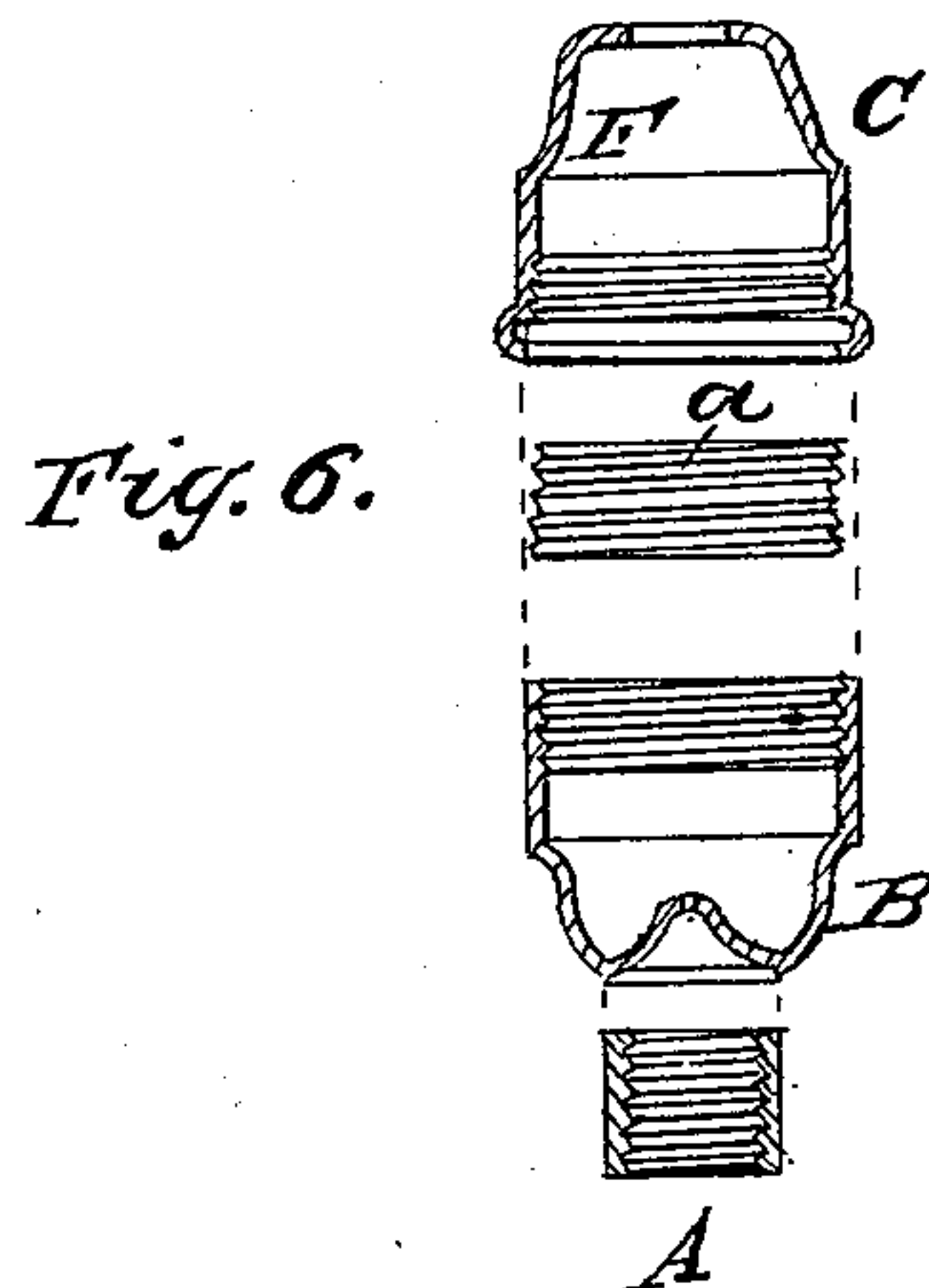
