

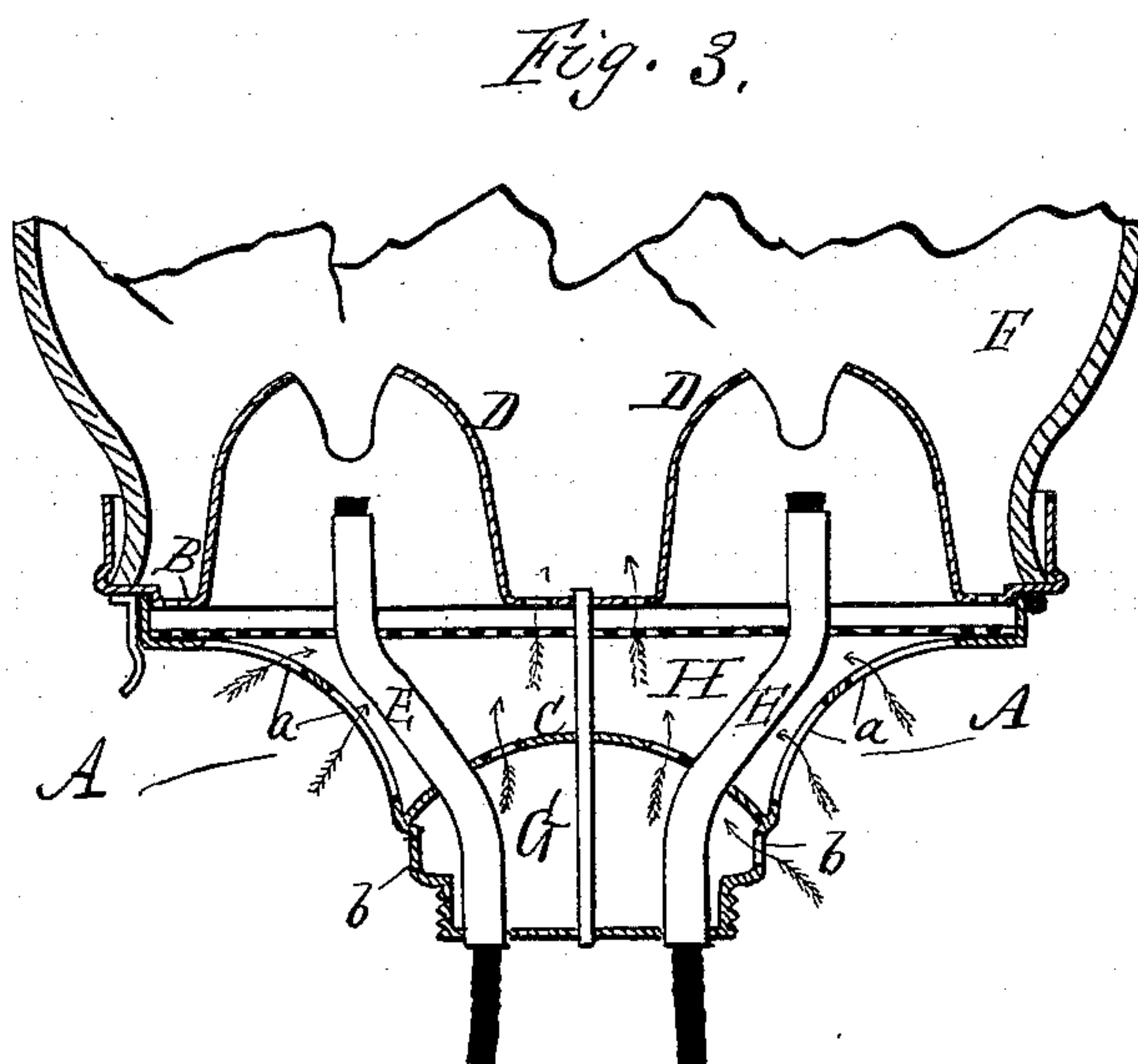
