

A. WOODWORTH.

Smoking Tube.

No. 35,804.

Patented July 1, 1862.

Fig. 1.



Fig. 2.

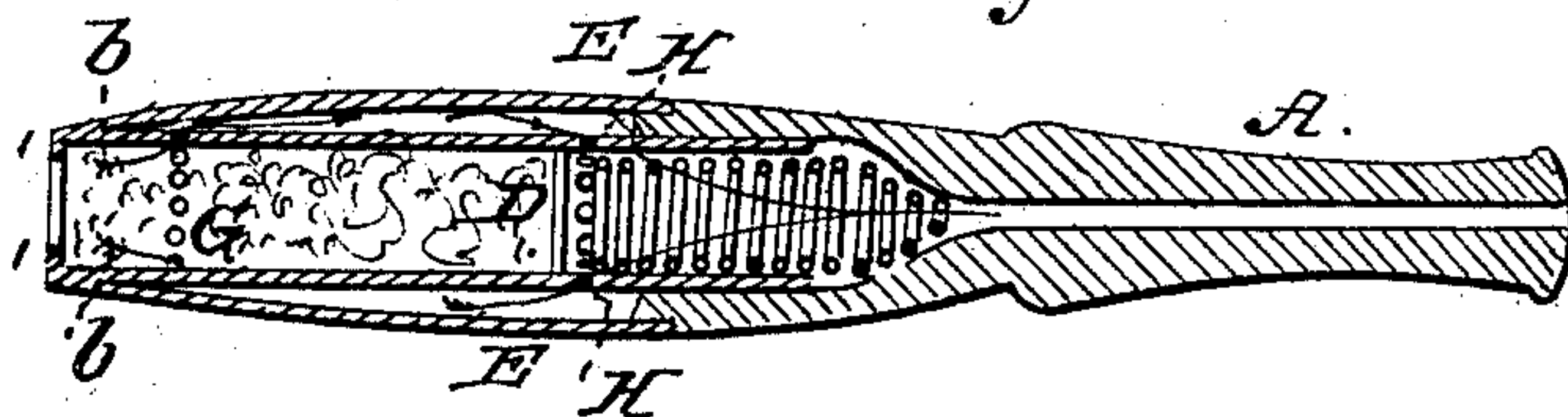


Fig. 3.

