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RADIATOR SHIELD

Filed Jan. 5, 1927

2 Sheets-Sheet 1

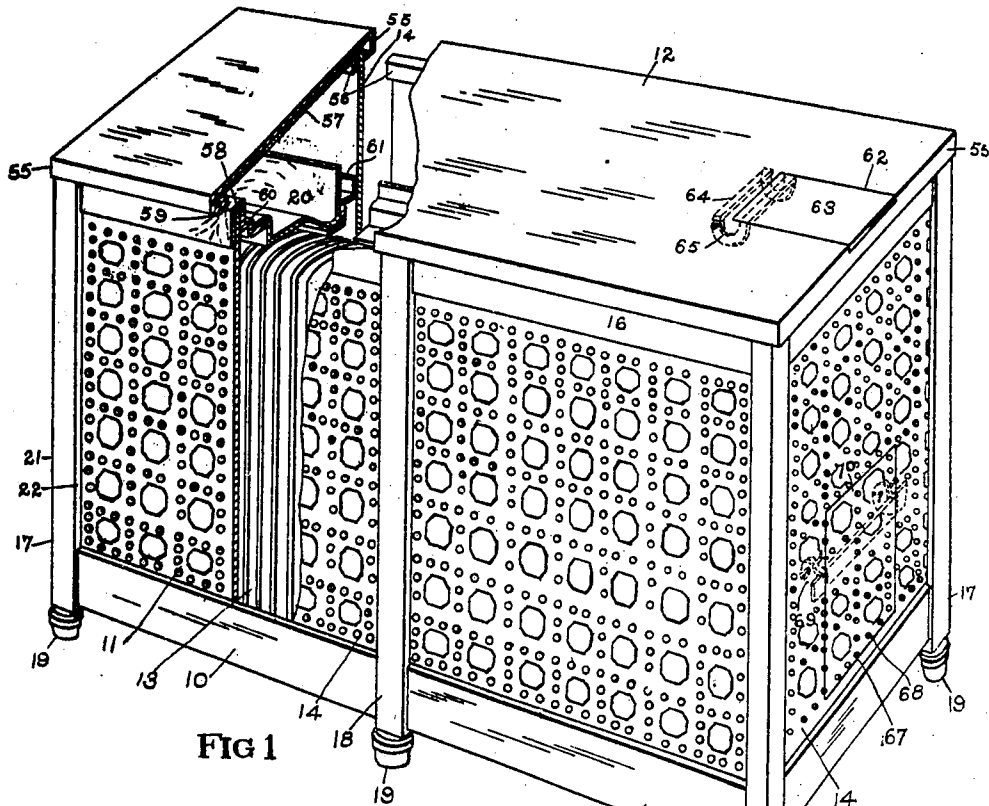


FIG 1

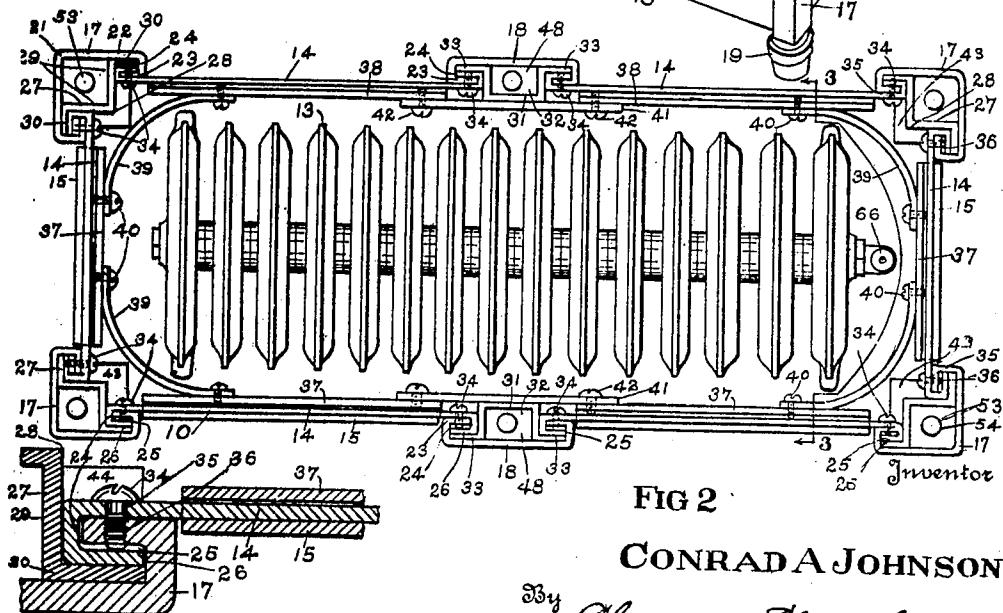


FIG 2

FIG 11.

