O. DEXTER, Jr.

ICE-CREAM FREEZER.

No. 192,684. Patented July 3, 1877.

Fig. 1.

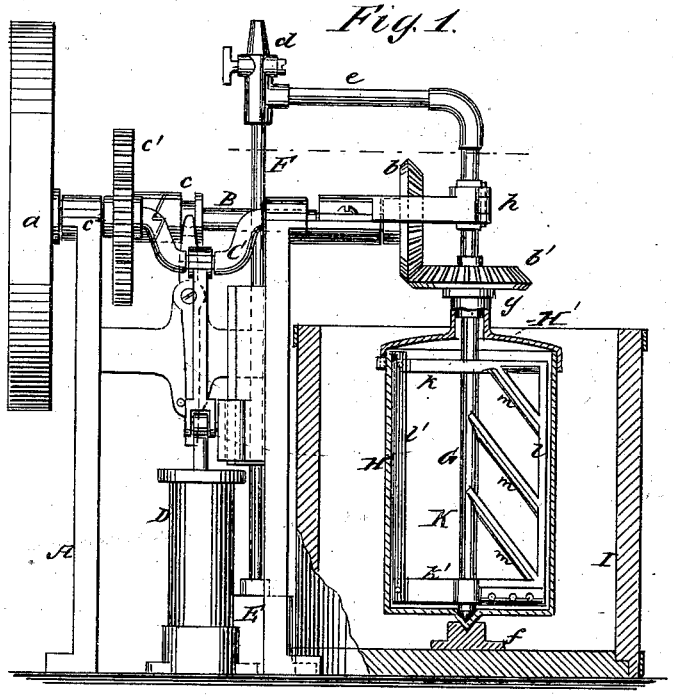


Fig. 3.

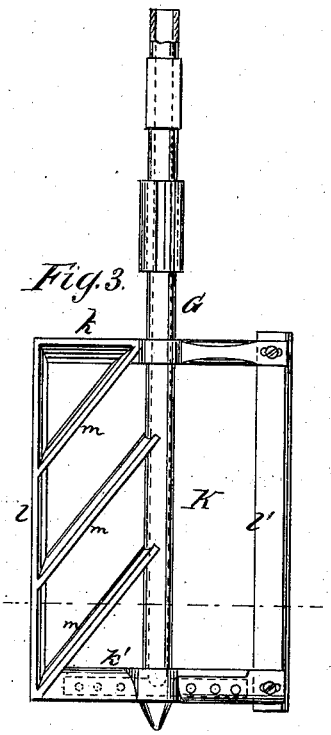


Fig. 2.

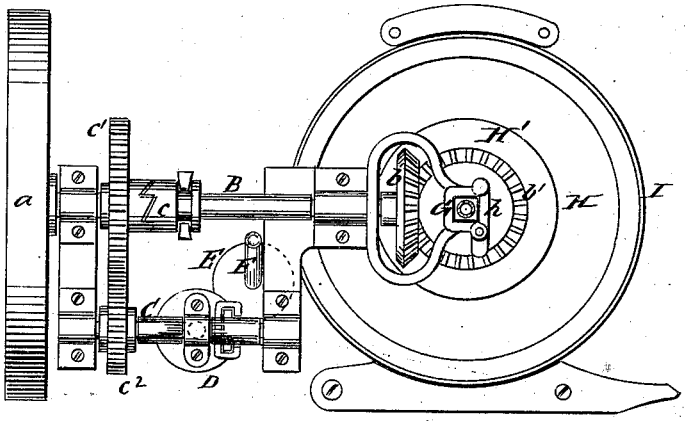
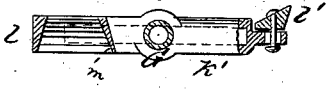


Fig. 4.



WITNESSES:

E. Wolff

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UNITED STATES PATENT OFFICE.

OLIVER DEXTER, JR., OF TROY, NEW YORK.

IMPROVEMENT IN ICE-CREAM FREEZERS.

Specification forming part of Letters Patent No. **192,684**, dated July 3, 1877; application filed May 21, 1877.

To all whom it may concern:

Be it known that I, OLIVER DEXTER, JR., of Troy, in the county of Rensselaer and State of New York, have invented a new and Improved Ice-Cream Freezer, of which the following is a specification:

This invention has relation to the manufacture of ice-cream; and the nature of my invention consists in means which will forcibly inject currents of air into the freezing-can during the process of agitating the contents thereof by dasher-blades.

In the annexed drawings, Figure 1 is a sectional elevation of my improved freezer. Fig. 2 is a top view of the same. Fig. 3 is a side view of the dasher; and Fig. 4 is a horizontal section through the same.

Similar letters of reference indicate corresponding parts.

The letter A designates a frame, on which is mounted, in suitable boxes, a driving-shaft, B, and a crank-shaft, C. On the driving-shaft B a belt-wheel, *a*, and a beveled spur-wheel, *b*, are keyed. A clutch, *c*, and a large spur-wheel, c^1, are also applied on this shaft. Wheel c^1 engages with the teeth of a pinion, c^2, keyed on the crank-shaft C, and when the wheel c^1 is clutched to its shaft, and the latter is rotated, motion will be imparted to the piston-rod of an air-engine, D.

E designates an air-receiver, which communicates with the air-engine, and contains an air-valve opening upward. From this receiver rises a stand-pipe, F, on the upper end of which is a cock, *d*. Below this cock *d* is a branch pipe, *e*, which communicates with a dasher-tube, G, by means of a detachable flexible tube, G′. When the cock *d* is opened little or no air will pass into a freezing-can, H. This can H is stepped upon a foot-block, *f*, fixed on the bottom of an ice-tub, I, and the cover H′ of the can is constructed with a long tubular neck, *g*, in which is journaled the dash-tube G, and on which a beveled spur-wheel, *b*′, is keyed that engages with the wheel *b* on driving-shaft B, and above this wheel *b*′ a prismatic portion of tube G is fitted into a box, *h*, provided with a hinged cap which holds tube G fast.

When shaft B is revolved and clutch *c* is engaged with the hub of wheel c^1, the can H will be revolved, and if cock *d* be shut, air from the engine D will be forcibly injected into the can at the lower end of the dasher. If the clutch *c* is disengaged from the hub of wheel c^1 the air-engine will not operate.

K designates a rectangular dasher, which is fixed to the stationary tube G, and constructed with cross-heads *k k*′, a vertical blade, *l*, a vertical scraper, *l*′, and inclined dash-blades *m*, which latter are feathered, as shown in the drawings, and rigidly secured to the tube G and blade *l*.

The scraper *l*′ is beveled, and connected loosely to the cross-heads *k k*′, so that it will be forced outward by the pressure of the cream against it, and clear the frozen mass from the wall of the can when the latter is revolved.

The stationary blade *l* is also beveled so as to direct the cream toward the center of the can, and the inclined dash-blades *m* direct the cream downward and inward and thoroughly stir it. The lower cross-head *k* is tubular and thickly perforated, and communicates with the tube G for the purpose of allowing jets of air to be introduced into the can H at the bottom thereof.

During the process of freezing the air is not introduced until the fluid begins to assume a solid condition, and the effect of the introduction of air is to leave the frozen cream very fine, and to lighten it and increase its bulk.

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

The combination, with a freezer and air-engine, of the receiver E, having the upwardly-opening valve, the cocked pipe *d* F, the branch pipe *e*, and the tubes G G′, as and for the purpose specified.

OLIVER DEXTER, JR.

Witnesses:

C. SEDGWICK,

ALEX. F. ROBERTS.