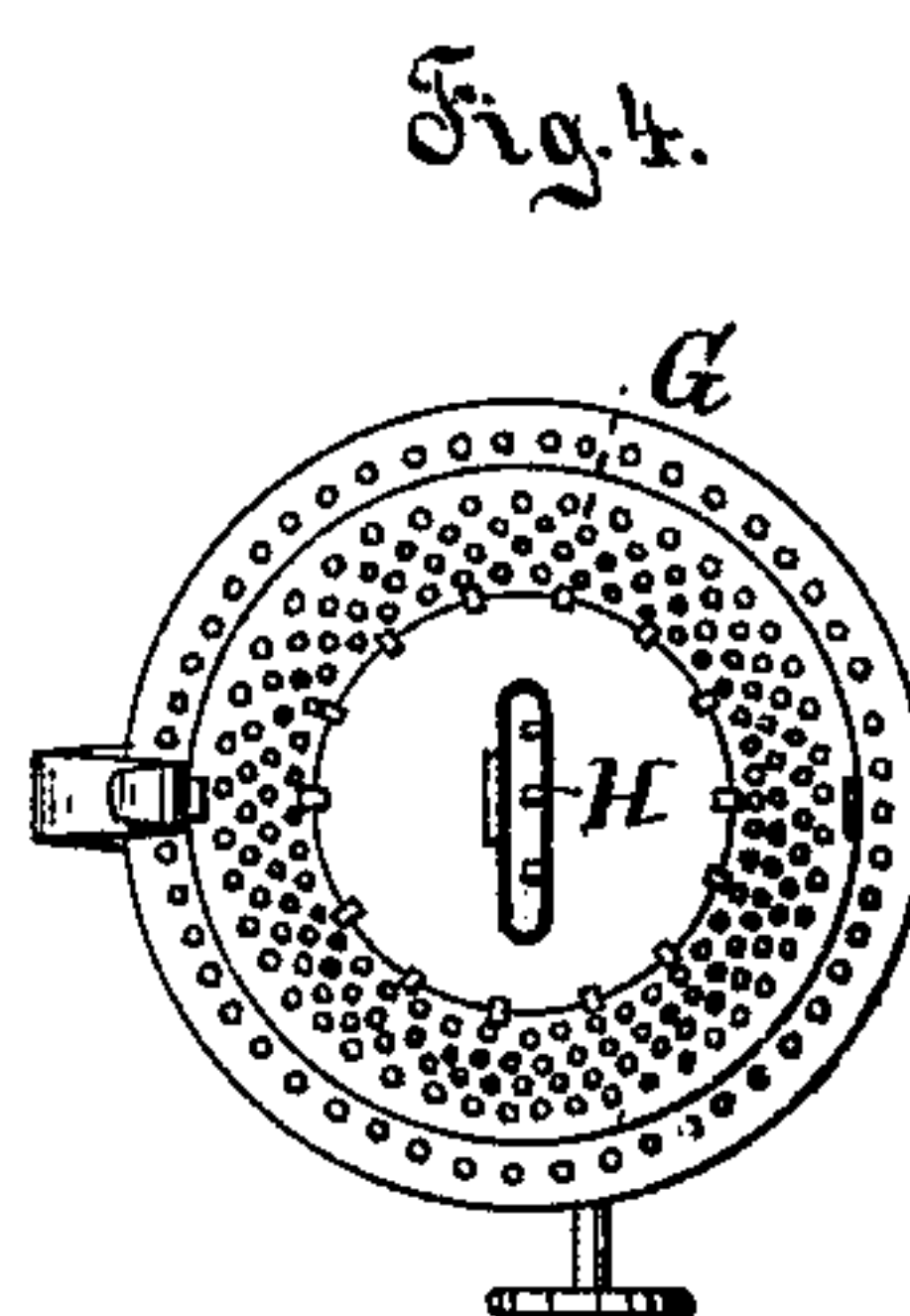
