

May 12, 1942.

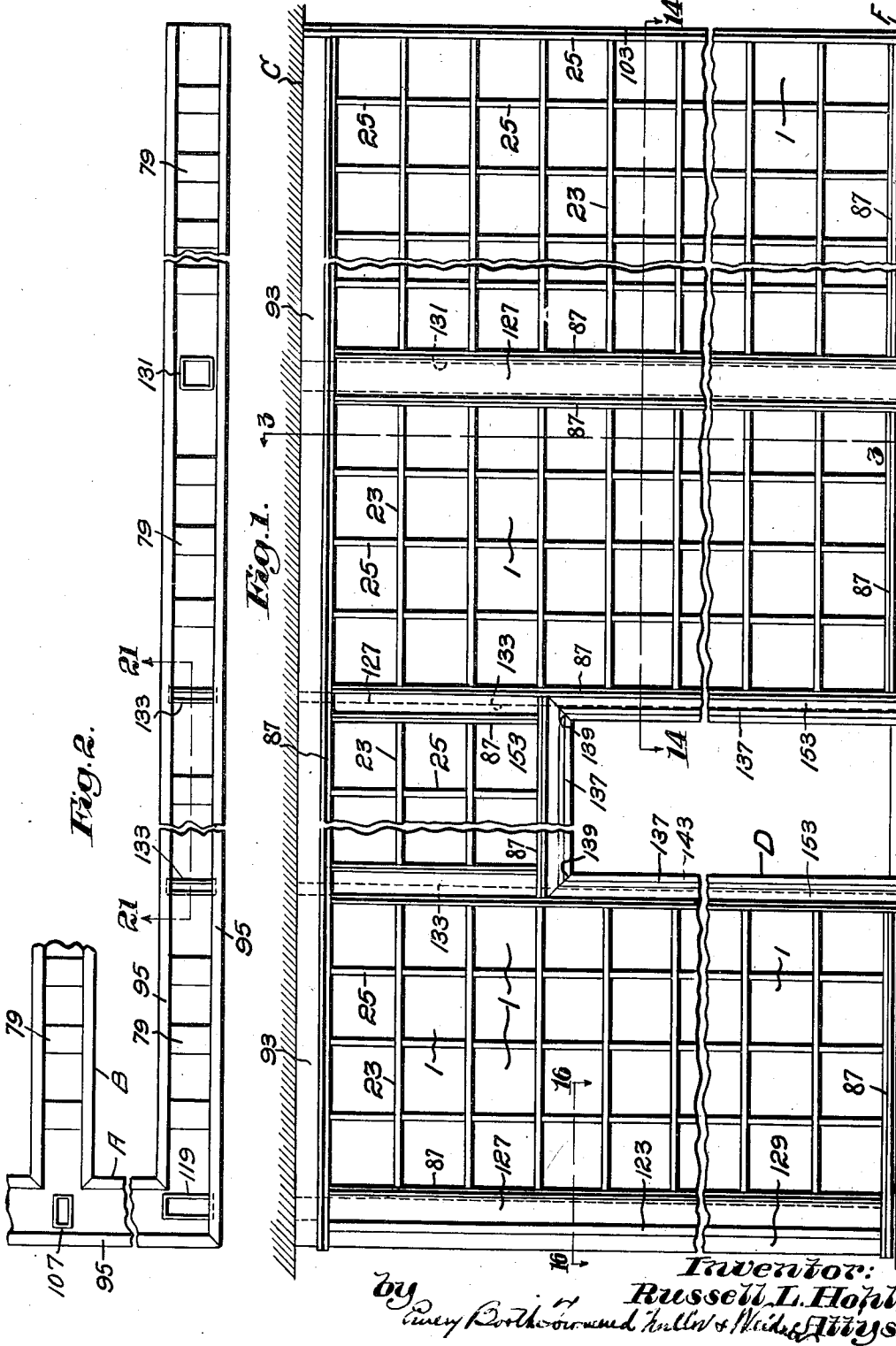
R. L. HOHL

2,282,964

WALL CONSTRUCTION

Filed May 11, 1939.

11 Sheets-Sheet 1



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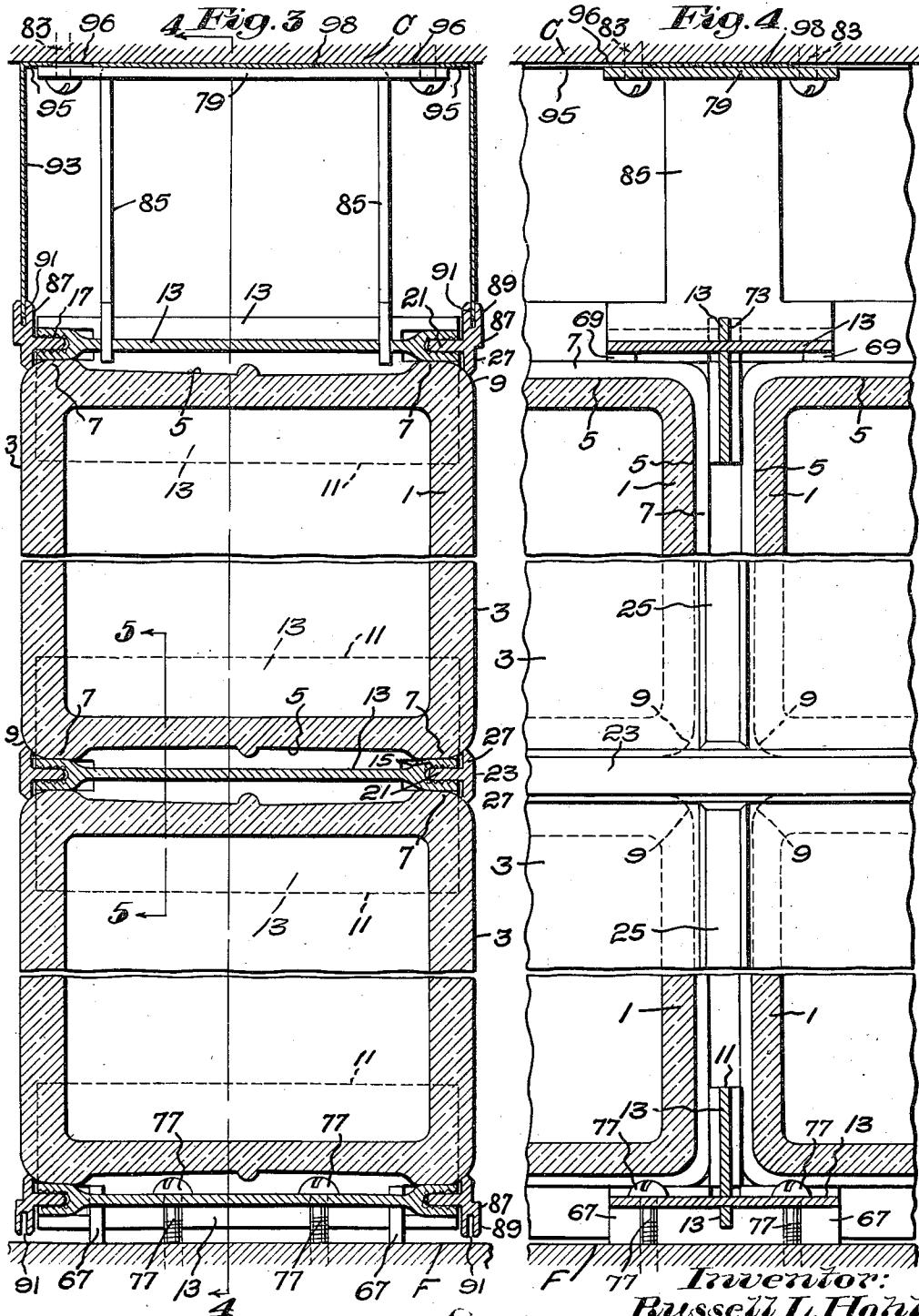
R. L. HOHL

2,282,964

WALL CONSTRUCTION

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11 Sheets-Sheet 2



Inventor:
Russell L. Hohl,
By *Ernest North Townsend Fuller & Widener*
Attys.

May 12, 1942.

