

No. 621,248.

Patented Mar. 14, 1899.

A. HELLER.
GAS BURNER.

(Application filed Nov. 9, 1898.)

(No Model.)

Fig. 1.

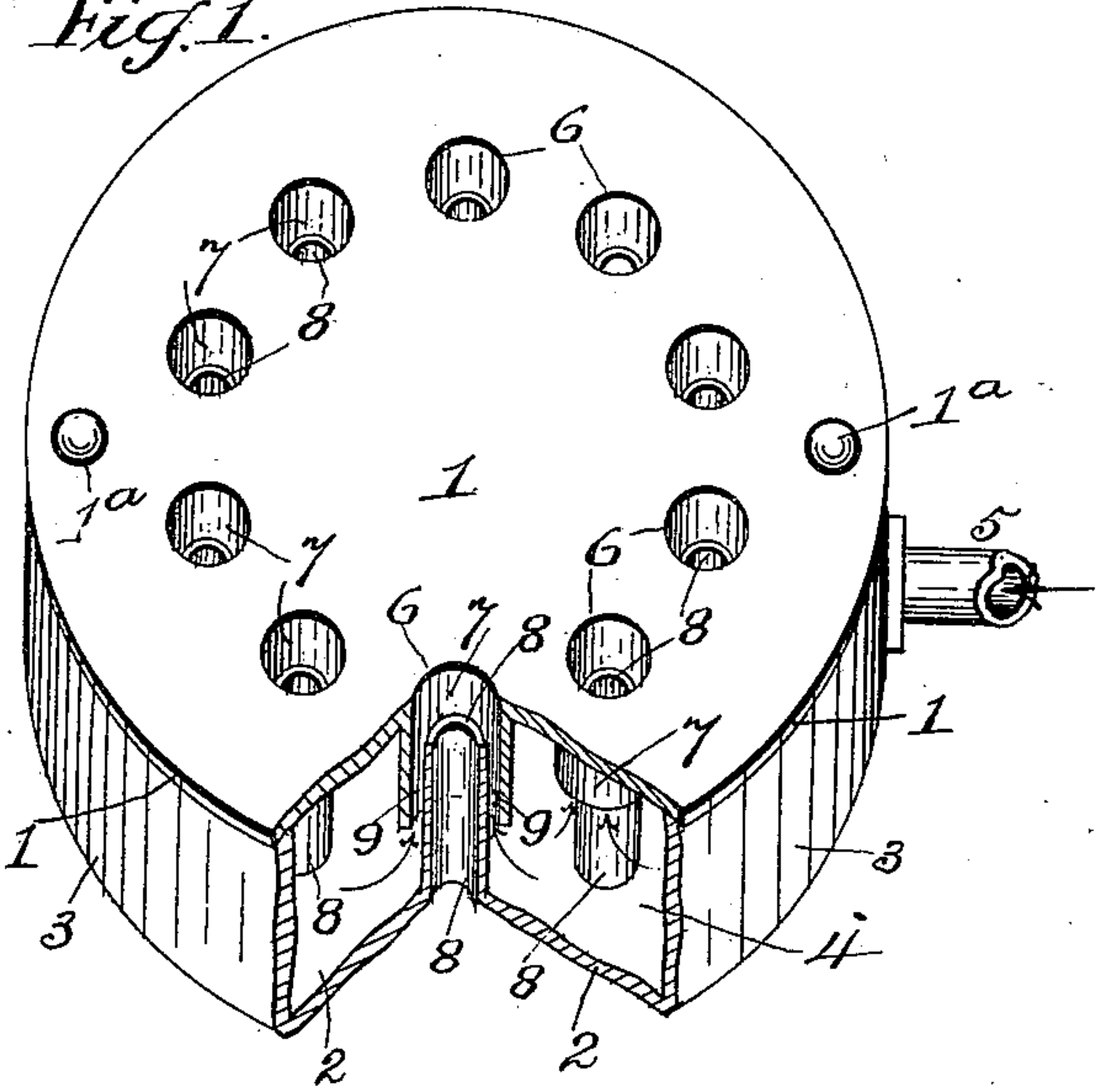


Fig. 3.

