

O. W. EPPERSON.
ICE CREAM FREEZER.
APPLICATION FILED SEPT. 19, 1910.

993,515.

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Fig. 1.

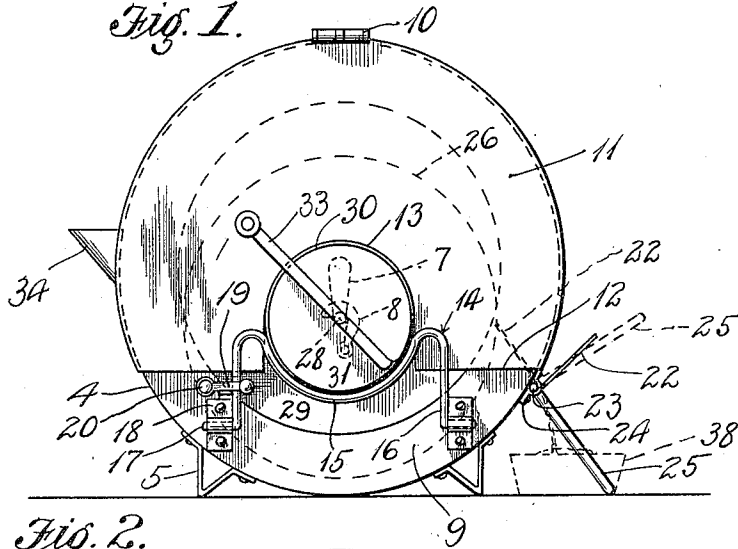


Fig. 2.

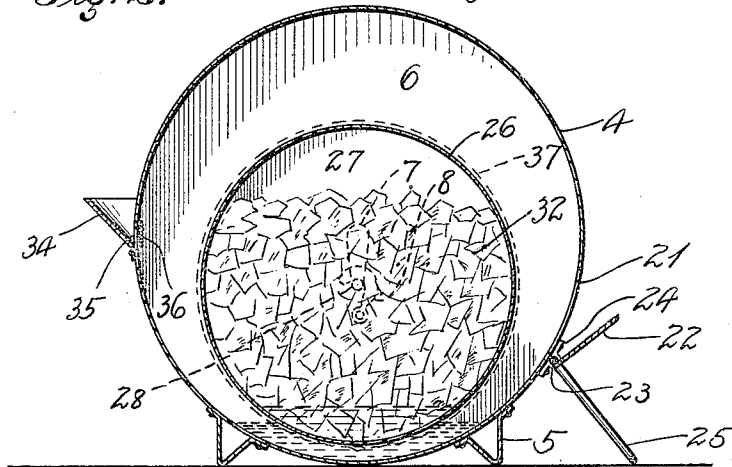
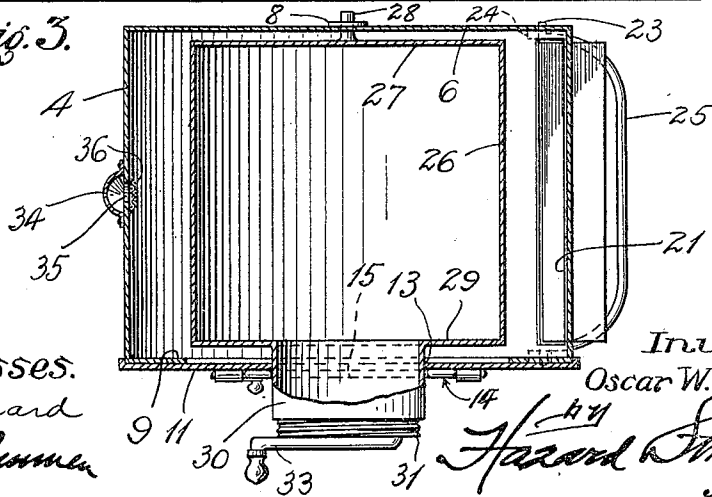


Fig. 3.



Witnesses.

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ICE-CREAM FREEZER.

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To all whom it may concern:

Be it known that I, OSCAR W. EPPERSON, a citizen of the United States, residing at Los Angeles, county of Los Angeles, State of California, have invented new and useful Improvements in Ice-Cream Freezers, of which the following is a specification.

