G. JOHNSON.

JET-PIPES FOR GAS-LAMPS.

No. 195,714. Patented Oct. 2, 1877.

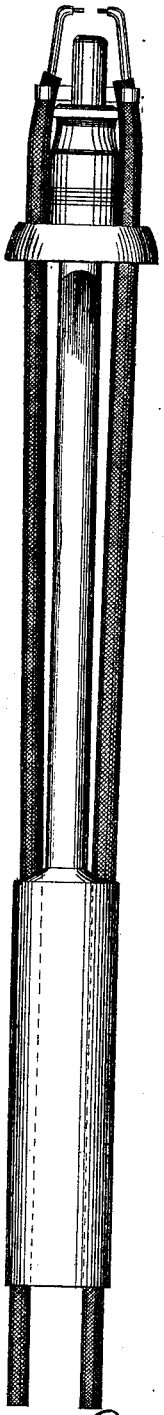

Fig 1

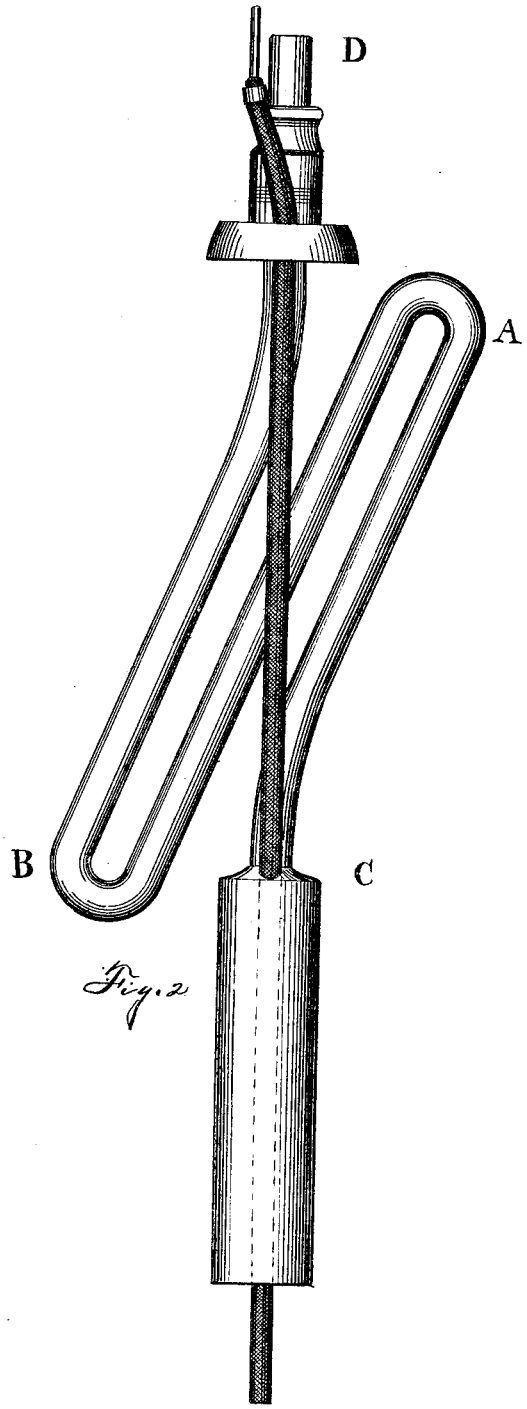

Fig. 2

Witnesses

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GEORGE JOHNSON, OF BUFFALO, NEW YORK.

IMPROVEMENT IN JET-PIPES FOR GAS-LAMPS.

Specification forming part of Letters Patent No. **195,714**, dated October 2, 1877; application filed May 9, 1877.

To all whom it may concern:

Be it known that I, GEORGE JOHNSON, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful improvements in pipes for connecting gas jets or burners with the gas-conducting pipe where electricity is used for lighting, of which the following is a specification:

This invention is intended to be used in connection with gas-lights in streets or in large buildings, or other places where electricity is or may be used for lighting a number of burners simultaneously; and the invention consists in arranging between the burner or jets and the gas-conducting pipe a bent or curved pipe, the object to be hereinafter fully explained.

In the drawings, Figures 1 and 2 represent side elevations of a single burner connected by a curved pipe to the usual gas-pipe, and showing also the wires by which the burner is to be lighted by electricity.

D represents the burner; A B, the curved pipe, and C the usual gas-conducting tube.

The object of this curved portion of the pipe is to do away with all individual stop-cocks to burners or jets, and to allow, where electricity is used to light the gas, the flow to be cut off or pressure to be put on by a single cock, either at the gas-works or in any other suitable place, or, in the case of a large city, several may be used, each one shutting off or turning on the gas for a whole district or division.

Its arrangement is as follows: One end of the curved pipe is attached to, or forms part of, the main pipe C, and runs up a short distance and is curved over, as shown at A; then, running down, is bent again (shown at B) and carried upward, and ending in an upright jet or burner, D, as shown. This exact running of the pipe, however, is not material. It is the curves and the descending part that prevent the escape of the gas after the flow has been shut off at the starting-point.

The descending portion of the pipe between the curves A and B may be made much shorter than shown without impairing its efficiency in retaining the gas. Only that small amount of gas escapes that was in the last length of the curve from B to the burner D, the pressure of the air outside into the burner and pipe also preventing the escape of gas except when the pressure is on at the main stop-cock. When the pressure is off, the gas remains in the pipes without escape.

This is a very simple arrangement, and will do away with all labor in opening and shutting individual stop-cocks, as it obviates these entirely where lighting by electricity is used.

I propose to arrange the wires for lighting inside instead of outside the usual pipe C, but coming one each side where the curved pipe is set, and each running up by the side of the curved pipe and through a shoulder in connection with the burner, as shown.

The utility of my invention is based on the philosophical principle that all gases which are lighter than atmospheric air will ascend when left free in the air.

It is not claimed that the curves A and B of themselves prevent the escape of gas from the conducting-tube below them; but they may be made in any shape that will form a descending portion of pipe between them. Through this descending portion the gas will not pass unless it is forced down by pressure of gas from the source of supply. As soon as this pressure is shut off at the main or central stop-cock the atmospheric air, being heavier than gas, will press in at the burner D, as the gas escapes through it from B, and will fill this portion of the jet-pipe and also the curve B, forming here a complete obstruction to the passage of the gas. This has been demonstrated by actual experiment by me.

I claim as my invention—

1. The curved pipe A B, placed intermediate between the burner or jet D and gas-conducting pipe C, substantially as and for the purpose specified.

2. The bent pipe A B, forming a part of the gas-pipe C, terminating in a gas burner or burners, and curved so as to obtain the descending portion between A and B, substantially as and for the purpose specified.

GEORGE JOHNSON.

Witnesses:
P. W. DORRIT,
L. B. SMITH.