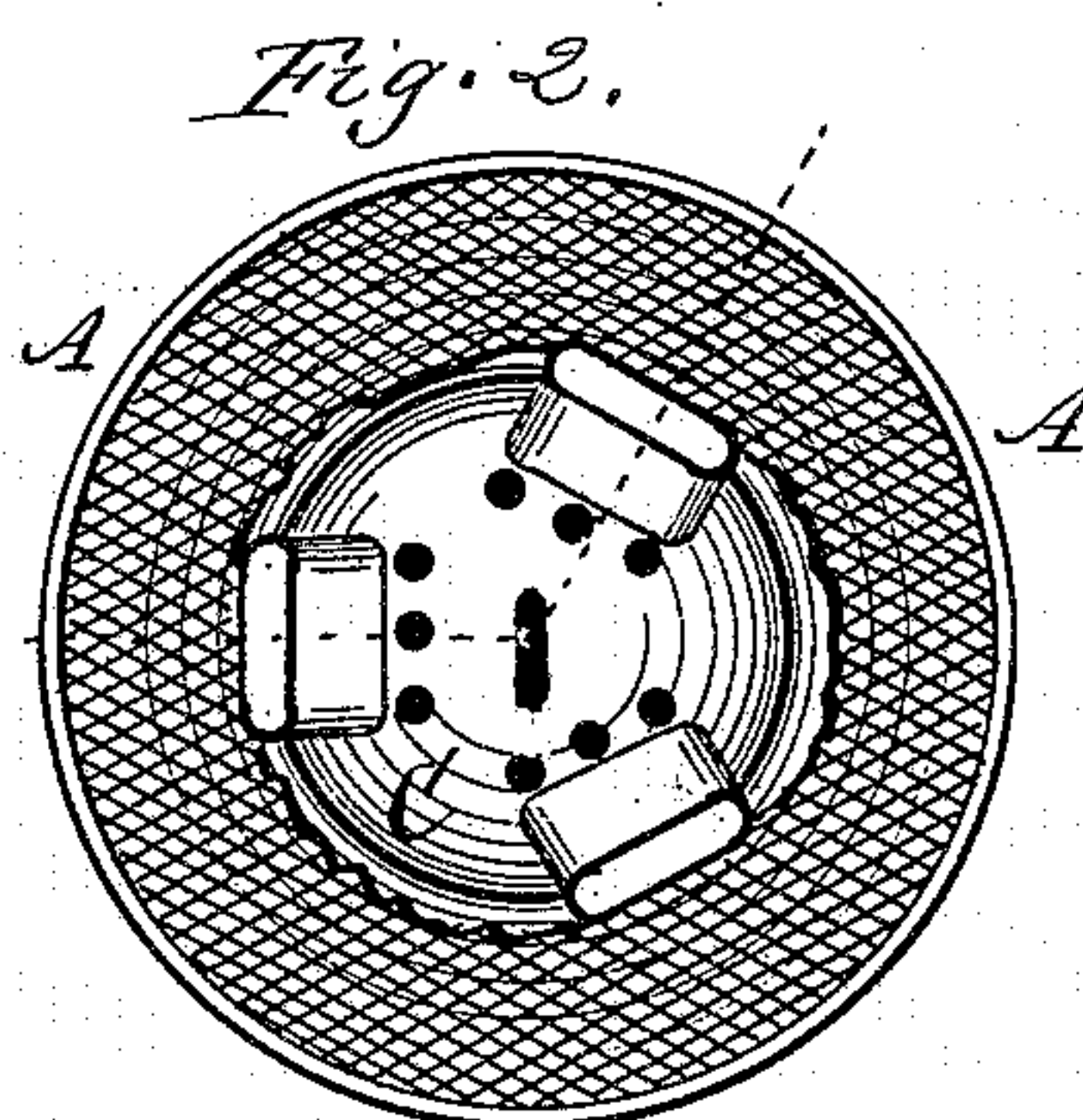
