

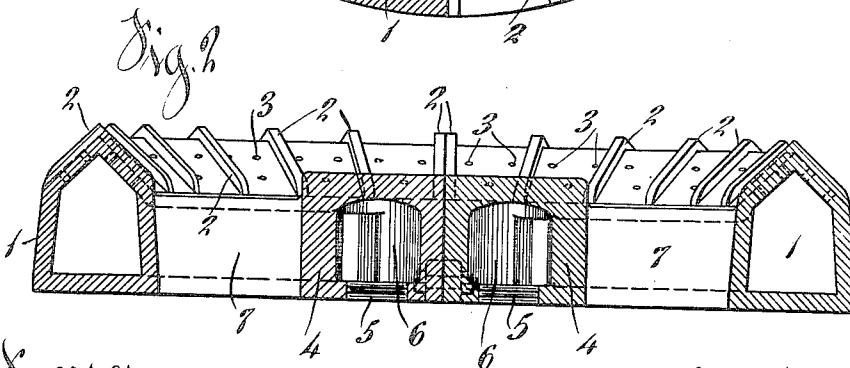
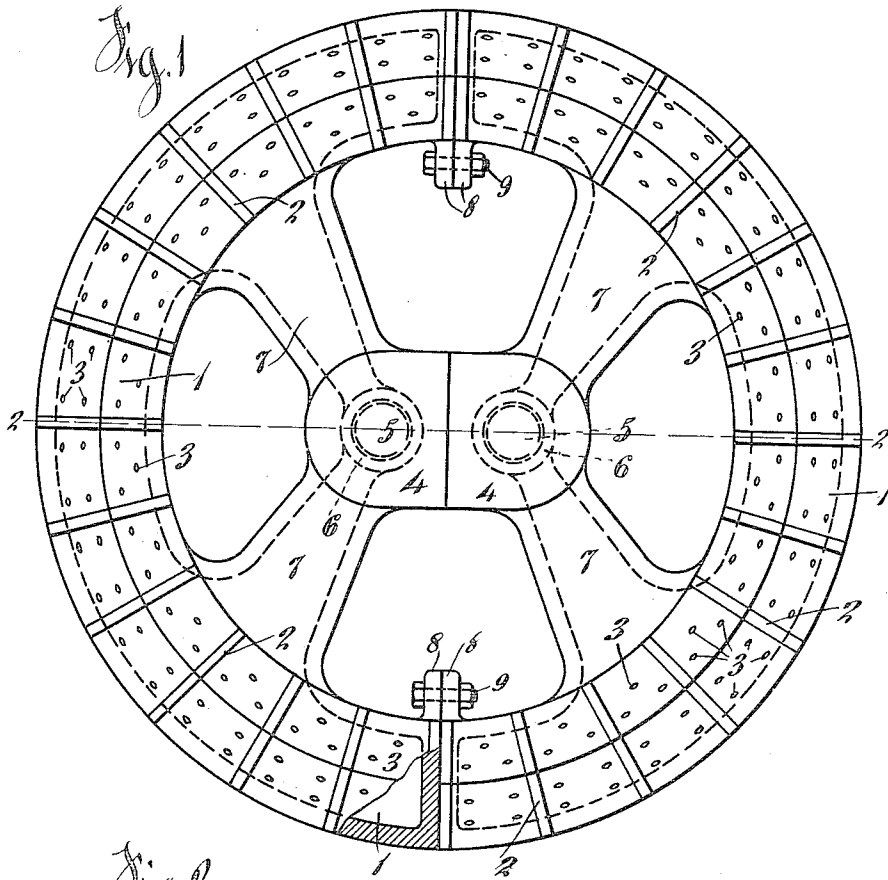
J. H. CARVER.
GAS BURNER.

APPLICATION FILED DEC. 20, 1909.

971,117.

Patented Sept. 27, 1910.

2 SHEETS—SHEET 1.



Witnesses
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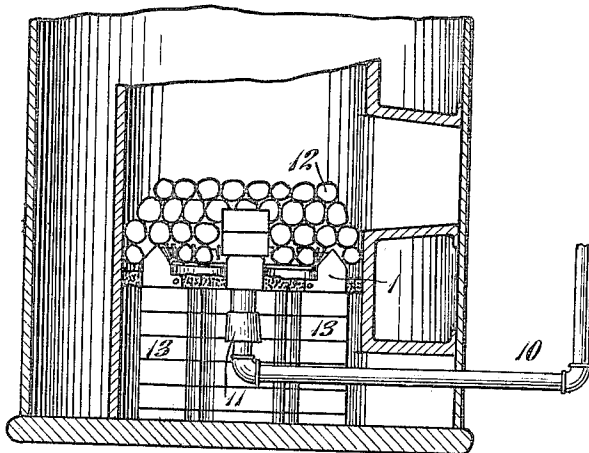
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Fig. 3



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GAS-BURNER.

