No. 699,856. Patented May 13, 1902.

E. STUTZ.

CAN FOR FREEZING WATER.

(Application filed Aug. 7, 1901.)

(No Model.)

Fig: 1.

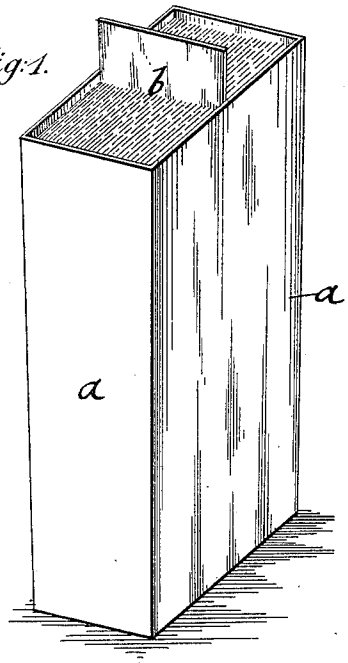


Fig: 2.

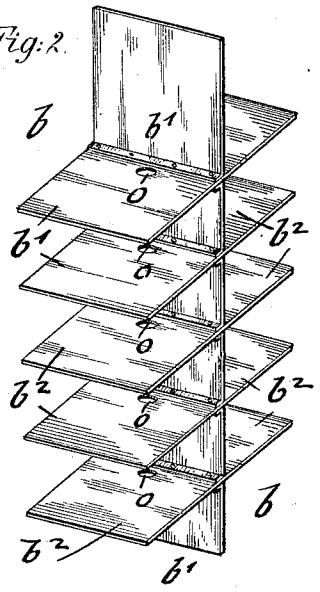


Fig: 4.

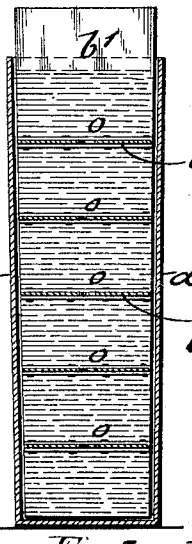


Fig: 3.

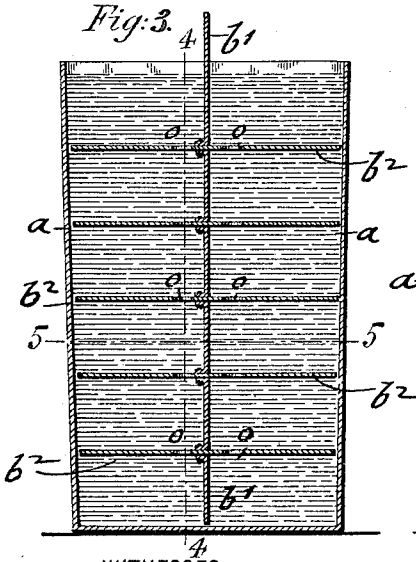


Fig: 6.

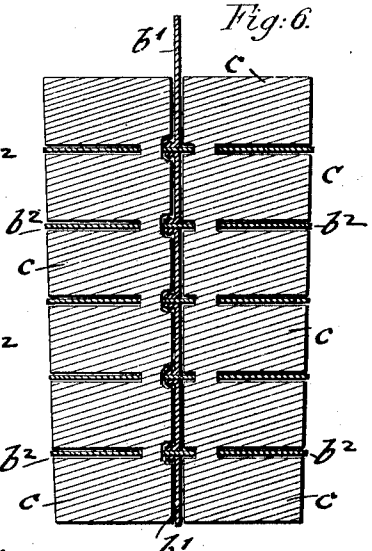
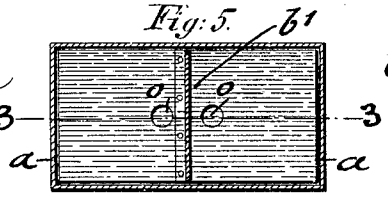


Fig: 5.



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UNITED STATES PATENT OFFICE.

ERNEST STUTZ, OF BROOKLYN, NEW YORK.

CAN FOR FREEZING WATER.

SPECIFICATION forming part of Letters Patent No. 699,856, dated May 13, 1902.

Application filed August 7, 1901. Serial No. 71,242. (No model.)

To all whom it may concern:

Be it known that I, ERNEST STUTZ, a citizen of the United States, residing in New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Cans for Freezing Water, of which the following is a specification.

