United States Patent [19]

Tuuri

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[54] **PREFABRICATED AND DEMOUNTABLE BUILDING**

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[52] **U.S. Cl.** **52/82,** 52/200, 52/245, 52/582

[51] **Int. Cl.** **E04b 1/343**

[58] **Field of Search** 52/82, 199, 200, 237, 245, 52/246, 247, 270, 293, 584, 582, 469, 465

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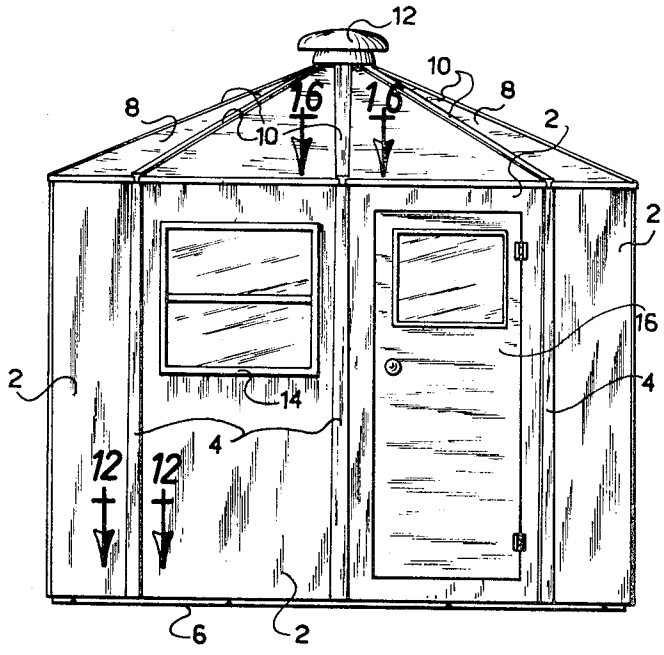
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Primary Examiner—Price C. Faw, Jr.

[57] **ABSTRACT**

A prefabricated and demountable building structure is disclosed. The structure provides for ready transportation and quick and easy assembly and disassembly in a minimum of time without the necessity of having to provide various tools to assist in the erection or demounting. The unit consists of a floor assembly having a central floor disc and a number of floor segments which interlock with the disc and with adjacent floor segments. Wall segments which are generally rectangular in side view fit together to form a wall enclosure which interlocks with the floor assembly. A roof assembly consists of a number of individual roof segments which interlock with adjacent roof segments and also interlock with the wall enclosure. The roof assembly is capped by a suitable vent or bonnet arrangement to hold all of the various roof segments in sturdy relationship. The vertical edges of the wall segments are provided with outstanding flanges which form a double flange to receive a wedge clamp to hold adjacent segments securely together. The double flange increases downwardly in width to receive a tapering wedge clamp which is slid over the double flange. The roof segments are likewise provided with flanges on their side or radial edges which butt together to form a double flange with the double flange increasing in width inwardly to receive a tapering roof wedge clamp. A suitable door and/or windows may be provided in selected one of the various wall segments.

