

(No Model.)

D. CANTOR.
DISTILLING APPARATUS.

No. 553,206.

Patented Jan. 14, 1896.

Fig. 1.

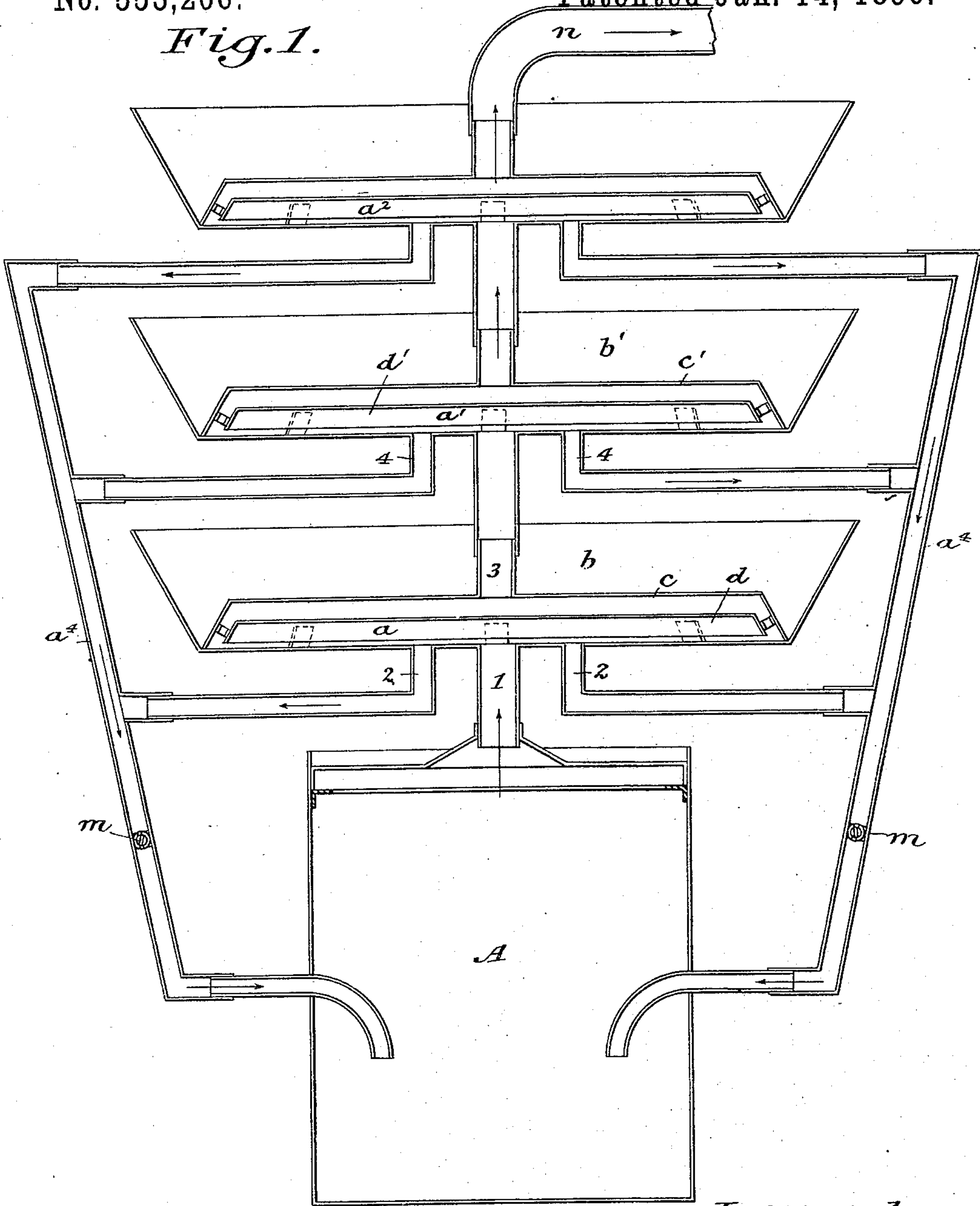
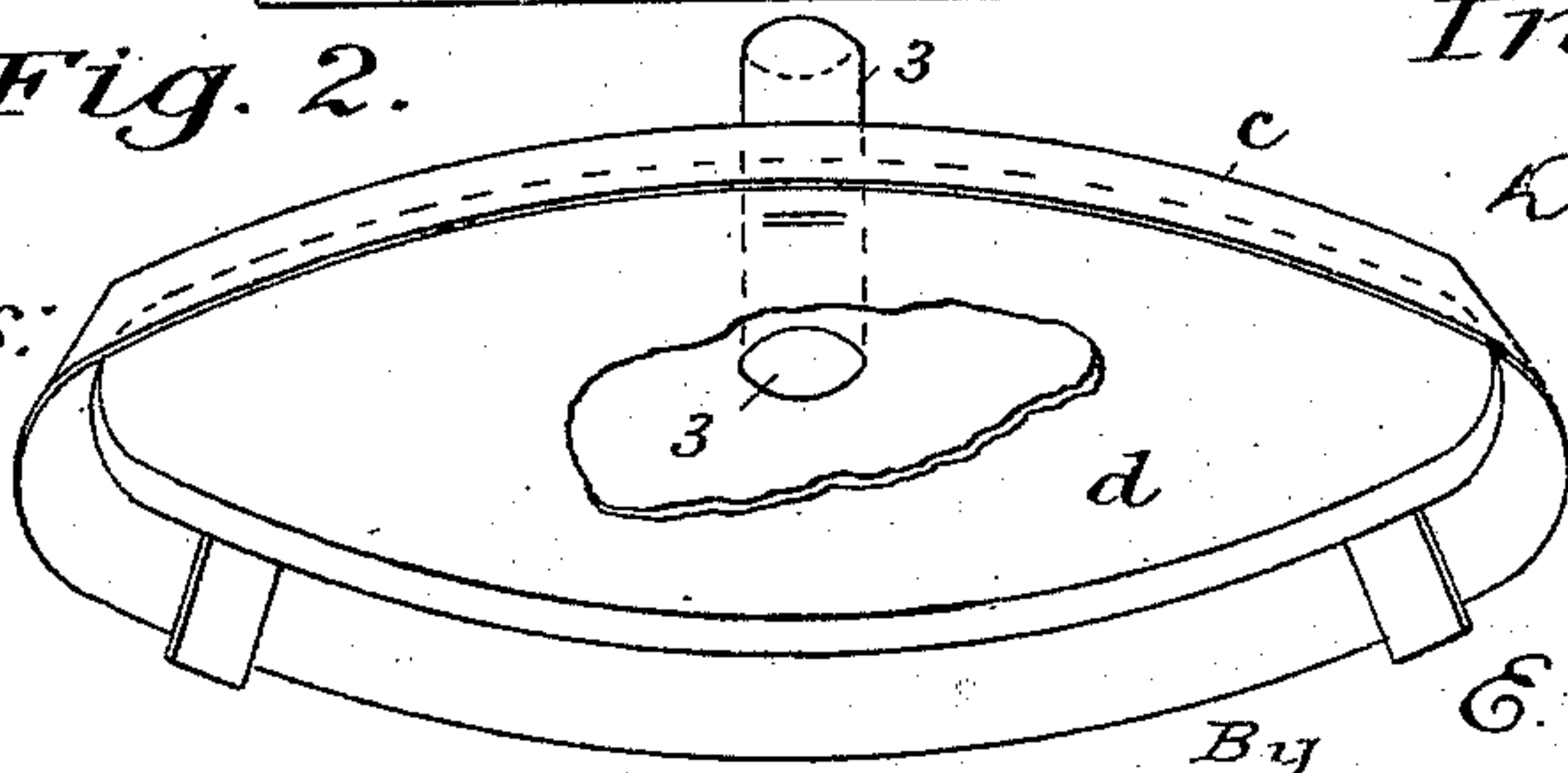


