July 5, 1960 A. C. SANFORD 2,943,366

UNIT COLUMN BUILDING CONSTRUCTION

Filed March 4, 1957 6 Sheets-Sheet 1

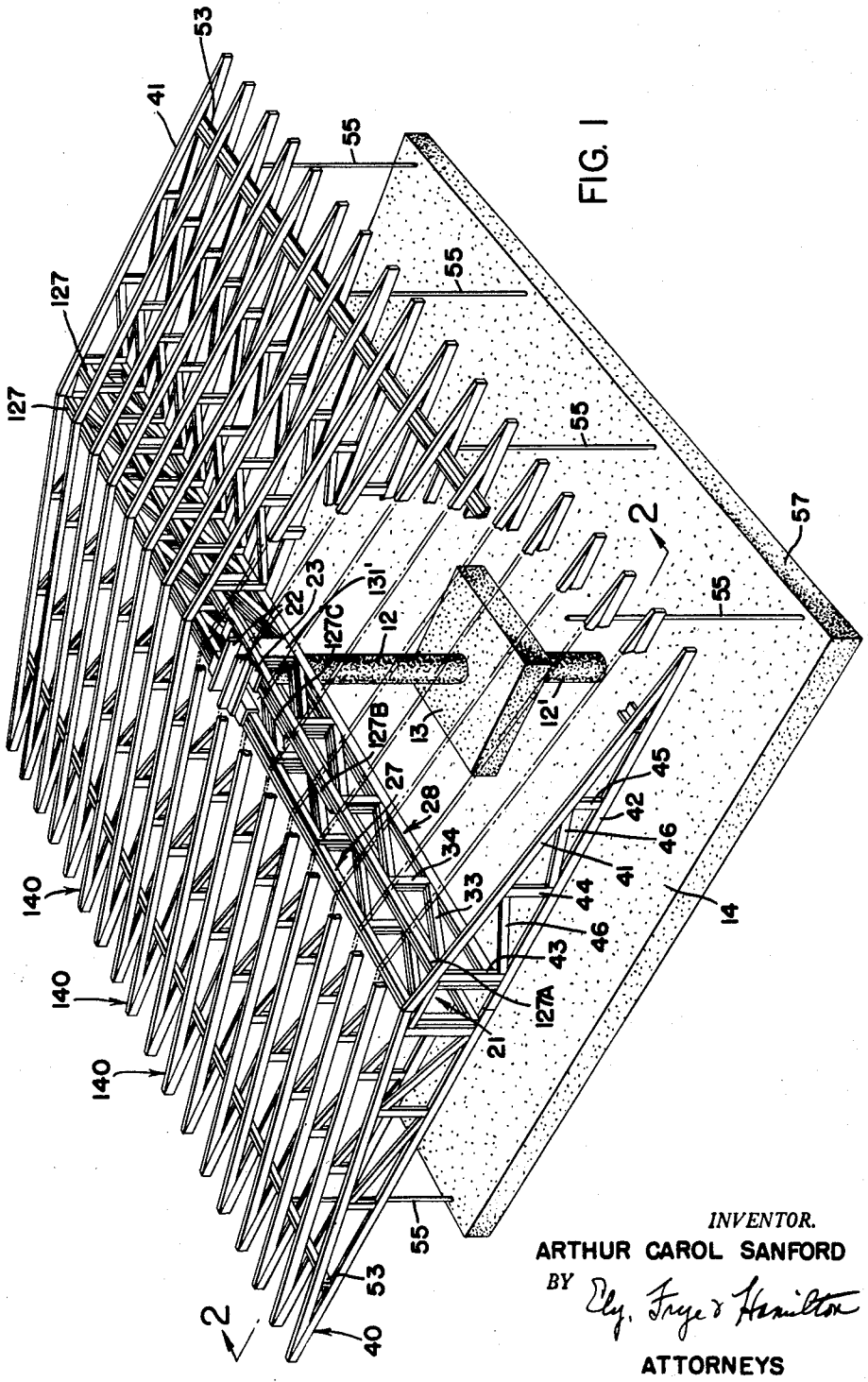


FIG. 1

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UNIT COLUMN BUILDING CONSTRUCTION

