

G. BROWN.
REFRIGERATOR.

No. 175,658.

Patented April 4, 1876.

Fig. 1.

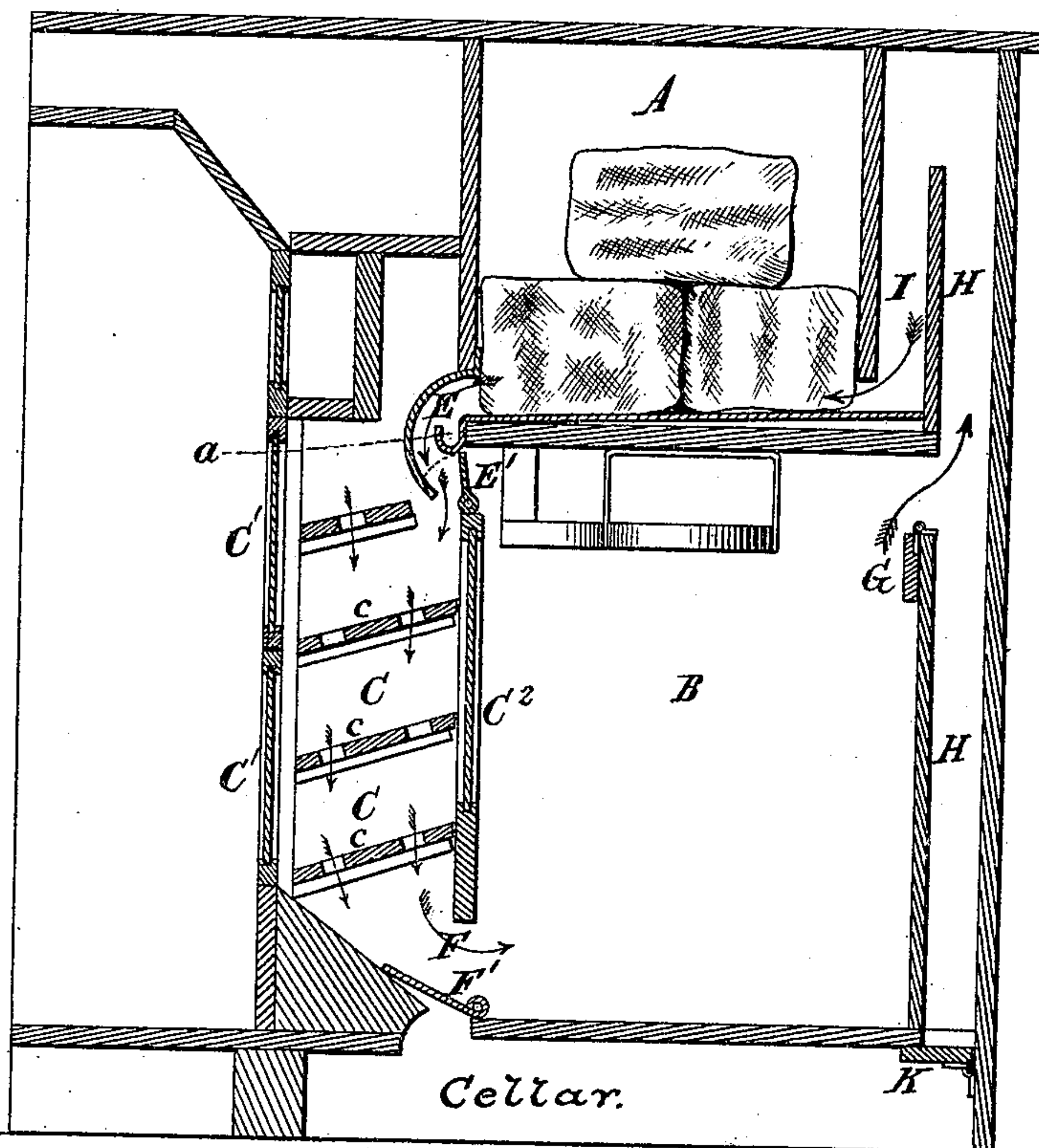
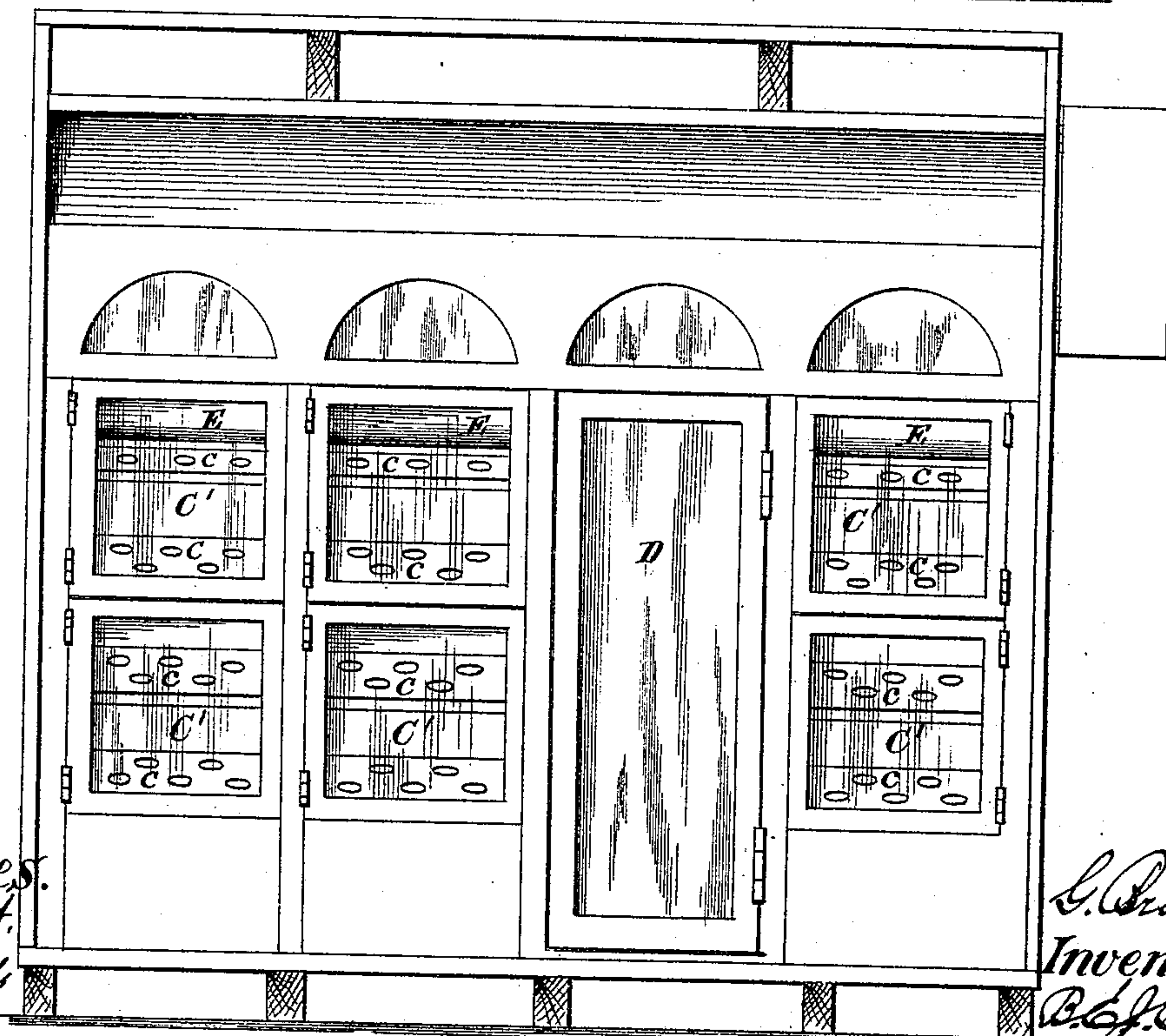


