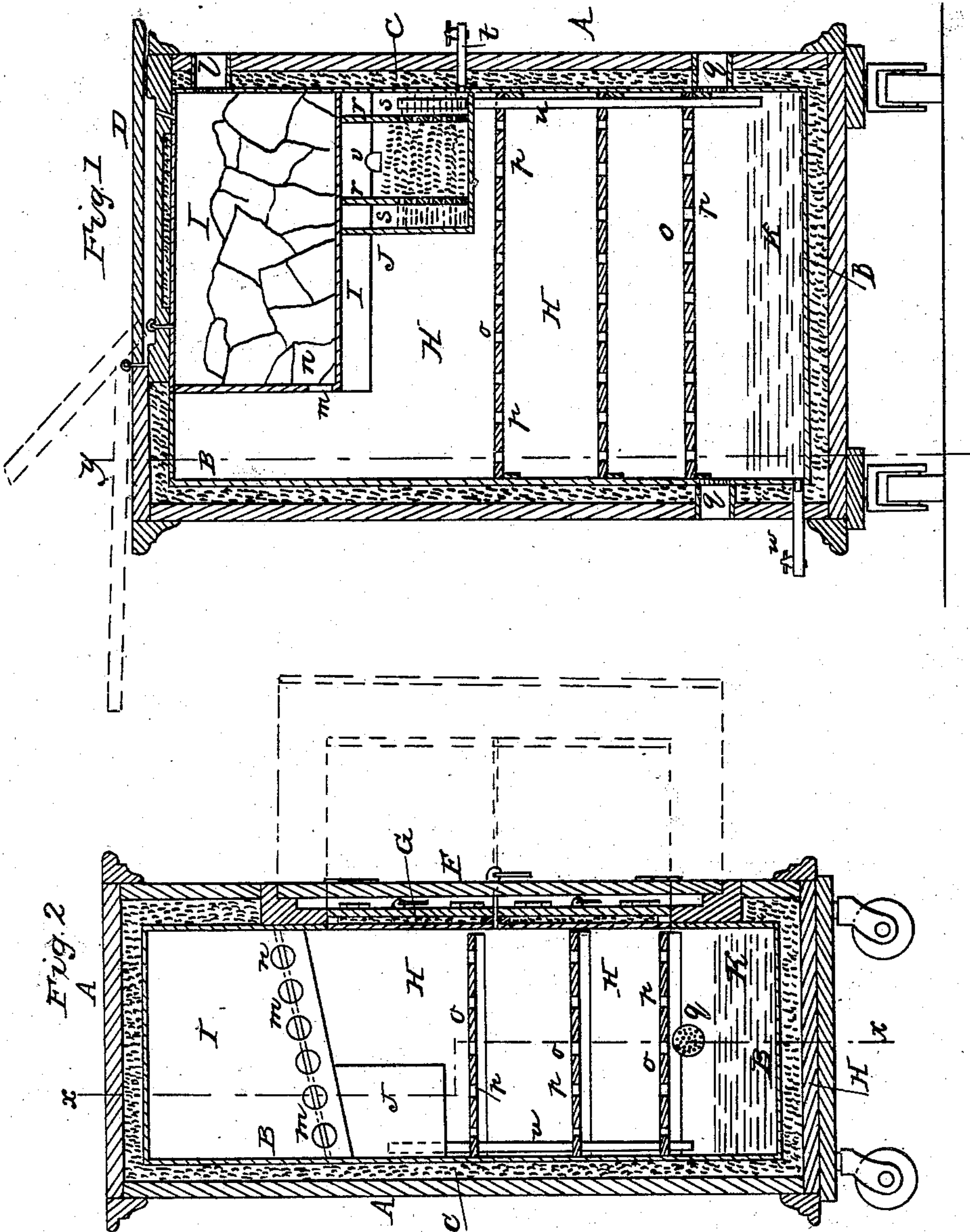


J. McKELVEY.

Refrigerator.

No. 54,931.

Patented May 22, 1866.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES McKELVEY, OF OGDENSBURG, NEW YORK.

IMPROVED REFRIGERATOR.

Specification forming part of Letters Patent No. 54,931, dated May 22, 1866.

To all whom it may concern:

Be it known that I, JAMES McKELVEY, of Ogdensburg, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Refrigerators; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved refrigerator in the plane of line *x x*, Fig. 2. Fig. 2 is a vertical transverse section in the plane of line *y y*, Fig. 1.

Like letters designate corresponding parts in both figures.