Filed March 4, 1957 6 Sheets-Sheet 2

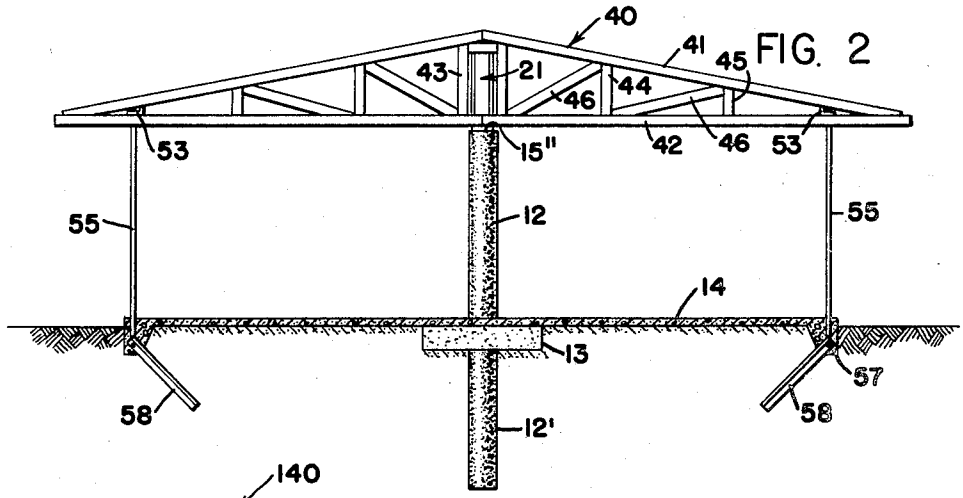


FIG. 2

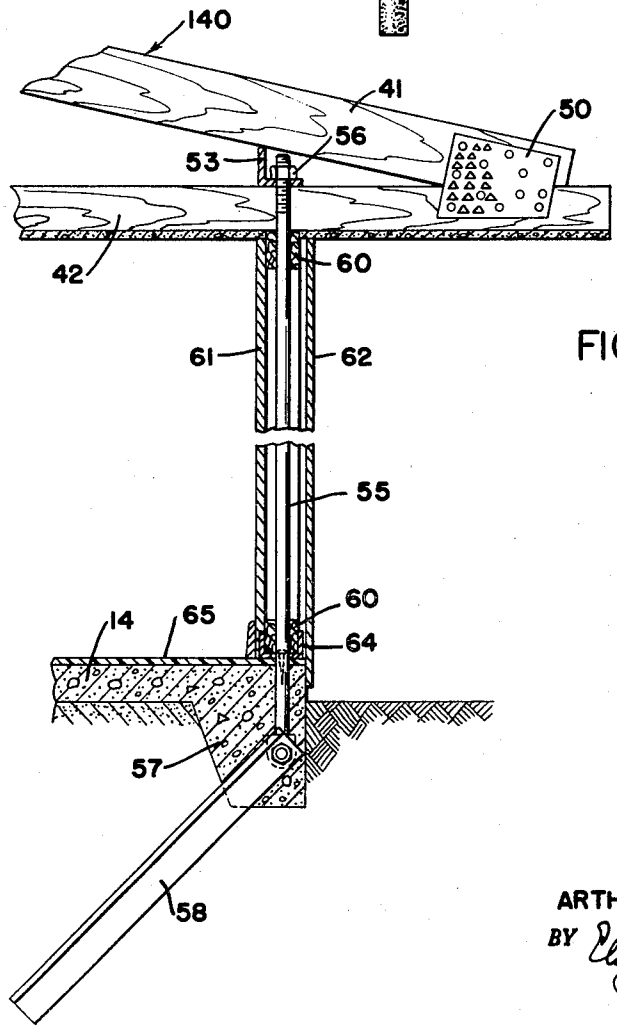


FIG. 3

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UNIT COLUMN BUILDING CONSTRUCTION

