March 27, 1951 A. A. EMRICK 2,546,359

RADIATOR BRACKET

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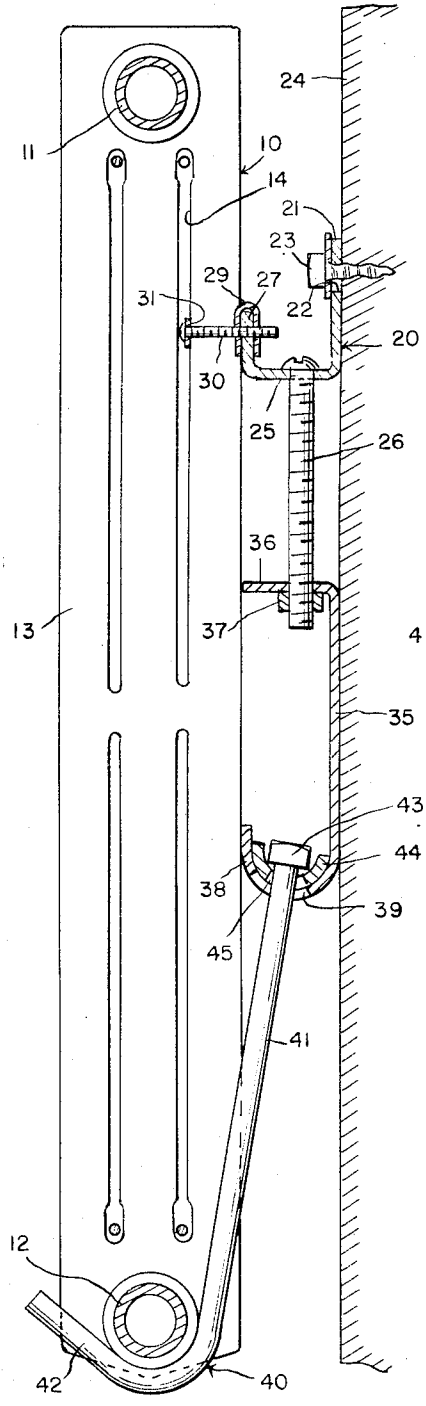


FIG.1.

FIG.2.

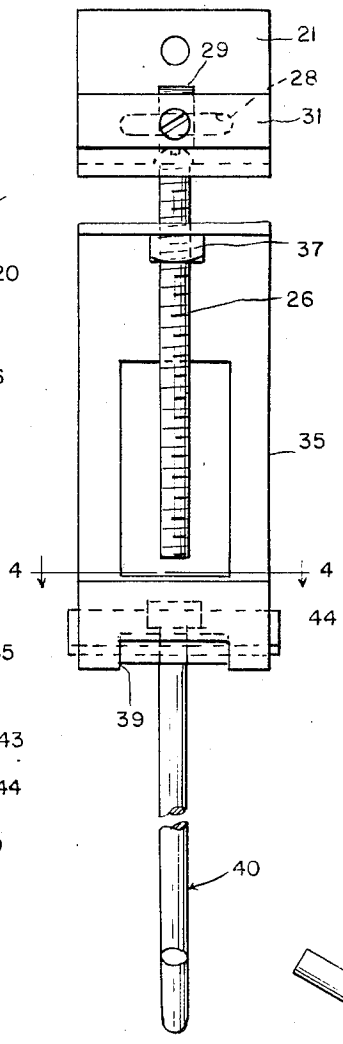
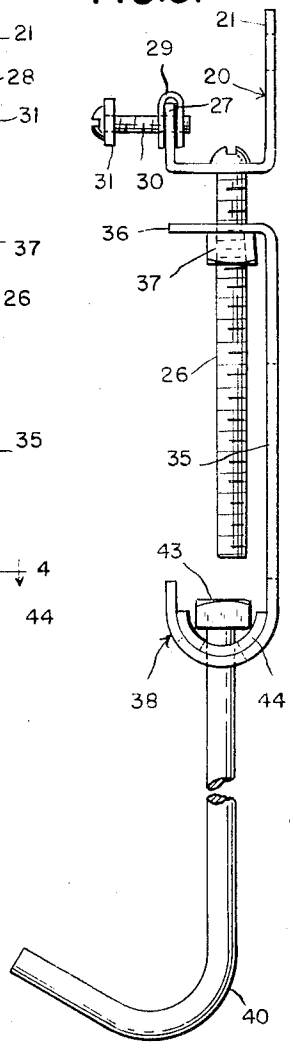


FIG.3.



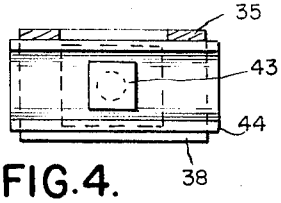


FIG.4.

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RADIATOR BRACKET

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7 Claims. (Cl. 248—234)

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The present invention relates to a radiator bracket for mounting a conventional radiator to a wall.

