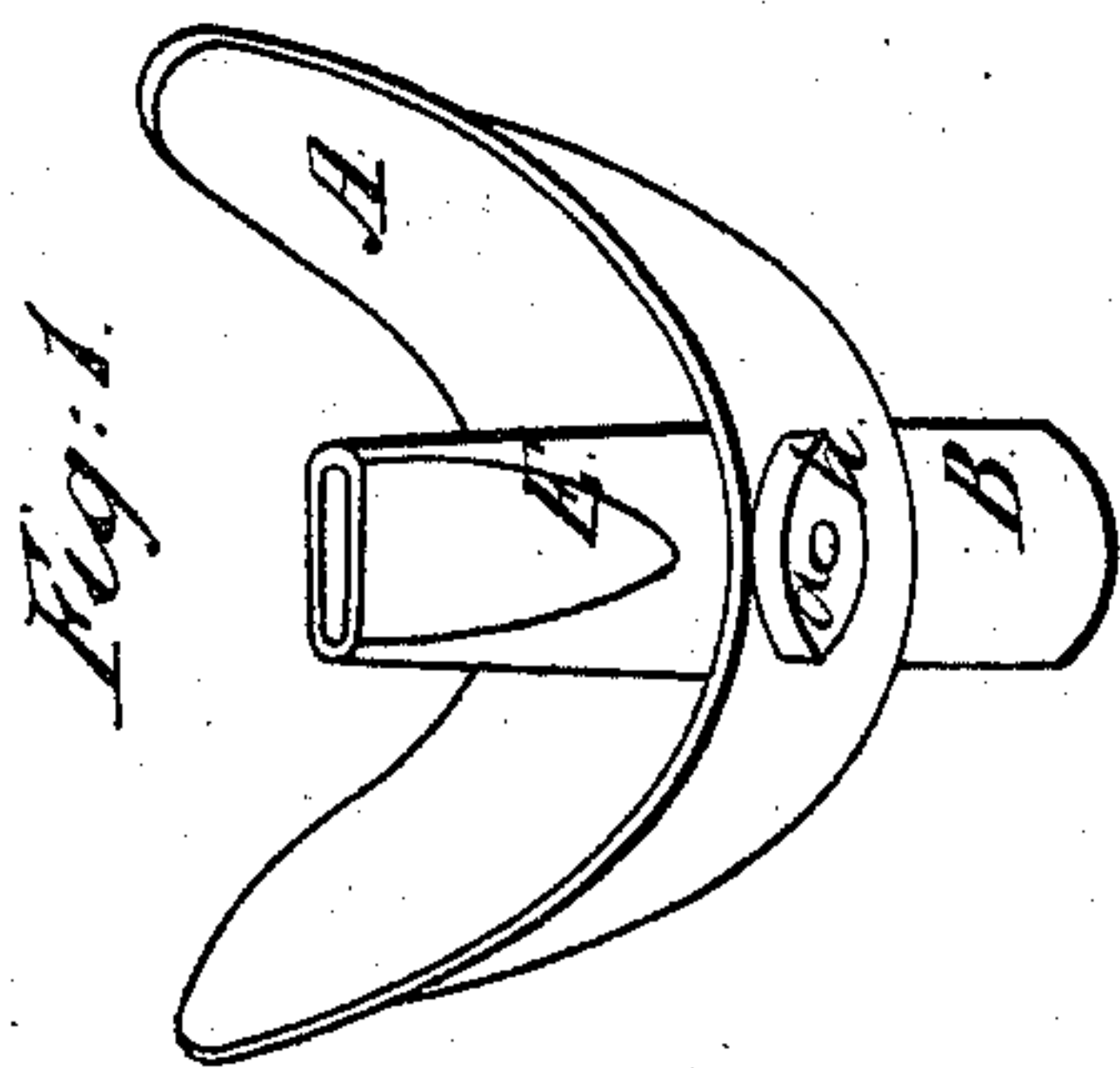
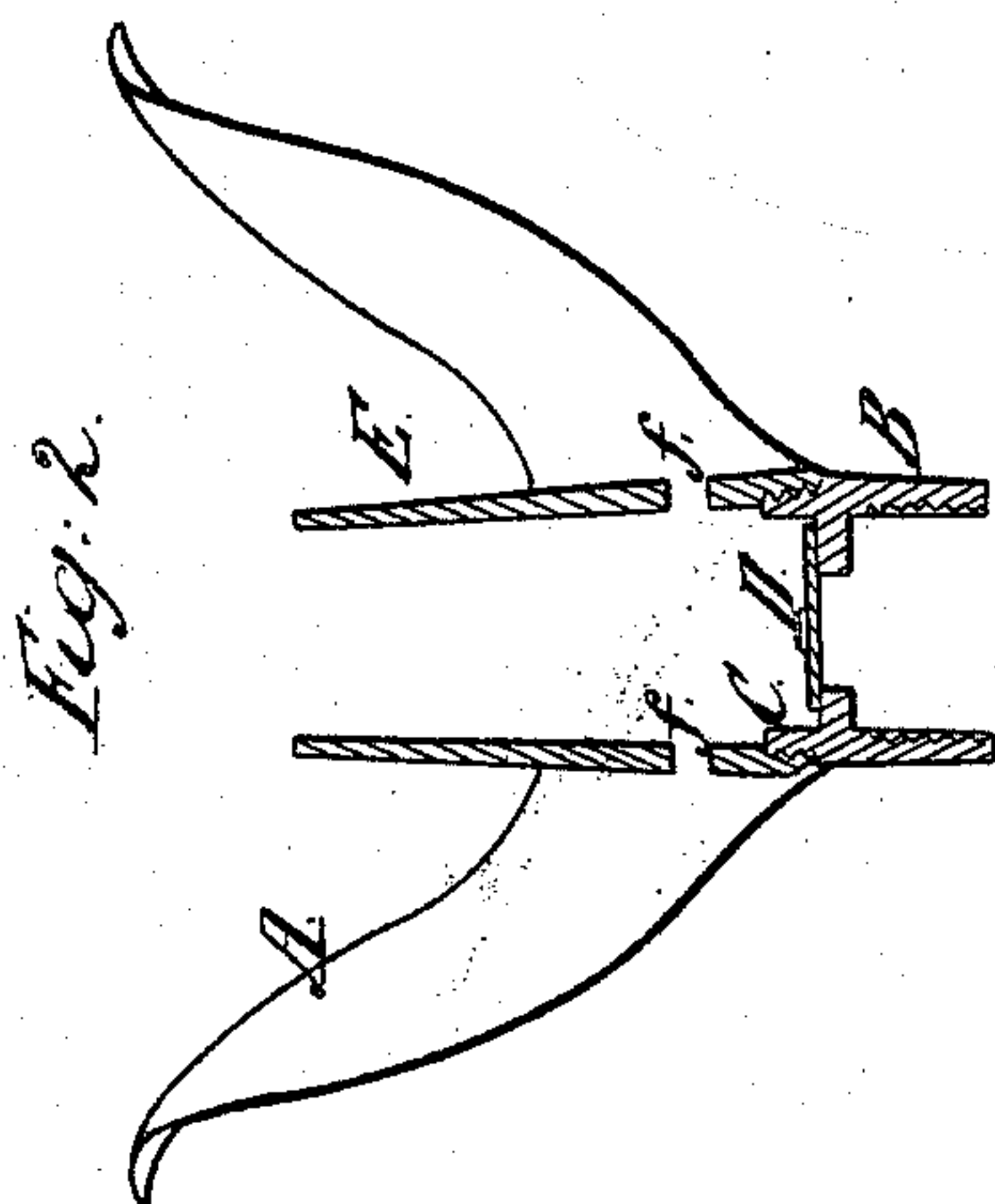
