

(No Model.)

G. W. GEISSENHAINER.

## ADJUSTABLE BLOWER FOR FIRE PLACES AND STOVES.

No. 261,221.

Patented July 18, 1882.

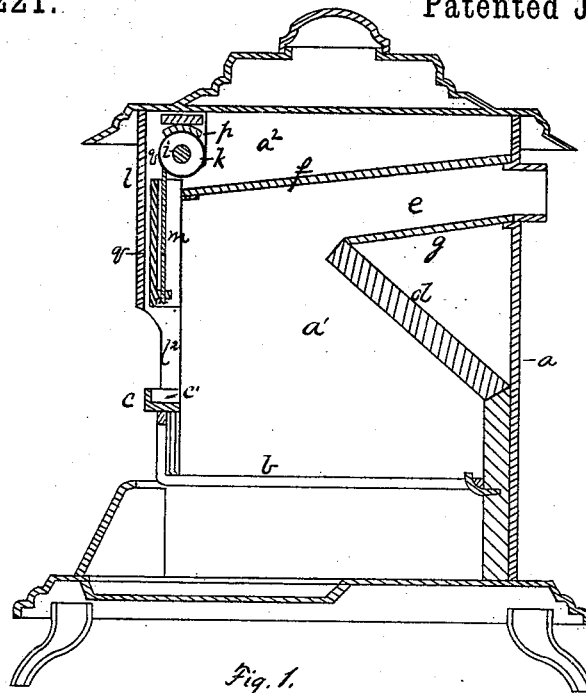
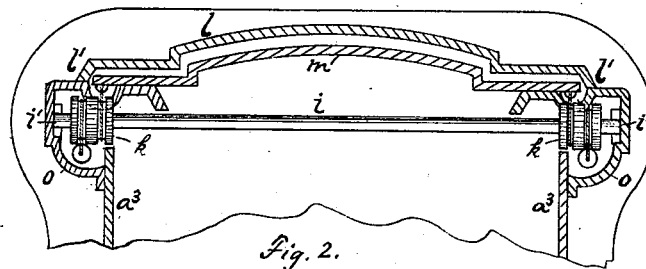


Fig. 1.



*Fig. 2.*

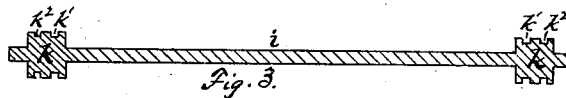


Fig. 3.

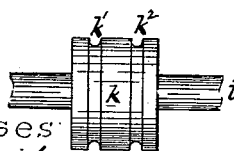


Fig. 4.

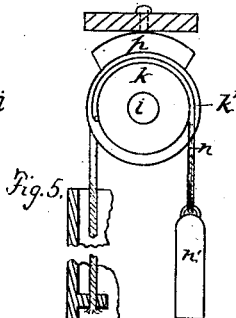


Fig. 5.

Inventor

Geo. W. Guisenbaker  
by his attys  
Bakewell & Kerr

# UNITED STATES PATENT OFFICE.

GEORGE W. GEISSENHAINER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR  
TO FRANK S. BISSELL, OF SAME PLACE.

## ADJUSTABLE BLOWER FOR FIRE-PLACES AND STOVES.

SPECIFICATION forming part of Letters Patent No. 261,221, dated July 18, 1882.

Application filed May 15, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. GEISSENHAINER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Adjustable Blowers for Fire-Places and Stoves; and I do hereby declare the following to be a full, clear, and exact description thereof.

Heretofore vertically-moving adjustable blowers have been made use of in stoves and fire-places; but their use has not been satisfactory, owing to the fact that the pulleys upon which they were suspended were mounted loosely on separate journals, and permitted one side of the door to rise more rapidly than the other in case the pressure on that side happened to be a little greater, and so caused the door to angle in its ways and stick. By my improvement I overcome this difficulty and secure an adjustable door or blower to a stove or fire-place which will move evenly in its ways, and is not liable to stick or require care in raising and lowering it.

To enable others skilled in the art to make and use my invention, I will now describe it by reference to the accompanying drawings, in which—

Figure 1 is a vertical cross-section of an open-faced stove to which my improvement has been applied. Fig. 2 is a horizontal section on the line  $x x$  of Fig. 1. Fig. 3 is a view of the pulley-shaft. Fig. 4 is a front view of one of the pulleys. Fig. 5 is a detailed sectional view, showing the side of one of the pulleys and its relation to the other parts of the stove.

