Dec. 25, 1962 E. A. LINDGREN 3,070,646

POLAR SCREEN ROOM

Filed Nov. 3, 1960 2 Sheets-Sheet 1

FIG 1

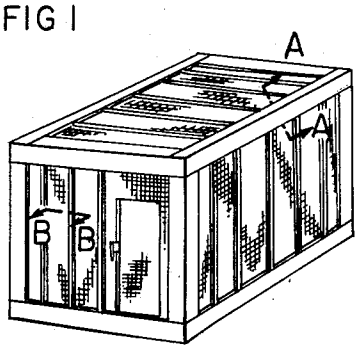


FIG. 2

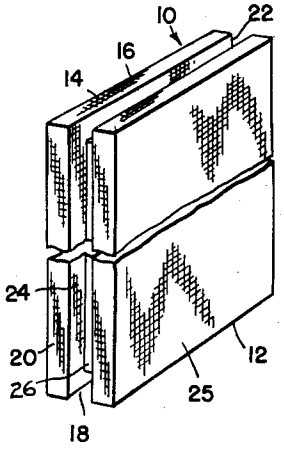


FIG. 3

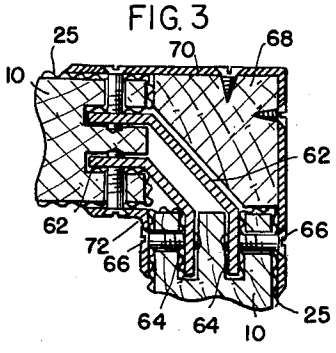


FIG. 4

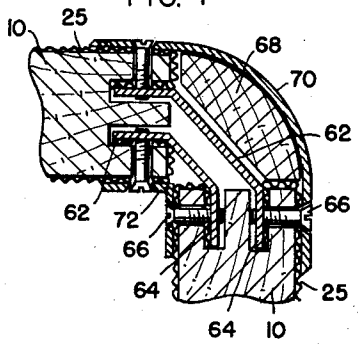
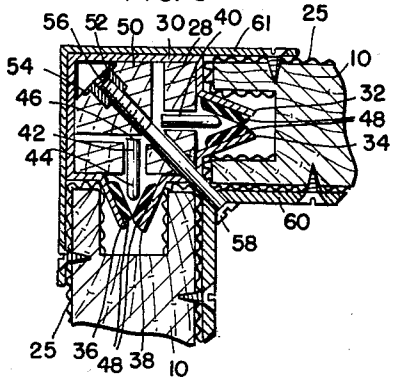


FIG. 5



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Dec. 25, 1962 E. A. LINDGREN 3,070,646

