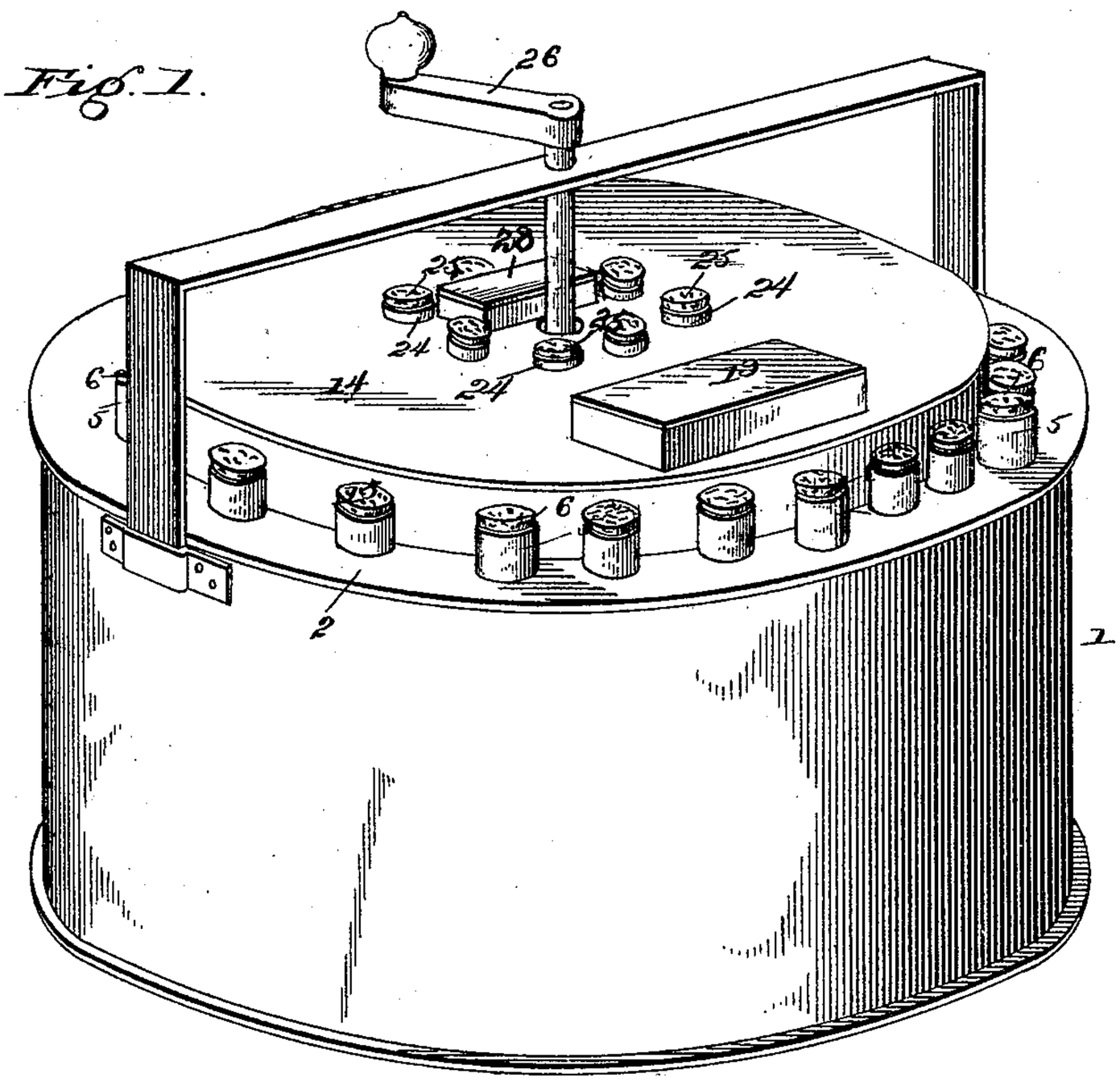
(No Model.) 2 Sheets—Sheet 1.

J. M. SKIPPER.

ICE CREAM FREEZER.

No. 517,492. Patented Apr. 3, 1894.

