March 13, 1934. C. W. KELLY 1,951,331

SUPPORT CONSTRUCTION FOR RADIATORS AND THE LIKE

Filed Aug. 17, 1931 5 Sheets-Sheet 1

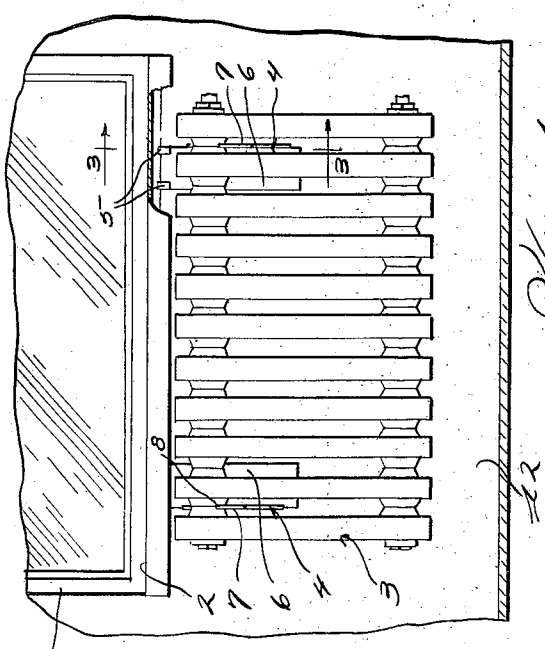


Fig. 1.

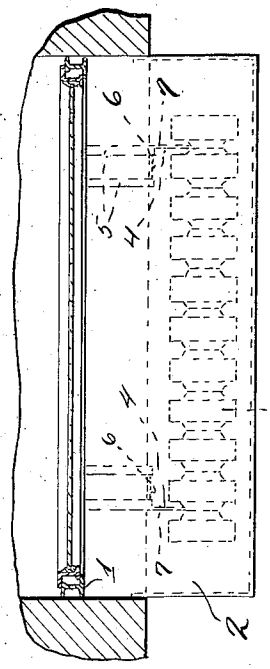


Fig. 2.

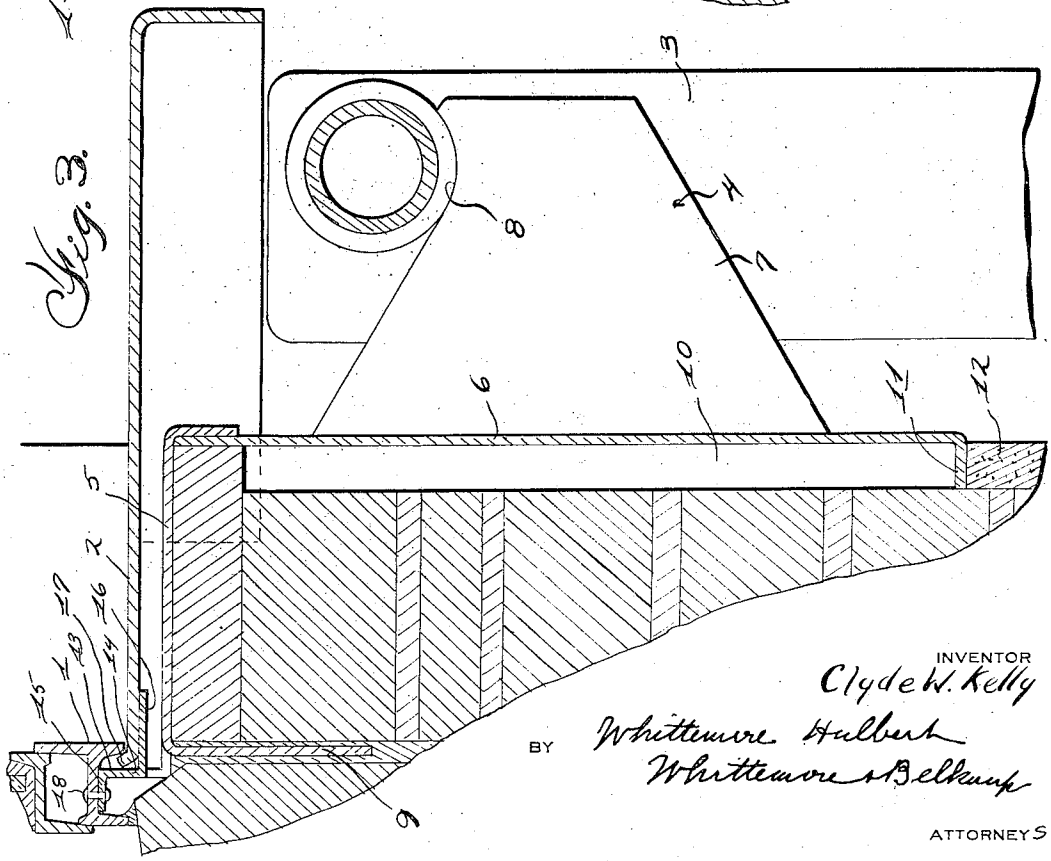


Fig. 3.

