March 10, 1936. S. HAMMER 2,033,767

CASING

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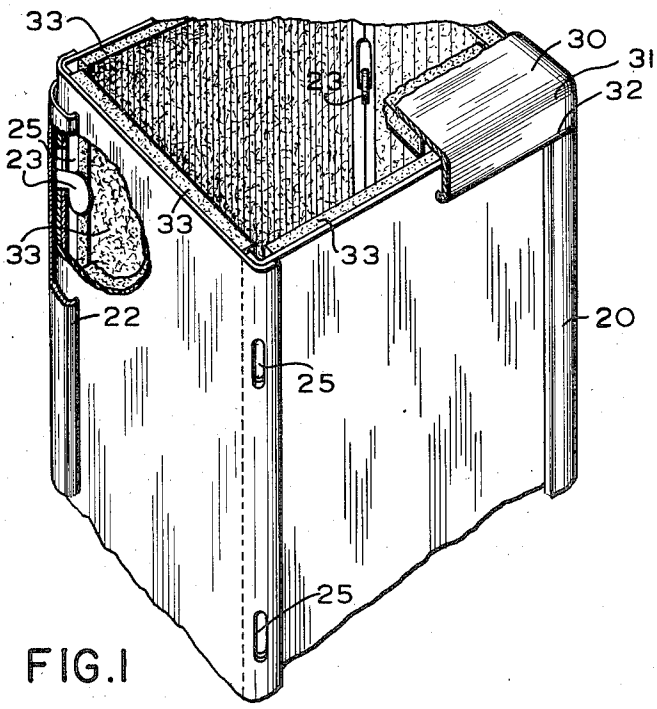


