

No. 641,849.

Patented Jan. 23, 1900.

E. P. DOTY.
CREAM SEPARATOR.

(Application filed June 9, 1899.)

(No Model.)

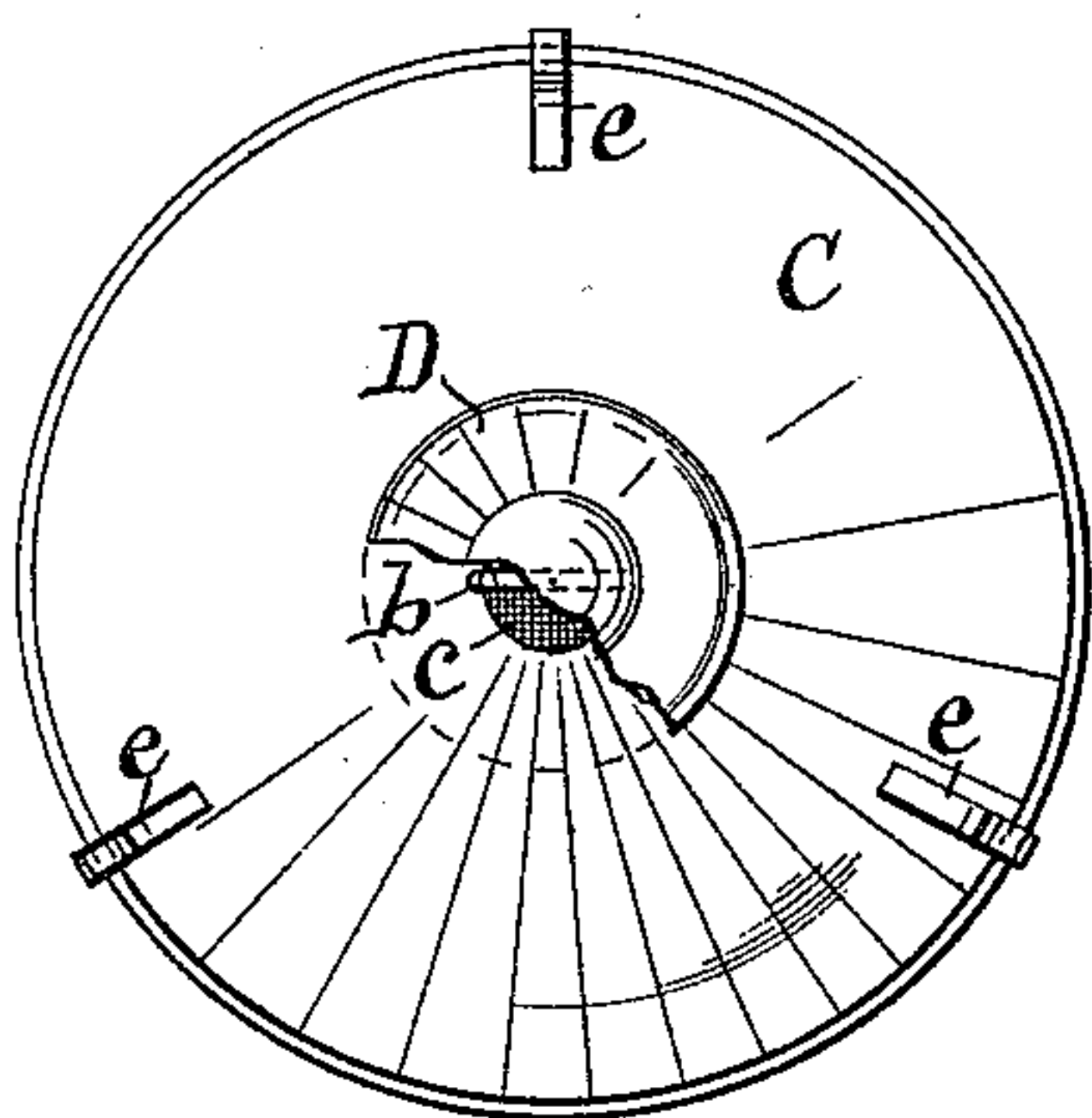
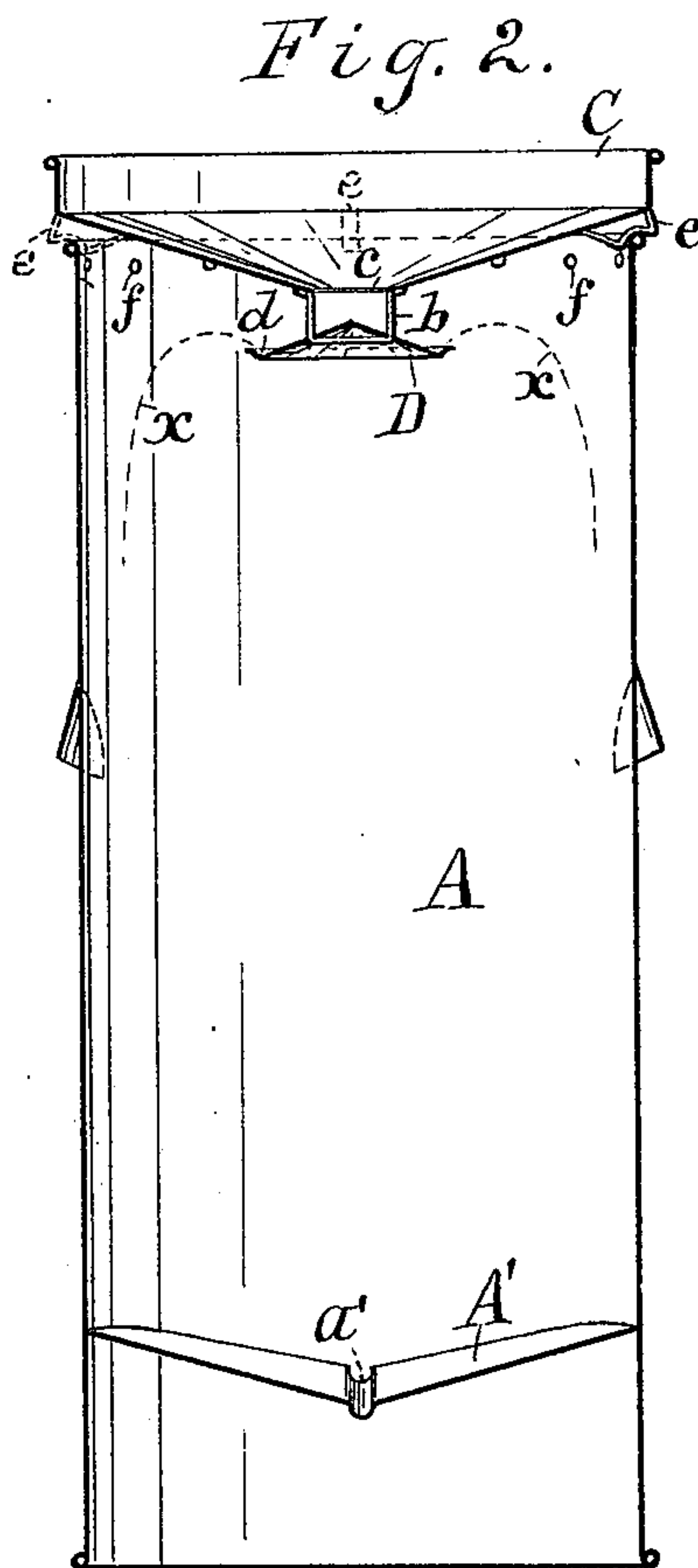
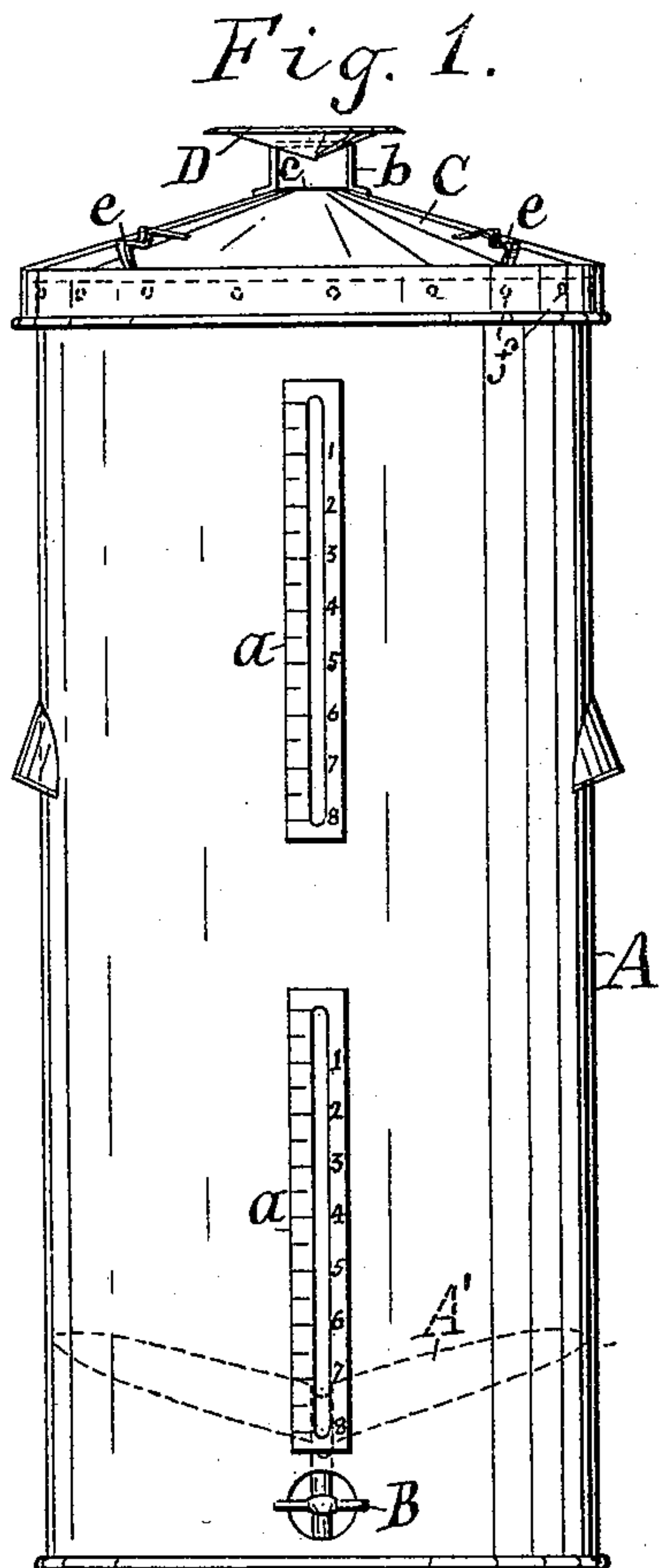


