May 17, 1955 R. W. BOARMAN 2,708,569

BASEBOARD CONVECTOR ENCLOSURE

Filed Jan. 19, 1953 2 Sheets-Sheet 1

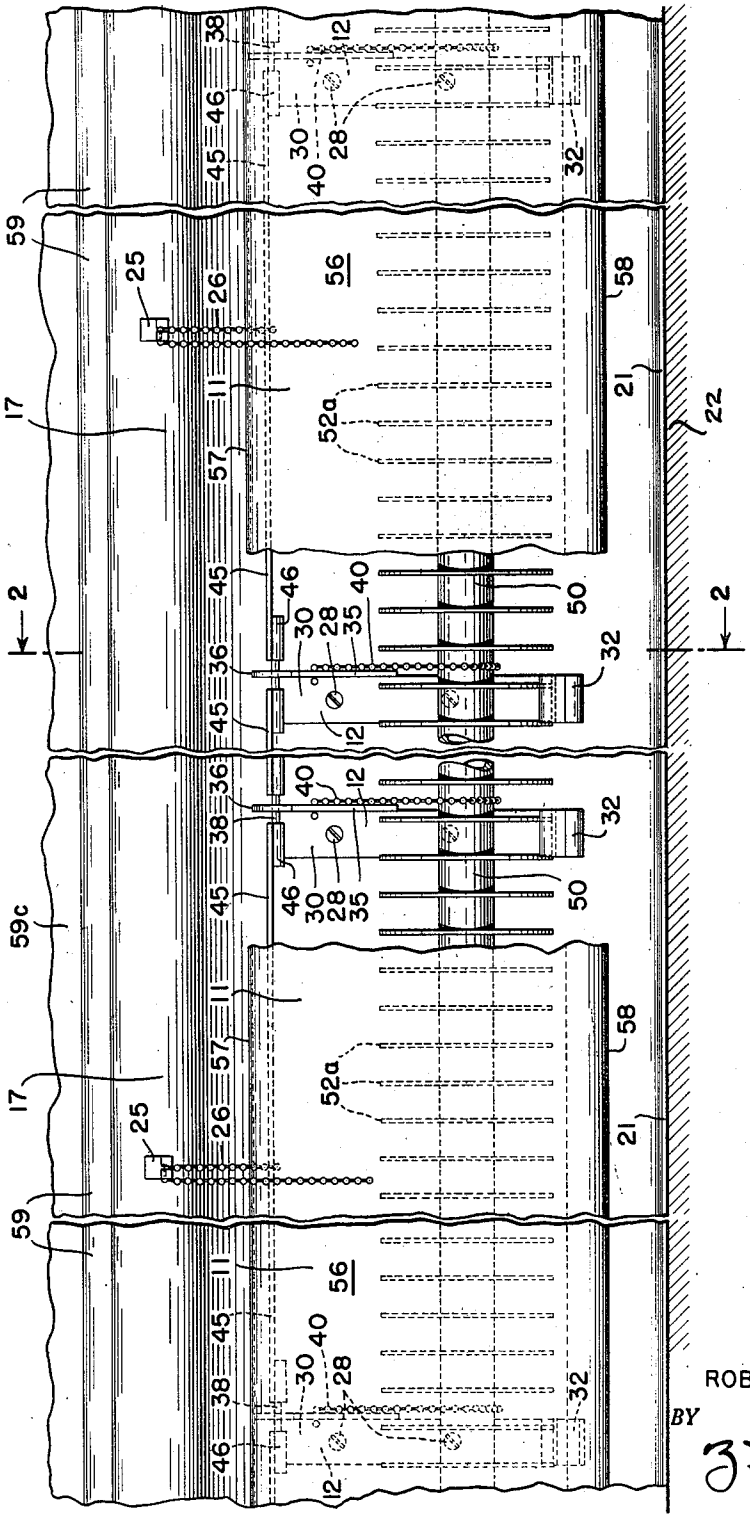


FIG. 1

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FIG. 2

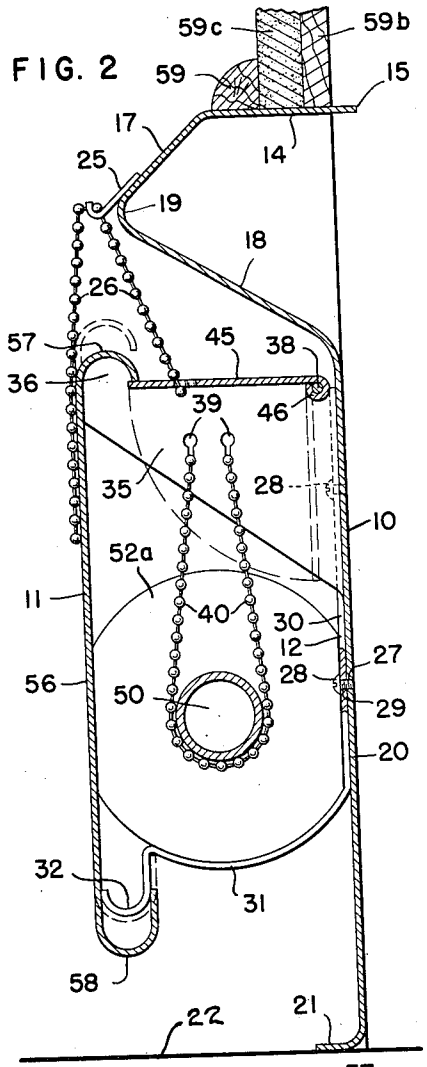
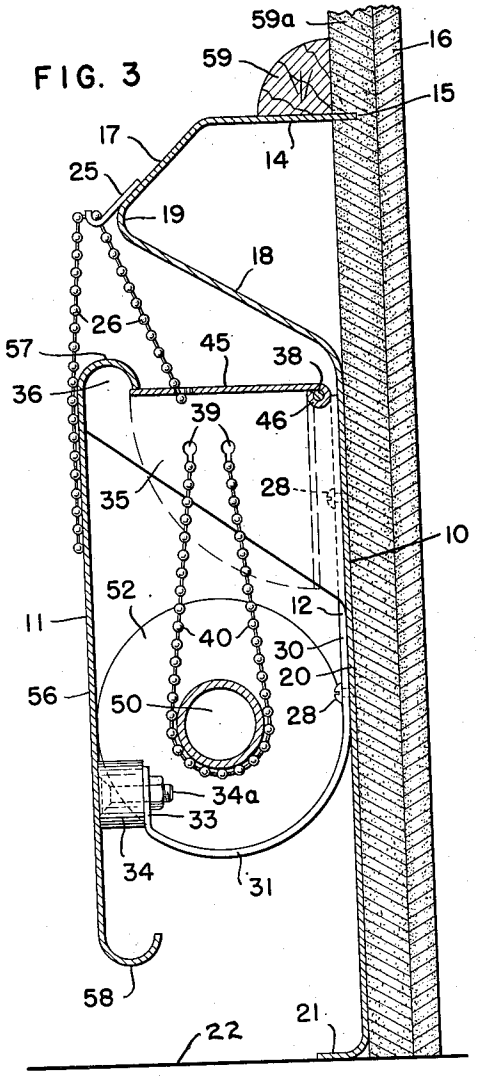


FIG. 3



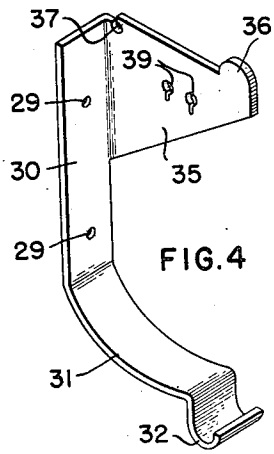


FIG. 4

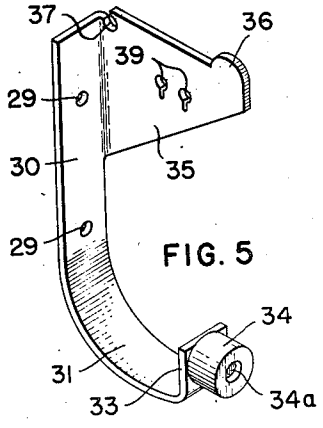


FIG. 5

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2,708,569

Patented May 17, 1955

2,708,569

BASEBOARD CONVECTOR ENCLOSURE

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Application January 19, 1953, Serial No. 331,764

5 Claims. (Cl. 257—133)

This invention relates to baseboard convector enclosures.

It is the principal object of the present invention to provide a baseboard convector enclosure which will control the distribution of heat from an enclosed heat exchanger.

It is a further object of the present invention to provide a baseboard convector enclosure having structure for changing the heat distribution by a simple manipulation.

It is a further object of the present invention to provide a baseboard convector enclosure of simple construction so that the assembly and mounting may be easily effected.

It is a further object of the present invention to provide a baseboard convector enclosure possessing pleasing decorative qualities.

It is a further object of the present invention to provide a baseboard convector enclosure which will prevent discoloration of the wall and the formation of heat streaks on the wall above the convectors.

It is a further object of the present invention to provide a baseboard convector enclosure having component parts which may be readily constructed from available materials.

