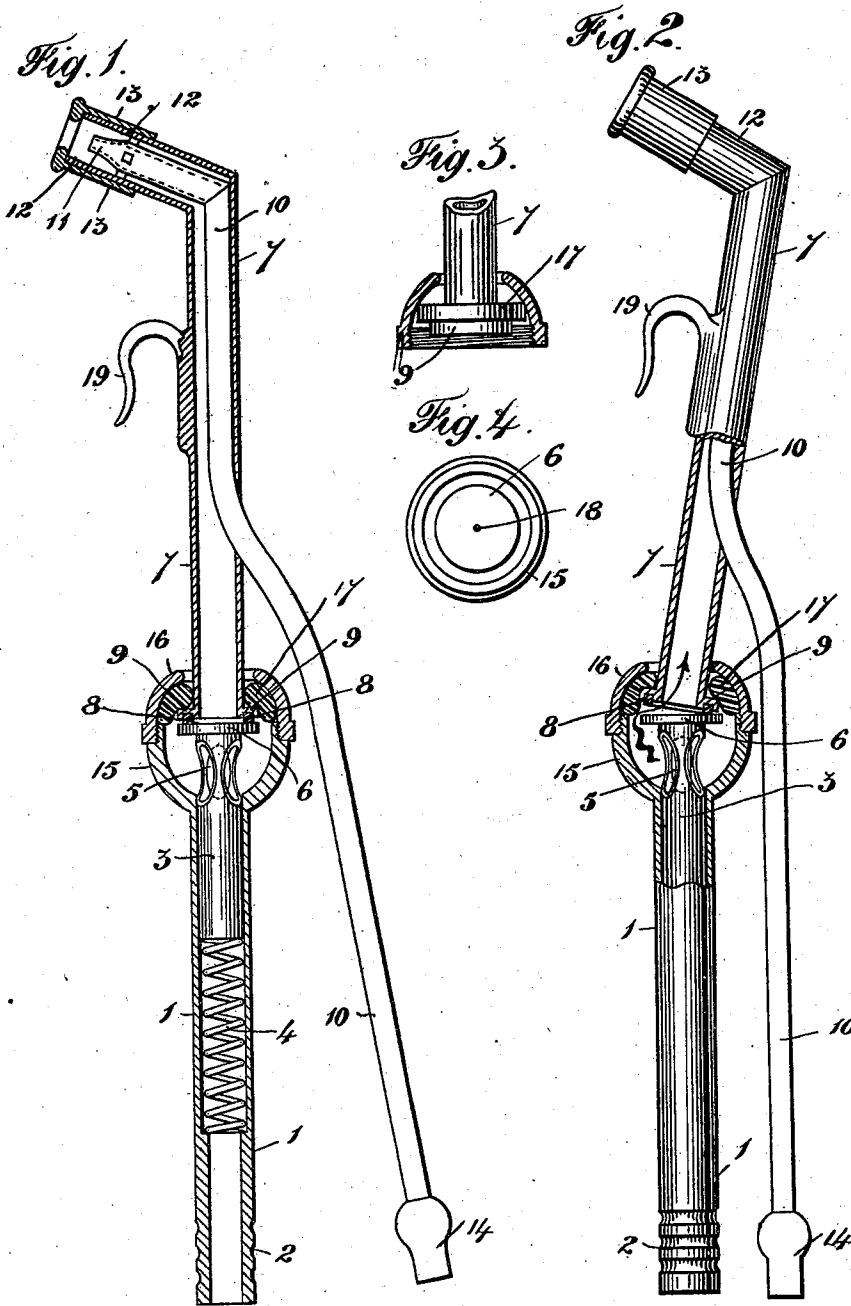


No. 724,257.

PATENTED MAR. 31, 1903.

H. S. BURTON.
BLOWPIPE BURNER.
APPLICATION FILED DEC. 6, 1902

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY SANFORD BURTON, OF OXFORD, ENGLAND.

BLOWPIPE-BURNER.

SPECIFICATION forming part of Letters Patent No. 724,257, dated March 31, 1903.

Application filed December 6, 1902. Serial No. 134,151. (No model.)

To all whom it may concern:

Be it known that I, HARRY SANFORD BURTON, a subject of the King of Great Britain, residing at 63 St. Giles, Oxford, county of Oxford, England, have invented certain new and useful Improvements in the Construction of Blowpipe-Burners, of which the following is a specification.

