United States Patent [19]

Moehlenpah

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[54] **ASSEMBLING AND SECURING APPARATUS FOR FABRICATING WOOD STRUCTURES**

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[52] **U.S. Cl.** ..... **29/200 P,** 29/200 J, 269/321 F

[51] **Int. Cl.** **B23p 19/00**

[58] **Field of Search** ..... 29/200 A, 200 J, 29/200 P; 227/152; 269/321 F

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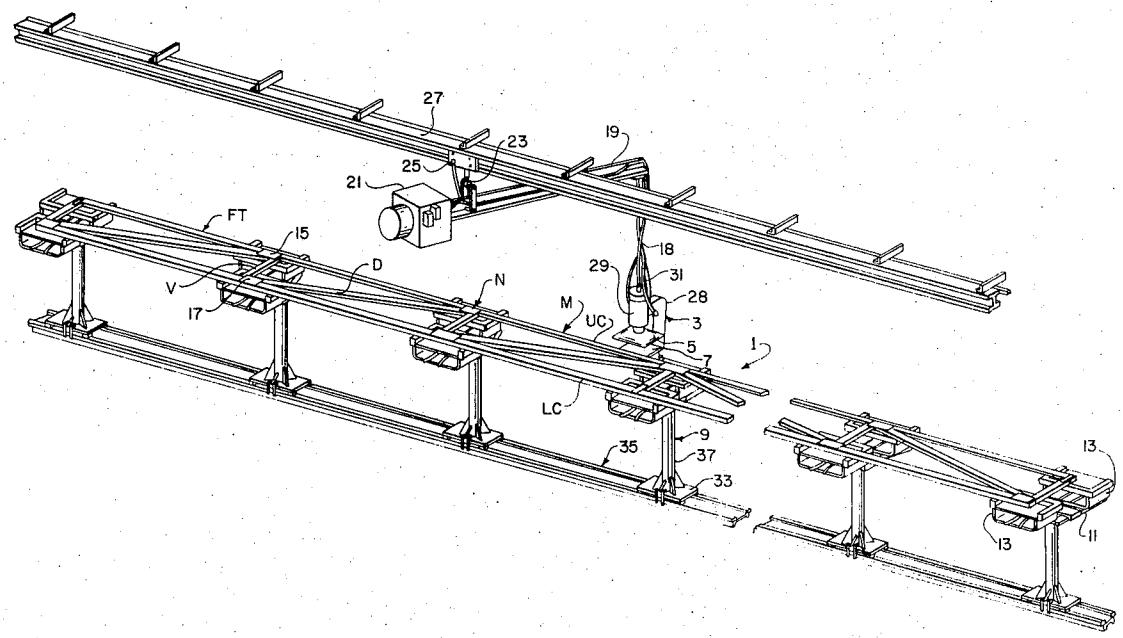
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[57] **ABSTRACT**

Apparatus for fabricating long-span, flat trusses of precut wood members, said apparatus having a number of stands slidably movable along a track for supporting the wood members in position to be secured together by nailing plates driven into the members from above and below by an overhead suspended C-shaped press mounted for universal movement so thacthe press may be moved from stand to stand. Each stand has a pair of work holders adapted to hold the wood members in position and to hold a lower nailing plate in position below the wood members to be driven upwardly. The work holders are mounted on a head for sliding movement toward and away from each other, with the head being rotatable about a vertical axis of the stand, and with each work holder being rotatable about a vertical axis to vary the angular relationship of the work holder to the head.

