

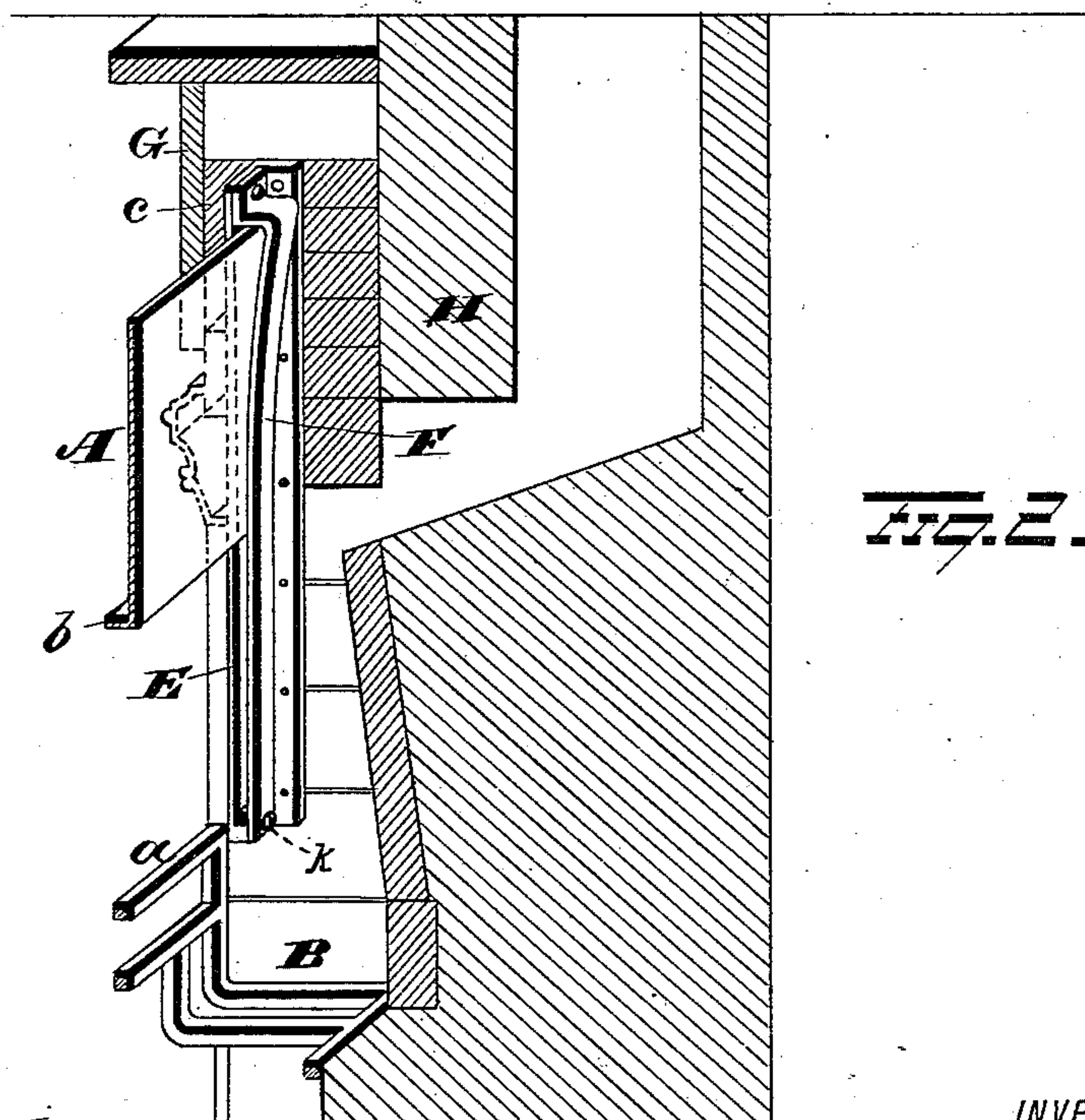
