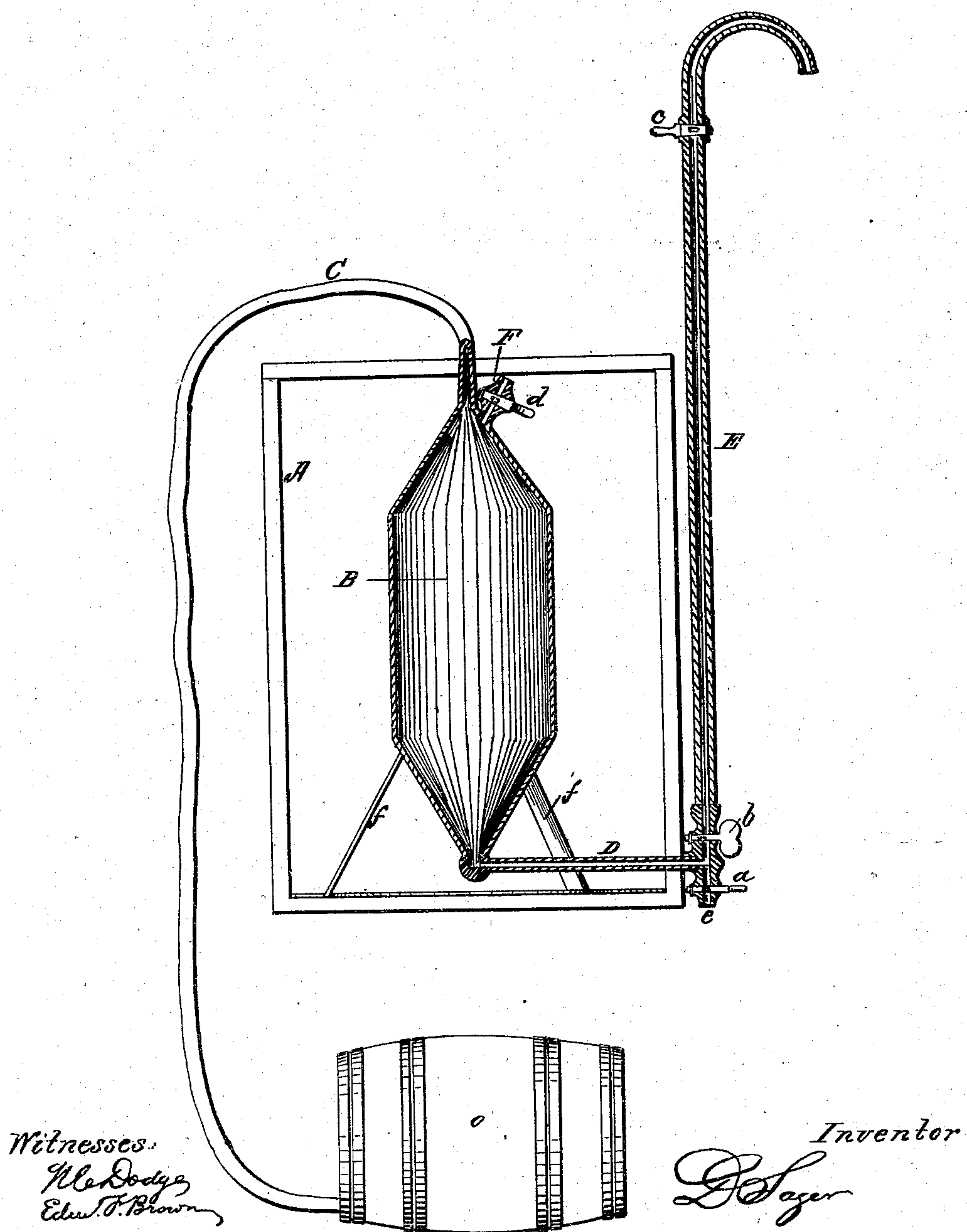


D. SAGER.
Beer Cooler.

No. 43,342.

Patented June 28, 1864.



UNITED STATES PATENT OFFICE.

DANIEL SAGER, OF ALBANY, NEW YORK.

IMPROVED BEER-COOLER.

Specification forming part of Letters Patent No. 43,342, dated June 28, 1864.

To all whom it may concern:

Be it known that I, DANIEL SAGER, of Albany, county of Albany, and State of New York, have invented a new and Improved Apparatus for Cooling Liquids; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, and to the letters of reference marked thereon, in which my invention is represented in vertical section.

The nature of my invention consists in a peculiarly-constructed reservoir for holding the liquid, which reservoir is placed in any suitable vessel and surrounded with ice or other cooling substances, and provided with suitable supply and exhaust pipes and cocks, as hereinafter more fully explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe it.

