

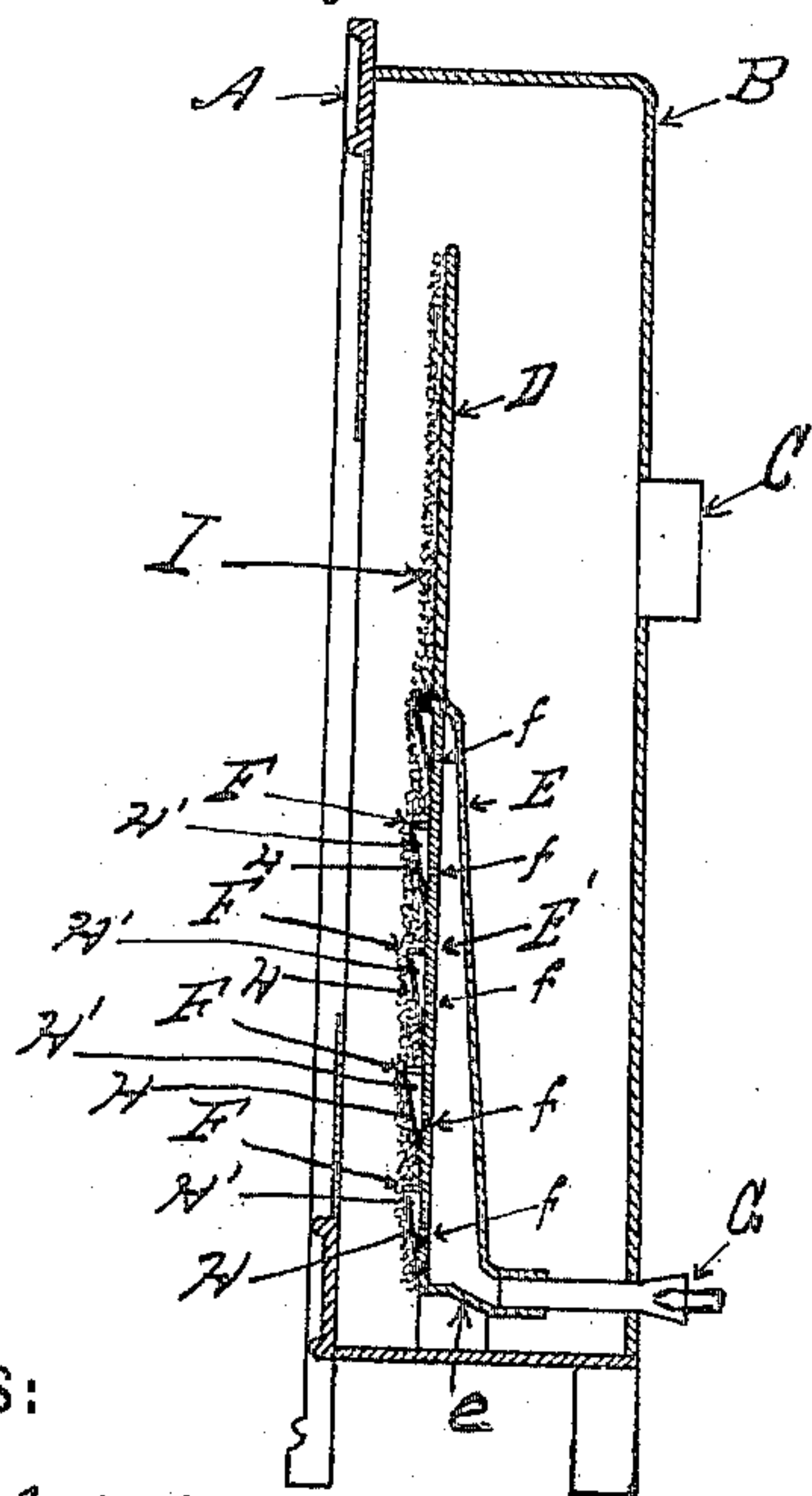
