

C. B. BARLOW.

Chimney Cowl.

No. 102,208.

Patented April 26, 1870.

Fig.1.

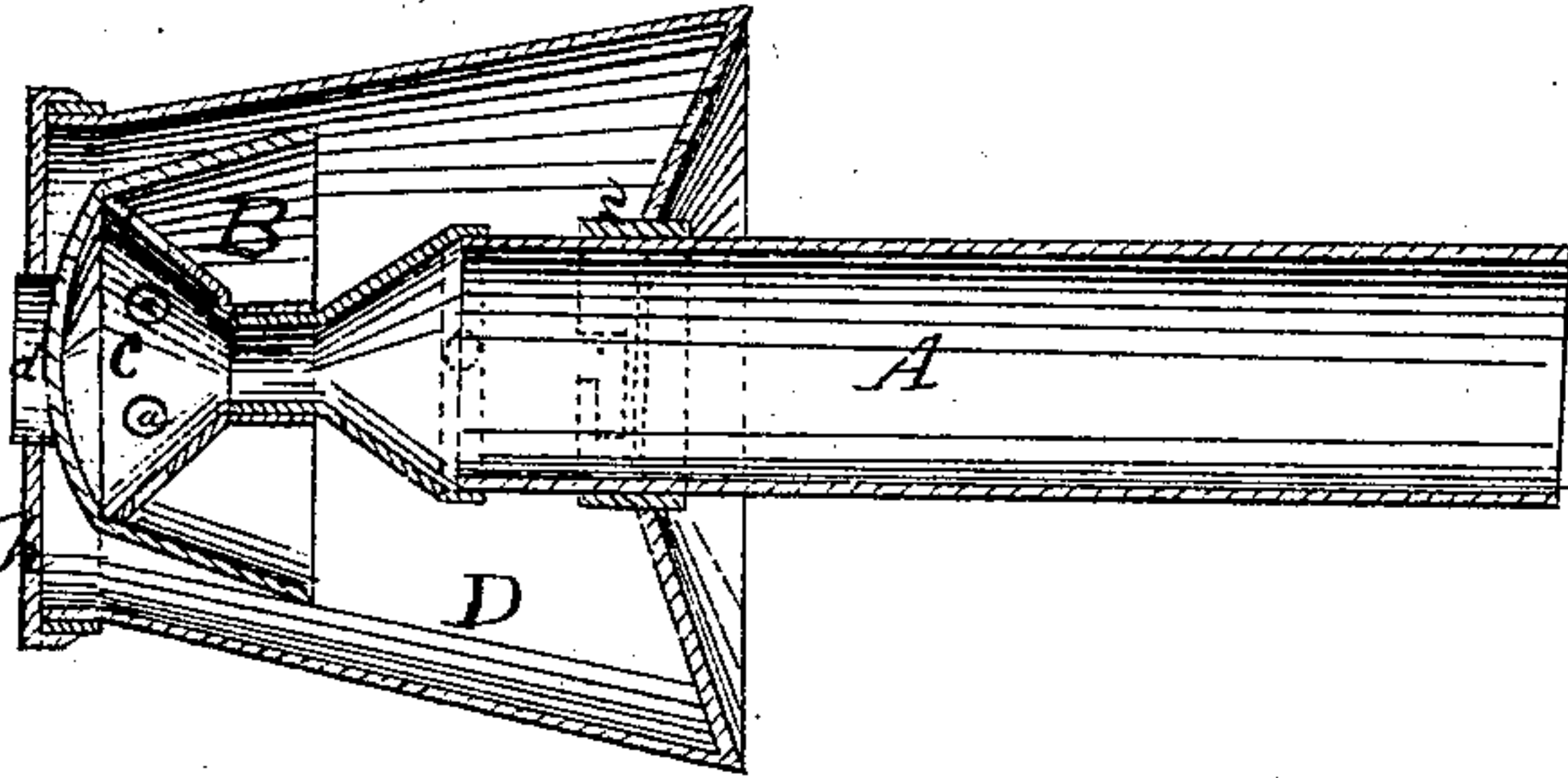


Fig.3.

