(No Model.) 2 Sheets—Sheet 1.

H. MOCK.

APPARATUS FOR REMOVING CAKES OF ICE FROM FREEZING CANS.

No. 556,584. Patented Mar. 17, 1896.

Fig: 1.

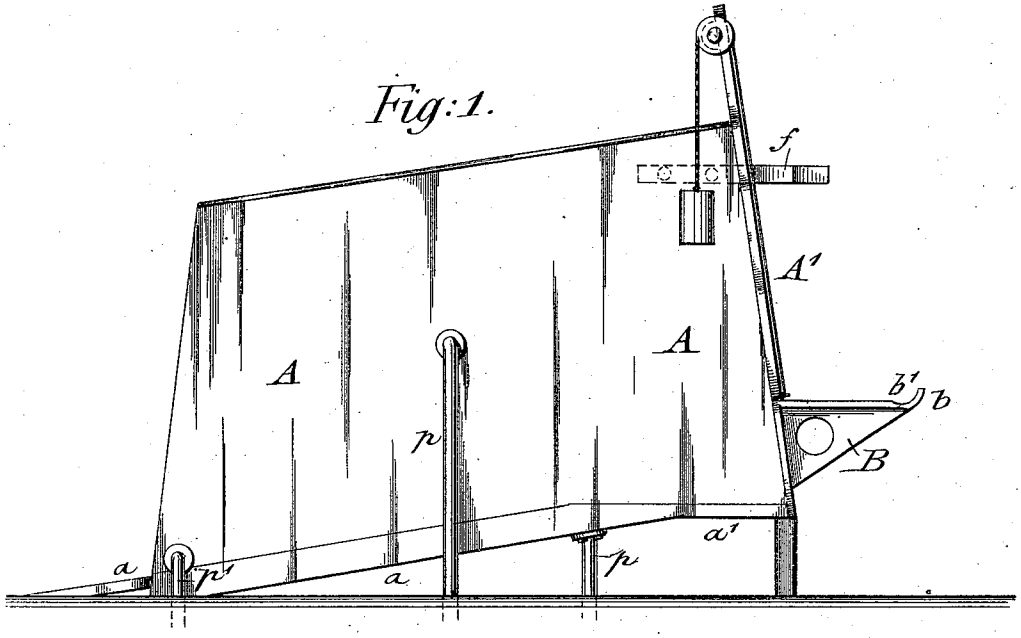


Fig: 2.

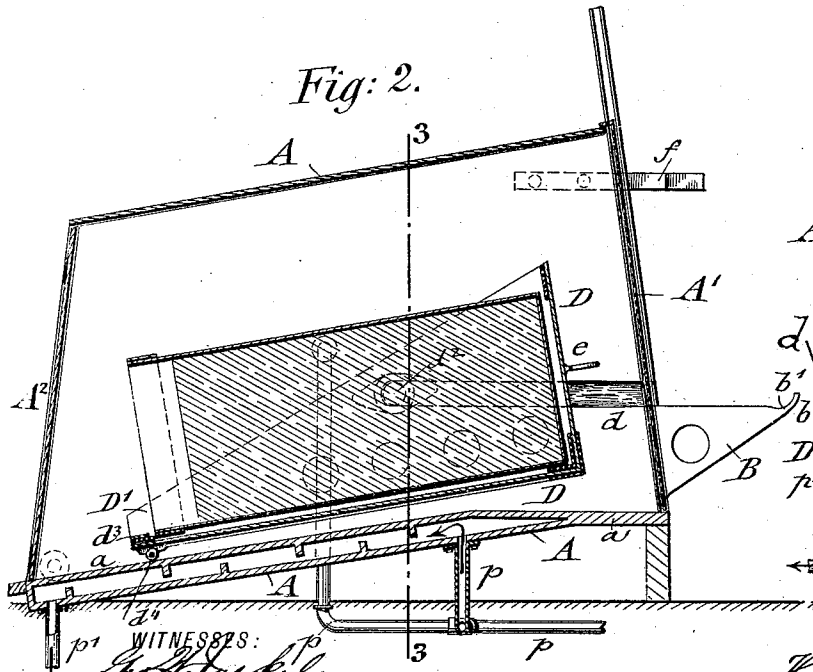
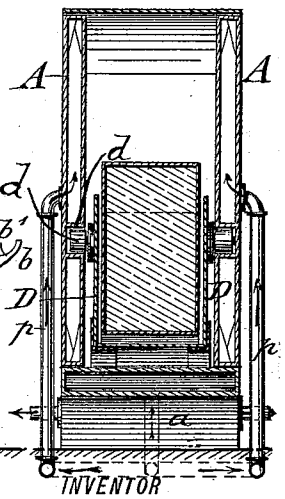


Fig: 3.



