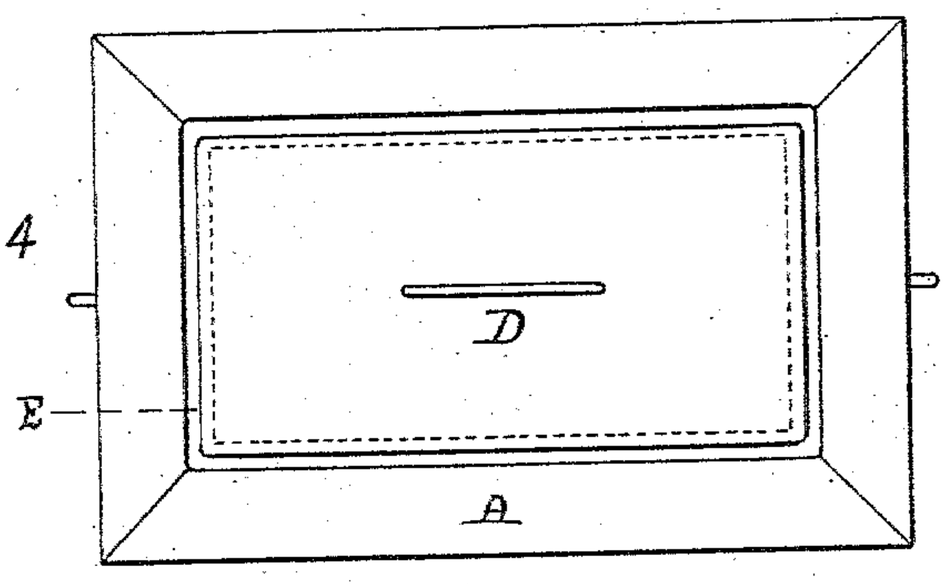
(No Model.)

T. S. DOHERTY.

ICE HOLDER FOR REFRIGERATORS.

No. 356,753. Patented Feb. 1, 1887.

FIG. 4



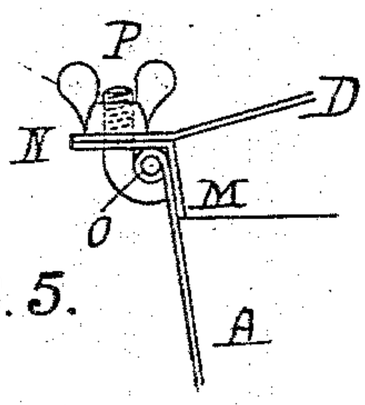
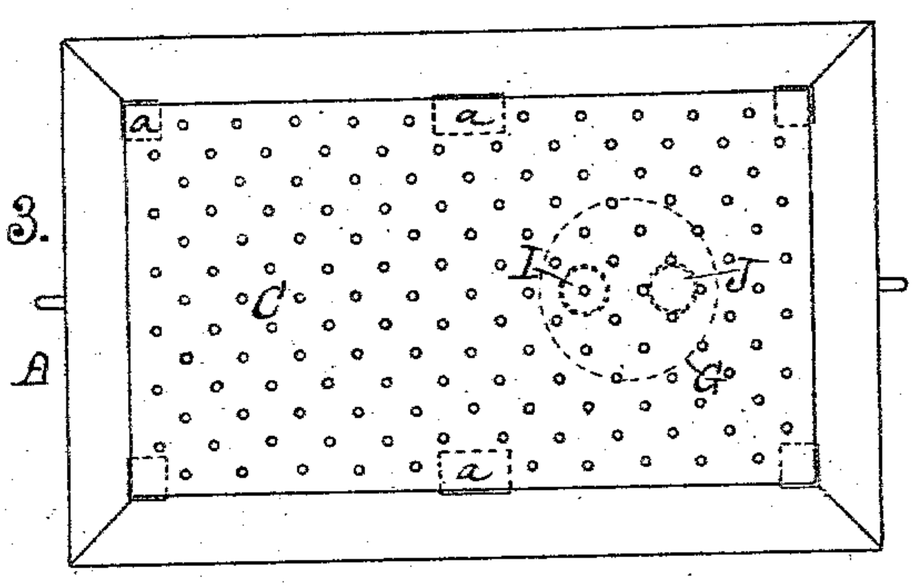


FIG. 5.

FIG. 3.



