2 Sheets—Sheet 1.

L. THOMPSON & B. E. PARKHURST.

REFRIGERATOR.

No. 191,729. Patented June 5, 1877.

Fig 1

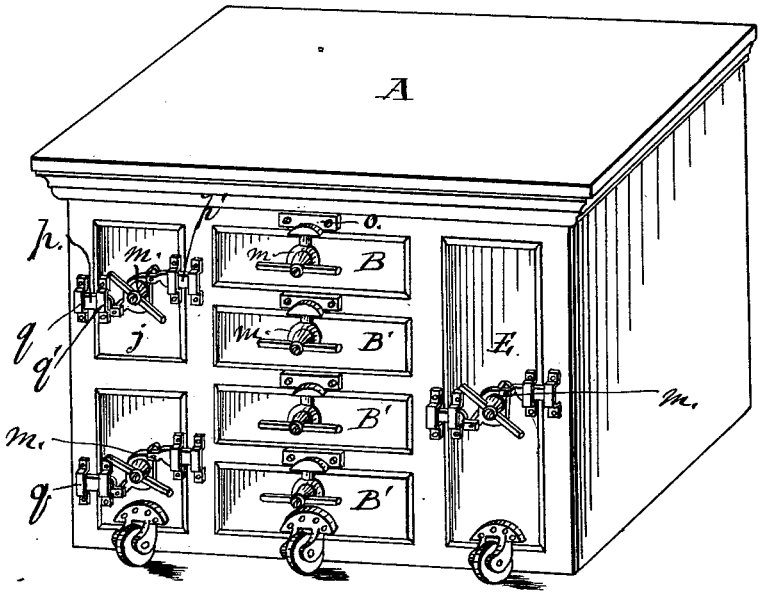
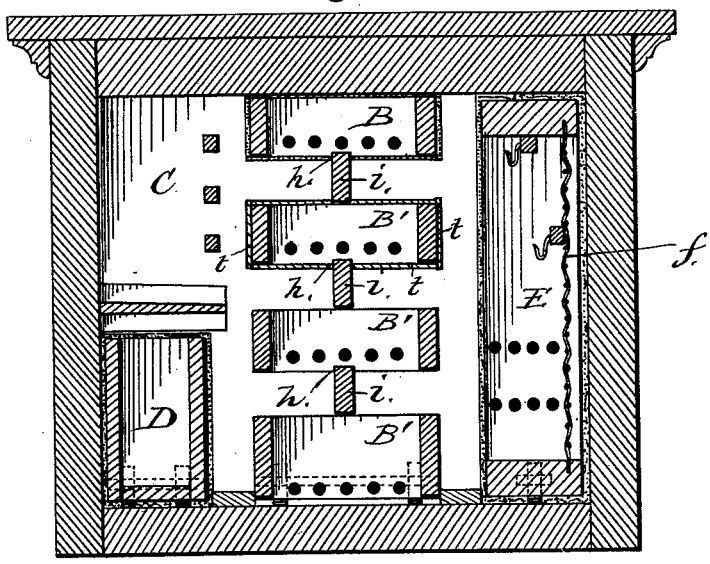


Fig 2



Witnesses
W. R. Edelen
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their atty

2 Sheets—Sheet 2.

L. THOMPSON & B. E. PARKHURST.

REFRIGERATOR.

No. 191,729. Patented June 5, 1877.

