

J. H. ANSPACH.

GAS FURNACE.

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1,132,296.

Patented Mar. 16, 1915.

Fig. 1.

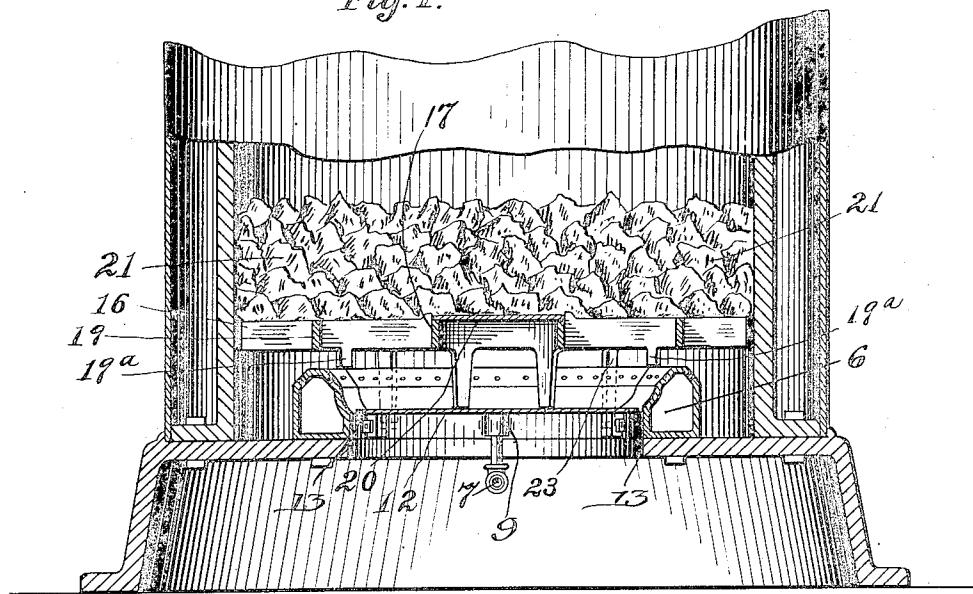


Fig. 2.

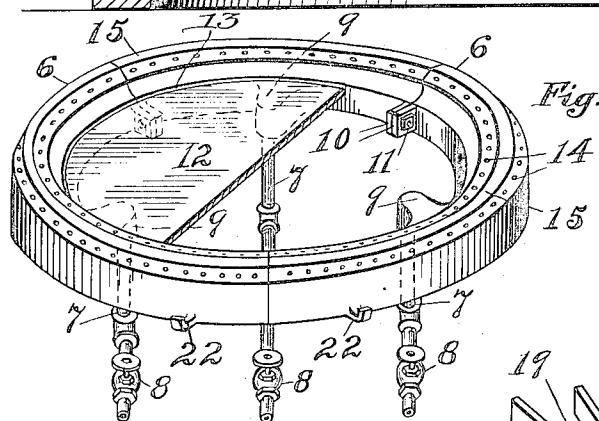
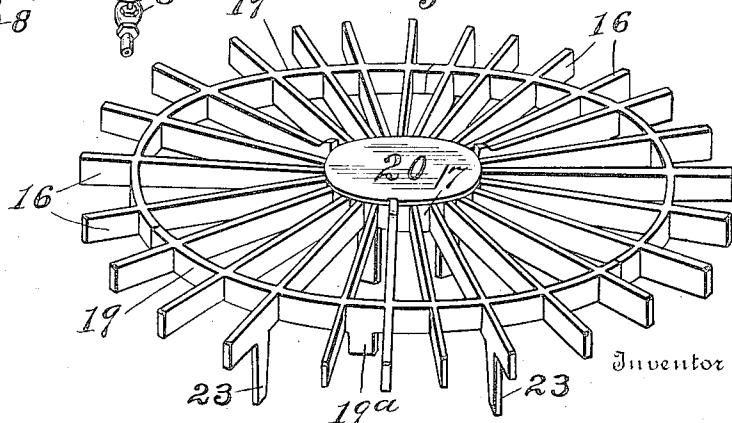


Fig. 3.



Witnesses

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GAS-FURNACE.

1,132,296.

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To all whom it may concern:

Be it known that I, JACOB H. ANSPACH, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gas-Furnaces, of which the following is a specification.

This invention relates to gas furnaces, and especially to burners for such furnaces, and comprises, in addition to a burner of novel construction, a grate or support located above the burner and adapted to support a bed or mass of refractory pieces or ingots which will be heated by the flame of the burner and thereby retain additional heat in the furnace.

The annular burner consists of a number of segments joined together end to end to form a complete ring, and each segment has a separate gas supply pipe, whereby one or more segments can be used for heating, according to the temperature desired, and any desired segment can be readily replaced. The grate is mounted upon the burner and is supported thereby to hold the upper bed of material in proper position relative to the burner.

The invention is illustrated in the accompanying drawings in which:—

Figure 1 is a vertical cross section of the burner and the grate, and the bed of material thereon. Fig. 2 is a perspective view of the burner, a part of its central plate being broken away. Fig. 3 is a perspective view of the grate.

Referring specifically to the drawings, it will be seen that the burner consists of a number of segments 6. These are hollow, but are closed at the ends, and each segment has an independent gas pipe 7 connected thereto, controlled by a valve 8, said pipes entering from the front under the burner, and having elbows tapped into bosses 9 on the inner side of the segments, said bosses communicating with the interior of the segment, the closed ends of which confine the gas supply from each pipe to the corresponding segment. At its ends, on the inner side, each segment has ears 10, which are fastened together by bolts 11, to form the whole burner, which may be supported in the fire box of

the furnace in any suitable manner. A plate 12 is placed within the burner ring, resting on the ears 10, and serves to close the central part of the burner, except a narrow air space 13 around the edge. The top of the burner body has beveled corners, with jet openings 14 on each side, and a plain or solid part 15 between the rows of jet openings.

The grate consists of a series of radial arms 16 joined at the inner ends to a ring 17, and connected near the outer ends by a ring 19. This grate may be made in segmental sections if desired. The ring 19 is so located that when the grate is in place above the burner, said ring will be just above and in line with the plain part of the burner ring. The ring 19 is provided with short legs 19^a which rest on plain part of burner ring 15. A plate 20 is provided, to cover the central opening of the grate. This grate supports a mass or bed of refractory material 21, which may consist of pieces of fire-brick, metal or the like which will act to retain the heat imparted thereto by the flame of the burner. Each segment of the burner has on the outer side thereof lugs 22, and the grate has depending legs 23 which rest on these lugs and thereby support the grate in position, and also support the bed of material on the grate.

The gas supplied to the various segments may be opened or closed according to the quantity of heat desired, and the construction is such that the grate can be readily removed for purposes of repair or otherwise. The plate 12 in the center of the burner serves to distribute the air or cause the flow thereof to the burner, to afford the necessary air supply to the flame.

What I claim as new is:—

The combination of a burner comprising a plurality of hollow segments having closed ends and a separate supply pipe to each segment, said segments being fitted together end to end and having inwardly projecting ears at said ends, fastenings between said ears, a plate resting on said ears and spaced at its edge from the segments, to form a narrow air space between the plate and the burner, and a grate supported above the burner and adapted to support a mass of

refractory pieces which will be heated by
the flame of the burner, said grate having
legs resting on the top of the burner and
also having legs depending beside the
burner, and resting on said plate, to hold the
grate in elevated position above the burner.

In testimony whereof, I do affix my signature in presence of two witnesses.

JACOB H. ANSPACH.

Witnesses:

JOHN A. BOMMARDT,
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