971,117.

Specification of Letters Patent. Patented Sept. 27, 1910.

Application filed December 20, 1909. Serial No. 534,160.

To all whom it may concern:

Be it known that I, JOHN H. CARVER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton 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 gas burners, and more particularly to that form of gas burner which is adapted for use in heating furnaces.

The object of my invention is to improve and render more efficient the type of gas burner having the burning surface thereof arranged on its outer surface for the purpose of throwing the heat to the sides of the furnace where it is most desired and where it is utilized to the best advantage.

My invention consists in a gas burner having its outer portion tapered at its top and adapted to be made in sections, each section being preferably an exact duplicate of the other and each adapted to be used simultaneously or separately as desired; in providing a series of ribs upon the tapered top and a series of openings through said tapered top between said ribs, said ribs being adapted to form supports for fire clay balls, and a space between said openings and said fire clay balls.

My invention also consists in the details of construction and in the novel features herein set forth and claimed.

In the drawing which serves to illustrate a preferred construction of my invention: Figure 1 is a plan of my improved burner when made in two sections. Fig. 2 is a cross section taken on the line 2—2 of Fig. 1. Fig. 3 is a vertical section through a furnace showing my device installed therein.

In the construction of gas burner illustrated, I provide a hollow rim 1 having a tapered top provided with a series of transverse ribs 2 thereon and having a series of perforations or openings 3 extending through said tapered top between said ribs to allow the escape of gas therethrough and at which points the gas is ignited. Hub portions 4 having inlets 5 and enlarged receptacles 6 therein are provided. Hollow arms 7 connect the hub portions 4 with the hollow rim portion 1 and form supports for the latter. The ribs 2 upon the tapered rim may be either integral therewith or separate. These ribs prevent the fire clay balls 12 or other heat retaining substance which may be

placed on the top of the burner rim from obstructing the holes 3 and thereby retarding the flow of gas therethrough.

Each section of the burner is provided with lugs 8 formed integral with the hollow rim 1 through which bolts 9 are adapted to pass to connect the sections of the burner together, each section being operative independently of the other. When connected together they form one complete circular burner having separate inlets, one inlet being provided for each section of the complete circular burner so that such number of sections as desired may be used, depending upon the amount of heat desired. In this manner, with the burner illustrated, it is possible to use just one-half of the burner if it is not desired to allow the full capacity of both sections to be used at the same time.

My improved burner may be mounted upon bricks 13 inside of the furnace, the fire grate of the furnace being removed. In this manner, it is easy to place the burner at any height desired inside the furnace. The gas enters through the pipe 10 and receives air at 11 which is mixed and intermingled therewith in its passage into the burner. It will be seen that by means of this construction the gas and air become thoroughly mixed while it is passing through the receptacle 6, hollow arms 7 and hollow rim portion 1. The total area of the holes 3 is preferably figured to be as great or even greater than the area of the inlet, thereby allowing the gas and the air to have free exit from the hollow rim 1 and not retard the flow of the mixture of gas and air at all. In this form of gas burner it has been found that if the mixture of gas and air is retarded by not having a large enough outlet that the gas will escape before the air and thereby cause more gas to be consumed than necessary.

What I claim as new and desire to secure by Letters Patent is:

1. A gas burner of the character described comprising a hollow circular sectional rim provided with a tapered top having transverse ribs thereon and perforations between said ribs, hollow hub portions, each having an inlet, a hollow arm connecting each hollow hub portion to its hollow rim, and means for connecting said sections together, substantially as and for the purposes set forth.

2. A gas burner of the character described made in halves, means for fastening said halves together, each half being a separate

gas burner in itself, each half having a hub portion provided with an inlet, a plurality of hollow arms extending from said hub portion to a hollow rim portion, said hollow rim portion having a tapered, perforated top, and means for preventing the obstruction of the perforations in the top of said hollow rim portion when heat retaining members are placed upon the top of the burners, substantially as set forth and for the purposes specified.

3. A gas burner of the character described made in sections and comprising a hollow rim portion, the top of which is raised in the center and having holes therein, means for preventing the obstruction of the holes in said top, when heat retaining members are placed thereon, a hub portion, hollow arms connecting said hollow rim portion to

said hub portion provided with inlets, and means for connecting the sections of the burner to each other, substantially as and for the purposes set forth.

4. A gas burner of the character described made in sections, each section being a complete burner in itself, and having an inlet chamber, a hollow rim portion provided with openings, hollow arms connecting the rim portion with the inlet chamber, and means for preventing the obstruction of the openings in said hollow rim portion when heat retaining members are placed on the top of the burner, substantially as set forth.

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