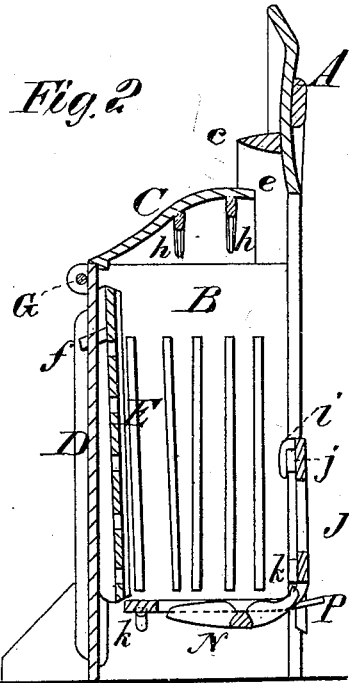
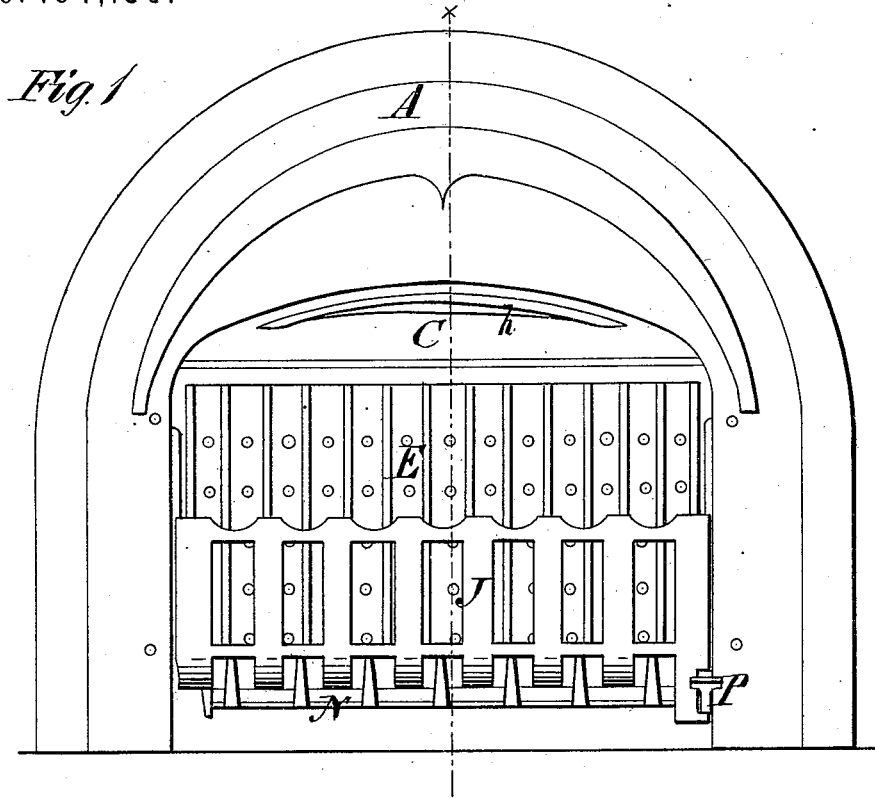


G. W. CUMMINGS.  
Fire-Place Grate.

No. 164,150.

Patented June 8, 1875.



WITNESSES  
*Chas. W. Johnson*  
*A. H. Bates*

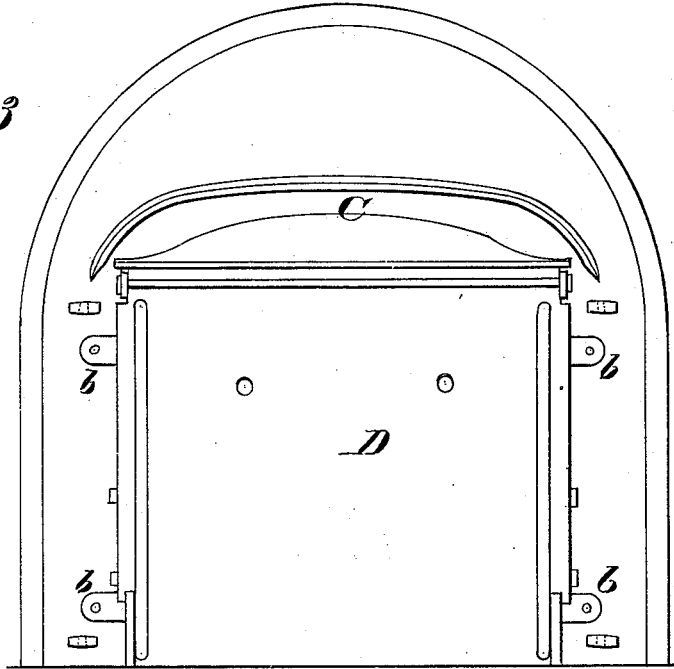
INVENTOR  
*Geo. W. Cummings*  
*Chipman & Osborn*  
 ATTORNEYS

