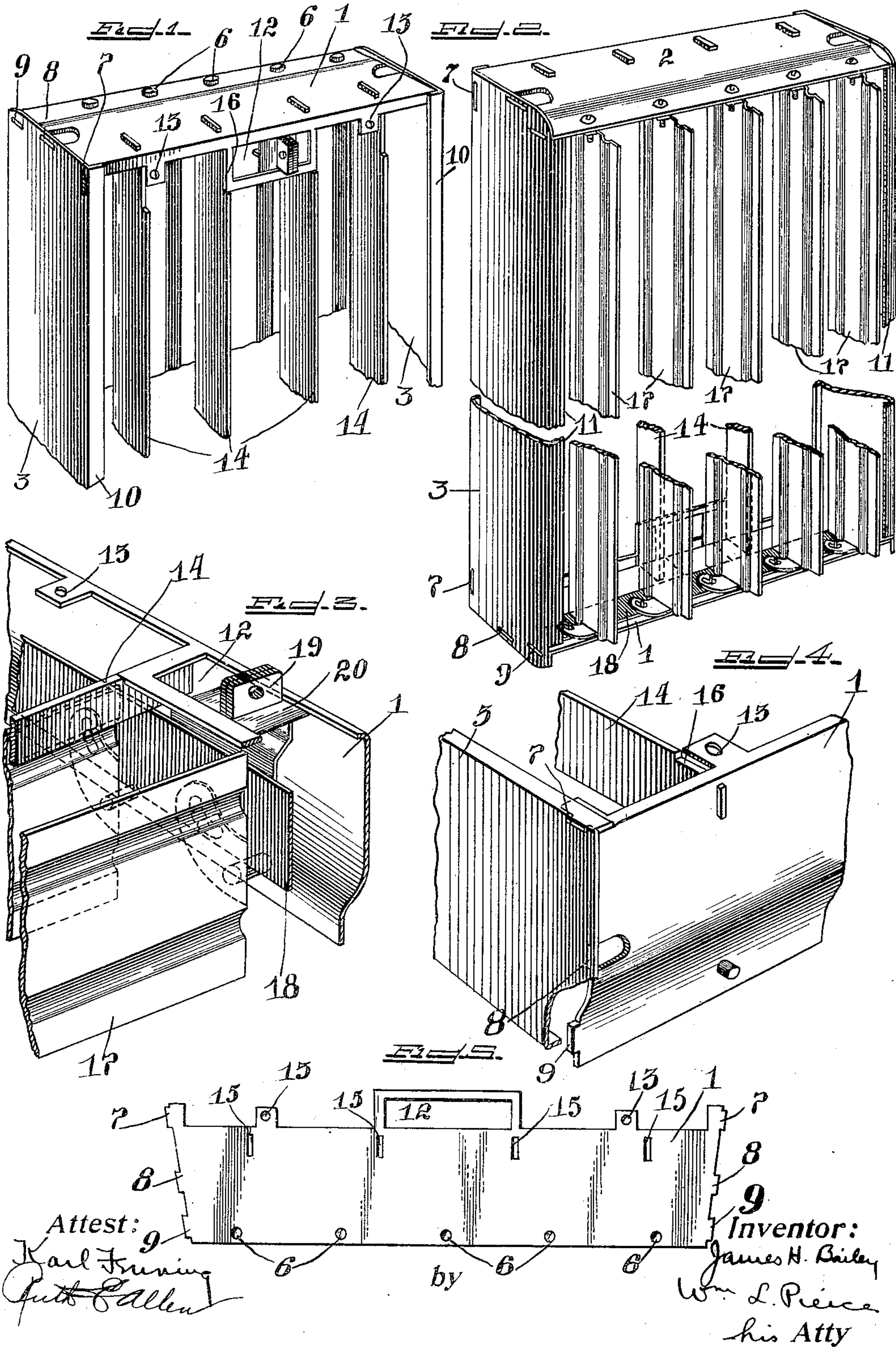


J. H. BAILEY.
REGISTER OR VENTILATOR.
APPLICATION FILED SEPT. 14, 1908.

978,129.

Patented Dec. 13, 1910.



UNITED STATES PATENT OFFICE.

JAMES H. BAILEY, OF NEW YORK, N. Y.

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Specification of Letters Patent.

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Application filed September 14, 1908. Serial No. 452,840.

To all whom it may concern.

Be it known that I, JAMES H. BAILEY, a citizen of the United States, residing in the borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Registers or Ventilators, of which the following is a specification.

My invention relates to registers or ventilators of that class which usually have a frame or body portion rectangular in shape adapted to be placed in the end of an air flue on the walls or floor of a room, and consists of details of construction hereinafter pointed out.

In the accompanying drawings I have shown one form which my invention may take.

Figure 1 is a front perspective view of a portion of the register or ventilator with the usual face-plate removed. Fig. 2 is a rear perspective view of the same. Figs. 3 and 4 are perspective views of portions of my register or ventilator showing details of construction. Fig. 5 is a plan view of the blank from which one of the end plates of the frame is made.