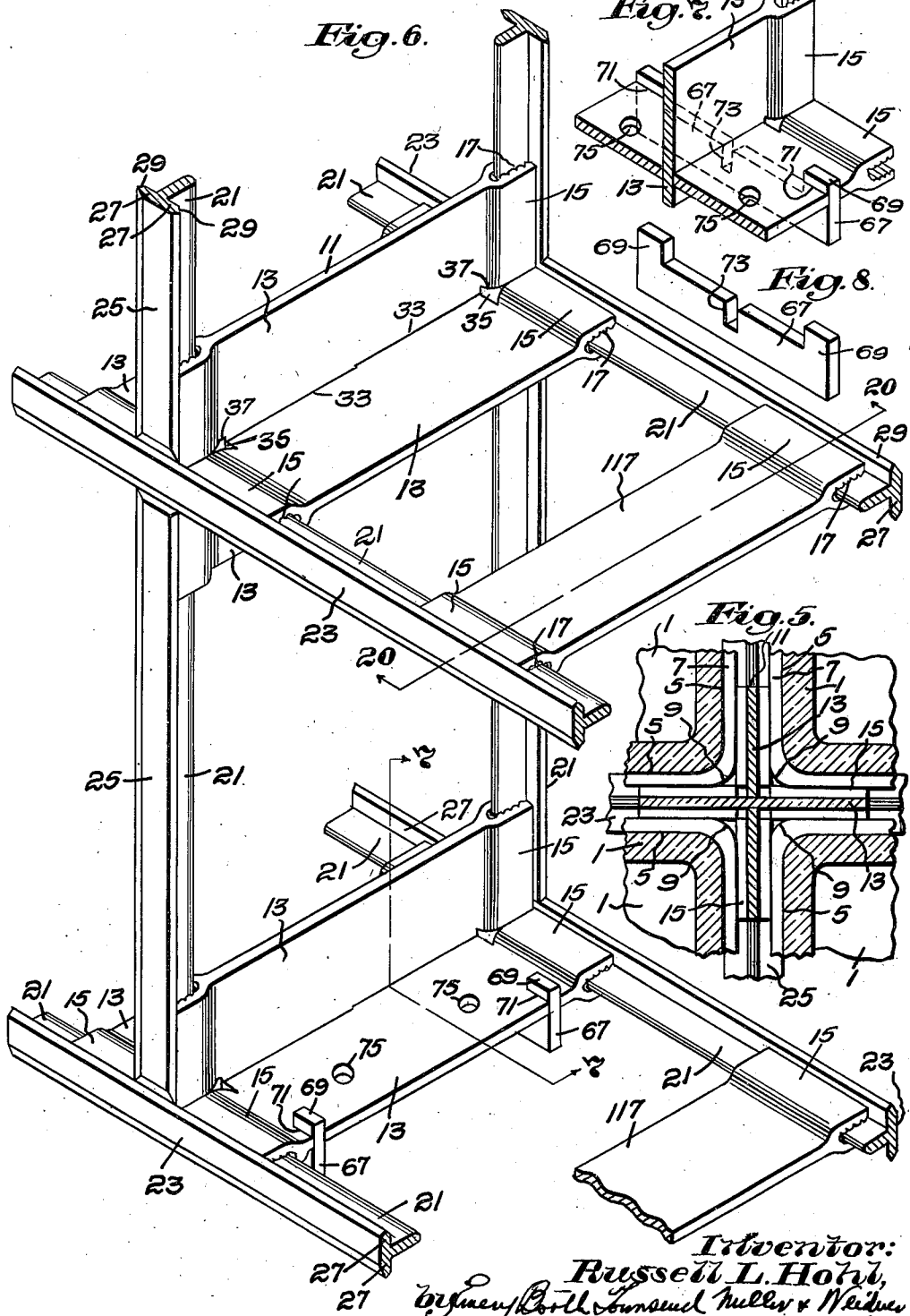
R. L. HOHL

2,282,964

WALL CONSTRUCTION

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11 Sheets-Sheet 3



Inventor:
Russell L. Hohl,
By *Wm. Earl Townsend* *Hubert W. Neider*
Attys

May 12, 1942.

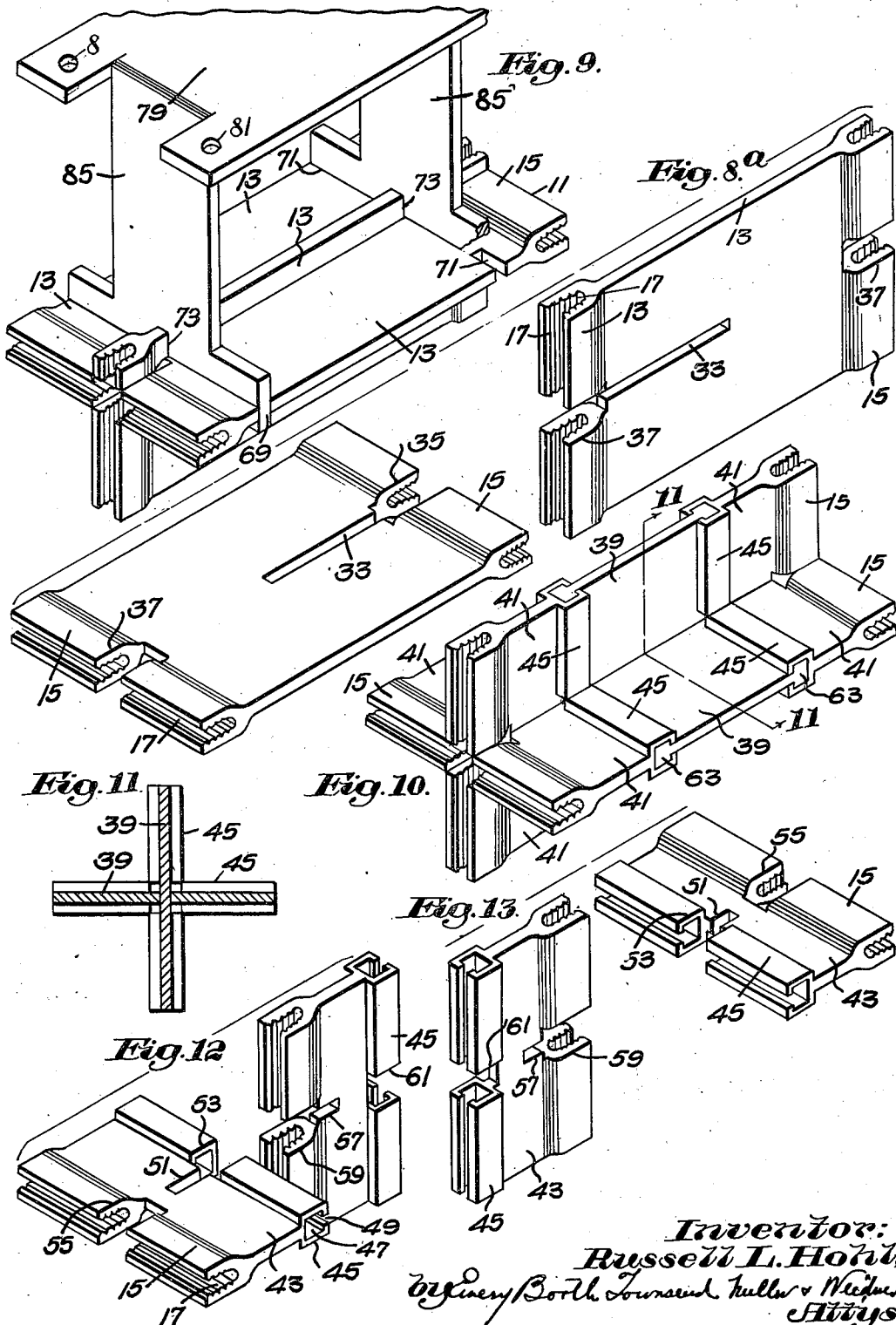
R. L. HOHL

2,282,964

WALL CONSTRUCTION

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11 Sheets-Sheet 4



Inventor:
Russell L. Hohl,
by Gary Borth Townsend Fuller & Widner
Attys.

May 12, 1942.

