

A. J. Chase,
Refrigerator.

No. 112,547.

Patented Mar. 14, 1871.

Fig 2

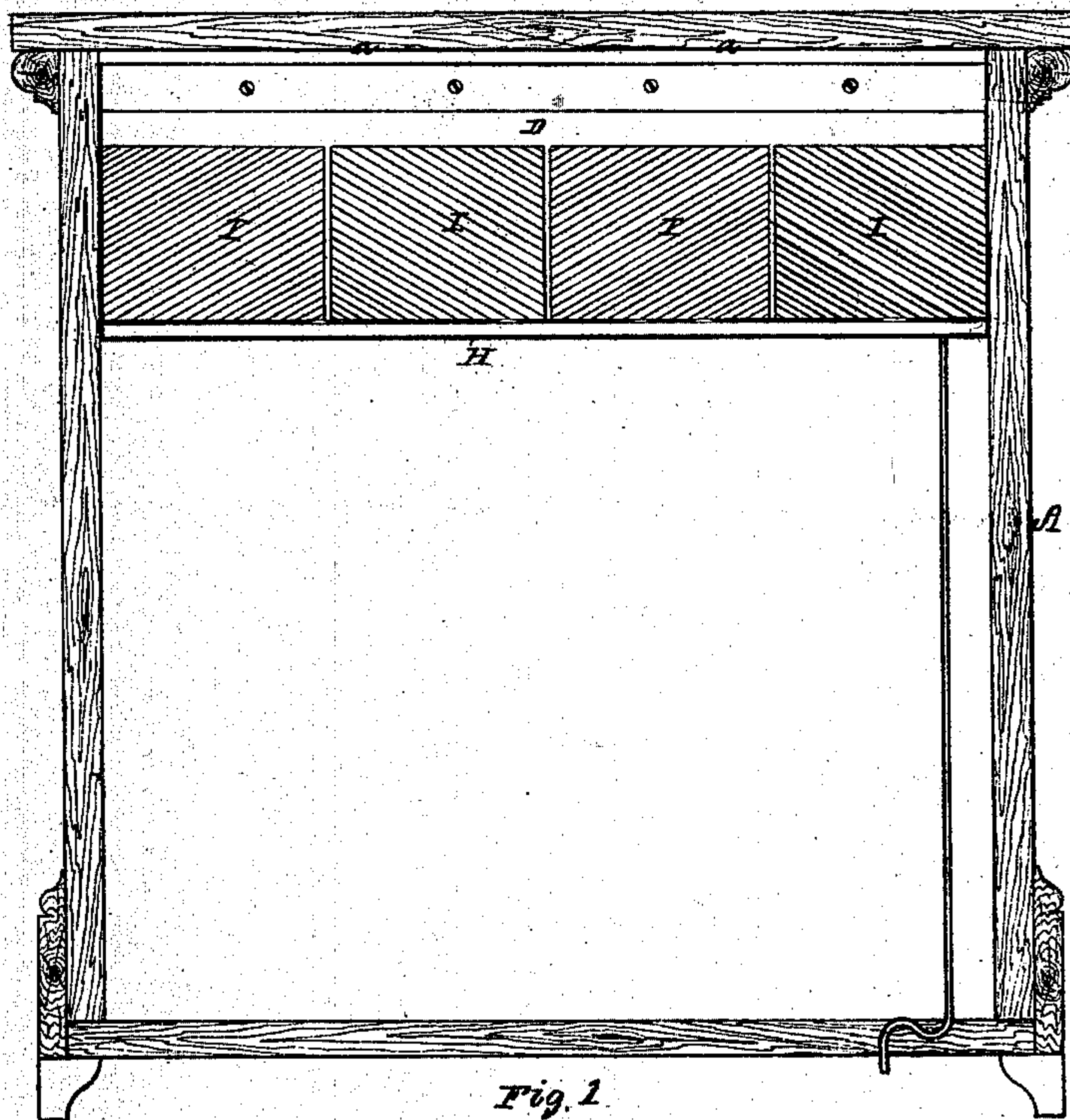
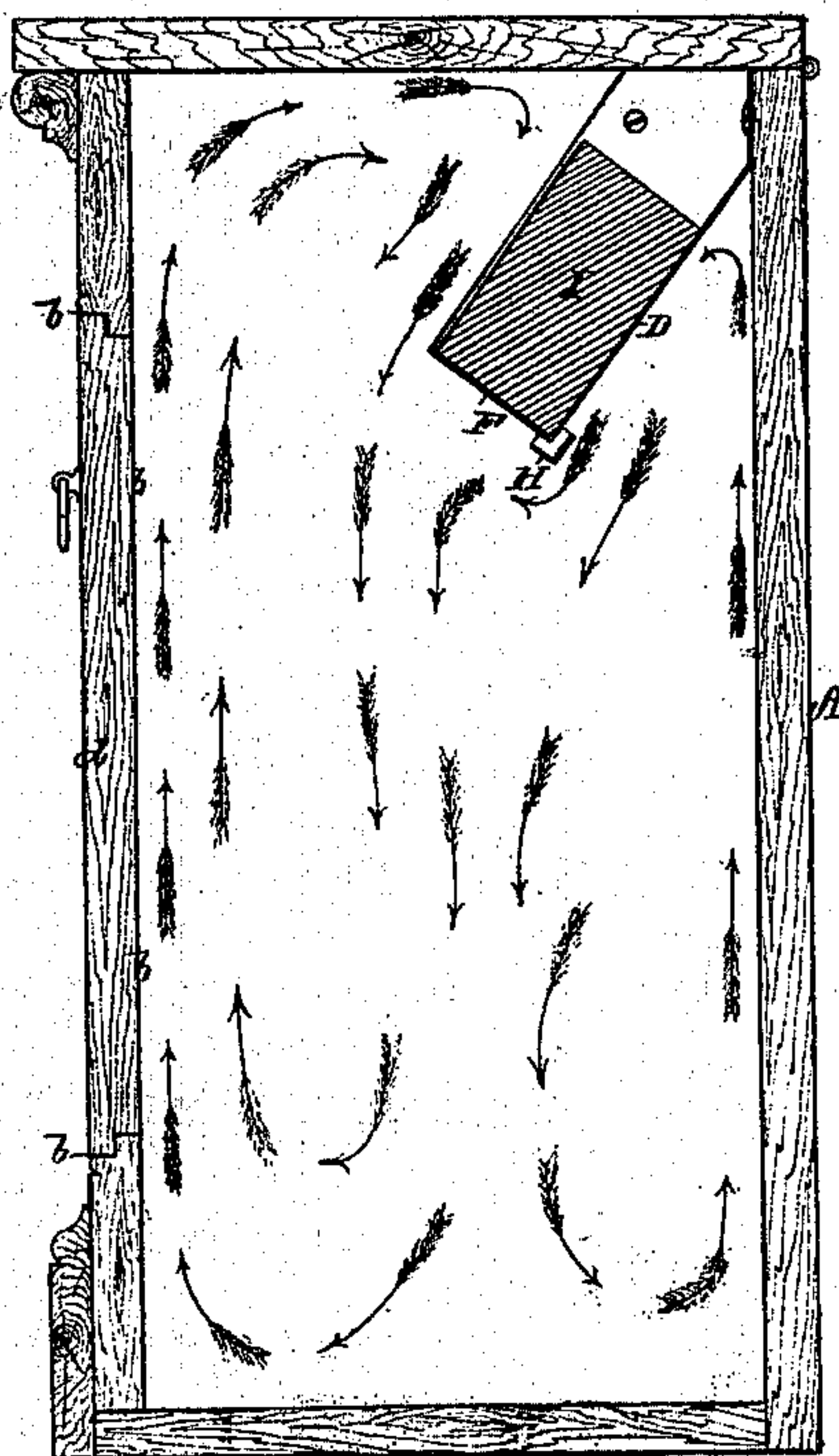


Fig. 1



Witnesses.

