

G. H. HUSTON.
GAS BURNER.
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1,024,261.

Patented Apr. 23, 1912.

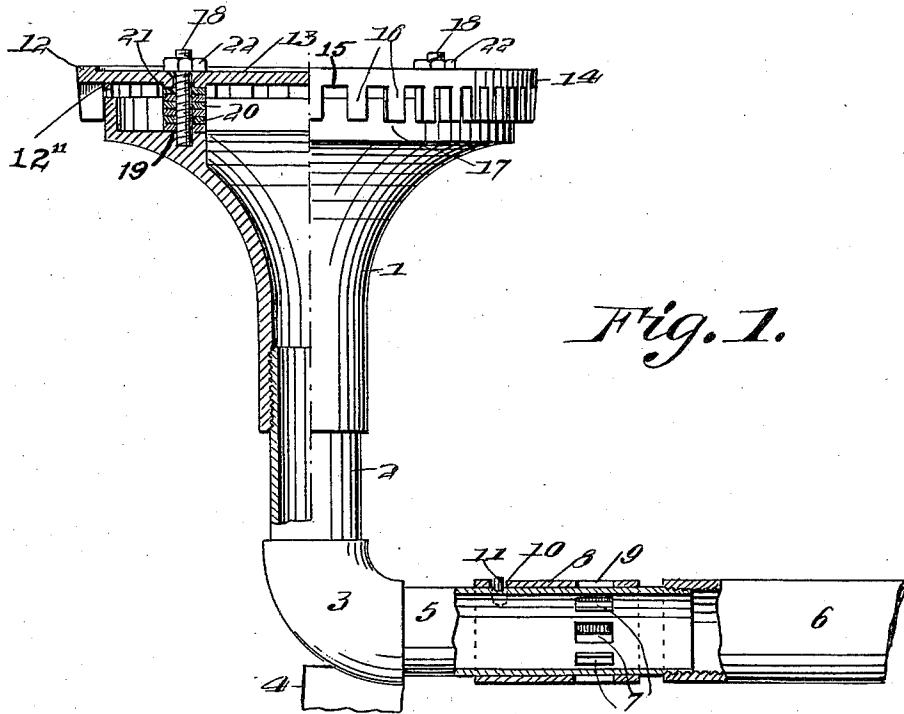


Fig. 1.

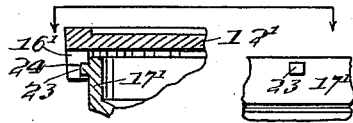


Fig. 2.

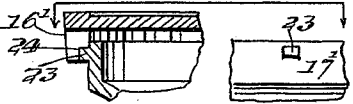


Fig. 3.

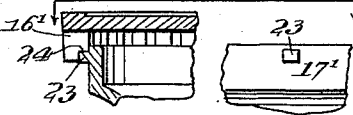


Fig. 4.

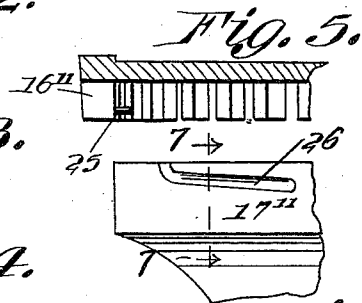


Fig. 5.

Fig. 6.

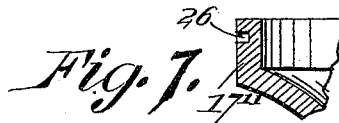


Fig. 7.

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE H. HUSTON, OF CINCINNATI, OHIO.

GAS-BURNER.

1,024,261.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE H. HUSTON, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to certain new and useful improvements in gas burners and relates more particularly to a burner which may be applied to a coal stove, when it is desired to employ gas in lieu of coal or wood. Its use, however, may be extended to furnaces, in which case a number of burners would be used.

The object of the invention is to provide a new and novel form of adjustment by means of which the size of the flame may be regulated, easily, quickly and positively.

Further and other objects will later appear.

In the drawings: Figure 1 is a side elevation, partly in section, of the preferred form of my invention, Figs. 2, 3 and 4 are fragmentary detail views, in partial section and side elevation of a modified form of the invention, Figs. 5 and 6 are fragmentary sectional and side elevations of a still further modified form of the invention, and Fig. 7 is a section on the line 7—7 of Fig. 6.

