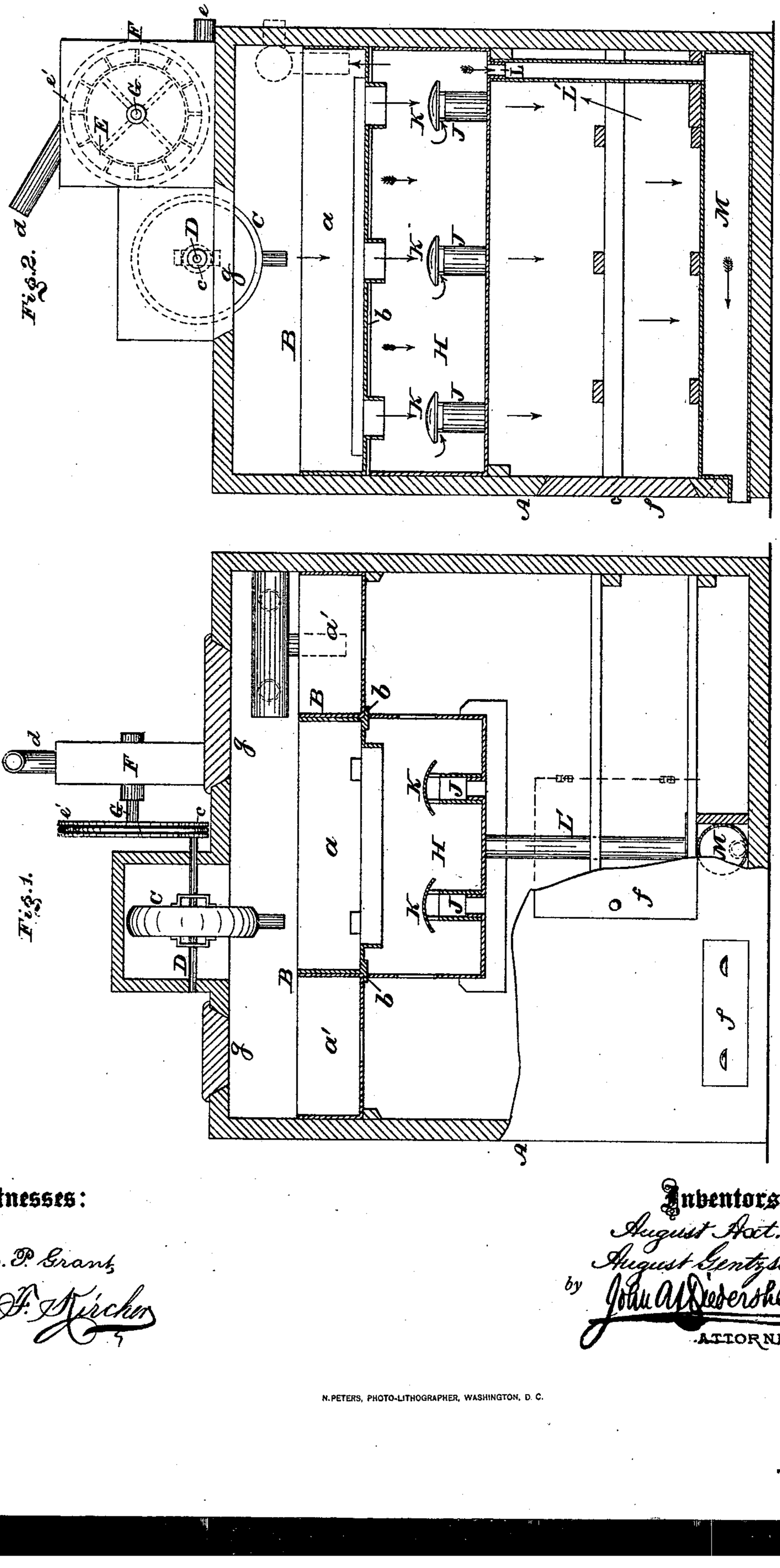
(No Model.)

A. AXT & A. GENTZSCH.

Refrigerator.