S. N. Piper.

L. N. Möller.

A. J. Chase.

by his attorney.

R. W. Hady

United States Patent Office.

ANDREW JACKSON CHASE, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 112,547, dated March 14, 1871.

IMPROVEMENT IN REFRIGERATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all persons to whom these presents may come:

Be it known that I, ANDREW JACKSON CHASE, of Boston, of the county of Suffolk and State of Massachusetts, have invented an Improved Refrigerator; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a transverse section, and

Figure 2 a longitudinal section of it.

In such drawing—

A denotes a box, having an opening, *a*, at its top, and another, *b*, in its side, such openings being furnished with covers or doors, *c d*, for closing them.

In carrying out my invention I arrange within the said box, directly against one side of it, and at or near the upper part of such side, an inclined apron, D, which I usually make of sheet metal, the inclination of the apron causing it to stand at an acute angle with the next adjacent side of the box, such being as shown in fig. 1. The apron extends entirely across the interior of the box, from one to the other of the ends of it.

At its lower end the said apron terminates against another short inclined apron, F, arranged at or about a right angle with the first one.

Underneath the junction of the two aprons is a trough, H, which extends across the box from end to end, and has a duct leading through one end.

At the junction of the two aprons, or directly over the trough, there should be made, in either apron or in both, one or more holes for discharge of water into the trough, which trough should be open at top, and be arranged with reference to the lower sides of the two aprons, in manner as represented, in order that any vapor that may be condensed on such sides of the aprons shall, after running down such sides, drop or fall into the trough.

The block or blocks of ice for cooling the air within the box are to be placed on the two aprons in manner as shown at I.

The modes in which the air within the box will be caused to circulate by the ice are exhibited, in fig. 1, by arrows.

In making my present refrigerator I have avoided the employment of any air-passages between the upper edge of the apron D and the next adjacent side of the case, the apron being fixed close against such side, thereby expressly avoiding any air-passage and all circulation of the air between the upper edge of the apron and such side. In this respect my present refrigerator differs from that for which Letters Patent

No. 110,112, dated December 13, 1870, have been granted to me.

In my present refrigerator I get much more room in the case for the packing or hanging or stowage of articles to be cooled or kept in a cool state.

I am also enabled to manufacture the refrigerator cheaper and to better advantage, relatively to the said patented refrigerator.

By dispensing with the air-passage between the side of the case and the upper edge of the inclined apron F the air is caused to have a circulation in two currents, one under and the other over the ice, the current going over the ice and against the top of the case being reflected or turned back over the ice in a manner to be better cooled than it would if suffered to flow up through an opening at the upper edge of the apron, and thence directly across the ice. The auxiliary current is caused by the cooling powers of the lower side of the longer apron.

The inclined positions of the two aprons, and the disposition of the trough with respect to them, not only enable the aprons to support the ice, but to conduct into the trough the waste of the ice, as well as the vapor that may be condensed on such aprons.

The refrigerator is found to operate with remarkable efficiency, and, as hereinbefore mentioned, not only to be better calculated for receiving and holding articles to be cooled or preserved, but to be cheaper in construction in respect to that described in my said patent.

It will be observed that, in this refrigerator, I combine the means of producing the reflex current over the ice, with the peculiar arrangement of the two aprons and their trough, whereby not only is the ice disposed to great advantage for cooling from all its surface, but its waste as well as the condensed vapors are carried off without falling upon any article or articles when beneath the parts for supporting the ice.

I therefore claim as my invention—

The improved refrigerator, composed of the case, and the two aprons and trough arranged within such case, substantially as described and represented, the arrangement involving the longer apron applied to the next adjacent side of the case, so that there may be no passage between such side and the upper edge of the apron for the air of the box to circulate through, all being as set forth.

ANDREW JACKSON CHASE.

Witnesses:

R. H. EDDY,

J. R. SNOW.