Fig. 3.

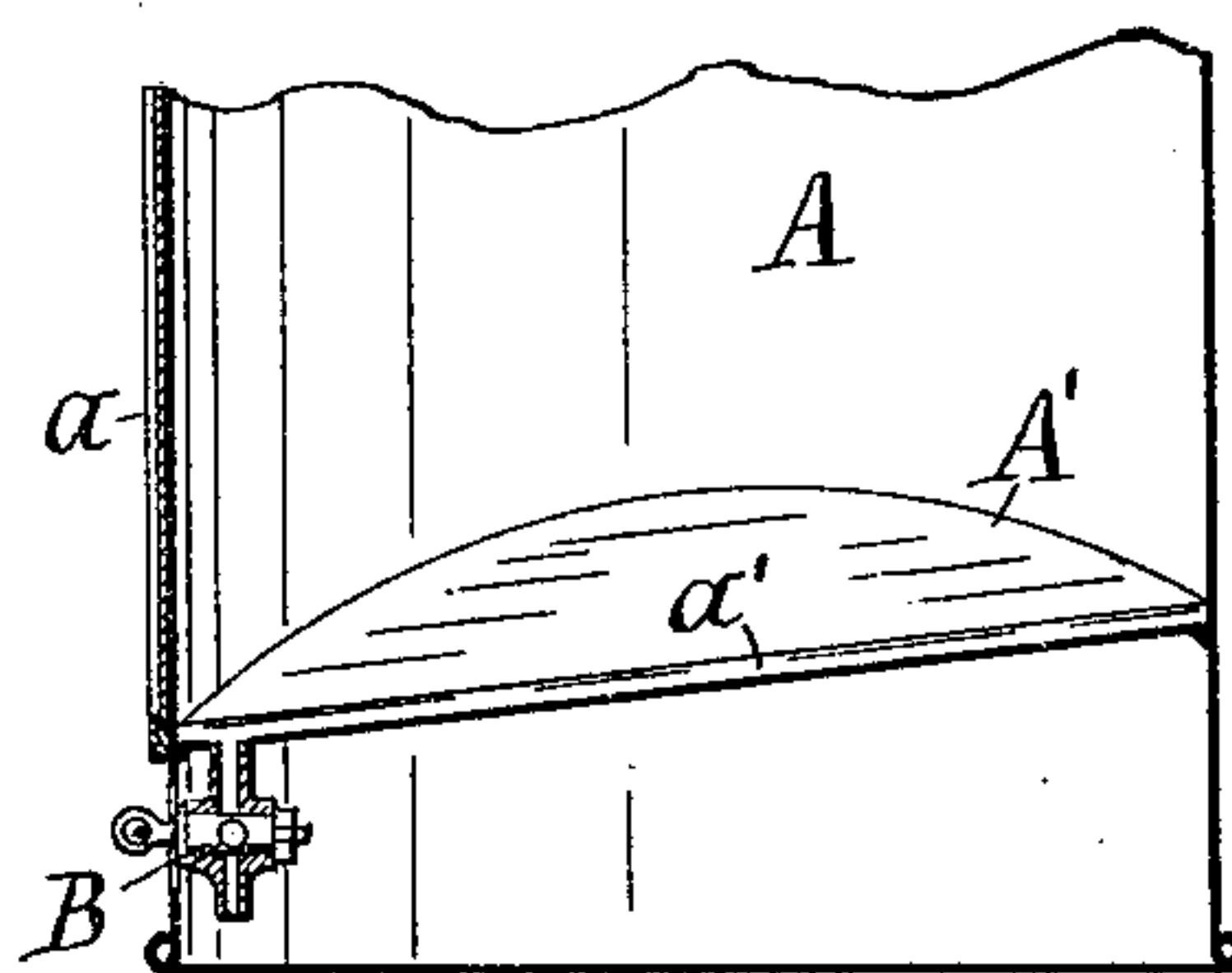


Fig. 4.

Witnesses.

L. A. White
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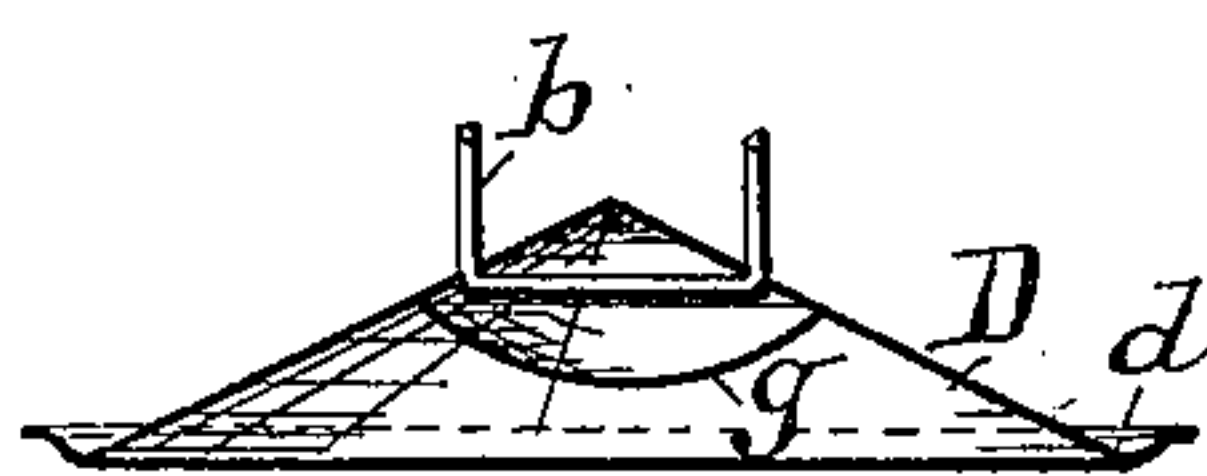


Fig. 5.

Inventor.
Ellsworth P. Doty,
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UNITED STATES PATENT OFFICE.

ELLSWORTH P. DOTY, OF CATO, NEW YORK, ASSIGNOR OF ONE-HALF TO
CHARLES A. CHASE, OF SAME PLACE.

CREAM-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 641,849, dated January 23, 1900.

Application filed June 9, 1899. Serial No. 719,927. (No model.)

To all whom it may concern:

Be it known that I, ELLSWORTH P. DOTY, of Cato, in the county of Cayuga, in the State of New York, have invented new and useful Improvements in Cream-Separators, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to cream-separators, and particularly to that class whereby the milk is strained, sprayed, and aerated at the same time and wherein the milk can be mixed with water to facilitate the separation and raising of the cream.

The object of my invention is to provide a can of the character described that will be simple in construction, easily assembled for use, effective in its operation, and capable of being readily cleaned; and it consists in certain improvements in the construction of parts of my cream-separator patented May 2, 1899, No. 624,194, and as hereinafter more fully described, and specifically set forth in the claims.

