

UNITED STATES PATENT OFFICE.

WILLIAM E. BRADLEY, OF FRANKFORT, KENTUCKY.

PROCESS OF WHISKY-MAKING.

SPECIFICATION forming part of Letters Patent No. 499,316, dated June 13, 1893.

Application filed August 17, 1889. Serial No. 321,114. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM E. BRADLEY, of Frankfort, Franklin county, State of Kentucky, have invented a new and useful Improvement in the Process of Whisky-Making, of which the following is a full, true, and exact description.

This invention relates to an improvement in the process of manufacturing spirits, with a view of benefiting the quality and increasing the quantity of spirits produced from a bushel of grain.

My improvement relates to the using back in subsequent processes of the refuse of previous distillations, ordinarily known as slop. It is well known that this slop is liable to be attacked by the deleterious ferments of the air in naturally cooling, especially between the temperatures, say of 90° and 130° Fahrenheit. It is also well known that the slop as it comes from the still cannot be returned successfully without separating the coarse or refuse matter which it contains. It has heretofore been customary in certain distilleries, especially those known as yeast making houses, to allow the hot slop as it comes from the still to stand and naturally cool and settle, and then to run the upper portion of this slop sometimes through a cooler to be used in the subsequent repetitions of the process of whisky making, such slop being especially used for filling up the fermenters. In this process, however, the slop is liable to be attacked by the deleterious ferments in naturally cooling, whereas if the slop is artificially cooled to a temperature of about 80° then it is to a great extent protected from such injurious action. By my process, therefore, I take the slop as it is blown from the still, run it through a cooler, by preference a closed pipe cooler, and thus cool it rapidly and artificially to a temperature low enough to avoid the action of the deleterious ferments. I prefer to cool it to 80° or under. Then I allow the

slop to settle and deposit out the heavier coarse particles, and use the thin upper portion again in the subsequent repetitions of the process of whisky making, especially in the fermenters. I may use the same likewise for washing out the mash-tub. In this way I am enabled to return the slop not attacked by deleterious ferments and practically free from the coarse matters or hulls of the grain.

As a practical description of the process of settling which I prefer I allow the slop to stand in a tub seven feet deep and five feet in diameter. In this tub the heaviest and coarsest particles will deposit to one-half the depth of the tub, say three and one-half feet in two and one-half hours. Above this coarse slop there is at that time a layer of thin liquid about one foot in depth which contains a very large quantity of the fine particles which I aim to save. I may, therefore, use back the whole of the upper part of this slop, or so much of it as I can advantageously use in subsequent operations.

I am aware of the Patents No. 263,087, dated August 22, 1882, and No. 335,267, dated February 2, 1886, granted to M. J. Allen and myself, and I do not claim anything herein which is disclosed in said patents.

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

The improvement in the art of whisky making herein described, which consists in rapidly cooling the slop as it is blown from the still and in then allowing this rapidly cooled slop to settle, and in returning the clearer portion back in subsequent repetitions of the process of whisky making, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM E. BRADLEY.

Witnesses:

W. H. JEFFRIES,
E. W. ZOELLER.