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March 13, 1934. C. W. KELLY 1,951,331

SUPPORT CONSTRUCTION FOR RADIATORS AND THE LIKE

Filed Aug. 17, 1931 5 Sheets-Sheet 2

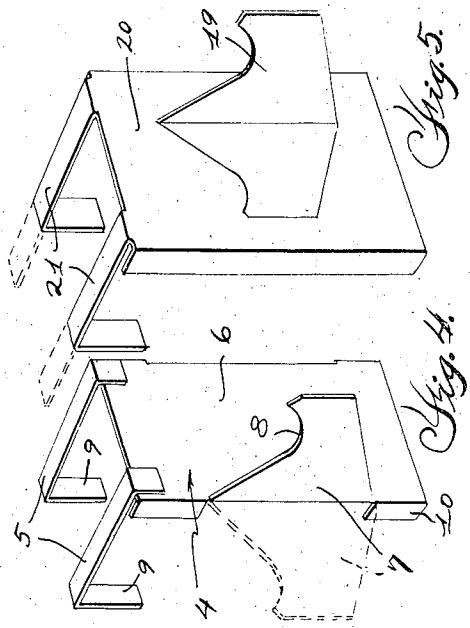


Fig. 5.

Fig. 4.

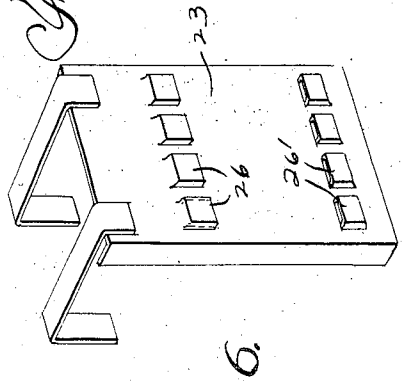


Fig. 7.

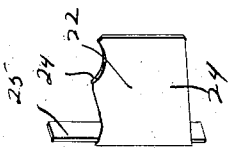


Fig. 8.