Other objects and advantageous features of the present invention will be apparent from the specification and claims.

The nature and characteristic features of the present invention will be more readily understood from the following description taken in connection with the accompanying drawings forming part hereof, in which:

Figure 1 is a front elevational view showing a preferred embodiment of the present invention, parts being broken away to show the details of construction;

Fig. 2 is a vertical sectional view taken approximately on the line 2—2 of Fig. 1;

Fig. 3 is a vertical sectional view similar to Fig. 2, showing an alternative form of the invention; and

Figures 4 and 5 are isometric views of the respective embodiments of bracket 12 illustrated in Figures 2 and 3.

It should of course be understood that the description and drawings herein are illustrative merely, and that various modifications and changes may be made in the structure disclosed without departing from the spirit of the invention.

Like numerals refer to like parts throughout the several views.

Referring now more particularly to the drawings, in which a preferred embodiment of the invention is illustrated, the baseboard convector enclosure there shown includes a back panel 10, a front panel 11 and a bracket 12. The back panel 10, which is preferably made from suitable sheet metal, has a plurality of integral sections as hereinafter explained. The uppermost section 14 of the back panel 10 is disposed generally horizontally, and has an inner edge 15 which is generally normal to the vertical side wall 16, of the room to be heated, preferably extends into the wall 16 for a short distance and is in locked engagement therewith. The section 14 has connected thereto an outwardly and downwardly inclined section 17 which is in turn connected to an inwardly and downwardly inclined section 18 by a curved section 19. The section 18 is connected to a downwardly disposed vertical section 20 having a lower outwardly curved portion 21 in engagement with the floor 22.

At a plurality of locations clips 25 are secured in any suitable manner to the section 17 for the purpose of permitting the adjustable passage of a suitable beaded chain 26 to be more fully described hereinafter. The back panel 10 has a plurality of holes 27 conveniently placed for the reception of fasteners 28, such as nails, screws or the like, for the purpose of securing the back panel 10 to the wall 16.

The bracket 12 includes a vertically disposed back strip 30 which is held in engagement with the section 20 of the back panel 10 and the wall 16 by the fasteners 28 which pass through holes 29 corresponding in size and location to the holes 27, to receive the same. The strip 30 extends downwardly to a lower relatively shallow arcuate strip 31 with which it is integral. At the outer extremity of the strip 31 and integral with it a hook-like member 32, J-shaped in cross section, is provided, As an alternative construction, and as shown in Fig. 3, the strip 31 is provided at its outer extremity and integral with it a relatively short vertical strip 33 to which a high magnetic intensity permanent magnet 34 is secured in any suitable manner such as by a bolt 34*a*.

At the upper portion of each of the strips 30 there is provided a vertical outwardly extending plate 35 disposed generally normal to the strip 30. The plate 35 is preferably substantially triangularly shaped with a lip 36 provided at the outermost part of its upper edge. At the innermost part of its upper edge the plate 35 is provided with a suitable notch 37 for the reception and partial rotation of a damper pin 38 to be more fully explained hereinafter. A pair of keyhole slots 39 is provided in the strip 30 for the reception and adjustable passage of a beaded or other suitable type chain 40 to be more fully explained hereinafter.

A plurality of damper plates 45 preferably of sheet metal is provided. The damper plates 45 at their inner edges and at each end have cylindrical sleeves 46 for the reception of the damper pin 38. Adjacent dampers 45 share a common pin 38 so that each pin 38 serves two dampers 45 while retaining to each damper 45 its independent movement for purposes of adjustment. The chains 26 suspended from the clips 25 and connected to the outer edge of a damper plate 45 permit of effecting the desired adjustment of the position of each of the damper plates 45.

A pipe 50 for conducting the heat distributing medium is provided. On the outer surface of the pipe 50 and in circumferential engagement therewith, a plurality of spaced parallel transverse fins 52 are provided for heat transfer from the pipe 50. The pipe 50 extends generally parallel to the panel 10 and is held in a slightly inclined position by the chains 40 each of which extends downwardly from one of the keyhole slots 39, passes under the pipe 50 and extends upwardly to the other keyhole slot 39. The lengths of the chains 40 may be varied so that the pipe 50 can be assembled at the proper inclination.

The fins 52 may be of any desired size and shape and as shown in Fig. 3 are of generally circular configuration. One or more fins 52 at the strip 31 rest on the strip 31. The fins 52 also engage the section 20 of the back panel 10 and the inner face of the front panel 11. If desired, larger circular fins 52*a* may be employed having front and rear segments removed but with a curved

lower edge for engagement with the strip **31** and two straight vertical edges for accommodation to the panel section **20** and the front panel **11** as stated previously.

