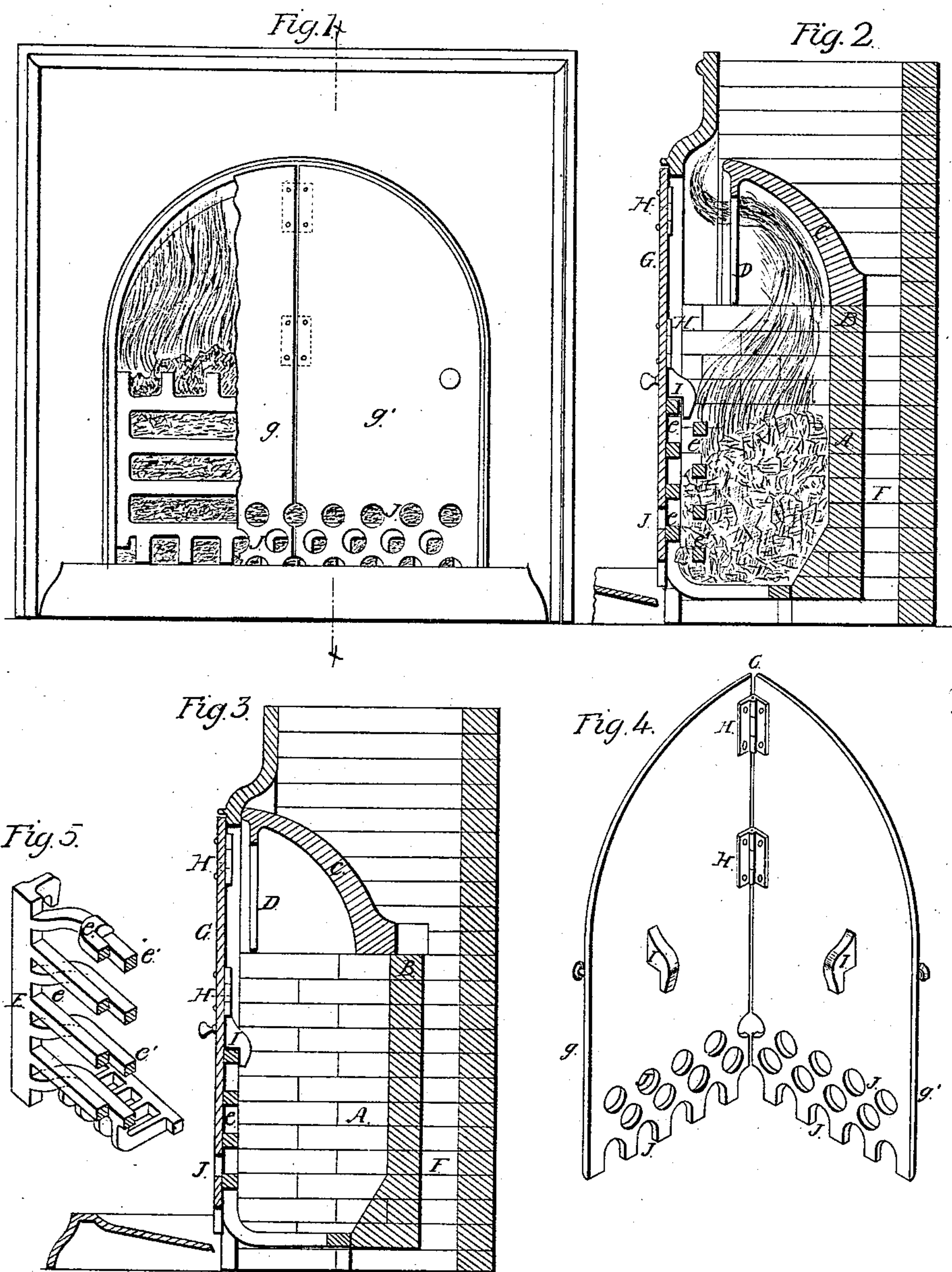


C. S. Rankin,

Fire Place,

No. 79,391.

Patented June 30, 1868.



Witnesses:

Jas H Gayman

W. B. Denning

Inventor:

C. S. Rankin  
by Knight Bros

# United States Patent Office.

CHARLES S. RANKIN, OF CINCINNATI, OHIO.

*Letters Patent No. 79,391, dated June 30, 1868.*

## IMPROVEMENT IN FIREPLACE-GRATES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO WHOM IT MAY CONCERN:

Be it known that I, CHARLES S. RANKIN, of Cincinnati, Hamilton county, and State of Ohio, have invented certain new and useful Improvements in Fireplaces; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My improvements relate—

First, to a peculiar arrangement of grate-bars, adapted to more effectually support the fuel, and at the same time to increase the radiation of heat into the room by presenting a more unobstructed candescent surface.

Second, a peculiarly-constructed folding and removable blower or summer-front.

Figure 1 is a front elevation of a fireplace embodying my improvements, a portion of the blower being broken away.

Figures 2 and 3 are sections at the line *xx*, fig. 1.

Figure 4 shows the blower detached.

Figure 5 is a perspective view of my preferred form of grate.

The fire-back A is formed with a ledge or set-off, B, which supports a movable crown, C, made of tile or cast iron, and of arching form, with a verge or flange, D, which, in conjunction with the arch aforesaid, acts to retain and consume smoke, and also facilitates the forward adjustment of the crown when it is desired to narrow or to close the throat. The closure of the throat serves to prevent the ingress of soot during the summer season.

The fire-grate E is formed in front of horizontal bars, in two series, *e e'*, of which the bars *e* approach nearest to the front, while the bars *e'* are somewhat back of and intermediate to the bars *e*, so as to be wholly or partially hidden by the latter from a person standing or sitting before the fire.

One effect of this arrangement is to hold the fuel in a more open body, with a more extended front surface, and so as to give a greater access and circulation of air, and cause more perfect combustion.

Another effect of this arrangement of front grate-bars is to present a more extensive radiating or incandescent surface to the room, and toward the person of any one standing in front of it, to whom, in certain positions, the grate-front will appear to have only half its complement of bars.

F is an ash-flue.

G is a combined blower and summer-front, consisting of two leaves or doors, *g g'*, hinged to each other at H, and having hooks, I, to engage over the grate-bars, and orifices, J, at their lower portion, to admit draught air.

When not desired for use, either as a summer-front or blower, the piece G may be folded up, and set aside in any convenient place.

I claim herein as new, and of my invention—

1. A grate, constructed with two series of "front" bars, one arranged alternately with and in the rear of the other, substantially as described.

2. The hinged and perforated summer-front and blower, substantially as set forth.

In testimony of which invention, I hereunto set my hand.

CHARLES S. RANKIN.

Witnesses:

GEO. H. KNIGHT,  
JAMES H. LAYMAN.