31 Claims, 9 Drawing Figures



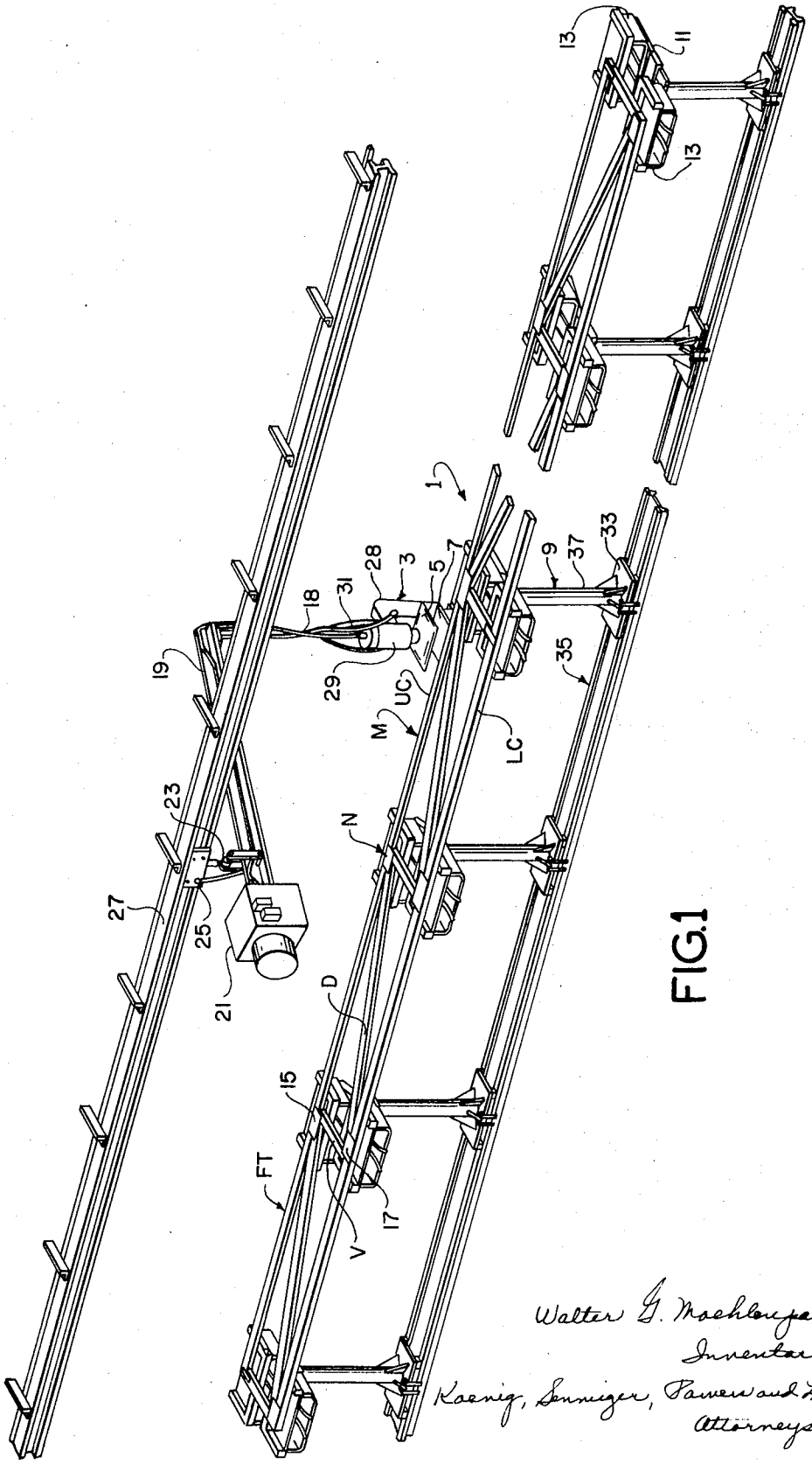


FIG.1

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Attorneys.

