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

GAS BURNER.

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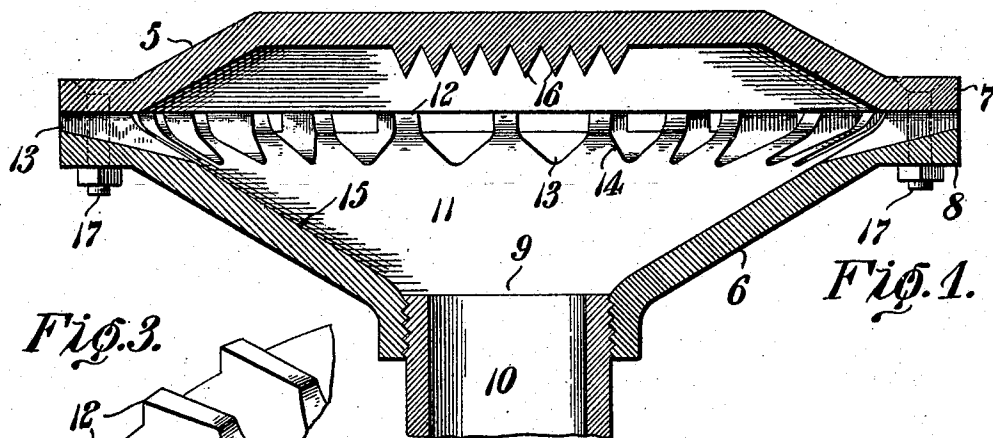


Fig. 1.

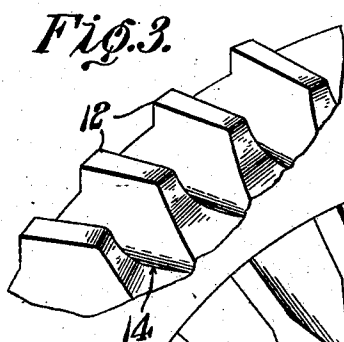


Fig. 3.