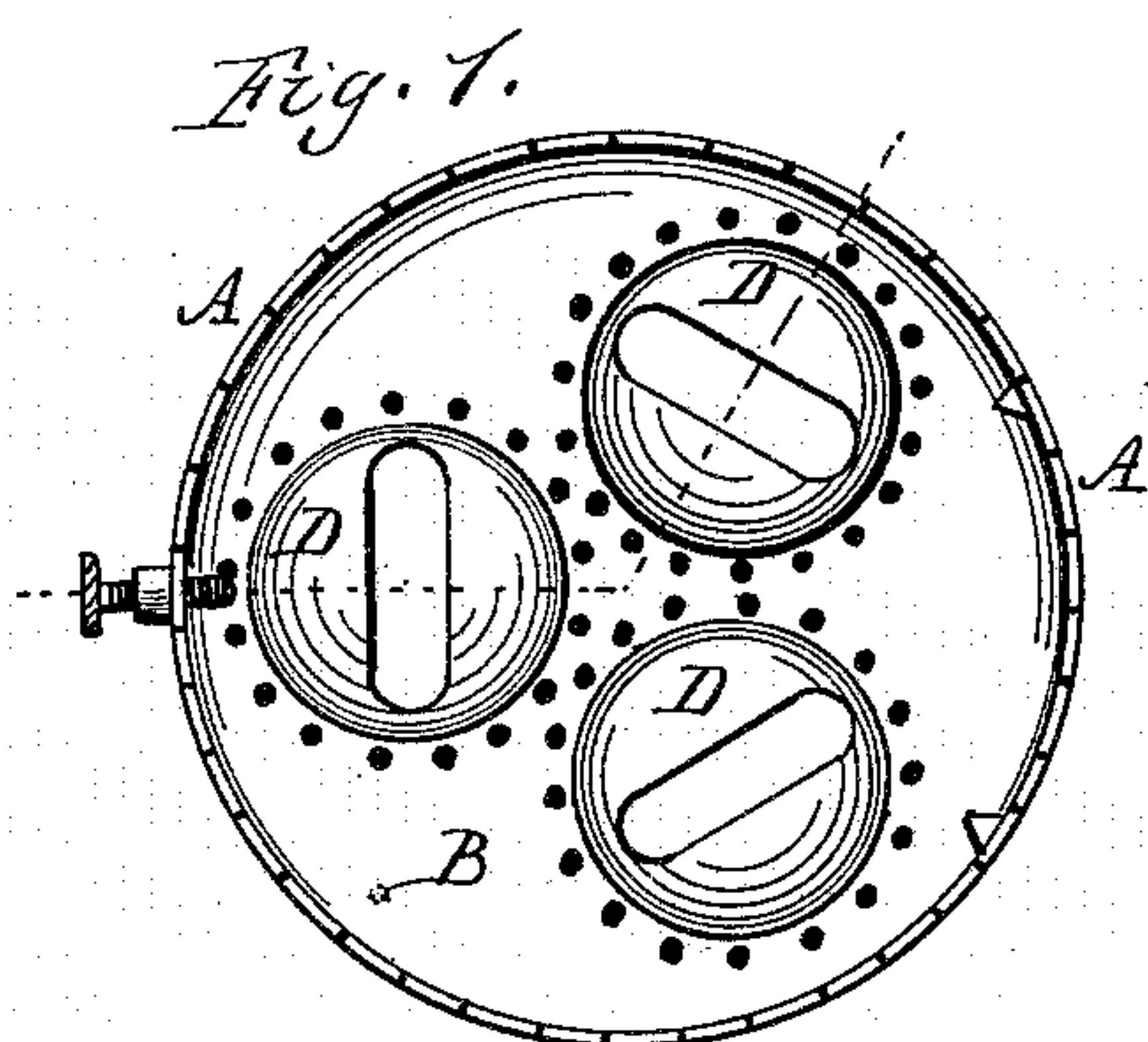
(No Model.)

