

May 4, 1943.

O. M. STOLZ ET AL.

2,318,022

FABRICATED HOUSE

Filed July 5, 1940

2 Sheets-Sheet 1

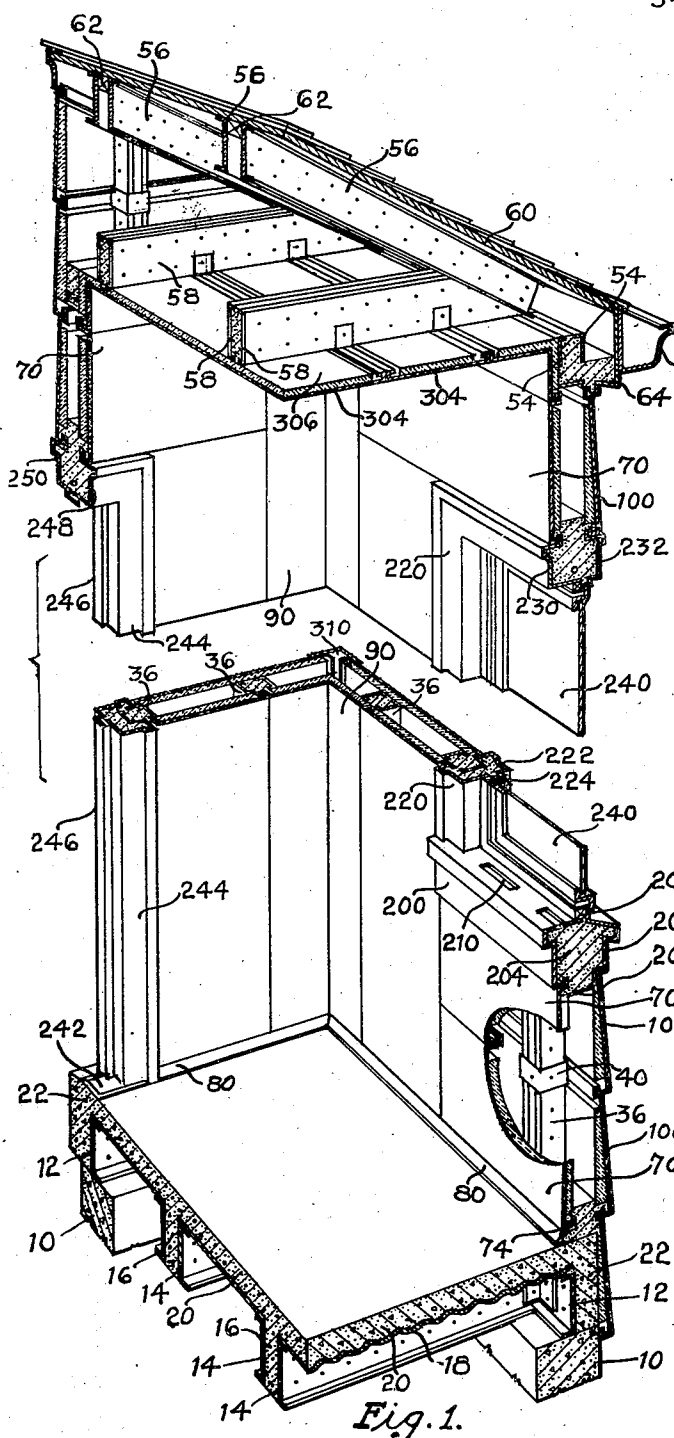
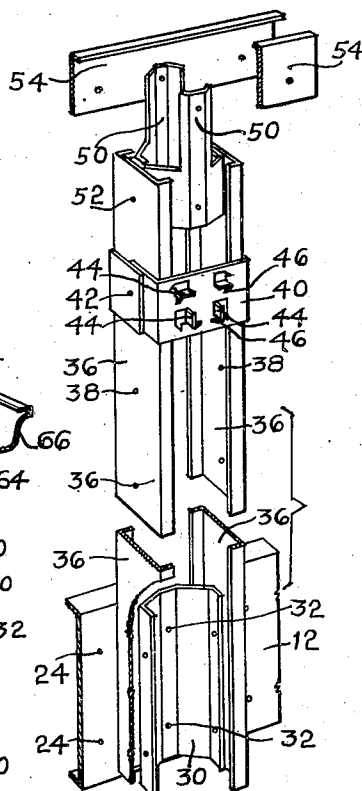


Fig. 2.

