Dec. 19, 1922. 1,438,981.

P. CHRISTENSEN.

REGISTER BOX AND GRILL.

FILED OCT. 12, 1921.

Fig. 3

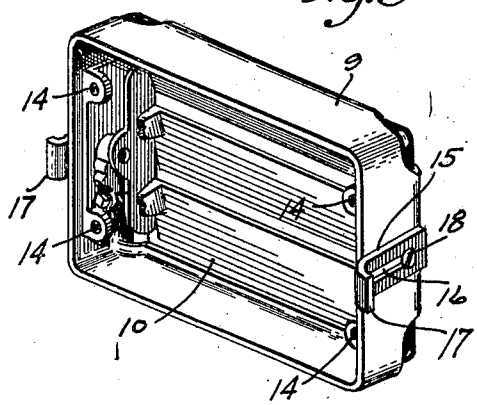


Fig. 2

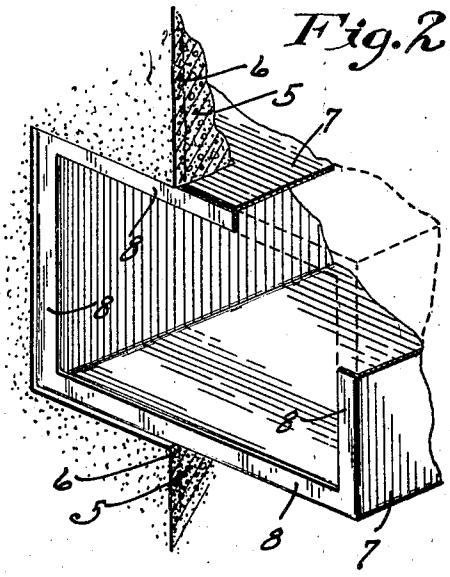


Fig. 4

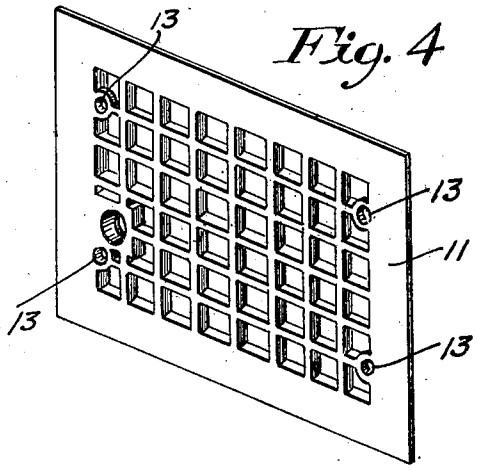
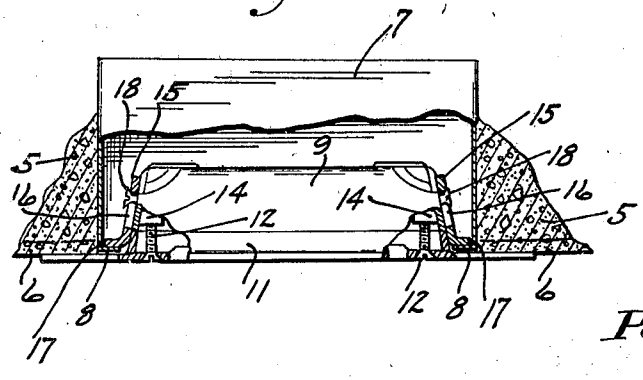


Fig. 1



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UNITED STATES PATENT OFFICE.

PETER CHRISTENSEN, OF ST. LOUIS PARK, MINNESOTA.

REGISTER BOX AND GRILLE.

Application filed October 12, 1921. Serial No. 507,338.

To all whom it may concern:

Be it known that I, PETER CHRISTENSEN, a citizen of the United States, residing at St. Louis Park, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Register Boxes and Grilles; 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.

My invention relates to register boxes and grilles used in hot air heating systems and is directed to improved means for connecting the same to the wall and to the conduit terminal that is imbedded or secured in the wall.

