

J. C. GASTON.

Churn.

No. 63,791.

Patented April 16, 1867.

Fig. 1

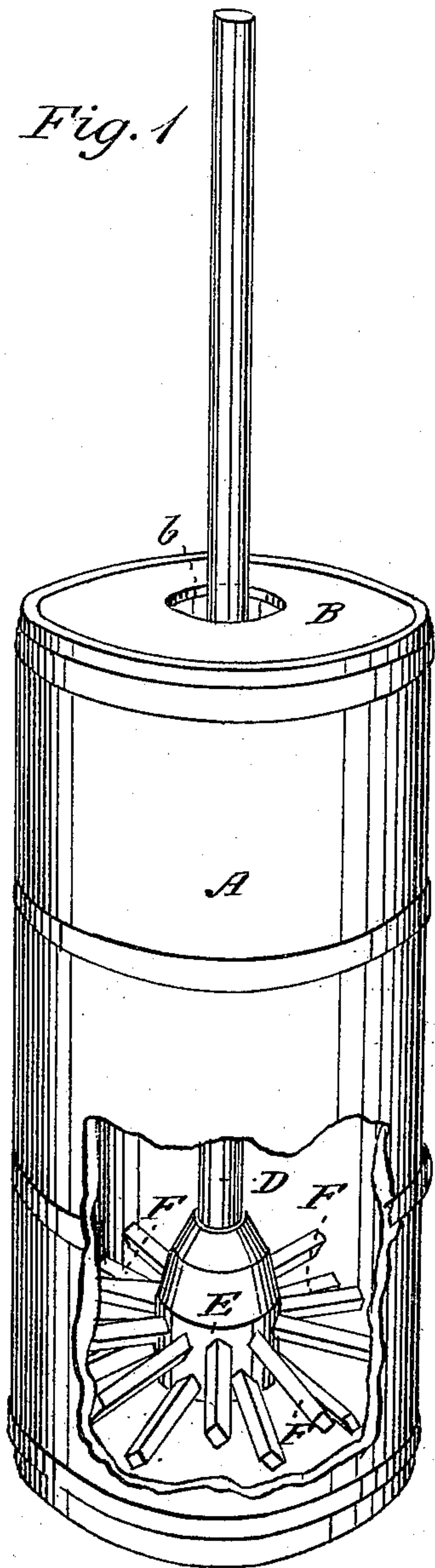


Fig. 3

