(No Model.)

J. W. SHAW.

SELF FEEDING OPEN FIREPLACE GRATE.

No. 496,326. Patented Apr. 25, 1893.

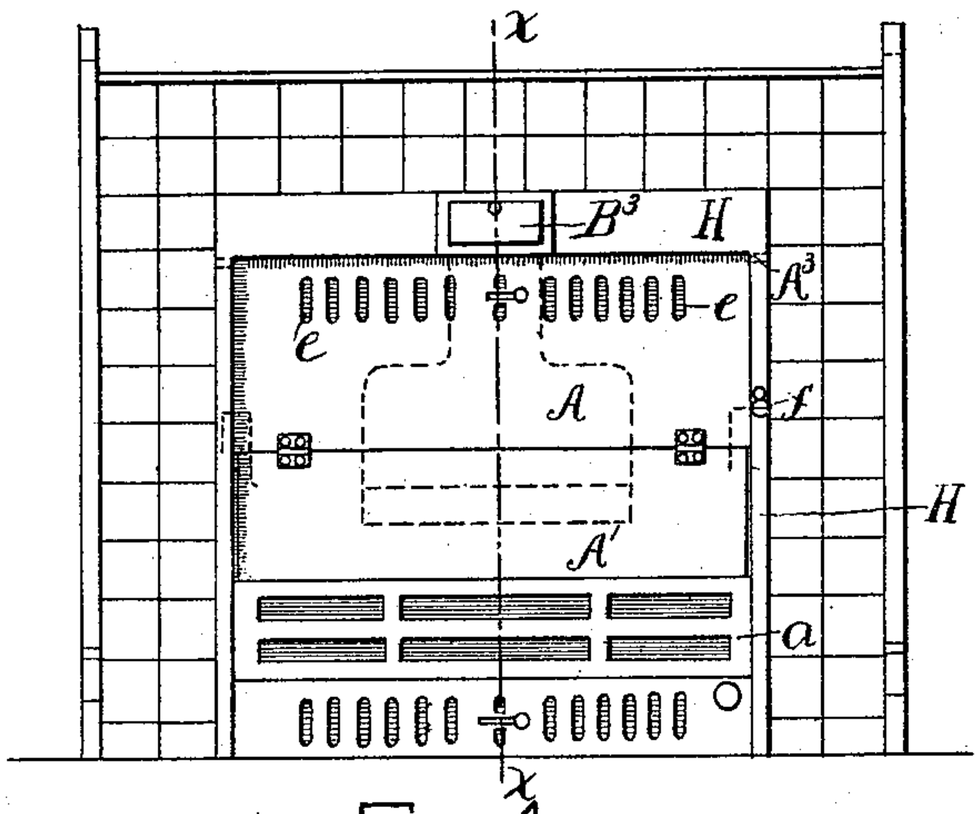

FIG. 1.

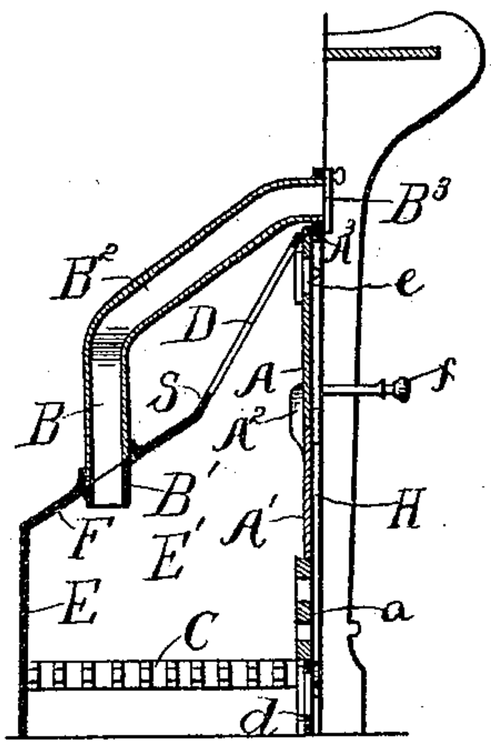

FIG. 2.

