

(No Model.)

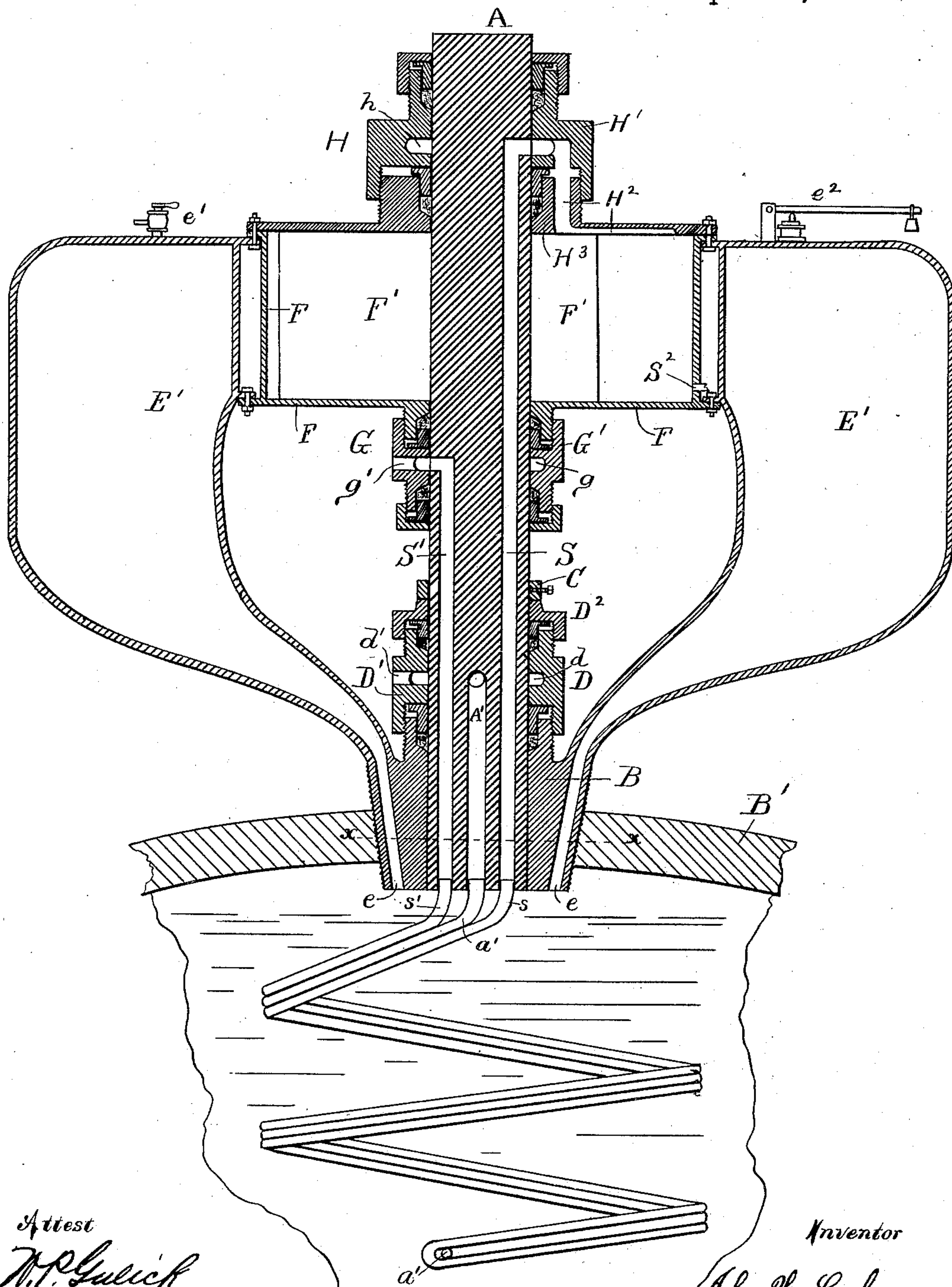
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J. W. LOCHNER & N. OESTER.

DEVICE FOR AGING AND PURIFYING LIQUORS.

No. 370,549.