Fig. 2.



Witnesses.
A. Ruppert.
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att'y

UNITED STATES PATENT OFFICE.

GOTTLÖB BROWN, OF MILTON, PENNSYLVANIA.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **175,658**, dated April 4, 1876; application filed January 26, 1876.

To all whom it may concern:

Be it known that I, GOTTLÖB BROWN, of Milton, in the county of Northumberland and State of Pennsylvania, have invented a new and useful Improvement in Refrigerators for Provision-Stores, of which the following is a specification:

This invention relates to the application, on a large scale, of that class of refrigerators in which the ice-chamber is separated from, but communicates with, the provision-chamber by means of air flues or passages, through which a constant circulation of cold and dry air is kept up; and it has reference more particularly to refrigerators, having their provision-chambers partly constructed of glass, so that their contents may be seen from the outside. The more immediate object of this invention is to produce a refrigerator especially adapted for use in stores and shops where perishable articles of food are kept for sale; and to this end my improvement consists, first, in the combination, with the refrigerator, composed of an ice-chamber and storage-room, of a series of show cases or closets, which are partitioned off from the general storage-room, so as to front the salesroom of the store with their glass doors, through which they are separately accessible, the shelves in them being so constructed that the air can freely circulate all around the articles displayed therein; second, in such a distribution of flues and valves that the circulation of air in the several compartments can be regulated at pleasure, and extended to the cellar.

In the accompanying drawings, Figure 1 is a section of so much of a store or shop as it is necessary to show in illustration of my invention. Fig. 2 is a front elevation thereof.

Similar letters of reference indicate like parts.

A represents the ice-chamber, which may be so capacious as to hold a year's supply of ice. B is the main provision-room, wherein the bulk of the perishable articles are to be kept, and which may be furnished with shelves, racks, hooks, &c., as best suits the business carried on by the store-keeper. The show cases or closets C, which may be of any preferred number and design, are arranged in front of the room B. The doors C¹ of these

closets opening into the salesroom of the store, are composed of plates of glass confined within metal frames, so that they will be airtight. The backs of the closets, which constitute the front wall of storage-room B, are provided with windows C². The shelves c are perforated, so that the air can circulate all around the articles displayed thereon; and, in order to enable the buyers to more readily inspect such articles, these shelves are placed in an inclined position. D is a door to a passage leading to the room B. This door, in the example shown, is composed of two plates of glass confined in a wooden frame. The walls of the closets on either side of the passage may be provided with hooks and shelves whereon to place such articles as it may be desirable to have within easy reach, but which, by reason of their weight, it would be impracticable to place in the closets. By this arrangement the storekeeper is enabled to make a neat display to his customers of all his wares without opening the closets and exposing the articles therein to the deleterious influences of recurring atmospheric changes. The closets communicate with the ice-chamber through the flues E, and with the provision compartment and cellar through the flues F. To insure a perfect circulation of air through the several compartments, the valves G should be opened, when the air in room B will pass through the flues H and I into the ice-chamber A, thence descend through the curved flues E into the closets C, from which it will re-enter room B through the flues F. This course the air will follow if the valves E' are in an upright and the valves F' in an inclined position. If the valves E' are turned down and the valves F' turned up, all communication with the closets is interrupted, and the circulation of air is confined to the chambers A and B. If the valves E' and F' both are turned up, and the valve K, which is attached to the flue H under the floor of room B is opened, the air will also circulate through the cellar. By operating the several valves in the manner described, the circulation of air can be regulated at pleasure. The flues E and F are curved, so as to prevent eddies in the currents of air and consequent condensation. As the air is in constant motion no

moisture will be formed, and the provisions will be kept dry, as well as cool and clean. The floor of the ice-chamber is covered with zinc, and has a slight inclination toward the front, so that the water may run into the gutter *a*, from which it may be discharged through a spout, or in some other suitable manner.

By the use of my improved refrigerator the store-keeper will save ice, he will be enabled to preserve his provisions in a cool, dry, and clean state, and to display, in an attractive way, such articles as he may wish to dispose of, while the bulk of his provisions is left undisturbed in the main store-room; and his customers also are benefited, for they will have the advantage of buying their provisions in a cleaner and better preserved condition than would be possible in a shop where no such precautions are taken.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, substantially as specified, of the elevated ice-chamber, the storage-room underneath the same, and the show cases or closets arranged in front of the storage-room, and provided with glass windows or doors, both front and rear, for the transmission of light.

2. The combination, substantially as specified, of the ice-chamber, the storage-room, the show cases or closets, the air-passages E, F, and H, and the valves therein.

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

GOTTLOB BROWN.

Witnesses:

JOHN KNOUF,
HENRY E. LUTZ.