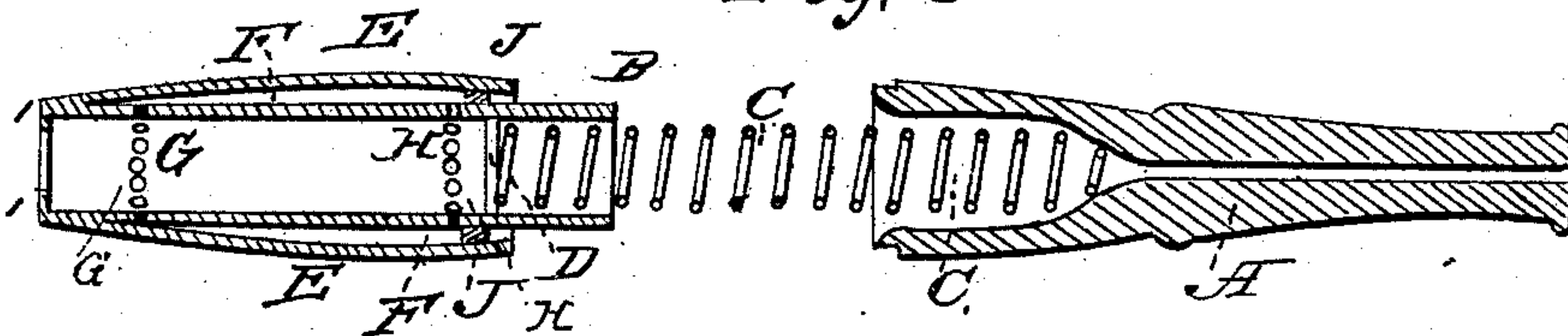
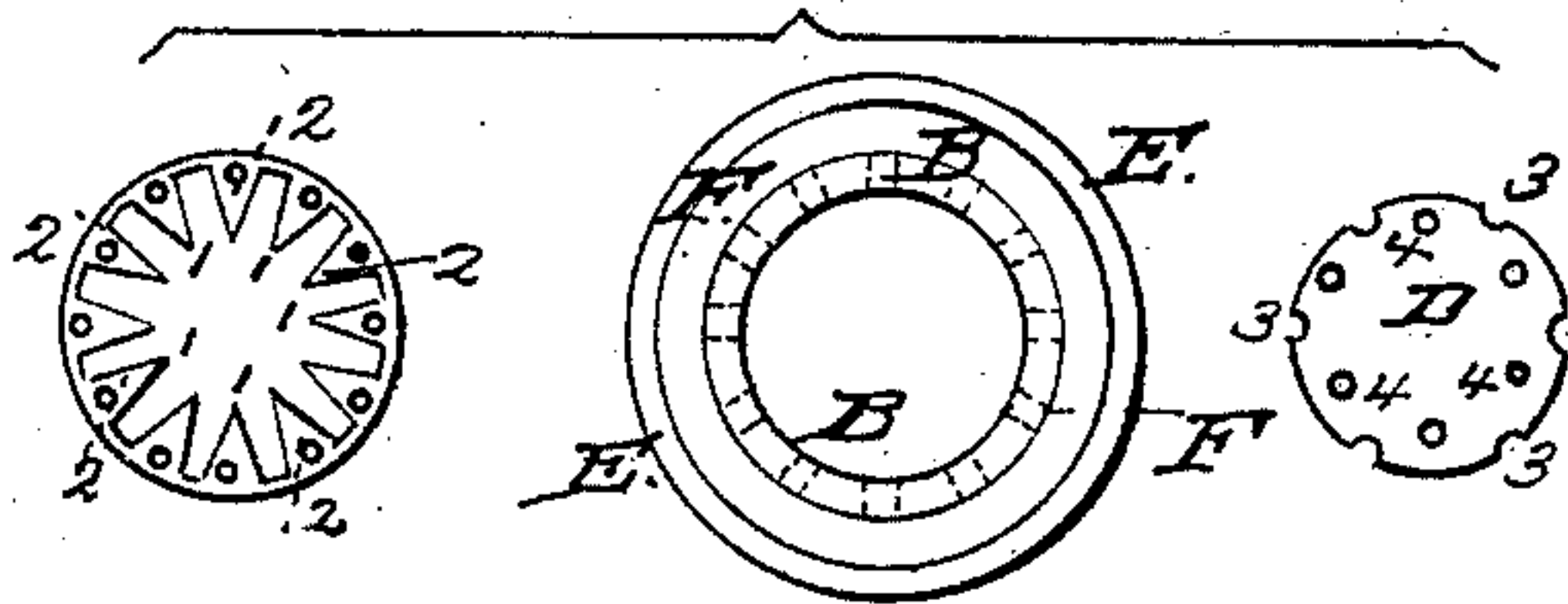


Fig. 4.



Witnesses

S. J. McDougall

E. H. Smith

Inventor

Arad Woodworth

UNITED STATES PATENT OFFICE.

ARAD WOODWORTH, 3d, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF, ALBERT BRIDGES, AND JOEL C. LANE, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN SMOKING-TUBES.

Specification forming part of Letters Patent No. **35,804**, dated July 1, 1862; antedated January 16, 1862.

To all whom it may concern:

Be it known that I, ARAD WOODWORTH, 3d, of the State, city, and county of New York, have invented certain new and useful Improvements in Smoking-Tubes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is an exterior view; Fig. 2, a sectional view; Fig. 3, a similar view showing the two parts separated. Fig. 4 shows the piston, and exhibits end views of the tube and its chamber or passage enlarged.

Smoking-tubes as now made, when in practical use, are attended with serious objections which have not hitherto been entirely overcome. When the tobacco or other filling is fresh lighted, the smoke, though drawn through the tobacco with comparative ease, the chemical products resulting from the burning of the tobacco, its moisture and that of the atmosphere condensed, together with the finer particles of ashes, soon choke and clog more or less the body of the tobacco, so that when only partially consumed the draft is obstructed and the tobacco has a stale and disagreeable taste. Moreover, the tobacco or filling is not entirely burned owing to defective combustion.

