

No Model.)

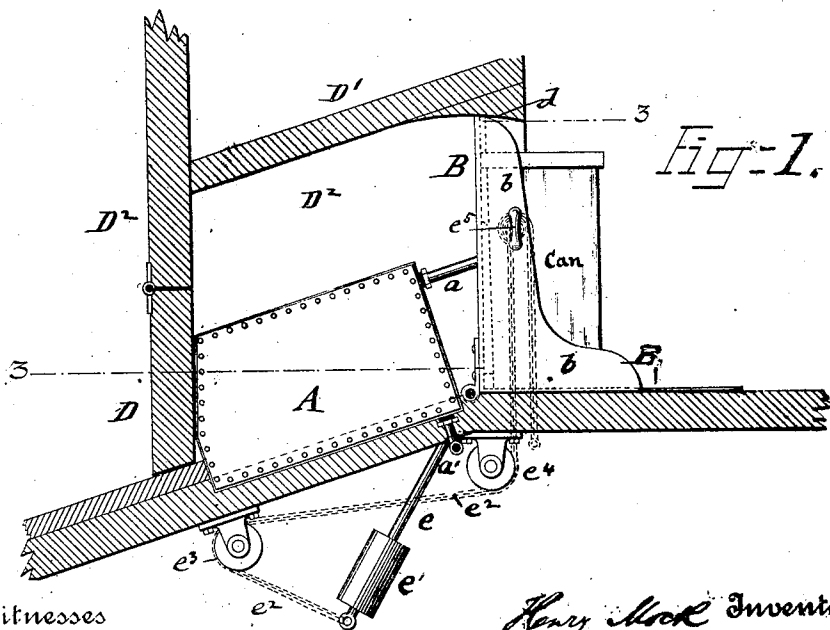
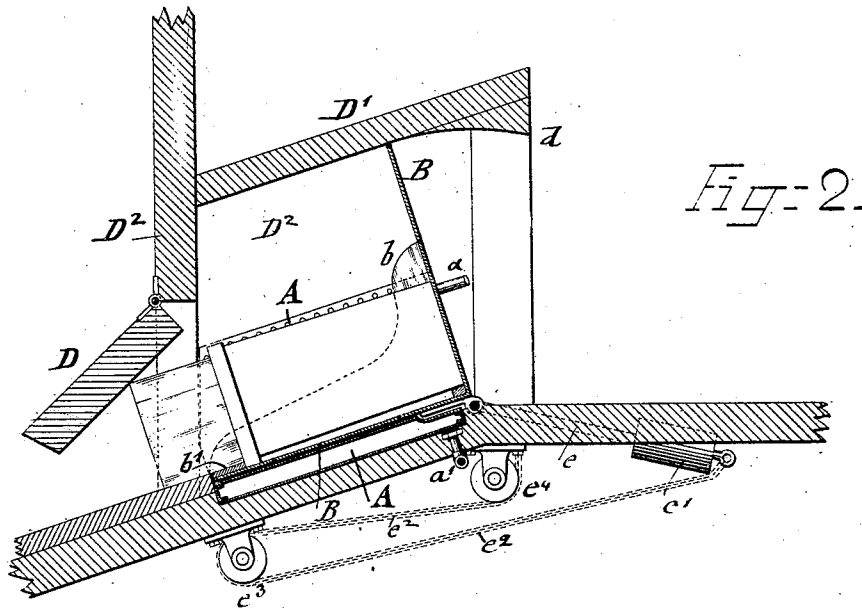
2 Sheets—Sheet 1.

H. MOCK.

APPARATUS FOR REMOVING CAKES OF ICE FROM FREEZING CANS.

No. 508,145.

Patented Nov. 7, 1893.



Witnesses
G. Baydany
Charles Schuster

Henry Mock Inventor
By his Attorneys Frank P. Rogers

(No Model.)

2 Sheets—Sheet 2

H. MOCK.

APPARATUS FOR REMOVING CAKES OF ICE FROM FREEZING CANS.

No. 508,145.

Patented Nov. 7, 1893.