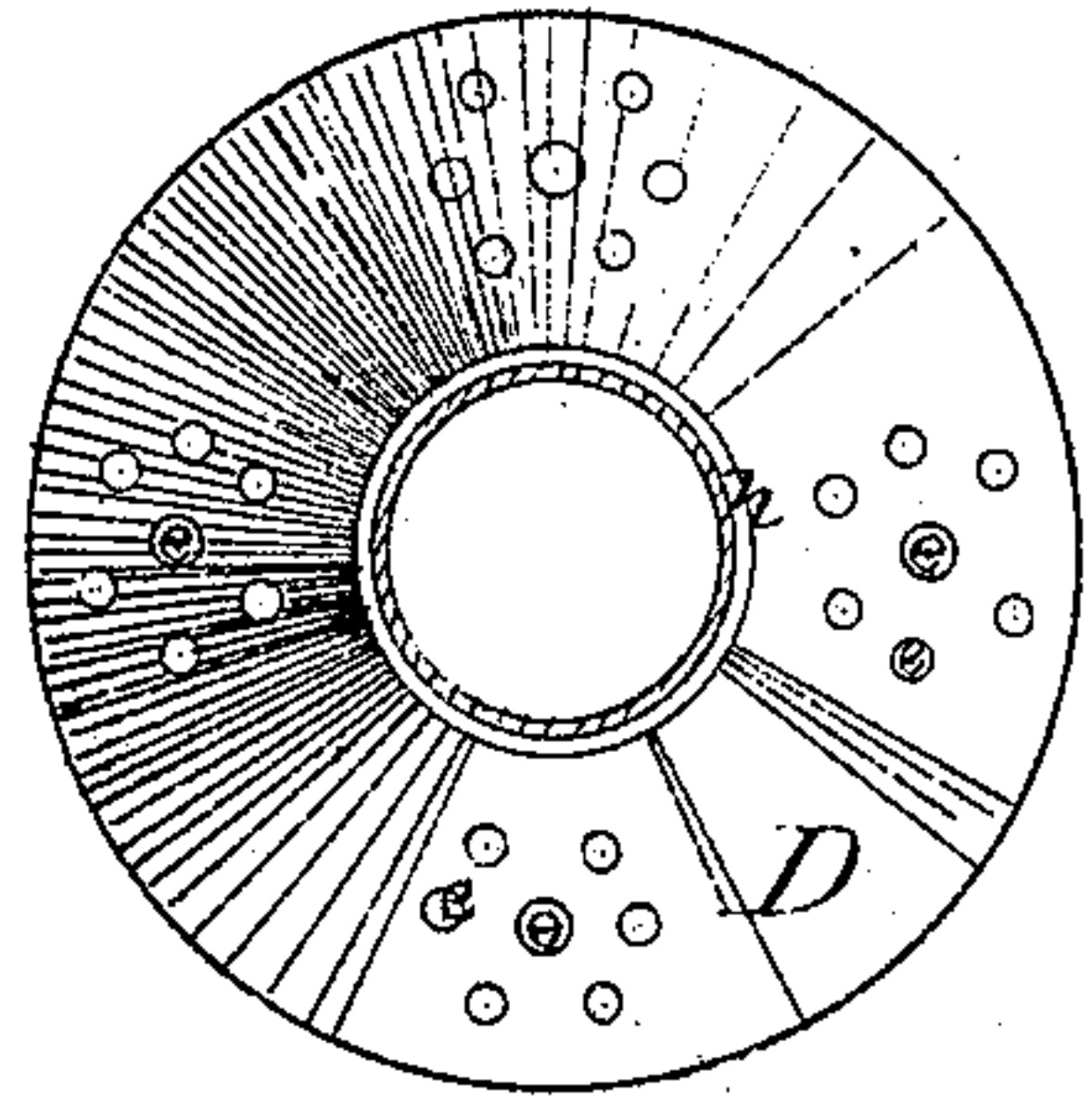


Fig.4.

