(No Model.)

T. D. MOWLDS.

Water Cooler.

No. 235,696. Patented Dec. 21, 1880.

Fig 1.

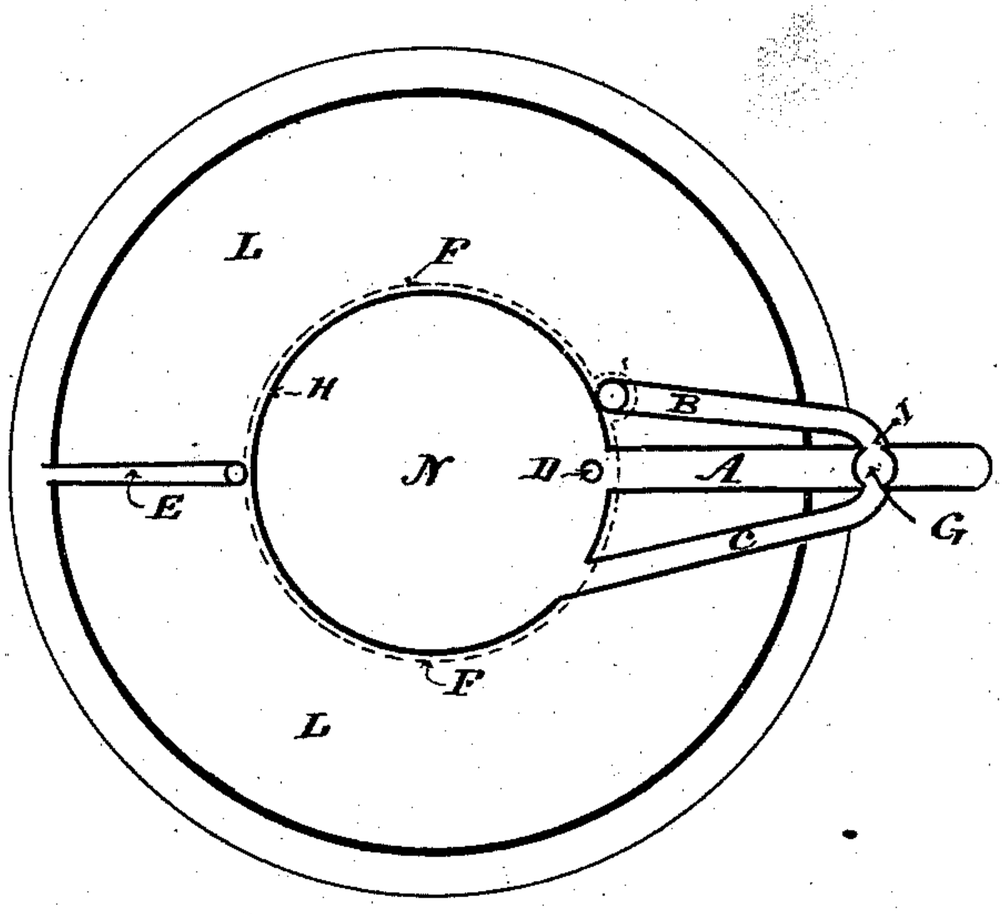


Fig 2.