FIG.2

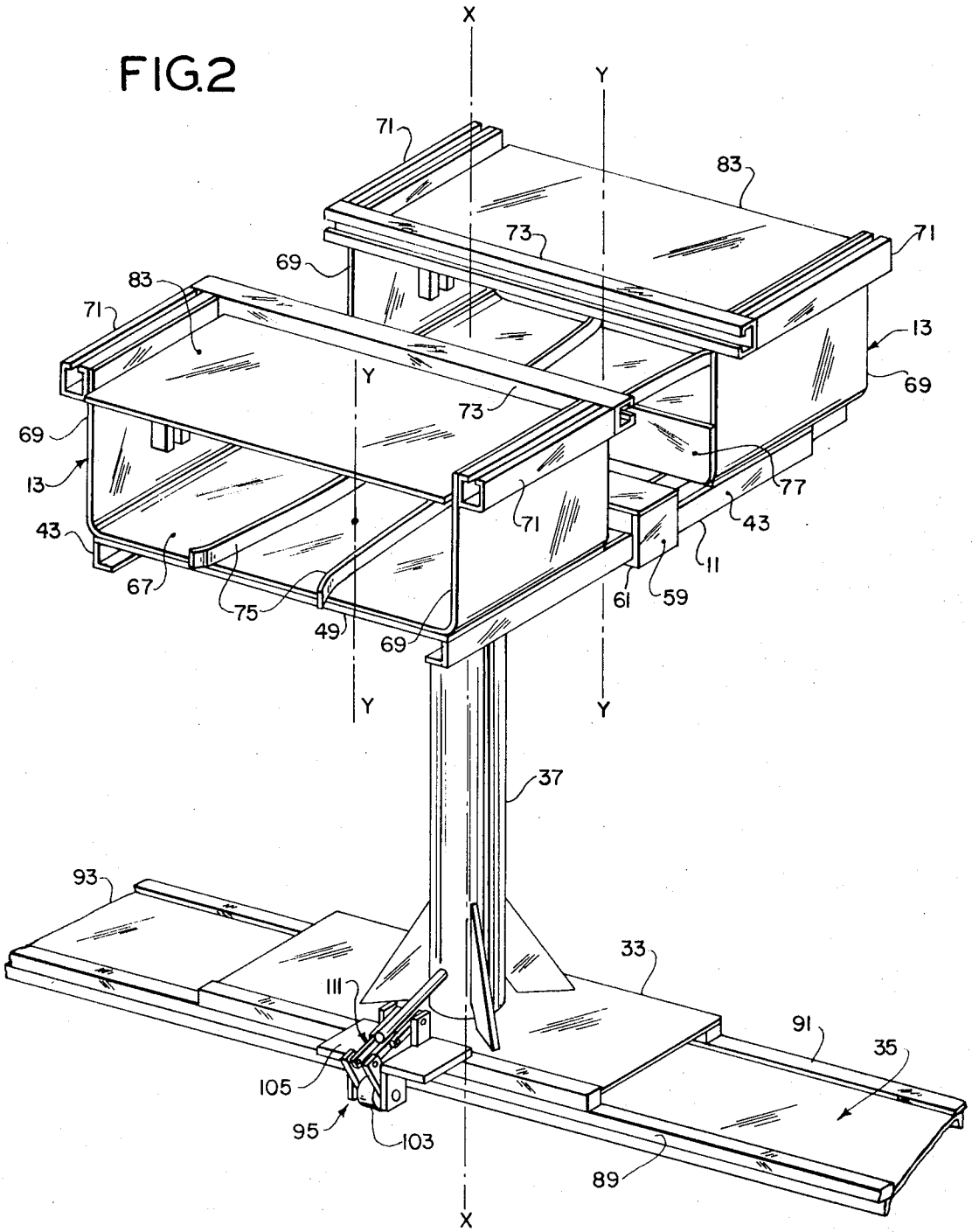
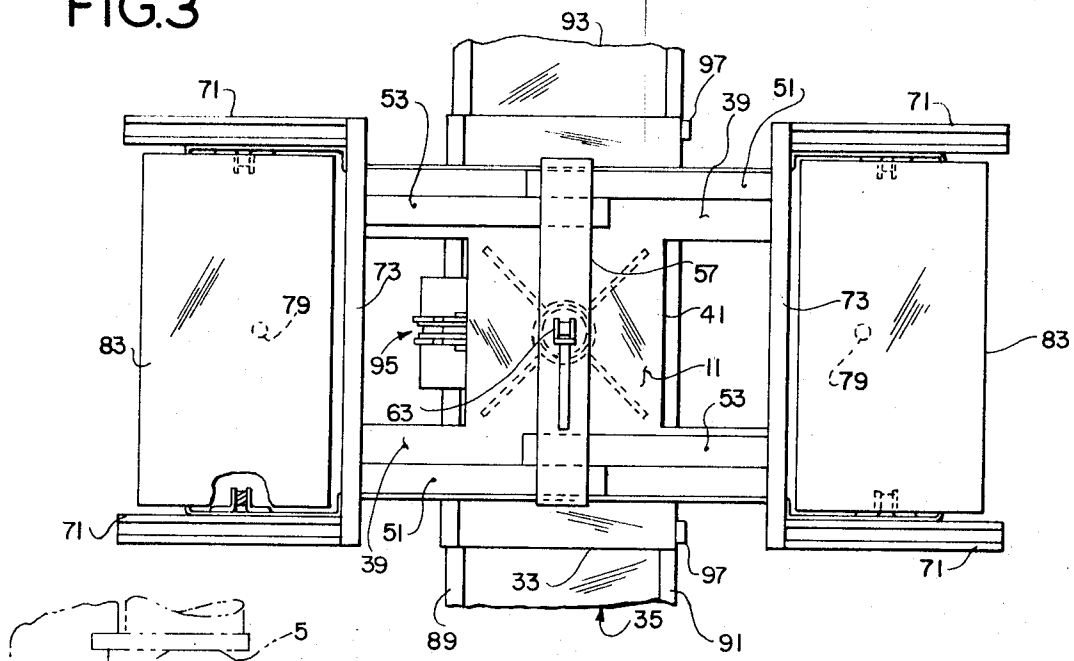

X
Y
71
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73
69
13
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67
75
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37
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33
111
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FIG.3