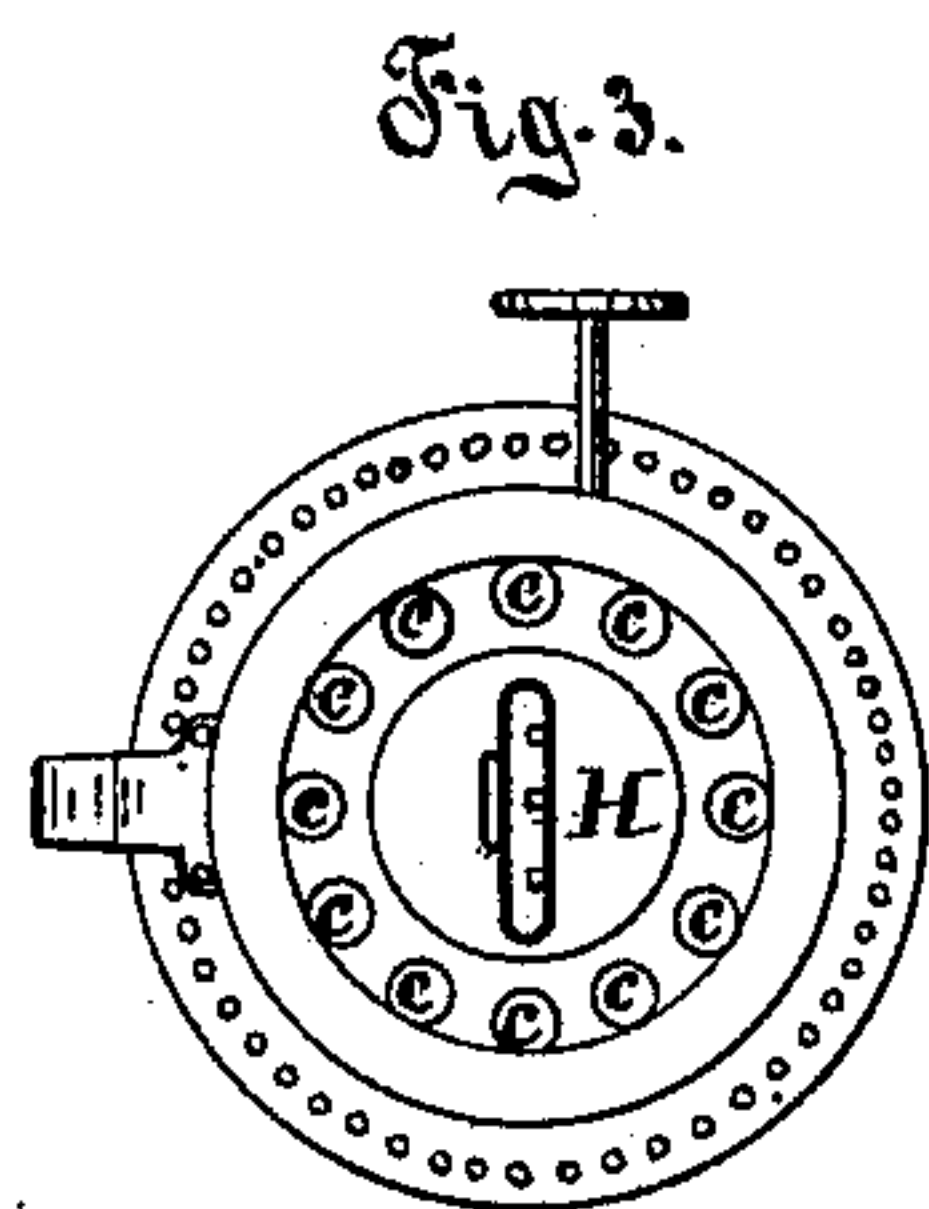
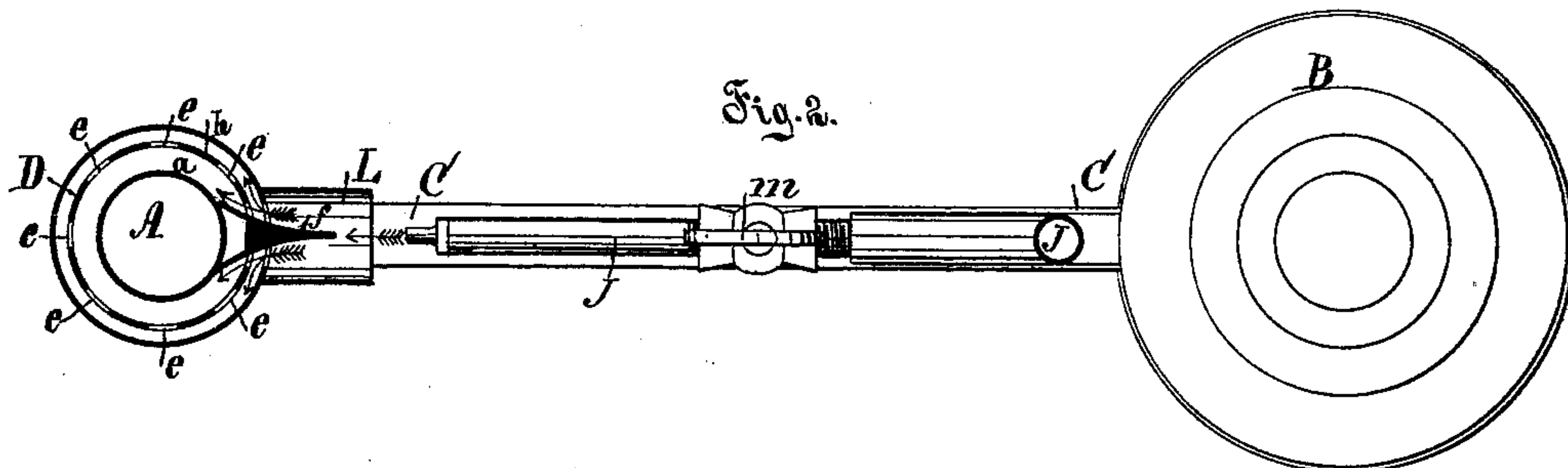