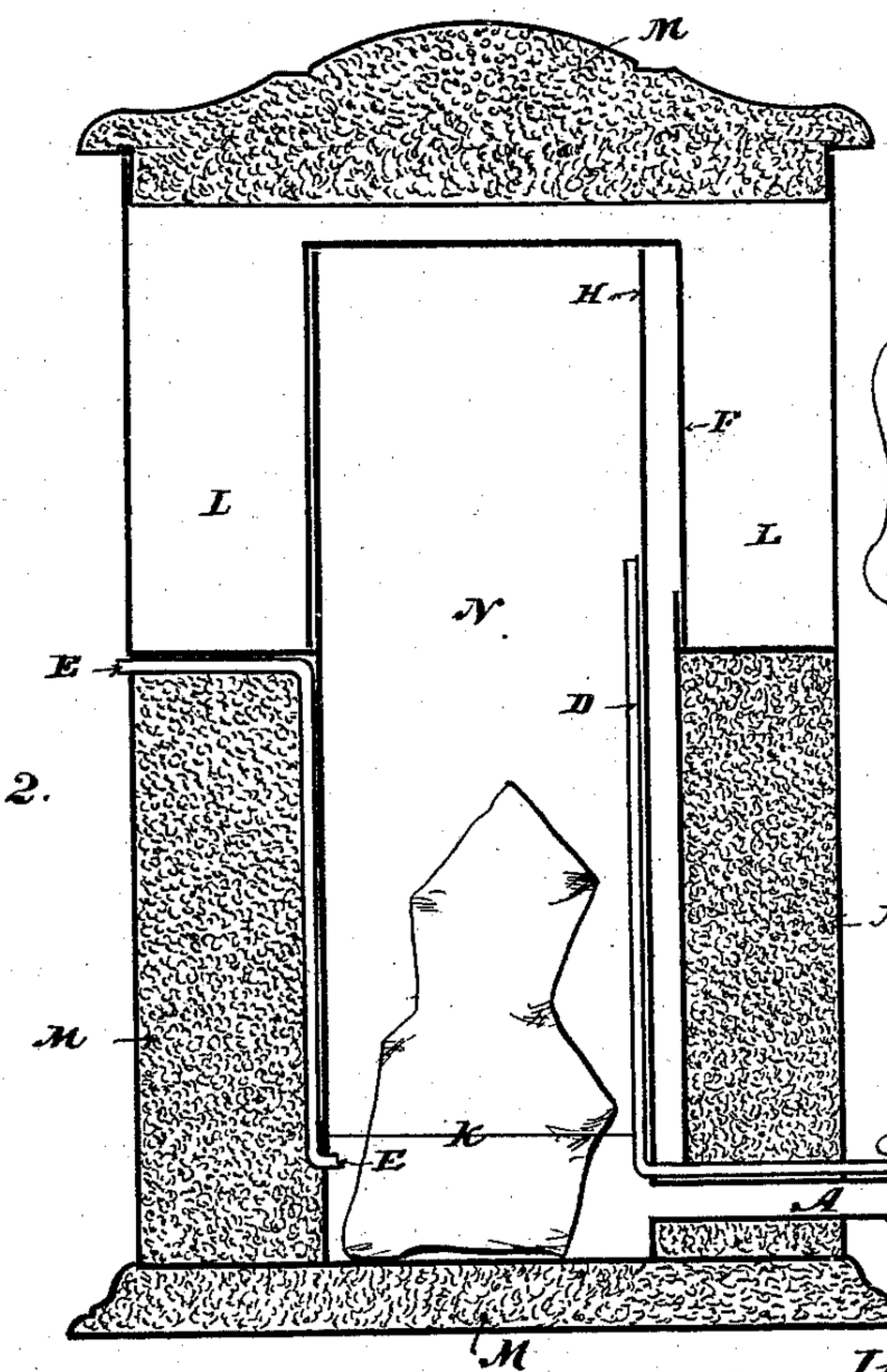
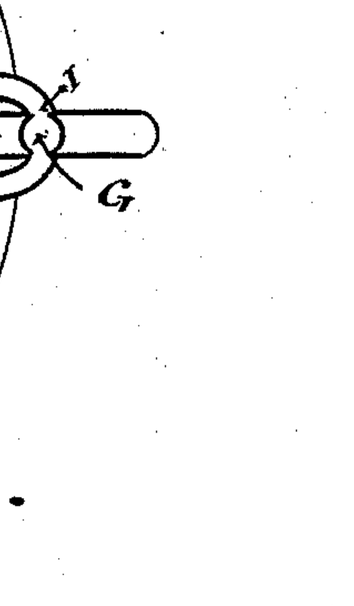


Fig 3.



Witnesses.
D. O'Donoghue
J. McNamee

Inventor.
Thos. D. Mowlds
By H. F. Ennis
Atty.

UNITED STATES PATENT OFFICE.

THOMAS D. MOWLDS, OF PHILADELPHIA, PENNSYLVANIA.

WATER-COOLER.

SPECIFICATION forming part of Letters Patent No. 235,696, dated December 21, 1880.

Application filed October 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS D. MOWLDS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Water-Coolers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in water-coolers for which Letters Patent No. 224,712 were granted me February 12, 1880, in which only a small quantity of water is kept on the ice and this supply automatically renewed as needed.