93
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35
91

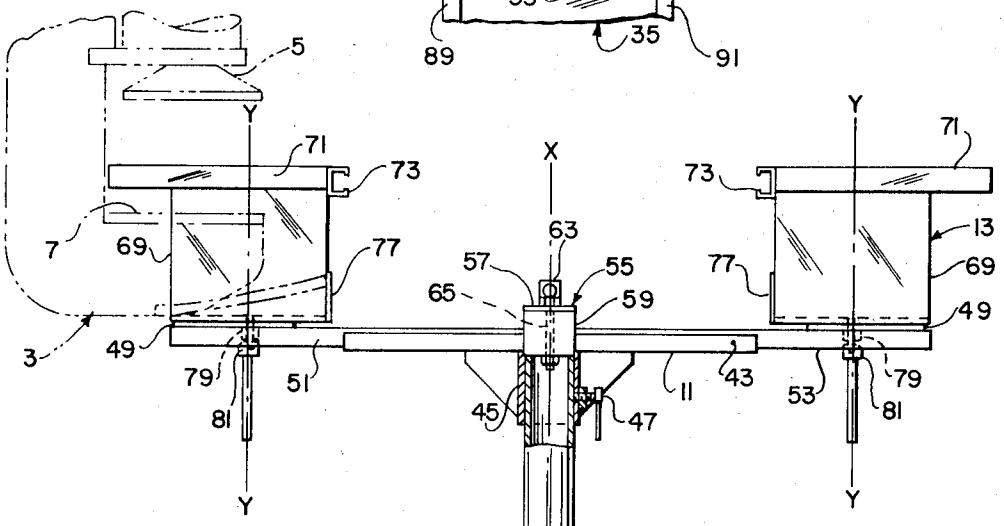

5
Y
71
73
7
69
77
3
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79
51
81
Y
X
63
57
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65
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11
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Y
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69
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53
79
81
Y

FIG.5

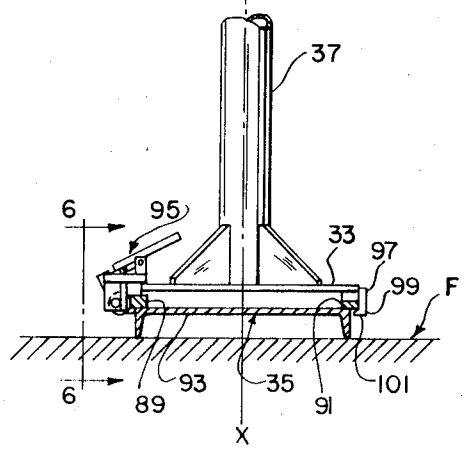

37
6
95
33
97
99
F
6
89
93
35
91
101
X

FIG.9

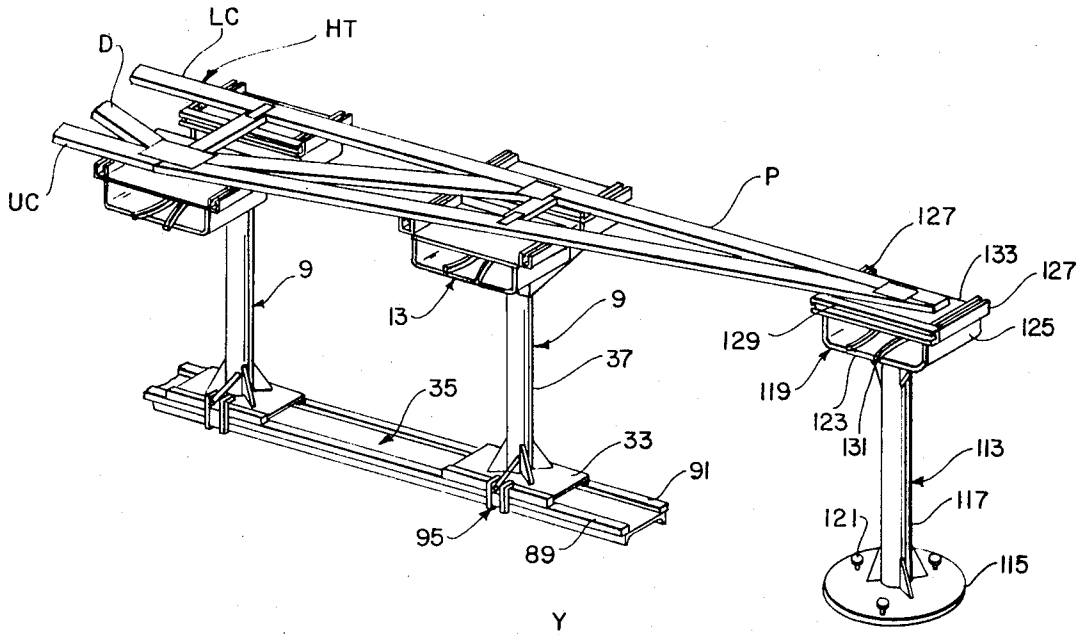

LC
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UC
P
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133
127
125
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119
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117
121
115
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13
9
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33
91
95
89

