

(No Model.)

M. H. HART.  
DEVICE FOR AERATING BEER OR ALE.

No. 533,890.

Patented Feb. 12, 1895.

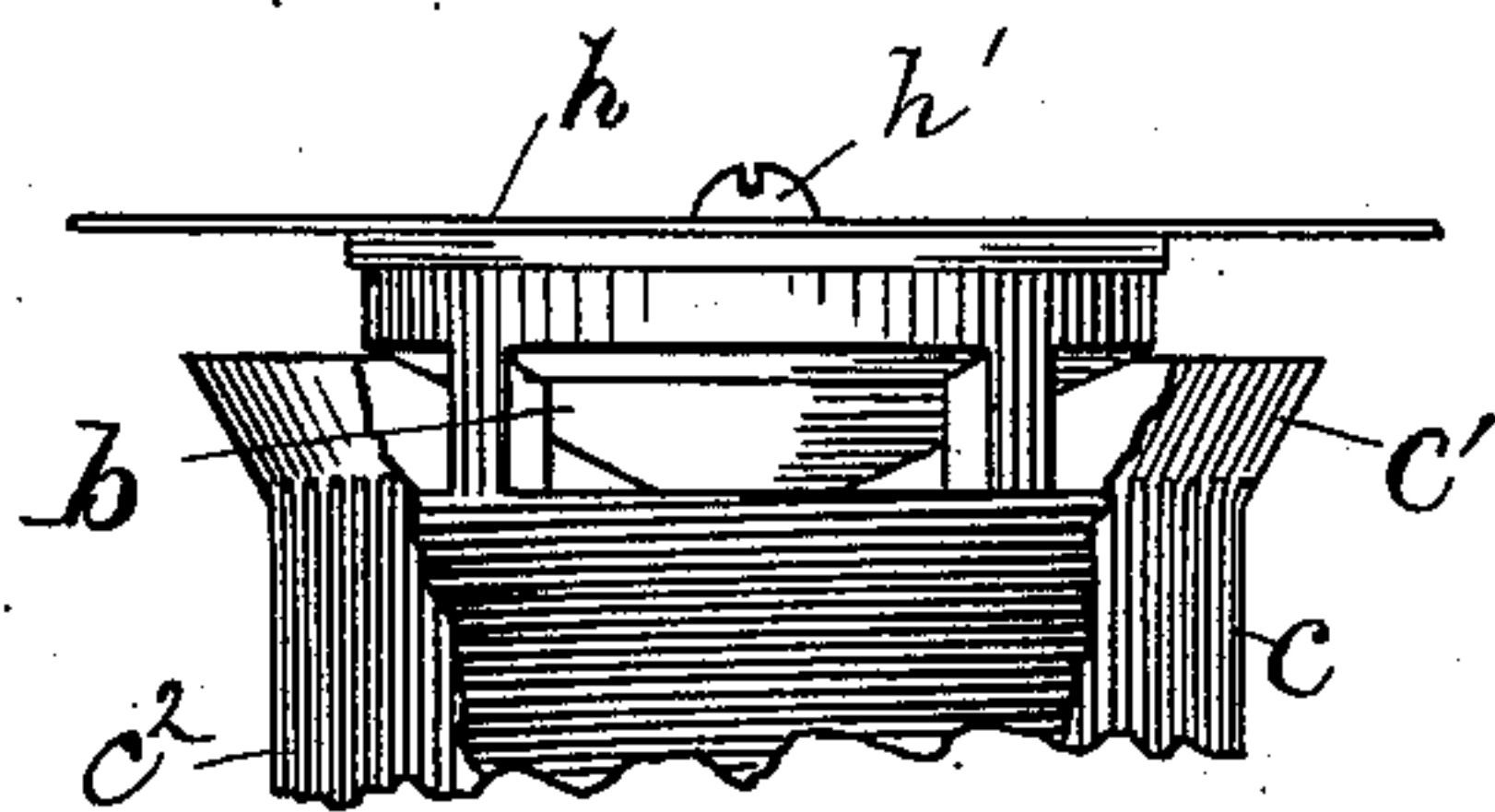


Fig. 3.