H. E. SHAFFER.

LAMP BURNER.

No. 347,132.

Patented Aug. 10, 1886.



*Attest.*  
*E. V. Adams*  
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*Inventor.*  
*Henry E. Shaffer,*  
*per R. L. Cogood,*  
*att'y.*



# UNITED STATES PATENT OFFICE.

HENRY E. SHAFFER, OF ROCHESTER, NEW YORK.

## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 347,132, dated August 10, 1886.

Application filed August 27, 1885. Serial No. 175,417. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY E. SHAFFER, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Lamp-Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to multiple-wick lamp-burners, having separate cones for the different wick-tubes, and an interior draft between the cones, introduced entirely through the burner itself, such as described in my application No. 166,215, filed May 20, 1885; and my invention consists in combining with the invention as therein set forth openings in the lower part of the burner shell or case separate from the openings above, which supply the draft-air to the interior of the burner-cones, and in an interior chamber, into which the said lower openings directly lead and which is separated from the draft-chamber above by a perforated diaphragm or partition, whereby the interior draft-air is first admitted directly into the middle of the burner, and is then passed directly upward between the burner-cones, thereby increasing the evenness, velocity, strength, and volume of the said interior draft.

In the drawings, Figure 1 is a plan view of the burner, showing my improvement. Fig. 2 is a similar view with the cone-plate removed. Fig. 3 is an enlarged central vertical section in line *xx*.

The accompanying drawings represent a lamp-burner of substantially the same construction as set forth in my above-mentioned application, with the addition of the present improvement, A indicating the burner proper, B the cone-plate, D D the cones, E E the wick-tubes, and F the chimney, all substantially as set forth in my said former application.

In addition to the openings *aa* in the burner shell or case, through which the draft-air is admitted to supply the interior of the cones D D, I form a set of openings, *bb*, in the lower part of the burner-shell, generally in the collar or shouldered enlargement of the collar, as shown. These lower draft-openings lead directly into an interior chamber, G, which is separated from the general draft-chamber H above by a perforated diaphragm or partition, C, that is preferably of a convex or dome shape, as shown in Fig. 3. The inte-

rior draft between the cones D D is supplied directly from the chamber G, in a central upward direction through the perforated diaphragm C, middle of the chamber H, foraminous plate above the said chamber H, and the cone-plate B, which is perforated between the cones for the purpose. The arrows in Fig. 3 indicate the direction of this interior draft of air, and other arrows in the same figure indicate the direction of the outer draft through the cones. This interior draft of air, acting in contact with the outer draft in the chamber H, increases the volume and velocity of the same, and the outer separate draft mutually acts upon and assists this interior draft, so that there is a reciprocal benefit in the operation of the two separately-introduced drafts.

I disclaim in this invention whatever is both described and claimed in my application No. 166,215, filed May 20, 1885, and in my other application No. 166,588, filed May 25, 1885.

I also disclaim all devices for introducing drafts of air through the sides of the burner, except such as are employed in connection with multiple-wick tubes and multiple cones, whereby one draft is carried through the separate cones and one directed upward between the cones.

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

A lamp-burner constructed with two or more wick-tubes, separated at their upper ends for forming separate flames, a plate provided with a separate cone for each wick-tube and having perforations entirely around each cone, a set of openings in the sides of the burner-shell through which the draft-air is admitted to the inside of the cones, a separate set of openings in the lower part of the burner-shell, and an interior chamber into which the draft-air is admitted through the said lower openings, the said interior chamber being separated from the chamber receiving the upper draft of air by a perforated partition, whereby an additional draft of air is first admitted into the said interior chamber, and thence carried directly upward between the former-cones.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

Witnesses: HENRY E. SHAFFER.  
R. F. OSGOOD,  
E. STARING.