Generally stated, the invention consists of the novel construction and combinations of parts hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a view partly in plan and partly in horizontal section showing the invention applied to secure a register box and grille in working position;

Fig. 2 is a fragmentary perspective with some parts sectioned, showing the conduit terminal and a portion of the wall into which it is built;

Fig. 3 is a perspective of the register box; and

Fig. 4 is a perspective of the grille.

The body of the wall is indicated by the numeral 5 and the plaster by the numeral 6. The wall illustrated is of masonry, but may be of other construction.

The numeral 7 indicates a rectangular sheet metal box-like structure which is built into the wall 5 or otherwise rigidly secured, and which constitutes the terminal of the air conduit. This box-like terminal 7 is provided at its inner edge with an inturned flange 8, which, in an ideal structure, would be about flush with the inner surface of the plaster, but which, in practice, will seldom be so located but, on the contrary, will usually be inward of the finished or exposed surface of the plaster.

The numeral 9 indicates the register box, the same, as shown, being of the type known as a "louvered" register having adjustable shutters 10 operated by means not necessary for the purposes of this case to consider.

The numeral 11 indicates the grille, which is preferably a cast structure, and which, in the customary arrangement, is adapted to be rigidly but detachably secured to the box 9 by screws 12 passed through perforations 13 in the grille and screwed into threaded lugs 14 on the interior of the box 9. In the usual construction, other screws, not illustrated, are employed to connect the grille 11 to the flanged end of the conduit terminal 7, but much trouble has been caused with such construction by the failure of the grille to be in proper position on the wall when thus connected to the conduit terminal. Moreover, a great deal of trouble has been caused by the fact that the flanged end 8 of the conduit terminal 7 frequently is considerably inward of the finished surface of the plaster.

My invention provides an extremely simple device or attachment for the box 9, which renders effective the screws 12, not only to connect the grille to the register box but to secure both the box and the grille to the wall and to the flanged end of the conduit terminal.

This device or attachment, in the preferred arrangement, comprises a pair of clamping brackets 15 having longitudinal slots 16 and laterally bent front ends 17. By means of screws 18, which are passed through the slots 16 and screwed into seats in the sides of the box 9, said brackets 15 are adapted to be rigidly but adjustably secured on said box. Said brackets should be so secured on the box that their ends 17 will be tightly drawn against the vertical flanges 8 of the conduit terminal 7 when the screws 12 are turned so as to draw the marginal portion of the grille 11 against the plaster and the grille itself against or nearly against the edge of the register box 9. In this way, the grille and the box are adapted to be secured together and securely clamped in working position. Moreover, the box and grille are capable of considerable adjustment in respect to the conduit terminal. They may, for instance, be given a large amount of vertical adjustment and a limited amount of horizontal adjustment parallel to the face of the wall and may, moreover, be given an angular adjustment in the plane of the wall, all

of which make it possible to set the grille and register in true alignment with the floor and otherwise properly positioned.

Obviously, the cost of the application of the adjustable clamping brackets 15 to the terminal box is very small and, moreover, the invention eliminates other devices that are of great cost. Of course, it follows that a great deal of time and work will be saved by the use of the above described device.

What I claim is:

1. The combination with a register box and a grille, of screws for connecting said grille to said box, and clamping elements on said box adapted to engage the flanges of an air conduit terminal when said screws are tightened to connect said grille to said box.

2. The construction defined in claim 1 in which said clamping elements are adjustable toward and from said grille.

3. The combination with a wall and an air conduit terminal secured therein, said terminal having an inturned flange, of a register box provided on its exterior with clamping flanges engageable with the flanges on said air conduit terminal, a grille, and screws for connecting said grille to said box and clamping the projecting portion of said grille against said wall and said clamping elements against said flanges.

4. The construction defined in claim 3 in which said clamping elements are adjustable on said box toward and from said grille.

In testimony whereof I affix my signature.

PETER CHRISTENSEN.