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2,793,007

BASEBOARD RADIATOR STRUCTURE

Filed Aug. 25, 1954

2 Sheets-Sheet 1

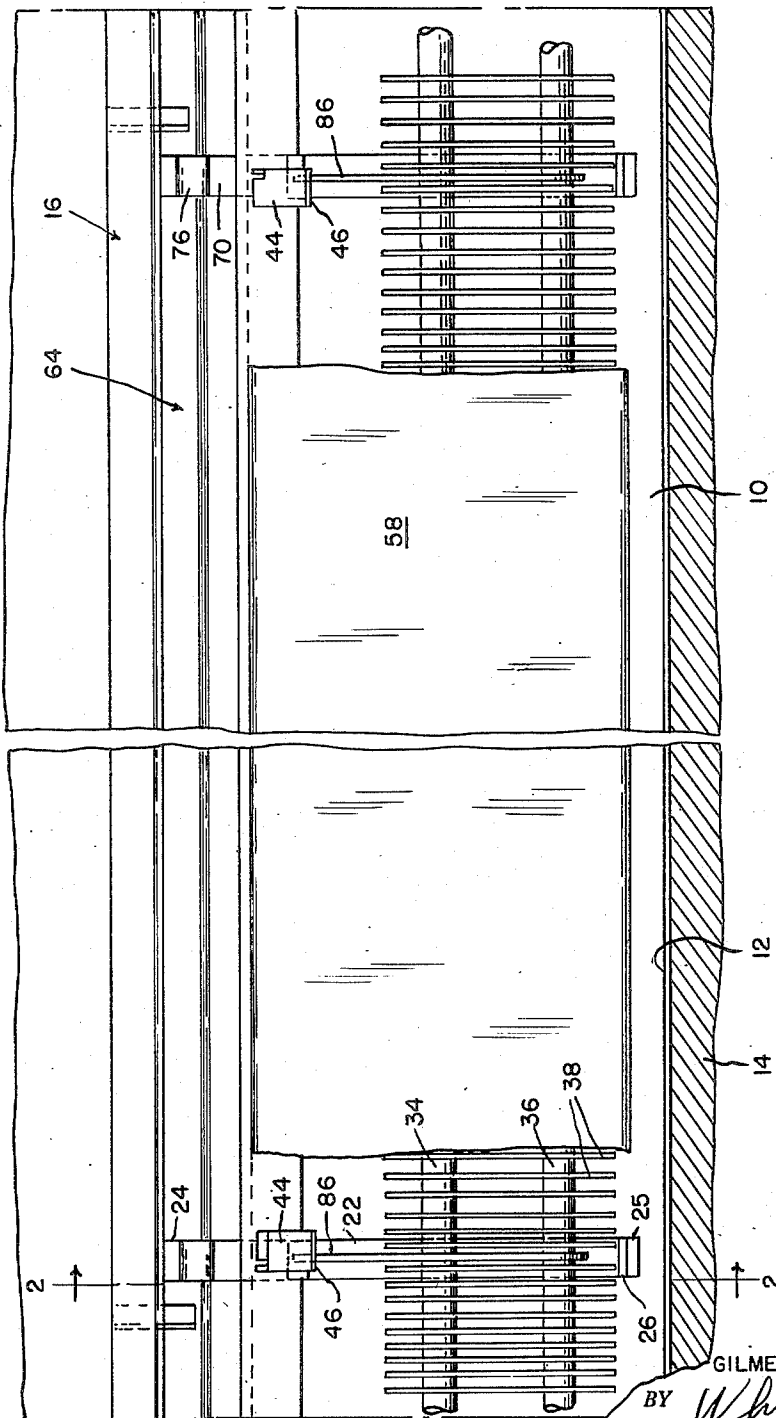


FIG. 1.

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FIG. 2.

