

No. 620,615.

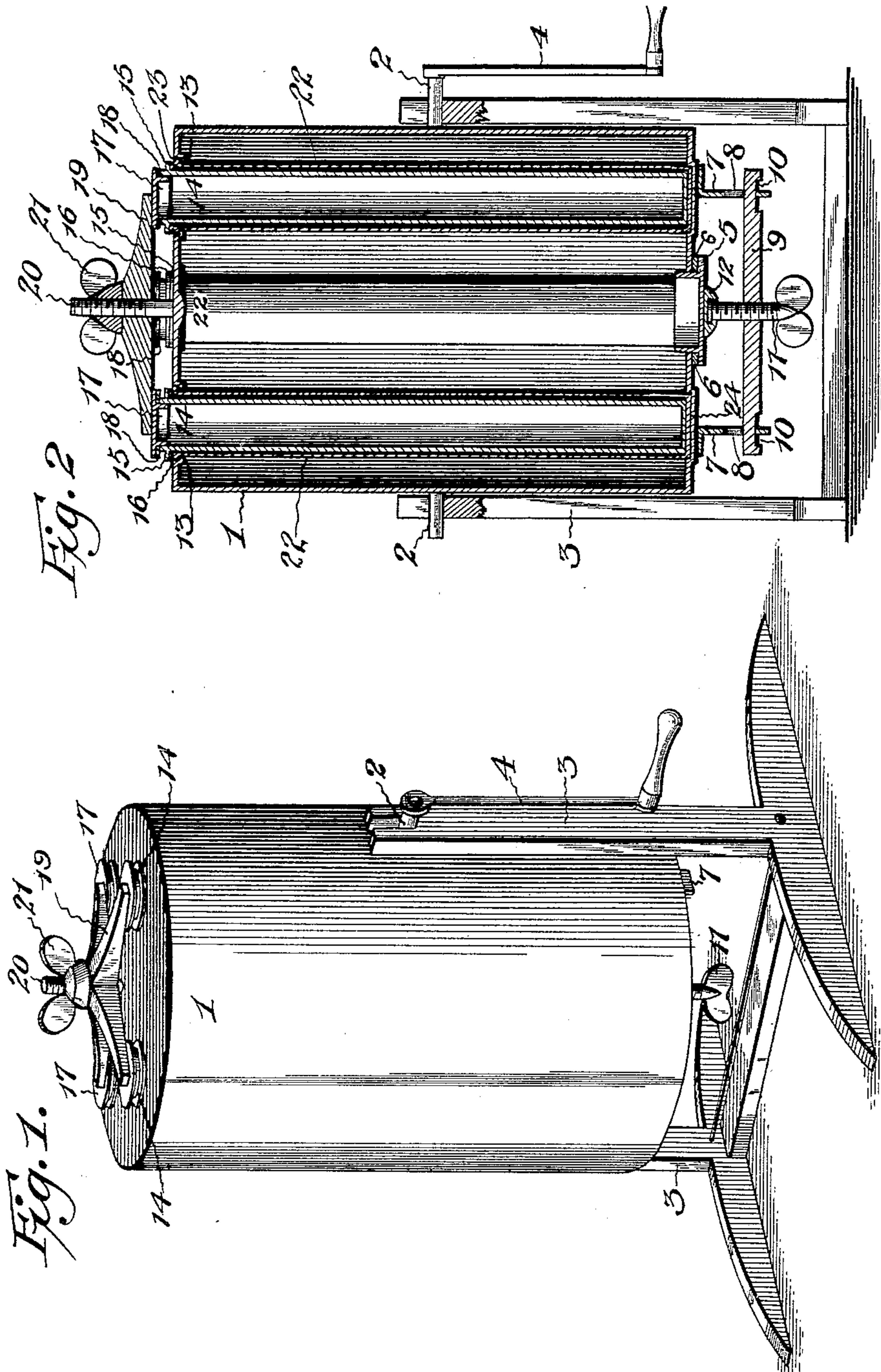
Patented Mar. 7, 1899.

W. J. SHAFFER.

CONVERTIBLE ICE CREAM FREEZER AND CHURN.

(Application filed May 3, 1898.)

(No Model.)



Witnesses

A. Roy Appleman

[Signature]

By *his* Attorneys,

William J. Shaffer, Inventor.

Cashnow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM J. SHAFFER, OF ENNIS, TEXAS, ASSIGNOR OF ONE-SIXTH TO
G. W. MASSEY, OF SAME PLACE.

CONVERTIBLE ICE-CREAM FREEZER AND CHURN.

SPECIFICATION forming part of Letters Patent No. 620,615, dated March 7, 1899.

Application filed May 3, 1898. Serial No. 679,574. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. SHAFFER, a citizen of the United States, residing at Ennis, in the county of Ellis and State of Texas, have invented a new and useful Convertible Ice-Cream Freezer and Churn, of which the following is a specification.

