

[54] CRYPT STRUCTURE

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52/263

[51] Int. Cl. E04h 1/04

[58] Field of Search 52/136, 134, 128, 133,
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386; 211/94, 103, 162; 248/295

[56]

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[57]

ABSTRACT

An above-ground crypt structure wherein the crypts comprise the main structural support for the entire building and comprise a modular structural unit providing a weather-proof crypt system incorporating ventilation and protection against the elements in a simple, yet aesthetically pleasing, building structure fully capable of being erected by way of prefabricated building techniques. A substantially improved crypt ingress structure is provided requiring no special tools to permit entombments.

6 Claims, 11 Drawing Figures

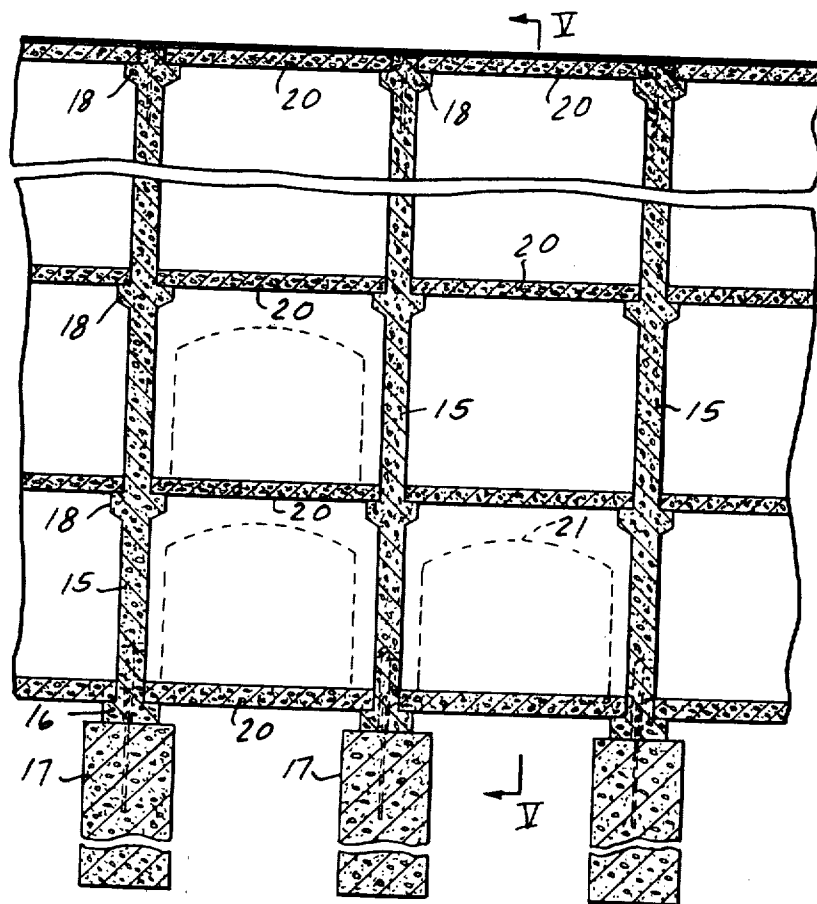


Fig. 1

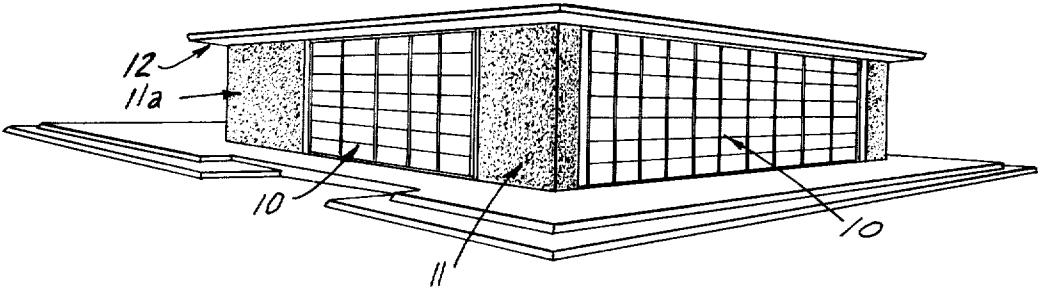
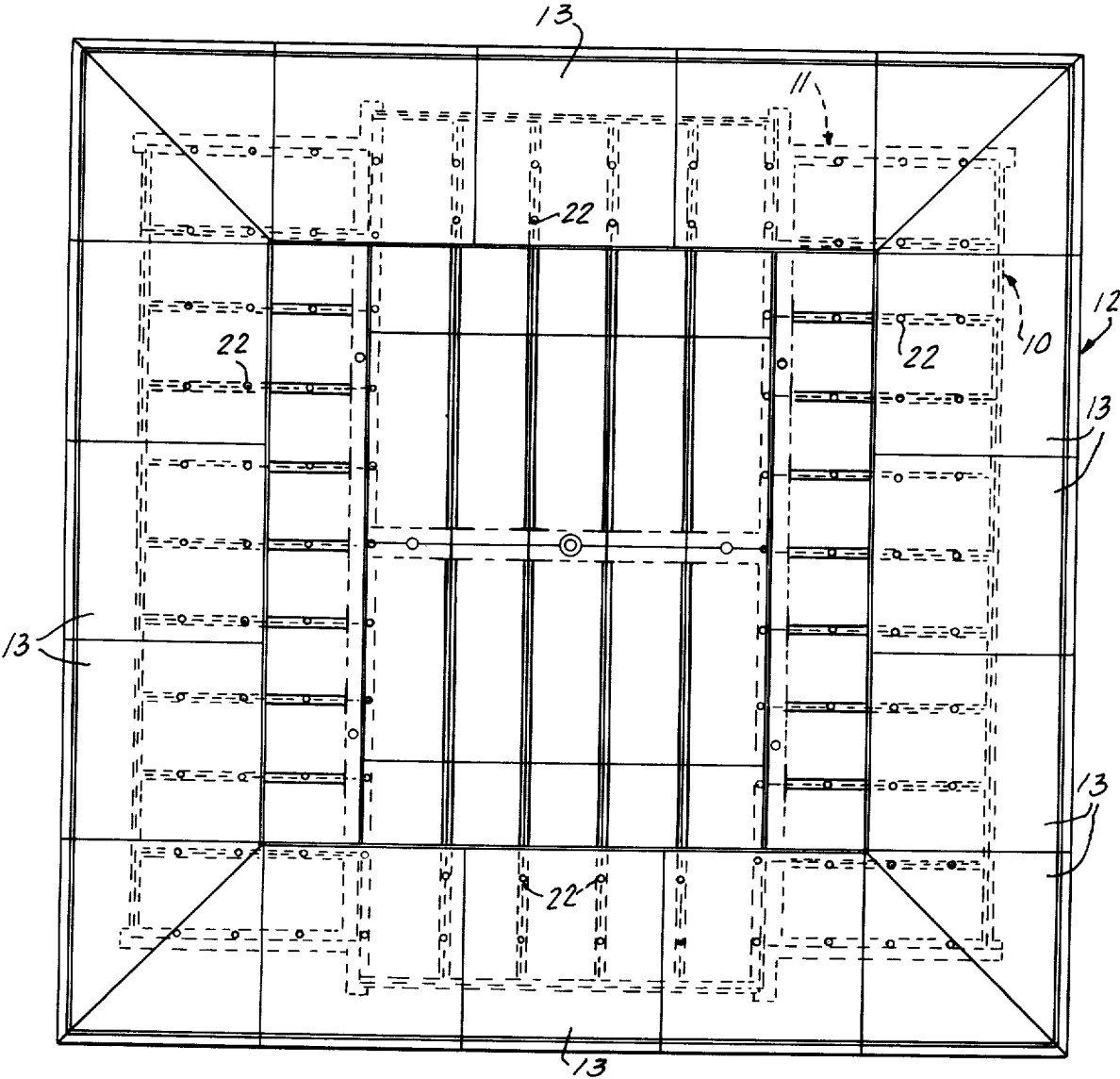