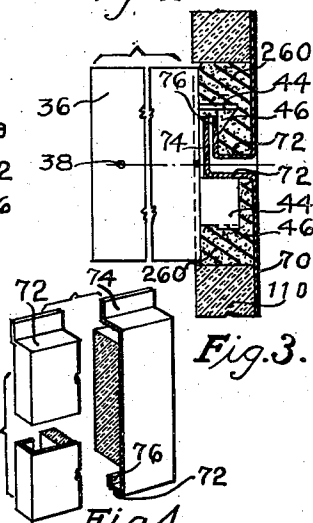


Fig. 3.

Fig. 4.

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2 Sheets-Sheet 2

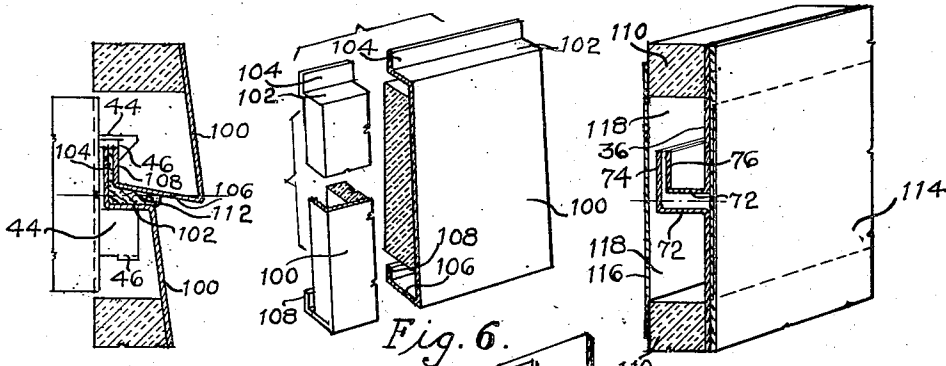


Fig. 5.

Fig. 6.

Fig. 7.

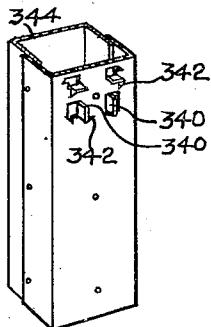


Fig. 9.

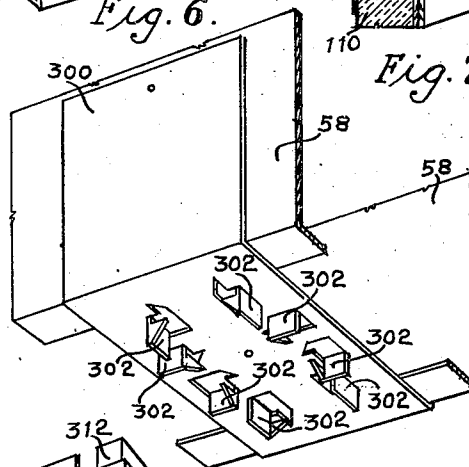


Fig. 8.

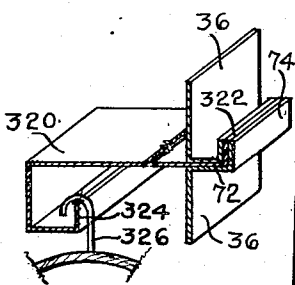


Fig. 11.

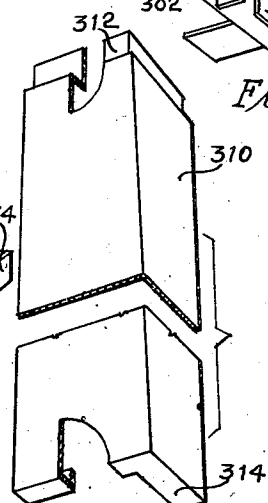


Fig. 10.

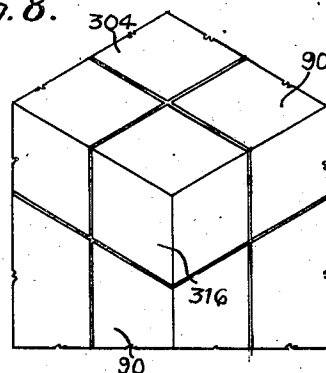


Fig. 12.

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2,318,022

FABRICATED HOUSE

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Application July 5, 1940, Serial No. 344,058

14 Claims. (Cl. 72-1)

This invention relates to fabricated houses and more particularly to fabricated houses utilizing sheet metal.