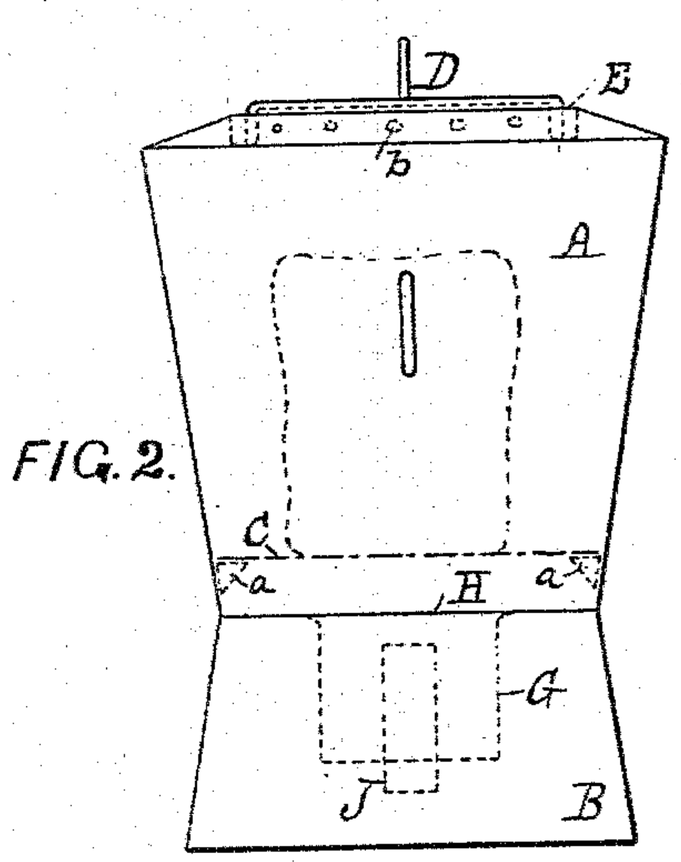


FIG. 2.

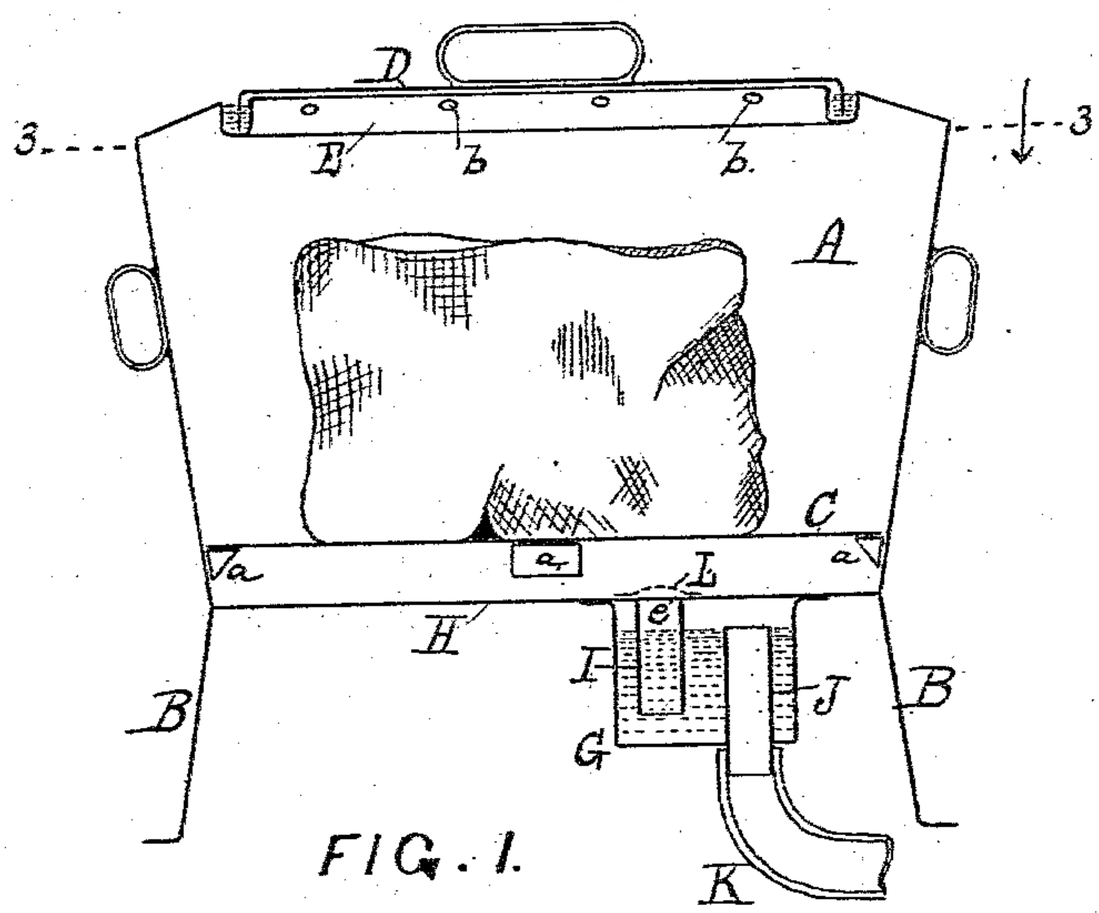


FIG. 1.

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UNITED STATES PATENT OFFICE.

THOMAS S. DOHERTY, OF WILMINGTON, DELAWARE.

ICE-HOLDER FOR REFRIGERATORS.

SPECIFICATION forming part of Letters Patent No. 356,753, dated February 1, 1887.

