July 3, 1962 D. DORFMAN 3,042,157

SECTIONAL HOUSING FOR AIR CONDITIONING

Filed Jan. 16, 1959 2 Sheets-Sheet 1

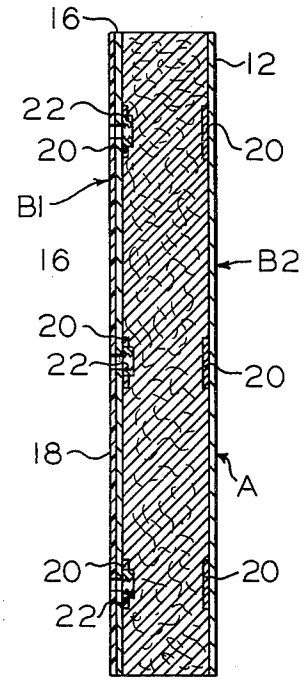


FIG. 2

FIG. 1

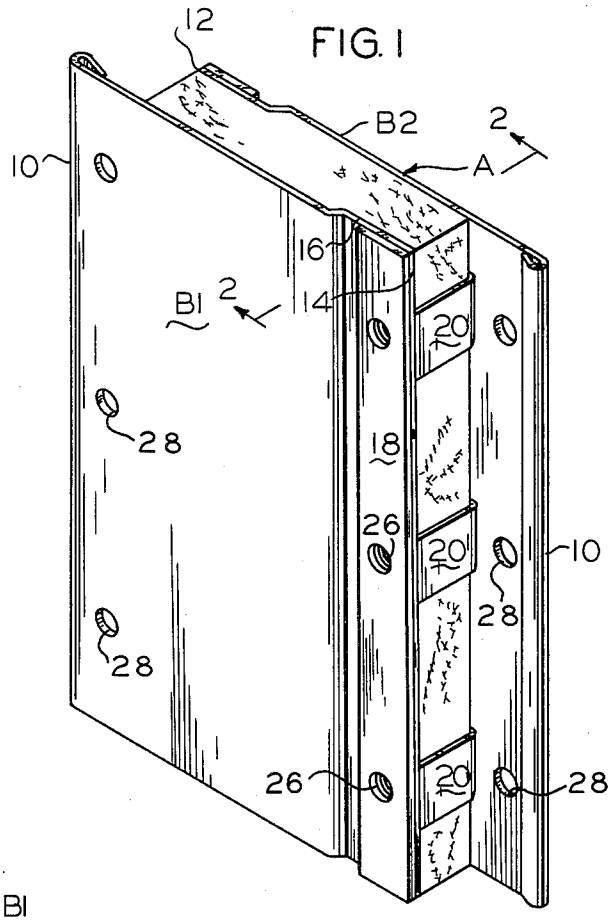
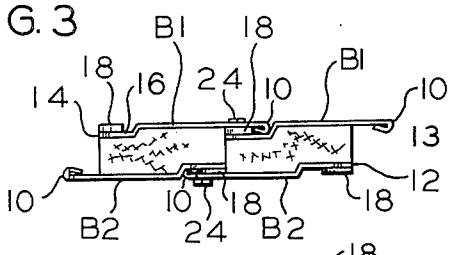


FIG. 3



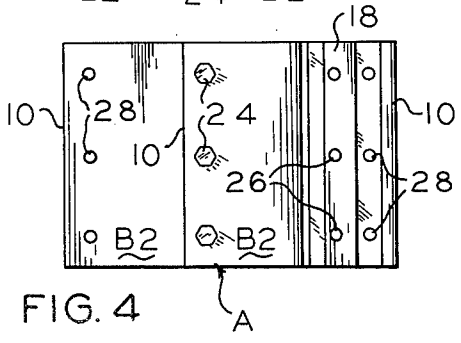


FIG. 4

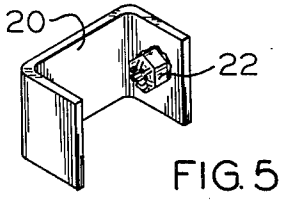


FIG. 5

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SECTIONAL HOUSING FOR AIR CONDITIONING