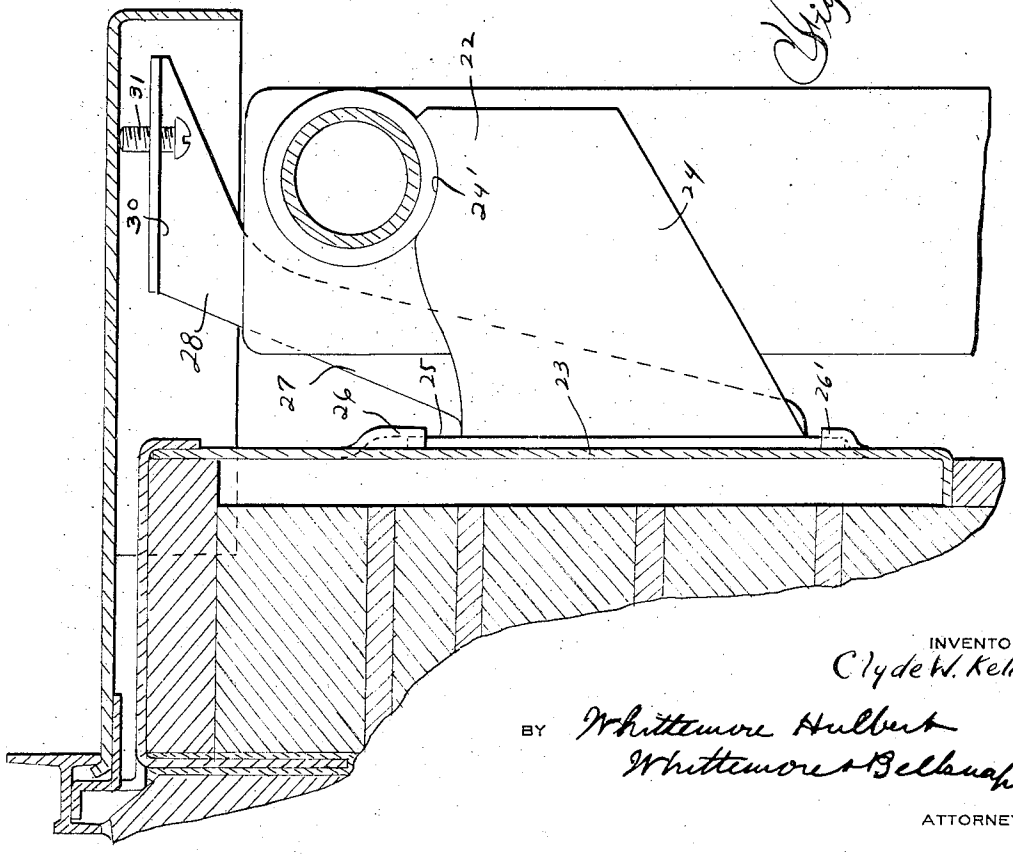


Fig. 6.

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SUPPORT CONSTRUCTION FOR RADIATORS AND THE LIKE

Filed Aug. 17, 1931 5 Sheets-Sheet 3

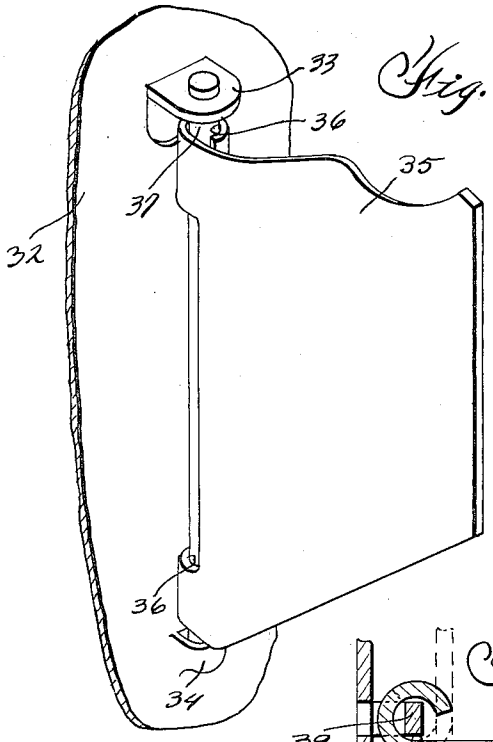


Fig. 10.

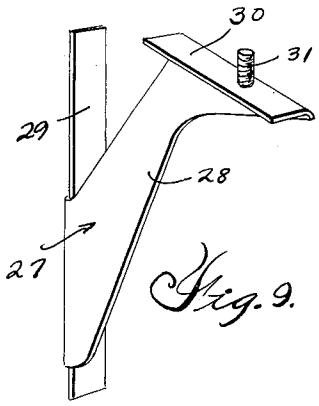


Fig. 9.

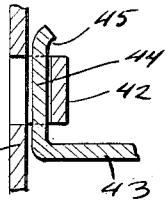


Fig. 16.

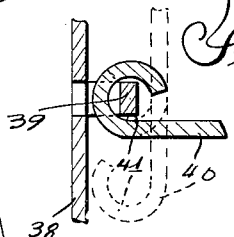


Fig. 15.

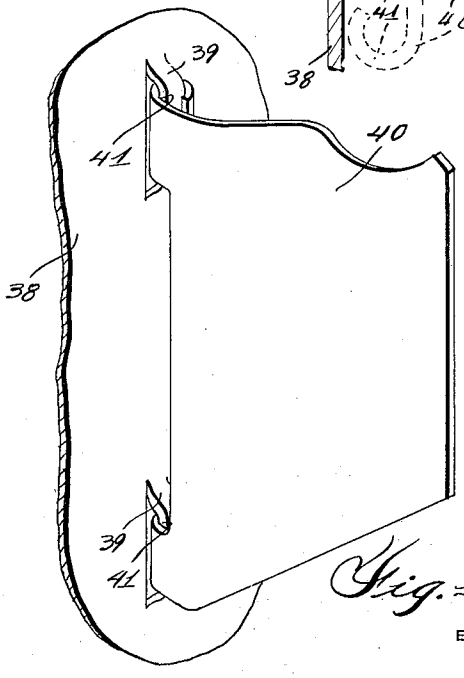


Fig. 11.

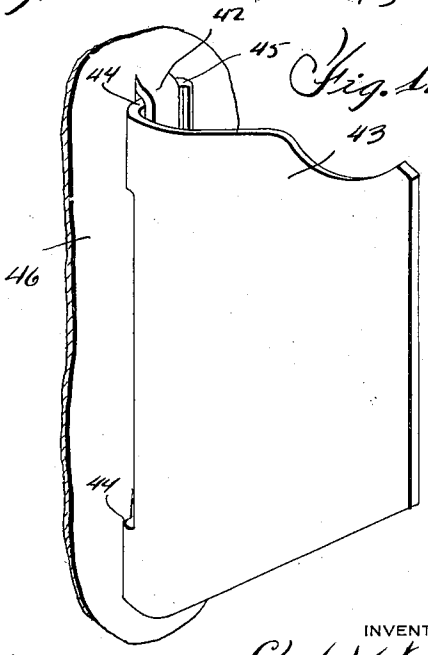


Fig. 12.