The frame or body portion of the register consists of end pieces 1 and 2 and side-pieces 3 which coöperate with the end-pieces to form a rectangular frame tapering slightly from that side on which the face-plate usually rests. The end-piece 1 is formed from a blank shown in Fig. 5, and as shown in Fig. 1, comprises a main body portion bearing seats 6 for pivots on the valves and extensions 7, 8 and 9 engaging apertures in the side-pieces in which they are upset, thereby rigidly connecting the four portions of the register frame together. It will be noted that the rivet projection 7 is formed on an extension of the end-piece 1 which is turned in at right angles so as to engage the side-piece of the frame a short distance in from its end. For a similar reason the portion adjacent to the projection 8 is indented and the lower portion of the end-piece 1 is depressed, so as to allow the projections 9 to engage the side pieces inward from their ends, and also to allow the pivots on the valve to extend through the end-piece without extending beyond the side-pieces by which they are, in a measure, protected when set in position. The side-pieces are turned in at their tops 10 and overlap the extension on the end pieces carrying the rivet 7, thus

producing a very strong and rigid frame or body portion for the register or ventilator. The side-pieces are also turned in at their bottoms 11 to form seats for the edges of the valves when the same are closed.

At the upper edge of the end-piece 1 there is turned in a portion carrying a slot 12 which acts as a guide for the actuating thumb-piece of the rod which connects and actuates the valves and also holds the said connecting rod in the frame whether the face-plate is attached to the register or not. In addition to the guide 12 there may be on the inturned portion of the end-plate two or more projections 13 for receiving the screws which hold the face-plate in position on the register.

The end-plate 2 is similar in all respects to the end-plate 1, excepting that the guide 12 may be omitted, inasmuch, as there need be a connecting-rod for the valves at only one end; and also the apertures 6 for receiving the pivots on the valves may be replaced by screw threaded apertures, so that the other end of the valves may be carried on removable pivots.

When the register is to be used in the floor, it is usually desirable or necessary to provide reinforcing bars 14 in the frame against which the face-plate may rest. When these are used it is desirable to provide in the end pieces of the frame apertures 15 forming seats for the reinforcing bars which may be recessed at one end 16 to receive the inturned portion carrying the guide 12, so that they may, throughout the rest of their length, be in direct contact with the under side of the face-plate.

The valves 17 may be provided with longitudinal strengthening ribs in the usual manner and have in an upturned portion at one end holes to engage the removable pivots in the end-piece 2 while at the other end they have upturned portions carrying pivots which engage the apertures 6 in the end-piece 1. The latter upturned portions are also provided with slots which engage projections on the connecting-rod 18 whereby the valves may be opened and closed in the usual manner. The connecting-rod 18 rests at its lower edge upon the revolving pivots of the valves which act as roller bearings for the connecting-rod, and there is projecting upward from the connecting-rod a thumb-piece 19 for actuating it. The thumb-piece 19 extends through, and is

guided in its movement by, the guide 12 on the end-piece 1 which is parallel to and adjacent the connecting-rod 18. Surrounding the actuating thumb-piece 19 and between it and the overturned portion of the end-piece 1 in which is the guide 12 (and below said inturned portion) is a leaf spring 20 which performs the dual function of holding the connecting-rod stationary in whatever position the valves may be and of tending to continually keep the connecting-rod pressed down onto the valve pivots which act as roller bearings therefor.

The whole device as described may be made of a small number of pieces of pressed sheet steel which, by my construction, readily lends itself to produce a light but strong register which is cheap to manufacture, inasmuch, as the assembling of the parts is very simple and readily performed. After the sides and ends of the frame have been put together, the connecting-rod is placed in position and the end of the valves adjacent thereto are inserted and by means of the guide 12 the portions already assembled are held in place while the removable pivots at the opposite ends of the valves are inserted when the assembling is completed.

It is obvious that changes might be made in details of construction without departing from my invention.

I claim as my invention:—

1. In a register or ventilator, a face-plate, a frame comprising two side-pieces and two end-pieces tapering from front to rear the side-pieces being turned over at their top edges onto inturned portions of the end-pieces, projections on said end-pieces adapted to engage and be upset in apertures in said side-pieces certain of the projections being on depressed portions of the end-pieces and certain of the projections being on inturned portions of the end pieces, inturned portions of said end-pieces forming lugs to which the face-plate may be fastened, an inturned portion on one of said end-pieces containing seats for the revolving pivots of valves, an inturned guide for the thumb-piece of a connecting-rod on said end-piece and integral therewith, an inturned portion on the other end-piece carrying removable pivots on which the valves swing, a connecting-rod riding between the valve bearings on the revolving pivots, a thumb-piece on the connecting-rod, a leaf-spring between the connecting-rod and the guide for the thumb-piece, pins carried by said connecting-rod engaging slots in upturned portions of the valves by which the valves are actuated, a plurality of valves, bearings at one end of the valves, removable valve pivots on one end-piece engaging the bearings, revolving pivots at the other end of the valves engaging the bearings in the other end-piece, upturned portions on the

valves, slot-bearings for the pins on the connecting-rod in the upturned portions of the valves, rods engaging and extending between the end-pieces and bearing against the face-plate to reinforce the face-plate and recesses in the rods to receive the inturned guide for the thumb-piece of the connecting rod.