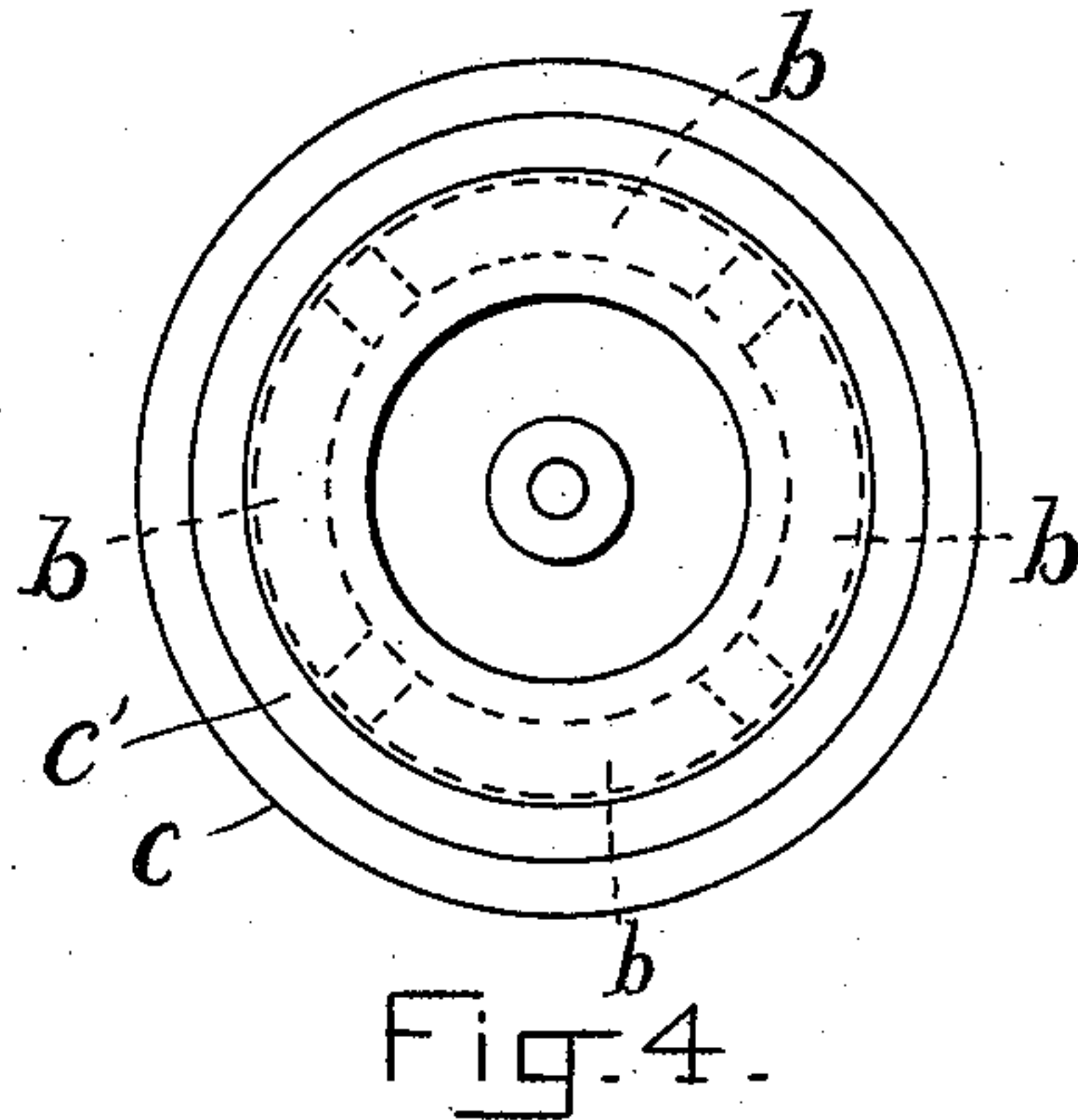


Fig. 4.

