JOHN. VANATTER.

CHURN.

No. 122,870.

Patented Jan. 16, 1872.

Fig. 1.

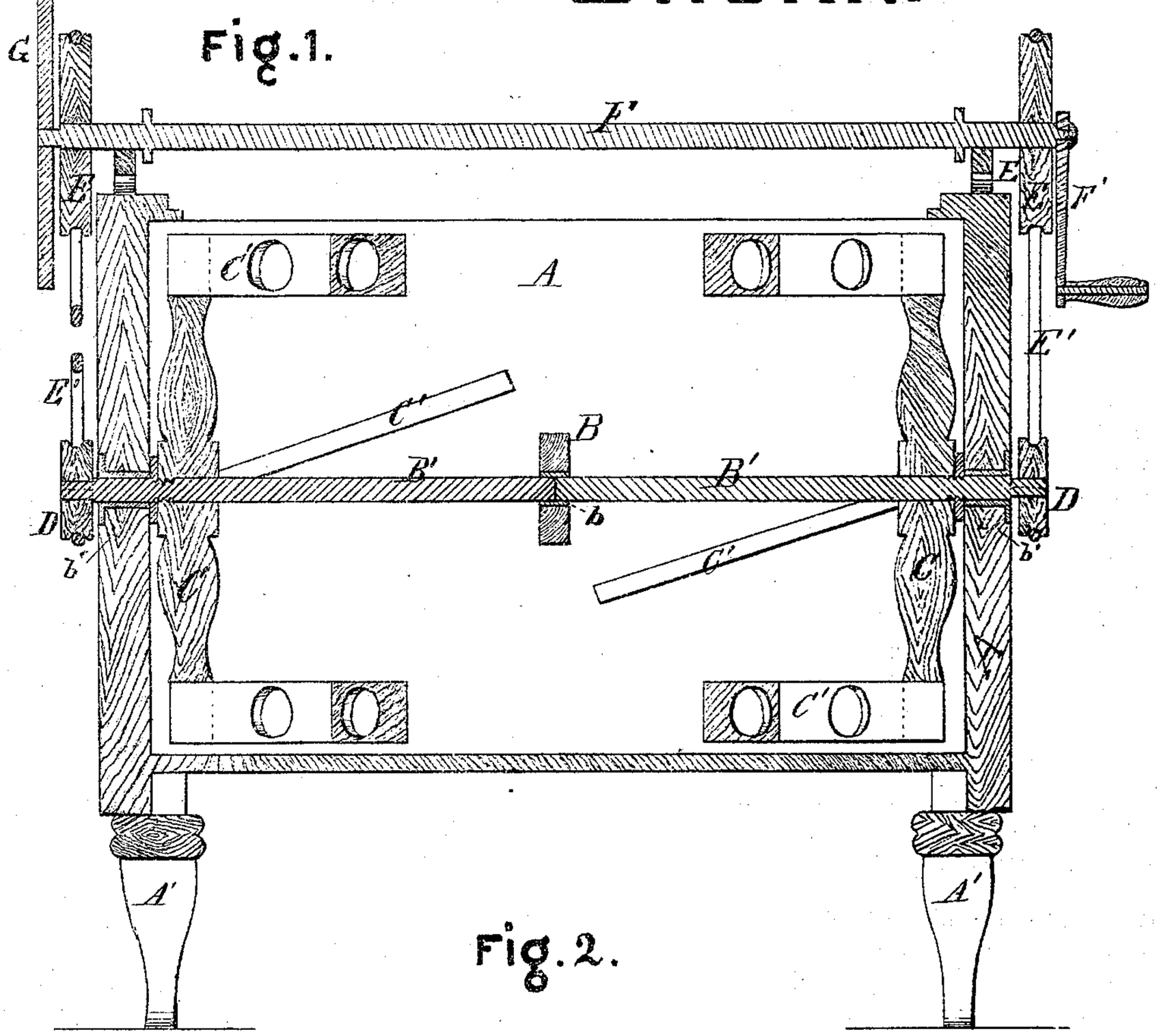
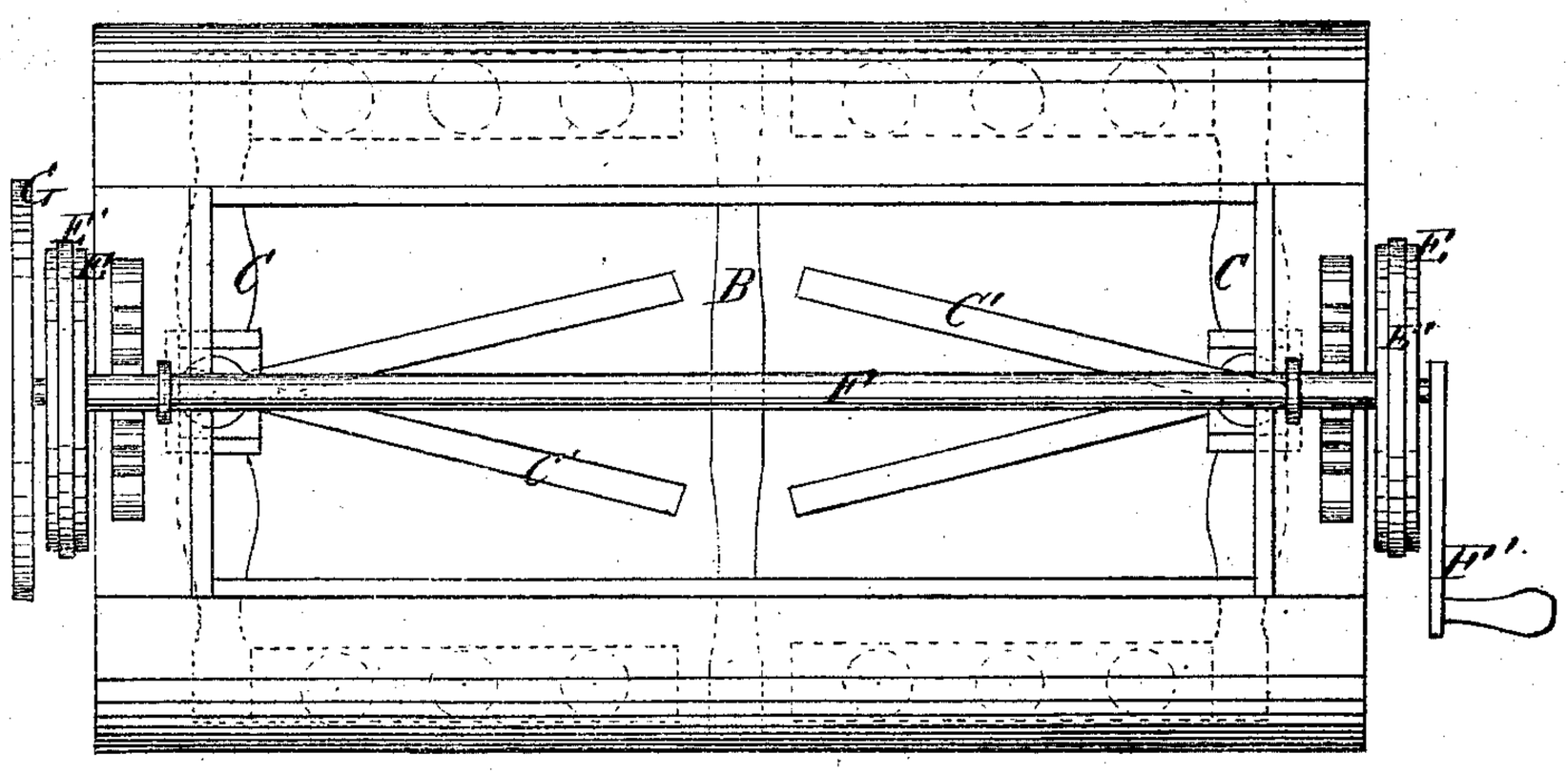