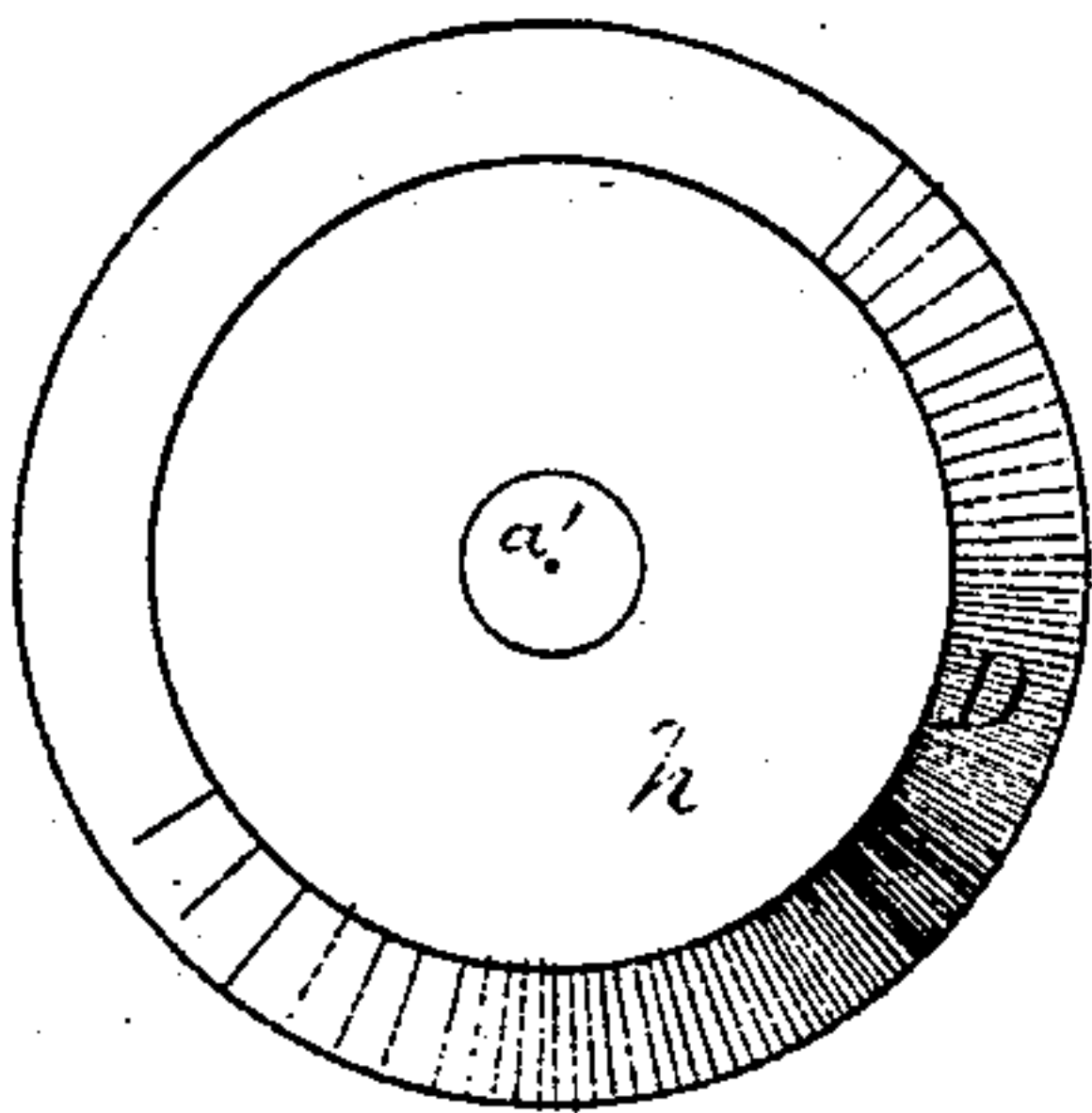


Fig.2.