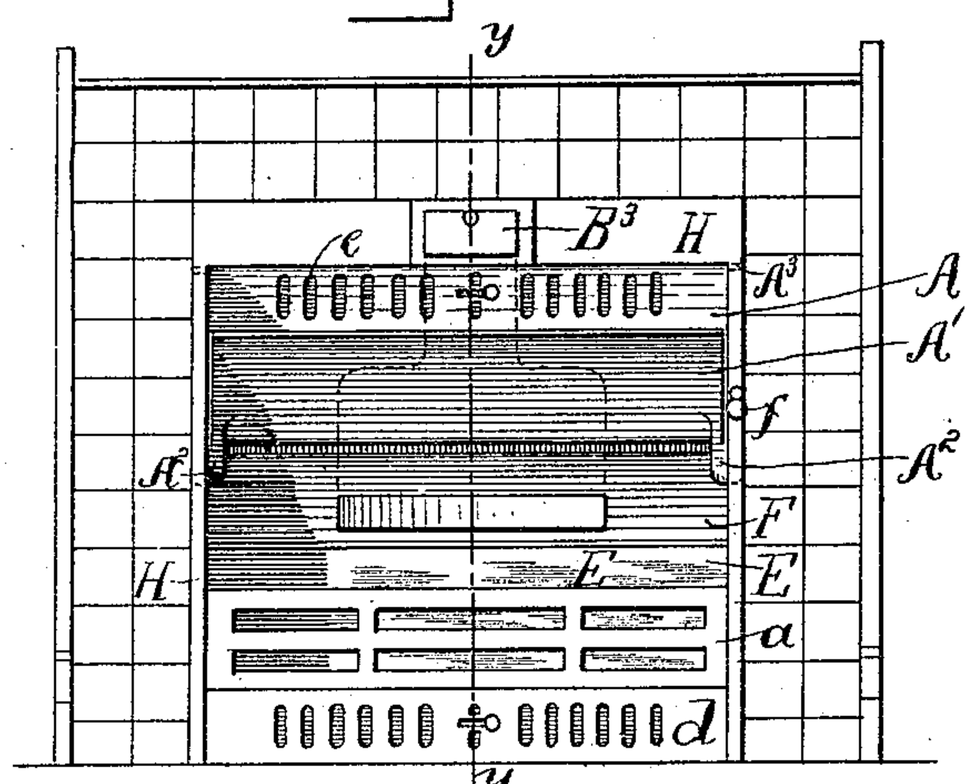

FIG. 3.

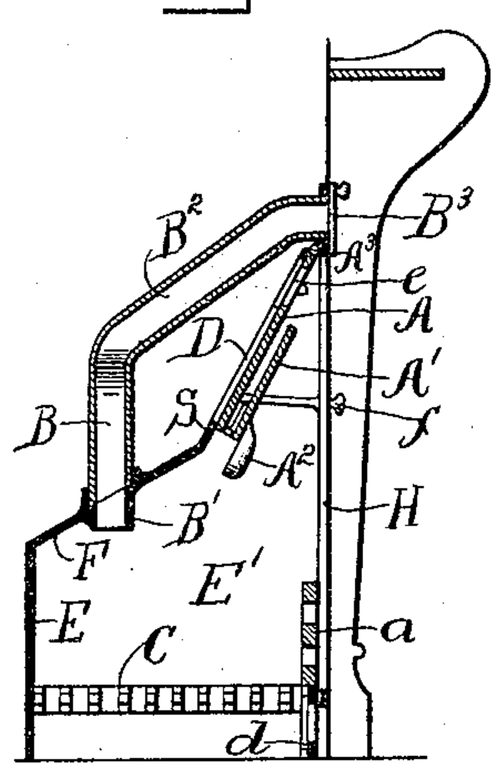

FIG. 4.

