

No. 639,185.

Patented Dec. 12, 1899.

C. H. RESOR.
GAS BURNER.

(Application filed Dec. 1, 1898.)

(No Model.)

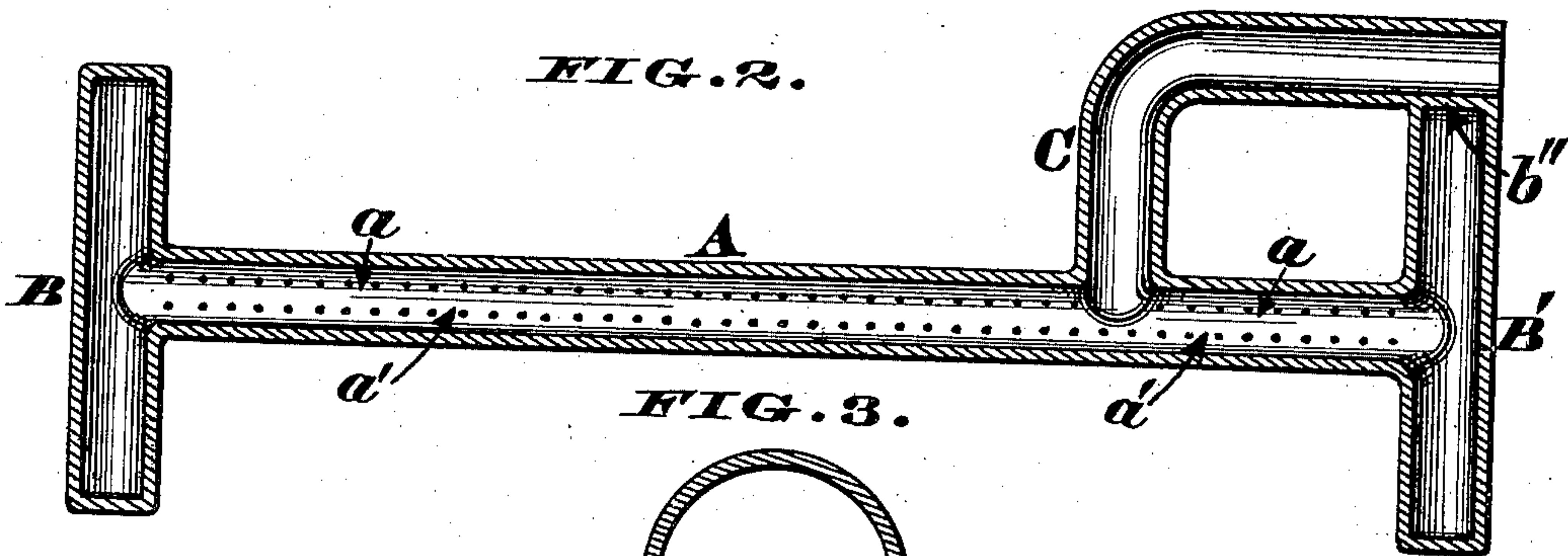
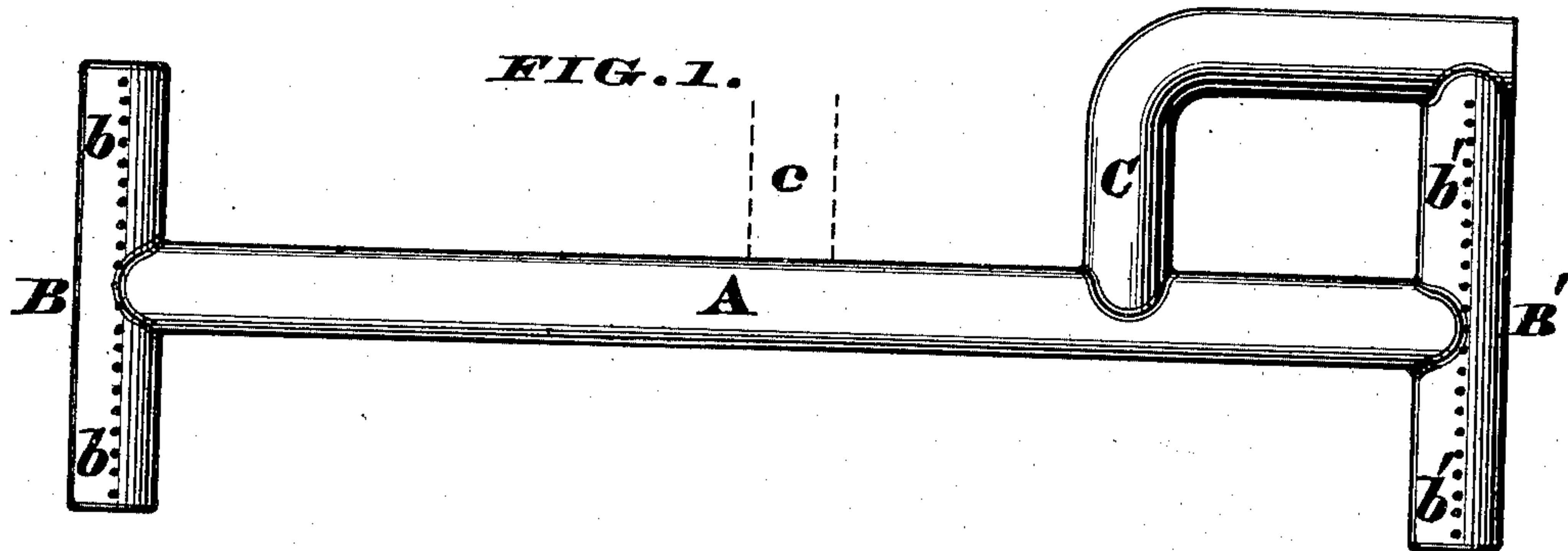