POLAR SCREEN ROOM

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FIG. 6

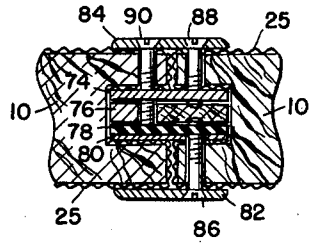


FIG. 7

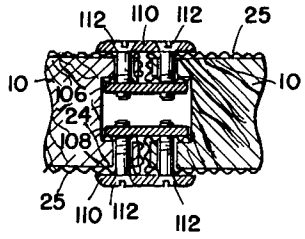


FIG. 8

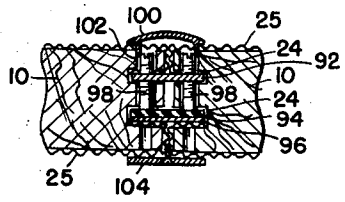


FIG. 9

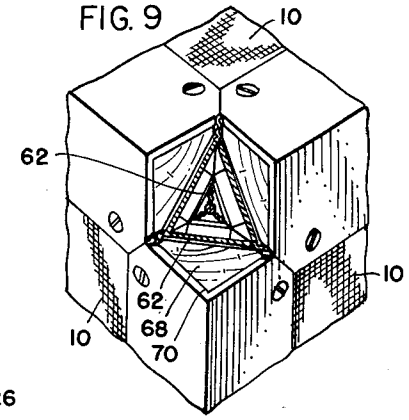


FIG. 12

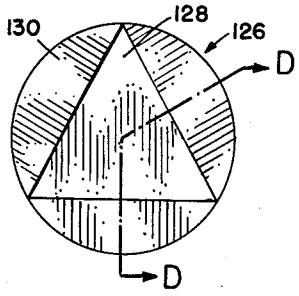


FIG. 13

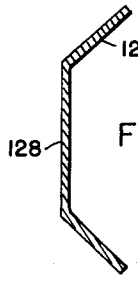


FIG. 10

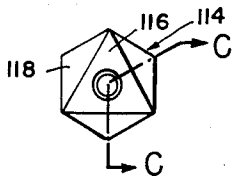


FIG. 14

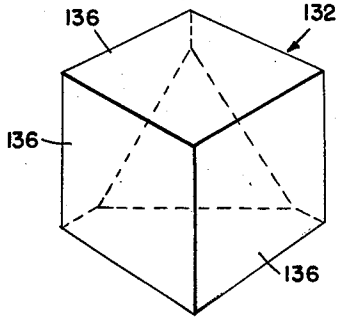


FIG. 15

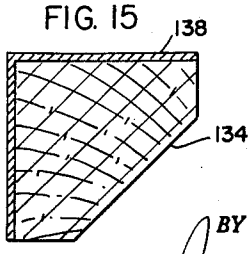
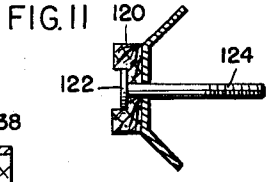


FIG. 11



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3,070,646

POLAR SCREEN ROOM

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Filed Nov. 3, 1960, Ser. No. 66,966
10 Claims. (Cl. 174—35)

This invention relates in general to the construction of electrically shielded enclosures, commonly referred to as screen rooms, for protection from high frequency wave emanations, and magnetic fields and in particular to improvements in connecting devices for securing panels of a portable prefabricated screen room whereby it may be readily disassembled and reassembled without loss of the shielding effectiveness.

This application is a continuation-in-part of my co-pending application Ser. No. 758,203, filed September 2, 1958, which is a continuation-in-part of Serial No. 393,372 filed November 20, 1953, issued as Patent No. 2,860,176.

In respect to doubled shielded screen isolated rooms, it is recognized that the effectiveness of attenuation is dependent upon the establishment of efficient impedance and for that purpose, each screen is preferably electrically isolated from the other. Thus, since each screen must completely encompass the space to be shielded, one being entirely within the other, there is presented a unique problem of maintaining continuity of conduction between consecutive sections of the same screen shield and, at the same time, securing electrical isolation of the different screens.

In joining adjacent panels of a double isolated screen room it is necessary not only to maintain continuity of conduction but to provide a means to secure the plural panels in tight, rigid relationship which may be readily assembled and disassembled. Moreover, it is desirable to permit connection of the adjacent panels from one side while at the same time provide a covering of the joining seam on both sides which eliminates any outwardly projecting connecting brackets. Further, it is preferable to protect the corners of the assembled screen room from contact with objects which might disrupt the outer screen which would cause a loss of the attenuating effectiveness of the double isolated screen room. In recognition of these factors, it is a principal object of this invention to provide an improved prefabricated, multiple panel screen room construction utilizing double electrically isolated shields in which continuity of conduction between corresponding screen shield elements of contiguous panels is automatically established, as the panels are assembled to each other, while complete electrical isolation of one screen shield from the other is maintained.

A specific object of this invention is to provide an improved connecting device for rigidly securing adjacent prefabricated panels of a double electrically isolated screen room entirely between the two shielding screens while maintaining continuity of conduction between corresponding screen shield elements.

Another object of this invention is to provide an improved connecting device for securing adjacent prefabricated panels of a double electrically isolated screen room which readily permits assembly and disassembly of the panels completely from one side of the adjacent panels.

A further object of this invention is to provide an improved connecting device for securing adjacent prefabricated panels of a double electrically isolated screen room which readily permits assembly and disassembly in close quarters of the panels without loss or injury of the attenuating effectiveness and presents a smooth covering over the seams formed between adjoining panels.

A still further object of this invention is to provide an

improved connecting device for securing adjacent prefabricated panels of a double isolated screen room which will automatically connect with corresponding screen elements of adjoining top, bottom or side panels to provide a completely encompassing multiple shielded double isolated enclosure.

