

E. B. TILDEN.
Ice-Cream Freezers.

No. 141,738.

Patented August 12, 1873.

Fig. 1.

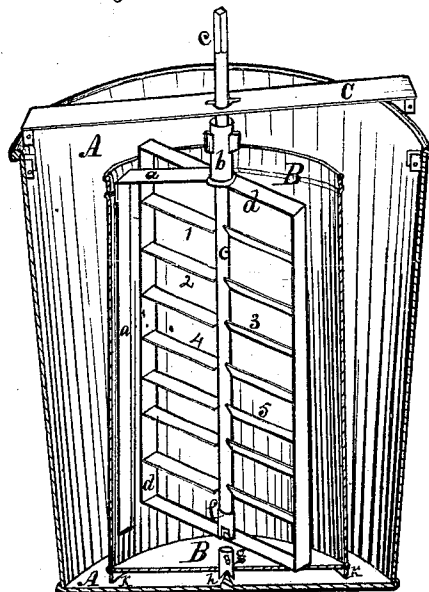
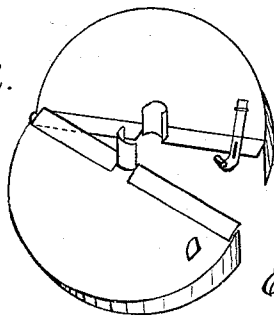


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

ELIJAH B. TILDEN, OF PRAIRIE CITY, IOWA.

IMPROVEMENT IN ICE-CREAM FREEZERS.

Specification forming part of Letters Patent No. **141,738**, dated August 12, 1873; application filed February 15, 1873.

To all whom it may concern:

Be it known that I, ELIJAH B. TILDEN, of Prairie City, in the county of Jasper and State of Iowa, have invented an Ice-Cream Freezer, of which the following is a specification:

The object of my invention is to provide an ice-cream freezer of simple mechanism, that will agitate, cut, mix, and pack the ingredients by centrifugal force. It consists in combining, arranging, and co-operating an ice-holder, cream-holder, scraper, and beater, in such a manner that during its operation the beater will be locked to the cream-holder and move therewith, while the scraper is at the same time held stationary in the revolving cream-holder, all as hereinafter fully set forth.

Figure 1 of my drawing is a miniature perspective view, which shows half sections of the ice and cream holders, and illustrates the manner of combining and operating therewith the scraper and the beater.

A A is the ice-holder; it may vary in form, size, and material. B B is the cream-holder, of cylindrical form, and varying in size to suit ice-holders of various dimensions. C is a locking-bar, designed to lock the scraper to the ice-holder. Any suitable catch or locking device may be used to connect the ends rigidly with the top edge of the vessel A. *a a* is the blade of the scraper, permanently attached to the tube *b*: This tube *b* passes over the shaft of the beater, and serves as a key to lock the scraper to the bar C. *c c* is the shaft forming part of the beater. *d d* is the frame of the beater, permanently attached to the shaft *c c*. 1 2 3 4 is a series of cutters or blades extending from the shaft to the frame. They are set at an angle of about thirty-five degrees, and on the one side in a reverse direction from the other. *f* is a catch of suitable form on the bottom end of the shaft *c c*, designed for coupling the beater to the pivotal-bearing *g*, which supports the vessel B on the pivot *h* in the center of the bottom of the vessel A. *k k* is a flange or rim on the bottom of the cream-holder. It prevents the vessel from resting on the pivotal bearing *g* when lifted out of the ice-holder, and serves as a foot or base upon which the vessel will stand perpendicular and independent of support.

Fig. 2 is a sectional cover, hinged together

in such a manner that it can be put on and taken off from the cream-holder at any time without unfastening or removing any other part of the apparatus. It may be formed of wood or cast metal, with a tongue-and-groove joint to keep the cream secure and clean. When made of sheet metal, strips can be attached to answer the purposes of a tongue-and-groove joint. A suitable clasp will hold the parts together and keep the cover in place.

To operate my freezer, place the cream-holder B in the ice-holder A, in such a manner that the bearing *g* will rest on the pivot *h*. Pass the key-tube *b* of the scraper *a* over the shaft *c*, and then place the combined scraper and beater in the vessel B, and fasten it thereto by means of the coupling devices *f* and *g*. Next, place the locking-bar C over the shaft *c*, and allow the key part of the tube *b* to enter the corresponding opening or key-hole in the bar. Fasten the ends to the vessel A. You are now ready to fill the space between the two vessels with the ice or congealing mixture, and the cream-holder with cream and eggs, or any other ingredients you may desire to mix and freeze. Cover the cream-holder, attach a crank to the shaft *c*, and turn rapidly. Any suitable gearing and power may be connected to do the turning. The shaft *c* coupled to the bottom of the cream-holder causes the beater and cream-holder to move jointly and simultaneously in the same direction. The vessel A and scraper *a*, locked together by means of the bar C, remain stationary. The blade of the scraper inclines from the wall of the cream-holder toward the center, and turns and directs the liquid from the outside toward the center. The liquid is thrown from the center to the circumference by centrifugal force, and all lumps come in contact with the scraper and are thereby broken. The same centrifugal force throws the liquid continually from the center toward the circumference, and at the same time causes a rotary movement that brings it in contact with the series of horizontal cutters 1 2 3 4. The fluid matter is loose within the rotating vessel and flies about, and is directed and beat and mixed by coming in contact with the fixed scraper and fixed beater. As it congeals it loses its volatile action, and settles toward

the bottom. The scraper prevents it from adhering to the vessel and aids in packing the congealed mass into the bottom ready to dish and serve.

I am aware that a stationary scraper has been combined with a rotating beater; but I claim as new and greatly advantageous the combination and arrangement which causes the beater to be stationary in the cream-holder, and to move jointly therewith, while the scraper is locked to the ice-holder, and yet held rigidly and stationary within the cream-holder, thereby causing the fluid matter to fly about and strike the fixed scraper and beater in the manner set forth.

I claim as my invention—

1. The locking-bar C, in combination with the ice-holder A and cream-holder B, substan-

tially as described, and for the purpose specified.

2. The locking-bar C, in combination with the tube-key *b* and scraper *a*, substantially as described, and for the purpose specified.

3. The locking-bar C, tube-key *b*, and scraper *a*, in combination with the beater *c d*, having a series of cutters, 1, 2, 3, and 4, substantially as described, and for the purpose specified.

4. The coupling device *f* and *g* and pivot *h*, in combination with the beater *c d*, substantially as described, and for the purpose specified.

ELIJAH B. TILDEN.

Witnesses:

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