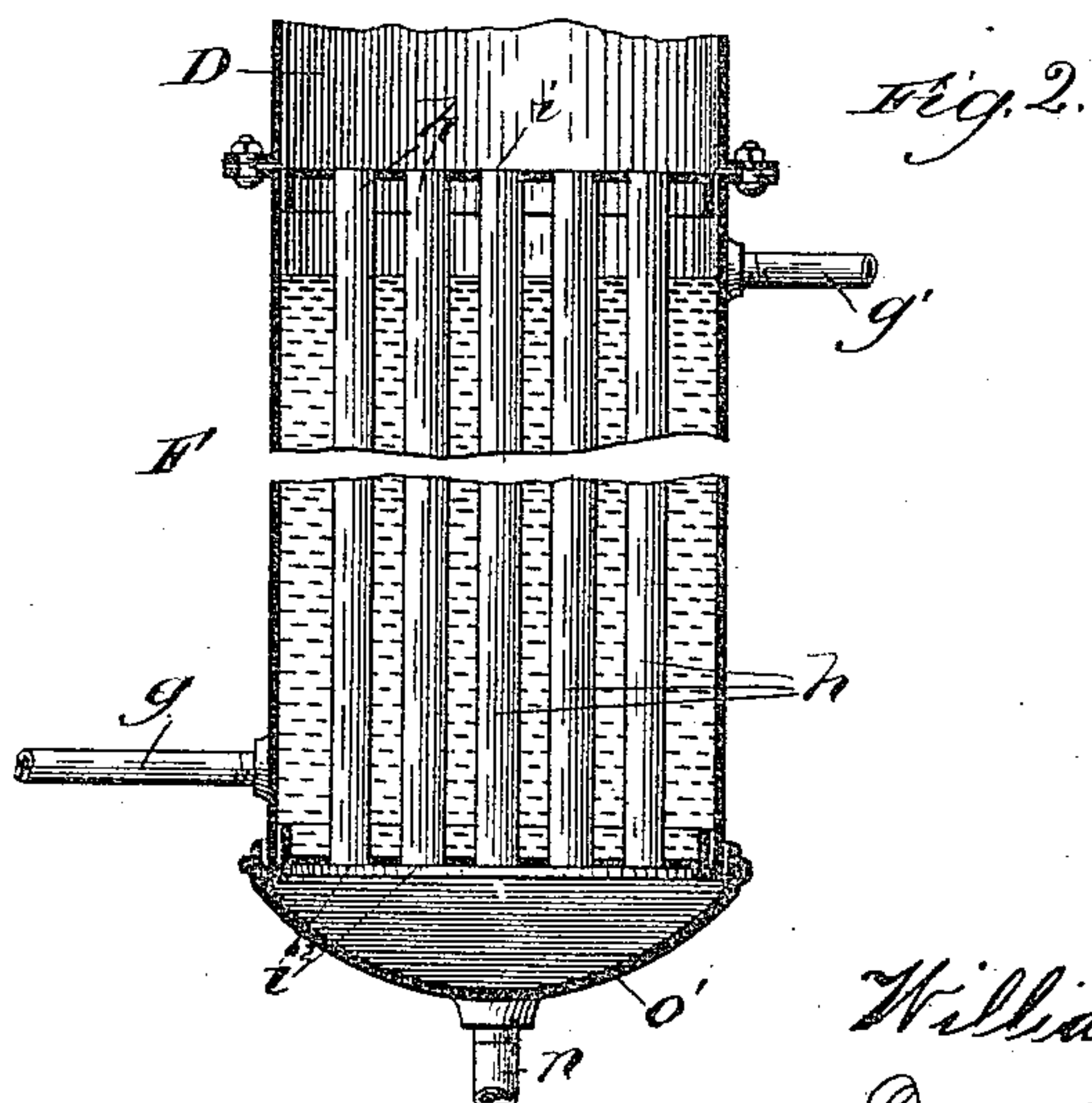
