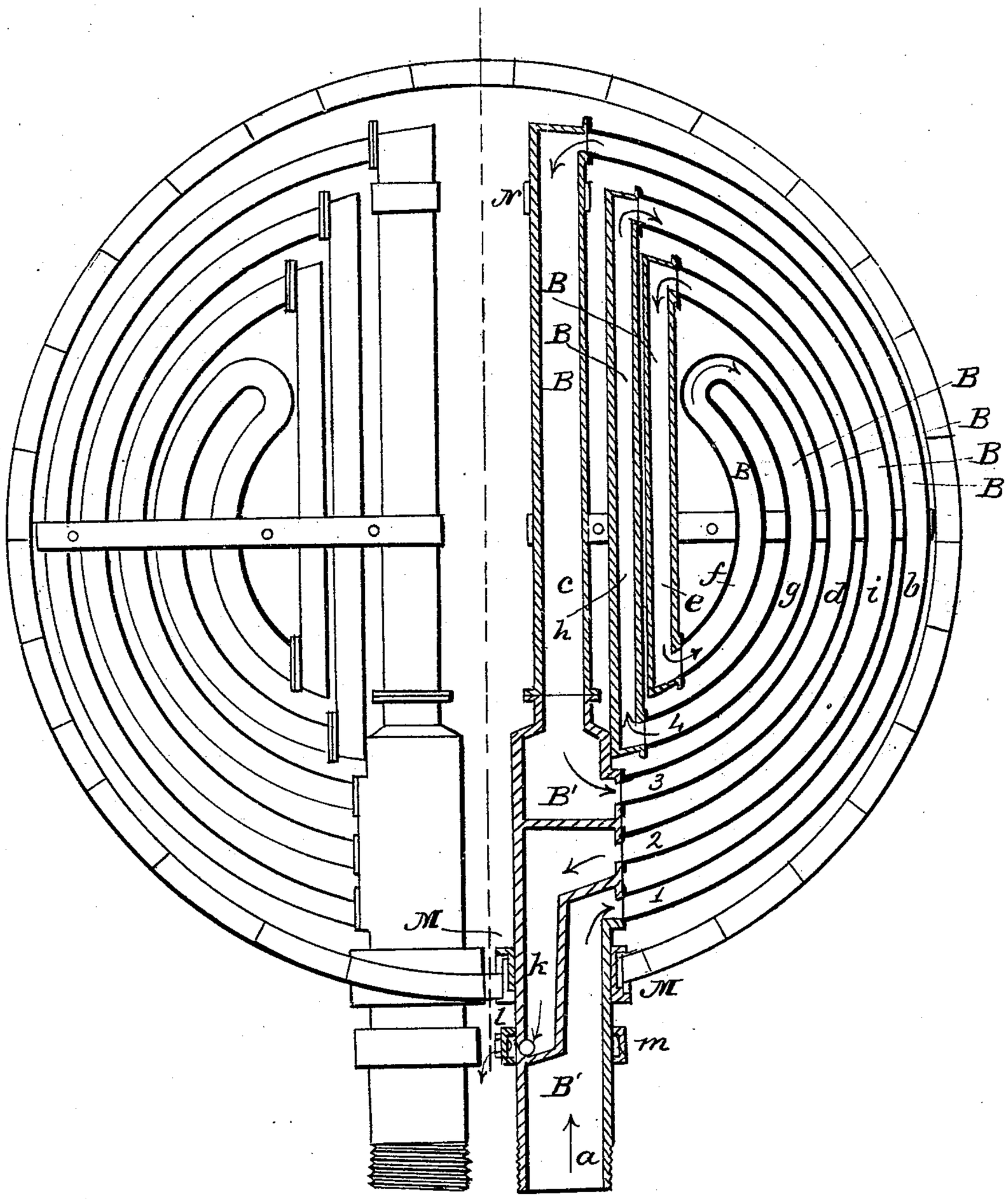
A. HAMMER.

