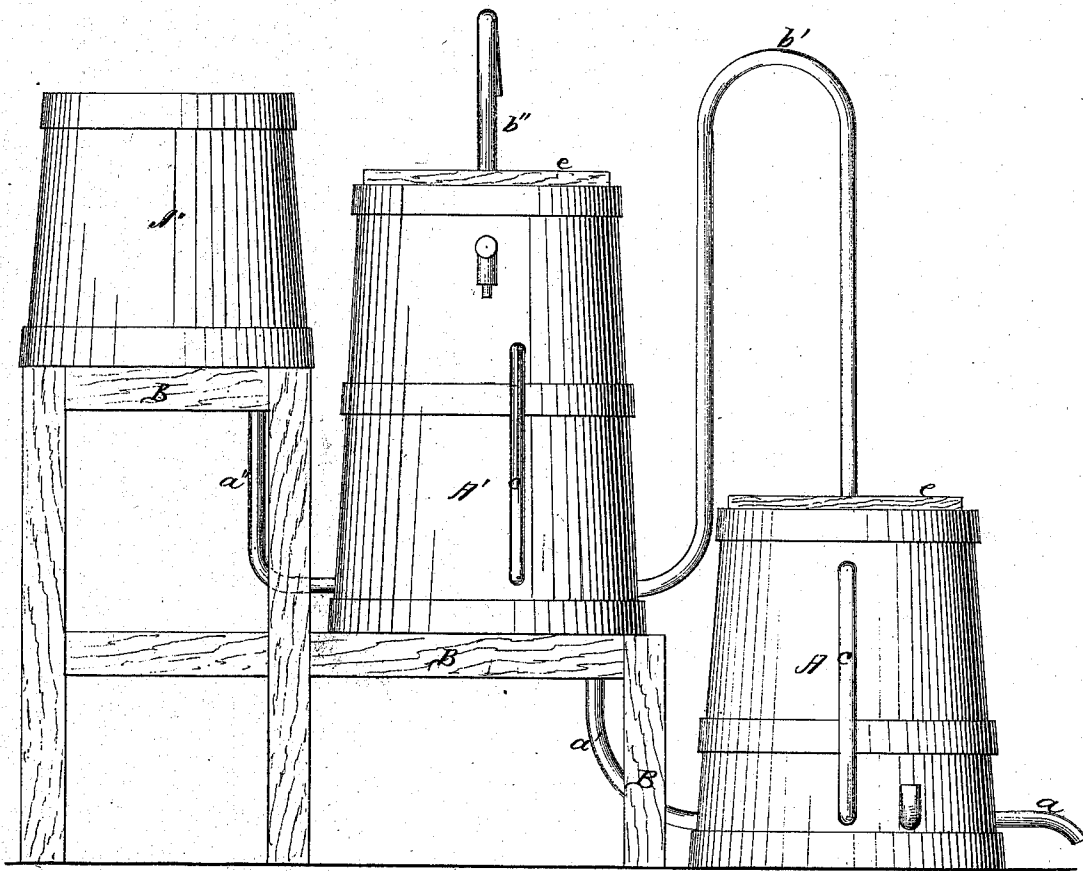


E. MELTON.
Alcohol Still.

No. 104,752.

Patented June 28, 1870.



Witnesses:

Victor Hagmann
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United States Patent Office.

ELIJAH MELTON, OF FLEMINGSBURG, KENTUCKY.

Letters Patent No. 104,752, dated June 23, 1870.

IMPROVEMENT IN STILLS FOR SPIRITS.

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, ELIJAH MELTON, of Flemingsburg, in the county of Fleming and State of Kentucky, have invented a new and useful Improvement in Stills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing making a part of this specification, in which the figure is a side elevation.

This invention relates to that class of stills in which the alcohol is carried off by steam injected into the wash at the bottom of the chambers, and rising through the wash and passing off, charged with alcoholic vapor, to the refrigerator.

The invention consists in making the series of chambers into which the wash is received, and through which it flows, separate from each other, and placing them in vertical echelon, or on ascending steps of the supporting frame, the bottom of one being higher than the bottom of its next lower neighbor, but not higher than the top of the same, so as to subject the wash to as many separate boilings from the steam as there are chambers, the chambers being tapering on the outside, so as to admit of the tight driving of hoops, and being provided with gauges to indicate the condition of their contents, and with valves so arranged as to let in external air wherever there may be a vacuum formed within a chamber.

In the drawing—

A A' A" are the chambers, made tapering on the outside and cylindrical within, and arranged on a gradient of successive steps in the frame-work B.

A", the upper or charging-chamber, receives the wash from vats, by pumping, and discharges its contents, when the stop-cock is opened, through the pipe a' into the next lower chamber A', which is of greater capacity than the chamber A", and, hence, affords space above the liquid for the expansion of the alcoholic vapor produced by the entrance of steam into the bottom of the chamber A' through the pipe b'.

Such alcoholic vapor passes, through the tube b",

out of the top of the chamber A', and into the refrigerator. The steam which effects such vaporization in the chamber A' is the same that previously effected a similar process in the lower chamber, A, out of which it passed, when its work in that chamber was done, by the pipe b'.

The wash in the lower chamber, upon which the steam thus acted in the first instance, is the same which had previously undergone the secondary action of the steam in the chamber A', and which was thereupon drawn off into the lower chamber through the pipe a'. The contents of each chamber, therefore, are subjected to two different steam boilings. After the second boiling, the wash in the lower is run off through the pipe a.

Each chamber is provided with a gauge, c, to indicate the condition of its contents, and with a valve, d, for the prevention of vacua, which are especially liable to occur in the chamber A' on the coming of the cold wash from the charging-chamber into contact with the warm vapors just previously generated.

The heads of the chambers are braced, to prevent collapse, as shown at e e.

Heretofore, wooden stills have been made all in one large tub, divided into different compartments. The inconvenience of making them in this manner is that, when one of the chambers collapses or otherwise gets out of order, the whole tub is rendered inoperative. This difficulty is remedied by my arrangement of separate chambers.

Having thus described my invention,

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

The series of chambers A A' A", placed on a gradient of successive steps, in the manner and for the purpose described.

To the above specification of my improvement I have set my hand this 1st day of November, 1869.

ELIJAH MELTON.

Witnesses:

N. K. ELLSWORTH,
CHAS. A. PETTIT.