

G. H. MAETZEL.
Refrigerating-Chamber, &c.

No. 222,144.

Patented Dec. 2, 1879.

Fig. 1.

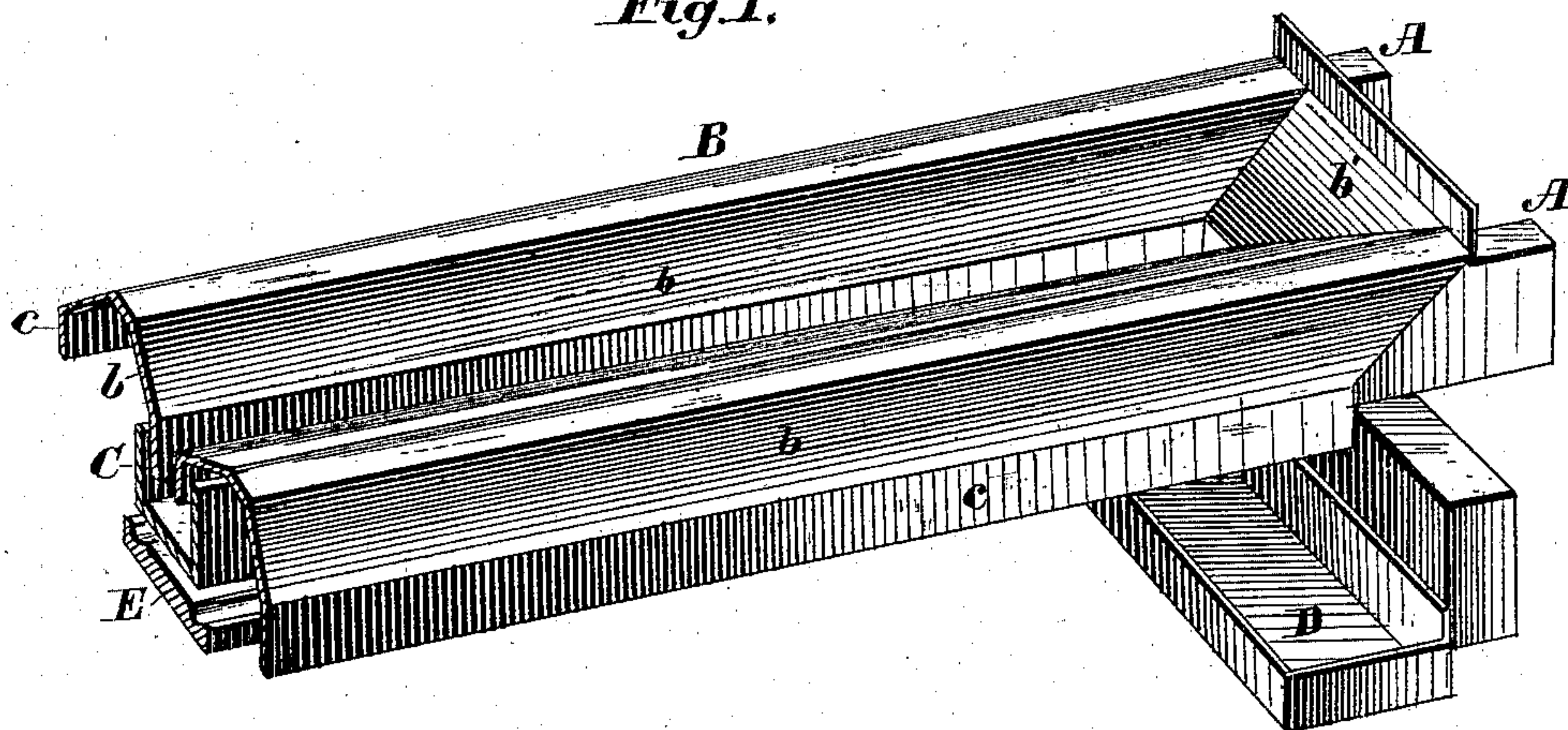


Fig. 2.