Referring by reference characters to the drawing 1 designates the burner body of somewhat conical-form, which at its lower end is in threaded engagement with a short section of pipe 2, the latter being connected to an elbow 3. A lug 4 is carried by the elbow 3, for suitable attachment to a suitable part of the stove whereby the device is supported within the latter. An air intake 5, is secured to the elbow 3, and has connection with a pipe 6 which leads to the source of gas supply. Air intake 5, is formed with a series of circumferential openings 7, which form air inlets to admit air to the body 1, of the burner. A sleeve 8 is rotatably mounted on the air intake 5, and is formed with air inlets 9, which are similar to the air inlets 7, of the air intake 5 and which register with said air inlets 7. An arcuate slot 10 is formed transverse of the length of sleeve 8 and receives a pin 11 carried by air intake 5, whereby the movement of the sleeve 8, is restricted in an obvious manner. It will be seen that by adjusting openings 9 of sleeve 8 with relation to the openings 7 of the air intake the quan-

tity of air admitted to the burner body may be regulated at will.

The burner cap 12 comprises a top plate 13 and a marginal depending rim 14 which engages over the periphery of the flange 17 of the body 1, the rim 14, being formed with a series of inverted U-shaped slots 15, the inner corners of which slots are square or sharp to thus form rectangular teeth 16, which act as efficient flame spreaders as distinguished from those heretofore used in which round or curved meeting portions have prevailed. Obviously by raising or lowering the cap 12, the size of the flame may be adjusted or regulated since the size of the flame is determined by the distance between the top plate 13 and the upper edge of the flange 17, of body 1. A pair of vertical screws 18 are carried by body 1, and the latter on its interior is formed with a seat 19, for each screw, the seat being at the base of the screw and acting to support the burs or washers 20, which are received over the screws and which engage with collars 21, integral with the under face of plate 13 and depending therefrom. The plate 13 has apertures through which the screws 18 project and the latter receive nuts 22, to hold the cap 12, in position. It will be seen that by increasing or decreasing the number of burs or washers 20, the distance between the burner cap and the body 1, may be changed or altered to adjust the size of the flame openings.

The modification illustrated in Figs. 2, 3 and 4, contemplates a different type of flame adjustment, the top 17' of the burner body having lugs 23, some of the teeth 16', being formed with cutaway portions which form seats 24, the latter resting on the lugs 23. It will be seen that the seats 24 in Figs. 2, 3 and 4 are at different distances from the top plate 13, whereby the cap may be turned and by bringing certain determinate ones of the seats in position to rest on and be supported by the lugs 23, the cap will be obviously held at different distances from the body.

Figs. 5, 6 and 7, show a still further modification, wherein certain of the teeth 16'' carry pins 25, for engagement in inclined slots 26 formed in the top 17'' of the body, whereby when the cap is rotated, the cap will be raised or lowered, according to the direction of rotation of the cap, as is manifest.

The under face of cap 12, is preferably provided, as seen in Fig. 1, with one or more depending lugs 12'', which prevent the burner cap from being moved down on the body 1, in such manner as would otherwise cut off the gas supply from entering the slots 15. The cone shape of body 1, permits the gas and air to become thoroughly commingled.

10 What I claim is:

1. In a gas burner, a body formed with seats on its interior, screws extending up from the seats, washers received over the screws and engaging on the seats, a burner cap composed of a top plate and a series of depending rectangular teeth which engage over the burner body, said top plate being formed with openings and with collars which surround the openings and depend from the top plate of the burner cap, said collars seating on the uppermost of said washers, and nuts engaging the screws and the top face of the top plate of the burner cap.

25 2. In a gas burner, a body having horizontal seats on its interior, screws extending up

from the seats, washers received over the screws and engaging on the seats, a burner cap having openings to receive the screws and being supported from said washers, a slotted rim depending from the cap and engaging over the body, and lugs carried by the cap for engagement with the body to restrict the downward movement thereof.

3. In a gas burner, a body having an upwardly extending flange, a top plate having a depending flange engaging over said flange of the body, said plate flange being formed with spaced teeth, means for adjusting the distance between the plate and body, and means carried by the top plate for engagement with the top edge of said flange of the body to prevent said plate from seating on the body and thereby cutting off the supply of gas to the spaces between said teeth.

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

GEORGE H. HUSTON.

Witnesses:

GEORGE H. FUEDMAN,
JACOB S. HERMANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."