A represents a receptacle, of any suitable size and form, for containing the liquid reservoir and ice, to be made preferably of wood.

B is the liquid-reservoir, placed within the vessel A, with sufficient space between them for containing a proper supply of ice. The reservoir B may be made cylindrical or, if preferred, of any other form, it being preferably provided with a conical bottom, as shown. The object of this conical bottom is to prevent the deposit or accumulation within the reservoir of any sediment, as would be the case if the bottom was flat, or nearly so. In case a flat bottom was used, the sediment would evidently be deposited and remain in the angle formed by the union of the sides and bottom; and thus in case beer was the liquid used, and for which my invention is specially adapted, the contents of the reservoir would soon be rendered sour and unfit for use.

C represents a supply-pipe by which the beer or other liquid is conveyed to the reservoir. In case the barrel or vessel from which it is supplied is lower than the reservoir, a pump may be used in the usual manner; but it is obvious that the barrel may be located higher than the reservoir B, in which case the liquid will flow into the reservoir.

D represents an exhaust-pipe secured to the lower end or point of the conical bottom, and connecting as shown, or in any suitable manner, with the spout or delivery-pipe E,

which may have a curved or bent portion provided with a suitable nozzle at its upper end, substantially as shown. This pipe E is provided with three cocks, *a*, *b*, and *c*, as clearly shown in the drawing, and also has an opening at its lower end, the object of which will be hereinafter explained. The reservoir B is also provided at its top, which may also be made conical, as shown, with a short tube, F, in which is located a stop-cock, *d*. This reservoir B may be made of any suitable material, such as sheet metal of any kind, in which case its interior surface should be tinned, or otherwise protected from corrosion by the liquid contained in it. A very cheap and effectual method is to make it of cast-iron, it being cast in two sections and united by flanges and bolts, the sectional division, by preference, being horizontal, as indicated by the red line. In case cast-iron is used, its interior can be enameled in the usual manner; or, if preferred, the reservoir may be made entirely of earthenware, which will prevent any deleterious influence of the liquid. The reservoir B is supported upon three or more legs, *f*, secured thereto in any suitable manner. If desired, these legs may be secured or united at their lower ends to a ring, by which they will be firmly braced, and which will serve as a base for the reservoir to rest upon, and by which, if desired, it may be securely fastened in place. By thus mounting the reservoir its lower end is raised up from contact with the bottom of the tub or receptacle A, leaving ample space for the ice to surround and come in contact with both the conical bottom and the pipe D. It also affords ready access for attaching the pipe to the bottom, or removing the same in case of necessity.

It is obvious that the pipe E may be run up through the ice on the inside of tub or box A, if desired; and such an arrangement may be considered preferable wherever the location and arrangement of the device will admit of it.

The operation of my invention is as follows: The cocks *a* and *b* being closed, and cock *d* being opened, the beer flows from the barrel O through pipe C into the reservoir B, the air in the latter escaping through the short tube F. The space surrounding B is filled with ice, which soon reduces the liquid in B to a low temperature. The cock *b* being opened, the beer rises in the pipe E, from which it can be

drawn at the nozzle, whenever desired, by turning the cock *c*, it being understood that tube *F* is closed as soon as the reservoir is filled. When the supply in the reservoir becomes nearly or partially exhausted and it is desired to replenish it, the remaining portion is drawn off at *e* by closing cock *b* and opening *a*, after which water for cleansing the reservoir may be introduced through *F*, the air being allowed to escape through *E*; or the water may be introduced through the supply-pipe *C* if the same is not attached to the barrel at the time.

It is obvious that the supply-pipe may be connected at the bottom and the exhaust-pipe at the top, if preferred, the pressure of the gases in either case forcing the beer out at the nozzle whenever the cock *c* is opened for its flow. In some situations this arrangement of the pipes may be preferable. The coldest portion of the liquid, being most dense and heavy, will settle at the bottom, and for that reason I usually prefer drawing it off at that point.

By the means of this device I am enabled to keep ale, beer, and similar liquids as cool as may be desired in the hottest of weather.

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

1. The reservoir *B*, provided with the tubes *C* and *D*, when used in combination with the tub or box *A*, substantially as shown and described.

2. Providing the exhaust-pipe with the outlet *e*, in combination with the stop-cocks *a* and *b*, substantially as and for the purpose herein set forth.

3. Providing the reservoir *B* with the tube *F*, having a cock, *d*, for the introduction of water or other liquids, as described.

4. Supporting the reservoir by means of the legs *f* or their equivalents, substantially as and for the purpose set forth.

DANIEL SAGER.

Witnesses:

W. C. DODGE,
EDM. F. BROWN.