This invention relates to that class of blow-pipe-burner in which an atmospheric flame issues from its nozzle; and it consists principally in the means for controlling the gas-supply to obtain the desired size of flame.

My invention will be clearly understood from the following description, aided by the accompanying drawings, in which—

Figure 1 is a side sectional elevation of the appliance in its normal condition and the gas shut off or only a pilot-light burning. Fig. 2 is a side sectional elevation of the appliance in the actuated position for admitting gas to the burner-nozzle. Fig. 3 is a part-sectional elevation of the upper half-cup and gas-tube end, showing a modified construction. Fig. 4 is a plan of the lower half-cup and gas-valve, showing the hole for allowing gas to pass to a pilot-light.

The appliance is made in two pieces, affixable together and movable about their joint to open or close the gas-supply. One part, 1, is connected by a flexible pipe joined on at 2 to a gas-supply, and such part or tube carries a tubular valve 3, controlled by a spring 4, said valve being provided with holes 5, through which the gas passes to the valve-face 6. The other part, 7, is provided with a valve-seating 8 at one end, such valve-seating being composed of a flexible ring recessed in or attached to a flange 9, as at Fig. 1, or it may be the metal flange 9^a on the end of the tube 7, as at Fig. 3, so that either a flexible or hard seating can be employed. The tube 7 also carries the air-pipe 10, passing out of the tube and projecting alongside the tube 1, so that the two form a handhold to enable the tubes 7 and 10 to be moved to open or close the gas-supply, as hereinafter explained.

The air-pipe terminates as a nozzle at the end 11, just inside the end 12 of the tube 7, thus forming a chamber for the admixture of the gas and air, both under pressure, to form the

atmospheric flame, the end 12 being encircled by a short tube 13, which can be pulled out to make the chamber larger, if desired. The end 14 of the air-pipe is connected by a flexible pipe to the air pump or supply, this being usually a bellows worked by the operator's foot.

The end 15 of the tube 1 is formed of semi-spherical shape and is provided with a screw-thread for connection of a corresponding-shaped head 16, encircling the tube 7, a rubber washer or flexible diaphragm 17 being arranged between the tube 7 and the head 16 to insure a tight joint.

In the position shown at Fig. 1 all parts are assembled in their normal condition, the half-cups 15 16 screwed together, the rubber washer 17 being compressed against the half-cup 16 to insure a tight joint, the spring 4 forcing the gas-valve 3 on its seat 8 to insure a shut off of gas or if a hole 18 be made in the valve, as at Fig. 4, to only supply a small amount of gas at the burner, so as to act as a pilot-light when the apparatus is not in use.

When it is desired to use the appliance, the operator first starts the air-blast and catches hold of the appliance, pressing the tubes 1 and 10 together, this action canting the tube 7 and the valve-seating, as at Fig. 2, compressing the rubber washer 17, and opening the valve, the degree of opening being determined by the amount of angle given to the tubes 7 and 10, thus regulating the supply.

19 is a hook by which the appliance can be hung onto a nail ready for use when required.

By this invention the degree of blast can be automatically regulated with one hand, the other hand being left free for manipulation of the work under operation.

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

1. A blowpipe-burner including a pair of tubes arranged end to end, one having a valve and the other a seat for said valve, and one of said tubes being angularly movable with respect to the other, whereby, on such movement, the valve will be forced open, a gas-tight casing surrounding the adjacent ends of the tubes, and a blast-pipe coöperative with one of said tubes.

2. A blowpipe-burner including a pair of tubes arranged end to end, one having a valve

and the other a seat for said valve, and one of said tubes being angularly movable with respect to the other, whereby, on such movement, the valve will be forced open, said valve
5 having a reduced bore for the passage of a small stream of gas, a gas-tight casing surrounding the adjacent ends of the tubes, and a blast-pipe coöperative with one of said tubes.

10 3. A blowpipe-burner consisting of upper and lower tubes abutting against each other, the lower tube having a valve, and the upper a seat for said valve, two detachably-connect-

ed spherical cups surrounding the ends of the tubes, the lower cup being united with 15 the lower tube and the upper cup being free of the upper tube, a resilient packing in the upper cup surrounding the upper tube, and a blast-pipe coöperative with the upper tube.

In testimony whereof I have hereunto set 20 my hand in presence of two subscribing witnesses.

HARRY SANFORD BURTON.

Witnesses:

WILLIAM HENRY PARTRIDGE,
FREDERICK TURNER.