

(No Model.)

J. GEDDES.

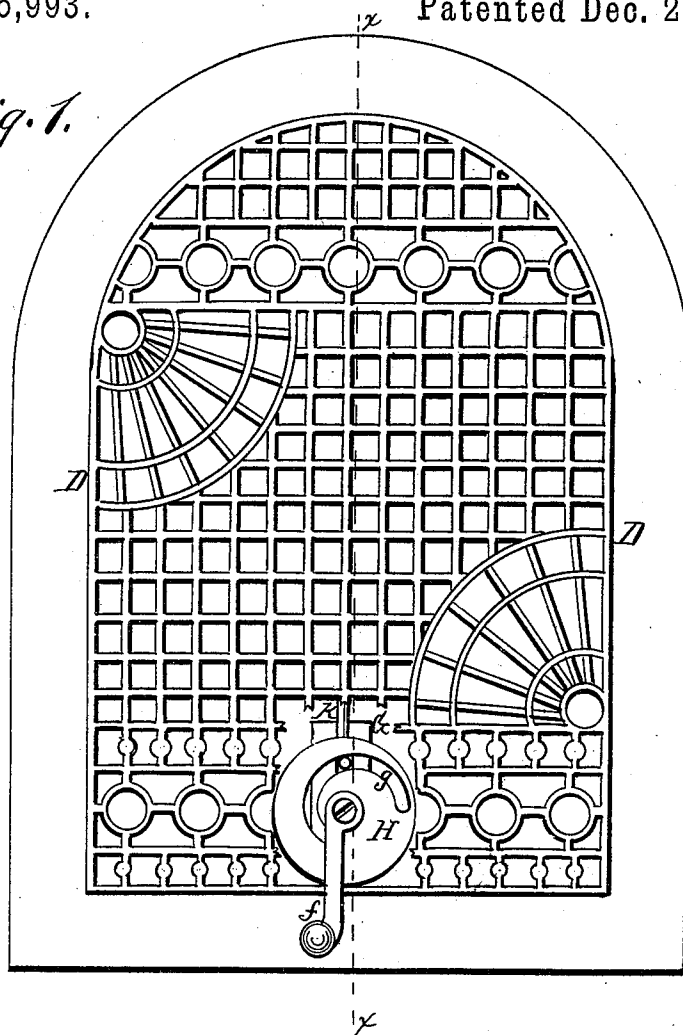
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HOT AIR REGISTER AND VENTILATOR.

No. 465,993.

Patented Dec. 29, 1891.

Fig. 1.



