

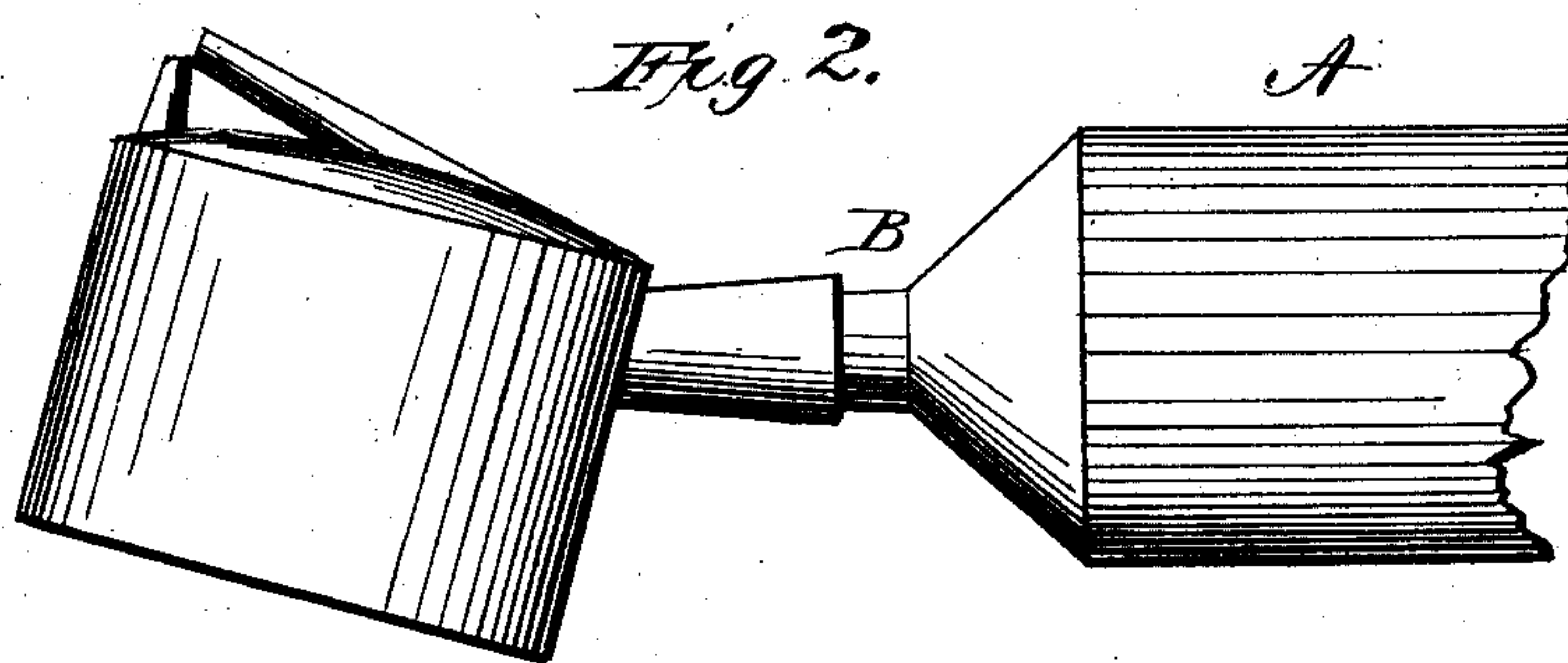
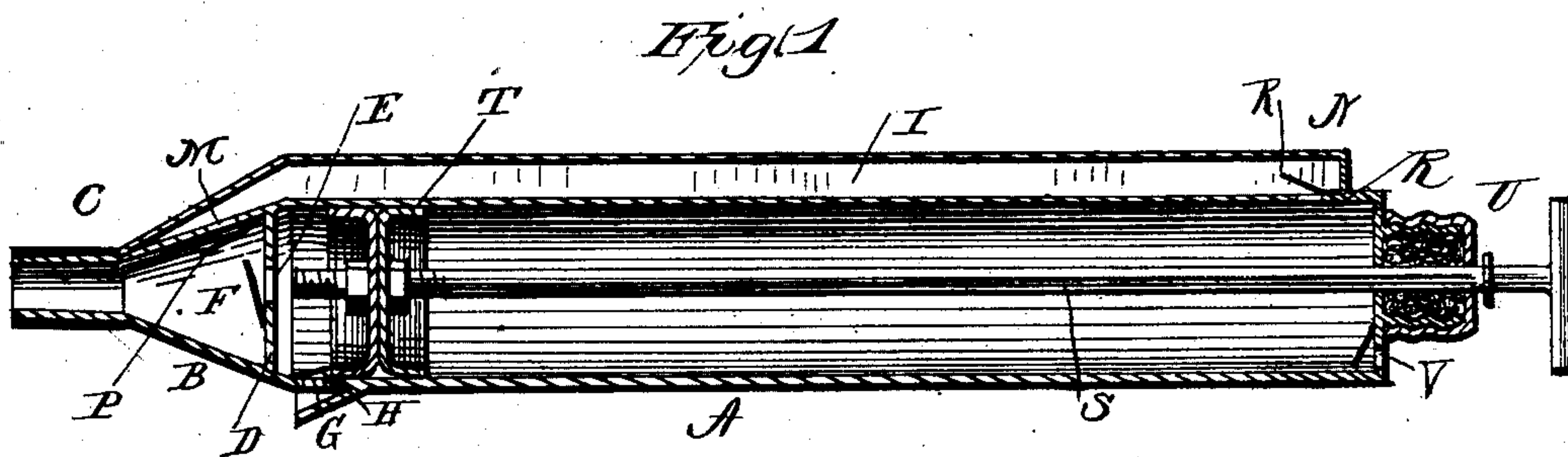
(Model.)

