A. McCLAIN.

REFRIGERATOR AND FILTER.

No. 188,650. Patented March 20, 1877.

Fig. 1.

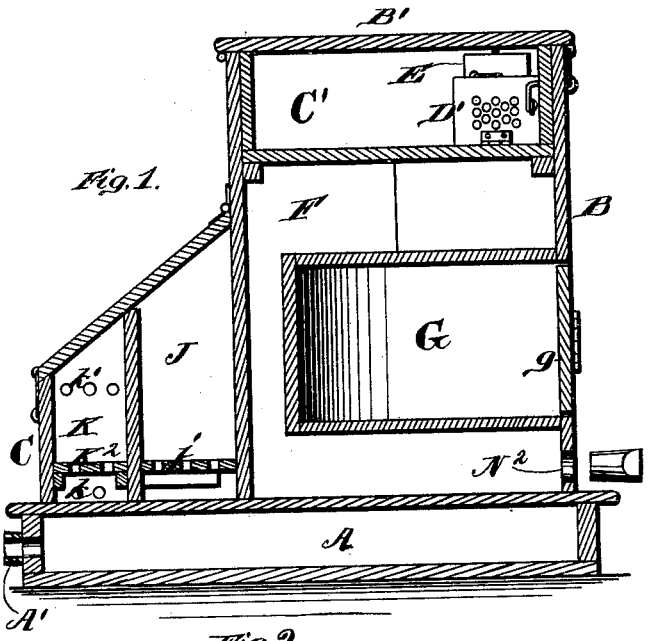


Fig. 3.

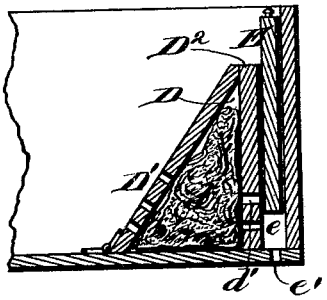


Fig. 2.

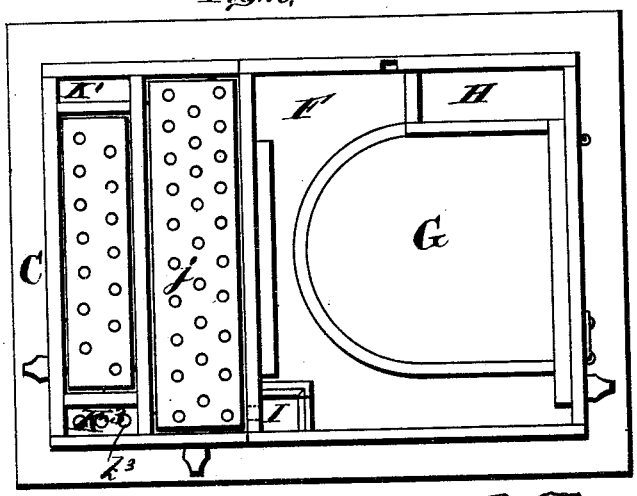


Fig. 4.

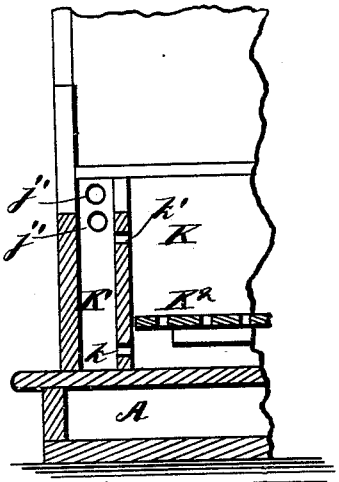


Fig. 5.

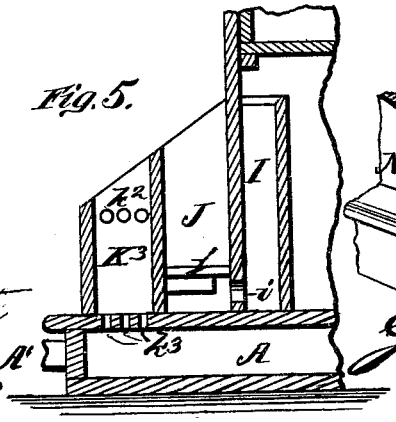
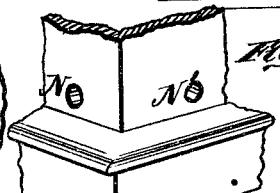


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

ANDREW McCLAIN, OF NASHVILLE, TENNESSEE.