FIG. 1

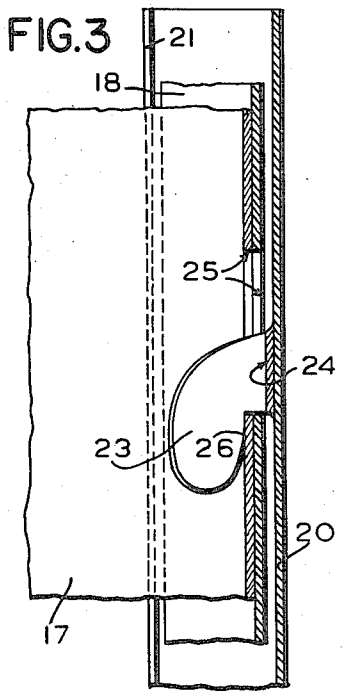


FIG. 3

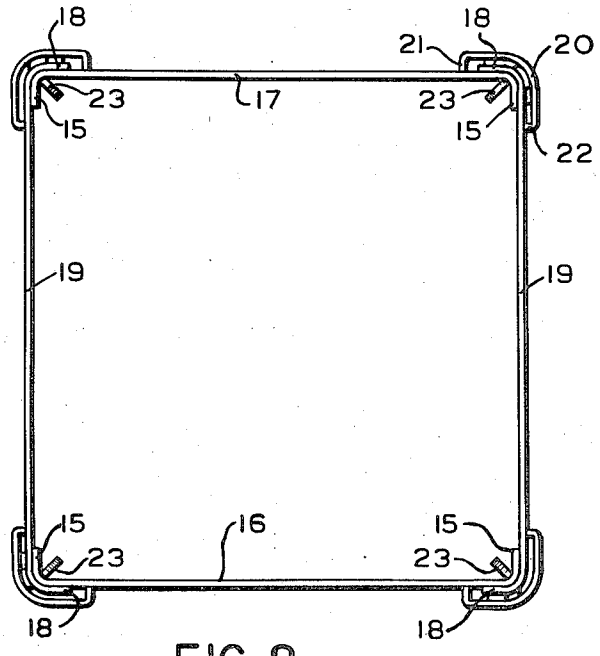


FIG. 2

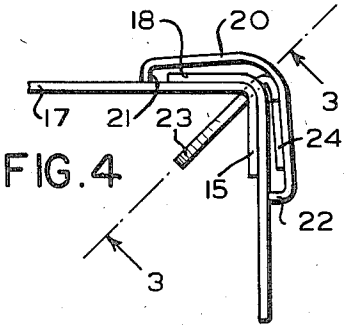


FIG. 4

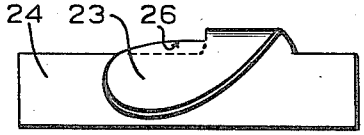


FIG. 5

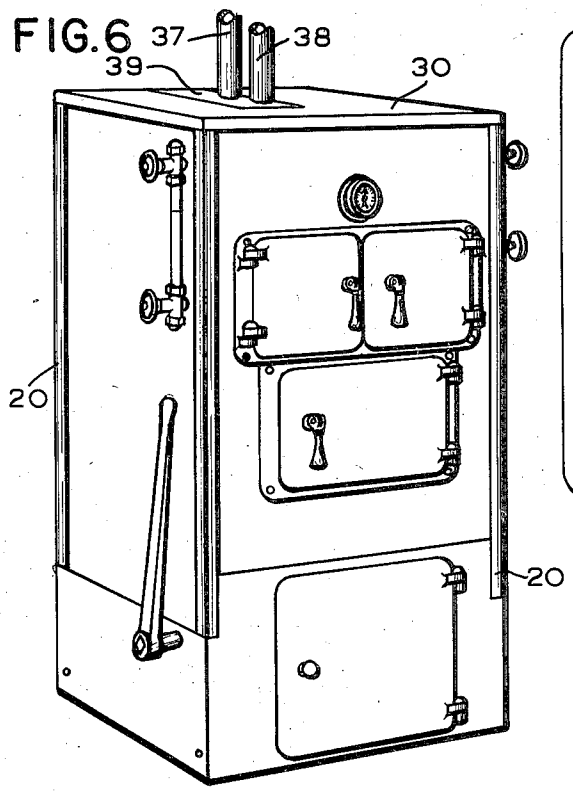
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CASING

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FIG. 6



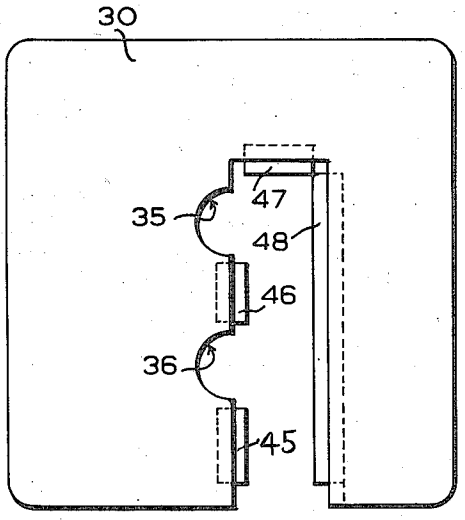


FIG. 8

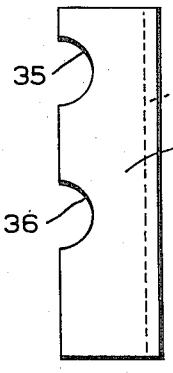


FIG. 9

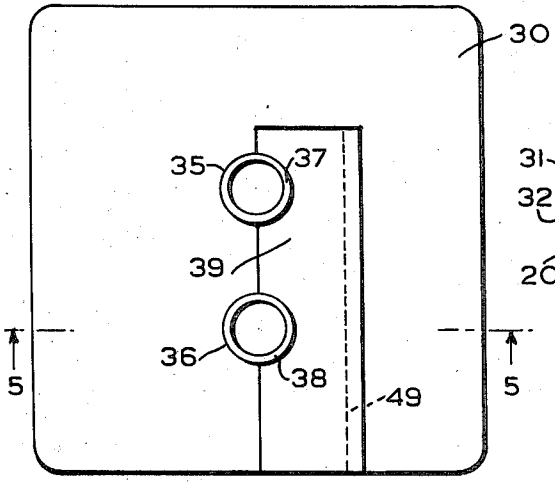
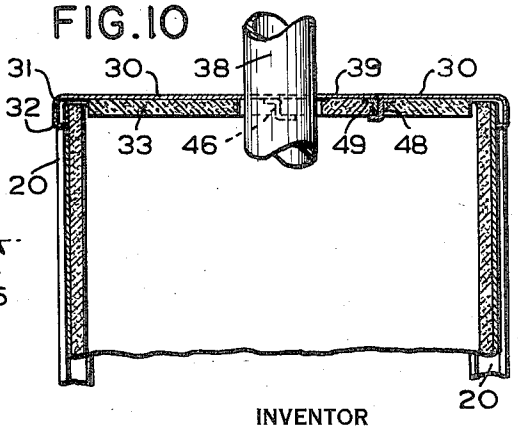


