(No Model.)

A. J. COHEN.

REGISTER FOR FLUES.

No. 524,310. Patented Aug. 14, 1894.

FIG. 1

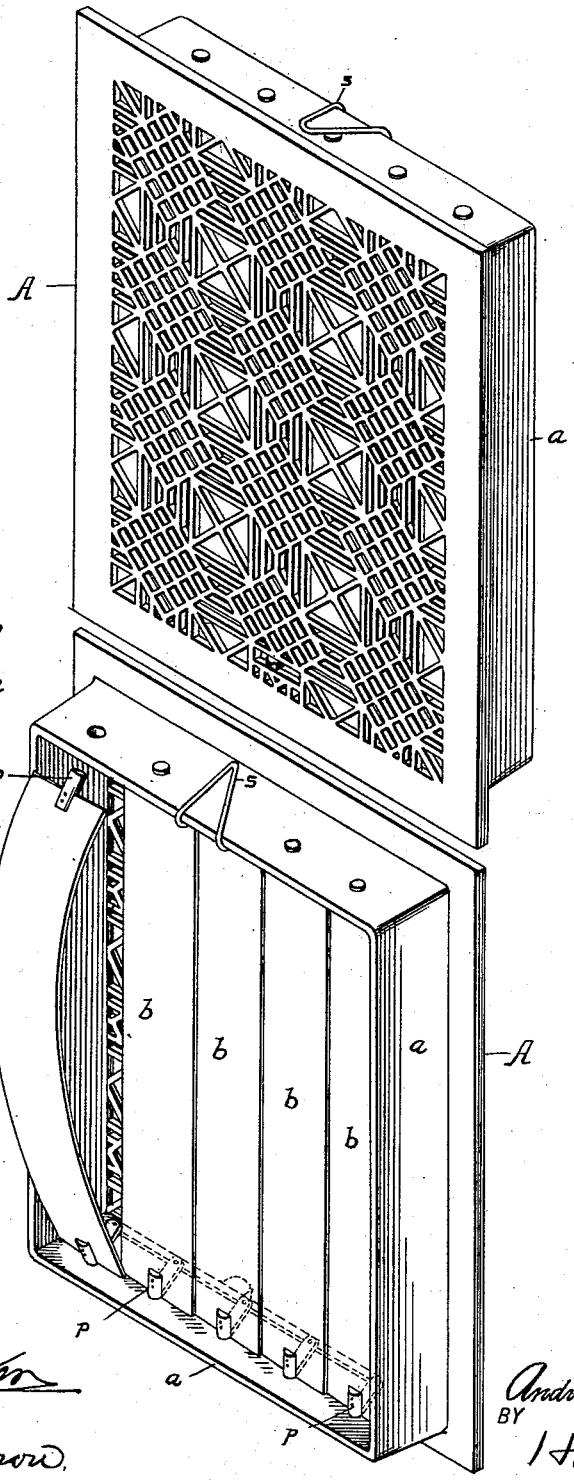

FIG. 3

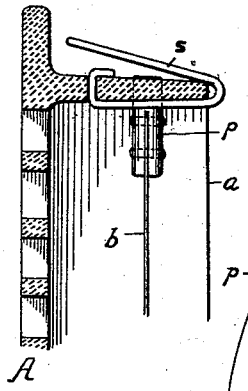

FIG. 2

WITNESSES:

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REGISTER FOR FLUES.

SPECIFICATION forming part of Letters Patent No. 524,310, dated August 14, 1894.

Application filed May 8, 1893. Serial No. 473,391. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. COHEN, of the city of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Registers for Flues; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

My invention has relation to registers for hot and cold air flues, and consists in the device hereinafter particularly described and claimed.

The object of my invention is to produce, as a new article of manufacture, an ornamental register box the face and inner flanges of which are formed integral of earthenware, or other like material, molded and formed from a plastic state, and in which the material composing the face of the register is susceptible of receiving a glazed finish upon its outer surface without the application of foreign material to the face for the purpose of producing said glaze as in registers heretofore known, which glaze as heretofore provided is liable to chip off by slight knocks.

A further object is to provide in earthenware register boxes metallic shutters, preferably of sheet metal, journaled directly to the upper and lower earthenware flanges of the box in orifices provided in said flanges for the purpose.

My register box may be constructed in various colors and tints from colored plastic material and molded into any suitable design presenting a neater and more attractive appearance than in the ordinary metallic register boxes, the face, for instance, may be molded to follow the pattern in a tiled wall in which it is to be placed, if desired.

Relief effects may be produced in the plastic face of my improved register box which are impossible of production in the thin surface enameling as now applied to metal faces and as now practiced and known in the art.

It is also clear that the earthenware, or other like material, of which my register box is composed is of such a nature that it will absorb the heat passing to it to a much greater degree than will metal, and will retain it longer, further as the face and flanges of the earthenware register are necessarily constructed much thicker than the like parts of a metal register, to give the requisite strength, an increased radiating surface is presented. The earthenware, or like material, thus operates functionally to assist in diffusing the heat.

