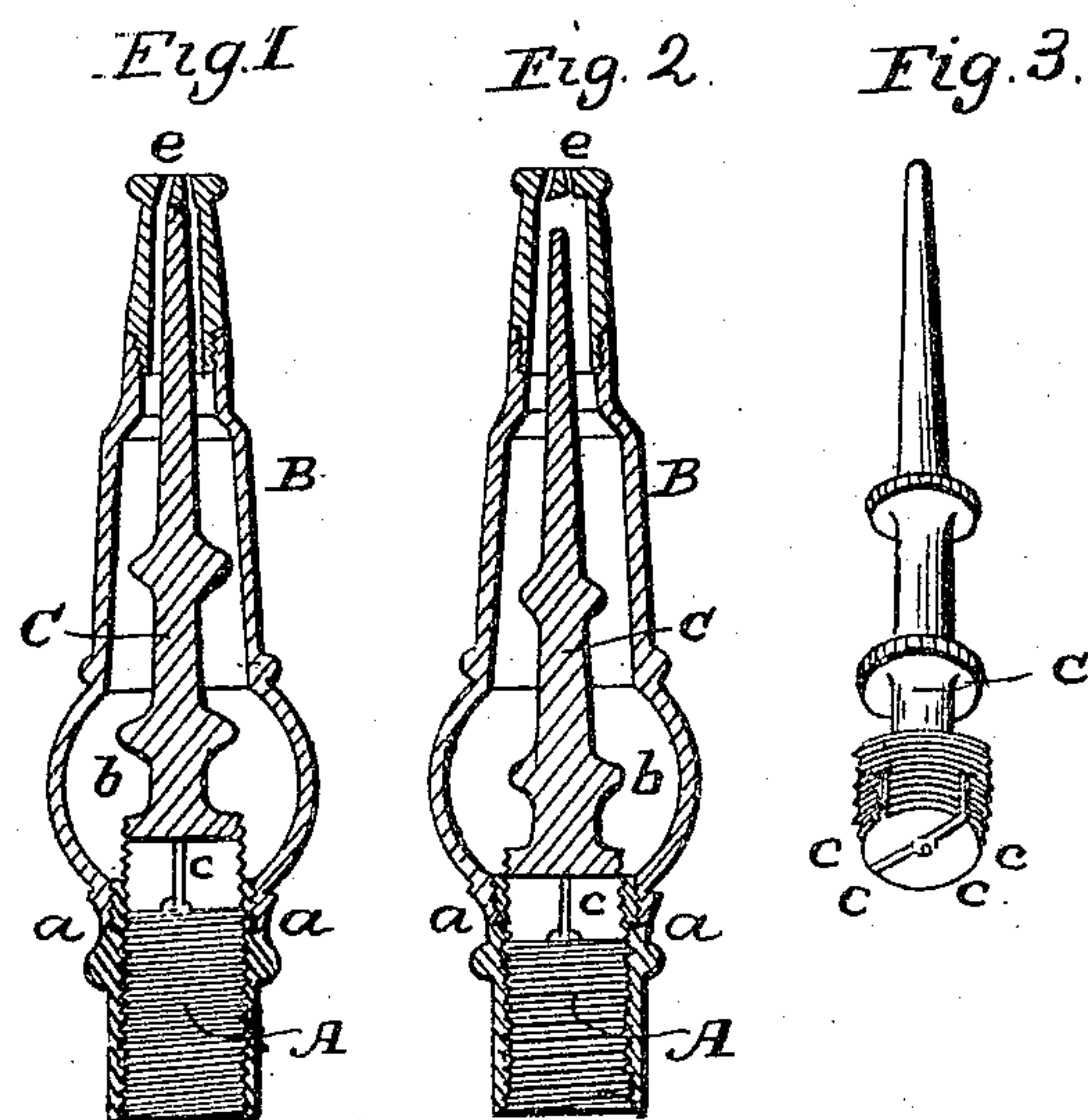


D. SULLIVAN & M. MCINTYRE.
GAS BURNER.

No. 19,720.

Patented March 23, 1858.



UNITED STATES PATENT OFFICE.

D. SULLIVAN AND M. MCINTYRE, OF CINCINNATI, OHIO.

GAS-BURNER.

Specification of Letters Patent No. 19,720, dated March 23, 1858.

To all whom it may concern:

Be it known that we, DENIS SULLIVAN and MICHAEL MCINTYRE, both of Cincinnati, Hamilton county, Ohio, have invented new and useful Improvements in Gas-Burners; and we hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

Our invention consists in a method of regulating the flow of gas into the burner and the consequent pressure at the tip, to any extent desired.

In the accompanying drawings Figures 1 and 2 are axial sections exhibiting the central plug or stem in each position. Fig. 3 is a perspective view of the plug detached.

A, is the base by which the burners attached to the pipe in customary manner.

B, is the cap or exterior part of the burner, attached to the base by means of a screw joint at *a*.

C, is a plug or stem screwed into the base A, as represented and extending centrally within the burner to near the tip *e*, for the purpose of preheating the gas in the chamber *b*.

c, c, are slots in the foot of the plug C, through which gas passes to the heating chamber *b*, at a greater or less rapidity according to the plug is screwed up or down.

The operation is as follows. In order to adjust the flow of gas the cap B, is removed when the plug C, may readily be screwed

up or down so as to leave as much or as little of the slots *c*, as desired above the base A. It will be observed that in its highest position, the greater proximity of the upper part of the plug C, to the tip *e*, increases its preheating effect, so that the preheating of the gas is constantly regulated in accordance with the extent of its flow. Copper is the preferable material for the stem C, being the best conductor of heat, which is not too costly.

The above described arrangement is found very effectual in limiting the pressure at the tip independently of the stop cock so as to maintain a steady flame and avoid waste of gas. It also enables the capacity of the burner to be limited to suit the desires of the proprietor of the house and at the same time affords a very simple and effective method of preheating.

We claim as new and of our invention herein:

The construction and arrangement substantially as described, of the plug C, for regulating the flow of gas to any extent desired.

In testimony of which invention we hereunto set our hands.

DENIS SULLIVAN.
MICHAEL MCINTYRE.

Attest:

GEO. H. KNIGHT,
C. RATCLIFF.