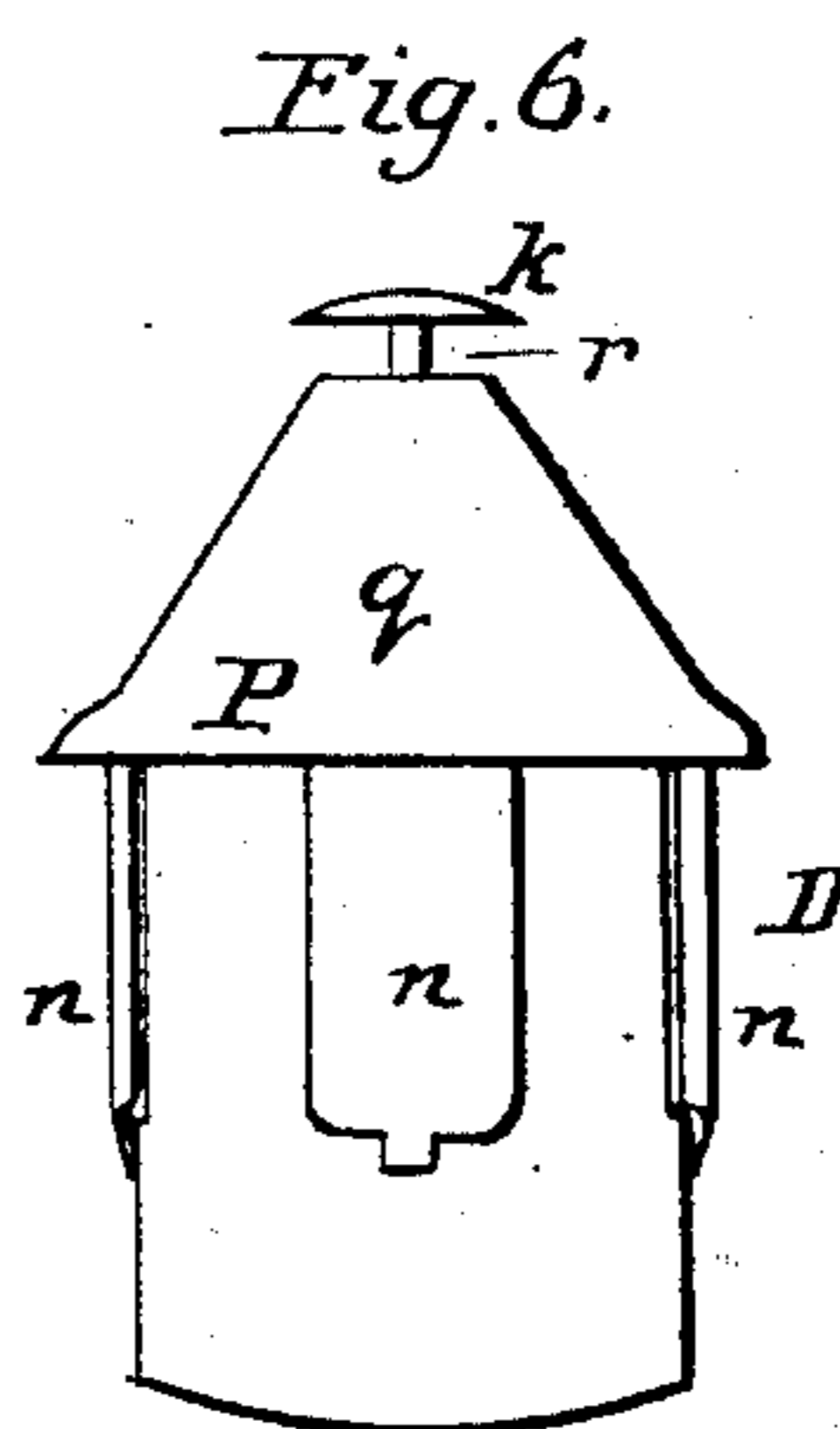