It is an object of the present invention to provide radiator supporting structure which is easy to install in a building, easy to attach the radiator thereto, is low in cost for production purposes, is adaptable to radiators of various widths, and with which it is easy to level the radiator without the use of special tools after it is attached.

It is a feature of the present invention to provide radiator supporting structure including a wall bracket having a trough-shaped saddle thereon provided with an elongated laterally enlarged slot for suspending a hook adapted to engage the lower pipe of the radiator in which the saddle prevents turning of the hook about its axis while permitting lateral adjustment with respect to the radiator, and swinging movement outwardly from the wall in a vertical plane perpendicular to the wall.

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 vertical transverse section through a radiator and mounting means therefor;

Figure 2 is a front elevation of the radiator mounting means;

Figure 3 is a side elevation of the radiator mounting means; and

Figure 4 is a section on the line 4—4 of Figure 2.

The radiator mounting means is adapted to support a radiator 10 of the conventional type having an upper pipe 11 and a lower pipe 12 and a plurality of flat vertically extending radiator sections 13. The radiator mounting structure comprises a bracket 20 having a vertical flange 21 provided with an aperture 22 through which passes a screw 23 by means of which the bracket is attached to a wall 24. The bracket 20 is provided with a horizontal web 25 having an aperture therein through which passes an adjusting screw 26. Outwardly of the web 25 the bracket 20 has a vertically extending flange 27 provided with an elongated slot 28 (Figure 2). Overlying the upper edge of the flange 27 is a U-shaped nut 29 adapted to receive a bolt 30. Beneath the head of the bolt 30 is a bar 31 adapted to span two radiator sections 13.

Suspended from the bracket 20 by the bolt 26 is a wall plate 35 having an outwardly extending horizontal flange 36 apertured to receive the lower end of the bolt 26. A nut 37 is threadedly

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engaged to the lower end of the bolt 26 and bears against the underside of the flange 36 to support the wall plate 35. The nut 37 is of such cross section that it is adapted to engage the vertical portion of the wall plate 35 so as to prevent turning, and accordingly the height of the wall plate 35 may be adjusted simply by turning the bolt 26 with a screw driver.

The lower end of the wall plate 35 is bent outwardly and upwardly to provide an upwardly open generally cylindrically curved trough-like saddle or ledge portion 38. An elongated laterally enlarged slot 39 is provided at the bottom of the saddle. Suspended from the saddle 38 is a radiator supporting hook 40 having a shank 41 and a hook portion 42 adapted to engage under the lowermost pipe 12 of the radiator 10. At its upper end the shank 41 of the hook 40 passes through the slot 39 formed in the saddle 38. The shank 41 of the hook is provided with a head 43 which is illustrated as square and beneath the head 43 and surrounding the shank 41 is an elongated curved bearing plate 44. The exterior of the bearing plate 44 is curved to fit the inner surface of the saddle 38 and the inner surface of the bearing plate 44 is adapted to engage the square head 43 of the hook so as to prevent turning of the hook about the axis of its shank 41. The bearing plate 44 is provided with a central opening 45 affording passage for the shank 41 of the hook. The structure thus far described supports the hook from the saddle for swinging movement outwardly from the wall 24 in a vertical plane perpendicular to the wall and also permits horizontal adjustment parallel to the wall and laterally of the radiator 10. The length of the slot 39 is such that the amount of adjustment afforded the hook 40 is at least equal to the spacing between a pair of adjacent radiator sections 13, and the width of the slot 39 is sufficient to permit sufficient outward swinging of the hook 40 to accommodate radiators of any desired width.

In using the radiator mounting structure thus described, the bracket 20 is first secured to the wall by the screw 23. Thereafter the radiator 10 is laid on the floor with its bottom adjacent wall. The bottom portion of the radiator is then lifted and suspended by means of the bottom pipe 12 on the hook 40. As previously stated, the hook 40 is transversely adjustable relative to the radiator so that it may be brought into registry with the space between adjacent radiator sections 13. Thereafter employing the engagement between the lower pipe 12 and the hook 40 as a pivot, the upper end of the radia-

tor is swung upwardly into position adjacent the vertical flange 27 of the bracket 20. Thereafter the bolt 30 with the transverse bar 31 thereon is positioned so that the transverse bar extends into slots 14 in adjacent radiator sections and is threaded into the U-shaped nut 29. It will be observed that the only tool required for the mounting of the radiator is a screw driver, by means of which the height of the radiator may be adjusted by turning the bolt 26 and which may be employed to draw the radiator firmly against the wall bracket 20 by turning the bolt 30.

The radiator mounting structure is extremely economical to manufacture, comprising as it does primarily sheet metal parts which may be stamped to the desired shape. It is further characterized by the extreme simplicity of the structure which renders the mounting of the radiators a quick and easy operation.