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SUPPORT CONSTRUCTION FOR RADIATORS AND THE LIKE

Filed Aug. 17, 1931 5 Sheets-Sheet 4

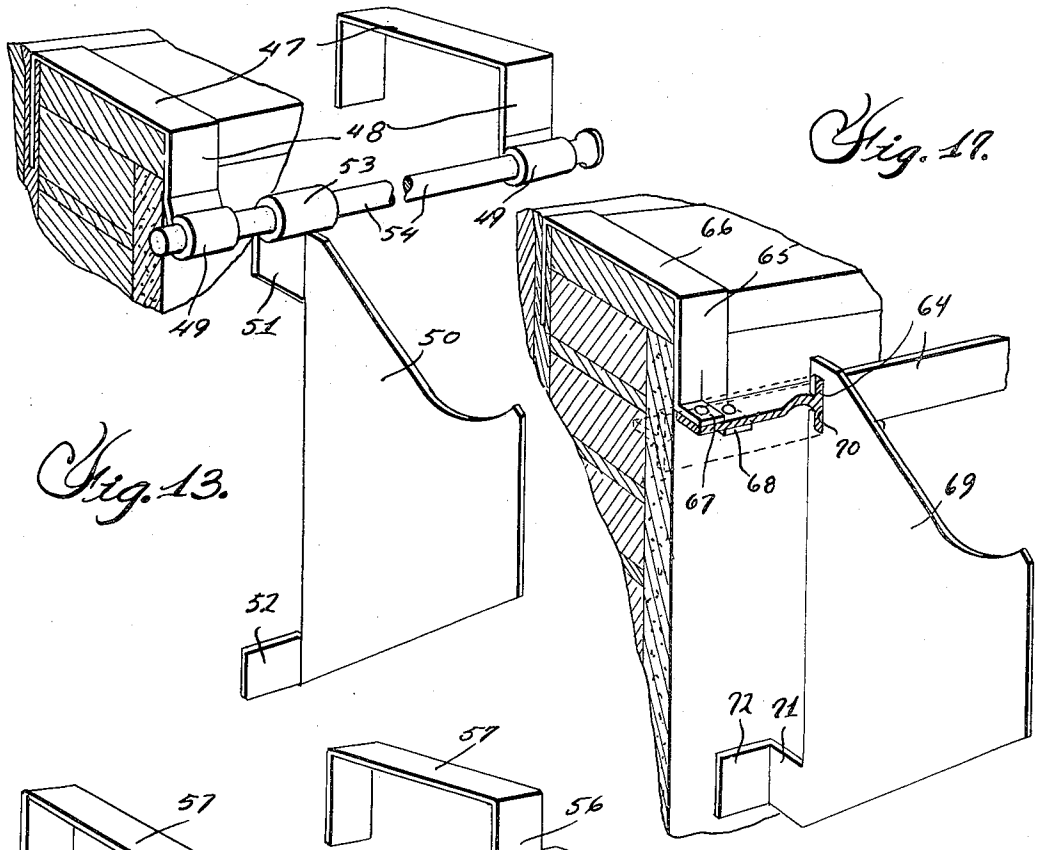


Fig. 13.

Fig. 12.