FIG. 3.

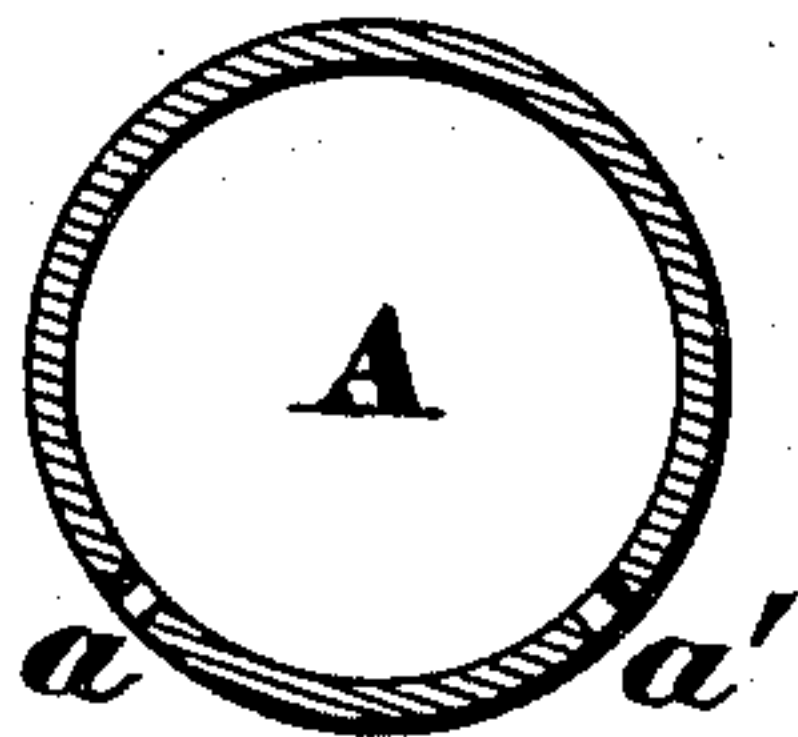


FIG. 4.

