Nov. 6, 1962 E. J. DE RIDDER ETAL 3,062,338

DOUBLE FACED PANELS

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FIG. 1.

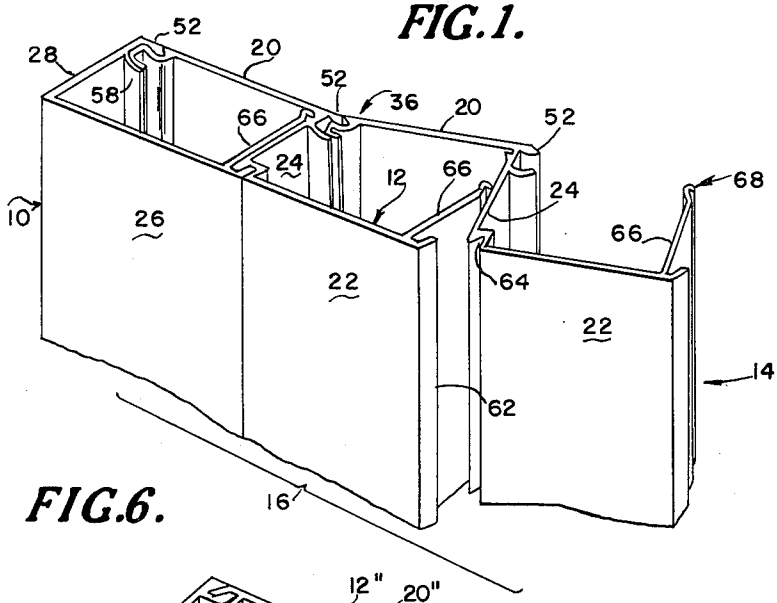
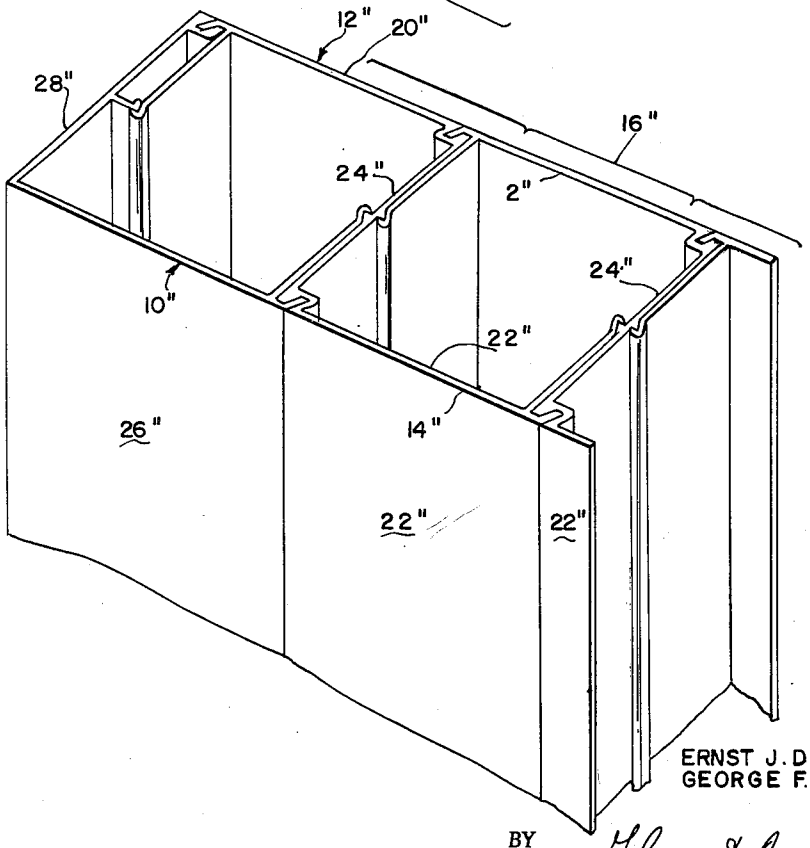


FIG. 6.



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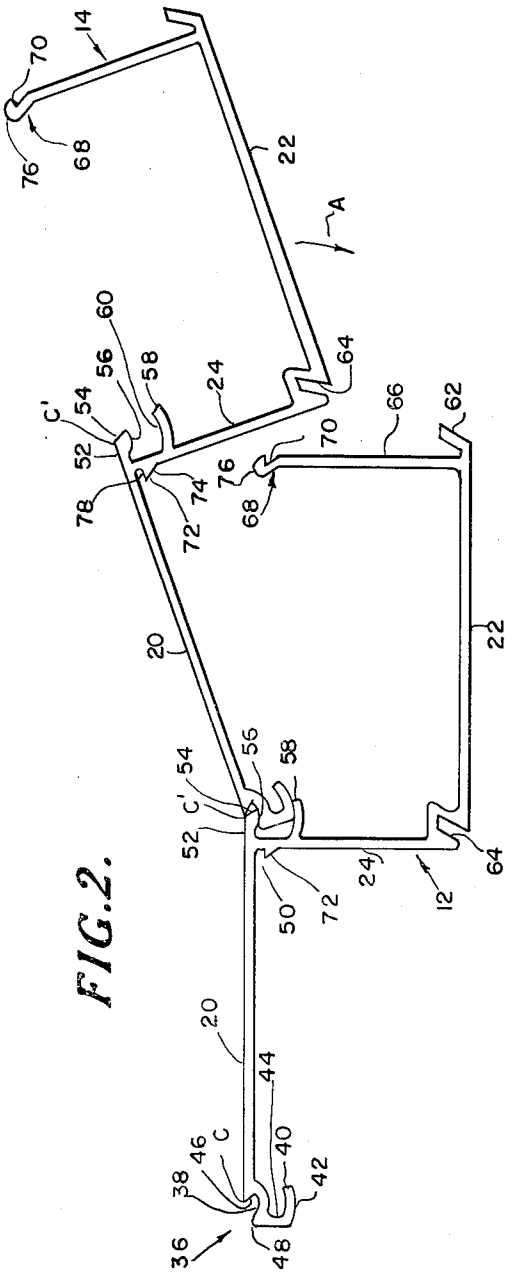


FIG. 2.

