

L. A. SEITZ.

HEATERS FOR FIRE-PLACES.

No. 188,194.

Patented March 6, 1877.

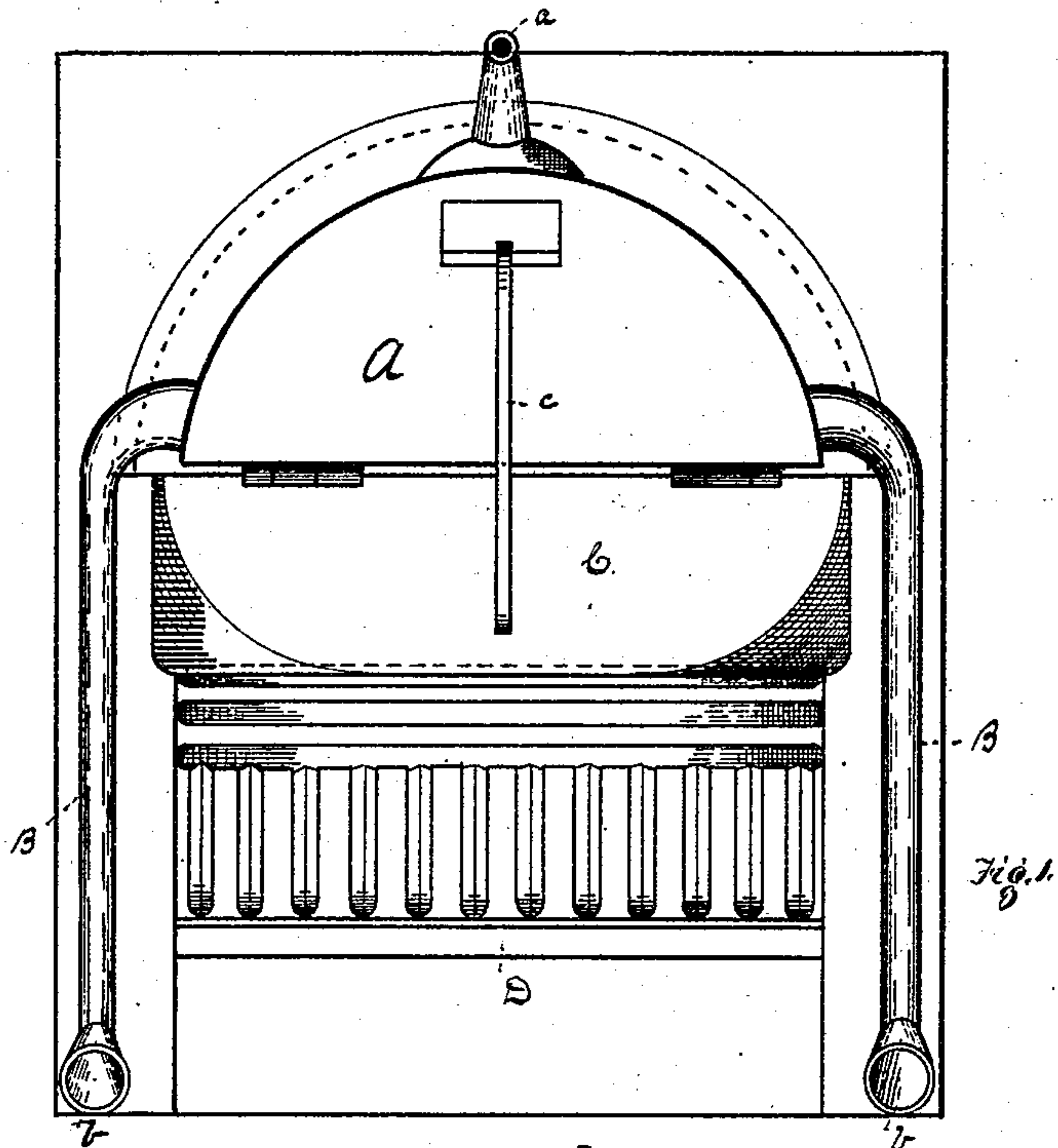


Fig. 1.