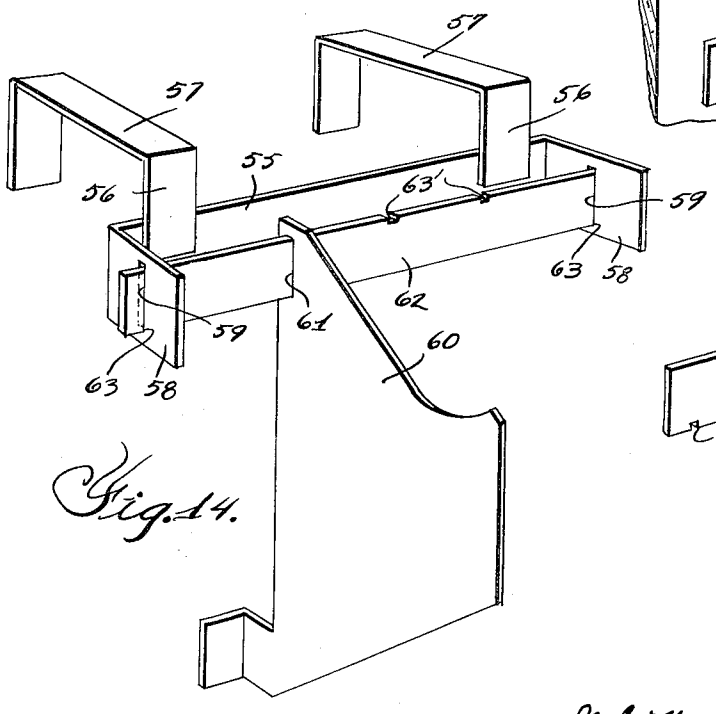


Fig. 14.

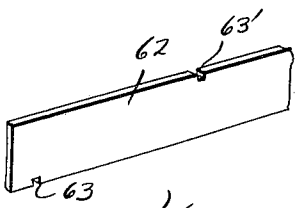


Fig. 14A.

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SUPPORT CONSTRUCTION FOR RADIATORS AND THE LIKE

Filed Aug. 17, 1931 5 Sheets-Sheet 5

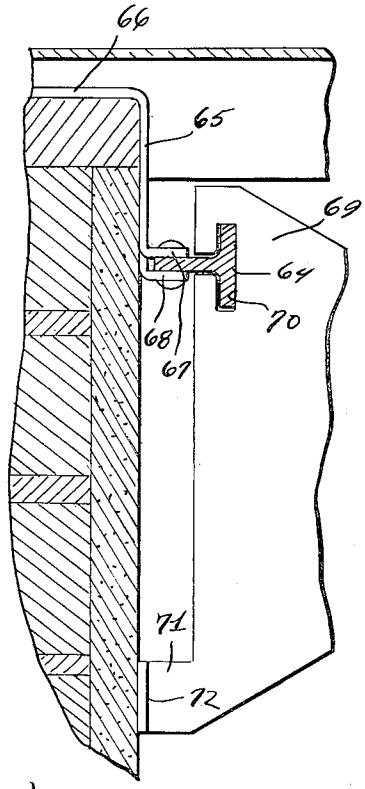


Fig. 18.

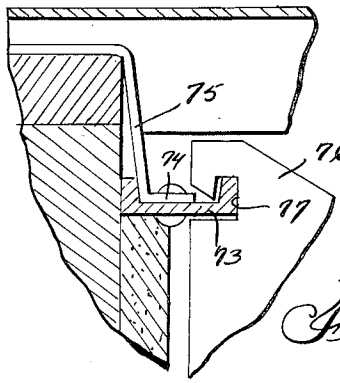


Fig. 19.

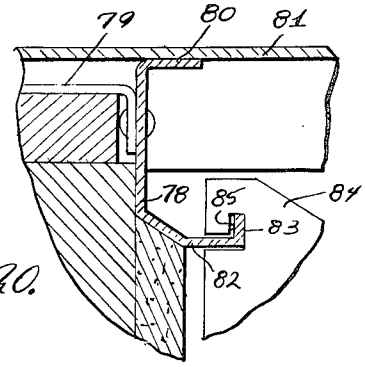


Fig. 20.

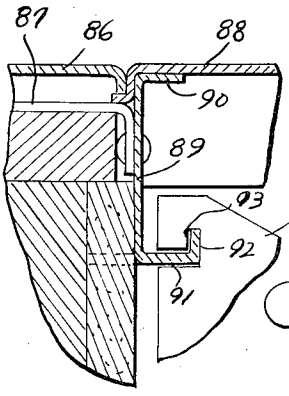


Fig. 21.

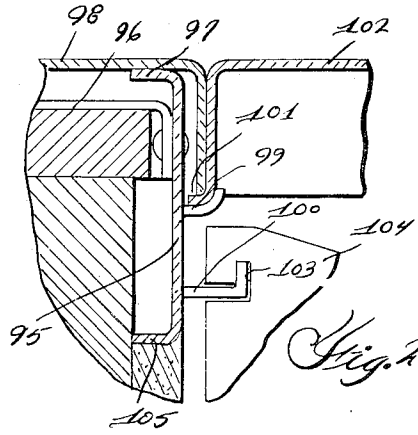


Fig. 22.