IMPROVEMENT IN REFRIGERATORS AND FILTERS.

Specification forming part of Letters Patent No. **188,650**, dated March 20, 1877; application filed February 3, 1877.

To all whom it may concern:

Be it known that I, ANDREW McCLAIN, of the city of Nashville, in the county of Davidson and State of Tennessee, have invented a new and valuable Improvement in Refrigerators and Filters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of central vertical section of my refrigerator and filter, and Fig. 2 is a plan view of the same with the tops removed. Figs. 3, 4, 5, and 6 are detail views thereof.

This invention relates to combined refrigerators and filters; and it consists in the peculiar construction, combination, and arrangement of the parts hereinafter described.

In the accompanying drawings, A designates a tank or water-receptacle, which supports a refrigerator, B, and a filtering apparatus, C, annexed to said refrigerator, and hereinafter more particularly described. Said refrigerator B is provided with an ordinary hinged cover, B′, immediately under which is a water-receptacle, C′. At one corner of said water-receptacle is a sponge-box, D, having an inclined perforated hinged outer face, D^1, and a perforated fixed vertical outer wall, D^2. The space between said outer wall D^2 and the inside of the outer casing of the refrigerator forms a guideway, *e*, for a slide, E, which regulates the outflow of water from said water-receptacle.

The perforations *d′* in said vertical wall D^2 are arranged above one another, so that the descent of the said slide may close all or only some of them, as preferred. The sponge *d* within said box D compels the water to flow slowly. It also checks the outflow of foreign matter, and acts as a coarse filter.

At the bottom of guideway *e* is a perforation, *e′*, through which the water passes to the main compartment F of the refrigerator.

G designates the refrigerating-chamber, which juts into the middle of said compartment F, and is provided with a door, *g*, opening at the front of said refrigerator, the front wall of which refrigerator supports said chamber G.

The water from said perforation *e′* passes first into a space, H, partitioned off from main compartment F, at one corner thereof, and communicating therewith at the bottom. At the corner diagonally opposite to said space is a vertical passage, I, rising from the floor of said compartment F to a point a little below the level of the top of same space H, and a little above the line of top refrigerating-chamber G. The water is thus compelled to circulate about the refrigerating-chamber G, and thoroughly cool the same, before passing out of compartment F, the ice being deposited in the corners of the compartment F which are most distant from door *g*.

From said passage I the water flows through an orifice, *i*, into the bottom of inner filtering-chamber J, and rises through a perforated false bottom, *j*, in said chamber, and through filtering material which is placed thereon, to a perforation or perforations, *j j*. (Shown in Fig. 4.) Through said perforation or perforations the water flows into an end space, K^1, partitioned off from a second filtering-chamber, K, but communicating therewith through upper perforations k^1 and lower perforations *k*. The water ordinarily passes through said lower perforation, then up through a perforated false bottom, K^2, of said chamber K, and the filtering material laid thereon, and finally out through perforation k^2, near the top of the opposite partition, into a second end space, K^3. The perforations k^2 are a little below the line of perforations *k*. In case, however, the water flows too freely into space K^1, upper perforations k^1 allow the excess to flow into chamber K, above false bottom K^2, and thereby prevent overflow.

From second end space K^3 the water, now thoroughly filtered, passes through bottom perforations k^3 k^3 into tank A, whence it is drawn through tube A′. N, N^1, and N^2 are perforations near to and above the bottom of

compartment F and filtering-chamber J and K, which are ordinarily to be kept closed with cork or other substance, and which are to be opened only for purposes of cleansing the machine.

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

1. The combination of water-receptacle C′ with sponge-box D, having perforated walls D^1 D^1 and slide E, substantially as and for the purpose set forth.

2. Refrigerating-chamber G, in combination with compartment F, having space H and tube I, arranged at diagonally-opposite corners, substantially as and for the purpose set forth.

3. The combination of filtering-chambers J and K, end spaces K^1 and K^2, and perforations connecting said chambers and spaces, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANDREW McCLAIN.

Witnesses:
CHAS. J. COHEN,
J. H. LOEB.