(No Model.)

A. J. LOWELL & A. L. FULLER.

REFRIGERATING CUPBOARD.

No. 550,985. Patented Dec. 10, 1895.

Fig. 1.

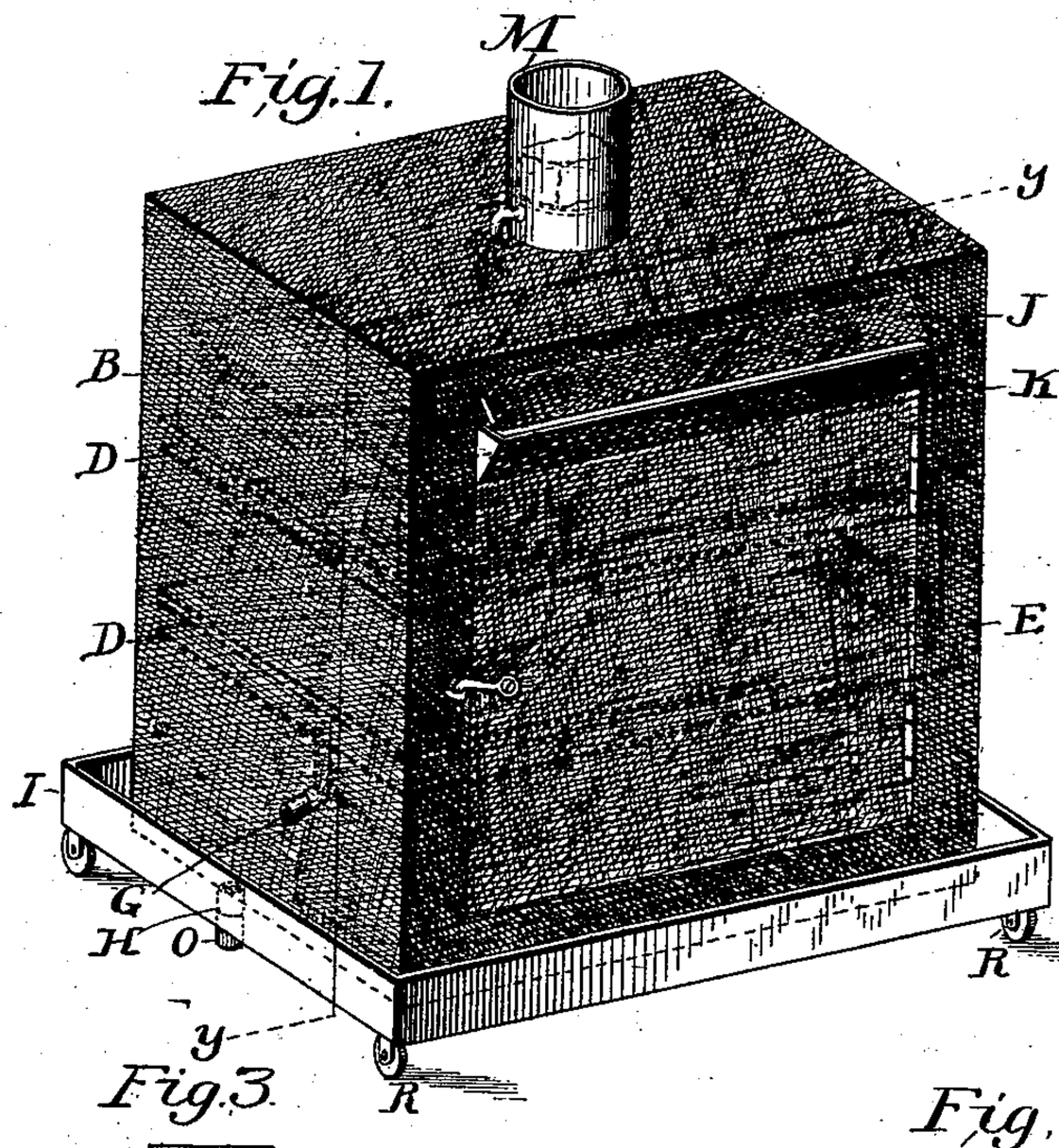


Fig. 2.

Fig. 3.

