

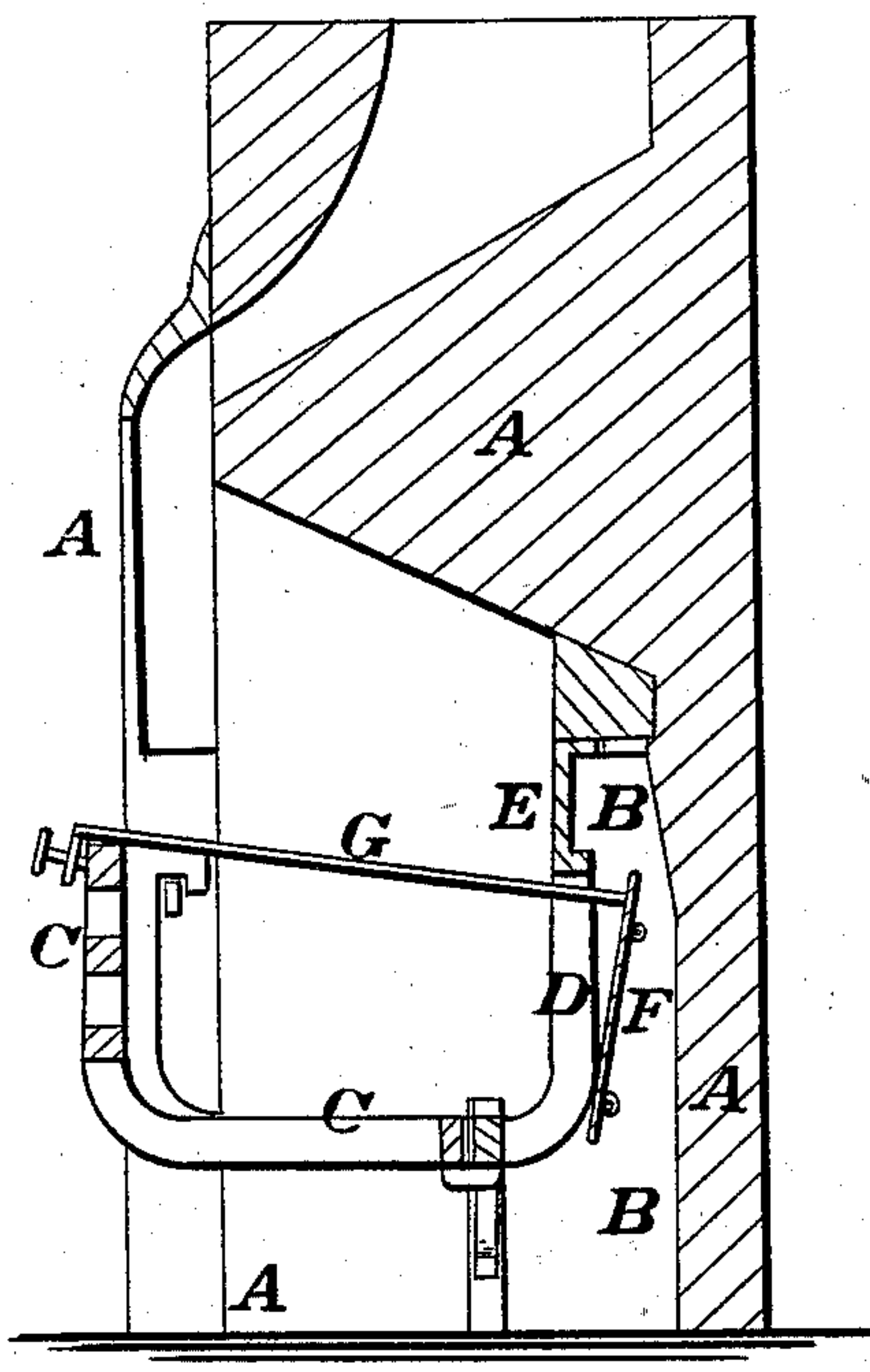
G. H. McELEVY.

Grate.

