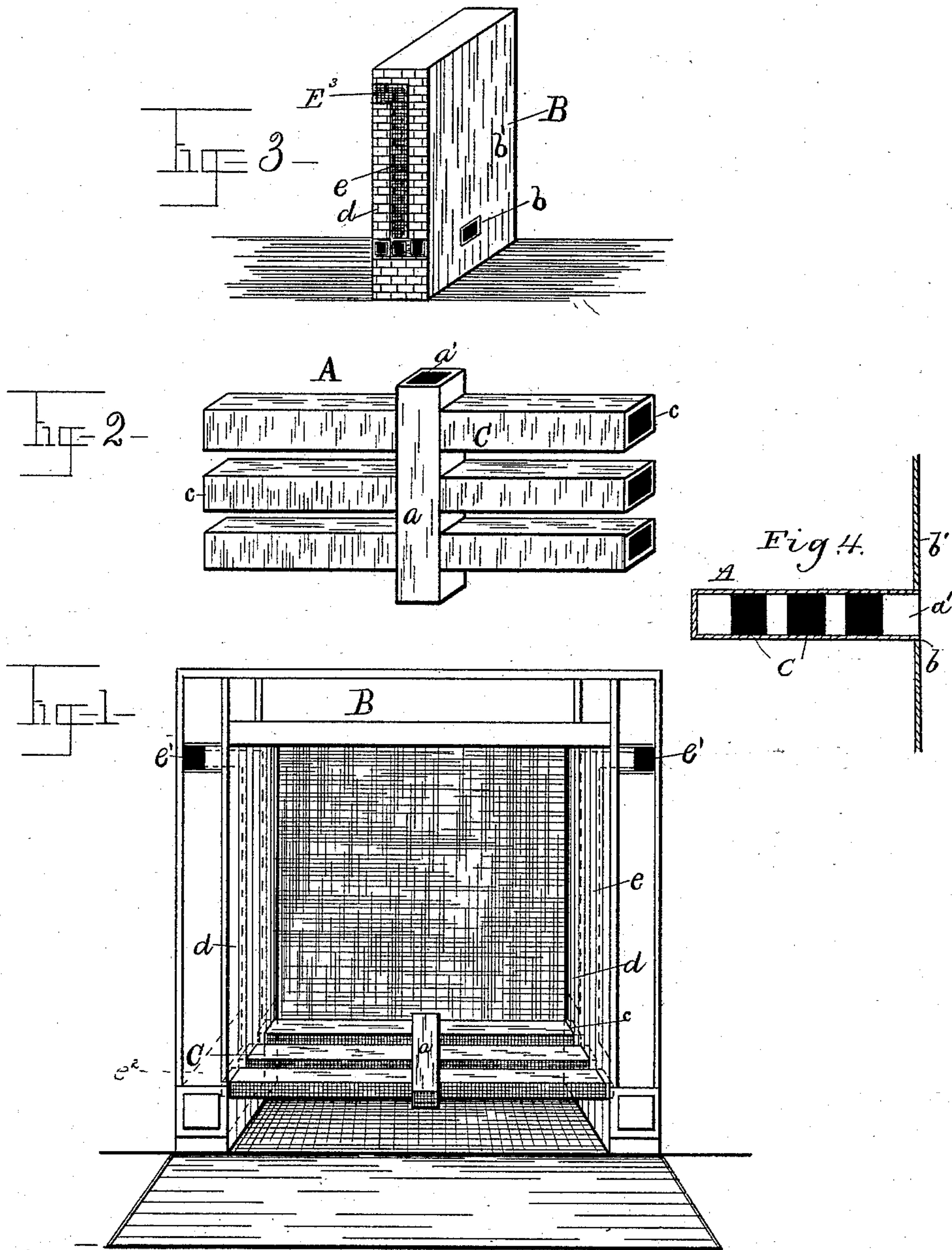


(No Model.)

W. L. NASON.
FIRE PLACE AND GRATE.

No. 418,215.

Patented Dec. 31, 1889.



Witnesses
N. H. Fay
J. D. Fay

Inventor
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UNITED STATES PATENT OFFICE.

WALTER L. NASON, OF CHICAGO, ILLINOIS.

FIRE-PLACE AND GRATE.

SPECIFICATION forming part of Letters Patent No. 418,215, dated December 31, 1889.

Application filed December 3, 1888. Serial No. 292,444. (No model.)

To all whom it may concern:

Be it known that I, WALTER L. NASON, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Combined Hot-Air Grate and Hot-Air Fire-Place, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The object of my invention is to provide an improved construction for heating a room with fresh air; and the same consists in the combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a front perspective of the combined grate and fire-place. Fig. 2 is a perspective of the grate alone. Fig. 3 is a perspective detail view of the back and one side of the fire-place. Fig. 4 is a detail central section view of the grate and connecting portion of the fire-place.

The grate A consists of a central hollow bar *a*, having a closed front end and an open rear end *a'*, and hollow longitudinal bars C, having both ends open, said bars C communicating at their inner ends with said bar *a*, while their outer ends *c* communicate with the flues *e*².

The fire-place B has its back *b'* provided with a cold-air horizontal transverse opening *b*, formed in its central lower portion. The two sides *d d* of the fire-place are each formed with the central vertical flue *e*, with the lower horizontal flue *e*², and with the upper horizontal flue *E*³, provided with the fresh hot-air opening *e'*.

The open rear end *a'* of the grate fits in the cold-air opening *b* of the fire-place back, while the outer ends *c* of the grate-bars C fit in the lower horizontal flues *e*² of the fire-place sides. Each flue *e*² communicates at its central portion with the lower extremity of

the corresponding vertical flue *e*, while each flue *E*³ communicates with the upper extremity of the corresponding vertical flue *e* and extends forwardly therefrom to the front of the fire-place, where it has its discharge-opening *e'*.

The cold fresh air from the outside of the building passes through said fire-place back opening *b* into the central grate-bar *a*, and has escape from the latter only through the longitudinal bars C, from which the air passes, respectively, into the two fire-place side flues *e*², and from the latter the heated air passes up through the two vertical planes *e* and out from the latter into the upper horizontal flues *E*³, from which it has final escape through the front openings *e'* into the room.

I claim—

The combination of the herein-described hot-air grate A and fire-place B, said grate consisting of central transverse hollow bar *a*, having a closed front end and an open rear end *a'*, and hollow longitudinal bars C, having their inner ends communicating with said bar *a* and their outer ends *c* communicating with flues *e*², said fire-place consisting of back *b'*, having its central lower portion provided with the horizontal cold-air opening *b*, and sides *d d*, each having the central vertical flue *e*, communicating at its lower extremity with the horizontal flue *e*², and each said flue *e* communicating at its upper extremity with the horizontal flue *E*³, which extends forwardly and has the front hot-air-discharge opening *e'*, said bar *a* having its rear end *a'* fitted in said opening *b*, and said bars C having their outer ends *c* fitted in said flues *e*², substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 30th day of November, A. D. 1888.

WALTER L. NASON.

Witnesses:

J. B. FAY,
N. H. FAY.