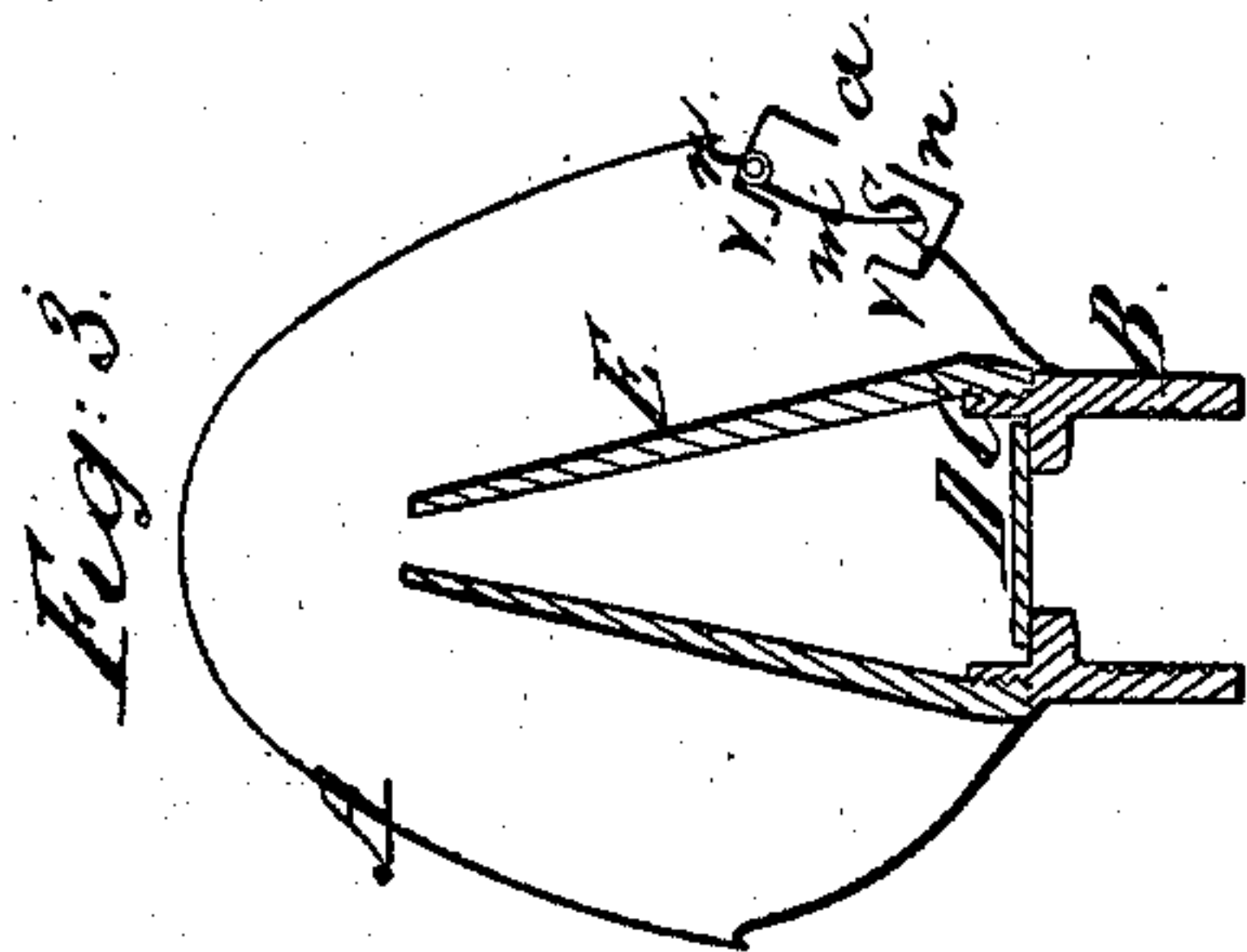