8 Claims, 23 Drawing Figures



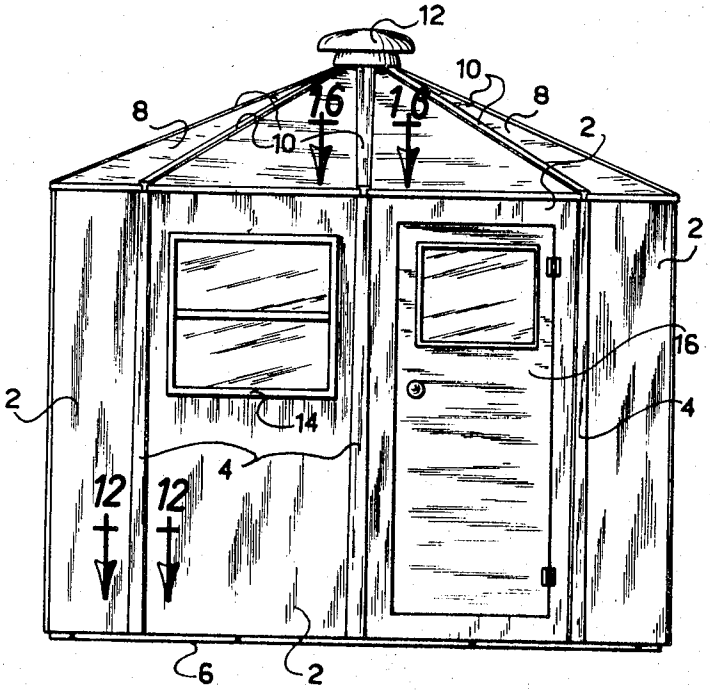


FIG.1

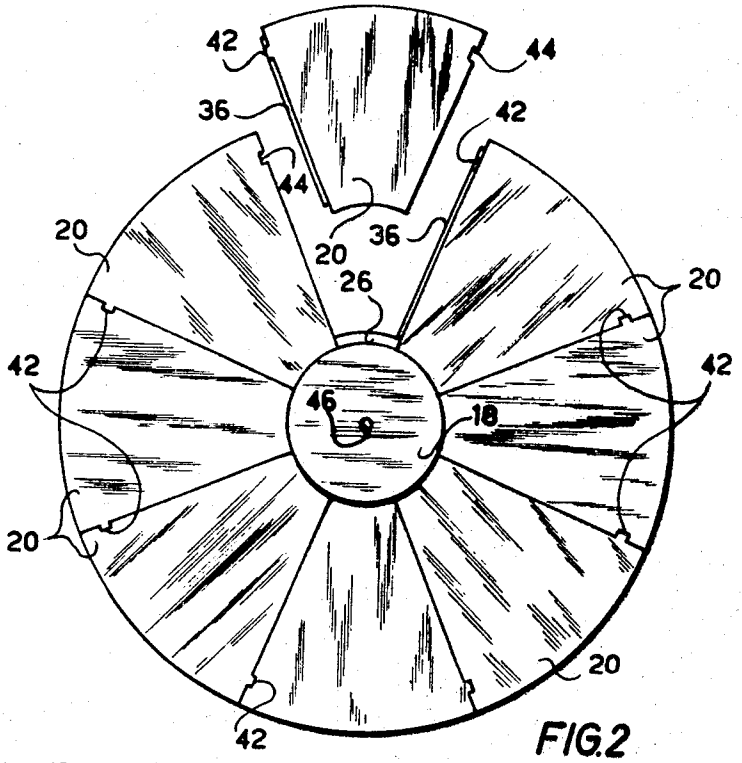


FIG.2

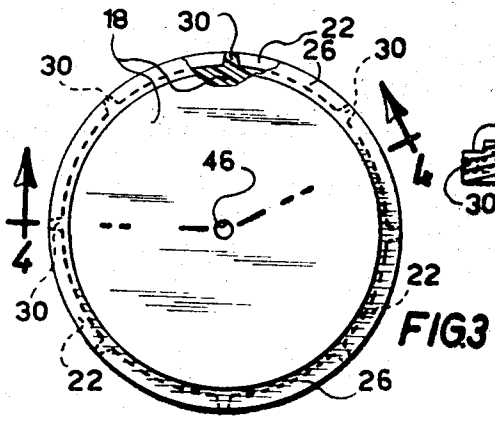


FIG.3

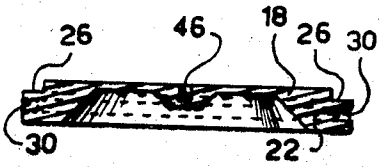


FIG.4

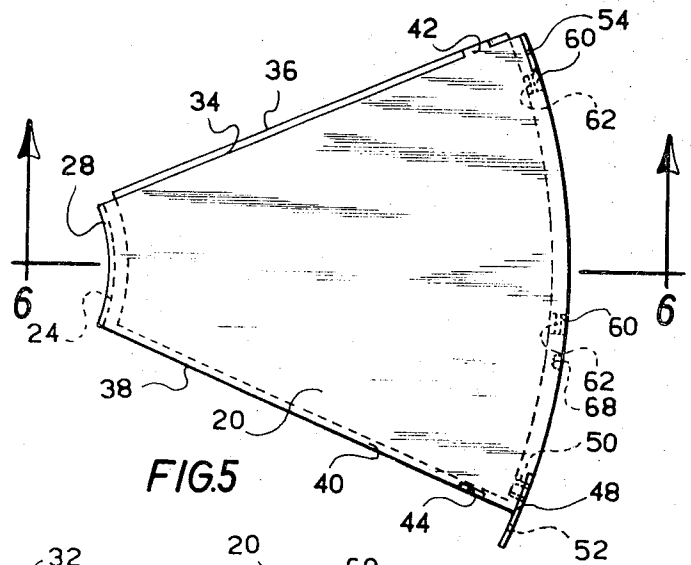


FIG.5

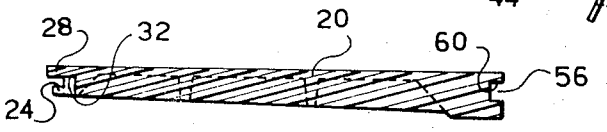


FIG.6

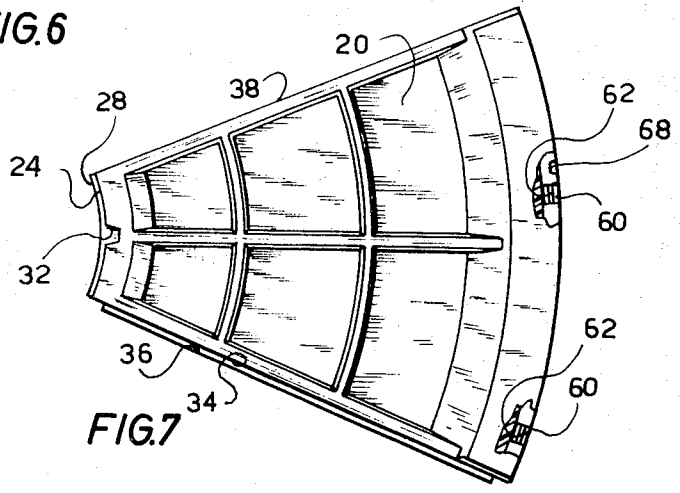


FIG.7

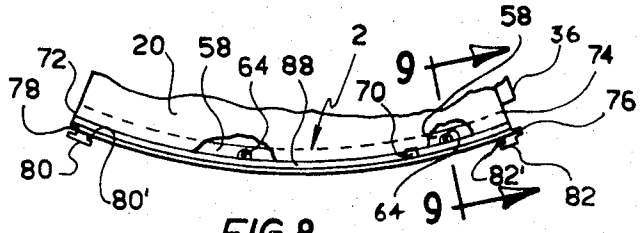


FIG.8

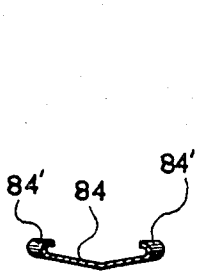


FIG.11

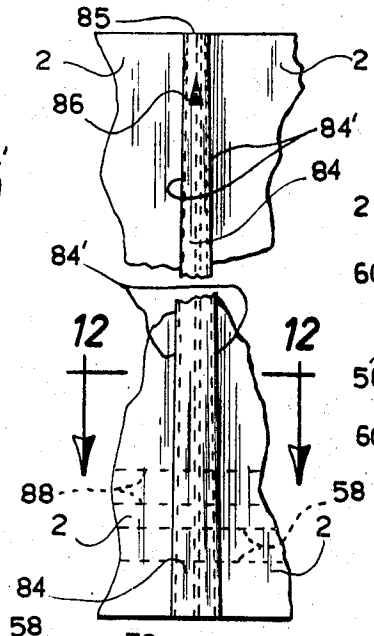


FIG.10

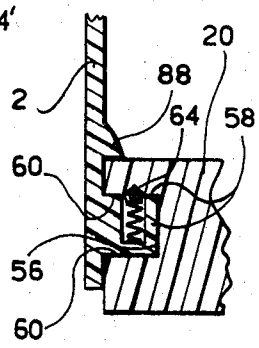


FIG.9

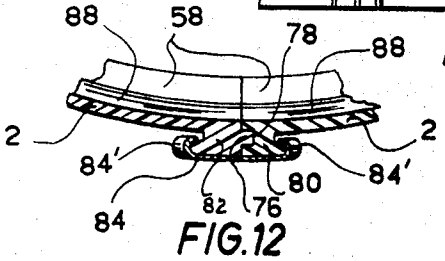


FIG.12

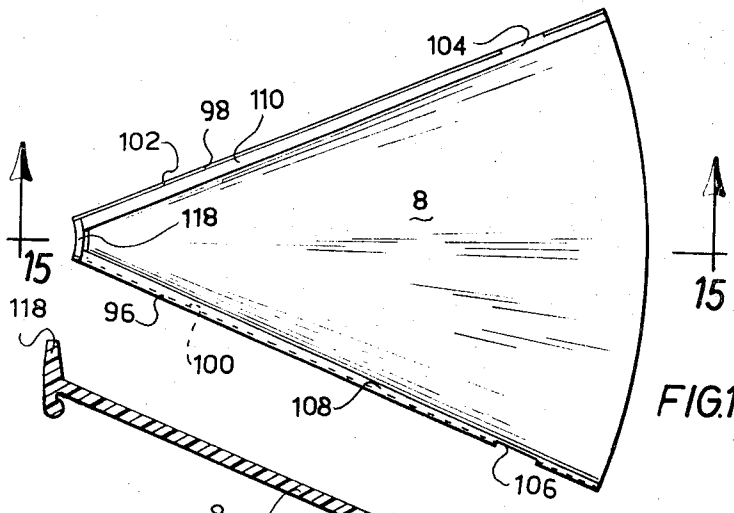


FIG.13

FIG.15

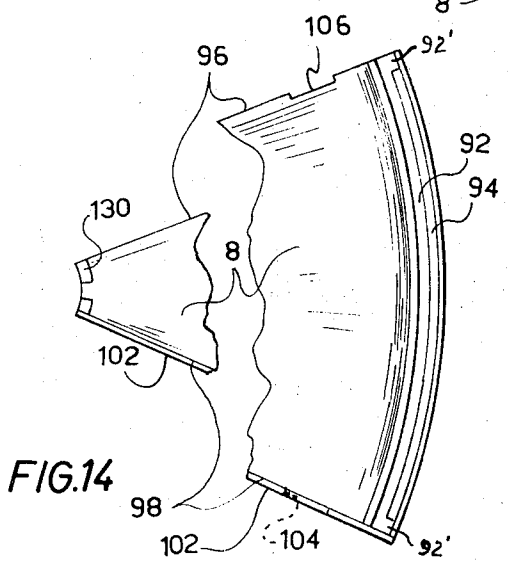


FIG.14

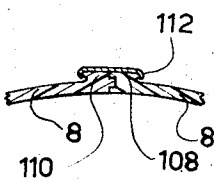


FIG.16

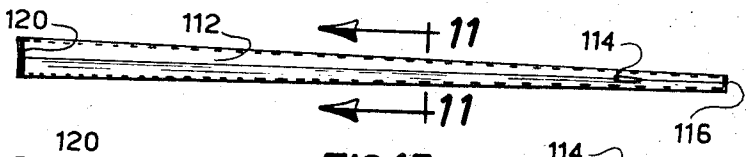


FIG.17

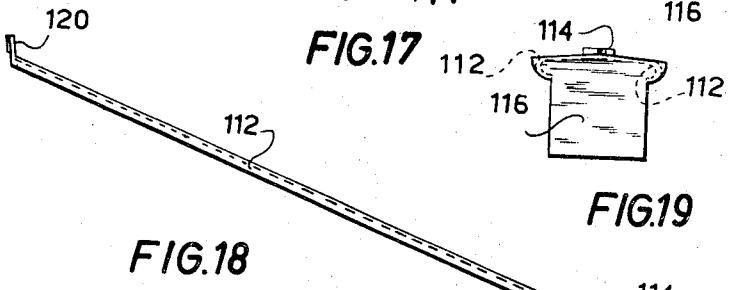


FIG.18

FIG.19

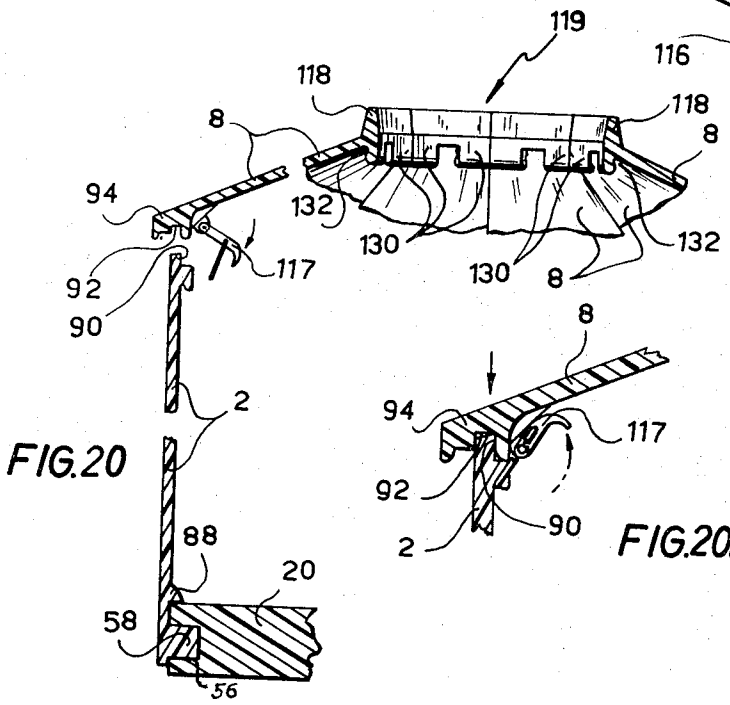


FIG.20

FIG.20a

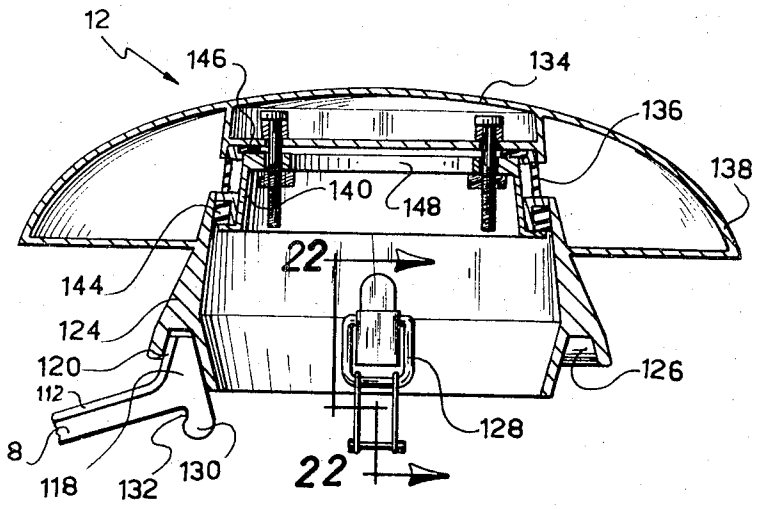

12
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FIG.21

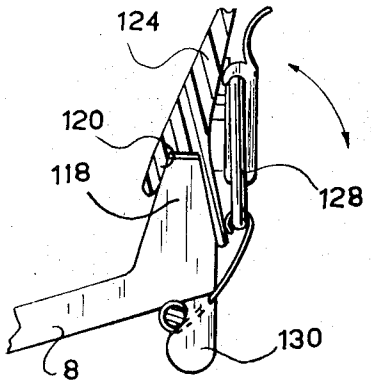

124
120
118
128
130
8

FIG.22

PREFABRICATED AND DEMOUNTABLE BUILDING

The present invention relates to a demountable and prefabricated building structure, and particularly to a prefabricated building structure which can easily and simply be transported from location to location and which can be assembled and disassembled in a short period of time without the necessity of having any special tools to assist in the erection or demounting.

In broadly general terms, the building structure of the present invention consists of four basic units, a floor assembly, a wall assembly, a roof assembly and a bonnet or vent for securing various roof segments, which together form the roof assembly, together.