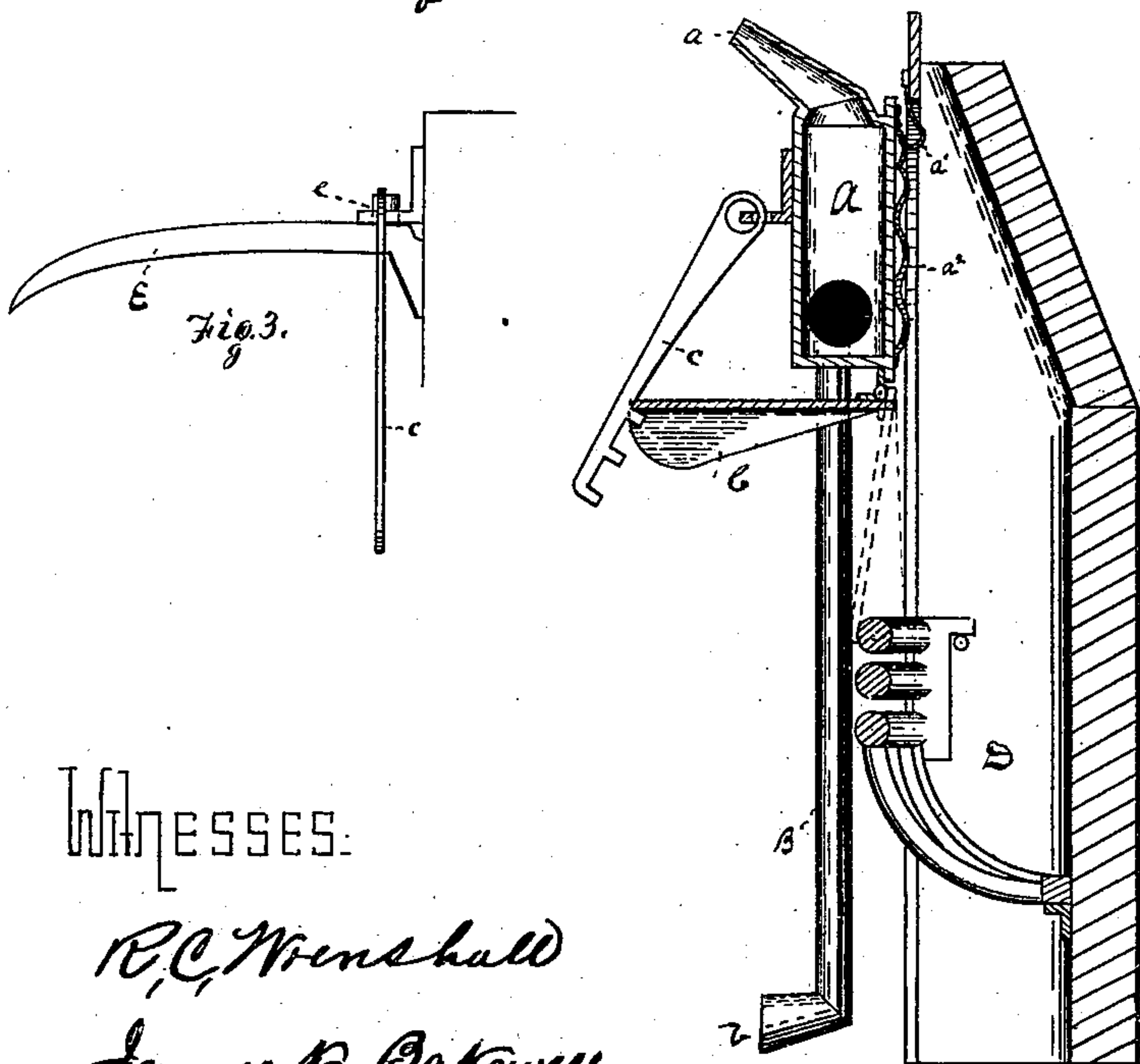


Fig. 2.

Fig. 3.

Witnesses:

R. C. Wenshall  
James B. Bakewell

Inventor.

Leonard A. Seitz  
by Bakewell & Ken  
Attorneys

# UNITED STATES PATENT OFFICE

LEONARD A. SEITZ, OF WEST BELLEVUE, PENNSYLVANIA.

## IMPROVEMENT IN HEATERS FOR FIRE-PLACES.

Specification forming part of Letters Patent No. 188,194, dated March 6, 1877; application filed January 26, 1877.

*To all whom it may concern :*

Be it known that I, LEONARD A. SEITZ, of West Bellevue, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Fire-Fronts; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a front elevation of my improved open-grate front. Fig. 2 is a vertical section through the line *xx* of Fig. 1, and Fig. 3 shows the operation of the lifter for removing the front.

My invention consists of an adjustable draft-regulator and air-heating apparatus for open fire-places, and has for its object the regulation of the draft of open fires to secure the thorough and economical consumption of the fuel, and the projection of heated air out into the room.

Open fire-places are preferable to stoves, because they give more perfect ventilation to a room, allowing the escape of the cold and foul air up the chimney more completely and perfectly, by reason of the large opening communicating with the room, than the small draft-openings of a stove.