Another object of this invention is to provide an improved prefabricated frame type panel for constructing screen rooms having two completely separated shielded enclosures, one within the other, electrically independent of each other whereby various size rooms may be constructed from multiples of but one basic or standard panel unit.

Other objects and advantages will appear from the specification and drawings in which:

FIG. 1 is a perspective view showing a screen room formed from a plurality of one basic frame type prefabricated panel and secured in position by the connecting devices of this invention;

FIG. 2 is a perspective view of a single basic frame type prefabricated panel of this invention used to form the screen room illustrated in FIG. 1;

FIG. 3 is a cross-sectional view taken along the line A—A of FIG. 1 illustrating a connecting device of this invention for securing adjacent panels at the corners;

FIG. 4 is a cross-sectional view taken along the line A—A of FIG. 1 illustrating an alternate form of the connecting device shown in FIG. 3;

FIG. 5 is a cross-sectional view similar to FIG. 3 illustrating preferred embodiment of a connecting device of this invention for securing adjacent panels at the corners from the inside of the room;

FIG. 6 is a cross-sectional view taken along the line B—B of FIG. 1 illustrating an embodiment of a connecting device of this invention for connecting two adjacent side panels of this invention, assembly and disassembly readily performed from one side of the enclosure;

FIG. 7 is a cross-sectional view similar to that shown in FIG. 6 of a connecting device of this invention for connecting two adjacent prefabricated panels of this invention, assembly and dis-assembly readily performed from both sides of the enclosure;

FIG. 8 is a cross sectional view similar to that shown in FIG. 6 illustrating another embodiment of the connecting device of this invention for connecting two adjacent prefabricated panels, assembly and disassembly readily performed from one side of the enclosure;

FIG. 9 is a perspective view of a corner junction of the screen illustrating the relationship of the adjoining side walls with the top wall;

FIG. 10 is a top plan view of a connecting member for the inner shielding at the corner junction illustrated in FIG. 9;

FIG. 11 is a cross-sectional view taken along the line C—C of FIG. 10;

FIG. 12 is a top plan view of a connecting member for the outer shielding at the corner junction illustrated in FIG. 9;

FIG. 13 is a cross-sectional view taken along the line D—D of FIG. 12;

FIG. 14 is a perspective view of a corner block for the corner junction illustrated in FIG. 9; and

FIG. 15 is a cross-sectional view in side elevation of the block illustrated in FIG. 14.

In addition to the unique screen room construction formed completely by joining a plurality of the basic prefabricated panel is the novel connecting devices for securing the many panels in tight right relationship whereby electrical isolation of the individual screen shield is automatically maintained and complete con-

tinuity of electrical conduction between the several screen elements of each shield is accomplished.

Panel Structure

Referring to FIG. 2, the basic panel from which the screen room is formed, is illustrated and may be fabricated from a solid material or preferably of frame construction with screening extending continuously over the entire surface of all the outer exposed surfaces and the edges thereof terminating at the lowermost point of a groove centrally formed in the marginal edge surfaces of the panel. Each panel is formed identically the same with a uniform thickness, preferably about 2", with the groove formed in the marginal surfaces thereof having substantially a width of 1" and a depth of 1". As viewed in FIG. 2, the basic panel indicated generally by the number 10 has opposing side wall surfaces 12 and 14, top edge surface 16, bottom edge surface 18 and opposing side edge surfaces 20 and 22. A groove 24 is formed in each of the edge surfaces 16, 18, 20 and 22 with a lower surface 26 of the groove parallel to the corresponding panel edge surfaces. The screening 25 extends over all of the outer surfaces of the panel except the lower surface 26 of the groove 24. The periphery of the screen terminates on the inner surface of the groove 24 which thus provides two completely individual screen shields electrically isolated which when the individual screen panels are interconnected in contiguous relationship continuity of electrical conduction between the several screen elements will be maintained.

Corner Connection

Referring to FIGS. 1 and 5, an embodiment of a connecting device is illustrated for securing adjacent panels forming the corners of a screen room. It is to be understood that this connection serves equally as well for the junction along the top and side panels.