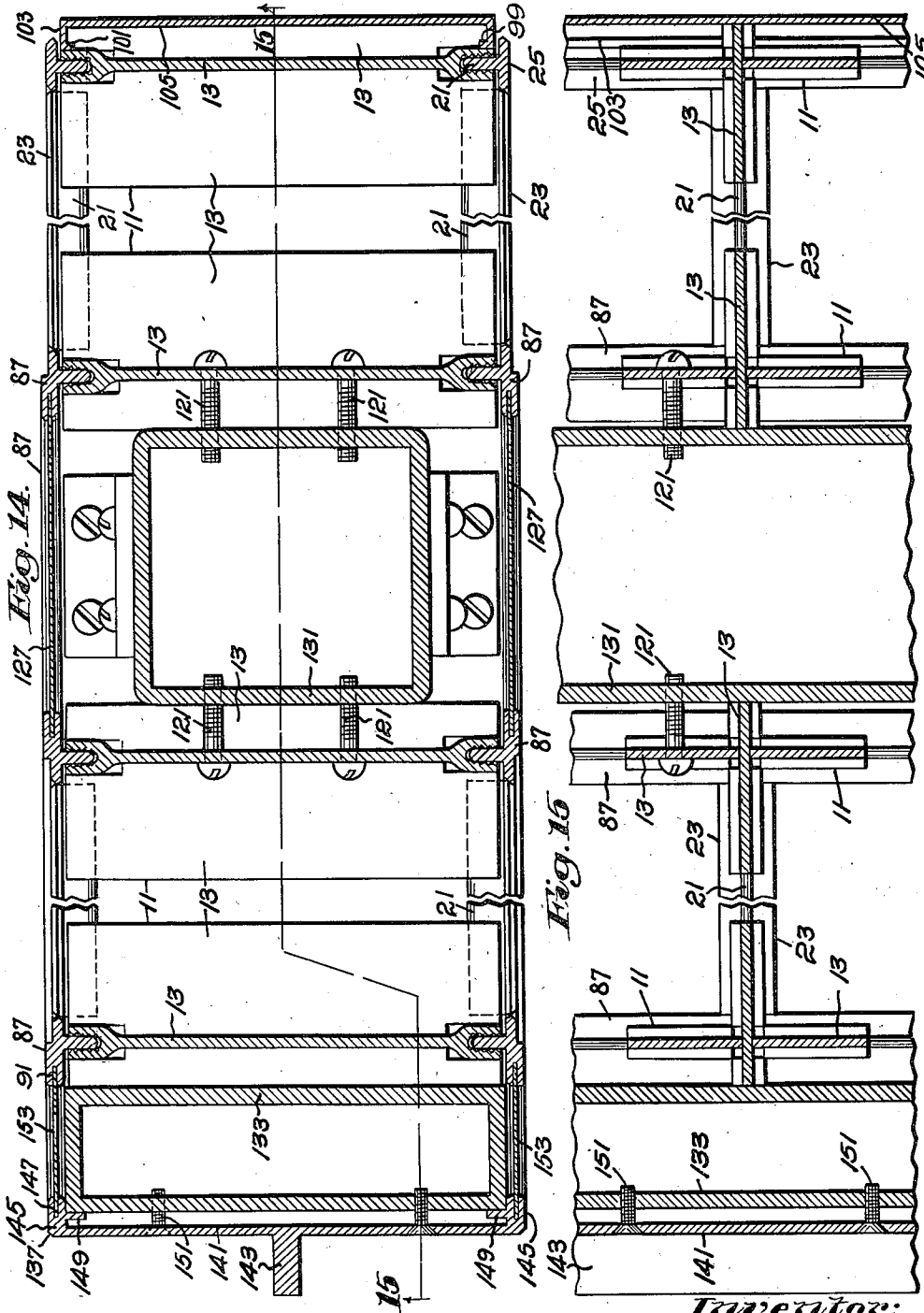
R. L. HOHL

2,282,964

WALL CONSTRUCTION

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11 Sheets-Sheet 5



Inventor:
Russell L. Hohl,
by Emory R. L. Leland, Miller & Wickham
Attys

May 12, 1942.

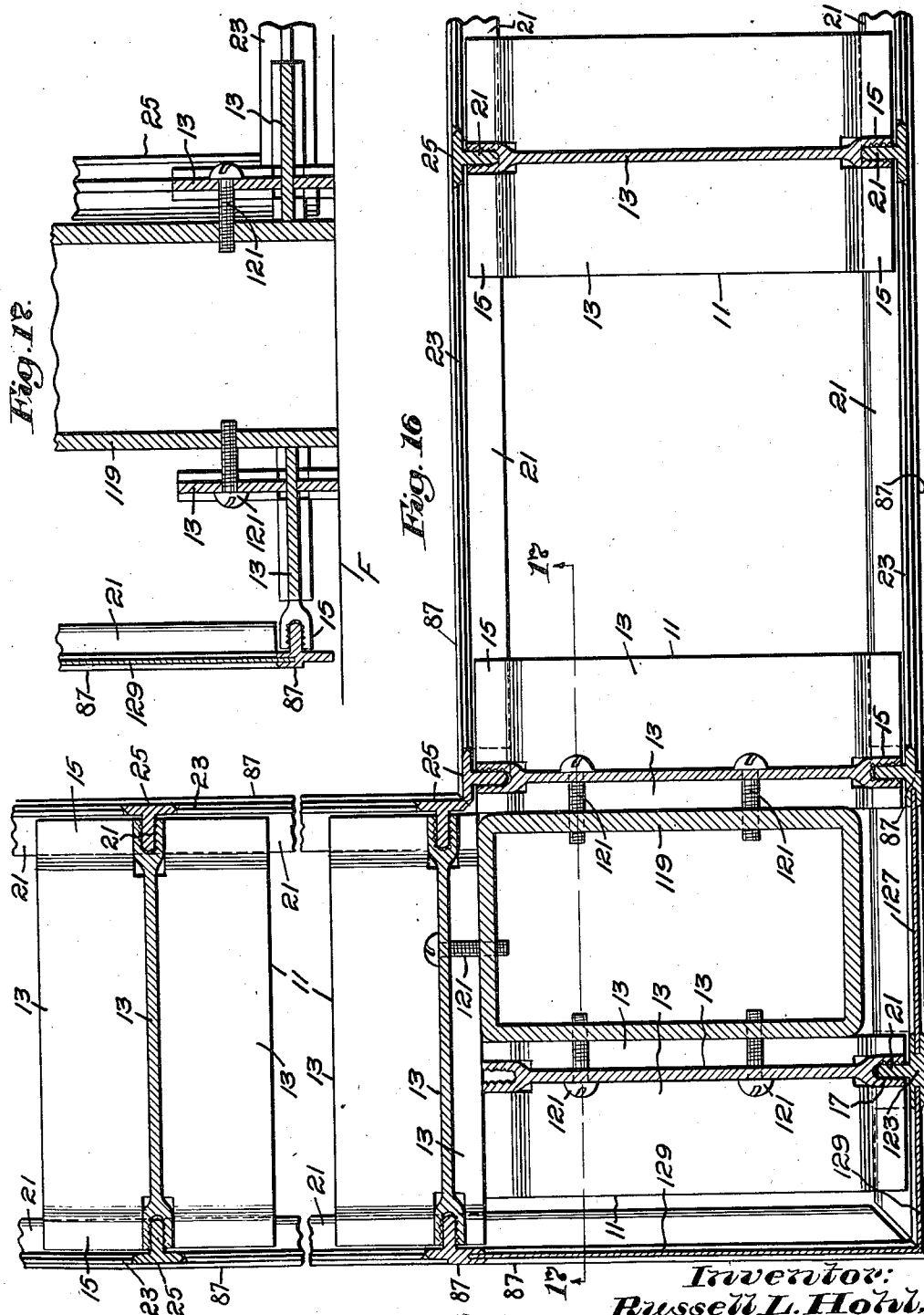
R. L. HOHL

2,282,964

WALL CONSTRUCTION

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11 Sheets-Sheet 6



Inventor:
Russell L. Hohl,
by Emily North Leonard Miller & McInnes
Attys.

May 12, 1942.