Filed March 4, 1957 6 Sheets-Sheet 3

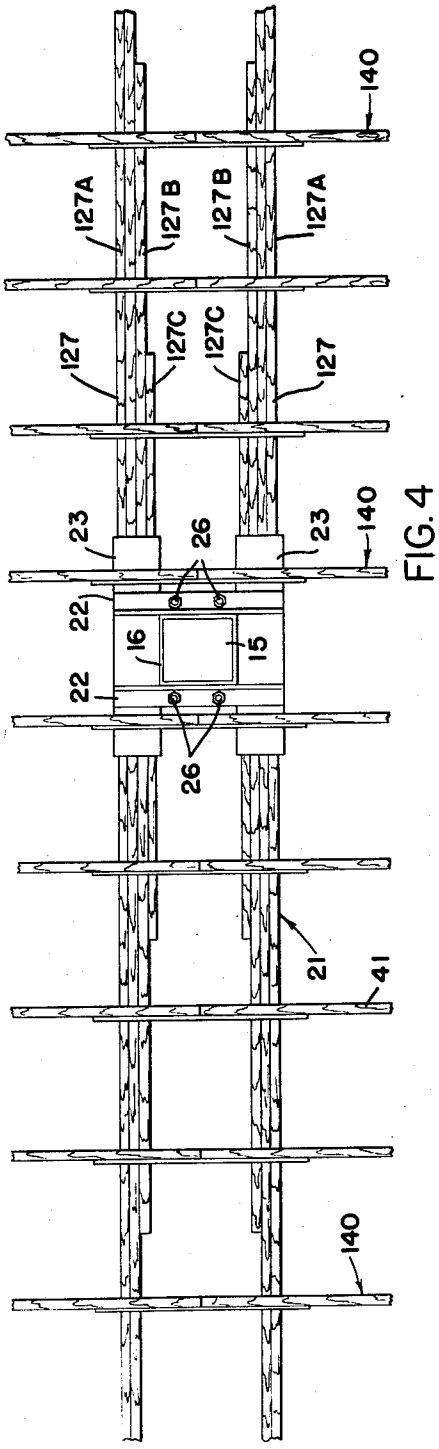


FIG. 4

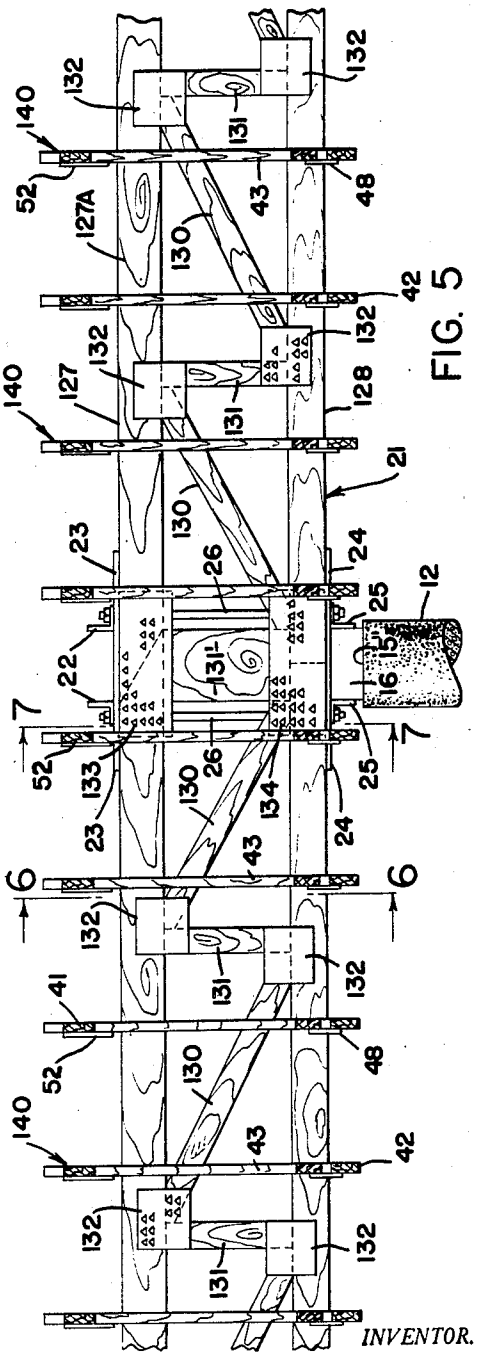


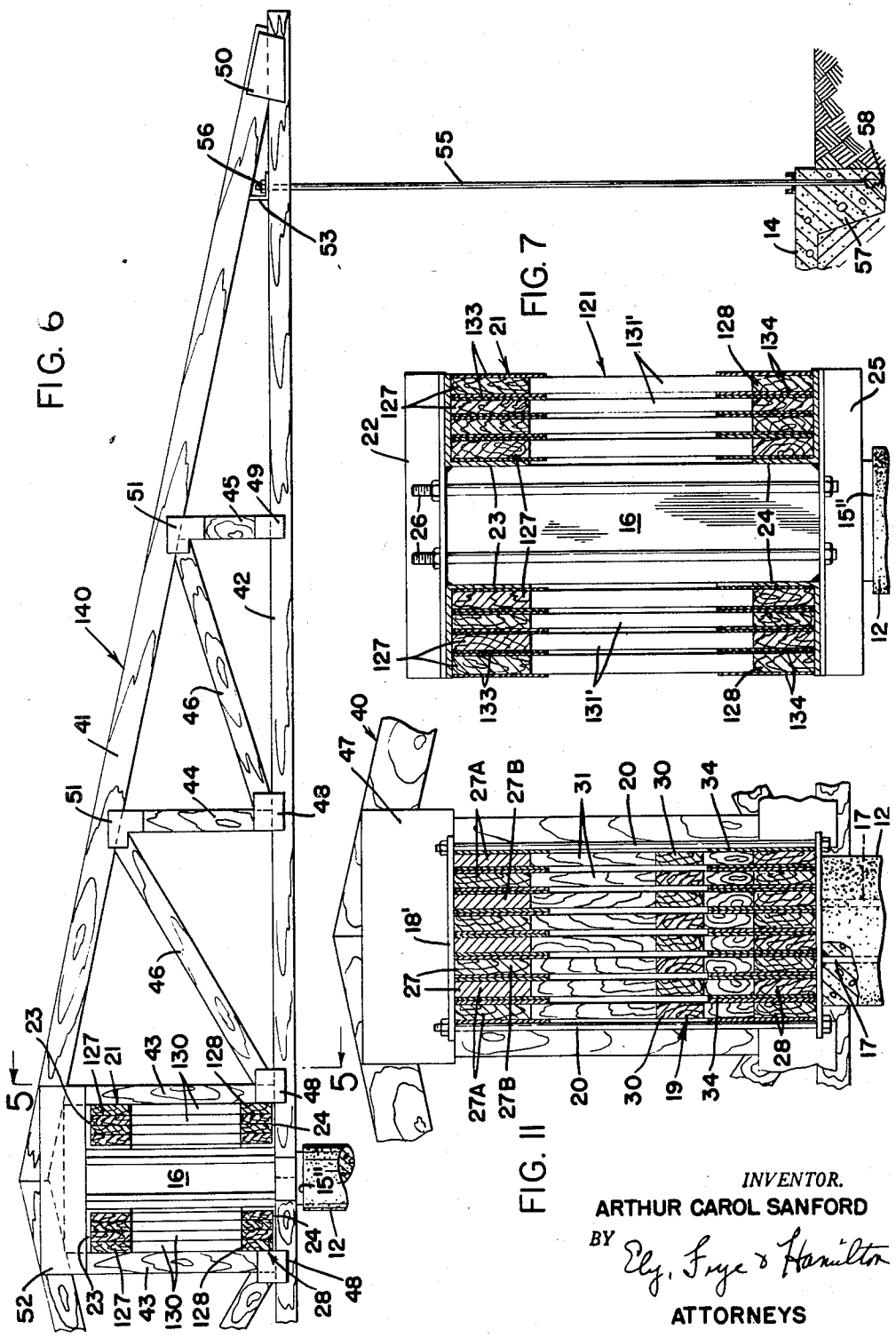
FIG. 5

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July 5, 1960 A. C. SANFORD 2,943,366

