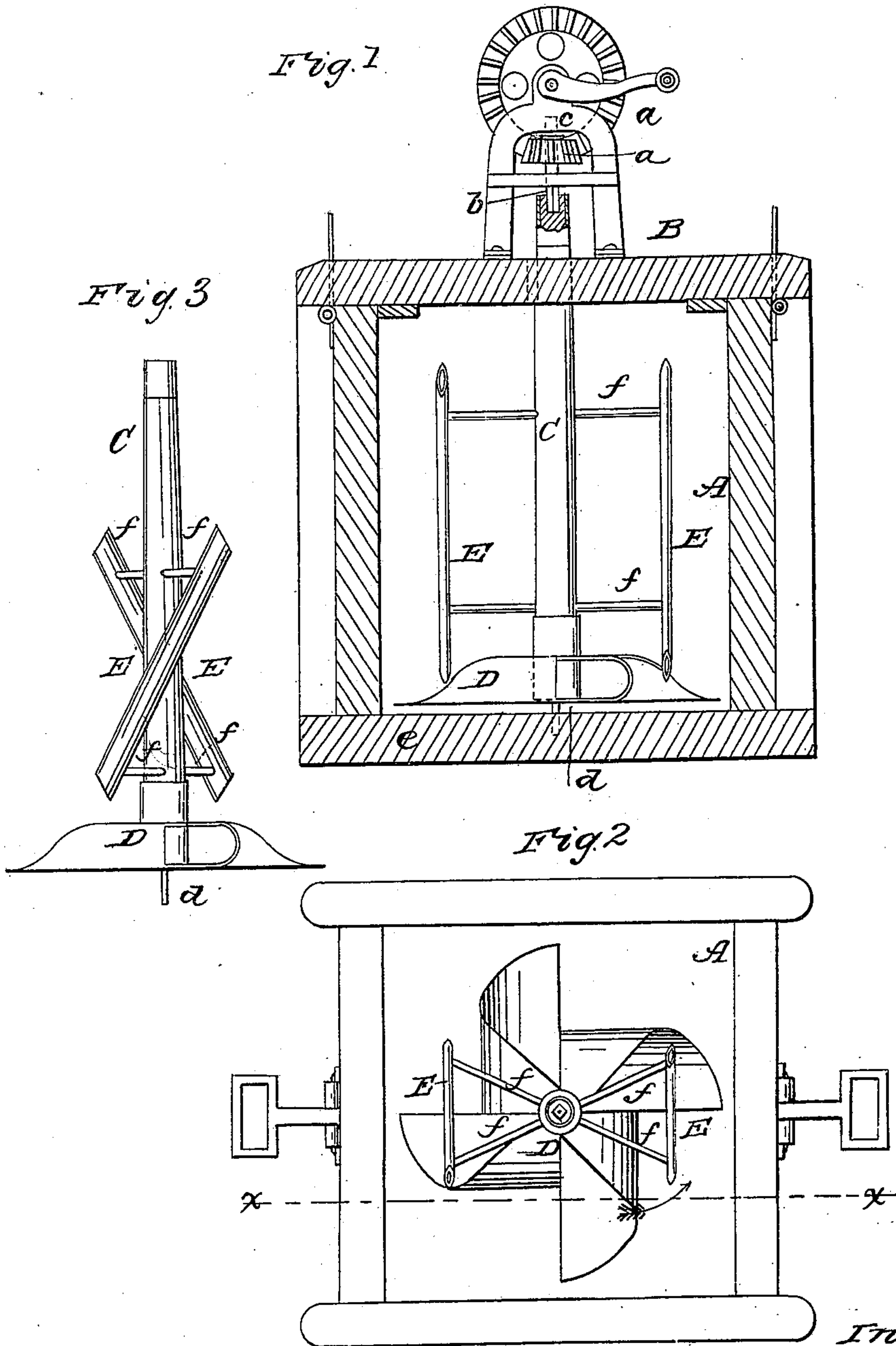


S. F. EMERSON.

Churn.

No. 38,891.

Patented June 16, 1863.



witnesses
J. W. Coombs
Charles A. Fisher

Inventor
S. F. Emerson
by Milton L. Catlin

UNITED STATES PATENT OFFICE.

S. F. EMERSON, OF SEVILLE, OHIO.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 38,891, dated June 16, 1863.

To all whom it may concern:

Be it known that I, S. F. EMERSON, of Seville, in the county of Medina and State of Ohio, 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 sectional elevation of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same with the cover removed; Fig. 3, a detached elevation of the dasher-shaft and parts connected therewith.

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

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

A represents the body of a churn, which may be of any desired form, and provided with a suitable cover, B.

C is a shaft, which is placed centrally and vertically in the body A of the churn, and is rotated by gearing *a* on the cover B, a square, *b*, on the axis *c* of one of the gears being fitted in the upper end of the shaft C, as shown clearly in Fig. 1. The lower end of the shaft is provided with a proper journal, *d*, which is stepped at the center of the bottom *e* of the body of the churn. On the lower part of the shaft C the dasher D is fitted. This dasher is constructed of sheet metal, a square piece of metal of suitable dimensions being cut at each corner radially toward the center, and then bent over toward the center, the shaft C passing centrally through the metal plate, and the ends which are bent over being attached to the shaft at a little distance above the lower part of the plate. A dasher constructed in

this manner works very efficiently, and has been thoroughly tested. It was formerly patented by me in connection with stationary air-tubes, the Letters Patent bearing date April 2, 1850.

E E represent two tubes, which are of oval form in their transverse section, and are connected to the shaft C by horizontal arms *f*, the tubes E being at some distance from the shaft, as shown in Fig. 1. These tubes E E extend upward a considerable distance nearly to the top of the body A of the churn, and they are inclined, as shown clearly in Fig. 3, the lower ends being cut so as to have an inclined position reverse to that of the tubes. As the shaft C is rotated in the direction indicated by the arrow, Fig. 2, a partial vacuum is produced within the tubes E, and air is forced down through the tubes into the cream; and said tubes also serve as beaters and greatly expedite the breaking or rupturing of the butter globules or molecules. The dasher performs its usual function, and has been proven as operating more efficiently than the ordinary dashers in use. It is greatly aided in its work by the tubes E.

I do not claim separately the dasher D, for that has been previously used, as formerly alluded to, nor do I claim, broadly, the employment of inclined tubes with churn-dashers; but

I do claim as new and desire to secure by Letters Patent—

The combination of the tubes E E with the dasher D, in the manner and for the purpose herein shown and described.

S. F. EMERSON.

Witnesses:

JOSEPH ROSS,
D. A. BENNETT.