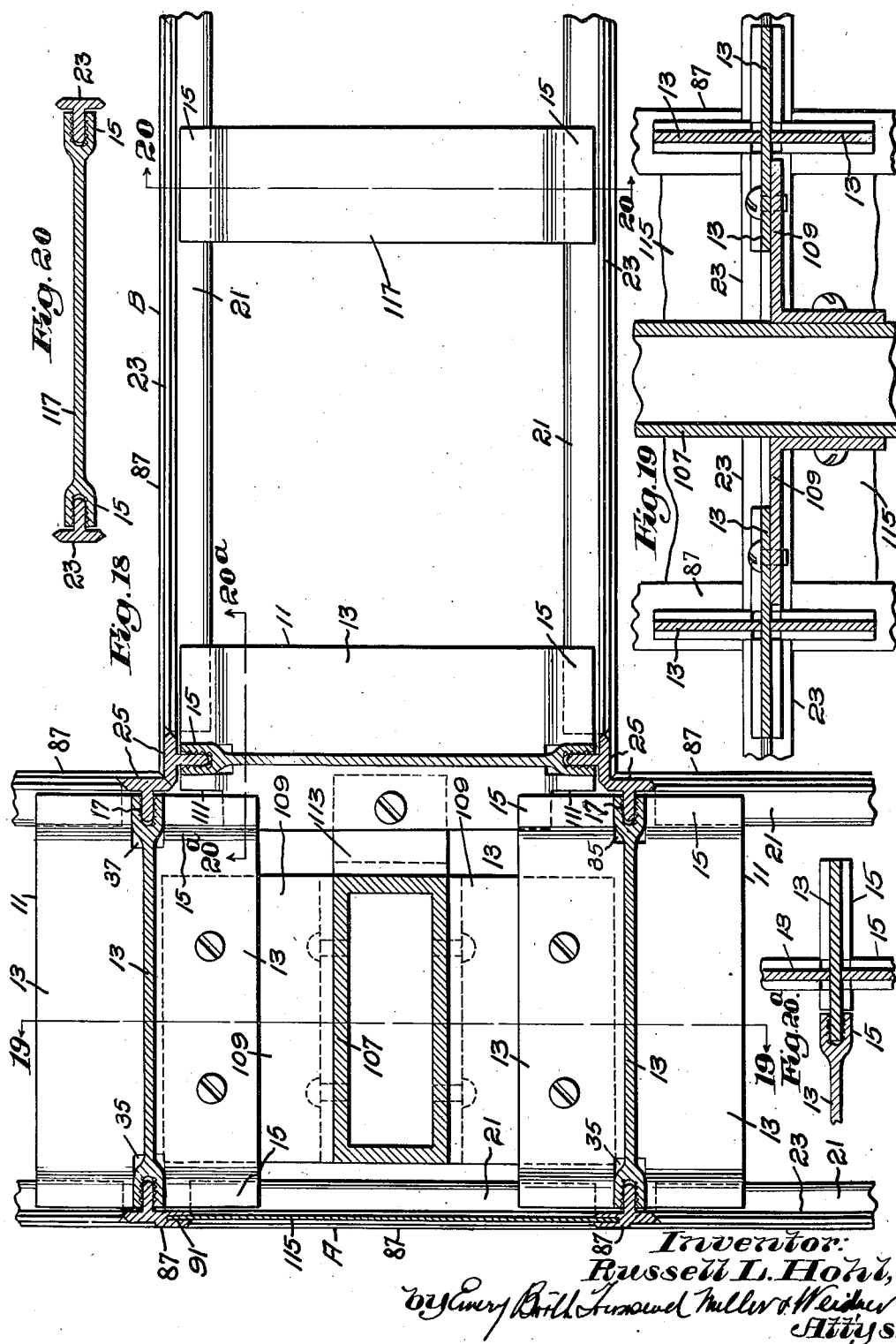
R. L. HOHL

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WALL CONSTRUCTION

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11 Sheets-Sheet 7



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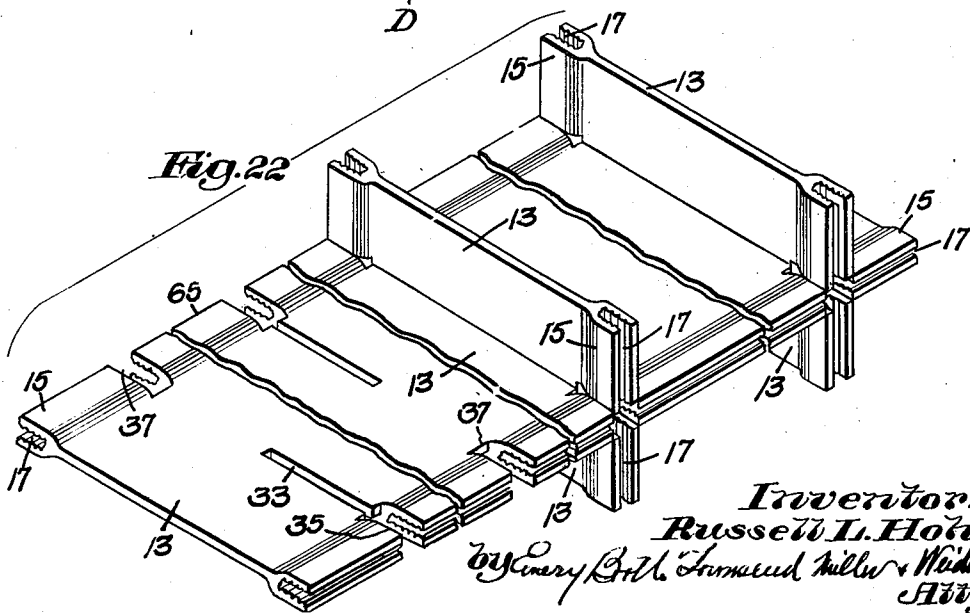
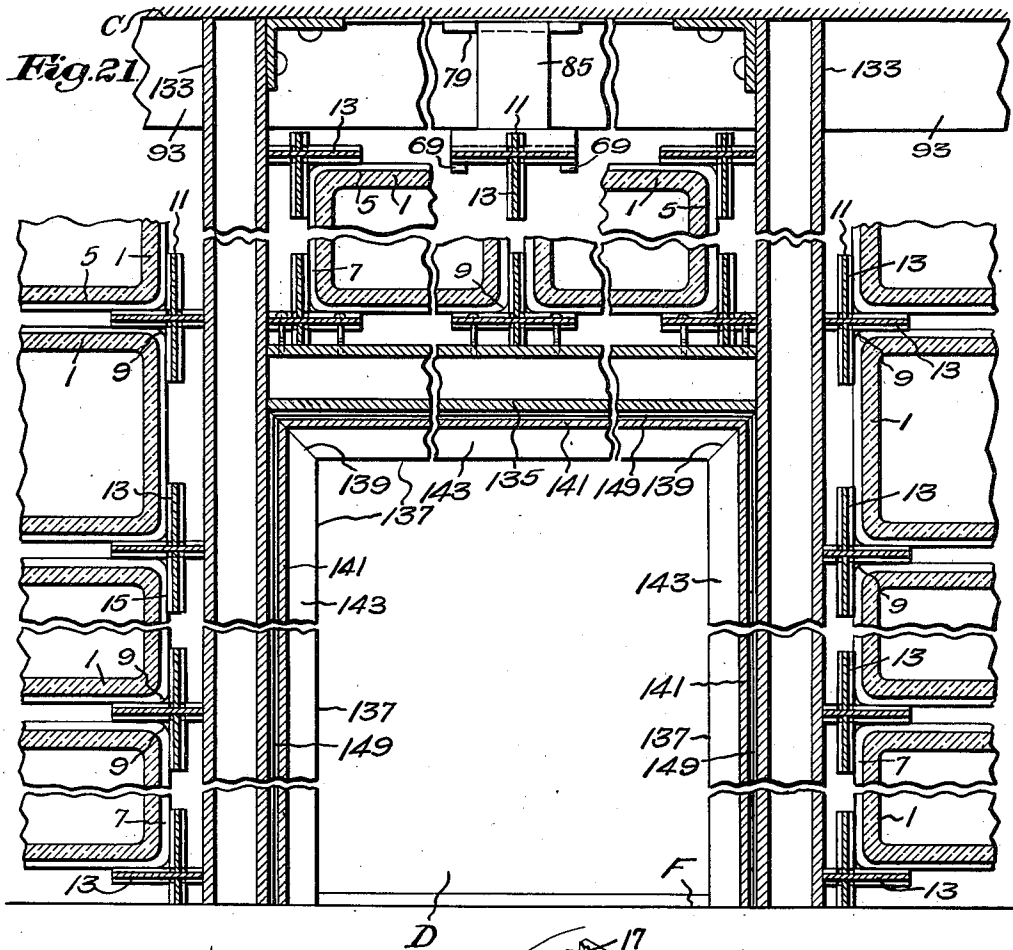
R. L. HOHL

2,282,964

WALL CONSTRUCTION

Filed May 11, 1939

11 Sheets-Sheet 8



Inventor:
Russell I. Howell,
U. Samuel Miller & William
Atty.

May 12, 1942.

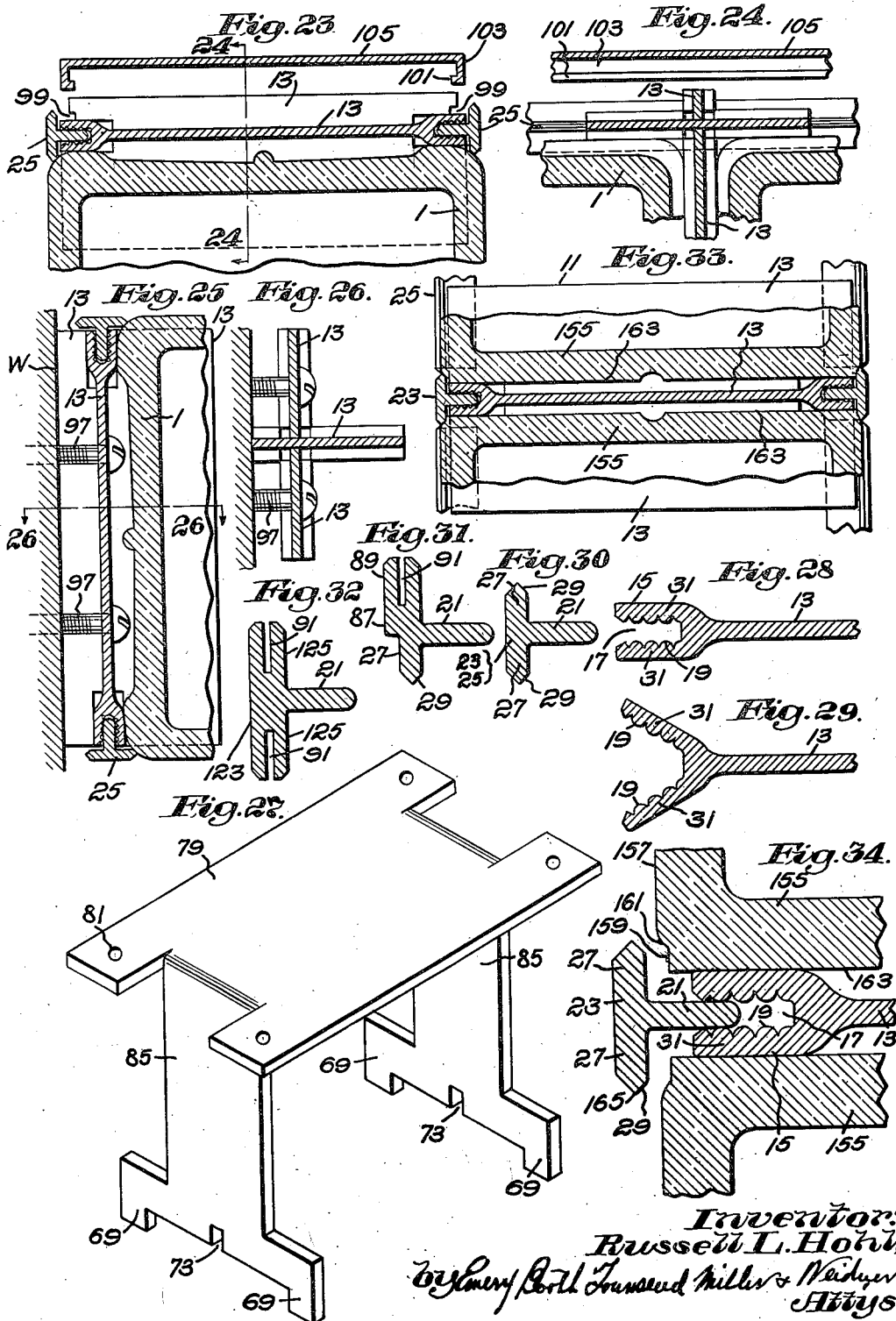
R. L. HOHL

2,282,964

WALL CONSTRUCTION

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11 Sheets-Sheet 9



Inventor:
Russell L. Hohl,
By *James Earl Townsend Miller & Nathan*
Attys.