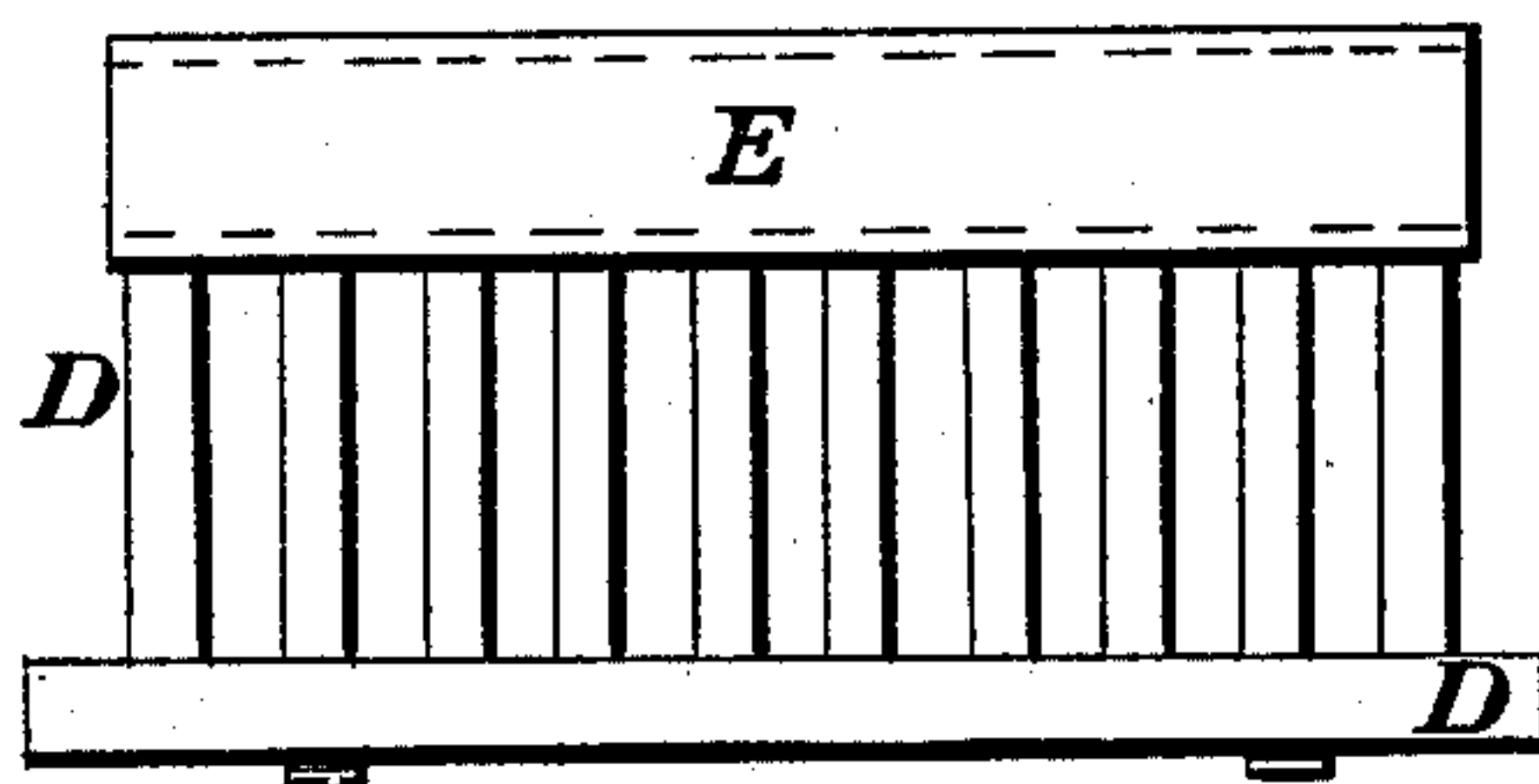
No. 99,581.

Patented Feb. 8, 1870.

