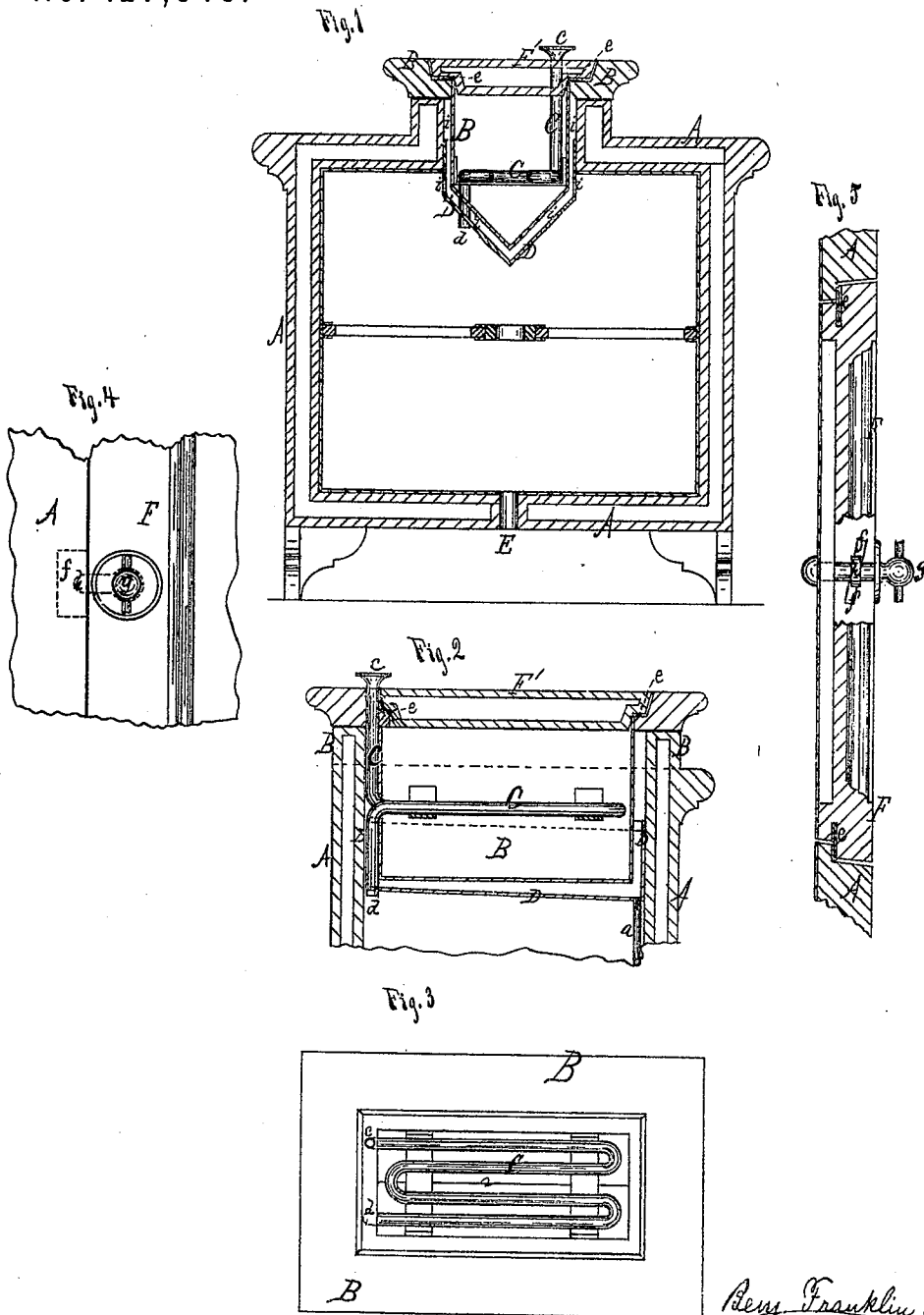


B. F. AVERILL.
Improvement in Refrigerators.

No. 127,946.

Patented June 18, 1872.



Witnesses.
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UNITED STATES PATENT OFFICE.

BENJAMIN F. AVERILL, OF DUNKIRK, NEW YORK, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO LEE LORD HYDE, OF SAME PLACE.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. 127,946, dated June 18, 1872.

Specification describing certain new and useful Improvements in Refrigerators and Milk-Coolers, invented by BENJAMIN FRANKLIN AVERILL, of Dunkirk, in the county of Chautauqua and State of New York.

Nature of the Invention.

The object of my improvement is to obtain a constant downward circulation of dry cold air through the refrigerator from top to bottom, and to prevent any contact of the air with the ice; and the invention consists in the construction and arrangement of the ice-box and certain parts, as hereinafter fully explained.

General Description.

In the drawing, Figure 1 is a vertical section. Fig. 2 is a cross-section of the ice-box, &c. Fig. 3 is a plan of the ice-box, &c; Figs. 4 and 5, detail views.

A represents the refrigerator-case, made in any suitable manner as to form and filling of the walls. Above and partly sitting in the refrigerator is the ice-box B, the bottom of which is made in trough-shape, so as to allow the drippings from the ice, and also the water condensed on the outside, to flow downward into the dripper D. This latter is made slanting to readily carry off the water (see Fig. 2,) either through the waste-pipe *a*, or a faucet, as may be desired. There is an open space, *i*, left between the ice-box walls and the contiguous walls of the refrigerator, as well as a space between the dripper and bottom of the ice-box. The object of this is important, as it is for the purpose of getting a constant contact and circulation of the rising air in the refrigerator around the outside of the ice-box B, whereby it again becomes ice-cold. In the ice-box, just above the bottom, is arranged a "return or zigzag pipe," C, having a flaring mouth, *e*, outside and on top of the "ice-box," and the other end *d* opening into the refrigerator. This is a very important feature of my invention. The air, being admitted from above into and through the mouth *e*, circulates through the lengths of the "return or coil-pipe," which is encompassed by the ice, thereby becoming

very cold, and, in this state, passes through the nozzle or opening *d* into the body of the refrigerator in a very dry and cold state, and is there diffused and radiated throughout the entire inside. The upper mouth *e* will be protected by a screen to prevent the entrance of flies, insects, &c.

To get the necessary circulation through the refrigerator, and to produce a draught, the bottom of the case A is provided with an outlet or escape-pipe, E, which also has a wire-cloth screen to prevent flies, dirt, &c., from entering.

The doors F of the refrigerator are made in the usual manner, with the addition of a band of rubber, *e*, or its equivalent, running around the outside, or set into a groove around the inner edge, to come in contact with the jamb, and thus make the joint air-tight. To make this packing more effective I make the socket *f* for the lock or catch *g* inclined inward from the top, so that the tongue or bolt *h*, (see Figs. 4 and 5,) when turned, will act on an inclined plane, and thus force the doors inward. The lid or door F' of the ice-box B is also arranged in this manner.

The operation of the refrigerator is very simple. The air in the pipe C, getting cooled, passes downward, and is being constantly replaced by the air from above through its mouth *e*, and, passing into the interior of the refrigerator through opening *d*, keeps a dry pure air in it always. By my simple method all odors are carried off, and a constant circulation of dry cold air is kept up, as before stated.

What I claim is—

The ice-box B, constructed substantially as shown, and inclosing the return or coil air-pipe C, with its induction-mouth *e* outside, and the eduction-mouth *d* inside the refrigerator, the whole arranged and operating in the manner and for the purpose hereinbefore set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

B. F. AVERILL.

Witnesses:

W. T. COLMAN,
A. E. COLMAN.