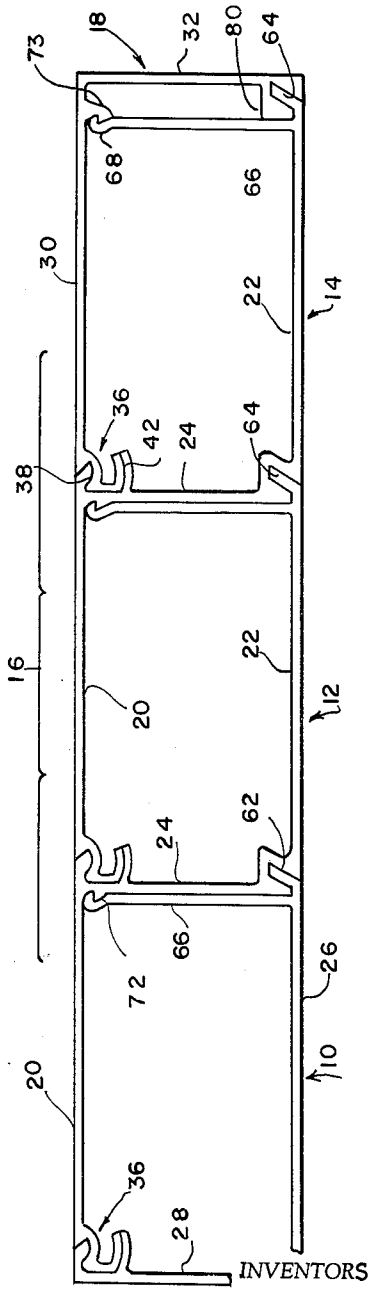


FIG. 3.

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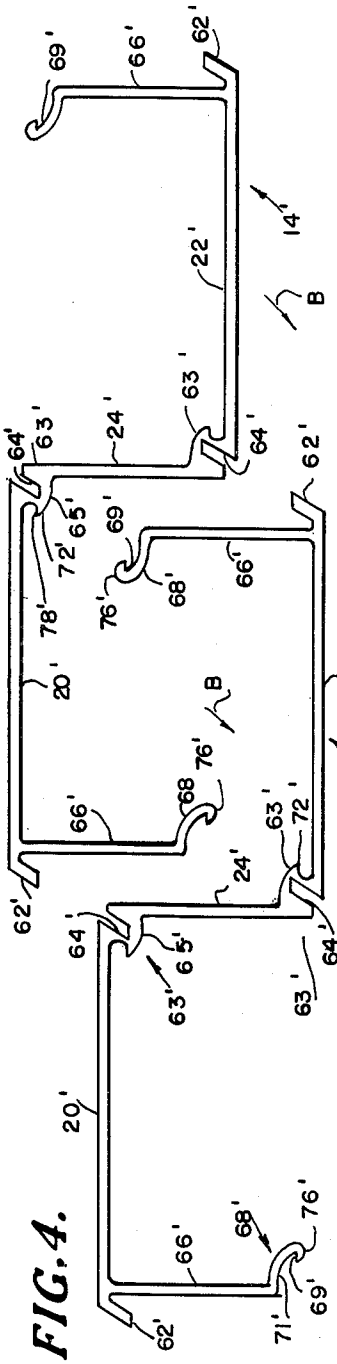


FIG. 4.

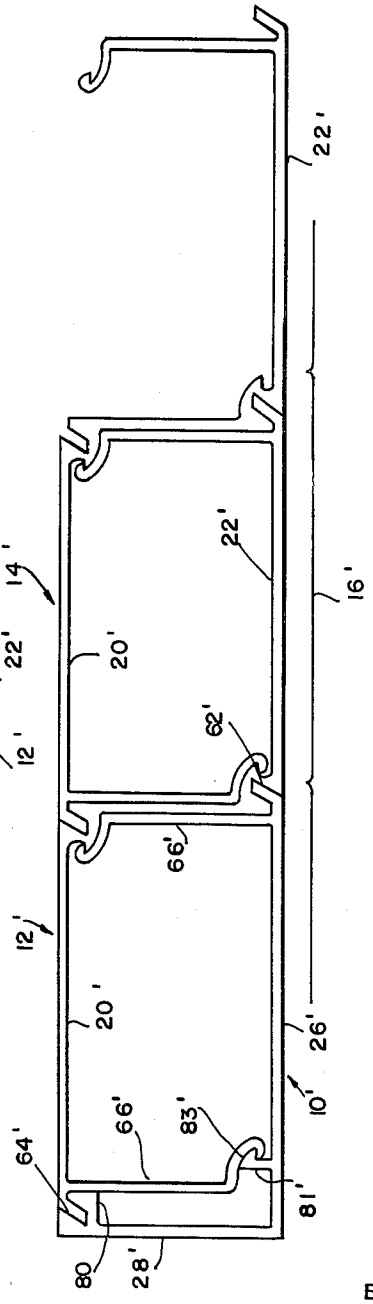


FIG. 5.

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FIG. 7.

