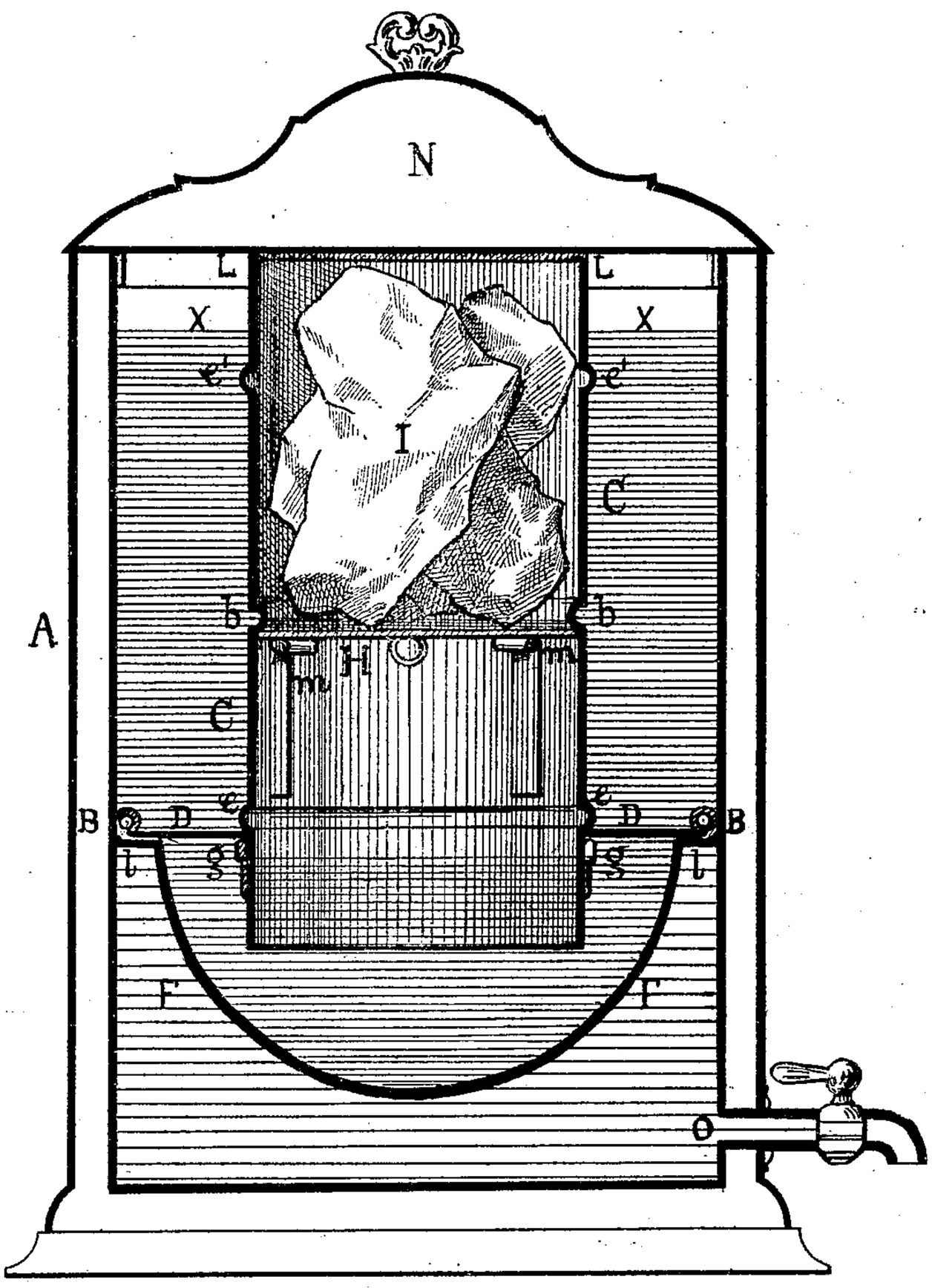
I. BRACH.

Water Coolers.

No. 142,986. Patented September 23, 1873.



WITNESSES.
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ISIDOR BRACH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WATER-COOLERS.

Specification forming part of Letters Patent No. **142,986,** dated September 23, 1873; application filed July 25, 1873.

To all whom it may concern:

Be it known that I, ISIDOR BRACH, of Philadelphia, in the State of Pennsylvania, have invented an Improved Water-Cooler, of which the following is a specification:

The first part of my invention relates to an arrangement for filtering or straining the water before its passage from the cooler. The second part of the same relates to devices for preventing the contact of water or air with the ice or other refrigerating substances used in the cooler.

The accompanying drawing represents a central sectional view of my water-cooler, A being an exterior vessel, or ordinary water-cooler, provided with the cover N. Within A, a few inches from the bottom, is placed a cup-shaped filter or percolator, F, of felt or other similar suitable material, of any desired thickness. F is kept in the proper position by means of a circular rim, B, of bamboo or other elastic substance which will not impart a bad flavor to the water, to which the edge of F is secured. B, by its elasticity, presses the margin of the filter against the inside of A, thus forming a joint sufficiently tight to arrest the passage of impurities in the water above.

The edge of F is stretched over and around the periphery of a flat ring or annulus, D, the whole resting upon three or more lugs, *l l*, fixed around the interior of A. Through an opening in D is inserted the ice-receptacle C as far as the bead *e*, by which it rests on D. There are slots in the latter, D, (not shown in the drawing,) through which lugs *g g* on C pass, and, on C being turned, the lugs, passing under the edge of the annulus, prevent C from getting out of position.

Receptacle C is simply a sheet-metal vessel hermetically sealed at its upper end L, and provided with the outwardly-projecting beads *e e'* and the inside bead *b*, the office of the latter being to form a rest for a diaphragm, H, which is held in place by means of lugs *m m* and corresponding slots in the edge of H. Upon turning H slightly around it is held from falling from position by the lugs.

Percolator F and annulus D being placed in the position before mentioned, first C is charged with ice I. The diaphragm is secured in place. C is then inverted, H preventing the ice from dropping out, and the lower end of C is passed into the opening in D, in the manner described. A being now filled with water, say, to the line X, the upper portion of the same, surrounding the ice, becomes cooled and descends to the bottom of the cooler, the warmer water taking its place, to be in turn cooled.

The water formed by the melting of the ice flows down and mingles with the water below, to be also filtered before its passage from the cooler. C being air-tight, of course the water cannot pass up into it so far as to come in contact with the ice. It will also be readily observed that no water can pass to the outlet O without having first become purified by passing through the percolator.

I claim that by these devices a considerable economy of ice results, it being practically shut off from contact with either air or water. Advantages are also secured by the use of the simple and effective filtering device, which may be readily taken out from time to time, as may be necessary, and, after cleansing, replaced with ease and dispatch.

When it is desired to employ a refrigerating mixture, which, of course, must be preserved from contact with the drinking-water, the receptacle C may be inverted as to the position shown, with the closed end below, and, when thus used, diaphragm H will form a support for any article which it may be desired to keep cool.

Cover N is constructed to fit as close as possible, in order to exclude the atmosphere.

I claim—

1. The removable felt percolator F, secured within vessel A, in the manner specified.

2. Percolator F, annulus D, and receptacle C, provided with the diaphragm H, all arranged within the vessel A, and acting together as and for the purposes described.

3. The inverted ice-receptacle C, provided with diaphragm H and open at its lower and closed at its upper end, in combination with vessel A, as and for the purpose set forth.

ISIDOR BRACH.

Witnesses:

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