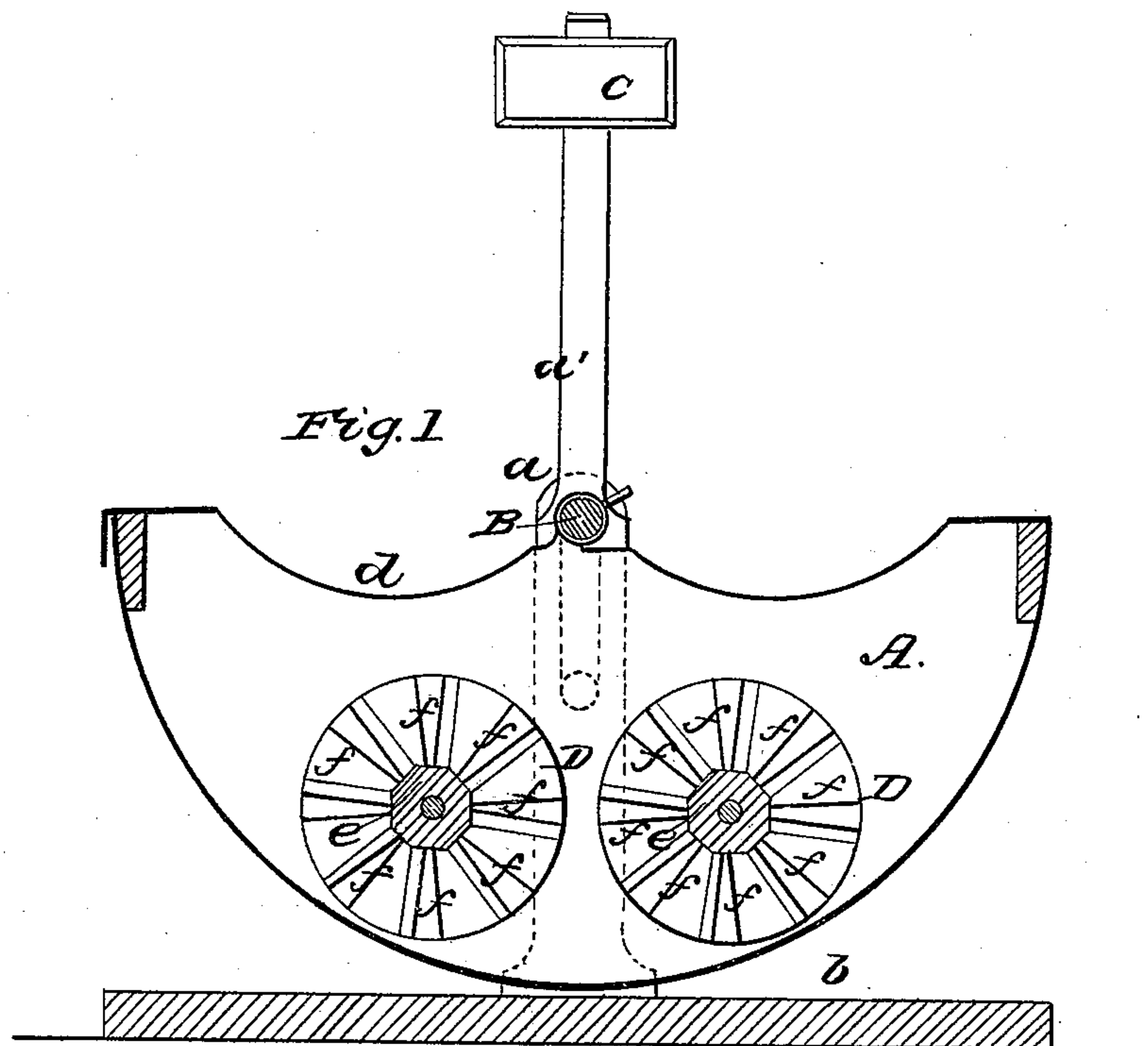


E. CHIPMAN.

Churn.

No. 41,193.

Patented Jan. 12, 1864.



Witnesses
Wm. B. Douglas
Geo. W. Reed

Inventor
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UNITED STATES PATENT OFFICE.

EDGAR CHIPMAN, OF NEW YORK, N. Y.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 41,193, dated January 12, 1864.

To all whom it may concern:

Be it known that I, EDGAR CHIPMAN, of the city, county, and State of New York, have invented a new and Improved Churn; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, a detached view of one of the agitators.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in the employment or use of a rocking or oscillating cream-box, provided with weights or counterpoises, and also provided with rotating agitators, having cells or chambers, all arranged to operate as hereinafter fully set forth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a cream-box of cylindrical or semi-cylindrical form, the latter shape being preferable. This cream-box is suspended by a shaft, B, between two uprights, *a a*, the shaft B being allowed to work or turn freely in the uprights. The uprights *a a* are attached to a suitable base, *b*, and at each side of the box A there is an upright arm, *a'*, having upon it an adjustable or sliding weight, C. These weights may be retained in position by friction only, or any suitable catches or fastenings may be employed. The top of the cream-box is provided with a lid, *d*, and the bottom of said box is the curved part. The box may be constructed of either wood or metal. The most preferable mode of construction would probably be to have the sides of wood and the bottom of sheet metal—zinc. The top and lid may also be of zinc. Within the cream-box A there are placed one or more agitators, D. Two are shown in Fig. 1, and this number will probably be used. These agitators are each constructed by attaching to a shaft, *e*, a series of chambers, *f*, which may be of sheet metal, bent or swaged so as to be of V form in their transverse section, and of such a length as to extend the whole

length of the shaft, as shown in Fig. 3. These chambers are attached obliquely to the shafts *e*, and at equal distances apart, and are open at their outer ends. The journals of the shafts *e* are allowed to turn freely in their bearings, and the lower parts of the agitators are within a short distance of the bottom of the churn, as shown clearly in Fig. 1, the agitators being placed transversely in the cream-box parallel with each other, and at equal distances from opposite sides of a vertical plane passing transversely through its center.

The operation is as follows: The box A is supplied with a requisite quantity of cream, and the weights C are raised or lowered on the arms *a'*, so as to counterpoise the box A and its contents. The shaft B is then turned, first in one direction and then in the other, by means of a crank, *a^x*, and an oscillating motion thereby given the cream-box, the cream within the box A being thereby agitated or moved back and forth, the agitation being greatly increased by the agitators D, which are turned by the action of the cream itself.

The agitators D perform two functions—to wit, they increase the agitation of the cream and they also, as they turn, force atmospheric air into the cream, the chambers *f*, as well as the spaces between them, being air-chambers, which, as they turn down into the cream, force the air into it, the upper ends of the shafts *e* being above the surface of the cream. The oblique portion of the chambers *f* have a tendency to give a lateral movement in the box, and thereby increase its agitation in a certain degree.

The box A, instead of being suspended on a shaft, B, may be fitted on rockers and the same end attained.

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

The agitators D, (one or more,) constructed of chambers *f*, attached to shafts *e*, in combination with the oscillating or rocking cream-box A, substantially as herein specified.

EDGAR CHIPMAN.

Witnesses:

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