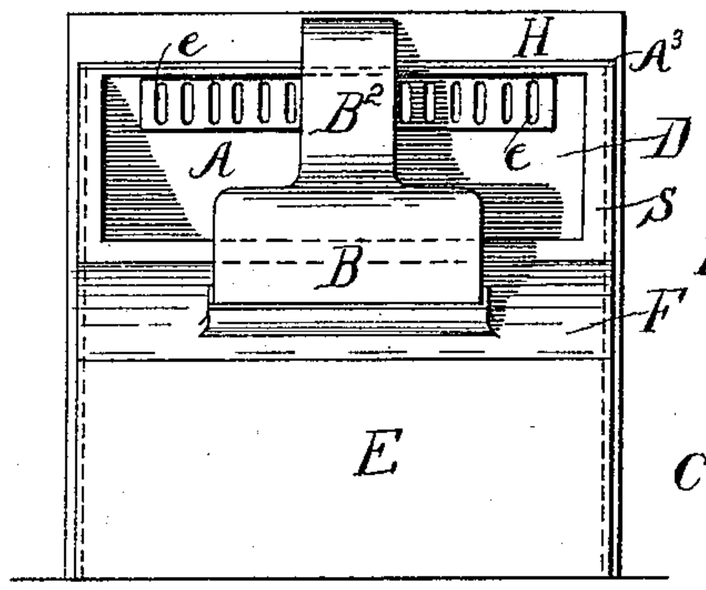

FIG. 5.

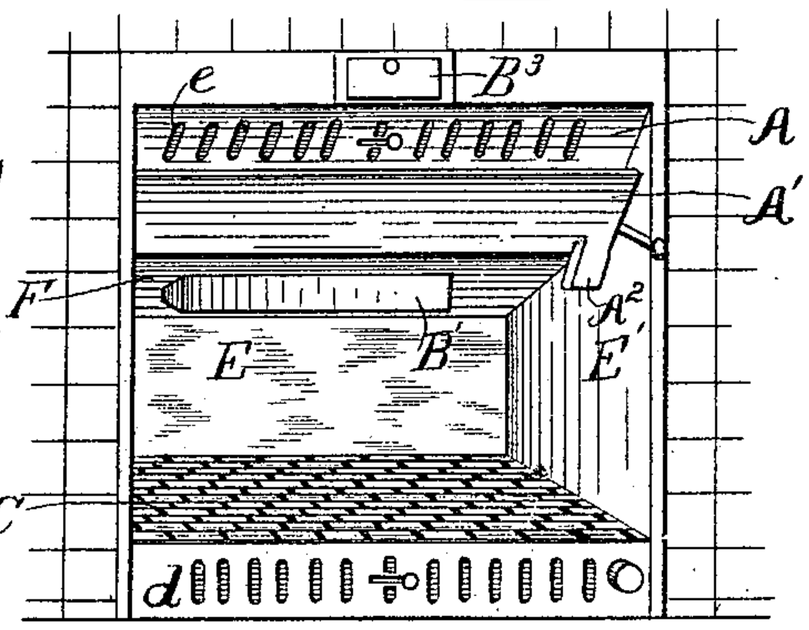

FIG. 6.

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JOSEPH WILLIAM SHAW, OF CHICAGO, ILLINOIS.

SELF-FEEDING OPEN-FIREPLACE GRATE.

SPECIFICATION forming part of Letters Patent No. 496,326, dated April 25, 1893.

Application filed January 30, 1892. Renewed March 31, 1893. Serial No. 468,575. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILLIAM SHAW, of the city of Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Self-Feeding Open-Fireplace Grates, of which the following is a specification.

My invention provides a means of making an open fire place self feeding as well as an improvement in the blower of said fireplace by which said blower is made adjustable.

The objects of my invention are: first to provide a means by which an open fire place may be made self-feeding; second to provide a direct draft when the blower is in position and third to provide a means of having an adjustable blower.

My invention is illustrated by means of the accompanying drawings in which—

Figure 1 is a front elevation of the fireplace with the blower down. Fig. 2 is a section through Fig. 1 on line *x*—*x* showing the blower in section when it is down. Fig. 3 is a front elevation of said fire place with the blower open. Fig. 4 is a section on the line *y*—*y* of Fig. 3 showing the blower in section when it is open. Fig. 5 is a rear view of the fire place showing the coal magazine and draft opening in elevation. Fig. 6 is a perspective of fireplace with the blower back and covering the draft opening also showing the grate in position with the grate front removed.

