No. 784,168. PATENTED MAR. 7, 1905.

R. T. MALIN.

GAS BURNER.

APPLICATION FILED APR. 23, 1904.

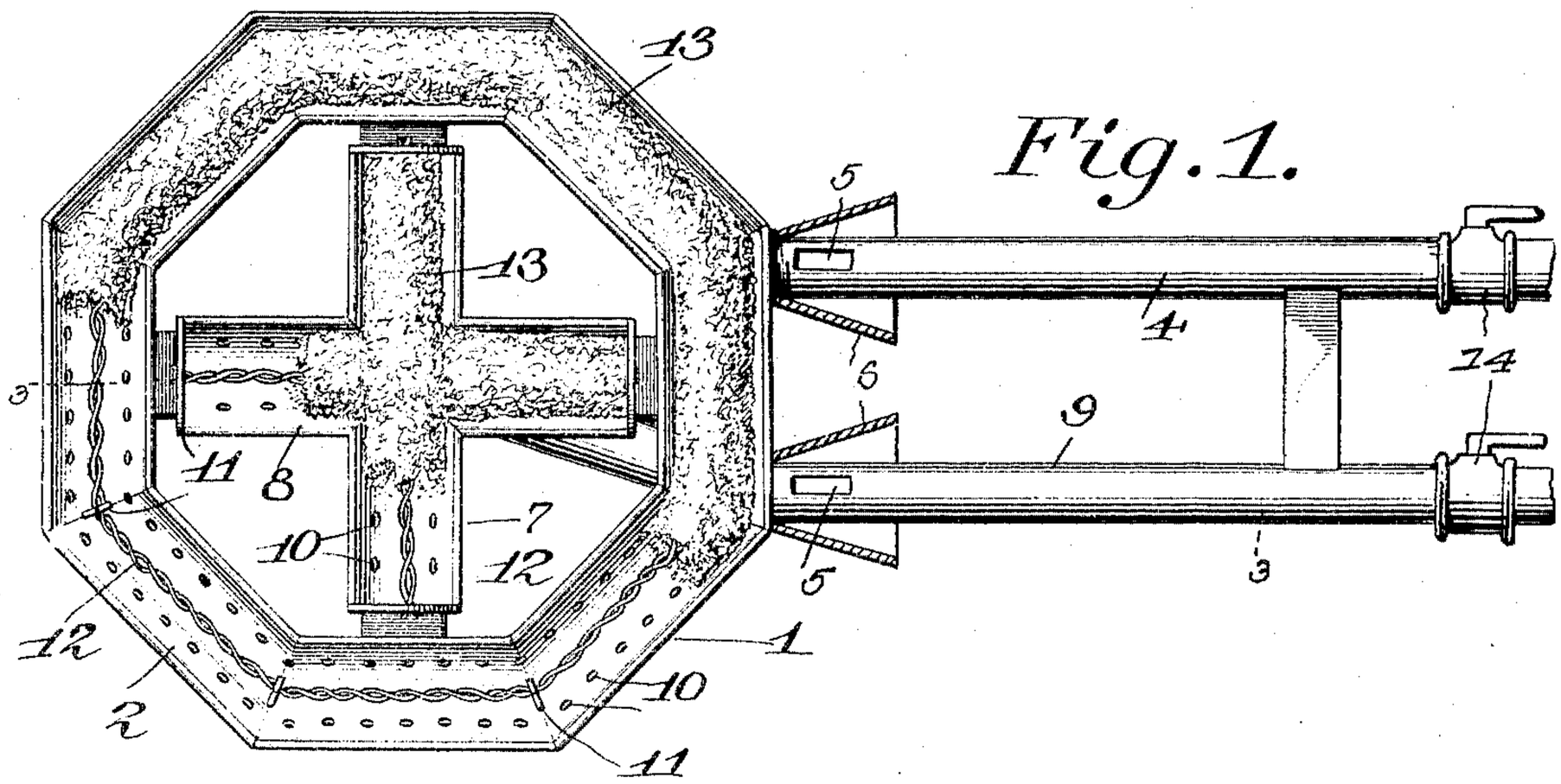

Fig. 1.