My invention is based on new principles of construction, whereby the tobacco is preserved until entirely consumed as fresh as when first lighted, and the combustion is rendered entirely thorough and complete.

The nature of said invention consists in providing a separate and independent passage to conduct the smoke from the burning-point in the tube to the mouth-piece, so as to avoid passing it through the body of tobacco in process of being smoked or burned, and ease the draft.

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation thereof.

Referring to the drawings annexed, (wherein the marks of reference correspond in all the figures,) A is a suitable mouth-piece tapered and flattened to accommodate the mouth, and otherwise shaped so as to fit snugly over a tube, B. Said tube contains the tobacco or other substance to be smoked. The mouth-

piece has a spiral spring, C, attached, and the latter has a piston, D, fixed to its outer extremity. The object of the piston is to press the tobacco to the outer end of the tube, where it is lighted and burned. To prevent the tobacco from escaping from that end when thus pressed by the piston, I employ a series of points, 1, arranged on the end of the tube, so as to project inward, as seen in end view in Fig. 4. These points, while effectually preventing the escape of the tobacco, permit, by the spaces between them, the free entrance of atmospheric air (which is drawn in in process of smoking) to all parts of the mass, and thus supplies the requisite amount of oxygen to effect a complete combustion—an effect which cannot take place in the absence of such spaces or similar apertures. The perforations in the points aid, and in addition I sometimes perforate the tube near the end *b*. The admission of air at the perimeter of the end of the tube insures a complete and even burning of all the tobacco from the center to the outside of the mass, so that not a particle escapes the fire.

The tube B has a jacket, E, surrounding it, and sufficiently larger to leave a space between the two, forming an annular chamber or passage, F. The said jacket is tapered down near the outer end of the tube, representing the appearance of a cigar, and joining the tube B closes up the passage F at that end. The said passage is also closed by the mouth-piece at its junction with the tube or where the instrument separates when taken apart. The tube communicates with the chamber near each end of the latter by means of suitable apertures, G H. To avoid packing the mouth-piece where it closes the chamber F, and yet make the chamber tight, a suitable packing is inserted in the mouth of the chamber, and may be removed when the chamber needs to be cleansed. When the tube is filled and ready for use, it presents the appearance shown in section in Fig. 2. The spring is compressed and is reacting on the body of tobacco, tending to force it toward the outer end of the tube. During the process of smoking, the smoke is drawn outward through the perforations G into the passage or chamber F, and thence following said passage is drawn inward through

the perforations H, and thence into the mouth-piece. The use of the passage is very advantageous. Though the body of tobacco be closely packed, the burning takes place regularly, perfectly, and thoroughly, and the draft is very easy and uniform, because the smoke not only does not require to be drawn through the body of filling, but naturally finds its way most readily to the mouth-piece through the passage. Hence the tobacco or filling is preserved fresh and untainted until all consumed, by reason of the absence of the matter usually deposited in such filling in cases where the smoke is obliged to permeate through it. The perforations or apertures G are purposely made a short distance from the end, so that in the event of the body of tobacco refusing at first to obey the impulse given to the piston the tobacco may burn a limited time before the fire reaches the said apertures. The smoke passes through the apertures G and H and follows the passage F, except when the tobacco is nearly exhausted and the piston has passed the apertures G; then the smoke may be drawn directly through the tube past the piston, and to permit this the piston has a number of

notches, 3, or perforations 4, as shown in the enlarged view in the drawings, Fig. 4.

The above invention is not confined to specific forms. Any construction of the end of the tube is equivalent to that described which allows the free ingress of the air both at the center and periphery, while preventing the escape of the tobacco; and any form or construction of passage or passages is equivalent to that herein described so long as competent to conduct the smoke to the mouth-piece without passing it through the tobacco or other filling.

I therefore claim as my invention and desire to secure by Letters Patent—

The combination, with the smoking-tube, of a suitable passage, substantially such as described, for the purpose of so conducting the smoke to the mouth-piece, essentially as set forth, as to avoid passing it through the body of tobacco or filling, for the purpose specified.

ARAD WOODWORTH, 3D.

Witnesses:

S. T. McDOUGALL,
E. HARRY SMITH.