(No Model.)

# J. G. WEBB.

## ICE CREAM FREEZER.

No. 301,941. Patented July 15, 1884.

Fig. 1.

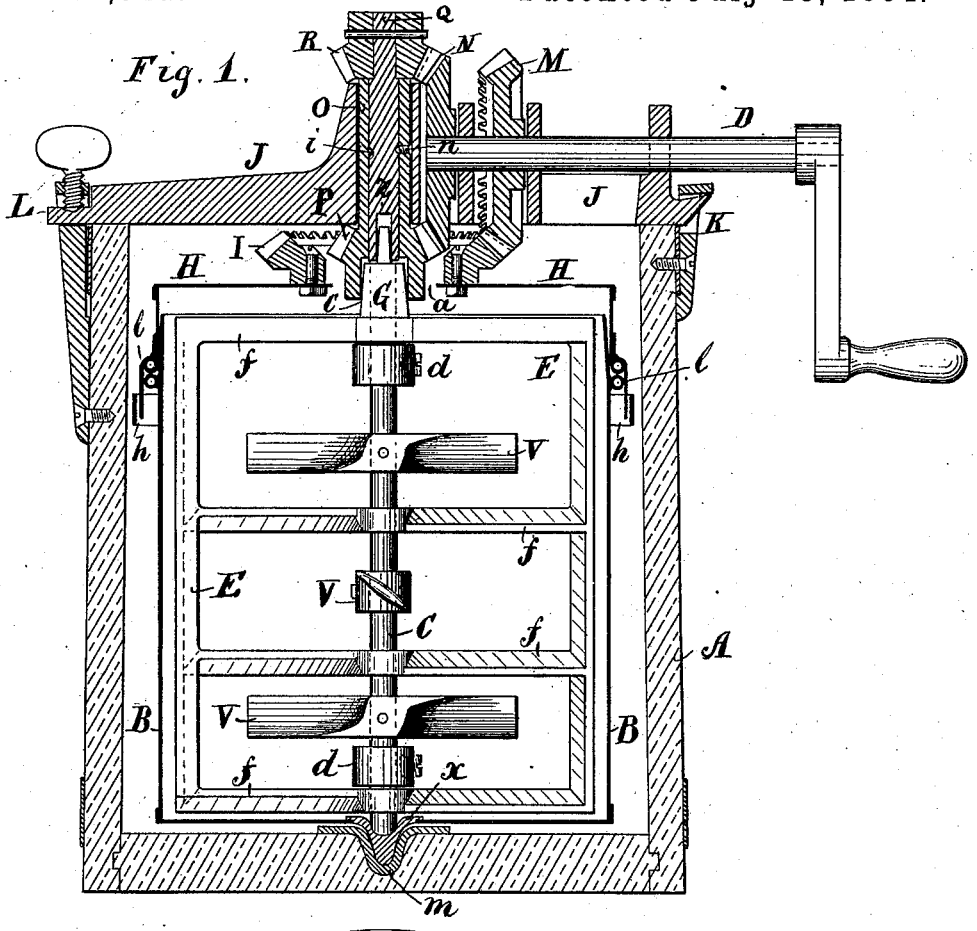
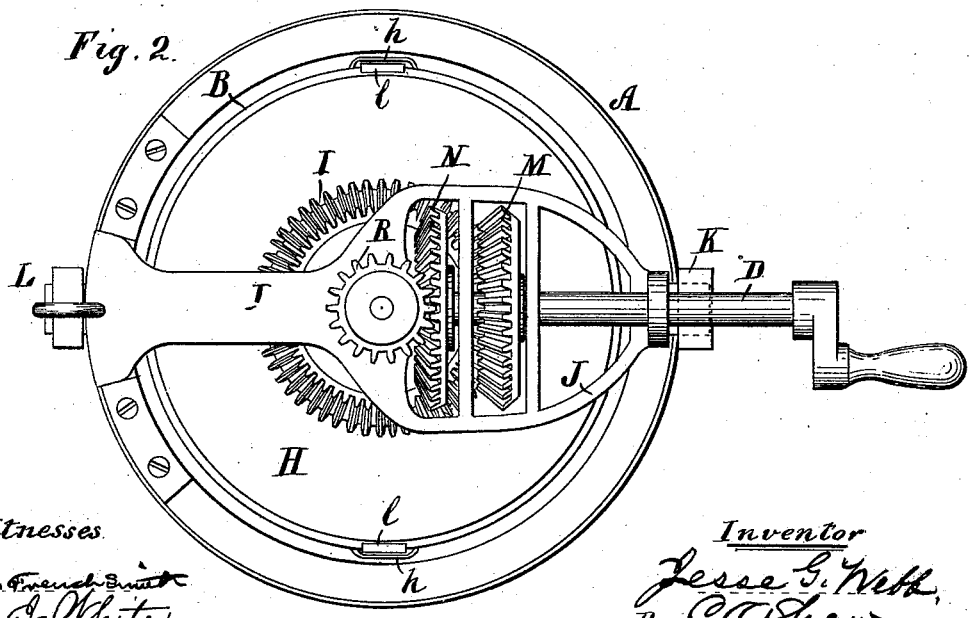



Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## ICE-CREAM FREEZER.

