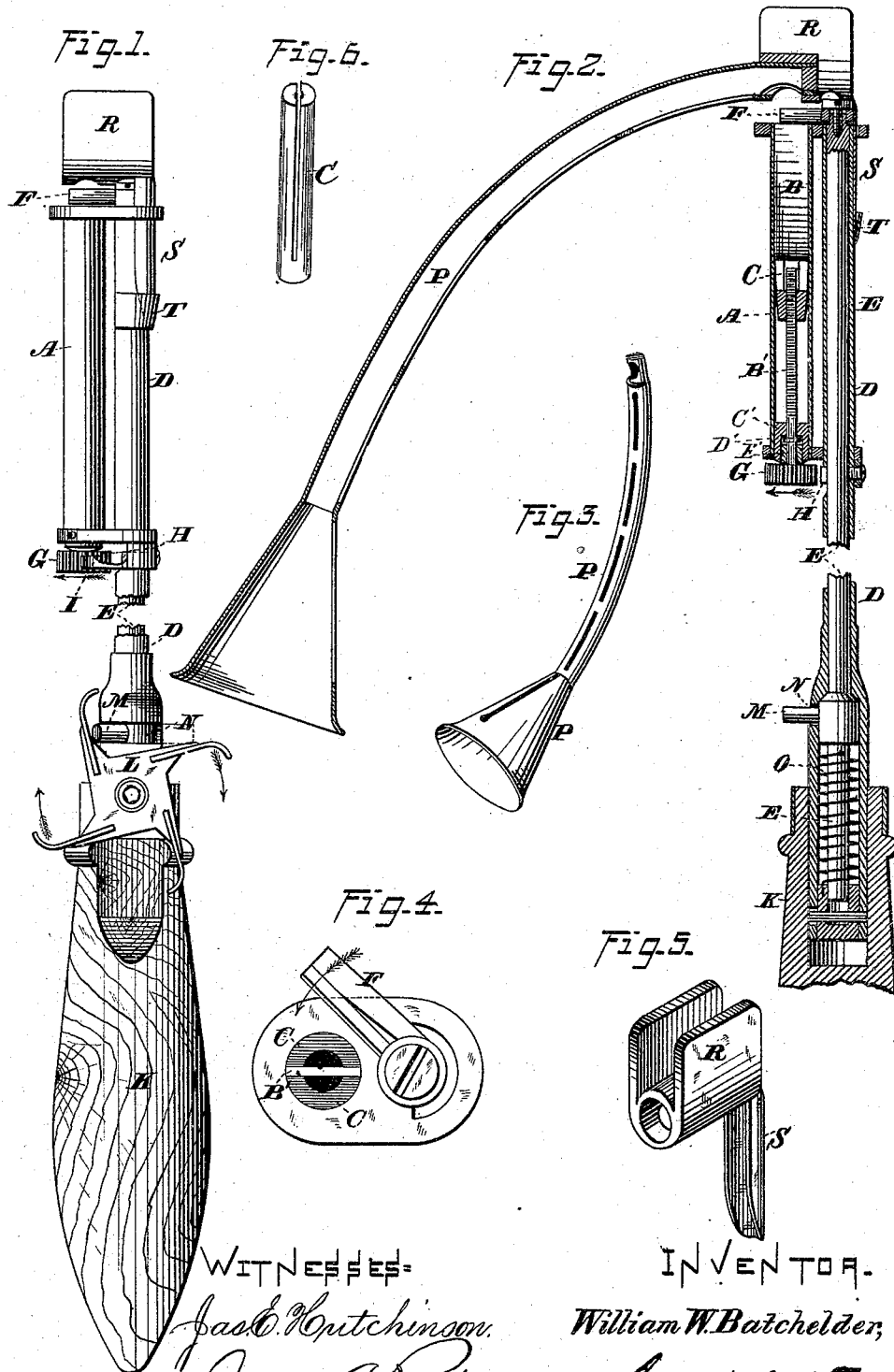


W. W. BATCHELDER.  
Apparatus for Lighting Gas.

No. 215,260.

Patented May 13, 1879.



WITNESSES-

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# UNITED STATES PATENT OFFICE.

WILLIAM W. BATCHELDER, OF NEW YORK, N. Y.

## IMPROVEMENT IN APPARATUS FOR LIGHTING GAS.

Specification forming part of Letters Patent No. **215,260**, dated May 13, 1879; application filed March 21, 1879.

### *To all whom it may concern:*

Be it known that I, WILLIAM W. BATCHELDER, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Lighting Gas, of which the following is a specification.

The object of this invention is to provide an apparatus for lighting gas which will be simple and inexpensive in construction, and which will be adapted to light the gas, where a globe is employed, either through the opening at the bottom of the globe, or, when said aperture is of insufficient size to admit the end of the apparatus to light the gas, over the top of the globe with the same facility as when no globe is employed.

