

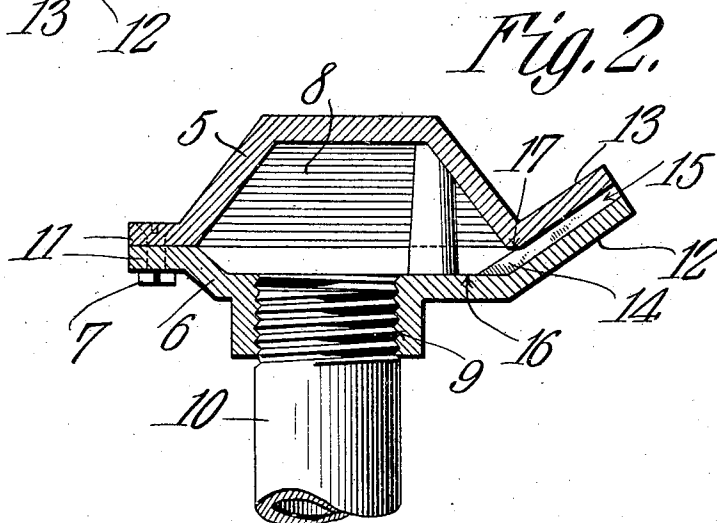
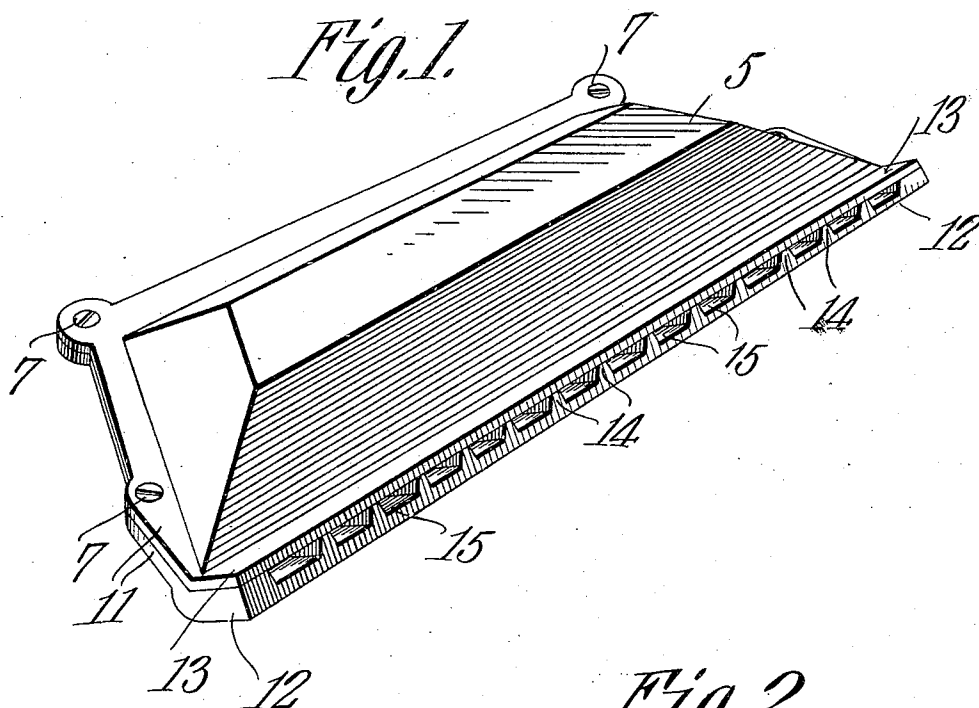
No. 873,624.

PATENTED DEC. 10, 1907.

E. S. SPRINGER & J. L. MALONEY.

GAS BURNER.

APPLICATION FILED AUG. 20, 1907.



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UNITED STATES PATENT OFFICE.

EDWARD S. SPRINGER AND JOHN L. MALONEY, OF LEAVENWORTH, KANSAS.

GAS-BURNER.

No. 873,624.

Specification of Letters Patent.

Patented Dec. 10, 1907.

Original application filed July 27, 1906, Serial No. 328,094, Divided and this application filed August 20, 1907. Serial No. 389,391.

To all whom it may concern:

Be it known that we, EDWARD S. SPRINGER and JOHN L. MALONEY, citizens of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented a new and useful Gas-Burner, of which the following is a specification.

