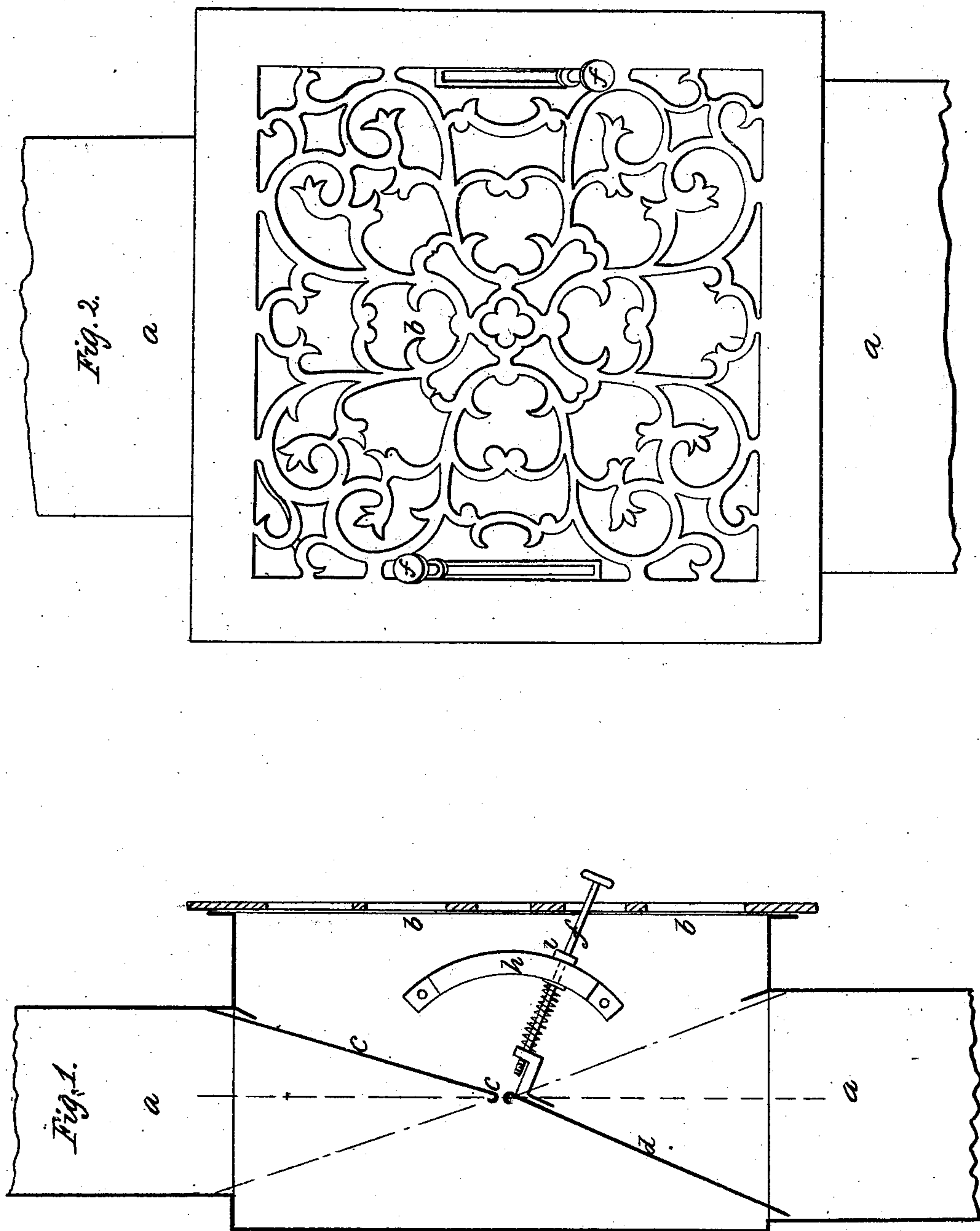


J. V. TIBBETS.
Hot Air Register.

No. 18,026.

Patented Aug. 18, 1857.



Inventor:
Joseph V. Tibbets

UNITED STATES PATENT OFFICE.

JOSEPH V. TIBBETS, OF NEW YORK, N. Y.

HOT-AIR REGISTER.

Specification of Letters Patent No. 18,026, dated August 18, 1857.

To all whom it may concern:

Be it known that I, JOSEPH V. TIBBETS, of the city, county, and State of New York, have invented certain new and useful Improvements in the Arrangement and Construction of Hot-Air Registers for Side Walls of Apartments; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section; Fig. 2, a front view.

It may be proper to remark that there are two classes of apparatus for regulating the flow of heated air from a hot air furnace into a room the one located in the floor the other in the side-wall and although floor registers have sometimes been used for the wall they are so defective for such purpose as to be objectionable. Again the usage now is in the most perfect arranged furnaces to carry up pipes separately for each story, thus if three floors are to be heated three pipes start from the furnace one of which terminates at the first floor above a second at the next and the third extends to the upper story. It will be seen that this involves a considerable expenditure in the multiplication of pipes, and single pipes, with openings into each story, are often used. When but one pipe is made to convey the heat from the furnace if the top register is open it is very apt to draw all the heat up past the two lower registers so that the lower part of the house fails to get heated and it becomes necessary to shut the heat off above in order to heat below. To prevent these difficulties and expenses is the purpose of my new device which gives with a single hot air flue perfect command of the heat on the first floor.

The construction is as follows: *a, a*, is the ascending pipe or hot air flue from the furnace (which is built into the wall) *b* is the opening of the register into the room behind this opening I hinge, in the center of the ascending pipe, two wings *d, c*, at the point *e* which is the axis on which they pivot; these two wings or valves it will be noticed may assume the position shown in the draw-

ing in which case they shut off all the heat from the rooms above and discharge all the heated air into the first room through openings *b* if the two wings are placed vertical as seen by the blue lines then the current takes its natural course if they are in position the reverse of the one in which they are placed in the drawing, (as indicated by the red lines) all the heat is shut off above and below; if *c* is in its present position and *d* brought into the place of the red line all the heat passes by the first opening *b* if it is set in the position of the blue line *c* being as before, half the heat goes to the lower room if *d* is in its present position and *c* is thrown back to the red line the current is deflected toward opening *b* and thus tends to throw a portion into the lower room. It is obvious that other intermediate positions will vary the extreme results above indicated which may be varied to any degree so as to render the effect of a single hot air flue as perfect as a series of separate flues for each story.

My device for moving and holding the valves *c, d*, are two straight arms *f* one near each side of opening *b* these project beyond the face of the register sufficiently to handle they are affixed to the valve at the pivot and pass through a curved collar *h* concentric with the turning point, a spiral spring wound around and attached to the arm makes pressure and friction upon the collar *h* which is attached to the side and thus the valves are retained at any point at which they are set a screw *i* on the arm *f* firmly fixes it in place when desired.

Having thus fully described my improved regulating register I wish to be understood as not claiming a register with a valve for turning the heat as such has been before essayed but

What I do claim is—

The valves *c, d*, placed in the ascending pipe at or near the center with independent movements as, and for the purposes, set forth.

JOSEPH V. TIBBETS.

Witnesses:

W. PENDLETON,
W. H. STANSBURY.