

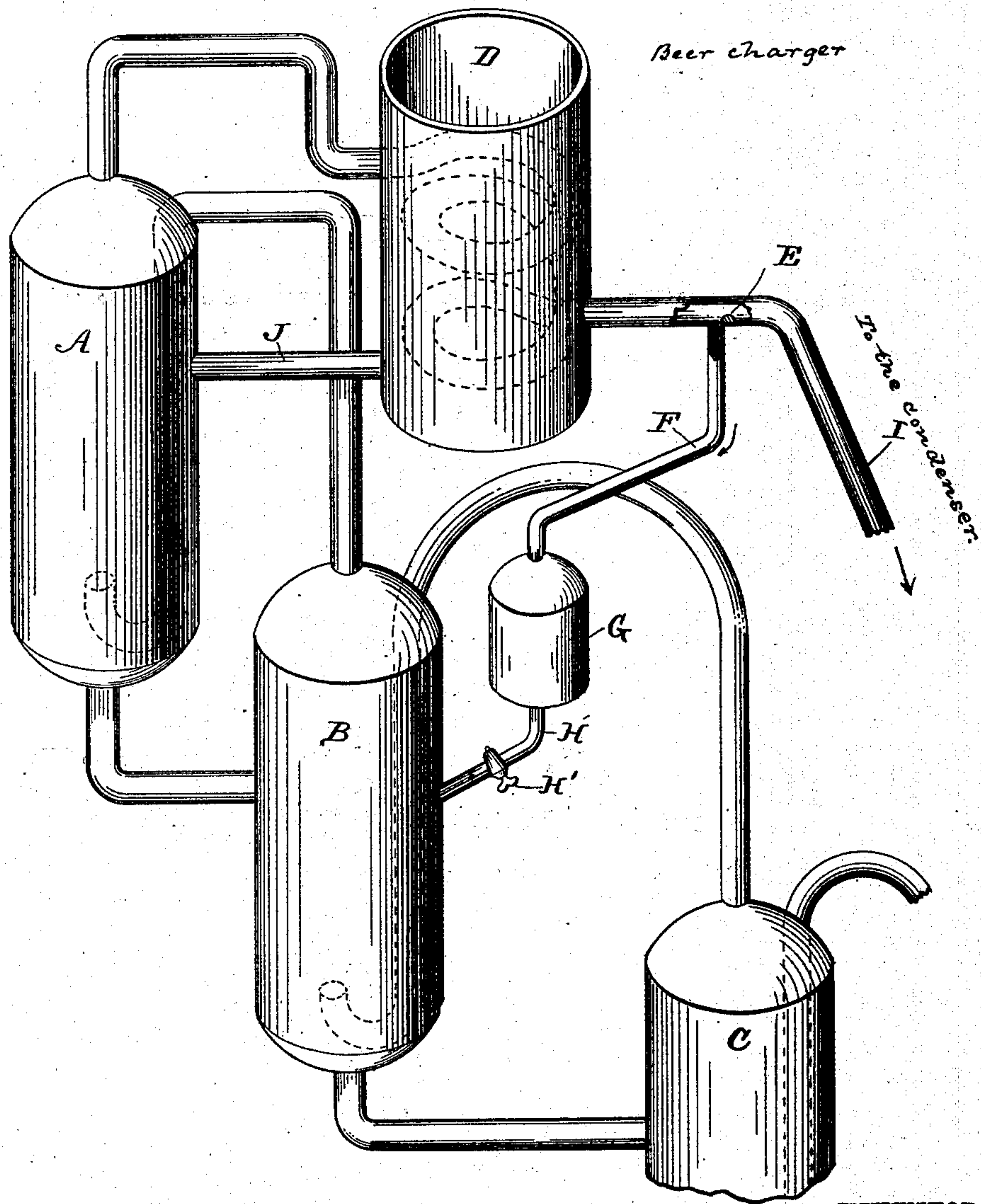
(No Model.)

M. V. MONARCH.

STILL.

No. 325,955.

