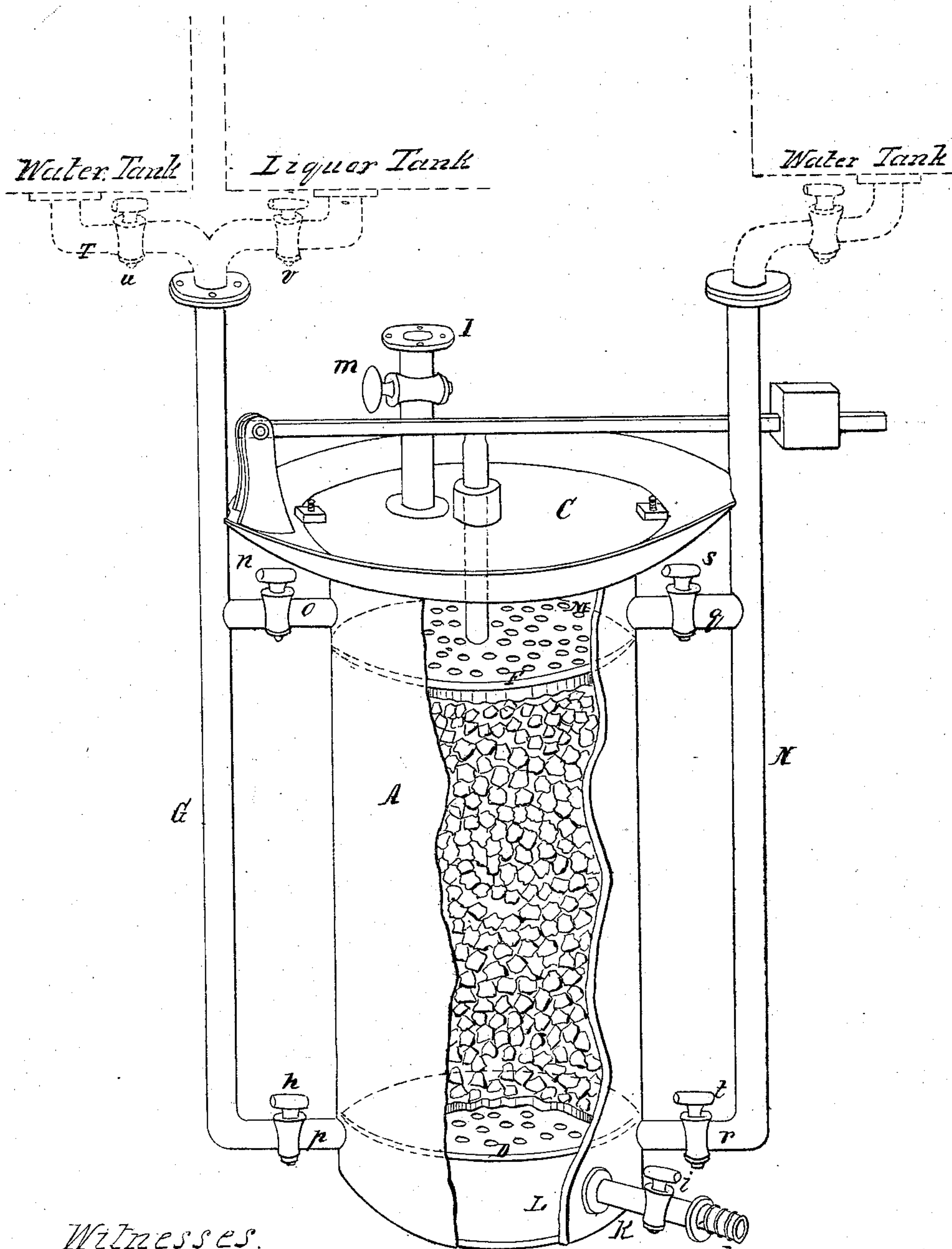


*C. L. Fleischmann,*

*Ageing Liquors.*

*No. 106530.*

*Patented Aug. 16. 1870.*



*Witnesses.*

*Wm H Bishop*  
*Edward Leitch*

*Ch' L Fleischmann*  
*Inventor*



# UNITED STATES PATENT OFFICE.

CHARLES LOUIS FLEISCHMANN, OF CINCINNATI, OHIO.

IMPROVEMENT IN APPARATUS FOR RECTIFYING ALCOHOLIC LIQUORS.

Specification forming part of Letters Patent No. **106,530**, dated August 16, 1870.