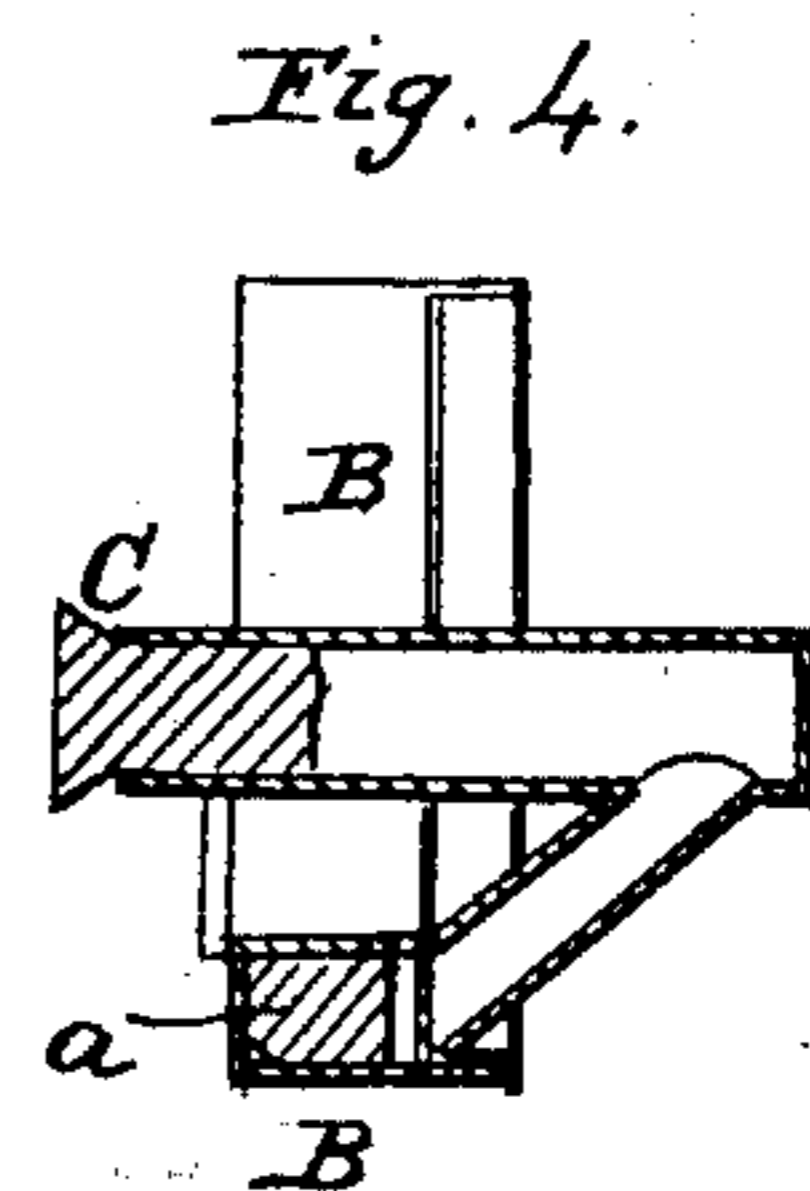
