J. H. DUNBAR.

DASHERS FOR ICE-CREAM FREEZERS.

No. 183,046. Patented Oct. 10, 1876.

FIG 1

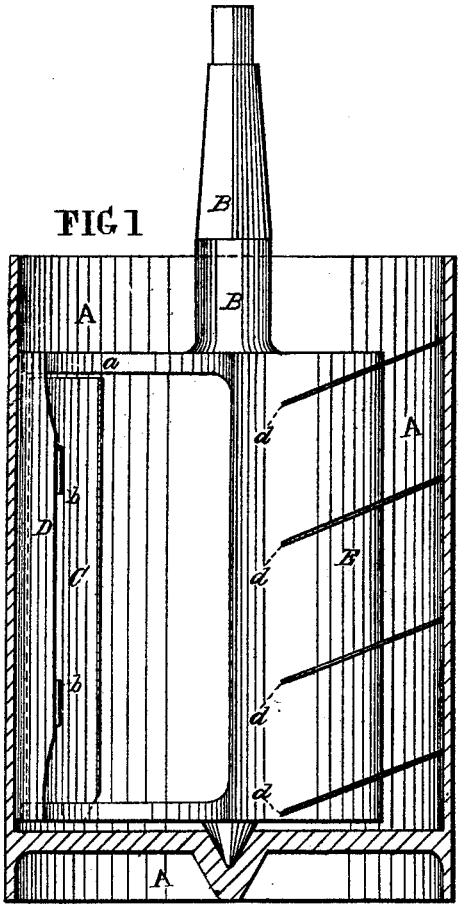


FIG. 2

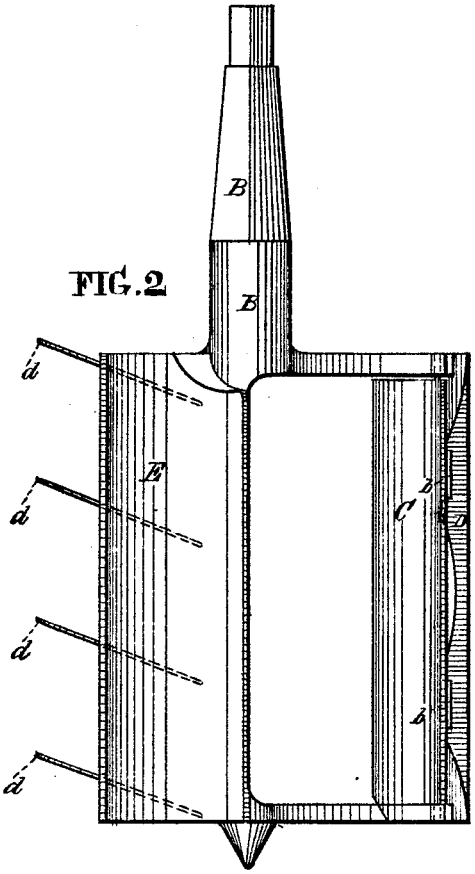


FIG 3

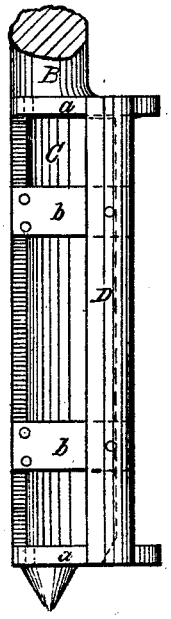
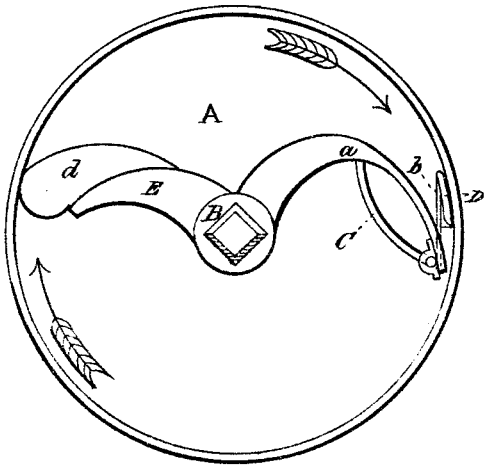


FIG. 4



Witnesses

Thomas J. Dewley.