UNIT COLUMN BUILDING CONSTRUCTION

Filed March 4, 1957 6 Sheets-Sheet 4

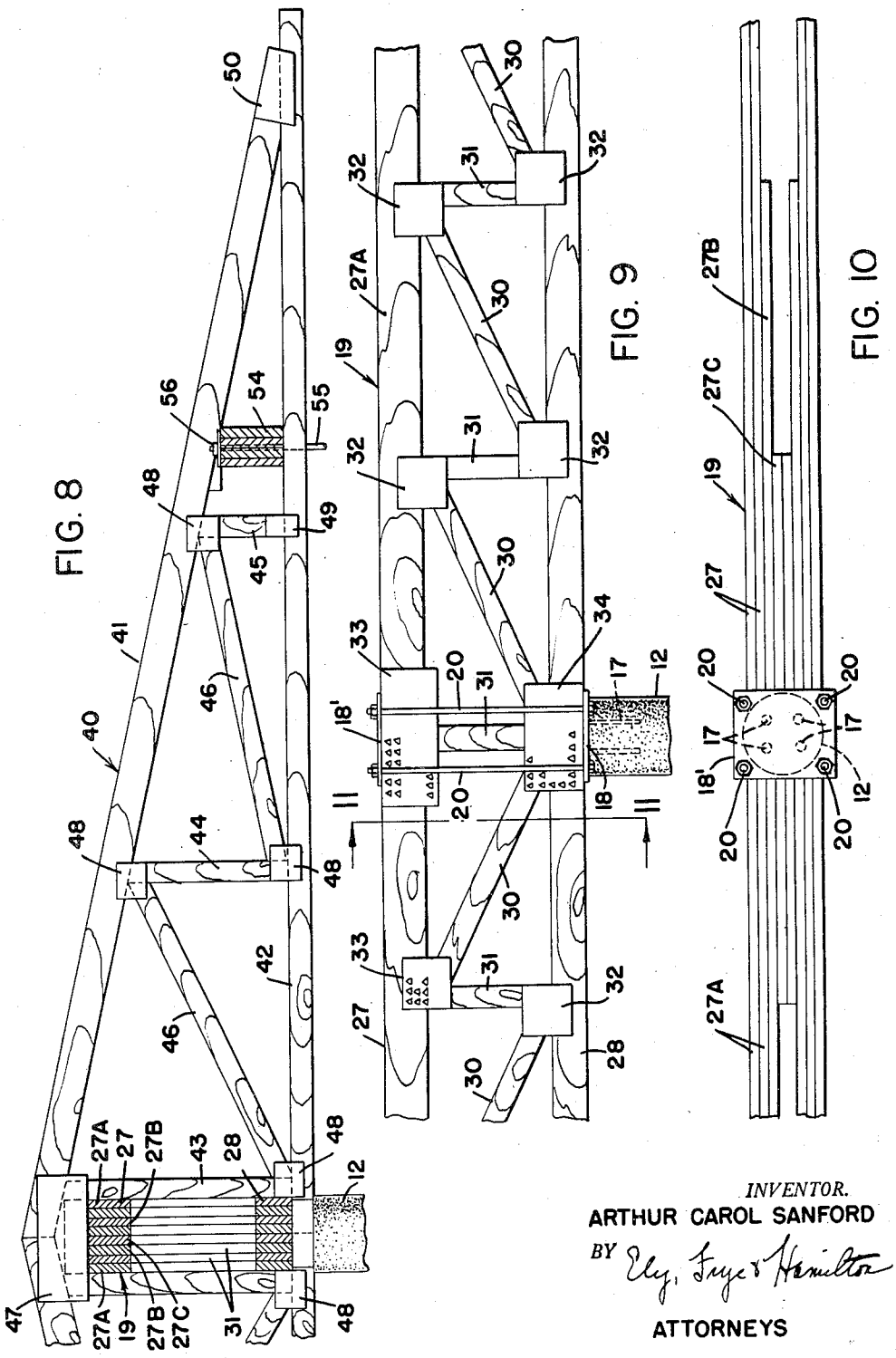


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July 5, 1960 A. C. SANFORD 2,943,366

UNIT COLUMN BUILDING CONSTRUCTION

Filed March 4, 1957 6 Sheets-Sheet 5



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July 5, 1960 A. C. SANFORD 2,943,366

UNIT COLUMN BUILDING CONSTRUCTION

Filed March 4, 1957 6 Sheets-Sheet 6

FIG. 12

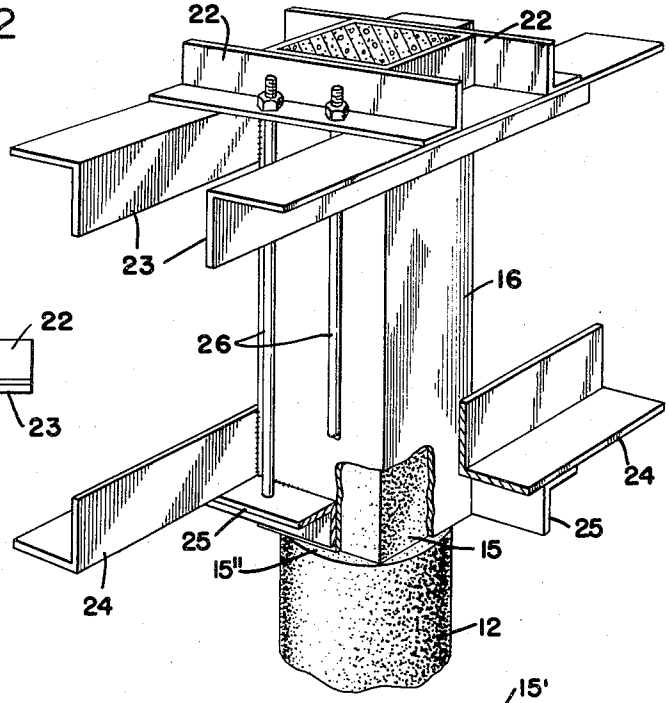
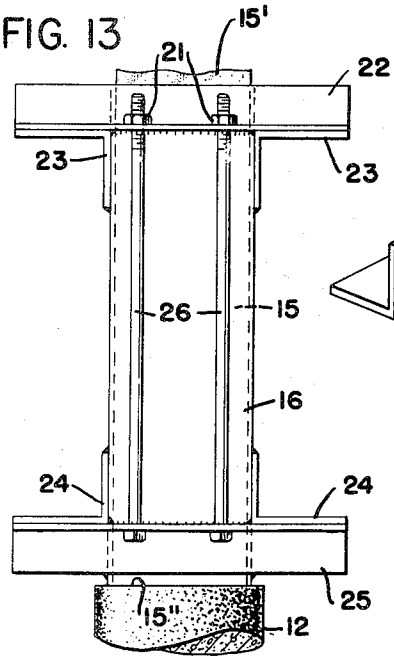


