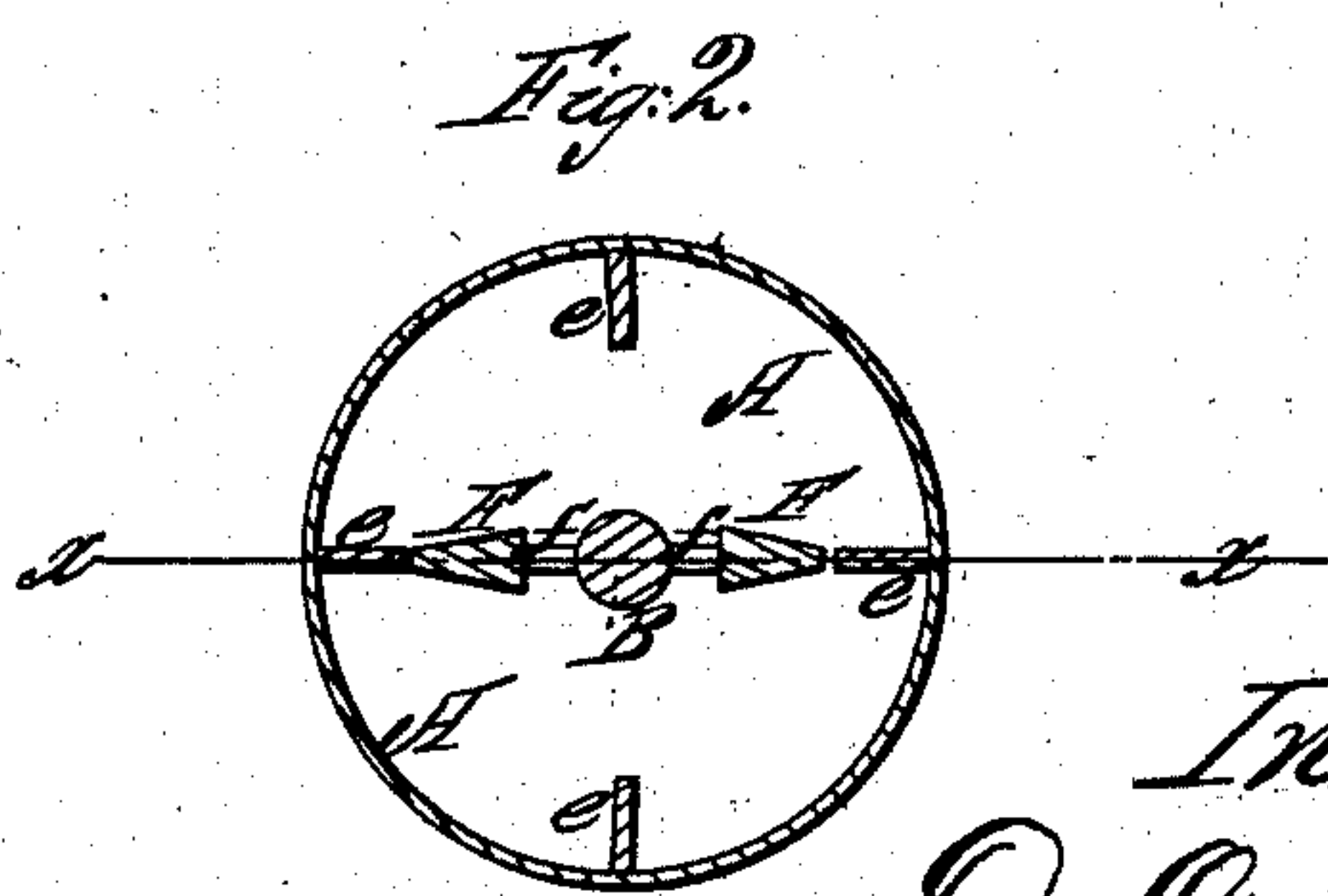
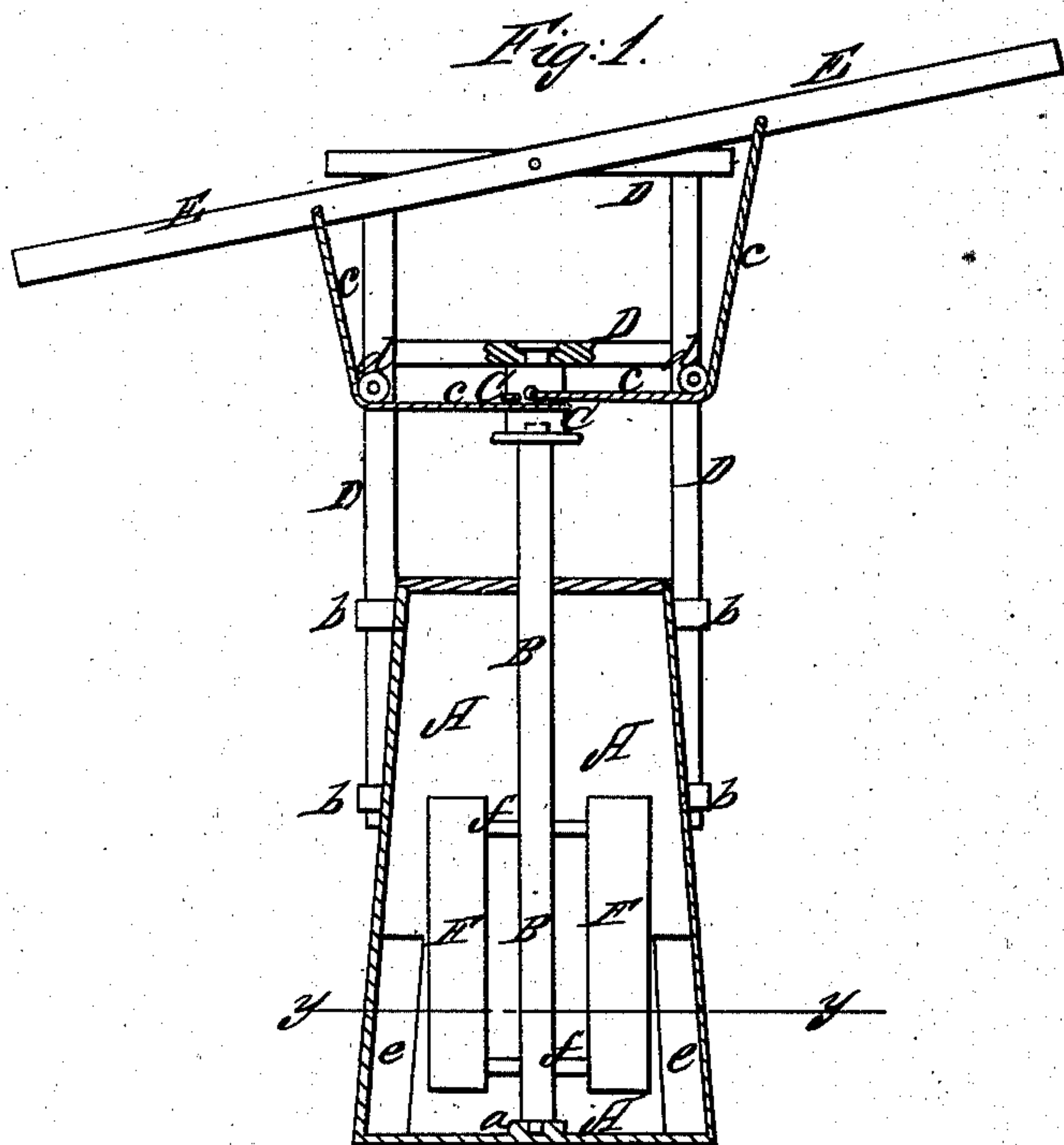