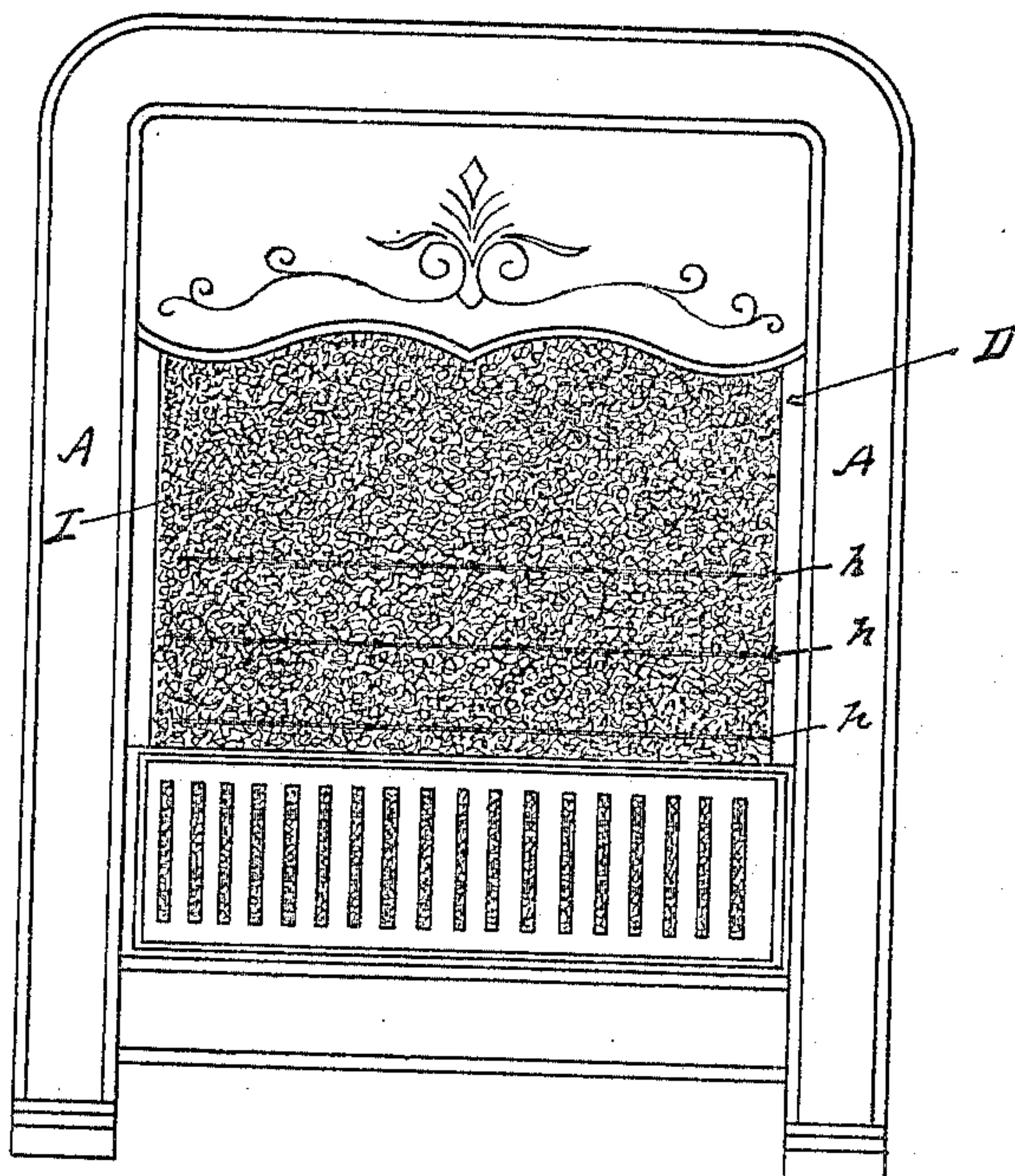
No. 640,462.