While there is illustrated and described in considerable detail a single preferred embodiment of the radiator mounting structure, it will be appreciated that this full disclosure has been given merely to enable those 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. In radiator mounting structure of the character described, a wall plate having its lower edge curved outwardly and upwardly to define a horizontally elongated saddle, said saddle having a horizontally elongated slot therein, a hook having a headed shank extending through said slot, said slot being substantially wider than the shank of said hook, an apertured bearing plate surrounding the shank of said hook beneath the head thereof and engaging the head thereof to prevent turning of said hook about the axis of its shank, said plate being curved to conform to the interior curvature of said saddle and being adjustable with said hook horizontally therealong, and being swingable with said hook therein about a horizontal axis parallel to said wall.

2. In radiator mounting structure of the character described, a wall plate having its lower edge outwardly and upwardly curved to define an elongated saddle, an elongated laterally enlarged slot therein, a hook having its upper end extending through said slot, and means supporting said hook in said saddle cooperating with said saddle to prevent turing of said hook about its axis while permitting adjustment thereof along said slot and swinging movement thereof outwardly from said wall plate, said means comprising an apertured bearing plate curved to conform to the curvature of said saddle.

3. In a radiator mounting structure of the character described, a wall plate having its lower edge outwardly and upwardly curved to define an elongated saddle, an elongated laterally enlarged slot therein, a hook having its upper end extending through said slot, and means supporting said hook in said saddle cooperating with said saddle to prevent turning of said hook about its axis while permitting adjustment thereof along said slot and swinging movement thereof outwardly from said wall plate, said means comprising an elongated apertured bearing plate curved transversely to conform to the curvature of said saddle and having its inner surface shaped to engage the head of said hook so as to prevent turning thereof relative to said bearing plate.

4. In a radiator mounting structure of the character described, supporting means having an elongated forwardly extending ledge provided with an elongated slot, an elongated apertured bearing plate on said ledge, a radiator supporting hook having a shank extending through the aperture of said plate and the slot of said ledge, said slot being wider than the diameter of said hook to permit forward swinging of the lower end of said hook, said hook having a head resting on said plate, said plate being shaped to engage said head to prevent turning of said hook about the axis of its shank, said plate being longitudinally slidable with said hook along the slot in said ledge, and said plate engaging said support means to prevent turning of said plate on said ledge about the axis of said shank.

5. Radiator mounting structure comprising, a bracket, means for securing said bracket to a wall, means carried by said bracket for drawing the top of a radiator against said bracket, a wall plate having a top horizontal flange, threaded means adjustably suspending said wall plate from said bracket, said wall plate having an outwardly extending, upwardly open elongated trough at its lower edge, said trough having an elongated slot in its bottom, a radiator supporting hook including a shank having a non-circular head located in said trough, said hook extending through the slot in said trough, means including the head of said hook and said trough preventing rotation of said hook about the axis of its shank, the diameter of the shank of said hook being substantially less than the width of said slot to permit outward adjustment of the lower portion of said hook, said hook being adjustable longitudinally of said slot.

6. In radiator mounting structure for supporting a radiator of the type having a pair of vertically spaced horizontal pipes and a series of horizontally spaced vertical radiator sections, a wall plate having an outwardly extending flange at its top and a flat body adapted to rest against a wall, vertically adjustable support means engaging said ledge intermediate the ends thereof, said plate having at its lower edge a horizontally extending, outwardly and upwardly curved and upwardly open trough of arcuate cross-section, said trough having an elongated slot at its bottom extending longitudinally thereof, a unitary headed hook having a shank loosely received in said slot and freely withdrawable therefrom, said slot having a length sufficiently greater than the diameter of said shank to permit adjustment of said hook an amount corresponding to the spacing of the radiator sections and of a width sufficient to permit substantial outward swinging of said hook away from the wall, the head of said hook being non-circular, and means comprising said head and said arcuate trough preventing turning of said hook about the axis of its shank while permitting outward swinging of said hook about the axis of curvature of said trough.

7. In radiator mounting structure for supporting a radiator of the type having a pair of vertically spaced horizontal pipes and a series of horizontally spaced vertical radiator sections, a wall plate having a flat body portion adapted to rest flat against a wall, means for supporting said plate for vertical adjustment, said plate having a horizontally extending, outwardly and upwardly curved, and upwardly open trough of arcuate cross-section, said trough having an elongated slot in its bottom extending longitudinally thereof, a unitary headed hook having a shank loosely received in said slot and freely withdraw-

able therefrom, said slot having a length sufficiently greater than the diameter of said shank to permit adjustment of said hook an amount corresponding to the spacing of the radiator sections and of a width sufficient to permit substantial outward swinging of said hook away from the wall, the head of said hook being non-circular, and means comprising said head and said arcuate trough preventing turning of said hook about the axis of its shank while permitting outward swinging of said hook about the axis of curvature of said trough.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
766,890	Newburg	Aug. 9, 1904
1,878,645	Robinson	Sept. 20, 1932
1,906,591	Hickey	May 2, 1933
1,974,855	Slaght	Sept. 25, 1934
2,195,540	Owens	Apr. 2, 1940