This invention relates to ice cream freezers in which the freezing mixture is held in a rotatable drum mounted within the casing or barrel and arranged so that the bottom of the drum containing the freezing mixture dips into the cream or milk to be frozen. When the drum is rotated the cream freezes onto the surface of the drum.

The object of the invention is to improve the construction of the casing or the barrel so as to facilitate the introduction and removal of the drum, and also to provide an improved form of scraper which operates to scrape the frozen cream from the surface of the drum as it rotates.

In the drawing forming a part of the annexed specification, Figure 1 is an end elevation of a freezer constructed according to my invention. Fig. 2 is a vertical cross section taken through the freezer, and further illustrating its construction. Fig. 3 is a horizontal central section through the device, certain parts being broken away and shown in plan.

Referring more particularly to the parts, 4 represents the outer casing or barrel of cylindrical form which is held in a horizontal position by means of legs 5 which are riveted to the under side as indicated. At one end this barrel or casing is provided with a fixed head 6, and in this head there is provided a central radial slot 7 which is disposed in a vertical position and converges slightly toward its lower end. Near the lower end of this slot a hook 8 is pivoted on the outer side of the head 6 as shown. At the opposite end of the barrel, an annular head or flange 9 is formed and on the upper side of the barrel at this end a hinge 10 is provided to which attaches a flap door or cover 11 which normally hangs down and forms a partial head at the open end of the barrel. This cover 11 is not completely circular but its lower portion is cut away on the horizontal edge 12 and at its middle point this edge is formed with an upwardly extending notch 13 for a purpose which will appear more fully hereinafter.

On the flange 9 at the lower side of the

barrel a rest 14 is mounted, said rest being preferably in the form of a bent wire, the upper portion of which forms a curved bow or rudimentary socket 15. Beyond this bow 15 the material of the wire is bent downwardly to form arms 16 and the lower ends of these arms are bent horizontally to form wrists 17 which are rotatably mounted in hinge plates or clips 18 attached to the face of the flange 9 as indicated. At the left side as indicated in Fig. 1 a handle 19 is provided which is pivoted on a pin 20 and this handle is adapted to swing over against the outer side of one of the arms 16 so as to hold the rest 14 in an upright position. The right side of the casing or barrel 4 is provided with a longitudinal slot or opening 21 and at this opening a scraper 22 is provided in the form of a plate, the lower edge of said plate being provided with hinge pins 23 rotatably mounted in hinge plates 24 attached to the outer side of the barrel as indicated.

Rigid with the scraper plate 22 there is provided a bail 25 in the form of a bent wire, and this bail normally extends downwardly and rests upon the surface of the table or shelf which supports the freezer. The scraper is of smaller dimensions than the opening 21 so that if the bail 25 is raised to the position in which it is indicated in dotted lines in Fig. 1 the scraper will extend into the interior of the barrel in such a way that its upper edge can contact with the surface of a freezing drum 26 which is disposed within the barrel.

The freezing drum 26 is of cylindrical form and has an inner head 27 provided with a central pivot or gudgeon 28 which is adapted to be received in the slot 7 and secured therein by the hook 8. The outer head 29 of the freezing drum is formed with a neck 30 which is adapted to extend through the notch 13 and project from the interior of the casing of the barrel as indicated more clearly in Fig. 3. This neck 30 is provided with a removable cap 31 which is removed when the drum is being filled with a freezing mixture 32 formed of cracked ice and salt or similar substances. The screw cap 31 is provided with a rigid crank 33 by means of which the drum may be rotated.

In using the freezer, the freezing drum 26 should be filled or partially filled with the freezing mixture 32 and should be

placed within the barrel as indicated. In order to insert the drum in the barrel it is only necessary to swing the cover 11 upwardly and the rest 14 downwardly so as to uncover the open end of the barrel. The drum is then slid longitudinally into position and the gudgeon 28 is inserted in the upper portion of the slot 27 and allowed to gravitate down into the lower end of the slot as indicated. In this position it is secured by the hook 8, and the rest 14 is then rotated upwardly so as to engage the under side of the cylindrical neck 30, the cover 11 or flap door having been previously folded down against the flange 9 as shown. The rest 14 engages the lower edge of the flap door or cover 11 and holds it closed and the rest is itself held in this position by the handle or lever 19 as will be readily understood.