The front panel **11** is preferably made of sheet metal and includes a vertical section **56**, an integral upper inverted hook section **57** and an integral lower hook section **58**, the hook sections **57** and **58** being provided to effect engagement with the corresponding parts **32** and **36** of the bracket **12**.

The baseboard convector enclosure is assembled by first positioning the back panel **10** against the wall **16** and securing it thereto in any suitable manner, screws **28** being preferred. The upper edge **15** extends into the wall **16** a suitable distance in order to provide rigidity to the enclosure structure. The amount that the upper edge **15** extends into the wall **16** is determined by the type of mounting of the back panel **10**, a recessed assembly having a greater extension than a flush assembly. To achieve decorative effects a trim molding **59**, such as the standard quarter round, is preferably positioned at the junction of the section **14** and the wall **16** and secured to the wall **16** in any desired manner, directly in a panel type wall **59***a* and into the lath **59***b* and plaster **59***c* in a plaster finished wall.

The lower portion **21** of the back panel **10** is in engagement with the floor **22** and because of its curved contour acts as a baffle directing the air that has entered the enclosure below the front panel **11** upwardly along the surfaces of the fins **52**, over the surface of pipe **50** and out of the top of the enclosure into the room to be heated. Thus the entering air becomes part of a continuous system of heat distribution. Any necessary cleaning operations are facilitated by the clearance between the lower part of the front panel **11** and the floor **22**, which clearance is enough to allow free circulation of sufficient air and permit access for cleaning. The curved contour of the lower section **21** of the back panel **10**, prevents any lodging of dirt in inaccessible crevices and this aids cleaning operations in addition to performing its prime function of directing incoming air upwardly.

The bracket **12** is affixed to the back panel **10** by screws or bolts **28** which pass through suitable holes **27** provided in the back panel **10** and into the wall **16**. The pipe **50**, with fins **52** assembled, is placed in the inner bracket **12** where one or more of the fins **52** rests on the lower strip **31** and the sides of all of the fins **52** are in engagement with the inner face of the front panel **11** and the front face of the back panel **10**. In order to insure a more efficient fluid flow or for other reasons the pipe **50** may be given the desired inclination by an adjustment on the chain **40** previously described. Such inclination of the pipe **50** is preferably effected when the system is installed but if necessary it can be effected subsequently.

Usually there will be a continuous circulation of unheated air entering the lower part of the enclosure, rising and being heated and rising again and entering the room from the opening at the top of the enclosure. Control of the heat circulation and distribution can be effected by a simple manipulation of the damper **45** by means of the adjustable chain **26**. If the damper **45** is vertical or open a maximum amount of heat will be circulated into the room. By gradually rotating the damper **45** toward a horizontal position by pulling upwardly on the chain **26** the amount of heat circulated into the room is gradually decreased until it reaches a minimum when the damper **45** reaches a horizontal or closed position. At the horizontal position of the damper **45** the amount of heat circulated into the room is minimal although some heated air will enter the room from the enclosure since no attempt is made to make the closed damper **45** airtight and of course some radiant heat will enter the room from the warm exterior portions of the baseboard convector enclosure.

The flow of lower entering unheated air is upwardly

directed by the curved contour of the lower portion **21** of the back panel **10**. The air then moves vertically and is directed upwardly and outwardly by the upper overhanging part of the back panel **10**. The outward direction of the heated air as it leaves the enclosure has at least a two-fold beneficial effect. The outward and upward direction of the heated air leads to improved heat circulation and distribution in the room and deflection of the stream of heated air away from the wall **16** of the room avoids objectionable heat streaks thereon.

The front panel **11** is secured in position by first engaging the section **58** over the hook members **32** then swinging the front panel **11** inwardly and upwardly and engaging the section **57** over the lips **36** of the side plates **35**. The front panel **11** then moves or is permitted to move for a short distance vertically downwardly to effect snug engagement with the clips **36** while maintaining engagement with the hook members **32**. The engagement between the section **58** and the hook members **32** holds the front panel **11** from outward displacement. The front panel **11** may be removed by a reversal of the operations previously described.

If desired, in place of the holding structure at the bottom edge of the front panel **11**, the magnets **34** may be employed, in which case the front panel **11** is hooked at the top over the lips **36** and then the lower part of the front panel **11** is moved inwardly until it engages the magnets **34**.

