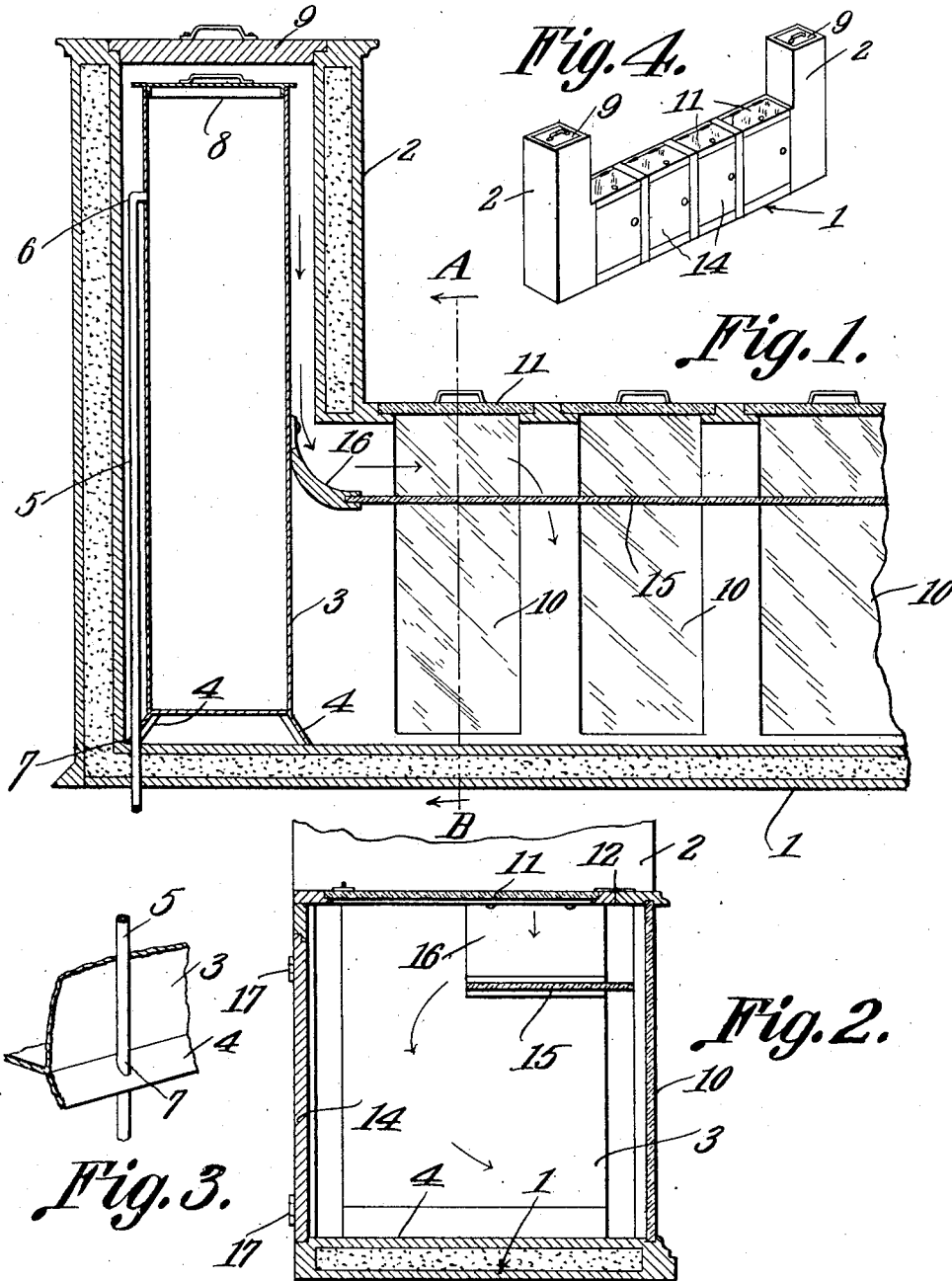


F. F. SCHAFER.
REFRIGERATOR.

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985,458.

Patented Feb. 28, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK F. SCHAFER, OF MEMPHIS, TENNESSEE.

REFRIGERATOR.

985,458.

Specification of Letters Patent.

Patented Feb. 28, 1911.

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To all whom it may concern:

Be it known that I, FRANK F. SCHAFER, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Refrigerator, of which the following is a specification.

It is the object of this invention to provide an article of store furniture which will be adapted to serve at once as a counter, as a refrigerator, and as a show case in which merchandise to be dispensed, may be displayed to prospective customers.

Another object of the invention is to provide a refrigerator so constructed that the body, or storage compartment of the refrigerator will at all times be filled with cold air.

Another object of the invention is to provide novel means for promoting the circulation of cold air within the refrigerator.

Another object of the invention is so to construct the refrigerator that refrigerant cans forming component parts of the structure, will be held in fixed positions with respect to the remaining portions of the device.

In the drawings, Figure 1 is a fragmental vertical section; Fig. 2 is a transverse section upon the line A—B of Fig. 1; Fig. 3 is a detail perspective of a portion of one of the refrigerant cans; and, Fig. 4 is a perspective of the device, showing the same in complete outline.

