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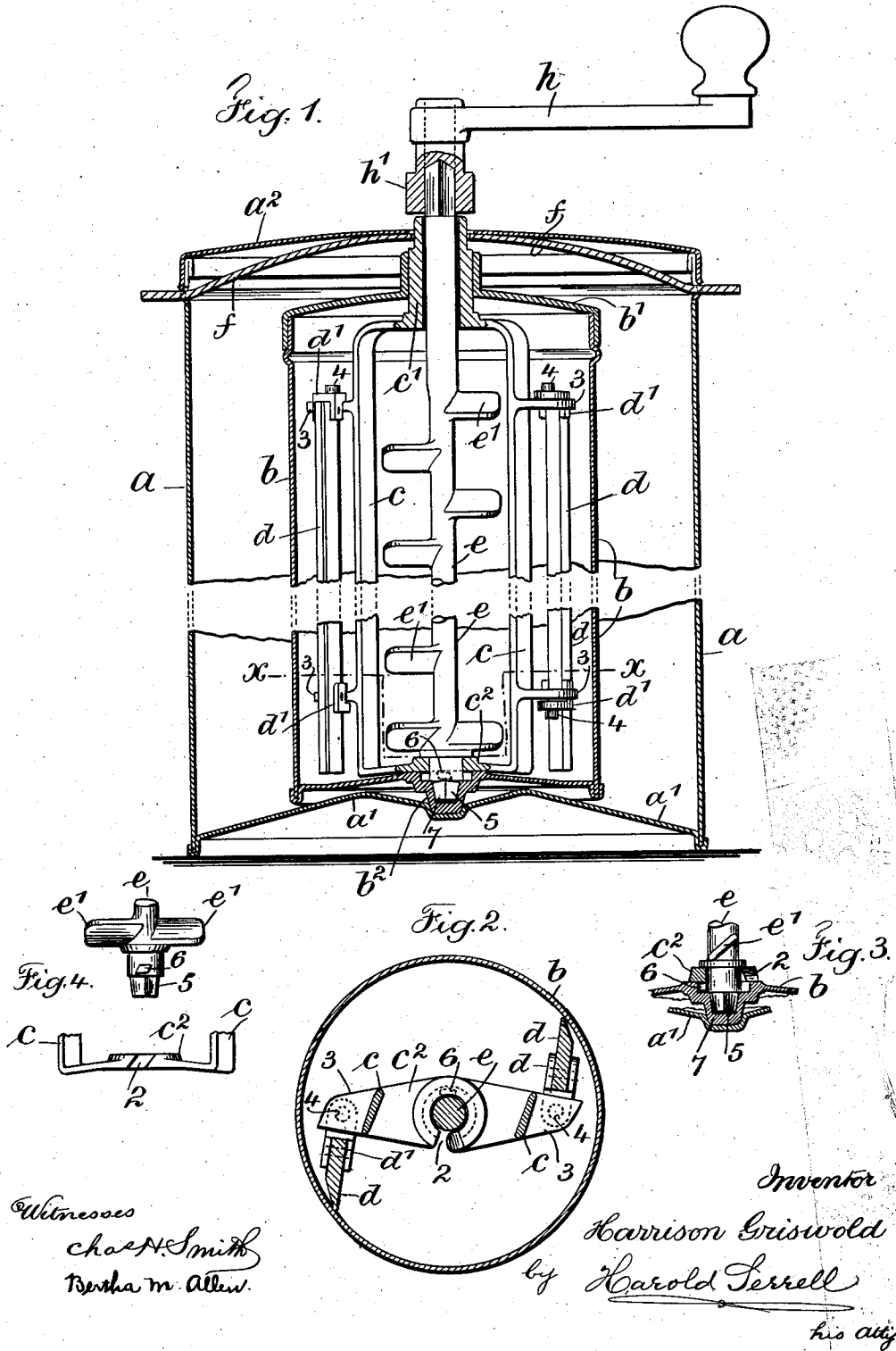
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DASHER FOR FREEZERS, CHURNS, &c.

APPLICATION FILED JUNE 13, 1911.

1,027,416.

Patented May 28, 1912.



UNITED STATES PATENT OFFICE.

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DASHER FOR FREEZERS, CHURNS, &c.

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Specification of Letters Patent.

Patented May 28, 1912.

Application filed June 13, 1911. Serial No. 632,946.

To all whom it may concern:

Be it known that I, HARRISON GRISWOLD, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented an Improvement in Dashers for Freezers, Churns, &c., of which the following is a specification.

In the art of ice cream freezers and churns, etc., it is usual to employ a receptacle or vessel to hold the materials to be acted upon by an internal agitator and either or both of these parts have been revolved in producing the desired results. The agitator device usually comprises a frame and scrapers and a dasher, and this latter an inseparable part; and for this reason it is difficult to clean and keep sanitary and is also more expensive to manufacture. My invention relates particularly to this dasher and the object of my invention is to overcome these objections.

In carrying out my invention, I cut a slot through the wall of the lower bearing member of the agitator-frame and provide the lower end of the dasher-spindle with an inclined lug. This slot is also inclined and in connecting the parts and placing the spindle, the inclined lug thereof passes through the said inclined slot to a plane below the bearing member. The inclined vanes of the dasher in its rotation keep the dasher down and without tendency to rise, consequently the aforesaid parts do not separate in action but are readily separable for cleaning, all of which is hereinafter described.

