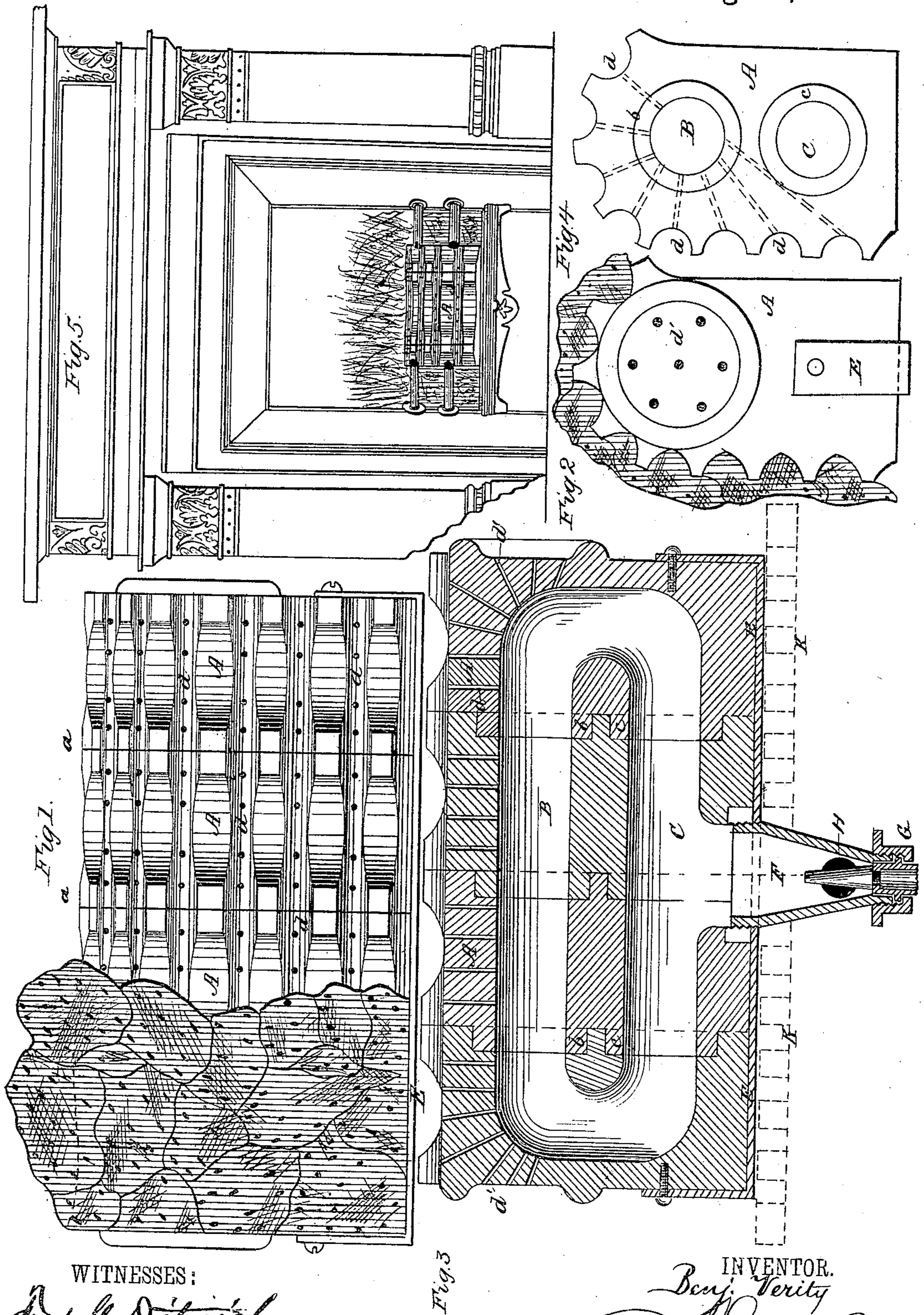


(No Model.)

B. VERITY.  
BURNER FOR GAS FIRES.

No. 263,255.