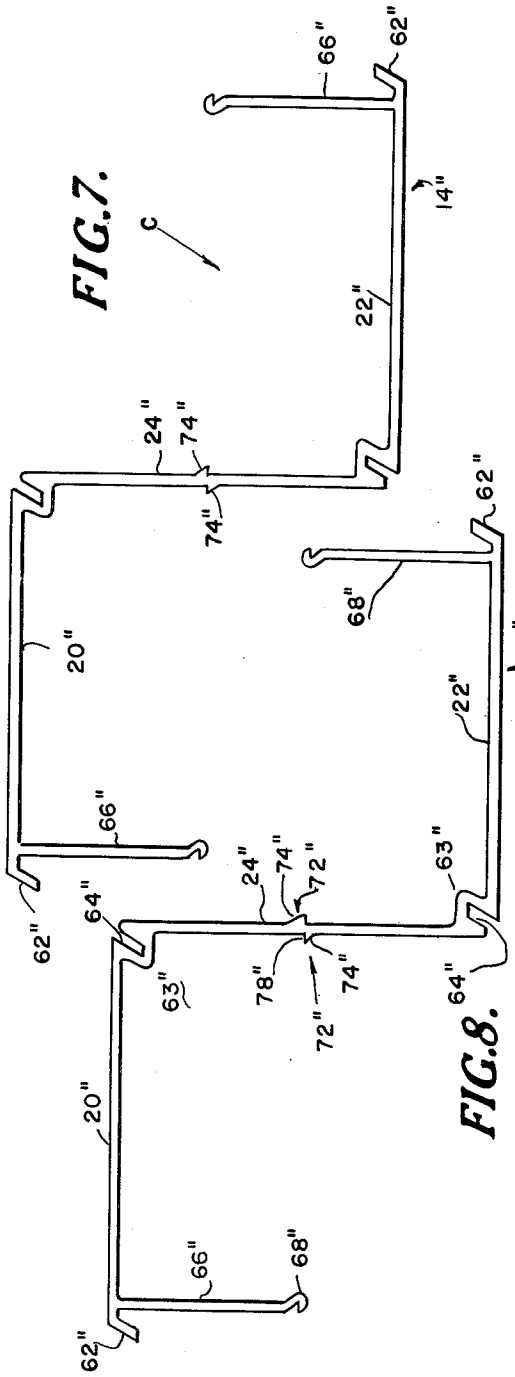
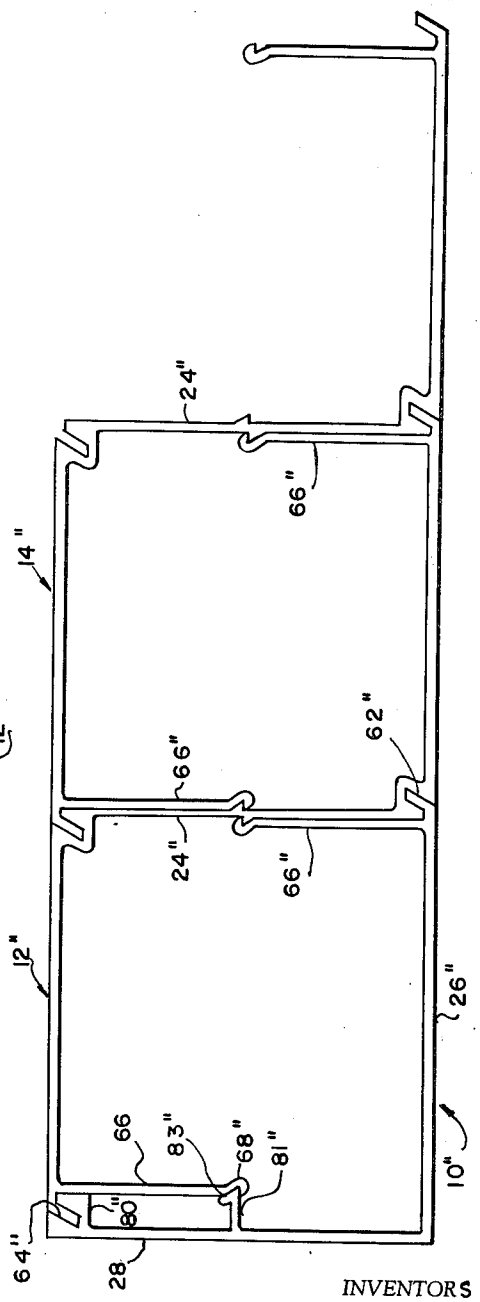


FIG. 8.



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3,062,338
DOUBLE FACED PANELS

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Filed Mar. 10, 1960, Ser. No. 14,043
35 Claims. (Cl. 189—34)

The present invention relates to structural members adapted to be formed by extrusion and provided with edge profile configurations so formed that the members can be interlockingly engaged along such edges. More specifically, the invention relates to extruded metallic structural members so formed that when interlocked along their edges, the resulting assembly is a double faced hollow panel or wall assembly capable of use as a partition member, wall, floor, door for use in trailers or piggy back carriers for trailers, cargo divider in freight cars or the like.

While the extruded structural members hereinafter described will be referred to as metallic structures, it is, of course, within the scope of the present invention for the members to be made of materials other than metal such as plastics or the like. However, it has been found the extruded sections, when used for assemblies such as walls, floors, partition members or the like, which encountered structural loads, should preferably be made from a metal. In this respect, the fabrication of the metallic structural members by extrusion of aluminum have proved most economical and satisfactory as aluminum is not only light in weight but structurally strong and, thus, the members may be used in various assemblies where strength and weight are critical factors.

In the copending application of Ernst J. De Ridder filed July 30, 1959, and serially numbered 830,586, various types of interlocking extruded sections are disclosed, as well as assemblies of the same. One such assembly is an improved double wall arrangement which, when assembled into interlocking engagement, provides a hollow wall or panel structure having spaced apart walls with substantially continuous oppositely disposed outwardly facing wall surfaces. The present invention is an improvement of such structure as well as an improvement of the interlocking configurations provided on the extruded panel sections which are capable of forming a hollow double wall or panel assembly.

An object of the present invention is to provide improved extruded sections particularly adapted to be interlockingly engaged, with great facility, along their side edges to form a hollow wall assembly capable of use wherever an assembly is needed with smooth wall surfaces on either side. Such use may be for the fabrication of partitions for rooms, floors, partitions in vehicle trailers or trucks, cargo divider in freight cars, or the like.

Another object of the present invention is to provide panel like extruded sections which may be assembled into walls or panels for various uses, the interlocking of the sections being such that no separate fastening means is necessary to hold the sections in a locked assembled relationship to each other.

A still further object of the present invention is to provide extruded sections having edge profiles which enable the sections to be interlockingly engaged and also including means integrally formed with the section which provide a permanent locking of adjacent sections to each other when the profile configurations are engaged in interlocking relationship.

It is still another object of the present invention to provide an improved double wall assembly that can be fabricated rapidly and with great facility from a number of interlocking extruded sections, the assembly when

fabricated providing a unitary structure regardless of length and a number of members interlocked.

Ancillary to the preceding object, it is a further object of the present invention to provide a hollow wall structure, which when assembled from interlocked extruded sections, cannot be easily disassembled, such means increasing the rigidity and strength of the final assembly.

These and other objects and advantages of the present invention will become more apparent from the following description and accompanying drawings in which:

FIGURE 1 is a fragmentary perspective view illustrating the method of interlockingly engaging one section with an adjacent section and further illustrating a hollow wall or panel assembly being fabricated;

FIGURE 2 is a transverse sectional view of the extruded sections forming the hollow wall as shown in FIGURE 1, the view illustrating the method of interlocking the two sections together when viewed in transverse sectional profile;

FIGURE 3 is a view similar to FIGURE 1 but showing a completed hollow wall, the wall being provided with suitable end sections;

FIGURE 4 is a transverse sectional view of two extruded sections having a modified type of interlocking joint, the view illustrating the method of interlockingly engaging one section with an adjacent section;

FIGURE 5 is a sectional view similar to FIGURE 4 but illustrating the sections of FIGURE 4 in interlocking relationship to form a hollow wall structure and also illustrating the transverse sectional profile of an end member for the wall;

FIGURE 6 is a fragmentary perspective view, partly in vertical section, and showing still another modification of extruded sections and the hollow wall being fabricated therefrom;

FIGURE 7 is a view similar to FIGURE 4 but showing the modified form of extruded sections of FIGURE 6;

FIGURE 8 is a transverse sectional view of a hollow wall assembly of the present invention being fabricated from the modified extruded sections disclosed in FIGURES 6 and 7.