Patented Sept. 27, 1887.



Attest  
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Fig. 1.

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(No Model.)

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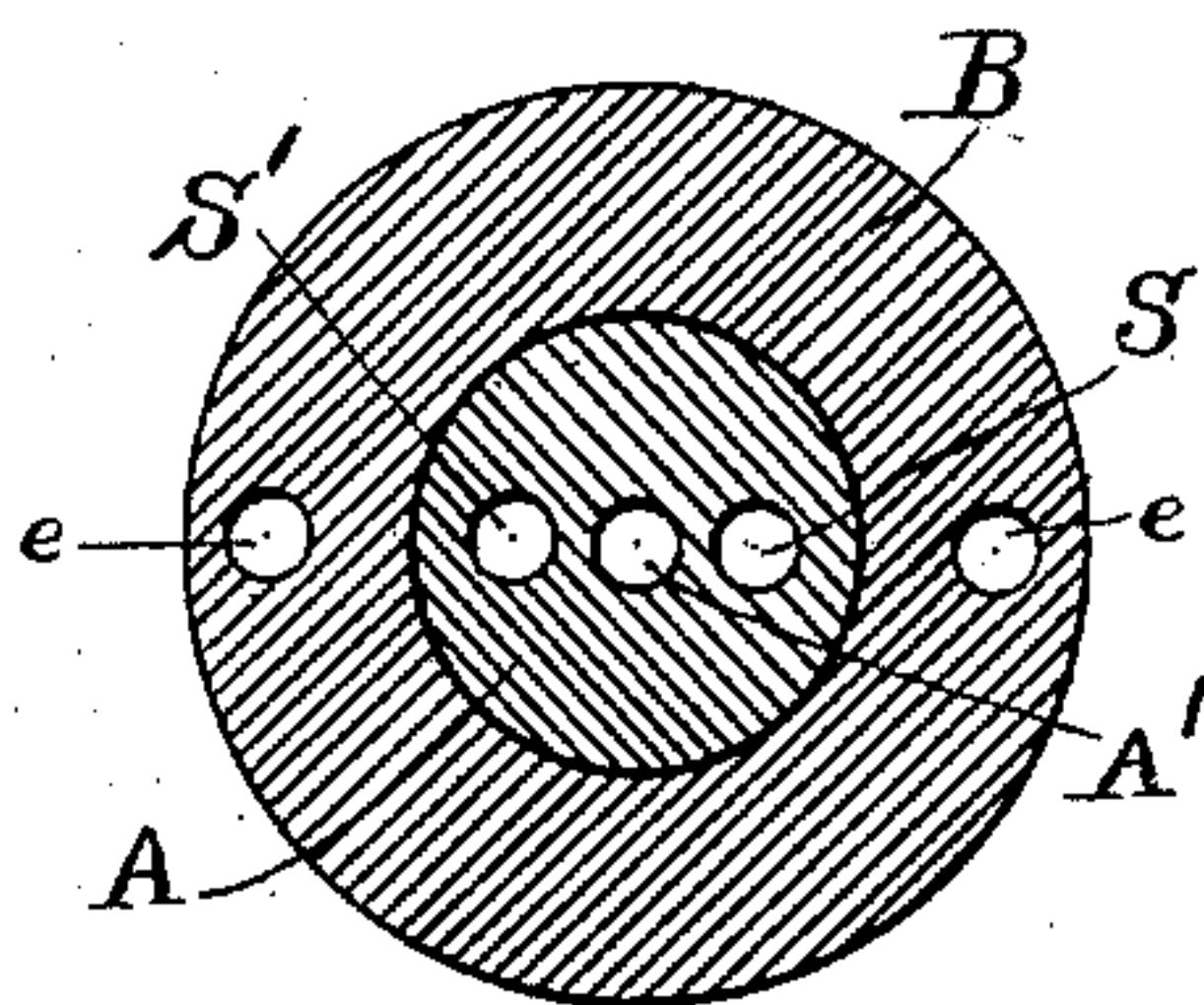
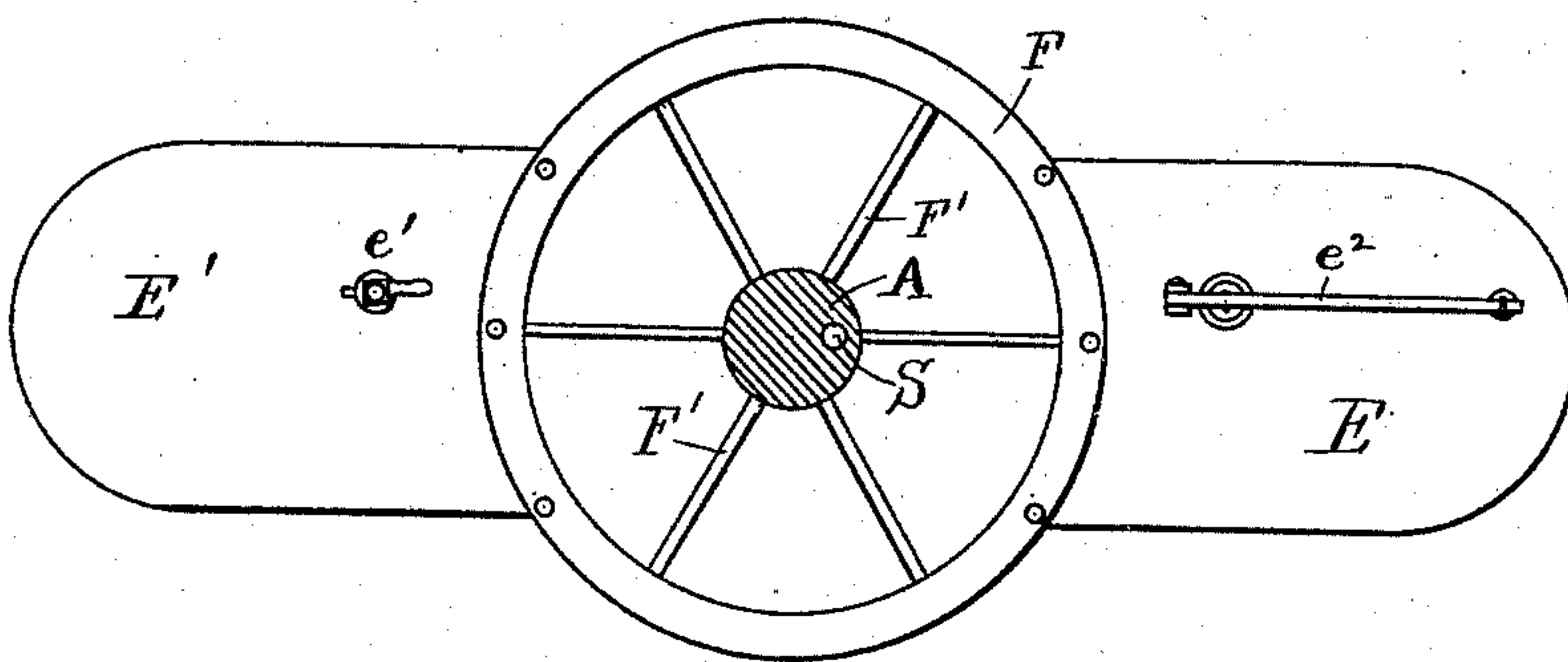
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*Fig. 2.*



