ELEVATED MODULAR BUILDING CONSTRUCTION

FIG. 1

FIG. 2

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Filed Oct. 12, 1967, Ser. No. 674,840

Int. Cl. E04b 1/74, 5/45; E04h 3/02

U.S. Cl. 52—73

Abstract of the disclosure

A building construction incorporating elevated segments or modules arranged in a circular pattern about a center column. Each module occupies one eighth of the circumferential area around the center column thus enabling a building to be initially constructed with at least one module with additional modules being subsequently added as the need for additional space occurs. Each module preferably includes complete facilities to enable effective use as a vacation house, motel unit, rental units or the like. The modular or modules are supported in elevated position by the center column and optional conventional supporting columns spaced sufficiently to enable an automobile or automobiles to be parked in a protected manner under the floor of the building. Various means may be employed to support the building without the use of any columns except the center column.

Brief description of the invention

The present building includes a main supporting column having a plurality of radially extending floor and roof supporting beams, cables, trusses or additional columns which are circumferentially spaced to enable an automobile to be driven to a position underlying the floor. Each segment of the building is serviced by electric conductors, water lines and the like oriented in or alongside the center column. A small utility and storage enclosure depends from the floor along side the center column and is provided with an access door openable into the garage area. A stairway is provided at the outer edge of the floor and is supported for pivotal movement from an operative inclined position to an inoperative elevated horizontal position to serve as a security measure and to enable the stairway to move to an out of the way stored position. At the upper end of the stairway, a landing is provided together with a porch or walkway all of which are nailed as a protective measure. Also, access is provided to the roof to enable the roof to be employed as a sun deck. The radial beams supporting the roof may be increased in length to permit a circular stairway to be installed around the center column. This also enables the use of a central circular hall to provide access to the individual rooms. A large transparent or translucent dome of plastic or similar material is installed in the roof above the stairway to provide lighting for the stairway and hall. Also, wall and floor sections may be supported by rods, or the like from the steel framework to enable the space below the framework to be thereby eliminating the expense of additional footings.

An object of the present invention is to provide a modular building structure in which the modules are arranged around a center supporting column with the modules each occupying a peripheral area defining a segment of predetermined angular extent.

Another object of this invention is to provide a building module including radial supporting beams attached to the center column and a plurality of parallel supporting members interconnecting said beams. Each beam includes flanges and the supporting members have notched ends engaging the flanges on the beams.
ments of each individual installation. The floor joists 30 and roof joists 34 are notched in each end thereof as indicated at 31 which permit them to slide into place with the flanges of the beams 22 and 24 serving as alignment tracks. The joists are so constructed that the same joist notching arrangement is used for both roof and floor joists with the floor 32 and ceiling 33 spaced from the adjacent beam flange. Extending vertically between the beams 22 and 24 are radial walls 38 and interconnecting the radial walls 35 is an outer peripheral wall 40 all of which are conventional curtain wall structure and provided with wall framing studs, insulation, door openings, doors, window openings, windows and the like. A portion of the peripheral wall 40 is recessed inwardly from the floor and roof to provide a walkway or porch 42 having a stairway landing 44 associated therewith to which a stairway 46 is pivotally attached. The pivotal attachment is along a hinged structure 48 at one edge of the landing 44. The stairway 46 is of conventional construction and may conveniently be a metallic stairway with the landing also being metallic. A lift cable 50 is connected to the free end of the stairway 46 and is entrained over a pulley assembly 52 supported from a portion of the building structure and is connected with a winch structure 54 attached to one of the posts 26 by virtue of which the stairway 46 may be elevated to an inoperative elevated position. This provides a security measure when leaving the premises inasmuch as a lock may be provided for the winch mechanism. If desired, a similar winch mechanism may be provided on the walkway or interiorly of the building structure so that after the occupants have entered the building structure, the stairway 46 can be elevated to its inoperative position thereby preventing unauthorized access to the building structure. This arrangement also enables the space below the floor 32 to be employed as a garage or carport for an automobile 55 or two automobiles depending upon the dimensional characteristics of the building structure.

There is also provided a depending storage or utility enclosure 56 supported on a flange 57 on the column 12 and disposed below the floor but above the supporting base 14. This enclosure is for storage of various items such as lawn tools or the like and may have other utility items therein and is provided with a door 58 opening into the garage or carport area to provide access thereto without materially decreasing the usable area of the carport or garage. The enclosure 56 may be increased in size to enclose the entire area defined by the floor 32 by suspending walls, floor and the like from the framework.

As illustrated, the building structure may be initially constructed with only a single segment and subsequent segments may be added as the need for additional space becomes necessary. With a single column 12, eight building segments or modules may be employed to serve as a vacation home, motel, rental units or the like.