Patented Jan. 2, 1900.

E. G. GERMER.
GAS BURNER FOR STOVES.

(Application filed July 12, 1897.)

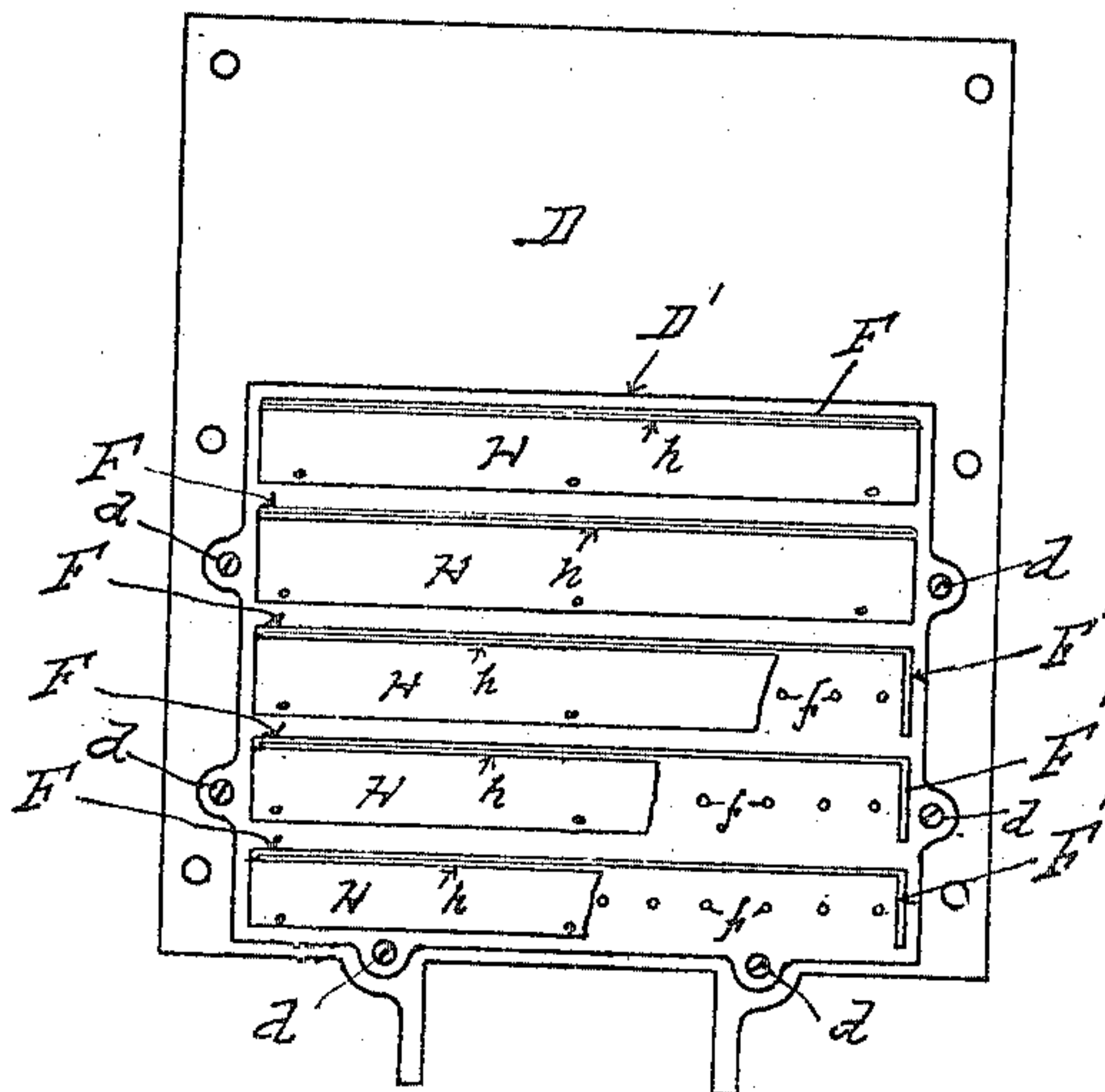
(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD G. GERMER, OF ERIE, PENNSYLVANIA.

GAS-BURNER FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 640,462, dated January 2, 1900.

Application filed July 12, 1897. Serial No. 644,244. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. GERMER, a citizen of the United States, residing at the city of Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Burners for Gas-Stoves; 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 of reference marked thereon, forming part of this specification.