Referring now to the drawings wherein like character or reference numerals represent like or similar parts, and in particular to FIGURE 1, there is shown three members or metallic extruded sections generally designated at **10**, **12** and **14**. The sections **10** and **12** which are to the left of FIGURE 1 are shown as being interlocked while the right-hand section **14** is being shown in position of partial engagement with the section **12**, preparatory to being moved into full interlocking engagement therewith. As is evident from FIGURE 1, the sections **12** and **14**, which are interlocked, form a portion of the double wall or panel assembly and when the section **14** is brought into interlocking engagement with the section **12** as shown in FIGURE 3, it too will form a portion of the assembly. The section designated **10** and shown at the left of FIGURES 1 and 3 provides an end member for the wall assembly and it will now be obvious to those skilled in the art that any number of intermediate sections of the configuration of sections **12** and **14** may be interlocked to form a wall assembly of a desired size. As shown in FIGURE 3, a wall assembly generally designated at **16** is made up of one end section **10**, two intermediate sections **12** and **14** and an opposite end section generally designated at **18**.

Each intermediate section **12** and **14** is of identical transverse sectional profile as best shown in FIGURE 2, and is provided with a first side panel **20** and a second side panel **22**, the panels **20** and **22** being rectangular in plan and having a substantially flat outer surface. The side panels **20** and **22** of each intermediate section **12** and

14 are connected together in spaced apart and offset relationship to each other by a flange-shaped rib 24 integral with each side panel. The rib 24 extends from the inner surface of each side panel 20 and 22 along a longitudinal edge of the same. As will be explained in more detail later in the specification, when two of the intermediate sections 12 and 14, which are Z-shaped in sectional profile, are interlocked with each other, the side panel 20 of one section is opposite and parallel to the side panel 22 of the adjacent section whereas the side panel 22 of the first section is in planar relationship to the side panel 22 of the adjacent section and likewise the side panel 20 of the adjacent section is in planar relationship to the side panel 20 of the first section. Thus, it will be understood when intermediate sections such as the Z-shaped sections 12 and 14 are interlocked, their respective side panels 20 form a portion of one wall of the double wall assembly whereas the side panels 22 forms a portion of the other wall of the double wall assembly but in spaced relationship and offset relationship with respect to the first portion.

As shown in FIGURE 3, end members or sections 10 and 18 are provided to cooperate with the overhanging side panels 20 and 22 respectively of the outermost intermediate sections 12 and 14. The end member 10 is L-shaped in sectional profile and is provided with one side panel 26 which lies opposite to the overhanging side panel 20, the flange-shaped leg or rib 28 of the section 10 closing off the end of the wall assembly. Similarly, the end member or section 18 is L-shaped in cross section and is provided with a side panel 30 which lies opposite and in spaced relationship to the overhanging side panel 22, as shown in FIGURE 3, and its flange-shaped leg or rib 32 closes the opposite end of the wall assembly.

The rectangularly shaped panels 20 and 22 of each of the intermediate sections such as sections 12 and 14 as well as the side panels 26 and 30 of the end sections 10 and 18 respectively may have any length desired and as will be evident, various widths may be provided to afford greater facility in design and size of the wall assembly. The space between the walls is determined by the width of the ribs 24, 28 and 32. Also, it will be understood that the side panels 20, 22, 26 and 30 may be concave or convex on their outer surface when it is desired to provide a partition wall with a decorative or ornamental appearance such as a partition wall in a recreation room. In any event, the purpose of the hollow wall assembly of the present invention is to provide spaced walls having substantially continuous outer surfaces at the interlocking edges of adjacent sections, the wall being sturdy in construction and light in weight.

In more detail and referring specifically to FIGURE 2 of the drawings, the Z-shaped intermediate section 12 is provided along its longitudinal free edge 36 with an inwardly offset portion defining an outwardly facing channel or groove having a curved surface 38. The curved surface 38 has its center of curvature C substantially on the outer surface of the panel 20 at the extreme edge of the panel. A projection 40 spaced inwardly from the curved surface 38 and forming an integral part of the offset end portion 36 extends reversely back toward the rib 24. The projection 40 is provided with an inwardly facing curved surface 42 having the same center of curvature C as the curved outwardly facing surface 38. The projection 42 merges smoothly into the side panel 20 as shown at 44 but the groove or channel 38 terminates in a flat surface 46 extending inwardly from the outer surface of side panel 20 at an acute angle thereto. The rounded ridge portion 48 between the curved surface 38 and the outermost portion of the reversely projecting extension 42 provides a smooth surface so that when the interlocking profile configuration of one section is attached to a complementary configuration of an adjacent section, one section may be rotated with respect to the other section to a locked position without interference.

Extending outwardly from the point of junction 50 of the rib 24 with the side panel 20 is an overhanging flanged lip 52 having a beveled flat edge 54 extending at an obtuse angle to the side panel 20, the angle being complementary to the angle of the surface 46. Lip 52 is provided with an inwardly facing curved surface 56 which merges smoothly into the rib 24 and is complementary to the outwardly facing curved surface 38. A flange-shaped extension 58 integral with rib 24 and extending therefrom on the side of the rib opposite the free edge of the side panel 20 is provided with an outwardly facing curved surface 60 complementary in curvature to the curved surface 42 of the reversely projecting extension 40. The center of curvature for the curved surface 56 is on the outer surface of the panel 20 at the point where the flat surface 54 slopes therefrom as indicated at C'. The center of curvature C' is also the center of curvature for the radius of the curved surface 60 of extension 58.

Since the curved surface 60 is spaced from the curved surface 56 substantially the same distance as the curved surface 42 is spaced from the curved surface 38, the free edge profile configuration of the side panel 20 of one section such as the section 14 may be partially engaged with the complementary shaped profile configuration at the junction of the rib 24 and the side panel 20 of an adjacent section such as the section 12 as shown in FIGURE 2 of the drawings. Rotation of the section 14 relative the section 12 in the direction of the arrow A permits the sections to move on the complementary curved surfaces 38—56 and 42—60 until the side panels 20 of each section, are in a substantially planar relationship to each other as shown in FIGURE 3.

In order that the sections 12 and 14 may be interlocked so as to form a substantially rigid unitary structure, the free edge of the side panel 22 of each of the sections is provided with an inwardly extending flange-shaped lip 62. The lip 62 is provided with planar parallel surfaces and is adapted to be received in a channel 64 provided at the junction of the rib 24 and the side panel 22. It will be noted that the channel or groove 64 is provided by offsetting inwardly the integral connection between the side panel 22 and the rib 24. Also, it will be noted, the inwardly extending lip 62 extends at an obtuse angle to the inside panel 22 whereas the groove 64 extends at a complementary acute angle to the lip. Accordingly, when sections 12 and 14 are rotated to their interlocking position, the lip 62 of one section is received in the channel or groove 64 of the adjacent section.

