

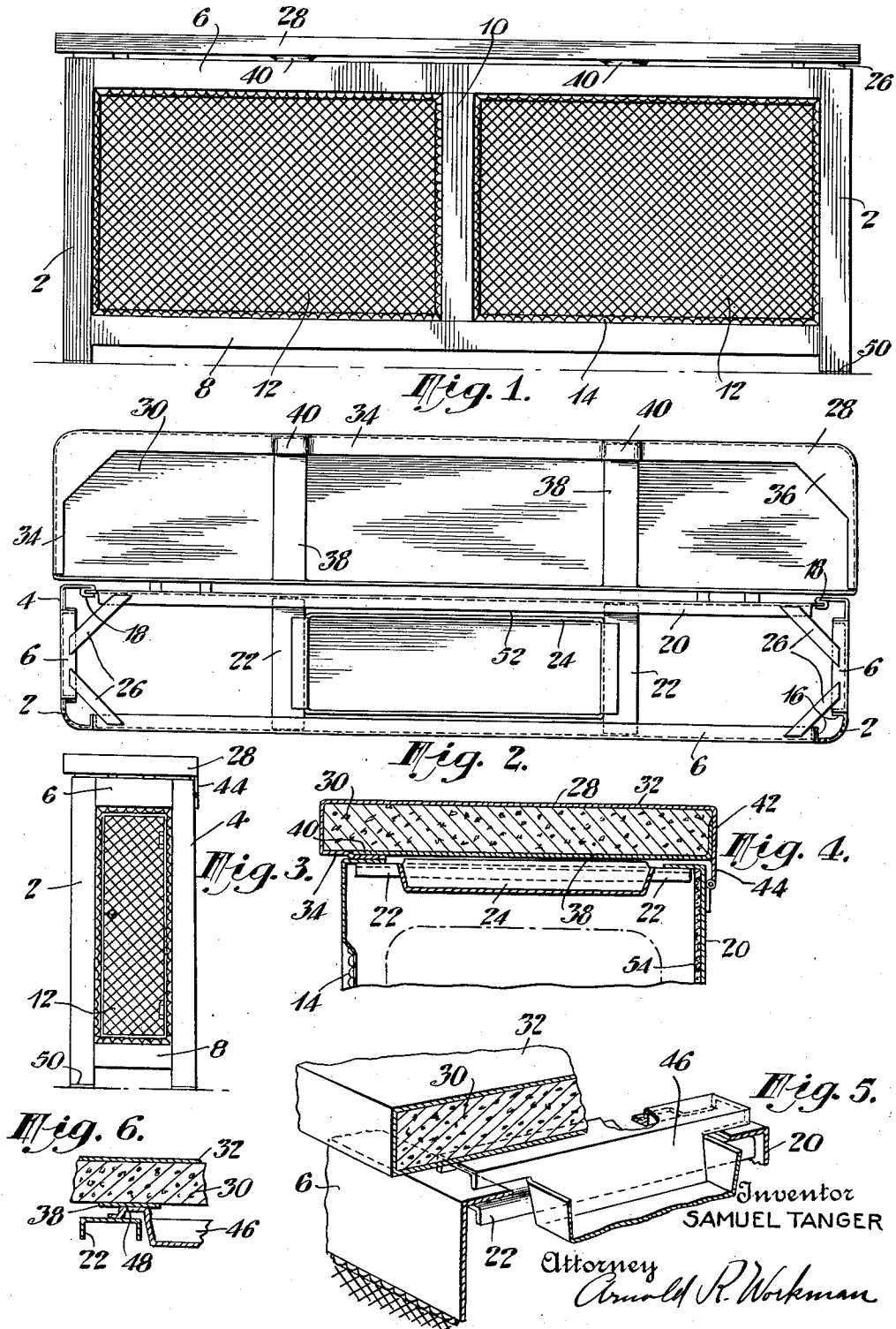
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RADIATOR INCLOSURE

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RADIATOR INCLOSURE

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This invention relates to improvements in radiator inclosures for covering steam, hot water or other types of radiators.

An important object of the invention is the provision of a radiator inclosure of sheet metal which will simulate the woodwork finishing of the house in which they are used.

A further object is to provide a radiator inclosure which may be quickly and economically constructed.

A still further object of the invention is to provide a radiator enclosure having a solid, rigid cover of cork board at least partially encased in sheet metal, and which cover is adapted to prevent conduction of heat from the top of the radiator.

A still further object is the provision of a radiator inclosure comprising elements soldered or welded together giving the appearance and strength of a one piece metal construction.