In the drawing, Figure 1 is a vertical broken section and partial elevation representing a freezer. Fig. 2 is a sectional plan on the dotted line *x, x*, through the inner parts and without the outer case. Fig. 3 is a vertical section and elevation at the lower part of the inner receptacle and dasher-spindle and at right angles to the view Fig. 1. Fig. 4 is an elevation at the lower end of the agitator-frame and lower end of the dasher, with the parts separated, indicating the manner of their connection.

For the purpose of illustration and description I have chosen to show an ice cream freezer in which *a* represents the outer receptacle or tub; *a*¹ the bottom of the tub, with a recessed central portion forming a seat or bearing, and *a*² a cover. The inner receptacle is represented at *b*. It is provided with a cover *b*¹ and with a bearing member or

pin *b*² connected to the bottom of the inner receptacle.

c represents the agitator-frame composed as indicated of two upright members and a cross-member *c*² at the bottom and a cross member with a sleeve *c*¹ at the upper part. This tubular member or sleeve *c*¹ passes snugly through a sleeve of the cover *b*¹, and the upper end thereof is preferably square, passing through a square opening in the cross-bar *f*; said cross-bar extending across or spanning the outer receptacle or tub *a* with the ends thereof received in openings in said receptacle. The bearing member *c*² at the bottom of the agitator *c* is centrally apertured and is cut through at one side, forming a slot 2 with inclined walls. The agitator-frame is formed with brackets 3 having pins 4 and the scrapers *d* are provided with frames *d*¹ which preferably span the brackets 3 and are provided with a perforation to receive or pass over the pins 4. In this manner the scrapers are fastened to the agitator-frame.

e represents the dasher-spindle preferably cylindrical and provided with vanes *e*¹ that are inclined to a horizontal plane and formed with the spindle at intervals and at opposite sides. The upper end of the spindle of the dasher passes through the tubular member *c*¹ of the agitator-frame and extends beyond the same with a squared end adapted to receive the opening in the crank-sleeve *h*¹ of the crank and handle *h*. The lower end of the dasher-spindle *e* is preferably made square at 5 and it sets into a squared recess 7 in the bottom of the can.

The special features of my invention relate to the inclined slot 2 cut through the bearing-member of the agitator-frame *c*², and to the inclined lug 6 formed near the lower end of the dasher-spindle *e* and adapted in connecting the dasher-spindle to the agitator-frame to pass through the inclined slot 2 to a position beneath the bearing member *c*² of the agitator-frame.

In the operation of the device described, the cross-bar *f* with its squared opening and the upper squared end of the tubular part *c*¹ of the agitator-frame received thereby retains this agitator-frame, together with the scrapers, in a fixed position, while the crank and handle and its sleeve engaging the dasher-spindle turns the dasher-spindle, and by virtue of its square lower end 5 received in the bottom of the inner receptacle *b*, also

turns the inner receptacle with the dasher-spindle; the one employed within the agitator-frame and the other outside of the agitator-frame and the direction imparted to these members tends to force the dasher-spindle downward so that it has no opportunity to rise and no tendency to separate from the bottom cross-bar bearing c^2 of the agitator-frame. When, however, the parts are separated from the inner receptacle and it is desired to take them apart for cleaning, the dasher-spindle is raised with reference to the agitator-frame so as to cause the inclined lug 6 at the lower end thereof to pass through the inclined slot 2, bringing the said lug and squared end at the lower end of the dasher-spindle into a plane above the lower member c^2 of the agitator-frame. In this position, and because of a predetermined looseness between the tubular member c^1 and the upper end of the dasher-spindle, the said spindle can at its lower end be moved away from the lower end of the agitator-frame sufficient to clear the same when the upper end of the dasher-spindle is pulled out of the tubular bearing portion c^1 of the agitator-frame and the parts separated for a thorough cleaning, after which they are readily put together in the reverse manner. Because it is possible to separate these parts, it is possible always to keep them clean, because where they cannot be separated and it is difficult to get at the parts to thoroughly clean them, a sediment is sure to collect, to decompose and become unsanitary; the material remaining in the bearings being composed of milk or cream mixed up with the particles of metal which wear in the operation of the freezer,—the disadvantages of

which are effectually overcome by the device of my invention. 40

The agitator-frame rests upon the bottom of the vessel b on the surface of the bearing member b^2 and a recess therein below said surface receives the pin 6. 45

I claim as my invention:

1. In a freezer or similar device, the combination with an agitator frame of suitable character and a dasher, of means for keeping the dasher down without tendency to rise and which means provides for a longitudinal and slight turning motion of the dasher for accomplishing the separation of the parts for thorough after cleaning. 50

2. In a freezer or similar device, the combination with an agitator-frame of suitable character and a dasher, the lower portion of the agitator-frame being cut through thus providing a slot, and the lower end of the dasher-spindle having a lug adapted to pass through the groove in connecting or separating the parts by a longitudinal movement of the dasher. 55

3. In a freezer or similar device, the combination with an agitator-frame of suitable character and a dasher, the lower portion of the agitator-frame being cut through thus providing an inclined slot, and the lower end of the dasher-spindle having an inclined lug adapted to pass through the groove in connecting or separating the parts by a longitudinal movement of the dasher. 60 70

Signed by me this 6th day of June 1911.

HARRISON GRISWOLD.

Witnesses:

GEO. T. PINCKNEY,
E. ZACHARIASEN.