Numerous attempts have been made to construct fabricated houses and other buildings. Some of these are meeting with limited success, others may be referred to as failures for one reason or another. Low cost seems to be absolutely essential in order to meet competition with other building materials. Furthermore, when utilizing steel or other metals having high heat conductivity, the heat losses may be great and difficulty is experienced in undesirable condensation accumulating on the exposed surfaces. This is objectionable to the appearance of the building, both when the condensation is actually present and after it has disappeared, as it usually has a deleterious effect upon the finish, particularly on the inside of the building. Obviously, the condensation is undesirable. This may be overcome in part by the judicious use of insulating material, providing the metal does not extend from the exterior to the interior of the building. Furthermore, metallic structures have a tendency to have a "tinny" sound unless the sheet metal is deadened.

In the patent to Stolz No. 2,143,288 patented January 10, 1939, for Fabricated metal buildings, is disclosed a fabricated building utilizing one embodiment of a fabricated structure wherein condensation has been eliminated. In this structure the sheathing on the outside, and for that matter the inside, consists of vertically disposed panels.

An object of this invention is to provide vertically disposed studdings supporting horizontally disposed metallic panels. Another object of this invention is to provide a fabricated building having an external appearance simulating conventional lap-siding.

Another object of this invention is to snap the panels into position, so as to support the successive panels in proper relation with respect to each other.

Another object of this invention is to provide a rigid support for supporting the weight of the panel and a yieldable support permitting the panel to be snapped into position.

Another object of this invention is to provide parts for a prefabricated house, which house is easily produced, cheap in construction, requiring a small amount of metal and at the same time dependable, resulting in a rigid construction.

Another object of this invention is to provide means for attaching the panels in position which

holds the panels in position temporarily during the construction of the building and permanently locks the panels in position when the structure is completed.

Another object of this invention is to provide upright studdings including a metallic housing enclosing an initially plastic substance that solidifies upon being encased.

Another object of this invention is to provide a studding including a metallic form housing mastic that is utilized as a support for the building and as a lock for the panels.

Another object of this invention is to provide temporary skeleton supports that are later embedded in mastic to reenforce the same.

Another object of this invention is to provide longitudinal supports for supporting some panels that are horizontally disposed and others that are vertically disposed.

Another object of this invention is to provide panel retaining means adapted for holding panels extending parallel to or normal to the supports, as the case may be.

Another object of this invention is to provide universal panel retaining means for holding the panels in various positions.

Other objects and advantages reside in the construction of parts, the combination thereof and the mode of operation, as will become more apparent from the following description.

In the drawings, Figure 1 is a fragmentary, perspective view of a building, showing the walls in section with parts broken away to illustrate the structural details.

Figure 2 is a perspective view of the studding assembly, with parts broken away, before mounting the panels in position and before pouring the concrete.

Figure 3 shows a sectional view of the panels used on the inside of the building, drawn to a larger scale than Figures 1 and 2.

Figure 4 is a perspective view of an inside panel, with parts broken away.

Figure 5 is a fragmentary, sectional view of the outside panels simulating lap-siding.

Figure 6 is a perspective view of outside panels constructed to simulate lap-siding, with parts broken away.

Figure 7 shows the use of a strip of adhesive material spanning the space between insulating material incorporated into adjacent inside panels.

Figure 8 discloses a perspective view of a universal retaining strip secured to the joists.

Figure 9 discloses a modification wherein the

retaining means are integral with the metal forming the studdings.

Figure 10 discloses a panel-like member to be used on the outside corners spanning the distance between the ends of the exterior panelling members.

Figure 11 discloses a fragmentary perspective view with parts in section of a shelf incorporated into the structure.

Figures 12 discloses a fragmentary perspective view of a corner having the corner piece mounted in position.

The fabricated house shown herein includes a temporary skeleton assembly that is converted into a permanent structure by pouring mastic or plastic, such as cement, into suitable spaces provided therefor, which plastic functions as joists and studdings. This mastic or plastic is provided with projections extending outwardly from the studdings or downwardly from the joists to interlock panels for lining the building on the inside and covering the building on the outside. These projections are provided with reinforcements which constitute temporary supporting members prior to the time that the mastic or plastic is poured. All variable dimensions are a function of a modulating unit. This modulating unit is preferably the same, both for horizontal and vertical distances. By this arrangement, any variable dimension may be changed by a whole multiple of the modulating unit. This modulating unit may be any selected length.

Referring to the drawings, the reference character 10 indicates the foundation of a building supporting sill channel members 12. A plurality of joist channel members 14 span the building and provide housings for concrete 16 supporting suitable concrete supports 18, such as corrugated sheet iron, forming a base for the concrete floor 20. Immediately outside of the sill channel members 12 is located a concrete retaining wall 22, resting upon the foundation 10. The concrete 20 and 22 may not necessarily be poured until after at least a part of the building has been erected.

