C. S. CRIST & E. BERRIAN.
Refrigerator.

No. 197,206. Patented Nov. 20, 1877.

FIG. 1

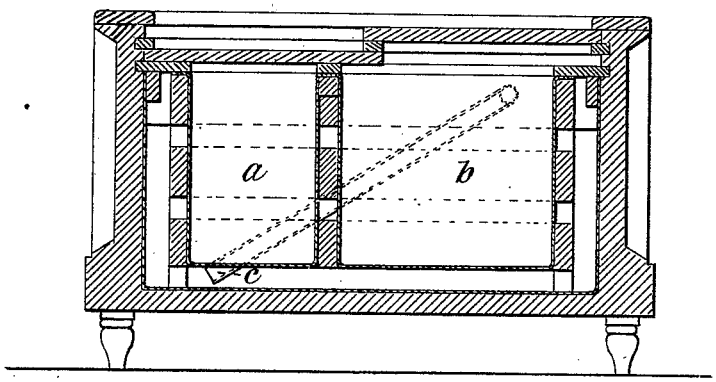


FIG. 2.

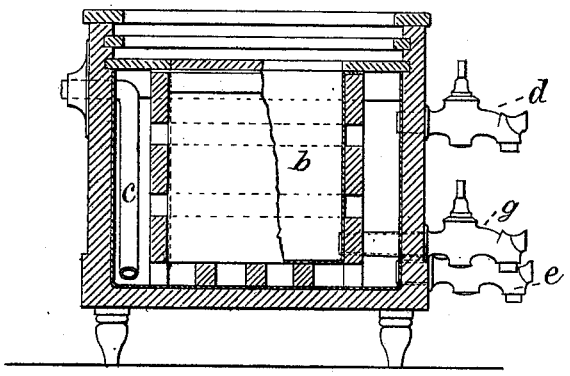
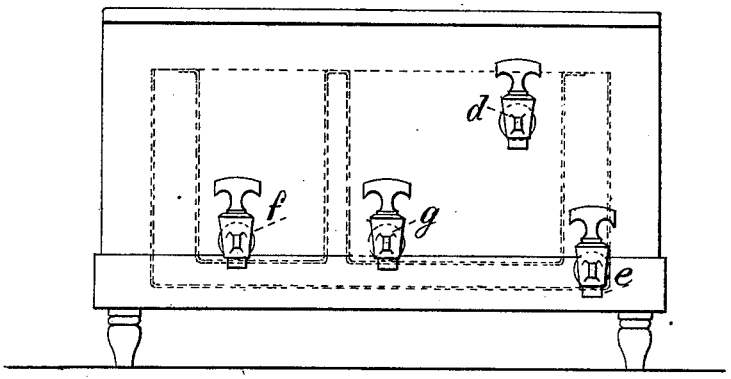


FIG. 3.



WITNESSES.

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CHRISTIAN S. CRIST AND EDWARD BERRIAN, OF NEW YORK, N. Y.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **197,206**, dated November 20, 1877; application filed May 19, 1877.

To all whom it may concern:

Be it known that we, CHRISTIAN S. CRIST AND EDWARD BERRIAN, of New York, in the county and State of New York, have invented a new and useful Improvement in Refrigerators, of which the following is a specification:

The said invention relates chiefly to a class of refrigerators that is specially adapted to the needs of butchers for keeping corned beef and pork, and it may be applied to other and similar purposes. It is designed to be used in connection with the large ice-box usually employed for the storage of meats, and which it is objectionable to open as often as may be required in making retail sales of small pieces of meat.

The object of the invention is to keep the contents of a smaller detached chest cool, by means of the waste water resulting from the melting of the ice in the larger ice-box or refrigerator-room, and it is accomplished by the circulation of the cold water from the ice within the hollow walls and partitions of the refrigerator, the direction and order of the passage of the current being regulated and controlled to retain the water while cold and to discharge it after it has become warm.

To enable others skilled in the arts to which it appertains to make and use our invention, we will proceed to describe its construction and operation with reference to the drawing.

Figure 1 is a vertical longitudinal section of a refrigerator constructed according to our said improvement. Fig. 2 is a cross-section, showing the various appurtenances. Fig. 3 is a front elevation of the same.

The chest is divided into two chambers or tanks, *a* and *b*, that are lined with sheet-zinc, which is sustained by an open frame-work of slats, that permits the complete circulation of the water around and through the sides, ends, bottom, and partition.

The water is carried to the bottom of the water-space by the inclined pipe *c*, and it is discharged on the opposite side by means of the cock *d*, placed at the highest point at which it may be convenient or desirable to limit the level of the water. As cold water is heavier than warm water, with the exception of that at the immediate point of freezing, the warmest water in the chest is first discharged at the top, and the water that is coldest remains in the chest, at the bottom, until it is displaced by water that is still colder.

The cock *d* may be kept partially open and connected with a drain-pipe, by which the drainage may be constantly received and conducted away. The cock *e*, at the bottom of the chest, may be used to discharge the water entirely from the water-spaces; and the cocks *f* and *g*, at the bottoms of the separate chambers or tanks, are useful to discharge their liquid contents when washing them out.

This chest may be used to contain ice, and it may be fitted with the various appurtenances that are generally applied to ordinary refrigerators, the distinguishing feature of our improvement in such a chest consisting in the provision for the circulation of cold water through the hollow walls, substantially in the manner described.

We claim—

The box with double water-tight walls and partitions, and the inlet-pipe *c*, and the outlet *d*, arranged to receive the water at the bottom and to discharge it at the top, in the manner and for the purpose described.

CHRISTIAN S. CRIST.
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