Similar letters refer to similar parts throughout the several views.

Inclosing the open fire place is the iron casing E which passes from the front piece H around the back of said fire place. Above this plate is the deflecting plate F which joins onto the angular plate S said angular plate having in it the direct draft opening D all of which are shown in the sectional views Figs. 2 and 4. The grate C, grate front *a* and draft plate *d* may be of any approved pattern or design. The blower is made in two parts A and A′ which are connected by means of a hinge. The upper part of the blower A fits close to the side of the niche E′ and is made to swing by means of a small projection on the top A^3 which projection extends over and fits into a small recess in the top of the side plate E′. Connected with this upper plate of the blower is the small rod *f* by which means said blower plate may be moved front and back as may be desired. Connected with the corners of the lower plate of the blower A′ are two weights A^3 which are made of such a weight that they will counteract and overcome the weight of said lower blower plate. These weights A^3 are cast on the lower blower plate A^2 in such a manner that when said lower blower plate is down the weights will be close against the upper blower plate A as will be seen by reference to Fig. 2. By this means said plates will not act to throw the lower blower plate up when said plate is in a vertical position but as soon as it is thrown out of a vertical line or the blower is pushed back then the weights will cause said lower blower plate to throw up against the upper blower plate as will be clearly seen by reference to Fig. 4 which shows said plates thrown back. The lower plate is made so as to clear the front plate H. In the upper blower plate is a set of check drafts *e* made of any approved form or design.

In the upper part of the front plate H is placed the feed door B^3 which opens into the neck B^2 of the magazine B said magazine being used as a receptacle for coal by which means the fireplace is made self feeding. This magazine consists of the neck B^2 and the main part B; the neck being connected at the upper part with the front plate H and having in it the feed door B^3 while the main part B is connected with the deflecting plate F by means of small projections or bosses on said deflecting plate making a socket for it to set in as will be seen by reference to the sectional views Figs. 2 and 4. Connected with said deflecting plate and cast to it is a continuation of the main part of the magazine which extends downward into the opening of the niche of the fireplace as will be seen in Figs. 2 and 4. In using this fireplace with its attachments the fire is first built of wood and a small amount of coal; both parts of the blower are placed down as is represented in Figs. 1 and 2 and the draft in the draft plate *d* is opened while the check draft *e* in the upper blower plate is closed. By this means a draft passes up through the fire and off through the draft opening D in the angular plate S. As

soon as the fire is started coal is put into the fireplace by means of the feed door B^3, the magazine and its neck, the blower plates being down, enough coal being put in to fill the fire-place up to the projection B′ of said magazine after which enough is put in to fill the magazine and neck. In this way as fast as the coal is burned away from the projection B′ it will be replaced by the coal moving down in the magazine and neck B, B^2. When the fire is well burned up the upper blower is pushed back by means of the rod *f* so that it closes the draft opening D and the lower blower plate being thus moved from a vertical line is immediately moved up against the upper blower plate by means of the weights A^3 heretofore described. When the blower is placed in this position the check drafts *e* are opened while the drafts in the draft plate *d* are closed. By this arrangement the fire may be made to burn open and without a draft. When it is desired to have the fire burn more freely the blower is again closed while the blower drafts are opened and the check drafts closed being the same position as when starting the fire and illustrated by Figs. 1 and 2.

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

1. An open fire place composed of the double blower A, A′ operated as described, the check draft *e*, the direct draft opening D, the deflecting plate F', the feed magazine B, B^2 and the extension tip B′ in combination with the grate, sides and back substantially as described.

2. In an open fire place the hinged blower A A′ suspended from the side piece E and arranged to operate by means of the rod *f* the weights A^3 and the front piece H substantially as described.

3. In an open fire place the combination of the side and back plates, the angular plate S having in it the direct draft opening D with the blower A A′ suspended from said side plates and the check draft *e* in said blower all substantially as and for the use set forth.

4. In an open fire place the combination of the magazine B B^2 with the deflecting plate F and the extension tip B′ all as and for the use described.

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Witnesses:

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