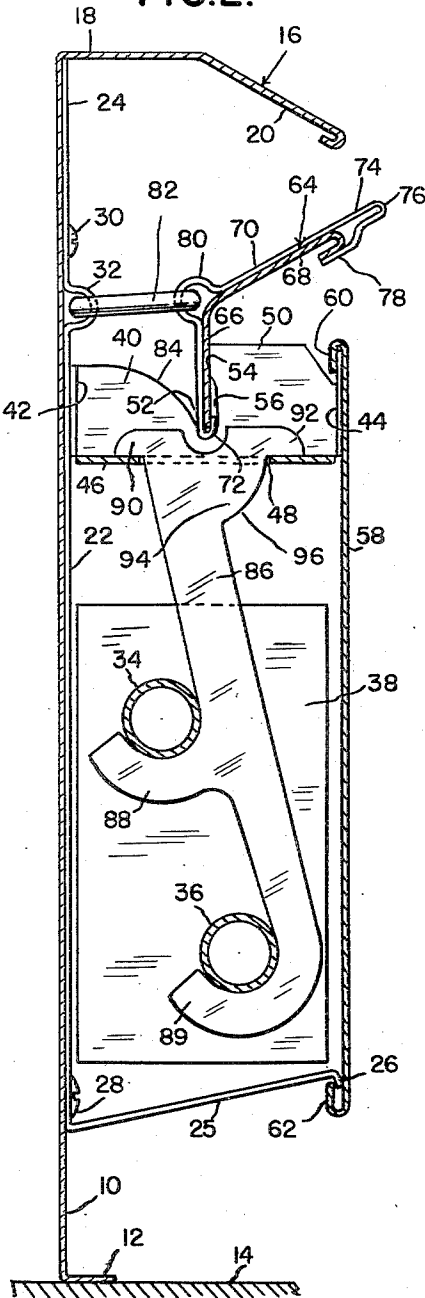


FIG. 3.

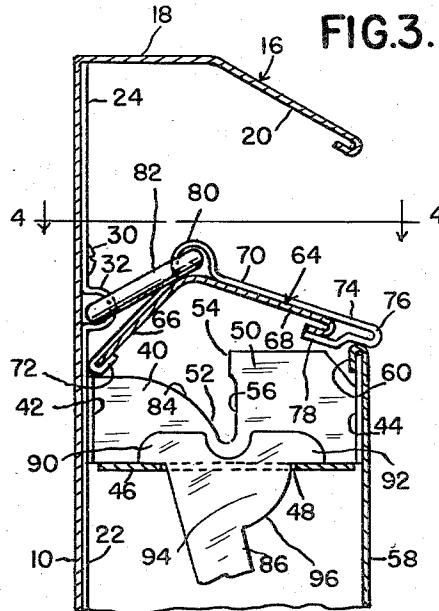
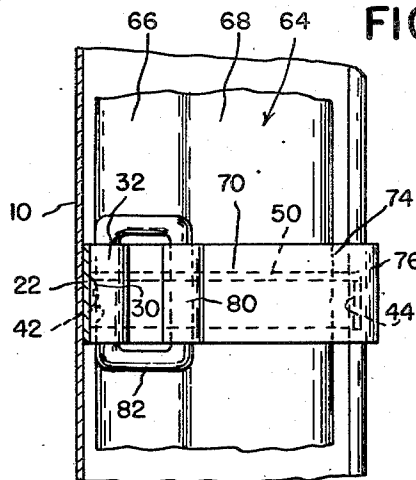


FIG. 4.



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BASEBOARD RADIATOR STRUCTURE

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4 Claims. (Cl. 257—133)

The present invention relates to baseboard radiator structure, and more particularly to a structure comprising a wall plate, a bracket extending forwardly from the wall plate, a front panel carried by the bracket, a pipe hanger depending from the bracket, and a damper selectively movable to control flow of heat by convection through said structure.

It is an object of the present invention to provide in baseboard radiator structure a bracket having an elongated slot therein, a pipe hanger having a head including ears insertable through said slot and adapted to support said hanger on said bracket.