This invention relates to an improved can for freezing water, so that cakes of smaller size ready for delivery are obtained, the freezing process considerably shortened, and the loss of time and the waste incidental to the cutting up or sawing of the blocks into small cakes avoided.

The invention consists of an upright can for freezing water which is provided with an interior removable frame, formed of an upright and transverse partitions, the transverse partitions having apertures for permitting the expansion of the water and the escape of the air in the same, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improved can for freezing ice. Fig. 2 is a perspective view of the removable frame used with my improved can for freezing water. Fig. 3 is a vertical longitudinal section of the can on line 3 3, Fig. 5. Fig. 4 is a vertical transverse section of the same on line 4 4, Fig. 3. Fig. 5 is a horizontal section of the can on line 5 5, Fig. 3; and Fig. 6 is a vertical longitudinal section of the partition-frame with the cakes of ice frozen thereon and removed from the can.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, *a* represents an upright freezing-can of the ordinary shape and size as used in plants for the manufacture of artificial ice. The cans are made of galvanized sheet metal, slightly tapering from the upper to the lower ends for facilitating the removal of the cakes of ice after heating the exterior of the can with hot water or other means. In the can *a* is placed a removable frame *b*, formed of a central upright partition *b'* and a plurality of transverse partitions b^2, arranged on each side of said partition *b'* and having their outer ends adjacent to the opposite side walls of the upright can. The central upright partition *b'* is formed of a number of individual sections having flanged or bent-up ends which are riveted to the transverse partitions, or the central upright partition may be made in one piece and the transverse partitions arranged at their inner ends with bent-up flanges and riveted to the upright partition, or any other means for connecting the upright and transverse partitions may be employed. Any number of transverse partitions may be used, and in addition to the upright central partition a second or more upright partitions may be employed in case smaller-sized cakes are to be produced. The transverse partitions b^2 have apertures *o* near their inner ends, which are arranged approximately in the vertical center line of the upright can, so as to lie in what may be termed the "zone of least resistance" for the escape of the air and the expansion of the water during the process of freezing, during which the water rises from the lower cells to the uppermost cells of the can without retarding or interfering with the freezing process, which takes place from the bottom and side walls toward the interior of the can until the water is frozen into one solid cake onto the partition-frame.

When the freezing process is completed, the can is removed from the brine-tank and subjected on the exterior to heat, so that the cake of ice can be removed, together with the partition-frame, from the can, after which the individual smaller cakes are severed from the partitions by a few blows on the same, so as to be ready for delivery, or the cakes can be sent out frozen on the partition-frame and removed successively from the same as required by delivery of the cakes to customers. In this manner the cutting up or sawing of large blocks or cakes of ice into small pieces is dispensed with and a neat and convenient cake of small size delivered directly for family use. Owing to the saving in time in delivery and the prevention of waste, the cakes can be sold at a lower rate than the ordinary pieces of ice heretofore delivered from the ice-wagons.

This freezing process in cans provided with interior removable partition-frames is accomplished in about one-third of the time required for freezing large blocks, so that the ice-freez-

ing plant is utilized to better advantage. The metallic partition-frame being a higher conductor of heat or cold than the water and being arranged centrally of the upright can serves to accelerate the escape of the heat from the central part of the water, which is the last to freeze, by reason of the fact that the water freezes along the walls of the can, retarding thereby the transmission of heat from the center of the water. The transverse partition serves to transmit the heat from the interior to the central upright partition, so that the water in the can, which occupies the cellular spaces, freezes from all sides, thereby considerably accelerating the process.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In combination, with an upright can for freezing water, of a removable partition-frame composed of upright and transverse partitions, the transverse partitions being provided with apertures adjacent said upright partition, substantially as set forth.

2. A cellular partition-frame for an upright freezing-can, consisting of an upright partition centrally arranged in said can, and a plurality of transverse partitions, the transverse partitions being provided with apertures adjacent said centrally-arranged upright partition and approximately the center of the can, substantially as set forth.

3. The combination, with an upright can for freezing water, of a removable partition-frame of sheet metal, consisting of a central upright partition, a plurality of transverse partitions on each side of said upright partition, said transverse partitions having their outer ends adjacent the walls of said upright can, and apertures at their inner ends adjacent said central upright partition, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ERNEST STUTZ.

Witnesses:
PAUL GOEPEL,
JOSEPH H. NILES.