Application filed June 17, 1886. Serial No. 205,437. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. DOHERTY, a citizen of the United States, residing at Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Ice-Holders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of movable holders or receptacles for ice which are adapted to be used in connection with a refrigerating-chamber and to be placed in any part of the refrigerating-chamber as may be desired, in order to receive the maximum benefit from the cooling properties of the ice. These holders receive the ice and are made air-tight, so that the ice is isolated and protected from the air-currents within the refrigerating-chamber, and at the same time the arrangement is such that the ice is kept away from the drip-water, so as not to be melted thereby. In this manner a great saving of ice is effected. These holders are made of thin metal, preferably of galvanized iron, so that the cooling properties of the ice are transmitted to the refrigerating-chamber without perceptible diminution.

The present invention consists in an improved construction of holders of this general character, the improved construction resulting in a more perfect isolation of the ice from the air-currents, and hence adding to the efficiency of the holder.

The improved holder is illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section of the holder. Fig. 2 is a side view. Fig. 3 is a horizontal section in a plane indicated by the line 3 3 in Fig. 1. Fig. 4 is a plan view, and Fig. 5 is a view of a modified joint for the cover.

A is the body or ice-chamber of the movable holder, which may be made of any desired shape and dimensions. This holder has closed bottom and sides and an open top, through which the ice is introduced, and it is supported above the floor of the receptacle in which it is placed by legs B B. The ice rests above the bottom of the holder on a perforated shelf, C, which is supported on brackets *a a*, carried by the inner walls of the holder-body. This shelf keeps the ice above and out of contact with the drip-water.

After the ice has been placed in the holder, the top of the holder is closed by a cover, D. To carry out the purpose of the invention, which is to isolate the ice within the holder from exterior currents, it is essential that the joint between the cover and holder should be air-tight, and at the same time to render the holder practical and efficient the cover should be readily and easily removable. To accomplish these objects, a water seal or trap is used to close the joint between the holder and the cover. To this end the top of the holder is formed with a trough-shaped rim, E, which is supplied with a liquid, such as water. The cover has a downwardly-projecting flange, F, which fits in said trough-shaped rim, its lower edge resting in and being sealed by the water contained in the rim. This forms an air-tight joint, and one which renders it easy and quick to place the cover in position and to remove the same. To carry off any surplus water which may be in the trough-shaped rim, the inner margin of the trough may be made lower than the outer margin, or the inner vertical walls of the trough may be provided with vent-holes *b b*, in either of which cases any surplus water will fall within the holder and be carried off with the drip-water.

The disposal of the drip-water so as to keep the same out of contact with the ice forms the second feature of the invention. Attempts have been made to accomplish this result by having the ice rest on a movable partition, which will rise as the ice melts, and so keep the ice away from the drip-water. Such a device renders the holder too complicated and expensive in construction. In the present invention the perforated shelf C, on which the ice rests, is just above the bottom of the holder. Beneath the holder, and suspended from the bottom thereof, is a small reservoir, G. The

ice-chamber, through an aperture, *e*, in the bottom H, communicates with this reservoir by a short pipe, I, which reaches nearly to the bottom of the reservoir. A second pipe, J, having its upper end near the top of the reservoir G, extends outward through the bottom thereof. The drip-water from the ice flows from the bottom of the main chamber of the holder through the pipe I into reservoir G, filling the latter with water, and closing the lower mouth of the pipe I until the level of the water in the reservoir reaches the open mouth of pipe J. An effectual water-seal is thus formed, so that no air-currents can reach the ice through the discharge. Any surplus drip-water is carried off through pipe J. As this water is usually utilized for drinking purposes, it is preferably conducted through a flexible pipe, K, to a discharge-spigot in the refrigerating-chamber. This pipe K is flexible, so as not to interfere with placing the holder in any desired position. To purify the drip-water, a strainer, L, is placed over the upper mouth of pipe I.

In Fig. 5 is shown a modification of the air-tight joint at the cover. In this case the cover is provided with a funnel-shaped downwardly-projecting flange, M, which enters in between the holder-walls. At the same time the cover has a horizontal flange, N, extending out over the outwardly-projecting rim O of the holder. A screw-clamp, P, holds the cover on the holder and renders the cover air-tight.

I claim as my invention—

1. A movable ice-holder having a movable cover secured thereto by an air-tight joint, in combination with a discharge-pipe for the drip-water, and a water-seal between said discharge-pipe and the holder-chamber, substantially as set forth.

2. A movable ice-holder having an ice compartment or chamber, a removable cover, and a water seal between said chamber and cover, in combination with a discharge-pipe, and a water seal between said discharge-pipe and said chamber, substantially as set forth.

3. A movable ice-holder having a trough-shaped rim at its top for holding a sealing-liquid, in combination with a removable cover having a downwardly-projecting flange which fits in said trough-shaped rim, substantially as set forth.

4. A movable ice-holder and a reservoir suspended beneath the same, in combination with an inlet-pipe leading from the holder-chamber to near the bottom of the reservoir, and an outlet-pipe leading from near the top of the reservoir to the exterior of the same, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS S. DOHERTY.

Witnesses:

THOMAS S. LEWIS,

JOSEPH B. BICKTA.