The front panel **11** serves both a utilitarian and decorative purpose. It conceals the inner part of the enclosure and presents an outward surface which may be painted or otherwise decorated to blend with the decoration of the room concerned. It, of course, acts as one side of a channel for guiding the air to be heated and the heated air. Its construction permits easy access to the inner parts should such be necessary or desired. The back panel **10** is likewise both utilitarian and decorative. In addition to guiding the air to be heated and the heated air it has an outer exposed portion that can be treated decoratively similarly to the front panel **11**. The damper **45** provides for heat control and, at the same time, maintains a decorative appearance.

I claim:

1. A baseboard enclosure for a heat distributing conduit unit comprising an elongated front panel, an elongated back panel having an outwardly curved lower end and an upper end sloping outwardly and then extending inwardly to the wall, spaced inner brackets mounted on said rear panel and each having an outwardly and upwardly curved lower portion in engagement with the conduit unit, a chain suspended from said inner brackets for supporting the conduit unit, said inner brackets each having an upper portion for supporting engagement with the top end of said front panel, a damper pivotally supported on said inner brackets, and engaging portions on said front wall panel and said lower portions of said brackets for holding the wall panel against outward movement.

2. A baseboard enclosure adapted to be disposed along a wall for a heat distributing pipe having spaced heat transfer fins thereon comprising an elongated front panel having inwardly curved top and bottom ends, an elongated back panel having an outwardly curved lower end and an upper end sloping outwardly and then extending inwardly to the wall, an inner bracket having an outwardly and upwardly curved lower portion for engaging said front panel and at least one of said fins, said inner bracket having an upper portion for supporting engagement with the top end of said front panel, elongated dampers each having sleeve members at each end of one of its edges, a pin supported by the upper portion of said bracket and in engagement in the sleeve members of adjoining dampers and adjusting members for said dampers including a connection to said upper end of said back panel.

3. A baseboard enclosure adapted to be disposed along a wall for a heat distributing conduit unit comprising an elongated front panel having inwardly curved top and bottom ends, an elongated back panel having an outwardly curved lower end and an upper end sloping outwardly and then extending inwardly to the wall, an inner bracket having an outwardly and upwardly curved lower portion in engagement with said front panel and an upper portion in supporting engagement with said front panel, a conduit for the heat distributing medium having a plurality of spaced fins, a chain in engagement with said inner bracket for adjustably supporting said conduit, a damper having sleeve members on each end of one of its edges, a pin supported by the said upper portion of said bracket and in engagement in the sleeve members of adjoining dampers, a clip on the upper end of said back panel, a chain adjustably engageable in said clip and connected to another edge of said damper.

4. A baseboard enclosure for a heat distributing conduit unit comprising an elongated front panel having top and bottom ends inwardly curved in a hook-shape, an elongated back panel having an outwardly curved lower end and an upper end sloping outwardly and then extending inwardly to the wall, an inner bracket having an outwardly and an upwardly curved lower portion terminating in a hook shaped member for engaging said bottom hook end of said front panel, said inner bracket having an upper portion terminating in a lip for supporting engagement with said top hook end of said front panel, elongated dampers each having a cylindrical sleeve at each end of its inner edges, a pin supported at the inner edge of said upper portion of said inner bracket and in engagement in said sleeves of adjoining dampers, a clip in engagement with an upper portion of said back panel, an adjustable chain, one end of said chain being connected to the outer edge of said damper and the other end of said chain being connected to said clip, an elongated cylindrical conduit for the heat distributing medium, said conduit having a plurality of spaced fins in circumferential engagement with said conduit, an adjustable chain for supporting engagement with said conduit, said upper portion of said inner bracket having a pair of slots and said conduit supporting chain being in adjustable engagement in said slots.

5. A baseboard enclosure for a heat distributing conduit unit comprising an elongated front panel having top and bottom ends inwardly curved in a hook shape, an elongated back panel having an outwardly curved lower end and an upper end sloping outwardly and then extending inwardly to the wall, an inner bracket having an outwardly and upwardly curved lower portion terminating in a tip, a magnet in engagement with said tip for engaging said front panel, said inner bracket having an upper portion terminating in a lip for supporting engagement with said top hook end of said front panel, elongated dampers each having a cylindrical sleeve at each end of its inner edge, a pin supported at the inner edge of said upper portion of said inner bracket and in engagement in said sleeves of adjoining dampers, a clip in engagement with an upper portion of said back panel, an adjustable chain, one end of said chain being connected to the outer edge of said damper and the other end of said chain being connected to said clip, an elongated cylindrical conduit for the heat distributing medium, said conduit having a plurality of spaced fins in circumferential engagement with said conduit, an adjustable chain for supporting engagement with said conduit, said upper portion of said inner bracket having a pair of slots and said conduit supporting chain being in adjustable engagement in said slots.

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