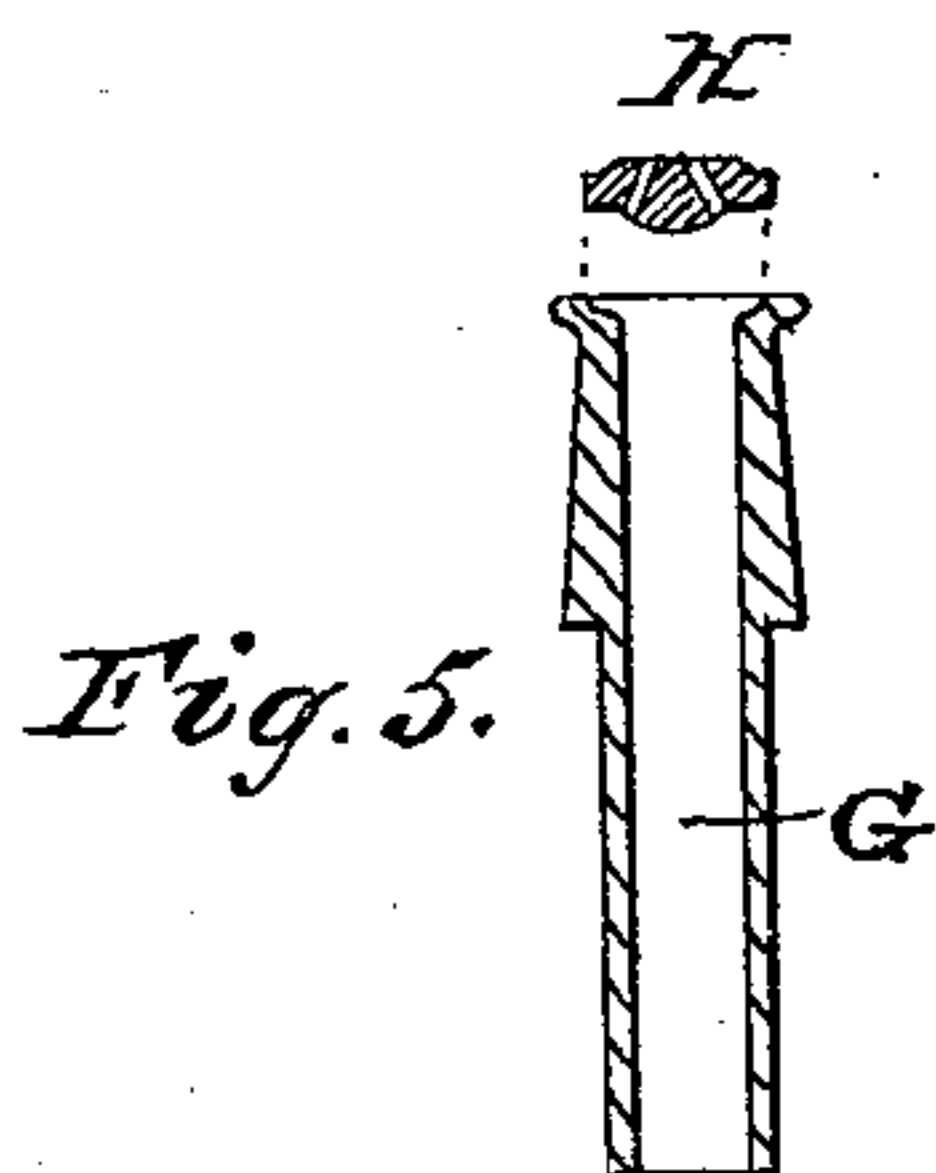