When the aforementioned sections 12 and 14 have been interlocked as just previously described, the opposed panels 20 and 22 of the respective sections as well as the opposed ribs 24 of the respective sections define a cavity which may be filled with suitable insulating and/or soundproof material as desired. The insulating or soundproofing material may be placed between the sections prior to interlocking the same or it may be inserted into the cavities between the ribs after the panel has been assembled but prior to the panel being finally positioned in a room or vehicle. In the latter case, the assembled panel would have openings at its longitudinal ends, such opening being closed when the panel is positioned in a structure.

In order to permanently lock one section 12 to an adjacent section 14, a leg 66 integral with the side panel 22 extends from its inner surface. The leg 66 is spaced inwardly of the flanged lip 62 and is provided on its free edge with a hooked-shaped end 68. The hooked-shaped end 68 faces outwardly as indicated at 70 and is adapted to engage and latch with a ridge or projection 72 provided on the rib 24 of an adjacent section. The ridge 72 has a gently sloping surface 74 which acts as a camming surface and initially contacts a curved outer end 76 of the hooked-shaped end 68 of flange-shaped leg 66. In other words, the leg 66 has sufficient flexibility and resiliency

to pass over the gently sloping surface 74 of ridge 72 and then snap back into latching engagement with a complementary flat surface 78 of the ridge. Once the leg 66 and the ridge 72 are in latching engagement as shown in FIGURE 3, the sections 12 and 14 cannot be inadvertently disassembled. Further, it will be noted that the leg 66 is contiguous with the rib 24 of an adjacent section when the leg is in latching engagement with the ridge 72. This increases the strength and rigidity of the resulting structure.

As shown in FIGURES 1 and 3, the end member or section 10 is L-shaped in sectional profile and its side panel 26 is complementary in width as well as length to the side panel 20 of the adjacent intermediate section 12. The rib 28 of the end section 12 is provided with a complementary end configuration to the end configuration of the offset free edge 36 of side panel 20. On the other hand, the free edge of the side panel 26 is provided with a complementary end configuration to the channel 64 and, thus, also has an inwardly turned flanged lip 62. The inner surface of the side panel 26 is provided with a leg 66 identical to the previously described legs 66 and is adapted to latch with the ridge 72 on the rib 24 of the adjacent intermediate section 12. It will be understood that the end section 10 and the intermediate section 12 can be interlocked in substantially the same manner as the sections 12 and 14 in that the section 12 in this case is partially engaged and rotated relative to the section 10 until the complementary configurations are fully engaged and the latching means, namely, the leg 66 and the ridge 72 are in latching engagement.

The opposite end section 18 is similarly L-shaped to the end section 10 but, of course, its interlocking end configurations are reversed with respect to those of the section 10. As clearly shown in FIGURE 3, the free edge of the side panel 30 is provided with an inwardly offset edge portion 36 having complementary curved surfaces 38 and 42 to the curved surfaces provided on the interlocking configuration provided at the junction of the panel 20 and the rib 24 of the section to which it is to be attached. The free edge of the rib 32 is provided with an inwardly projecting thickened flange 80. The flange 80 is provided with a groove identical with the previously described grooves 64 and complementary in angular relationship to the flanged lip 62 of an adjacent section so that it may receive such section. Since the thickened flange 80 extends inwardly from the leg 32, a flange-shaped ridge 73 is provided on the inner surface of the side panel 30 in substantial alignment with leg 66 so as to receive the hooked-shaped end 68 of the leg of a section to which the end section 18 is attached. It will be understood that the end section 18 is attached in interlocking relationship with an adjacent section in a similar manner as heretofore described.

Referring now to FIGURES 4 and 5 of the drawings, a modification of the wall assembly is shown, the modification being substantially similar in external configurations and the sections being substantially similar in sectional profile, the difference being in the arrangement of the interlocking configurations between adjacent sections. In more detail, the wall assembly 16' includes an L-shaped end section 10' and intermediate Z-shaped sections 12' and 14'. As best illustrated in FIGURE 4, the Z-shaped intermediate sections 12' and 14' are each provided with side panels 20' and 22'. The side panels 20' and 22' are integrally connected by a flange-shaped rib 24' extending along an edge of each of the respective side panels 20' and 22' so that the respective side panels are connected together in spaced apart and offset relationship when viewed in sectional profile.

Each of the panels 20' and 22' are provided along a longitudinal free edge with an inwardly turned flange-shaped lip 62' extending at an obtuse angle to the plane of the respective side panels. At a point of junction 63' between the rib 24' and each of the side panels 20' and 22', an inwardly extending groove or channel is provided which is complementary to the lip 62'. The grooves 64' extend at an acute angle to the plane of the respective side panels 20' or 22' and as previously mentioned is complementary to the angle of the lip 62' so that such lips may be received therein.

In the modification shown in FIGURES 4 and 5 of the drawings, at the point of junction 63' between the respective panels 20', 22' and the rib 24', a curved inner surface 65' is provided. The curved inner surface terminates in a longitudinally extending ridge 72' having a flat surface 78'. Extending inwardly from each of the panels 20' and 22' is a flange-shaped leg or rib 66' having a hooked-shaped end 68' with a flat latching surface 69' which is complementary to the flat surface 78' of the ridge 72'. The hooked-shaped end 68' is provided with a curved surface 71' complementary to the curved surface 65'.

In assembling sections 12' and 14' together in interlocking relationship, the sections are positioned apart as shown in FIGURE 4 of the drawings so that the flanged lip 62' of one section is in alignment with the channel 64' of another section. The sections are then moved together with the lips 62' being received in the respective channels 64' and the curved end 76' of the hooked-shaped end 68' of the leg 66' engages the curved surfaces 63', the leg 66' being then flexed inwardly toward the rib 24' until its end passes over the ridge 72' and then the leg snaps back and its flat surface 69' cooperates with the flat surface 78' of the ridge to latch the two sections together so that they cannot be inadverently disassembled.

The end section 10' of the modification shown in FIGURES 4 and 5 of the drawings is L-shaped in cross section and is provided with a side panel 26' and a leg or rib 28'. The free edge of the panel 26' is provided with an inwardly extending flanged lip 62' identical with the previously described lips 62' whereas the free edge of the leg 28' is provided with a thickened inwardly extending flange 80' having a complementary shaped groove or channel 64'. A suitable ridge 81' extending inwardly from the panel 26' and having a curved surface 83' is adapted to cooperate with a leg 66' from the opposing panel 20' so as to latch the end section onto the adjacent section 12'.