The floor assembly consists of a centrally positioned floor disc, and a number of floor segments or sections with each of the floor segments being substantially frusto-triangular in configuration and having top surfaces which are substantially planar. The inner edges of the floor segments are adapted to butt against and interlock with the centrally positioned floor disc to provide the floor assembly. Each floor segment interlocks with adjacent floor segments in a manner to be described in more detail below to provide a floor structure which is dust- and draught- and moisture-free.

The wall assembly consists of a number of wall segments or sections. Each wall segment interlocks with adjacent wall sections, and the vertical side edges of the wall segments are provided with outstanding flange portions and interlocking rib and groove portions with the abutting flange portions of adjacent wall segments being held together by means of tapering wall wedge assemblies which when slid over the flanges of abutting wall segments provide a tight and moisture- and wind-proof and strong and durable enclosure without the necessity of having to employ additional securing means, such as nuts and bolts, and the like. Additionally the various wall segments interlock with the outer edges of the floor segments.

The roof assembly consists of a number of roof segments or sections. Each roof segment is generally frustotriangular in configuration with the lower surface of the outer edges of each roof segment being provided with suitable groove means to receive upstanding rib portions provided on the wall segments. The roof segments interlock with adjacent roof segments and are secure to each other by means of tapering roof wedges which engage over flanges provided on the side edges of adjacent roof segments. The roof assembly itself is secured to the wall structure by means of suitable hook or clamping arrangements without the necessity of having to use specific tools to tighten bolts or other securing means or the like.

When assembled, the roof assembly provides a centrally positioned opening with the inner edges of the roof segments terminating in upstanding flanges which together form a collar, and a bonnet or vent or the like is secured over the collar and the bonnet is secured to the roof members by means of suitable hooks or fastening means or the like again without having to use any special tools.

In known prefabricated and demountable building structures special tools are required to assist in assembly and disassembly and this disadvantage is overcome by the present invention. Additionally known structures are for the most part laborious and time-consuming in assembly and disassembly requiring a number of people to assist in the erection and demounting and these disadvantages are also overcome by the present structure.

It is the main object of the present invention to provide a building structure which consists of prefabricated component parts and which is strong and durable and draught- and moisture-free and which is readily assembled or disassembled in a minimum of time and with a minimum of effort without the necessity of having to provide any specific tools to assist in the erection or demounting, and which when demounted is readily transportable from one location to another.