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Patented Mar. 13, 1934 1,951,331

UNITED STATES PATENT OFFICE

1,951,331

SUPPORT CONSTRUCTION FOR RADIATORS AND THE LIKE

Clyde W. Kelly, Detroit, Mich., assignor to Detroit Steel Products Company, Detroit, Mich., a corporation of Michigan

Application August 17, 1931, Serial No. 557,655

6 Claims. (Cl. 248—17)

The invention relates to a support for radiators and the like and refers more particularly to a support for a radiator used for heating purposes. One of the objects of the invention is to provide an improved construction of radiator support which is simple and may be manufactured at relatively low cost. Another object is to provide an improved construction of support for a window stool. A further object is to so construct the window stool supporting means that it serves as an anchor for the window frame. These and other objects of the invention will become apparent from the following description, taken in connection with the accompanying drawings, in which

Figure 1 is an inside elevation with parts broken away of a radiator support construction showing an embodiment of my invention;

Figure 2 is a plan view thereof;

Figure 3 is a cross section on the line 3—3 of Figure 1;

Figure 4 is a perspective view of a portion thereof;

Figure 5 is a similar view showing another embodiment of my invention;

Figure 6 is a view similar to Figure 2 showing another embodiment of my invention;

Figures 7, 8 and 9 are perspective views of different parts thereof;

Figures 10, 11, 12, 13 and 14 and 14a are perspective views showing other embodiments of my invention;

Figures 15 and 16 are plan views of portions of Figures 11 and 12;

Figure 17 is a perspective view showing another embodiment of my invention;

Figure 18 is a view similar to Figure 3 of Figure 17;

Figures 19, 20, 21 and 22 are views similar to Figure 3 showing other embodiments of my invention.

The invention is designed to support a radiator through which may pass a suitable heating medium, such as steam, hot water or vapor, and, as shown in Figures 1, 2, 3 and 4, the support is adapted for use with a wall having a window opening in which is located the metal frame 1 of the window and the stool 2, which latter is preferably formed of sheet metal and extends inwardly beyond the wall. The radiator 3 is located at the inside of the wall and below the portion of the stool extending inwardly beyond the wall and it is preferably spaced above the floor.

For supporting the radiator, I have provided the supporting members 4, each of which has the horizontally extending sheet metal straps 5 beneath the stool and resting upon the wall and the depending sheet metal plate 6 at the inside of the wall and permanently secured to the straps as by being welded thereto. A sheet metal hanger bracket 7 is secured to each plate and extends transversely inward therefrom. The brackets 7 are adapted to extend between the sections of the radiator 3 and have the notches 8 in their upper edges for engagement with the usual projections upon these sections.

The horizontally extending straps 5 have the down-turned outer ends 9, which are imbedded in the wall and are located between the inner and outer portions thereof. These down-turned ends are bent when assembling the support in the building, so that variations in thicknesses of the inner portions of the walls may be taken care of. The plate 6 is preferably provided with the side flanges 10 and the lower flange 11 extending transversely thereof into contact with the inner portion of the wall, so that this plate forms a guide for the plaster 12. The hanger bracket 7 is preferably formed from the same blank of sheet metal as the plate 6 and, as shown particularly in Figure 4, the bracket is struck out from the sheet metal blank and bent to extend transversely inward from an edge of the plate when it is installed.

13 are clips preferably formed of sheet metal, each having a portion imbedded in the wall between the inner and outer portions thereof and the upwardly extending portion 14 provided with the outwardly extending lateral part 15 and the struck-out inwardly extending lateral part 16. The stool 2 extends beneath the inside flange of the lower bar of the frame 1 and preferably has at its outer edge the upwardly extending flange 17 at the front side of this inner flange. The parts are located to engage the lower face of the stool 2 and to support the same, while the parts 15 are located to engage the lower face of the web of the lower bar of the window frame and are preferably fixedly secured thereto by suitable means, such as the rivets 18.

Figure 5 discloses a modification of the supporting construction for a radiator differing from that shown in Figures 1 to 4, inclusive, in that the hanger bracket 19 is struck out from the central portion of the sheet metal plate 20 and this plate is integral with the horizontally extending straps 21.

In the modification shown in Figures 6, 7, 8 and 9, the radiator support differs from that shown in Figures 1 to 4, inclusive, in that the hanger bracket 22 is separate from the depending plate 23 and is adapted to be located in various positions transversely thereof to properly engage between the sections of the radiator. This hanger bracket is preferably formed of sheet metal and has the bracket portion 24, the upper edge of which is preferably provided with the notch 24' for engaging and supporting the radiator. The hanger bracket also has the flange 25 integral with and extending transversely of the bracket portion and the upper and lower ends of which project respectively upwardly and downwardly beyond the bracket portion. The plate 23 is provided with the transversely extending series of inwardly extending pockets 26 and 26' and located in its upper and lower portions, respectively, and preferably positioned to be concealed by the radiator. These pockets are preferably formed by stamping the same from the plate and have a width and depth sufficient to receive the ends of the flange 25. The upper pockets open downwardly and the lower pockets open upwardly. The height of the upper pockets 26 and the length of the upper end of the flange 25 are such that in assembling the hanger bracket with the plate the upper end may be moved upwardly in an upper pocket a sufficient distance so that the lower end of the flange will clear the lower pocket, after which the flange may be swung against the plate and the hanger bracket may then be lowered to engage the lower end with a lower pocket, the lowering movement being such that the hanger bracket cannot become disengaged from the upper pocket.