Referring to Figure 2, the sill channel members 12 are provided with a plurality of apertures or holes 24 that may be arranged in pairs. These pairs of holes are spaced longitudinally along the sill a distance equal to a modulated distance. For example, the structure may be constructed on a basis of a modulated system equal to three inches (3"). If three inches is used as a modulated unit length, the dimensions of the building is a function of this modulated unit length. Instead of using three inches, any other suitable length may be used. The distance may be more or less. Likewise, the height may utilize a modulated unit of height. For the purpose of illustration, the modulated unit length and the modulated unit height are the same. By this arrangement, the height is a multiple of the modulated unit height and when this is the same as the modulated unit length, it may be stated as a multiple of the modulated unit length.

A shoe 30 is attached to the sill 12 by suitable screws 32. These screws 32 are passed through a selected pair of the apertures 24. There are as many shoes 30 as studdings, there being one shoe for each studding. If the studdings are spaced twelve inches (12") from center to center, pairs of holes twelve inches apart are selected for the screws 32 holding the shoes 30.

The shoes 30 support on either side channel members 36, having the channel of one directed towards the channel of the other. The bottom

of each channel is provided with equally spaced apertures 38, the distance from the center of one aperture to the center of the adjacent aperture being equal to a modulated unit height. Suitable automatic operable panel supporting strips 40 are attached by screws 42 to the channel members 36. These panel supporting or retaining strips 40 are provided with outwardly projecting tongues 44. The two upper tongues 44, as disclosed in Figure 2, lie in a horizontal plane common to the two tongues. The lower tongues 44 lie in vertical, parallel planes. Each of the tongues 44 is provided with a hook or tooth 46 projecting at right angles to the main plane of the tongues 44. The body portion of the tongue 44 is sufficiently flexible, so that as the panels are inserted in position, as will be described more fully later, the main body portion will flex or yield sufficiently to permit the tooth 46 to move out of the path of the panel.

The upper ends of members 36 are secured to a pair of brackets 50 by suitable bolts 52. These brackets 50 support horizontally disposed purlin members 54 providing a support for the rafters 56, also channel-shaped, and beams for supporting the ends of the joists 58. The rafters 56 and the joist members 58 have a construction substantially identical to the channel members 36, excepting that it may be necessary to use wider joists and wider rafter members than studdings. The rafters support the roofing 60, whatever type of roofing material may be used, whether it be wood, fabricated material, sheet metal or any other suitable roofing material. If sheeting is used, wooden members 62 are positioned between the rafters 56, so as to form nailing cleats for holding the roofing in position. A suitable cornice member 64 may abut the end of the rafters and provide a support for the eavestrough 66. Thus far, the skeleton frame, excepting the concrete or mastic filler material, has been described.

The walls of the building are lined by suitable panels, excepting the openings left vacant for doors, windows and ventilating areas. The retaining strips 40 are so designed that the two upper tongues 44 may be used in securing horizontally disposed panels in position and the lower tongues 44, as viewed in Figure 2, may be used to secure in position vertically disposed panels. This permits the selection and use of either vertically or horizontally disposed panels, or both, on the interior and the exterior of the building. For the interior of the building, either vertically disposed panels or a combination of vertically disposed and horizontally disposed panels may be used. Very desirable artistic effects in design are available by a combination of both vertically and horizontally disposed panels on the interior of the house.

Referring to Figure 1, horizontally disposed interior panels 70 are located above and below the windows and above the doors. Each of these panels, as may best be seen by referring to Figures 3 and 4, is provided with outwardly directed flange portions 72. These flange portions 72 extend outwardly with respect to the wall of the building along the top, along the bottom and along each end. The flange extending along the top merges into an upwardly directed flange 74, which may be referred to as an offset flange, as viewed in Figure 4. The lower flange 72 is also provided with an upwardly directed reentrant flange 76. Again referring to Figure 1, a base panel member 80, simulating conventional base-

boards, extends around the periphery of the room, excepting under the doors. This narrow panel member may be seated upon or embedded into the concrete constituting the floor. It is provided with an upwardly directed flange 74, identical to the upwardly directed flange 74 shown in connection with the flange 70. The first set of strips, one for each of the studdings, is secured to the two members 36 in such a position that the upper tongues 44 extend directly above the flange 74 of member 80, so as to have the tooth 46 arranged in hooked relation with respect to the flange 74. After member 80 has been put in position throughout the periphery of the room, the panels 70 are placed in position. This panel has its lower flange 76 arranged in overlapping relation with respect to the flange 74 and is snapped in position so as to be held in position by the tooth 46. The upper flange 74 is mounted in hooked relation with respect to the retaining strip 40 located and attached to the studding 36 in proper relation so as to engage the top of the flange 74.