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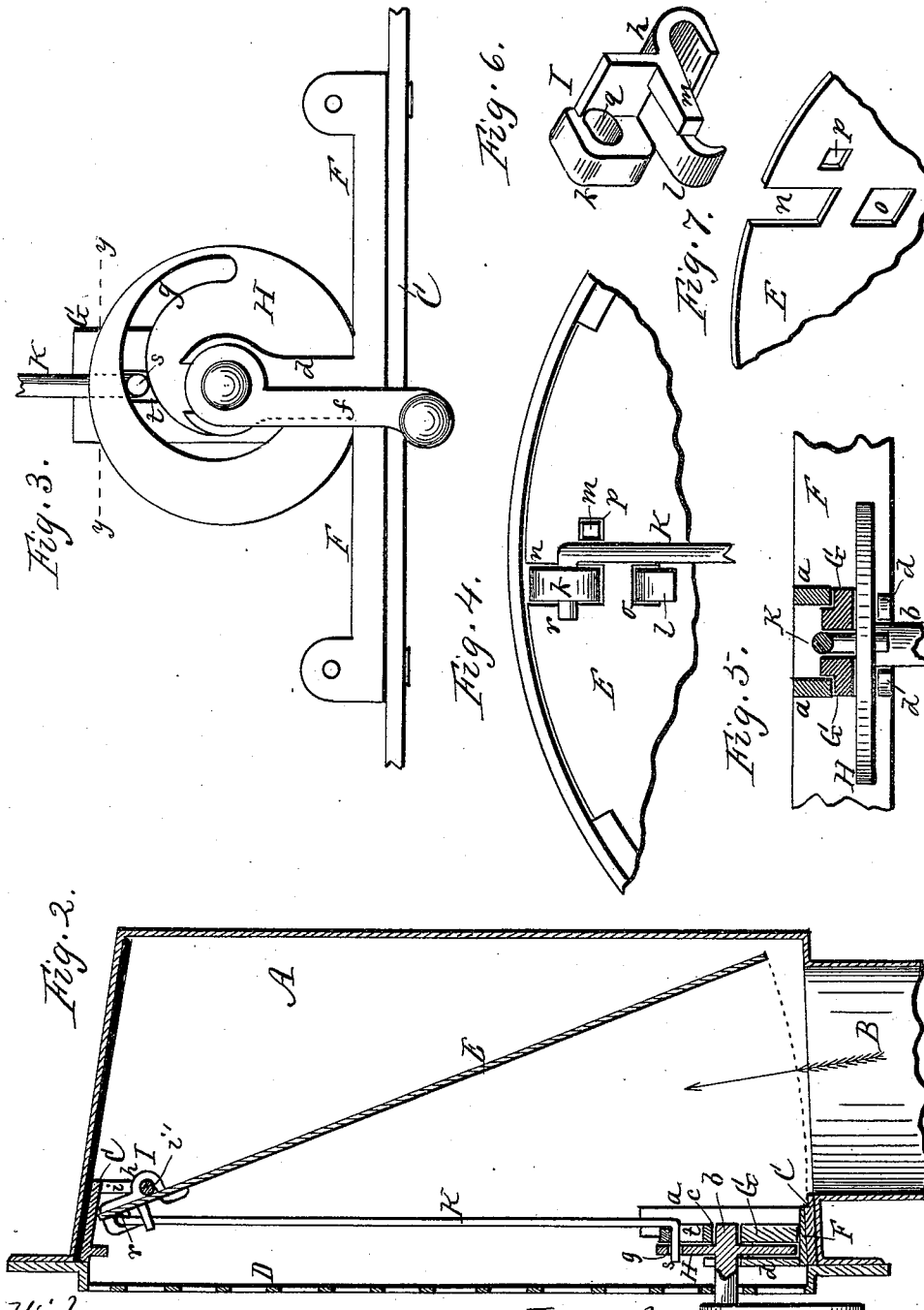
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UNITED STATES PATENT OFFICE.

JOSEPH GEDDES, OF ROCHESTER, NEW YORK.

HOT-AIR REGISTER AND VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 465,993, dated December 29, 1891.

Application filed October 11, 1890. Serial No. 367,797. (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 specification.

10 In general construction this invention resembles that patented by me September 16, 1890, No. 436,522.

The object of this invention is to provide a more effective arrangement for operating the valve; also, to provide a simpler and more effective hinge to the valve.

The invention consists in the construction and arrangement of parts hereinafter described and claimed.

20 In the drawings, Figure 1 is a front elevation of the register, a part being broken away to show the cam-wheel for operating the valve. Fig. 2 is a vertical cross-section of the same in line *xx* of Fig. 1. Fig. 3 is an enlarged elevation showing the lower end of the frame, the cam-wheel, and connecting parts. Fig. 4 is an enlarged elevation showing the upper end of the frame and the hinge connection between the swinging valve and the frame. 25 Fig. 5 is a cross-section in line *yy* of Fig. 3. Fig. 6 is a perspective view of the casting that forms the hinge of the valve. Fig. 7 is a perspective view of the upper end of the valve, exhibiting the slots therein to receive the lugs of the casting that forms the hinge. 30 35

A indicates the hot-air box, to which the register is attached, and B the hot-air pipe connected therewith. These parts may be located either in the side wall or the floor of the apartment, according to the use to which the device is applied. The drawings show a side-wall register, but it is equally adapted to floors. 40

C is the inner frame of the register, which is attached to the front of the box, and D is the open-face plate attached to the frame by screws or otherwise. 45

E is the valve, of the same construction as in my aforementioned patent, consisting of a plate of suitable material, hinged at the top, but swinging at the bottom and covering the whole area of the register. When thrown backward, as shown in Fig. 2, it opens the pas-

sage and deflects the hot air outward. When closed, it cuts off the passage of air to the room.

