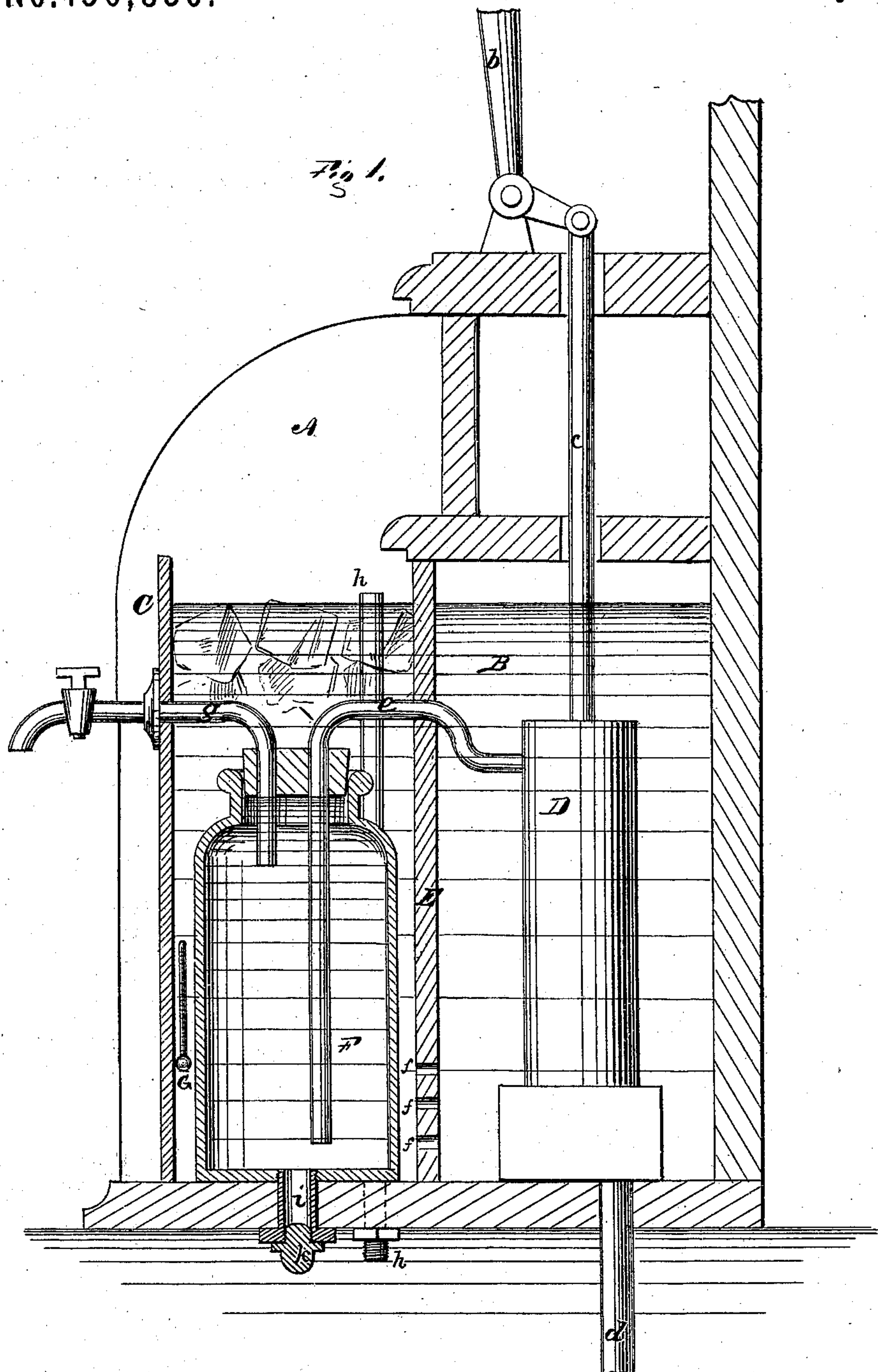


J. W. COLLIER.

Coolers for Beer and other Liquids.

No. 150,830.

Patented May 12, 1874.



Witnesses.
H. C. Matzenberg.
Chas. Miller.

Inventor.
James W. Collier,
per J. W. Collier
att.

UNITED STATES PATENT OFFICE.

JAMES W. COLLIER, OF NEW YORK, N. Y.

IMPROVEMENT IN COOLERS FOR BEER AND OTHER LIQUIDS.

Specification forming part of Letters Patent No. **150,830**, dated May 12, 1874; application filed August 27, 1873.