With these and other objects in view the invention will be described in detail in connection with the accompanying drawings in which:

Fig. 1 is a diagrammatic front elevational view of the finished radiator inclosure showing the spacing between the cover and the main body of the inclosure.

Fig. 2 is a diagrammatic view looking down on the enclosure with the cover swung back in open position.

Fig. 3 is an end view of the inclosure shown in Fig. 1 in which the panel end door is shown.

Fig. 4 is an enlarged diagrammatic vertical sectional view of a portion of the improved radiator inclosure shown in Figs. 1 and 3.

Fig. 5 is a perspective view partly in broken vertical section showing a modified construction of the water pan and cover support.

Fig. 6 is a broken sectional view of the modified cover support and pan combination shown in Fig. 5.

In accordance with the features of the invention the improved radiator inclosure as shown in Figs. 1, 2 and 3 comprises rounded, sheet metal front corner members

or posts 2 and square rear corner posts 4, connected together by upper and lower horizontal frame pieces 6 and 8. The front may be panelled by one or more dividing members 10 connected to and between front pieces 6 and 8. The lower members 8 are preferably raised slightly from the floor to permit passage of cool air into the radiator. As shown in Figs. 1 and 3, panels of artistic metal grillework or screen 12 are provided in the front and ends of the inclosure, the panel in the end shown being hinged and used as a door for operation of the radiator valve. Each panel is inset and bordered by an artistic metal "quarter" moulding 14 as shown more in detail in Fig. 4.

In constructing the frame of the inclosure sheet steel (preferably), brass, copper, aluminum or other suitable sheet metal is used. Sheet steel of about 20 gauge has been found very satisfactory. The front corners 2 are formed by bending or pressing a flat piece of steel into an arc of about a quarter circle with the edges bent radially in as at 16, so as to be soldered readily to similar bent ends on the pieces 6 and 8. One side of the rear corner members 4 is bent in the same way, in fact the edges of most of the frame members are turned in to facilitate soldering and to give added strength.

The rear corner members 4 have their edges facing each other bent in the form of an S as at 18, which forms a groove for the reception of a back panel 20 which is preferably a solid piece of sheet metal reaching nearly to the floor, and bent over at the top as shown in Fig. 4. The sheet 20 is soldered in place in the grooves in the edges of corners 4. In order to add strength and rigidity to the inclosure and to provide a support for a water pan spaced cross braces 22 of inverted pressed channel are soldered in under the turned upper edges of the sheet 20 and the front frame member 6. A water pan 24 provided with end flanges or lips is supported by and between the strips 22.

Each of the corners of the inclosure are provided with a cross-corner brace 26 soldered on top of the main frame to add to the rigidity of the frame and at the same time act as

spacing members to keep the cover raised above the upper edge of the frame. The effect of these spacer-braces is shown in Figs. 1 and 3. Similar corner braces are used in the lower part of the frame directly below the braces 26, connecting the end piece 8 with the front piece 8 and with the back plate 20. The front braces 26 directly across the rounded corners 2 give a very strong rigid corner construction.

The enclosure is provided with a cover 28 which is hinged to the back plate 20 and spaced above the main frame as indicated above. The cover projects over the edge of the frame at the ends and in front so that the spacing between the cover and frame is scarcely visible. The spacing is not usually more than one fourth inch.

The cover 28, which forms one of the important features of the invention, comprises a solid piece of cork board (or cork composition board) 30, having its top and edges covered with sheet metal 32. The sheet metal 32 also extends or laps over on the under side of the front and end edges of the cork as at 34, shown in Figs. 2 and 4. The under side of the front corners of the cover are provided with a broadened metal web as at 36, in order to more effectively hold the metal covering to the cork and to serve as a rest on the front corner braces 26. The cover 28 is also preferably provided with one or more sheet metal brace strips 38, soldered at one end in front under the metal edge 34 which is rounded over the strip 38 as at 40 and soldered at the other end, around the rear edge of the cork, to the metal extending down the rear edge of the cover as at 42 (see Fig. 4). The sheet metal at the rear edge of the cover preferably extends straight down for about one inch below the strip 38 as shown at 44 (Figs. 3 and 4) so as to direct the hot air from the radiator toward the front of the inclosure. The cover is hinged from the piece 44 onto the back piece 20. In some cases the cover is hinged to the piece 20 before the latter is secured in the grooves in the rear posts.

The front end of the brace strips 38 serve as spacing means to support the mid-portions of the front of the cover while the hinges help support the cover in the rear.