Fig-3-

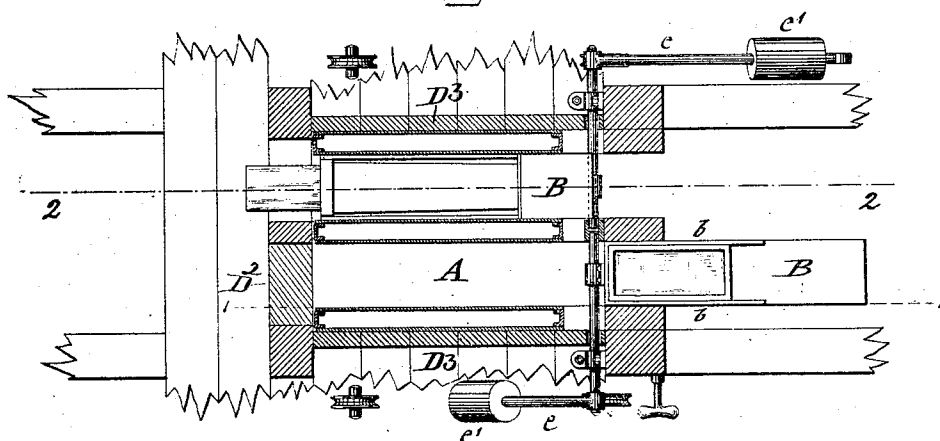


Fig-4-

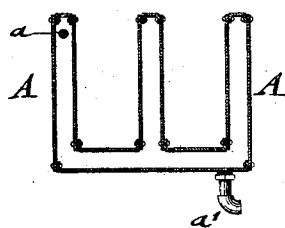
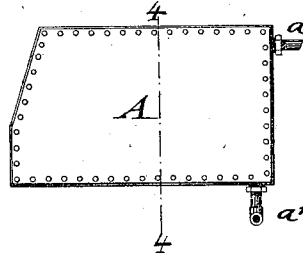


Fig-5-



Witnesses
G. Bogdanoff
Charles Schroeder

Inventor
Henry Mock
By his Attorneys G. Bogdanoff & Charles Schroeder

UNITED STATES PATENT OFFICE.

HENRY MOCK, OF NEW-YORK, N. Y.

APPARATUS FOR REMOVING CAKES OF ICE FROM FREEZING-CANS.

SPECIFICATION forming part of Letters Patent No. 508,145, dated November 7, 1893.

Application filed June 17, 1893. Serial No. 477,908. (No model.)

To all whom it may concern:

Be it known that I, HENRY MOCK, a citizen of the United States, residing at New York, county and State of New York, have made certain new and useful Improvements in an Apparatus for Removing Cakes of Ice from Freezing-Cans, of which the following is a specification.

This invention relates to an improved apparatus for removing cakes of ice from the cans in which they are artificially frozen in the refrigerating machine, the removal being accomplished by utilizing the heat of exhaust steam from the engine; and the invention consists of an apparatus for removing cakes of ice from the freezing cans, which comprises an inclined double-walled and steam-heated jacket, open at the ends and top, a hinged and tilting platform, located back of and in line with the steam-heated jacket and means for facilitating the tilting of the platform from the position in which it receives the cans into the jacket, so that the cake is loosened from the can by the heat to which it is subjected and then delivered to a suitable storage receptacle.

The invention consists further in certain details of construction, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1, represents a vertical longitudinal section on line 1 1, Fig. 3, of my improved apparatus for removing cakes of ice from their freezing cans showing the receiving platform in position for receiving a can and before being tilted into the steam-heated jacket. Fig. 2, is a vertical longitudinal section of the same on line 2 2, Fig. 3. Fig. 3, is a plan partly in section, on line 3 3 Fig. 1, and Figs. 4 and 5 are respectively a vertical transverse section on line 4 4, Fig. 5, and a side-elevation of the steam-heated jacket.

Similar letters of reference indicate corresponding parts.

In the drawings my apparatus is shown with a double steam-heated jacket and two tilting platforms, whereby a double apparatus is obtained.

It is obvious that one apparatus or a multiple of the same may be arranged side by

side, as I do not desire to confine myself to the use of two apparatus only.

The apparatus consists of a fixed and steam-heated jacket A which is supported in an inclined position on suitable timbers and constructed of boiler iron riveted together. The cross-section of the jacket A is made of U-shape and double-walled sides and bottom, but open at the ends and top. To the interior space of the sides and bottom of the jacket A is supplied exhaust-steam from the engine or other suitable source of supply. The steam supply pipe *a* is connected with the upper part of one of the side-walls of the jacket, while the water of condensation and the non-condensed steam is conducted off through an outlet-pipe *a'* located at the bottom of the jacket A. The lower ends of the side-walls of the jacket are preferably cut off at the proper inclination, so as to fit against the hinged door D which drops by gravity into closed position, said door being arranged above the inclined timbers or chute on which the jacket A is supported. At or near the upper end of the jacket A is hinged a strong tilting platform of angular shape which is provided at its sides with bracket-shaped guard-plates *b*. The angular platform B rests on the floor of the building in which the freezing tank of the refrigerating machine is located, so that the cans with the frozen cakes of ice in the same can be readily transmitted by a traveling hoist or other suitable device to the platform. The upright portion of the platform B is provided at its end with a thickened portion or shoulder *b'* against which the upper end of the can abuts when placed on the platform and when it is tilted into the jacket A. The ends of the angular platform B swing along the rounded off portion *d* of the inclined top *D'*, which in connection with the end-wall *D*², hinged door D, side-walls *D*³ bottom of the jacket A, and the upright portion of the platform forms a closed heating-chamber the inner surface of the walls of which are lined with asbestos or other suitable non-conductor of heat.

