

(No Model.)

J. M. DAWLEY.
ICE CREAM FREEZER.

No. 386,112.

Patented July 17, 1888.

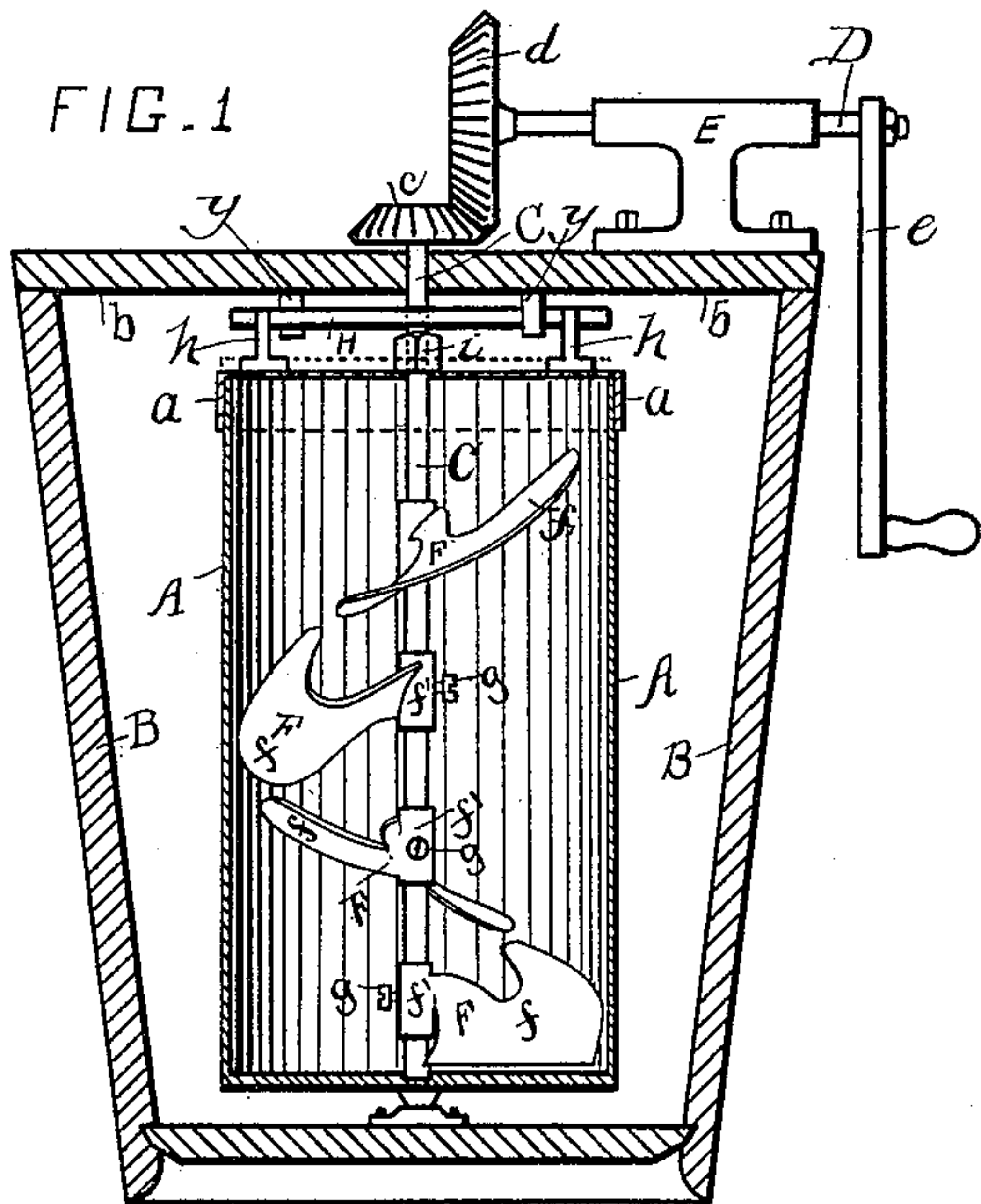


FIG. 2

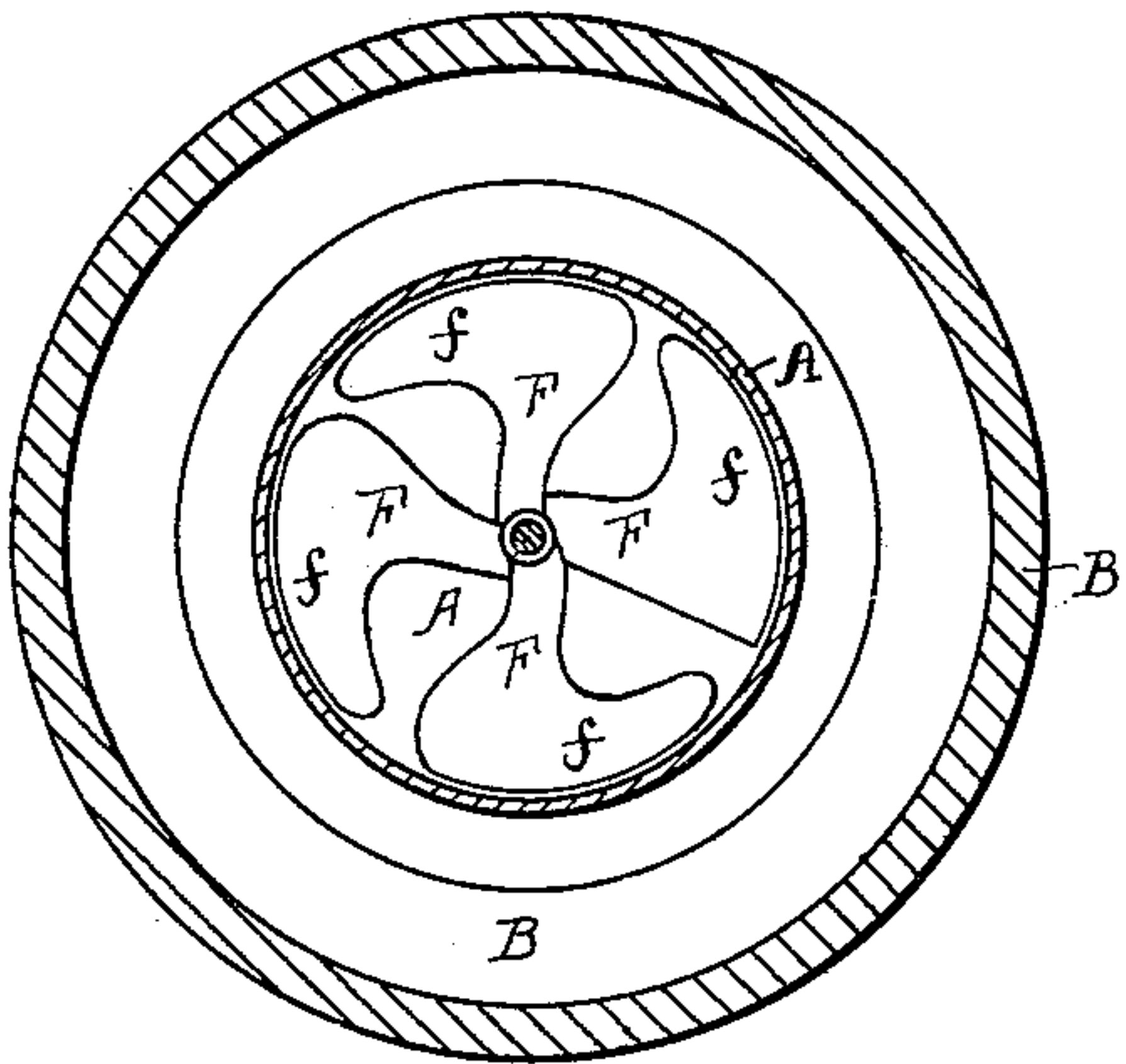


FIG. 3.