My invention consists in a novel combination of devices adapting for use in lighting elevated gas-burners my improved igniter, which is the subject of Letters Patent No. 204,285, granted May 28, 1878.

In the drawings, Figure 1 represents a side elevation of my improved apparatus, showing the conductor or receiver detached. Fig. 2 represents a sectional view of the same. Fig. 3 represents a perspective view of the conductor or receiver detached. Fig. 4 represents a top view of the casing containing the igniting material. Fig. 5 is a detached view of the key-turner, and Fig. 6 represents a detached view of the forked follower.

The letter A represents a cylindrical casing, divided by a longitudinal partition, B, extending from the upper end about half-way down the casing into two compartments, for the reception of the igniting materials. Said casing is provided with a screw-threaded shaft, B', extending upwardly into the same through the bottom, and provided with a forked follower, C, which is adapted to straddle the dividing-partition and travel forward in the compartments, and feed the igniting material forward toward the upper end of the casing, which is open. The said casing is mounted on a tube, D, at or near one end. The tube D is of suitable length to reach an elevated gas-burner, and incloses an oscillating rod, E, which is provided at its upper end with a scraper, F, adapted to traverse the ends of the compartments in the casing A, and rub the igniting

material in the same together to ignite it and produce a flash or flame, the igniting material being fed forward at each oscillation of the rod by means of a ratchet-wheel, G, secured to the lower end of the screw-shaft B', and the follower operated by said shaft. The screw-thread on said shaft terminates near its lower end, which passes through a removable recessed plug, C', which is secured in the lower end of the casing A in any suitable manner.

The letter D' represents a shoulder or annulus formed on or secured to that portion of the shaft passing through the recessed plug. The said shoulder or annulus is confined in the recess in the plug by means of a ring, E', secured in the lower end of the recess, whereby the shaft is prevented from being shifted longitudinally.

The ratchet is operated by means of a spring-pawl, H, mounted on the rod E, and working through an aperture in the side of said tube. I indicates a spring, secured to the tube D, which bears against the ratchet and prevents it from accidental shifting. The lower end of the tube is provided with a handle, K, to which is pivoted a rotating thumb-lever, L, which is adapted to engage and trip a pin, M, on the rod E, and projecting through an aperture, N, in the tube D. Said lever is operated continuously in one direction, the projections, which may be of any suitable number, successively engaging and tripping the pin or the rod, whereby the necessity of springs and pawls is obviated. To the lower end of the rod E, which extends into a recess in the handle, is secured a spring, O, which holds the rod in a normal position, and returns it after the pin has been tripped.

The letter P indicates a conductor or receiver, consisting of a bent metal tube, which may be bell-shaped or flaring at its lower end, and which is provided with a slot or series of slots or apertures extending nearly from one end to the other. Said conductor is fixed or detachably secured to the igniting apparatus in such position that its upper end will be in close proximity to the point where the flame or flash is produced. In the present instance it is secured in a socket formed in the key-turner R, which is provided with a short semi-cylindrical shank, S, adapted to sit in socket

T at the upper end of the tube D, by means of which said conductor or receiver may be readily attached and detached.

I do not intend to limit myself, however, to this particular construction, as it is obvious that the tube may be provided with a socket formed directly thereon for the reception of the gas conductor or receiver, which may be fixed or detachably secured therein.

The operation of my improved apparatus will be readily understood in connection with the above description. Upon rotating the thumb-lever, the rod inclosed by the tube will be partially rotated and then released, causing the scraper to traverse the end of the casing inclosing the igniting materials. The gas having been previously turned on at the burner, it is only necessary to hold the upper end of the apparatus in close proximity with the burner at the time the scraper is traversing the igniting materials in order to light the gas by the flash or flame produced. In case the burner is provided with a globe having an aperture at the base too small to insert the apparatus, the conductor or receiver is attached, and the apparatus is held in such position as to bring its bell-mouth over the burner, and when the materials are ignited the gas passing up the receiver will be ignited, transmitting the flame to the burner.

Having now fully described my invention, I claim—

1. The combination of the tube D, with or without the conductor P, the rocking rod arranged within said tube and provided with pin M, projecting through a slot in said tube at its lower end, and the arm F, projecting from the top of said rod, the casing A, terminating at its top directly under said arm and containing the igniting materials, the follower C, arranged within said casing, the screw B', carrying ratchet-wheel G, and the pawl H, actuated by the rod E, substantially as described.

2. The combination of the tube D, rod E, having pin M, projecting through a slot in said tube, and carrying pawl H, engaging with ratchet-wheel G, the spring O, for retracting said rod, handle K, and the thumb-wheel mounted at the lower end of the tube, and having the projecting arms adapted to strike the pin M, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

W. W. BATCHELDER.

Witnesses:

JAMES L. NORRIS,

JAMES A. RUTHERFORD.