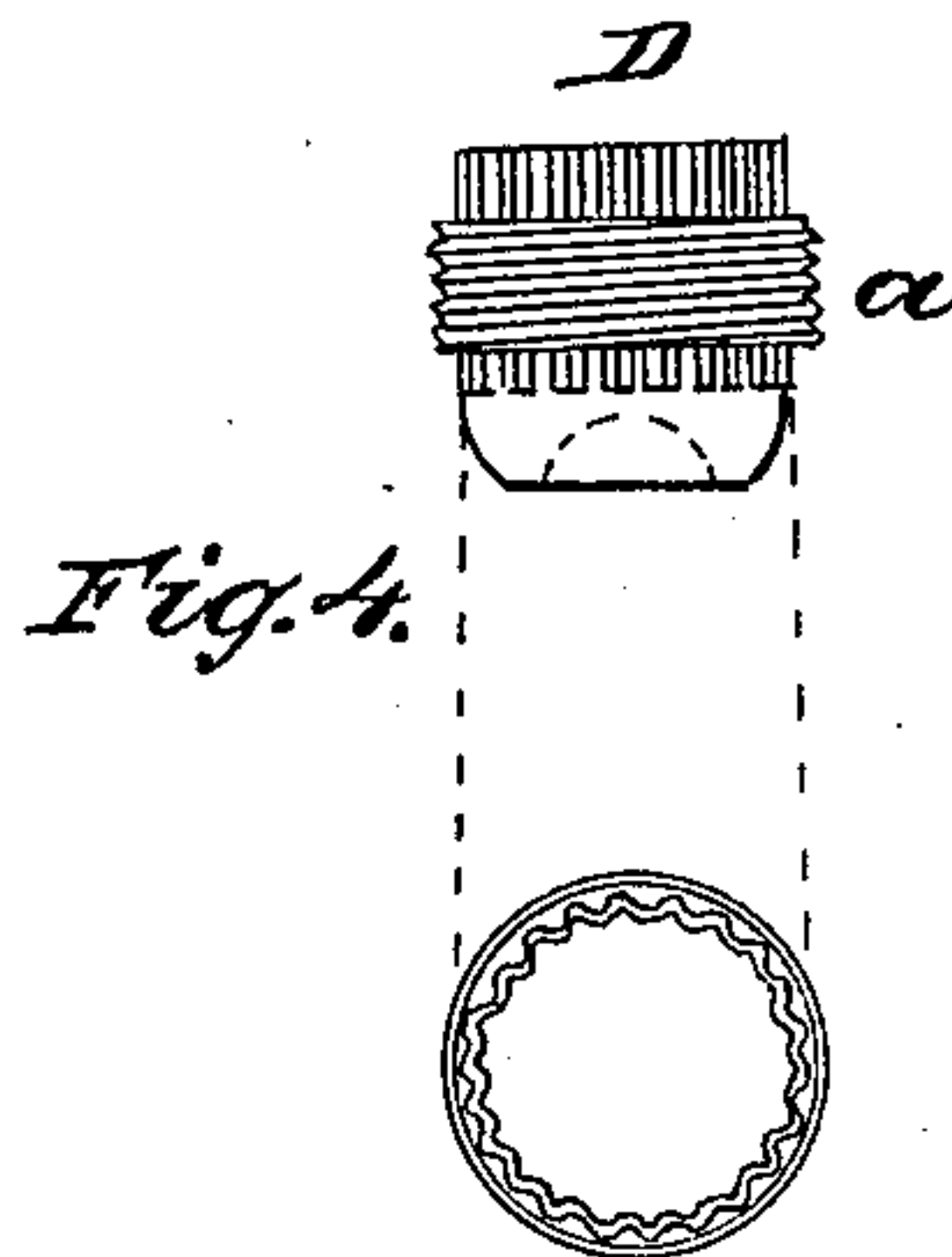
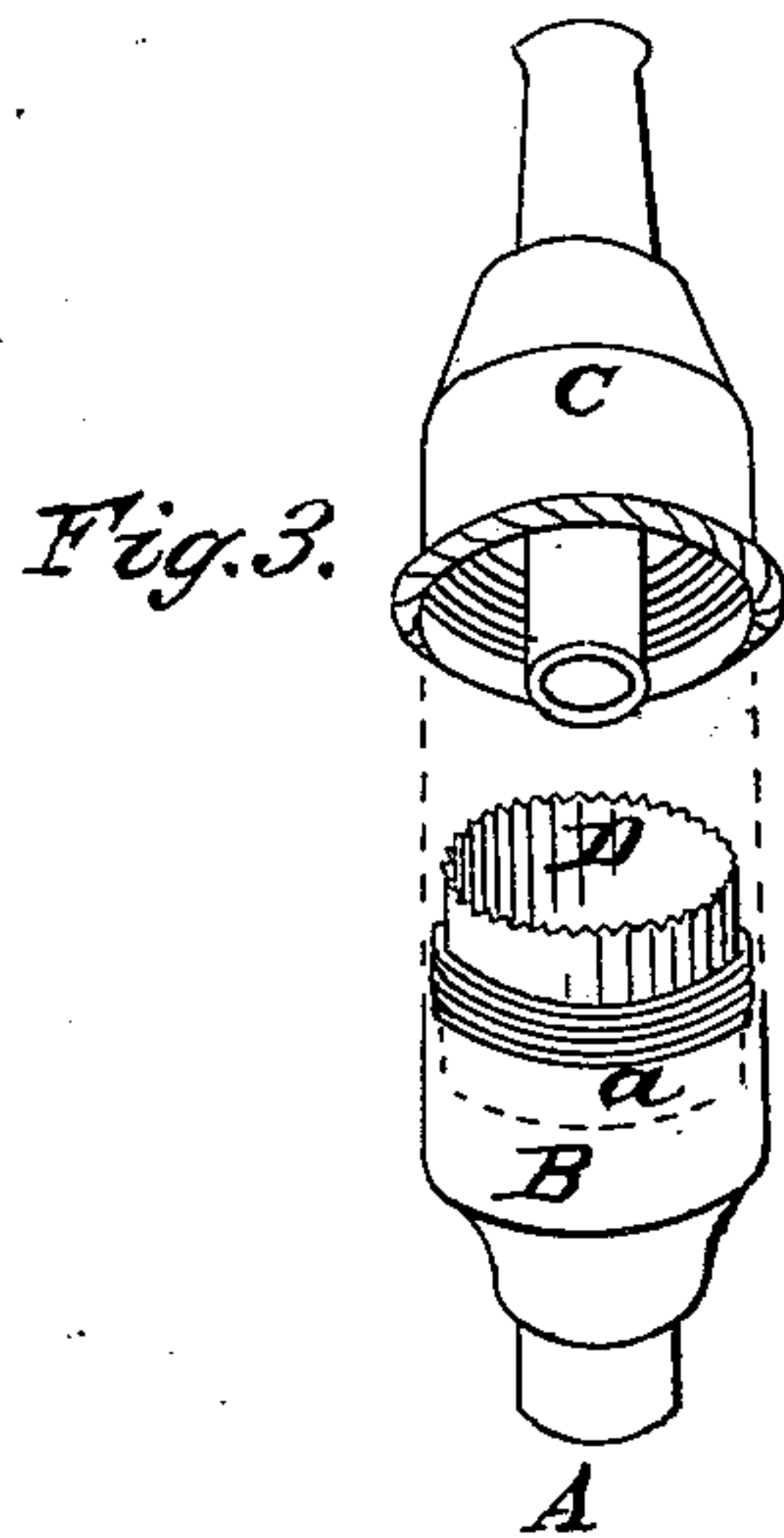