May 12, 1942.

R. L. HOHL

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WALL CONSTRUCTION

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Fig. 35.

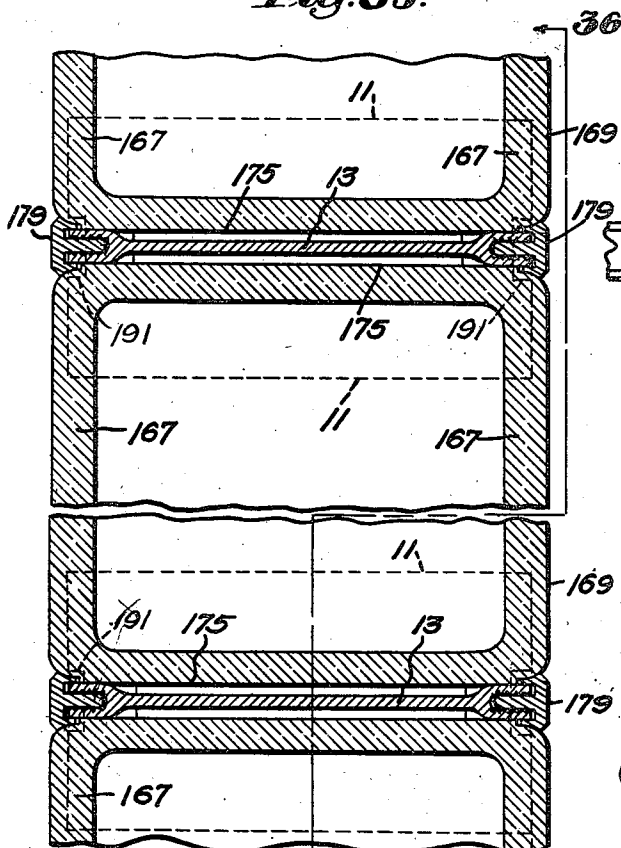


Fig. 36.

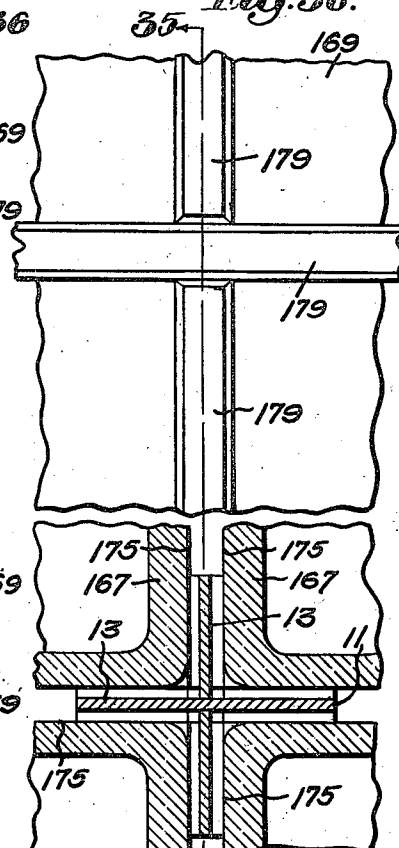


Fig. 37. Fig. 38.

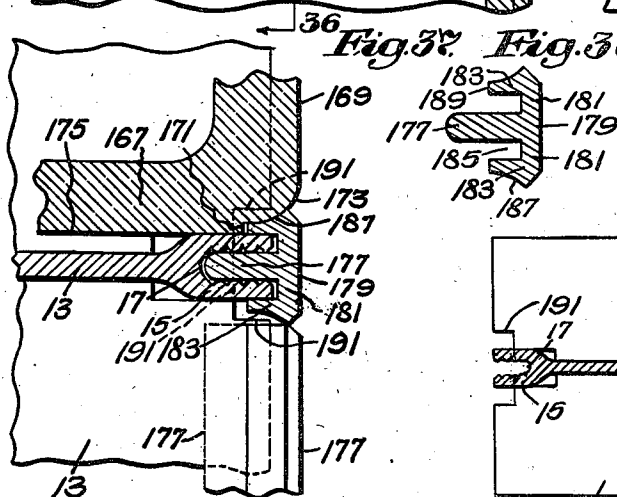
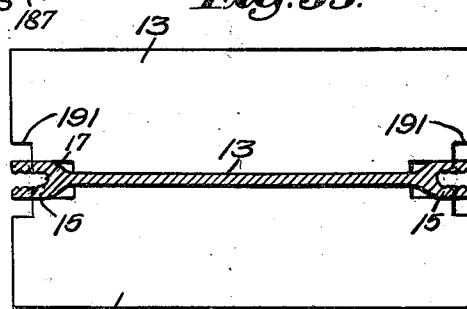


Fig. 39.



Inventor:
Russell L. Hohl
By *James R. L. Hohl* Attorney

May 12, 1942.

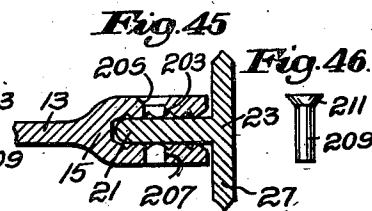
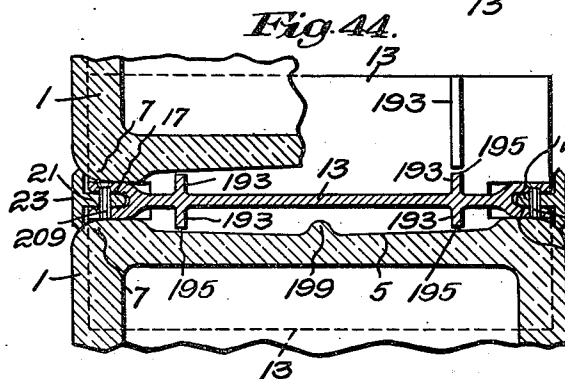
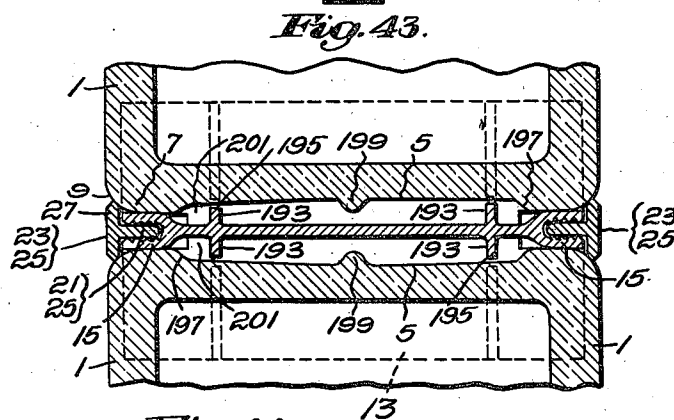
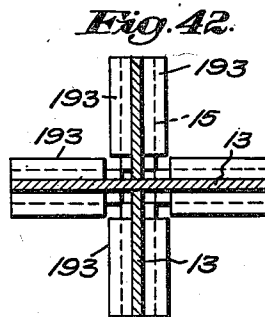
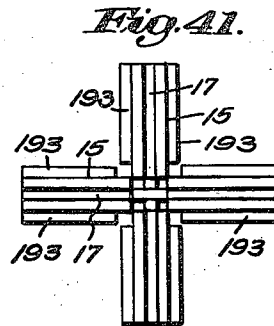
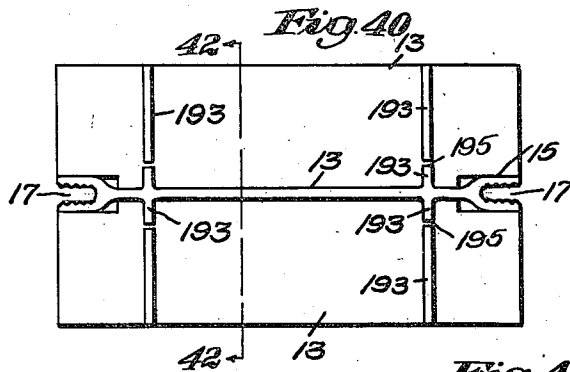
R. L. HOHL

2,282,964

WALL CONSTRUCTION

Filed May 11, 1939

11 Sheets-Sheet 11



Inventor:
Russell L. Hohl,
by *Emory R. L. Leland* Attorney

UNITED STATES PATENT OFFICE

2,282,964

WALL CONSTRUCTION

Russell L. Hohl, New York, N. Y.

Application May 11, 1939, Serial No. 272,976

11 Claims. (Cl. 72-42)

My invention relates to building constructions, and particularly to walls of the type disclosed in my United States Patents Nos. 2,140,997 and 2,141,000, issued December 20, 1938.