*Fig. 3.*

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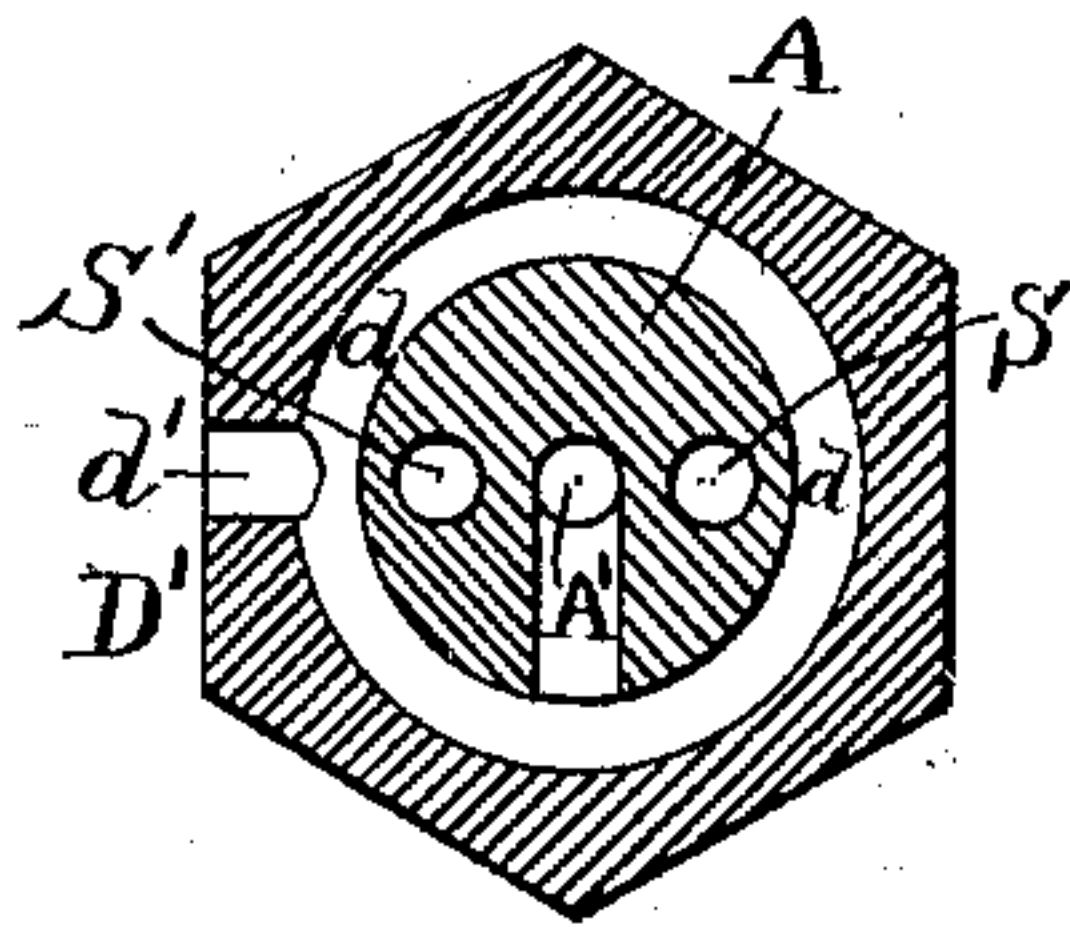
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*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

JOHN W. LOCHNER AND NICHOLAS OESTER, OF AURORA, INDIANA.

## DEVICE FOR AGING AND PURIFYING LIQUORS.

SPECIFICATION forming part of Letters Patent No. 370,549, dated September 27, 1887.

Application filed April 9, 1887. Serial No. 231,299. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN W. LOCHNER and NICHOLAS OESTER, citizens of the United States, and residents of the town of Aurora, in the county of Dearborn and State of Indiana, have invented certain new and useful Improvements in Devices for Aging and Purifying Liquors, of which the following is a specification.

The several features of our invention and the advantages arising from their use, conjointly or otherwise, will be apparent from the following description.

In the accompanying drawings, forming part of this specification, Figure 1 is a central vertical section of the device as applied to a barrel. Fig. 2 is a top view of the device on a reduced scale, the top of the cylinder F being removed to show the arrangement within the cylinder. Fig. 3 is a cross-section of the bung and shaft, taken at the line  $\alpha \alpha$ . Fig. 4 is a cross-section taken through the annular passage  $d$ .

The shaft A is provided with longitudinal passages S, S', and A', each of which at its upper end has a lateral branch extending to the side of the shaft. The passages S, S', and A' are continued downwardly from the shaft A by the tubes s, s', and a', respectively. These tubes are preferably coiled together into a loose spiral, as shown. The tubes s s' are united at their lower ends, forming one continuous tube. The lower end of the tube a' is open. The shaft A is journaled in the bung B, which latter is held in the barrel B' by any desired means, preferably by being screwed therein, as shown. The joint between the bung and the shaft A is made tight by the stuffing-box D.

