(No Model.)

F. BURMEISTER.

HOT AIR REGISTER.

No. 491,524. Patented Feb. 14, 1893.

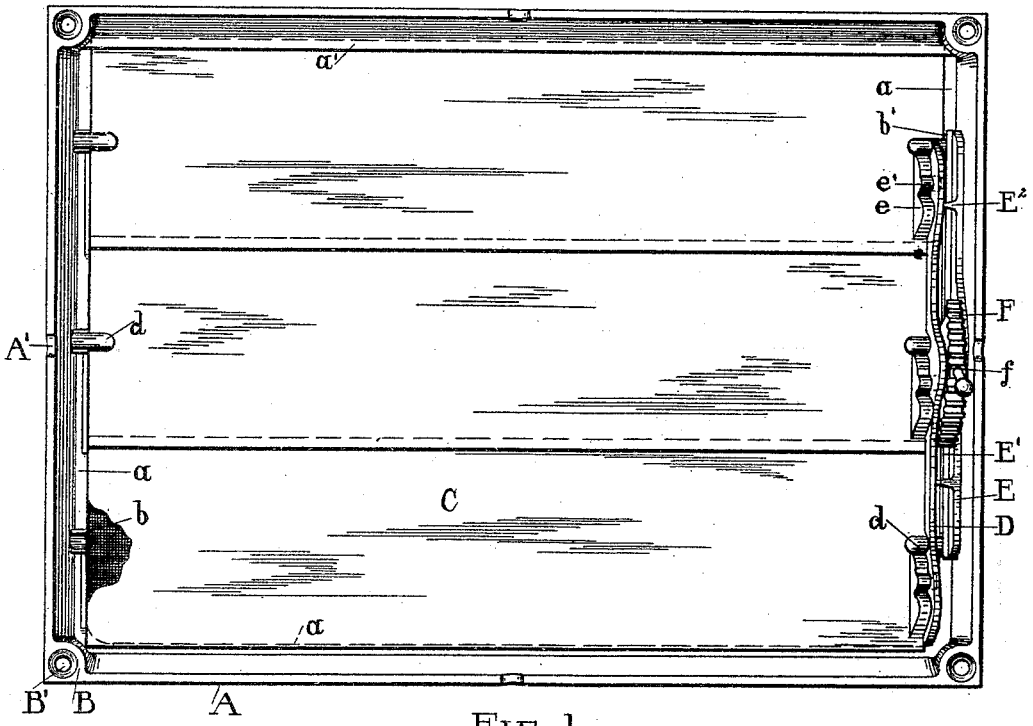

FIG. 1.

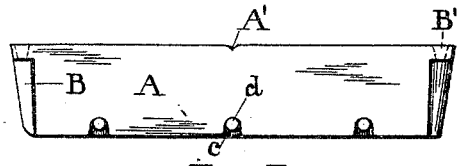

FIG. 2.

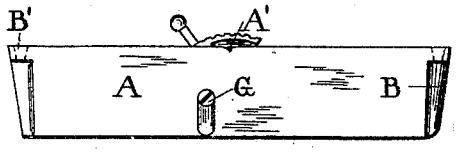

FIG. 3.

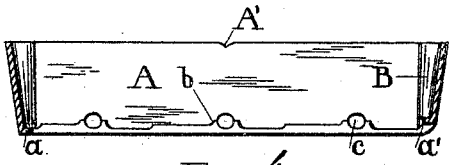

FIG. 4.

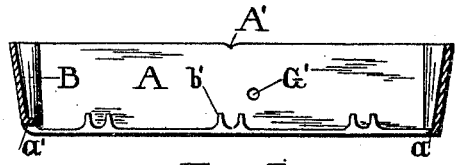

FIG. 5.

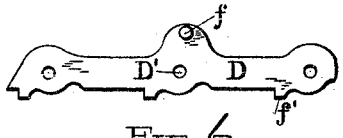

FIG. 6.

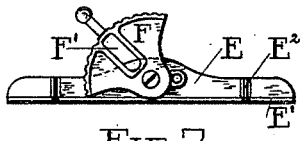

FIG. 7.

FIG. 8.

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UNITED STATES PATENT OFFICE.

FREDERICK BURMEISTER, OF CLEVELAND, OHIO.

HOT-AIR REGISTER.

SPECIFICATION forming part of Letters Patent No. 491,524, dated February 14, 1893.

Application filed September 10, 1892. Serial No. 445,571. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BURMEISTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Hot-Air Register, of which the following is a full, clear, and complete description.

The nature of my invention relates to a register in which the different parts are cast in such a manner that they are all ready for use when they leave the foundry, with the exception of two threaded openings, and one screw which holds all of the parts together.