FIG. 13



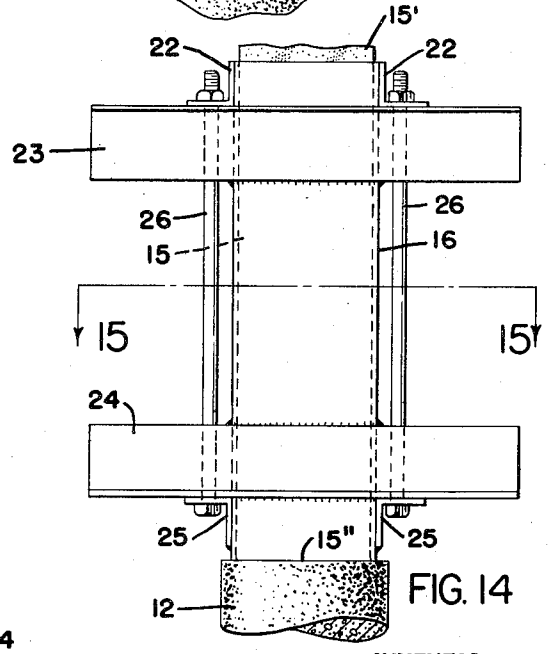
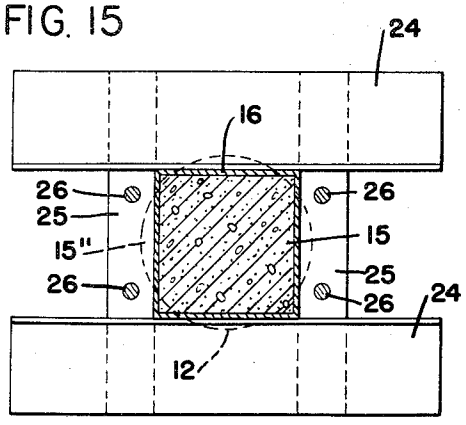


FIG. 14

FIG. 15



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United States Patent Office

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UNIT COLUMN BUILDING CONSTRUCTION

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Filed Mar. 4, 1957, Ser. No. 643,598

15 Claims. (Cl. 20—1)

The invention relates generally to building construction, and more particularly to a wood structure supported wholly on a central column anchored in the ground at its bottom end. The invention finds ready application in residential housing construction.

In conventional housing construction, a house must be designed with certain load bearing walls which support beams or girders carrying the roof structure. This requirement limits the flexibility of design, especially where cost is a factor, with the result that in many low cost housing developments the plans of all the houses are much alike. Moreover, such conventional houses are not well adapted to withstand high wind loads, such as may result from hurricanes and the like, because the walls carry part of the roof load and if the walls fail the roof fails also.

The novel structure of the present invention is economical and provides an extensive variety of designs, without extra cost, because the entire roof structure is cantilevered and balanced on a central column or columns, and the walls need carry no roof load. Lateral wind loads are transmited by the exterior walls through the roof to the central load bearing column. The novel structure may be embodied in a unit or module construction, and two or more units can be combined in various arrangements to provide additional variety in appearance and design of houses.

An important object of the invention is to provide a novel and improved building structure supported on a central column in such a way that all loads, including wind loads, are transmitted to the base of the column.

Another object is to provide a novel girder truss structure supported intermediate its ends on the central column and carrying transverse trusses at intervals along the girder structure.

Other objects include the provision of novel stabilizing means connecting the periphery of the roof structure to a floor slab or other footing foundation spaced laterally outward of the central column.

These and other objects are accomplished by the constructions, combinations and arrangements comprising the present invention, a preferred embodiment of which is shown by way of example in the accompanying drawings, and described in detail herein. Various modifications and changes in details of construction are comprehended within the scope of the invention as defined in the appended claims.

In the drawings:

Fig. 1 is a perspective view of one embodiment of a unit or module construction comprising the present invention, the roof structure being partly broken away to show the central column and foundation which supports the roof in a balanced or cantilevered condition.

Fig. 2 is a tranverse sectional view thereof, as on line 2—2 of Fig. 1.

Fig. 3 is an enlarged fragmentary sectional view similar to Fig. 2, showing one form of stabilizing means connecting the periphery of the roof structure to the floor slab.

Fig. 4 is a fragmentary plan view of the roof structure of Fig. 1 showing one form of girder truss carrying the transverse trusses and straddling the central column.

Fig. 5 is a side elevation thereof substantially on line 5—5 of Fig. 6, showing the transverse trusses in section.

Fig. 6 is a fragmentary transverse sectional view taken on line 6—6 of Fig. 5.

Fig. 7 is an enlarged fragmentary sectional view taken on line 7—7 of Fig. 5.

Fig. 8 is a view similar to Fig. 6 showing another form of girder truss which is supported on the top of the central column and carries the transverse roof trusses.

Fig. 9 is a fragmentary side elevation of the girder truss of Fig. 8.

Fig. 10 is a fragmentary plan view of the girder truss of Fig. 8.

Fig. 11 is an enlarged fragmentary sectional view of the girder truss of Fig. 8, showing the manner of mounting it on the central column.

Fig. 12 is an enlarged perspective view, partly broken away, of the connection for supporting on the column a girder truss of the straddling type shown in Figs. 1–7, which, if desired, allows the column to extend through a second story floor to support the roof above.

Fig. 13 is an end elevation thereof, partly broken away.

Fig. 14 is a side elevation thereof.

Fig. 15 is a plan sectional view on line 5—5 of Fig. 14.

Referring first to Figs. 1 and 2, the central column 12 for a unit or module construction as preferably concrete and has a suitably reinforced concrete footing foundation 13 just below the ground line over which the floor slab 14 may be poured. Preferably below the footing 13 is a depending column or root portion 12′ coaxial with the column 12, which acts to resist the tilting moment applied to the column from the roof, as by a lateral wind load. The column portions 12 and 12′, together with the footing 13, may be poured simultaneously to become parts of a homogeneous mass or the root portion may be poured first and the column 12 later poured thereon and interlocked therewith in a well-known manner.