W. C. Helmbold.

Inventor

John H. Dunbar.

per Stephen Ulrick, attorney

UNITED STATES PATENT OFFICE.

JOHN H. DUNBAR, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN DASHERS FOR ICE-CREAM FREEZERS.

Specification forming part of Letters Patent No. **183,046**, dated October 10, 1876; application filed September 11, 1876.

To all whom it may concern:

Be it known that I, JOHN H. DUNBAR, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Dashers for Ice-Cream Freezers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My invention consists of the following particulars: To the outer ends of arms, which project from one side of the central shaft of the dasher, is pivoted or hinged a convex plate or wing, the free edge of which projects inward toward the center of the cylinder or can, and to the outer hinged edge of said plate a scraper is attached, by means of springs, which give flexibility of action to the said scraper during the revolutions of the dasher, and permit the scraper to adapt itself to any irregularities in shape of the cylinder.

In the revolutions of the dasher the action of the cream, which is thereby carried to the center of the can, bears the scraper with sufficient force against the sides of the can to remove therefrom the film of cream which adheres thereto by the action of the freezing-mixture upon the outside, and has not been carried away by the hinged plate. I have mentioned the hinged plate or wing as being of convex form, but do not confine myself to that particular form.

On the opposite side of the dasher to that with which the above-described hinged plate and scraper are connected is a convex plate, which projects from the central shaft toward the inner circumference of the can, which, in the revolutions of the dasher, carries the cream from the center to the side. With the convex surface of this plate are connected any desirable number of wings, placed at suitable distances apart, from the top to the bottom of said convex surface, which are concentrically curved and radially inclined, and are arranged at right angles in their cross-section to the said convex surface.

In the accompanying drawings, Figure 1 is a vertical section through the cylinder or case A, showing a side view of the dasher. Fig. 2 is a view of the dasher from the opposite side to that shown in Fig. 1. Fig. 3 is an edge view of the dasher. Fig. 4 is a top view of the same, in position in the cylinder.

Like letters of reference in all the figures indicate the same parts.

A is the cylinder or can to contain the cream. B is the central shaft of the dasher, which is revolved by means of a crank and gear wheels connected with its upper end. There are arms *a a* projecting from one side of the central shaft B. To the outer ends of said arms is pivoted or hinged the outer edge of the convex plate C, the free or inner edge of which extends toward the central portion of the cylinder, so that as the dasher revolves in the direction of the arrow, shown in Fig. 4, the cream is carried from the circumference to the center of the cylinder. To said pivoted plate C is connected the wooden scraper D, by means of the springs *b b*. The said scraper is for the purpose of removing the film of cream that adheres to the wall of the cylinder by the action of the freezing-mixture upon the outside, and that has not been already carried away by the said hinged wing C, the resilient action of the springs *b* permitting the scraper D to adapt itself to any irregularities in shape of the can. From the opposite side of the central shaft B projects the convex plate E, which carries the cream from the center to the circumference of the can. Upon the convex surface of the plate E, at suitable distances apart, are connected the concentrically-curved and radially-inclined wings *d*, which are at right angles in their cross-section to the convex surface of said plate E.

The plate E and wings *d*, in conjunction, serve to lighten and carry the cream to the circumference of the can, placing it in the most advantageous position for freezing.

The combined action of the pivoted or hinged wing C and scraper D with the convex plate E and wings *d* serve to continuously carry the cream from the circumference to the center of the can, and vice versa, producing uniform freezing, and securing the proper degree of inflation.

I have represented the hinged wing of convex form throughout its length, but do not confine myself to that particular form.

The scraper D may be made of metal or any material that will answer the purpose.

I claim as my invention—

1. The plate or wing C, pivoted or hinged to the arms *a a* of the dasher, having the scraper D attached thereto by means of the springs *b*, substantially in the manner and for the purpose set forth.

2. The concentrically-curved and radially-inclined wings *d*, in combination with the convex surface of the plate E, substantially in the manner shown and described.

3. The pivoted or hinged plate C, having the scraper D, in combination with the convex plate E, having the wings *d*, substantially in the manner shown and described.

JOHN H. DUNBAR.

Witnesses:

THOMAS J. BEWLEY,

LEVI H. DUNBAR.