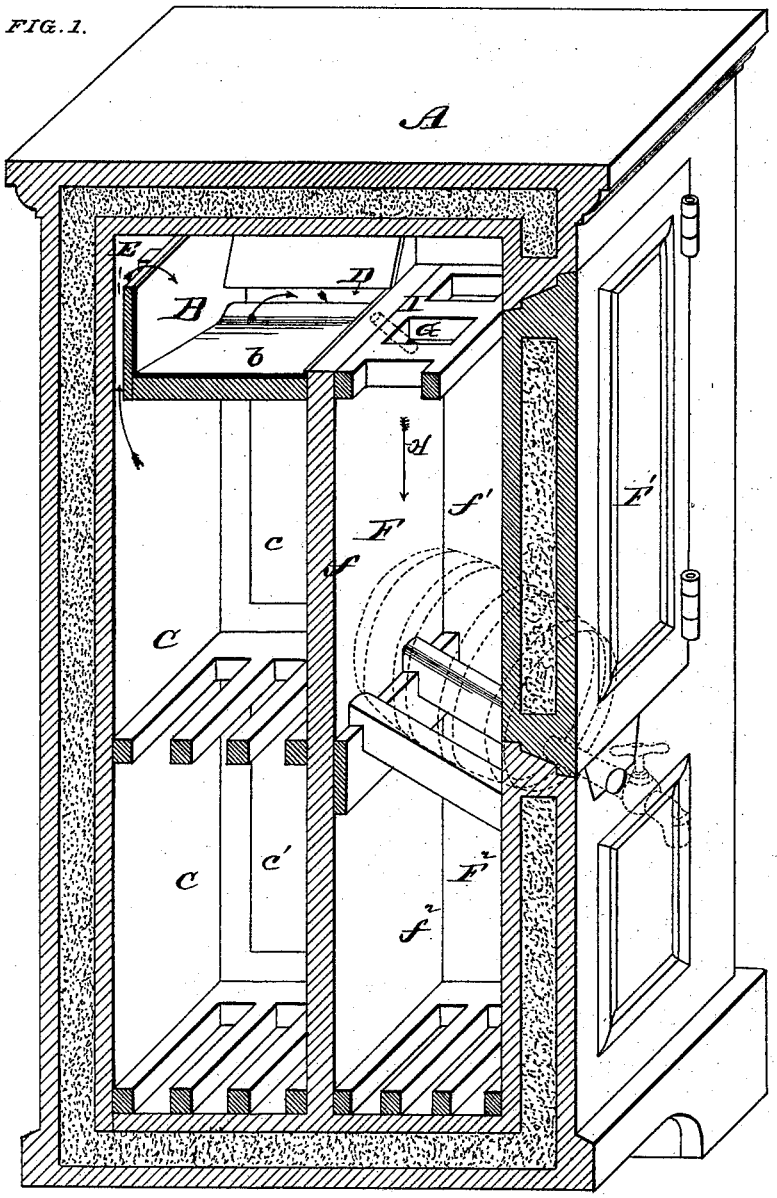
W. GRAYSON.
Refrigerator.

No. 210,321. Patented Nov. 26, 1878.

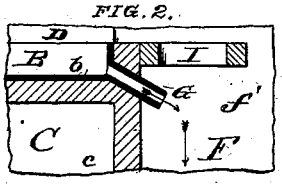
FIG. 1.



ATTEST:

Chas. S. Boyd
Paul Bakewell

FIG. 2.



INVENTOR:

William Grayson
by Chas. D. Moody
atty.

UNITED STATES PATENT OFFICE.

WILLIAM GRAYSON, OF ST. LOUIS, MISSOURI, ASSIGNOR TO ST. LOUIS REFRIGERATOR AND WOODEN GUTTER COMPANY, OF SAME PLACE.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **210,321**, dated November 26, 1878; application filed May 11, 1878.

To all whom it may concern:

Be it known that I, WILLIAM GRAYSON, of St. Louis, Missouri, have made a new and useful Improvement in Refrigerators, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, making part of this specification, in which—

The invention is shown in sectional perspective in Figure 1, the section being taken in a plane parallel to the front side of the refrigerator. Fig. 2 is a detail, being a vertical section taken through the drain-pipe and the parts immediately therewith connected.

The present invention is valuable as a construction for preserving provisions, and also for keeping articles inclosed in packages, such as beer in kegs or wine in bottles, which, without liability to damage, can be cooled by the drip-water from the ice. It is especially adapted to the requirements of grocers who include in their business the selling of liquors.

Referring to the drawing, A represents a refrigerator having the present improvement. B represents the ice-box, and C the chamber for keeping articles that require to be cooled by air-currents only, and that must be kept as dry as is practicable. It is immediately beneath the ice-box, and separated therefrom by a tight floor, *b*, and the entrances thereto are at *c c'*. D represents the flue through which the cold air passes from the ice-box into the chamber C, and E the flue through which the warmer air ascends therefrom into the ice-box, all in the usual manner. F represents the beer-cooling chamber. It is separated from the chamber C by a close partition, *f*. A drain-pipe, G, leading from the lowest part of the floor *b* (which is suitably inclined) into the chamber F at the upper part thereof, serves to conduct the drip-water that collects in the ice-box into the chamber F, whence it is allowed to fall down through the chamber and onto any articles that may be therein, as indicated by the arrow H. Ice may also be supported in the upper part of the chamber F upon the rack I, and be used to supplement the action of the drip-water coming from the ice-box. F^1 represents the door to that part f^1 of the chamber where the beer on tap is kept, and F^2 the entrance to the part f^2, where the unopened packages may be kept.

In operation, ice being placed in the ice-box, the chamber C is cooled by cold air only descending from the ice-box. The chamber F, however, is cooled largely by the drip-water discharged from the drain-pipe G. The ice upon the rack I serves both to chill the atmosphere in all parts of the construction, as the partition *f* does not extend above the level of the rack, and also to cool the chamber F by means of its drip-water. In this manner the drip-water from the ice is thoroughly utilized.

I am aware that refrigerators have been constructed having the ice-box in the upper part of the refrigerator, a channel in the rear of the ice-chamber, through which the warmer air ascends and comes in contact with the ice in the ice-chamber, thence to descend through channels at the ends of the ice-chamber, thereby keeping up a continuous circulation of the air contained in the refrigerator; and that the preserving-chambers of refrigerators have been divided by vertical partitions; and that beer-coolers have been furnished with racks to hold ice, the drip-water from which fell onto the beer kegs beneath; but my present aim is to provide a refrigerator combining in its construction a dry preserving-chamber and a preserving-chamber wherein the drip-water can be utilized in the manner described.

I claim—

1. The combination, in a refrigerator, of the ice-box B, chamber C, flues D and E, chamber F, and pipe G, the chambers C and F being separated by the partition *f*, which extends downward to the bottom of said chambers, and the pipe G leading from the ice-box B and discharging into the chamber F, as and for the purpose specified.

2. The combination, in a refrigerator, of an ice-chamber, located in the upper part of the refrigerator, and two preserving-chambers, arranged beneath the ice-chamber and separated from each other by a tight partition, the bottom of the ice-chamber above one of such preserving-chambers being tight, to prevent the drip-water from descending into that chamber, and the other part of the bottom of the ice-chamber being perforated, to allow the drip-water to fall down into the preserving-chamber, which is directly under the perforated portion of the ice-chamber bottom, substantially as described.

W. GRAYSON.

Witnesses:
CHAS. D. MOODY,
PAUL BAKEWELL.