H. A. ROBINSON.

GAS BURNER.

APPLICATION FILED APR. 17, 1919.

1,329,096. Patented Jan. 27, 1920.

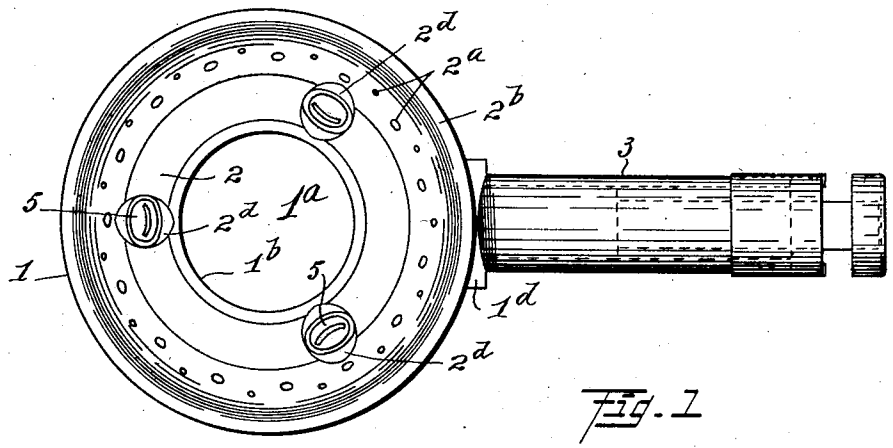


Fig. 1

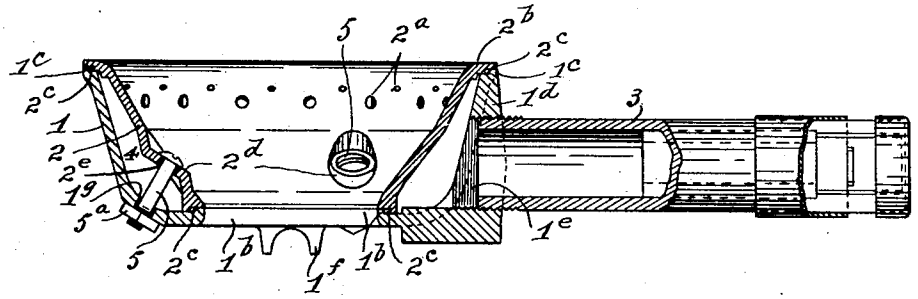


Fig. 2

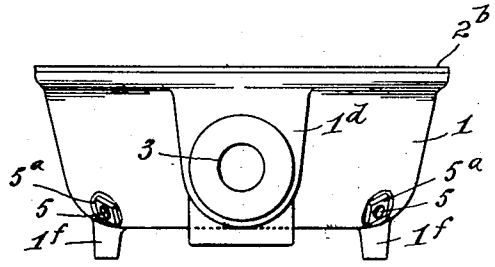


Fig. 3

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UNITED STATES PATENT OFFICE.

HARRY A. ROBINSON, OF MANSFIELD, OHIO, ASSIGNOR TO THE ECLIPSE STOVE COMPANY, OF MANSFIELD, OHIO, A CORPORATION OF OHIO.

GAS-BURNER.

1,329,096. Specification of Letters Patent. Patented Jan. 27, 1920.

Application filed April 17, 1919. Serial No. 290,757.

To all whom it may concern:

Be it known that I, HARRY A. ROBINSON, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

My invention relates to improvements in gas burners, and more particularly to that class or type known as "ring" burners, the present embodiment of the invention being particularly designed and adapted for use in connection with gas ranges, stoves, and the like.

The primary object of my invention is to provide a generally improved burner of this class, which will be exceedingly simple in construction, cheap of manufacture, and efficient in use.

A further and very important object of the invention is the provision of an improved burner head and annular gas expansion or feed chamber of improved form and arrangement through the provision of inner and outer shells conjointly forming said gas feed chamber and provided with a central air passage or port opening, said passage or opening being formed in the bottom of the outer shell or body member and said inner shell or burner member resting within said outer shell or body and extending upwardly from and surrounding said passage or opening.

A still further object of the invention is the provision of an improved two-part burner head together with improved fastening or connecting elements whereby the inner and outer shells may be readily assembled or disassembled, as well as providing improved means for securely connecting and clamping the parts in their assembled or normal position.

With the above mentioned and other ends in view, the invention consists in the novel construction, arrangement, and combination of parts, hereinafter described, illustrated in one of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a top plan view of a burner constructed in accordance with this invention.

Fig. 2, a central vertical section view of the same.

Fig. 3, an end elevation of the feed end of the same.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

The improved gas burner comprises an improved burner head made up of an outer or body shell 1, and an inner or burner shell 2. The outer shell 1, is provided with a central air passage or port opening 1^a, surrounded by an upwardly extending flange 1^b, and the upper edge or rim portion of the outer shell 1, is preferably provided with an annular recess surrounded by an upwardly extending peripheral flange 1^c. The outer shell or main body portion 1, is preferably of bowl or cup shape, as shown, and is provided at one side with a boss portion 1^d, adapted to be provided with a threaded opening 1^e, adapted to receive and contain a gas supply or mixer pipe 3. If of the side supply type, as shown, the opening 1^e, and conduit pipe 3, enter at one side of the boss portion 1^d, said conduit or supply pipe 3, communicating with any suitable mixing mechanism and being connected to the gas supply mechanism in any suitable and convenient manner.

