D. Woodward.

Distilling Apps.

No. 89,961. Patented May 11, 1869.

Fig. 1.

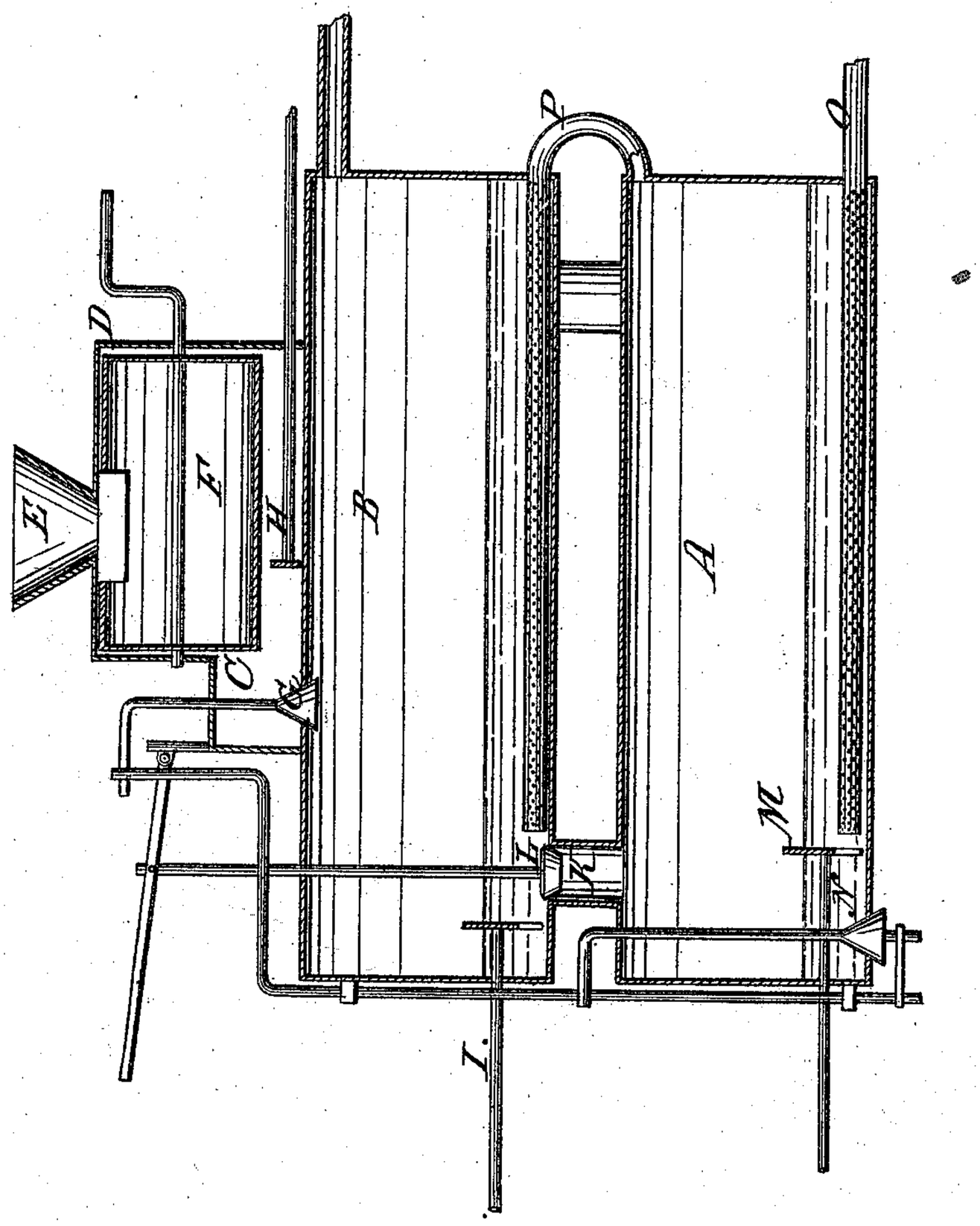
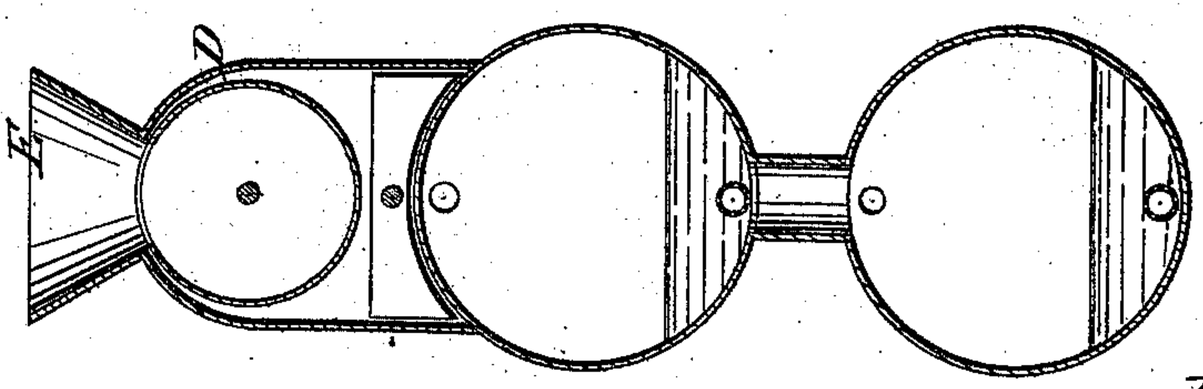