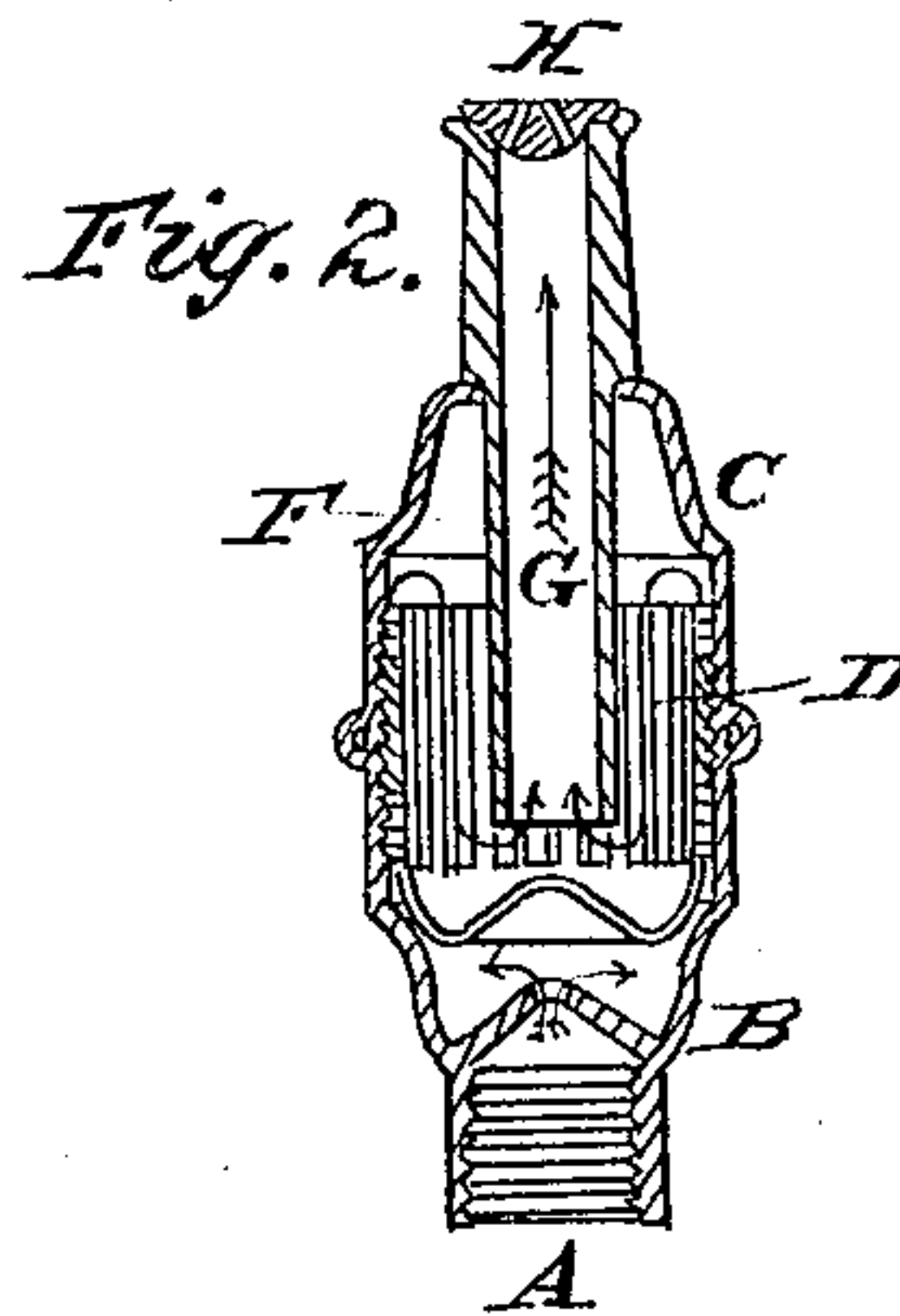