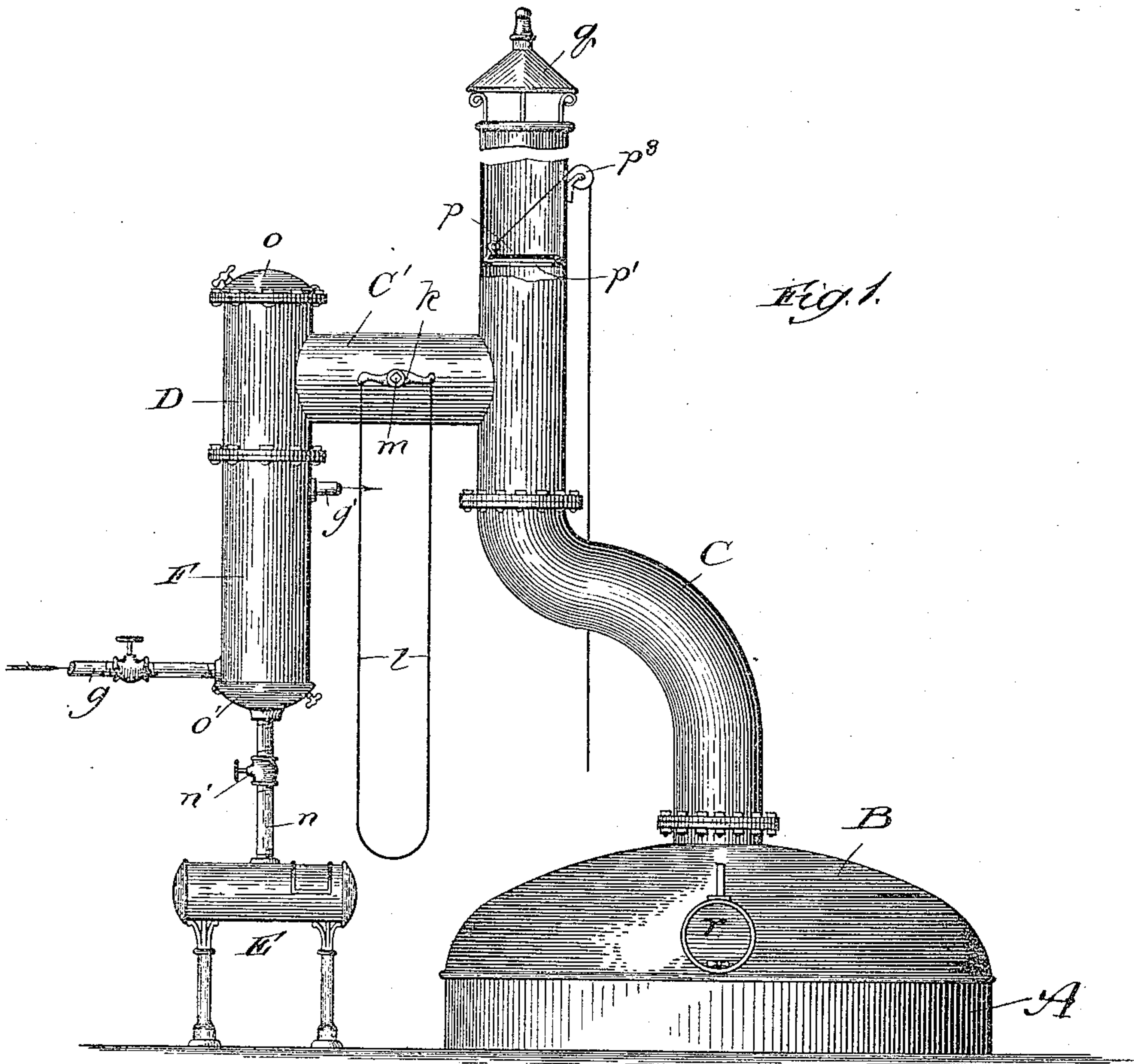