Fig. 1.



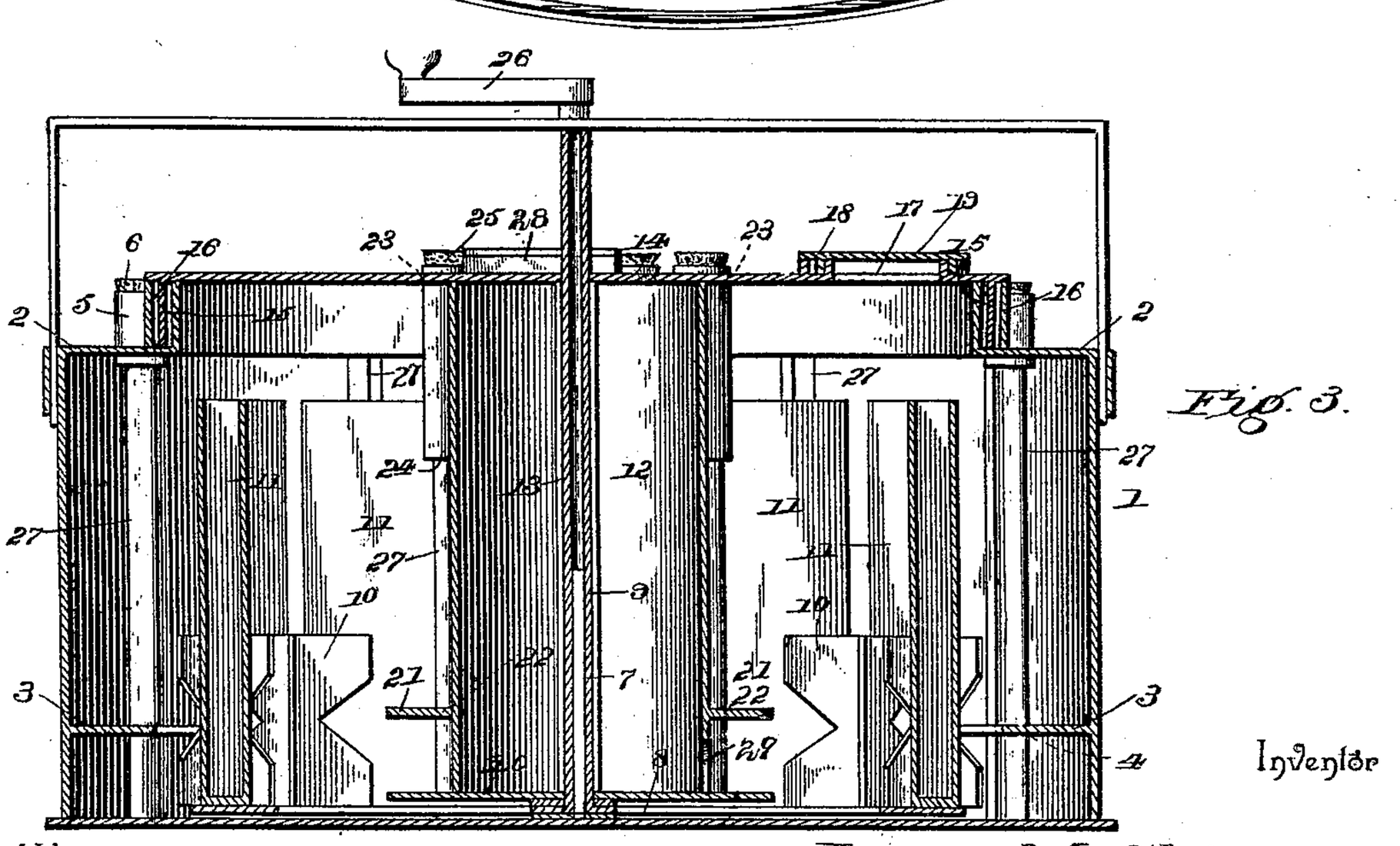


Fig. 3.

Witnesses:
F. H. Johnson.
W. S. Dwall.

