

J. C. CROSMAN.
Fire-Place Blower.

No. 218,118.

Patented Aug. 5, 1879.

Fig. 1.

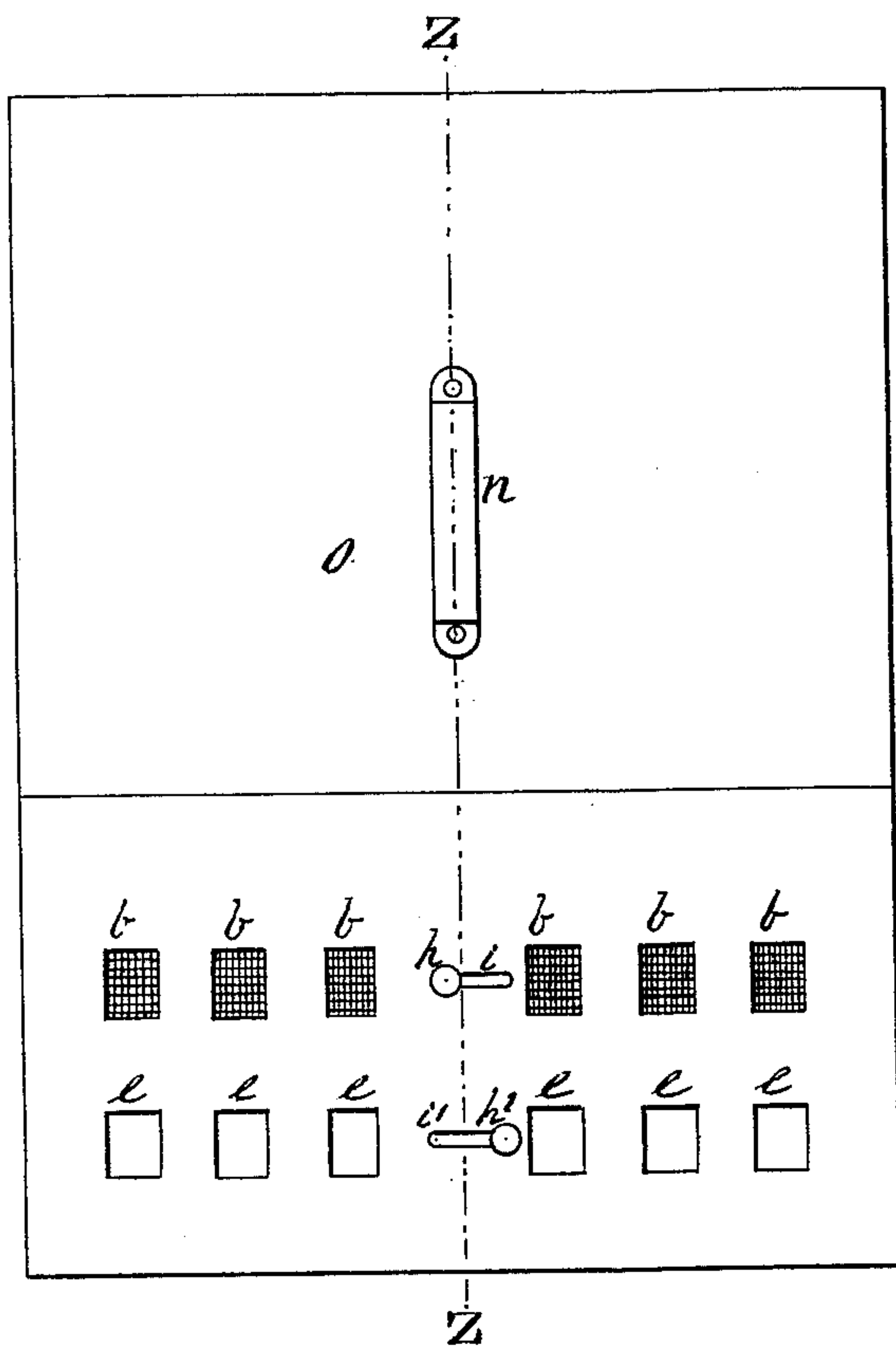


Fig. 2.