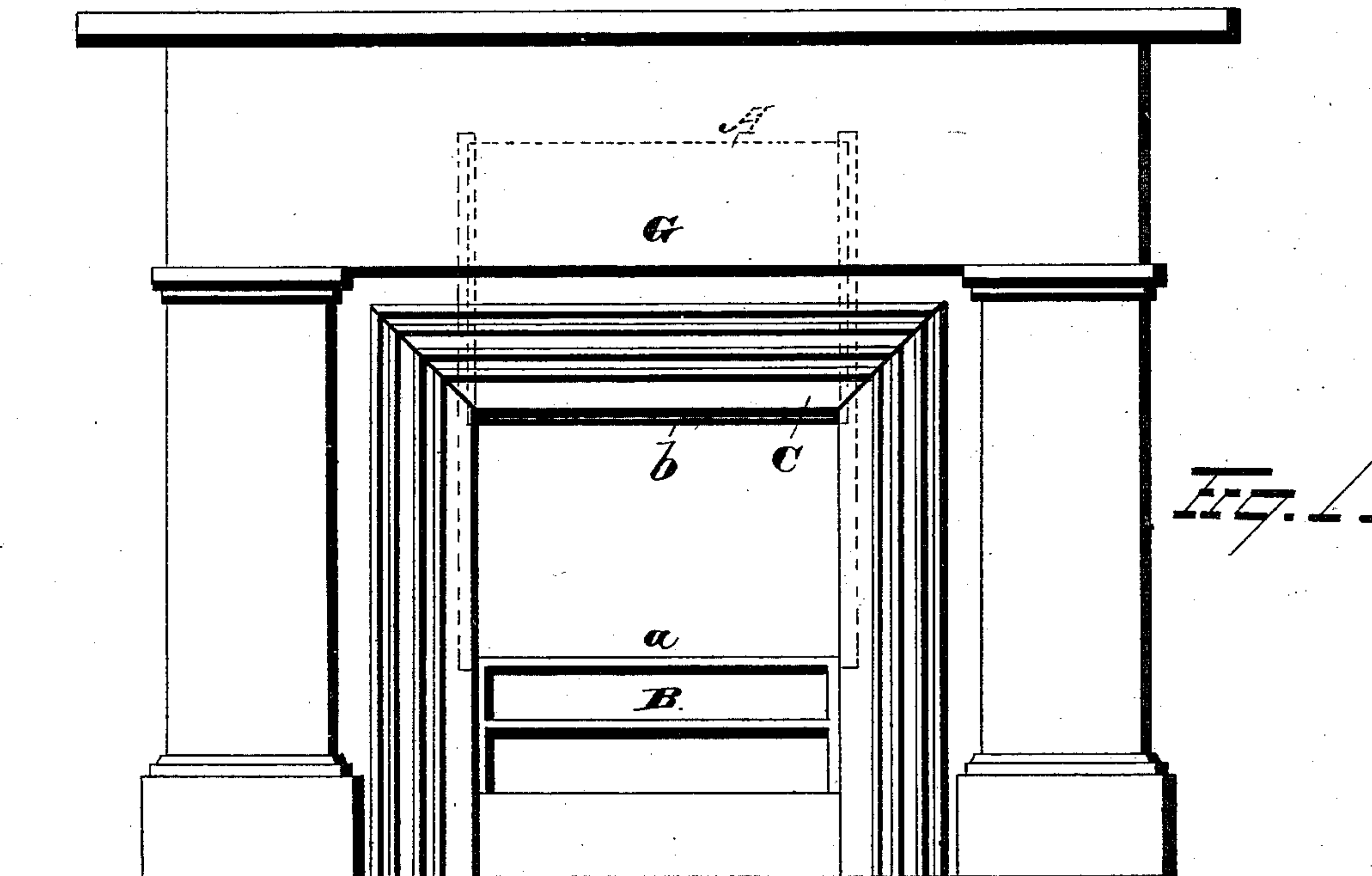
(No Model.)