The device includes a body 1, of sufficient height to serve as a counter. At the ends of this body 1, are upright shafts 2. These shafts 2 communicate with the interior of the body 1, as clearly seen in Fig. 1. Disposed within the body 1, at the ends thereof, are upright refrigerant cans 3. These cans 3 extend into the shafts 2, to points adjacent the upper ends of the shafts. The cans 3 are supported upon flanges 4, the flanges 4 being inclined to outstand beyond the contour of the cans to which they are connected. Overflow pipes 5 are provided, the upper ends of these pipes communicating as shown at 6, with the cans 3 at points adjacent the upper ends of the cans. The lower ends of the pipes 5 are, as shown at 7, extended through one of the flanges 4, and preferably carried downwardly through the bottom of the body 1.

In Fig. 1 of the drawings, but approximately one half of the structure is shown; it being obvious from an examination of

Fig. 4 that the structure shown in Fig. 1, at one end of the refrigerator, is duplicated at the other end thereof.

The cans 3 are stopped at their upper ends by the removable closures 8, the upper ends of the shafts 3 being equipped with removable closures 9.

The side walls of the shafts 2, and bottom of the body 1, are made relatively thick, and are heat insulated in any desired manner. The front of the body 1 is made transparent, by means of a plurality of glass plates 10. In the top of the body 1, there are a plurality of openings, adapted to receive movable closures 11, hinged preferably to the body 1, as shown at 12 in Fig. 2. By comparing Figs. 2 and 4, it will be seen that in the rear walls of the body 1 there are a plurality of openings, adapted to receive movable closures 14. The number of the closures 14 is preferably, although not necessarily, the same as the number of the top closures 11. The closures 14 at the rear end of the body, are preferably hinged for horizontal swinging movement, as denoted by the numeral 17.

Disposed within the body 1 and extended longitudinally of the same, is a shelf 15, fashioned from any desired material. The ends of this shelf 15 are engaged in curved deflectors 16, the remote ends of which are bolted or otherwise secured to the adjacent faces of the cans 3, the deflectors thus serving as supports for the shelf 15. Referring to Fig. 2, it will be seen that the shelf 15 extends approximately halfway across the body 1.

The operation of the device is as follows:—The cans 3 are filled with crushed ice and salt, or with any other suitable freezing mixture. The liquid from this freezing mixture is carried away by means of the pipes 5. The freezing mixture may be placed within the cans 3, by removing the closures 8 and 9. In refrigerators as ordinarily constructed, the coldest portion of the refrigerator, is adjacent the bottom thereof, and articles which are positioned adjacent the top of the refrigerator, are maintained in an atmosphere which, compared with the temperature at the bottom of the refrigerator, is relatively warm; to the damage of articles thus positioned adjacent the top of the refrigerator. In the present invention, however, owing to the fact that the cans 3 extend well above the body of the refriger-

ator, the cans, throughout their entire lengths will serve as cooling mediums. The cold air will, therefore, following the arrows, descend between the cans 3 and walls of the shafts 2, thus maintaining the temperature at the top of the body 1, much cooler than would otherwise be possible. The cold air, following the arrows, will impinge against the curved deflectors 13, and be projected along the shelf 15, the cold air passing over the edge of the shelf into the body 1 of the refrigerator, as indicated by the arrows in Fig. 2.

The refrigerator is intended primarily for the use of butchers. Large pieces of meat will be placed in the body 1 beneath the shelf 15, steaks, and the like being placed upon the shelf 15. The closures 11 give access to the articles upon the shelf 15, while the rear closures 14 give access to the larger chunks of meat which may be deposited within the body 1, beneath the shelf 15.

In order to maintain an air space between the cans 3 and the walls of the shafts 2, the drain pipes 5 extend through the flanges 5 and through the bottom of the body 1. The cans 3 will thus be prevented from sliding in one direction. Moreover, by reason of the fact that the shelf 15 is terminally united with the cans 3, the cans 3 will be prevented from sliding in another direction; as Fig. 1 will clearly show.

Having thus described the invention what is claimed is:—

1. A refrigerator comprising a body and upright shafts rising above the body at the ends of the body and communicating with the interior of the body; refrigerating elements

having one end disposed within the body, the other ends of the refrigerating elements being disposed within the shafts, the refrigerating elements being spaced from the side walls of the shafts to provide for a downflow of cold air from the shafts into the body; a shelf extended longitudinally of the body; and curved deflectors connected at their adjacent ends with the shelf to serve as a mounting therefor, the remote ends of the deflectors being connected with the refrigerating elements.

2. A refrigerator comprising a body and upright shafts rising above the body at the ends of the body and communicating with the interior of the body; refrigerant cans having one end disposed within the body, the other ends of the cans being disposed within the shafts, the cans being spaced from the side walls of the shafts to provide for a downflow of cold air from the shafts to the body; overflow pipes connected at their upper ends with the cans and at their lower ends connected with both the cans and the body to prevent the cans from moving in one direction; and a shelf located in the body and connected with the cans to prevent the cans from moving in another direction; thereby to maintain the air spaces between the cans and the side walls of the shafts.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRANK F. SCHAFER.

Witnesses:

W. C. TAYLOR,
F. W. TRUSS.