Fig. 2.



Witnesses
Chas. Nida
Jno F Brooks

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per Munn & Co
Attys

United States Patent Office.

DANIEL WOODARD, OF SPRINGFIELD, TENNESSEE.

Letters Patent No. 89,961, *dated May* 11, 1869.

IMPROVED APPARATUS FOR DISTILLING AND PURIFYING SPIRITS.

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, DANIEL WOODARD, of Springfield, in the county of Robertson, and State of Tennessee, have invented a new and improved Distilling-Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in distilling-apparatus designed to provide an attachment for the boilers or stills, as commonly arranged, whereby the vapor may be filtered through charcoal, instead of exposing the whole body of the liquor to the charcoal, as is now commonly practised. Also an arrangement to facilitate the charging of the apparatus with coal, and discharging the same.

Figure 1 represents a longitudinal sectional elevation of my improved apparatus, and

Figure 2 represents a transverse section of the same.

Similar letters of reference indicate corresponding parts.

A and B are two cylindrical vessels, arranged, one upon another, and suitably connected together.

C represents a charging-apparatus, consisting of a chamber upon the top of the vessel B, having a casing, D, of semicircular form at the top, and provided with a hopper, E.

F is a cylinder, arranged in the said chamber, with an opening, which may be turned up to coincide with the mouth of the hopper, for the reception of coal therefrom.

After the coal is received into the cylinder, the latter is turned around to discharge the coal into the chamber, and in this position the cylinder F closes the passage through the hopper.

G represents a passage, closed by a valve opening into the cylinder B; and

H, a rake, for scraping the coal through the passage into the cylinder when the valve is lifted,

I represents a rake, arranged in the cylinder B, for adjusting the coal therein, and for scraping it to the tube K, for passing it into the lower cylinder A, when the valve L is raised; and

M is a rake, arranged in the cylinder A, for a like purpose, the coal being passed through the passage N to be discharged.

O represents a pipe, leading from the boiler or still, for conveying the vapor therefrom through the charcoal. It runs nearly the length of the cylinder A, along the bottom thereof under the charcoal, and is finely perforated, to distribute the vapor throughout the body of the coal.

P represents another similar pipe, through which the vapor again passes, and is similarly distributed in the cylinder B. From the latter it is conveyed to the condenser in any suitable manner.

By this arrangement the action of the charcoal is much more direct and powerful upon the vapor, and I am enabled to accomplish better results with less coal than can be done by the old method.

My improved arrangement for charging the cylinder is also very economical in respect of time and labor.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1 The cylinders A B and perforated pipes O P, arranged in combination with a still, or boiler and condenser, substantially as specified.

2. The case D, hopper E, cylinder F, and rake H, combined with the cylinder B, substantially as specified.

3. The cylinders B and C, provided with the passages G, K, and N, and their valves, and the rakes I and M, all substantially as specified.

DANIEL WOODARD.

Witnesses:

BEN. HUNT,

D. W. C. RANDOLPH.