The invention, which has among its objects a wall built up of preformed members held in assembled relation by preformed bonding members of improved construction, will be best understood from the following description when read in the light of the accompanying drawings of several embodiments of the invention, the scope of which latter will be more particularly pointed out in the appended claims.

In the drawings:

Fig. 1 is an elevation of a wall constructed according to the invention, with parts broken away;

Fig. 2 is a plan of the wall according to Fig. 1;

Fig. 3 is a section on the line 3-3 of Fig. 1 on an enlarged scale, with parts broken away;

Figs. 4 and 5 are, respectively, sections on the lines 4-4 and 5-5 of Fig. 3;

Fig. 6 is a perspective of a fragment of the framing of the wall of Figs. 1 to 5 on an enlarged scale;

Fig. 7 is a perspective, corresponding to a section on the line 7-7 of Fig. 6, with parts omitted;

Fig. 8 is a perspective of a detail;

Fig. 8a is a detail of one form of the transversely extending member of cruciform cross-section of the framing of the wall according to Fig. 6 with the elements thereof in disassembled relation;

Fig. 9 is a perspective of a further detail of the wall according to Figs. 1 to 4;

Fig. 10 is a perspective of another form of the transversely extending member of cruciform cross-section of the framing of the wall;

Fig. 11 is a section on the line 11-11 of Fig. 10;

Figs. 12 and 13 are, respectively, perspectives of the two marginal portions of the members according to Fig. 10 with the elements thereof in disassembled relation;

Fig. 14 is a section on the line 14-14 of Fig. 1, with parts broken away and the blocks omitted;

Fig. 15 is a section on the line 15-15 of Fig. 14;

Fig. 16 is a section of the corner of the wall according to Figs. 1 and 2 on the line 16-16 of Fig. 1, with parts omitted, parts broken away, and the blocks omitted;

Fig. 17 is a section on the line 17-17 of Fig. 16, with parts omitted;

Fig. 18 is a horizontal section of the intersect-

ing wall portions at the upper left hand corner of Fig. 2, with the blocks omitted, corresponding to a section on the line 16-16 of Fig. 1;

Figs. 19 and 20 are, respectively, sections on the lines 19-19 and 20-20 of Fig. 18;

Fig. 20a is a section on the line 20a-20a of Fig. 18, with parts omitted;

Fig. 21 is a section on the line 21-21 of Fig. 2 on an enlarged scale, with parts broken away and parts omitted;

Fig. 22 is a perspective, with parts broken away, of another form of the transversely extending members of the framing of the wall;

Fig. 23 is a horizontal section of a blank end portion of the wall according to Figs. 1 and 2 with the cover part in disassembled relation, corresponding to a section on the line 14-14 of Fig. 1;

Fig. 24 is a section on the line 24-24 of Fig. 23;

Fig. 25 is a section through the wall according to Figs. 1 to 4 illustrating a modified form of construction where an end or the top or bottom of the wall adjoins a floor, ceiling, post, or the like;

Fig. 26 is a section on the line 26-26 of Fig. 25;

Figs. 27, 28, 29, 30, 31 and 32, respectively, illustrate details of a construction according to the invention;

Fig. 33 illustrates a detail of a joint between blocks of a different construction from those shown by the preceding figures;

Fig. 34 is a fragment of the right hand side of Fig. 33 in partially disassembled relation, on an enlarged scale and with parts omitted;

Fig. 35 is a vertical section of a modified form of wall employing a still further form of blocks, being a section on the line 35-35 of Fig. 36;

Fig. 36 is a section on the line 36-36 of Fig. 35;

Fig. 37 is a fragment of the wall according to Fig. 35 on an enlarged scale, with parts omitted;

Figs. 38 and 39 are, respectively, details of the wall according to Figs. 35 and 36;

Fig. 40 is an elevation of a further modified form of the transversely extending member of cruciform cross-section;

Fig. 41 is an end elevation of the member according to Fig. 40;

Fig. 42 is a section on the line 42-42 of Fig. 40;

Fig. 43 is a transverse section of the wall, showing the joints between two blocks, employing the member according to Figs. 40, 41 and 42;

Fig. 44 is a section corresponding to Fig. 43, with parts omitted, showing a step in the assembly of the wall;

Fig. 45 is a fragment of the assembly, according to Fig. 43, illustrating a step in the operation of assembling the wall; and

Fig. 46 is an elevation of a pin for use in the assembly according to Figs. 43, 44 and 45.

Referring particularly to Figs. 1 to 4, one form of wall according to the invention comprises wall members in the form of blocks 1 arranged in superimposed rows. As best illustrated in Figs. 3 and 4, the blocks, without limitation thereto, may be hollow and of glass. As shown, the blocks have the oppositely disposed lateral faces 3 in the planes of the vertical sides of the wall, and have recessed faces 5 extending transversely of the wall between the faces 3. As shown, the recesses 5 extend around the four transverse faces of the blocks so as to present ribs 7 adjacent the faces 3 extending around the four transverse sides of the blocks, all the edges of the blocks being rounded as indicated at 9. For convenience the surfaces of these rounded edges may be considered as part of the lateral faces 3 of the blocks.

It will be understood, however, that the blocks may be of material other than glass, and need not be hollow, and, if desired, may be relatively thin transversely, for example, but without limitation thereto, slab-like blocks in which the lateral faces 3 are in the order of one and one-half inches apart.

As illustrated, for holding the blocks in assembled relation, transversely extending members 11 are positioned at each of the sets of adjacent transverse edges 9 of the blocks (see Figs. 3 to 6). As shown, the members 11 are of cruciform cross-section, having flattened arms 13 which extend transversely of the wall between the transverse faces 5 of the blocks. At each of its opposite edges each arm 13 has a thickened portion 15 against which the ribs 7 of the blocks rest. As shown, each of the thickened portions 15 is provided with grooves 17 of the radial height of the arm opening on the outer edge face of the latter. As best illustrated in Fig. 28, the opposite walls of the grooves are formed with longitudinally extending beads 19 for augmenting the friction with which these walls grip the tongues 21 (Figs. 3, 6 and 30) of horizontally disposed members 23 and vertically disposed members 25, which tongues are driven into those grooves.

As shown, the members 23 and 25 are provided at one edge of the longitudinally extending tongue 21 thereof with oppositely projecting longitudinally extending flanges 27, the outer edges of the flanges being beveled, as indicated at 29 (Fig. 30), for engaging with the surface portions of the rounded edges 9 of the blocks, as shown in Fig. 3. Preferably the horizontally disposed members 23 are long enough to engage with a plurality of blocks of a row, while the vertically disposed members 25 are of length corresponding to the height of the block, as best shown in Figs. 1, 3, 4 and 6.

The transverse members 11 may consist of elements cut from long bar-like lengths of metal (see Fig. 22) having the cross-section indicated in Figs. 8a, 22 and 28. Preferably these members are extruded to the shape indicated by Fig. 29 to provide at the opposite edge portions of the extrusions the flaring portions 31, after which the margins of the bar-like lengths are subjected to a rolling operation to cause the portions 31 to approach each other so as to provide the thick-

ened portions 15 having the grooves 17 (Fig. 28).

Short lengths may be cut from the bar-like members just described to provide the two elements shown by Fig. 8a. Each element may then be slotted intermediate its length from one edge thereof for part of its width, as indicated at 33 (Fig. 8a). As shown, each of these slots has a wider portion 35 at the thickened portion 15 of the element, which wider portion is of width the thickness of the portion 15, while the narrower portion of the slot is of width the thickness of the intermediate portion of the element. By moving the two members of Fig. 8a toward each other those members may be half-jointed by means of the slots 33, 35 to form the transversely extending member of cruciform cross-section illustrated by Figs. 3, 4, 5 and 6. As illustrated, the thickened portion 15 of each element of Fig. 8a opposite the slot 33 is also provided with a slot 37 of width at least the thickness of the tongue 21 of the members 23 and 25, so that when the elements are half-jointed together the thickened portion 15 of one element will not close the groove 17 in the thickened portion 15 of the other element and prevent reception in the groove of this tongue.

If desired, the transversely extending members of cruciform cross-section may be constructed as illustrated by Figs. 10 to 13. As shown in those figures, the arms of these members are each provided with an insert 39 of material of poor heat conductivity to prevent conduction of heat by the members from one side to the other of the wall, to which inserts are joined the metallic marginal portions 41 of the arms. The metal of which the marginal portions are formed may be short lengths cut from long lengths of extruded bar-like members of the cross-section shown by the elements of Figs. 12 and 13. These bar-like members have webs 43 at one edge of which is formed the longitudinally extending thickened portion 15 having the groove 17, while at its opposite edge they are provided with a longitudinally extending thickened portion 45 presenting a T-slot 47 having the opening 49. By slotting one of each of the elements of Figs. 12 and 13, as shown at 51, 53 and 55, and the others in each case as shown at 57, 59 and 61, the two elements of each figure may be moved toward each other, and by means of the slots may be half-jointed to form the marginal portions having the arms 41 of Fig. 10. The inserts of material 39 may be cut from long bars or strips having the cross-section shown in Fig. 10 so as to provide at each edge of the strip a longitudinally extending T-bead 63 for reception in the T-slots of the thickened portions 45 of the marginal portions of the metallic members of Figs. 10 and 11.