WITNESSES:

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Henry Mock

BY

Goepel & Raegener

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

H. MOCK.

APPARATUS FOR REMOVING CAKES OF ICE FROM FREEZING CANS.

No. 556,584. Patented Mar. 17, 1896.

Fig: 4.

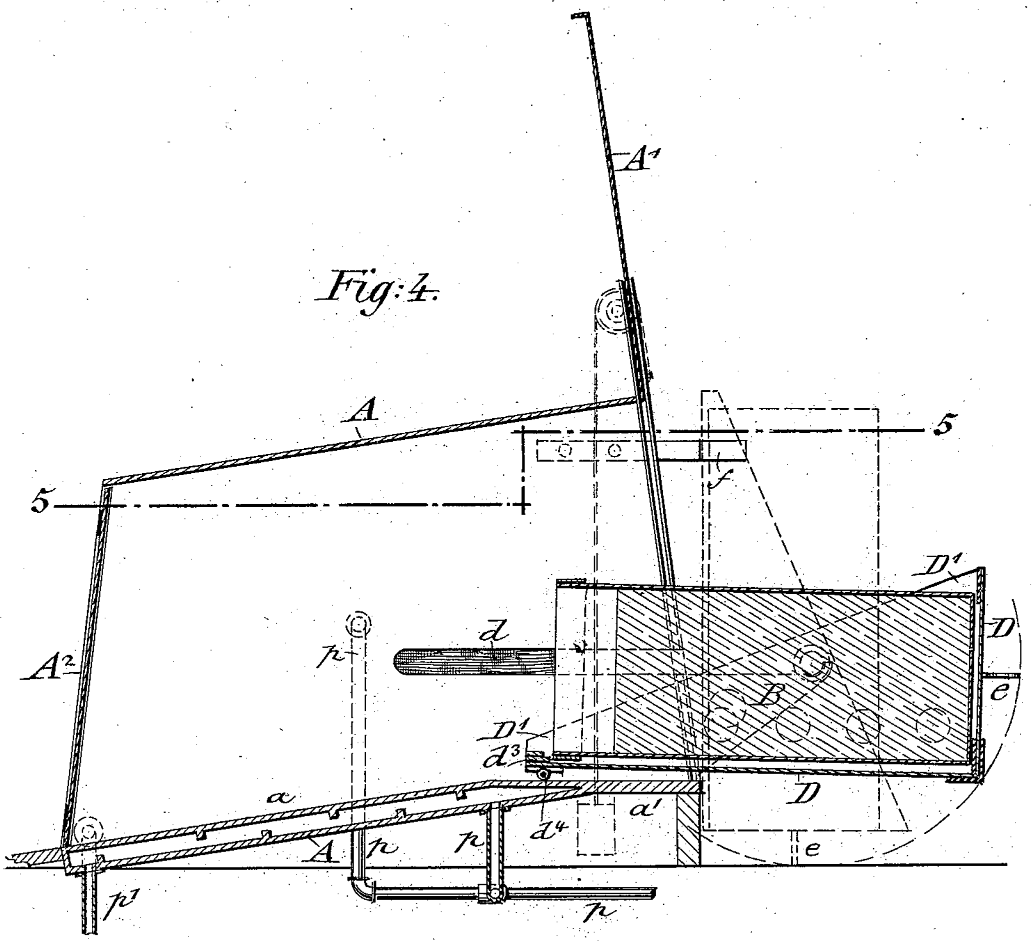
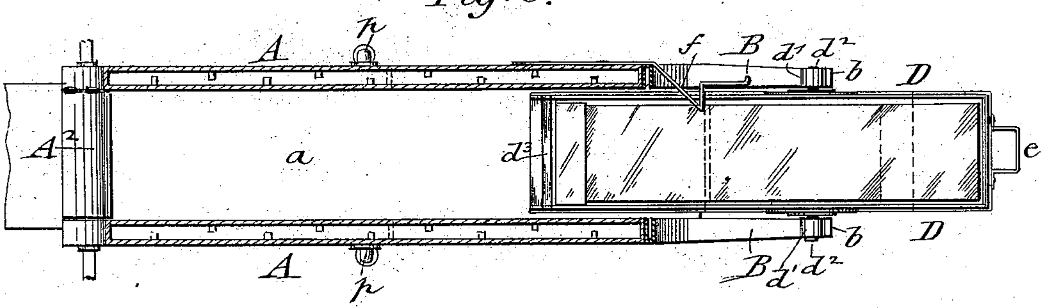