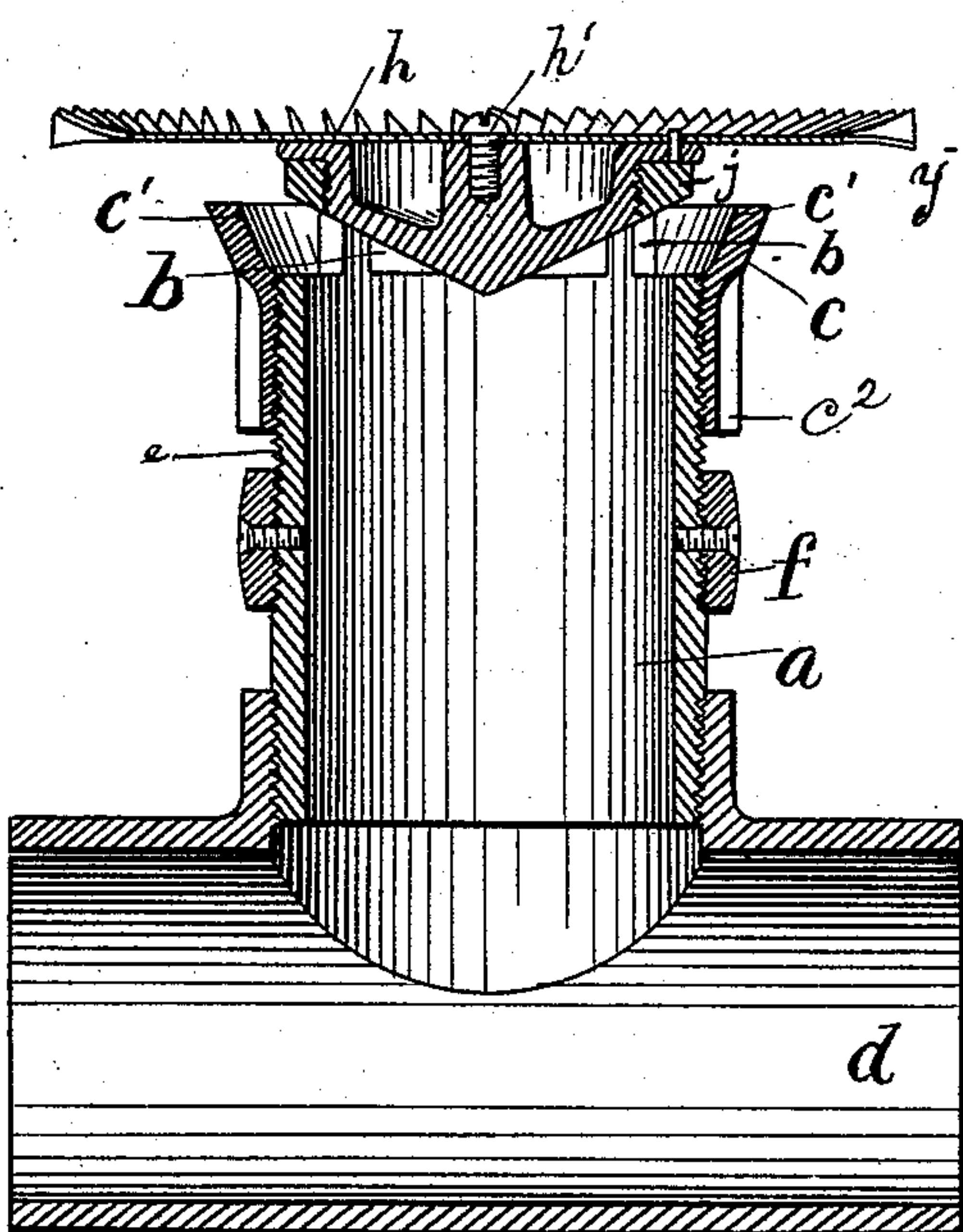


Fig. 1.

