

(No Model.)

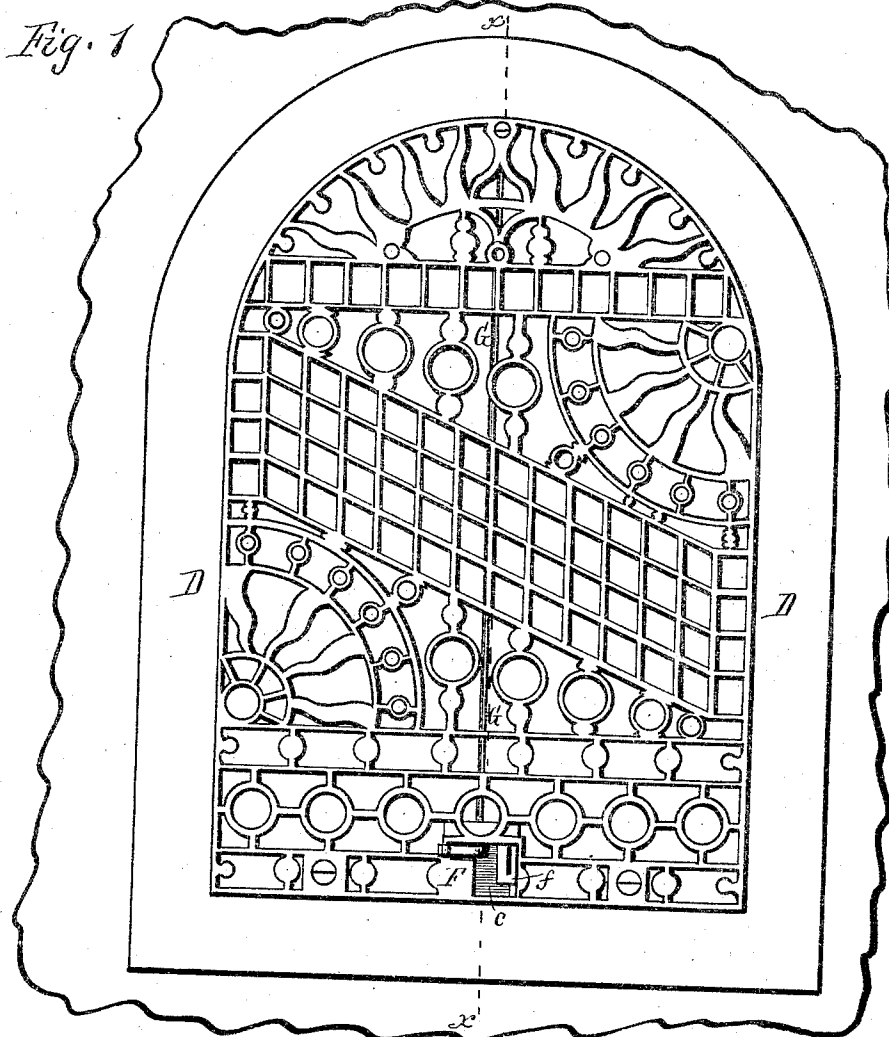
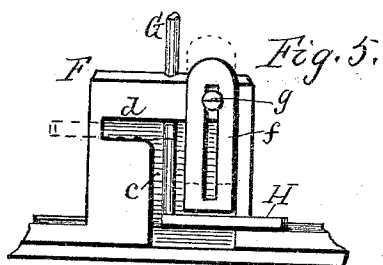
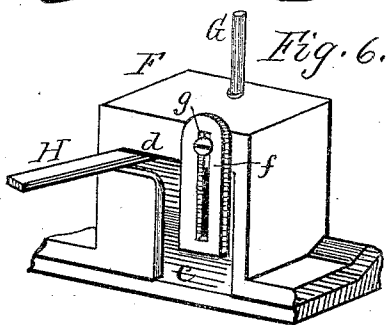
2 Sheets—Sheet 1.

J. GEDDES.

HOT AIR REGISTER AND VENTILATOR.

No. 436,522.

Patented Sept. 16, 1890.