FIG.4

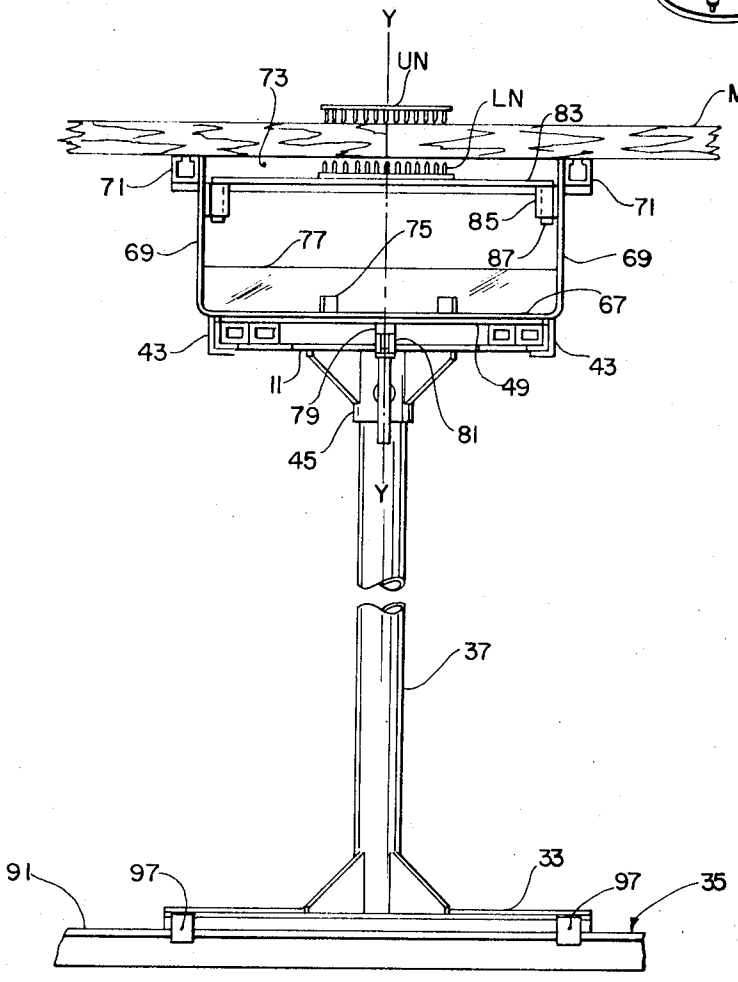

Y
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73
LN
83
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71
85
69
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87
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79
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FIG.6