The panel members 70 may be of any suitable length that is a multiple of the modulated unit. These panels may be one foot wide, they may be fifteen inches (15"), eighteen inches (18"), twenty-one inches (21"), twenty-four inches (24") or any other suitable width. The vertically disposed panels located on the inside are identical to those described in connection with the horizontally disposed panels. These are placed on end and are snapped into position in the same manner as described in connection with the horizontal panels, excepting the vertically disposed panels are held in position by means of the lower tongues and their associated teeth. Thus, it is seen that the upper tongues, as viewed in Figure 2, are used to retain the horizontal panels in position, the lower tongues are used to hold the vertical panels in position, and in addition thereto, the lower tongues provide a support for the flange 72 along the top of each of the horizontal panels. The weight of the horizontal panels is supported upon the edges of the lower tongues and the horizontal panels are held in position with respect to the studdings by the upper tongues and their associated teeth. From this it is seen that the lower tongues, when used in association with vertically disposed studdings, are duo-functional, in that the lower tongues are used as panel retaining members for the vertically disposed panels and panel supporting members for the horizontally disposed panels.

In the corner, as viewed in Figure 1, a corner panel 90 is held in position in a manner similar to the other vertical panels. From this arrangement it appears that the panels between the windows and the doors are vertically disposed. Above the windows and below the windows the panels are horizontally disposed. Any other suitable arrangement may be used. If, for example, porcelain enamel panels are used, very effective color schemes may be worked into this arrangement.

Vertical panels have been used on the exterior of prefabricated houses, as clearly illustrated in the Stolz Patent No. 2,143,288. Vertical panels are satisfactory for some types of buildings; but for others, horizontal panels simulating lap-siding are preferable, in that the prefabricated house could then be constructed so as to simulate a frame house using lap-siding of wood. A special panel has been constructed so as to simulate lap-siding. As a matter of fact, this panel ar-

angement has substantially all of the characteristics of lap-siding, in that the flanges of adjacent panels overlap.

As may best be seen by referring to Figures 5 and 6, the panel 100 is provided with an inwardly directed flange 102 along the top, merging into a vertically disposed flange portion 104. The lower edge of the panel 100 is provided with an inwardly directed flange 106 that is much wider than the flange 102. The inwardly directed flange 106 merges into an upwardly directed flange 108 that overlaps the flange 104 of the panel directly below. These panels are inserted in position with respect to the tongues 44 and the teeth 46 in a manner identical to that used in connection with the horizontal panels located on the inside. Both the panels 70 and 100 are preferably lined with suitable sheets of insulating material 110. This may be any suitable insulating material such as "Celotex," "sheet rock" or the like. The insulating material is held in position by a suitable mastic. This insulating material also deadens undesirable noises and rumblings. This arrangement permits the use of light weight sheet metal, without the accompanying "tinny" sound. This insulating material provides insulation for most of the wall surface.

However, it does not provide insulation of the area in the vicinity of the overlapping joints of the panels, whether it be the outside panels or the inside panels. The joints between the panels are insulated and waterproofed by the use of a suitable mastic caulking compound 112. This may be used only on the exterior, or it may be used on both the exterior and the interior, depending entirely upon the desired finish and the structural details. For some purposes it is sufficient to use the mastic between the joints outside the building, without using the mastic between the joints on the inside. This is especially the case where the panels used on the inside have been accurately made, so as to provide a very small clearance between adjacent panels.

As may best be seen by referring to Figure 7, the exposed flat surface of the inside panels may be papered with suitable wall paper 114. Instead of wall paper, any other suitable sheet material or coating material may be used. In order to insulate the joints between panels, strips 116 of adhesive material or other suitable material is secured to the insulating boards 110, so as to cooperate with the panels to form dead air pockets 118 located between adjacent edges of the insulating boards 110.

Suitable spaces are left vacant for windows and doors. As may best be seen by referring to Figure 1, an inside sill member 200 extends across the bottom of the window opening. An outside sill member 202 cooperates to form a housing for a cement filler core 204 supported at the bottom upon a suitable ledge 206. A strip of wood 208 is mounted between the joint or juncture between members 200 and 202, so as to form an insulating connection. Member 200 may be provided with suitable passages or openings 210 through which the plastic, such as cement, is poured. The lower edges of the sill members 200 and 202 are provided with a connection similar to the lower edges of the panels, so that these members are hooked into position on the regular retaining strips 40.

The sides of the window frame include an inside member 220 and an outside member 222. These are secured in position in the same manner as the vertical panels, both on the inside and on

the outside. A suitable spacing strip 224 is located between the edges of members 220 and 222 providing an air-tight juncture. Capping members 230 and 232 extend across the top of the window. These again are secured in position the same as the panels by the use of retaining strips 40.

