

R. C. BROWN.
WALL FRAME FOR AIR REGISTERS.
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943,298.

Patented Dec. 14, 1909.

Fig. 1.

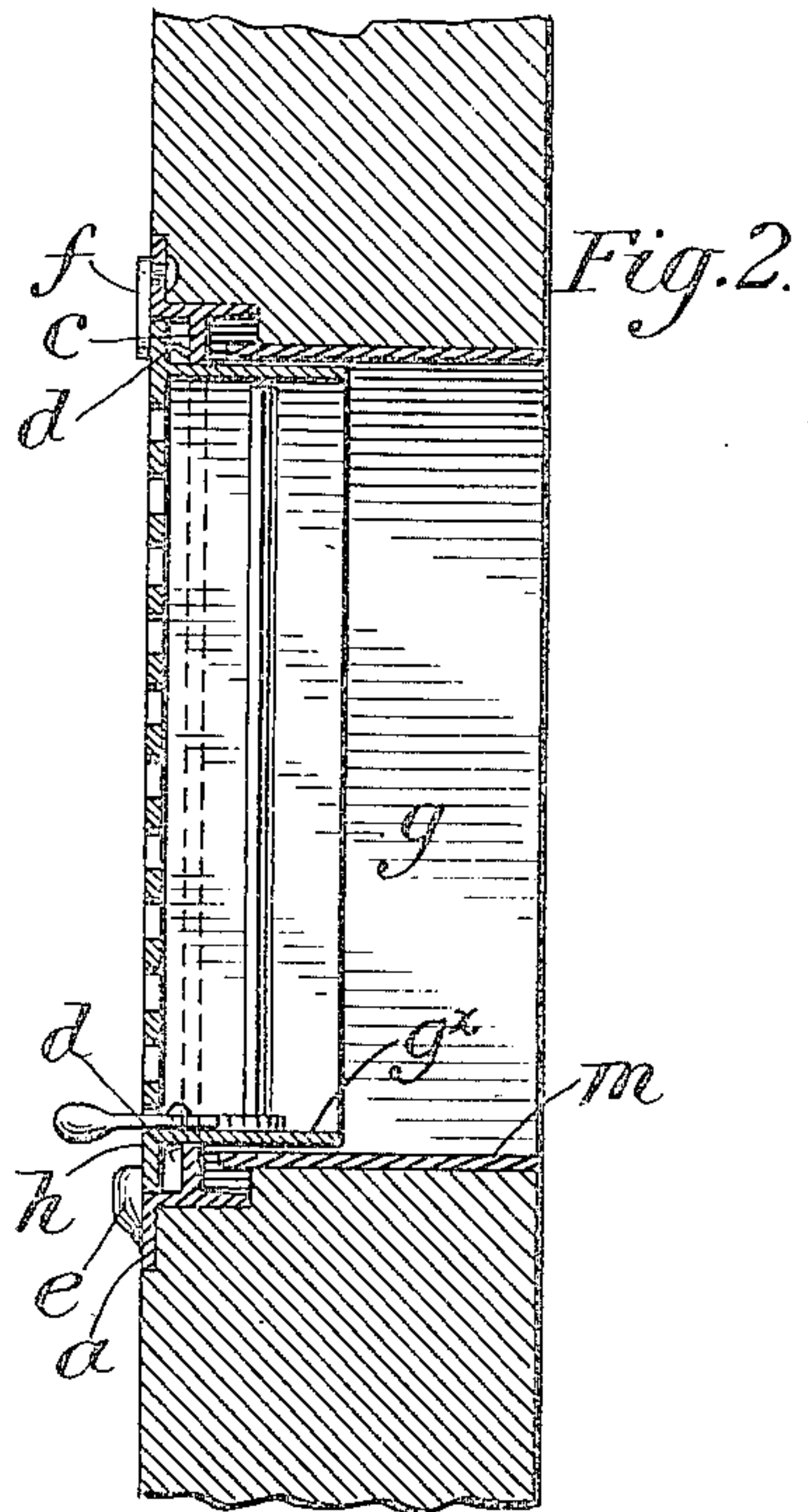
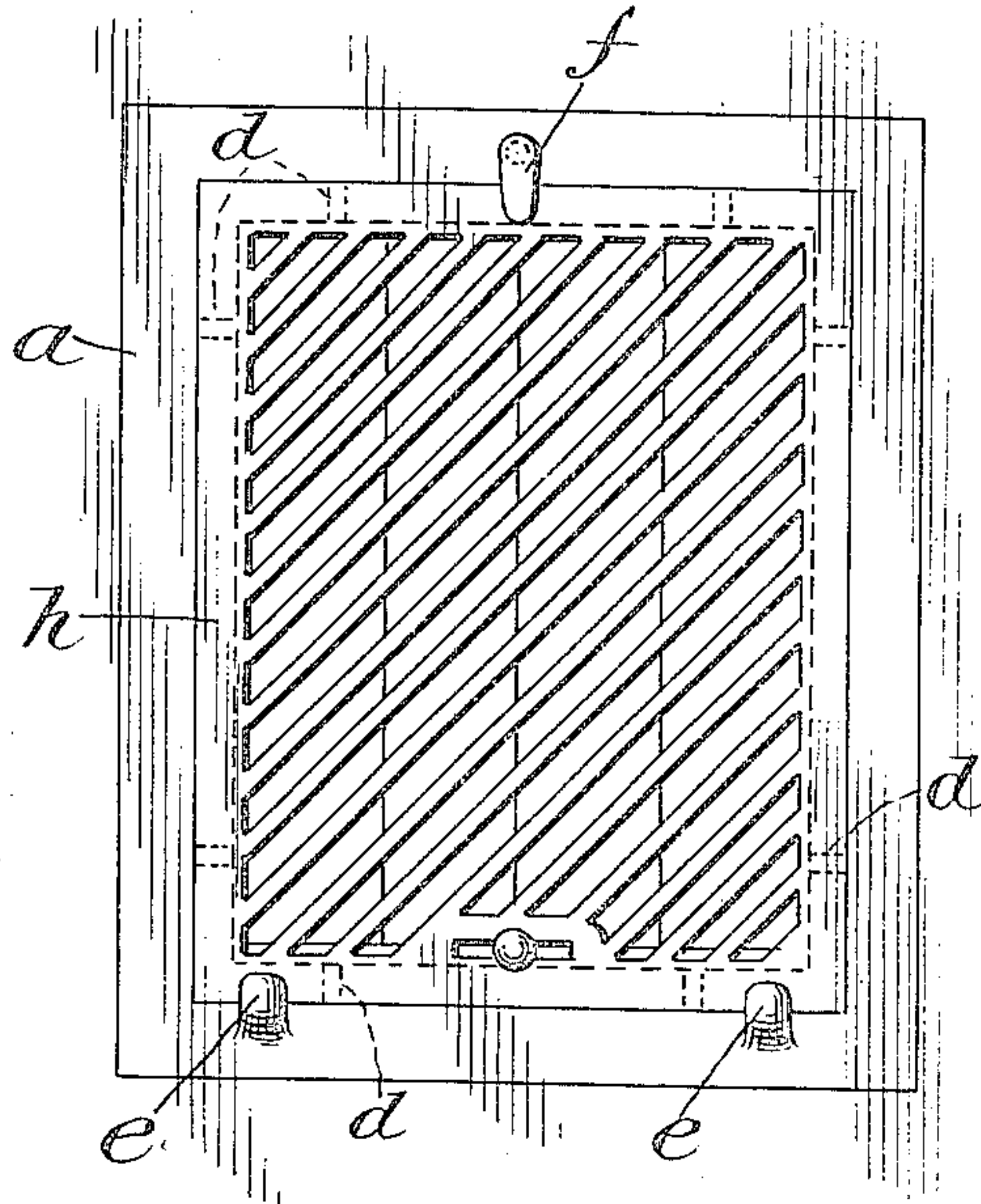