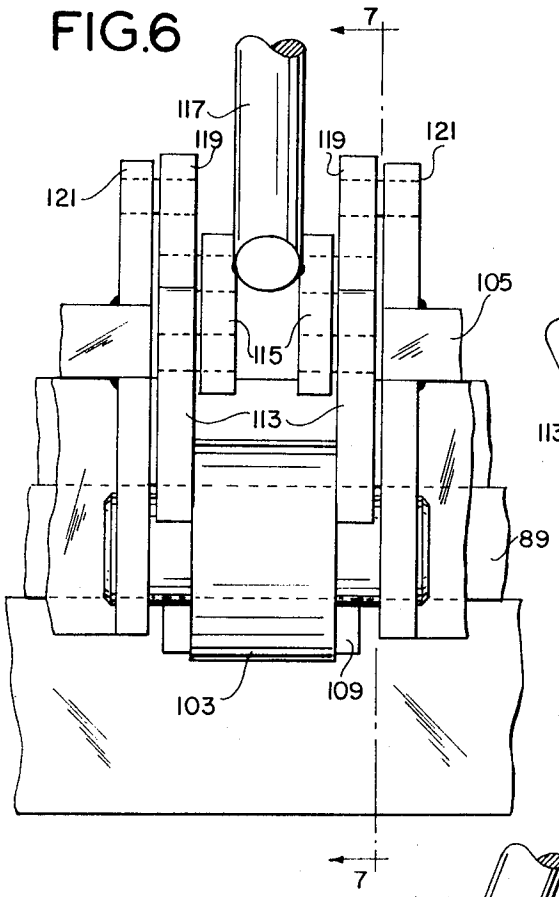


FIG.7

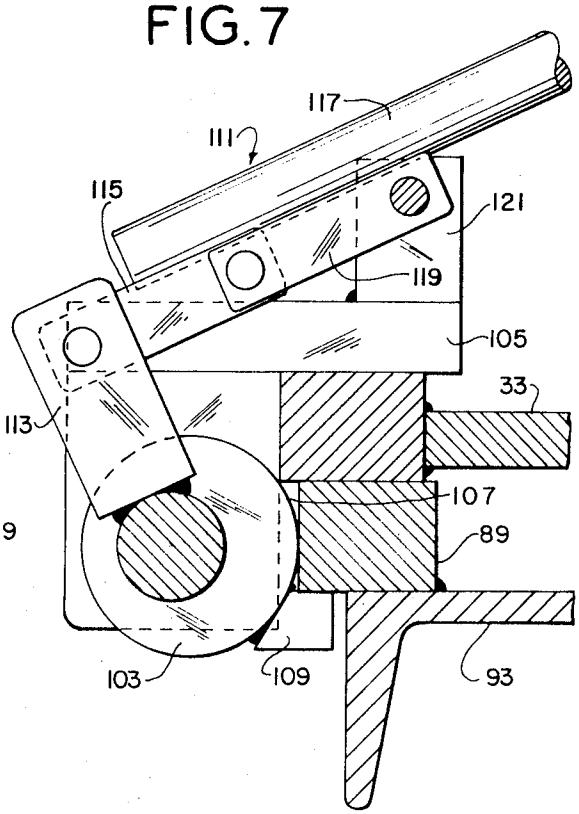
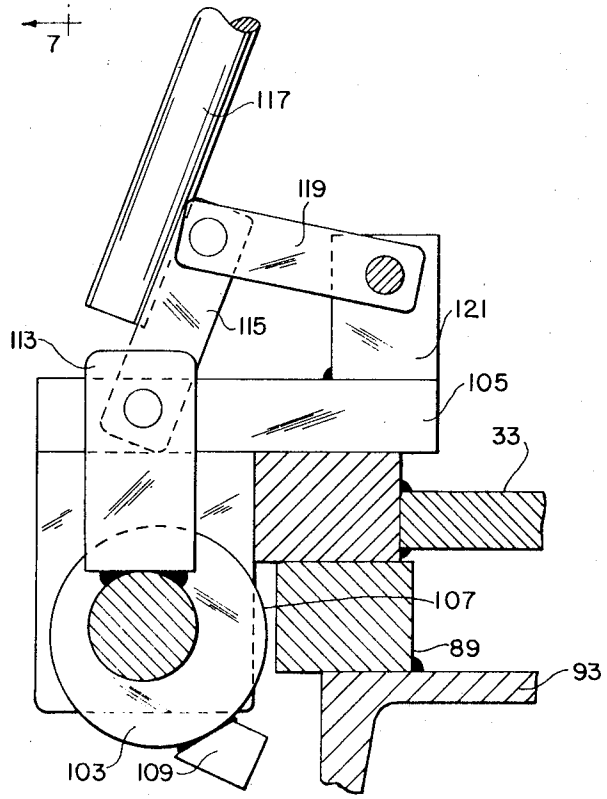


FIG.8



ASSEMBLING AND SECURING APPARATUS FOR FABRICATING WOOD STRUCTURES

BACKGROUND OF THE INVENTION

This invention relates to assembling and securing apparatus for fabricating wood structures and more particularly to such apparatus for fabricating wood trusses.

This invention is especially concerned with wood truss fabricating apparatus having a plurality of stands movable along a track secured to the floor, the stands together constituting a jig on which precut wood truss members may be assembled and secured together by nailing plates driven into the wood members from above and below by a C-shaped hydraulic press having an upper platen and a lower platen which are movable toward and away from one another for driving the nailing plates. Generally, prior art truss fabricating devices, as shown in Moehlenpah et al. U.S. Pat. No. 3,068,484, have been adapted to fabricate triangular roof trusses for residential and commercial buildings having pitched roofs. Recent developments in the building construction industry have created a substantial demand for flat trusses (i.e., trusses having substantially parallel upper and lower chord members) as well as for conventional triangular trusses. These flat trusses are required in different lengths of up to 60 feet, with relatively small heights, 3 feet for example. These requirements present a problem of providing truss fabricating apparatus adapted to fabricate flat trusses of such spans and heights with different arrangements of web members, and which is compatible with conventional triangular truss fabricating apparatus (i.e., capable of using components of such apparatus that may have been previously purchased), which requires a minimum of floor space, and which is of relatively low cost.

SUMMARY OF THE INVENTION

Among the several objects of the invention may be noted the provision of truss fabricating apparatus adapted for the fabrication of flat trusses of various spans and heights, including flat trusses of relatively long span; the provision of such apparatus adapted for the fabrication of flat trusses with various web member arrangements, for example Howe trusses, Pratt trusses and Warren trusses; the provision of such apparatus useful for fabricating trusses with vertical ends or hip trusses with inclined ends, or small triangular or half trusses; the provision of improved work-supporting stands for such apparatus; and the provision of such apparatus which is relatively economical to supply and which requires a minimum of floor area.

In general, apparatus of this invention utilizes a C-shaped press having an upper platen and a lower platen which are relatively movable toward one another for driving nailing plates into two or more wood members from above and below. It comprises a plurality of stands for holding the work to be operated on by the press, each stand comprising a head rotatable relative to the stand about a vertical axis, and a pair of work holders carried by the head on opposite sides of the vertical axis with the holders being mounted on the head for adjustment toward and away from one another.