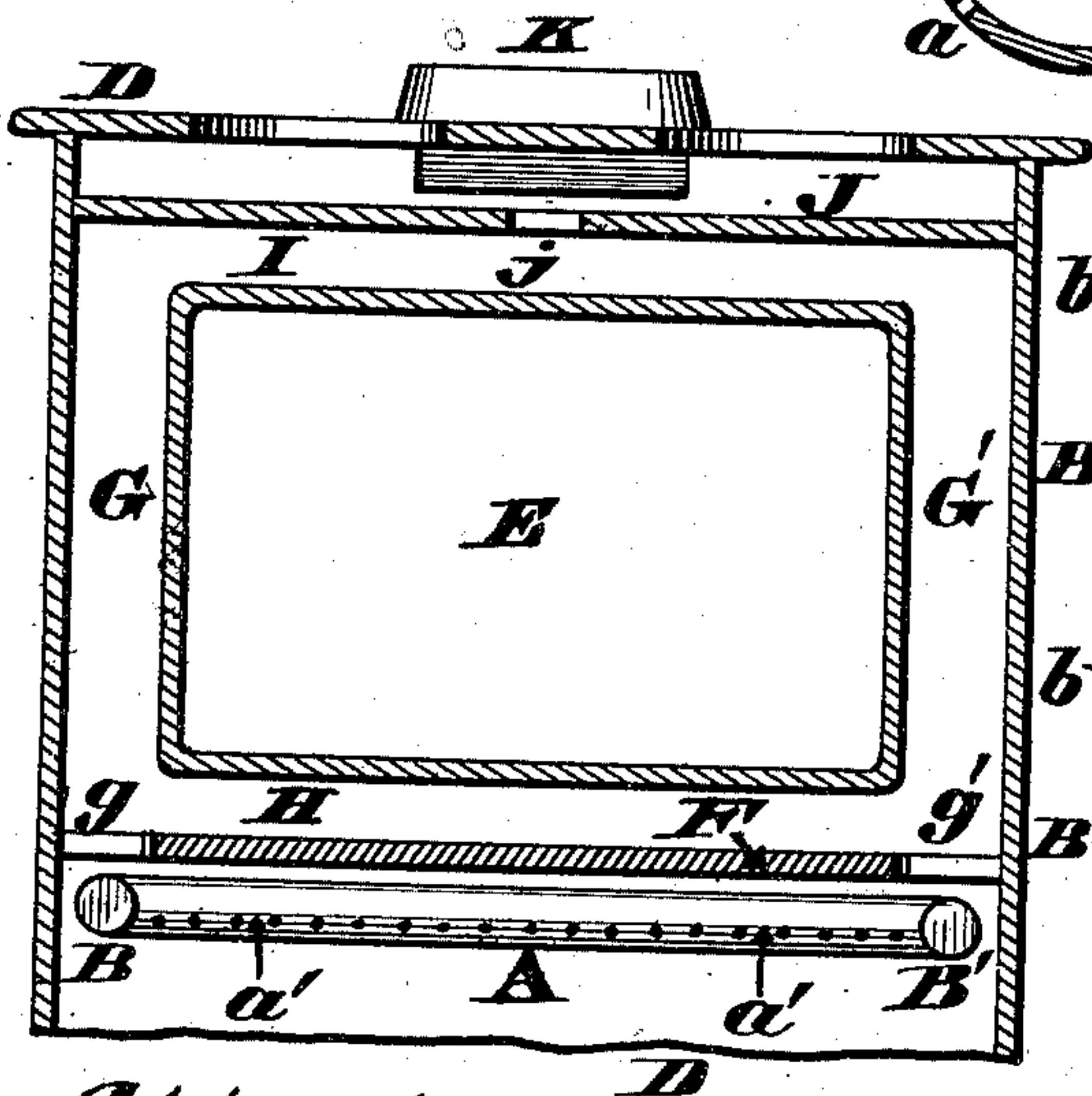