Fig. 2.



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UNITED STATES PATENT OFFICE.

DAVID CANTOR, OF CONNELLSVILLE, PENNSYLVANIA.

DISTILLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 553,206, dated January 14, 1896.

Application filed May 9, 1895. Serial No. 548,663. (No model.)

To all whom it may concern:

Be it known that I, DAVID CANTOR, a citizen of the United States, and a resident of Connellsville, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Distilling Apparatus, of which the following is a specification.

This invention relates to the distillation of liquids, and has special reference to the purification, or more properly speaking, the rectification of wines, beers or other liquors. Its object is to provide a simple and economical apparatus for effecting such rectification.

In the accompanying drawings, Figure 1 is a sectional view of my improved rectifier, and Fig. 2 is a perspective view of the under side of a cover to one of the compartments.

A represents the boiler or tank in which the liquid to be distilled is boiled, and a a' a^2 represent a series of compartments, through which the vapor passes successively after leaving the boiler, as will be hereinafter described. These compartments are constructed substantially as follows: An upright pipe 1 leads from the top of the boiler to the bottom of a pan b formed thereon. One or more small-sized drain-pipes 2 lead from the bottom of pan b back into the boiler A, where the said pipes are provided with check-valves m to prevent passage of liquid from the boiler into the pipes. A cover c , having an upright pipe 3, similar to pipe 1, projecting from its center, fits tightly into pan b , the edge of the cover closely impinging against the side of the pan and considerable space being left between the cover and the bottom of the pan. Attached to the under side of the cover and separated a short space therefrom is a condensing-sheet d of less diameter than the diameter of either the pan b or its cover c , and placed parallel to both, whereby a compartment a is formed between the bottom of the pan and sheet d , between the edge of the sheet d and the side of the pan, and between the sheet and the cover. Fixed to the upright pipe 3 is a pan b' , similar to pan b , and provided with a cover

c' , drain-pipes 4, and a condensing-sheet d' , similar to those described for pan b . The drain-pipes 4 lead into drain-pipes a^4 . Like compartments a^2 a^3 , &c., are formed in the same manner, one above the other, to any desired extent.

In the operation of the apparatus above described the liquid passes from boiler A in the form of vapor through pipe 1 into compartment a , where it is in part condensed upon the sheet d , against which it impinges upon entering the compartment. The "low" liquor which condenses on sheet d falls to the bottom of pan b and is carried off through drain-pipes 2 and returned to the boiler. That part of the vapor which is not condensed at high temperature passes through the opening between the edge of the sheet and the side of the pan, and then ascends through pipe 3 into compartment a' , where the same operation takes place, and in like manner it passes successively into and through the compartments a^2 a^3 , &c., until it reaches the last compartment of the series, from whence it passes through pipe n into the warm place, wherein it is condensed in the usual way. Obviously the "proof" of the liquid is raised as it passes through each compartment, for the reason that the temperature at which the vapor condenses is successively lowered.

I claim—

In a distilling apparatus, the combination of a boiler with an upright pipe 1 leading therefrom, a pan b supported thereon, a cover c therefor carrying a condensing sheet d and having an upright pipe 3, a plurality of similar pans and covers connected in like manner, and a system of drain pipes leading from the bottom of each pan to the still, substantially as described.

Signed at Connellsville, in the county of Fayette and State of Pennsylvania, this 27th day of April, A. D. 1895.

DAVID CANTOR.

Witnesses:

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