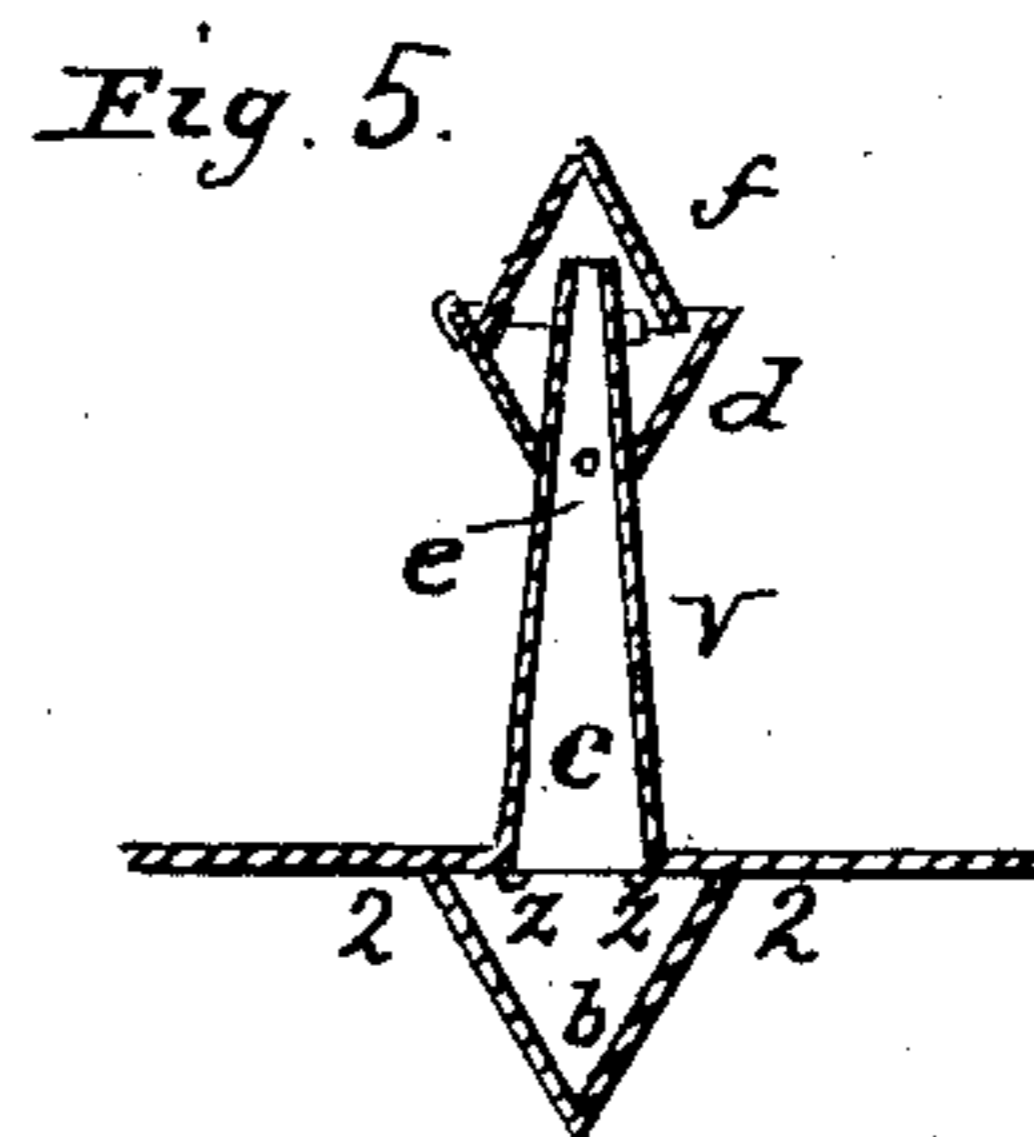
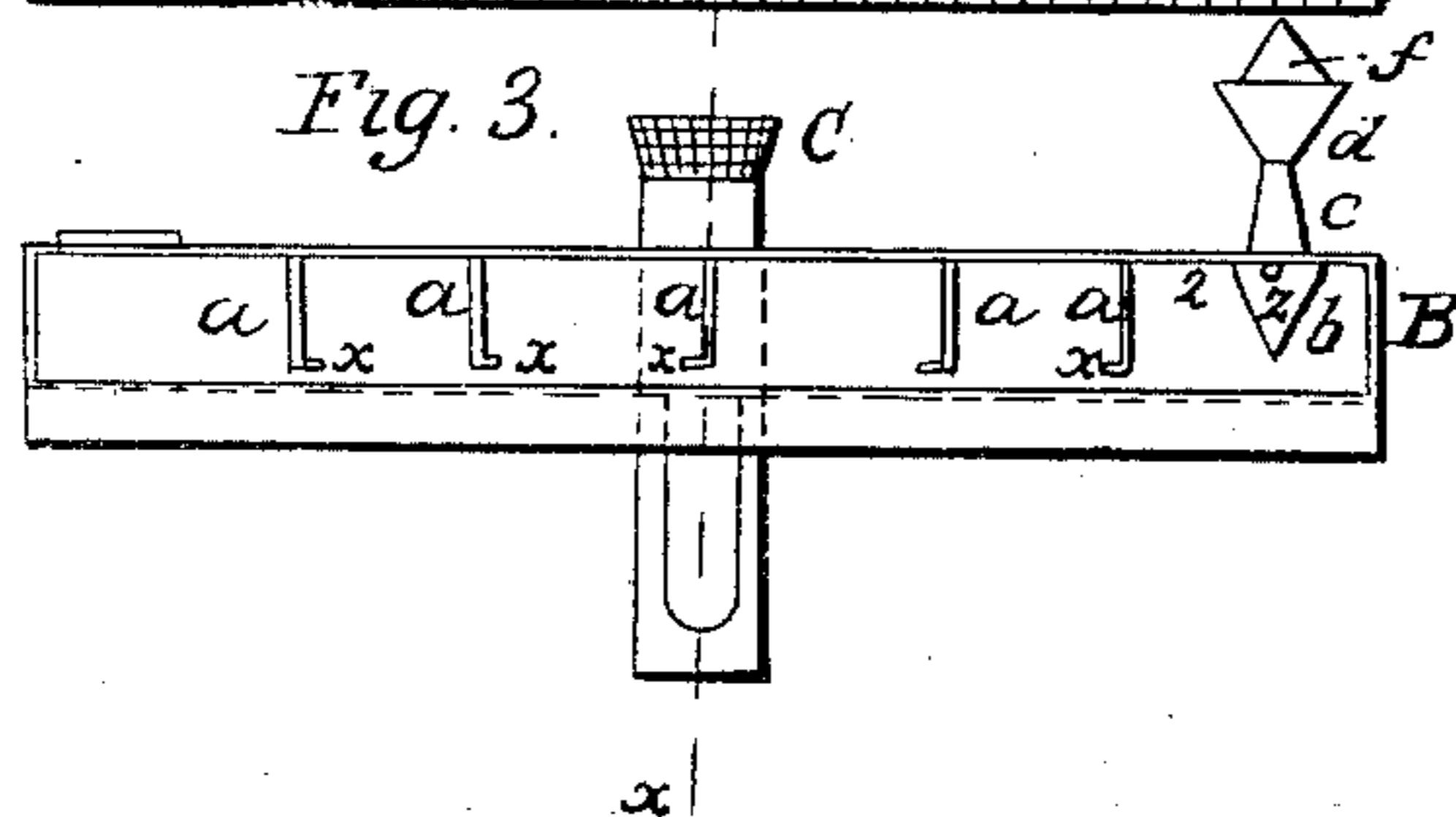