As shown in this modification, I also provide means for supporting the portion of the stool which extends inwardly beyond the wall and over the radiator. Specifically, 27 is a one-piece bracket preferably stamped from sheet metal and having the vertically extending bracket portion 28 and flange 29, the latter extending transversely of the former, and the flange 30 extending transversely of the bracket portion and also horizontally. This stool support is detachably engageable with the plate 23 and its vertically extending flange 29 has upper and lower ends projecting beyond its bracket portion 28 in the same manner as the flange 25 projects beyond the bracket portion 24 of the radiator support to engage a set of upper and lower pockets 26 and 26', respectively, not engaged by the hanger bracket 22. For taking care of various heights of stool above the plate 23, I have provided an adjustable member supported by the flange 30 and engaging the lower side of the stool. As shown, this adjustable member is the screw 31.

In the embodiment of my invention illustrated in Figure 10, the depending plate 32 is provided in its upper portion with the transversely extending series of inwardly struck-out tongues 33 and in its lower portion with the transversely extending series of inwardly extending pockets 34, there being but one of each shown. The sheet metal hanger bracket 35 is formed with the eyes 36 at the upper and lower ends of its outer edge or its edge adjacent to the plate 32. The bar 37, which is preferably cylindrical, extends through these eyes and through an opening in the tongue 33 and into the pocket 34. The bar may be inserted by a downward movement to secure the hanger bracket to the plate.

Figures 11 and 15 disclose a modification of Figure 10 in which the sheet metal plate 38 is formed in its upper and lower portions with inwardly extending eyes formed by the straps 39 struck out from the plate. The hanger bracket 40 is formed with the eyes 41 for engaging the straps and these eyes are open sufficiently to permit engaging the hanger bracket with the plate by first positioning the hanger bracket substantially parallel to the plate, as shown in dotted lines in Figure 15, and then initially engaging the eyes 41 with the straps 39, after which the bracket may be swung to extend transversely to the plate.

Figures 12 and 16 disclose another modification in which the straps 42 are preferably wider than the straps 39 and the hanger bracket 43 has the transverse flanges 44 formed with the bent terminal portions 45 for holding the brackets from accidental disengagement from the sheet metal plate 46. In this case the flanges 44 cooperate with the straps and the plate to maintain the hanger bracket at substantially right angles to the plate.

Figure 13 discloses another embodiment of my invention in which the support for the radiator has the horizontally extending straps 47, which at their outer ends are imbedded between the inner and outer portions of the wall in the same manner as shown, for example, in Figures 1 to 4, inclusive. Depending from the inner ends of these straps are the portions or straps 48 at the inside of the wall having at their lower ends the eyes 49. The hanger bracket 50 has at the edge adjacent to the wall the transverse upper and lower flanges 51 and 52, respectively, and the upper flange is provided with the eye 53. 54 is a bar which is preferably cylindrical and is adapted to be passed through the eyes 49 and the eye 53 for supporting the hanger bracket. With this construction it will be seen that the hanger bracket may be readily adjusted longitudinally of the bar to properly position the same between the sections of a radiator.

Figures 14 and 14a disclose a modification of Figure 13 in which the sheet metal yoke 55 has its base fixedly secured to the depending portions or plates 56 upon the horizontally extending straps 57. This yoke has at the ends of its base the inwardly extending portions 58 which are provided with the transverse openings or eyes 59. The hanger bracket 60 has at its upper edge the transverse opening or eye 61. 62 is a bar which is preferably flat and which extends through the openings or eyes 59 and 61. This bar is secured from accidental disengagement from the yoke by providing the notches 63 in its lower edge for engaging the transverse ends 58. The upper edge of the bar is also preferably provided with the notches 63' spaced longitudinally thereof for alternatively receiving the portion of the hanger bracket immediately above its opening or eye 61.