Inventor
James M. Skipper.
By his Attorneys.
Cashow & Co.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. M. SKIPPER.

ICE CREAM FREEZER.

No. 517,492. Patented Apr. 3, 1894.

Fig. 2.

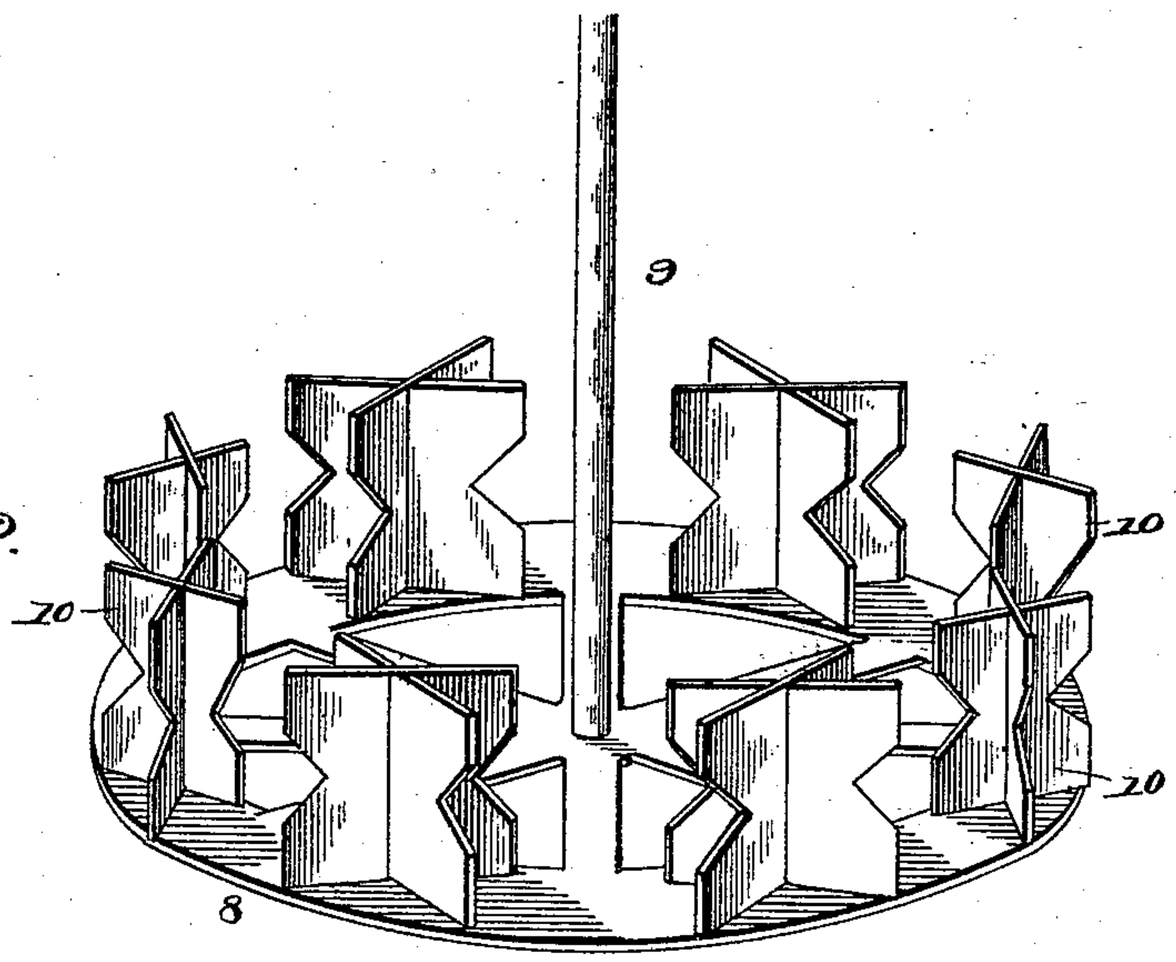
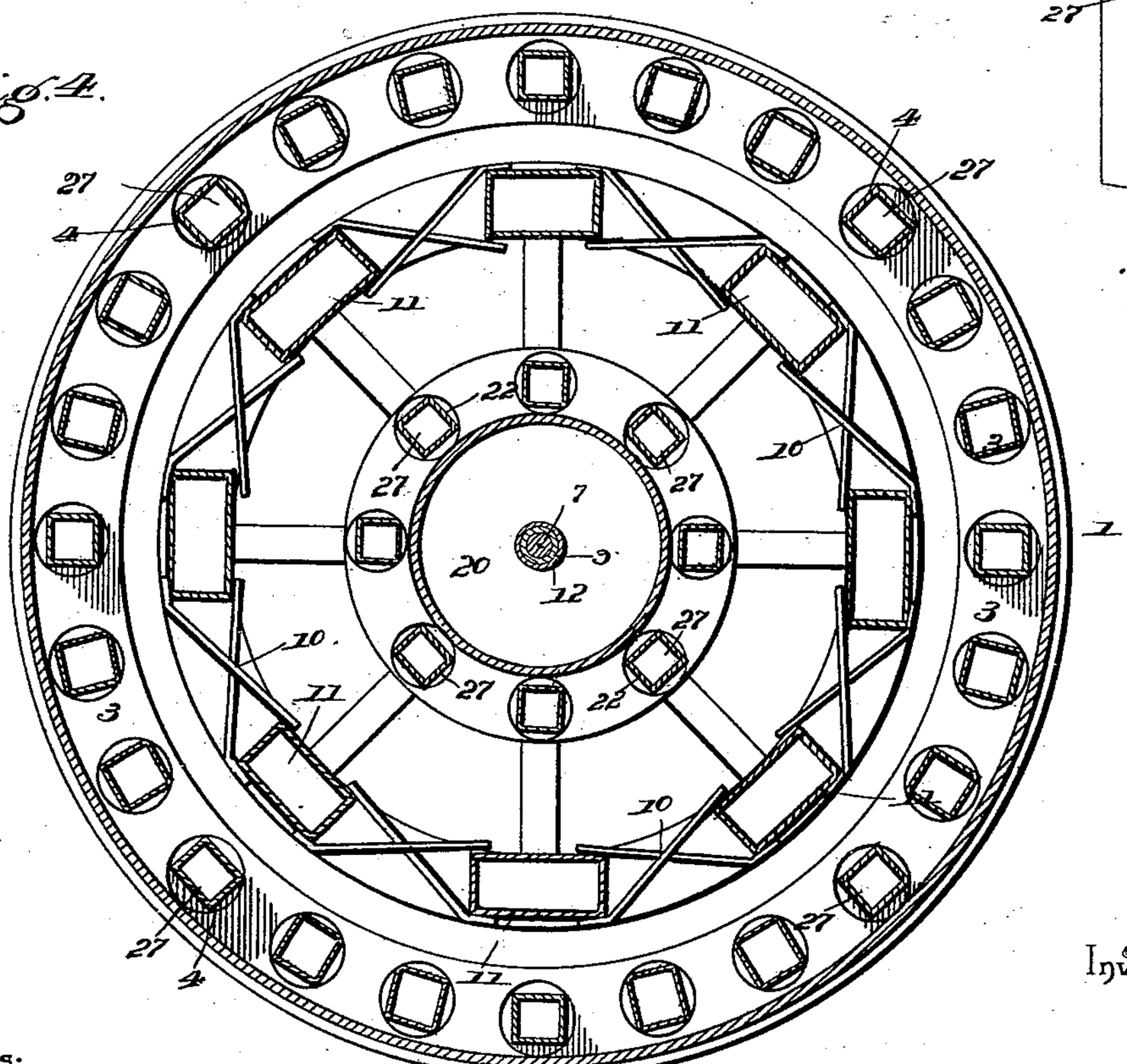