Fig. 2



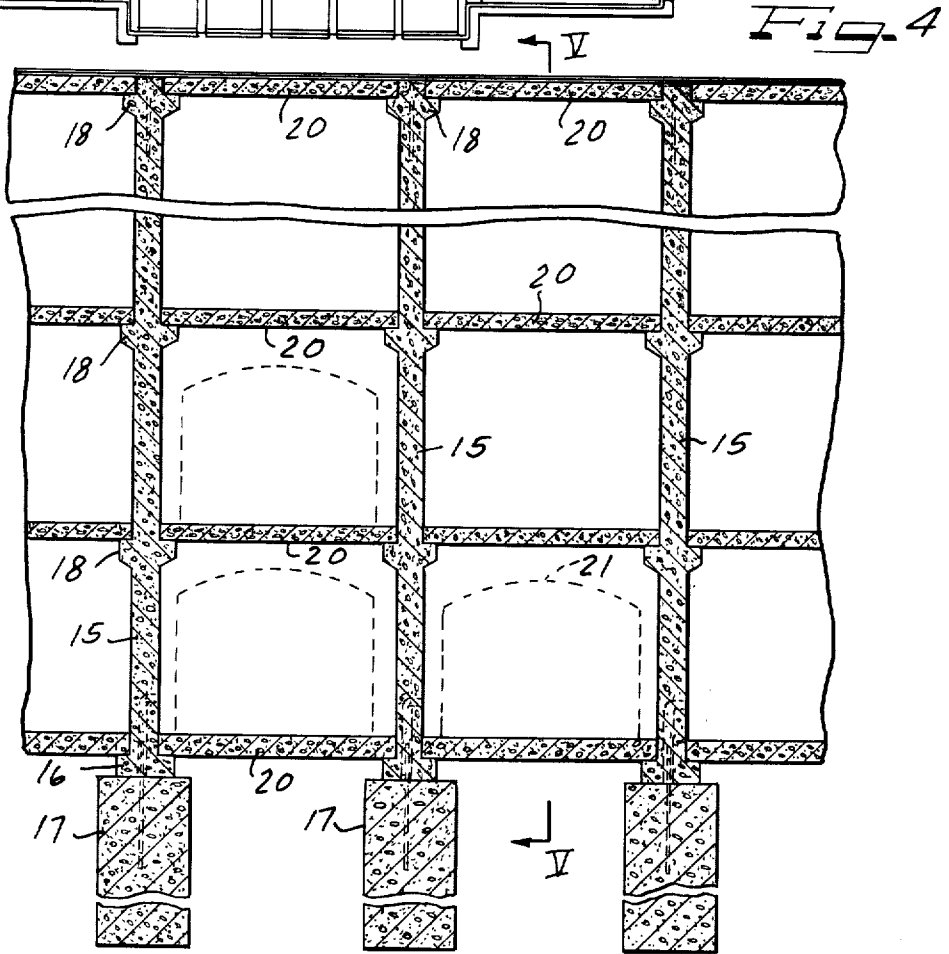
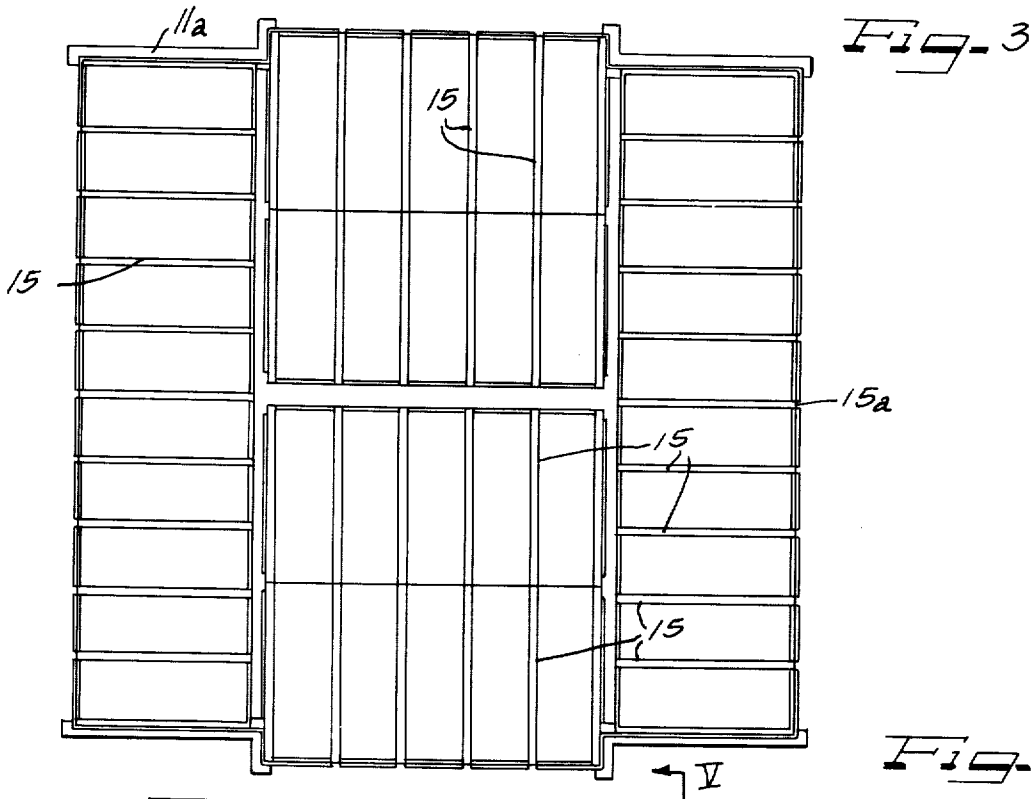