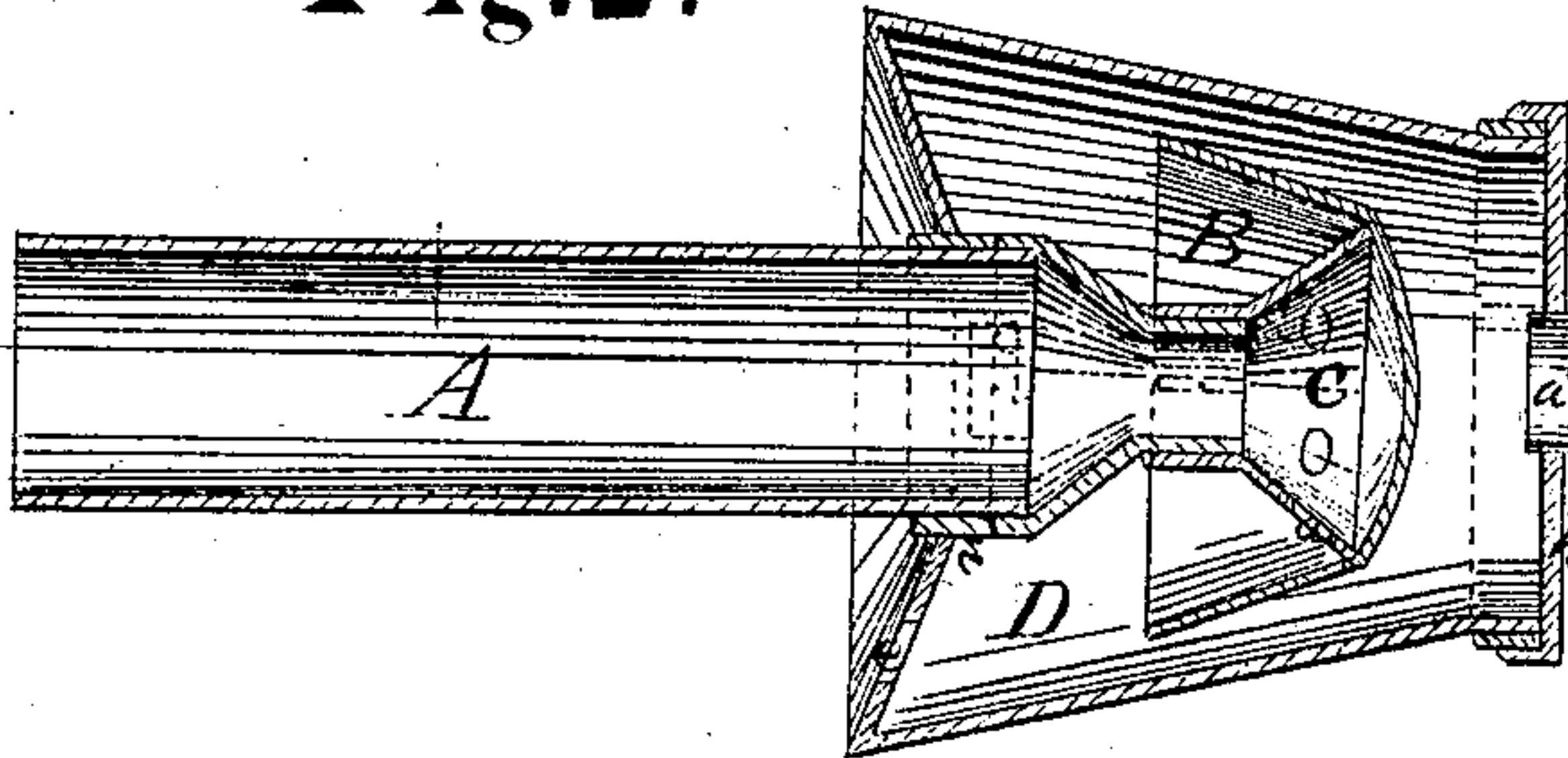


Fig.5.

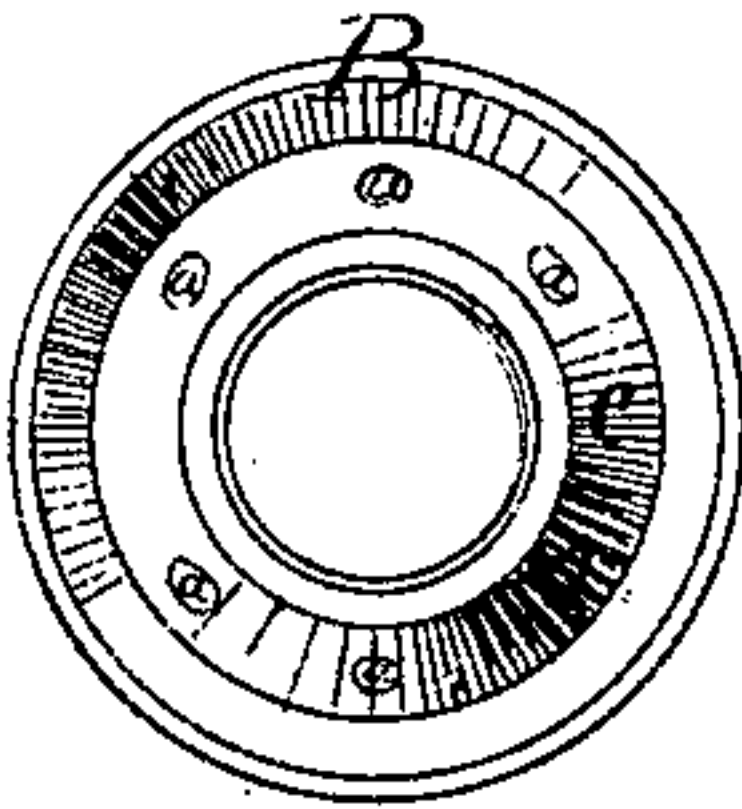
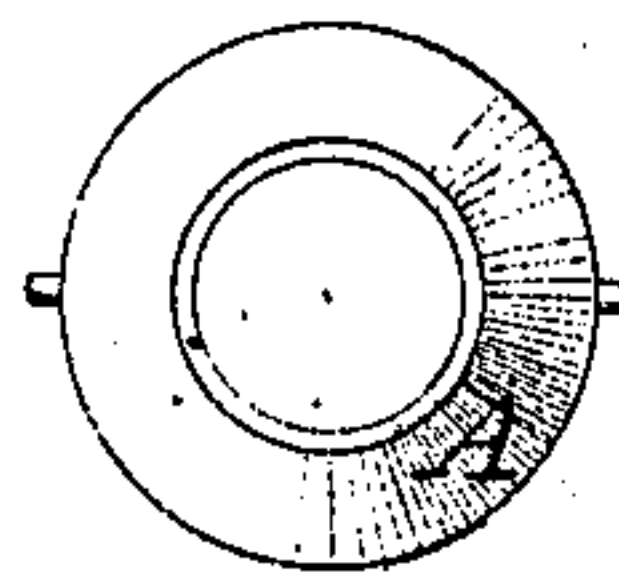