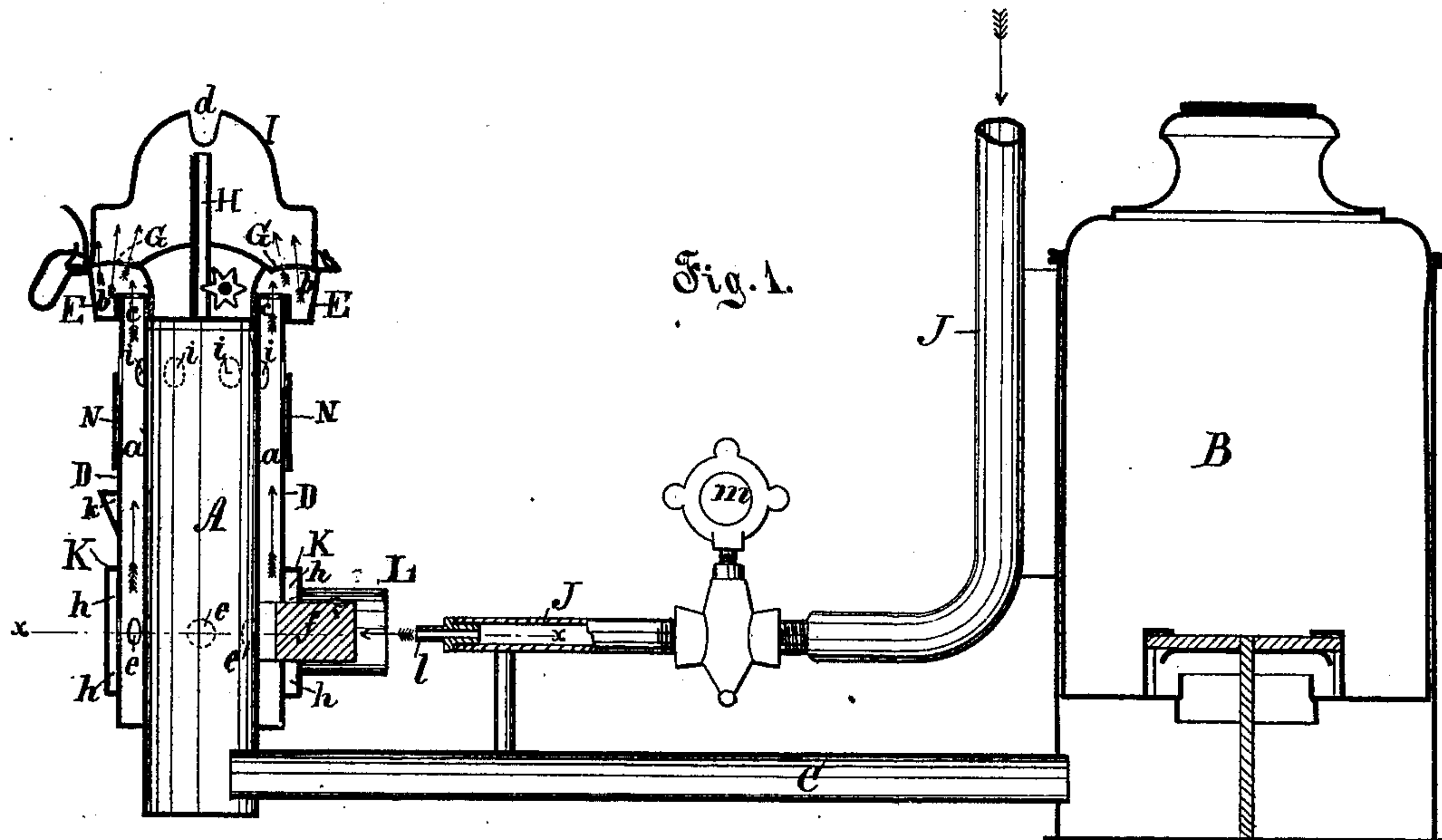