Fig-5

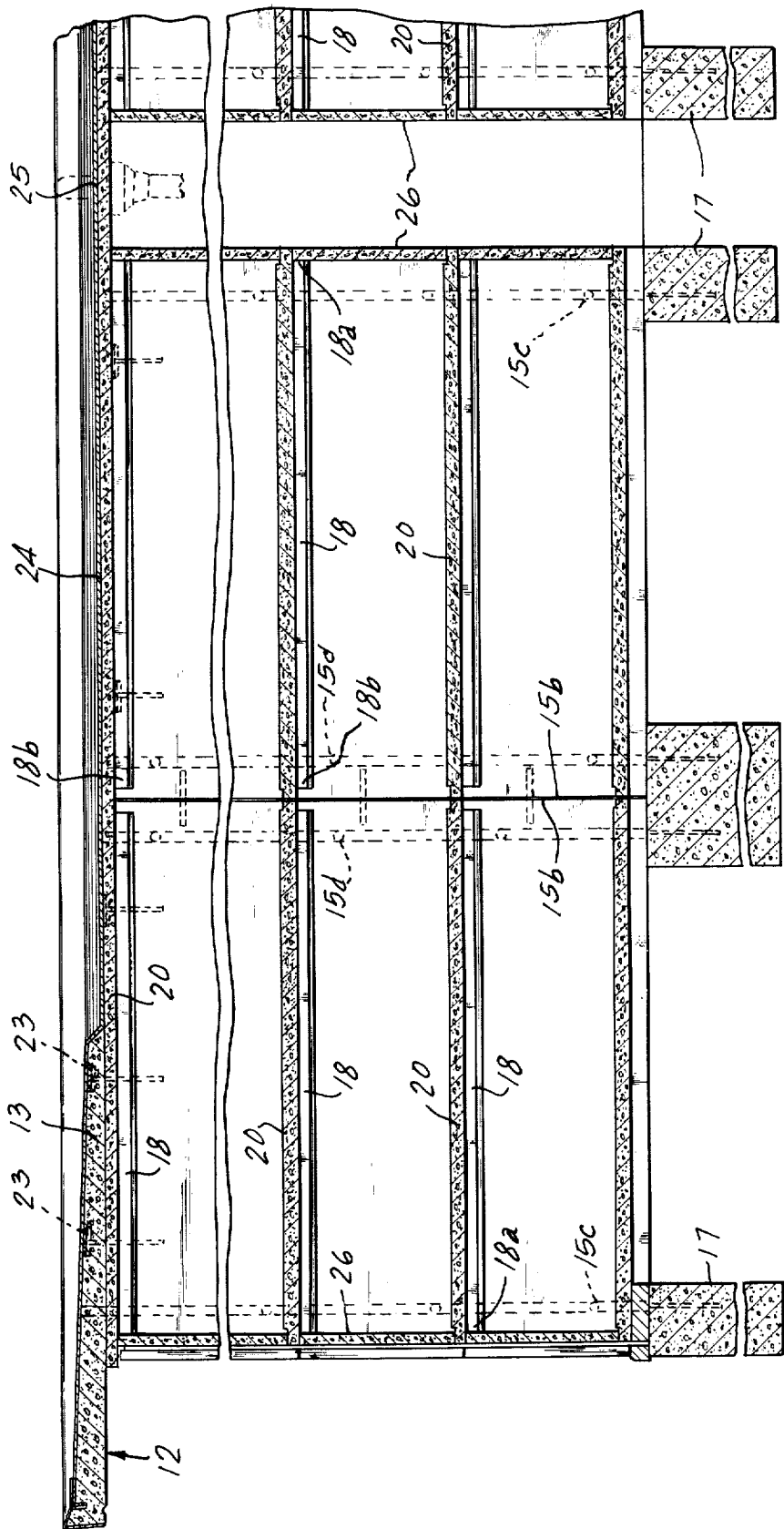


Fig. 6

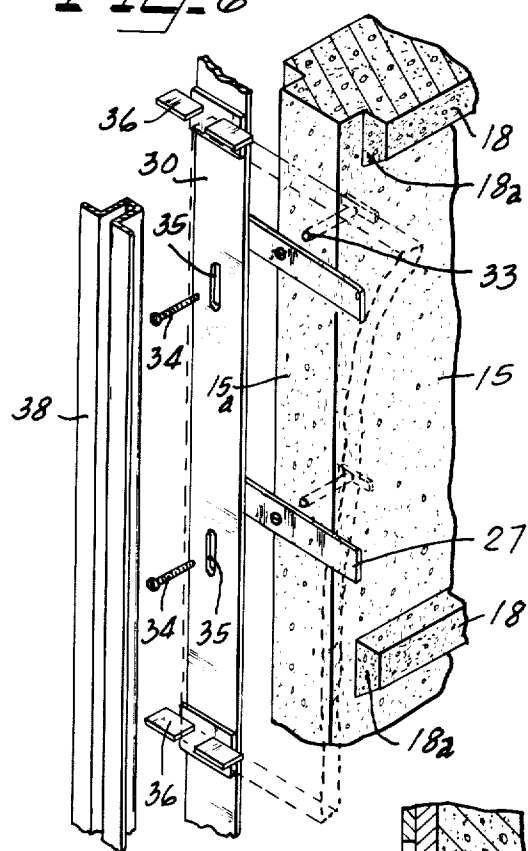


Fig. 7