The entire core of the window frame is filled with plastic, so as to provide insulation and to give rigidity to the window frame. The opening bounded by the frame is closed by a suitable window 240, which may simulate any conventional steel sash window now appearing on the market. After the plastic has been poured into the sill, the opening 210 is covered by suitable capping members or filled by suitable material so as to conceal the openings.

The door frame is substantially identical to the window frame, with the exception that the door frame is provided with a threshold 242. The sides of the door frame include a pair of members 244 and 246, which are held in position in the same manner as the vertical panels, by means of retaining strips 40. The top of the door frame includes an inner capping member 248 and an outer capping member 250, also held in position by the retaining strips 40 in the same manner as the horizontal panels. The hollow portion of the door frame formed by members 244 and 246 and members 248 and 250 is filled by plastic so as to provide insulation and give rigidity to the structure.

After the panels have been positioned, the hollow spaces formed between channels 36 are filled with plastic. This plastic, in addition to filling these hollow spaces, locks the panels in position. The space 260 surrounding the tongues 44 and the hooks 46 is filled with plastic, thereby providing a rigid support for the flanges of the panels. The plastic is poured into position to bind the flanges of the panels to the studdings or the joists, as the case may be. This plastic material, whether it be concrete, mortar or any other plastic material, should be so selected as to have good insulating properties.

From this it is very apparent that the channels 36 cooperate with the retaining strips 40, having sufficient rigidity and at the same time flexibility, to provide temporary support for the panels until the plastic sets, at which time the plastic acts as a support for the panels, the window frames, the door frames and the like. By this arrangement, studdings are produced from plastic, or any other suitable material, having projections interlocking the flanges of the panels, the sides of the studdings being reinforced by the metallic channel members 36. These channel members are quite light in weight, in that they may be made from 14 to 20 gauge steel.

The ceiling may also be enclosed or covered with metallic panels. These panels may extend transversely with respect to the joists 58 or they may extend parallel thereto. Retaining members 300, as best seen in Figure 8, are made substantially identical to the strips 40, excepting that two hooks are preferably used for supporting each flange of the panels, so as to provide adequate support for the weight of the panels. The hooks 302, projecting downwardly from the retaining strips 300, are so grouped that the panels may be hung either parallel to the joists 58, or transversely with respect to the joists. For some types of structures the panels may extend parallel to the joists and others longitudi-

nally, so as to create the desired artistic appeal.

After the panels 304 have been snapped into position, the hollow space between the channels lining the joists 58 is also filled with plastic. It may be necessary to brace the panels lining the ceiling while pouring the plastic into the joists 58, so as to prevent a failure of the hooks 302. However, after the plastic has been poured and has set, the plastic surrounding the hooks 302 prevents the hooks from being deflected, so that after the plastic has set, there is no danger of the hooks failing. The space between adjacent joists may be filled with rock wool or any other suitable insulating material. This insulating material would then, of course, be carried by the panels 304.

From the foregoing, it can readily be seen that a house or structure is produced incorporating a steel skeleton provided with cavities or spaces to be filled with mastic to give rigidity and strength to the building. The steel skeleton is assembled before pouring the mastic, so that when the mastic is poured, it flows to interlock the joints of the flanges overlapping the studdings and joists. This mastic that interlocks the flanges is reinforced by the metallic hooks projecting from the retaining strips, spanning adjacent channels of the studdings or the joists, as the case may be.

The inside or upper sides of the panels 304 may be lined with insulating sheets 306 substantially identical to the insulating strips used on the side walls. Instead of insulating sheets 306, rock wool or any other suitable insulating material may be packed between the joists, so as to provide insulation for the ceiling.

As may be seen by referring to Figure 10, a cornice member 310 may be used to span the distance between adjacent ends of the lap-siding terminating near the corners of the building. In Figure 1, member 310 has been shown in position. This cornice member is provided with upwardly directed flanges 312 along the top and reentrant flanges 314 along the bottom, for securing these cornice pieces in position.

In Figure 12 a corner bracket 316 has been shown mounted in the interior corner of a room. This bracket cooperates with members 90, both vertically and horizontally disposed, to fill the corner.