It is a further object of the present invention to provide baseboard radiator structure comprising a wall plate, a bracket extending forwardly from the wall plate, a front panel carried by said bracket and defining a heat exchange space between the plate and panel, a damper movable to open and close the space at the top between said plate and panel to control egress of heated air.

It is a further object of the present invention to provide apparatus of the character described in the preceding paragraph in which the bracket is provided with locating means engageable with one edge of the damper to locate said damper in fully open position.

It is a further object of the present invention to provide apparatus of the character described in the preceding paragraph in which the damper is provided with a finger piece at one edge engageable with the upper edge of the front panel to locate the damper in one extreme position of adjustment.

Other objects and features of the invention will become apparent as the description proceeds, especially when taken in conjunction with the accompanying drawings, wherein:

Figure 1 is a front elevation with parts broken away.

Figure 2 is a section on the line 2—2, Figure 1.

Figure 3 is a fragmentary sectional view similar to Figure 2 showing the damper in a different position of adjustment.

Figure 4 is a fragmentary sectional view taken on the line 4—4, Figure 3.

The present invention relates to baseboard radiator structure in which the entire structure is at the location of and ordinarily supplants the conventional baseboard provided along the wall of a room at the floor level.

The baseboard radiator structure comprises a wall plate 10 having a forwardly extending flange 12 adapted to rest on the floor 14 and provided at its upper end with a forwardly extending hood structure 16 including a horizontal forwardly extending portion 18 and a forwardly and downwardly inclined portion 20.

Secured to the forward side of the wall plate 10 are a plurality of straps 22 the upper edge of which as indicated at 24 engages under the forwardly extending portion 18 of the hood. At the bottom ends, the straps 22 extend forwardly as indicated at 25 and terminate in downwardly extending lips or flanges 26. Screws 28 and 30 are used to retain the straps 22 assembled to

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the wall plate 10 and also to mount the wall plate 10 against the wall of the room or enclosure.

Intermediate their ends the straps 22 include forwardly extending loops 32 serving as mountings for links later to be described.

The baseboard radiator structure includes as the source of heat a pair of pipes 34 and 36 which are in heat conducting relation to a multiplicity of fins 38.

Located above the pipes 34 and 36 are brackets 40 which include inner flanges 42 welded or otherwise secured to the front surface of the straps 22. At the front end the brackets 40 include laterally extending front flanges 44. The bottom portions of the flanges are bent laterally to provide a horizontally extending flange 46 having an elongated slot 48 therethrough. The bracket includes a vertically extending portion 50 having a notch or recess indicated generally at 52 including an abutment surface 54 undercut as indicated at 56 for a purpose which will presently appear.

A front panel 58 is provided having its upper edge inwardly bent as indicated at 60 to provide a hook portion engageable over the upper edge of the laterally extending front flanges 44 of the brackets 40. The lower edge of the front panel 58 is reversely turned as indicated at 62 to provide a groove for receiving the downwardly extending lips or flanges 26 of the arm portions 25 of the straps 22. The front panel 58 is thereby firmly supported from the brackets 40 and the lower edge of the front panel is spaced a substantial distance above the floor to form an air inlet permitting air to flow into a heat exchange space intermediate the wall plate 10 and the front panel 58.

In order to control transfer of heat to the room, the baseboard radiator structure includes a damper indicated generally at 64 composed of two angularly related flat portions 66 and 68. The damper is mounted by a plurality of straps 70 having end portions 72 bent inwardly to underlie the inner edge of the damper and having portions 74 which extend outwardly to form finger pieces 76 and a reversely bent edge portion 78 underlying the reversely turned edge of the portion 68 of the damper. Intermediate their ends the straps 70 are looped as indicated at 80.

As best seen in Figure 4, the damper 64 is carried by links 82, each having a portion received within the loop 80 of the strap 70 and having a parallel portion received within the loop 32 provided in the straps 22.