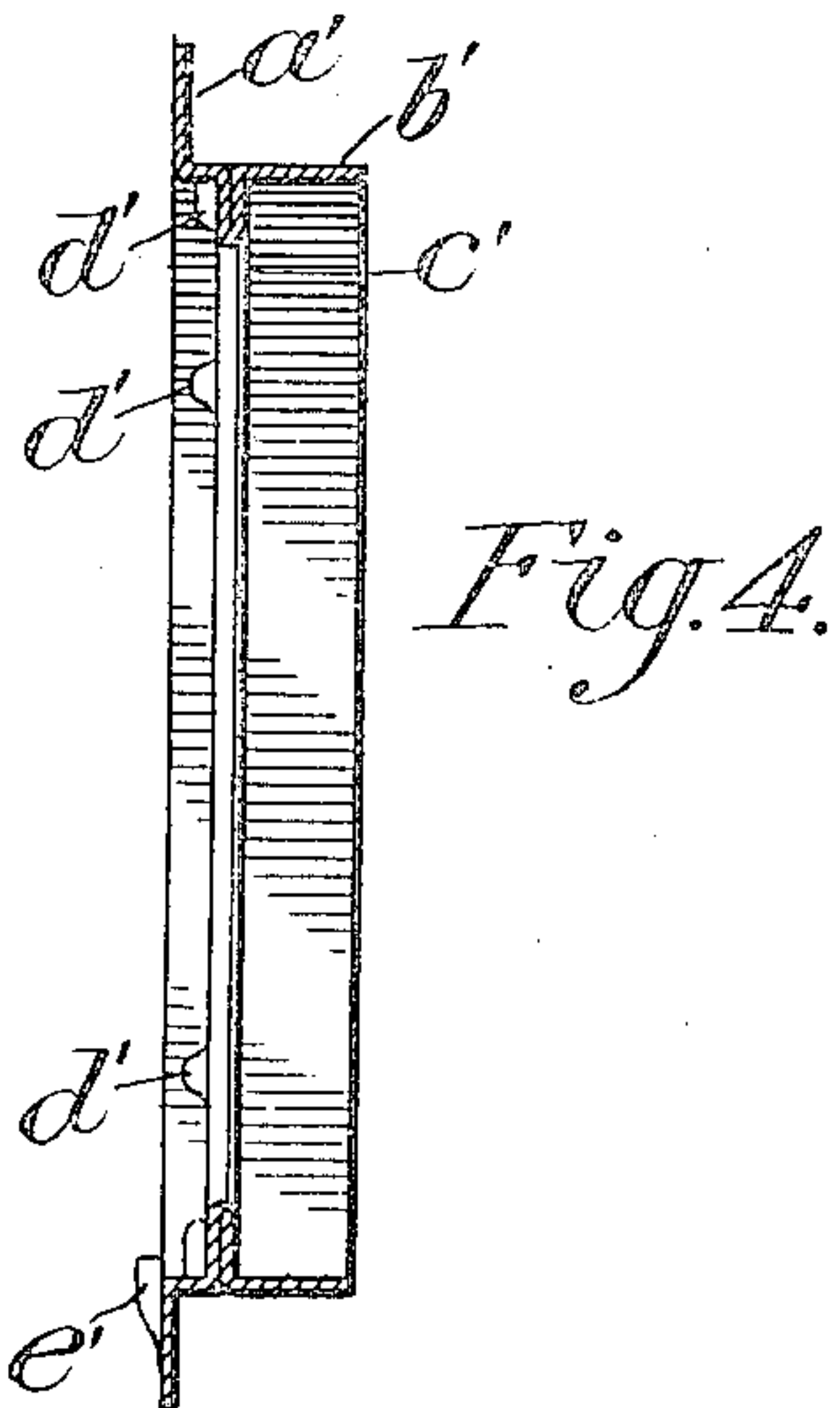
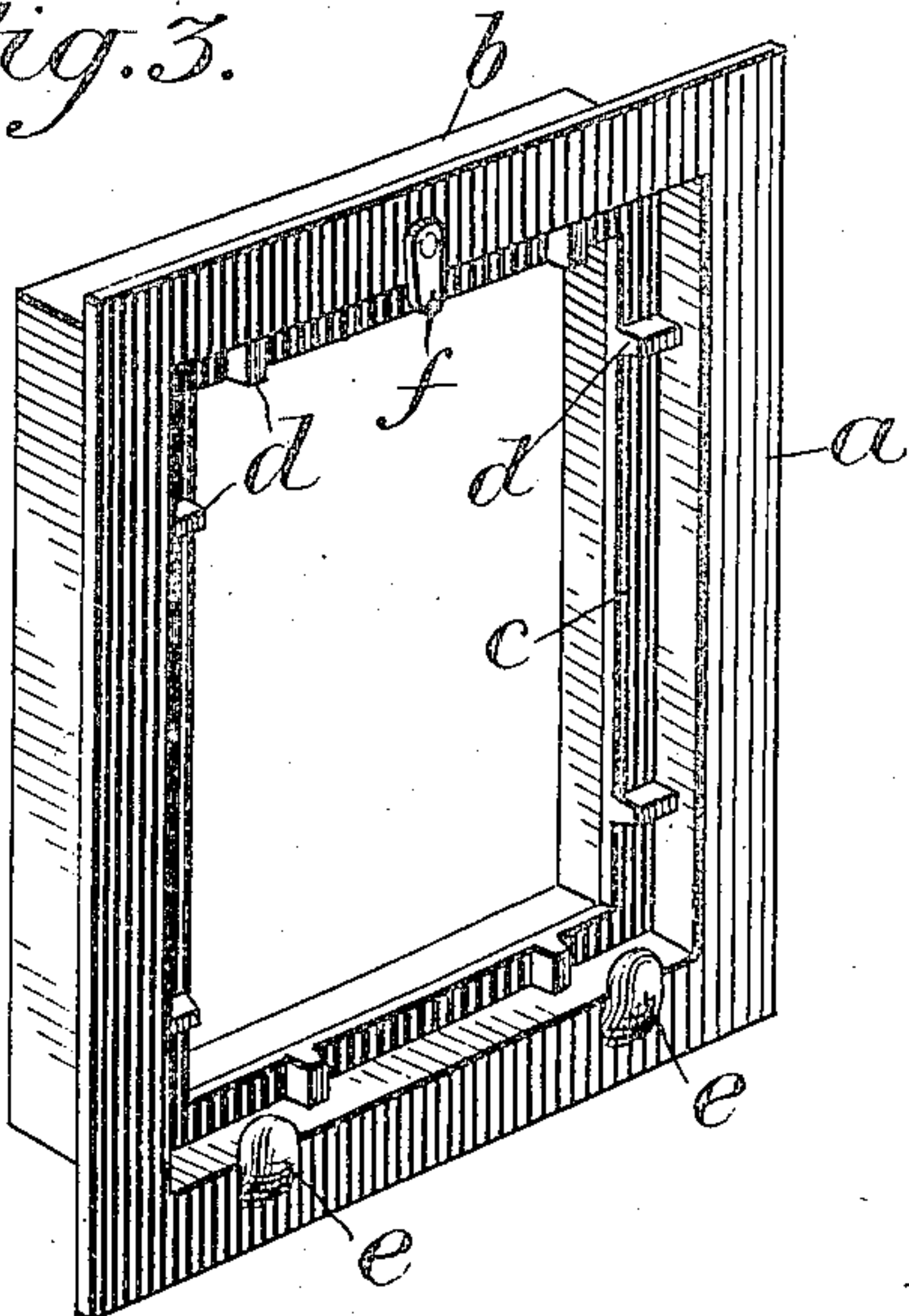


