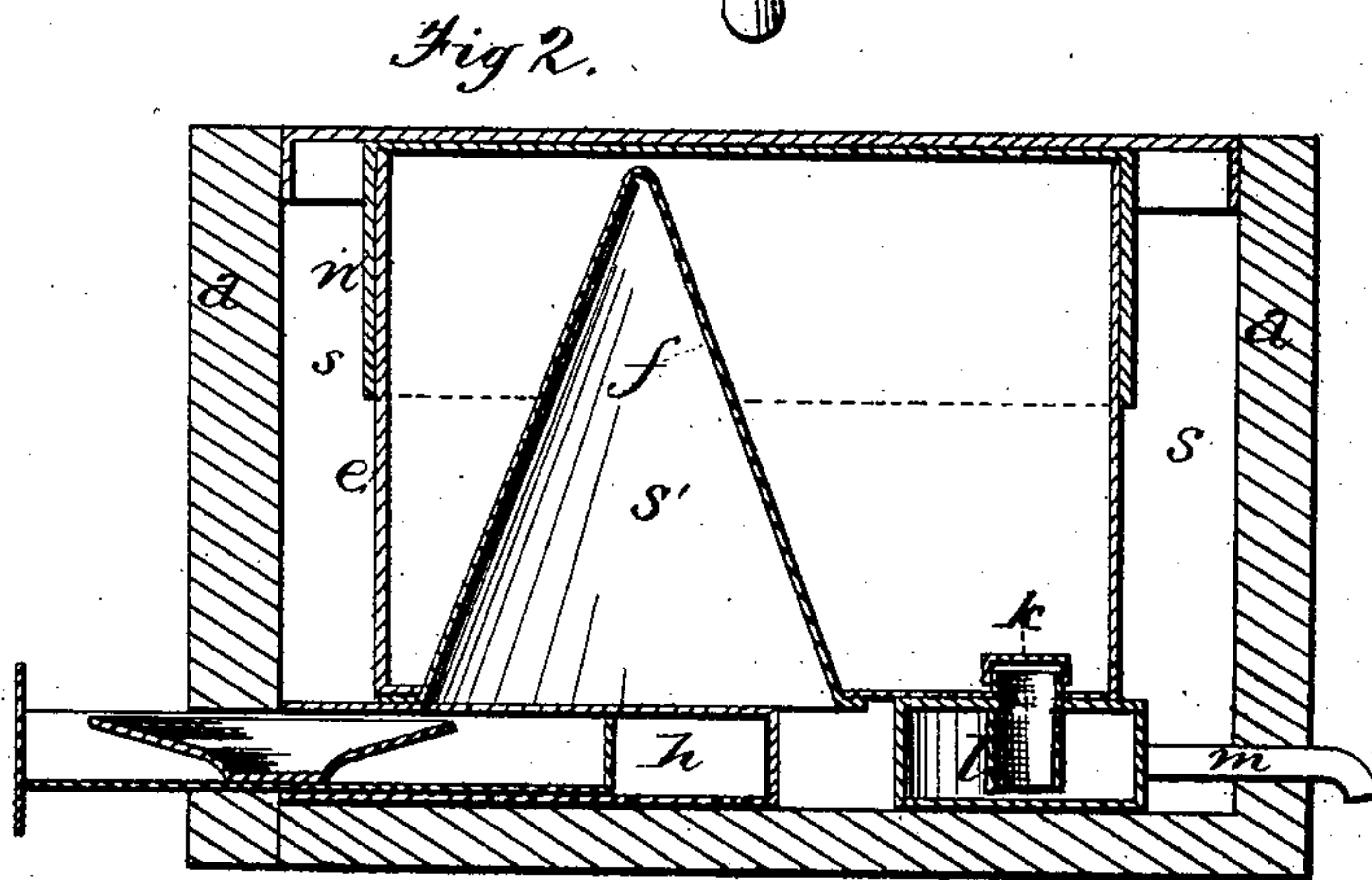