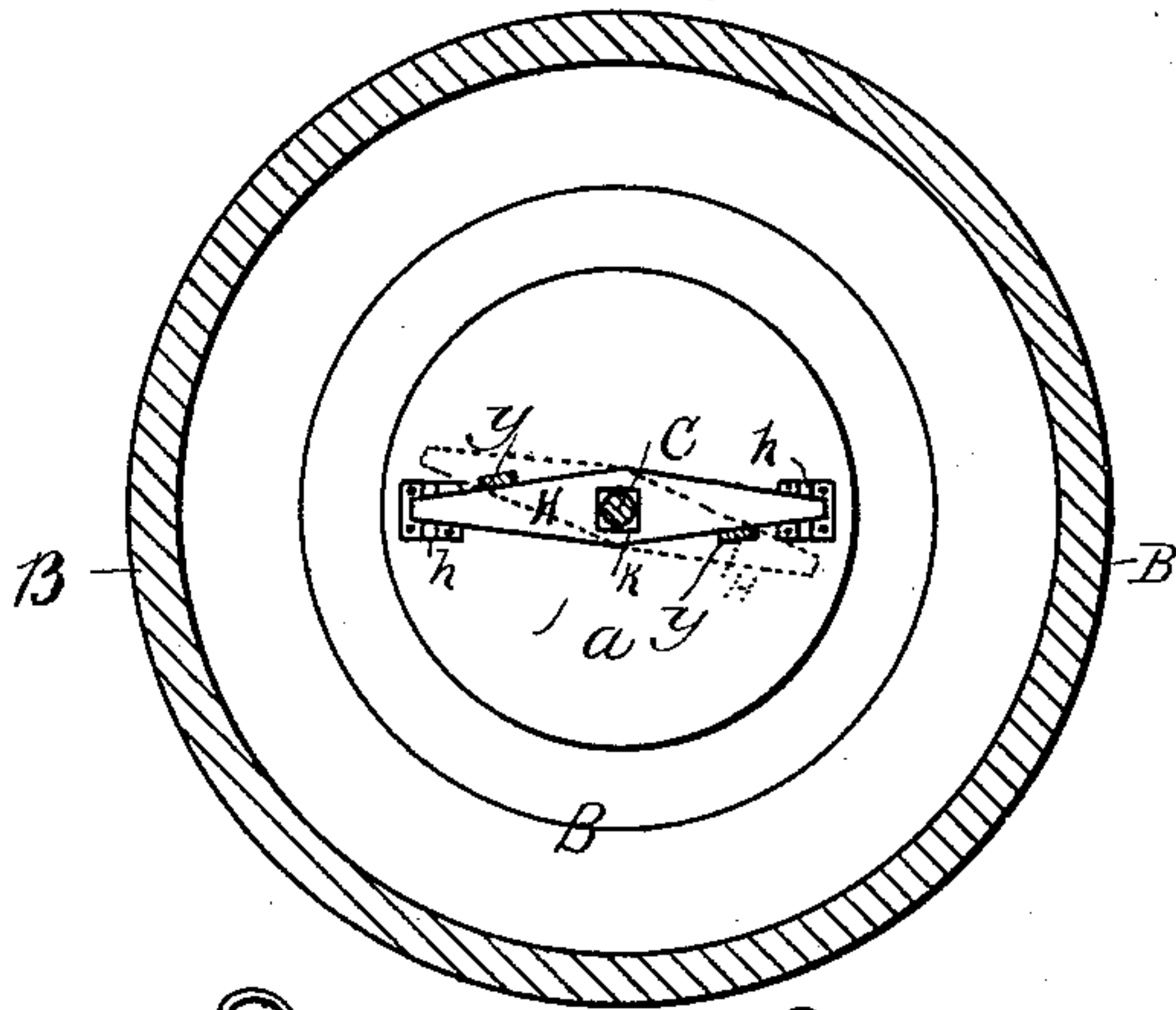


FIG. 5

