Dec. 23, 1930. G. S. AUER 1,785,993

HOT AIR REGISTER CONSTRUCTION

Filed Oct. 10, 1928 2 Sheets-Sheet 1

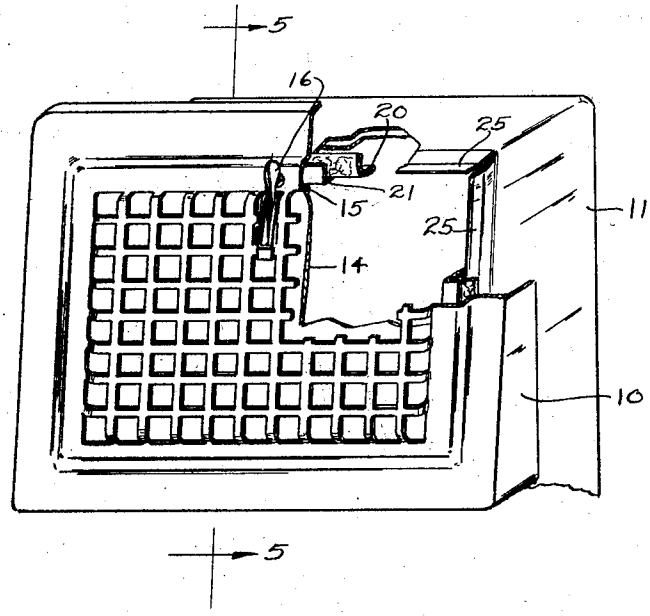


FIG.-1

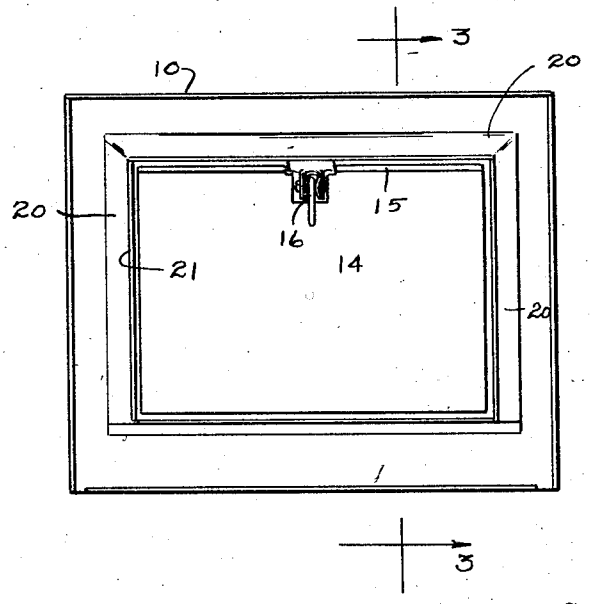


FIG.-2

Inventor

George S. Auer

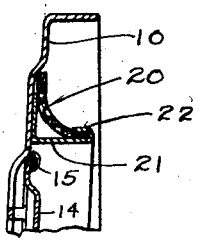
By Bates, Macklin, Gobrick & Teare

Attorneys

Dec. 23, 1930. G. S. AUER 1,785,993

HOT AIR REGISTER CONSTRUCTION

Filed Oct. 10, 1928 2 Sheets-Sheet 2



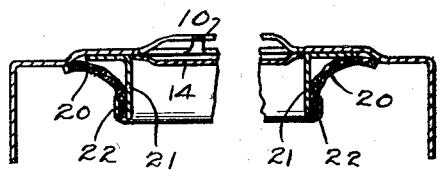


FIG.—4

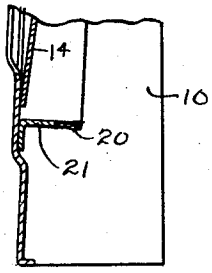
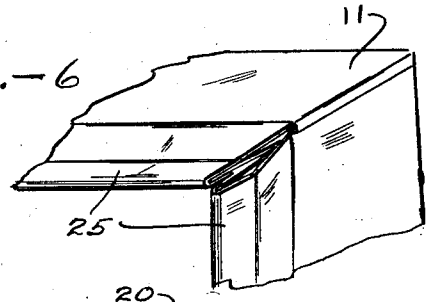


FIG.—3

FIG.—6



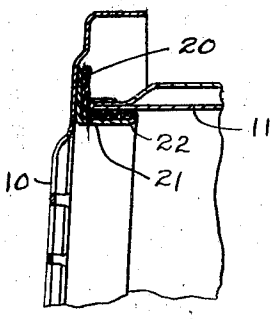


FIG.—5

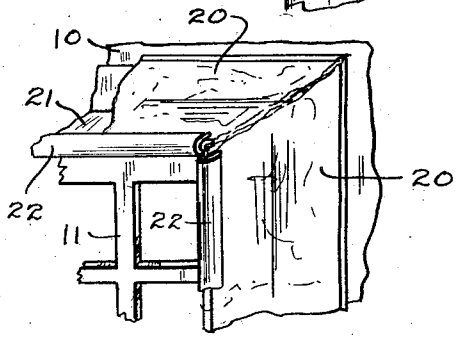


FIG.—7

Inventor

George S. Auer

By Bates, Macklin, Golrick & Years

Attorneys

Patented Dec. 23, 1930 1,785,993

UNITED STATES PATENT OFFICE

GEORGE S. AUER, OF CLEVELAND, OHIO

HOT-AIR-REGISTER CONSTRUCTION

Application filed October 10, 1928. Serial No. 311,591.