The column portion 12 may be formed at its top end with a square or rectangular portion 15 on which a steel moment connection is supported, as best shown in Figs. 12–15, for mounting a girder truss of the open or straddling type shown in Figs. 4–7. Alternatively, the top end of the column may have a laminated girder truss of the closed or solid type resting directly thereon, as shown in Figs. 8–11. Referring to Figs. 12–15, the steel moment connection has a central sleeve section 16 which is square in cross section and fits over the square concrete portion 15 of the column. The concrete portion 15 can terminate at the top of the connection if the roof is to be supported at that point, or it can continue upwardly as shown at 15′ in Figs. 12–15 to support the roof over the upper story. The bottom end of section 16 rests on the shoulder 15″ formed at the top of column 12 and between the round and square portions thereof.

The column 12, 12' is preferably reinforced by reinforcing rods extending from the bottom of portion 12' to the top of the column. Preferably, some of the reinforcing rods are spiral and others are longitudinal, so as to reinforce the column against compression and tension, bending and torsional stresses. As shown in Figs. 9–11, anchor bolts 17, preferably four in number, are embedded in the top portion of the column 12 and project upwardly therefrom. These anchor bolts are secured by welding to a plate 18 resting on top of the column, and the longitudinal girder truss 19 rests on said plate. A similar plate 18' abuts the top of the girder truss 19, and four bolts 20 clamp the truss between the two plates 18 and 18'.

In the connection of Figs. 7 and 12–15, the lower legs of cross angles 22 are secured as by welding to the upper horizontal legs of laterally spaced angles 23 which run longitudinally of the hollow girder structure 21, and the inner downturned vertical legs of the angles 23 are welded to opposite sides of the upper end of sleeve section 16. Near the bottom of sleeve 16, the inner upturned legs of a pair of longitudinal angles 24 are welded to opposite sides of sleeve 16, and the lower horizontal legs of angles 24 rest on cross angles 25 welded to the lower end of sleeve 16. The longitudinal angles 23 and 24 are spaced apart vertically a predetermined distance for receiving and supporting the longitudinal chord members of the girder structure 21 carried on and straddling column 12. Preferably, the angles 22 and 25 are connected on opposite sides of the column by pairs of bolts 26 extending vertically between the angles 23 and 24.

The closed girder truss 19 shown in Figs. 8–11 is rectangular in cross-section and is made up of a number of laminations each having upper and lower chord members 27 and 28, preferably standard wood members such as 2 x 8's and 2 x 6's, respectively. The distance between the chord members 27 and 28 is such that the laminations fit snugly between the plates 18 and 18'. The upper and lower chords of each lamination may be connected at longitudinal intervals by inclined struts 30 and vertical struts 31 in the same plane as the chords, and the struts are joined to the chords by metal grip plates 32 on both sides of each joint. The vertical struts at the center of the girder are connected to the upper and lower chords by large rectangular grip plates 33 and 34, respectively.

Preferably, the grip plates all have the construction shown in my copending application Serial No. 414,365, filed March 5, 1954, comprising a plurality of punched-out teeth which are embedded in the wood fibers of the connected members, as a result of which the aggregate shear strength of the teeth resists the combined compression and tension stresses transmitted by the top and bottom chord members, without requiring connecting bolts or the like. Nails having annularly or screw threaded shanks are used to tack the plates in place before pressing in the teeth, after which the nails act to prevent the teeth from pulling out of the wood.

The upper edges of grip plates 33 and the lower edges of grip plates 34 bear directly on the plates 18' and 18, so that the stresses transmitted through the girder truss to the column are distributed by the multiplicity of teeth into the wood fibers over a large area. Accordingly, the bearing area at the top of the column can be reduced because the strength of the girder is increased by the use of the steel teeth penetrating into the wood and distributing the stresses at the joints.

As best shown in Fig. 10, the outer laminations 27A of each chord member 27 and 28 extend the full length of the girder structure. This length may vary but is preferably not over thirty-six feet. Adjacent the innermost lamination 27A is at least one shorter lamination 27B, and adjacent the inner side of member 27B is at least one still shorter lamination 27C. Thus, the laminations of the upper and lower chord members 27 and 28 are made in graduated or stepped-off lengths, with the longest members on the outer sides. This construction develops the greatest strength in the girder structure at its bearing on the column.

The open or straddling type of girder truss 21 shown in Figs. 4–7 is a hollow rectangle in cross section, each side being made up of a number of laminations of standard wood members, and having upper and lower chord members 127 and 128. The distance between the chord members is such that the laminations fit snugly between the horizontal legs of upper and lower angles 23 and 24 on opposite sides of the sleeve 16 fitting over the square portion of the column. The upper and lower chords of each lamination may be connected at longitudinal intervals by inclined struts 130 and 131 and the struts are joined to the chords by metal grip plates 132 on both sides of each joint.

The vertical struts 131' at the center of the girder truss are connected to the upper and lower chords by large rectangular grip plates 133 and 134, respectively, and all the grip plates have a multiplicity of punched-out teeth embedded into the connected wood members, as described in connection with plates 32, 33 and 34. The upper edges of plates 133 and the lower edges of plates 134 bear directly on the horizontal legs of angles 23 and 24, respectively, so that the stresses transmitted through girder truss 21 to the column are distributed by the teeth into the wood fibers over a large area.

As shown in Fig. 4, the outer laminations 127A at each side of the girder truss extend the full length of the truss, and the lengths of inner laminations 127B and 127C are graduated to be progressively shorter, similar to the construction of girder truss 19.

The triangular rafter trusses which are carried transversely on the girder trusses 19 and 21 at longitudinal intervals are indicated generally at 40 and 140 and their construction is best shown in Figs. 4 and 6. Each truss may be constructed of standard size wood members connected together by metal grip plates. For example, the upper chords chords 41 may be 2 x 6 members, and the lower chords 42 and struts 43, 44, 45 and 46 may be 2 x 4 members. The metal grip plates on both sides of each joint are of substantially the same construction as grip plates 32, 33 and 34, having a plurality of sharp-toothed projections pressed into the wood members. The plates may be of various shapes as shown at 47, 48, 49, 50, 51 and 52.