The modification shown in Figs. 5 and 6 comprises a combined water pan and cover spacing means 46. The supporting lip for the pan is crimped into a substantially Z shaped extension (in section) 48 which rests on cross brace 22, and is sufficiently high to give the proper spacing and support for the cover 28. It will be noted that the ends of the extension 48 are cut away so as to rest on the upper edge of the members 6 and 20, at the same time that it rests on the brace 22. The cork cover may be completely covered with sheet metal as shown in Fig. 5.

The top edges of the corner members 2 and 4 are preferably turned over to present a smooth surface (Fig. 2). Likewise the bottom of the corners or legs may be turned to prevent scratching of floors, but a piece of sheet lead 50 soldered to the bottom of the corner, onto which is glued a piece of felt makes a very satisfactory corner base.

As shown in Fig. 2 the water pan may be placed toward the front so that the hot air from the radiator will be forced through the opening 52 and caused to sweep over the surface of the water in the pan and thereby increase the evaporation.

The front corner members may be square or stamped into any other desired artistic design, and if desired the cover 28 and the back 20 may be constructed as a unit and used with suitable well-known braces and attachments on radiators without the complete enclosure.

The back plate 20 may be lined with cork 54 ($\frac{1}{2}$ inch) as shown in Fig. 4 to prevent heat from the radiator injuring the wall of the room.

The radiator may be assembled by welding, such as spot or resistance welding or other similar process but a soldered construction has been found to be thoroughly satisfactory in every respect, in fact the finished inclosure after being lacquered, varnished or painted, gives every appearance of a unitary construction, resembling wooden furniture. The under surface of the cover where the cork is exposed is preferably coated with waterproofing or lacquer.

A radiator inclosure constructed as described above, when tested under a concentrated moving weight of over 200 pounds showed no signs of weakness. Even the cover retained its straight rigid position. Furthermore the cover does not have a metallic ring so apparent with present metal covers for inclosures. In the usual construction cork of one inch thickness is used and a cover of this thickness acts as a non-conductor of heat to such an extent that the top of the cover is scarcely above the temperature of the room.

Having thus described the invention, what is claimed as new is:

1. A substantially unitary sheet metal radiator inclosure of rigid construction, comprising a frame including rounded front corner members and rear corner members, said rear corner members being provided with a groove for the reception of a back plate, upper and lower cross members connecting front and rear corner members and the front corner members, braces across each rounded corner and raised above the normal top level of the frame, a solid metal back secured in the grooves of said rear corner members, and a sheet metal cover for said frame including a

body of cork insulating material of substantial thickness secured therein.

2. A radiator inclosure of rigid construction and unitary appearance, comprising a
5 soldered frame of corner post members and upper and lower cross members between the posts to form the ends and front of the frame, a solid sheet metal back secured to the rear posts forming the back of the inclosure, a
10 panel of metal grille work soldered in the front of the frame, and a relatively thin sheet metal cover for said frame, said cover including an under body portion of relatively thick cork insulating material firmly secured
15 in and adapted to stiffen the sheet metal cover.

3. In a radiator inclosure, a casing, and cover therefor comprising a composition cork board of substantial thickness and of the
20 size for the cover, the top and edges of which are covered with relatively thin sheet metal which in turn is bent back a short distance on the under side of the front and ends of the cork board, and a sheet metal flange along
25 the back edge of the cover extending down below the under surface of the cover and movably attached to the casing and adapted to direct hot air from a radiator in the inclosure toward the front of the inclosure.

30 4. A radiator inclosure, comprising a rigid frame made up of sheet metal elements attached together, an imperforate sheet metal back secured in said frame, a front panel of metal grille work secured in said frame, and
35 a thin sheet metal cover for said frame, said cover including an under body of rigid cork insulating material of substantial thickness adapted to stiffen said cover.

5. A radiator inclosure, comprising a rigid
40 frame made up of sheet metal elements attached together, said frame including a front panel of metal grille work, a relatively thick cover for said frame spaced above the front of the frame, said cover including a sheet metal
45 coating and an underbody of rigid insulating material of substantial thickness adapted to stiffen said cover.

6. A radiator shield, comprising a back element adapted to extend down the back of the
50 radiator to be covered to thereby direct the air heated by said radiator toward the front, and a relatively thick rigid cover for said shield of relatively thin sheet metal and an underbody portion of composition insulation
55 board of substantial thickness, the front end edges of which are within and covered by said sheet metal, said board being adapted to stiffen said cover.

In testimony whereof I affix my signature.

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