Since the interlocking profile configurations are identical on each end of an intermediate section, the end section or member 10' may be used on either end of the wall assembly 16'. In other words, it does not have to have different interlocking profile configurations as in the previously described modification shown in FIGURES 1, 2 and 3.

Referring now to FIGURES 6 through 8 of the drawings, there is shown a modification of the arrangement disclosed in FIGURES 4 and 5. The arrangement shown in FIGURES 6 to 9 is provided for wall assemblies wherein it is desired to space the panels making up the spaced walls further apart so that the resulting wall assembly is quite thick. In this environment, the Z-shaped sections 12'' and 14'' have identical free edge interlocking configurations as the Z-shaped sections disclosed in FIGURES 4 and 5.

As shown in FIGURES 6 to 8 inclusive, the interlocking double wall assembly 16'' includes intermediate sections 12'' and 14'' and end sections 10''. Each of the intermediate sections 12'' and 14'' is provided with a rib 24'' integral with and interconnecting side panels 20'' and 22'' in spaced apart and offset relationship. The rib 24'' has a width which is substantially greater than the width of the ribs 24 and 24' previously described with respect to the modifications shown in FIGURES 1 and 4 respectively of the drawings.

The free edges of side panels 20'' and 22'' are each provided with an inwardly extending flanged lip 62'' having planar side surfaces. Each lip 62'' extends at an

obtuse angle to the planar surface of the respective side panels to which it is integrally formed. At the junctions 63" of each of the panels 20" and 22" of an intermediate section, a groove or channel 64" is provided for receiving the flanged lip 62" of an adjacent section. The channel 64" extends inwardly at an acute angle to the side panel with which it is associated, the angle being complementary to the angle of the lip 62".

Rib 24" at a point substantially intermediate the panels 20" and 22" is provided on each of its outer surfaces with longitudinally extending ridges 72" having gently sloping camming surfaces 74" and flat substantially transversely extending latching surfaces 78". A flanged-shaped leg 66" extending inwardly along the free edge of each side panel 20" and 22" is provided with a hooked-shaped end 68". The legs 66" have a length in profile approximately equal to one half the length in profile of the ribs 24" and are adapted to cooperate with the latching ridges 72" on the respective sides of the ribs 24".

As shown in FIGURE 7, two intermediate sections 12" and 14" are placed in spaced apart relationship with the lips 62" in alignment with the grooves 64" of an adjacent section. The sections 12" and 14" are then moved toward one another in the direction of the arrow C and the leg 66" of the one section latches with the ridge 72" of the oppositely disposed section as best shown in FIGURES 6 and 8 of the drawings. In this modification, it will be noted that one leg 66" latches on one side of a rib 24" while a leg, a third section latches on the other side of the rib 24", thus making a sturdy joint between interlocking sections of the wall assembly.

The end section 10" of wall assembly 16" is L-shaped and provided with a side panel 26" and a flange-shaped leg or rib 28". The free edge of the side panel 26" is provided with an inwardly extending lip identical with the previously described lip 62". Leg 28" is provided at its free end with an inwardly extending thickened flange 80" having a groove or channel identical with the grooves 64", the grooves being complementary to the flanged lip 62" of an adjacent section to be attached thereto. Extending inwardly from the leg 28" is a flange-shaped suitable longitudinally extending ridge 81" which has an end having a camming surface 83" in substantial alignment with the hooked-shaped end 68" of a section to be attached thereto. As will now be obvious, when the end section 10" is attached to an adjacent Z-shaped section 12", the latching leg 66" cooperates with the sloping camming surface 83" to flex inwardly and then snap over the edge of the ridge 81" to provide a tight locking engagement between the two sections. The opposite end section of the wall or panel assembly 16" (not shown) is identical to the end section 10" because of the similar interlocking complementary configurations on the intermediate sections 12" and 14".

It is thus seen that the objects and advantages of this invention have been fully and effectively accomplished by the structures shown in the various described embodiments. However, the foregoing specific embodiments are subject to some changes without departing from the principles of the invention involved.

The terminology used in this specification is for the purpose of description and not limitation, the scope of the invention being defined in the claims.

We claim:

1. A set comprising at least two panel like extruded sections snugly interlocked together and forming at least a portion of a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing substantially continuous wall surfaces: a first of said sections including a side panel forming a portion of one of said spaced apart walls and a second side panel forming a portion of the other of said spaced apart walls, a flange-shaped rib integral with and interconnecting said first and second side panels in spaced apart and offset relationship to each other; a second of said sections having at least one side panel forming a portion of one of said spaced apart walls opposite one of said first and second side panels of said first section, a flange-shaped rib extending inwardly from an edge of the side panel of said second section and interlocked with a free edge of the oppositely disposed side panels of said first section; one of said first and second sections having a flanged lip extending inwardly at an angle to its side panel and the other of said first and second sections having a channel therein complementary to said flanged lip and receiving the same; and one of said first and second sections having a leg with a hooked shaped end extending inwardly from its side panel toward the oppositely disposed side panel of the other section and the other of said first and second sections having a ridge cooperating with the hooked shaped end of said leg to permanently interlock said first and second sections together when said flanged lip is received in said channel.

2. The structure defined in claim 1 in which the free edge of the side panel of said first section which is disposed oppositely from the side panel of said second section is offset inwardly of the side panel and provided with a first curved surface facing outwardly, said free edge being provided with a reversely extending portion spaced inwardly of the side panel, said portion being provided with a second curved surface facing inwardly of the panel, and said flange-shaped rib of the side panel of the second section having a reversely projecting flanged lip at its end, said lip having a curved surface facing inwardly and being complementary to said first outwardly facing curved surface of said offset edge and a flanged projection spaced inwardly of said reversely projecting lip, said extension being provided with a curved surface facing said lip and complementary to said second curved surface of said offset free edge, the arrangement being such that the curved surfaces on said first section may be partially engaged with the complementary curved surfaces on said second section and said sections may be relatively rotated about the engaged surfaces into interlocking engagement of said leg and said ridge.

3. The structure defined in claim 2 in which the first and second curved surfaces on the free edge of the side panel of said first section are respectively concave and convex with the center of curvature thereof substantially on the outer surface of the side panel.

4. The structure defined in claim 1 in which the free edge of the side panel of said first section which is disposed oppositely from the side panel of said second section is provided with a flanged lip extending inwardly at an angle to the panel, and substantially parallel to said first-mentioned flanged lip, and said flange-shaped rib of the side panel of the second section being provided with a channel at its outer end complementary to the flanged lip on the free edge of said first section and receiving the same.

