JOHN MATTHEWS.

Improvement in Coolers for Soda Water, &c.

No. 125,139. Patented April 2, 1872.

Fig. 1.

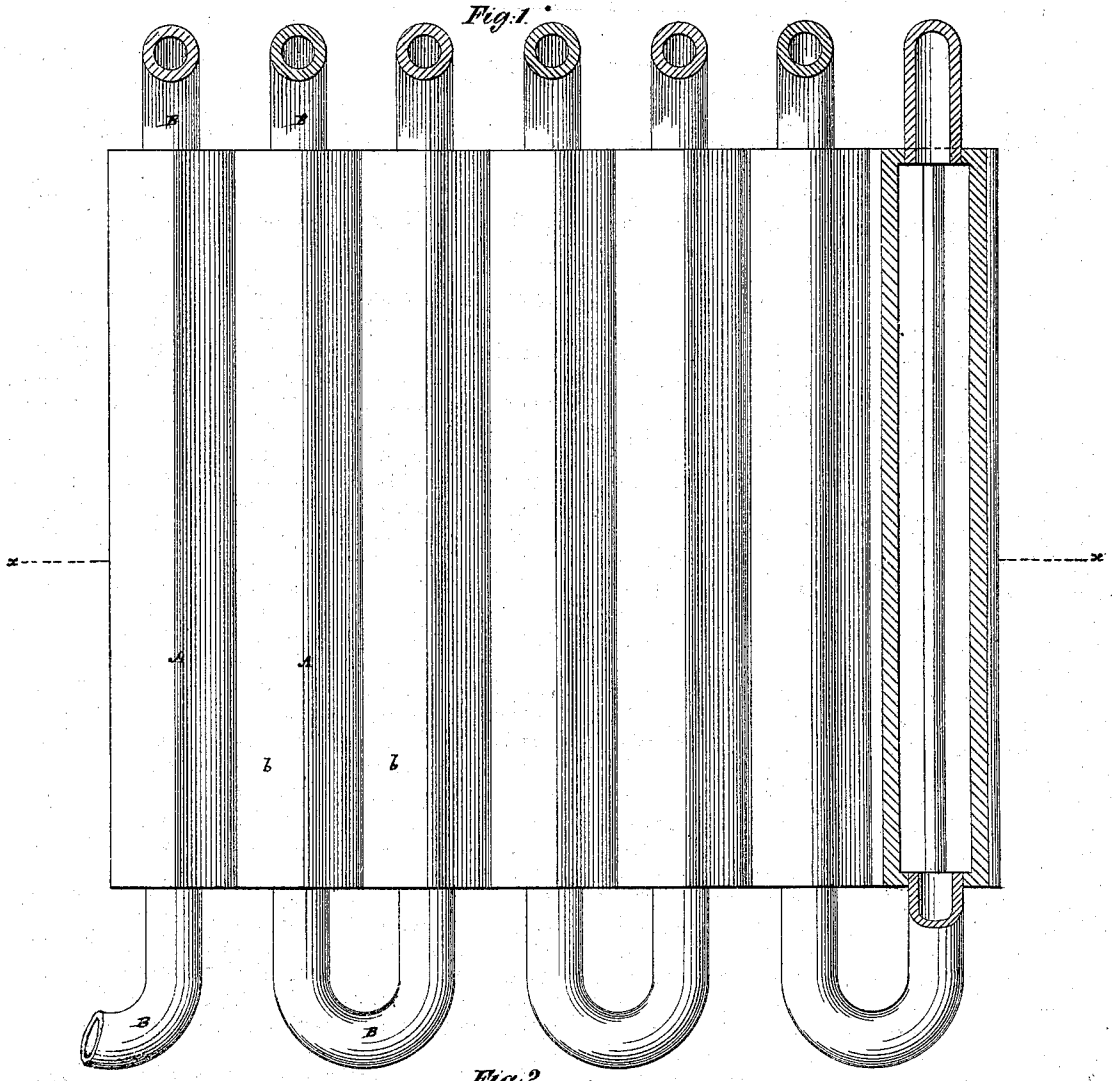
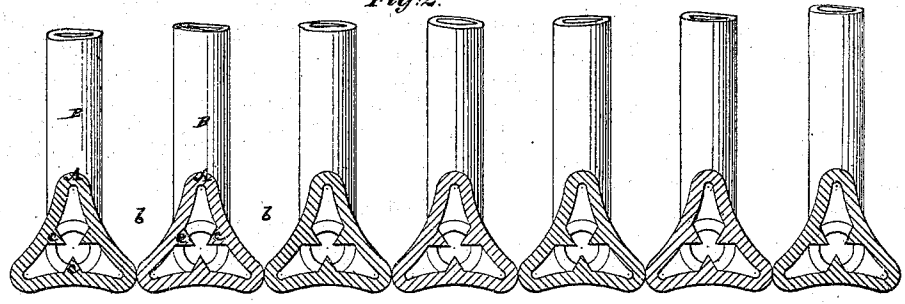