Referring now to Figure 2 it will be observed that the damper is in fully open position at which time the flat portion 66 thereof is in engagement with the surface 54 of the bracket, the undercut 56 providing clearance for the reversely turned edge 72 of the strap 70. At this time the portion 68 of the damper is inclined upwardly and outwardly from the upper edge of the portion 66 and its outer edge is located substantially midway between the upper edge of the front panel 58 and the forward edge of the hood 16. Thus, air flowing by convection through the baseboard is permitted to escape and a portion of such air is directed upwardly and outwardly by the inclined portion 68 of the damper. When it is desired to prevent escape of heated air from the radiator structure the operator presses upwardly and inwardly on the finger piece 76 which has the effect of shifting the damper to the position illustrated in Figure 3. This is accompanied by upward swinging of the link 82 about the axis established by loop 32 in the strap 22. Due to the curvature of the edge portion 84 defining one side of the recess 52 in the bracket 40, the damper is self-opening once it is started by lifting on the finger 76. This makes it possible to open the damper from any one point along its length, which may be several feet. Without this

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feature it would be necessary to lift the damper symmetrically about the center of length. When it is desired to permit the escape of heated air from the radiator the finger piece 76 is lifted, thus rocking the damper to a position in which the portion 66 thereof engages the abutment surface 54.

The radiator structure includes pipe engaging hangers 86 which are provided with pipe supporting hooks 88 and 89. The dimension of these hooks prevents movement of the lower part of the hanger 86 through the slot 48 provided in the bracket 40 and accordingly, makes it necessary to provide a special head structure at the upper ends of the hangers. For this purpose the upper ends of the hangers are provided with laterally extending ears 90 and 92. Directly below the ears 90 and 92 the hanger is provided with a laterally enlarged portion 94 having an arcuate edge surface 96. This construction permits assembly of the hangers 86 and brackets 40 by first inserting the ear 92 through the slot 48, thereafter swinging the hanger as a unit to move the ear 90 through the slot, at which time the hanger may be released and will assume its illustrated position. The arcuate surface 96 constitutes a camming or guiding surface which prevents shifting of the hanger in the bracket and which insures proper location of the hanger when in pipe engaging position.

The drawings and the foregoing specification constitute a description of the improved baseboard radiator structure in such full, clear, concise and exact terms as to enable any person skilled in the art to practice the invention, the scope of which is indicated by the appended claims.

What I claim as my invention is:

1. Baseboard radiator structure comprising a wall plate adapted to be fixed to a wall just above a floor, said plate having a flange extending forwardly from the top thereof to provide a hood, a plurality of vertically extending sheet metal straps secured to the front of said plate and having their lower portion extending forwardly substantially above the bottom edge of said plate, sheet metal brackets fixed to said plate and extending forwardly

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therefrom beneath said hood, said brackets each comprising a forwardly extending vertical web, a laterally extending mounting flange at the rear edge of said web, a laterally extending stiffening flange at the bottom edge of said web, and a laterally extending panel-support flange at the front edge of said web, said stiffening flange having an elongated slot therethrough, a sheet metal pipe hanger extending through said slot and having a portion engaging the upper surface of said stiffening flange to suspend said hanger therefrom, a heating pipe suspended by said hanger, and a front panel having suspension means engaging said panel-support flange, the forwardly extending lower portions of said straps engaging the lower edge of said panel.

2. Structure as defined in claim 1 in which said hanger has an elongated head terminating in ears adapted to extend beyond the ends of said slot in supporting position and to be insertable sequentially through said slot by inclining the hanger from its supporting position.

3. Structure as defined in claim 1 in which the upper edge of said web has a contoured surface, damper means movably mounted between the upper edge of said panel and said hood, link means connecting said damper means to said wall panel for simultaneous rocking and bodily movement between open and closed positions, said damper means comprising an edge surface movable over said contoured surface to guide said damper in movement between open and closed positions.

4. Structure as defined in claim 1 in which said brackets are permanently fixed to said straps, and said straps and brackets are attachable as a unit to said plate.

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