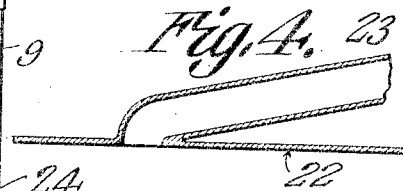
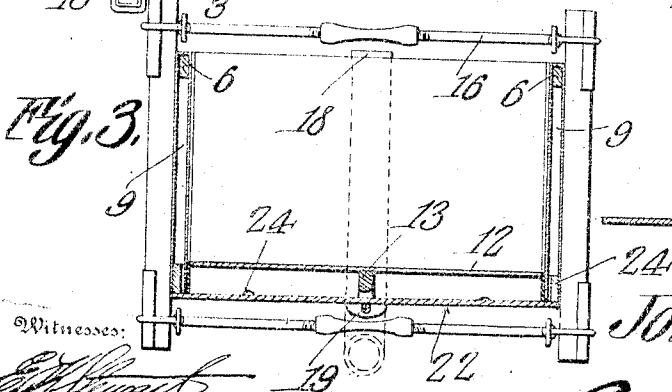
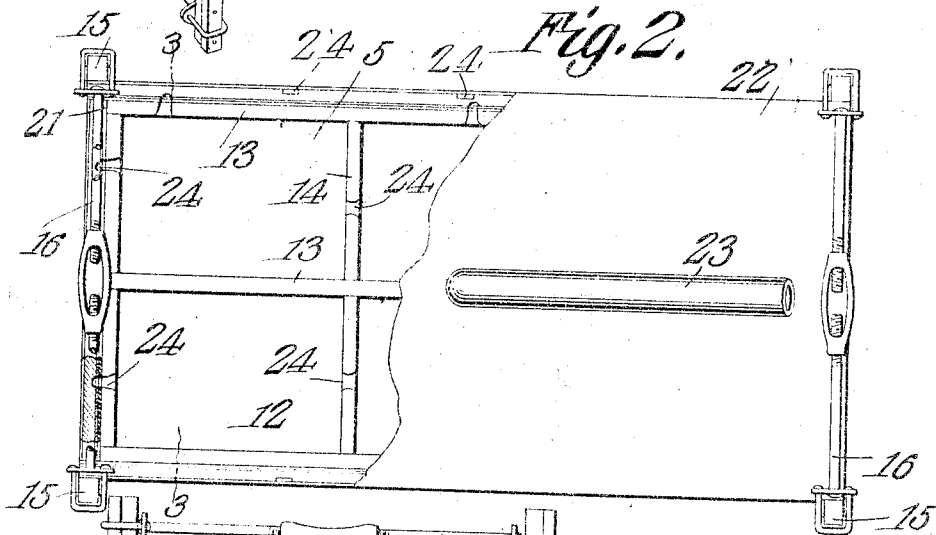
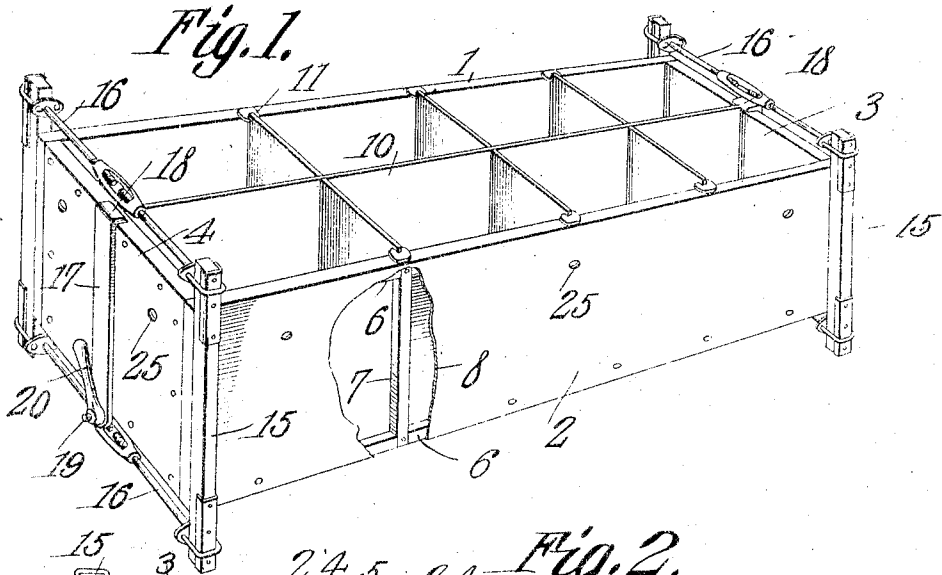


J. H. LEWIS.
ICE FREEZING TANK.
APPLICATION FILED JAN. 3, 1910.

986,835.

Patented Mar. 14, 1911.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN H. LEWIS, OF RHINELANDER, WISCONSIN.

ICE-FREEZING TANK.

986,835.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed January 3, 1910. Serial No. 535,959.

To all whom it may concern:

Be it known that I, JOHN H. LEWIS, a citizen of the United States, residing at Rhineland, in the county of Oneida and State of Wisconsin, have invented a new and useful Ice-Freezing Tank, of which the following is a specification.