A skylight 59 is provided in the roof and a suitable ladder is provided interiorly of the enclosure so that access can be gained to the roof through the openable skylight for use of the roof as a sun deck. Interiorly of the enclosure, conventional bathroom, kitchen, living and bedroom facilities are provided as illustrated in FIG. 3. The arrangement may vary depending upon the particular use intended.

For example, the basic vacation house may include two segments with a partition wall with a folding panel assembly to separate the enclosures into bedroom areas. If additional bedrooms are desired, an additional segment may be added for each additional room desire.

FIGURE 10 illustrates another embodiment of the invention in which the central column is enlarged to form a hollow core 60 in which a circular stairway 62 is provided. The stairway 62 leads to a landing 64 at the upper end thereof which is in communication with a circular walkway 66 by which access may be gained to each of the segments or modules 68 through a suitable access door. The lower end of the hollow central core 60 may also be provided with a doorway and the center interior of the core could receive various utility items such as pipes, ducts and the like.

Another variation in construction is the use of precast concrete panels employed as flooring or roof decking which, of course, would be fireproof and provide a more permanent structure as compared with wood joists and wood panel floor and roof decking. In this construction, the concrete panels would have outwardly diverging side edges corresponding with the divergency of the beams and could interlock with the beams in this same manner as the wood joists. Such panels would be installed prior to installation of the facie plate 41 which interconnects the ends of the beams. Other variations are illustrated in FIGURE 8 in which the beams 22 and 24 are supported by cables 70 which extend from the top of the center column 12 to the outer end of the beam 24 and then downwardly from the outer end of the beam 24 to the beam 22. In FIGURE 8, there is also illustrated a beam construction 72 which increases in depth toward the column 12 which is especially useful when the outer supporting posts 26 are not employed but rather only a post 76 extending between the beam 22' and the beam 24.

As illustrated in FIGS. 12 and 13, the building 10 has an upstanding wall 72 on the roof 36 which is divided by radial partitions 74 into segments similar to the building with communication through the roof through sky lights 59. Each segment or compartment is provided with a vertically adjustable reclining surface 76 in the form of a bunk supported by an inclined chain 78 or other suitable flexible support. Both the chain and the rear edge of the bunk are supported adjustably from a vertical post or the like rigid with the partition walls 74.

A screen 80 covers each of the compartments to prevent access over the top of the walls 74 while at the same time enabling entry of sun rays. The walls and partitions are constructed of reflective material such as brightly polished aluminum or stainless steel for reflecting the rays of the sun to enable sunbathing even when the sun is relatively low in the sky in the morning and afternoon with each compartment affording complete privacy.

The foregoing is considered illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed is new as is follows:

1. A building structure comprising a column supported in vertical position and extending above ground surface, stationarity radially extending beams attached to said column in elevated spaced relation above ground surface, a floor, roof and walls supported from said beams to form an enclosed space elevated above ground surface, said beams, floor, roof and walls being disposed completely within a portion of the peripheral area outwardly of the column to enable a building to have a single enclosure or multiple enclosures disposed peripherally around the column with each enclosure defining an equal angular area peripherally of the column, said column being provided with vertically spaced radial attaching flanges mounted thereon, said radial beams being attached at their ends to said flanges, the floor of the enclosure being supported from the lowermost beams, and the roof being supported from the uppermost beams and a plurality of supporting joists extending between adjacent radial beams in parallel relation to each other and of progressively increasing length in a radial direction from the column, a plurality of peripherally disposed beams interconnecting the outer ends of said radial beams, said radial beams having top and bottom flanges, each end of each joist having a notch...
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therein slidingly receiving a flange on the radial beams for guiding the joist into place, said notches being spaced from each longitudinal edge thereof thereby positioning the longitudinal edge of each joist vertically inwardly of the radial beam flange for supporting a floor and ceiling in vertically spaced relation to the radial beam flanges.

2. The structures defined in claim 1 together with means extending above ground surface for supporting the outer ends of said beams, said means being in the form of supporting members oriented in circumferentially spaced relation to enable access to the space between the elevated enclosed space and ground surface thereby providing garage space for an automobile.

3. The structure as defined in claim 1 wherein said enclosed space is provided with a stairway having one end thereof pivotally supported radially of the floor, and means connected with the stairway for pivoting the stairway from an inclined operative position to an elevated substantially horizontal position to prevent access to the enclosed space and to store the stairway in an out-of-the-way position.

4. The structure as defined in claim 1 wherein a portion of the outer periphery of the enclosed space is provided with an elevated walkway, an access door in the outer periphery wall adjacent thereto, and a stairway attached to the walkway for access to the elevated walkway.

5. The structure as defined in claim 1 wherein said center column defines a hollow core, a stairway disposed in said hollow core, and a walkway encircling the core at the floor level and having access to the stairway and each enclosure provided.

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U.S. Cl. X.R.

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