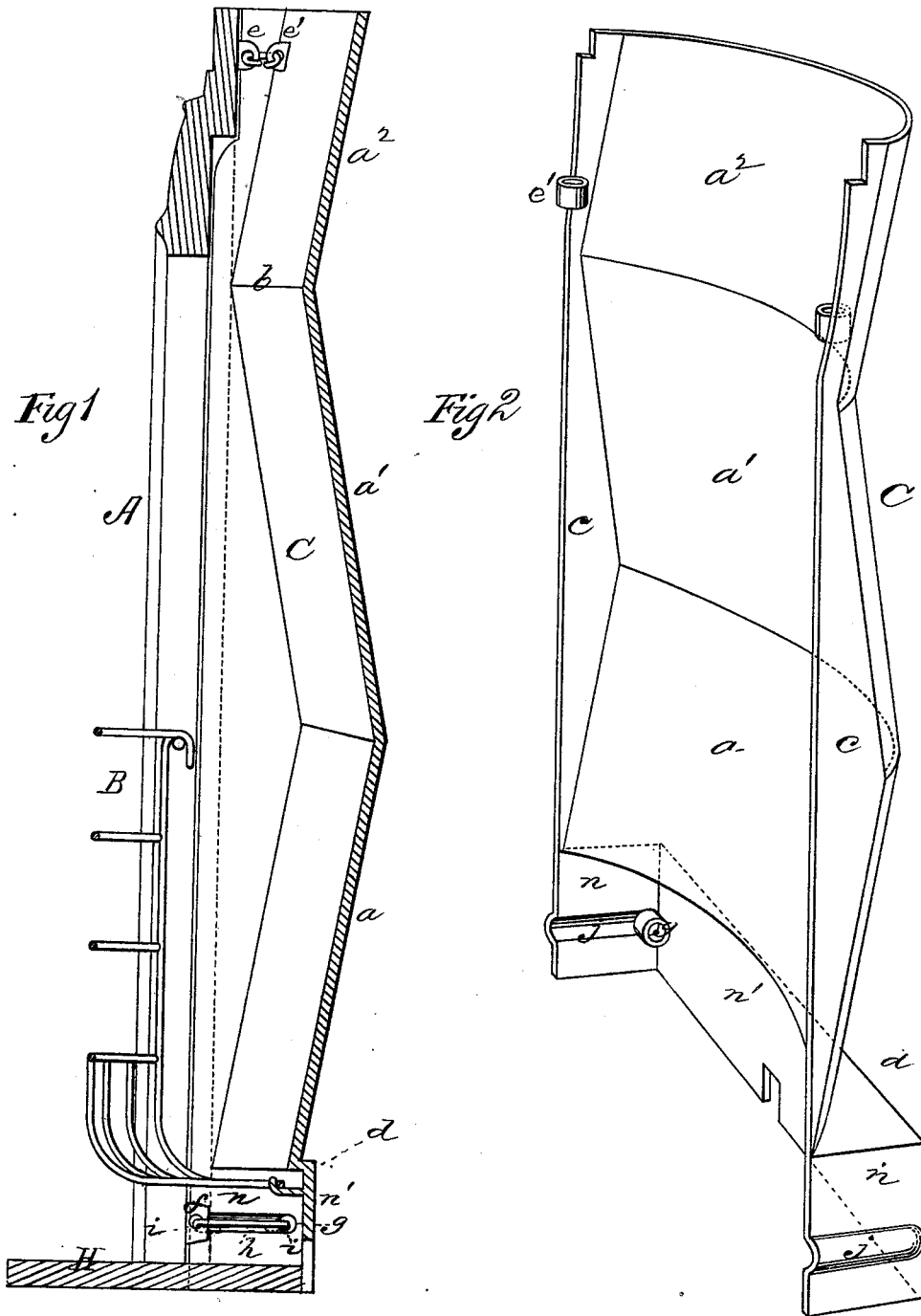


S. B. BAKER.
FIRE-PLACE.

No. 188,838.

Patented March 27, 1877.



WITNESSES:
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UNITED STATES PATENT OFFICE.

SAMUEL B. BAKER, OF NELSONVILLE, OHIO.