*Fig. 1*



*Fig. 2*



*Witnesses;*  
*A. W. Almgren*  
*Edgar Tate*

*Inventor;*  
*G. H. McElevy*  
PER *[Signature]*

# United States Patent Office.

G. H. McELEVY, OF NEWCASTLE, PENNSYLVANIA.

Letters Patent No. 99,581, dated February 8, 1870.

## FIRE-PLACE GRATE.

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

*To all whom it may concern:*

Be it known that I, G. H. McELEVY, of Newcastle, in the county of Lawrence, and State of Pennsylvania, have invented a new and improved Grate; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved grate, and the fire-place with which it is connected.

Figure 2 is a detail front view of the detachable open back.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of grates for fire-places and stoves, so that a draught may be introduced into the rear side of the fire, and introduced in such a way that it may be controlled as may be desired; and

It consists in the construction of various parts of the apparatus, as hereinafter more fully described.

My improvement may be connected with a fire-place or open stove, as may be desired, but I will describe it as applied to a fire-place.

A is a fire-place, the back part of which, in the rear of the grate, is recessed, as shown in fig. 1, said recess B being extended upward, above the grate, as shown in the figure.

C represents the ordinary basket-grate, the forward part of which is hung upon lugs, secured to the jambs, in the ordinary manner.

The rear edge of the bottom part of the grate C rests upon lugs, formed upon the lower edge of the grate-back D, as shown in figs. 1 and 2. The grate-back D is made open or slotted, in a manner similar to an ordinary grate-bottom, and may be made straight or curved, as may be desired.

E is a thin metal or tile plate, extending from the upper edge of the grate-back D to the top of the recess B, as shown in fig. 1. The plate E may be made solid with the grate-back D, or in a separate piece, as may be desired or convenient, and is designed to conduct the heat to the air in the upper part of the recess B, and heat the said air before it is introduced into the fire to support combustion.

F is a metal plate, which extends up through the recess B, in the rear of the grate-back D, dividing said recess into two compartments. The plate F is attached or pivoted, at or near its lower edge, to lugs, pins, or supports, attached to the sides of the recess B, in such positions that the lower part of said plate may rest against the lower part of the grate-back, so

that the air will pass up through the rear compartment of the recess B, be heated in the upper part of said recess, and pass down to the fire through its forward compartment, and through the open grate-back, acting as a hot blast to the fire.

The upper part of the plate F may be left free, and its movement be limited by the back of the recess B, and by the grate-back D, or its rearward movement may be limited by lugs or pins, attached to the sides of said recess.

To the upper part of the plate F, near one end, is attached one end of a rod, G, the other end of which passes out to, and projects beyond the upper edge of the front of the grate C.

By this construction, by means of the rod G, the plate F may be adjusted to regulate the passage of air to the grate-back, or, by drawing the plate F close up against the said grate-back, entirely exclude the air. The rod G may be provided with a hook or catch to catch upon the upper bar of the grate-front, and thus secure the plate F in place, when adjusted. This catch may, if desired, be made adjustable, so that the plate F may be secured in any desired position.

Having thus described my invention,

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

1. The separate open grate-back D, in combination with an ordinary grate, and with the recess B, formed in the rear of said grate, substantially as herein shown and described, and for the purpose set forth.

2. The recess B, formed in the rear of the grate, and extending above the said grate, in combination with the open grate-back D, substantially as herein shown and described, and for the purpose set forth.

3. The thin metal or tile plate E, whether made solid with, or separate from the open grate-back D, in combination with the said open grate-back D, and with the upwardly-extended recess B, substantially as herein shown and described, and for the purpose set forth.

4. The metal plate F, in combination with the recess B, open grate-back D, and plate E, substantially as herein shown and described, and for the purpose set forth, whether said plate F be pivoted or stationary.

5. The combination of the rod G, with the pivoted plate F, open grate-back D, and grate C, substantially as herein shown and described, and for the purpose set forth.

The above specification of my invention signed by me, this 16th day of November, 1869.

G. H. McELEVY.

Witnesses:

J. N. PHILLIPS,  
E. F. TAIT.