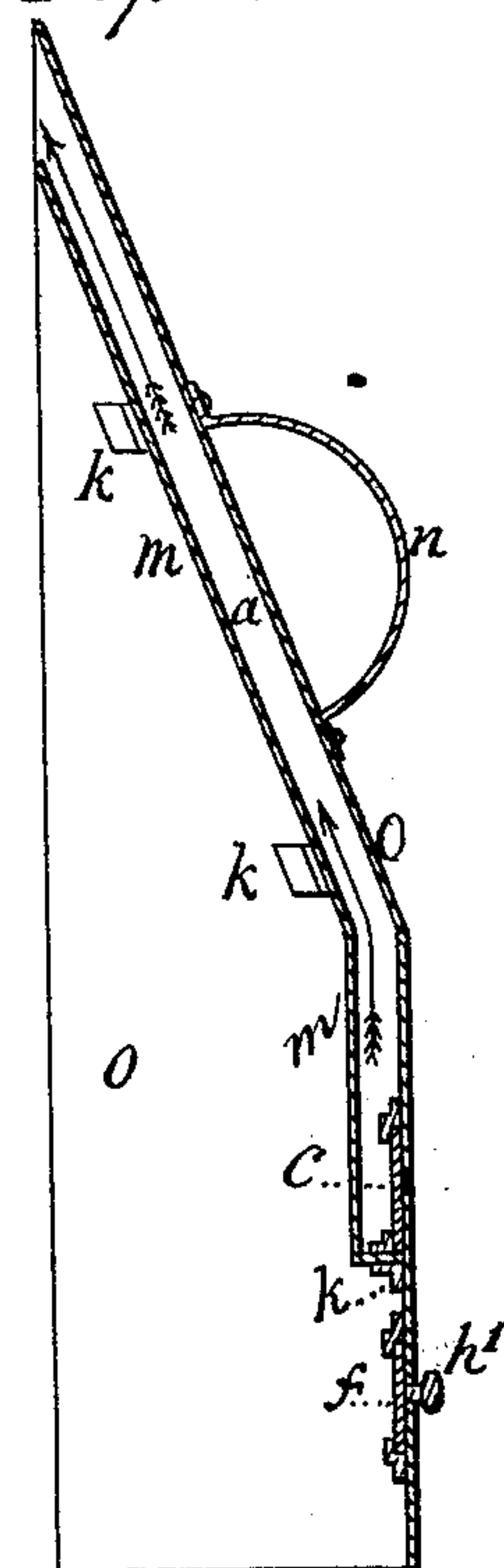
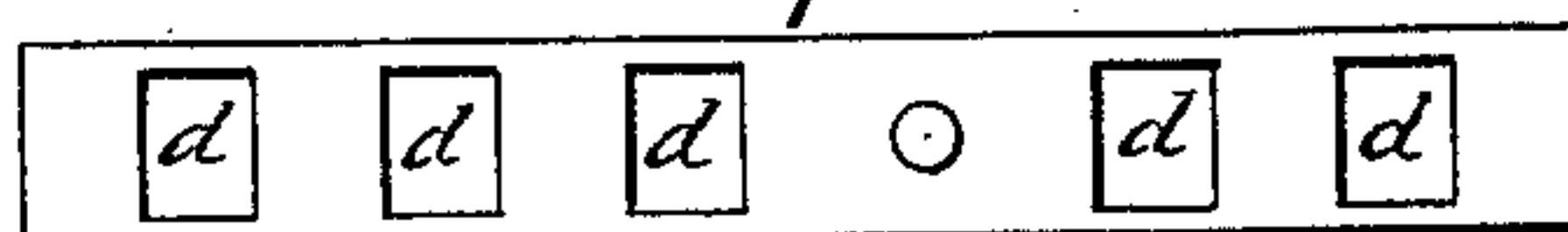


Fig. 3.



Witnesses,-

Sturges J. Bacon
Henry G. Hill

Inventor,-

John C. Crosmen.

UNITED STATES PATENT OFFICE

JOHN C. CROSMAN, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FIRE-PLACE BLOWERS.

Specification forming part of Letters Patent No. **218,118**, dated August 5, 1879; application filed October 26, 1878.

To all whom it may concern:

Be it known that I, JOHN C. CROSMAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Fire-Place Blower; and I do hereby declare that the following description thereof is sufficiently full, clear, and exact to enable others skilled in the art to make and use my said invention, reference being had to the accompanying drawings, and the letters of reference marked thereon, making a part of this specification.