F is a removable casting in the bottom of the frame, attached by bolts or screws and provided on the inner side with a slotted standard *a*. 55

G is a plate fitted loosely on front of said standard. 60

H is the cam-wheel by which the valve is operated. This cam-wheel is provided with two journals *bb*, the inner one of which rests in a hole *c* of the removable plate G, while the outer one rests in the fork of an arm *d*, cast solid with the casting F. The outer journal extends through a hole in the face-plate D and is provided on the outer end with a crank *f*, by which the cam-wheel is turned. The cam-wheel is provided with an eccentric slot *g*, which starts from near the periphery on one side and gradually contracts toward the center on the opposite side, as shown in Fig. 3, said slot being for the purpose of receiving the bent end of the rod that operates the valve, 65 70 75 as will presently be described.

I is a casting, that forms the hinge of the valve E. It is made in one piece and consists of a half-socket *h*, which fits and turns on a bearing *i'*, that forms the bottom of a loop *i* that depends from the top of frame C. It also has three lugs *klm* projecting from the front, as shown in Fig. 6. The upper end of the valve E also has three corresponding slots *no p* to receive the lugs, as shown in Fig. 7. 80 85

K is the rod by which the valve is operated. It has two bent ends *rs*, which stand at right angles to each other.

To connect the casting I with the valve E to form the hinge, the half-socket *h* is placed around the bearing *i'* of the frame. The plate E is held at an angle and the lugs *lm* are inserted through the slots *op*, after which the plate E is turned down, so as to bring the lug *k* into the open slot *n*. The bent upper end *r* of the rod K is then inserted through the hole *q* of lug *k*, thus locking the parts together. The lug *l* is in the form of a hook, as shown, and when in place it laps past the slot and prevents any separation. The lug *m* is simply a straight stud and stands outside the rod K and prevents the latter from becoming detached from its connection with lug *k*. The parts are all thus detachably secured to- 90 95 100

gether and the hinge is very cheap. The hinge can be located higher or lower on the plate at pleasure, thus placing the joint at the top or at any intermediate point.

5 The lower bent end *s* of the rod *K* passes through a slot *t* of the plate *G* and fits in the eccentric slot *g* of the cam-wheel *H*. By turning the cam-wheel, as described, in one direction or the other the valve *E* is correspond-
10 ingly opened or closed, and by this means it can be opened to any desired degree; and, furthermore, it is held firmly at any adjustment, as the bent end of the valve-rod is firmly held by the slot. One great advantage is that
15 the adjustment can be made instantly and held in place without any locking attachments, which latter are required in my former patent.

Having described my invention, I do not here claim, broadly, the valve shown in my
20 former patent; but

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

1. In a hot-air register and ventilator, the combination, with the box *A*, of the casting *F*,

attached removably in the mouth of the box 25 and provided with the slotted standard *a*, the plate *G*, fitted loosely in the standard, the cam-wheel *H*, having one journal resting in the plate *G* and the other in the arm *d*, attached to the casting *F*, and the rod *K*, attached at 30 one end to the swinging valve and at the other in the eccentric groove of the cam-wheel, as shown and described, and for the purpose specified.

2. In a hot-air register and ventilator, the 35 combination, with the valve *E*, provided with the slots *n o p*, of the casting *I*, provided with the lugs *k l m*, fitting in the slots, and the rod *K*, provided with a bent end *r*, fitting in an opening in lug *k*, as shown and described, and 40 for the purpose specified.

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

JOSEPH GEDDES.

Witnesses:

R. F. OSGOOD,
CHAS. A. WIDENER.