(No Model.)

W. J. SEIB.
APPARATUS FOR BREWING.

No. 438,328.

Patented Oct. 14, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM J. SEIB, OF CHICAGO, ILLINOIS.

APPARATUS FOR BREWING.

SPECIFICATION forming part of Letters Patent No. 438,328, dated October 14, 1890.

Application filed April 23, 1890. Serial No. 349,169. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. SEIB, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Apparatus for Brewing, of which the following is a specification.

My invention relates to an improvement in apparatus for use in collecting, condensing, and storing the essential oil and aromatic properties of hops to save them, and which is, therefore, especially serviceable for the particular purpose for which I have invented it—namely, that of saving the aforesaid properties of the hops while they are being boiled with the wort in the manufacture of beer.

My present invention is particularly designed to afford an improvement in the construction of an apparatus for the same purpose as that set forth in the application of Carl Hoefner for Letters Patent of the United States No. 301,482, allowed on the 22d day of March, 1890. The construction of the apparatus therein described necessitates that the vapor from the kettle shall pass to the condenser and return by the same course to the storage-reservoir, which impairs the effectiveness of the condensation, since the liquid thereof has to pass under the influence of the rising heated vapor to gain access to the receptacle.

My object is to provide an apparatus for the purpose stated whereby this objection shall be obviated; and to this end my invention consists in the construction hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a view showing my improved apparatus in broken elevation as operatively applied to a brew-kettle, and Fig. 2 an enlarged broken sectional view of the condenser.

A is the kettle or boiler, of any ordinary or suitable construction, and provided with a close cover B, in which one or more man-holes are provided and adapted to be tightly sealed.

C is a conduit extending upward from the cover B, through which it communicates with the interior of the boiler, and provided at its upper end with a suitable cap *g*, below which it contains a valve *p*, preferably of the hinged "damper" variety, controllable, with refer-

ence to its seat *p'*, through the medium of a cord *p²*, chain, or the like extending over a guide-pulley *p³* into position of ready accessibility to the operator.

D is a chamber, preferably of the cylindrical form illustrated, extending parallel with the straight portion of the conduit C and lateral of the latter. The chamber D should be provided at opposite ends with adjustable heads *o* and *o'*, the hinged construction shown permitting them to be readily raised to gain entrance, as for cleaning purposes, to the interior of the chamber and as readily closed and secured. The chamber communicates from its base, through a pipe *n*, containing a suitable valve *n'*, with the reservoir E, for storing the liquid of condensation, and from one side near its upper end it communicates with the conduit C, below the valve *p* therein, through a branch C' of the conduit containing a valve (not shown, but like the ordinary damper in a stove-pipe,) supported on journals *m* and controlled from cord *l* or the like, fastened to opposite ends of a lever *k*, centrally secured upon one of the journals *m*.

In the lower part of the chamber is the condenser F, Fig. 2, formed of perforated heads *i* and *i'*, connected by vertical tubes *h*, extending at their opposite ends into the perforations in the heads. A water-inlet pipe *g* leads into the chamber D near its base into the space surrounding the condenser-pipes *h*, and from near the top of said space the water-outlet pipe *g'* leads.

The operation is as follows: When the hops have been introduced into the boiling wort, the valve *p* which is normally open, is closed and the valve in the branch C' opened to direct the vapors rising from the kettle A to pass through the conduit C into the chamber D and through the tubes *h* therein, wherein they become condensed under the influence of the cold water circulated through the condenser, and flow through the pipe *n* into the reservoir E. The admission of the cold water near the base of the condenser and its outlet from near the top is advantageous, inasmuch as it subjects the matter undergoing condensation to a gradually lowering temperature of the condensing medium, (water.) The upper portion of the chamber D above the condenser-pipes therein

affords a receiving-head for the vapors to be condensed and which are led into it by the conduit C. When the essential oil of the hops has entirely or sufficiently become liberated 5 by the boiling, the valve in the branch C' should be closed and that in the conduit C opened to permit the further vapor from the kettle to escape. The contents of the reservoir E are then ready for use to produce the 10 desired hop-flavor in the beverage, and may to that end be introduced either during or after the fermentation stage of the brewing process.

What I claim as new, and desire to secure 15 by Letters Patent, is—

In a brewing apparatus, substantially for the purpose set forth, the combination, with a kettle A, of a conduit C, extending upward

from the kettle and open at its upper end to the outer air and containing a valve *p*, a 20 branch C', extending at an angle from the conduit C below the valve *p* therein and containing a valve, a chamber D, into the side of which near its upper end the branch C' leads, and having heads *o* and *o'*, a condenser F in 25 the chamber below the communication therewith of the said branch, pipes *g* and *g'*, leading, respectively, into the base and out of the upper portion of the condenser, and a reservoir E, communicating with the condenser 30 through a pipe *n*, substantially as described.

WILLIAM J. SEIB.

In presence of—

J. M. DYRENFORTH,
M. J. FROST.