Other objects and features will be in part apparent and in part pointed out hereinafter.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a trimetric view showing truss fabricating apparatus of this invention having a plurality of stands of this invention;

FIG. 2 is a trimetric view of a stand of this invention per se;

FIG. 3 is a plan view of the stand shown in FIG. 2;

FIG. 4 is a front elevation of the stand;

FIG. 5 is a side elevation of the stand;

FIG. 6 is an enlarged view on line 6—6 of FIG. 5 showing certain clamp means in its clamped position, with parts broken away;

FIG. 7 is a section on line 7—7 of FIG. 6 with the clamp means in the clamped position;

FIG. 8 is a view like FIG. 7 showing the clamp means in a fully unclamped position; and

FIG. 9 is a trimetric view showing an arrangement, including a modified stand of this invention, for fabricating a small triangular truss section or hip truss.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, apparatus of this invention, generally indicated at **1**, for fabricating wood structures (e.g., flat trusses such as indicated at FT) utilizes a C-shaped press **3** having an upper platen **5** and a lower platen **7** which are relatively movable toward one another for driving nailing plates generally indicated at N into two or more wood members generally indicated at M from above and below. The apparatus comprises a plurality of stands generally indicated at **9** for holding work, i.e., the wood members M, to be operated on by the press. Each stand comprises a head **11** rotatable about a vertical axis X—X, and a pair of work holders, each designated **13**, carried by the head **11** on diametrically opposite sides of axis X—X, these work holders being mounted on the head **11** for adjustment toward and away from one another.

As shown in FIG. **1**, the flat truss FT is constituted by a lower chord member LC and an upper chord member UC, the latter members being substantially parallel to each other. These chord members may be fabricated from wood members such as 2 × 4's spliced in end-to-end butting relation by nailing plates N. As illustrated in FIG. **1** by way of example, the upper and lower chord members are joined together by vertical and diagonal web members V and D triangulating the space between the chords and arranged to form a Howe truss, these web members being secured to the chord members by the upper nailing plates. The nailing plates securing the intersection of a diagonal member D with the upper chord member UC, as indicated at **15**, and the nailing plates securing the intersection of an adjacent diagonal member with the lower chord member LC, as indicated at **17**, may be offset on opposite sides of a vertical member V extending vertically relative to the truss between the stated intersections **15** and **17**. It is to be mentioned that the apparatus **1** may be set up to fabricate a wide variety of trusses having relatively flat slopes, different spans and heights with various arrangements of the wood members therein, other than the arrangement shown in FIG. **1**. The apparatus of this invention may be adapted to fabricate certain types of

pitched or triangular trusses such as the hip truss HT (a portion of which is shown in FIG. 9) having a flat central section similar to the flat truss FT and pitched ends P.

The apparatus 1 as shown in FIG. 1 is particularly adapted to be compatible with conventional triangular truss fabricating apparatus such as shown in U.S. Pat. No. 3,068,484. The stands 9 of this invention are adapted to replace the pedestals 9, 17 and 19 (referring now to the reference numerals in the abovementioned patent) which are mounted on track 11 so that flat trusses as well as triangular trusses may be fabricated on the apparatus of the abovementioned patent.

Referring now to FIG. 1 herein, the hydraulic press 3 corresppnds to the press indicated at 35 in the aforementioned patent and it is herein shown to be supported for universal movement by a cable 18 attached to one end of a boom 19. The latter is counterbalanced by a hydraulic pump and electric motor assembly generally designated 21 at the other end of the boom. A pivotal hanger 23 suspends the boom from a carriage 25 which is movable along an overhead I-beam 27 suspended from the ceiling, or from other overhead structure. The hanger 23, the counterbalanced boom 19 and the movable carriage 25 permit universal movement of the press 3 from stand to stand for nailing plate driving purposes. The press 3 comprises a C-shaped frame 28 on which the lower platen 7 is fixed and carrying the upper platen 5, which is movable via a hydraulic power cylinder 29. The power cylinder 29 is connected to the hydraulic pump assembly 21 by hydraulic fluid lines 31 for providing hydraulic fluid under pressure to move the upper platen toward and away from the lower platen for nailing plate driving purposes.

Referring now to FIGS. 2–5, stand 9 is shown to comprise a base 33 adapted slidably to engage track means 35, which corresponds to track 11 in U.S. Pat. No. 3,068,484, for movement to different positions of adjustment therealong. A support post 37 of circular cross section is rigidly secured as by welding to the center of the base 33 and extends upwardly therefrom to support head 11 rotatably on the uppermost end of the post.