Fig.6.



Witnesses,
E. W. Andrus
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United States Patent Office.

CHARLES B. BARLOW, OF PORTSMOUTH, NEW HAMPSHIRE.

Letters Patent No. 102,208, dated April 26, 1870.

CHIMNEY-COWL.

The Schedule referred to in these Letters Patent and making part of the same.

To all to whom it may concern :

Be it known that I, CHARLES B. BARLOW, of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented a new and valuable Improvement in Ventilators; 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 making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of my invention in central vertical section, with upper opening closed.

Figure 2 is a similar section, with upper aperture open.

Figures 3, 4, 5, and 6, are details.

My invention relates to ventilators for ships' flues, and chimneys, and consists, mainly, in the construction and novel arrangement of devices, whereby it is designed to insure thorough draught under all circumstances.

The letter A of the drawings designates the main pipe or flue, the upper end of which is contracted.

B designates the inner cap, which falls over a head, *c*, having a collar formed to fit on the contracted end of the pipe A.

The under plate of the head *c* is pierced with six or more holes *a a*, which united would form an outlet about two-thirds the size of the main pipe.

D designates the outer cap, a hollow truncated cone, having a concave perforated bottom, rising and closing in to a circular flanch or collar, *n*, formed to fit on the main pipe, and fastened thereto by means of slots arranged to receive the studs on each side of the main pipe.

The united area of the perforations *e* in the bottom of the outer cap is equal to that of the perforations *a* in the bottom of the inner head *c*.

The cap D is covered with a top, *h*, having a flanced opening, *a'*, in the center, whose size is about two-thirds that of the main pipe.

The operation of my invention is as follows:

The hot air, gas, or smoke rises in the main pipe and crowds that portion which has preceded it through the outlets *a a* with greater velocity than its own, in consequence of their smaller capacity. Thence the smoke or gas is directed out of the cap D in different ways, according to the direction and character of the wind.

If a steady current of air is blowing around the ventilator, the smoke or gas will escape through the hole in the top of the cap. If eddy currents are blowing, it will escape through both upper and lower holes. Downward currents will cause it to pass out through the lower holes.

My improved ventilator may be placed within three or four inches of the deck or chimney-top. Heretofore, an elevation of ten feet or more above the deck has been necessary. An economical result is, therefore, obtained.

For a ventilator six feet in diameter, the main pipe need be only six feet six inches long, a great saving of material, those now in use requiring much more.

It may be stated that there is less danger of accident to a ventilator when placed low.

When desired, the cap D can be dropped, and the opening *a'* in the top thereby entirely closed.

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

The ventilator for ships' flues, and chimneys, herein described, having main pipe A contracted at the top, inner head *c* with cap B, and perforations *a*, outer cap D with outlet *a'*, and perforations *e e* in its concave bottom, all constructed and arranged to operate as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

CHAS. B. BARLOW.

Witnesses :

SAMUEL DODGE,
J. M. EDMONDS.