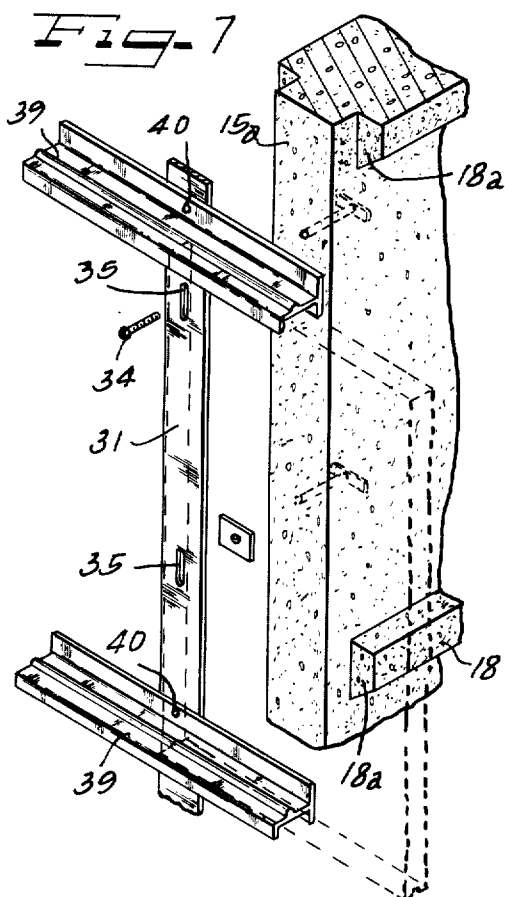


Fig. 9

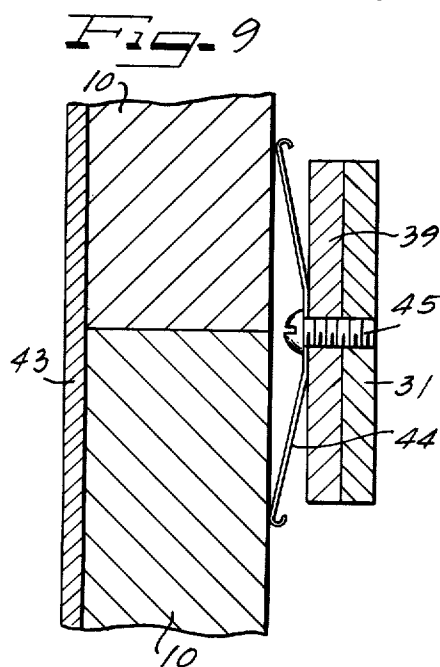


Fig. 8