FIG. 7

FIG. 10



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UNITED STATES PATENT OFFICE

2,033,767

CASING

Samuel Hammer, Brooklyn, N. Y., assignor to United Metal Box Co., Inc., Brooklyn, N. Y., a corporation of New York

Application October 23, 1934, Serial No. 749,533

5 Claims. (Cl. 122—494)

This invention relates to the manner of making casings for boilers, radiators and the like. An important object of the invention is to construct a sheet metal jacket or casing for a boiler or radiator comprising wall units, corner locking strips and a cover or top, all of which may be assembled without the use of rivets, bolts or screws, and which may be both assembled and taken apart without the use of tools.

Another important object of my invention is to construct a sheet metal casing of the type described having the general contour of a piece of furniture and which may be finished to resemble a piece of cabinet work made of wood, particularly when the exposed surfaces of the material are grained or finished to represent wood.

At the present time it is common practice, with the advent of oil burning heating plants for residences to design boilers in such a way that the rooms in which they are installed, which heretofore were frequently used for kindling and coal, may now be used either as living quarters or for social purposes. It has also become common practice to decorate or cover the radiators of steam, vapor or hot water heating systems with sheet metal structures so that their irregular shape may be transformed and thereby become useful pieces of furniture.

Another object of my invention therefore is to make radiator casings which may be easily shipped from place to place and conveniently assembled or removed from a radiator.

Other objects and advantages of my invention will become apparent or be specifically referred to in the following description thereof which is written in connection with the accompanying drawings, in which

Figure 1 shows, in perspective, an assembled view of a casing embodying my invention, comprising the wall units and corner locking strips and illustrating the manner in which the same are assembled so that the locking strips are held held in locked position by the casing cover. The wall units of this figure are shown with insulating material on the inside thereof to illustrate a suitable manner of constructing the same for use as a boiler casing.

Figure 2 shows a plan view of the casing shown in Figure 1 when the top is removed, and when the casing is constructed without the use of insulating material.

Figures 3, 4 and 5 show enlarged detail views of the construction of the corner locking strips and the manner in which the same may be assembled on, or removed from, the wall units of the casing.

Figure 6 is a perspective view of a boiler on which my improved casing is assembled.

Figures 7, 8, 9, and 10 illustrate detailed views of the manner in which the top of the casing is constructed when it is desired to assemble the same around pipes leading to and from the boiler.

Referring first to Figures 1 to 5 it will be seen that my casing comprises wall units having flanges bent along the opposite edges thereof and adapted to cooperate with each other to form the corners of the casing. For instance, it will be seen from the exemplary embodiment of my invention shown, that flanges 15 formed at the vertical edges of the front and back walls 16 and 17, respectively, cooperate with flanges 18 formed on the vertical edges of the side walls 19. The wall units when positioned as above described are united at the corners by devices which may be described as corner locking strips 20. Each of the strips 20 are of angular cross-section and comprise inwardly turned edges or flanges 21 and 22 formed respectively at each side thereof and a plurality of locking tongues and hooks 23. The hooks 23 are spaced from one another and secured in any suitable manner in the apex of the angle of the strip so as to extend therefrom as free-standing elements located between the flanges 21 and 22. As here shown by way of example the hooks 23 each form a part of an angular sheet metal stamping 24 which is welded or otherwise secured to one side of the strip. The corner locking strips 20 are secured in position to hold the wall units together by inserting the hooks 23 into slots 25 pierced at the corners of the wall units formed by the flanges 15 and 18 respectively and thereafter being pushed vertically downwardly until the hook 23 engages the corners of the wall units. By means of the camming action of the face 26 of the hooks 23, the wall units are pressed tightly into the angle strips 20 with the flanges 21 and 22 thereof securely held against the outside surface of the units.

A top 30, having a flanged and rolled edge 31 disposed about the periphery thereof, is then placed on the wall units so that the lower edge 32 thereof abuts the ends of the strips 20 and thereby holds them in their downwardly disposed locked position.