IMPROVEMENT IN FIRE-PLACES.

Specification forming part of Letters Patent No. 188,838, dated March 27, 1877; application filed February 10, 1877.

To all whom it may concern:

Be it known that I, SAMUEL B. BAKER, of Nelsonville, in the county of Athens and State of Ohio, have invented a new and valuable Improvement in Fire-Place Backs for Grates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of the grate front and back, and Fig. 2 is a perspective view of the back.

This invention has relation to improvements in metallic backs for grates.

The object of the invention is mainly to devise means for properly securing the back to the fire-place front, and for causing the greatest possible amount of heat to be radiated from the back into the room.

The nature of the invention consists in eyes which are formed in corresponding positions on the front and back, so that they register with each other, and may be secured together by a stout wire rod, bent at each end in the form of a hook. It also consists in a grate-back, having below the chimney-throat a transversely concave and vertically-angular part, against which the product of combustion will be thrown, and from which heat will be radiated from all directions into the room under the same, a shouldered rectangular extension to the hearth, and below its upper surface, and above the said throat, a concave and backwardly-flaring guard-plate or flue-back, extending upward from the concave middle portion of the back, which will direct the smoke into the flue and produce adequate draft, as will be hereinafter more fully explained.

In the annexed drawings, the letter A designates an ordinary fire-place front; B, the grate, and C the back.

This back will be made preferably of cast-iron, and will be, as to its various parts, of the following construction: Its side walls will be at right angles to the back, and its free vertical edges will strictly conform to the form of the inside of the grate-front A. These

walls will have angular rear edges, the salient points being nearly or quite on a level with the upper bar of the grate. The middle portion of the back is composed of two parts, *a* and *a'*, the one above the other, both being transversely concave, and forming an obtuse angle the one with the other. Part *a* extends from the lower edge of the grate backward and upward to a level with the upper bar, at which point it joins the upper part *a'*. This portion extends upward and forward to a point slightly below the highest point of the arch of the front, forming therewith a chimney-throat, *b*, above which is a third plate, *a''*, which extends from part *a* upward and backward a sufficient distance. Parts *a* *a'* *a''* and their side walls *c* are formed in one piece.

d represents the back of the ash-pit formed below part *a*, for the reception of the customary ash-pan. This part will be preferably of rectangular form, and will extend to the rear a sufficient distance to receive the rear of the ash-pan. It may be cast in one piece with the parts *a* *a'* *a''*, and form a component part thereof. As shown in the drawings, the side and back walls *n n'* of the ash-pit back *d* extend downward considerably below the edge of the hearth H. By this means ashes and coals are prevented from getting under the hearth and falling upon the ceiling under the same. *e e'* represent eyes, which are respectively formed on or secured to the front and back above the throat, and which will register the one with the other when the above-mentioned parts are in position. By passing a stout wire through these registering-eyes and drawing it tight the upper parts of the front and back will be securely fastened together. *f f* represent similar eyes, projecting inward from the rear side of the front, and *g* are perforations made in the side walls of the ash-pit back, near their rear edges. Eyes *f* and perforations *g* are on the same level with each other, and below the grate-bottom, and they are connected with each other by means of metallic rods *h*, having end hooks *i*, one of which is engaged with the eye, and the other with the perforation. Each of rods *h* is received in a groove, *j*, formed in the side walls of the ash-pit back, and it is thus kept out of the way.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the front A, having eyes *e f*, of the grate-back C, having eyes *e'*, perforations *g*, grooves *j*, and the hooked rods *h*, recessed in the said grooves, and connecting the said eyes *f* and perforations *g*, substantially as specified.

2. The combination, with a metallic fire-place front, A, of a separate metallic grate-back, consisting of recess *d*, inclines *a a'* *a''*, and sides *c*, as described, extending from below the hearth to above the throat, as shown, and connected to said front by detachable

rods or connections, substantially as specified.

3. The combination, with a metallic grate-back, consisting of the concave middle parts *a a'*, flue-back *a''*, and side walls *c*, of the downwardly-extending ash-pit back *d*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SAMUEL BROWN BAKER.

Witnesses:

P. H. MOORE,

W. C. HICKMAN.