Brewer's Boiler.

No. 17,968. Patented Aug. 11, 1857.



UNITED STATES PATENT OFFICE.

ADOLPH HAMMER, OF READING, PENNSYLVANIA.

BREWER'S STEAM BOILING APPARATUS.

Specification forming part of Letters Patent No. 17,968, dated August 11, 1857; Reissued June 20, 1865, No. 2,001.

To all whom it may concern:

Be it known that I, ADOLPH HAMMER, of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Steam Boiling Apparatus; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which represents a plan view, part in section through the center line, of the pipes arranged according to my invention.

The usual apparatus for boiling by steam consists of a coil of pipe placed horizontally in the tub, near its bottom, with the ends of said pipe extending through the sides of the tub (or jointed thereto) so as to allow of the coil being detached and hoisted out for cleansing (as occasion requires). This operation which very frequently occurs in some of the arts and more particularly in the art of brewing requires such an arrangement of the boiling apparatus, whereby the time and labor consumed in and the machinery used for the hoisting and lowering used for heavy coils as used by brewers, is saved; also the difficulty of making steam tight joints is done away with. Among the devices used or suggested I only know of Alfred Hillman's boiling apparatus patented on May 16th, 1846, which is constructed on different principles. But it does not answer the purpose generally, as it is only applicable to small and square tubs, which have to be constructed purposely and in connection with the boiling apparatus. The cleansing moreover can be performed but partially and the heat is not uniformly diffused all over the surface of the tub.

I have succeeded in constructing a boiling apparatus which answers the requirements in a most perfect manner by arranging the steam pipes in boiling apparatus in two or more separate and distinct parts or series, whereby either or both or all parts or series of pipes may be elevated by rotating the same upon an axis of rotation at or near the center of the tub, also by letting the steam after being condensed out, through the same pipes which forms the trunnion having partitions arranged in the manner hereinafter described.

In the annexed drawing A is the tub; B the series of steam pipes. The steam enters a partitioned pipe B′ at *a*, thence passes onward through *b* to *c*, thence through *d* and *e* to *f*, thence through *g*, *h* and *i* to the rear chamber *k* of the main or entrance pipe B′ and finally escapes through a small cock at *l* all as indicated by the arrows. These portions of steam pipe are all made cylindrical, in section and bolted together steam tight, substantially as indicated in drawing.

The part which passes through the side of the tub, works or rotates in a steam tight bearing M, while the inner end rests in or upon a bearing N, which rises vertically from the bottom of the tub, so that the series may be readily turned up upon its edge and thus admit of free access to the whole bottom of the vessel for the purpose of cleansing it, and thus also bringing the whole series of pipes into the most favorable position for the same purpose, without detaching it and hoisting from the tub.

The cock *l* is fixed in a hollow band *m* which, although fitted thereon steam tight is yet adjustable so as to bring the cock to any position required.

It will be readily seen that this arrangement of steam pipes, entirely obviates the necessity of the detachment and hoisting hitherto required in brewer's boiling apparatus and at the same time produces a better, because a more uniform diffusion of the heat over the bottom of the vessel.

It is obvious that the arrangement of pipes herein described may be employed with great advantage in connection with any boiling apparatus, whatever the nature of manufacture be; it may thus be introduced in the manufacture of salt, sugar, soap, in distilleries, etc.

Disclaiming connecting a series of branch pipes with and into a main pipe before which said branch pipes may be rotated in the manner described by A. Hillman in his patent of May 16, 1846, I claim—

Arranging the steam pipes in boiling apparatus in two or more separate and distinct

parts or series in the manner substantially as herein described, whereby either both or all parts or series of pipes may be elevated by rotating the same upon axes of rotation at or near the center of the tub for the purpose specified.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

ADOLPH HAMMER.

Witnesses:
CHAS. EVERETT,
A. POLLACK.

[FIRST PRINTED 1912.]