Witnesses.
Geo. B. Selden
C. S. Crannell

Inventor.
Joseph Geddes.
R. F. Osgood,
Atty

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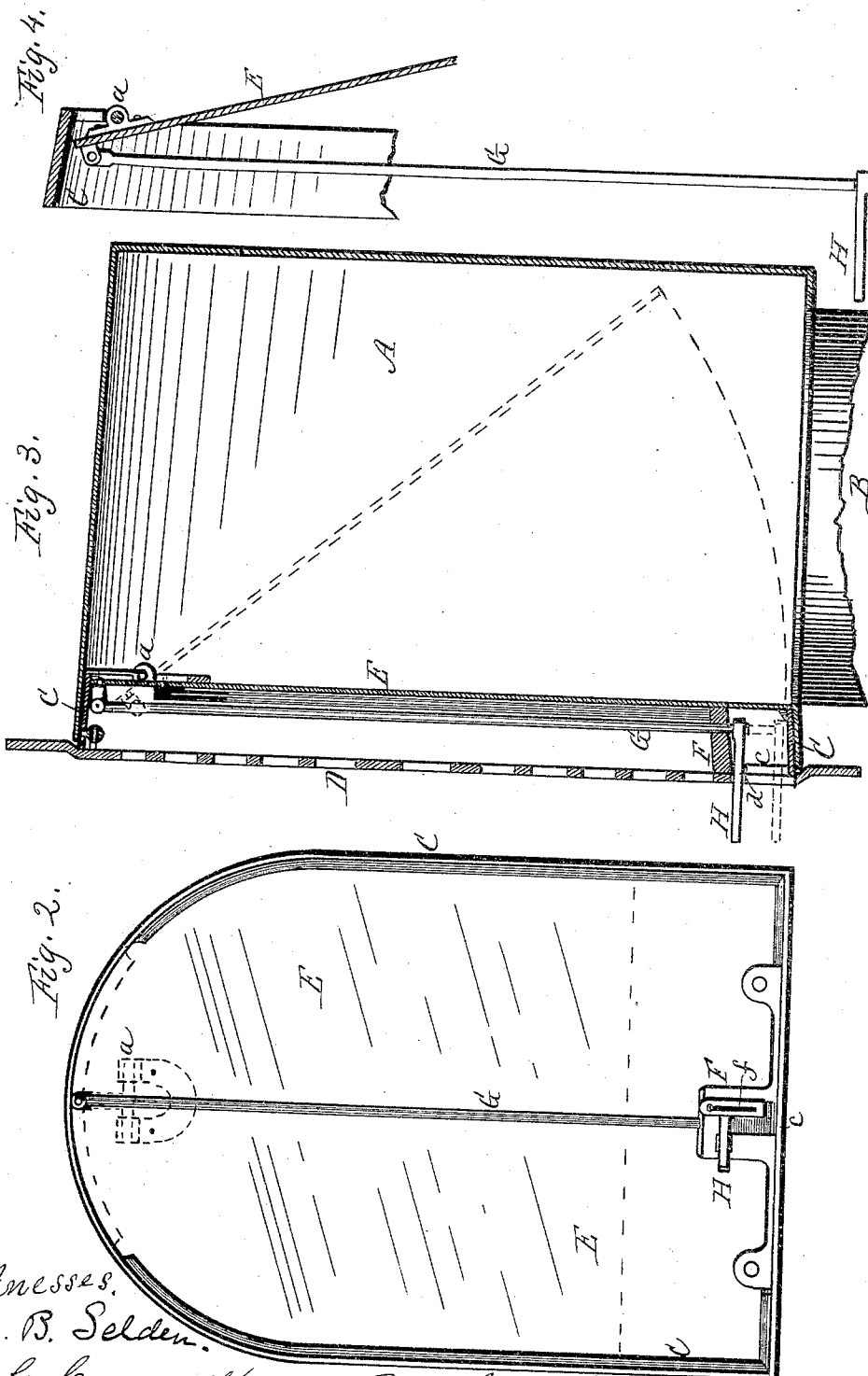
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R. F. Osgood, Atty.

UNITED STATES PATENT OFFICE.

JOSEPH GEDDES, OF ROCHESTER, NEW YORK.

HOT-AIR REGISTER AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 436,522, dated September 16, 1890.

Application filed April 14, 1890. Serial No. 347,890. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GEDDES, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Hot-Air Registers and Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to registers and ventilators set into the side walls of rooms; and it consists, more particularly, in the employment of a wing or valve that covers the whole opening of the face-plate, being hinged so as to be swung open and closed, and arranged to be held in either position by the means hereinafter described.

In the drawings, Figure 1 is a front elevation of a register provided with my improvement. Fig. 2 is a similar view of the interior frame and wing, the face-plate being removed. Fig. 3 is a central vertical cross-section in line *xx* of Fig. 1, showing in full lines the wing or valve in its closed position, and in dotted lines the same part in its open position. Fig. 4 is an elevation of the adjusting-rod and its crank-connections removed from the register. Fig. 5 is a front elevation of the arrangement at the bottom of the register for adjusting and holding the wing. Fig. 6 is a perspective view of the same.