Fig: 5.



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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. 556,584, dated March 17, 1896.

Application filed November 30, 1895. Serial No. 570,670. (No model.)

To all whom it may concern:

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

This invention relates to certain improvements in the apparatus for removing cakes of ice from freezing-cans, for which Letters Patent were granted to me, No. 508,145, dated November 7, 1893, the improvements being designed for the purpose of simplifying the construction of the apparatus and permitting the easier and convenient operation of the same; and the invention consists of an apparatus for removing cakes of ice from freezing-cans, which comprises a steam-heated chamber, open at the ends and provided with gates at the inner and outer ends, stationary brackets at the inner end of the chamber, a tilting platform provided with rollers at its side walls for moving in or out of the chamber and which can be tilted on the brackets from an upright position into a horizontal position, and vice versa, and guide-grooves in the side walls of the chamber arranged in line with the horizontal brackets, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved apparatus for removing cakes of ice from freezing-cans. Fig. 2 is a vertical longitudinal section showing the receiving-platform with a freezing-can on the same at the inside of the heating-chamber in position for discharging the cake of ice. Fig. 3 is a vertical transverse section on line 3 3, Fig. 2. Fig. 4 is also a vertical longitudinal section showing the platform and freezing-can in the act of being transferred into the steam-heated chamber; and Fig. 5 is a horizontal section on line 5 5, Fig. 4.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a double-walled chamber, which is heated by the exhaust-steam from a steam-engine, or by other means, and which is arranged with an inclined bottom *a* having a horizontal inner portion *a'*. The steam-heated chamber A is open at both ends, the inner end being closed by a sliding gate A', which is guided in suitable ways and counterbalanced by weights suspended from chains passing over pulleys, so that the door can be easily raised or lowered for opening or closing the chamber A. The opposite end of the steam-heated chamber A is closed by means of a hinged gate A^2 that is opened automatically by the cake of ice when the same is discharged from the freezing-can, said gate, owing to its inclination, closing automatically as soon as the cake of ice has passed beyond the same.

To the inner end of the chamber A are applied horizontal brackets B, that are provided at their rearmost ends with upwardly-curved hooks *b*. In line with the horizontal brackets B are arranged horizontal guide-grooves *d* in the inner side walls of the chamber A, which serve, in connection with the brackets, for guiding antifriction-rollers *d'* that are applied to fixed pivots d^2 at the side walls of a tilting platform D. The platform D is made of angular shape and provided at its sides with guard-plates D'. The bottom of the tilting platform D is provided with a handle *e*, by which the platform can be pulled backwardly from its inclined position at the inside of the chamber, as shown in Fig. 2, into a horizontal position at the outside of the chamber, as shown in Fig. 4.

By means of the antifriction-rollers *d'* the platform can be readily moved into or out of the heating-chamber A and conveniently tilted into upright position when the rollers *d'* arrive at the ends of the stop-hooks *b* of the brackets B, where they drop into slight depressions *b'* adjacent to the hooks *b*.