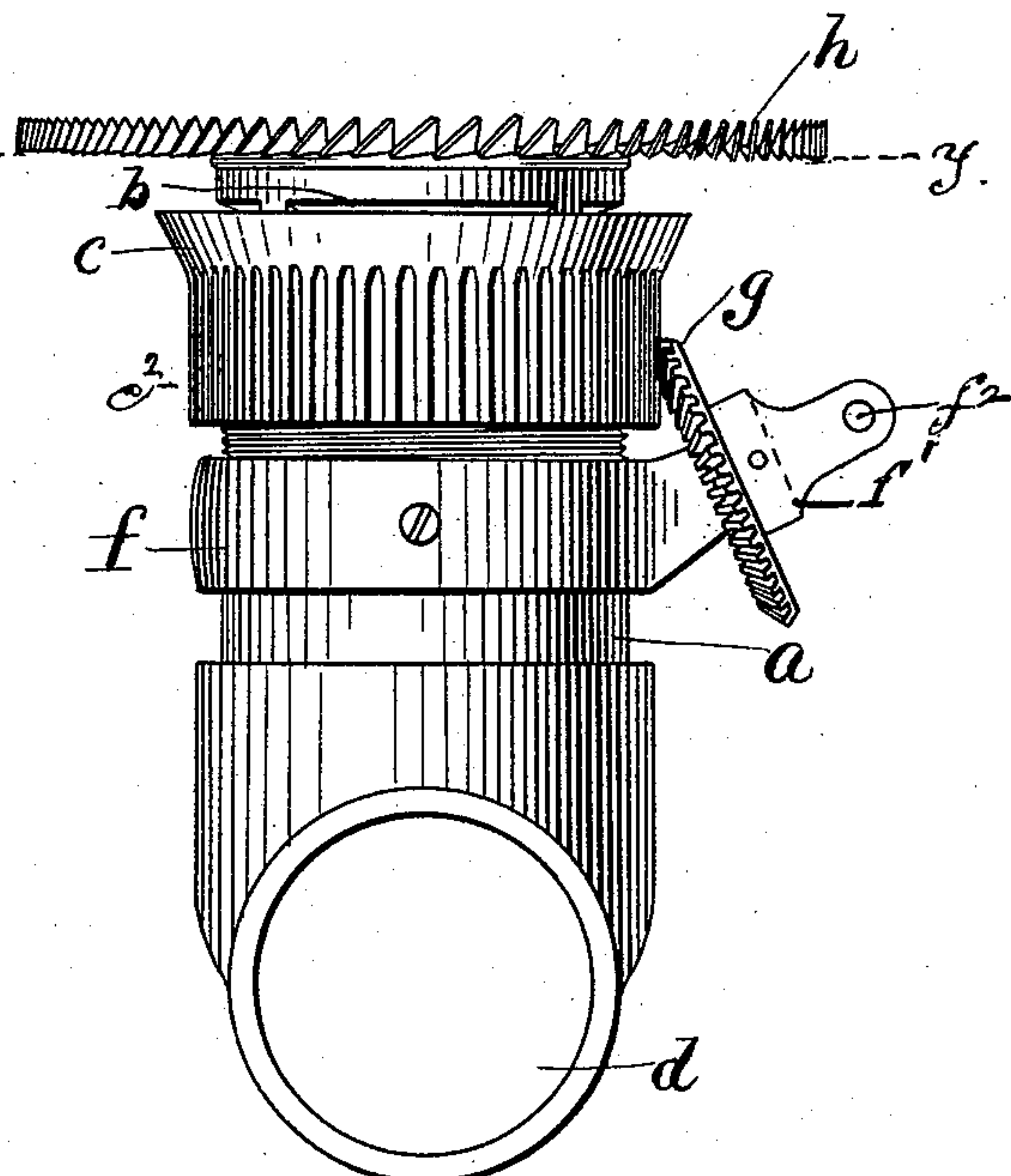


Fig. 2.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

MILTON H. HART, OF NEW YORK, N. Y., ASSIGNOR OF TWO-FIFTHS TO  
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## DEVICE FOR AERATING BEER OR ALE.