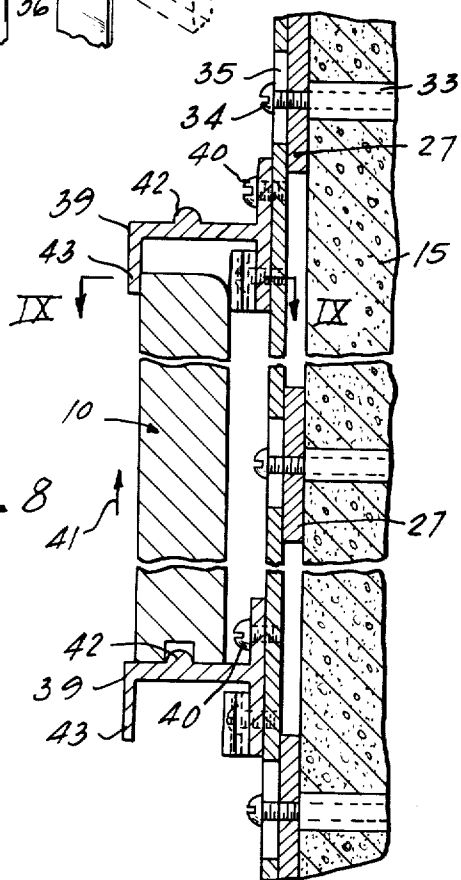


Fig. 10

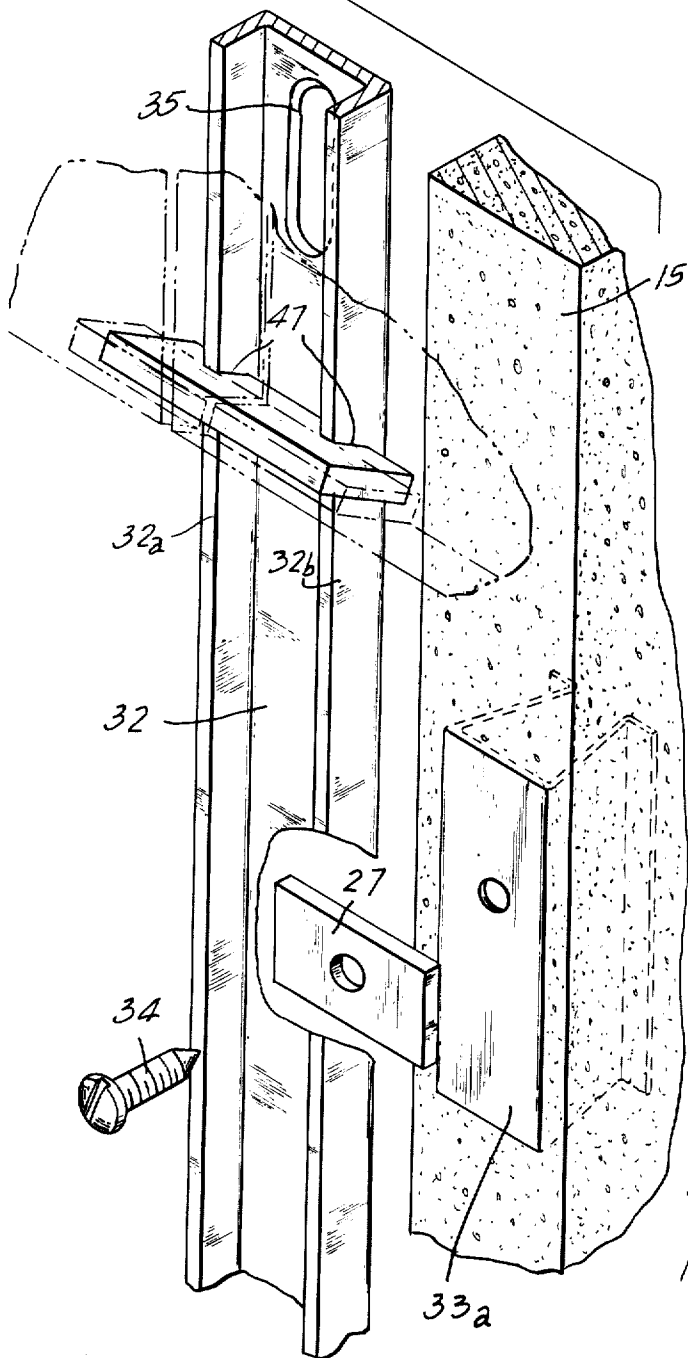
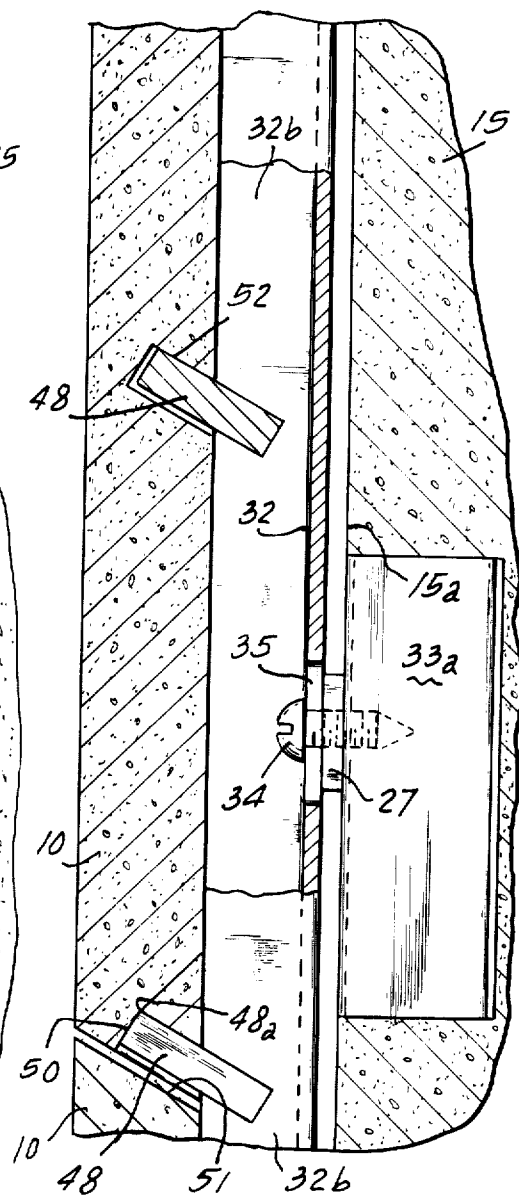