It is a further object of the present invention to provide a structure as above-described which consists in part of a number of floor segments, roof segments and wall segments with the roof segments being used interchangeably, and the wall segments being used interchangeably, and the floor segments being used interchangeably to avoid the necessity of having to follow any numbered sequence in assembly thus reducing assembly time.

The structure according to the invention may have many uses, such as a hut or shed for use by hunters or fishermen, a children's playhouse, a cottage, etc. Additionally, individual units may be used as modular constructions joined together to form a complex, with additional modular units being added as the need arises.

The above and other objects will become apparent from the following description of a specific construction with reference to the accompanying drawings wherein:

FIG. **1** is a side view of an erected building or shelter according to a preferred embodiment of the present invention;

FIG. **2** is a diagrammatic plan view of a floor assembly according to a preferred embodiment of the present invention and showing the central floor disc and various floor segments interlocking therewith;

FIG. **3** is a detailed plan view of the central floor disc shown diagrammatically in FIG. **2**;

FIG. **4** is a sectional view taken along line **4—4** of FIG. **3**;

FIG. **5** is a top plan view of an individual floor segment shown diagrammatically in FIG. **2**;

FIG. **6** is a cross-sectional view taken along line **6—6** of FIG. **5**;

FIG. **7** is a bottom view of a floor segment as shown in FIGS. **2, 5** and **6**;

FIG. **8** is a top plan view of one wall segment according to the preferred embodiment of the present invention when in upright position;

FIG. **9** is a sectional view taken along line **9—9** of FIG. **8**;

FIG. **10** is a front view of a wall wedge clamp employed to secure abutting wall segments together;

FIG. **11** is a sectional view of a wall wedge clamp taken along line **11—11** of FIG. **10**; and

FIG. **12** is a sectional view taken along line **12—12** of FIG. **1**;

FIG. **13** is a top plan view of one of the roof segments;

FIG. **14** is a bottom view of the roof segment shown in FIG. **13**;

FIG. **15** is a sectional view taken along line **15—15** of FIG. **13**;

FIG. 16 is a sectional view taken along line 16—16 of FIG. 1;

FIG. 17 is a top plan view of a roof wedge clamp used in securing abutting and adjacent roof segments together;

FIG. 18 is a side view of the roof wedge shown in FIG. 17;

FIG. 19 is an outer end view of the roof wedge clamp shown in FIGS. 17 and 18;

FIG. 20 is a diagrammatic side sectional view illustrating the interlocking relationship between a floor segment, a wall segment and a roof segment;

FIG. 20*a* is an enlarged fragmentary detail view of the wall to roof interlock;

FIG. 21 is a side sectional view of a suitable bonnet or vent showing a toggle fastener for use in securing the bonnet or vent to a roof segment; and

FIG. 22 is a partial side sectional view of the inner portion of a roof segment secured to the vent by means of a suitable toggle fastener and connector clip.

In the attached drawings the floor assembly is shown as consisting of a central circular disc member and a number of floor segments which are generally frusto-triangular in configuration having inner and outer edges of arcuate shape to provide a floor assembly or circular shape. The wall assembly consists of a number of wall segments which are generally rectangular and have a horizontal cross-section of arcuate shape to provide a wall assembly of generally cylindrical shape. The roof segments are frusto-triangular having inner and outer edges of arcuate shape and which are generally arcuate in lateral cross-section and which together form a generally frusto-conical roof assembly.

It will be appreciated however that while only one specific construction has been illustrated other modified forms are possible. By way of example, the central floor disc could be polygonal or hexagonal or octagonal in shape rather than circular, and the floor segments would have straight inner edges to abut against the straight sides of the disc. The outer edges of the central disc could then be arcuate (as shown) or straight, and if straight the wall segments would not have a cross-section of arcuate shape but rather would be planar, with each wall segment abutting and interlocking with a corresponding floor segment. The number of wall segments would correspond to the number of sides of the floor assembly and the wall assembly would define an enclosure of polygonal cylindrical shape. The roof segments would correspond in number to the wall segments, and need not be arcuate in lateral cross-section but may be planar, and the outer edges of the roof segments may be straight or arcuate if desired as may the inner edges. If the inner edges of the roof segments are straight then of course the bonnet or vent will be provided with a corresponding shape.

Referring now to the drawings in detail, it will be seen that for purposes of illustration that there are eight floor segments, and eight wall segments and eight roof segments which together form a generally cylindrical enclosure having a substantially conical-shaped roof portion. However it will be appreciated that more or less than eight can be used as a number for the roof segments and/or wall segments and/or floor segments.

Each floor segment is generally frusto-triangular in configuration having inner and outer edges of arcuate shape and straight side edges (or radial edges in assembled position). For purposes of brevity in this disclosure however such segments are simply referred to as floor segments or sections.

Each wall segment is generally rectangular in side view and arcuate in horizontal cross-section. Such segments however will simply be called wall segments or sections.

Each roof segment is generally frusto-triangular in configuration having arcuate inner and outer edges and straight side or radial edges and is arcuate in transverse cross-section. For the purpose as discussed above such segments will be called simply roof segments or sections.

Referring now specifically to FIG. 1, the building structure according to the present invention consists of a number of wall sections 2 which are secured to upstanding side-by-side abutting relationship by means of tapering wall wedge clamps 4, and the wall segments 2 are secured to and interlocked with the flooring unit indicated generally at 6 as will be explained in more detail below. The wall wedge clamps 4 may taper uniformly but this is not critical.

The roof of the structure consists of a number of roof segments indicated by number 8 which are secured in side-by-side abutting relationship by means of taper roof wedge clamps 10. The roof sections or segments 8 when assembled provide a generally conical closure having a central opening which is capped by means of a bonnet or vent arrangement shown generally by numeral 12.