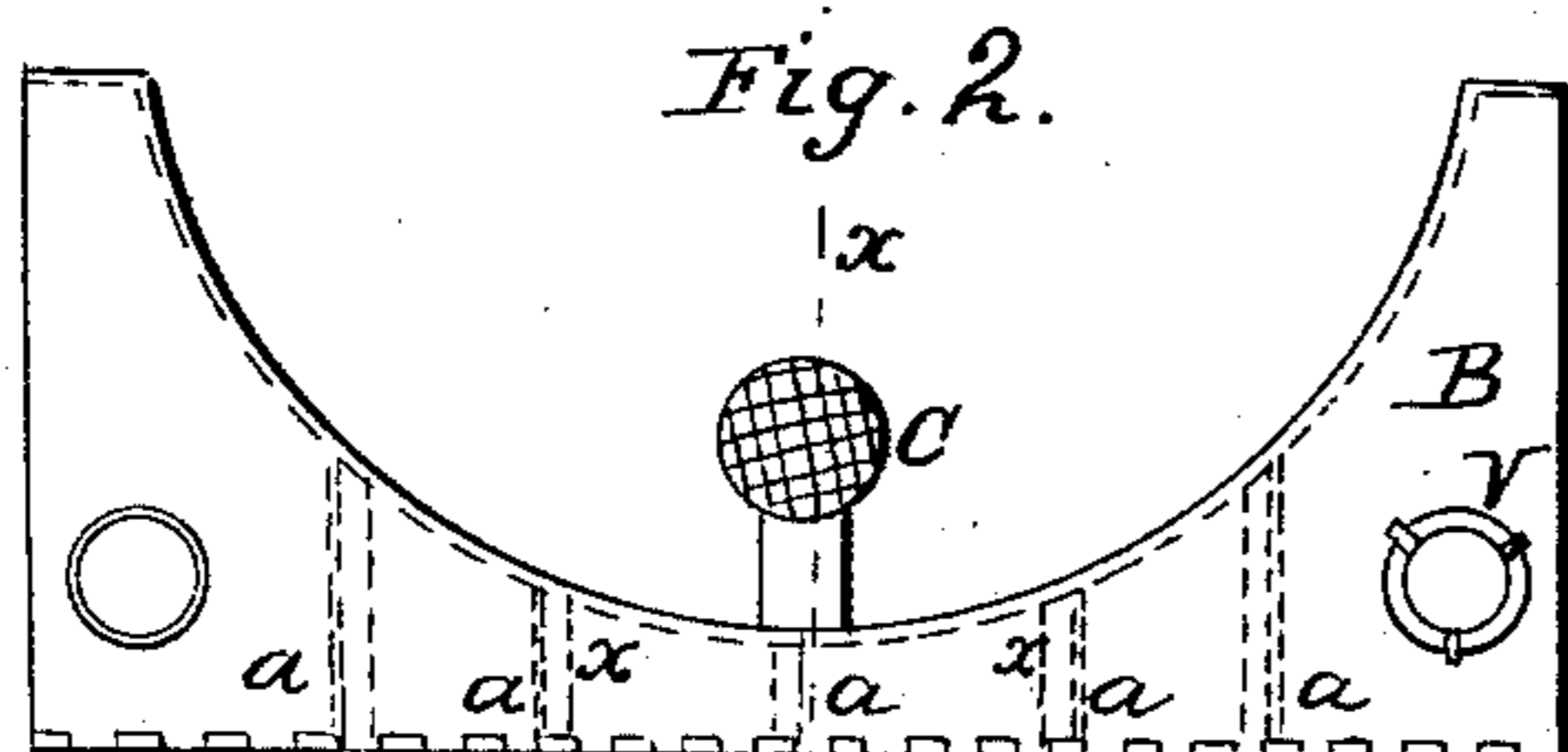
