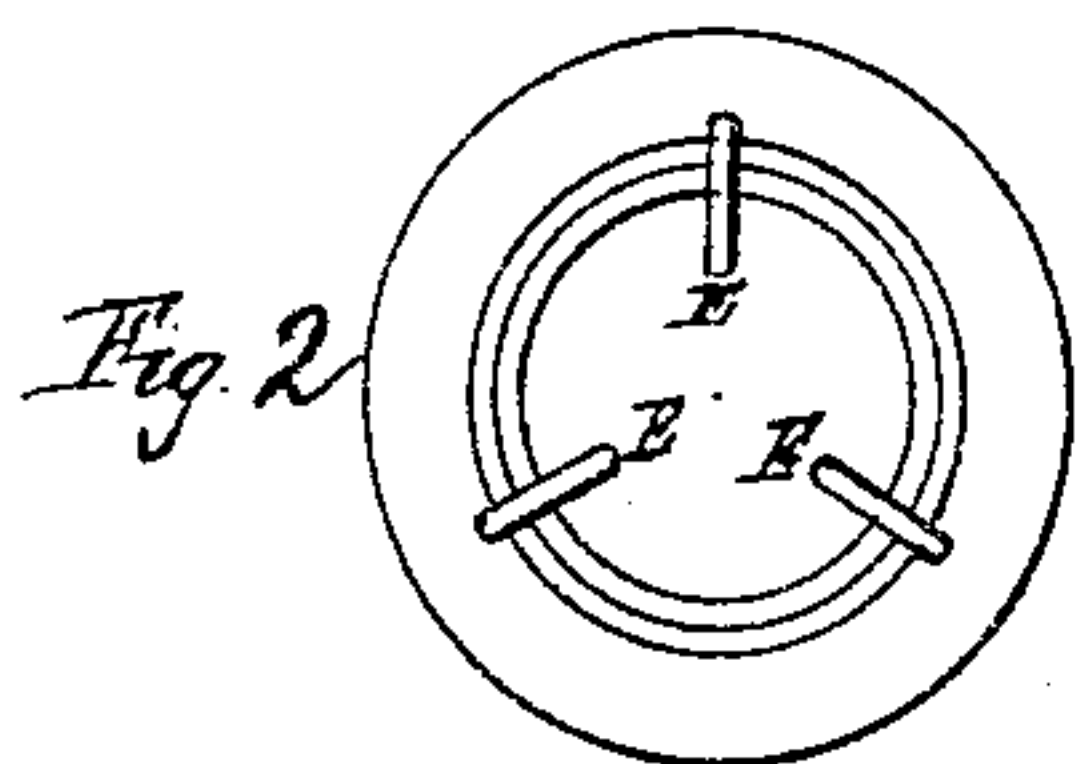
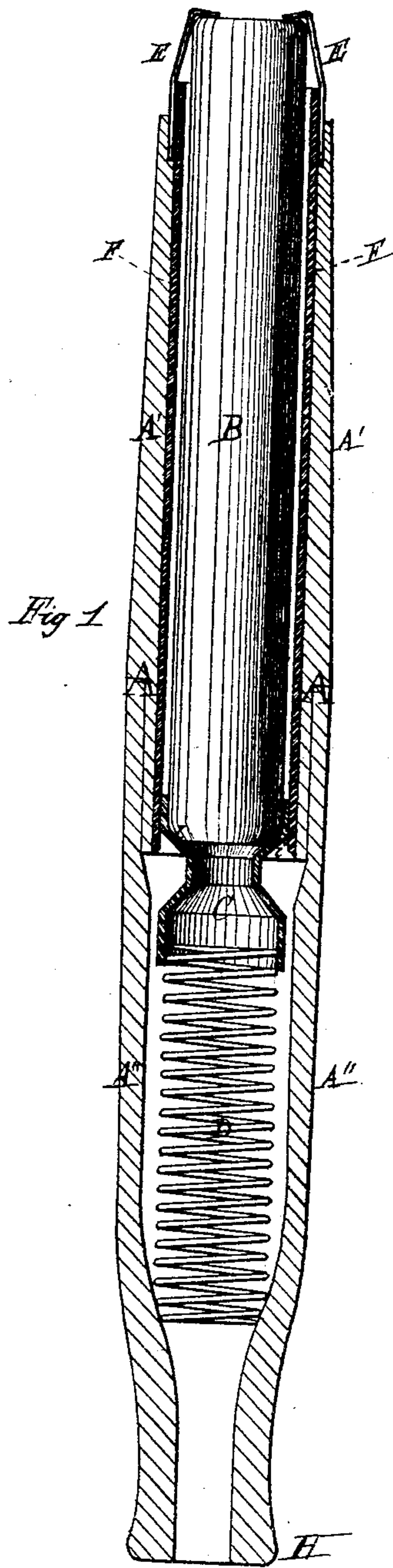