Each of the wall segments 2 are identical in over-all configuration but as desired suitable windows 14 or doors 16 may be provided in individual wall segments. The positioning of windows and a door in desired wall segments is a matter of simple design and installation and it is not believed that further clarification is required above, other than to say that various windows and the door used would preferably be provided with suitable locking mechanism so that the building structure may be secured against burglarism during the absence of the inhabitants. The window material used may preferably be a transparent plastic or like material to reduce the chance of breakage during transport.

Attached FIGS. 2 through 7 illustrate a floor assembly for the present building structure, with the floor assembly consiting of a centrally positioned disc 18 and a number of floor sections or segments indicated generally by numeral 20. The positioning of these various floor components is diagrammatically illustrated in FIG. 2.

The central disc 18 is shown in detail in FIGS. 3 and 4 and it will be appreciated that the outer circular periphery of the disc 18 is provided with a groove 22 to receive an inwardly directed rib 24 provided on the inner arcuate edge of each of the floor segments 20. This rib 24 is clearly shown in attached FIG. 6. The upper outer peripheral edge of the central disc may also be provided with a recess 26 to receive an inwardly directed rib 28 (FIG. 6) provided on the floor segments. In a preferred construction, the groove 22 may be provided with centering wedges 30 to be received within corresponding recesses 32 (FIG. 7) provided centrally along the arcuate inner surface of each floor segment 20 for purposes of correctly aligning the various floor segments during construction. The aperture 32 or recess is centrally positioned in the inner arcuate rib 24 of each of the floor segments and it is apparent that the central disc 18 will be provided with a number

of centering wedges **32** corresponding to the actual number of floor segments **20** employed.

In addition to interlocking with the central disc in the manner disclosed, each adjacent floor segment also interlocks with each other. This will be clearly appreciated from attached FIG. **5** from which it will be seen that the edge **34** of a floor segment is provided with an outwardly projecting rib **36** whereas the other edge **38** of the floor segment is provided with a groove **40** to receive the rib **36** provided on an adjacent floor segment. In a preferred construction, edge **34** is provided with a locating block **42** to be received within the corresponding recess **44** provided on the other edge **38.** The provision of the locating block **42** and the recess **44** will assure correct aligning and positioning of adjacent floor segments.

The central disc **18** may be provided with a central recess or opening **46** for purposes to be described hereafter.

In order to secure the various floor section components against undesired movement during erection of the remaining components of the structure, each of the floor segments **20** may be provided with a floor strap **48** (see FIG. **5**) with one end of the floor strap being secured to one end of the arcuate outer edge of each floor segment by means of suitable screws or bolts **50.** The portion of the strap **48** projecting past the edge **38** of the floor segments is provided with an aperture **52** to receive a strap post **54** provided on an adjacent floor segment. Of course the floor straps **48** will be recessed within the outer defined circular periphery of the floor structure so as to provide snug fitting of the various wall segments when erected.

The outer arcuate edge of each of the floor segments **20** is provided with a groove **56** to receive a corresponding inwardly directed rib **58** provided on the lower inner surface of each of the wall segments (see FIGS. **9** and **20**). The groove **56** provided on each floor segment may also preferably be provided with a suitable number of striker plates **60** each provided with a shallow indentation **62** to receive a spring-loaded ball catch **64** (see FIGS. **8** and **9**) spaced along the upper surface of the inwardly directed rib **58** of each wall segment. These spring-ball catches **64** provide for a "snapping-in" action when the wall sections are placed in engagement with the floor segments. Correct positioning of the spring-loaded ball catches **64** may be assured by providing a tapered recess or notch **68** within the groove **56** to receive a tapering block **70** carried by each of the wall segments (see FIG. **8**).

As will be clearly seen from FIG. **8,** each of the wall segments **2** is arcuate in horizontal cross-section whereby when all of the wall segments are assembled together, they provide a cylindrical enclosure.

Each of the wall segments **2** are provided with vertical edges **72** and **74** as will be seen from FIG. **8.** The vertical edge **74** is provided with an outwardly directed rib **76** to be received within a corresponding groove **78** provided on an adjacent wall segment. Thus when the various wall segments are assembled they provide an interlocking along their vertical abutting edges to provide against moisture and draught. The vertical edges **72** and **74** are additionally provided with outwardly directed flanges **80** and **82** respectively, which together form a double flange arrangement or a wedge clamp flange having oppositely facing grooves **80'** and **82'** respectively to receive the inwardly directed edges **84'** of the generally C-shaped (in cross-section) wall wedge clamps **84** which are shown in FIGS. **10** and **11.**

The lateral width of the flanges **80** and **82** on each wall segment increases downwardly whereby when the C-shaped wall wedge clamp **84** which also correspondingly increases in width in a downward direction is slid onto the abutting flanges **80** and **82,** the wedge **84** provides a wedging action thus tightly securing adjacent wall sections together and guarding against the entry of draughts and moisture. FIG. **12** which is a sectional view taken along line **12—12** of FIG. **1** illustrates the positioning of the wedge member **84** with respect to the flanges **80** and **82** carried by adjacent wall sections **2.** The lower end of the clamp **84** will of course be open, but the upper end is preferably closed as shown at **85** in FIG. **10.**

The wall wedge clamp **84** may advantageously be provided with a raised double-ended knock-out lug **86** to assist in positioning and removal of the wedge **84** when it is desired to assemble or disassemble the building. Of course any suitable hammering implement may be used against the knock-out lug **86** to provide positioning of or dislodgement of the wedge member **84** when desired.

As the combined widths of abutting flanges **80** and **82** increase in a downward direction and inasmuch as the width of the wedge **84** increases in a downward direction by a corresponding amount, it is quite apparent that the positioning of the various wall segments and the positioning of the wedging elements **84** will result in a sturdy and draught-proof and moisture-free cylindrical enclosure.

