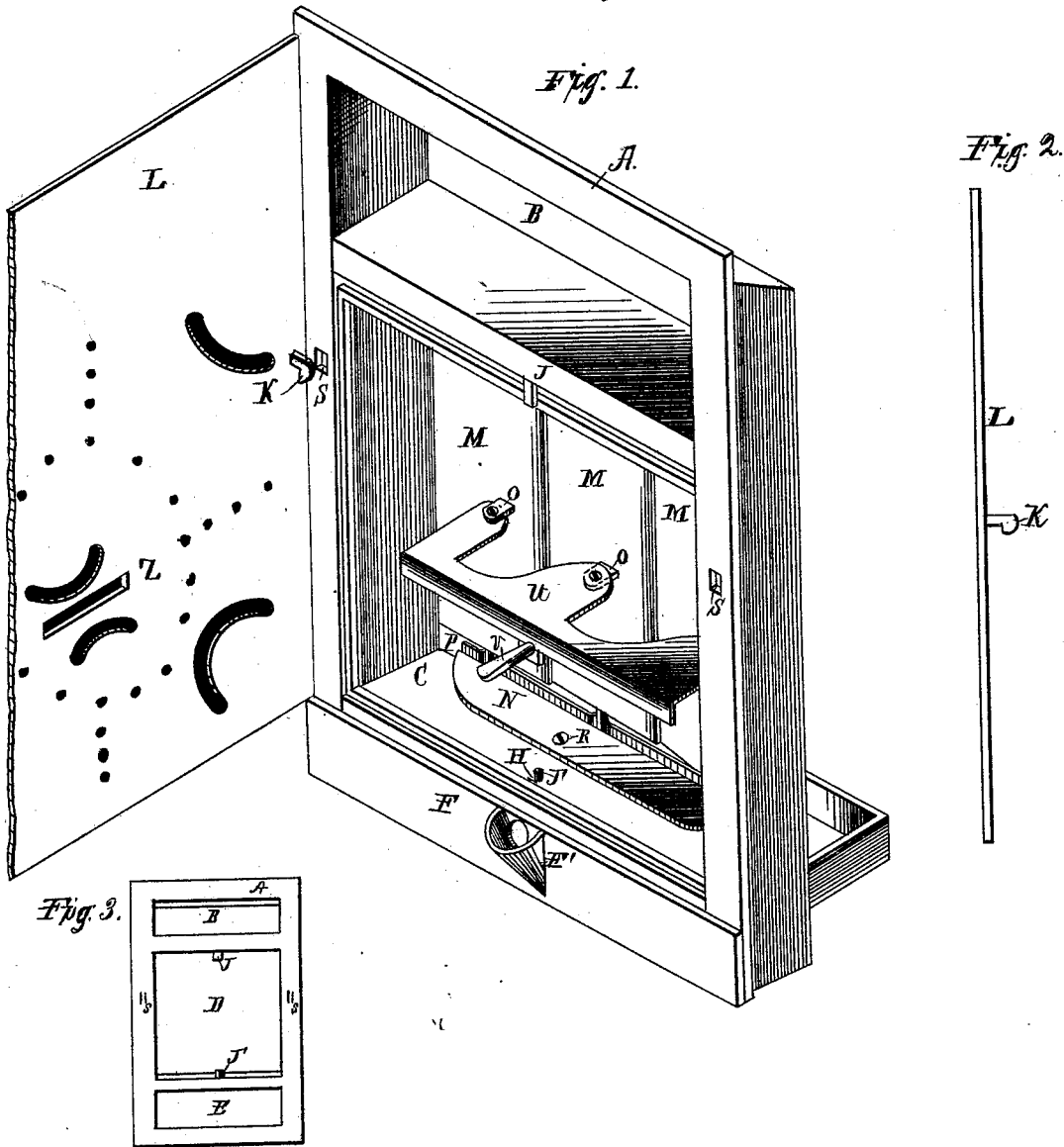


J. W. COLLINS.  
HOT-AIR REGISTERS.

No. 186,081.

Patented Jan. 9, 1877.



Witnesses:  
Morton Toulmin  
Albert Collins

Inventor:  
John W. Collins.  
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# UNITED STATES PATENT OFFICE.

JOHN W. COLLINS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN HOT-AIR REGISTERS.

Specification forming part of Letters Patent No. 186,081, dated January 9, 1877; application filed December 2, 1876.

*To all whom it may concern:*

Be it known that I, JOHN W. COLLINS, of the city of Washington, District of Columbia, have invented a new and useful Improvement in Registers, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to construct a register in such manner that it can be taken apart for repairs, or any other purpose, without injury to the walls of the building in which the register-frame is inserted, the frame being so constructed that the face may be taken off and the register-slats removed without taking the slats apart, and also to temper the heated air with moisture by evaporating water in pan or drawer inserted in the register-frame.

Figure 1 of the accompanying drawings is a perspective view of the register with the face removed and one of its edges broken off. Fig. 2 is an edge elevation of the face L, showing one of the lugs K. Fig. 3 shows the register-frame A with face L, slat-frame C, and evaporator F removed.

A is the register-frame. It is provided with an opening, B, for a hand-hole, an opening, D, to receive the movable slat-frame C, an opening, E, for the evaporator-pan F. The slat-frame C is attached to the register-frame, and kept in its place by one or more lugs, J, at the top of the opening D, and at the bottom of the slat-frame there are one or more slots H, which slip over one or more lugs, J', attached to the bottom of the opening D. This opening should be large enough to admit of the slat-frame being lifted up from the lug J' to remove it from the frame and let it drop down over the lug J' to put it into its place. The slat-frame C may be fastened into its place by screws instead of using lugs and slots.

The face L may be made so as to cover the register and hand-hole in one piece, or it may be made in two pieces to cover them separately. That part of the face which covers the hand-hole may be used for a name-plate.

The slat-frame C may be cast in a single piece, or it may be constructed of several pieces fastened together in any convenient manner. Either the upper or the lower part of the slat-frame C is perforated with a suitable number of holes, in which the pivots on one end of the slats are inserted, and the opposite end of the slat-frame is provided with a ledge or flange, P, having indentations, into which the pivots on the opposite ends of the slats are made to fit, and are held in their respective places by a small plate, N, the edge of which is made to rest against the pivots. This plate is attached to the slat-frame by one or more screws, R. The removal of this screw or screws R enables the slats to be taken out and detached entirely from the slat-frame and from the register. Each of the slats M is provided with a lug, O, near its center. These lugs are furnished with pivot-holes, through which rivets or screws may be inserted to fasten the plate U and the slats M together, and by means of the handle V, which protrudes through a slot, Z, in the face L, the slats may be opened or shut, either to admit the heat into or to cut it off from the apartment.

It is obvious that the register-frame may be cast in a single piece, or that it may be made of several pieces, and that the face L may be attached thereto in various ways; also, that the hand-hole B may be used or not, without departing from my invention.

The drawer F is provided with a lip, F', through which it may be filled with water without removing it from the register.

I claim as my invention—

The combination, in a hot-air register, A, of hand-hole B, movable slat-frame C, and evaporator F, provided with a lip, F', as shown and described, and for the purposes set forth.

JOHN W. COLLINS.

Witnesses:

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