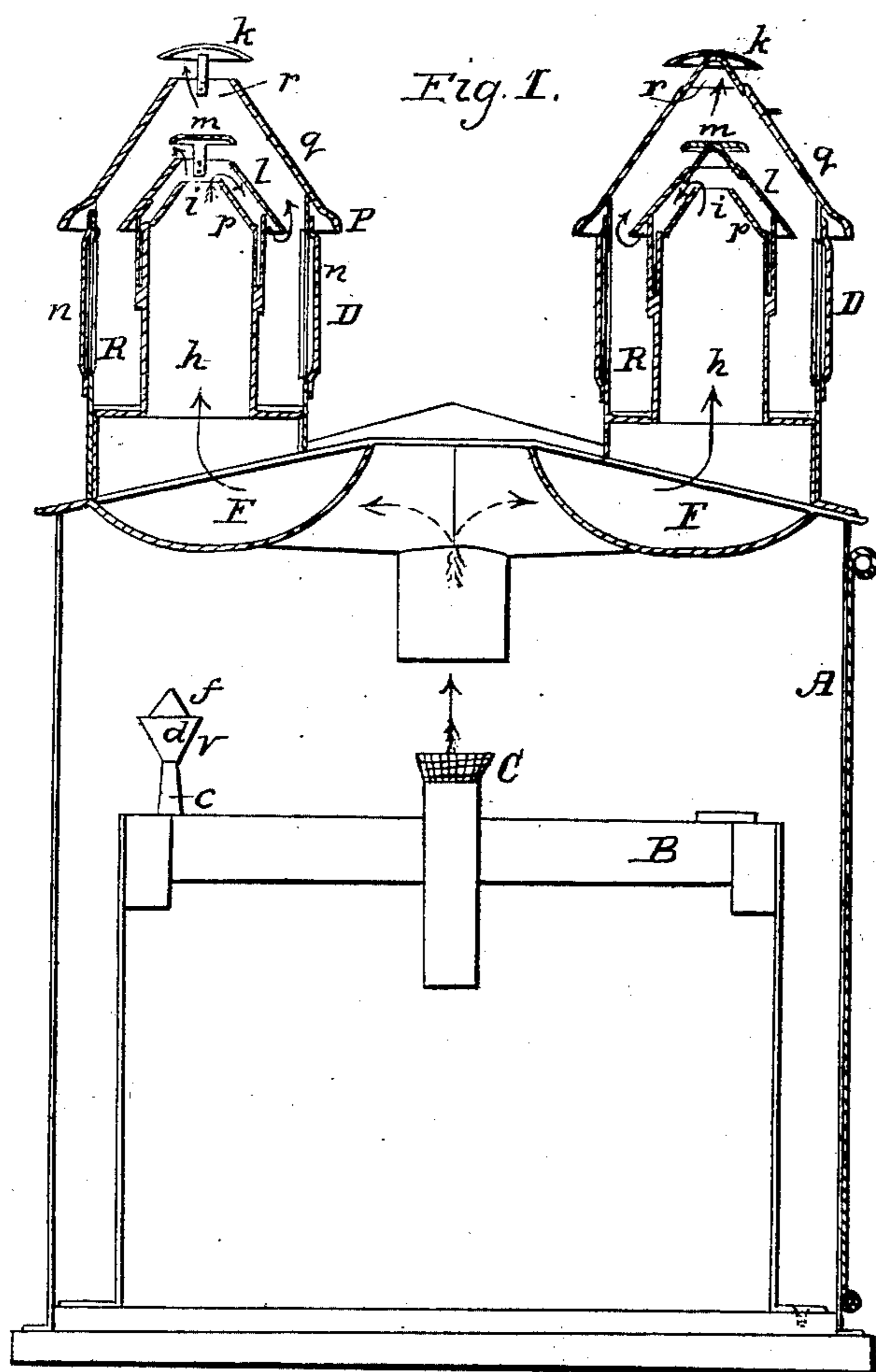