The outer shell or body 1, may be provided with leg or rest members 1^f, on its bottom and the base or bottom portion of the outer shell 1, is provided with a series or plurality of bolt receiving openings 1^g.

The inner or burner shell 2, is arranged within and spaced from the walls of the outer or body shell 1, forming conjointly with the latter an annular upwardly and outwardly tapering annular gas supply chamber 4, the base of said inner shell 2, surrounding the opening or passage 1^a, and extending upwardly and outwardly therefrom, and being provided near the upper edges with gas jet or feed openings 2^a, and adapted to direct the gas jets upwardly and inwardly toward each other above the central air passage or opening 1^a, and to be intersected by the air passing from the latter. The upper portion of the inner shell 2, is provided with a horizontally extending rim 2^b, adapted to rest upon the upper rim portion of the outer shell 1, and the lower and upper marginal edges of the inner shell 2, are provided with annular peripheral recesses 2^c, adapted to receive and interlock with the flanges 1^b and 1^c, of the outer body

shell, as shown most clearly in Fig. 2, of the drawings.

The lower or base portion of the inner or burner shell 2, is provided with inclined seat or boss members 2^a, said members 2^a, being provided with bolt receiving openings 2^e, adapted to contain a series of fastening elements 5, preferably in the form of screw bolts, as shown, said fastening elements or bolts 5, extending through the openings 1^s, of the outer shell, and being threaded at their ends to be drawn up through the medium of threaded nuts 5^a. It will be seen that the relative disposition and inclination of the fastening elements 5, to the inner and outer shells 1 and 2, is such that the latter will be securely fastened and clamped together at their flanged peripheral joints, and it will also be observed that the fastening elements 5, are somewhat removed from the jet or feed openings 2^a, of the inner burner shell 2. It will also be observed that the jet openings 2^a, intersect the upper narrow converging portion of the annular supply chamber 4, thereby permitting the latter to supply at all times the jet openings 2^a, with a supply of fuel.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood.

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

1. A gas burner, comprising a burner head made up of inner and outer spaced shells conjointly forming an annular upwardly tapered gas chamber, said inner shell being provided with gas jet openings communicating with said upwardly tapered portion of said gas chamber, and said outer shell being provided with a bottom port opening within the inner periphery of the inner shell, fastening elements extending transversely and diagonally through the base portions of said inner and outer shells to clamp the same together, and a feed pipe communicating with said annular gas chamber.

2. A gas burner, comprising an open bottom body shell, an inner shell mounted on and spaced inwardly therefrom and having its walls flaring upwardly and outwardly from said open bottom forming an upwardly and outwardly extending outwardly inclined annular tapered gas feed chamber between the walls of said shells, said inner shell being provided with upwardly inclined gas jet openings within its upper outwardly flaring marginal portion adapted to direct the gas jets inwardly and upwardly above said port opening of said outer shell, and means for connecting clamping and interlocking said shells in assembled position.

3. A gas burner, comprising a burner head made up of inner and outer shells provided with a central opening, the walls of said outer shell being bowl-shaped, and the walls of said inner shell flaring upwardly and outwardly from said opening and having an outwardly inclined upper marginal portion converging toward the upper marginal edges of said outer shell forming an annular converging fuel supply chamber between the walls of said shells, the outwardly inclined upper portions of said inner shell being provided with upwardly inclined jet openings communicating with the converged portion of said fuel supply chamber, and fastening and clamping elements for connecting and clamping said inner and outer shells.

4. A gas burner, comprising inner and outer shells provided with a central opening, said inner shell extending upwardly and flaring outwardly from said central opening and having its walls spaced from said outer shell forming an intermediate annular fuel supply chamber having a tapered outwardly inclined upper portion, a source of fuel supply communicating with the base of said annular chamber, said inner and outer shells being provided with inwardly inclined bolt receiving openings in their lower portions, threaded bolts passing through said inclined bolt receiving openings and connecting and clamping said shells, said inner shell being provided within its upper marginal portion with upwardly inclined jet openings removed a substantial distance above said bolts.

5. A gas burner, comprising a burner head made up of inner and outer walls provided with a central opening, the outer wall being bowl-shaped and the inner wall flaring upwardly and outwardly from said opening and having an outwardly inclined upper marginal portion converging toward the upper marginal edge of said outer wall forming an annular converging outwardly inclined fuel supply chamber between said walls, the outwardly inclined upper portion of said inner wall being provided with upwardly inclined jet openings communicating with the converged portion of said fuel supply chamber.

In testimony whereof I have affixed my signature.

HARRY A. ROBINSON.