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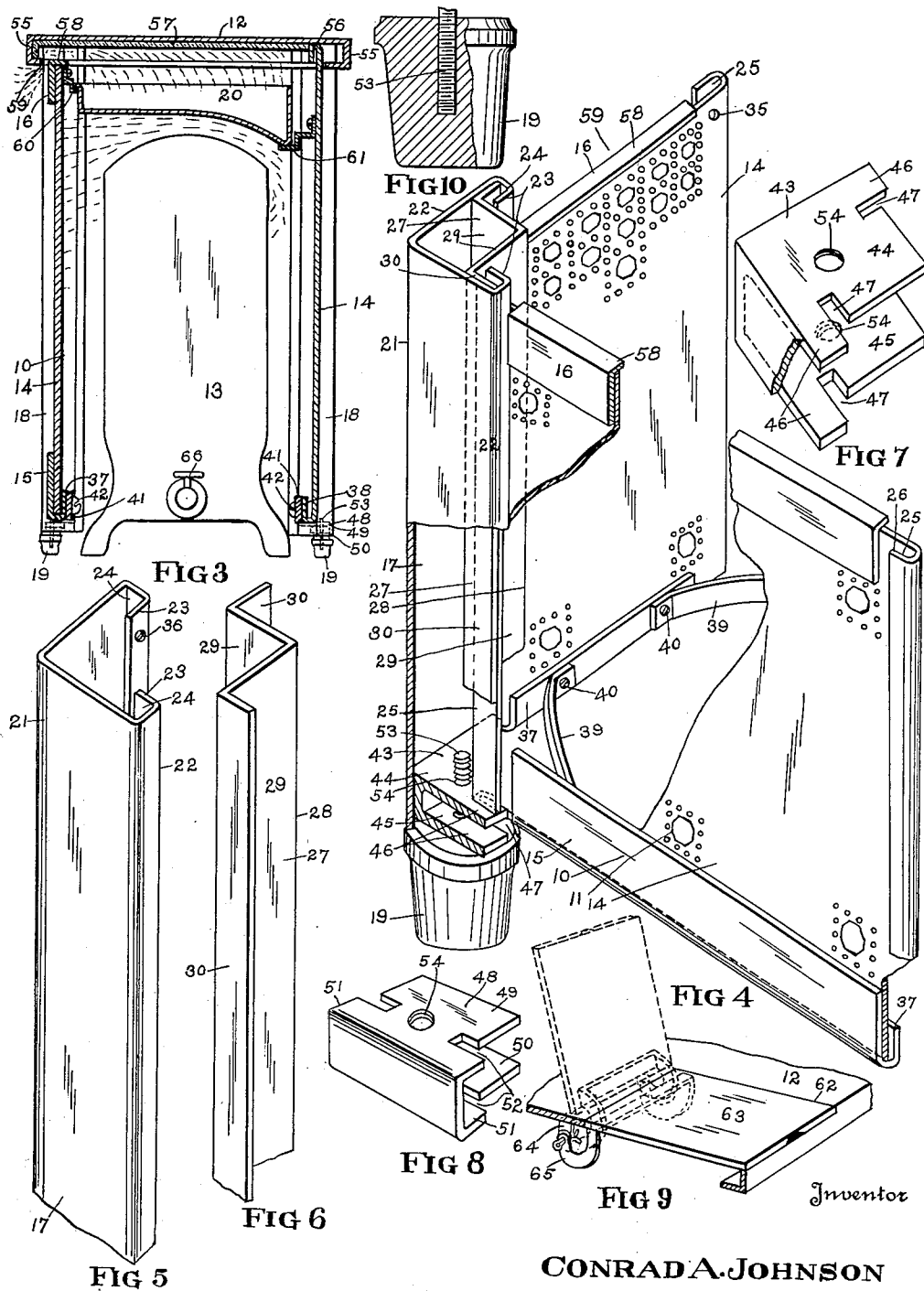
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RADIATOR SHIELD

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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RADIATOR SHIELD.