The cap D' of the stuffing-box D is provided with the annular groove  $d$ , which, when the cap is screwed home, comes opposite the opening of the passage A', with which it communicates. The opening  $d'$  passes through the cap D' into the annular groove  $d$ . The cap D' is preferably provided above with the stuffing-box D<sup>2</sup>. The shaft A is supported by the projecting collar C, which rests on the top of the stuffing-box D<sup>2</sup>. The chambers E E' are rigidly attached to the bung B, preferably by being cast therewith, as indicated in Fig. 1.

Each chamber connects with the interior of the barrel by means of an opening,  $e$ , passing through the bung B. One of the chambers is provided at the top with a blow-off cock,  $e'$ , and the other with a safety-valve,  $e^2$ . The cylinder F surrounds the shaft A, and is supported in position by the chambers E E'. The openings in the cylinder F through which the shaft A passes are protected by stuffing-boxes G H. The cap G' of the stuffing-box G is provided with an annular groove,  $g$ , which communicates with the passage S' and with the air externally through the opening. Similarly the cap H' of the stuffing-box H is provided with the annular groove  $h$ , communicating with the passage S' in the shaft A, and also with the steam-inlet H<sup>2</sup>. The steam-inlet H<sup>2</sup> also communicates with the interior of the cylinder F. It is preferably cut through the nipple H<sup>3</sup>, but may be made by a separate pipe. A series of fans, F', are rigidly attached to the shaft A and project radially therefrom. Each fan fits snugly against the side and top and bottom of the cylinder F. The steam-pipe S<sup>2</sup> communicates with the cylinder F, and is so placed as to direct the steam from it against the fans as they pass it.

The mode of operation is as follows: Steam is turned on through the pipe S<sup>2</sup>, which, striking against one of the fans F', forces the fan in front of it and causes the shaft A to rotate. This steam is exhausted through the pipe or passage H<sup>2</sup> when the compartment containing it comes opposite this opening. The action of the steam on succeeding fans maintains the rotation of the shaft. Instead of this means of operating the shaft A, a crank or pulley may be applied directly to the shaft and form a means of transmitting motion to the shaft from another source. The steam passing through passage S continues through the pipe s, and returns through the pipe s' and passage S', and escapes into the air through the opening  $g'$ . This steam serves to heat the liquor in the barrel, which is at the same time being constantly agitated by the movement of the coil. Air is now pumped into the liquor through the passage A' and tube a, being introduced into the passage A' through the opening  $d'$  and annular groove  $d$ . This air is preferably first purified by passing it through some porous



material, such as wadding or asbestos. The air escapes from the barrel into the chambers E E', where it is held under pressure until the desired limit at which the safety-valve is set has been reached.

What we claim as new and of our invention, and desire to secure by Letters Patent, is—

1. The combination of the shaft A, provided with passages S S' A', tubes s s' a', rigidly attached to the shaft A and communicating, respectively, with the passages S S' A', and the tubes s s' connected to form one continuous tube, means for introducing steam to passage S, means for introducing air to passage A', and means for rotating the shaft A, substantially as and for the purposes specified.

2. The combination of shaft A, provided with passage A', and cap or ring D', provided with opening d', and annular groove d, communicating with the passage A', substantially as specified.

3. The combination of barrel B', bung B,

provided with passages e, chambers E E', blow-off cock e', and safety-valve e<sup>2</sup>, and shaft A, provided with agitating-coil containing air and steam tubes, substantially as set forth.

4. The combination of cylinder F, having steam-inlet S<sup>2</sup> and steam-outlet H<sup>2</sup>, shaft A, provided with radial fans F' and passages S S' A' and tubes s s' a', rigidly connected to the shaft A and communicating, respectively, with the passages S S' A', substantially as and for the purposes specified.

5. The combination of shaft A, provided with radial fans F' and passages S S' A' and pipes s s' a', with the cylinder F, having steam-inlet S<sup>2</sup> and steam-outlet H<sup>2</sup>, and bung B, provided with passages e and chambers E E', substantially as set forth.

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