Fig. 11



CRYPT STRUCTURE

BACKGROUND OF THE INVENTION

Crypt structures have, of course, been long known in the prior art. The price of land in and near large metropolitan areas has provided a continuing problem for cemeteries providing underground burial service. The need for large recreational areas, super highways, and other municipal uses, as well as private land needs has caused traditional burial practices to be carefully re-examined. Recently cremation has grown in popularity as a method of disposing of human remains. The reluctance of a great many people to employ such disposal methods as cremation has, however, led to a large group of persons who do not approve cremation but who recognize the undesirability of maintaining the old-style burial plot cemetery practice. The concept of employing an above-the-ground crypt structure has, accordingly, received careful attention. It permits the storage of remains on a substantially reduced acreage. This is convincingly demonstrated by the fact that the preferred crypt design calls for at least seven vertically stacked crypts whereas typical in-the-ground burial sites provide for a single layer of caskets and, accordingly, at least seven times more area. Use of crypt structures permits a large open grass area to be maintained as parks, whereas such cemeteries employing the past plot system provide open space not readily usable for park, playground, and similar purposes.

This basic need for above-the-ground burial has been recognized by many. In the past, however, a typical crypt construction has called for the manufacture of a very substantial exterior building within which crypts were individually constructed. In such prior art systems, the exterior building walls provide substantially no crypt support, alignment, or other structural support. They merely provide an external shield against the elements, including structural support for the exterior walls and roof. In accordance with the present invention, however, a novel crypt configuration is employed in which the individual vertical walls of the crypt itself provide the structural support for the crypt building. In accordance with the present invention, each of the components of the above-the-ground crypt is readily manufacturable on a mass-produced basis and may be erected at substantially any cemetery site in a prefabricated, yet permanently structurally sound, completely self-supporting manner. The crypt building of the present invention has completely eliminated separate exterior walls, has provided a novel design configuration and has enabled the ingress to individual crypts in the building structure during funeral procedures substantially without the use of special tools and in far less time than required for such ingress in prior systems.

SUMMARY OF THE INVENTION

In accordance with the present invention the crypt structure is composed of a plurality of vertical upright walls extending from the foundation floor vertically upwardly the full height of the building under construction. Typically, crypt structures contemplate a height of approximately seven burial crypts. Typically, crypt structures contemplate a height of approximately several burial crypts. Typically, accordingly, this height would approximate 17 feet leaving an individual crypt height of approximately 2½ feet. This height permits the utilization of mobile lift trucks for the insertion of

caskets in the individual crypts and also provides a height beyond which the reading of burial inscriptions becomes difficult from ground level.

In accordance with the present invention, each individual wall member is provided with support ledges on both sides projecting approximately 1½ inches from the face thereof for the support of horizontal slabs of approximately 2½ feet width and 7½ feet length. The individual vertical walls are set up with a wall-to-wall width of approximately 2½ feet so that the individual crypt supports may be inserted in the manner of shelves, resulting in an elevational view comprising a grid of approximately 2½ feet × 2½ feet crypts having both ends open. The individual ends are closed by generally rectangular closures arranged for insertion or removal in a simple, yet unobvious, manner. In construction of the building, the upper ends of the individual upright wall elements are secured to prefabricated roof slabs cross-connected to a plurality of walls to provide a rigid final structure which is fully load-supporting and which is also aesthetically pleasing.

The decorative portion of each crypt may comprise a rectangular front slab bearing a name and other relevant identifying data. Alternatively, a wall of front slabs may be formed with individual slabs constituting components of an over-all sculptural relief mosaic or the like whereby the wall may have artistic decoration in addition to, or in substitution for, conventional identification materials. In accordance with the present invention, these decorative concepts are not interfered with by the structural aspects of the building and, in fact, are enhanced.