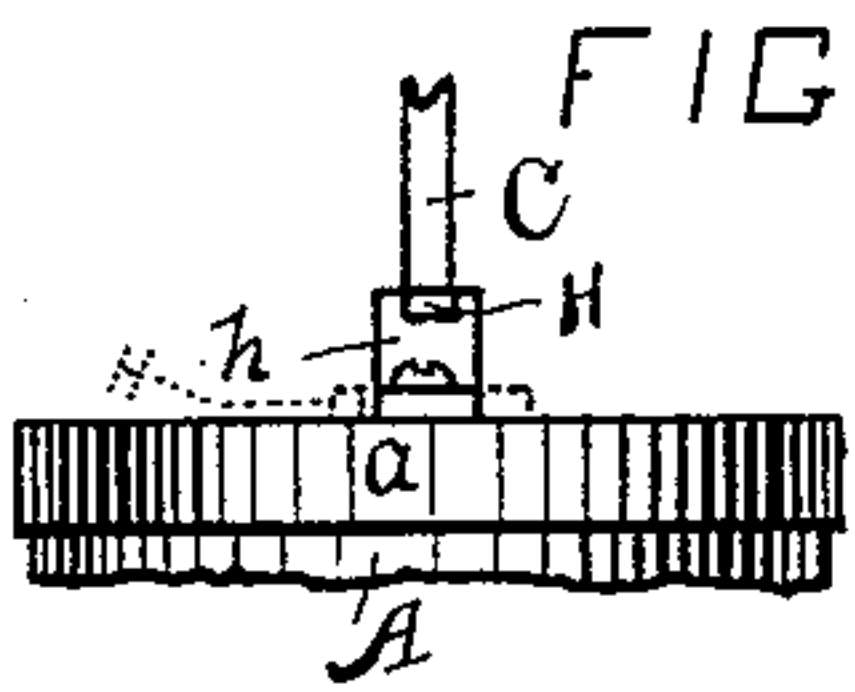
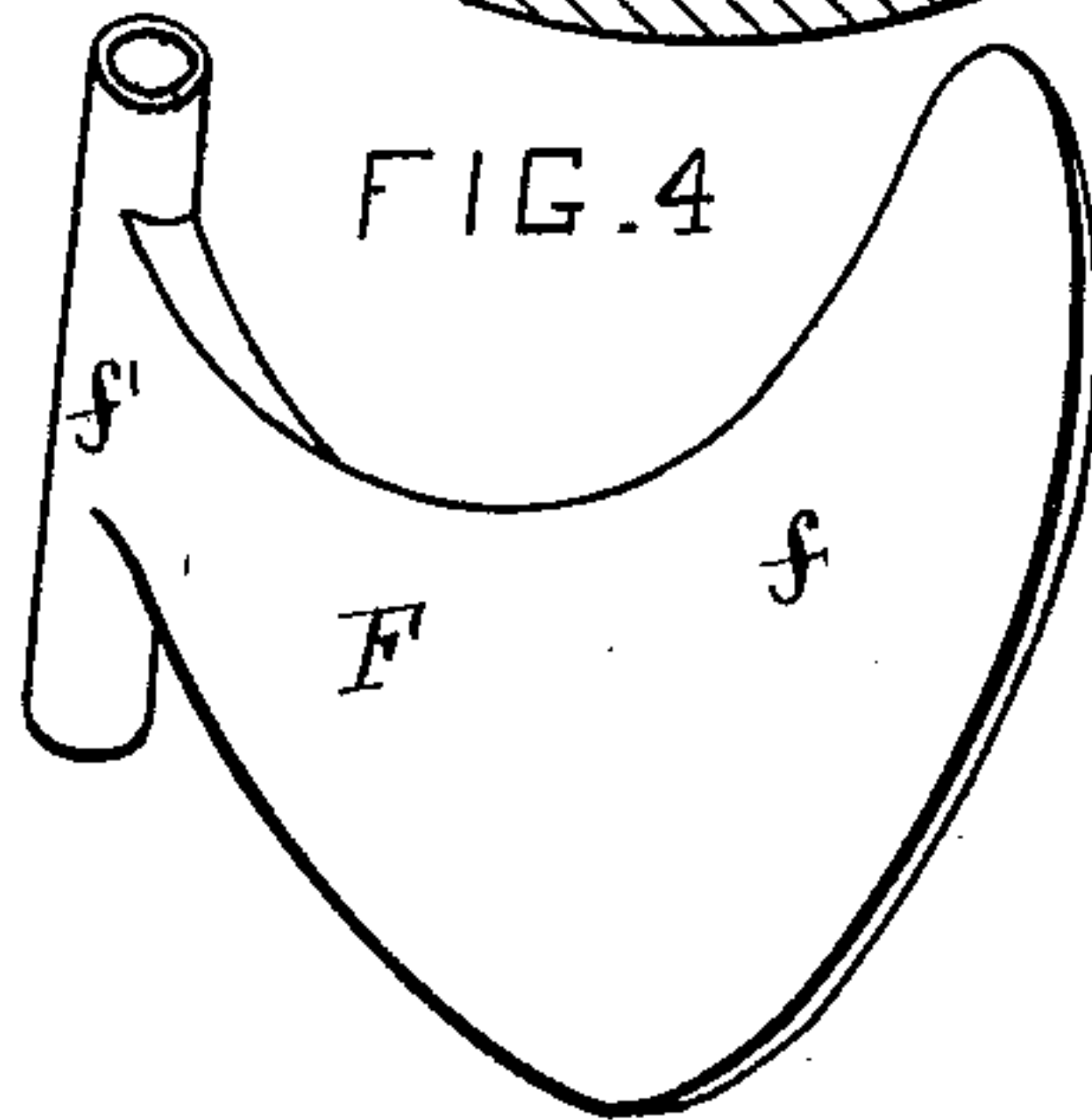