Z. Rogers.

Air Inhaler.

N^o 90,051.

Patented May 11, 1869.



Witnesses
Geo. L. Chapin
A. Hayward

Inventor
Z. Rogers

United States Patent Office.

Z. ROGERS, OF CHICAGO, ILLINOIS.

Letters Patent No. 90,051, dated May 11, 1869.

IMPROVED AIR-INHALER.

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

To all whom it may concern:

Be it known that I, Z. ROGERS, of Chicago, in the county of Cook, and State of Illinois, have invented an Improved Air-Inhaler; 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 accompanying drawings, and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of my invention.

Figure 2, a longitudinal section of the same.

Figure 3, a transverse section.

Figure 4, the valve-cylinder.

This invention relates more especially to an improvement in mouth-pieces for air-inhalers, which are used to produce anæsthesia, preparatory to performing surgical operations, extracting teeth, &c.; and

Its nature consists in the use of a closely-fitting mouth-piece, inside of which is a tube for conducting the air to the mouth, and a valve for preventing the air once inhaled, from entering the supply-tube, and in the side of which is a valve operating in a cylinder, and arranged to close and prevent the atmospheric air from being drawn into the lungs, and to swing open and allow the medicated air to escape.

To enable others to make and use my invention, I have marked corresponding parts with similar letters, and will now give a detailed description.

A represents the mouth-piece, which is made of any non-corrosive metal metal, and to fit the outside of the lips closely.

A cylinder, B, is soldered, or otherwise made fast to the smaller end of this mouth-piece, as shown in all of the figures, except 4, and it has a screw-thread cut on its internal periphery for fastening to a supply-pipe, in the usual manner; and it has hinged to its inner end, C, a valve, D, which is arranged to allow a suitable quantity of air to pass into the lungs, and to close

by the outward current of the breath, and thus prevent the air once breathed from again entering the supply-pipe.

A screw-thread is also cut on that part of the cylinder B projecting inside of the mouth-piece A, and a rubber tube E is turned thereon; said tube having holes *ff* in its periphery, through which the air from the mouth is breathed out.

An important feature of my invention consists in the novel means used to prevent the escape-valve from being injured when in use, and also to hold it in place.

A short metal cylinder, *h*, with a head at the outer end, and a narrow flange, *vv*, at the other, is put through a suitable opening in the mouth-piece A, to support a valve, S, fig. 3, which valve is hinged or jointed to the periphery of the cylinder, and shuts against the said flange *vv*, and thus closes the opening *m*, same figure, when air is inhaled through the tube E, and opens when air is exhaled from the lungs; openings *dd*, in the under side of the periphery of the cylinder, as shown at fig. 4, allowing the air to pass out of the mouth-piece A; and an opening, *a*, in the head of the cylinder, permitting the atmospheric air to enter and close the valve.

Having thus described my invention,

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

1. The cylinder *h* and valve S, in combination with the mouth-piece A, arranged to operate substantially as herein described and shown.

2. The combination of the cylinder *h*, valve S, mouth-piece A, tube E, valve D, and cylinder B, the whole being arranged and constructed substantially as set forth.

Z. ROGERS.

Witnesses:

G. L. CHAPIN,

A. HAYWARD.