Application filed January 5, 1927. Serial No. 159,212.

This invention relates to an improvement in a radiator shield, and more particularly in a shield of the knockdown type adapted to enclose a radiator without impeding the radiation of heat therefrom.

The primary object of this invention is to provide a radiator shield which includes panels and pillars so formed that they can be quickly and easily interlocked to erect the body of the shield.

A further object of this invention is to provide in the radiator shield a water pan, the bottom of which is of such conformation that it will deflect the heat waves rising from the back of the radiator coils toward the front of the shield.

Another object of this invention is to provide a corner block fixed at the bottom of each pillar, which functions as a support for the panels and also for the foot of the shield, which is adjustably secured thereto.

Other objects of this invention reside in the details of construction thereof, set forth in the following description and in the drawings which form a part thereof, and in which

Fig. 1 is a perspective view illustrating one embodiment of this invention, certain parts being broken away;

Fig. 2 is a top plan view of the embodiment shown in Figure 1, the top of the shield being removed;

Fig. 3 is a sectional view taken along the line 3—3 of Figure 2, the cover being in place on the body of the shield;

Fig. 4 is a perspective view on an enlarged scale of one corner of the radiator shield, portions being broken away;

Fig. 5 is a perspective view of the corner pillar or post;

Fig. 6 is a perspective view of the filler, adapted to be used in connection with the post shown in Figure 5;

Fig. 7 is a perspective view showing one of the blocks adapted to be used with a corner pillar;

Fig. 8 is a similar view showing one of the blocks adapted to be used with a center pillar;

Fig. 9 is a view showing the door in the top of the shield, both in the open and closed position;

Fig. 10 is an elevation partly in section of one of the feet for the shield; and

Fig. 11 is an enlarged sectional view showing the interlocking connection of pillar and panel at one corner of the shield.

Referring to the drawings, the reference numeral 10 is used to designate a radiator shield embodying this invention which comprises a body portion 11 and a top 12. As pointed out above, this device is intended to be used to enclose the radiators in a building, one such radiator 13, being shown in Figures 1, 2 and 3.

The body portion 11 is of knockdown construction, so that it can be shipped flat and assembled at the point of installation. The body 11 comprises a plurality of panels 14, preferably made of sheet metal.

The front and side panels are preferably provided with perforations therein, through which the heat from the radiator can escape into the room. In accordance with the practice in the trade these panels are generally referred to as "cane" panels, because they imitate that material. The back panels are impermeate.

Rigidly secured to each front and side panel 14 is a strip 15, which will hereinafter be referred to as the base, and a strip 16, which will hereinafter be referred to as the apron. The panels 14 are connected at their points of meeting by means of pillars 17, 18, the pillars 17 being at the corners of the shield and the pillar 18 being at the centers of the sides. It will be understood, of course, that the pillars 18 are only employed when a shield of considerable length having more than one front panel is necessitated by a long radiator, and that, with a short radiator, the corner pillars 17 alone will be sufficient. The shield is supported upon feet 19, which are adjustably secured in the pillars 17, 18, as will be described later.

Within the radiator shield and suitably supported by the front and back panels may be provided a water pan 20. As shown particularly in Figure 3, the base of the pan 20 is curved so that it extends at the back down into the space between the radiator and the back panels of the shield, and thus functions to deflect the heat rising from the back of the

radiator and causes it to enter the room through the front panels.

Each corner pillar 17 is bent longitudinally along a center line 21 to form sections 22 at right angles to each other, and the side edges of the sections 22 terminate in flanges 23, which are parallel to and spaced from the sections 22 to provide vertically extending channels 24. The pillars 18 are not bent at right angles along a center line, but like the pillars 17, have at each side edge a longitudinal flange 23 and a channel 24 defined by said flange.

The panels 14 are also provided at each side edge with longitudinally extending channels 25, the outer limits of which are defined by flanges 26. The bases 15 and aprons 16 terminate short of these channels 25, so that they will not in any way interfere with the assembling of the parts.

The panels 14 are joined to the pillars 17, 18 by the interlocking of the flanges and channels just mentioned. The bases 15 and aprons 16 which are secured to the panels 14 make it necessary to associate the panels with the pillars by a longitudinal sliding movement and prevent their separation except by a reverse movement. Figure 2 shows the way in which the flanges 26 of the panels 14 enter the channels 24 of the pillars 17 and 18, and the flanges 23 of the pillars enter the channels 25 of the panels.