Figure 1 is a front elevation of the blower. Fig. 2 is a section of a side elevation cut on the dotted line Z Z of Fig. 1; and Fig. 3 is a front elevation of one of the dampers.

Owing to sudden atmospheric changes of temperature and other causes, rooms heated by fire in fire-places frequently become oppressively warm, to the great discomfort of the occupants. Relief is sought by opening doors and windows, the cold drafts of air from which often engender agues and catarrhs. At such times, too, much fuel is unnecessarily consumed. When the temperature of the atmosphere rises it generally happens that the draft of the chimneys is materially lessened, causing the air of the overheated apartments to be contaminated with the poisonous gas escaping from the burning coals.

The object of my invention is to regulate the temperature of a room heated by fire in a fire-place, more especially where the fuel used is anthracite coal.

Another object is to save fuel, and also to keep the air in the room free from unwholesome gases.

The nature of my invention consists in combining a flue with a fire-place blower, so as to prevent any excess of heat from entering the room from the fire-place, and so as to render more certain the ascent of the products of combustion into the chimney.

The blower may be made of brass, iron, or other suitable metal, and of dimensions and shape to fit the opening of the fire-place. Its flue *a*, Fig. 2, is connected by air-ports *b*, Fig. 1, with the air in the room. A damper, *c*, Fig. 2, provided with air-ports *d*, (shown in Fig. 3,) corresponding to the air-ports *b*, is made to

slide back and forth, and to close or open, partially or wholly, as may be desired, the air-ports *b*, which connect the flue *a* with the air in the room.

Below the lower part of the flue *a* are other air-ports, *e*, which lead to the fire in the fire-place or grate and to the chimney. A damper, *f*, Fig. 2, with air-ports corresponding to the air-ports *e*, Fig. 1, is made to slide back and forth, and to close or open, partially or wholly, as may be desired, the air-ports *e*, which connect the air of the room with the fire and the chimney.

Pins *h h'*, Fig. 1, working in slots *i i'*, are for moving the dampers, to which the pins are fastened, back and forth.

Letters *k*, Fig. 2, denote the angle-iron, by which the inner shell, *m*, Fig. 2, of the blower is fastened to the outer shell, *o*, so as to form the flue *a*. Letters *n*, Figs. 1 and 2, denote the handle.

I prefer making the inner shell, *m*, Fig. 2, of metal considerably thinner than that of the outer shell, *o*, so that said inner shell may expand or cockle by itself without disturbing the shape of the outer shell.

The purpose of the damper *f* is to regulate the quantity of air passing to the fuel and fire, and the purpose of the damper *c* is to regulate the quantity of air passing through the flue.

Whenever it is desired to urge the combustion of the fuel, the blower is placed in position upon the hearth, close up to the opening of the fire-place, and the damper *f* is moved so as to open the air-ports *e* to the extent desired, which will admit air to the fuel and fire. Whenever the room becomes too warm, and it is desired to check or stop the combustion of the fuel, the damper *f* is moved so as to partially or wholly close the air-ports *e*, and at the same time, by moving the damper *c*, the air-ports *b* may be opened, which will arrest the flow of heat into the room, and cause it to pass, with the ascending air in the flue, into the upper part of the fire-place and into the chimney, as indicated by the arrows in Fig. 2.

By properly adjusting the dampers, it is evident that the temperature of the room may be easily regulated to any degree desired, while the current of air from the room, enter-

ing the flue of the blower through the air-ports, and passing out into the fire-place and chimney, will keep the room well ventilated, its air pure and wholesome, and at the same time stop the wasteful combustion of fuel.

The blower is designed to stand on end upon the hearth, and its sides to gently grasp the ends of the grate.

The drawings represent the upper tier of air-ports, *b*, open, the lower tier, *e*, closed.

The dampers in the drawings are placed on the inner side of the outside shell; but it is obvious that they may be placed on the outside, and in some cases the latter location may be preferable.

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

1. The combination of a flue with a fire-place

blower, the flue being formed in the blower, in the manner substantially as and for the purpose herein described.

2. The combination of a damper with a flue formed in a fire-place blower, in the manner substantially as and for the purpose herein described.

3. In combination with a fire-place blower having dampered openings therein, a flue having a damper attached to it, said flue and damper and said dampered openings constructed and arranged to operate substantially as and for the purpose herein described.

JOHN C. CROSMAN.

Witnesses:

STEUBEN T. BACON,
HENRY T. GILL.