FIG. 4



WITNESSES
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ICE-CREAM FREEZER.

SPECIFICATION forming part of Letters Patent No. 386,112, dated July 17, 1888.

Application filed May 11, 1887. Serial No. 237,894. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. DAWLEY, a citizen of the United States, residing at Chillicothe, in the county of Ross and State of Ohio, have invented a certain new and useful Improvement in Ice-Cream Freezers, of which the following is a specification.

My invention relates to the improvement of that class of ice-cream freezers wherein rotary motion may be communicated to either the can or internal paddle-carrying shaft; and the objects of my invention are to provide an ice-cream-freezing can with an internally-revolving shaft carrying peculiarly-shaped paddles, adapted to both agitate the cream and scrape the same from the inner side and bottom of the can, to provide for the adjustment of said paddles on the shaft, and to easily and readily shift the revolving motion from the shaft to the can, and vice versa. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the ice-tub and freezing-can, showing in elevation the internal shaft and its paddles. Fig. 2 is a transverse section of the can and ice-tub, taken between the upper paddle and top of the can. Fig. 3 is a plan view of the can-cover, with the tub-cover removed. Fig. 4 is a perspective detail view of one of the paddles; and Fig. 5 is a side elevation of the can-lid, taken at right angles with Fig. 1.

Similar letters refer to similar parts throughout the several views.

A represents the cylindrical freezing-can, pivotally seated, in the usual manner, in the bottom of the ice-tub B, within which it is adapted to be revolved.