C. CAPEL.
LAMPS.

No. 195,571.

Patented Sept. 25, 1877.



Witnesses:
Theodore. Foster.
B. E. Clark

Inventor.
Charles Capel
by J. H. Smith
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES CAPEL, OF MACON, GEORGIA, ASSIGNOR OF ONE-THIRD OF HIS
RIGHT TO GEORGE D. DAVIS, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. 195,571, dated September 25, 1877; application filed
April 13, 1877.

To all whom it may concern:

Be it known that I, CHARLES CAPEL, of Macon, Macon county, Georgia, have invented a new and useful Improvement in Lamps, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same, in which—

Figure 1 is a side elevation, partly in section, of my improved lamp, with the oil-reservoir and pipe through which air is mechanically supplied to the flame connected therewith. Fig. 2 is a section of same on line *x x*, Fig. 1. Fig. 3 is an under-face view of a cap which constitutes an air-chamber fixed on the top of the lamp, from which air passes to the flame; and Fig. 4, a top-face view of the same.

My invention relates to that class of lamps that are supplied with air by some mechanical means, such as may produce an impelled current of air, to avoid the use of a chimney; and consists in the peculiar devices and combination of devices whereby the impelled current, while being conducted to the flame, is so distributed and regulated as to avoid disturbing its steadiness and the making of a whistling sound, which is apt to occur in this class of lamps; also, combining with the said lamp, supplied mechanically with air, devices whereby it may at pleasure be converted into an ordinary lamp with a chimney, and supplied with air by its own levity. It is intended for the burning of any of the oils or burning-fluids ordinarily used in lamps.

A is the body or oil-chamber of the lamp. B is the ordinary reservoir for supplying oil to the lamp through the tube C. D is a jacket, which surrounds the oil-chamber A, forming an annular chamber, *a*, around A, closed at the bottom and open at the top. E is a hollow cap, which fits down upon the top of the air-chamber *a*, and is screwed into the body A, as seen plainly in Fig. 1. Within said hollow cap is an air-chamber, *b*. Air may pass from the air-chamber *a* into the air-chamber *b* through openings *c* in the base of the cap. These openings may be perforations, as seen in Fig. 3, or they may be made by cutting away the plate through which the said openings appear, so as to leave only suitable supports

or attachments of the body of the cap to the part that screws into the body A of the lamp. The top plate G of the said cap is finely perforated, as seen in Fig. 4, through which air from the air-chamber *b* will pass, and be evenly distributed to the flame of the lamp. H is the wick-tube. I is the ordinary deflector-cap for concentrating the air upon the flame, which passes through an opening, *d*, in the said cap.

J is a pipe through which air is conducted to the lamp. It is intended to be connected with a fan, an air-pump, or some suitable motor for impelling a current of air through it, the said pipe. K is a second jacket, surrounding the jacket D, forming a second air-chamber, *h*. In the wall of the jacket D, within said jacket K, are perforations *e*, opening communication between the air-chambers *a* and *h*. L is a pipe opening into the air-chamber *h*, and directly opposite said pipe is a wide opening through into the chamber *a*, so that air impelled through said pipe L will pass equally into both of said chambers, as indicated by the arrows in Fig. 2.

f is a division-plate attached to the body A, and extending through the openings in the jackets D and K into the pipe L, and vertically across the said pipe. It is divided into two branches at its union with the body A, as seen in Fig. 2. The air passing in through the pipe L will thus be divided into two currents, one passing on each side of the body A into the air-chambers *a* and *h*. Perforations *e* are made through the jacket D, so that the air from the chamber *h* will pass into the chamber *a*, by which arrangement the current of air impelled through the tube L will be so distributed in the chamber *a* as to reach the flame through the chamber *b* in a steady uniform current, so as to avoid a flickering or disturbance of the flame. The said partition-plate *f* also prevents the disagreeable whistling or hissing noise which air blown into the pipe L would otherwise cause.

Near the upper end of the jacket D are perforations *i*, whereby air may be supplied to the flame through the chamber *a*, when it is desired to suspend the use of the impelled cur-

rent through the pipe J. N is a sleeve fitted on the jacket D, to close the said perforations at pleasure by sliding the sleeve up over the said perforations *i*. *k* is a stop to limit the downward movement of the said sleeve.

The pipe J terminates in a nozzle, *l*, near to and directed toward the inlet-pipe L, designed to send a current of air into the said pipe L, and thence through the air-chambers and perforations above described to the flame of the lamp. *m* is a cock, by which the said current of impelled air may be cut off or regulated.

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

1. The combination, with a lamp, of the air-chambers *a* and *h*, communicating with each other by perforations *e*, the inlet-pipe L, the division-plate *f*, and the pipe J, all constructed to operate as and for the purpose described.

2. The lamp A, jacket D, perforations *i*, and the valve-sleeve N, constructed and combined to operate as and for the purpose described.

In witness whereof I have hereunto set my hand this 7th day of April, 1877.

CHARLES CAPEL.

Witnesses:

B. S. CLARK,

M. F. CLIFTON.