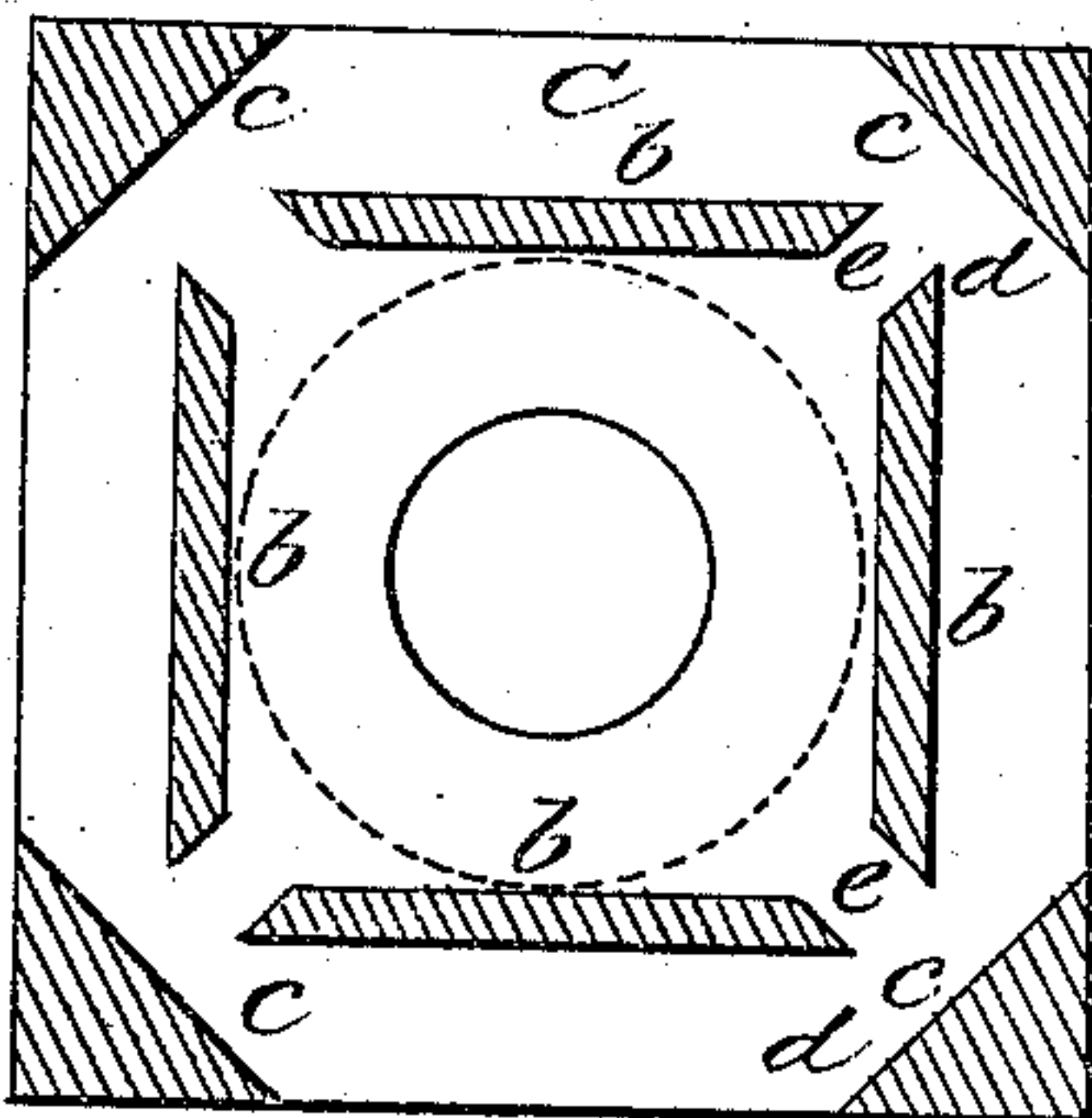
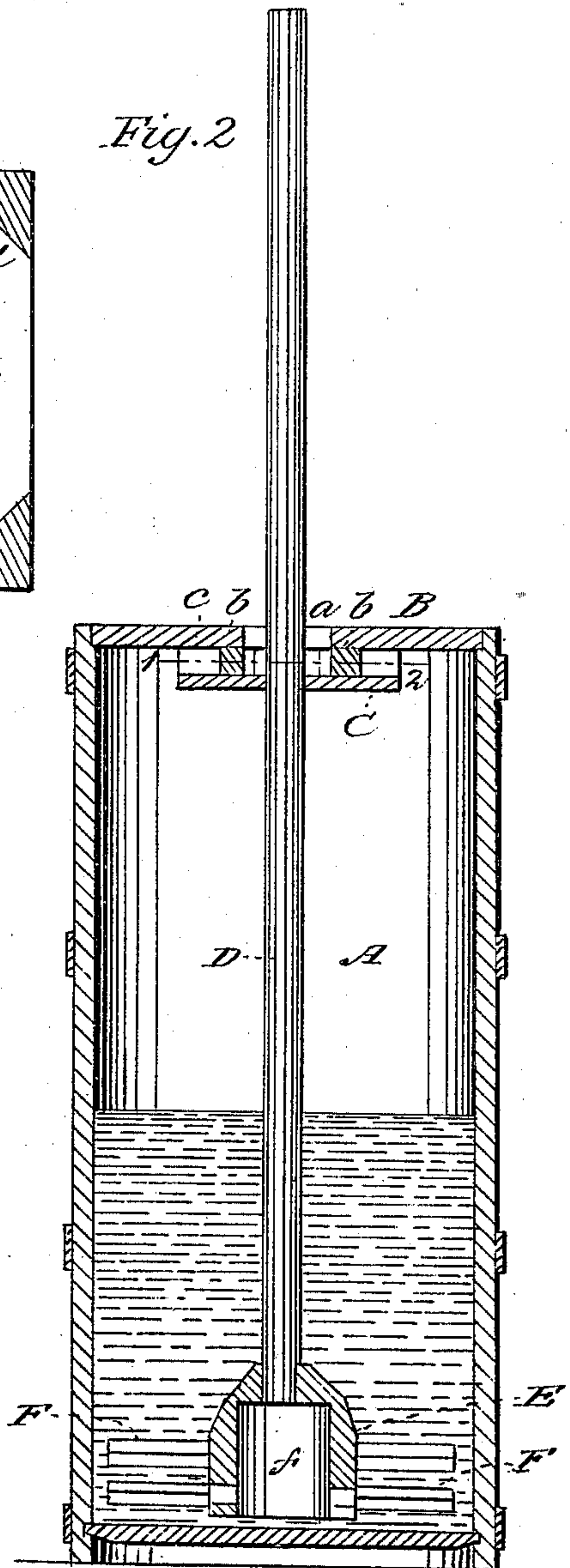


Fig. 2



Witnesses:  
C. L. Fisher  
George Kerr Jr.