Referring specifically to FIG. 5, the prefabricated panels 10, with the screen 25 in place, are set in position at right angles with their inner leading edges adjacent to one another. An angular insert 28, preferably formed from wood, is positioned in the opening formed when the panels were placed at right angles to one another. A metallic sheathing 30, preferably steel or copper, substantially forms a square to cover the opening formed by the panels and encompasses the insert 28. The sheathing 30 is formed in two parts with ends 32, 34, 36 and 38 terminating in the grooves 24. Spreader elements 40 and 42 are received in sliding relationship with the insert 28 and presents a rounded end 44 extending into the grooves 24 with the opposite ends 46 thereof extending beyond the surface of the insert in the other direction. The spreader elements are preferably formed from wood, but any suitable hardened dielectric material will function equally as well.

Secured to each of the end surfaces 32, 34, 36 and 38 of the metallic sheathing 30 is a spacer element 48, preferably formed from brass, which cooperates with the spreader elements 40 and 42 to force the end surfaces of the metallic sheathing 30 into physical contact with the screen 25 on the sides of the groove 24, as will be readily understood as the description continues.

A slider member 50 is disposed between the insert 28 and the right angle formed by the outer metallic sheathing 30. A T-nut 52 is embedded in the outer surface 54 of the slider for receipt of a bolt 56 which extends through the slider 50 and the insert 28 with a head portion 58 thereof exposed to the inner surface of the screen room. A right angle bracket 60, preferably formed from brass, is utilized to assist in securing the two panels and provide a seat for bolt head 58. The bracket 60 will vary in dimension depending whether it is securing the juncture of top and bottom walls with the side walls or the side walls at the corners. From the illustration in FIG. 5 and from the above description, it is easily understood that by turning the bolt 56, the slider element 50 will force the spreader elements 40 and 42 into engagement with the spacers 48 which in turn will force the ends 32, 34, 36 and 38 respectively of the metallic sheathings 30 into physical contact with the screen 25 on the side walls of the grooves 24. In addition, the slider element 50 makes physical contact with the insert 28 which is forced against the edge surface of the panels 10 to provide a rigid corner junction and additional contact between the screening 25 and sheathing members 30. Thus, it is readily seen that not only has a rigid right angle junction been formed between two of the prefabricated panels, but the required electrical isolation of the individual screen shields is automatically maintained and complete continuity of electrical conduction between the several screen elements of each shield is accomplished through the use of but one basic panel structure and the unique connecting device.

A right angle cover plate 61, preferably formed from steel and encompassing the outer surface of the corner junction, is added to provide additional rigidity, to protect the sheathing material and to enhance the overall appearance of the screen room.

Referring now to FIG. 3, an alternate embodiment of a corner connecting device is illustrated with the prefabricated side panels 10, on a top and side panel positioned at right angles to one another as described for the previous embodiment. The edges of the panels are provided with two spaced grooves 24, each of which receives an end of a metallic sheathing member 62. The sheathing member 62, preferably formed from steel or copper, provides openings 64 adjacent each end thereof for engagement with a threaded hold-down bolt 66. A supporting spacer 68, preferably formed from wood, completes the corner of the opening formed when the two panels were in position at right angles to each other. A right angle cover plate 70 encompasses the outer surface of the corner juncture and provides openings adjacent the ends thereof in alignment with the openings 64 in the outer sheathing member 62. It is now readily apparent that as the bolts 66 engage the sheathing member, the ends thereof will be drawn into tight physical contact with the screen 25, thus providing the required continuity of the outer screen shield of the adjacent panels. In like manner, a right angle bracket 72 is placed on the inner surface of the right angle corner juncture and provides openings in alignment with the openings 64 in the inner sheathing member 62. Thus, as the bolts 66 engage the openings 64, the ends of the sheathing are drawn into tight physical contact with the inner screen shield to maintain the continuity of the inner shield of the adjacent panels. Not only does the inner and outer angle plates in conjunction with the bolts 66 draw the sheathing members 62 into contact with the screen shield but provide rigid securement of the two panels. An additional refinement of the embodiment just described is illustrated in FIG. 4 having the outer cover plate 70 providing a smooth rounded external corner surface rather than a right angle corner.