Fig 3

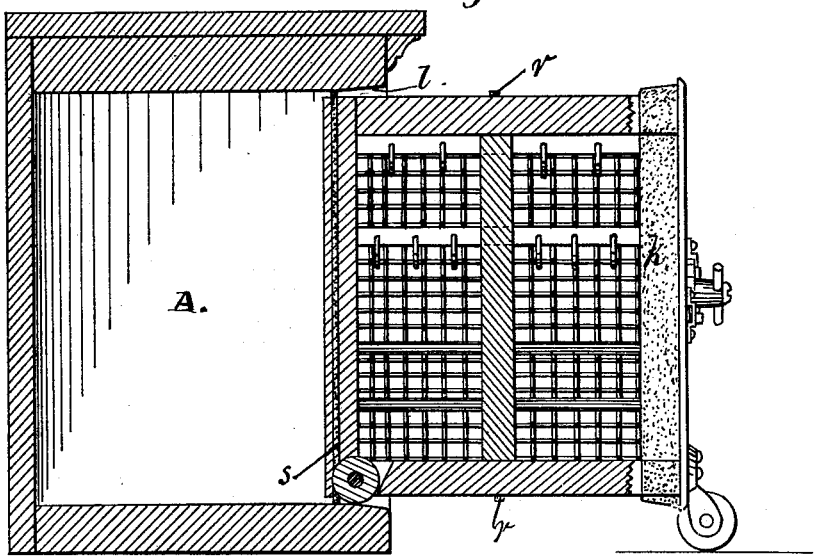


Fig 4

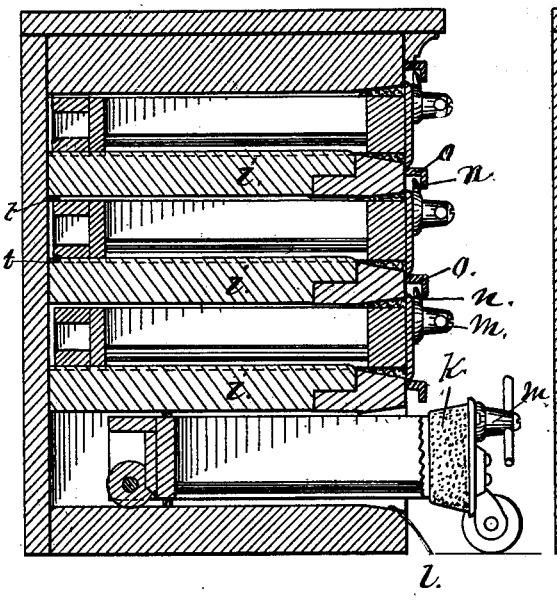
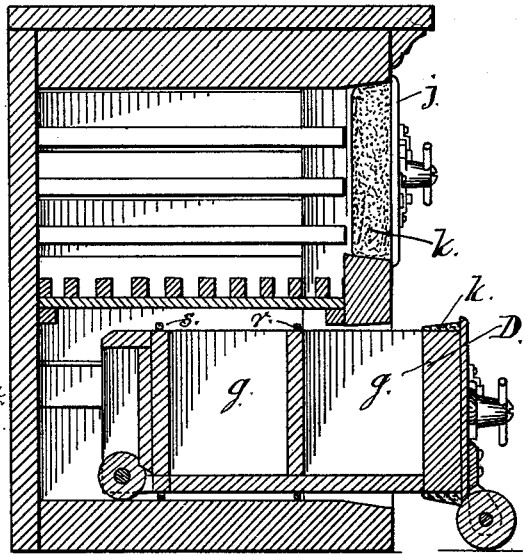


Fig 5



Witnesses
W. R. Edelen
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John F. Halsted, their Atty.

UNITED STATES PATENT OFFICE.

LEANDER THOMPSON AND BENJAMIN E. PARKHURST, OF NEW YORK, N. Y., ASSIGNORS OF ONE-THIRD THEIR RIGHT TO FISHER M. CLARKE, OF SAME PLACE.

IMPROVEMENT IN REFRIGERATORS.

Specification forming part of Letters Patent No. **191,729**, dated June 5, 1877; application filed March 14, 1877.

To all whom it may concern:

Be it known that we, LEANDER THOMPSON and BENJAMIN E. PARKHURST, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Refrigerators; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to a new and improved kind of refrigerator, our improvements being more especially adapted for butchers and provision-dealers, and for large hotels, and whereby a person depositing or taking out articles shall not risk his health by entering a cold apartment from the warm air outside, and whereby less warm air can enter when articles are withdrawn from the chambers.