2. In a register or ventilator, a face plate, a frame comprising two side-pieces and two end-pieces tapering from front to rear the side-pieces being turned over at their top edges onto upturned portions of the end-pieces, projections on said end-pieces adapted to engage and be upset in apertures in the side pieces, upturned portions on said end-pieces to which the face-plate may be fastened, an upturned portion on one of said end-pieces containing seats for the revolving pivots of the valves, an upturned guide on said last mentioned end-piece and integral therewith for the thumb-piece of the connecting-rod, removable pivots on an upturned portion of the other end-piece upon which the valves swing, a leaf-spring, a connecting rod resting between the valve bearings on the revolving valve pivots and held in place between them and the guide by the leaf-spring, pins on the connecting-rod, slots in upturned portions of the valves engaging the pins on the connecting-rod by which the valves are actuated, a thumb-piece on the connecting-rod, a plurality of valves, bearings at one end of the valves for the removable valve pivots, and pivots at the other end of the valves engaging the bearings in the end-piece.

3. In a register or ventilator, a face plate, a frame comprising two side-pieces and two end-pieces tapering from front to rear, projections on said end-pieces adapted to engage and be upset in apertures in the side-pieces, upturned portions also on said end-pieces to which the face-plate may be fastened, an upturned portion on one of said end-pieces containing seats for revolving pivots of valves, an upturned guide integral with said end-piece for the thumb-piece of a connecting-rod, removable pivots on an inturned portion of the other of said end-pieces on which the valves swing, a connecting-rod, projections on the connecting rod, a thumb-piece on the connecting-rod, a plurality of valves, bearings at one end of the valves for the removable valve pivots, pivots at the other ends of the valves engaging the bearings in the end-piece and slot-bearings on the valves for the projections on the connecting-rod.

4. In a register or ventilator, a frame comprising two side-pieces and two end-pieces tapering from front to rear, projections on said end pieces adapted to be engaged and upset in apertures in the side-pieces certain of the projections being in

depressed portions of the end-pieces and certain of said projections being in upturned portions of the end-pieces the side-pieces being turned over at their top edges onto upturned portions of the end pieces, seats on an upturned portion of one end piece for the revolving pivots of the valves, an upturned guide on said end-piece for the thumb piece of a connecting-rod, removable pivots on an inturned portion of the other end-piece on which the valves swing, a plurality of valves, pivots on the valves, a rod connecting the valves and adapted to actuate them and a thumb-piece on the connecting rod.

5. In a register or ventilator, a face plate, a frame tapering from front to rear, a plurality of valves, bearings at one end of the valves, removable valve pivots in the frame engaging the bearings, revolving pivots at the other end of the valves, bearings in the frame which the revolving pivots engage, slot bearings on the last mentioned end of the valves, a leaf-spring, a guide on the frame for a connecting-rod, a connecting-rod resting between the valve bearings on the revolving valve pivots and held in place between them and the guide by the leaf-spring, pins on the connecting-rod to engage the slot bearings on the valves by which the valves are actuated, rods engaging and extending between the end-pieces of the frame and bearing against the face-plate to reinforce the face-plate and portions cut out of the rods to receive the guide for the connecting-rod.

6. In a register or ventilator, a face plate, a frame comprising two side-pieces and two end-pieces tapering from front to rear, projections on said end-pieces adapted to engage and be upset in apertures in the side

pieces, upturned portions on the said end-pieces to which the face-plate may be fastened, seats on an upturned portion of one of said end-pieces for the revolving pivots of the valves, an upturned guide on said last mentioned end-piece for the thumb-piece of a connecting-rod, removable pivots on an inturned portion of the other end-piece on which the valves swing, a leaf-spring, a connecting-rod resting between the valve bearings on the revolving valve pivots and held in place between them and the guide by said leaf-spring, pins on said connecting-rod, a plurality of valves, bearings at one end of the valves for the removable valve pivots, revolving pivots at the other end of the valves engaging the seats in the end-piece, slot-bearings in upturned portions of the valves for the pins on the connecting-rod.

7. In a register or ventilator, a face-plate, a plurality of valves, bearings at one end of the valves, valve pivots in the frame engaging the bearings, revolving pivots at the other end of the valves, bearings in the frame which the revolving pivots engage, slot bearings on the last mentioned end of the valves, a guide on the frame for a connecting rod, a connecting rod resting between the valve bearings on the valve pivots and held in place between them and the guide, and pins on the connecting rod to engage the slot bearings on the valves by which the valves are actuated.

Signed at New York, this tenth day of September, 1908.

JAMES H. BAILEY.

Witnesses:

RUTH E. ALLEN,
KARL FENNING.