When the platform is supported in upright position at the outside of the chamber A, as shown in dotted lines in Fig. 4, the freezing-can can be readily placed on the same, as the heating-chamber is arranged 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 means to the platform D. The upright portion of the platform D is

provided at its end with a thickened portion or shoulder d^3, against which the upper end of the can abuts when placed on the platform and which holds the can in position when the platform is tilted into the heating-chamber A. Below the shoulder d^3 the end of the platform D is provided with an antifriction-roller d^4 at each corner, so that the platform can be easily moved over the inclined bottom a of the chamber A. The double-walled sides and bottom of the chamber A are supplied with steam by pipes $p\ p$, the water of condensation being drawn off by a pipe p' at the lowest point of the bottom, as shown in Figs. 1 and 2.

The apparatus is used as follows: The can which contains a frozen cake of ice is conveyed onto the platform, which is then supported in upright position on the brackets and ready to receive the can transferred to the same. When the tilting platform D is in upright position, it is locked by means of a spring-catch f, which is attached to one of the side walls of the heating-chamber A, as shown in Figs. 4 and 5. When the can is transferred to the platform D, the spring-catch f is released from the platform by the attendant, so that the platform can be tilted from its upright position into horizontal position on the brackets B, as shown in full lines in Fig. 4. The tilting of the platform is facilitated by arranging the antifriction-rollers somewhat below the center of gravity of the platform. As soon as the platform and can are in a horizontal position the handle of the platform is taken hold of and the platform moved on the brackets B and grooves d in line with the same into the heating-chamber A, the platform and can assuming, when the rollers arrive at the inner ends of the guide-grooves, an inclined position, as shown in Fig. 3, as the center of gravity is then in front of the rollers. The sliding gate A′ is then moved in downward direction, so that the inner end of the chamber is closed. The heat in the chamber can then act on the cake of ice in the can, so as to produce the melting of the same until the cake of ice can liberate itself and shoot forward by its own weight against the hinged gate A^2, which it opens sufficiently so that the cake can pass over an inclined chute to any suitable place of storage. As soon as this is accomplished, the sliding gate is opened again, the handle of the platform taken hold of, and the latter pulled with the empty can in backward direction into horizontal position (shown in Fig. 4) and then tilted into upright position, as shown in dotted lines in Fig. 4. The empty can is then removed and another can with a cake of ice in the same placed on the platform, which is tilted again and moved into the heating-chamber, so that the cake of ice is again melted and delivered from the can, and so on. If more than one heating-chamber is required for removing the cakes of ice from cans, the same are preferably arranged side by side, each being provided with its own sliding gate, tilting platform and guiding devices.

The advantages of my improved construction as compared to the construction shown in my prior patent referred to are, first, that the mechanism for tilting the platform is considerably simplified, so that the same can be handled with great facility; second, the construction of the heating-chamber is also simplified, the special double-walled heating-jacket used in my former patent being entirely dispensed with, whereby the apparatus can be supplied at a much lower price, and, third, that by the present construction the apparatus can be finished completely and shipped and put up directly at the place where it is to be used.

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

1. The combination of a heating-chamber, provided with horizontal brackets at the inner end and guide-grooves in line with said brackets, and a tilting platform, provided with rollers guided on said brackets and grooves and adapted to be tilted from an upright position into inclined position, and vice versa, substantially as set forth.

2. The combination of a heating-chamber open at the ends and provided with gates for opening or closing the same, horizontal brackets at the inner end of the chamber, said brackets being provided with stop-hooks at the ends, guide-grooves arranged in the side walls of the chamber in line with the horizontal brackets, and a tilting platform provided with rollers and guided in said brackets and grooves, substantially as set forth.

3. The combination of a heating-chamber open at the ends and provided with a bottom formed of a horizontal inner portion and of an inclined outer portion, gates at the inner and outer ends of said chamber, a tilting platform, means for guiding said tilting platform into and out of the chamber, and means for tilting the platform from its upright position first into a horizontal and then into an inclined position, substantially as set forth.

4. The combination of a heating-chamber, open at the inner and outer ends and provided with gates at the ends, a tilting platform, means for guiding the tilting platform into and out of said heating-chamber, horizontal brackets for supporting the platform outside of the chamber, and a spring-catch adapted for locking the tilting platform into upright position, 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,
GEO. W. JAEKEL.