This invention relates to ice freezing tanks.

The object of the invention is to provide an apparatus of this character that shall be adapted for freezing water into lumps of ice of any desired shape without the employment of an artificial refrigerant, and in which the removal of the cakes may be accomplished in a ready and rapid manner.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same, consists, generally stated, in a tank divided into compartments of a size that will determine that of the cakes of ice. This tank is a knock down structure and comprises bottom, side and end walls. The bottom is preferably of metal and the side and end walls of wood covered with metal, while the compartments and the partitions forming the compartments will preferably be made of metal, *per se*. The side, end and bottom walls are held detachably assembled, and in order to prevent the escape of water, a suitable packing preferably of rubber will be interposed between the meeting edges of the parts.

As a matter of further improvement, there is provided means for supplying a current of heated air or the like beneath the bottom and between the side and end walls, whereby to cause the ice to melt these points and thus become detached from these parts and from the partitions.

Further and more specific details of construction will hereinafter more fully appear.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts:—Figure 1 is a view in perspective of an ice freezing tank constructed in accordance with the present invention. Fig. 2 is an inverted plan view. Fig. 3 is a transverse sectional view taken on the line 3—3, Fig. 2. Fig. 4 is a perspective detail view of a portion of the apparatus.

The tank, as above stated, comprises side walls 1 and 2, end walls 3 and 4, and a bottom wall 5. The side and end walls are preferably constructed of longitudinal and ver-

tical beams 6 and 7, and these are inclosed in a sheathing 8 of metal, preferably of zinc or galvanized iron, forming thereby a series of compartments 9 in each of the four walls, one being shown in Fig. 3 into which the heating medium is introduced for the purpose of loosening the ice.

Arranged within the tank is a series of partitions 10 defining compartments in which the water is placed, and these partitions are held in vertical position by keepers or cleats 11 secured to the upper edges of the side walls. The bottom 5 is constructed of a sheet 12 of metal, and is secured to a gridded frame comprising longitudinal and transverse beams 13 and 14.

Secured at each corner of the side walls is a post 15 and these posts extend above and below the upper and lower edges of the tank, and are engaged by the turn buckles 16 by which the parts are firmly clamped together transversely. In order to exert longitudinal draft upon the end walls two cleats 17 are employed, the upper end of each of which is provided with a flange 18 to engage with the upper edge of the end walls, and the lower end of each of which is arranged to receive a longitudinal bar 19 which is threaded for the reception of a lever 20, by which pressure may be applied to the end walls.

In order to render the tank water-tight, there is a packing of rubber or other suitable material 21 interposed between the meeting portions of the side and end walls.

The means for effecting the release of the frozen product comprises a false bottom 22 which is provided with a pipe 23 to be connected with a blow torch or a steam pipe. This false bottom is, as shown in Fig. 2, disposed over the longitudinal and transverse beams 13 and 14 of the bottom, and upon the heating medium being supplied to the pipe 23, the same will circulate around the bottom and between the sheathing of the side and end walls, passages 24 being provided to secure the desired circulation. The heating medium escapes through openings 25 formed in the side and end walls, as clearly shown in Fig. 1. The heat can also be applied by placing a blow torch or the like to the sides and bottom of the tank and thus do away with the space in the walls.

In the operation of the tank after the parts have been properly assembled, it is filled with water and placed out of doors and when all of the water is frozen, the

heating medium supplied. As soon as the ice melts sufficiently to free it from cohesion with any part of the tank, one of the ends is removed and the ice taken out.

I claim:—

1. A freezing tank comprising a false bottom, having an inlet, a gridded frame bearing on the false bottom, an upper bottom secured to said frame, there being openings within the frame, hollow side walls lapping the sides of the frame and bearing on the false bottom, there being passages for establishing communication between the interior of the frame and the interiors of the side walls, hollow end walls bearing upon the false bottom and against the ends of the frame, the interiors of said end walls communicating with the interior of the frame, corner posts secured to the ends of the side walls and extending above and below the frame, means engaging the projecting ends of the posts for binding the side walls against the side edges of the end walls, partitions interposed between the side walls, and keepers upon the upper edges of said walls and engaging and holding the partitions.

2. An ice freezing tank including a false bottom, hollow side walls bearing thereon,

hollow end walls interposed between the side walls and bearing on the false bottom, a gridded frame bearing on the false bottom and interposed between the side and end walls, an upper bottom secured upon said frame, there being passages for establishing communication between the interiors of the walls and frame and between different portions of the frame, posts secured upon the ends of the side walls and projecting above and below said walls, adjustable means engaging the projecting end posts for binding the side walls upon the end walls, each of said walls having outlet openings in the upper portion thereof, cleats bearing against the outer faces of the end walls and flanges engaging the upper edges of said walls, a connecting rod engaging the lower ends of the cleats, and means upon said rod for drawing the end walls toward each other.

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

JOHN H. LEWIS.

Witnesses:

CHAS. B. PETERSON,
J. C. COUTURE.