The nature of the construction of my invention allows of its production at a considerably less cost than the register boxes heretofore invented, and will permit of its being placed upon the market at a much reduced price.

In the accompanying drawings, Figure 1 is a front perspective view of the earthenware register box, representing a plain, yet ornamental, design of glazed face. Fig. 2 is a rear perspective view. Fig. 3 is an enlarged detail view in longitudinal section, through the center.

The face, A, is formed integral with the rectangular flanges, *a*, the upper and lower of which flanges are provided with orifices for the reception of the pivots, *p*, provided on the slats, *b*, which pivots extend into or through the said orifices. The slats, *b*, are preferably formed of flexible sheet metal, and have provided at either end the said pivots, *p*; the pivots are secured upon the slats, *b*, by any suitable means, for instance, in the manner shown in the drawings, wherein the inner end of the pivot is recessed for the reception of the end of the slat and is secured thereon centrally in a vertical position by rivets, or by other suitable means; the pivots, however, may be constructed and secured by any well known means. When flexible slats are employed they can be readily secured into position within the box, formed by the flanges, after the pivots, *p*, have been provided on the said slats by simply slightly bending the slat, as illustrated in Fig. 2; where, however, rigid slats are employed, they may be readily secured in position by inserting into the orifice one of the pivots, *p*, secured upon the slat and afterward securing the other to the slat when the slat has been set in position within the box. Any well known construction of pivoted arms or levers secured to the slats and pivotally connected to a cross arm may be employed within the box as a means for opening and closing the slats or valves, *b*, from without, such for instance as shown in Fig. 2.

In register boxes, as ordinarily constructed, the face, being severable from the inner flanges, the box is secured in position in the flue by removing the face and securing the flange or inner box portion by screws, staples, or by other means, provided through the sides of the flanges or box into the walls of the flue. It is clear that in my construction of integral register box, where the face is not severable from the inner flanges, that this means of securing cannot be employed.

As a means of securing my improved register within the flue I preferably provide upon the upper or other flanges a spring, *s*, having the tension tending outwardly from the face of the flange, said spring being constructed preferably, as shown in the drawings, of a loop of wire with the loop extending outwardly from the outer face of the flange toward the face of the register and its inner ends secured through an orifice provided in the flange and bent down thereon; the lower arms may be countersunk in the inner face of the flange, or not, as desired. It is clear that other forms of spring may also be employed to accomplish the same purpose, such as a plate spring screwed or riveted to the flange.

As the register box is inserted in the flue or orifice in the wall the spring, *s*, will become depressed in coming in contact with the walls of the flue and tending to spring outward will hold the box firmly in position, while it is also clear that, by the exercise of little force, the box can, when desired, be readily removed by pulling outwardly.

Another and equally desirable method of securing my earthenware box in the wall consists in applying mortar or plaster between the inwardly protruding flanges of the box and the sides of the orifice in the wall in which it is inserted; the mortar or plaster when dry will form a solid union between the integral earthenware flanges of the register box and will make it adhere so strongly to the wall that it will be almost impossible to detach it therefrom. The register box thus practically becomes integral with the wall. This function of the earthenware flange which affords a positive union also affords a most ready means of securing the register in the wall.

In enameled register faces, as heretofore employed, the glazing or enameling has been applied to the outer surface of a metallic register face. This enameling, by reason of its construction and method of application, is liable, when subjected to knocks such as register faces, by reason of their exposed position, are constantly liable, to crack and fall off in places, disfiguring the face of the register. In my invention this objection is overcome, as the enameling or glaze, which is produced by any well known method of glazing earthenware, being integral with the face itself, cannot crack or peel off by any ordinary shock or blow; and the register face, being integral with the inner flanges, obviates the necessity of the use of screws or bolts which usually protrude through the face, and consequently disfigure to a greater or less extent the appearance of the face.

In my improved construction the number of parts necessary to form the entire register box, with valves, is reduced to a minimum, and the work required in the assemblement of the parts is also reduced materially, allowing the production of the most ornamental registers at a comparatively small cost.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An earthenware molded register frame consisting of a perforated face extending across the entire frame and side and end flanges molded to the rear of the face at an angle to the line of the face the whole formed from plastic material in one integral piece, substantially as described.

2. An earthenware register frame consisting of a perforated face extending entirely across said frame and inner side and end flanges at an angle to the line of face and formed integral with the said face constituting the inner box molded from material while in the plastic state and metallic slats pivotally secured in the said boxing, and means for opening and closing said slats, substantially as described.

In witness whereof I have hereunto set my hand this 5th day of May, A. D. 1893.

ANDREW J. COHEN.

Witnesses:
HORACE PETTIT,
J. BAYARD HENRY.