This invention relates to a hot air register and is particularly concerned with a construction which is particularly adapted for use in the construction of wall registers. Such construction usually comprises a box which is placed behind the wall, and a register which coacts with the box and is mounted against the wall and near the floor. Heretofore, the practice has been to provide coacting metallic flanges on the register and box respectively for providing a connection between the register and box, but it has been impractical to make such construction without leaving a joint at the upper corners around the register opening. As a result, dirt laden air has seeped through and worked upwardly thus leaving a dirt streak on the wall adjacent each upper corner of the register.

The principal object of the present invention is to make a register construction which prevents the leakage of dirt laden air between the register and box and around the register opening. In this connection, my invention contemplates the provision of a connection between the box and register which is simple in construction, which may be easily attached, and which will thereafter provide a satisfactory air tight connection for an indefinite period of time.

In the drawings, I have shown a preferred form of construction, wherein Fig. 1 is a perspective view of a register and a coacting box, with part of the register and box being broken away to show the interior construction; Fig. 2 is a rear view of the register removed from the box; Fig. 3 is a vertical section taken through the register on the line 3—3 in Fig. 2; Fig. 4 is a horizontal section taken through the register on a plane extending at right angles to that shown in Fig. 5; Fig. 5 is a vertical section taken on the line 5—5 in Fig. 1, and Figs. 6 and 7 are perspective views showing the corner connection of the register and box on an enlarged scale.

In the drawings, 10 represents a register and 11 a register box which coacts therewith. A door 14 is shown as being pivotally mounted at 15 adjacent the top of the register opening in the usual manner, while an operating lever 16 for the door is shown near the top of the grille in Fig. 1. When the door is closed and a static pressure is built up within the box, it is difficult to maintain an air tight seal around the register opening, and at the same time provide adequate flexibility in the wall construction of the box to permit slight variation in the position of the box with reference to the wall.

Frequently upon installation, the box is imbedded into the wall at too great a depth to obtain a satisfactory seal with the register. Again, the box is apt to protrude too far into the room, with the result that the metallic flanges are bent to such position that an air tight joint cannot be maintained.

My invention provides an air tight joint around the marginal edges of the opening by utilizing strips of flexible material 20, preferably asbestos, which extend around the top and sides of the opening. To provide a satisfactory joint at the corners, the ends of the strips adjacent the meeting edges are in abutting engagement, and the strips are attached to flanges 21 which are affixed to the back of the register as is shown in Fig. 7. An expeditious manner of holding each strip in place is to provide an over-hanging lip 22 on each flange which engages one longitudinal edge of the associated strip.

In Fig. 6, the box construction which coacts with the sealing strip is illustrated as comprising flanges 25 which project slightly inwardly and forwardly from the wall part of the box. Such flanges extend outside the flanges 21 and engage the sealing strips, as is shown in Fig. 1, where the register is fastened into place. As the fastening members which hold the register are drawn up tightly, there is sufficient pressure exerted upon the sealing strips to bend them to an approximate L shape, as is shown in Fig. 5. Since the asbestos paper strips overlap at the corners, the sealing effect is greatly amplified and the possibility of dirt laden air escaping through the corners is eliminated.

From the foregoing description, it is obvious that a hot air register construction embodying my invention is advantageous in that it eliminates objectionable leakage of air, and in that it may be readily incorporated in a

register construction without materially increasing the cost thereof. In addition, the construction is such that the sealing material will remain effective for an indefinite period, and may permit slight variation in box adjustment with relation to the outer surface of the wall of the room wherein the register is to be installed.

I claim:

1. In combination, a register having an opening therein, a box associated therewith, coacting flanges on the register and box respectively, some of the flanges having an over hanging lip, there being strips of flexible material associated with the flanges, one edge of each strip extending into the overhanging lip of the associated flange and said strips providing an air tight connection between the register and box.

2. In combination, a register member having an opening therein, a box member coacting therewith, and a plurality of strips of flexible sealing material mounted on one of said members adjacent the contiguous marginal edges of the opening, said last named member having flanges overlapping the strips and holding them in place, said strips being engaged by the other of said members to effect a substantially air tight joint between them.

In testimony whereof, I hereunto affix my signature.

GEORGE S. AUER.