This invention relates to gas burners of that general class shown and described in Letters Patent issued to us on the 12th day of March 1907 under No. 847210 and of which the present case forms a divisional application.

The object of the invention is to provide a burner including a sectional casing having one longitudinal edge thereof bent upwardly and provided with a plurality of spaced jet orifices for deflecting the flame laterally in contact with the surface to be heated.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a perspective view of a gas burner constructed in accordance with my invention. Fig. 2 is a transverse sectional view of the same.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved burner forming the subject matter of the present invention includes a casing preferably trapezoidal in shape, as shown, and formed in two sections 5 and 6 detachably secured together by bolts or similar fastening devices 7. The upper section 5 is provided with a concaved portion forming a gas chamber 8 and formed in the lower section and communicating with the gas chamber is an inlet opening 9 the walls of which are threaded for engagement with the correspondingly threaded walls of a fuel supply pipe 10. Each section of the casing is provided with a marginal laterally extending flange 11 having spaced perforations formed therein for the reception of the fastening devices 7.

The flanges at one longitudinal edge of the

casing are of greater width than the flanges at the opposite edge thereof and are bent upwardly in spaced relation to form parallel lips 12 and 13. The lower inclined lip 12 is provided with a plurality of spaced lugs or partitions 14 defining intermediate jet orifices 15. The lugs 14 extend from the free edge of the lip 12 to the flat base 16 of the lower section of the casing while the lower surface of the lip 13 at its juncture with the section 5 is provided with a flat shoulder 17 preferably disposed parallel with the flat face 16 and which serves to direct the gas from the chamber 8 to the jet orifices. It will thus be seen that the gas entering through the supply pipe 10 will come in contact with the upper wall of the chamber 8 and thence be deflected downwardly and laterally through the contracted neck formed by the shoulder 17 and thence pass upwardly between the lugs to the jet orifices where it will be ignited and the flame directed in contact with the surface to be heated. Attention is here called to the fact that the angle or inclination of the lips 12 and 13 serves to direct the flame upwardly in parallel jets and thereby materially increase the efficiency of the burner.

Should the burner become clogged with deposits of carbon or other foreign matter the same may be readily cleaned by removing the fastening devices 7, as will be readily understood.

While it is preferred to use the burner in connection with sectional water leg boilers it is obvious that the same may be used with equally good results in heating or cooking stoves, furnaces or wherever a burner of this character is found desirable.

Having thus described the invention what is claimed is:

1. A gas burner including a casing provided with an inlet and having one longitudinal edge thereof bent upwardly to form spaced inclined lips, lugs formed on one of said lips and defining a plurality of intermediate jet orifices, and a shoulder formed on the mating lip at the juncture of said lip with the casing.

2. A gas burner including a casing comprising detachable sections each formed with a laterally extending perforated flange, the flanges on one side of the casing being longer than the flanges on the opposite side thereof and bent upwardly to form inclined lips, one of said lips being provided with

spaced lugs adapted to engage the adjacent lip and defining intermediate jet orifices, a shoulder formed on the other lip at its juncture with the casing, and fastening devices
5 extending through the perforations in the flanges for detachably securing the sections in engagement with each other.

3. A gas burner including a casing having an interior gas chamber and provided with a
10 flat lower wall pierced by an inlet opening, the lower longitudinal edge of the casing being bent upwardly to form inclined lips, lugs formed on one of the lips and extending from the free edge thereof to the flat base of
15 the gas chamber, said lugs forming spaced jet orifices, there being a shoulder formed on the opposite lip at its juncture with the casing.

4. A gas burner including a substantially trapezoidal casing comprising two sections
20 each formed with a laterally extending perforated flange, one of said sections being con-

caved to form a gas chamber and the opposite section provided with an inlet, the flanges on one longitudinal edge of the casing being longer than the flanges on the opposite edge 25 thereof and bent upwardly at an angle to the horizontal plane of the casing to form parallel inclined lips, lugs formed integral with one of the lips and bearing against the adjacent lip to produce intermediate jet ori- 30 fices, and means extending through the perforations in the flanges for detachably securing the sections in assembled position.

In testimony that we claim the foregoing as our own, we have hereto affixed our sig- 35 natures in the presence of two witnesses.

EDWARD S. SPRINGER.
JOHN L. MALONEY.

Witnesses:

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L. S. PURCELL.