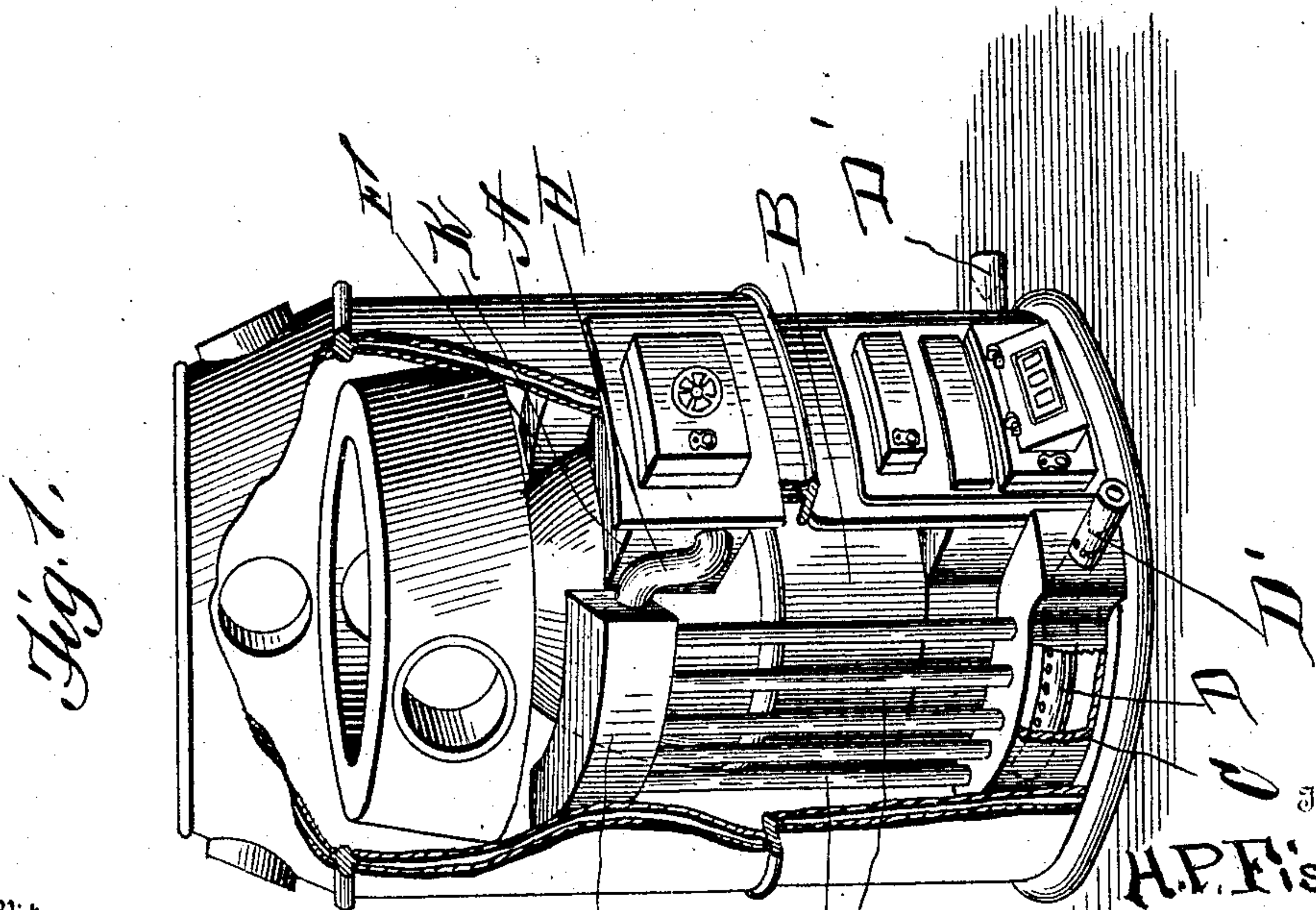
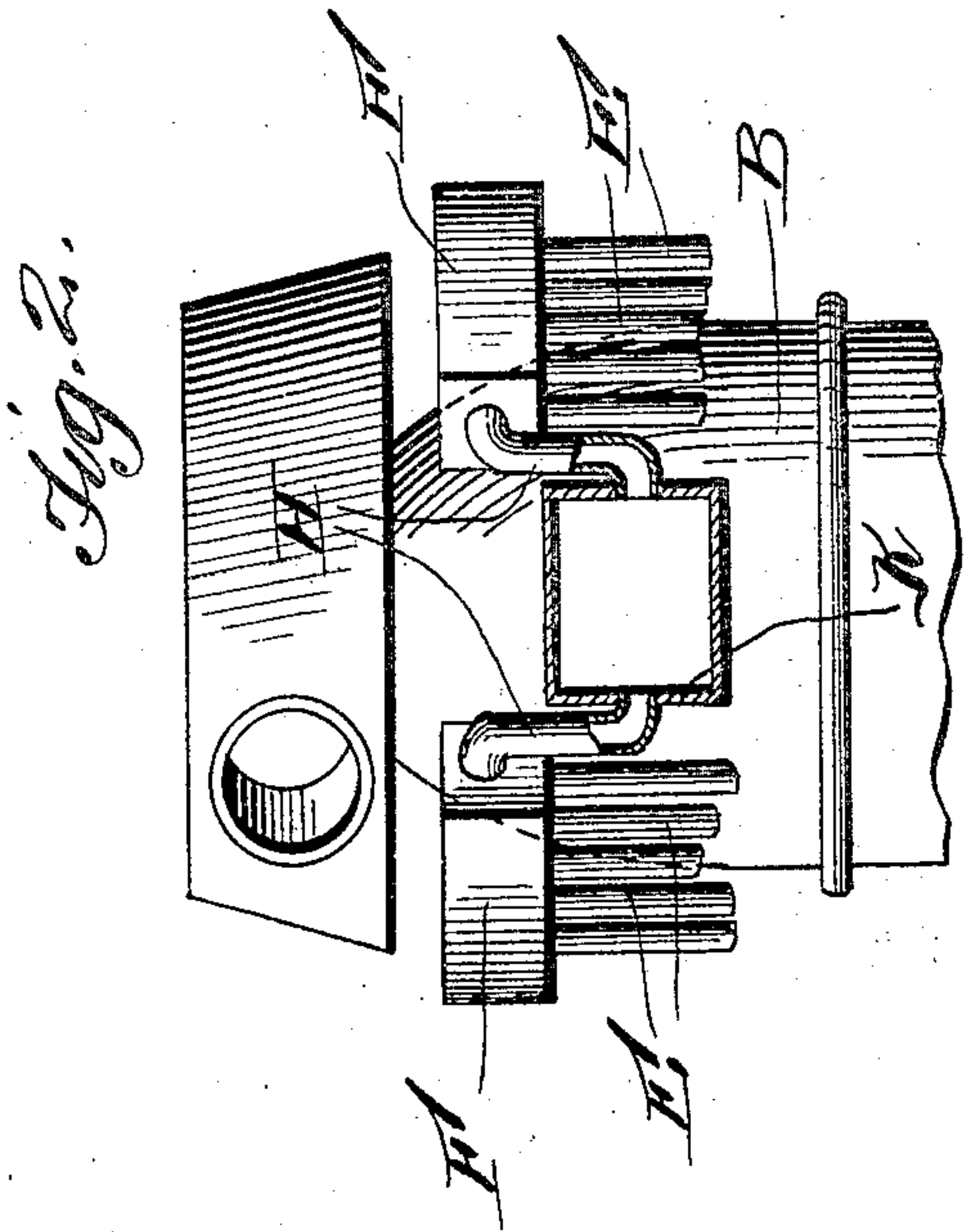


