

United States Patent Office.

OBADIAH MARLAND, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF, JOHN C. CROSMAN, OF SAME PLACE, AND ALFRED E. TILTON, OF NEW YORK CITY.

Letters Patent No. 98,784, dated January 11, 1870.

IMPROVEMENT IN TREATING WHISKEY AND OTHER 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, OBADIAH MARLAND, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improvement in Treating Whiskey, &c.; and I do hereby declare that the following is a description of my invention sufficient to enable those skilled in the art to practise it.

In "ageing" or "ripening" whiskey in casks or barrels, it has heretofore been, to some extent, the practice to place said casks or barrels in buildings heated by steam or warm water in coiled pipes, to a temperature of about 110° to 120° Fahrenheit, where it is allowed to remain for from six or eight weeks to six or eight months, or longer, as may be desired, but I believe never less than six weeks. Whatever length of time said whiskey is thus exposed, there is always considerable loss in quantity, as well as in "proof," by evaporation, and also from leakage from said casks or barrels.

The primary object of my invention is to save a large portion of the losses occasioned by such evaporation and leakage; and

My invention consists in placing said casks or barrels containing whiskey or other alcoholic liquors, in a building or chamber so constructed that the said evaporations may be condensed and collected in a receiver, and the liquor which leaks from said casks or barrels may be saved, for the purpose of use or sale.

In carrying out my invention, I construct a building, preferably with thick walls, to prevent heat from passing through, and of any capacity desired, having an inlet-door and two or more outlets, one of the latter being a stop-cock, and another a pipe connected with a suitable condenser and receiver.

Said building may be of any form desired, but I prefer to make it rectangular, with a roof rising at an angle of about forty-five degrees from each wall, and terminating at the top with a small outlet of about six inches in diameter.

The door and door-way of said building I make wide enough to permit the free ingress and egress of the liquor-containing casks or barrels, and of a height about four feet above the height of the entire collection of casks or barrels to be placed inside said building to fill it. I make the door and door-way of the height designated, in order that said casks or barrels may be introduced into the building, one above another, from an elevation on the outside of the building, and also for the purpose of avoiding such objectionable work on the inside of the building, and also for the further purpose of giving the workman room while putting in and stowing the last or upper tier of casks or barrels.

I sheath the inside of the building, throughout, with smooth, tight-fitting wooden sheathing, and line the entire inside surface of said building with thin sheets of tinned copper, bronze, or other metal, soldering the

joints of said sheets, and also the joints around the copper nail-heads, where said sheets are nailed to the wooden sheathing, with a solder of pure tin or other suitable solder.

Upon the surface of the tinned sheets, on the floor of said building, I lay a raised wood-work to receive the casks or barrels, and on the sides of the building I also place wood-work against the tinned sheets or lining, to protect the lining from abrasion from the casks or barrels rolled against or resting upon it.

All the wood (and I prefer white oak) used inside of said building after the lining has been attached, is previously thoroughly steamed with highly-heated steam, until all the juices of said wood are expelled, or so nearly expelled that said wood will not impart any objectionable flavor to the vapors or liquors which come in contact with it.

The inside surface of the door is sheathed and lined in the same manner as the inside of the building.

The floor of the building is made with an inclination of about one-fourth of an inch to a foot, toward one corner, and at said corner I place a stop-cock, for the purpose of drawing off all liquor that leaks from the casks or barrels.

To the hole in the top of the roof of the building, I connect one end of a close-fitting copper or tinned copper pipe, and the other end of said pipe I connect with a suitable condenser and receiver.

At the proper intervals between the wood-work on the floor and the sides of the building, I introduce tinned copper or tinned brass pipe, (preferably tinned on its outside surface,) said pipe being for the purpose of conducting warm water or steam to heat said building and its contents.

I connect one thermometer, or more, with the building to indicate the temperature of its interior.

Said building being constructed substantially as herein described, the barrels, casks, or other vessels containing liquors to be treated, are placed within the chamber, and the door is shut. The crack around and between the door and door-way is then very carefully and very tightly calked, preferably with clean white linen lint, or slack-twisted linen yarn. Steam or warm water is now made to circulate through the coil of pipe, until the interior of said building and its contents are heated to the temperature of 110° to 120° Fahrenheit, or even higher, if necessary, and kept so heated for the number of weeks or months desired.

From time to time the stop-cock at the corner of the floor is opened, to draw off any liquor that may have leaked from the vessels inside the building.

The vapors which rise during the treatment enter the pipe at the-top of the building, and are condensed in the worm-condenser, and then deposited in the receiver.

After keeping the liquor under treatment for the

length of time, and at the temperature desired, the door is opened, the barrels containing the liquor removed, and then the operations may be repeated.

Instead of constructing the building as described, it may be built of, or lined with glazed tile or glazed brick, and said tile or brick may be laid in a mortar or cement that will readily fuse under heat, and with the aid of the hydro-oxygen blow-pipe, all the seams or joints where said mortar or cement presents itself between said tile or brick, may be fused in such a way as to give to the whole interior surface of the building one continuous and perfectly glazed or vitrified coating.

It will be obvious, that instead of constructing the

room with a door for ingress and egress of casks, the room may be provided with a suitable tank or tanks, to be filled by pumps through a suitable inlet-passage, in which case no door would be necessary.

I claim the improvement in treating whiskey or other liquors in casks, barrels, or tanks, substantially as described.

Executed November 30, 1869.

OBADIAH MARLAND.

Witnesses:

J. B. CROSBY,
FRANCIS GOULD.