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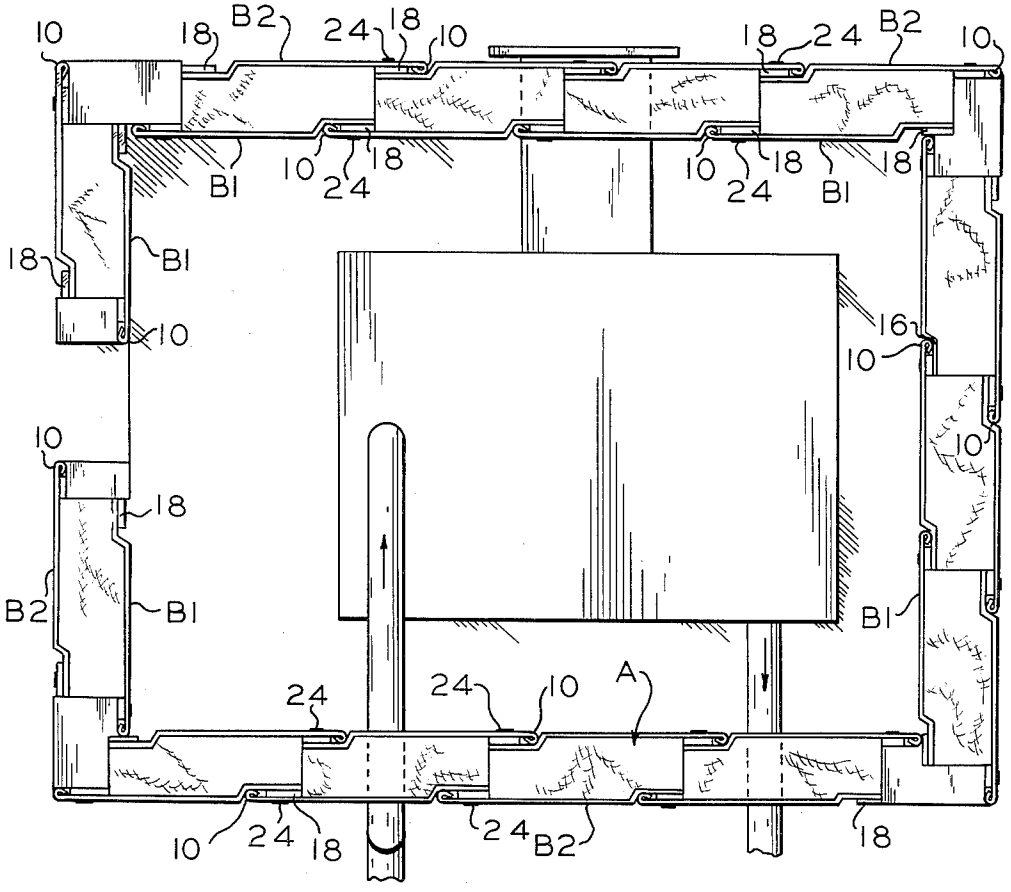


FIG. 6

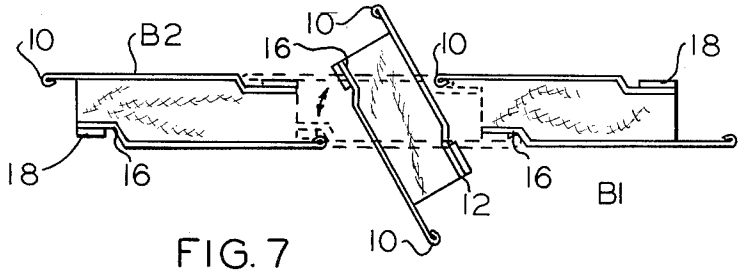


FIG. 7

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SECTIONAL HOUSING FOR AIR CONDITIONING

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3 Claims. (Cl. 189—34)

My invention relates to a sectional housing for encasing an air conditioning unit, and relates particularly to the paneling for forming the walls of the housing.

Heretofore, air conditioning units which have been generally placed on the top of a building such as a penthouse, have been encased within plastic molded panels. The air conditioning housing panels are usually constructed of sections of panels which are bolted or riveted together. When the housing is completed on a penthouse, persons such as mechanics carrying long pipes or wrenches accidentally strike the plastic panelled housing with a heavy blow whereby the panelling is shattered.

To remove the shattered panel is costly, because the construction of the unit invariably requires the dismantling of many parts.

Frequently, something may happen to the panelling such as shattering or breaking and it is necessary to change or alter one panel and the plastic panelling that has been used has invariably been expensive and a tedious task.

In housing air conditioning equipment, it sometimes is desirable to remove all of the moisture from the air and the way this is done is that the air is cooled to a very low temperature and then it is heated. At a low temperature, the moisture is removed and then the air is heated and run through the air conditioner. Therefore, it is apparent that this is an expensive manner of handling this operation, so that the container for the room should be substantially free of having moisture from the outside permeate to the inside where the air is cool. It is also desirable that the B.t.u. interchange between the outside of the housing to the inside be at a minimum.

With my invention I provide a housing for air conditioning equipment which is insulated, which is substantially vaporproof and which does not need special equipment for support. Furthermore, it is imperative that there be a tight seal to prevent the entrance of moisture or heated air from the outside into the inside of the enclosure.