Intermediate Connections

Referring now to FIGS. 1 and 6, a preferred embodiment for connecting two adjacent prefabricated panels is illustrated whereby the joining is readily accomplished from one side of the panels. Two prefabricated panels 10, similar to the one illustrated in FIG. 2, are placed in abutting relationship. Disposed within an elongated slot formed by the two abutting grooves 24 in sandwich relationship are an outer metallic strip 74, preferably of copper plated steel, a wooden spacer 76, a plastic insert 78 and an inner metallic strip 80, similar to the outer strip 74.

Cover plates 82 and 84, preferably formed from stainless steel, is positioned on the inner and outer surface respectively of the panels 10 to cover the seam formed by the abutting panels. The inner cover plate 82 is secured

to one of the panels by a bolt 86 which passes therethrough and threadably engages the lower metallic strip 80 and plastic insert 78. Thus, as the bolt is tightened, the metallic strip 80 has its one end drawn into positive engagement with the screen 25 within the groove 24. In like manner, the outer cover plate 84 is secured to the same panel by a bolt 88 which threadably engages the outer strip 74 and when tightened will draw the end thereof into positive engagement with the outer screen shield 25 within the groove 24. In addition, a bolt 90 passes through the other end of outer cover plate 84, through the other adjoining panel, threadably engages the upper strip 74, extends through the wood spacer 76 and engages the plastic insert 78. Thus, as the bolt 90 is tightened it will draw the other end of outer strip 74 into positive engagement with the outer screen 25 and at the same time force the other end of lower strip 80 into positive engagement with the inner screen 25, the plastic insert 78 providing the electrical insulation to maintain continuity of the two separate shield screens.

From the foregoing description it is readily apparent that the abutting prefabricated panels are securely joined and that the electrical isolation of the individual screen shield is automatically maintained and complete continuity of electrical conduction between several screen elements of each shield is accomplished, it being understood that the component parts are secured to one of the panels at time of shipment leaving only the positioning of the panels and the insertion and tightening of bolt 90 to be completed at time of assembly. Thus, the several panels of the screen room are quickly and easily joined with a minimum of effort and hardware with assembly being accomplished completely from one side of the panels. In addition to the novel connecting device as just described, a smooth protecting cover on both sides is provided for covering the seam formed between the adjacent panels which eliminates all projecting bolts or clamps, protects the screening shields and enhances the overall outward appearance of the construction.

Referring now to FIG. 8, another embodiment of an intermediate connecting device is illustrated whereby adjacent prefabricated panels are completely secured from one side of the panel. The adjacent prefabricated panels 10, as illustrated in FIG. 2, but providing two spaced grooves 24 in the edge surfaces thereof, are positioned in abutting relationship with an outer metallic strip 92, preferably formed from a copper plated steel, disposed in an elongated slot formed by the outer opposing grooves 24 and a plastic insert 94 and an inner metallic strip 96, similar to the outer strip 92, in sandwich relationship, are disposed in an elongated slot formed by the inner opposing grooves 24. Bolt members 98, each passing through an end of one of the panels 10, threadably engage the outer metallic strip 92 and extend through the centermost point of the abutting surfaces with the ends of the bolts contacting the plastic insert 94. The bolts 98 are designed to recess within the panel frame and as they are tightened, draw the outer strip 92 into positive physical engagement with the outer screen 25 and at the same time force the inner metallic strip 96 into positive physical engagement with the inner screen 25. As in the preferred embodiment previously described, the plastic insert insulates the shields from each other to preserve the desired double shield effectiveness. A curved metallic cover plate 100, providing depending legs 102, is secured over the seam formed by the adjacent panels. The resiliency of the strip will secure the legs 102 in the openings in the panel frames in which the bolts 98 are recessed. A similar cover plate 104 may be secured on the other side by any suitable securing means such as by screws. This, as in the preferred embodiment previously permits the adjacent panels to be readily assembled or dis-assembled with a minimum of time and effort with all work being completed from one side of the panels. By providing openings on both sides of the panels for bolts 98, securement may be readily accomplished from either side of the panels.