The dimensions of the flanges and the wedges **84** will preferably be such that the wedge must forceably be moved its last few inches of travel to ensure a firm interference fit.

If desired, the interior surface of the wall sections **2** may be provided with suitable moulding **88** to extend inwardly over the outer arcuate edges of each of the floor segments to provide a neat and clean assembly.

The upper edges of each of the wall sections are provided with upwardly directed ribs **90** which are adapted to be received within grooves **92** provided on the lower surface of the outer edges **94** of each of the roof segments **8.** The provision of the flanges or ribs **90** and the grooves **92** is clearly shown in attached FIG. **20.**

The various roof panels used are shown in detail in FIGS. **13, 14, 15** and **20.** The roof panel **8** has side edges **96** and **98** with the side edge **96** being provided with a longitudinal groove **100** to receive a longitudinal rib **102** provided on the edge **98.** Additionally, as in the case of the floor segments, the roof segments will be provided with location blocks **104** and location block receiving recesses **106** to assure positive alignment of adjacent roof segments.

As clearly shown in FIG. **14** the ends of the outer edge of each roof segment **8** may be provided with recesses **92'**. The purpose of these recesses or notches **92'** is two-fold. Firstly, the recesses **92'** receive the upper ends of the wall flanges **80** and **82** and the wall wedge clamp **84,** and secondly they act as locating recesses for correctly positioning the wall segments with respect to the roof segments.

The edge **96** and the edge **98** of each of roof segments are provided with an upstanding flanges **108** and **110** respectively, which together form, when two adjacent segments are placed together a wedge-receiving

flange having oppositely directed grooves to receive a roof wedge **112** which is shown in FIGS. **17, 18** and **19.** The cross-section of the roof wedge is similar to that of the wall wedge **84** and which is shown in FIG. **11.**

The roof wedge **112** may be provided with a suitable knock-out lug **114** to assist in the positioning and removing the wedge when it is wished to erect or demount the building.

The width of the flanges **108** and **110** increase inwardly as does the width of the wedge member **112** with the result that by sliding the clamping member inwardly over the clamping flange formed by the abutting flanges **108** and **110** a secure and moistureproof roof assembly is provided.

The outermost end of the flange **112** and which is indicated at number **116** in the attached drawings, is bent downwardly to the form shown in FIG. **19** to completely cover the line of joinder of adjacent roof segments. This prevents entry of moisture and draughts during stormy periods.

The positioning of the roof clamping member **112** over the flanges **108** and **110** is clearly shown in FIG. **16** which is a sectional view taken along line **16—16** of FIG. **1.**

The various roof segments **8** are secured to the wall segments **2** by suitable catch or latch arrangements such as a toggle latch **117** as shown in FIG. **20.** Any suitable number of catches **117** may be employed as required.

The inner end of each roof segment **8** is provided with an upstanding lip or flange **118** which provides a collar arrangement as shown generally at **119** in FIG. **20** when all of the roof segments are arranged in position. Additionally, the inner end of each of the roof wedges **112** is provided as an upwardly directed lip **120** which recesses snugly against the upwardly directed flange **118** of adjacent roof segments when the wedge **112** is fully pushed inwardly into position. The circular opening provided by the collar is closed by means of a suitable vent or bonnet arrangement shown generally at numeral **12** in FIG. **21.** A lower sleeve portion **124** of the vent **12** is provided with a downwardly opening groove **126** to receive the upper edges **118** of the roof segments when in assembled position. As clearly shown in FIG. **21,** the fitting of the vent sleeve **124** snugly encloses the inner ends **120** of the roof wedge clamps **112** and also the upstanding flanges or lips **118** of each of the roof segments whereby any entrance of moisture or draught is prevented. The bonnet or vent **12** may engage over the lips **118** in a tapering fit as shown to facilitate installation and removal. Additionally, it will be appreciated that when the vent or bonnet arrangement **12** is secured onto the collar by means such as a toggle fastener arrangement shown generally at **128** in FIG. **22** removal of the roof wedges **112** is prevented. The roof wedges **112** can be removed only after first removing the vent structure **12** and the vent structure can be removed only by loosening the fasteners **128** from the inside of the structure.

Additionally, inasmuch as the wall wedges **4** slide downwardly into wedging position, it will be appreciated that removal of the wedge **4** is possible only after the roof elements have been removed and the roof elements can be removed only after the vent structure is removed and the toggles or latches **117** disengaged and this is possible only from the inside the building structure with the result that once the door is locked it is impossible for any burglar or intruder to enter or demount the building without first forcibly opening the door or gaining entry through a window.

As will be clearly seen from FIGS. **14, 20, 21** and **22** the inner lower edges of the roof segments **8** may be provided with downwardly depending lips or flanges **130** providing grooves **132** around which a suitable toggle fastener **128** arrangement may engage to snugly hold the vent arrangement on the top of the conical roof structure.

While any suitable vent-bonnet arrangement **12** can be used it is preferred that the arrangement be of a type that can be opened for ventilation and closed during cold or inclement weather. Additionally suitable means could be provided for receiving a stove pipe in the vent to dispose of smoke if the structure is to be heated.

A suitable but not limiting vent arrangement is shown very generally in FIG. **21.** The sleeve **124** extends upwardly and is capped by a cap **134** secured thereto. The portion **136** of the sleeve **124** within the skirt portion **138** may be provided with open, preferably screened ports for ventilation. A closure ring or sleeve **140** is mounted for suitable vertical movement to open and close the ports. In FIG. **21** the sleeve which may be guided by bolts or posts **142** is closed against seals **144** and **146** to close the vent and prevent ventilation. The center area **148** of the sleeve **140** is open and it will be appreciated that by lowering the sleeve **140** with respect to sleeve **124** that ventilation will be provided through the ports and centrally through the sleeve **148.** Suitable means for holding the sleeve **140** in either open or closed position will of course be provided but such as not shown in the drawings.