To all whom it may concern:

Be it known that I, JAMES W. COLLIER, of the city, county, and State of New York, have invented a new and Improved Apparatus for Drawing Ales, &c.; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an improvement in drawing and cooling ales and other liquors; and the invention consists in making the jars or coolers and the pipes connecting them with the pumps of non-metallic materials or substances, and in the combination and arrangement of the pumps, non-metallic coolers, and connecting-pipes with a cooling-tank having a transparent front.

In the accompanying sheet of drawings, Figure 1 represents a transverse section of my apparatus.

A represents the casing of my apparatus. This casing may be made from wood, marble, or any other suitable material, and may be of any convenient form and size. Within the lower part of the casing A is constructed a tank, B. This tank may be made from sheet metal, or of any desired material, in any desired way. The face of the tank, however, is made of glass, C, and within the tank are fitted the pumps D. Immediately in front of these pumps is placed a perforated partition, E, and in front of this partition are placed the cooling-jars F. The pumps D are connected with the barrels from which the ale, &c., is to be drawn by a pipe, *d*, extending from their under sides, and the pumps are operated by the piston-rods *c*, which extend upward and are attached to handles *b*. From the top of each pump passes a tube, *e*, extending into and near the bottom of the cooling-jars F, and from the tops of these jars pass tubes *g*, provided with faucets on their outer ends.

My apparatus being constructed substantially as above described, its operation is as follows: The pumps and cooling-jars being placed within the tank, as above mentioned, and the pumps connected with the barrels, which may be placed either above or below them, and the tubes *e*, suitably connecting the pumps with the cooling-jars, being properly

adjusted, water and ice are placed into the tank B, surrounding the cooling-jars F, until these jars are nearly or quite surrounded with water and ice. The partition E having perforations *f* formed therein permits the cold water to circulate freely around the pumps D, reducing them to the same temperature as the cooling-jars. The handles *b* being forced up and down by hand, as in ordinary ale-pumps, the ale is drawn from the barrels, forced into the cooling-jars F through the tubes *e*, whence it is drawn by the tubes *g* and faucets for consumption. The ale, &c., being thus forced to pass through the cool-pumps and cooling-jars, is reduced to a palatable temperature, and, since the act of forcing the ale into the cooling-jars by the operation of the pumps necessarily displaces more or less air from the interior of the jars, a vacuum, to a greater or less extent, is formed in the jars, by reason whereof any ale remaining in the pipes between the pumps and the cooling-jars will flow freely into the jars, and the jars being of glass, it can remain within them for an indefinite time without injury, since it does not remain in contact with any metallic substance, that part of the tubes *e* which passes into the jars being made of glass, so that ale may be drawn as fresh and good from the jars at all times as though just taken from the barrel. This results in a great saving, for in ale-cooling apparatus, as constructed heretofore, it has always been necessary to draw from the cooling-coil and throw away the ale that remained in it over night.

The advantage of making the front of the tank B of glass is, that the interior of the cooling-jars F may at all times be seen and the condition of the ale in them ascertained.

In order to keep the ale at a temperature which will be palatable, but will not rob the ale of its "life" or effervescing qualities, I fix within the tank B a thermometer, G.

A pipe, *h*, extends from the bottom to nearly the top of the cooling-tank, and is open at each end to allow of the escape of the water in the tank, so as to prevent its overflowing. The cooling-jars are also provided with an outlet, *i*, fitted with a stop-cock or stopper, *k*, whereby said jars may be readily washed out.

By constructing an apparatus for drawing ales, &c., substantially as I have described,

not only is economy effected by a saving of ale, but an economy of space is also the result of such construction; and by the fact that the temperature of the pumps as well as the coolers is influenced by coming in contact with the ice and water, the ale is more certainly and effectually cooled, and, by placing the pumps and coolers on the same level the ale will more certainly flow from the pumps into the cooling-jars by reason of the vacuum before mentioned.

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

1. In an apparatus for drawing and cooling

ale, &c., the non-metallic cooling-jars, connected with the pumps by similar pipes, substantially as described.

2. In an apparatus for drawing and cooling ale, &c., the combination of the non-metallic cooler and connecting-pipes and pumps with a cooling-tank having a transparent front, arranged substantially as set forth.

3. The cooling-jars provided with outlets *h*, by means of which access is had to them when it is desired to wash them.

J. W. COLLIER.

Witnesses:

H. L. WATTENBERG,
CHAS. MILLER.