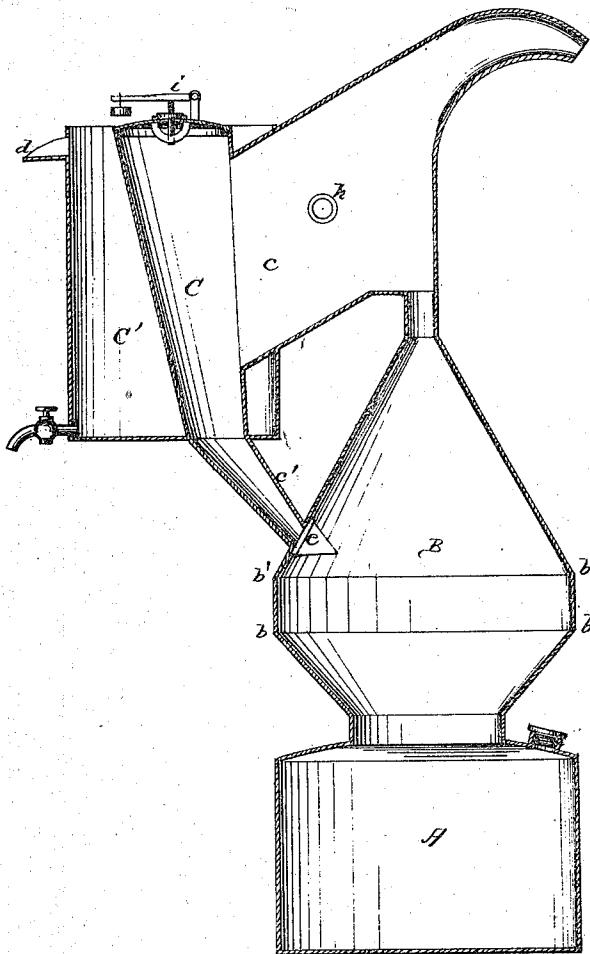


J. Dawson,

Alcohol Still.

No. 105,783.

Patented July 26, 1870.



Witnesses:

Victor Hagmann
C. A. Pettit

Inventor:

J. Dawson
per Messrs
Attorneys.

United States Patent Office.

JOSEPH DAWSON, OF ALEXANDRIA, VIRGINIA.

Letters Patent No. 105,783, dated July 26, 1870.

IMPROVED ALCOHOL AND SPIRIT-STILL.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSEPH DAWSON, of the city and county of Alexandria, and State of Virginia, have invented a new and improved Spirit-evaporating Chamber; 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 making a part of this specification, in which the figure is a sectional elevation.

This invention has for its object to produce alcoholic spirits from beer, wash, wort, or any other liquid that will answer the purpose.

The improvements relate to the evaporating-chamber, its form, which allows the liquid to present a larger evaporating-surface in proportion to its quantity than has heretofore been attained; also, to a device for preventing the wash from boiling over into the spirit-condenser, and for returning the wash cooled to the evaporating-chamber, when, through excess of heat, it has boiled up out of the same; also, to a device which prevents the spirits from entering the cooling-chamber, and at the same time allows the wash to escape therefrom.

In the drawing—

A is the still, which is of ordinary construction.

B is the evaporating-chamber, placed next above and communicating with the still.

Heretofore, evaporating-chambers have been made in simple tubular shape, which exposes but a comparatively small surface of the wash to evaporation. My chamber is an improvement over this form, in that it is made of double conical form, tapering outward from the point of its junction with the still to the point *b*, thence cylindrical to the point *b'*, and thence tapering inward to its top. The lower cone returns "meal" and other sediment to the still. The expansion of the chamber allows the wash to spread out and expose a larger evaporating-surface than it could present in a tube, thus accelerating the process of distillation and diminishing the liability of boiling over.

As a further preventive of this latter mischief, I provide a conical receiver, C, within an inclosing-chamber, C', which receiver communicates, by an inclined pipe, *c*, with the vapor-tube *a*, and by a pipe, *c'*, with the evaporating-chamber B.

The inclosing-chamber C' receives a constant supply of cold water. Should the wash become so heated as to rise in the vapor-tube *a* to the height of the pipe *c*, it cannot fail to run down the latter and enter the

conical receiver, where it is cooled by the surrounding water.

When the latter becomes heated by the wash in the receiver, it rises to the top of the chamber and runs out by the spout *d*.

Within the evaporating-chamber, over the lower mouth of the pipe *c'*, is a valve, *e*, which is made sufficiently heavy to retain the liquid in the receiver until some considerable quantity of it accumulates there and becomes cooled.

When overbalanced, the valve *e* opens and allows the wash in the receiver to flow back into the evaporating-chamber. In this manner all tendency to boil over is corrected, which being the case, the still may be filled full without exposing the process to one of the dangers to which it has heretofore been liable. Moreover, the wash is by this means prevented from entering the spirit-condenser through the tube *a*, and thus deteriorating the quality of the high wines.

From the foregoing it is evident that, by my apparatus, I am enabled to make more and better spirits than can be made by the ordinary process, and in much less time.

There is a collapse-valve, *h*, in the side of the pipe *c*, which admits external air, when, by condensation in the receiver C, a vacuum is formed within the pipe.

There is also a safety-valve, *i*, in the top of the receiver C, for the purpose of letting off vapor when it brings a dangerous pressure upon the inside of the receiver.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The evaporating-chamber B, constructed as described, for the purpose of exposing an increased evaporating-surface of the wash.

2. The cooling-receiver C, combined with its inclosing-chamber, and with the evaporating-chamber, and with the vapor-tube, in the manner described and for the purpose of preventing boiling over of the wash.

3. The weighted valve *e*, constructed and operating as set forth.

To the above specification of my invention I have signed my hand this 5th day of February, 1870.

JOSEPH DAWSON.

Witnesses:

CHAS. A. PETTIT,
SOLON C. KEMON.