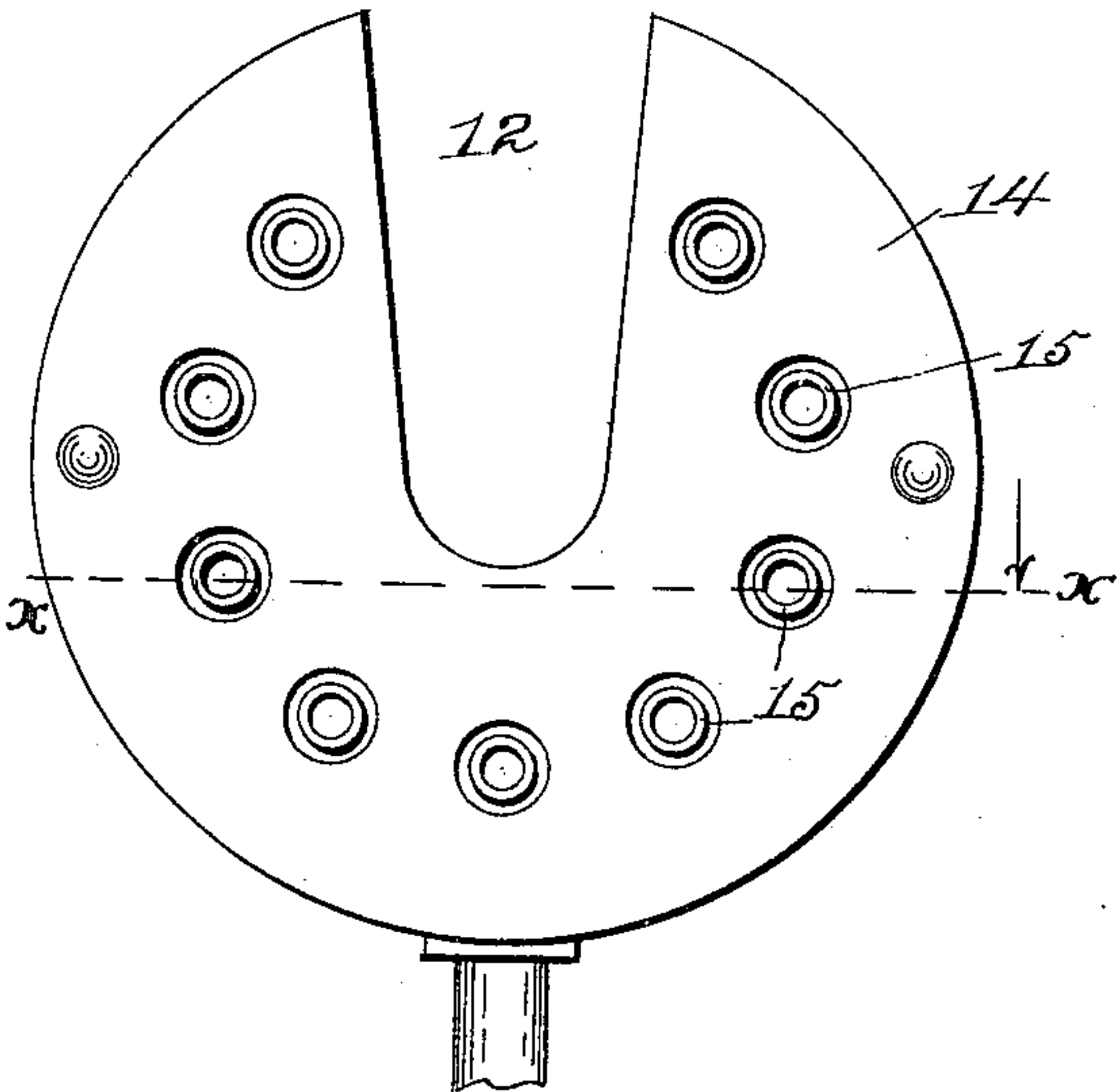


Fig. 2.