Inventor:  
J. C. Gaston

# United States Patent Office.

J. C. GASTON, OF CINCINNATI, OHIO.

Letters Patent No. 63,791, dated April 16, 1867.

## IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. C. GASTON, of Cincinnati, Hamilton county, and State of Ohio, have invented a new and useful Improvement in Churns, of which the following is a full and clear description reference being had to the accompanying drawings, making part of this specification.

My invention relates to the dasher, which is an inverted cup, provided externally with a series of radiating arms, and also to a "guard-plate" secured a short distance beneath the lid of the churn to pendants attached to the lid, the pendants being so arranged as to permit the free access of air through the enlarged central opening in the lid of the churn to the interior, and at the same time prevent the splashing out of the milk during the operation of churning.

Figure 1 is a perspective view of my improved churn, having a section broken out to show the dasher.

Figure 2 is a longitudinal section of the churn.

Figure 3 is a transverse section of the pendants, and plan of the "guard-plate" attached to them, the section being taken in the plane of line 1-2 in fig. 2.

A is the barrel of the churn, which is provided with the lid B, having a central perforation, *a*, greater in diameter than the dasher handle which passes through it; *b* are pendants secured to the under or inner side of the lid B; as represented they are four in number, at right angles to each other, tangent to the edge of the perforations *a* in the lid B, and have their ends chamfered off, leaving spaces *e* between them. The guard-plate C is made fast to the pendants *b* and blocks *c*, making quite a space between the guard-plate C and the lid B. The blocks *c* present plane surfaces opposite the spaces *e*. The blocks prevent any considerable quantity of milk from passing through or into the spaces *d*, and thence between the chamfered ends of the pendants *b*, and out through the perforation *a* in the lid B of the churn. E is the hub of the dasher secured to the handle D. It is cylindrical in form, and is provided with two series of arms F, square in cross-section, and secured to the lower half of the hub E of the dasher. The upper series of arms F are over the spaces between the lower series of arms, and the opposite angles of each arm of either series are respectively vertical and horizontal. All the parts of the churn constructed as above described may be made of wood or metal; the former material has the preference, since it may be wrought with greater facility and economy. The mode of churning is the same in the churn having my improvements attached as in the ordinary vertical barrel churn. When the operator depresses the dasher, forcing it into the body of the milk, an amount of air, which fills the cavity *f* in the hub E of the dasher, is taken down and is caused to commingle with the milk when a quick reciprocating motion is given to the dasher. The upper and lower face of each arm in one series of arms F will cause a deflection in the upward or downward motion of the dasher of the milk, causing it to impinge abruptly upon the series of arms immediately over or beneath the first series, according to the direction of the motion of the dasher, in this manner destroying the globules or sacks containing the particles of butter. When the milk is rapidly agitated the splashing is prevented an exit through the perforation *a*, in the lid B, by the guard-plate C, and pendants *b*, between the ends of which, through the spaces *e*, fresh air is constantly finding access to the churn. When the dasher is raised above the body of the milk a fresh supply of air is admitted to the cavity *f* in the hub E of the dasher, and is taken down into and caused to permeate the milk, in this manner constantly giving the necessary supply of fresh air to the milk, which facilitates the collection of butter.

What I claim as new, and desire to secure by Letters Patent, is—

1. In the dasher, the inverted cup-shaped hub E, the cavity *f* being cylindrical, and two or more series of radial arms F, secured to the exterior of the hub E, all constructed substantially as above described and for the purpose specified.

2. In combination with the lid B, which has the enlarged central perforation *a*, the guard-plate C, pendants *b*, and blocks *c*, arranged substantially as and for the purpose above described and set forth.

Witnesses:

C. L. FISHER,

GEORGE KERR, Jr.

J. C. GASTON.