5. The structure defined in claim 4 wherein each of said flanged lips extends at an obtuse angle to the side panels of the sections to which they are connected.

6. A set comprising at least two panel like extruded sections snugly interlocked together and forming at least a portion of a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing substantially continuous wall surfaces: a first of said sections including a side panel forming a portion of one of said spaced apart walls and a second side panel forming a portion of the other of said spaced apart walls, a flange-shaped rib integral with and interconnecting said first and second side panels in spaced apart and offset relationship to each other, at least one of said side panels having a free edge offset inwardly of the side panel and provided with a first curved surface facing outwardly, said free edge being provided with a reversely extending portion spaced inwardly of the side panel and having a second curved surface facing inwardly of the panel, a ridge provided on said rib and spaced in-

wardly of the side panel having the offset free edge; a second of said sections having at least one side panel forming a portion of one of said spaced apart walls opposite said side panel of said first section having the offset free edge, said second section having a flange-shaped rib extending inwardly along an edge of its side panel, said flange-shaped rib having a reversely projecting flanged lip at its end, said lip having a curved surface facing inwardly and being complementary to said first outwardly facing curved surface of said offset free edge of said first section, a flanged projection on said flange-shaped rib, said projection being spaced inwardly of said reversely projecting lip and provided with a curved surface facing said lip and complementary to said second curved surface of said offset free edge, a leg extending inwardly of the side panel of said second section and having a hooked end cooperating with said ridge to permanently interlock said first and second sections together.

7. The structure defined in claim 6 wherein the first and second curved surfaces on the free edge of the side panel of said first section are respectively concaved and convexed with the center of curvature thereof substantially on the outer surface of the side panel.

8. The structure defined in claim 6 wherein said second section is provided with a second panel extending in parallel, spaced and offset relationship from the first-mentioned panel of said first section, said second panel being integral with the outer end of said flange-shaped rib and providing a substantially continuous wall surface with the side panel of said first section interconnected to the end of said flange-shaped rib.

9. The structure defined in claim 6 wherein said side panel of said second section is provided with a flanged lip on its free edge extending inwardly at an angle to the panel and wherein said first section is provided with a channel complementary to said lip and extending inwardly at a point of junction between the flange-shaped rib and the one of its side panels which is substantially continuous with the side panel of said second section when said sections are interlocked, said flanged lip being received in said channel.

10. The structure defined in claim 9 wherein said flanged lip of the side panel of said second section extends at an obtuse angle thereto and wherein said channel extends at an acute angle to the side panel of said first section.

11. A set comprising at least two panel like extruded sections snugly interlocked together and forming at least a portion of a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing wall surfaces: a first of said sections including at least one side panel forming a portion of one of the spaced apart walls and a flanged rib extending inwardly of an outer wall surface of said side panel; a second of said sections including at least one side panel forming an oppositely disposed portion of the other of said spaced apart walls, said side panel having a flange-shaped rib along one of its edges and extending inwardly of an outer wall surface of said side panel, complementary interlocking means along the free edge of the panel of said first section and the end of the rib of the second section and a second complementary interlocking means along the free edge of the panel of said second section and the free edge of the rib of said first section, and a leg projecting inwardly from the side panel of one of said sections, said leg having a hooked-shaped end, and a ridge on the other section cooperating with the hooked-shaped end of said leg to permanently lock said sections together.

12. The structure defined in claim 11 wherein said leg is contiguous with the rib of the other section and wherein said ridge extends along the rib of the other section.

13. The structure defined in claim 11 wherein one of said interlocking means between one of said ribs of one section and the side panel of the other section is a cooperating tongue and channel extending at an angle to the side panel and the rib.

14. The structure defined in claim 11 wherein said interlocking means between the side panel of one section and the rib of the other section is a pair of curved surfaces carried on an inwardly offset edge portion of said side panel, one of said curved surfaces facing outwardly and the other of said curved surfaces facing inwardly of the side panel and complementary curved surfaces facing oppositely of the curved surfaces on said panel, the arrangement of said complementary curved surfaces of one section being such that one section can be partially engaged with the curved surfaces of the other section and then the sections rotated relatively until said leg and said ridge engage and permanently interlock said sections together.

15. The structure defined in claim 14 wherein the second of said interlocking means includes a flanged lip on one of said sections extending at an angle to a plane of one of the side panels and a complementary channel on the other section receiving said lip when said sections are rotated relative to each other to an interlocking position.

16. The structure defined in claim 14 wherein said outwardly facing curved surface of said side panel is concave and wherein said inwardly facing curved surface of said side panel is convex and spaced inwardly of the same.

17. A set comprising at least two panel like extruded sections snugly interlocked together and forming at least a portion of a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing substantially continuous wall surfaces: a first of said sections including a side panel forming a portion of one of said spaced apart walls and a second side forming a portion of the other of said spaced apart walls, a flange-shaped rib integral with and interconnecting said first and said second side panels in spaced apart and offset relationship to each other; a second of said sections substantially identical to the first of said sections and including a first side panel and a second side panel interconnected by an integral flange-shaped rib in spaced apart relationship to each other, said first and second sections being interlocked with each other so that one of the panels of said first section is in continuous relationship with one of the panels of said second sections while disposed in spaced relationship with the other panel of said second section, interlocking means connecting a free edge of one panel of one of said sections with a point of junction between the rib and panel of the other section which is continuous therewith, a leg integral with and extending from the inner surface of a panel of one section, said leg having a hooked-shaped end, and a ridge-shaped extension on the other section, cooperating with the hooked-shaped end of said leg and permanently latching said sections together.

18. The structure defined in claim 17 wherein said ridge-shaped extension is provided with a camming surface for flexing said leg so that said hooked-shaped end can pass over said extension and snap back in latching engagement therewith when said sections are interlocked together.

19. The structure defined in claim 17 wherein said ridge-shaped extension is provided on the rib of the other section and said leg is contiguous with the latter-mentioned rib.

20. The structure defined in claim 17 wherein the opposed spaced side panels of said first and second sections are each provided with a leg integral therewith and extending toward the opposite panel, each leg having a hooked-shaped end, and each rib of each section being provided with a ridge engaging the hooked-shaped end of the leg on the panel of the other section.

21. The structure defined in claim 20 wherein said interlocking means includes a flanged lip extending inwardly along the edge of one panel of one section at an obtuse angle to the latter-mentioned panel and a complementary channel at the point of junction between the rib and panel of the other section, said channel receiving said lip.