The stove  $a$  is provided with a grate,  $b$ , having a front or cross bar,  $c$ , which is preferably recessed, as at  $c'$ , for the reception of the lower edge of the blower, an inclined back wall,  $d$ , and a smoke-flue,  $e$ . In the upper part of the stove, and dividing its interior into two compartments, one composing the fire-chamber, is an inclined top plate,  $f$ , which, with a plate,  $g$ , extending from the upper edge of the inclined back wall,  $d$ , forms a narrow upwardly-inclined smoke-flue,  $e$ . Practical experience has demonstrated that the use of the plate  $f$ , arranged as described, is very beneficial in the operation of the stove. In the present in-

stance it not only forms an upper chamber for the placing of the roller-shaft of the blower and its protection from the heat, but it also cuts off from the fire-chamber  $a'$  a large space above the smoke-flue, which has heretofore had no beneficial effect whatever, but, on the contrary, has very seriously interfered with the draft of the stove, and causes puffing of the smoke and soot therefrom. In the space  $a^2$  above the plate  $f$ , and at the front of the stove, I place a pulley-shaft,  $i$ , which is journaled in bearings  $i'$  at the side of the stove, and at each end is provided with a pulley,  $k$ , mounted rigidly upon it. In each of the pulleys there are two grooves,  $k'$   $k^2$ . The periphery of the pulleys extends over the front end of the plate  $f$ , and in the grooves  $k'$ , I fasten a wire or wire cord, the other end of which is fastened by lugs to the upper edge of a movable blower,  $m$ , placed between the outer end of the plate  $f$  and the inner side of the fore plate,  $l$ , of the stove. The ends of the blower are covered by the cheeks  $l'$  of the fore plate,  $l$ . The blower  $m$  is preferably an ornamental casting, and is fitted to slide between the cheeks  $l'$  of the fore plate,  $l$ , and is of sufficient width to close the front opening,  $l^2$ , of the stove. In the grooves  $k^2$  of the pulleys  $k$ , I fasten cords or wires  $n$ , the other ends of which are fastened to weights  $n'$ , which weights act as a counter-balance to the blower  $m$ , so that if the blower is raised and placed at any position it will be held there by the weights. The grooves of the pulleys are beyond the side plates,  $a^3$ , of the stove, so that the weights  $n'$  shall pass down outside of the stove, and the cords or wires not be affected by the heat. The weights are inclosed by circular plates  $o$ , which extend down the sides of the stove, and are secured in place by bolts or otherwise.

The blower may be raised up into the space  $q$  either by a hook or poker inserted into a staple, hook, or lug on its lower edge, or it may be operated by a small crank placed on the outer end of the shaft  $i$ .

As a substitute for the weights, I may use a bar,  $p$ , bearing upon the upper side of the pulleys  $k$  with sufficient weight to create enough friction upon the pulleys to counter-balance the weight of the blower. In such

case it would be necessary to make use of a crank on the end of the shaft *i* in order to raise or lower the blower.

The great advantage of my improvement is the fact that the blower cannot rise or fall more rapidly on one side than the other, owing to the fact that the pulleys are mounted rigidly on the shaft and will turn evenly therewith. The result is that the blower is easily and evenly moved, and does not get out of order, as has been frequently the case heretofore.

In case I make use of the bar *p*, it is desirable to have the wearing-surfaces against which the pulleys turn "babbitted" or faced with some other material which will prevent that disagreeable noise caused by one metal surface rubbing against another.

If desired, the groove in the pulleys may be made in spiral form, making two turns on the face of the pulley, the weights *n'* being connected to the same cords that are attached to the blower.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a stove or fire-place,

of the vertically-moving blower, with pulleys mounted rigidly upon a common shaft, substantially as and for the purposes described.

2. The combination of the blower, pulleys mounted rigidly upon a common shaft, and counter-balance or friction device, substantially as and for the purposes described.

3. A fire-place or stove having an adjustable blower operated by pulleys mounted upon a common shaft, provided with a division-plate which separates the fire-chamber from that in which the pulley-shaft is placed, substantially as and for the purposes described.

4. A fire-place or stove having an adjustable blower operated by pulleys upon a common shaft, and vertical chambers outside of the fire-chamber, in which the pulley-weights are suspended, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 12th day of May, A. D. 1882.

GEORGE W. GEISSENHAINER.

Witnesses:

W. B. CORWIN,  
T. B. KERR.