C represents a vertical shaft, made to pass loosely through holes formed in the center of the ice tub cover *b* and can-cover *a*, and having its lower end pivoted loosely within a socket or depression formed in the center of the bottom of the can. Fixed on the upper end of the shaft C is a miter-wheel, *c*, which gears with a miter-wheel, *d*, carried on one end of a horizontal shaft, D, the latter having its central portion bearing within and supported by a suitable metallic bearing-arm, E, made to project from the top of the ice-tub

cover, to which its base is secured. To the remaining end of the shaft D is detachably secured a crank, *e*.

F represents the scraping and agitating paddles, each of which consists of a thin metallic plate, *f*, made to project from a vertical elongated collar, *f'*, with which it is preferably formed. This plate or paddle *f* is lobe-shaped, and is bent to incline slightly upwardly at an angle with its collar *f'*, its outer curved edge extending within a short distance of the inner side of the can. The paddles are made to project from the shaft C within the can by passing said shaft through the collars *f'* and fixing them in the desired relative position and at the desired height thereon by means of set-screws *g*, one of which is made to pass through a screw-hole formed in each of the collars *f'* and to bear against the shaft. In order to produce the best results, the paddles are usually arranged on the shaft so that their lobes will follow each other spirally, as shown in the accompanying drawings. The lower edge of the lower paddle is preferably made straight, in order that when made to revolve it will scrape the frozen cream from the bottom of the can.

The shaft C has fixed thereon, at a point immediately above and adjoining the upper surface of the can-lid, a square collar or nut, *i*. Made to extend upwardly from the upper side of the can-cover *a*, at equal distances from the shaft C, are two oppositely-located projections, *h*, having their flanged bases secured in any well-known manner to the surface of the can-cover.

H represents a cross-piece, of any suitable material, having a square hole, *k*, through its center, through which is made to pass at a point above the can-cover the shaft C, and the ends of which are seated within notches formed in the upper sides of the projections *h*, or made to bear against opposite sides of said projections, as hereinafter described.

When it is desired to revolve the can to freeze the cream, the pivoted cross-piece H is dropped down on the shaft until the nut *i* is within the square hole *k* thereof, and its tapering ends made to bear against opposite sides of the projections *h*, as shown in dotted lines in Figs. 3 and 6 of the accompanying draw-

ings. Motion is then communicated to the shaft C through the miter-wheels *c* and *d* and shaft D by turning the crank *e*. The engagement of the nut *i* with the angular sides of the hole *k* of the cross-piece H will cause the latter to turn with the shaft, and the cross-piece, in turn bearing against the projections *h*, as described, will cause the can to revolve. When the cream is sufficiently frozen, the shaft C, with its paddles, may be revolved independently of the can by raising the cross-piece until its hole *k* surrounds the round portion of the shaft above the nut *i*. The ends of the cross-piece are then dropped into the notches of the projections *h*, as shown in full lines in Figs. 3 and 6 of the drawings. The can is prevented from turning with the shaft by means of short stop-arms *y*, made to extend downwardly from the under surface of the tub-cover on opposite sides of the cross piece H, said stop-arms being of sufficient length to meet and prevent the turning of the cross-piece when the latter is elevated to its position in the notches of the projections *h*.

It will be seen that, the paddle-lobes being inclined as shown, and set as desired, the cream will be thoroughly agitated, while the edges of the paddles will at the same time scrape the

frozen cream from the sides and bottom of the can. The incline of the paddles will cause the same to cut the cream edgewise and thus add to the ease of operation.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an ice-cream freezer, the combination, with the can having projecting from the lid thereof the notched projections *h*, of the rotary paddle-carrying shaft pivoted within said can and having nut *i*, and cross-piece H, having square hole *k*, pivoted on said shaft, substantially as and for the purpose specified.

2. In an ice-cream freezer, the combination of the ice-tub having stop-arms *y*, the can having notched projections *h*, the cross-piece H, adapted to engage said stops and projections, and the rotary shaft C, carrying a number of inclined adjustable agitating-paddles adapted to scrape the cream from the inner surface of the can, substantially as and for the purpose specified.

JOHN M. DAWLEY.

Witnesses:

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