H. HUMPHREVILLE.

AIR PUMP.

No. 244,901.

Patented July 26, 1881.



*Witnesses.*  
*P. L. Curand*  
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# UNITED STATES PATENT OFFICE.

HENRY HUMPHREVILLE, OF MOUNTVILLE, PENNSYLVANIA.

## AIR-PUMP.

SPECIFICATION forming part of Letters Patent No. 244,901, dated July 26, 1881.

Application filed May 12, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, HENRY HUMPHREVILLE, of Mountville, in the county of Lancaster, and in the State of Pennsylvania, have invented certain new and useful Improvements in Air-Pumps for Atomizers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain improvements in air-pumps, and it is specially designed to be employed in connection with the spray-dampener for which Letters Patent of the United States were granted to me the 2d day of March, 1880.

The invention has for its objects to provide a means whereby a current of air may be forced through such a machine, as is more fully hereinafter specified. These objects I attain by the apparatus and devices illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal section of my improved device; Fig. 2, a view of the device, showing the spray-dampener attached thereto.

The letter A indicates a cylinder constructed of metal or other suitable material, and provided with a nozzle, B, having a rubber packing, C, over which may be fitted the tube leading to the spray-dampener, as indicated in Fig. 2 of the drawings.

The letter D indicates a diaphragm at the forward part of the cylinder, which has a central aperture, E, provided with an outwardly-opening valve, F.

The letter G indicates an aperture in the

forward end of the cylinder, and H an inwardly-opening valve at said aperture.

I indicates a passage leading from the front to the rear of the cylinder A, and communicating therewith by apertures M N, having inward valves P and R.

S indicates the piston-rod, and T the piston, the latter being constructed of two reversely-set disks of leather or other suitable material. The piston-rod passes through a stuffing-box, U, at the rear of the cylinder A.

The operation of my invention is as follows: Upon the forward stroke of the piston air will be taken in through aperture V at the rear of the cylinder and forced out through the aperture F and through the nozzle B into the atomizer. Upon the return-stroke of the piston will be taken in at G and forced out through apertures N M through the nozzle B into the atomizer.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The cylinder A, having a nozzle, B, a diaphragm, D, provided with an aperture, E, and valve F, in combination with the chamber I, communicating with the cylinder by means of apertures N M, provided with suitable valves, the cylinder being provided with suitable inlet valved apertures, G and V, substantially as specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 23d day of April, 1881.

HENRY HUMPHREVILLE.

Witnesses:

JOHN M. GRIDER,  
JOHN M. FRIDY.