The vertical struts 43 at the central portion of each truss 40 form with the lower chord 42 and grip plates 47 a rectangular opening fitting around the rectangular cross section of the girder structure. The only difference between trusses 40 and 140 is that the vertical struts 43 in truss 140 are spaced wider apart to accommodate the greater width of the open girder truss 21 as compared to the closed girder truss 19.

As indicated in Figs. 1 and 2, the transverse trusses are supported in a balanced or cantilevered condition and the longitudinal girder structure is in turn supported in a balanced or cantilevered condition on the central column. Thus, the exterior and interior walls of the building do not carry any of the load of the roof, and it is only necessary to provide means for taking care of lateral wind loads which may be transmitted from the exterior walls to the roof structure.

For this purpose the roof structure is connected to the floor by tension or compression means, preferably tension means. For example, longitudinal angles 53 may extend through the trusses 40 near their outer ends, as shown in Fig. 6, or longitudinal wood beams 54 may be used as shown in Fig. 8. Vertical tension rods 55 are connected at their upper ends to the angles 53 or the beams 54 at longitudinal intervals by nuts 56. The lower ends of the rods 55 are anchored in the floor slab or other foundation.

If the rods are near the outer ends of the trusses they may be anchored in the footing foundation 57 which ex-

tends around the outer periphery of the floor slab. As shown in Figs. 2, 3 and 6, an additional anchor may be provided for each tension rod **55** by securing its lower end to a staking angle **58** driven angularly into the ground below the slab. If the rods **55** are located inwardly of the outer ends of the roof trusses, as in Fig. 8, they may be anchored in reinforced concrete pads provided at proper locations.

By using tension rods as tie-downs or stabilizers on opposite sides of the structure, they can be preloaded in tension to pre-stress the entire roof structure and transmit all the stress to the central column as compressive load, regardless of lateral wind load transmitted from the exterior walls to the roof. Compression means may be used as stabilizers, in which case some of the stresses will be transmitted downwardly through the walls or secondary compression columns.

While the tension rods **55** are shown tied to opposite ends of the transverse trusses along the sides of the structure, it may be desirable to provide tie-downs along the ends of the structure as well. Moreover, while the central column **12** is shown at the center of the unit construction in Fig. 1, so as to support the roof in balance independently of the tie-downs **55**, the column may be somewhat off center if desired, and the unequal loading taken care of by the amount of preloading on the various tie-downs in tension or compression. In certain cases tie-downs may be provided along one side only of the structure.

With this balanced or cantilevered structure preloaded in tension by the tie-downs, lateral wind loads are transmitted by the exterior walls through the roof structure to the column and thence into the ground. All stresses are transmitted from the roof to the column as compression stresses. Thus, the design and location of all exterior and interior walls may be varied extensively without regard to any load bearing requirement.

In erecting the improved building structure, the column structure **12**, **12'** with its footing foundation **13** set in the ground is poured or erected. Next, the girder structure is set onto the plates or angles of the central connection. In order to facilitate assembling the transverse trusses **40** over the girder and around the central connection, the inner laminations **27C** or **127C** of the girder are temporarily spaced toward one end so that the trusses **40** or **140** can be slid over the girder to proper location without binding. After the trusses are located, the short inner laminations **27C** or **127C** can be slid longitudinally into place and wedged tight against clamping bolts **20** or the vertical legs of angles **23** and **24**, respectively.

After the roof is up, the angles **53** or beams **54** are inserted through the trusses **40**, and the tie-down rods **55** connected thereto at their upper ends. If the rods **55** are located near the outer ends of the trusses so as to be above the outer edge of the floor slab location, staking angles **58** may be driven into the ground and connected to the lower ends of rods **55**, after which the floor slab **14** and its footer **57** may be poured. The rods **55** may then be preloaded in tension by tightening the nuts **56**, to pre-stress and align the entire roof structure. If the rods **55** are located inwardly of the outer ends of the roof trusses, as in Fig. 8, the bottom ends of the rods may be anchored in reinforced concrete pads provided below the floor slab level.

Referring to Fig. 3, the exterior walls may be built around the tension rods **55** to completely conceal the rods. Filler blocks **60** may extend longitudinally between the rods under the bottom chords **42** of the transverse trusses **40**, and above the floor slab **14**. Interior and exterior wall coverings **61** and **62** may be applied to the filler blocks **60** to form a hollow wall structure. Preferably the lower filler blocks are supported in metal channels **64** resting on the floor covering material **65**.

While the improved building construction has been shown and described as a substantially square unit or module having a single supporting column, it will be understood that the unit may be rectangular and the column offset, and that the roof structures of a plurality of units may be connected together in a variety of designs and arrangements.

What is claimed is:

1. Building construction having a floor slab, a central column extending into the ground, a longitudinal girder truss of rectangular cross section, means supporting said girder truss on said column in a cantilevered condition, transverse trusses supported on said girder truss at longitudinal intervals, said transverse trusses having central rectangular openings slidable over and fitting around said girder truss for supporting the transverse trusses thereon in a cantilevered condition, longitudinal members spaced outwardly of said girder truss and connecting the outer ends of the transverse trusses, and tie-down means anchored in the ground and connected to said longitudinal members.

2. Building construction having a central supporting column, said column having a foundation footing and an elongated root portion depending therefrom in the ground, a roof structure comprising a longitudinal girder truss of rectangular cross section, means supporting said girder truss in a cantilevered condition on the top of said column, transverse roof trusses cantilevered on said girder truss at longitudinal intervals, said transverse trusses having central rectangular openings slidable over and fitting around said girder truss, and means spaced outwardly of said girder truss anchoring said roof structure to the ground.

3. Building construction having a central supporting column extending into the ground, a roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination comprising upper and lower chords connected by struts, means supporting said girder truss as a unit in a cantilevered condition on the top of said column, transverse roof trusses cantilevered on said girder truss at longitudinal intervals, said transverse trusses having central rectangular openings slidable over and fitting around said girder truss, and stabilizing means spaced outwardly of said girder truss anchoring said roof structure to the ground.