Referring now to FIG. 7, a third embodiment of an intermediate connecting device is illustrated whereby adjacent prefabricated panels may be securely joined from both sides of the panel. The prefabricated panels, providing a groove 24 in the marginal edges thereof, as illustrated in FIG. 2, are placed in abutting relationship with an outer metallic strip 106, preferably formed from copper plated steel, disposed on the upper side wall of the elongated slot formed by the opposing grooves 24 and an inner metallic strip 108, similar to strip 106, is disposed within a slot formed by the inner opposing grooves 24. A cover plate 110 is positioned on both sides of the abutting panels to cover the seam formed therebetween with each of the plates 110 providing openings at each end thereof for receipt of clamping bolts 112. Each of the bolts pass through the end portion of one of the panels and threadably engages the metalling strips 106 and 108. Thus, the bolts on the inner side will draw the inner strip 108 into positive physical engagement with the inner screen shield 25 and the bolts on the outer side will draw the outer strip 106 into positive physical engagement with the outer screen shield 25. As in the previously described embodiments, the intermediate connecting devices rigidly secure the abutting prefabricating panels and maintain the required continuity of conduction between the separate screen shields.

Three-Panel Corner Connection

Referring now specifically to FIG. 9, one of the eight three-panel corner junctions is illustrated in perspective with the corner connection illustrated in FIG. 3 interconnecting adjacent panels. The ends of the inner and outer sheathing elements 62 mate at their respective corners to outline a triangular shape; the inner triangle being spaced inwardly from the outer triangle.

Referring to FIGS. 10 and 11, an inner three-way connector member 114 preferably formed from copper coated steel is illustrated and provides an upper triangular surface 116 with downwardly extending tabs 118 integrally formed on the periphery thereof. A spacer 120 preferably formed from a dielectric such as wood and having a contour the same as surface 116, is positioned on top of surface 116 with a T-bolt 122 centrally recessed therein. The threaded portion 124 of the T-bolt extends outwardly a distance sufficiently to pass through the angle bracket 72 (FIG. 3) whereby a threaded member may engage the bolt to secure the connector member 114 in position. Each of the tab members 118 respectively is placed in physical contact on top of one of the inner sheathing members 62 of the corner connections, it being readily understood that as the connector member is secured in position, continuity of conduction of the inner shield of the three panels forming this corner is thereby maintained.

In like manner, as shown in FIGS. 12 and 13, an outer connector member 126 is illustrated and provides an upper triangular surface 128 and angular depending tabs 130 and is preferably formed from a copper coated steel. The tabs 130 are inserted between the spacer 68 and the outer sheathing element 62 (FIG. 3) to provide a bridge, similar to the inner connector 114, between the outer sheathing elements 62 of the three corner connections whereby continuity of conduction of the separate outer shields of each panel is maintained between the adjacent panels. The spacer 120 on the upper surface of the inner connector member 114 maintains the isolation between connector member 114 and connector member 126 to maintain the dual shielding desired.

Referring to FIGS. 14 and 15, a cap member 132, preferably formed from wood, is designed to fit in the remaining space formed by the junction of the three panels. An inner surface 134 is beveled to abut the upper triangular surface 128 of connector member 126. The exposed sur-

faces 136 of the cap are suitably covered with metal plates 138 corresponding to bracket 70 (FIG. 3) to provide an overall finished surface.

It will be understood that a suitable door will be provided in one of the side panels for access to the interior of the assembled screen room and while a door is not herein illustrated and described, reference may be had to my Patent No. 2,765,362 in which a suitable door arrangement is shown and described.

To those skilled in the art, it is now readily apparent from the drawings and description how the objects and advantages of this invention are attained. The invention provides an improved and simplified panel construction and connecting devices whereby a highly efficient screen room may be made from lightweight demountable and interchangeable panel units. All of the panels being of identical construction permits a plurality of arrangements to form various room sizes and complete standardization and great reduction in the number of component parts of connecting devices for assembling the panels. The improved and simplified panel edge construction in conjunction with the unique connecting devices provides positive automatic insulation of the dual screen shields and complete continuity of conduction between the screen sections comprising each shield. By providing only one prefabricated panel construction and the simplified connecting devices of this invention, it is readily apparent that the total cost of the screen rooms is substantially reduced without sacrifice of the highest attenuation efficiency formerly required.