Patented Aug. 22, 1882.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

BENJAMIN VERITY, OF ST. PANCRAS, COUNTY OF MIDDLESEX, ENGLAND.

## BURNER FOR GAS-FIRES.

SPECIFICATION forming part of Letters Patent No. 263,255, dated August 22, 1882.

Application filed March 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN VERITY, of St. Pancras, in the county of Middlesex, England, have invented a new and Improved Burner for Gas-Fires; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in the burners for gas-fires, made of fire-clay or a mixture of fire-clay and silicate, or of other plastic material; and it has for its object to facilitate the manufacture of the burner, to afford the necessary freedom for expansion and contraction and prevent fracture when in use, to insure a more complete and intimate mixture of the gas and air, and to raise the temperature of the gases before they enter into combustion. The burner is of that class which has heretofore been molded in one piece with a single internal chamber and perforations leading out through the walls of the chamber, at which the gases issue and burn in contact with imitation fuel molded upon or packed around the burner. Such burners have been liable to fracture, owing to the unequal heating, and the consequent unequal expansion at different parts of their length when in use.

My present invention consists in constructing the burner (whether it have one internal chamber, as hitherto, or two, as hereinafter described) of a number of sections or parts juxtaposed and fitted together; and it also consists in constructing the burner with two chambers—an upper and a lower one, extending the whole length of the burner—and communicating with one another at the ends, the gas and air being supplied to the lower chamber, where they become thoroughly mixed and heated before entering the upper chamber, whence they are distributed through perforations radiating from the upper chamber only through the walls of the burner.

In order that the invention may be more readily understood, I have illustrated an example thereof in the accompanying drawings, and will proceed to describe the construction of the burner in detail with reference thereto.

Figure 1 is a front elevation of the burner

partly denuded of the artificial fuel which would usually be molded upon the front and top surfaces of the sections. Fig. 2 is an end elevation, Fig. 3 is a central longitudinal section, and Fig. 4 is an end view, of one of the sections of the burner. Fig. 5 represents a fire-place, the grate-bars and fuel being partly removed to show the burner in position therein.

The burner is composed of any desired number of sections, A, according to its length or size, the joints *a* between the sections being transverse or otherwise.

B is the upper chamber, and C is the lower chamber, running horizontally the one above the other, and connected at the ends, as shown in Fig. 3, by flanges *b c* entering like-shaped recesses in the respective chamber of the juxtaposed section, the joint being luted, if necessary.

*d* are the perforations radiating from the upper chamber, B, to different points of the front and top surfaces, as shown in Fig. 4, these perforations opening into hollows or corrugations formed in these surfaces. The sections are molded of this form, and the imitation fuel, which may also be perforated, is applied over the corrugations and baked on the sections; or it may be packed around the burner after it is placed in the fire-place.

*d'* are perforations leading out from chamber B through the ends of the burner.

The several sections are bound together by a metal strap or clamp, E, extending along the bottom and embracing the ends of the burner, and secured thereto in any suitable manner. This metal strap may be made in one piece with or attached to a hollow boss or bulb, F, fitted in a socket in the bottom of the middle section or sections of the burner, and leading into the lower or mixing chamber, C, as shown, the gas-inlet G being connected to it, as shown, or in any other suitable manner.

H is the air-inlet, the whole forming a Bunsen burner.

K are the ordinary grate-bars of the fire-place, on which the burner simply rests, as shown in Fig. 5.

It will be seen that the burner is complete in itself and requires no fitting.

The sections A are securely bound together by the clamp E, and the bulb F, if made separate therefrom, is screwed into its place before the burner is put into the fire-place, the gas-  
5 inlet being connected afterward.

Having thus described my invention, what I claim as new is—

1. A gas-fire burner having the molded sections A, with perforations *d d'* and clamp E,  
10 as shown and described.

2. A gas-fire burner formed of sections A, and having an upper chamber, B, and a lower

chamber, C, the former provided with perforations *d d'*, and the latter a bulb, F, with inlets G H, as shown, and for the purpose specified.  
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The above specification of my invention signed by me this 2d day of February, 1882.

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Witnesses:

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