The objects of my improvements are, first, to provide a secure and easily-adjusted air-tight cover for the ice-chamber; second, to draw off any surplus water made by the melting of the ice in the ice-chamber. I attain these objects by the mechanism illustrated in the accompanying drawings.

Figure 1 is a plan of the cooler; Fig. 2, a vertical transverse sectional view of the same; Fig. 3, a view of the spigot as turned on for drawing off water.

N is the chamber for the ice; K, lump of ice therein; M M, packing around the ice-chamber; L L, reservoir for the additional supply of water; F F, a movable cover, made on the principle of the diving-bell, and fitting snugly over the outside of the ice-chamber, and at the same time covering over the top of the supply-tube B. This top reaches to the bottom of the reservoir L, and is held in position by the snug fit; or, if necessary, any suitable fastening may be adjusted. H H are the walls of the ice-chamber; A G, an ordinary bib-cock for drawing off water, of which A is the tube and G is the plug. The bearing in the cock is made to extend some considerable distance up and around the plug, (see Fig. 3,) and the plug has a small opening therein, said opening being a short distance above and running parallel with the water-way. Through the bearing, on both sides, is also a small opening, to correspond with the hole in the plug, so that when the cock is turned to draw off water the opening through the plug G and the openings in the bearing are on a line with the tube D D, as shown by the dotted line in Fig. 3. I is the second water-way in the side of the cock, (not in the plug, that having one water-way only,) to which, on either side, are attached the tubes B and C; D D, an air-tube extending from the inside of the ice-chamber, above the water-line, to and connecting with the opening in the bearing of the plug G; E E, an air-tube extending from the outer rim of the cooler to a point in the ice-chamber desired for a water-line; B B, a tube for conveying the water from the reservoir L to the plug G, through which it passes into the tube C and thence into the ice-chamber N.

The manner of operating the cooler is as follows, viz: The ice being first introduced, the cover F F is placed over the top of the ice-chamber N and tube B. The water is then poured into the reservoir L L. The bottom edge of the cover not being water-tight, the water flows up to the top of and down through the tube B, through the plug G and tube C into the chamber N, the air in the ice-chamber being, by the pressure of water, forced out through the tube E until the opening inside the ice-chamber is sealed by the water rising above it; then, as no more air can escape no more water can flow in, and the water stands on a level with the top of the tube E until the ice begins to melt, when the volume of water is increased correspondingly. This extra supply, made by the melting of the ice, is drawn off thus: The plug G being turned for drawing off water, the same motion shuts the opening I and allows no water to flow from the reservoir L through the tubes B and C into the ice-chamber; consequently any water drawn off must reduce the quantity in said ice-chamber. At the same time and by the same movement of turning the cock for drawing water the air-tube D D is opened, thus allowing air to rush in and fill the vacancy made by the water drawn off. When sufficient water has been drawn the motion of shutting off the water shuts the air-tube D and opens the connection between the supply-tubes B and C and the reservoir L; but no water can flow into the

ice-chamber unless the drawing off has reduced the water therein below the air-tube E, in which case the air would be forced out and the water would again flow in until it had sealed the air-tube E by rising above the opening.

As the top of the supply-tube B extends some distance above the bottom of the reservoir L the water flowing into the ice-chamber is not taken from the bottom of said reservoir; consequently the greater part of any sediment or impurities contained in the water will settle and be deposited on the bottom of the reservoir, and not enter the ice-chamber at all.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a water-cooler, the combination of the reservoir L, the ice-chamber N, the tube B, connecting with the two-way cock A G, and the cover F, constructed and operating substantially as and for the purposes set forth.

2. In a water-cooler, the combination of the two-way cock A G, tubes B and C, ice-chamber N, air-tube H, reservoir L, and cover F, constructed and operating substantially as and for the purposes set forth.

3. In a water-cooler, the combination of the air-tube E, ice-chamber N, cover M, tube B, and reservoir L, constructed and operating substantially as and for the purposes set forth.

4. In a water-cooler, the supply-tube B, extending above the bottom of the reservoir L, in combination with the ice-chamber N and the tube A and plug G, substantially as set forth.

5. In a water-cooler, the air-tight cover F, in combination with the ice-chamber N, reservoir L, and tube B, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS D. MOWLDS.

Witnesses:
JOHN F. BELSTERLENG,
J. MCNAMEE.