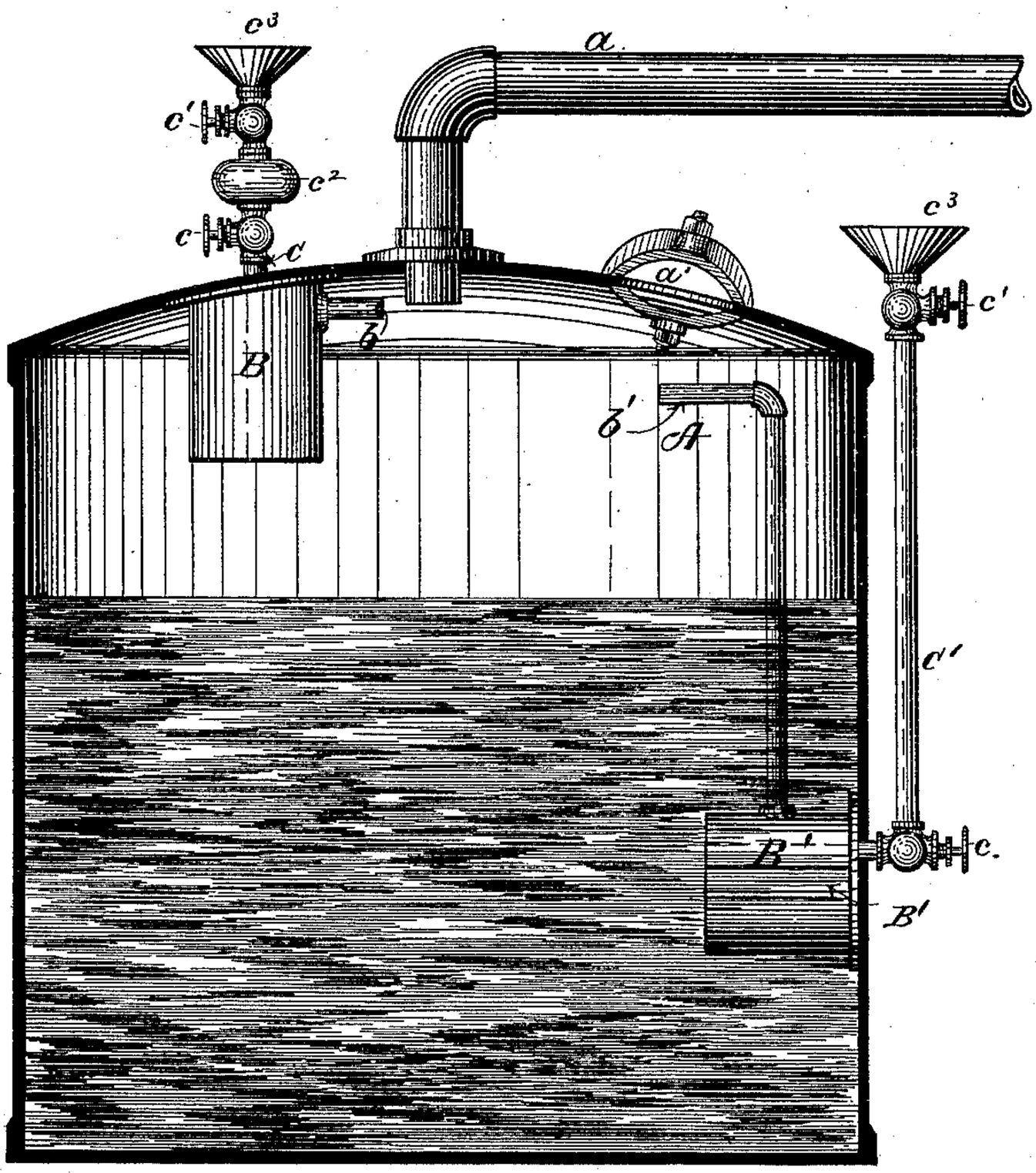
(No Model.)

T. McGOWAN.

APPARATUS FOR DISTILLING OIL.

No. 431,386. Patented July 1, 1890.



Witnesses
W. R. Edelen.
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UNITED STATES PATENT OFFICE.

THOMSON McGOWAN, OF CLEVELAND, OHIO.

APPARATUS FOR DISTILLING OIL.

SPECIFICATION forming part of Letters Patent No. 431,386, dated July 1, 1890.

Application filed February 28, 1889. Serial No. 301,545. (No model.)

To all whom it may concern:

Be it known that I, THOMSON McGOWAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Apparatus for Distilling Oil; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in distilling apparatus; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawing the figure is an elevation partly in section.

The still may be of any variety preferred—for instance, still A, shown in the drawing, the same having the necessary auxiliaries—such, for instance, as eduction-pipe *a*, manhole *a'*, &c. In the process of distillation it is frequently desirable and is sometimes necessary to employ chemicals of various kinds and from time to time to act on the distillate while yet in the still and in the form of vapor or gas. For this purpose I provide a chemical-container located inside the still, such container having suitable eduction opening or pipe discharging into the vapor-space of the still. The container is also provided with an induction or feed pipe, the same leading from the container to the outside of the still, such feed-pipe being provided with the necessary valves and receiving or feed chamber, whereby the chemicals may be fed to the aforesaid chemical-container during the operation of the still. The location of the chemical-container, so long as it is inside the still for heating purposes, is not material, and may be varied according to the construction of the still or according to circumstances. For instance, in the drawing a chemical-container B is shown connected with the top member of the still, while chemical-container B' is shown connected with one side of the still. It will be understood that only one container is necessary. Container B is provided with eduction nozzle or outlet *b*, while container B' is provided with eduction-pipe *b'*, both eduction-outlets discharging in the vapor-space of the still.

The chemical-container wherever it may be located inside the still has an induction or feed pipe extending outside the still and to where it is accessible for feeding purposes. The feed-pipe C of container B has valves *c* and *c'*, and between these valves is located an enlarged section c^2, serving as a receiving or feed chamber. The upper end of the feed-pipe terminates, preferably, in a funnel c^3. A similar arrangement is shown connected with container B', the long pipe C' serving as a feed-chamber. By closing valve *c* and opening valve *c'* the feed-chamber may be filled with a chemical, after which by closing valve *c'* and opening valve *c* the chemical descends by gravity to the chemical-container, such feeding of course being done, if necessary, while the still is in operation. With such construction it is obvious that chemicals can be applied from time to time as wanted and the chemicals may be changed during the distillation as circumstances may require.

The chemicals introduced into the chemical-container B or B' are vaporized while in such container, and hence only the vapors of such chemicals enter into the body of the still and commingle with the oil-vapor.

What I claim is—

1. The combination, with a still, of a chemical-container located inside the still, said chemical-container having a feed-pipe extending outside the still and having an eduction pipe or opening discharging into the vapor-space of the still, substantially as and for the purpose set forth.

2. The combination, with a still, of a chemical-container located inside the still and having induction and eduction pipes connected therewith, the former extending outside the still and the latter discharging into the vapor-space of the still, a receiving or feed chamber connected with the induction-pipe, and valves in the induction-pipe, located on either side of such feed-chamber, substantially as and for the purpose set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 12th day of January, 1889.

THOMSON McGOWAN.

Witnesses:

CHAS. H. DORER,

ALBERT E. LYNCH.