Fig. 2.



WITNESSES.
E. H. Bates.
F. B Curtis

INVENTOR.
John Vanatter,
Chipman Hosmer & Co,
Attys.

122,870

UNITED STATES PATENT OFFICE.

JOHN VANATTER, OF STRATFORD, CANADA.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 122,870, dated January 16, 1872.

To all whom it may concern:

Be it known that I, JOHN VANATTER, of Stratford, in the county of Perth and Dominion of Canada, have invented a new and valuable Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical longitudinal section of my invention. Fig. 2 is a plan view of the same, with lid removed to show the interior.

This invention relates to certain improvements in churns patented in Canada April 13, 1870, and in which there are arranged two dashers revolving in opposite directions on separate horizontal shafts placed in a direct line within the body of the churn. The beaters are arranged on the ends of radial arms, and at right angles therewith, but not parallel with the axis of the dasher-shaft, the object being to throw the cream toward the center of the churn, where it will be subjected to a greater degree of agitation than if directed toward the ends, and consequently have its particles fractured by the beaters and the butter released more quickly.

In the accompanying drawing illustrating this invention, A represents a cylinder, supported on suitable legs or stands A′ in a horizontal position. B shows a transverse bar, securely arranged in said cylinder midway between its ends. In the middle of said bar, which is designed as a support and bearing for the inner ends of the dasher-shafts B′, an orifice is formed and lined with a metallic bushing, *b*, which constitutes a suitable bearing-surface and box for said shaft-ends to turn in. The latter, in such position, should not touch each other, as it would cause friction and increase the labor of operating the churn. In the ends of the cylinder A other orifices are made and provided with bushing *b′*, the outer ends of the dasher-shafts having their bearings therein. C represents the radial arms, and C′ the beaters composing the dashers. The former are secured to the shafts B′ near their outer bearings, and the latter attached to the outer ends of said arms, and thence project diagonally toward the middle of the cylinder, and are perforated so as to allow the cream to play through them and receive more violent agitation. The nature of the diagonal projection of the beaters is such that they must have such relation to the devices which give motion to the dashers that the leading faces of said beaters, in the action of rotating, will be inclined toward the middle of the cylinder, and consequently such leading faces or sides on the beaters of one dasher will be inclined to parallel with the corresponding like faces or sides of the opposite beaters of the other dasher. Hence, when the churn is in operation, the cream will be dashed toward the inner ends of the beaters and against the faces thereof and against the transverse bar B, and a very violent commotion thereby caused. D represents a pulley-wheel keyed to the outer end of each of the dasher-shafts. Motion is communicated to these wheels from longer pulley-wheels E by belts E′. The wheels E are arranged on the ends of the horizontal shaft F, which has its bearings at either end of the cylinder A, on top thereof. This shaft is provided with a cramp, F′, at one end, and a fly-wheel, G, at the other end.

I am aware that the running-gear, center-support, and inclined dashers are not new; hence I do not claim such broadly.

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

In the cylindrical case A, the dash-reels herein described, consisting of the oppositely-rotating shafts B B′ in the same line and the inclined and perforated dash-boards C′, free at their inner ends, and at their outer ends connected to said shafts by the cross-arms C, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN VANATTER.

Witnesses:

JAMES O'LOANE,

R. R. LANEY.

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