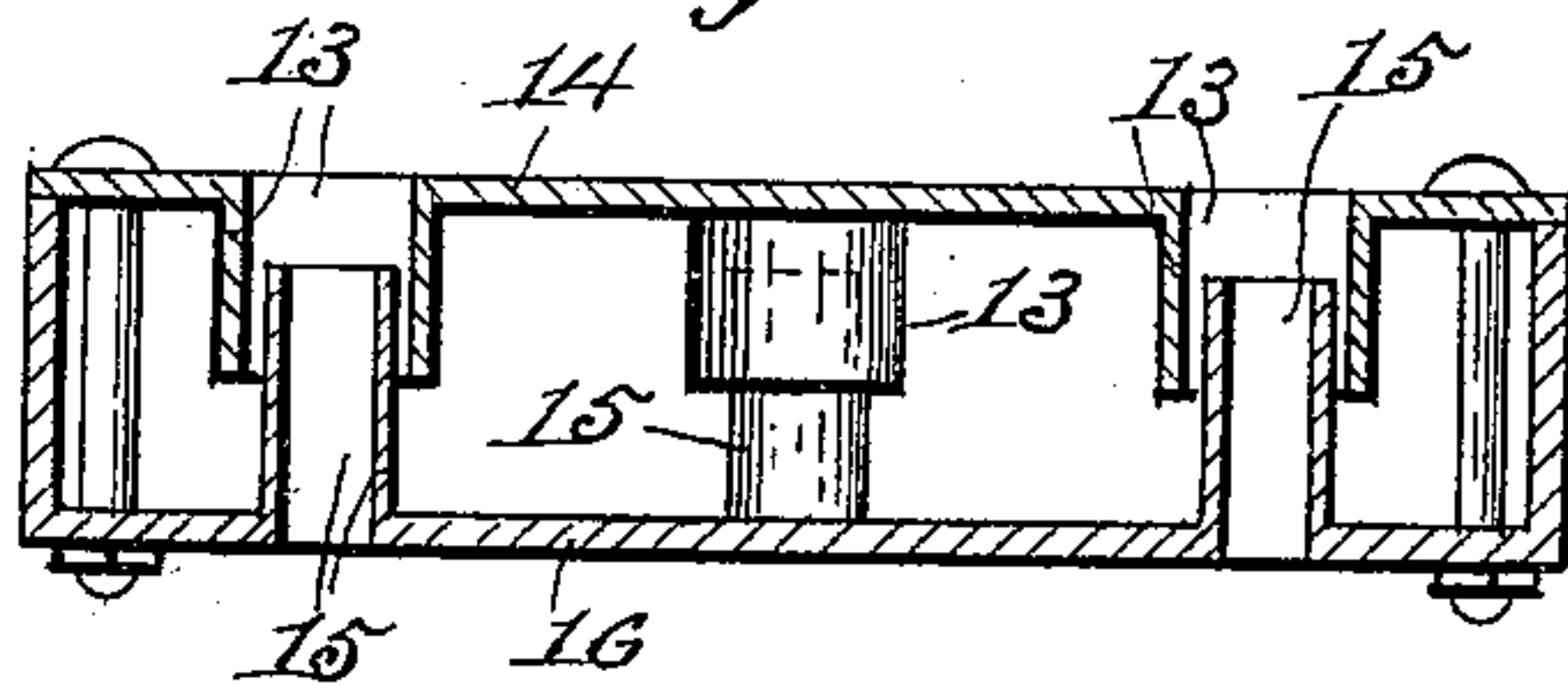
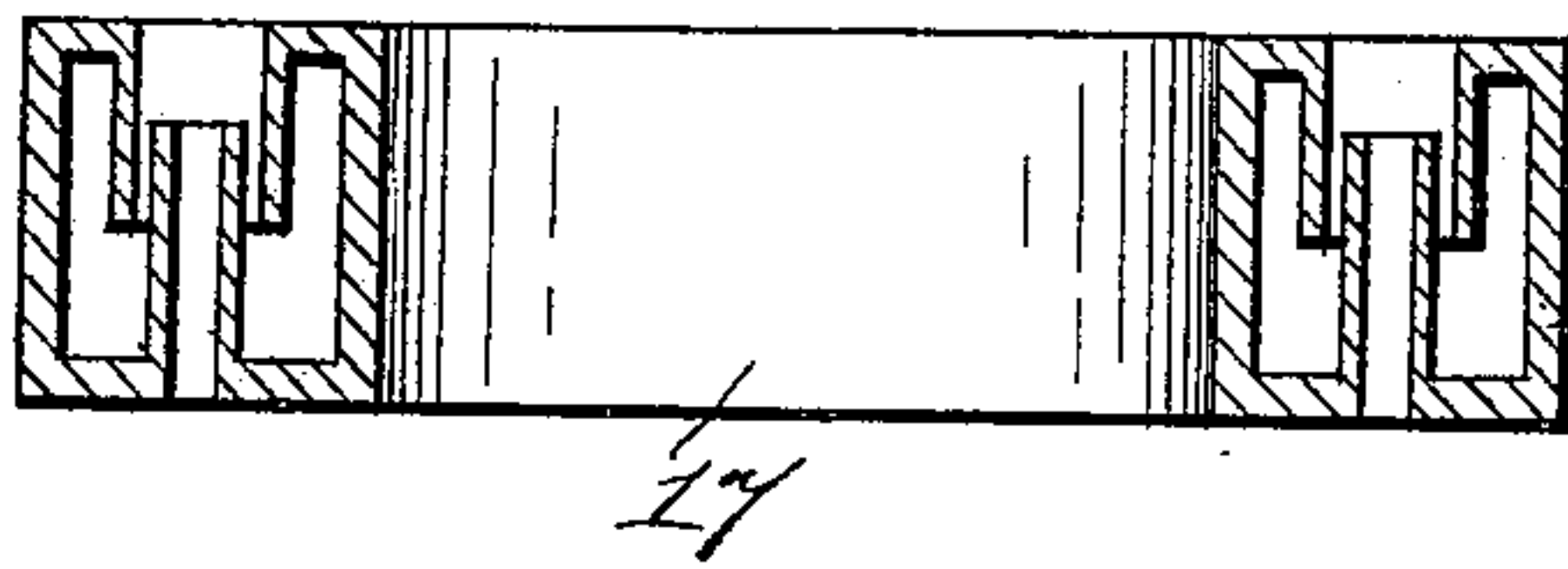