22. The structure defined in claim 17 wherein said interlocking means includes providing said free edge of said panel with an inwardly offset portion defining an outwardly facing curved surface and a reversely projecting extension defining an inwardly facing curved surface, and an overhanging lip extending from the end of said rib and having a curved surface facing inwardly and complementary to the first-mentioned curved surface, said rib having an extension with an outwardly facing curved surface complementary to said inwardly facing curved surface.

23. An extrusion for use in assembling a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing continuous wall surfaces by interlocking a plurality of the extrusions together in overlapping relationship with each other, said extrusion including a pair of panel sections adapted to form portions of said spaced apart walls, said panel sections being connected together in spaced and offset relationship by an integral flange-shaped rib extending along an edge of each of said sections, said rib being provided with an outwardly extending ridge on one surface thereof, a leg integral with and extending from the inner surface of one of said panel sections along a free edge of the same, said leg being on the opposite side of the rib from said ridge and having a hooked-shaped end, a flange-shaped lip extending from the free edge of said one panel section at an obtuse angle to the section, and a channel complementary to said flanged lip and formed at a point of junction between the rib said one panel section having said lip.

24. The extrusion of claim 23 including a leg integral with and extending from the inner surface of the other of said panel sections along a free edge of the same, and a ridge extending outwardly of said rib on its surface opposite the surface provided with said first-mentioned rib.

25. The extrusion of claim 23 including a second flange-shaped lip extending from the free edge of the other of said panel sections at an obtuse angle to the section, and a channel complementary to said last-mentioned lip and formed at a point of junction between the rib and the panel section having said last-mentioned lip.

26. The extrusion of claim 25 including a leg integral with and extending from the inner surface of the other of said panel sections along a free edge of the same, and a ridge extending outwardly of said rib on its surface opposite the surface provided with said first-mentioned ridge.

27. The extrusion of claim 26 wherein each of said legs are substantially half the length of said rib and wherein each of said ridges are positioned on said rib at a point substantially midway between said panel sections.

28. The extrusion of claim 23 wherein the free edge of the other of said panel sections is offset inwardly of the same and defines a first outwardly facing curved surface, said free edge having a reversely projecting extension defining a second curved surface facing inwardly of the panel section and wherein a point of junction between the rib and said last-mentioned panel section is provided with an overhanging flanged lip having an inwardly facing curved surface complementary to the outwardly facing curved surface of the offset edge of the last-mentioned panel section and wherein said rib is provided with a flanged extension spaced from and on the same side as said last-mentioned lip, said last-mentioned extension being provided with a curved surface facing outwardly and complementary to the inwardly facing curved surface on said reversely projecting extension.

29. The extrusion defined in claim 28 wherein all of said curved surfaces have a center of curvature on the outer surface of said last-mentioned panel section.

30. An extrusion for use in assembling a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing continuous wall surfaces by interlocking a plurality of the extrusions together in overlapping relationship with each other, said extrusion including a pair of panel sections adapted to form portions of said spaced apart walls, said panel sections being connected together in spaced and offset relationship by an integral flange-shaped rib extending along an edge of each of said sections, said rib being provided with an outwardly extending ridge on one surface thereof, a leg integral with and extending from the inner surface of one of said panel sections along a free edge of the same, said leg being on the opposite side of the rib from said ridge and having a hooked-shaped end, one of said panel sections having its free edge offset inwardly to define a first outwardly curved surface, said offset free edge having a reversely projecting extension defining a second curved surface facing oppositely of said first curved surface, an overhanging flanged lip extending from the edge of the last-mentioned panel section where it is integral with said rib, said lip having an inwardly facing curved surface complementary to the outwardly facing curved surface of the free edge of said last-mentioned panel, and a flange extension projecting outwardly from said rib in spaced relationship to said lip, said extension having a curved surface facing the curved surface of said lip and complementary to the curved surface of the reversely projecting extension of the free edge of last-mentioned panel section.

31. The extrusion of claim 30 wherein the other of said panel sections is provided on its free edge with a flanged lip extending inwardly at an obtuse angle to the plane of the section, and wherein the point of junction between the rib and said other panel section is provided with a channel which is complementary to said flanged lip.

32. An extrusion for use in assembling a hollow wall structure, partition, floor or the like having spaced apart walls with oppositely and outwardly facing continuous wall surfaces by interlocking a plurality of the extrusions together in overlapping relationship with each other, said extension including a pair of panel sections adapted to form portions of said spaced apart walls, said panel sections being connected together in spaced and offset relationship by an integral flange-shaped rib extending along an edge of each of said sections, one of said panel sections having a free edge offset inwardly and defining an outwardly facing curved surface, said offset edge being provided with a reversely extending projection having an inwardly facing curved surface, an overhanging flanged lip extending from the edge of said last-mentioned panel section which is connected to said rib, said lip having an inwardly facing curved surface complementary to the outwardly facing curved surface of the free edge of said last-mentioned panel section, an extension projecting from said rib and having an outwardly facing curved surface facing the curved surface of said lip and complementary to the inwardly facing curved surface of said reversely projecting extension, the other of said panel sections having a free edge portion with a flanged lip extending inwardly at an obtuse angle to the latter-mentioned section, and a channel at a point of junction between the other panel section and said rib, said channel being complementary to said inwardly extending flanged lip.

33. The structure of claim 32 wherein the extrusion is made from metal.

34. A hollow wall assembly having spaced apart walls with oppositely and outwardly facing wall surfaces com-

prising: an elongated extruded L-shaped end section, said end section including a panel forming a portion of one wall and a flange integral with said panel and extending transverse of the same; a plurality of Z-shaped extruded sections; each of said sections including a first panel for forming a portion of one of said walls and a second panel for forming a portion of the other of said walls and a rib integral with and interconnecting said first and second panels in spaced apart and offset relationship to each other; interlocking complementary configurations integral with the edges of the panel and flange of said L-shaped section and integral with the free edge of each panel of each Z-shaped section and the edge of each panel of each Z-shaped section adjacent the rib, and cooperating latching means between the end section and one Z-shaped section and between adjacent Z-shaped sections, the arrangement being such that for assembly the configurations of one Z-shaped section and the complementary configurations on said L-shaped section can be engaged and said latching means actuated upon full engagement so as to hold the one section permanently to said end sections and successive Z-shaped sections being likewise assembled in permanent fixed relationship to each other.

35. The structure defined in claim 34 wherein said latching means between sections includes a flange-shaped latching ridge on each of the sections and a flexible flange-shaped latch integral with the other sections, a latch on one section cooperating with an opposed latching ridge on an adjacent section.

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