Specific support elements are incorporated in the system according to the present invention. They permit the crypt fronts to be installed at the time of construction of the building. At the time of a burial ceremony an individual crypt front may readily be removed without the need of special tools and in a substantially instantaneous manner. The slab supporting and aligning structure is extremely simple and at the same time discourages vandalism by providing an arrangement which is unobvious with respect to ingress.

It is, accordingly, an object to provide an improved crypt structure system which incorporates an extremely simple and yet highly efficient building structure coupled with ready crypt access, all in an aesthetically pleasing construction. Other objects will, of course, become apparent to those skilled in the art from a consideration of the attached drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective elevational drawing of the crypt structure constructed in accordance with the present invention;

FIG. 2 is a plan view of the building illustrated in FIG. 1;

FIG. 3 is a floor layout plan of the building shown in FIG. 2, on a somewhat reduced scale;

FIG. 4 is a side-elevational view, partially broken away, of the crypt structure shown in FIG. 1;

FIG. 5 is a side-elevational view of the building shown in FIG. 1 and taken along the line generally of V—V of FIG. 4;

FIG. 6 is a detailed elevational view, in exploded form, of one embodiment of crypt front hanger system in accordance with the present invention;

FIG. 7 is a second embodiment of crypt front hanger viewed from the same direction as the system shown in FIG. 6 and similarly an exploded view;

FIG. 8 is a side-elevational view of the structure shown in FIG. 7;

FIG. 9 is a partial plan elevation of the structure shown in FIGS. 7 and 8 taken along the line IX—IX of FIG. 8;

FIG. 10 is an exploded view of the third embodiment of crypt front hanger structure in an exploded view; and

FIG. 11 is a side-elevational view illustrating the embodiment of FIG. 10 in assembled relation.

DETAILED DESCRIPTION

As may be seen from a consideration of FIG. 1, the crypt structure of the present invention comprises an over-all building having a facade formed by crypt front slabs of a rectangular configuration generally indicated at 10 framed by corner trim elements generally indicated at 11, all of which is housed under an integral roof 12. The construction of the building employs a large number of identical structure components arranged in a manner providing a minimum number of special items. Thus, the crypt sidewalls are designed as a standard wall unit more clearly illustrated in FIG. 4. There, the wall indicated at 15 is provided with a rectangular base support 16 resting upon footings 17 and has lateral projecting supports 18 projecting on opposite sides for supporting identical crypt floor slabs 20. The length of the individual wall sections 15 is slightly longer than a single burial vault, indicated at the dotted line 21. By employing a floor plan substantially as shown in FIG. 3, the entire building may be constructed of a plurality of identical walls 15 trimmed at the corners with two pairs of identical trim panels of an L configuration, indicated at 11 and 11a. By securing each of the individual walls 15 to the fixed footings 17 by way of conventional embedded anchor bolts, structural rigidity is given the building by the over-lapping attachment of the multiple roof panels 13 to the top edges of the walls 15 by way of the vertical tie bolts 22. Bolts 22, preferably embedded in the prefabricated walls 15, project upwardly for securement with a nut or other mechanical fastener 23. The result of this arrangement is an essential building rigidity in all horizontal directions provided by an interlocking relationship between the vertical walls, the footings, the corner panels 11 and the roof sections 13. A tar facing or other conventional permanent weather-proof seal 24 is provided over the roof, with a conventional drain 25 connected to a storm sewer below grade in a conventional manner. Individual crypt air vent conduits may be integrally molded in the concrete walls 15, as at 15c, 15d.

Additional rigidity is provided in the building structure in the form of the inner, or liner, end slabs 26 which are rectangular to closely fit the rectangles formed by the respective walls 15 and floors 20. To provide a snug fit, the supports 18 terminate, as at 18a, 18b short of the respective weatherfacing wall edge 15a and inner edge wall 15b. The slabs 26 may be sealed in place at the time of a burial by way of a cement sealer or by mechanical fastening means, such as for example, by pivotal plates or butterflies 27 as shown in FIG. 6.

Outer crypt front slabs 10 are very efficiently secured in accordance with the present invention. The several embodiments illustrated each provide a generally verti-

cal channel member, which is flat in the case of members 30 and 31 illustrated in FIGS. 6 and 7 and U-shaped in the embodiment illustrated in FIG. 10 at 32. The channel member extends vertically along the weather-facing edge 15a of the individual walls 15 throughout the entire length thereof. Each of the channel members is secured to the weather-facing wall by means of any conventional embedded threaded fastener 33, 33a and screw 34 which passes through the respective channel member by way of vertically extending adjusting slots 35. As a result of utilization of the vertically extending channels 30, 31 or 32, slight adjustments may be made between the individual walls 15 and the surface end slabs 10 to provide substantially perfect alignment at the building site.

In the embodiment illustrated in FIG. 6, the individual slabs are supported on cleats 36 which are preferably welded or otherwise fixedly mounted on channel 30 in a prefabricated position, spaced apart a distance slightly greater than the vertical dimension of the slab 10. The slabs 10 are then retained in position by the T-shaped channel 38 which may be secured to the channel 30 by conventional screw, not illustrated, or, if preferred, by the securing screws 34.