The tilting platform B is hinged at the apex of its angle to the upper bottom edge of the jacket. To the pintle of the hinge on which the platform B swings, is applied an

arm *e* with a balance-weight *e'*, by which the tilting of the platform B is facilitated. This may be accomplished by means of a chain or rope *e²* which is connected to an eye at the outer end of the rod *e*, and which passes over suitable guide-pulleys *e³* *e⁴* and is applied to a hook *e⁵* or other support on the side-wall D³ of the heating chamber so as to be readily removed from the same when raising or lowering the platform B.

- My apparatus is used as follows:—The can containing a frozen cake of ice is conveyed onto the platform, which is then in its initial position on the floor of the refrigerating building. The platform is then tilted with the can into the steam-heated jacket in such a manner that it rests on the inclined bottom of the jacket A. The edge of the can containing the cake rests then against the shoulder *b'* of the outgoing end of the platform B and is thereby prevented from moving out of the jacket. The can is now entirely inclosed in a closed chamber in which a high temperature is sustained by the exhaust-steam conducted into the double walls of the jacket. The heat in the chamber produces the melting of the cake of ice in the can until it can liberate itself and shoot forward by its own weight so as to open the hinged door D being then conducted over the inclined timbers to any suitable place of storage. The platform with the empty can is then returned by the rope or chain *c²* and weight *e²* to its initial position on the floor of the refrigerating building. Another can with a cake of ice is then placed on the platform, tilted with the same into the heating jacket, so that on the melting of the surface of the cake, it is delivered from the can and so on. By the use of two jackets side by side an alternating lowering and emptying of the cans can take place.

The advantages of my improved invention are, first that cakes of ice can be removed from the cans in a shorter time than by the devices heretofore in use; secondly, that the construction is simple, easily handled and not liable to get out of order, and thirdly, that by the utilization of exhaust-steam, the thawing out of the cakes or blocks of ice is very economically accomplished.

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

1. An apparatus for removing cakes of ice from freezing cans, consisting of a double-walled heating jacket and a can-supporting platform adapted to be moved with the can into or out of the jacket, substantially as set forth.
2. An apparatus for removing cakes of ice from freezing cans, which consists of a stationary double-walled heating jacket open at the top and ends, and a platform hinged at or near one end of the jacket and adapted to be tilted into the same, substantially as set forth.

3. The combination, of a stationary double-walled jacket open at the top and sides and provided with means for supplying exhaust-steam to the same, a tilting platform hinged at or near one end of the jacket; and means for lowering or raising the platform into or out of the jacket, substantially as set forth.

4. The combination, with an inclined double-walled jacket open at the top and end, means for heating said jacket, an angular platform hinged at its apex to or near the upper end of the jacket, and means for tilting the platform into the jacket or returning it to its initial position, substantially as set forth.

5. The combination of an inclosing chamber having a door, a can holder disposed in inclined position in said chamber opposite said door, and means for heating said can holder, substantially as set forth.

6. The combination of a closed chamber having a hinged door at one end, and a heater disposed in said chamber in inclined position opposite said door and adapted to receive a can of ice, substantially as set forth.

7. The combination of a receiving chamber having an inclined bottom and a hinged door, a heating jacket open at its top and ends and supported on said inclined bottom, and a can receiving platform hinged to or near the upper end of said jacket, substantially as set forth.

8. The combination of a receiving chamber having an inclined bottom and a hinged door, a heating jacket open at its top and ends and supported on said inclined bottom, an angular can receiving platform hinged at its apex to or near the upper end of the jacket, said platform serving to close the receiving chamber when the platform is in either its initial or in tilted position, substantially as described.

9. The combination of a receiving chamber having a hinged door, a heating jacket open at its top and ends and supported in inclined position opposite said door, and a can receiving platform hinged at its apex to or near the upper end of said jacket, and a stop on said platform adapted to hold a freezing can in the required position, substantially as set forth.

10. The combination of an inclosing chamber having a door, a can holder disposed in inclined position in said chamber opposite said door, means for heating said can holder, a can receiving platform hinged near the upper end of said can holder, and a weight and chain mechanism adapted to tilt and lower said can receiving platform out of and into said can holder, 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.

HENRY MOCK.

Witnesses:

PAUL GOEPEL,
CHARLES SCHROEDER.