SPECIFICATION forming part of Letters Patent No. 533,890, dated February 12, 1895.

Application filed January 9, 1894. Serial No. 496,333. (No model.)

*To all whom it may concern:*

Be it known that I, MILTON H. HART, a citizen of the United States, residing at New York, in the county and State of New York, have invented an Improvement in Devices for Aerating Beer or Ale, of which the following is a specification.

The object of my invention is the hot aeration of worts by spraying them so as to reduce the temperature to any desired amount, to insure proper fermentation, to eliminate any excess of albuminoids, and otherwise to improve the quality of the beer or ale.

Figure 1 is a vertical central section of an apparatus embodying my invention; Fig. 2, an end elevation taken at right angles to Fig. 1; Fig. 3, a detail, partly broken away; Fig. 4, a plan view in the line  $y y$  of Fig. 3.

In the drawings,  $a$  is the chamber into which the worts to be aerated, are to pass. This chamber is provided with the ports  $b b$ .

$c$  is a ring, geared on its periphery, to be screwed on to the upper part of this chamber, and having on its upper edge the bevel  $c'$ .

$d$  is a removable base to the chamber  $a$ . The outside of the chamber  $a$  is provided with the screw thread  $e$ .

$f$  is a ring screwing on to the thread  $e$ , and locked by set screws.

$g$  is a bevel gear meshing into the gears on ring  $c$ .

The operation is as follows: The hot worts being introduced into the chamber  $a$  under pressure, they pass thence through the ports  $b$ , and along the bevel  $c'$  in the form of a sheet of liquid, and the operation of aeration or exposure to air is perfectly accomplished. The ring  $c$ , by means of its thread, may be adjusted higher or lower upon the chamber  $a$ , as needed, and consequently the width of the opening or space between the bevel  $c'$  and the top of said chamber may be varied at will, through the agency of the bevel-gear  $g$ , which engages with the teeth  $c^2$  on the exterior of the ring  $c$ . The ring  $f$ , as shown, is secured to the exterior of the chamber  $a$ , and it sup-

ports the gear  $g$ ; and the ring  $c$ , may be raised or lowered to the desired extent, by causing said gear to be revolved in either direction by any suitable means, as for instance by turning the projection or stud  $f'$  in any convenient way,—say by inserting a rod or lever in the hole  $f^2$  at the end of such projection. The ring  $f$  serves not only as a stop or limit to the downward adjustment of the ring  $c$ , but also to carry or support the bevel wheel  $g$ . The flare or bevel  $c'$  of the ring  $c$  may be made at any desired angle relatively to the cylindrical threaded portion, and this ring is readily removable, in order that another provided with a different flare may be substituted at will. This allows the sheet of liquid to be given such direction as may be desired. On top of the chamber is removably secured a plate or distributor  $h$ , serrated or fan like on its upper side, and serving to cause the liquid to be broken up into a spray or mist. The plate  $h$  is located over the chamber  $a$ , and attached to the inverted cone by means of a screw  $h'$ .

The ports  $b$ , as will be seen, are constituted of openings in the upper part of the chamber or cylinder  $a$ .

The port  $j$ , shown as attached to the inverted cone by screw-threads on its periphery, is a vertically adjustable ring, and permits the increasing or lessening of the annular space between itself and the ring  $c$ .

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

The improved device for aerating beer or ale, consisting of the chamber provided near its top with ports  $b$ , and having thereon the interiorly threaded ring, carrying the bevel wheel  $g$ , combined with the interiorly threaded ring  $c$  adapted to be engaged by said bevel wheel, and having a bevel or flange  $c'$  at its top, all substantially as set forth.

MILTON H. HART.

Witnesses:

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FERDINAND FAHRBACH.