In the embodiments illustrated in FIGS. 7, 8 and 9, horizontal continuous trim strips or cleats 39 are secured to the channel 31 by screws or other fasteners 40. In this case, the cleats 39 are spaced a distance approximately one-half inch greater than the vertical height of the slabs 10. As may be seen from a consideration of FIG. 8, the slab 10 may be removed from its site, there shown, by lifting the slab in the direction of the arrow 41 until it clears the retention rib 42 whereupon the slab may be pulled forwardly at its lower edge and slipped out from underneath the downwardly extending leg 43 of the cleat 39. A spring 44 may be secured by screw 45 to the channel 31 and operates to resiliently bias the slabs 10 against the flange 43. It will be seen that the embodiment shown in FIGS. 7, 8 and 9 provide substantially instantaneous insertion or withdrawal of any given crypt front slab 10. In practice, vacuum cups typically employed in the handling of plate glass are attached to the front surface of the slabs 10 to permit their manual manipulation in the upward and outward direction.

In the embodiment illustrated in FIGS. 10 and 11, channel 32 is provided with side walls 32a and 32b which are angularly slotted as at 47 to accommodate cleats 48. The cleats 48 are flat but lie at an angle from the horizontal of approximately 30° as clearly shown in FIG. 11. At the same time, each of the crypt front slabs 10 is provided with cooperating, generally horizontal, support surfaces adjacent the side edges. Preferably, four cleats 48 are employed with each slab 10. The lowermost pair of these, as shown in FIG. 11, has its uppermost point 48a generally coincident with the centerline of the respective floor slab 20. Accordingly, the bottom edge of the slab 10 is provided with a notch 50 and the top edge of the slab 10 immediately therebelow is provided with a fully beveled upper edge 51. Above the lower cleats 48, a pair of upper cleats is positioned in complementary notches 52. Removal of the slab 10 in the embodiment shown in FIGS. 10 and 11 is accomplished by a continuous upward and outward movement of the slab. As can be seen, the cleats 48 are identical to each other and the channels 32 need only be provided with a plurality of slots 47 to provide secure

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fastening. The cleats 48 may, of course, be rigidly secured to the channels 32 by welding or otherwise, but it is preferred that they merely be a snug or press fit in the slots 47 since there are no forces acting upon the cleats 48 tending to dislodge them from the channel.

As will be clear to those skilled in the art, the crypt structure above described provides a regular facade of crypt front slabs in which the slabs may readily be removed for burial services with a minimum of labor. In the case of the embodiment shown in FIGS. 10 and 11, the means of securing the crypt fronts to the building proper is completely hidden and, accordingly, a continuous mosaic design may be provided in the crypt fronts without serious visual distraction apart from the minor vertical and horizontal lines formed by the slight gap between slabs. As a result of the structure shown, a crypt may be substantially completely prefabricated and installed on the site in only a few hours. Further, while the crypt building is permanent in nature, its modular design and generally molded construction permits its removal in a relatively short time should relocation or enlargement be required.

It will be further apparent that variations may be made in accordance with the present invention without departing from the scope of the novel concepts thereof. It will be appreciated, for example, that the footings 17 may take any form, including a solid one-piece base slab and/or that the vertical channels 30, 31, 32 may take various cross-sectional forms other than those shown. While concrete is a suitable material for the walls 15, it will be seen that other rigid materials may be employed satisfactorily. It is, accordingly, my intention that the scope of the invention be limited solely by that of the hereinafter appended claims.

I claim as my invention:

1. In combination in a building constituting a plurality of crypts, a footing, a plurality of vertically extending substantially identical prefabricated one piece walls fixedly secured at their bases to said footing, each of said walls integrally incorporating a plurality of horizontally extending lateral support surfaces, a plurality of equally dimensioned shelves each extending between a pair of walls and supported upon facing respective support surfaces with shelves between walls being vertically spaced to provide crypt openings facing the

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outside of the building, overhead interconnecting prefabricated roof slab members extending above and across a plurality of said walls and rigidly secured to each thereof, said building having other vertical walls extending perpendicular to at least two of said first-mentioned walls whereby said footing, vertical walls, shelves and interconnecting roof members provide a rigid structure integrating the building and the crypts.

2. The crypt building structure set forth in claim 1 wherein the others of said walls each have at least a portion of the wall surface that is without shelves providing a terminal wall surface.

3. The crypt building structure set forth in claim 1 wherein each of said walls has vertically extending hollow ducts herein substantially spaced horizontally and each vented at at least one point between successive vertically spaced support surfaces.

4. The crypt building structure set forth in claim 1 wherein a channel structure is vertically adjustably secured to the weather-facing edge of each said walls and which channel structure extends substantially completely along the vertical length of said wall and incorporates preset vertically spaced supporting and retaining surfaces for releasably securing crypt front slabs in horizontal alignment across said walls.

5. A connecting system for retaining a plurality of vertical and horizontal rows of generally similar slab elements in position on a generally upright grid composed of a plurality of spaced walls comprising a plurality of vertically extending elements, means vertically adjustably securing one of said elements to each one of said walls, each of said elements having a plurality of horizontally extending cleats thereon vertically spaced on a respective element a distance providing at least two cleats on each element in cooperative contact with a slab, the vertical spacing between cleats being preset the same on all vertically extending elements, each said cleat having an upwardly extending component thereof and each slab having a portion thereof extending behind said component whereby the slab is gravitationally secured to said element and to said wall.

6. The structure of claim 5 wherein said means securing said elements to said walls comprises an adjustable connector.

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