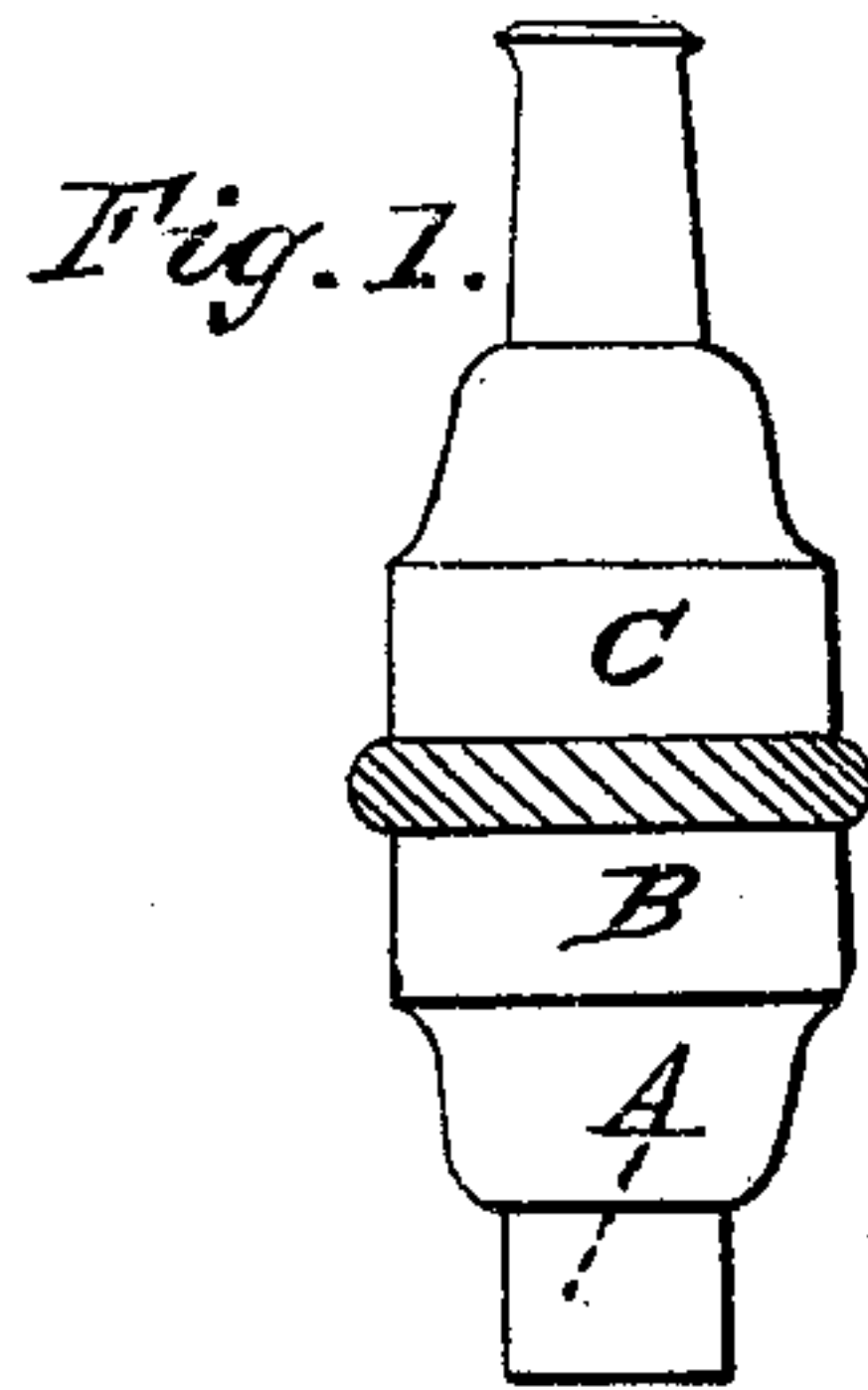