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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WALL-FRAME FOR AIR-REGISTERS.

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To all whom it may concern:

Be it known that I, ROBERT C. BROWN, a citizen of the United States, and resident of Lynchburg, Virginia, have invented certain new and useful Improvements in Wall-Frames for Air-Registers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to wall frames for hot air registers and has for its object to provide a simple and efficient form of frame to receive and hold a hot air register, of any standard type, removably in position with respect to the air duct leading to the same, thereby avoiding the necessity of securing the register permanently in the wall and admitting of the register being quickly removed from its location within the frame for the purposes of inspection and repair, without danger of marring the adjacent wall or fittings. To this end, the invention comprises a relatively deep box-like frame having a horizontal rim around its outer edge and an intermediate inwardly projecting flange within the frame provided with outwardly-extending lugs upon which the flange of the register rests, so that the front face of the register lies flush with the horizontal rim of the frame, which latter is preferably flush with the wall through which the hot air flue, leading to the register, opens. The frame may be secured in position in the wall by plaster of paris, cement, or any other suitable means and the register is conveniently secured within the frame, so as to be readily removed from the latter.

The invention is illustrated in one of its convenient forms in the accompanying drawings, in which;

Figure 1 is a front view of the frame having the register applied thereto, Fig. 2 is a vertical section through a wall showing the relation of the frame, the register and the flue leading to the latter, Fig. 3 is a perspective view of the frame, and Fig. 4 is a vertical section through a modified form of frame.

