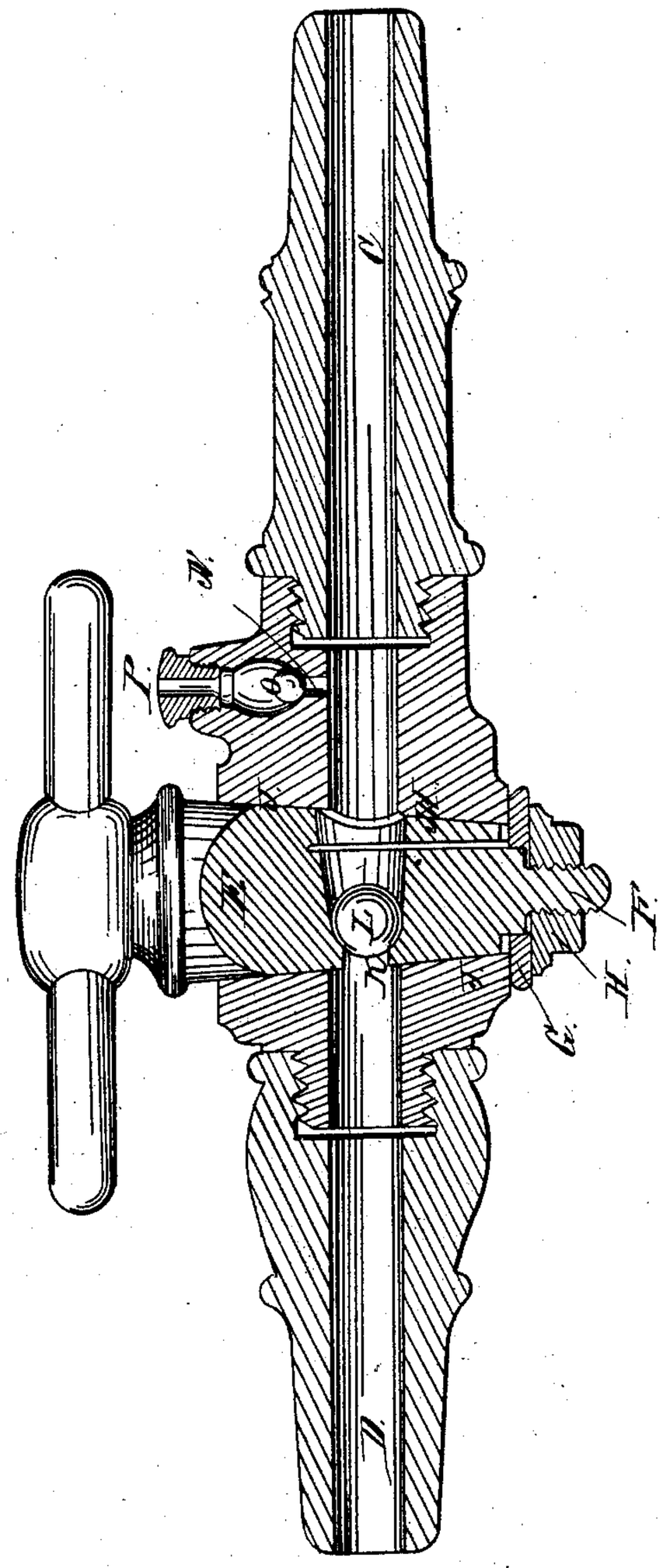
C. L. Munns,

Inhaler.

No. 55,527. Patented June 12, 1866.



UNITED STATES PATENT OFFICE.

CUTHBERT L. MUNNS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN GAS-INHALERS.

Specification forming part of Letters Patent No. **55,527,** dated June 12, 1866.

To all whom it may concern:

Be it known that I, CUTHBERT LANDRETH MUNNS, of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new Double-Valved Self-Adjusting Safety Gas-Inhaler, for the purpose of introducing by inhalation into the human lungs nitrous oxide or other gases in all their purity, and free from carbonic or other noxious gases exhaled or emitted from the lungs, which, without my invention, would flow back into the gas receiver or holder; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and letters of reference marked thereon.

My invention consists in the employment of a hollow tube for inhaling gas having a ball-valve on its side and a reversible plug containing a ball-valve near one end of the tube, by means of which the gas may be inhaled from the gas-receiver, and when exhalation takes place the carbonic or other noxious gases from the lungs are made to pass out of the valve in the side of the tube, in order to preserve the purity of the gas in the receiver, and by turning the plug all communication can be cut off between the mouth and the gas-receiver, and further inhalation of the gas be immediately stopped.

In the drawings, the figure represents the tube complete.

C is the mouth-piece, and D the part entering the gas-holder. E is a plug fitting accurately the plug-hole I, and having a ball-valve, L, working in the valve-seat K, and having a valve-pin, M, across the valve-seat, to prevent the ball-valve from rising too high above its seat. O is a ball-valve operating in front of the plug in its valve-seat N, and P is a perforated cap fastened over the top of the valve-seat N.

The operation is as follows: The end C is applied to the mouth, and the reversible plug turned so that the ball-valve and its seat will be in the line of the tube. Inhalation will cause the ball-valve in the plug to rise from its seat, and the gas will pass into the mouth and lungs. When exhalation takes place the valve in the plug will be closed and the ball-valve O will open and allow the exhalations from the lungs to pass into the open air and preserve the purity of the gas.

The action of the valves when the plug is turned, as described, will be automatic, and thus possess decided advantages over those inhalers in which the valve in the side of the tube for the passage of the exhalations from the lungs is operated by hand.

By turning the plug-valve all communication with the gas can be cut off, and all danger from inhaling too much gas can be prevented.

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

The hollow tube C, in combination with the reversible plug, with its ball-valve, and the ball-valve O, the whole being constructed and operated substantially in the manner and for the purpose set forth.

CUTHBERT L. MUNNS.

Witnesses:

J. H. BRYAN,

JAMES MCCAHEN.