4. Building construction having a central supporting column extending into the ground, a roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in a cantilevered condition on said column, said connection means including metal members bearing on the top and bottom of said girder truss, said bottom metal members supported on said column, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss.

5. Building construction having a central supporting column extending into the ground, a roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in a cantilevered condition on said column, said connection means including metal members bearing on the top and bottom of said girder truss, said bottom metal members supported on said column, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss, said transverse roof trusses having central rectangular openings slidable over and fitting snugly around said girder truss and holding the laminations thereof in abutment with each other.

6. Building construction having a central supporting column extending into the ground, a roof structure com-

prising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower wood chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in a cantilevered condition on said column, said connection means including metal members bearing on the top and bottom of said girder truss, said bottom metal members supported on said column, toothed metal grip plates laterally abutting and connecting the upper and lower chords and struts at the joints of each lamination, said grip plates within said connection means having their edges bearing on said top and bottom metal members respectively, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss.

7. Building construction having a central supporting column extending into the ground, a roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower wood chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in a cantilevered condition on said column, said connection means including metal members bearing on the top and bottom of said girder truss, said bottom metal members supported on said column, toothed metal grip plates laterally abutting and connecting the upper and lower chords and struts at the joints of each lamination, said grip plates within said connection means having their edges bearing on said top and bottom metal members respectively, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss, said transverse roof trusses having central rectangular openings fitting snugly around said girder truss and holding the laminations thereof in abutment with each other.

8. Building construction having a central supporting column extending into the ground, a roof structure comprising a laminated girder truss having laterally adjacent laminations, connection means supporting said girder truss as a unit in a balanced condition on the column, said means including upper and lower plates abutting the top and bottom of said girder truss, said lower plate supported on the top of the column, means extending vertically on opposite sides of said girder truss and clamping said girder truss between said plates, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss.

9. Building construction having a central supporting column extending into the ground, a roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower wood chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in a balanced condition on the column, said means including upper and lower plates abutting the top and bottom of said girder truss, clamping means connecting said upper and lower plates, said lower plate supported on the top of the column, toothed metal grip plates laterally abutting and connecting the upper and lower chords and struts of each lamination, said grip plates within said connection means having their edges bearing on said upper and lower metal plates, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss.

10. Building construction having a central supporting column, said column having a foundation footing and a root portion depending therefrom in the ground, a roof structure cantilevered on the top of said column, said roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in balanced condition on the column, said means including upper and lower plates abutting the top and bottom of said girder truss, clamping means connecting said upper and lower plates on opposite sides of and confining said truss, said lower plate supported on the top of said column, metal grip plates laterally abutting and connecting the upper and lower chords and struts of each lamination, said grip plates within said connection means having their edges bearing on said upper and lower metal plates, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss.

11. Building construction having a central supporting column, said column having a foundation footing and a root portion depending therefrom in the ground, a roof structure cantilevered on the top of said column, said roof structure comprising a laminated girder truss of rectangular cross section having laterally adjacent laminations, each lamination having upper and lower wood chords connected in vertically spaced relation by struts, connection means supporting said girder truss as a unit in balanced condition on the column, said means including upper and lower plates abutting the top and bottom of said girder truss, clamping means connecting said upper and lower plates on opposite sides of and confining said truss, said lower plate supported on the top of said column, toothed metal grip plates laterally abutting and connecting the upper and lower chords and struts of each lamination, said grip plates within said connection means having their edges bearing on said upper and lower metal plates, and transverse roof trusses supported in a balanced condition at longitudinal intervals on said girder truss, said transverse roof trusses having rectangular openings fitting around said girder truss, and stabilizing means connecting said roof structure to the ground.

12. Building construction comprising a central column having a foundation below ground level, a floor slab above said column foundation, a longitudinal girder truss of box construction straddling said column, connection means extending longitudinally of said girder truss and supporting it in a balanced condition on said column, transverse roof trusses slidable over said girder and supported in a balanced condition at longitudinal intervals on said girder truss and forming a rectangular roof structure and spaced-apart stabilizing means connecting the peripheral portion of said roof structure to the floor slab.

13. Building construction comprising a central column having a foundation below ground level, a floor slab above said column foundation, a longitudinal girder truss of box construction straddling said column, connection means extending longitudinally of said girder truss and supporting it in a balanced condition on said column, transverse roof trusses slidable over said girder and supported in a balanced condition at longitudinal intervals on said girder truss and forming a rectangular roof structure, longitudinal members spaced outwardly of said girder truss and connecting said transverse roof trusses together, and stabilizing means anchoring said longitudinal members at intervals in the ground.

14. Building construction comprising a central column having a foundation below ground level, a floor slab above said column foundation, a longitudinal girder truss of box construction straddling said column, connection means extending longitudinally of said girder truss and supporting it in a balanced condition on said column, transverse roof trusses slidable over said girder and supported in a balanced condition at longitudinal intervals on said girder truss and forming a rectangular roof structure, longitudinal members connecting the outer ends of said transverse roof trusses together, and means preloaded in tension connecting said longitudinal members at intervals to the floor slab.

15. Building construction comprising a central column having a foundation below ground level, a floor slab above said column foundation, a longitudinal girder truss of rectangular box construction straddling said column,

means supporting said girder truss in a cantilevered condition on said column, said supporting means providing bearing for the girder truss longitudinally beyond said column, transverse roof trusses slidable over and cantilevered on said girder truss at longitudinal intervals and forming a rectangular roof structure, said transverse trusses having central rectangular openings fitting around said girder truss, and spaced apart stabilizing means anchoring said roof structure in the ground.

References Cited in the file of this patent

UNITED STATES PATENTS

1,219,123	Macmechen et al.	Mar. 13, 1917
2,047,644	Mopin	July 14, 1936
2,128,539	Roach	Aug. 30, 1938
2,775,869	Pointer	Jan. 1, 1957
2,790,452	Dusek	Apr. 30, 1957