Fig. 5.

Fig. 4.



Inventor

Witnesses:

F. P. Johnson.

W. S. Duvall.

By his Attorneys. James M. Skipper.

C. A. Snow & Co.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES M. SKIPPER, OF GRANBURY, TEXAS, ASSIGNOR OF ONE-HALF TO JOHN W. HOLDEN, OF SAME PLACE.

ICE-CREAM FREEZER.

SPECIFICATION forming part of Letters Patent No. 517,492, dated April 3, 1894.

Application filed August 22, 1893. Serial No. 483,733. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. SKIPPER, a citizen of the United States, residing at Granbury, in the county of Hood and State of Texas, have invented a new and useful Ice-Cream Freezer, of which the following is a specification.

My invention relates to improvements in ice-cream freezers; and the objects in view are to provide a machine for effectually and with slight labor freezing cream; to be so constructed as to freeze the cream into sticks of merchantable size and adapted for retail trade; and, furthermore, to provide for a simultaneous manufacture of ice, so that as the cream is frozen water may be congealed forming ice that may be subsequently employed in the freezer or otherwise.

Various other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of an ice-cream freezer embodying my invention. Fig. 2 is a similar view in detail of the agitator. Fig. 3 is a transverse vertical section of the machine. Fig. 4 is a transverse horizontal sectional view through the entire apparatus. Fig. 5 is a detail of one of the cream-tubes.

Like numerals of reference indicate like parts in all the figures of the drawings.

In carrying out my invention I employ a cylindrical casing 1, which, in the present instance, is designed to be stationarily mounted upon a suitable base, as a bench or a push-cart, when the freezer is employed by street vendors. The casing has its upper end provided with a circular opening formed therein, its edges leaving the annular flange 2, and a corresponding flange 3 is secured to the inner surface of the wall of the casing near the bottom thereof. These flanges 2 and 3 are at intervals provided with vertically aligning perforations 4, and the upper perforations are provided with surrounding collars 5 in which removable corks or stoppers 6 are inserted. The bottom at its center is provided with a vertical bearing-stud or pin 7, and in the present instance there is mounted rotatably thereon a circular frame or disk 8, from the center of which there rises a vertical shaft 9. This disk 8 is an open disk, as shown, so as to render it light and permit of a circulation of the ice and water therethrough, and is at intervals along its periphery or near its rim provided with pairs of vertical standards 10, the same being X-shaped in cross-section, and between each pair there is seated a water receptacle or can 11, the same being removable and held in vertical position. An inner cylinder 12 is provided with a central tubular bore 13 that fits over the shaft 9, and said inner cylinder is secured to the under side of the main circular cover 14 that surmounts the outer casing. This cover 14 is provided with a depending annular flange 15 that fits in a double flange 16 with which the top of the outer cylinder is provided, the said double flange forming a water-seal in which the flange 15 of the cover 14 fits. The cover is further provided at one side with a rectangular opening 17, which is surrounded by a double flange 18 forming a water-seal in connection with a removable lid 19, the opening 17 being of such size as to permit of the upward withdrawal therethrough of the water-cans 11 heretofore mentioned. The bottom of the cylinder 12 is provided with a disk 20 which projects outward beyond the cylinder, and above the same the cylinder is encircled by a flange 21. The flange 21 is provided with perforations 22 located at intervals therein and vertically aligning with corresponding perforations 23 formed in the cover 14 and from which depend cylindrical pipes 24. The upper ends of these pipes are closed by corks or other stoppers 25. The shaft 9 projects upward through the tube 13 of the inner cylinder, and may be provided with a crank 26 or any other desired means for operating the same. If desired the machine may be mounted upon a hand-cart and through ordinary gearing with the hub or axle thereof, be rotated. The inner and outer cylinders, it will be seen, are, in the present instance, intended to be stationary while the disk revolves, but it will be obvious that the disk may be sta-

tionary and the inner and outer cylinders revolved if desired, such being within my invention.

Located in the openings 23 and 22 and in the openings 5 and 4 is a series of cream tubes 27, the same being in this instance rectangular in cross-section and loosely fitting in the openings so that they may be readily withdrawn after a withdrawal of the corks or stoppers that are located in the collars 5. The inner series of tubes rests upon the disk 20 of the inner cylinder, while the outer series of tubes rests upon the bottom of the external cylinder or casing.