I. A. WILLIAMS.  
Locomotive Head-Light.

No. 11,799.

Patented Oct. 10, 1854.



# UNITED STATES PATENT OFFICE.

IRVIN A. WILLIAMS, OF UTICA, NEW YORK.

## LOCOMOTIVE-LAMP.

Specification of Letters Patent No. 11,799, dated October 10, 1854.

*To all whom it may concern:*

Be it known that I, IRVIN A. WILLIAMS, of Utica, in the county of Oneida and State of New York, have invented a new and useful Improvement in Locomotive-Lamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, forming part of this specification, in which—

Figure 1 is a vertical section of case through axes of the chimneys. Fig. 2 is a top view of can and burner. Fig. 3 is a rear view of same, showing interior of can. Fig. 4 is a vertical section on line  $x x$  of Figs. 2 and 3. Fig. 5 is a section of vent taken through axes. Fig. 6 is a front elevation of chimney.

Similar letters of reference in the several figures denote the same part of the lamp.

My invention refers to improvements in the can, and vent of locomotive lamps, and consists 1st, in constructing the can with partitions extending from top nearly to bottom, so as to break the interior into a series of chambers which by communicating along the bottom of the can give a uniform and steady supply of oil to the wick, while the partitions prevent the swash of the fluid in the can, and the slopping over incident to the motion of the engine. 2d, in placing over the vent tube a conical cap, and around said tube and near its top a funnel communicating with the interior of the vent tube; also a perforated funnel under the tube; the arrangement being such that while air is freely admitted to the can, the oil cannot fly out of the vent.

To enable other skilled in the art to make and use my invention I will proceed to describe the construction and operation of the same.

In the drawing A is the lamp case, B the can, of the ordinary external construction, C the burner, and D the chimneys. Running across the can and extending from the top nearly to the bottom of the same are the partitions  $a$ , shown in Figs. 2 and 3.

V is the vent, consisting of the perforated funnel  $b$  within the can and directly under the top, the tube  $c$  perforated at  $e$ , the funnel  $d$  and cap  $f$  (see Fig. 5).

The chimney D consists of pipe  $h$  communicating with the flue F, this pipe terminating in a frustum of cone  $p$  open at  $i$ . Above this pipe is a conical cap  $l$  surmounted by a circular plate  $m$ ; this forms the inner chimney, surrounding which is the case P having its vertical surface slotted and covered with the plates  $n$ , while above is the cap  $q$  having the opening  $r$  in its top, the whole surmounted with the circular plate  $k$ .

The other portions of the can and case being well known will not require particular description.

The operation of my improved lamp is as follows. The partitions  $a$  prevent the swash and consequent slopping of the fluid which takes place in ordinary cans, and by keeping the oil in a quiet state insure regularity of feed and a consequent steadiness of flame. The flanges  $x$  on the partitions parallel to the bottom of the can aid materially in preserving the fluid in a quiescent state. Air enters the can through the tube  $c$  and perforations  $z$  of the funnel  $b$ , while if any of the fluid should be thrown up through the tube it impinges against the cap  $f$  and is thrown back into the funnel  $d$  and by the apertures  $e$  in the tube  $c$  enters said tube, and flows back into the can, thus the vent while it furnishes a sufficient supply of air effectually prevents the exit of the oil from the can. The smoke from the burner C passes through the flues F and through the interior chimney as shown by the arrows, and finally escapes from under the disk  $k$  and from beneath the plates  $n$  covering the slots in the outer case as shown by the arrows in Fig. 1. These passages while they furnish a free draught for the combustion of the wick prevent effectually the entrance of any current created by the running of the engine, as whatever wind might enter through the opening  $r$  would meet the disk  $m$  and would be deflected over the cap  $l$  into the space R between the two casings, while a current entering under the plate  $n$

would be destroyed in the same space, or would be diverted upward and assist the draught of the lamp.

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

1. Constructing the can B with partitions substantially as set forth for preventing the swash of the fluid and insuring a steady feed to the burner.
2. The combination of the perforated inverted cone b, cap f, funnel d, and perfo-

rated tube c, constructed, arranged and operating as herein before set forth for admitting air to the can and preventing the slopping of oil from the vent.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

IRVIN A. WILLIAMS.

Witnesses:

DEXTER GILLMORE,  
A. J. WILLIAMS.