Fig. 2.



Witnesses:

Fred Haynes

R. A. Rabeus

Scale. 1 inch

John Matthews

per Brown Combs & Co.

Attorneys

UNITED STATES PATENT OFFICE.

JOHN MATTHEWS, OF NEW YORK, N. Y.

IMPROVEMENT IN COOLERS FOR SODA-WATER AND OTHER LIQUIDS.

Specification forming part of Letters Patent No. 125,139, dated April 2, 1872; antedated March 16, 1872.

To all whom it may concern:

Be it known that I, JOHN MATTHEWS, of the city, county, and State of New York, have invented a new and useful Improvement in Coolers for Soda-Water and other Liquids; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents an interior partly sectional base or face view of a cooler in part constructed in accordance with my improvement, and Fig. 2 a transverse section thereof at the line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts in both figures of the drawing.

My invention relates to coolers such as are ordinarily used for cooling soda-water and other gaseous or aerated liquids, and which are for the most part made up of tubes arranged to form the base or base and walls of an ice-chamber, and through which tubes the liquid to be cooled is circulated, while the ice is packed on and between them. To this end said tubes have heretofore been of circular form in their transverse section and arranged in close proximity to each other, thus presenting at best but half their area to direct contact with the ice, and requiring the ice to be very finely cut or broken to insure even this exposure. My invention consists in a triangular or approximately-triangular construction of said tubes, or certain of them, constituting the base or walls in part of the ice-chamber; likewise in forming said tubes with projections on their interior surfaces, the same constituting conductors, which add to the efficiency of the tubes.

Referring to the accompanying drawing, A A represent the tubes, which constitute my improved cooling-surface; and B B, return-pipes and connections at the ends of said tubes for passage to and circulation through the latter of the liquid to be cooled. These tubes A A are of triangular-shape in their transverse section and arranged side by side in contact with or close proximity to each other, their sides being preferably slightly concave on their exterior, and presenting V-shaped spaces *b* between them for reception of the ice. The tubes A A, as thus constructed and arranged, present an enlarged area—that is, two-thirds of their whole surface—to contact with the ice; likewise, the spaces *b* between the tubes serve, by their configuration, to hold the larger, and, consequently, more serviceable or lasting chunks or pieces of ice. Said tubes A A are furthermore constructed with projections *c* on their interior surfaces, which projections being of metal in common with the tubes, operate as conductors to add to the efficiency of the tubes as coolers of the liquid contained within or circulating through the latter.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The interior base or walls of the cooler constructed of tubes A A of triangular form in their transverse section, and arranged in relation with each other substantially as specified.

2. The triangular tubes A A of the cooler formed with internally-projecting conductors *c*, and arranged in relation with each other for passage through them of the liquid to be cooled and retention between them, as by spaces *b*, of the ice, substantially as herein set forth.

JOHN MATTHEWS.

Witnesses:

RICHD. W. MOTT,

THEO. M. TUTHILL.