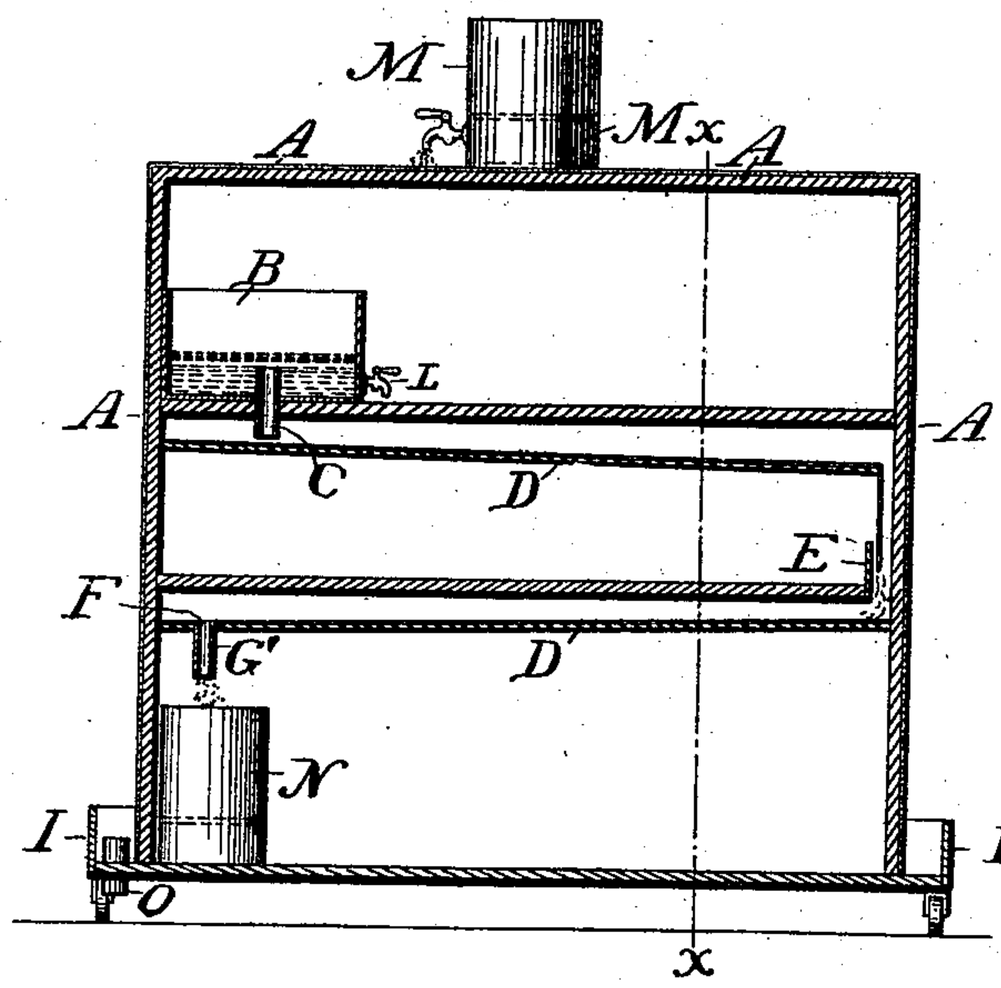
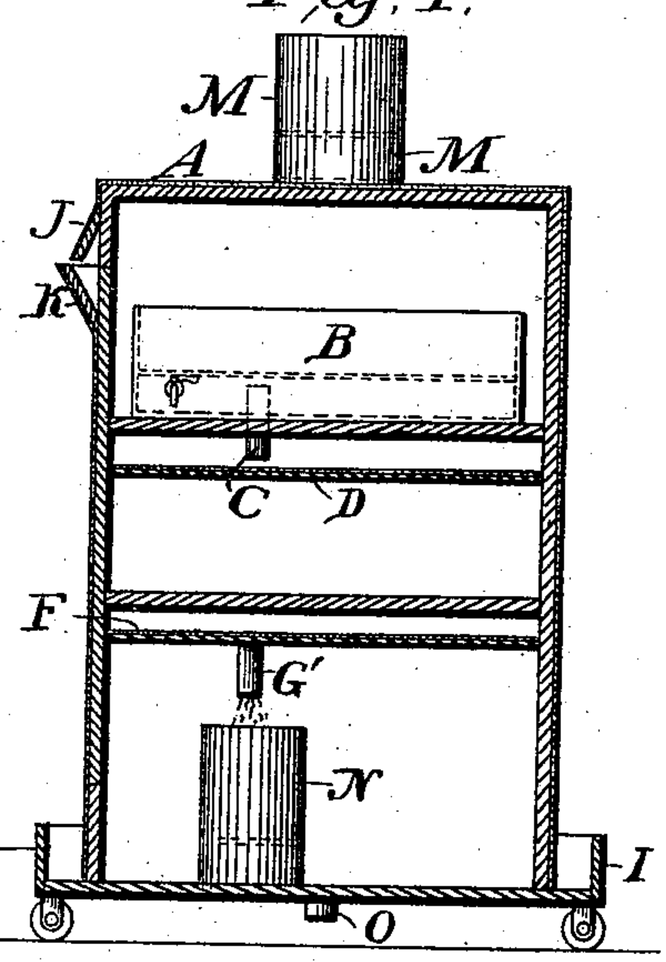


Fig. 4.