A. H. RAY.

Gas Burner.

No. 20,584.

Patented June 15, 1858.



UNITED STATES PATENT OFFICE.

AMOS H. RAY, OF BOSTON, MASSACHUSETTS.

GAS-BURNER.

Specification forming part of Letters Patent No. 20,584, dated June 15, 1858; Reissued May 14, 1867, No. 2,605.

To all whom it may concern:

Be it known that I, AMOS H. RAY, of the city of Boston, county of Suffolk, and State of Massachusetts, have invented a new and

5 Improved Gas-Burner, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

10 Figure 1, is a view. Fig. 2 a vertical section through the same. Fig. 3 a perspective view, the top of the burner being disengaged from the bottom part. Figs. 4, 5, and 6 details which will be referred to hereafter.

15 My invention has for its object to heat and rarefy illuminating gas at the moment before it is consumed whereby more perfect combustion is insured and a consequent brilliancy of flame and economy of gas is

20 effected. To enable others skilled in the art to understand my invention I will proceed to describe the manner in which I have carried it out.

25 The burner is composed of two principal portions B, and C, which are united together by a screw ring *a* (seen in red in the various figures) which for convenience of construction is made separate from either part as

30 seen detached in Fig. 6 and is subsequently secured by solder, brazing or otherwise to the lower portion B. This part (B) is closed at the bottom, which is perforated with a small hole *c* for the admission of

35 the gas. The nipple A, which is connected with the supply pipe is secured to the burner as seen in Fig. 2.

D, is a hollow fluted or corrugated cone which fits into the ring *a*, the corrugations furnishing numerous passages for the gas 40 between the ring and the cone and through which it passes slowly to the chamber F, above. The cone D, is closed at the bottom and open at the top, and its interior thus forms a continuation of the chamber F. 45 Into this chamber and nearly to the bottom of the cone D, projects the tube G, which descends from the tip or jet H, and passes through a hole in the part C, to which it is brazed. This tube becomes heated by the 50 burning gas and serves to heat and rarefy the gas within the chamber and cone, by which as before stated a more perfect combustion is insured and a great economy of gas effected. 55

The gas entering from the supply pipe through the nipple A, passes through the opening *c*, beneath and around the cone D, up through the spaces between the cone and the ring *a*, and into the chamber F; from 60 this chamber after being heated by contact with the tube G, it passes through this tube to the tip H.

What I claim as my invention and desire to secure by Letters Patent is— 65

The within described gas burner consisting essentially of the chamber F, heating tube G, and the cone D, or its equivalent operating in the manner substantially as set forth.

AMOS H. RAY.

Witnesses:

JOS. A. CHAMBERS,
JAMES MARTIN.