In Figure 11 a shelf 320 that may be provided with flanges 322 along three sides thereof may be mounted between panels in clothes closets and the like. This shelf 320 is provided with a reentrant flange 324 extending along the exposed side for supporting a coat hanger 326 or any other suitable hanger. In the event the shelf is used in the kitchen, the flange 324 may support hooks for supporting kitchen utensils and the like. The shelf has been described as supported on three sides. For some installations it may be convenient to support the shelf only on one or two sides, utilizing brackets cooperating with the supported side or sides to properly support the shelf. These brackets may be provided with reentrant flanges projecting between adjacent panels. Furthermore, such brackets may be mounted so as to removably or collapsibly support a ledge, a shelf, a table top or the like. By this arrangement, the shelf itself and the brackets are supported between adjacent panels, so as to utilize the rigid support for the panels for holding the parts supported thereby in a fixed position.

In Figure 9 another type of studding has been shown. This includes a pair of channel members 344 provided with outwardly directed tabs 340

having hooked portions 342 for holding the panels in position. Only one set of such hooks has been shown. Additional groups of hooks are provided at properly spaced intervals, which spaced intervals are a function of the modulating unit. By this arrangement, the strips that have been shown in connection with the preferred embodiment have been eliminated, in that the fastening means are projected from members 344. A similar arrangement may be utilized in connection with the joists, so as to eliminate the strips generally used in connection with the joists 58, as shown in the preferred embodiment.

Instead of the studdings including channels, these may be made from any other suitably formed members, as for example, hollow members either with or without a longitudinally extending slot.

Furthermore, for partitions and other uses, vertically disposed panels may function as studdings having marginal channels supporting suitable fastening devices holding horizontal panels. By this arrangement the thickness of the wall is greatly reduced without a sacrifice in structural details, as claimed herein.

Although the preferred modification of the device has been described, it will be understood that within the purview of this invention various changes may be made in the form, details, proportion and arrangement of parts, the combination thereof and mode of operation, which generally stated consist in a device capable of carrying out the objects set forth, as disclosed and defined in the appended claims.

Having thus described our invention, we claim:

1. A fabricated house including a plurality of channel members forming supports for the fabricated house, said channel members including fastening means provided with flexible hooks, panel members each provided with a reentrant flange along one side thereof and an offset flange along the opposite side thereof engaging said fastening means and held in position temporarily by the flexible hooks, and a plastic material housed by said channel members and interlocking the flanges of the panels for providing a permanent rigid support for the panels.

2. A fabricated house including a plurality of parallel channel means cooperating to form hollow supporting members including supporting means having metallic clips arranged at spaced intervals along the length of the supporting members, and a plurality of panels simulating lap-siding mounted upon the exterior of said supporting members, each of said panels including a horizontally disposed flange portion extending along the top of the panel and a second horizontally disposed flange portion extending along the bottom of the panel, the flange portion along the top being narrower than the flange portion along the bottom so as to cause the main body portion of the panel to slope, said flange portions being secured to said metallic clips of said supporting means to hold the panels in position.

3. A fabricated house including a plurality of parallel supporting members aligned in a common vertically extending plane, said supporting members including supporting means having a supporting portion and a yieldably mounted hooked portion spaced from the supporting portion and a plurality of panels simulating lap-siding mounted upon the exterior of said supporting members, inwardly directed means extending along the top of each panel forming

rabbets and inwardly directed means extending along the bottom of each panel seated in the rabbets along the top of the panel directly below, the inwardly directed means extending along the top cooperating with the inwardly directed means extending along the bottom to support the main body portion of the panel in an inclined plane so as to cause the panels to simulate lap-siding, said inwardly directed means resting upon the supporting portion, the hooked portion engaging the lap-siding to hold it upon the supporting portion.

4. A fabricated house including a plurality of parallel supporting members, a plurality of panels each of which includes flanged portions extending towards said supporting members in a direction normal to the longitudinal axis of the supporting members, each of the flange portions extending along the sides of the panels merging into flanges extending parallel to the supporting members in close proximity thereto, and a plurality of supporting strips for supporting the panels, each of said supporting strips including a flexible tab merging into a hooked portion overlapping the flanges extending parallel to the supporting members, said strips including hooks arranged to hold panels extending at right angles to the supporting members and other hooks arranged to hold panels extending parallel to the supporting members.

5. A fabricated house including a plurality of supporting members, each of said supporting members having attached thereto a plurality of retaining strips, each of said retaining strips being provided with a plurality of flexible tongues some of which are adapted to be flexed in a direction parallel to the longitudinal axis of the supporting members and others in a direction normal to said longitudinal axis, each of said tongues merging into a hooked portion, a plurality of panels supported by said hooked portions for enclosing the house leaving spaces vacant for doors and windows, and metallic frames bounding said vacant spaces, said metallic frames being provided with reentrant flanges supported by said hooked portions to hold the frames bounding the vacant spaces in position.