The objection to the use of open fires is that they do not heat the room effectually, a large proportion of the heat passing up the chimney, and also that they have a very imperfect draft, which prevents the thorough and perfect consumption of the coal, and in a great degree nullifies the effect of that which is consumed by choking up the grate. These objectionable features can only be overcome by creating a thorough draft, and by causing warm air from the fire to pass out into the room.

This object is attained by my invention, which I will now proceed to describe, so that others may manufacture and use the same.

A is the air-chamber, constructed of any suitable material, such as iron, &c. This chamber is fastened onto the fire-front by means of a hook,  $a^1$ , which is placed thereon engaging one of a number of eyes or notches,

$a^2$ , in the back of the air-chamber. These notches  $a^2$  are placed one above the other, so that the air-chamber may be placed high up or low down on the fire-front, according to the amount of draft required. The combined air heater and blower may, however, be fastened to the fire-front in any suitable manner; but the above-described method is the most preferable. B B are air-pipes, made of any suitable material, which connect with, and extend down from, the air-chamber on each side of the fire to near the bottom of the fire-front, where they are provided with openings *b*, through which the cold air enters and passes up into the air-chamber A.

Hinged to the lower side of the air-chamber A is the adjustable blower C, which consists of an apron or sheet, made of sheet iron, copper, brass, or other suitable material, so arranged that it may be let down from a horizontal position to a vertical one before the fire, and thus act as a blower. *c* is a catch, which is hinged to the air-chamber A, and is provided on its inner edge with a number of hooks or serrations, which engage with the lower edge of the blower C, and thus hold it in any desired position.

The fire being started in the grate D the combined air heater and blower is hung onto the front by means of the hook and notches  $a^1 a^2$ . The blower C is then lowered to a vertical position or nearly so, and thereby prevents the air from entering the fire-place above the flames, and causes it to enter through the bars of the grate D, thus making a thorough draft. The flames, passing up back of and against the side of the air-chamber A, rapidly heat the air in the chamber A, and the cold air passing up through the pipes B forces the hot air out of the chamber A through the opening or escape pipe *a* into the room. The cold air, which enters the pipes B and passes into the chamber A, is heated and passes into the room, as before described. Thus currents of cold air are continually passing into the chamber through the openings *b* in the pipes B, and a current of warm air is passing out into the room through the opening *a*. If the fire burns too rapidly the draft may be less-



ened by raising the blower C to the requisite height to allow some air to pass into the fire-place above the flames. The blower C also acts as a shade from the flickering light of the fire, which is very injurious to the eyes.

The pipes B may be constructed back of the fire-front, and so arranged as to connect with the air-chamber A, and also to project through the fire-front at its base to allow of the ingress of the cold air.

When the room gets too warm the combined air heater and blower may be lifted off of the fire-front by the use of the lifter E, which may be of any convenient form, and one end of which engages in the holes or eyes *e* in the end of catch *c*, which is hinged to the air-chamber A.

If desired, the air-heating chamber may be made with, and form part of, the fire-front, instead of being separate therefrom, as shown.

It may also be placed back of the front plate, but still remain in front of the fire-place. Either of these alternate constructions are apparent upon an examination of my invention and within its scope. The removable construction is applicable to fire-places now in use, without requiring that they should be changed, other than to provide a means of support. The blower may be made to slide up into a suitable recess between the front plate and the air-chamber, and a hook and ratchet substituted for the serrated hook to support it, in which case the hook would be on the blower, and the ratchet on the back part of the air-heating chamber, so that when

the blower is pushed up into the recess it may be hung on the ratchet by the hook at any desired height, but is prevented from accidental escape from the recess by making the last tooth of the rack large enough to require careful manipulation to insert and withdraw the hook.

I do not claim an air-chamber placed partially within the chimney-wall and partially in front of and above the fire-place; but

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with an open fire-place, and air-heating chamber, provided with draft and discharge pipes, said chamber located and arranged wholly in advance of the fire-front, substantially as and for the purpose specified.

2. The movably-adjustable hinged blower, in combination with a supporting device for supporting it in any desired position, as and for the purposes described.

3. The adjustable air-heating fire-front, provided with an air-chamber, suitable draft and discharge pipes, and a hinged blower, in combination with a hook or other suitable supporting device, substantially as and for the purposes described.

In testimony whereof I, the said LEONARD A. SEITZ, have hereunto set my hand.

LEONARD A. SEITZ.

Witnesses:

JAMES K. BAKEWELL,  
JAMES I. KAY.