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UNITED STATES PATENT OFFICE.

AZMON J. LOWELL, OF SAN FRANCISCO, AND AMOS L. FULLER, OF OAKLAND, CALIFORNIA.

REFRIGERATING-CUPBOARD.

SPECIFICATION forming part of Letters Patent No. 550,985, dated December 10, 1895.

Application filed April 13, 1893. Serial No. 470,262. (No model.)

To all whom it may concern:

Be it known that we, AZMON J. LOWELL, residing in the city and county of San Francisco, and AMOS L. FULLER, residing at Oakland, Alameda county, California, citizens of the United States, have invented a new and useful Refrigerating-Cupboard, of which the following is a specification.

Our invention is a device for converting common detached cupboards into efficient refrigerators for preserving food or drink and also for rendering the same insect-proof, which improvements, in part, may be applied to fixed shelves, pantries, and other structures.

In our device we secure the result desired by a system of outside and inside application of cold water or water from melting ice in a manner far more simple and effective than any heretofore devised.

Figure 1 is a perspective view showing the manner of outside application of water from the small reservoir on top of the cupboard. Fig. 2 is a sectional view of the wall of the cupboard with coverings. Fig. 3 is a sectional front view showing the plates in position with cloth covering and guard E for same. Fig. 4 is a sectional end view.

Fig. 1 is an ordinary detached cupboard with the usual number of shelves and with single walls, the outer surface of which is covered with jute cloth, or other cloth of coarse texture, P, Fig. 2, which is then covered with felt or woolen cloth of close texture, Q, Fig. 2. Upon the cupboard or above it is placed the small reservoir M, which is fitted with a bib-cock to regulate the flow of water. The reservoir is filled with cold water, which falls on the jute cloth through an opening in the outer covering in quantity regulated by the bib. Experiment has proven that the water falling on the jute cloth will be distributed by capillary attraction over the whole surface covered by the same. Extending around the cupboard, near the bottom, is the gutter I, into which the water from the jute falls. The water is allowed to rise in this gutter to a sufficient height to prevent insects from passing into the cupboard, at which point is placed the overflow waste-pipe O. Above the door is the projection J, which carries the cloth coverings a little beyond the outer surface of the door. Near the top of the door is the slanting projection K, forming an angle with the door, as shown in Fig. 4, within which the loose ends of the cloth coverings fall when the door is closed, thus immediately restoring the connection between the cloth above and that on the door. At one end of the upper shelf is the ice-box B, Fig. 3, with an upper and lower compartment separated by a horizontal partition, the upper compartment for ice, the lower compartment for ice-water. The lower compartment is fitted with the bib-cock L for drawing the ice-water, when desired. In this water-chamber is the overflow-pipe C, placed at a proper height to retain any desirable amount of water in this chamber. This overflow-pipe extends through the shelf to a metallic plate D beneath. This plate is detachable and extends the whole length and width of the shelf. The edges of the plate are turned up, and the plate has a slight fall toward the end opposite the ice-box. On the plate is a covering of jute cloth or other suitable material for distributing the water under all parts of the shelf and to prevent it from flowing in a narrow stream along the plate, as it is contemplated that only a small quantity of water will be used. At the end of the plate opposite the ice-box the plate covering passes through the guard E, a wide flat metallic tube, to a corresponding plate below the next shelf, which has a slight fall in the opposite direction, and so on through the whole series of shelves. At the lower end of the last plate is the pipe G or G′ to conduct the water into the vessel N, or to which a bent or flexible tube may be attached to conduct the water into the gutter I, when desirable.

Experiments have demonstrated that coverings thus arranged and cooled effectually protect the cupboard from the influence of external heat, while the ice and the ice-water that passes below the shelves keep the whole cupboard at a low temperature, thus making an exceedingly convenient and satisfactory refrigerator.

We claim as our invention and desire to secure by Letters Patent—

1. The covered plates in combination with the ice-box the shelves, and the water cham-

ber, and the overflow pipe conveying the water from the water-chamber to the covered plate below the upper shelf and a guard, as described, on the middle shelf to prevent dripping thereon.

2. The combination of an ice-box and the covered plates, with a water chamber and an overflow pipe connected with covered plates, and a pipe leading from the lower plate to a gutter fitted with an overflow pipe arranged in the manner and for the purpose indicated.

3. The combination with a refrigerator casing of a cloth covering thereof, and a water supply for moistening the cloth, and projections on and above the door for the purpose of restoring the connection between the cloth on the door, and that above it, when the door is closed.

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