Instead of having separate transversely extending members 11 at each of the sets of adjacent transverse edges 9 of the blocks of the wall, the construction employed may be that shown by Fig. 22. As there shown, there is provided an elongated member 65, formed of a long length of the bar-like extrusions from which the elements of Fig. 8a are cut. As shown, this member 65 is provided at spaced points along the length with the transverse slots 33, 35 and 37, so that elements formed as shown in Fig. 8a may be half-jointed with the member 65 to form the vertical arms 13 projecting from opposite sides of the member 65, which arms are spaced apart a distance the length of a block.

The wall may be built up by use of the members according to Fig. 22 by starting with one of

those members at the bottom of the wall and fitting the blocks to it. After a course of blocks is laid another of these members may be placed upon the top of that course and the next course built up on the member so positioned, the operation being repeated until the wall is of the desired height.

As shown in Figs. 3, 4, 7 and 8, the lower vertical arms 13 of the transversely extending members 11 at the bottom of the wall are cut away to clear the floor F, and those members are each supported by a pair of blocks or plates 67. The plates 67, as clearly shown in Fig. 8, are provided at each end with upstanding lugs or tabs 69 which fit into notches 71 formed in the transverse edge portions of the horizontal arms 13. Intermediate its width the plate 67 is formed with a notch 73 which receives the lower vertical arm 13. In this way the plates 67 are locked against movement in a horizontal plane relative to the lower transverse members 11. The horizontal arms 13 may be provided with perforations 75 (Fig. 7) through which may extend suitable fastener members 77 (Fig. 3) for securing the lowermost members 11 to the floor.

As shown in Figs. 3, 4, 9 and 27, for securing the wall to the ceiling C the bracket members illustrated by Fig. 27 are provided. These bracket members have base portions 79 provided with perforations 81 through which may be passed suitable fasteners 83 (Figs. 3 and 4) for securing the bases to the ceiling. Each base 79 carries spaced downwardly projecting arms 85 at the lower end of which are provided tabs 69 and slots 73 like those on the plates 67 at the bottom of the wall. The horizontal arms 13 at the top of the wall as shown are formed with notches 71 the same as the horizontal arms at the bottom of the wall, these notches receiving the tabs 69, while the upper shortened vertical arms 13 at the top of the wall are received in the slots 73. In this way the upper transversely disposed members of cruciform cross-section may be rigidly secured to the ceiling.

In place of the horizontal block engaging members 23 somewhat similar members 87 (Figs. 3 and 31) may be provided for engaging the upper edge portions of the lateral faces of the blocks at the top of the wall. These members 87, as shown, have the tongues 21 and lower flanges 27 like the members 23 and 25. The upper flanges 89 for the members 87 however are thicker, and are provided with longitudinally extending slots 91. As shown in Fig. 3, the slots 91 of the opposite members 87 receive the lower edge portions of sheet metal members 93 for closing the space between the top of the upper blocks and the ceiling. These members 93, as shown, are provided with flanges 95 inserted in the cracks 96 between the base 79 and the ceiling, suitable spacer plates 98 being positioned between the bases and the ceiling for forming the cracks. The members 93 preferably have sufficient resiliency to permit their lower edge portions to be inserted in the slots 91 after the tongues 21 of the members 87 are driven into the adjacent grooves 17 of the horizontal arms 13 of the members 11, after which the flanges 95 may be forced into the cracks 96.

If desired, the construction shown at the top of the wall may be employed at the bottom of the wall. Further, if desired, the plates 67 at the bottom of the wall may be of greater height than as shown, so as to hold the lower course of blocks well above the floor. In either case sheet metal

members similar to the members 93 at the top of the wall may be secured to the opposite members 87 at the bottom of the wall and to the floor to close the space thereat, the members 93 in such case serving as base-boards, and the construction providing a conduit beneath the wall for wiring and the like.

Where the wall according to the invention abuts with the wall, post, or other vertically disposed portion of the building the adjacent horizontal arms 13 may abut with the surface of that portion, as shown in Figs. 25 and 26, and each of the vertical arms 13 may be perforated and secured to such portion by suitable fasteners 97.

As will be obvious, any space at the top, bottom or edges of the wall, or elsewhere between the wall and a fixed part of the building, may, if desired, be grouted with cement or the like to close the space between the wall and that part.

Where the wall has a blank end, as indicated at the right hand side of Figs. 1 and 14, the adjacent vertical block engaging members 25 may extend the height of the wall, as shown in Fig. 1, and the adjacent shortened horizontal arms 13 may be provided at each side with notches 99 (Figs. 14 and 23). Into these notches may be snapped the longitudinally extending beads 101 projecting inwardly from the flanges 103 of the cover members having the webs 105, the webs 105 of these cover members having sufficient resiliency to permit this action.

Where two lengths of wall A and B intersect, as shown at the upper left hand corner of Fig. 2, the construction may be as shown in Figs. 18 to 20. Referring to these last mentioned figures, conveniently a rigidly secured post 107 is placed in the space bounded by the four planes of the sides of the two wall lengths, and each adjacent horizontal arm 13 of the transversely extending members 11 of the wall length A forming the base of the intersection may be secured to the post by means of suitable brackets 109. Conveniently, the thickened portions 15 of the adjacent horizontal arms of the transversely extending members 11 of the wall length B are cut away, as indicated by the notches 111 (Fig. 18), and the corner portions of the notched arms are inserted in the grooves 17 in the thickened portions 15 of the adjacent horizontal arms of the members 11 of the wall length A. In this way assurance is had that the upper and lower edges of the blocks of all the three wall sections abutting with the post will be in alignment, and one length of wall will be secured to the other. For further securing these intersecting lengths of wall to each other the adjacent horizontal arms of the wall length B may also be secured to the post by brackets 113.

The vertical members 25 at the intersection of the two wall lengths A and B preferably extend substantially the full height of the wall, as likewise do the vertically positioned members 87 opposite the members 25. As shown, the members 87 support panels 115 preferably in the form of thin resilient metal plates extending the height of the wall, the edge portions of the plates being received in the slots 91 of the members 87.

As shown in Figs. 18 and 20, and also in Fig. 6, members 117, cut from the lengths from which the arm portions 13 of the transverse members 11 are cut, may be placed intermediate the lengths of blocks for further tying together the

horizontal wall engaging members 23, or, if desired, the vertical wall engaging members 25.

The framing for a corner of the wall may be as shown in Figs. 16 and 17. As illustrated, a rigidly secured vertical post 119 is placed at the corner of the wall between the planes of the opposite side faces of the wall. The horizontal arms 13 of the transversely extending members 11 adjacent the post are, as shown, shortened, and abut with the post, and the vertical arms 13 are secured to the post by means of suitable fasteners 121. The lengths of these shortened arms 13 preferably are such as to permit the adjacent members 25, which preferably extend substantially the full height of the wall, to abut with each other, as shown in Fig. 16.

As shown, at one side of the post 119, just referred to, are secured transversely extending members 11 for supporting an adjacent vertically extending member 123, more fully illustrated in Fig. 32, and horizontally positioned members 87 at the top and bottom of the wall. As shown, the member 123 has a tongue 21 for reception in the grooves 17 of the vertical arms 13, which tongue at one edge thereof carries oppositely projecting flanges 125, each of which is provided with one of the grooves or slots 91. Supported by this member 123 and the adjacent vertical member 87 on the same face of the wall is a cover panel 127. Supported by the same member 123 and the adjacent vertical member 87 on the outer face of the other section of the wall is a bent cover plate or panel 129. The lower and upper edges of the panels 127 and 129 are supported by the members 87 at the top and bottom of the wall. The panels 127 and 129 preferably are of resilient sheet metal, and finish the adjacent portions of the wall.

Where a long length of wall needs bracing, suitable posts 131 may be placed along its length, as indicated in Figs. 1, 2, 14 and 15. The transversely extending members 11 at opposite sides of these posts may be secured thereto and the spaces between those members covered by use of the block engaging members 87 and panels 127, as described in connection with Figs. 16 and 17.

Where the wall has a door opening D (Figs. 1 and 21) suitably secured vertical posts 133 extending from the floor F to the ceiling C may be placed at each side of that opening, as indicated in Figs. 1, 14, 15 and 21. Above the opening may be placed a transverse member 135, of the same cross-section as the posts 133, to which latter opposite ends of the transverse member may be secured in any suitable way, say by welding. The section of the wall above the door opening as shown is supported on the transverse member 135, as will be clear from Figs. 1 and 21. The horizontal arms 13 of the wall sections at opposite sides of the door opening preferably abut with the posts 133, but preferably are not secured thereto, so that jars imparted by slamming the door will not be transmitted to those sections.

The door jamb sections, indicated in their entirety at 137 (Figs. 1 and 14), are conveniently lengths cut from elongated members preferably formed as extrusions. These sections, which preferably are mitered at the corners of the door opening as indicated at 139 (Figs. 1 and 21), have webs 141 carrying the longitudinally extending door jamb flanges 143. As shown, the webs 141 at opposite edges thereof are provided with flanges 145 preferably spaced such distance apart as to permit the sections to fit over opposite sides of the posts 133 and transverse member 135.