The corner pillars 17 are preferably reinforced by a filler 27, which is folded along a longitudinal center line 28 to provide sides 29 at right angles to each other. Each side 29 terminates in a flange 30, which extends at right angles to the side. The fillers are slid into engagement with the pillars 17, the flanges 30 entering the channels 24 between the flanges 26 of the panels and the pillars. The center pillars 18 are also provided with fillers 31, which have a central channel 32 and flanges 33 at each edge of the channel 32, and projecting outwardly therefrom. The fillers 31 are slid into the pillars 18, the flanges 33 entering the channels 24 of the pillars 18 between the flanges 26 of the panels and the pillars.

When the parts are assembled as shown in Figure 2, the panels may be secured to the pillars at the top of the shield by means of screws 34, which pass freely through holes 35 in the panels 14, and have a threaded engagement with holes 36 in the flanges 23 of the pillars. The screws 34 are made sufficiently long, so that they will pass through the holes 36 and bear against the flanges 26 of the panels, thus forcing them into engagement with the flanges 30 and 33 of the fillers, and at the same time clamping the body of the panel against the flanges 23. (See Figure 11.)

The lower edges of the bases 15 are provided with flanges 37, which when the bases are secured to the panels lie against the inner faces

thereof. The back panels 14 terminate at the bottom in flanges 38, which are narrower than the body of the panels, and which lie parallel to the rear faces thereof. The corners of the shield are braced by curved straps 39, which are secured by screws 40 to the flanges 37 of the bases 15 and to the flanges 38 of the rear panels. As a further support at the center pillars 18, straight straps 41 are provided, which are secured in place by screws 42. At the front the straps 41 are fastened to the flanges 37 of the bases 15, while at the back they are secured to the flanges 38 of the back panels. Thus it will be noted that the various parts of the body portion are interlocked and are rigidly fixed together by means of removable screws.

At the bases of the pillars 17, 18 are provided blocks to which the feet 19 are attached. The blocks 43 for the corner pieces are shown particularly in Figure 7, and comprise top and bottom plates 44, 45, spaced from each other and connected thereto along the outer edges. Each of these plates is provided with tongues 46 at two opposite corners, partly separated from the main body of the plates by a slot 47. The blocks 43 are suitably secured to the inner faces of the pillars 17, preferably by welding the outer faces thereto, the flanges 23 of the pillars entering the slots 47 of the supports, while the tongues 46 enter the channels 24. The flanges 30 of the fillers and the flanges 26 of the panels rest upon the upper plates 44, as shown in Figure 4, so that the blocks act to limit the downward movement of the fillers and panels with reference to the pillars, and supplement the function of the screws 40.

The blocks 48 used with the center pillars 18 are channeled, as shown in Figure 8, the upper and lower plates 49 and 50 being each provided at the sides with tongues 51 and slots 52, adjacent such tongues. The blocks are secured to the lower ends of the pillars 18 by welding or other suitable means, the tongues 51 entering the channels 24 in the pillars while the slots 52 receive the flanges 23. The panels 14, with their flanges 23 and the fillers 31, rest on the plates 49, and thus check the downward movement of the panels and fillers.

The feet 19 may be, as shown in Figure 10, solid and provided with threaded pins 53 which engage tapped holes 54 formed in the upper and lower plates of the blocks 43, 48. Thus the feet 19 can be detached when the shield is in shipment, and replaced when installed, being adjusted to the height required.

The top 12 of the shield has flanges 55, which extend downwardly and inwardly along each edge thereof, and rests upon the upper ends of the pillars 17, 18. The rear panels 14 are made longer than the front and side panels, and terminate in a flanged upper edge 56, which is preferably level with the

top of the pillars 17, 18, and which, therefore, closes the back of the shield. The top 12 may be lined with asbestos 57, if desired to protect it from heat. The aprons 16 are
 5 formed at their upper edges with right angle flanges 58, which rest upon the upper edges of the panel 14. As pointed out above, the panels are lower than the pillars and the flanges 58 finish the openings 59 between the
 10 flanges 55 of the top plate 12, and the aprons 16 at the front and sides of the shield.

The water pan 20 is preferably supported upon a series of brackets 60 secured to the inner faces of the front panels, and 61 secured
 15 to the inner faces of the back panels. There are preferably a plurality of individual brackets 60 spaced from each other. The brackets 61, however, preferably extend continuously along the back panels between the
 20 pillars 17 and 18.