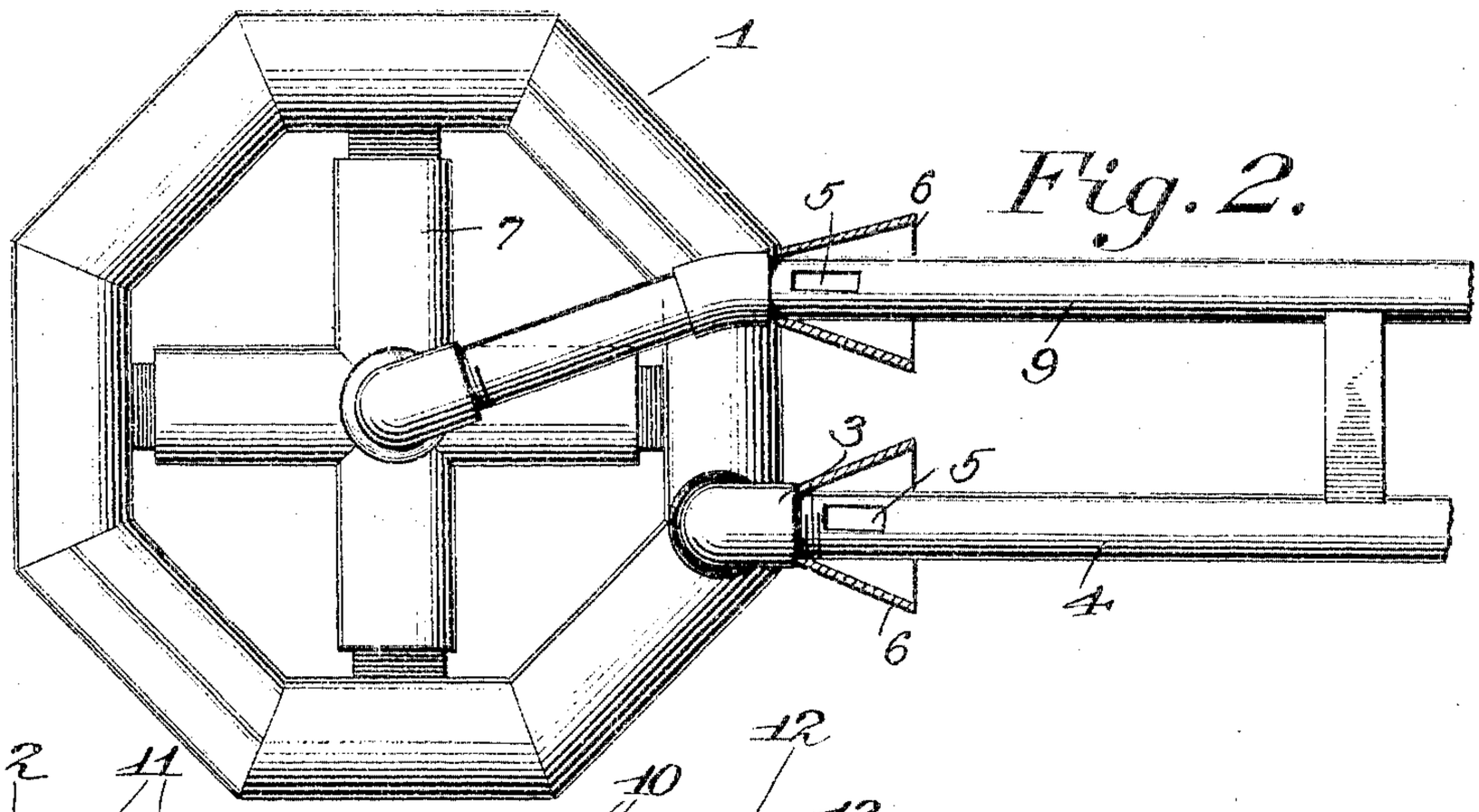

Fig. 2.