In the drawings hereto annexed and forming a part of this specification, Figure 1 is the front side elevation of my improved separator. Fig. 2 is a central vertical sectional view. Fig. 3 is a top plan view with a portion of the hood or deflector broken away. Fig. 4 is a central sectional view of the lower part of the separator, and Fig. 5 is an enlarged sectional view of the deflector.

Referring specifically to the drawings, A is the vertical cylindrical body of the separator, which is formed of sheet metal and provided on one side—preferably the front side—with the usual observation-panes *a a* for inspecting the contents of the separator-can. The said panes are shown in the drawings arranged one above the other and in line with the faucet B, near the lower end of the can. The said faucet has its stem protruding through an orifice in the cylinder. The faucet is connected to a port at the lowest point of the inclined bottom A'. The bottom is inclined toward the front side of the cylinder and is formed with a channel or concave groove *a'* in its upper side and extending diametrically and entirely across the bottom and rearwardly from said port. The opposite sides of the bottom or those sides lying on opposite

sides of the groove *a'* or channel are inclined inwardly or toward the groove and also, of course, toward the front of the can. Each of the said sides of the bottom is flat. This form of bottom insures the complete removal of the contents of the can, as the entire surface has the same inclination, and there are no places for the contents to lodge and be retained thereon. The cover C of the separator is reversible. In Fig. 2 the cover is inverted for the purpose of filling the can with milk and water, as usual. Said cover is conical, and when inverted its center is the lowest point, and at this point is a strainer C, of wire gauze or netting, to strain the milk poured in the funnel-shaped cover. Below the center of the cover, a short distance below the wire-netting or strainer, is a conical deflector D or spraying device sustained by a rigid wire loop *b*, which passes, preferably, through and below the central portion of the deflector. The upper central point of the deflector being raised, the fluid falling upon it is deflected outwardly toward its circular outer edge in all directions. Near the said outer edge of the deflector and in its upper side is a circular groove *d*, which causes the fluid to be thrown upward to some extent while thrown outward before it descends within the can, as clearly indicated by broken lines *x x* in Fig. 2. This causes the milk to be thoroughly broken up into small drops or sprays, thus assisting aeration.

When in its inverted position, the cover is supported upon and raised above the top edge of the can or cylindrical body by means of several angular standards *e e*, secured to the cover, thus allowing the air to pass out the top of the can when it is being filled. A circular series of holes *f* near the top edge assists the outflow of air and also provides for the inlet of air when the cover is reversed, as shown in Fig. 1 of the drawings, for although the flange of the cover fits over the outer side of the cylinder it is sufficiently large to form an annular air-space between said parts. The air passes in through the holes and out through the strainer. The deflector then forms a cover for the strainer, preventing the lodgment of dust thereon. An enlarged view of the deflector is shown in Fig. 5 for the purpose of

showing the groove *d* therein and also for the purpose of showing a concavo-convex cap *g* below the wire support *b*, passing through the deflector, which cap is preferably provided
5 that the part may be more easily cleaned. Fig. 1 shows the position of the cover when the can is filled and the contents aerated. The hot air and the animal odor pass off freely through the wire-netting *c*. When water is
10 used to dilute the milk, a sufficient quantity is preferably first placed in the can and the milk is sprayed into it, as above set forth.

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

1. In a cream-separator, the cylindrical body *A*, provided with a bottom which is inclined toward one side, and which is raised a distance above the lower end of the body, a faucet
20 secured to the bottom and inclosed by the chamber in the lower end of the body, there being a circular series of perforations near the top edge of the cylindrical body, a reversible funnel-shaped cover provided with a
25 flange to inclose the upper end of said body and of sufficient size to permit air to pass from the outside to the said holes, a strainer at the center of the cover, and a conical deflector

connected to the cover but remote from the strainer, said deflector having a circular
30 groove near its circular edge, substantially as and for the purpose described.

2. In a cream-separator, the cylindrical body provided with an inclined bottom, a faucet connected to the lowest point of said bottom,
35 a reversible funnel-shaped cover provided with a flange to inclose the upper end of said body, and of a size to provide an annular air-space between the flange and the outer surface of the cylindrical body, standards *e, e*, se-
40 cured to the cover to rest on the top edge of the body when the cover is inverted, a strainer in the center of the cover, a conical deflector supported below the strainer and having its center nearer the strainer than its periphery,
45 and having a circular groove on the side turned toward the cover, and near the periphery of the deflector, as and for the purpose described.

In testimony whereof I have hereunto
50 signed my name.

ELLSWORTH P. DOTY. [L. S.]

Witnesses:

J. W. HAPEMAN,
FRED B. CASEY.