In the modification shown in Figures 17 and 18, 64 is a T-shaped bar extending horizontally at the inside of the wall and fixedly secured to the depending portion or plate 65 upon the horizontally extending straps 66. As shown, the depending portion is provided with the upper and lower transverse and inwardly extending tongues 67 and 68, respectively, between which the bar is located and secured. The radiator hanger bracket 69 is provided with the T-shaped

slot 70 to permit sleeving the bracket over the bar. The bracket is also preferably provided at its lower end with the extension 71 terminating in the transverse flange 72 engageable with the inside of the wall.

As shown in Figure 19, the bar 73 is channel-shaped and opens upwardly and its web is fixedly secured to the inwardly extending flange 74 at the lower edge of the depending portion or plate 75. One flange of this bar engages the inside of the wall and the other flange is engageable by the radiator hanger bracket 76, which is provided with the suitably shaped notch 77 for receiving the inner portion of the bar, including this flange.

As shown in Figure 20, the bar 78 is in general channel-shaped with its web extending vertically at the inside of the wall. This web is fixedly secured to the downwardly extending portions of the straps 79 and has an upwardly extending portion terminating in the transverse flange 80 for supporting the stool 81. The bar also has a depending portion at the inside of the wall which is formed with the transversely extending flange 82 terminating in the upwardly extending portion 83. The hanger bracket 84 is provided with the notch 85 for receiving the upwardly extending portion 83 and the adjacent portion of the flange 82.

In the modification shown in Figure 21, the stool 86 terminates above the horizontally extending straps 87 and a suitable sheet metal cover 88 is provided extending inwardly beyond the stool and substantially flush therewith. The bar 89 is fixedly secured to the straps 87 and is preferably formed of sheet metal. The bar has an upwardly extending part provided with the transverse flange 90 for supporting the cover 88. The bar also has a depending part provided with the transverse flange 91 terminating in the upwardly extending flange 92, which is engageable in the notch 93 of the hanger bracket 94.

Figure 22 discloses another modification in which the bar 95 is secured to the horizontally extending straps 96 and has the transverse flange 97 above these straps for supporting the stool 98. The bar has a portion depending from the straps 96 and formed with the struck-out upper and lower tongues 99 and 100, respectively. The upper tongue engages the depending flange 101 of the radiator cover 102 and supports the latter and the lower tongue engages the notch 103 of the hanger bracket 104. The lower edge of the bar is formed with the transverse flange 105 for engaging the inside wall beyond the plaster and serves as a guide for this plaster.

What I claim as my invention is:

1. In a support for radiators and the like, a supporting member having a horizontally extending portion adapted to be permanently mounted in a building wall, a vertically extending strap portion at the inside of said wall, a bracket extending transversely of the wall, and a member extending transversely of said bracket and mounted on said vertically extending portion and upon which said bracket is sleeved.

2. In a support for radiators and the like, a supporting member having a horizontally extending portion adapted to be permanently mounted in a building wall, a second relatively narrow member carried by said first-mentioned member at the inside of the wall, a bar at the inside of the wall mounted upon said second member, and a bracket extending transversely inwardly from the wall and sleeved upon said bar.

3. A support for radiators and the like and adapted for use with a wall having a window opening and a stool at the lower end thereof and extending inwardly beyond the wall, comprising a supporting member having a horizontally extending portion adapted to be permanently mounted in said wall, a portion secured to said first mentioned portion and having an upwardly extending part for supporting said stool thereabove and a depending part at the inside of said wall, and a bracket supported upon said last mentioned part.

4. A support for radiators and the like and adapted for use with a wall having a window opening, a stool at the lower end thereof and a radiator cover extending inwardly beyond the wall, comprising a supporting member having a horizontally extending portion beneath said stool and adapted to be permanently secured in said wall, a member secured to said portion having an upwardly extending part provided with means for supporting said cover thereabove and having a part at the inside of said wall, and a radiator supporting bracket mounted upon said part.

5. A support for radiators and the like, adapted for use with a wall having plaster at the inside thereof and a window opening, comprising a substantially channel shaped supporting member having one edge portion adapted to be built into said wall and the other edge portion arranged at the inside of said wall, a plate depending from said last mentioned edge portion and provided with a transverse flange engaging said wall, and a bracket upon and extending transversely of said plate, said plate forming a guide for said plaster and fashioned to support a stool above said channel shaped supporting member.

6. A support for radiators and the like and adapted for use with a wall having a window opening, a substantially U-shaped supporting member having the base portion mounted on and having one leg portion projecting into said wall and the other leg portion engaging the inner side of said wall, a member secured to said last mentioned leg portion and having a portion depending therefrom at the inside of said wall fashioned with a transversely extending flange terminating in an upwardly extending portion, and a bracket extending transversely inwardly from the wall and adjustably sleeved upon said flange of the aforesaid member.

CLYDE W. KELLY.