No. 236,476. Patented Jan. 11, 1881.



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AUGUST AXT AND AUGUST GENTZSCH, OF PHILADELPHIA, PENNSYLVANIA.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 236,476, dated January 11, 1881.

Application filed November 10, 1880. (No model.)

To all whom it may concern:

Be it known that we, AUGUST AXT and AUGUST GENTZSCH, both citizens of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Refrigerators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 are vertical sections, at a right angle to each other, of the refrigerator embodying our invention.

Similar letters of reference indicate corresponding parts in the two figures.

Our invention consists of a refrigerator having the combined effects of a cold fresh-air blast and cold-water receptacle, the construction, combination, and arrangement of parts being hereinafter fully set forth.

Referring to the drawings, A represents the body of a refrigerator, and B the ice-rack at the upper portion thereof, said rack being formed of sections *a a' a'*, suitably supported within the body, the central section, *a*, having at opposite sides projecting ledges *b*, for sustaining the inner sides of the contiguous sections *a' a'*, which latter may also act as receivers for articles of food. To the closing top of the body A is secured a fan or fan-blower, C, the rotary shaft D whereof carries a pulley or gear-wheel, *c*.

E represents a water-wheel, the case F whereof is supported on the body A, and provided with an inlet-pipe, *d*, attached to a hydrant or other place of supply, and with a discharge-outlet, *e*. To the end of the shaft G of the wheel is attached a pulley or gear-wheel, *e'*, which gears with the pulley or wheel *c*, a belt or band being employed in the present case.

Within the body A, below the ice-rack, is supported a drip-pan, H, provided in its bottom with air-outlet tubes J, each having an overhanging cap or guard, K, and to said bottom is also secured a drip-outlet pipe, L, which by means of a pipe, L', communicates with a cylinder, M, located horizontally on the bottom of the body A. A space exists between the pan H and floor of the body A, for for the reception of racks for the support of articles to be refrigerated, the body having suitable doors *f* for access to said space, and lids *g* in the top or cover for access to the ice.

The operation is as follows: When water is directed into the case F the wheel E is rotated, and the power thereof communicated to the fan-blower C. The air-blast is directed against the ice in the section *a* and forced, in a cold condition, through the open bottom thereof to the pan H, then through the tubes J and slotted sides of the pan into the space below the pan, and caused to reach every part of the body A as cold air in circulation, the heated matters escaping through a suitable outlet at top of the body. The melted ice or drip falls into the pan H, being prevented from dropping into the tubes J, owing to the guards K, and escapes through the pipe L and pipe L' to the bottom cylinder, M, which, besides forming a cooling medium at the bottom of the body, and, furthermore, having the air-blast directed against it for additional cooling of said blast, serves as a receiver for the ice-water which may be drawn off, as desired.

It will be seen that the refrigerator is subjected to the cooling effects of a blast of fresh air cooled by the ice at top and kept in constant circulation, and the surface of the ice-water receptacle at bottom, so that the articles placed on the racks and floor are reliably refrigerated.

We are aware that it is not new to provide a refrigerator with an ice-rack, below which is a pan having outlets for the drip and guarded outlets for the air driven into the refrigerator through said rack and pan, and therefore disclaim the same; but we are not aware of any refrigerator having the side sections of the ice-rack supported by ledges on the main section thereof, so that the inner sides of said side sections are prevented from breaking down, or any refrigerator having an ice-water receiver forming a cooling medium at the bottom of the body in connection with means for forcing cold air into and through said body; wherefore we believe that we have made an improvement in the art.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The ice-rack formed of the sections *a'* and section *a*, with ledges *b*, substantially as and for the purpose set forth.

2. In a refrigerator, the ice-rack B at top, and drip-pan H, with air-outlets J, below the same, in combination with an ice-water receiver, M, at the bottom, substantially as and for the purpose set forth.

3. The refrigerator having an air-forcing apparatus, C, a top ice-rack, B, a drip-pan, H, with water and air outlets L J, and a bottom ice-water receptacle, M, all constructed, arranged, and operating substantially as and for the purpose set forth.

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