As large refrigerators or refrigerating rooms or chambers are now constructed, persons using them are obliged to go inside to deposit and take out articles. Thus many times a day they are exposed to the sudden change in temperature, the result of which is often sickness and death.

Another disadvantage in the old style of refrigerators is that, in going in and out, a large quantity of warm air will rush in and raise the temperature inside of the refrigerator, affecting the cooled articles and melting the ice.

Still another disadvantage in the old style is that the articles placed inside for preservation are in one apartment. Frequently the floor is covered with articles of meat, poultry, &c. At the same time the hooks overhead are all in use; and hence great inconvenience often occurs in looking for a particular piece of meat, &c., and three or four minutes are consumed in finding the desired article, thereby endangering the health of the dealer by his remaining so long in the apartment, and causing a great waste of ice, and frequently besmearing the person with blood and grease from contact with the articles in the refrigerator.

Another defect in existing structures is that the contents of the refrigerator cannot at option be displayed to the customer, so that he may make his selection.

The objects of our invention are to remedy the above-named and other evils by devices hereafter described.

To remedy the evil of going inside the refrigerator, and risking life by going suddenly from a warm into a cold temperature, we have drawers, so constructed that the cold air will circulate freely through them, and thus keep the articles cool, such drawers, when withdrawn for the purpose of displaying their contents, being adapted to prevent the admission of the external air, and when pushed back to place, being also adapted, by means of appropriate packing and fastening devices, to make a very close and approximately air-tight fit or joint.

In the drawings, Figure 1 is a perspective view of a refrigerator illustrating our invention; Fig. 2, a vertical longitudinal section; Fig. 3, a vertical transverse section, a provision stall or drawer being pulled partially out; Fig. 4, a vertical transverse section through the drawers, showing guide-rails, &c., one of the drawers being open; Fig. 5, a vertical section through the ice-box and salt-meat drawer.

A is the refrigerator; B B′, &c., drawers; C, an ice-box; D, a salt-meat box, and E a provision stall or cupboard, each of these parts B, D, and E, being constructed to slide in and out as a drawer; and in building the refrigerator they may be located relatively to each other, as may be found most convenient—for instance, the ice-receptacle may be at either end or in the middle, or any number of cupboards or stalls may be used, and the other drawers dispensed with.

The drawers B B′, &c., are all made with bottoms sufficiently open to permit the cold air to circulate freely in and through them, as shown. The cupboard or provision-stall E we provide with shelves and hooks, as shown,

so that the articles may be laid down or hung up, as desired; and its part *f* (which becomes its back when the cupboard is withdrawn) may be at one side, as shown, or extend centrally lengthwise, and thus make a double cupboard; but it must be latticed or full of openings, so as not to obstruct the circulation of the cold air.

This provision-stall has no side walls, and therefore when drawn out partially, or to its fullest extent, its side (or both sides, if the reticulated or latticed part *f* be central of the drawer) becomes its front, and the meat hung therein can be fully inspected just as it hangs, and without handling; and any article selected may be readily unhooked and taken down, or put up, without disturbing or handling any other article, just as in an open meat-stall in the market.

The tub or tubs *g* of the box D is, excepting at top, a tight vessel, so as to hold corned or salt meat, or anything requiring a non-leaking receptacle. The tub being sustained by one or more rollers at its rear running on the lower part of the refrigerator, and by a roller or rollers on the outside resting on the floor of the room, allows the frequent running in and out of this tub (which is very heavy when filled with salt meats and brine) without danger of slopping over of the brine and thereby fouling the whole refrigerator, and rendering it necessary to withdraw the tub entirely on such occasions, to permit a cleansing of the refrigerator. Our improvement, besides tending to avoid such accidents, of course, to the same extent, prevents the wholesale admission of the warm air, which is unavoidable every time a tub is entirely removed for any purpose.