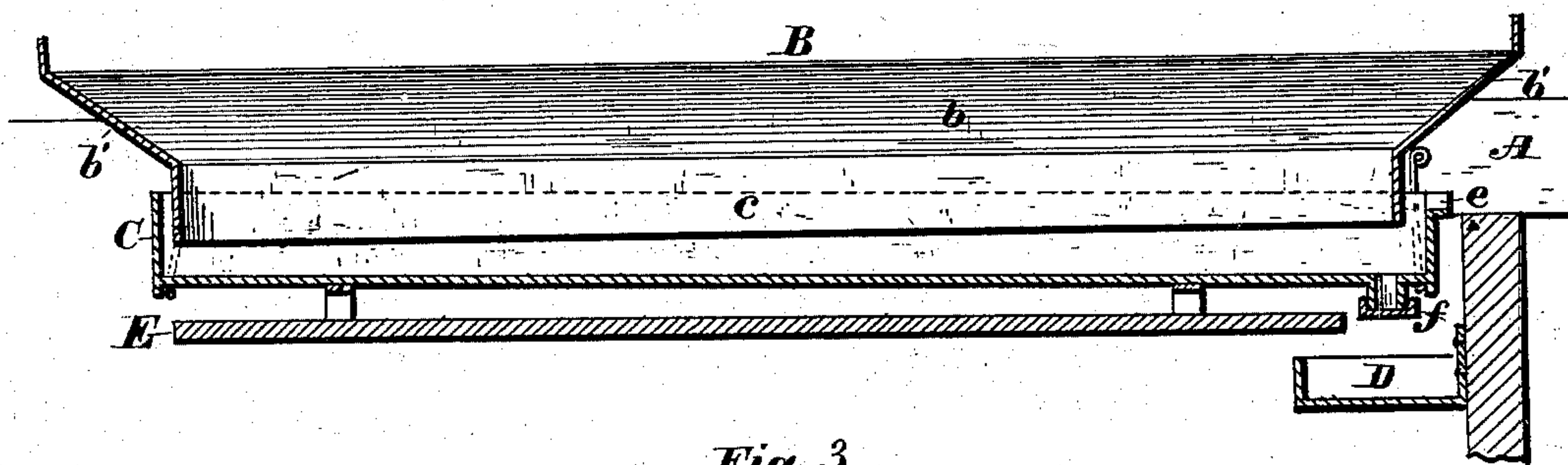
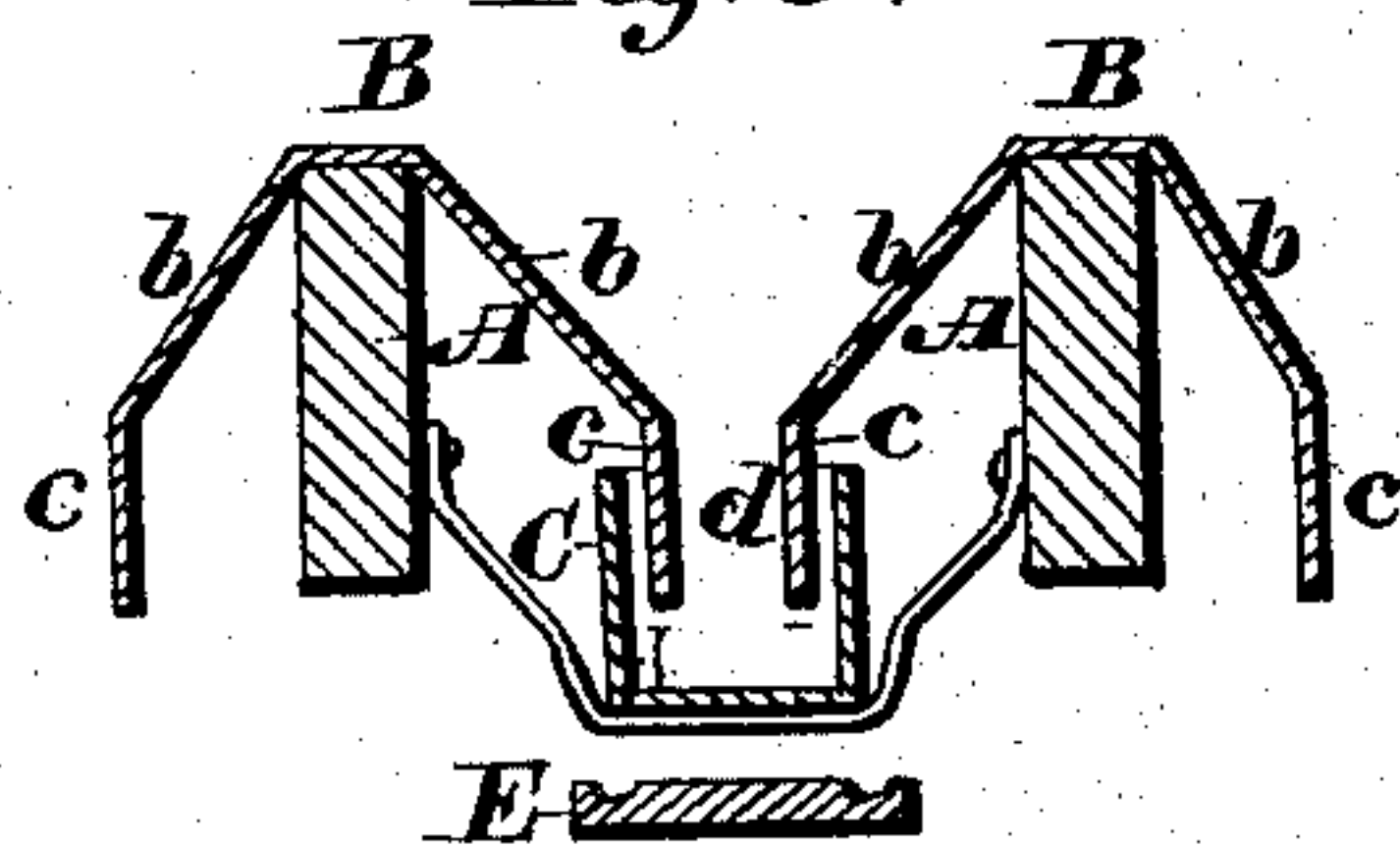


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

GEORGE H. MAETZEL, OF COLUMBUS, OHIO.