It has been common practice in installing registers, which control the outlet of hot air pipes, ventilators, or the like to apartments to secure the registers directly to the walls in alinement with the flues by means of cement, plaster of paris, or the like, so that when it is found necessary to remove the

register for any purpose, its connection with the wall has to be broken, and this operation inevitably damages the wall and the adjacent fittings, and in case the wall is papered or decorated, the repair of the damage frequently involves heavy expense. In order to overcome these difficulties, and also permit the register to be applied, removed, or adjusted with greater facility than has been possible heretofore, the present invention contemplates the provision of a frame adapted to receive and hold the register in proper relation to the flue, the frame being permanently secured to the wall, so that it is never necessary to remove the frame, and therefore the wall is never soiled or damaged when the register is removed.

The frame, in its preferred embodiment, comprises a rim *a* having an opening therein adapted to receive the inclosing rim and front plate of the register. Extending rearwardly from said rim *a* and at right angles thereto is a relatively deep flange *b* forming with the rim an open box-like structure which is adapted to be secured within the wall or partition adjacent to the mouth of the flue, by means of plaster of paris, cement, or the like, said flange *b* forming the body of the frame and being sufficiently deep to afford a firm and rigid connection between the frame and the wall. Intermediately of the width of the interior faces of the flange *b* there is formed an inwardly extending flange or ledge *c* provided with outstanding lugs or ears *d* adapted to receive and support the rim *h* of the register *g*, so that the front face of the register is substantially flush with the rim *a* of the frame, as indicated in Figs. 1 and 2. The register *g* is provided with a rearwardly extending flange *g'* which enters the space defined by the flange or ledge *c* and rests against the inner edge of the latter.

In order to admit of the register being quickly applied to or removed from position in the frame, the latter is provided with fastening means adapted to engage the register rim. These fastening means may be of any desired character but a convenient fastening means is illustrated in the drawings and consists of two lugs *e* formed on the lower member of rim *a*, and extending upwardly over the opening in the frame a short distance to overlie the lower edge of the register rim. On the upper face of rim *a* there is preferably provided a pivoted lug

or latch *f*, which when in operative position, overlies the upper end of the register rim *h*, as indicated in Figs. 1 and 2.

From the foregoing, it will be apparent that after the frame has been secured in position in a wall, the register may be instantly applied to or removed from said frame without in any way damaging or marring the adjacent wall, and furthermore the frame being made to receive standard sized registers, the old register may be removed and discarded and a new one substituted therefor without in any way disturbing the frame in its position in the wall or damaging or soiling the latter.

The register receiving frames may be made as integral castings having the general characteristics hereinbefore described and particularly illustrated in Figs. 1, 2 and 3. It may be found desirable, however, to press or stamp the frames from sheet metal, as for example, sheet steel, and under such circumstances the frame may conveniently be made in the form shown in Fig. 4, to wit; with the angularly disposed rim *a'* and body flange *b'* having the intermediate inwardly extending flange *c'* formed from the body flange *b'* as a U-shaped crimp or bend, with the lugs *d'* struck outwardly from the body of the flange or crimp *c'* and the ears or lugs *e'* likewise punched outwardly from the lower member of the rim *a'*.

What I claim as my invention is:—

1. In an air register construction, the

combination with a wall having an air opening, of a register frame comprising a box-like flange extending into said opening and seated therein, a rim about the outer edge of said box-like flange and extending at right angles to said flange, said rim lying flush with the surface of the wall, an inwardly extending flange or ledge formed integral with the box-like flange intermediate of the width of the latter and provided at its front face with outstanding lugs or ears, a register having a rearwardly extending flange resting against the flange or ledge on the box-like flange and provided with a rim which is supported by said outstanding lugs or ears, and lugs on the rim of the box-like flange to engage and removably lock the register in position in the frame.

2. A sheet metal frame for air registers comprising a box like body flange, a marginal rim about the outer edge of said flange, the said body flange being folded or crimped on its interior faces to form a U-shaped ledge, outwardly extending lugs struck from said ledge to receive and support the register, and lugs or ears struck from the marginal rim to hold the register in position.

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

ROBERT C. BROWN.

Witnesses:

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