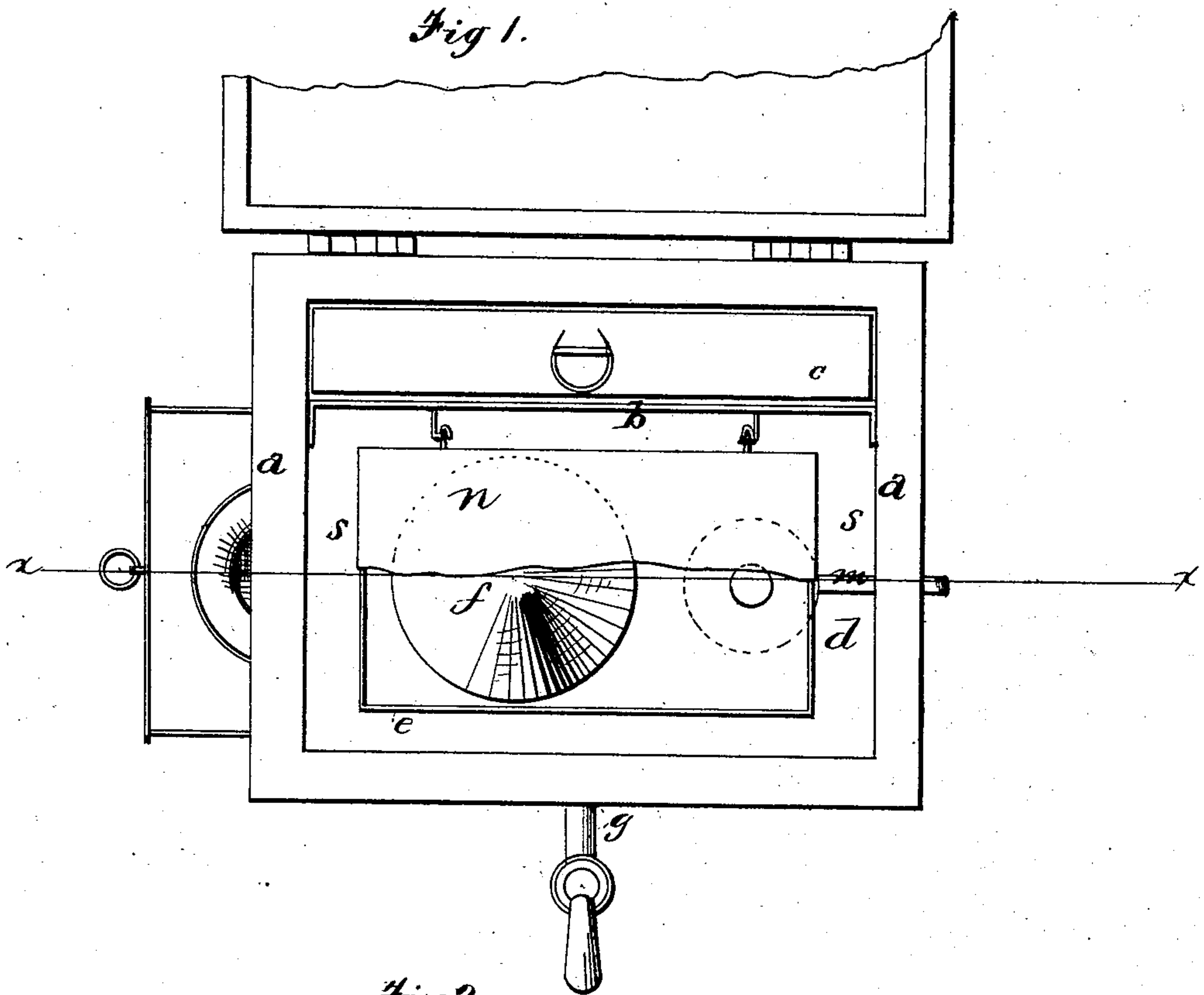