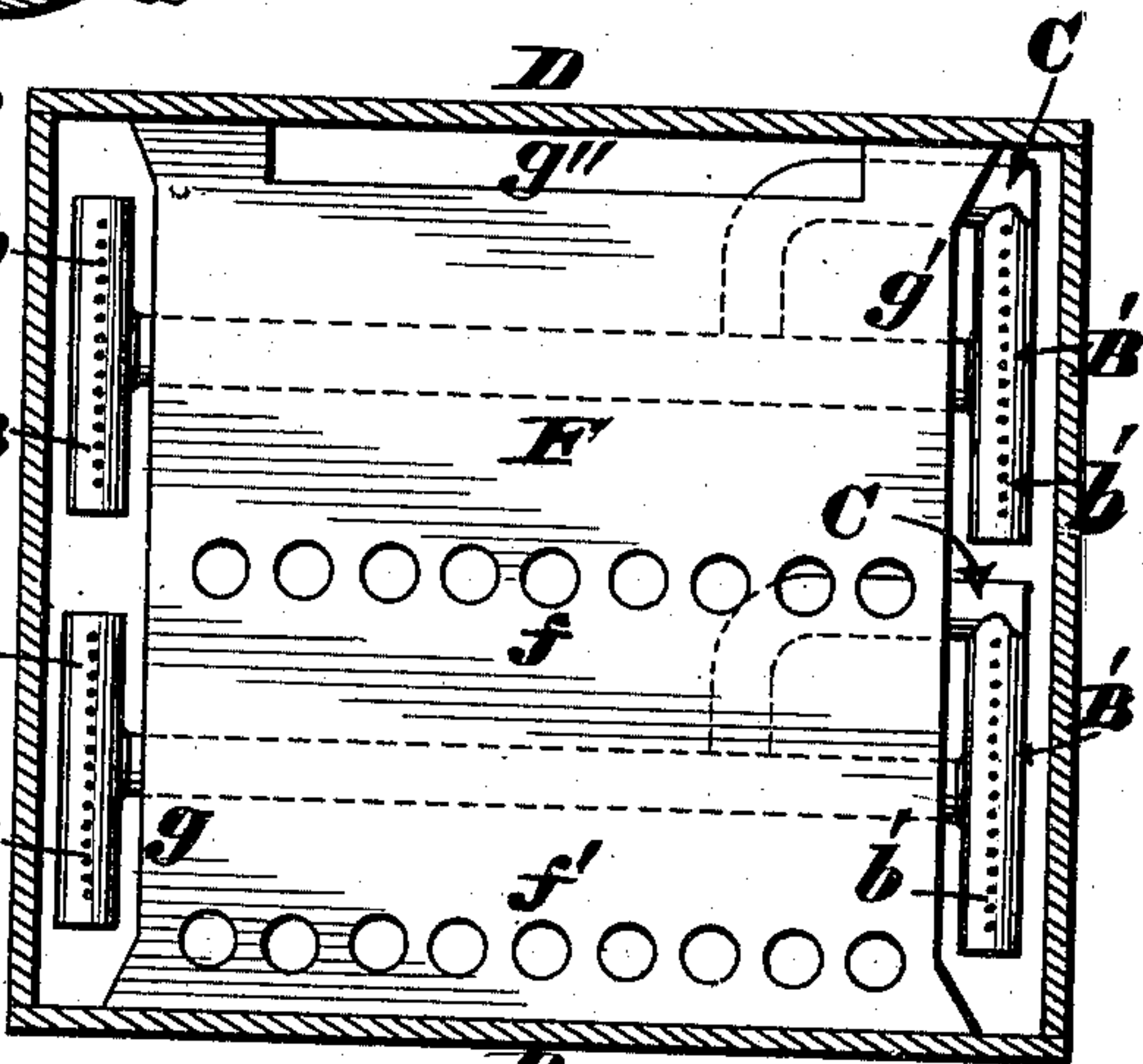