My invention relates to the construction of a vertical gas-fuel burner for stoves having therein an upright chamber the front of which is pierced with small holes for the exit of the gas fuel from said chamber; and it consists in constructing on the face of this plate a series of narrow horizontal auxiliary chambers into which the gas passes from the holes in the front plate, and at the top of each of said chambers there is a narrow slot for the exit of the gas fuel from said auxiliary chambers, the faces of said auxiliary chambers and of the plate being covered with fluff abestos, mineral wool, or other non-combustible material of like character, which becomes incandescent from the heat of the gas fuel burned at the narrow slots in the fronts of the auxiliary chambers. These improvements, together with the other features of my invention, are hereinafter fully set forth in the specification and claims and illustrated in the accompanying drawings, in which—

Figure 1 is a front view in elevation of a gas-stove embodying my invention. Fig. 2 is a vertical central section of the same. Fig. 3 is a front view, partially in elevation and partially in section, of my improved gas-fuel burner with the asbestos covering left off.

In the construction of the invention illustrated in the accompanying drawings, A is the front of a stove, B the shell of the stove, C the opening for connecting a pipe for the escape of the products of combustion, and G the gas-and-air mixer, these features being of usual and ordinary construction.

D is a vertical plate having the back E and the bottom e of the chamber E' cast integral therewith. The front of the chamber E' is

formed of a separate plate D', set into the front of the plate D and secured therein by small screw-bolts d, as illustrated in Fig. 3, by means of which construction the joint between the plates forming the front and back of the chamber E' is so nearly adjacent to the flames issuing from the front of the burner that in case there is any leakage of gas fuel from said joint it is at once consumed. Upon the front face of this plate D' there are a series of horizontal ribs F, terminating at each side of the plate D' in triangular-shaped vertical portions F', each of which extends downward nearly to the top of the rib F next below, and below each of the ribs F there is a row of small holes f through the plate D', so that the gas fuel will pass out through them from the chamber E', and on the front of the plate D', against the sloping vertical ribs F', there are riveted or otherwise secured horizontal strips of metal H, the upper edges of which are placed so near the under surfaces of the horizontal ribs F as to leave narrow horizontal slots h just under the ribs F. These strips H form the front, the ribs F the tops, and the sloping vertical ribs F' the ends of narrow triangular auxiliary chambers H', which extend horizontally across the front of the plate D' and receive the gas fuel from the chamber E' and discharge it through the narrow slits h, directly under the ribs F. These auxiliary chambers superheat the gas fuel, resulting in more perfect combustion, and prevent irregular drafts of air operating to blow out the gas-flame or otherwise disturb the proper operation thereof.

The fronts of the plates D and D' and of the chambers H' are covered with fluff asbestos or with mineral wool I, secured thereto in the usual manner.

Having thus described my invention, so as to enable others to construct and operate the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a gas-fuel burner, of a vertical plate forming the front wall of a vertical gas-fuel chamber and the rear walls of a series of horizontal auxiliary gas-fuel chambers on the front of said plate and having series of openings therethrough for the passage of gas fuel from the vertical cham-

ber into said auxiliary chambers; said auxiliary chambers discharging said gas fuel through narrow horizontal slits in the fronts thereof, substantially as set forth.

5 2. The combination in a gas-fuel burner, of a vertical plate forming the front of a vertical gas-fuel chamber, narrow horizontal ribs on the front of said plate, and horizontal strips secured to the front of said vertical plate below said ribs, so as to form the fronts of auxiliary gas-fuel chambers on the front of said plate communicating with the main gas-fuel chamber by means of small holes through said vertical plate, and discharging the gas fuel
10 received therethrough from the main chamber, through narrow slits between said ribs and the upper edges of the strips forming the

fronts of said auxiliary chambers, substantially as and for the purpose set forth.

3. A gas-fuel burner provided with a face 20 having outwardly-projecting ribs thereon and openings below said ribs to allow the escape of gas fuel, in combination with horizontally-arranged strips over said openings having their lower edges in contact with the plate, 25 and their upper edges next to the outer edges of said ribs but apart therefrom to allow emission of gas, substantially as set forth.

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

EDWARD G. GERMER.

Witnesses:

FRED EINFELDT,
HENRY E. FISH.