Although certain embodiments of this invention are herein shown and described, it will be understood that details of construction shown may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

What is claimed is:

1. A connecting device for securing two adjacent prefabricated double electrically isolated shielding panels of a screen room from one side comprising an outer metallic strip, a spacer element, an insert, an inner metallic strip, said outer strip, spacer, insert and inner strip disposed in sandwich relationship within a slot formed by opposing grooves in the abutting surfaces of the panels, an inner cover plate extending the length of the panels overlapping a seam formed therebetween, an outer cover plate extending the length of the panels overlapping the seam formed therebetween, first securing means interconnecting one end of said inner cover plate and said inner metallic strip, second securing means interconnecting one end of said outer cover plate and said outer metallic strip and third securing means interconnecting the other end of said outer cover plate with the outer metallic strip and said insert adjacent the inner metallic strip whereby the adjacent panels are rigidly secured to one another with continuity of conduction of the two independent isolated electrical shields of each panel automatically maintained as the securing means are rotated in a tightening direction.

2. A connecting device for securing two abutting prefabricated double electrically isolated shielding panels of a screen room from one side comprising an outer metallic strip, a spacer element, a dielectric insert, an inner metallic strip, said outer strip, spacer, insert and inner strip disposed in sandwich relationship within a slot formed by opposing grooves in the abutting surfaces of the panels, an inner cover plate extending the length of the panels overlapping a seam formed therebetween, an outer cover plate extending the length of the panels overlapping a seam formed therebetween, a first bolt member interconnecting one end of said inner cover and threadably engaging the inner metallic strip, a second bolt member interconnecting one end of said outer cover plate and threadably engaging the outer metallic strip and third bolt members interconnecting the other end of said outer cover, threadably engaging the outer metallic strip with the end thereof bearing against the dielectric insert adjacent the inner metallic strip whereby the abutting panels are rigidly secured to one another with continuity of conduction of the two independent isolated electrical shields of each panel automatically maintained as said bolt members are rotated in a tightening direction.

3. A connecting device for securing adjacent prefabricated double electrically isolated shielding panels of a screen room from one side comprising an outer metallic strip disposed in a slot formed by opposing outer grooves in the abutting surfaces of the panels, an insert, an inner metallic strip, said insert and strip disposed in a slot formed by opposing inner grooves in the abutting surfaces of the panels and securing means extending through each of said panels, upper portion of each securing means engaging an end of the outer metallic strip and lower portion thereof bearing against said insert adjacent the inner strip whereby continuity of conduction of the adjacent panels is automatically maintained as the securing means retain the panels in secured relationship.

4. A connecting device for securing adjacent prefabricated double electrically isolated shielding panels of a screen room comprising an outer metallic strip disposed in a slot formed by opposing outer grooves in the abutting surfaces of the panels, a dielectric insert, an inner metallic strip, said insert and strip disposed in a slot formed by opposing lower grooves in the abutting surfaces of the panels and bolt members extending through each of said panels, upper portion of each bolt member threadably engaging an end of the outer metallic strip and lower portion thereof engaging the dielectric strip whereby continuity of conduction of the adjacent panels is automatically maintained as the bolt members retain the panels in secured relationship.

5. A connecting device for securing adjacent prefabricated double electrically isolated shielding panels of a screen room from both sides comprising an inner metallic strip disposed in a slot formed by opposing inner grooves in the abutting surfaces of the panels, an outer metallic strip disposed in a slot formed by outer opposing grooves in the abutting surfaces of the panels, an inner cover plate, first securing means passing through each end of said inner cover plate and engaging an end of the inner strip, an outer cover plate on the outer surface of the panels over the seam formed therebetween and second securing members engaging each end of said outer cover plate and engaging an end of the outer metallic strip whereby said inner and outer strips are drawn into positive physical contact with the inner and outer shields respectively of the panels as the bolt members are rotated to a tightening position to secure the panels in rigid relationship with continuity of conduction between adjoining panels being automatically maintained.