A indicates the hot-air box, which is located in the side wall of the apartment, and B is the hot-air pipe connected therewith, the same being of ordinary form and construction.

C is the inner frame of the register, which is attached to the open front of the box, and D is the open face-plate attached to the frame by screws or otherwise, so as to be removable. This may be ornamented in any desired way, one form being shown in the face view, Fig. 1, sufficient opening being made through the face-plate for the escape of the hot air outward into the room.

In ordinary registers of the kind now in use, the openings through the face-plate are covered by vertical slats which are hinged so as to open and close, and as a number of such slats are used they occupy considerable space, and much of the opening is covered and obstructed, even when they are open. I employ

in place of these slats a single plate E, made of suitable material, forming a wing or valve, which, when open, exposes the whole opening of the face-plate, allowing unobstructed passage of the hot air, and when closed covers said opening and prevents any escape. This wing is hinged at the top, as shown at *a*, and swings backward, so as to cut off more or less of the heat, as indicated by dotted lines in Fig. 3. In this position it forms a deflector to throw the hot air directly outward without passing to the top of the box. It can be set at any angle to regulate the passage of the hot air, by the means hereinafter described.

F, Figs. 5 and 6, is a casting forming a bearing in the bottom of the frame C, and G is a rod or spindle hinged at its upper end to the top of the wing E, above the hinge *a*, on which the wing turns, the lower end of said rod passing down loosely through a hole in the top of the bearing F, and having swiveled thereto a crank-arm H, which projects outward through an opening *c* in the front of the bearing, and in position to be reached and operated by the hand. On one side of this opening is a cross-slot *d*, of sufficient size to receive and hold the crank-arm when raised and turned to one side, and on the other side of the opening is a slotted plate *f*, forming a stop held in place by a set-screw *g*, which passes through the slot and enters the bearing. By this means the slotted plate can be adjusted higher or lower, and fixed at any position, as indicated by the dotted lines in Fig. 5. The crank-arm H is also adapted to be turned in the opposite position and rest under the end of this gage-plate.

To close the wing or valve E, the spindle G is pressed up, and the crank-arm H is then turned to the left into the side slot *d*, which locks it in place and holds the spindle elevated. To open the wing, the crank-arm H is pressed down, carrying the spindle with it, and is then turned to the right under the lower end of the gage-plate *f*, which holds it in that position. By making the gage-plate vertically adjustable, as before described, the degree of opening of the valve can be regulated exactly as desired. Under some circumstances it is desirable to limit the opening of the valve to only a part of the depth of the

hot-air box. When used as a ventilator, the valve is hinged at the bottom and the lever-work reversed, so as to operate from the top.

The register may be of any desired shape—
5 square, rectangular, or oblong.

The device is effective for furnace, steam, or hot-water heating.

It is obvious that the spindle G can be hinged at its top to the wing E, either above
10 or below the hinge *a*, on which the wing swings. If hinged below, the wing will be opened by the raising of the spindle and closed by its falling.

I design to make an opening in the face-plate D, opposite the screw *g*, so that the screw
15 can be turned by a screw-driver without removing the face-plate.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—
20

1. In a hot-air register, the combination, with the face-plate D, of the wing or valve E, hinged at its top so as to swing forward and back, the spindle G, hinged to the wing, and
25 the crank-arm H, swiveled to the lower end of the spindle and capable of being turned to the right and left to engage with devices for locking it in place, as herein shown and described.

2. In a hot-air register, the combination, 30
with the face-plate D, of the wing E, hinged so as to swing forward and back, the spindle G, hinged to the wing, the crank-arm H, swiveled to the lower end of the spindle and capable of turning to the right and left, the 35
bearing F, provided with the cross-slot *d*, into which the crank-arm turns when elevated, and the gage-plate *f*, under which it turns when depressed, as shown and described, and for the purpose specified. 40

3. In a hot-air register, the combination, with the face-plate D, of the wing E, hinged so as to swing forward and back, the spindle G, hinged to the wing, the crank-arm H, swiveled to the lower end of the spindle and ca- 45
pable of turning to the right and left, the bearing F, provided with the cross-slot *d*, and the gage-plate *f*, adjustable higher or lower by the set-screw *g*, as shown and described, and for the purpose specified. 50

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSEPH GEDDES.

Witnesses:

R. F. OSGOOD,
P. H. COSTICH.