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

ADAM HELLER, OF BALTIMORE, MARYLAND.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 621,248, dated March 14, 1899.

Application filed November 9, 1898. Serial No. 695,961. (No model.)

To all whom it may concern:

Be it known that I, ADAM HELLER, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to gas-burners, and particularly to a portable burner adapted for domestic or other heating purposes.

The prime object of the invention is to provide an improved gas-burner of novel and peculiar construction and arrangement of parts to produce combustion upon the inside of the top of the gas-chamber or within gas-tubes depending from said top, so that each blaze given by such combustion will be solid or compact, without interruption in the body of the blaze as it comes from the top of the burner. This result is accomplished by any of the burners hereinafter disclosed. In all burners of this class now known by me the combustion takes place upon the outside of the top of the burner and is interrupted by a tube or pipe around which the blaze is formed, or combustion is made in air-tubes having gas-apertures and projecting above the top of the burner, or combustion takes place below the open top of the burner around an air-tube extending above a gas-tube, the mouth of the air-tube interrupting or deflecting the blaze laterally. It is to overcome these objections and defects and to produce a simplified improved burner having great heating capacity that my invention is intended.

In the accompanying drawings, forming part of this application, Figure 1 is a perspective view, partly in section. Fig. 2 is a section on the line *x x*, Fig. 3. Fig. 3 is a top view of a modification. Fig. 4 is a section of a further modification.

The same numeral references denote the same parts throughout the several figures of the drawings.

The casing consists of a top 1, bottom 2, and sides 3, constructed and arranged together to form a gas-chamber 4. As shown in the drawings, the said parts are secured together by bolts 1^a, and the casing is circular, but it may be any desired form or shape, and provided with a gas-inlet 5 to the chamber 4.

The top 1 has holes 6, from which depend

into the chamber 4 open gas-tubes 7, having a solid or non-perforated wall. These tubes are preferably cast or formed integral with the top 1, though they may be otherwise connected.

The bottom 2 has air-tubes 8 in the chamber 4, which tubes project upward and terminate in the tubes 7, with an interval or space 9 between the tubes 7 and 8 for the passage of gas and the mingling of the latter with the air.

It is obvious that the gas passes from the chamber 4 into the space 9, meets the air from the tubes 8 in the tubes 7, where combustion takes place and whence the blaze is emitted in a straight solid uninterrupted mass.

The form of burner shown in Figs. 2 and 3 is U-shaped or has an opening 12 from its edge to the center of the burner. This burner has gas-tubes 13 depending from its top 14 and upwardly-projecting air-tubes 15 from its bottom 16, which terminate in the tubes 13, the top tubes being larger than the bottom tubes for the purpose of forming the space hereinbefore referred to.

In the form of burner shown in Fig. 4 the same tubes are employed, the only difference being in the shape of the burner, which is all in one piece and has a central opening 17, making a ring-shaped burner.

I do not wish to be understood as limiting myself to any particular size, shape, or material in the manufacture of the burner nor to the purposes to which it may be applied.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a gas-burner, the combination, with the casing forming a gas-chamber, and having holes in its top and bottom, of the tubes depending from the top holes, and the tubes projecting from the bottom holes into the said depending tubes, to leave a gas passage or space from said chamber between the telescoping portions of the tubes.

2. In a gas-burner, the combination, with a casing forming a gas-chamber, and having holes in its top and bottom, of the tubes depending from the top holes and terminating in the chamber above the bottom holes, and the tubes projecting from the bottom holes and terminating in the depending tubes so as

to leave a gas-passage from the chamber between the tubes, and a combustion-space in the depending tubes.

3. In a gas-burner, the combination, with
5 a casing forming a gas-chamber, of the open tubes depending from the top of the casing and terminating in said chamber, and the open tubes projecting from the bottom of the casing and terminating in the said depending

tubes, to leave a gas-passage, and a combustion-space.

In witness whereof I hereunto set my hand in the presence of two witnesses.

ADAM HELLER.

Witnesses:

WILLIAM H. H. BINYON,
J. P. B. SADTLER.