*To all whom it may concern:*

Be it known that I, CHARLES LOUIS FLEISCHMANN, of Cincinnati, in the State of Ohio, have made Improvements in the Apparatus for Rectifying Alcoholic Liquors, for which Letters Patent have been granted to me by the United States of America on the 24th day of May, 1870. I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The object of my invention consists in obtaining from the rectifying medium the greatest amount of rectifying power, and to abstract from the saturated coal or other suitable material all the absorbed liquor.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The general construction and arrangement of the apparatus are the same as I described them in the patent of May 24, 1870, with the exception that I make and use two distinct chambers instead of one, and employ, besides the liquor-supply pipe, a water-pipe.

I make one chamber below the rectifying medium and one above it. The lower chamber, L, is situated below the coal, between the filter-plate D and the bottom of the vessel A. The other or upper chamber, M, is situated above the coal, and is formed by the filter-plate F and cover C.

To introduce the liquor into the chambers L and M, I provide the liquor-pipe G with two short branch pipes, *o* and *p*. The branch pipe *o* enters into the chamber M and the pipe *p* into chamber L. Each branch pipe is furnished with a stop-cock, *h* and *n*.

Besides the liquor-supply pipe G, I employ a water-pipe, N, which has, like the liquor-pipe G, two short branch pipes, *q* and *r*. The branch pipe *q* communicates with the upper chamber, M, and the pipe *r* with the chamber L. Each of the branch pipes *q* and *r* has a stop-cock, *s* and *t*.

The water-pipe N can be dispensed with by substituting, as an equivalent, the liquor-supply pipe G, provided near its upper end with a branch pipe, T, connected with a water-tank, as shown in the drawing by dotted lines. The branch pipe T and the liquor-pipe G are in that case provided with stop-cocks *u* and *v*

close to their respective tanks, so that when the liquor is shut off the water may be turned on and used for cleansing and washing the coal.

## *Operation.*

Suppose the liquor has passed for some time from the lower chamber, L, upward through the coal into chamber M, and out through pipe I, so that the layers of coal contiguous to the filter-plate D have become clogged with impurities, while the upper strata of the coal are still in a condition to render good service. In order to bring the rectifying powers of the upper layers into action, and to use them with advantage for rectifying, I close the stop-cock *h* of branch pipe *p*, to prevent the liquor from flowing into chamber L, and withdraw the liquor contained therein through pipe K. At the same time I close the stop-cock *m* of pipe I and open the stop-cock *n* of branch pipe *o*, to allow the liquor to enter into chamber M and to pass down through the coal into chamber L, and out through pipe K.

Should it be necessary to rectify again from below upward the stop-cocks *h* and *m* are opened and the stop-cocks *n* and *i* closed, which causes the liquor to flow into chamber L, up through the coal into chamber M, and out through pipe I.

When the coal has lost its rectifying power it is necessary that the liquor which is held in absorption should be abstracted from it. I use first the pump, which is to be attached to pipe K in the manner as described in the patent of May 24, 1870.

That portion of the liquor which cannot be got out by suction is to be washed out by means of strong currents of water. For that purpose I use the water-pipe N in the same manner as the liquor-pipe G, and the currents of water can thus be alternately reversed until the coal is completely cleansed.

By alternately reversing the flow of liquor through the coal every portion of the coal is brought into action to the fullest extent of its rectifying power, and I thus obtain from a given quantity of charcoal or other rectifying medium a greater quantity of finely-rectified liquor than there was ever obtained by any known modes of rectifying.

As the cleansing of the coal can be accom-

plished in the most effective manner and the pores freed from all absorbed matter, the coal becomes again fit for further rectification, and it enables, at the same time, the rectifier to provide himself with pure water for reducing high-proof spirits in the cheapest, quickest, and most convenient manner.

What I claim as my invention in apparatus for rectifying spirits is—

1. The charcoal or other rectifying medium placed between two chambers, each provided with a discharge-pipe governed by a valve or cock, in combination with a supply-pipe for supplying the spirits to be rectified under hydrostatic pressure, when the said supply-pipe

is provided with two branch pipes governed by cocks or valves, and each communicating with one of the said chambers, substantially as and for the purpose specified.

2. Also, in combination with the combination specified in the foregoing claim, the water-pipe or its equivalent for supplying water under pressure, and provided with two branch pipes governed by cocks or valves, each communicating with one of the chambers, substantially as and for the purpose specified.

CH. L. FLEISCHMANN.

Witnesses:

WM. H. BISHOP,

EDWARD C. REEHILL.