FIG. 5.



Attest.

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UNITED STATES PATENT OFFICE.

CHARLES H. RESOR, OF CINCINNATI, OHIO, ASSIGNOR TO THE WILLIAM
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GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 639,185, dated December 12, 1899.

Application filed December 1, 1898. Serial No. 697,955. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. RESOR, 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; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

My invention comprises a novel burner to be used in a gas-range, whose construction insures a very thorough and uniform heating of the oven, which oven is housed within an inclosing shell and has a flue at each side. Located under said oven is a deflector or baffle-plate and between the edges of said plate and the shell are passages in line with the aforesaid side flues. Arranged below this baffle-plate is the burner proper, the principal member of which is a main pipe extending horizontally across from side to side of the range and having at each end a T branch or lateral, an inlet being provided for said main pipe at any suitable place intermediate of said branches. Again, these end laterals and the main pipe from which they proceed have numerous small perforations that serve as ventages for the escape of gas, and by locating said laterals under the passages at the edges of the baffle-plate the heat from the ignited gas-jets traverses said passages and then ascends directly within the side flues of the range; but the ignited jets issuing from the main pipe are spread out or dispersed against the under side of said plate, thereby heating the bottom of the oven, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of my improved gas-burner. Fig. 2 is a longitudinal section of said device. Fig. 3 is an enlarged transverse section through the main pipe of the burner. Fig. 4 is a vertical section, taken from side to side, of a gas-range having said burner fitted therein. Fig. 5 is a horizontal section of said range, taken directly above its baffle-plate.

A represents the principal member or main pipe of the burner, and B B' are the T branches or laterals at the opposite ends of

said main, which parts A B B' may be separate tubes secured together in any suitable manner; but preferably they constitute a single integral cast-iron pipe of sufficient capacity to supply all the gas required for heating a range or other similar cooking apparatus.

a a' are ventages arranged along the under side of the main pipe, as more clearly shown in Fig. 3, and b b' are similar perforations in the upper sides of the branches B B'.

C is a common inlet for the entire burner, which inlet leads into the main pipe A at any suitable point between its branches.

b'' in Fig. 2 is a partition that prevents any flow of gas from the pipe C directly into the branch B'.

This burner is used to the greatest advantage in a gas-range constructed substantially as shown in Figs. 4 and 5, wherein D is the outer shell of such a cooking apparatus and E is its oven. F is a deflector or baffle-plate fitted within the range at any suitable distance below the oven and so arranged as to spread the flames issuing from the main pipe A of the burner. This plate does not extend completely across from side to side of the range, but is of such a size as to leave passages g g' between it and the shell D. Again, these open spaces or passages g g' are in line with the flues G G', extending up at the opposite sides of the oven, as more clearly shown in Fig. 4. g'' is another passage communicating with a vertical flue at the back of the oven. In addition to these side and rear passages the baffle-plate has usually two distinct rows of holes f f' for the products of combustion to enter a flue H below the oven, above which latter is a top flue I, having its ventage through a slot j of plate J. K is a neck for the attachment of a smoke-pipe. I prefer using a pair of my burners with such a range and arrange them so as to bring their branches B B' B B' directly under the passages g g'. Consequently this arrangement causes the main pipes to extend completely across from side to side of the baffle-plate F and just below it, as more clearly shown in Fig. 5. Suitable connections are made with the two inlets C C, and when gas is let into the burner and ignited the numerous jets issu-

ing from the ventages *a a'* of the main pipes soon produce a very intense but uniform heat under the oven E, while at the same time its sides are heated by the flames discharged from the perforations *b b'* of the branches or laterals B B'. Furthermore, all the heated currents ascending within the side and rear flues of the range unite in the upper flue I before escaping through the narrow outlet *j*, and as a result of this intimate union of these currents the oven is as hot at top as at bottom. It will thus be apparent that the entire oven, except its front, is surrounded with hot products of combustion, and for this reason all articles placed in said oven are thoroughly and uniformly cooked without running any risk of being burned. Finally, the dotted lines *c* in Fig. 1 show that an inlet may project from the mid-length of the main A and be carried out at the front or back of

a range; but a side connection is preferred for obvious reasons.

I claim as my invention—

A gas-burner consisting of a perforated main pipe A, having perforated laterals B, B', and, between said laterals, an inlet C; in combination with a range consisting of an oven E, side flues G, G', a baffle-plate F, and passages *g, g'*, communicating with said side flues; the burner proper being so fitted within the range as to cause the heat from said laterals B, B', to traverse said passages *g, g'*, and flues G, G', in the manner described, and for the purpose stated.

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

CHARLES H. RESOR.

Witnesses:

JAMES H. LAYMAN,
EARLE R. PASSEL.