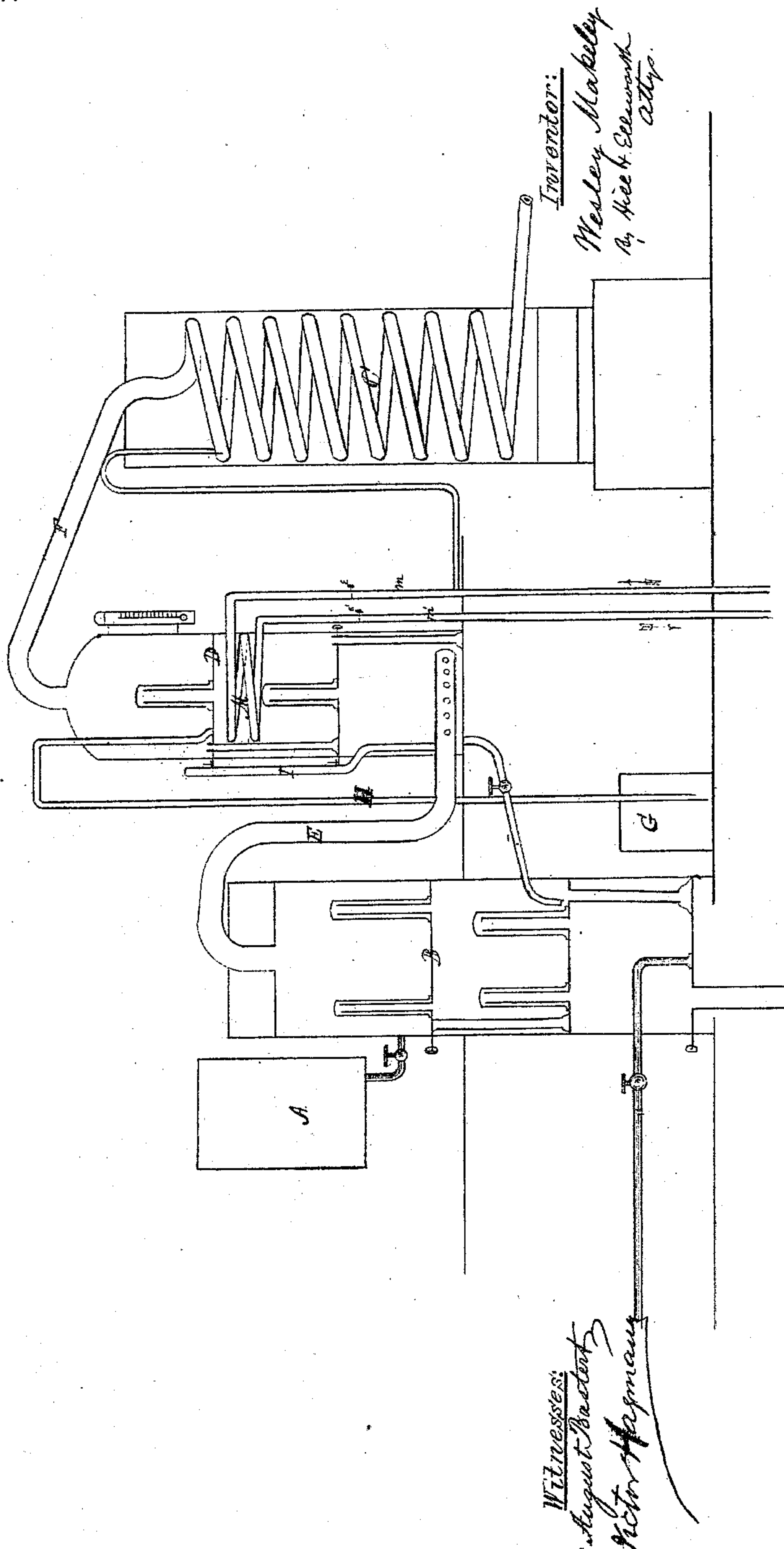


W. MAKELEY.

Improvement in Stills for Spirits, &c.

No. 115,751.

Patented June 6, 1871.



# UNITED STATES PATENT OFFICE.

WESLEY MAKELY, OF ALEXANDRIA, VIRGINIA.

## IMPROVEMENT IN STILLS FOR SPIRITS, &c.

Specification forming part of Letters Patent No. 115,751, dated June 6, 1871; antedated June 2, 1871.

*To all whom it may concern:*

Be it known that I, WESLEY MAKELY, of the city and county of Alexandria and State of Virginia, have invented certain new and useful Improvements in Stills; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which my invention is represented by a longitudinal vertical section.

The object of this invention is to prevent fusil-oil and other volatile deleterious substances from passing over with the spirits. This object is accomplished by the introduction of a refrigerating coil between the still and the worm-pipe for the purpose of cooling the spirituous vapors sufficiently to precipitate the fusil-oil contained in them without condensing the spirits, the latter thus purified and separated being left to pass over alone.

In the drawing, A is the charging-tub; B, the still; C, the worm-tub; D, the doubler; E, the pipe leading from the still to the doubler; F, the pipe leading from the doubler to the worm; G, the low-wine tub; H, the low-wine pipe; I, the tube used to discharge the several upper chambers of the doubler; and J, the return-pipe leading from the lower chamber of the doubler back to the still. All these are of any of the usual forms, and are not claimed as constituting my invention, which relates solely to the device employed in connection with them as separator and purifier, which I will now proceed to describe. This device consists in the employment of a refrigerating coil, M, in one of the vapor-chambers of the still or doubler, preferably the latter, through which may be passed a constant stream of water of any required temperature, so that

by the use of it the temperature of the vapor-chamber may be controlled at will. In the drawing, *m* indicates the supply-pipe; *m'*, the waste-pipe of the coil; and *e e'* are cocks, by which means the current flowing through the coil may be retarded or accelerated, as desired.

The supply-pipe may be fed both from a hot-water and a cold-water pipe, if preferred, for the purpose of further and more completely controlling the temperature created by the coil.

A coil is, self-evidently, only one form of cooler, and is employed because believed to be, for this purpose, superior in simplicity, cheapness, and efficiency to other possible forms.

Instead of this form a water-jacket might be used, surrounding the doubler, or a portion of it; or a water-chamber within the doubler might be substituted.

The invention consists not so much in the particular details of construction shown as in the employment of the cooler so constructed and operating that by means of it the distiller can, at pleasure, reduce the temperature of the vapor, just before it passes to the worm, to a point, say, from 140° to 150° Fahrenheit, at which temperature fusil-oil and many other impurities will be condensed and precipitated, while the spirituous vapor will pass along to be condensed in the worm.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

A cooler, M, when employed in connection with a still, substantially in the manner and for the purpose specified.

WESLEY MAKELY.

Witnesses:

M. WASHINGTON,  
J. S. RIDGELEY.