It therefore, is an object of my invention to provide a housing for air conditioning equipment wherein the housing is constructed of panelling wherein each panel comprises spaced metal sheets which have insulation between them. The panels, when bolted or held together panel to panel, must provide a tight seal and must reduce the transfer of heat from one side of the panel to the other side of the panel; and it also must reduce the permeation of moisture from one side of the panelled housing to the other side.

Another object of my invention is to provide a housing which is substantially impervious to the transfer of heat or moisture from one side of the panel to the other side of the panel by virtue of convection.

Another object of my invention is to provide panelling which reduces the transfer of heat or moisture to a minimum amount by virtue of convection and of conduction.

Another object of my invention is to provide a housing for air conditioning equipment of the panelling which may have a single panel removed or inserted without disturbing the remainder of the housing.

Other objects of my invention are to provide an improved device of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, my invention consists in the details of construction and combination of parts, as will be more fully understood from the following description when read in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a panel embodying my invention.

FIG. 2 is a sectional view taken along the line 2—2 of FIG. 1.

FIG. 3 is a top view of a pair of panels bolted together.

FIG. 4 is a front view of the pair of panels shown in FIG. 3.

FIG. 5 is a perspective view of the metal spacer for holding the walls of the panel together.

FIG. 6 is a view of an air conditioning housing wherein the housing is constructed of panels embodying my invention.

FIG. 7 is a view showing the removal of an individual panel.

Referring now in greater detail to the drawings wherein similar reference characters refer to similar parts, I show a panelled housing for air conditioning equipment wherein the wall panelling is made up of individual panels, generally designated as A, which may be of different widths and of different lengths.

The specific details of a panel is as follows: A metal sheet, generally designated as B1, is parallel to a second similar panel, generally designated as B2, but wherein the panels B1 and B2 have their edges 10, 12 off-set with respect to one another. The edge 10 of the panel B1 is overturned to form a bead 13. The other edge 14 has an off-set at 16, and a natural rubber or felt or synthetic rubber strip 18 is laid up on the outside surface 16 whereby the strip serves as a gasket. The strip 18 is adapted to provide a substantially tight seal as shall hereinafter be described. The gasket or rubber strip 18 is located so that the wall 10 of an adjoining panel (see FIG. 3) can fit between an edge of the gasket 18 and the metal sheet B1. The similar panels B1 and B2 are separated from one another by a spacer 20 which is a U-shaped sheet metal strip welded to each of the metal sheets B1 and B2 adjacent the portion of the threaded holder 22 which provides for receiving a holding screw 24. The holding screw is aligned with an opening 26 in the gasket and the metal sheet B1 and the holding screw 24 also passes through an opening 28 in the metal strip.

In operation, if the panel is to be removed after the housing is up, due to rusting or some other cause, the panelling being self-supporting, may have the screw bolts removed and the panel to be removed is tilted with respect to the other panels so that the off-set sections are separated from the adjoining sections and the panel removed. The new panel is reinserted in the reverse order. It is tilted in position and then the off-set free edges are bolted to the adjoining portions.

Although my invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

I claim:

1. A panel section adapted to be detachably secured to a plurality of like sections to form a housing for air conditioning equipment, said section comprising a pair of spaced sheets and an interposed layer of insulation, said spaced sheets having at least two edges thereof off-set with respect to one another, each of said sheets having a first edge overturned to form a bead and at least one aperture formed in said sheet adjacent said first edge and said bead, each of said sheets having a second edge parallel to said first edge and longitudinally off-set from said sheet, a sealing strip applied to said second edge against said off-set and at least one aperture formed in said seal-

ing strip and in said second sheet adjacent said second edge whereby said first edge is adapted to overlie and to be detachably secured to the second edge of a like section at said apertures adjacent said edges, and said second edge is adapted to overlie and to be detachably secured to the first edge of a like section at corresponding apertures in order to form a portion of a housing for air conditioning equipment, which housing is both moisture-proof and resistant to the permeation of air.

2. The invention of claim 1 wherein said sheets are separated from one another by a U-shaped spacer secured to said sheets.

3. A detachable panel for forming a housing for air conditioning equipment which is both moisture-proof and will not permit air to permeate from one side to the other, said panel comprising a plurality of panelled sections detachably held together, each panel comprising a pair of spaced sheets and an interposed layer of insulation, said spaced sheets having at least two edges thereof off-set

with respect to one another, each of said sheets having a first edge overturned to form a bead and at least one aperture formed in said sheet and adjacent said first edge and said bead, each of said sheets having a second edge parallel to said first edge and off-set from said sheet, a sealing strip applied to said second edge against said off-set and at least one aperture formed in said sealing strip and in said second sheet adjacent said second edge whereby said first edge is adapted to overlie and to be detachably secured to the second edge of a like section at said apertures adjacent said edges, and said second edge is adapted to overlie and to be detachably secured to the first edge of a like section at corresponding apertures.

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