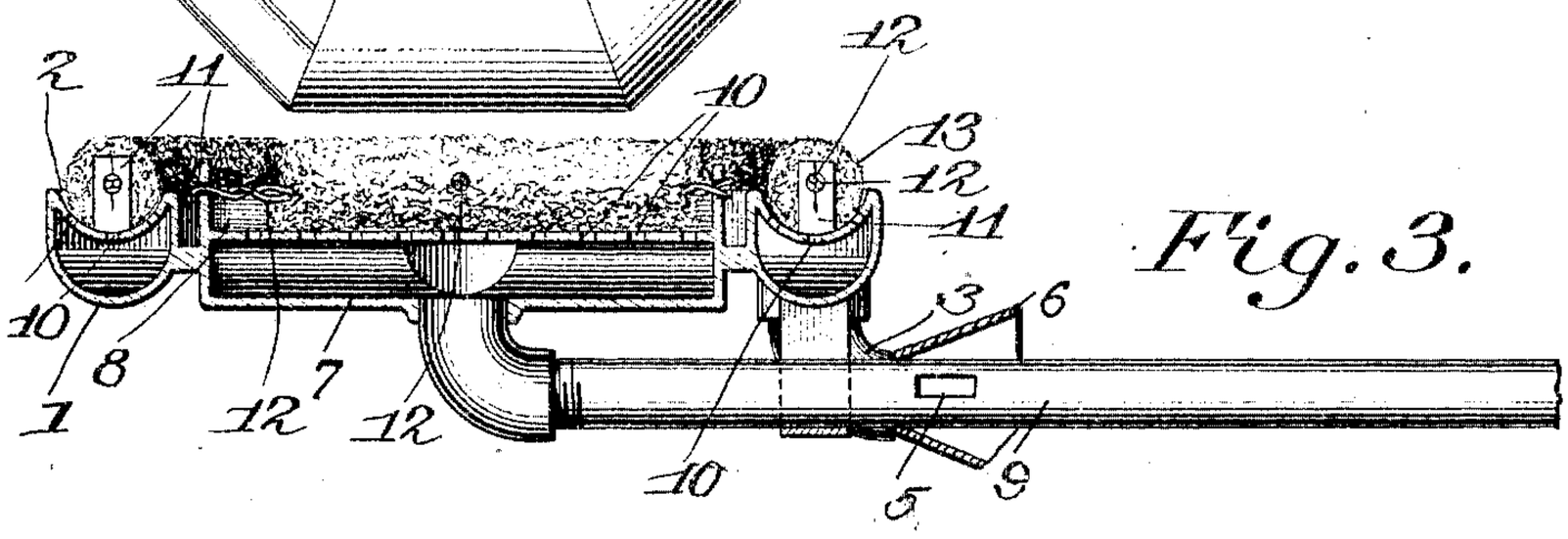

Fig. 3.

Witnesses
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No. 784,168. Patented March 7, 1905.

UNITED STATES PATENT OFFICE.

RICHARD THOMAS MALIN, OF DENVER, COLORADO.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 784,168, dated March 7, 1905.

Application filed April 23, 1904. Serial No. 204,630.

To all whom it may concern:

Be it known that I, RICHARD THOMAS MALIN, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented a new and useful Gas-Burner, of which the following is a specification.

This invention relates to gas-burners; and it has for its object to provide a burner for gas cooking stoves and ranges which shall be simple in construction, durable and inexpensive, and by means of which a great amount of heat may be quickly developed and advantageously applied to the cooking vessel placed above the burner in order that the contents of such vessel may be very quickly heated and brought to a boiling temperature, which is sometimes desirable and important—such as, for instance, in candy making, where it is frequently of great importance that the candy should be raised to the boiling-point very swiftly in order that the best results may be attained.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a gas-burner constructed in accordance with the principles of the invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a transverse sectional view taken on the line 3 3 in Fig. 1.

Corresponding parts in the several figures are indicated by similar numerals of reference.

The burner of this invention includes an annular tube or chamber 1, which is constructed preferably of cast-iron and which may be circular or polygonal in outline, as may be preferred, the upper side of said annular tube or chamber being provided with a dished portion, forming a trough or gutter 2. The under side of this annular tube or chamber is connected by an L 3 with a gas-supply pipe 4, which is suitably connected with the source of supply and which may be provided with means for the admission of atmospheric air into the annular chamber 1, which constitutes a mixing-chamber. These means for the admission of atmospheric air have been illustrated in the nature of slots 5 and a funnel 6.

7 designates a cruciform hollow casting the upper side of which is dished, as shown at 8, to form a trough or gutter. This cruciform casting or chamber is disposed within the annular casing 1 and is supported upon a gas-supply pipe 9, which may also be provided with means for the admission of atmospheric air to the cruciform casting, which also constitutes a mixing-chamber.

The dished portions of the castings or casings which constitute the mixing-chambers 1 and 7 are provided with jet-openings 10, which are formed obliquely in the walls thereof, so that the flames emitted thereto will intersect each other, as will be readily understood. The dished portions of said casings are likewise provided with uprights 11 for the support of wire rods 12, which are plentifully wrapped with asbestos or mineral wool, as shown at 13. The asbestos may be connected with the wire rods by twisting the latter spirally together and causing the asbestos to be held between the twists or coils. Then when the latter are placed in position and connected with the uprights 11 the asbestos filling will be securely retained in the trough-like or dished cavities in the upper sides of the mixing-chambers without interfering with the jet-openings.

It will be seen from the foregoing description that the cruciform mixing-chamber or the annular mixing-chamber may be operated each independently of the other; also, that when desired the two may be operated together, thus producing a flame of great intensity and heat. Each of the gas-supply pipes will be provided with an ordinary valve, as shown at 14, for the purpose of controlling the passage of gas to the mixing-chambers of the burner.

I desire it to be understood that while in the drawings hereto annexed a simple and preferred construction of my invention has been illustrated I do not necessarily limit myself to the structural details therein exhibited, but reserve the right to any changes, alterations, and modifications which come fairly within

the scope of the invention and which may be resorted to without departing from the spirit or sacrificing the advantages of the same.

Having thus described the invention, what is claimed is—

1. In a gas-burner, a mixing-chamber having a dished upper surface forming a trough or receptacle and provided with jet-openings in the sides of said trough, uprights extending from the bottom of said trough, wires supported by said uprights, and refractory material upon said wires.

2. In a gas-burner, a mixing-chamber having a dished upper surface forming a trough or receptacle, uprights in said trough and spirally-twisted wires supported by said uprights, and refractory material intertwisted with and secured by said wires.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD THOMAS MALIN.

Witnesses:
GEO. H. TUCKER,
C. L. RICHARDS.