I. A. HEALD.  
CIGAR-PIPES.

No. 182,821.

Patented Oct. 3, 1876.



Witnesses  
*Chas. O. Farwell*  
*J. F. Daniels*

Inventor  
*Isaac Har Andrew Heald*

# UNITED STATES PATENT OFFICE.

ISSACHAR A. HEALD, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN CIGAR-PIPES.

Specification forming part of Letters Patent No. **182,821**, dated October 3, 1876; application filed January 3, 1876.

*To all whom it may concern:*

Be it known that I, ISSACHAR ANDREWS HEALD, of San Francisco, California, have invented certain Improvements in Smoking-Tubes, of which the following is a specification:

I now proceed to explain in detail my invention, with the aid of the accompanying drawings, in which—

Figure 1 shows a section of the tube through its longitudinal axis; and Fig. 2 an end view on the side where the tobacco burns.

The tube A is made of wood, in two parts, A' and A'', fitted in the middle, as seen in the drawing, and held together simply by friction. The part A, at the end of which, outside, the burning takes place, is furnished with a metallic lining, F, to prevent the wood from shrinking and warping. At the end of A' are seen three thin projections, E, made of wire, fastened to the wood. A piston, C, having the shape of a double funnel, slides inside the tube, and is pushed forward by the spring D, fastened at one end to the piston, and bearing at the other end on the inside of the tube, near the mouth-piece H.

To use the tube, the end A'' is pulled out of A', together with the spring and piston, and a cartridge of tobacco, B, is inserted in the part A'. The two parts A' and A'' are again put together, care being taken to have the funnel of the piston C covering the end of the cartridge, as shown in the drawing. Now, the tube being ready, the cartridge is lighted, and the air and smoke pass through the cartridge B, the piston C, and tube A''.

The spring D pressing steadily on the piston and cartridge, the ashes crumble away against the projections E as fast as they are formed, and the burning is very complete, because the quantity of metal in the wires E is not large

enough to take away the heat, and the combustion always takes place outside of the tube A', care being taken to make the prongs E sufficiently long.

This result attained is very important, as, in the experiments which led to these improvements, it was observed that when the tobacco was burnt inside of the tube, or immediately at the mouth, the smoke had a very strong and unpleasant flavor, and, also, that any metallic ring or other device too near the tube prevented the complete combustion of the tobacco touching it, clogged this opening, and seriously interfered with the working of the apparatus.

With my improvements these defects are remedied, the combustion is complete, the ashes easily crumble, leaving the cartridge to slide freely, and the burning taking place outside, in the open air, the smoke is of a pleasant flavor, and of a comparatively low temperature.

The experimenting also brought about the funnel shape of the piston C. The pressure of the cone *i* against the edge, the cartridge curls it inward and forms a practically air-tight joint, fitting equally well with a little variation in the size of the cartridge, and does not interfere with its outward motion.

What I claim as my invention is—

1. The tube A, provided with the longitudinally-projecting points E, for holding the cartridge in position, substantially as shown and described.

2. In combination with the tube A, the funnel-shaped piston C, and spring D, constructed and arranged to operate as set forth.

ISSACHAR ANDREWS HEALD.

Witnesses:

CHAS. O. FARCIAL,  
T. J. DANIELS.