My invention consists in the combination and arrangement of a filter with the ice box or compartment, refrigerating-chamber, and a water-reservoir at the bottom of the latter; so that the water from the ice as it melts will flow into the filter, from whence, after filtration, a portion may be drawn out when required for use, and the excess discharged into the water-reservoir; also, in the use of a wire or small rod inside of the ice-chest and placed centrally across the ventilating-holes to prevent water dripping on articles in the chamber below from portions of ice which lie in contact with said holes; and, further, in the special arrangement of two inner doors or a divided door with the food-chamber and shelves, for the purpose herein described.

In the drawings, A A represent the exterior ordinary wooden case of a refrigerator; B B, the inner metallic case, preferably made of iron; C C, any ordinary and suitable filling between the cases A B, such as pulverized charcoal, plaster-of-paris, or other non-conducting material; D and E, inner and outer lids or covers at the top for access into the ice-chamber, the inner one, E, being packed in like manner as the sides of the refrigerator; F, the outer door, and G G' two inner doors for entrance into the food-compartment H, the doors G G' being also made non-conducting. I is the ice-chest in the upper part of the apparatus. J is the filter, placed immediately beneath the ice-chamber, at the back corner, and may be of any ordinary construction. K is the water-reservoir at the bottom of the food-compartment; L, ventilating-hole for the entrance of

air into the ice-chest; *m m*, openings for the passage of the air from the ice-chest, after it has become cooled, into the main compartment. *n* is a wire stretched across the holes *m m* to prevent the protrusions of portions of the ice, from which the water might otherwise drip upon the food or other articles within the compartment below. *o o* are ordinary shelves, of which there may be any number required, which are provided with perforations *p p* for the free passage and circulation of the air; and *q q* are escape ventilating-passages, the inner ends or mouths of each, and also of *l*, being protected against the entrance of insects by wire-gauze or finely-perforated metal.

The filter may be constructed as shown, consisting of an inner case, *r*, for holding the defecating and filtering material, and provided in its sides with perforations for the passage of the purified water into the surrounding reservoir or jacket *s*. *t* is a pipe extending from this jacket outside, where it is provided with a faucet, through which the water is drawn when required for drinking or other purposes. *u* is a vertical pipe passing through the bottom of *s* and extending upward to near the top for the discharge of the water when it rises to that point into the reservoir K beneath, and *v* is the opening from the ice-reservoir into the filter, and *w* is a discharge-pipe provided with a suitable stop-cock for drawing off the water when required from the reservoir K.

To render the apparatus more durable and to prevent oxidation I prefer to galvanize the casing B on its inner side, and also to case the reservoir K with lead.

The advantages of my improvements are as follows:

First, the arrangement of the filter within the refrigerator keeps the water cool, dispenses with the use and expense of one outside, it enables the water which results from the melting of the ice to be used for culinary and drinking purposes, and also purifies the water for the reservoir K.

Second, the wire *n* effectually prevents the dripping of water through into the food-compartment, which wire-gauze or perforated plate does not, its thickness prevents actual contact of the ice with the side by which the water as

it melts is prevented from dripping through the holes, and the inclination of the wire acts as a conductor of the water which may come in contact with it to the lower portion of the ice-chest, where it is discharged into the filter.

Third, the inner divided doors, G G', prevent in a great measure the escape and waste of the cold air in removing and placing articles upon the shelves. For instance, if access is desired to the upper shelves only, the upper door, G', only requires to be opened, and thereby allows the escape of only one-half of the cold air which would otherwise be liberated if the two doors were combined in one, and an equal saving is effected when the lower door only is opened for communicating with the lower shelves.

Fourth, the employment of the water-reservoir K, which in an ordinary-sized refrigerator is designed to have a capacity of several pailfuls, prevents the inconvenience of having to frequently remove the same, as is usually required, and thereby prevents the dripping upon the floor or carpet which more or less attends its frequent removal, and especially when it is allowed to drip from the apparatus into a pail,

which overflows when not promptly attended to. But its great advantage is the antiseptic and preservative effect which the purified water has upon the articles in the refrigerator, possessing as it does a great affinity for and power of absorbing the exhalations from the food and other articles and preventing their decomposition, it having been proved by experiment that food under such circumstances will keep sweet and fresh a much longer period of time than it will without the influence of the water.

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

The filter J, in combination with the ice-chest I and refrigerating-chamber H, arranged substantially in the manner and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JAMES MCKELVEY.

Witnesses:

JAY HYATT,
LOUIS FRASER.