The object of my improvement is to provide a practical register which is simple and inexpensive in construction and can be quickly and easily put together.

That my invention may be seen and fully understood by others reference will be had to the following specification and annexed drawings forming a part thereof, in which—

Figure 1 is an enlarged top view of the register; Figs. 2 and 3 are opposite end views; Figs. 4 and 5 are opposite sectional end views; Fig. 6 is a view of the bar by means of which the leaves are opened and closed; Fig. 7 is a view of the locking-bar and the segment which reciprocates the bar shown in Fig. 6 and Fig. 8 is an end view of one of the leaves.

Similar letters of reference designate like parts in the drawings and specification.

The frame A, Figs. 1, 2, 3, 4 and 5, has a boss B in each of the four corners. An opening B′ is cored out of the upper part of the boss B and through the four openings thus formed are passed the screws which secure the perforated top or cover to the register. The perforated top is common to all hot air registers and it has not been deemed necessary to illustrate or describe the same in connection with this case. The notches A′, in the top of the frame A, are to receive corresponding projections on the under side of the perforated cover for the purpose of holding said cover more firmly in place.

Surrounding the interior of the frame A at the base are the flanges *a* and *a′*, Figs. 1, 4 and 5. The flange *a′*, on one side of the frame A, is elevated above the flange *a* on the remaining three sides, as shown in Figs. 4 and 5, for the purpose hereinafter described. Cast on the end sections of the flange *a* are the bearings *b* and *b′* and communicating with the interior of the bearings *b* are the openings *c*, cored out of the frame A, as shown in Fig. 2.

The leaves C, provided at both ends with the trunnions *d* which rest in the bearings *b* and *b′*, form a bottom to the frame A, when said leaves are closed as illustrated in Fig. 1. The end of each of the leaves C next to the bearings *b′* is provided with an upward projecting lug *e*, Figs. 1 and 8, which has extending therefrom the pin *e′*, said pin and lug forming an integral part of the leaf C.

The bar D, of essentially the form shown in Fig. 6, is provided at the top with the pin *f*, projecting from the face and forming an integral part thereof, and has at the bottom the dogs or ears *f′*. The holes D′, in the bar D, receive the pins *e′* of the lugs *e* and when the leaves are in a vertical position or open to their fullest extent the ears *f′* come in contact with the trunnions *d* and prevent said leaves from turning completely over.

The locking-bar E, Figs. 1 and 7, is provided at the base with the flange E′ which rests upon the top of the bearings *b′*, when said bar is in place between the end of the frame A and the bar D. Projecting from the locking-bar E are the guides E^2, which bear against the bar D and assist in retaining said bar D in place. Screwed or pivoted to the locking-bar E is the segment F, having a serrated edge and a pin for rotating the same. In the segment F is the slot F′ into which the pin *f* of the bar D is received. The screw G passes through the opening G′ in the frame A and secures the locking-bar to the end of said frame. It will now be readily seen that, by rotating the segment F, the bar D will be reciprocated between the lugs *e* and the guides E^2 and at the same time open or close the leaves of the register according to the direction in which said segment F is moved. When the leaves are closed the outside edge of one outer leaf bears on the underside of the flange *a′*, each successive leaf overlapping the next until the opposite outside edge of the outer leaf rests on the flange *a*. A portion of one of the leaves C is broken away in Fig. 1 to show a top view of the bearing *b*. The trunnions *d* which rest in the bearings *b* extend through the openings *c*

and when the bar D is in place, over the trunnions at the opposite end of the leaves C, said leaves are held securely in place.

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

1. In a hot air register, a series of leaves provided with trunnions at opposite ends, the lugs *e* and pins *e'*; the frame A having the flange *a* and the bearings *b* and *b'*, said bearings *b'* communicating with the openings *c*; and the reciprocating bar D having the pin *f* and the downwardly projecting ears *f'*, with openings to receive the pins *e'*, in combination with the locking-bar E and slotted segment F, said locking-bar being provided with a flange at the base, the guides E^2 and secured to the end of the frame A, in the manner substantially as and for the purpose set forth.

2. A hot air register consisting of the frame A pierced by the hole G', at one end, and having a perforated boss in each corner, the flanges *a* and *a'*, and bearings *b* and *b'*, said bearings *b* communicating with the openings *c*; trunnioned leaves provided with the lugs *e* and pins *e'*; the reciprocating bar D; locking-bar E, and slotted segment F secured, through the opening G', to said frame, in the manner substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK BURMEISTER.

Witnesses:
W. H. BURRIDGE,
F. A. CUTTER.