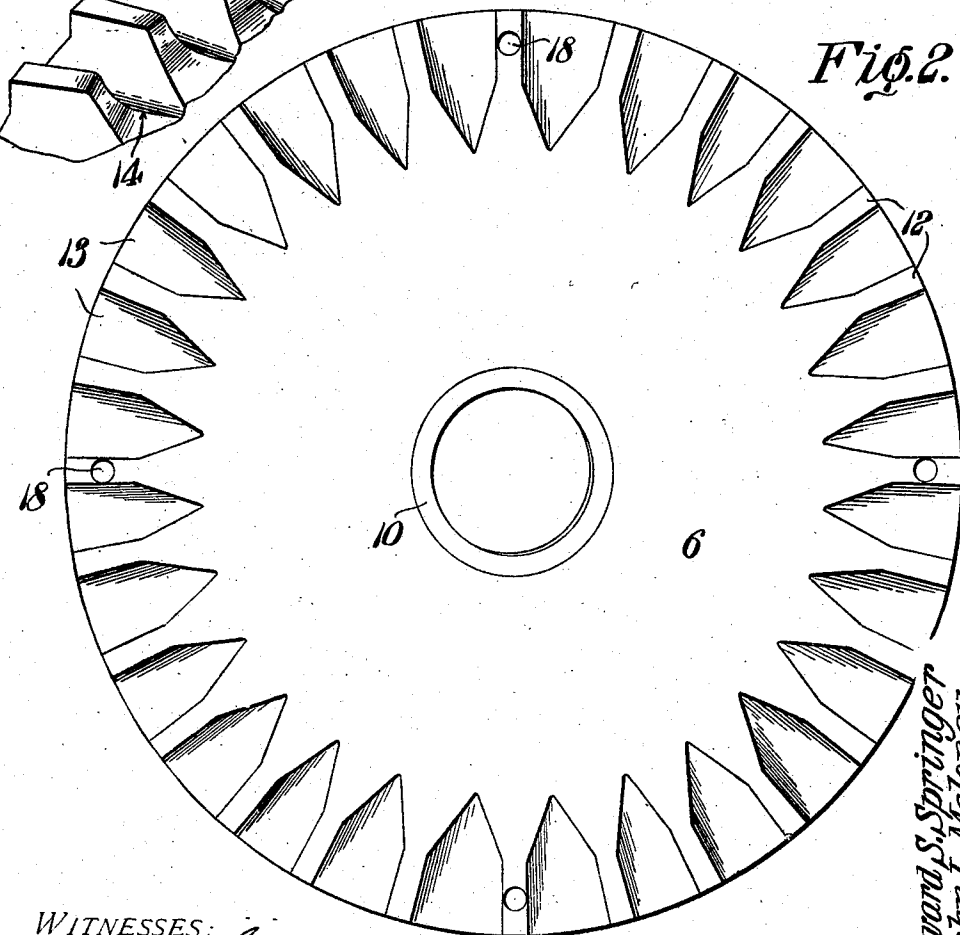


Fig. 2.

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UNITED STATES PATENT OFFICE.

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

GAS-BURNER.

No. 873,182.

Specification of Letters Patent.

Patented Dec. 10, 1907.

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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 for stoves, furnaces and similar heating apparatus and more particularly to that class of burners especially designed for the consumption of natural gas.

The object of the invention is to provide a circular burner having a plurality of radiating tips or jet orifices, the walls of which are inclined or beveled thereby to deflect the flame laterally into the fire-box.

A further object of the invention is to provide a burner including a plurality of detachable sections one of which is provided with a gas chamber and the other with spaced depending lugs constituting a spreader.

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 longitudinal sectional view of a gas burner constructed in accordance with my invention. Fig. 2 is a top plan view of the same with the upper section removed. Fig. 3 is a detail perspective view of a portion of the peripheral edge of the lower section.

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

The burner forming the subject matter of the present invention includes a plurality of detachable sections 5 and 6 preferably circular in form, as shown and provided with laterally extending flanges 7 and 8. The lower section 6 is provided with an intake 9, the walls of which are threaded for connection with a fuel supply pipe 10, the interior walls of the lower section 6 being inclined upwardly in the direction of the adjacent flange 8 thereby to form a relatively large gas chamber 11.

Secured to and preferably formed integral with the flange 8 are a series of spaced radial ribs or partitions 12 defining a series of burner tips or jet orifices 13, the lower walls of which are inclined or beveled, as indicated at 14 so as to deflect the gas upwardly in engagement with the lower face of the flange 7 and thence laterally into the fire-box. The inclined walls 14 of the jet orifices gradually merge into the inclined walls 15 of the gas chamber so as to permit the free discharge of gas through the jet orifices.

Depending from and preferably formed integral with the upper section 5 are a plurality of pointed lugs or teeth 16 which are disposed in alinement with the inlet 9 and constitute a spreader, the upper section 5 being preferably concave so as to allow the free circulation of gas around the spreader. The sections 5 and 6 are detachably secured together by means of bolts or similar fastening devices 17 which pass through suitable openings 18 formed in the adjacent ribs 12 and serve to clamp the sections in engagement with each other.

Attention is here called to the fact that the openings 18 are of less width than the width of the ribs so that when the sections are assembled the bolts or fastening devices will be effectually housed within the ribs and thus permit the free discharge of gas through the several discharge openings. It will also be observed that the inner ends of the several ribs or partitions form a continuation of the inclined walls 15 of the gas chamber 11 so as to effectually deflect the gas from the fuel supply pipe through the several openings between the partitions.

From the foregoing description it will be seen that there is provided an extremely simple, inexpensive and efficient device admirably adapted for the attainment of the ends in view.

Having thus described the invention what is claimed is:

A gas burner including a plurality of detachable sections provided with laterally extending flanges the inner face of one of which is formed with a flat bearing surface disposed in a horizontal plane, the flange of the mating section being provided with a plurality of spaced radiating ribs gradually increasing in height from the peripheral edge of the flange to the center of said section and defining intermediate jet orifices the walls of which are

smooth and unobstructed and inclined upwardly towards the flat bearing face of the other flange, one of said sections being provided with an inlet and having its interior
5 walls between said inlet and flange inclined upwardly, there being openings formed in some of the ribs and of less width than said ribs, a series of lugs depending from the upper section and disposed in alinement with
10 the inlet, and fastening devices carried by the flanges and passing through the openings

in the ribs for clamping said sections in assembled positions.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature 15 in the presence of two witnesses.

EDWARD S. SPRINGER.
JOHN L. MALONEY.

Witnesses:

BART. J. LONG,
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