My invention relates to a convertible ice-cream freezer and churn, and has for its object to provide a simple, compact, and efficient construction and arrangement of parts adapted for use in the capacity either of a churn or an ice-cream freezer.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a convertible churn and ice-cream freezer constructed in accordance with my invention. Fig. 2 is a central sectional view of the same.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

1 designates a cylindrical receptacle provided with lateral trunnions 2, mounted in suitable bearings in a supporting-frame 3, one of the trunnions being extended to form a crank 4. In one end of the receptacle is formed an opening fitted with a removable cap 5, which is flanged and provided with a packing-ring 6, and upon opposite sides of said opening are arranged brackets 7, having slots 8 for the reception of the extremities of the cross-head 9, said cross-head being notched at its outer side, as shown at 10, to engage the outer ends of the slots in the brackets. Mounted in the cross-head is a set-screw 11, provided at its inner end with a bearing-disk 12 for contact with the exterior surface of the cap. This capped opening, which is preferably located centrally in one end of the cylinder, is designed to provide for the introduction of milk when the apparatus is to be used as a churn or ice when the same is to be used as a freezer, and by arranging said end of the receptacle uppermost the materials mentioned may be readily introduced. In the opposite end of the recep-

tacle are formed openings 13, arranged, preferably, in a circular series, and therein are fitted the terminally-flanged tubes 14, closed at their inner ends and provided at their outer ends with flanges 15 to bear upon the exterior surface of the end or head of the receptacle, a packing-ring 16 being introduced between each flange and the exterior surface of the head to form an air-tight and water-tight joint. Also fitted in the outer end of each tube is a removable flanged cap 17, upon the collar of which is fitted a packing-ring 18. These tubes, with their caps, are suitably and securely held in place by means of a clamping-spider 19, fitted at its center upon a central bolt 20, upon which is threaded a thumb-nut 21. The spider is provided with a number of arms corresponding with the tubes 14, and said arms are adapted to bear, respectively, upon the caps of the tubes, whereby when the thumb-nut is tightened the tubes are securely locked in their positions in the openings of the cylinder-head, and the caps of said tubes are also so secured as to prevent the escape of the contents of the tubes.

In order to provide for the removal of the tubes 14 without exposing the contents of the receptacle 1, I preferably employ seating-tubes 22, of which the upper flanges 23 are countersunk in the head of the receptacle and of which the lower closed ends are stepped in seats 24, arranged on the inner surface of the opposite head of the receptacle. These seating-tubes may be permanently secured in the receptacle; but in the drawings I have shown the same arranged with the flanges 23 flush with the exterior surfaces of the head and covered by the above-described washer 16, upon which is seated the flange 15 of the removable tube 14. This makes a compact and efficient construction and at the same time provides for the removal of the seating-tubes when it is desired to thoroughly cleanse the interior of the receptacle.

The removable tubes 14 are designed to receive cream when the device is adapted for use as an ice-cream freezer, it being possible to place different flavorings in the several tubes, and they are adapted for the reception of a tempering agent, such as hot water or ice, when the apparatus is intended for use as a churn

in order that the proper temperature of the contents of the receptacle may be attained; also, the machine may be used for making ice by placing water in the tubes 14.

5 From the above description it will be seen that the apparatus is simple and compact, and as both ends of the receptacle are open, or as the interior of the receptacle is accessible from either or both ends, the proper cleansing thereof may be attained with facility; also, 10 the conversion of the apparatus from a churn to an ice-cream freezer, or vice versa, consists, simply, in exchanging the functions of the receptacle and tubes. For instance, when designed for use as a churn the receptacle forms 15 a vessel to hold the milk, while the tubes constitute means for holding a tempering agent; but when designed for use as an ice-cream freezer the tubes form the receptacle for the milk or 20 cream, while the tempering agent, such as ice, is arranged in the body of the receptacle.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit 25 or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

30 1. In an apparatus of the class described, the combination of a cylindrical receptacle mounted for end-over-end rotary movement, and provided at one end with a series of openings and at the other end with a series of

aligned seats, and also provided at the center of the second-named end with an opening fitted 35 with a removable cap, whereby a freezing element may be introduced into the receptacle, seating-tubes removably fitted in said series of openings with their inner ends arranged in said seats, receiving-tubes fitted in said 40 seating-tubes, caps for the receiving-tubes, and means for applying pressure to said caps to maintain the receiving and seating tubes in their operative positions, substantially as specified. 45

2. In an apparatus of the class described, the combination of a receptacle mounted for rotation and provided in one end with a series of openings, terminally-flanged seating-tubes 50 removably fitted in said openings and stepped at their opposite ends in seats on the inner surface of that head of the receptacle which is opposite to said openings, removable tubes fitted in the seating-tubes and flanged at their 55 outer ends, packing-rings, caps removably closing the open ends of the inner tubes, and means for securing said caps in place, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 60 in the presence of two witnesses.

WILLIAM J. SHAFFER.

Witnesses:

S. T. ALLEN,
E. D. SHAFFER.