Patented Sept. 8, 1885.



WITNESSES:

*Thos Houghton.*

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BY

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# UNITED STATES PATENT OFFICE.

MARTIN V. MONARCH, OF OWENSBOROUGH, KENTUCKY.

## STILL.

SPECIFICATION forming part of Letters Patent No. 325,955, dated September 8, 1885.

Application filed July 14, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN V. MONARCH, a citizen of the United States, residing at Owensborough, in the county of Daviess and State of Kentucky, have invented a new and useful Improvement in Stills, of which the following is a description.

This invention is an improvement in stills, and has for an object to provide a simple construction by which to efficiently extract from the vapor certain components—as volatile oils, especially fusel-oil—before such vapor reaches the flake-stand or condenser; also, to eliminate such solid and liquid substances, deleterious in their nature, as may be carried over with the vapor by its momentum, as mealy and other particles from the wash, and verdigris that may be produced in the copper stills and pipes by the action of acetic and other acids upon same.

It has for a further object to so construct the parts that the said oils and other substances will be conducted back into the stills, in order that any portions of alcohol carried off may be saved.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter fully described and claimed.

The drawing represents the several parts of my invention in elevation.

The still-chambers A, B, and C represent those ordinarily used in distilling sour-mash whiskies. However, the number and character of these chambers may be varied according to the purpose for which the still is intended.

The beer charger or chamber D, in which is placed the solution or wash constituting the charge is connected, as by pipe J, with one of the still-chambers.

From the still, and usually from the last chamber thereof, I extend the discharge-pipe or worm I, which is conducted through the charge-chamber D, and may be coiled therein, as shown. This pipe is carried beyond the chamber D to the flake-stand or condenser. (Not shown.) A receiver, as G, connects with said pipe I beyond the chamber D, between the said chamber and the condenser. Beyond the point of connection of said receiver I form or provide within the pipe I a stop or dam, E'.

The receiver G may be connected with the still by a pipe, H, having a valve, H', in order to again pass such portions through the still.

In operation the vapor passes in worm I through the chamber D. This chamber cools the worm somewhat, and operates to condense therefrom those products of distillation which evaporate at a higher temperature, and are more readily condensed than alcohol. The products which it is particularly desired to eliminate from the vapor are the volatile oils, especially fusel-oil. These condensed portions pass on to the receiver, and are conducted thereinto by the pipe F. The receiver, it will be seen, also serves to intercept any solid or liquid substances that may be carried over from the still.

It is preferred to use the beer-charger as the intermediate or cooling chamber, because thereby, in addition to the partial condensation of the vapor, the temperature of the charge will be raised, as is desired. It will be understood, however, that a separate chamber might be employed for the purpose alone of partially condensing the vapor in the worm. The receiver may be connected directly with the worm, or by means of the pipe F, as shown. This receiver also may be connected with the still, as shown, and as preferred, for the reasons before stated, or may be disconnected therefrom and have an independent discharge without departing from the broad principle of my invention. In practice it is usual to apply the heat directly to the lowest still only, and a portion of the contents of such still or chambers passes into and through the remaining still-chambers in the form of steam.

Having thus described my invention, what I claim as new is—

1. The combination of a still, a discharge-pipe or worm leading from one of the chambers of the still to the condenser, a dam or stop located within said pipe between the still-chamber and the condenser, and a receiver communicating with the pipe between the dam and the still-chamber, substantially as set forth.

2. The combination, substantially as herein described and shown, consisting of the still,

the beer charger or chamber, the pipe or worm  
conducted through said charging-chamber, a  
receiver connected with said pipe beyond the  
said chamber, a stop or dam located in the  
5 said pipe between the condenser and the point  
of connection of the receiver with such dis-  
charge-pipe, a pipe connecting the receiver

and one of the still-chambers, and a valve in  
said pipe, all arranged and adapted to oper-  
ate substantially as set forth.

MARTIN V. MONARCH.

Witnesses.

J. A. DEAN,

FRED. W. CLARKE.