IMPROVEMENT IN REFRIGERATING-CHAMBERS, &c.

Specification forming part of Letters Patent No. **222,144**, dated December 2, 1879; application filed September 24, 1879.

To all whom it may concern:

Be it known that I, GEORGE H. MAETZEL, of Columbus, Franklin county, State of Ohio, have invented a new and useful improvement in the structure of ice-chambers, refrigerating-chambers, fermenting-chambers, and all other chambers and inclosures requiring for use a low temperature and dry atmosphere, when combined with an ice-chamber, forming an improved system of refrigeration for purposes of preserving vegetable, animal, and other substances, and for fermenting and other purposes, of which the following is a specification.

In the construction of ice and refrigerating chambers it is common to employ metallic corrugations or inclines to form the ceiling of such chambers, whether used for storing ice or other purposes, as refrigeration, requiring a low temperature and dry atmosphere to be used, for condensing upon the inclined or corrugated under surfaces the moisture contained in the atmosphere and rising to such surfaces, and employing, in connection with such inclined surfaces, gutters or drip-troughs to receive and convey away the drip from such ceilings and discharge it outside the chamber. These ceilings formed, however, of metallic corrugations or inclines are objectionable, serving as repositories for slime and the accumulation of foreign matter contained in the ice, which in time accumulate to such an extent as to impair and impede seriously the refrigerating effect due to the ice upon the refrigerating-chamber.

To overcome these defects is the object of my invention, and at the same time produce a dry atmosphere and low temperature in the ice and refrigerating-chamber.

The nature of my invention consists in forming the floor of the ice-chamber, constituting also the ceiling of the refrigerating-chamber, in sections, of galvanized iron or other metal, having inclined or curved sides, and sides terminating vertically, thereby forming passages which are water-sealed by means of removable drip-troughs provided with condensing-troughs, all as will be hereinafter fully described.

Referring to the annexed drawings, Figure 1 represents a perspective view. Fig. 2 repre-

sents a longitudinal sectional view. Fig. 3 represents a cross-section.

A designates the joists upon which the sections of the floor of the ice-chamber are placed. B designates the sections of the floor of the ice-chamber, formed of galvanized iron or other metal, having inclined or curved sides *b* and inclined ends *b'*, terminating vertically, as shown at *c*, thereby forming passages *d*. C designates a removable drip-trough, suspended in such a manner as to close the passage *d*, formed by the vertical sides of the floor-sections, the object of which is to receive and collect the drip-water from the melting ice, also the water of condensation formed upon the under sides of the inclined plates of the floor, thereby forming, in combination with the vertical sides *c*, a water-seal, thus preventing the circulation of air direct from the ice-chamber into the refrigerating-chamber, or the warm air from the refrigerating-chamber entering the ice-chamber. The trough also serves as a collector for foreign matter contained in the ice and a receptacle for slime.

e designates an overflow-pipe, connected to the trough C near its upper edge, for the purpose of discharging the drip-water into the trough D, from which it is led to any suitable receptacle. *f* designates a pipe connected to the lower part of the trough C, for the purpose of emptying the same of water. E designates a gutter for conveying away the water of condensation formed upon the trough C, which also empties into D.

From the above description it will be observed that the floor, being in sections and not secured to, but resting upon, the joists, and having seams only where the ends of the sections meet, is easily removable for any needed repairs, &c.

The manner in which my improvement operates to produce the desired effect is as follows: Ice having been placed or stored within the ice-chamber and the removable troughs suspended in proper position, the drip-water accumulates within the trough, forming a water-seal with the floor of the ice-chamber.

It will also be observed that all foreign matter contained in the ice and carried down by

the drip-water accumulates within the drip-trough, which, being removable, is easily and readily cleaned and replaced or another substituted in its place.

It will also be observed that by means of the passages *d* access may be had to the upper surfaces of the floor for the purpose of removing slime or any foreign matter that may have accumulated thereon, and thereby restoring the cooling effects of the refrigerating material.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a refrigerator-building, in combination

with the floor of the ice-chamber having inclined or curved sides terminating vertically, thereby forming passages, the removable troughs forming water-seals, substantially as described.

2. The combination of the floor of the ice-chamber having vertical passages with the removable troughs forming water-seals, substantially as described.

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Witnesses:

LOUIS SCHADE,

GEORGE GODRON.