The flanges 145, each of which is provided with longitudinally extending slots 147, as shown are provided on their opposite sides with longitudinally extending flanges 149 for engaging those sides of the posts 133 and transverse member 135 which are opposite the web 139 of the section, the latter being secured to these posts and member by suitable fasteners 151. As shown, the spaces at opposite sides of the posts 133 adjacent the plane of the wall are closed by resilient sheet metal panels 153 respectively carried at opposite edge portions thereof by insertion of those portions in the slots 147 and 91 of the adjacent flanges 145 and members 87.

The block engaging members 23, 25 of Figs. 1 to 6 and 30 may also be employed with blocks 155 of the type shown in Figs. 33 and 34. These blocks have the lateral faces 157, each of which faces about its four edge portions is recessed to provide narrow surfaces 159 connected to the intermediate portion of the face by curved surfaces 161 (Fig. 34), the four transverse faces 163 of the block being substantially flat. When the tongues 21 of the members 23 or 25 are driven into the grooves 17 of the arms 13 either or both the surfaces 159 and 161 will be contacted by the flanges 27 of those members, or only the edges 165 of those flanges will contact with the surfaces 161, depending upon the particular shape of the edge portions of the block.

When blocks 167 of the type shown in Figs. 35, 36 and 37 are employed, the construction is preferably as shown in those figures. Each lateral face 169 of the blocks illustrated is deeply recessed about its four edges to provide surfaces 171 connected to the intermediate portion of the lateral face by curved surfaces 173, the four transverse surfaces 175 of the block being substantially flat. These transverse surfaces rest upon the thickened portions 15 of the arms 13. Driven into the grooves 17 of the arms are the longitudinally extending tongues 177 of members 179. As shown, these tongues at their outer edges have oppositely projecting longitudinally extending flanges 181, the latter at their outer edges having the portions or flanges 183 parallel with the tongue 177 to provide grooves 185, the outer sides of the flanges 183 being recessed as shown at 187. When the tongues 177 are driven into the grooves 17 the surfaces of the recesses 187 on the flanges 183 will contact with the surfaces 173 of the blocks, the surfaces of the recesses 187 preferably having a shape adapting them to fit said surfaces 173, and the portions of the thickened parts 15 of the arms 13 at opposite sides of the grooves 17 thereof enter the grooves 185 of the members 179. The construction is such that, if the blocks are misshapen to such an extent as to prevent the surfaces of the recesses 187 of the members 179 from contacting with the surfaces 173 of the blocks, the end surfaces 189 of the flanges 183 will contact with the surfaces 171 of the blocks. As will be clear from Figs. 37 and 39, the outer edge of each of the arms 13 of the transversely extending members is notched adjacent the portions 15 of the other arms, as shown at 191, so that the flanges 183 of the members 179 may clear those portions.

According to the modification illustrated by Figs. 40 to 43, the arms 13 of the transversely extending members are formed with spaced raised beads 193 at each of opposite sides thereof intermediate the thickened portions 15. The outer edges 195 of these beads lie beyond the planes of the lateral surfaces of the thickened portions

15, so that the beads may cooperate with the shoulders 197 on the blocks and those presented by the opposite sides of the beads 199, if the latter are present on the blocks, to prevent accidental transverse shifting of the blocks as they are being placed in the wall. These beads 193 also provide dams for preventing passage of water from one side of the wall to the other, and further provide dams for mastic or other caulking if placed in the spaces 201 between the blocks and the arms 13.

The beads 193 are preferably formed integrally with the arms 13, and conveniently may be in the form of longitudinally extending members on the elongated bars from which the arms are cut, which bars, as hereinbefore mentioned, are preferably formed by extrusion.

For further securing the flanges 25 of the horizontal caps 23 in the grooves 17 of the arms 13 of the transversely extending members of cruciform cross-section, the thickened portions 15 of the arms at one side of the grooves 17 may be formed with drilled holes 203 (Fig. 45), preferably countersunk at their outer ends as shown at 205, and the thickened portions at the opposite side of the grooves with drilled holes 207 aligned with the holes 203. After a course of blocks is laid, and the cruciform members are positioned at the tops of those blocks, the flanges 25 of the caps may be driven into the horizontally positioned grooves 17 before the next course of blocks is laid, whereupon using the holes 203 as centers holes may be drilled through the flanges 25 in alignment with the holes 203 and 207, and in those aligned holes may be inserted pins 209 having flat heads 211, as shown in Fig. 44, after which the next successive course of blocks may be laid, the blocks of that course preventing withdrawal of the pins. Although the construction just described is illustrated in connection with the cruciform members according to Figs. 40 to 42, it will be understood that the same construction may be employed with the other modifications of the cruciform members hereinbefore described.

It will be understood that, within the scope of the appended claims, wide deviations may be made from the forms of the invention shown without departing from the spirit of the invention.

I claim:

1. A wall having, in combination, blocks arranged in a plurality of superimposed rows and having opposite lateral faces forming the opposite sides of the wall; means extending through the wall at the sets of adjacent transverse edges of the blocks holding their transverse faces in spaced relation and presenting, adjacent each side of the wall, grooves opening outwardly of the wall at each side thereof and extending away from the transverse edge of each of the blocks of each of said sets in the directions of the two adjacent lateral edges of the block, and means received by and secured in said grooves and spanning the spaces between the blocks in overlapping engaging relation with the latter for holding the blocks in assembled relation.

2. A wall according to claim 1 in which the means at the sets of adjacent transverse edges of the blocks is constituted by a separate member at each of said sets, that member being of cruciform cross-section and having flattened arms spacing the transverse faces of the blocks, each of opposite ends of each of which arms is provided with one of the grooves, the means received by and secured in said grooves extending

from each groove at the end of each member to that of an adjacent member for tying said members together.

3. A wall according to claim 1 in which the means at the sets of adjacent transverse edges of the blocks comprises flattened members positioned between adjacent rows and common to a plurality of blocks of said rows, those member carrying flattened members positioned between the blocks of said rows, the first and second mentioned members having said grooves, the means received by the grooves of the second mentioned members extending from those grooves to the grooves of the second mentioned members of adjacent first mentioned members.

4. A wall having, in combination, wall members of which the wall is built up, each of said members having a recessed edge portion opposed to a like portion of another member, the recesses forming outwardly facing shoulder surfaces inwardly of the outer faces of said members adjacent the transverse faces of said members, which shoulder surfaces are connected by other outwardly facing shoulder surfaces to the outer faces of said members, and means for retaining said members in assembled relation comprising parts spacing said members and having means for attachment thereto of other parts provided with inwardly facing shoulder surfaces cooperating with the outwardly facing shoulder surfaces of said members.

5. A wall according to claim 4 in which the means for retaining the members in assembled relation comprises a flattened part between the transverse faces of said members having a groove opening outwardly of the wall adjacent the outer faces of said members, and a separate part having a tongue received by and secured in said groove carrying oppositely projecting flanges on which are formed the inwardly facing shoulder surfaces, said flanges being formed with grooves for receiving the edge portions of said flattened part at opposite sides of the groove therein.

6. An elongated member having a longitudinally extending flattened web provided with thickened lateral edge portions, which latter are formed with longitudinally extending grooves opening on the edges of said member, said member also being provided with spaced slots extending transversely thereof from opposite sides for part of its width, and like shorter members each having a slot extending transversely thereof from one side for a portion of its width, the last mentioned members being severally half-jointed to the first mentioned member by means of said transversely extending slots.

7. A wall comprising a longitudinally extending section and a laterally intersecting section, said sections being built up of wall members, means for holding the wall members of said sections in assembled relation comprising flattened members provided with outwardly opening grooves adjacent each side of the sections of the wall, wall member engaging means having tongues received by and secured in said grooves, the flattened members of said intersecting section at its end adjacent said longitudinally extending section being received by and secured in the adjacent grooves of the flattened members of said longitudinally extending section.

8. A wall according to claim 7 in which a post is positioned in the space bounded by the intersecting planes of the sides of the two wall sections, and the flattened members are secured to said post.

9. A wall having, in combination, superimposed members of which the wall is built up, means for holding said members in assembled relation comprising horizontally disposed parts between said members, which parts at the end of the wall project therefrom, the opposite edge portions of said parts at the projecting portions thereof at the end of the wall being formed with notches, and an elongated finishing cover for the end of the wall having cooperating portions adapted to be received in said notches for securing said cover to said parts.

10. An elongated shape for retaining pre-formed blocks of a wall in assembled relation comprising a flattened bar-like member having outwardly opening longitudinally extending relatively deep grooves in its opposite edges portions, and having, at each of opposite sides there-

of between said edge portions, spaced longitudinally extending beads.

11. An elongated shape for retaining pre-formed blocks of a wall in assembled relation comprising a flattened bar-like member having longitudinally extending thickened portions at each of opposite edges thereof, each of said thickened portions having formed therein a relatively deep groove extending longitudinally of said member and opening outwardly on the adjacent edge thereof; said member at each of opposite sides thereof having, between said thickened portions, spaced longitudinally extending beads of such height as to cause their outer edges to be positioned beyond the lateral surfaces of said thickened portions.

RUSSELL L. HOHL.