The top and wall units shown in Figure 1 are illustrated with insulation linings 33 secured by any suitable adhesive to the inside surfaces thereof. When the casing is to be used on a boiler like that illustrated in Figures 6 to 10 and

to be hereinafter more particularly described, such insulation will be employed to reduce the heat radiation from the boiler. However, such insulation is not used when the casing is employed as a radiator casing because it then becomes important to permit and even facilitate the radiation of heat from the radiator to the surrounding atmosphere. It will be understood that when the casing is used as a radiator casing, sometimes referred to generally as radiator covers, that the wall units may be perforated in any suitable manner or have louvred openings formed therein to facilitate the radiation of heat and circulation of air about the radiator and through the casing, all as will be understood by anyone familiar with the art to which this invention pertains.

Referring now to Figures 6 to 10, I shall describe a novel form of cover comprising a removable section or locking element to be used to facilitate the assembly of the cover about the risers or feed pipes when my casing is installed about a boiler. In such a case, the top 30 is first perforated to form therein openings 35, 36 of the size of the risers or feed pipes 37, 38 through which water or vapor is conducted to and from the boiler. Thereafter a notch or segment 39 having a width greater than that of the pipes, see Figure 9, is stamped out of the top 30. As thus formed the top may then be disposed on the casing, as illustrated, after the pipes are secured in position. Angle irons 45, 46, 47, and 48 are secured to the edges of the opening formed by the removal of the segment 39 to support the segment after the top has been placed in position around the pipes 37 and 38. The segment 39 is then placed in the top as shown in Figure 7. A reinforcing angle iron 49 is secured to one edge of the segment 39. The formation of the angles 45 to 48 is further illustrated in Figure 10, together with the manner in which the top is fitted about the pipe 38. Figure 10 also illustrates the manner in which insulating material 33, of a suitable shape, is secured to the inside surface of the cover 30, and similar material secured to the inside surface of the segment 39.

While I have described what seems now to be the preferred embodiments of this invention, it is conceivable that various modifications in the configuration, composition and disposition of the component elements going to make up the invention as a whole, as well as in the selective combination and application of the respective elements, may occur to those skilled in the art, and no limitation is intended by the phraseology of the foregoing description or illustrations in the accompanying drawings.

What is claimed is:

1. A casing comprising in combination, a plurality of wall units having perforations proximate opposite edges thereof, said units being disposed with a perforation in one unit in registration with a perforation in another unit, and means securing said units together, said means comprising a strip, a hook on said strip engaging the inner surface of the inner wall unit through said perforations and adapted, when moved longitudinally of said units, to clamp the same between said hook and strip.

2. A casing comprising a plurality of wall units having perforations proximate opposite edges thereof, said units being disposed with a perforation in one unit in registration with a perforation in another unit, and means securing said units together, said means comprising a strip, a hook on said strip engaging the inner surface of the inner wall unit through said perforations and adapted, when moved longitudinally of said units, to clamp the same between said hook and strip, in combination with means for holding said strip in clamping position.

3. A casing comprising a plurality of wall units having perforations proximate opposite edges thereof, said units being disposed with a perforation in one unit in registration with a perforation in another unit, and means securing said units together, said means comprising a strip, a hook secured to said strip intermediate the ends thereof engaging the inner surface of the inner wall unit through said perforations and adapted, when moved longitudinally of said units, to clamp the same between said hook and strip, in combination with a cover cooperating with one end of said strip to hold the same in clamping position.

4. A casing comprising a plurality of wall units, a flange on opposite edges of each unit forming an angle, said unit and flanges having a perforation in each angle, and means securing said wall units together when they are angularly disposed with respect to one another and with a perforation in one unit in registration with a perforation in an adjacent unit, said securing means comprising a strip of angular cross-section, a hook secured at the apex of the angle of said strip intermediate the ends thereof engaging the inner surface of the inner wall unit through said perforations and adapted, when moved longitudinally of said units, to clamp the same between said hook and strip.

5. A casing for a boiler having riser and feed pipes secured thereto comprising a plurality of wall units, a flange on opposite edges of each unit forming an angle, said unit and flanges having a perforation in each angle, and means for rigidly securing said wall units together when they are angularly disposed with respect to one another about said boiler with a perforation in one unit in registration with a perforation in an adjacent unit, said securing means comprising a strip of angular cross-section, a hook secured at the apex of the angle of said strip intermediate the ends thereof engaging the inner surface of the inner wall unit through said perforations and adapted, when moved longitudinally of said units, to clamp the same between said hook and strip, in combination with a cover cooperating with one end of said strip to hold the same in clamping position, said cover forming an opening extending from one side thereof to and including the region of the riser and feed pipes of said boiler, and a segment to close said opening when the cover is disposed on said casing about said pipes.

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