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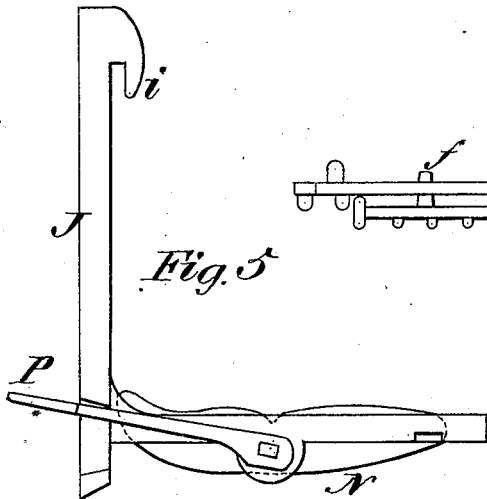
*Fig. 3*



*Fig. 4*



*Fig. 5*



WITNESSES

*Geo. W. Johnson.*  
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INVENTOR

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ATTORNEYS

# UNITED STATES PATENT OFFICE,

GEORGE W. CUMMINGS, OF FRANKLIN, PENNSYLVANIA.

## IMPROVEMENT IN FIRE-PLACE GRATES.

Specification forming part of Letters Patent No. **164,150**, dated June 8, 1875; application filed May 15, 1875.

*To all whom it may concern:*

Be it known that I, GEORGE W. CUMMINGS, of Franklin, in the county of Venango and State of Pennsylvania, have invented a new and valuable Improvement in Fire-Place 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 front view of my fire-place, and Fig. 2 is a transverse vertical sectional view of the same. Fig. 3 is a front view, and Figs. 4 and 5 are detail views.

The object of my invention is to improve the fire-place for which Letters Patent of the United States were granted to me on the 22d day of April, 1872; and the nature of my invention consists in a novel manner of fastening the false back to the back plate of the fire-place, leaving an air-space between them; also, in an arched crown having ribs or flanges formed on it, and extending from side to side of the fire-place, for the purpose of arresting the heat and throwing it into the room, in combination with an arched and beveled flange on the back part of the front plate, arranged just over the outlet into the chimney, for the purpose of preventing the escape of smoke into the room. The invention finally consists in novel means for constructing the several parts of the fire-place and putting the same together, as will be hereinafter explained.

In the annexed drawings, A designates the front plate or facing of the fire-place; B B, the two jambs; C, the crown or top plate; D, the back plate, and E the false back, between which and the back plate is a space for the circulation of air, which air becomes heated and passes, through perforations through plate E, into the fire-chamber, where it promotes combustion. The front plate A is rigidly secured to the front edges of the jambs by means of bolts, which are tapped through lugs *b*, formed on the jambs, and shown in Fig. 3. On the back part of the plate A is an arch, provided with a flange, *c*, which is beveled, as shown in Fig. 2, and which extends over an opening, *e*, through which the heated

products of combustion escape into the flue above the plate C. The flange *c* directs the smoke backward, or from the plate A into the chimney-flue, thereby preventing the mantel from being smoked. The false back E and the jambs B B have vertical ribs cast on them, and the back E has inclined studs *f* cast on it, which are received in holes made through the back plate D. By making the studs *f* inclined they will securely hold the false back in its place, but allow it to expand and contract without cracking. The vertical edges of the back plate D have ribs cast on them, which form grooves to receive the rear vertical edges of the jambs, and serve, in combination with a horizontal rod, G, for securing the jambs and back plate together. The lower edge of the back plate is received into notches made in offsets of the jambs. The lower side of the top plate C is provided with ribs *h*, which extend from side to side, and serve to arrest the heat and throw it into the room.

J designates a basket-grate, at the corners of the vertical portion of which hooks *i* are formed, which engage with *j*, and serve, in combination with lugs *k*, to hold the grate in its place. In combination with the grate J I use a shaker, N, which is composed of longitudinal and cross bars, and hung so that it can be oscillated by means of a handle, P, for the purpose of shaking out ashes and keeping the grate-bars free from ashes.

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

1. The combination of the perforated false back E, inclined studs *f*, and perforated back D, substantially as specified.

2. The arched crown C, having ribs *h*, in combination with the front plate A, provided with the beveled flange *c*, extending rearwardly into the flue, substantially as specified.

3. The back plate D, provided with ribs, in combination with the jambs B and rod G, substantially as and for the purpose set forth.

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

GEO. W. CUMMINGS.

Witnesses:

J. A. O'DELL,  
J. W. NEILL.