SPECIFICATION forming part of Letters Patent No. 301,941, dated July 15, 1884.

Application filed April 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JESSE G. WEBB, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Ice-Cream Freezers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved ice-cream freezer, and Fig. 2 a top plan view of the same.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of ice-cream freezers which are provided with a series of stirrers and a scraper adapted to revolve in opposite directions; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more desirable and effective article of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body or main tank, B the auxiliary tank, C the vertical shaft, and D the crank-shaft. The shaft C stands in a step, *x*, formed in the center of the bottom of the tank B, which step also stands in a corresponding step, *m*, formed in the bottom of the tank A, the upper end of the shaft being squared.

Secured to the shaft C near either of its ends there is a fixed collet, *d*, and suspended on the uppermost of these collets there is a rotary scraper, E, its upper cross-bar or beater, *f*, being provided with a squared stud or nipple, G, through which the inner end of the shaft C passes, and in which it rotates.

The cover H of the tank B is provided on either side with a downwardly-projecting flange, *l*, which enters a loop or ear, *h*, on the side of said tank, so that when the cover is rotated the tank will also be rotated or revolved in the same direction. A central opening, *a*, is formed in the cover H, and attached to said cover around this opening there is a large bevel-gear, I, with its teeth arranged uppermost.

A yoke, J, is disposed on the tank A, being secured in position by the lip and ear K at one end and the swinging screw-clamp L at the other.

The crank-shaft D is mounted horizontally in the yoke, and provided with two miter-gears, M N, nearly equal in size, and both facing inwardly or toward an extended vertical line drawn through the center of the shaft C, the gear M intermeshing with the gear I.

Journaled vertically in the yoke there is also a sleeve, O, carrying near its lower end the small miter-gear, P, and disposed within said sleeve there is a vertically-arranged rod, Q, provided with a circumferential groove, *i*, near its center, and at its upper end with a small miter-gear, R, the gears P R intermeshing with the gear N. The lower end of the rod Q is provided with a square socket, *z*, which passes over the squared upper end of the shaft C, the rod Q and sleeve O being loosely coupled together by the screw *r*, working in the groove *i*. A square socket, *t*, is formed in the lower end of the gear P, which fits over the square stud or nipple G on the frame E, and disposed on the shaft C there are three radial arms or stirrers, *v*.

From the foregoing it will be obvious that when the crank-shaft D is turned the gear N, acting above the central axial line of said shaft on the gear Q, and below the same on the gear P, will revolve the stirrer-shaft C and scraper E in opposite directions, while at the same time the gear M, acting on the large gear I, will revolve the tank B in the same direction with said scraper, and in a direction opposite to that of the shaft C, thereby producing a compound movement of the parts which is very effective in its action on the cream in the tank B.

It will be understood that the salt and ice or other refrigerating materials are to be placed in the annular space between the two tanks A B.

The gears M N being of nearly the same size, and the gear I larger than the gears P R, it will be obvious that the tank B will be revolved slower than either the scraper or stirrers.

I am aware that it is not new to provide a scraper to rotate in the same direction with the cream-vessel, at a slower rate of speed, in

connection with beaters rotating in the opposite direction, said beaters being so constructed as to produce a vertical outer downward current and a vertical inner upper current.

Having thus explained my invention, what I claim is—

1. The combination, in an ice-cream freezer, of a main tank for containing the refrigerating compound, a rotary vessel within the main tank for containing the cream, a rotary scraper within said vessel, consisting of horizontal bars connected by vertical arms, rotary stirrers consisting of horizontal arms arranged to rotate between the horizontal bars of the scraper, and mechanism, substantially as described, for actuating said rotary vessel, scraper, and stirrer, the vessel moving in the same direction as the scraper, at a slower speed, and the stirrer in the opposite direction, substantially as described.

2. In an ice-cream freezer substantially such as described, the detachable yoke J, carrying the crank-shaft E, gears M N R P, rod Q, and sleeve O, constructed, combined, and arranged to operate substantially as specified.

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Witnesses:
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