D. O. Blair,

Churn.

No. 62,179.

Patented Feb. 19. 1867.



Witnesses:

F. A. Jackson
Wm. Brown

Inventor:

D. O. Blair
Per *Wm. Brown*
Attorneys.

United States Patent Office.

DAVID O. BLAIR, OF ABINGDON, ILLINOIS.

Letters Patent No. 62,179, dated February 19, 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, DAVID O. BLAIR, of Abingdon, in the county of Knox, State of Illinois, have invented a new and improved Churn; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a vertical cross-section of the same, taken on a plane indicated by the line *x x*, fig. 2.

Figure 2 is a horizontal section taken on a plane indicated by the line *y y*, fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a churn of that class in which the dasher is attached to a vertical shaft, and receives a reciprocating rotary motion by certain devices arranged above the cover of the churn. And my improvement consists, first, in the construction of those parts by which the dasher-shaft is revolved, by which the churn is operated in an easy and efficient manner; and which parts are furthermore so arranged that a slower or faster motion can be imparted to the dasher-shaft without changing in the least the motion of the lever by which the whole is operated; second, my improvement consists in the construction and shape of the vertical dashers, which are so arranged that the cream is thrown vehemently against the sides of the churn, thus insuring a thorough and speedy breaking of the cream.

A represents a common churn, made either of wood or metal, as may be desired. The dasher-shaft B fits into a step, *a*, at the bottom of the churn, while the squared upper end of the said shaft fits into the socket-drum C, fig. 1. The drum C hangs on the frame D, which is attached to the churn by means of loops *b*, as seen. A rope, *c*, is attached to the drum C, and, after winding around the drum, both ends of the rope are passed over pulleys *d*, and then secured to the lever E, the latter being pivoted to the frame D, as seen. By pressing down one end of the lever E, the opposite end is raised, whereby one end of the rope is pulled from the drum, thereby causing the latter to revolve, as the rope unwinds from it, while the other end of the rope is wound around the drum, so as to revolve the same in an opposite direction as soon as the position of the lever is changed. By this arrangement a reciprocating rotary motion is imparted to the dasher-shaft by a very simple and efficient device. It is extremely easy to work this lever, as one hand may pull one end of the lever up, while the weight of the body may be used to push it down again, thereby saving just one-half the power usually needed for the purpose, and thus enabling children and weak persons to operate this churn without very great exertion. It is obvious that the velocity of the dasher-shaft may be increased or decreased by using, respectively, a smaller or larger drum. The dashers F, of which any desired number may be attached to the shaft B, are secured to the latter by means of pins or rods *f*, as seen; and they are bevelled towards their outer ends, as seen in fig. 2, so as to cut their way through the cream with greater ease, and to throw the cream against the sides of the churn at an angle which approaches nearer to a right angle than it would if the dashers were not bevelled off. The speedy breaking of the cream is also aided by the application of the breakers *e*, which are attached to the inside of the churn, as seen.

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

1. The combination of the lever E, cord *c*, pulleys *d*, socket-drum C, and dasher-shaft B, with each other, and with the frame D, constructed as shown, and operating substantially in the manner herein set forth.
2. In combination with the above, the vertical dashers F, bevelled towards their outer ends, for the purpose described, substantially as specified.

DAVID O. BLAIR.

Witnesses:

JESSE C. CHESNEY,

W. H. GILLASPIE.