C. A. PRESTON.

GRATE BLOWER.

No. 278,736.

Patented June 5, 1883.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

CHARLES A. PRESTON, OF NORWALK, OHIO.

## GRATE-BLOWER.

SPECIFICATION forming part of Letters Patent No. 278,736, dated June 5, 1883.

Application filed February 6, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. PRESTON, of Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful  
5 Improvements in Grate-Blowers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

10 My invention relates to an improvement in grate-blowers, the object of the same being to provide simple, economical, and durable means for automatically retaining the blower in any desired position; and with this end in view  
15 my invention consists in certain novel constructions and combinations of parts, which will be hereinafter particularly described, and pointed out in appended claims.

In the accompanying drawings, Figure 1 is  
20 a view in front elevation of a fire-place, showing my improved blower in a partly-elevated position; and Fig. 2 is a vertical sectional view of the same, showing the blower and adjacent structures in perspective.

25 A represents a blower or screen made of sheet metal and of the desired size, and B a fire-place grate of any desired construction, on the upper rail, *a*, of which the flange *b* of the blower rests when the latter is in a depressed position.  
30 This flange *b* projects outwardly, and, besides performing the function of a stop for the downward movement of the blower, also forms a limit of upward movement by abutting against the lower edge of the top portion of the iron  
35 grate-frame C. When the blower is in this last-mentioned position it is entirely concealed from view behind the mantel, thereby enabling the surrounding parts to present a neat appearance.

40 E are the metal frames, bent at right angles longitudinally, and adapted, in conjunction with the spring-bars F, to form slideways for the opposite side edges of the blower. These frames E and springs F extend up into the  
45 pocket or recess formed between the mantel G and masonry H, immediately behind the mantel, and the portions of the mantel and grate-frame that form parts of the said pocket are backed up or filled in with fire-cement *c* for the  
50 purpose of protecting said parts from the heat of the blower. The frames E are anchored into

the joints of the brick jambs on each side of the fire-place; or they may be fastened to the grate-frame. The spring-bars F are rigidly secured to the frame E at their upper and lower  
55 ends, with a space between them for the movement of the blower. This space is, however, decreased immediately behind the upper portion of the grate-frame, which causes the springs to bear firmly against the rear face of the blower  
60 and hold it in any desired position. The springs F are only secured at their ends to the frames E, and if the blower should warp, the springs will yield and still hold the blower in proper position. The springs F are so bent  
65 as to press against the blower at all times, whether the latter be elevated or lowered, thereby enabling the said blower to be either slightly elevated or pushed up out of sight, as described. When it is desired to use the blower  
70 it is simply pulled down partly or wholly by pressing on the flange *b*, which latter projects outward sufficiently for that purpose.

I can, if desired, rigidly secure the lower ends of the springs F to the frames E; but I  
75 prefer to use a screw, as shown at K, or bolt, for the purpose of regulating the stiffness of the springs, and also for permitting of the ready removal of the blower when necessary.

In the drawings I have shown a straight  
80 grate; but when bowing or curved grates are employed the flange *b* of the blower A would be increased in size and made to conform in shape thereto, so as to snugly fit on the top of the grate and prevent the ingress of air above  
85 the fuel.

My improved blower, together with the holding-springs, can be secured in position in any of the ordinary grates and mantel fire-places now in use, as well as the new ones to be set up.  
90 It is simple in construction, durable in use, and can be manufactured at a small initial cost.

It is evident that slight changes in construction and relative arrangement of the several parts might be resorted to without departing  
95 from the spirit of my invention, and hence I would have it understood that I do not limit myself to the exact construction of parts shown and described, but consider myself at liberty  
100 to make such changes and alterations as fairly fall within the scope of my invention.

Having fully described my invention, what



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

1. The combination, with the grate and fire-place frame, of the guideways formed behind the jambs, the blower arranged to slide in said guideways, and the spring-bars arranged to press against the rear surface of the blower, substantially as set forth.

2. The combination, with the frame-plates E, and the spring-bars F, arranged behind said plates and secured thereto at their ends, of the blower having its ends inserted between said plates and spring-bars, substantially as described.

3. The combination, with the frame E, spring-bars, and grate, of the blower or screen having at its lower edge an outwardly-projecting flange, substantially as and for the purpose set forth.

4. The combination, with the fire-place frame, the grate, and the masonry having a recess or pocket formed therein behind the upper portion of said fire-place frame, of the plates E and the spring-bars F, arranged behind the jambs and extending upward into said pocket or recess, and the blower having its ends inserted between said plates and springs, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES A. PRESTON.

Witnesses:

F. P. FOX,

HENRY S. MITCHELL.