No. 848,543.

PATENTED MAR. 26, 1907.

H. P. FISH.
HOT AIR FURNACE.
APPLICATION FILED MAR. 28, 1906.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY P. FISH, OF YOUNGSTOWN, OHIO.

HOT-AIR FURNACE.

No. 848,543.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed March 28, 1906. Serial No. 308,553.

To all whom it may concern:

Be it known that I, HARRY P. FISH, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Hot-Air Furnaces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in hot-air furnaces; and the object in view is to produce a simple and efficient apparatus which is to be interposed between the fire-pot and the outer casing and comprises chambers conforming to the curvature of the casing and positioned at the upper and lower portions thereof and connected by means of suitable pipes, a gas-burner being positioned within the lower of said chambers, and communication between the upper chambers and the draft-pipe in the fire-chamber.

My invention consists, further, in various details of construction and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claim.

I illustrate my invention in the accompanying drawings, in which—

Figure 1 is a perspective view of a furnace, showing a portion broken away and my improved gas heating apparatus applied thereto. Fig. 2 is a side elevation of a portion of a furnace, parts being illustrated in vertical section.

Reference now being had to the details of the drawings by letter, A designates the outer casing of a furnace, and B the fire-pot, with a space intervening between the same and the casing in which my improved gas heating apparatus is positioned.

C designates a chamber which may be of any suitable size or shape, preferably conforming to the curvature of the space intermediate the fire-pot and casing, and contains a gas-burner D, only one of which being shown, and to which burners air and gas is conveyed through the pipes D' to support combustion.

E E designate a series of small pipes which communicate at their lower ends with said chamber C, and their upper ends are connected to and communicate with a chamber F, which is similar in construction to the chamber C referred to. One end of said chamber F is closed, and its other end is provided with a pipe H, which leads into the box K, in which coal or other fuel is usually applied to the furnace, thereby forming means to establish a draft, and through which box the products of combustion may pass and thence make exit through the usual channel for the smoke or gas of other fuel when used in a furnace. While I have shown chambers C and F positioned upon one side of the furnace and in Fig. 2 have shown two of the chambers F, it will be understood that a second chamber C is positioned underneath the chamber at the right of Fig. 2 and occupying the same relative position in the furnace that the chamber C (illustrated in Fig. 1) occupies.

From the foregoing description, taken in connection with the drawings, it will be noted that by the provision of the gas heating apparatus made in accordance with my invention a furnace may be utilized either for gas or for the usual fuel—such as coal, wood, &c.—without the one interfering with the other and so constructed that the burner may be removed when desired for cleansing or other purposes.

What I claim is—

An improvement in hot-air furnaces comprising, in combination with the fire-pot and casing of the furnace, with a space between the same, a fuel-box leading into the upper portion of the fire-pot, heating-chambers mounted within said space, pipes forming communication between the chambers, burners extending into the lower one of said chambers, the upper of said heating-chambers positioned above the fuel-box, and pipes leading from said upper chambers through the side walls of the fuel-box, as shown and described.

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

HARRY P. FISH.

Witnesses:

W. P. STEWART,
E. W. BURRELL.