(No Model.)

A. GASSIS.

APPARATUS FOR PREVENTING SMOKING IN FIRE PLACES.

No. 385,610. Patented July 3, 1888.

Fig. 4.

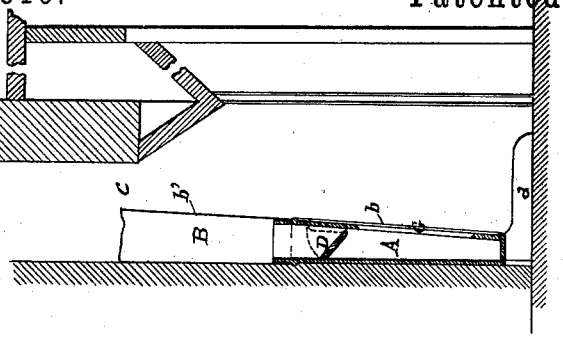


Fig. 3.

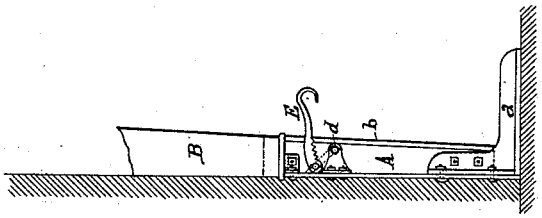


Fig. 1

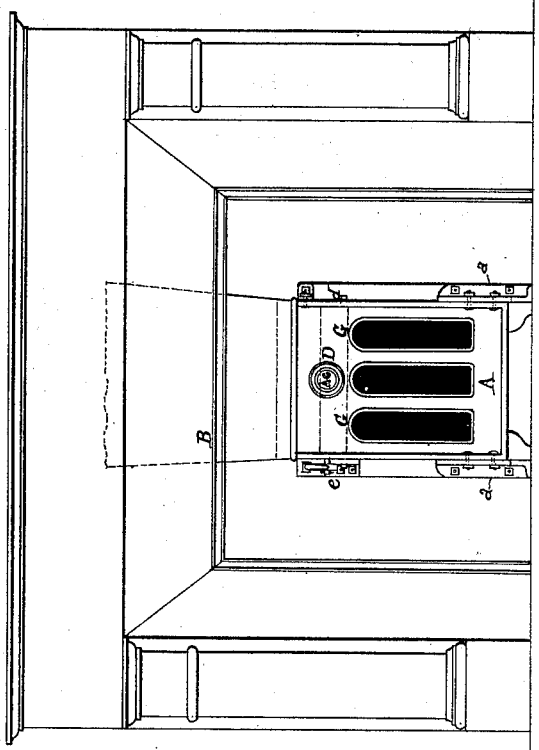
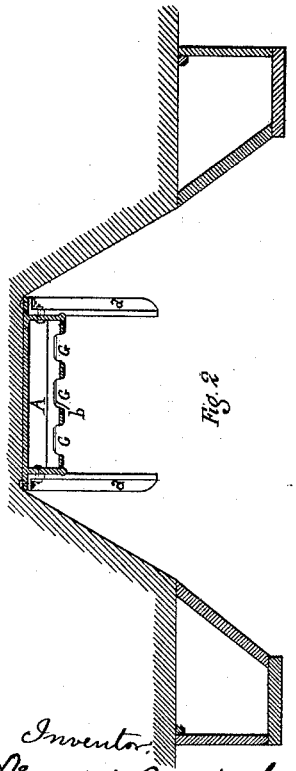


Fig. 2



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UNITED STATES PATENT OFFICE

ARMAND GASSIS, OF CHÂTEAULIN, FRANCE.

APPARATUS FOR PREVENTING SMOKING IN FIRE-PLACES.

SPECIFICATION forming part of Letters Patent No. 385,610, dated July 3, 1888.

Application filed February 21, 1888. Serial No. 264,867. (No model.) Patented in France September 3, 1887, No. 185,603.

To all whom it may concern:

Be it known that I, ARMAND GASSIS, of Châteaulin, in the Republic of France, have invented a new and useful Improvement in Apparatus to Prevent Smoking in Fire-Places, (for which I have obtained a patent in France, No. 185,603, dated September 3, 1887,) which is fully set forth in the following specification.

This invention has reference to the construction of an apparatus or device to be placed in a fire-place for the purpose of preventing the escape of smoke and gases into the apartment.

The apparatus is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a fire-place and mantel having the apparatus referred to; Fig. 2, a horizontal section of the same; Fig. 3, a profile view, and Fig. 4 a central vertical section.

The apparatus comprises two removable parts, one above the other. The lower part is a chamber or casing, A, provided with legs *a*, on which it rests. The upper part is a second chamber or casing, B, forming a prolongation of the chamber A. The apparatus is set against the rear wall of the fire-place, the casing or chamber B extending up into the flue or chimney. The front or face *b* of the casing A is inclined slightly forward from the bottom up and is provided with a number of openings, C, through which a part of the gaseous products of combustion are intended to pass. The front or face *b'* of the upper casing, B, is likewise inclined slightly outward, so that the flue will be contracted at the throat of the chimney, whereby the velocity of the gases that ascend at that point will be accelerated. The flue or chimney is thus divided into two parts—namely, that which is within the upper casing, B, and that indicated by the letter *c*, between the casing B and the breast of the chimney.

As certain flues smoke only occasionally, or according to the condition of the atmosphere or other circumstances, the casing A is provided with a damper, D, supported on two journal-pins, *d*, and capable of being turned by means of a lever-arm, E. The lower edge of the latter is serrated, so that it may be engaged and held by a stationary catch, *e*, in any desired position. By drawing arm E forward the damper may thus be more or less opened and the draft regulated at pleasure. The dotted lines, Fig. 4, show the position of the damper D when opened.

When a fire is burning in a grate in front of chamber A, a portion of the gases passes into said chamber through the openings C. This portion is less mixed with air than that which escapes to the flue above the grate, and is heated to a higher temperature than the latter by the walls of the casing, which are in contact with the fire, and consequently it acquires a greater upward velocity than that of the smoke and gases passing up through the part *c* of the flue. Thus the smoke and gases outside the chamber or casing ascend by their own force and are also drawn upward by the force of the current through the chambers A and B. In this way no smoke will be permitted to remain floating above the grate or to escape into the apartment.

I claim—

1. An apparatus for improving the draft in fire-places and preventing smoking, said apparatus comprising a chamber or casing, an upper casing or chamber forming a prolongation of the first and adapted to extend into the flue of the chimney, the lower chamber or casing being provided with openings for the admission of gases from the fire-place and with a damper for regulating the draft therein, substantially as described.

2. The combination of the lower casing having a face or front inclined outward toward the top and openings therein for admission of part of the smoke and gases from the fire-place, and the upper casing forming a prolongation of the first and having its front similarly inclined, said casings filling part of the flue-space, whereby the smoke and gases passing through them and becoming heated assist in creating a draft in the portion of the flue outside of the same, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ARMAND GASSIS.

Witnesses:
I. DUPONT,
CH. CASALONGA.