As discussed above the central floor disc **18** may be provided with a central opening or cylindrical recess **46,** and the purpose for this may be two-fold. During one man assembly a suitable pole or other type of rod (not shown in the drawings) which may be telescoping or adjustable is positioned upright in hole **46.** The top of the rod is provided with means to support a ring having a diameter somewhat larger than the diameter of the collar **119** whereby roof segments may be laid against and supported by the ring during erection of the complete roof structure. The ring may be provided with a suitable diameter to be received within the grooves **132** provided on each roof segment; and the ring in fact should be split to permit an increase in its diameter to receive the lips **130** of the last few roof segments erected. The top end of the rod may project upwardly above the structure during erection, and the bonnet **12** hung on the upper end of the rod during positioning of all of the roof segments. After all of the roof segments are positioned the rod may be removed or shortened to lower the bonnet into correct position.

After all of the roof segments are positioned the rod may be removed (but the ring will stay in position) and the aperture **46** used to support s shorter rod or tube to act as a table support, or clothes hanger or the like.

In larger structures the rod could be left in position if desired.

It is suggested that the members such as the various wedge clamping members **4** and **10** and the vent structure **12** be manufactured from some metallic corrosive-resistant material such as aluminum or other suitable metal alloy; whereas the central floor disc, floor segments, wall segments, and various roof segments can be

made of any suitable material such as aluminum or metal alloy as desired, but the latter components can preferably be made from a fibreglass-reinforced plastic material in view of the resulting economical advantages. Stiffening ribs or members of wood or aluminum or the like may be molded in the segments if desired.

The structure may of course be made of any suitable size, but a floor diameter of about 8 feet, a wall height of 5 – 6 feet and an overall height of close to 8 feet has been found to be suitable.

In FIG. **9** the spring-loaded ball catches **64** are shown being positioned on the inwardly directed ribs **58** of the wall segments **2** for engagement into indentations or recesses provided in the floor segments **20.** However it will be appreciated that a reverse arrangement is also possible, that is, the ball catches **64** could be carried by the floor segments for engagement either with the inwardly directed ribs **58** or the molding **88** provided on the wall segments.

Also the wall segments **2** are preferably provided with location blocks and recesses (not shown) in the same manner as blocks **42** and recesses **44** in the floor segments, and blocks **104** and recesses **106** in the roof segments to maintain adjacent wall segments in proper alignment both during and after erection.

Although a very specific arrangement of component parts has been disclosed in the foregoing description and in the accompanying drawings, it is clear that various modifications are possible and are within the scope of this inventive concept and that the foregoing disclosure and attached drawings should not be construed as limiting the inventive concept involved.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A prefabricated and demountable building structure consisting of a floor, a wall assembly and a roof assembly and a bonnet or vent capping the roof assembly, the floor interlocking with the wall assembly interlocking with the roof assembly, the wall assembly consisting of a number of substantially identical wall segments with each of the wall segments having vertical side edges for abuttment against vertical side edges of adjacent wall segments, and outstanding vertical flanges provided on vertical side edges of the wall segments, the vertical flanges of abutting wall segments providing a wall wedge clamp flange which increases uniformly in width in a downward direction, and a wall wedge clamp having a width increasing uniformly downwardly slideably mounted on each wall wedge clamp flange to secure adjacent wall segments together, the roof assembly consisting of a number of substantially identical roof segments with each of the roof segments having side edges for abuttment against side edges of adjacent roof segments, and upstanding side flanges provided on side edges of the roof segments, the side flanges of abutting roof segments providing a roof wedge clamp flange which increases uniformly in width in an inward direction, and a roof wedge clamp having a width increasing uniformly inwardly slideably mounted on each roof wedge clamp flange to secure adjacent roof segments together, and wherein the floor is circular, and the wall assembly is substantially cylindrical and the roof assembly is substantially conical, the wall segments being generally arcuate in horizontal crosssection and the roof segments being generally frustotriangular in configuration and having an arcuate lateral crosssection, and wherein the roof segments have inner and outer edges of arcuate shape and straight side edges, the side edges of adjacent roof segments interlocking, the inner edges of the roof segments being provided with upwardly directed ribs which together form a collar to receive the said bonnet or vent, the said roof wedge clamps being provided on their inner ends with upwardly directed flanges which contact the said collar exteriorly and are received within a downwardly directed circular sleeve provided on the bonnet or vent.

2. A structure according to claim **1,** wherein the floor consists of a central disc member, and a plurality of floor segments abutting against and radially positioned around the central disc member, the floor segments being generally frusto-triangular in configuration and having inner and outer edges, inner edges of the floor segments abutting and interlocking with the central disc member, the side edges of adjacent floor segments being abutting and interlocking.

3. A structure according to claim **2,** wherein the floor is provided with an outwardly projecting peripheral rib received in interlocking relationship with a groove provided interiorly in the substantially wall assembly.

4. A structure according to claim **2,** wherein the wall assembly is provided along its top edge with an upwardly directed rib received in interlocking relationship in a downwardly opening groove provided in the substantially conical roof assembly.

5. A structure according to claim **2,** including an inwardly projecting molding provided on the wall segments, the molding overlying upper surfaces of the floor segments when the wall segments are in interlocking relationship with the floor segments.

6. A structure according to claim **1,** wherein the said wall and roof wedge clamps are provided with outstanding double-ended knock-out lugs to assist in assembly and disassembly of the structure.

7. A structure according to claim **1,** including a door or window provided in at least one of the wall segments.

8. A structure according to claim **1,** wherein the floor, and wall and roof assemblies are constructed of fiberglass-reinforced plastic material.

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