The brackets 61 thus block the heat from rising to the back of the shield and compel it to follow the curve of the base of the pan 20 and pass to the front of the shield. Any
 25 heat rising past the brackets 61 will be prevented by the flange 56 from escaping at the rear of the top 12.

The top 12 may be provided with an opening 62 in order to permit access to the pan 20 for filling or for inspection. The opening 62 is normally closed by a door 63 supported upon concealed hinges 64, 65, fixed to the under face of the door and the under face of the top 12 adjacent the opening 62. The arms 65
 35 of the hinges are preferably curved so that when tilted the door 63 will entirely uncover the opening 62 and the arms will strike the edge of the opening and support the open door. In the end panel 14 of the shield, adjacent the control valve 66 of the radiator 13,
 40 is provided an opening 67, normally closed by a door 68. This door like the door 63 is supported upon concealed hinges 69. In this case, however, the hinges are fixed, not at the edge of the door, but at a point below the
 45 edge so that pressure upon the upper portion 70 of the door will cause it to open and allow access to the valve 66.

The embodiment of this invention shown and described is adapted to be used with a long radiator, but it will be understood that other embodiments can be made without departing from the spirit and scope of the invention as set forth in the following claims.

55 Having thus set forth my invention, what I claim as new and for which I desire protection by Letters Patent is:

1. In a radiator shield a pillar having an inturned flange at each side edge, which flange
 60 defines with the body of the pillar a longitudinally extending channel, a block within said pillar below said flanges, and panels terminating at their side edges in flanges which form with said panels longitudinally
 65 extending channels, said pillar flanges en-

tering said panel channels and said panel flanges entering said pillar channels to interlock said panels with said pillar said panel flanges resting upon said block.

2. In a radiator shield a pillar having an
 70 inturned flange at each side edge, which flange defines with the body of the pillar a longitudinally extending channel, a block within said pillar below said flanges, panels terminating at their side edges in flanges which
 75 form with said panels longitudinally extending channels, said pillar flanges entering said panel channels and said panel flanges entering said pillar channels to interlock said
 80 panels with said pillar said panel flanges resting upon said block, and a filler member having a flange at each edge which flanges enter the channels of said pillar in contact with the flanges of said panel, said filler member resting upon said block.

3. In a radiator shield a pillar having an
 85 inturned flange at each side edge, which flange defines with the body of the pillar a longitudinally extending channel, a block within said pillar below said flanges, panels terminating at their side edges in flanges which
 90 form with said panels longitudinally extending channels, said pillar flanges entering said panel channels and said panel flanges entering said pillar channels to interlock said
 95 panels with said pillar said panel flanges resting upon said block, and strips secured to said panels and terminating short of said panel flanges the ends of which strips will
 100 contact with the edges of said pillar and prevent any relative lateral movement of said panels and pillar sufficient to disengage said panel and pillar flanges.

4. In a radiator shield a pillar having an
 105 inturned flange at each side edge, which flange defines with the body of the pillar a longitudinally extending channel, a block within said pillar below said flanges, panels terminating at their side edges in flanges which
 110 form with said panels longitudinally extending channels, said pillar flanges entering said panel channels and said panel flanges entering said pillar channels to interlock said
 115 panels with said pillar said panel flanges resting upon said block, a filler member having a flange at each edge which flanges enter the channels of said pillar in contact with the
 120 flanges of said panel, said filler member resting upon said block, and strips secured to said panels and terminating short of said panel flanges the ends of which strips will contact with the edges of said pillar and prevent any relative lateral movement of said panels and pillar sufficient to disengage said panel and
 125 pillar flanges.

5. In a radiator shield a pillar having an
 130 inturned flange at each side edge, which flange defines with the body of the pillar a longitudinally extending channel, a block within said pillar below said flanges, panels termi-

nating at their side edges in flanges which form with said panels longitudinally extending channels, said pillar flanges entering said panel channels and said panel flanges entering said pillar channels to interlock said panels with said pillar said panel flanges resting upon said block, a filler member having a flange at each edge which flanges enter the channels of said pillar in contact with the flanges of said panel, said filler member resting upon said block and screws passing through said panels and said pillar flanges bearing upon said panel flanges and clamping said panel flanges and said filler flanges against said pillar.

In testimony whereof I have affixed my signature.

CONRAD A. JOHNSON.