In operation the cream-tubes are partially filled, as are also the water-cans 11 partially filled, the tubes placed in position, and the cans likewise are placed and introduced successively in the opening in the cover 14. After this ice and salt are introduced in proper proportions and quantities into the external cylinder, and in fact it may be introduced into the inner cylinder through a covered opening 28 and as shown said inner cylinder in such instance communicating with the external cylinder through suitable openings 29 formed in the side thereof. The machine being set in motion, it will be seen, that the movement of the ice will cause the tubes to rotate each independent of the other and the strong cold brine will so reduce the temperature of the water in the water-cans as to freeze the water into bricks corresponding in shape to the cans. If the cream is not sold as soon as frozen, the tubes may be removed and inserted through the opening 28 into the inner cylinder and there kept cold and in salable condition, and other tubes substituted for them. As the water is frozen in the water-cans, the cans are successively withdrawn through the rectangular opening in the cover and the ice employed either in the freezer or for other purposes. This ice attachment is particularly adapted to be employed when the machine is used by street vendors or in case of all-day picnics, excursions, &c.

It will be obvious that the water-freezing attachment may be omitted, and instead employ one or two cylinders and the described accessories, and revolve the inner cylinder within the outer cylinder or the outer cylinder around the inner cylinder, such operation being readily secured by an obvious rearrangement of the mechanism.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic.

Having described my invention, what I claim is—

1. In an ice-cream freezer, the combination with an inner and an outer cylinder, holders arranged in said cylinders and having their upper ends covered, and ice-cream receiving tubes loosely and removably seated for independent location in the holders, substantially as specified.

2. In an ice cream freezer, the combination with an inner and an outer cylinder, provided with holders, of a series of cream-receiving tubes loosely arranged for independent rotation in the holders, substantially as specified.

3. In an ice-cream freezer, the combination with inner and outer cylinders provided with holders having removable covers, of a series of cream-receiving tubes rectangular in cross-section and loosely fitting said holders, adapted to rotate therein substantially as specified.

4. In an ice-cream freezer, the combination with an inner and an outer cylinder having holders, of agitating devices arranged in the outer cylinder, and cream-freezing tubes loosely arranged for rotation in the holders, substantially as specified.

5. In an ice-cream freezer, the combination with an outer and an inner cylinder, of a removable cover for the outer cylinder secured to the inner cylinder, flanges arranged on the inner side of the outer cylinder and outer side of the inner cylinder, perforations formed in the cover and the flanges of the inner cylinder and the top and flanges of the outer cylinder, flanges surrounding said perforations of the top and cover, covers arranged in the flanges, and a series of cream-receiving tubes arranged in the perforations and flanges, substantially as specified.

6. In an ice-cream freezer, the combination with an outer and inner casing, cream tubes therebetween of water-cans contained between the cream tubes, and agitating devices, substantially as specified.

7. In an ice-cream freezer, the combination with an outer and an inner cylinder, a rotatable agitator arranged within the outer cylinder, of cream tubes, and water-receptacles, the latter being carried by the rotatable agitator, substantially as specified.

8. In an ice-cream freezer, the combination with the outer and the inner cylinders, of holders, cream-tubes arranged in the receptacles, a rotatable disk arranged between the bottoms of the two cylinders, a shaft extending from the disk upward through the inner cylinder and provided with operating means, a series of X-shaped standards arranged on the disk, and a series of removable water-receptacles arranged between the X-shaped standards, substantially as specified.

9. In an ice-cream freezer, the combination with the outer cylinder formed with an annular opening in its upper end having a surrounding horizontal flange, and an internal horizontal flange, aligning perforations formed in the said flanges, a central pin, a disk arranged on the pin and having a central shaft rising therefrom to a point above the cylinder, cream-tubes arranged in the perforations

in the flanges, and water-receptacles carried by the disk, of an inner cylinder having a central bore arranged on the shaft, a perforated circular cover secured to the upper end of the inner cylinder and having an opening covered and communicating with the same, outer cylinder perforations in the flange agreeing with those in the cover, and cream tubes arranged therein, and in the perforations in the flanges of the cylinder substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES M. SKIPPER.

Witnesses:

JOHN T. HELSLEY,

PHIL JACKSON.