6. A fabricated house including a plurality of supporting members, each of said supporting members having attached thereto a plurality of retaining strips, each of said retaining strips being provided with a plurality of flexible tongues some of which are adapted to be flexed in a direction parallel to the longitudinal axis of the supporting members and others in a direction normal to said longitudinal axis, each of said tongues merging into a hooked portion, a plurality of panels supported by said hooked portions for enclosing the house leaving spaces vacant for doors and windows, hollow metallic frames bounding said vacant spaces, said hollow metallic frames being provided with reentrant flanges held in position by hooked portions on said retaining strips, and a hardened plastic filler material filling the core of the hollow metallic frames to give rigidity to said frames.

7. A fabricated house including a plurality of channel members forming supports for the fabricated house, said channel members including temporary fastening means, panel members each provided with a reentrant flange along one side thereof and an offset flange along the opposite side thereof engaging said fastening means and held in position temporarily thereby, and a plastic material housed by said channel members and

interlocking the flanges of the panels for providing a rigid support for the panels.

8. A fabricated house including a plurality of vertically disposed studdings, said studdings including supporting means having metallic clips arranged at spaced intervals, and a plurality of panels simulating lap-siding mounted upon the exterior of the studdings, each of said panels including a horizontally disposed flange portion along the top of the panel and a second horizontally disposed flange portion along the bottom thereof, the flange portion along the top being narrower than the flange portion along the bottom so as to cause the main body portion of the panel to slope, said flange portions being secured to the metallic clips of said supporting means to hold the panels in position, and initially plastic material interlocking the flange portions of the panels to provide a permanent support therefor.

9. A fabricated house including a plurality of parallel channel members cooperating to form hollow supporting members including supporting means having metallic clips arranged at spaced intervals along the length of the supporting members, a plurality of panels simulating lap-siding mounted upon the exterior of said supporting members, each of said panels including a horizontally disposed flange portion extending along the top of the panel and a second horizontally disposed flange portion extending along the bottom of the panel, the flange portion along the top being narrower than the flange portion along the bottom so as to cause the main body portion of the panel to slope, said flange portions being secured to said metallic clips of said supporting means to hold the panels in position, and initially plastic material interlocking the flange portions and filling the hollow portions of the supporting members to provide a rigid support for the panels.

10. A fabricated house including a plurality of vertically disposed studdings aligned in a common plane, said studdings including supporting means having a supporting portion and a hooked portion arranged in spaced relation from the supporting portion, and a plurality of panels simulating lap-siding mounted upon the exterior of the studdings, each of said panels including an inwardly directed flange along the bottom thereof, and a panel securing portion along the top of the panel resting upon said supporting portion to support the panel, said hooked portion engaging the panel to hold it in position.

11. A fabricated house including a plurality of vertically disposed studdings aligned in a common plane, said studdings including supporting

means having metallic clips, and a plurality of panel simulating lap-siding mounted upon the exterior of the studdings, each of said panels including a horizontally disposed marginal flange cooperating with the adjacent panel to cause the panels to simulate lap-siding and initially plastic material cooperating with the metallic clips of the supporting means to hold the panels permanently in position.

12. A fabricated house including a plurality of vertically disposed studdings, retaining means attached to each of said studdings, a plurality of panels supported by said retaining means for enclosing the house, leaving spaces vacant for doors and windows, and a metallic open frame assembly for each of the vacant spaces, said metallic frame assembly including reentrant flanges on the inside and on the outside engaged by said retaining means to hold the frame assembly in position.

13. A fabricated house including a plurality of supporting members, each of said supporting members having attached thereto a plurality of retaining means, each of said retaining means being provided with a plurality of flexible tongues, some of which are adapted to be flexed in a direction parallel to the longitudinal axis of the supporting members and others in a direction normal to said longitudinal axis, each of said tongues merging into a hooked portion, a plurality of panels supported by said hooked portions for enclosing the house leaving spaces vacant for doors and windows, a plurality of sheet metal open frame assemblies bounding said vacant spaces, there being one frame assembly for each space, said metallic frame assemblies including external and internal supporting means held in position by said hooks, and a hardened plastic filler material enclosed by said sheet metal frame assemblies for giving the same rigidity.

14. A fabricated house including a plurality of supporting members, a plurality of retaining means mounted on each of said supporting members at spaced intervals, a plurality of panels fixedly attached to said supporting means for enclosing the house, leaving spaces vacant for doors and windows, open metallic frames bounding said vacant spaces, there being one frame for each space, said metallic frames including an exterior sheet metal member and an interior sheet metal member, said sheet metal members being held in position by said retaining means, and a plastic filler material filling the spaces between the sheet metal members of said frames.

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