At one side the barrel or casing 4 is provided with a pouring funnel 34 having an opening 35 through the wall of the barrel through which the milk or cream may pass into the interior, and this opening is covered on the under side by a strainer 36 as shown. A very small quantity of milk or "cream" is placed in the casing and when it has been placed in the barrel the lower face of the drum 26 dips in the milk or "cream." The drum is then rotated slowly by means of the crank 33 so that all the outer surface of the drum passes like a roller through the "cream." This results in freezing the cream in a coating, indicated by the dotted line 37, which adheres to the surface of the drum. When the coating has been formed on the surface of the drum the freezing will continue more effectively, and then the scraper plate 22 is moved into the barrel so as to scrape off the cream as it freezes and a plate or pan 38 may be placed under the scraper so as to catch the cream as it falls from it. The drum if rotated will give sufficient time for the cream to freeze and the scraper will remove the frozen cream as it accumulates.

By forming an opening on one side of the outer casing or barrel 4 I am enabled to readily introduce the freezing drum 26 into the interior of the casing 4 without the inconvenience of raising an upper portion of the outer casing, if the same were divided into two parts, as is common in freezers of this description, thereby economizing in operating space for the freezer and obviating an accidental displacement of the freezer itself. Also by forming the outer casing 4 in one piece I am enabled to effect economies in the manufacture of the same, and at the same time provide a freezer which is absolutely sanitary, foreign particles such as hair from the operator's head and dust particles held in suspension in the air being prevented from falling into the

mixture contained in the outer casing 4 and thus contaminating the mixture being frozen.

What I claim is:—

1. An ice-cream freezer comprising an outer casing having a head with an opening therein, a drum adapted to be introduced through said opening and adapted to hold a freezing mixture, means for rotatably supporting said drum at the end of said casing opposite said opening, said drum having a projecting neck and a folding member attached to said casing and adapted to support said neck to permit the rotation of said drum.

2. An ice-cream freezer comprising an outer casing adapted to contain a small quantity of cream, said casing having an opening at one end thereof, a rotatable drum to contain a freezing mixture and adapted to be inserted through said opening, means for rotatably supporting said drum at the end of said casing opposite said opening, said drum having a projecting neck, a rest having a hinge connection with said casing and having a bow engaging said neck to support the same, and a cover plate covering the upper part of said opening.

3. An ice-cream freezer comprising an outer casing having an opening in one end thereof and adapted to retain a small quantity of cream to be frozen, a rotatable drum to contain the freezing mixture and adapted to be inserted through said opening, means for rotatably supporting said drum at the end of said casing opposite said opening, said drum having a projecting neck at the end thereof adjacent to said opening, a cover plate having a hinge connection with said casing at the upper side thereof and substantially closing said opening, and a rest engaging the under side of said neck to support the same rotatably and engaging said cover plate to hold the same closed, and means for holding said rest in an elevated position in contact with said neck.

4. An ice-cream freezer having a casing of cylindrical form having a head at one end thereof and an opening at the opposite end, said head having a vertical slot therein, a drum to contain a freezing mixture adapted to be inserted through said opening and having a pivot pin adapted to be received in said slot, said drum having a neck projecting from said casing, a removable lever for said neck having a crank for rotating said drum, and means for substantially closing said opening when said drum is within said casing and movable means attached to said casing for rotatably supporting said neck.

5. An ice cream freezer comprising a substantially cylindrical casing having a

head in one end thereof and having an opening at the other end, a rotatable drum having a pivot pin at the inner end thereof, said head having a slot adapted to receive
5 said pin, said drum having a neck at the end opposite said pin, a cover having hinge connections with said casing and adapted to fold downwardly to substantially close said opening and having a notch receiving
10 said neck, a rest attached to said casing and adapted to fold downwardly and normally engaging the under side of said neck, and

engaging said cover to hold the same closed, and means for normally holding said rest in an elevated position to engage said neck 15 and support said drum.

In witness that I claim the foregoing I have hereunto subscribed my name this 14th day of September, 1910.

O. W. EPPERSON.

Witnesses:

F. D. AMMEN,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
