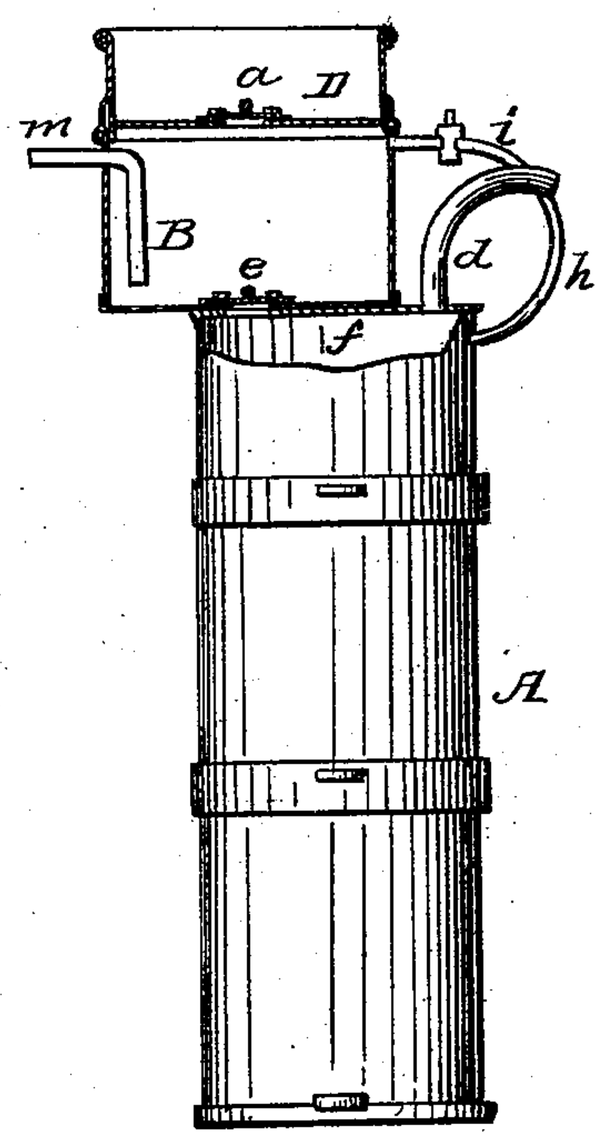
W. CORFIELD.

Distilling Apparatus.

No. 85,286. Patented Dec. 29, 1868.



Witnesses
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United States Patent Office.

WILLIAM CORFIELD, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 85,286, *dated December* 29, 1868.

IMPROVED DISTILLING-APPARATUS.

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, WILLIAM CORFIELD, of Philadelphia, Pennsylvania, have invented certain Improvements in Distilling-Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists in the use, in combination with a still, of a closed vessel or vessels, in which the material for distillation is heated by the direct application of steam, in a broken or continuous jet, preparatory to the introduction of said material into the still itself, so that less interruption of the process of distillation may take place than when the material is introduced in any other state, and also for the purpose of securing agitation of said material during the process of preparatory heating.

My invention further consists in the use of a pipe, forming a communication between the said closed vessel or vessels and the still, and having a safety-valve, so that any excess of vapor generated in the closed vessel or vessels may pass into the still, as hereinafter particularly mentioned.

In order to enable the public more fully to understand the nature of my invention, and those skilled in the art to use the same, I will describe it, as follows, reference being had to the accompanying drawing, which is lettered to correspond with and which forms a part of this specification, and in which the figure represents the exterior of an ordinary still, with my improvements, in section.

A is a still, similar to those in common use for the purpose of distillation; and adjacent to this still, or in connection with it, is a vessel, B, closed at the top by the bottom of a receiver, D, open at the top.

The bottom of this receiver is provided with a suitable valve, *a*, on opening which the contents of the said receiver will pass into the vessel B, the bottom of the latter being also provided with a valve, *e*, which is opened when the contents of the vessel B are to be discharged into an upper compartment of the still, M, between which and the upper part of the vessel B, a communication is formed, by the pipe *h*, when a safety-valve, *i*, on the pipe is raised.

A steam-pipe, *m*, passes into the vessel B, and conveys the steam used in heating and agitating its contents.

The usual pipe, *d*, extends from the upper compartment of the still to the condensing-worm.

It was formerly the practice to introduce the material for distillation into the still in a cold state, which put a stop for a time to the distillation. To attempt to prevent this, in the most approved stills now in use the material to be used is heated by vapors arising from the other matter already undergoing the process of distillation, or, by means of pipes, conveying these vapors through this material.

The first of these methods is ineffectual, and the latter objectionable, because involving the introduction of stirrers, to prevent clogging about the pipes.

In using my improvement, the material is, in the first instance, deposited in the receiver D, from which it is permitted to flow into the vessel B, on opening the valve *a*, after which this valve is closed, and steam is then permitted to flow through the pipe *m* into the vessel B, so as to heat the material, and maintain it in such a state of constant agitation that no wash or other substance can settle in the vessel, to prevent the entire mass of material being discharged on opening the valve *e*. Should there be any undue accumulation of vapor, the valve *i* will be opened, and the excess of vapor will pass through the pipe *h* to an upper compartment of the still M. When sufficiently heated in the vessel B, the material is permitted to escape into an upper compartment of the still by opening the valve *e*.

Owing to this preparatory heating of the material in an auxiliary vessel, it interferes but little, when introduced into the still, with the process of distillation, while loss by evaporation is prevented, as the excess of vapor in the vessel B passes, by means of the pipe *h*, into the still itself, and thence to the condensing-worm. It should be understood that the vessel B is provided with a vacuum-valve.

Two or more vessels, such as are indicated by B and its attachments, may be used in connection with a still for the preparatory heating of the material, and these vessels may be situated in any position which may be found most convenient in respect to the still, providing they have a communication therewith which may be opened and closed at pleasure.

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

1. The combination, with a still, of an auxiliary closed vessel or vessels, B, with the valve *e* intermediate between the receiver into which the material is first pumped and an upper chamber of the still, M, for the purposes specified.

2. The introduction, into the closed vessel B, of the steam-pipe *m*, terminating therein, for the purpose of agitating and heating the material contained in said closed vessel, preparatory to its introduction into an upper chamber of the still, the whole arranged substantially as and for the purposes specified.

3. The communicating-pipe *h*, provided with the safety-valve *i*, as and for the purposes specified.

4. Heating the mash, beer, or other substance by discharging steam, in broken or continuous jets, into the preparatory vessel or vessels, before depositing said material in the still, or subjecting it to the distillatory process.

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

WILLIAM CORFIELD.

Witnesses:

H. HOWSON,

JOHN WHITE.