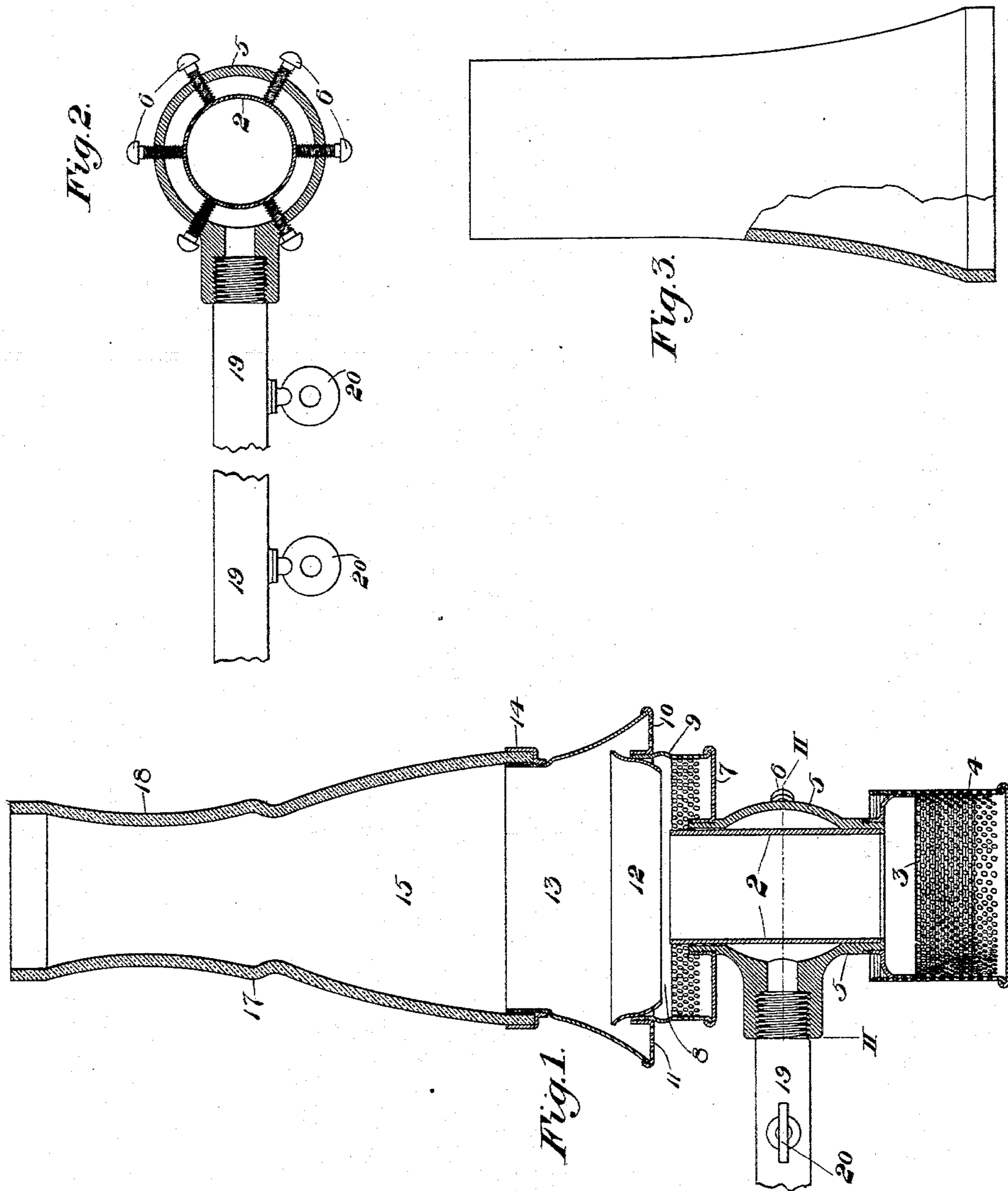


(No Model.)

J. F. BUSEY.  
GAS BURNER.

No. 533,526.

