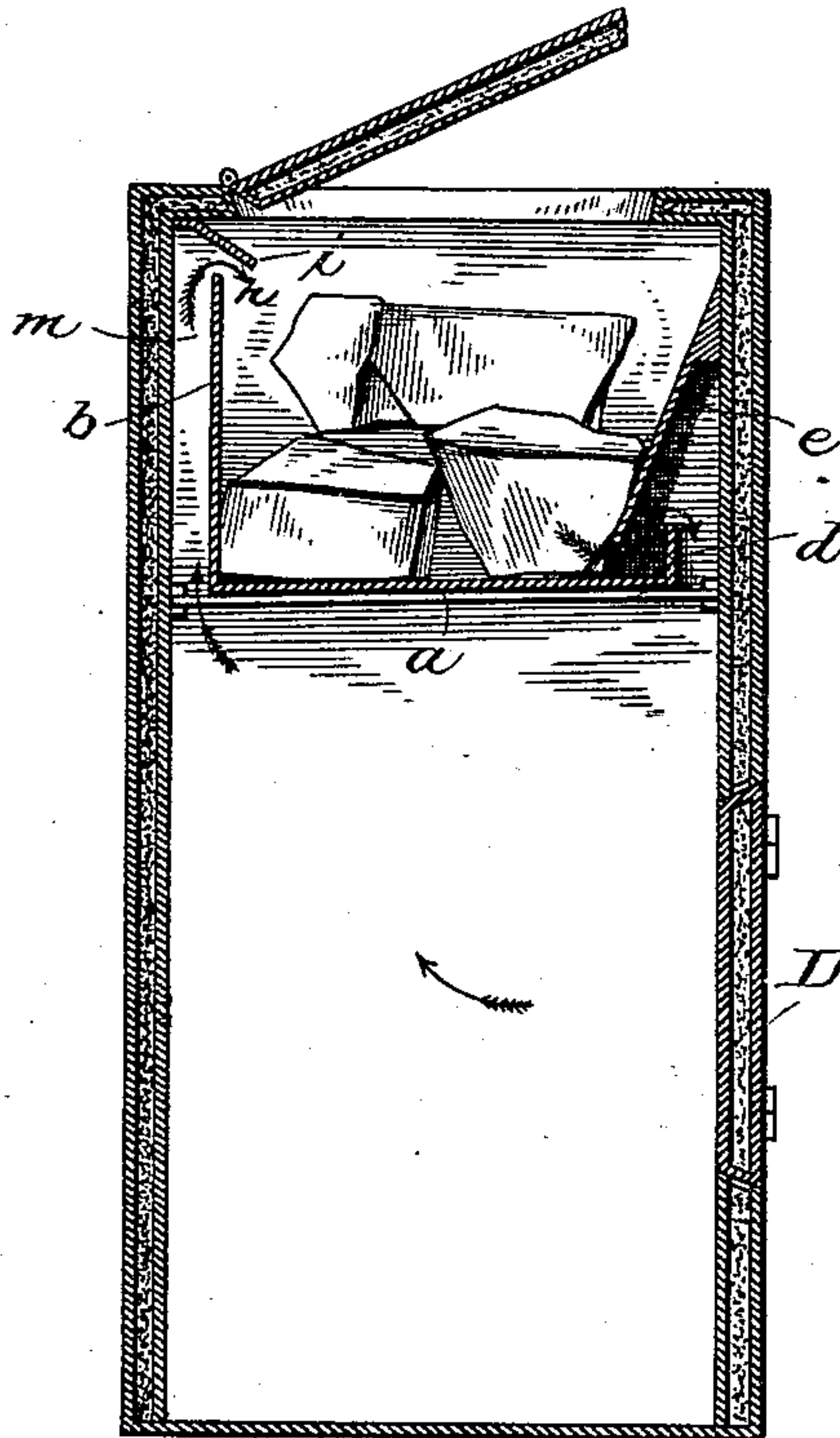


(No Model.)

H. C. GOODELL.
REFRIGERATOR.

No. 282,882.

Patented Aug. 7, 1883.



Attest:
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UNITED STATES PATENT OFFICE.

HENRY CARR GOODELL, OF ATCHISON, KANSAS.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 282,882, dated August 7, 1883.

Application filed November 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY CARR GOODELL, of Atchison, in the county of Atchison and State of Kansas, have invented a new and useful Improvement in Refrigerators; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to refrigerators. Its object is to simplify the construction of that class of refrigerators in which a current of air is kept in circulation between the provision-chamber and the ice-box, to give the air free passage, so that there shall be sufficient circulation without great difference in temperature between the upper and lower parts of the refrigerator, and to arrange the ice-box and air-passages conveniently in relation to the drainage and the door.