The drawers, preferably, have each a central groove, *h*, on their under side, that they may be slidden in and out in right lines upon a fixed ridge, *i*, in the refrigerator, this ridge or rail *i*, forming not only a guide-rail to insure the moving of the drawer in and out in right lines, and to prevent it getting askew or turning to either side, but also serving as the main support for the drawer. These drawers, so supported and having no other solid bar or wall to support them, are thus substantially surrounded with cold air at all four sides; and their bottoms being open to the cold air this central rail *i* offers no impediment to the free contact of this air directly to the bottom of the material contained in the drawers. The single rail also avoids that interference with the circulation which exists usually where drawers, as in a bureau, are guided by two side boards or partitions.

Each sliding drawer, cupboard, or box, as also the door *j* of the ice-box, is banded or lined with rubber or other flexible material, as shown at *k*, near its outer end, in order to make a tight joint when pushed into place; and in order to make this tightness the better insured, bevels *l l* are made in the case, whereby, when such drawers, &c., are pushed into place, the rubber shall be wedged more tightly into and against these bevels or inclines.

As a still further means of insuring tight joints, peculiar latches or fastenings *m m* are used, which, upon being turned to fasten the drawers or door to place, compress or squeeze the rubber or flexible material still tighter by the action of bevels or inclines *n* acting upon the fixed clasps or eyes *o*. The knob of latch *m*, instead of having the inclined part *n* projecting from it, may, in some cases, serve to operate two bolts, *p p'*, each having an incline, as above stated, which acts upon the inner side of the staple or eye *q q'*, and serving thus to compress the rubber in the same manner just stated.

Rubber or flexible material may also be applied to or around the center or other piece or partition, or around the back end of the tub, as also to the central or other partition and back end of the drawers, as shown applied to the meat-box and cupboard at *r* and *s*, the object being to exclude the air from entering the refrigerator when such cupboard or other sliding part is drawn part-way out, or nearly all the way out; or a rib, flange, shoulder, bevel, projection, or band, *t*, may be made on such part at its back end, extending around the top, bottom, and sides, so that when pulled nearly out it will be arrested, and cannot come any farther. Thus the apertures which receive the drawers are always closed against the admission of warm air, or escape of the cold air, whether the drawers be open or closed.

Each or any of the sliding drawers may be provided at their bottoms with one or more rollers, that they may be easily moved in and out; and those which are nearest the floor having each its front roller or rollers, such that it may, when pulled out, roll freely along the floor, which thus helps to support it.

Any appropriate trough, or trough and tube, may be employed to convey the water from the ice-box to the outside of the refrigerator.

The refrigerator may be double-walled, and any suitable non-conducting material placed between the walls.

We claim—

1. In combination with a refrigerator or refrigerating-chamber, a sliding provision stall or cupboard open at both sides, whereby the cool air from the single ice-compartment is permitted to pass across and around the stall, substantially as shown and described.

2. In combination with the lower part of a refrigerator or refrigerating-chamber, the water-tight tub or tubs for containing salt meats, &c., the same being provided with one or more rollers at rear end, running on the lower part of the refrigerator, and a roller at the front end resting on the floor of the room, as and for the purpose set forth.

3. In combination with the sliding drawers and their rubber or flexible packing applied to the same near their outer ends, as described, the latches or fastenings operating in the act

of fastening to compress such flexible material and tighten the joint, substantially as shown and described.

4. In combination with the sliding drawers, rubber packing, placed around one or more partitions in the drawer, whereby the warm air from the outside is admitted to only one section or compartment of the drawer at a time, or to all, if desired.

5. In combination with a refrigerator-drawer provided with a groove, *h*, located at about the center of its rear wall, the rib or rail *i*, serving to support the drawer and guide it in its movements, and also permitting the cooled air to have free access to the perforated or open bottom of the drawer, as shown and described.

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