Patented Feb. 5, 1895.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JEROME F. BUSEY, OF VENICE, PENNSYLVANIA.

## GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 533,526, dated February 5, 1895.

Application filed May 31, 1893. Serial No. 476,032. (No model.)

*To all whom it may concern:*

Be it known that I, JEROME F. BUSEY, of Venice, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Gas-Burners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a vertical sectional view. Fig. 2 is a cross-section on the line II—II of Fig. 1, and Fig. 3 is a modification of the lamp chimney.

15 My invention relates to the gas burners employed for illuminating purposes, and is designed to produce a cheaper and more efficient burner than has heretofore been attained.

20 In the drawings, 2 represents the cylindrical air tube of the burner which is open at the top and bottom. This tube is surrounded by the shell 5. At the base of this tube and secured to the shell by a thread on the outer surface of the shell is a flared flange 3 provided with a thread on its lower outer surface, 25 which second thread engages with a thread on the inner surface of the perforated air-regulating cap 4, which cap is provided with a solid bottom piece, and is adapted to screw upward on the flange-piece 3, so as to reduce the number of perforations below the flange-piece and consequently reduce the amount of 30 air which passes through the perforations into the air-tube 2.

35 The annular shell 5, which surrounds the air-tube 2, may be formed of a suitable casting, and it is secured to the air-tube 2 and is centered about the same by the screws 6. The bottom of this shell is closed by fitting the casting tightly around the air-tube 2; but, 40 at the top, there is a very narrow space between the air-tube, which tube extends slightly above the casting, and the casting, through which space the gas passes from the chamber.

45 On the outer face of the casting 5 is a screw-thread into which fits the interior thread formed on an upturned collar of the base-plate 7 of the mixing-chamber 8. This mixing-chamber is formed of the solid base-plate 7 and a collar 9, the lower portion of which

is perforated, and the upper outer portion of which is threaded so as to engage with a thread formed on the inner face of the upturned portion of the annular gallery 10, which is provided with air perforations 11.

50 Fitting in the upper portion of the mixing-chamber 8 is an air-deflecting ring 12, the lower portion of which extends in the chamber 8 inwardly at an angle toward the center so as to deflect the air passing in through the perforations in the side of the mixing-chamber toward the center, and the upper portion 55 of this ring above the mixing-chamber flares outwardly in a reverse direction so as to spread the gas which passes through the space between the air-tube 2 and the casting 5. 60

65 Fitting on the gallery 10 is the deflector 13, the annular wall of which is in the shape of the frustum of a cone. Secured to the upper portion of this deflector by screw threads is the gallery 14, which supports the glass-chimney 15. This chimney is of peculiar shape, 70 having a regular concave curve from its base to its top as shown in Fig. 3, or it may be convex in shape near its base ending in a shoulder 17, and a concave upper portion 18 near 75 its top as is shown in Fig. 1. The extreme upper end portion of the chimney may be cylindrical in form.

80 Gas is admitted to the gas-chamber between the tube 2 and shell 5 by the supply-pipe 19, which is provided with two or more stop-cocks 20, by means of which the supply of gas may be regulated so as to prevent roaring of the flame.

85 The advantages of my invention will be apparent to those skilled in the art; and within the scope of my invention, as defined in the claims, modifications in the form and construction of the parts may be made by the skilled mechanic. 90

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

1. In a gas-burner, the combination of an air-tube, a surrounding gas-chamber having 95 an annular opening and below the level of the chimney, a perforated gallery around the mouth of the air-tube and gas opening, and

an inclined deflecting ring situate above the gas and air exits; substantially as described.

2. In a gas-burner, the combination of an air-tube, an annular gas exit orifice surrounding the air-tube, a perforated gallery surrounding the gas and air exits, an outwardly inclined deflecting ring situate above the gas and air exits, and an inwardly inclined conical

deflector situate above the said deflecting ring; substantially as described. 10

In testimony whereof I hereunto set my hand.

JEROME F. BUSEY.

Witnesses:

W. B. CORWIN,

H. M. CORWIN.