My improved refrigerator embodies a well-known form in which the air is made to rise on one side of the ice-box, and to overflow the edge of said box and enter it, passing over the ice, and having its exit lower down in the other side. Such a refrigerator is shown in Letters Patent No. 221,394, of November 11, 1879. I have modified this form, however, by reversing the inclination of the bottom of the ice-box, so that the drainage-pipe may be brought nearer the wall and the water turned away from the air-passage for the descending current, by placing the descending air-passage in rear of the chamber, so that upon opening the door, as is so frequently done, the cold air will not flow out so readily, whereby the use of a self-acting valve is avoided, by providing a deflector at the top of the ascending air-passage to turn down the air, and so prevent drippings from the ice falling into the provision-chamber, and, lastly, in simplifying the form of the descending air-passage.

The invention is illustrated in the accompanying drawings, in which the figure represents a transverse vertical section.

The refrigerator is composed of walls A B, which may be of ordinary construction, or may be double and provided with the usual non-conducting filling. In the upper part of the refrigerator is situated the ice-chamber, which is preferably of metal, and of smaller diameter than the interior of the refrigerator. This chamber is sustained in its position by means of projecting cross-pieces, secured to it at or

near its ends, engaging with grooves or mortises in the wall of the refrigerator, and is composed of a bottom plate, *a*, and a back plate, *b*, which extends up nearly to the top of the refrigerator, suitable side plates, and a flange, *d*, in front. Attached to the front wall of the refrigerator, above the ice-chamber, is an inclined plate, *e*, the bottom of which is slightly below the upper edge of the flange *d*, between which and said flange is a passage communicating with the provision-chamber. The upper rear portion of the ice-chamber also communicates with the provision-chamber by means of a passage, *h*, formed by an inclined deflector, *i*, secured to the back wall of the refrigerator. The rear part of the ice-chamber extends to within a suitable distance of the back of the refrigerator, and a passage, *m*, is thus formed for the air to enter to the opening *h*. The ice is held in the ice-chamber, resting in the bottom thereof, and also upon the inclined plate *e*, by which it is prevented from falling. An ordinary cover is supplied at the top for filling the chamber, and in the front is a door, D, for each chamber.

It will be apparent now from this construction that when the door is closed, the air entering will force the air contained in the provision-chamber up through the back flue, *m*, and passage *h*, whence it enters the ice-chamber, being given a downward direction by the deflector *i*, which also prevents fragments of ice or drippings from falling into the provision-chamber. At the same time the air contained in the ice-chamber escapes through the passage between the flange *d* and the inclined plate *e*, at the front of the chamber, into the provision-chamber, the result being that a constant circulation is maintained and the currents of cold and warm air do not meet, as would be the case were the door in the back and air admitted at that point.

I prefer to make the floor of the ice-chamber somewhat inclined toward the rear, as shown, and to provide at any suitable point a discharge-pipe to carry off the melted ice.

As will be seen, my construction is exceedingly simple, but at the same time produces a thorough and effective cooling of the provision-chamber.

It will be understood that instead of having the flange *d* on the front it may be similarly

constructed upon each end, though the construction first described is the preferred form.

I have found in practice that my device is particularly well adapted to refrigerator-cars.

5 When applied to this purpose, however, I have found it desirable to provide double ice-chambers on opposite sides of the car at the top, and extending the entire length thereof, and connected with the cooling-chamber below. The circulation of air is in all respects as heretofore described, and no essential modification of the construction shown is necessary.

Having thus described my invention, what I claim is—

15 1. In a refrigerator, an ice-box located in the upper part, having a bottom inclined to the rear, a back wall, *b*, extending to near the top, leaving an air-passage behind said wall, with an upturned flange, *d*, in front, leaving
20 an air-passage between itself and the front wall, in combination with an inclined plate, *e*,

extending from the front wall inside of and below the upper edge of the flange *d*, the parts being arranged as shown.

2. In a refrigerator, an ice-box located in 25 the upper part, having a bottom inclined to the rear, a back wall, *b*, extending to near the top, leaving an air-passage behind said wall, a reflector, *i*, with an upturned flange, *d*, in front, leaving an air-passage between itself 30 and the front wall, in combination with an inclined plate, *e*, extending from the front wall inside of and below the upper edge of the flange *d*, the parts being arranged as shown.

In testimony whereof I have signed my name 35 to this specification in the presence of two subscribing witnesses.

HENRY CARR GOODELL.

Witnesses:

JOHN TOMLINSON,
JESSE C. CRALL.