6. A connecting device for securing two abutting prefabricated double electrically isolated shielding panels of a screen room from both sides comprising an inner metallic strip disposed on the inner side wall of a slot formed by opposing grooves in the abutting surfaces of the panels, an outer metallic strip disposed on the outer side wall of a slot formed by opposing grooves in the abutting surfaces of the panels, an inner cover plate on the inner surface of the panels over the seam formed therebetween, first bolt members, each passing through an end of said inner cover plate, through one of the panels and threadably engaging an end of the inner strip, an outer cover plate on the outer surface of the panels over the seam formed therebetween, and second bolt members each engaging one end of said outer cover plate, passing through one of the panels and threadably engaging an end of the outer metallic strip whereby said inner and outer strips are drawn into positive physical contact with the inner and outer shields respectively of the panels as the bolt members are rotated to a tightening position to secure the panels in rigid relationship with continuity of conduction between adjoining panels being automatically maintained.

7. A connecting device for securing adjacent prefabricated double electrically isolated panels forming a right angle corner of a screen room comprising a first panel having inner and outer spaced grooves formed in the edges thereof, a second panel having inner and outer spaced grooves formed in the edges thereof, said first and second panels positioned at right angles with inner leading edges thereof adjacent to one another, an inner sheathing element having an end thereof disposed in each of said inner grooves, an outer sheathing element having an end thereof disposed in each of said outer grooves, a spacer element disposed outwardly from said outer sheathing element, an outer right angle cover having one side overlapping on said first panel and other side thereof overlapping on said second panel, an inner right angle bracket having one leg thereof on the first panel and other leg thereof on the second panel, first securing means interconnecting the overlapping portion of said outer right angle cover with the panels and engaging the ends of the outer sheathing element disposed in said outer grooves and second securing means interconnecting the inner right angle bracket with the panels and engaging the ends of the inner sheathing element disposed in said inner grooves to securely retain the panels in rigid relationship and draw the ends of the sheathing elements respectively into physical contact with the two independent electrically isolated shields of the panels whereby continuity of conduction is maintained.

8. The structure as set forth in claim 7 wherein said first and second securing means comprise bolt members threadably engaging the ends of the inner and outer sheathing elements respectively.

9. A connecting device for securing adjacent prefabricated double electrically isolated panels forming a right angle corner of a screen room comprising a first panel having a central groove formed in the edges thereof, a second panel having a central groove formed in the edges thereof, said first and second panels positioned at right angles with inner leading edges thereof adjacent to one another, an angular insert providing a surface adjacent the adjoining surfaces of the first and second panels, spreader elements received in sliding relationship within said insert, each of said spreader elements in juxtaposition with the groove of said first or second panel, an outer sheathing having the ends thereof terminating on the outer side of the grooves, an inner sheathing element having the ends thereof disposed on the inner side of the grooves, spacer elements secured on the inner surface of the ends of the inner and outer sheathing elements, a slider member disposed between the insert and the outer sheathing element having a threaded aperture recessed therein, an outer corner plate having a leg thereof secured to said first and second panels, an inner right angle bracket having a leg thereof secured to said first and second panels and a locking bolt member extending through the inner right angle bracket, the insert and threadably engaging the slider whereby said bolt when turned in a tightening direction draws the slider inwardly to engage and force the spreader elements into contact with the spacer elements to positively engage the ends of the inner and outer sheathing elements with the two independent electrically isolated shields of the panels respectively to maintain continuity of conduction between adjacent shielding elements as the panels are rigidly secured to form the screen room.

10. A connecting device for securing three adjacent prefabricated dual isolated shielding panels positioned at right angles to one another forming a corner junction of a screen room comprising an inner three-way connector member having depending tabs integrally formed about the periphery thereof for surface to surface contact with inner sheathing elements interconnecting abutting surfaces of said panels, a spacer element disposed on the outer surface of the inner connector member, a T-bolt recessed in the outer surface of the spacer, threaded portion of said T-bolt extending through said inner connector member to threadably engage a locking member on the inner surface of the panels, an outer three-way connector having depending tabs, such of said tabs in surface to surface contact with outer sheathing elements interconnecting abutting surfaces of the panels, said inner connector member maintaining continuity of conductivity of the inner shield of each adjoining panel, said outer connector member maintaining continuity of conductivity of the outer shield of each adjoining panel, said spacer element maintaining electrical isolation between said inner and outer connector members and a cap member positioned against the upper surface of the outer connector member to provide a smooth right angle three-way corner junction.

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