J. W. TAYLOR.
Water-Coolers.

No. 155,393.

Patented Sept. 29, 1874.



Witnesses

Harry C. Clark
H. Church

Inventor.

James W. Taylor
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attys

UNITED STATES PATENT OFFICE.

JAMES W. TAYLOR, OF ASHLAND, VA., ASSIGNOR OF TWO-THIRDS HIS RIGHT TO DUNCAN B. COX AND CHASTAIN H. TAYLOR, OF SAME PLACE.

IMPROVEMENT IN WATER-COOLERS.

Specification forming part of Letters Patent No. **155,393**, dated September 29, 1874; application filed August 1, 1874.

To all whom it may concern:

Be it known that I, JAMES W. TAYLOR, of Ashland, in the county of Hanover and State of Virginia, have invented a new and Improved Water-Cooler; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top-plan view of my invention. Fig. 2 is a cross-section through the line *x x*, Fig. 1.

Similar letters of reference in the accompanying drawings denote the same parts.

My invention relates to improvements in water-coolers; and it consists in the employment of an ice-receptacle surrounded by a water-space, the former being provided with a chamber, preferably formed by a hollow cone projecting from its bottom, which forms an interior water-space, so that the ice-receptacle has water-spaces concentrically situated on both sides of it, thus materially increasing the area of the water-spaces in contact with the ice, and more effectually cooling the water therein, the water-spaces of each side of the ice-receptacle communicating with each other, thus allowing a free circulation of water between the water-spaces, and at the same time economizing the ice, and permitting the employment of ice of an inferior character. My invention further consists in certain details of construction, hereinafter more fully set forth.

In the accompanying drawings, *a* is a rectangular vessel, preferably lined with metal, and divided by the plate *b* into two chambers, *c d*, of unequal dimensions, the larger one, *d*, receiving the ice-receptacle *e* of the same form as the chamber *d*, but smaller, so as to leave a water-space, *s*, between the faces of the ice-receptacle and three of the inner sides of the cooler and the plate *b*.

The ice-receptacle is held in position, when placed in the cooler, by means of projecting pieces on one of its outer sides sliding in grooves made in projections on the inner face of the dividing-plate, or by other equivalent means, which will permit the ready removal

of the ice-receptacle for the purpose of cleaning the parts, or repairing them when injured.

f is a hollow cone, springing from the bottom of the ice-receptacle, and extending to the top, or nearly so, of it, there being thus formed a water-space, *s'*, in the interior of the cone, which connects with the water-space surrounding the ice-receptacle. In lieu of a cone a cylinder or a chamber formed by four plates at right angles to each other, closed at its top and open at the bottom, might be employed; but the conical form has several advantages over the others, among which may be enumerated the following: It serves to pack the ice better, the latter as it melts always resting in direct contact with the cone, and cooling the water contained therein, which would not be the case in the other forms described. In the cone form, also, the warmest water is at the apex of the cone, which, being a small quantity, is quickly cooled, which causes a rapid circulation of water in the water-spaces and cooling of the latter. It is seen by my construction, also, that inferior or impure ice filled with foreign matter may be employed to cool the water as well as the purest ice, as the latter is never in contact with the water. *g* is a pipe, provided with a cock leading into the water-space surrounding the ice-receptacle, from which water may be drawn, as desired. *h* is a chamber, in the bottom of the cooler, for the reception of a butter-drawer, a receptacle for milk being also slid into the space between the dividing-plate *b* and one of the sides of the cooler. The water arising from the melting of the ice in its receptacle passes out through an opening in its bottom, through which passes a short vertical pipe, *k*, in the axis of the hollow cylinder *l*, the pipe *k* extending nearly to the base of the cylinder, which rests on the bottom of the cooler. *m* is a discharge-pipe, leading from the upper part of the cylinder *l* through the side of the cooler.

By this construction, the waste water from the melted ice in its receptacle will run out through the discharge-pipe *m*, when the water reaches its level, which is above the bottom

of the vertical pipe *k* attached to the bottom of the ice-receptacle. There is thus always left a stratum of water above the opening into the pipe *k*, which prevents all ingress of air to the ice through the discharge-pipe. *n* is the cover, having sides or flanges projecting into the water surrounding the ice-receptacle. The ice is thus securely protected from air, while the latter has free access to the water.

I claim as new, and my invention—

1. A water-cooler, having an ice-receptacle inclosed by a surrounding water-space, and itself inclosing a water-chamber, the water-

spaces on each side of the ice-receptacle communicating with each other, so as to preserve a constant circulation of the water between the spaces, substantially as described, and for the purpose set forth.

2. The ice-receptacle *e*, provided with the cone *f*, in combination with the water-spaces *s s'*, communicating with each other, substantially as described, for the purpose set forth.

JAMES W. TAYLOR.

Witnesses:

RO. T. JAMES,

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