As shown in FIG. 3, head 11 comprises an H-shaped member having two parallel sides, each designated 39, joined together by a central transverse member 41. Each of the sides 39 has an upturned flange 43 at its outer edge. A socket 45 is secured to the bottom of the central transverse member, and the uppermost end of post 37 is socketed therein. A screw clamp 47 is threaded in a tapped hole in socket 45 for clamping the head 11 to the support post to fix the angular position of the head relative to the post. By backing off the screw clamp 47, the head 11 may be readily removed from post 37.

Each work holder 13 is pivotally mounted on a base plate 49. The latter is supported on cantilever arms 51 and 53 which are secured to each side of the base plate and which are adapted to slide in and out on the parallel sides 39 of head 11 for movement of the work holders toward and away from one another. Means generally indicated at 55 is provided for clamping the arms 51 and 53 in their adjusted position relative to the head, comprising a rigid clamping bar 57 extending transversely of the head above transverse member 41 with the lower surface of the clamping bar adapted to engage the upper surfaces of the arms 51 and 53 of both work holders for clamping purposes. The outer ends of the clamping bar have downturned members 59 having inwardly directed lower horizontal flanges 61 adapted to cooperate with the lower surfaces of the parallel sides 39 of head 11. An eccentric cam clamp 63 is pinned to a vertical rod 65 which is secured to the lower side of the transverse member 41 so that as the cam clamp is rotated downwardly, a substantial downward camming force is exerted on clamping bar 57 to securely clamp the arms between the head and the clamp bar.

Each work holder 13 has a bottom member 67 pivotally attached to base plate 49 so that each work holder may rotate about a vertical axis Y—Y through its respective pivotal attachment to vary its angular relationship to the head 11 as the head is rotated to different angular positions of adjustment about axis X—X. This bottom member 67 has two vertical side walls each designated 69 extending up at its outer sides. These side walls are spaced sufficiently apart to permit the entry of the lower platen 7 of the press 3 from the front side of the work holder (i.e., the side of the work holder facing away from axis X—X as it is shown in FIG. 2) to assume an operating position (as shown in phantom in FIG. 5) between the side walls. Each of the side walls 69 has a horizontal bar 71 secured at its top edge, and a transverse bar 73 extends between and is secured to the back ends of the bars 71. The top surfaces of the bars 71 and 73 lie in a substantially horizontal plane for supporting the wood members M to be secured together by the nailing plates N. The bars 71 and 73 correspond to the channel-shaped guides 103 and 71 shown in U.S. Pat. No. 3,068,484, and the bars are adapted to carry clamping and aligning apparatus (not herein shown) similar to those indicated by reference numerals 75, 77 and 105 in the aforementioned patent for holding the wood members in position.

Referring now to FIG. 4, the bottom member 67 is shown to have guide members 75 secured thereto for guiding the lower portion of the press frame 27 into its operating position within the work holder. A partial back wall 77 at the back edge of the bottom member constitutes a stop to locate the lower platen within the work holder. The bottom member 67 is pivotally attached to the base plate 49 by a pin 79. A cam clamp 81 is attached to the lower end of pin 79 so that the work holder may be clamped at any adjusted angular position relative to the base plate 49.

Each work holder has a locator plate 83 adapted to hold a lower nailing plate LN in position below the top surface of the bars 71 and 73 to be moved vertically upward by the lower platen of the press to drive the lower nailing plate into the wood members from below. The locator plate is supported in a lowered retracted position (shown in FIG. 4 to be generally at the level of the bottom of the bars 71 and 73) by angle members 85 secured to the upper portions of side walls 69. The angle members on each side wall are arranged back-to-back in pairs with a space therebetween adapted to receive a guide bar 87 secured to the lower side of the locator plate.

Referring now to FIGS. 1 and 5, track 35 includes a pair of rails 89 and 91 spaced apart from one another and secured as by welding on top of and at opposite sides of a dowwardly facing channel member 93 which is secured to the floor F. The rails extend outwardly beyond the sides of the channel so that the rails each have

upper, lower and outer surfaces. The base **33** of the stand is adapted to slide on the upper surfaces of rails **89** and **91** and has means generally indicated at **95** for clamping the stand to the track at any position therealong.

The clamp means **95** is located near the center of one side of the base **33** adjacent rail **89**, and a pair of track guides, each designated **97**, is provided on the other side of the base with one of these guides **97** at each end of the base. Each track guide **97** comprises a rigid vertical member **99** secured to the base having a flange **101** at its lower end extending inwardly beneath the lower surface of rail **91** and cooperable therewith. The inner face of member **99** is adapted to bear against the outer surface of rail **91** for guiding the stand as it is moved along the track and for aligning the stand on the track as will appear hereinafter. The clamp means **95** comprises a radial cam **103** (an eccentric) journalled for eccentric rotary motion in a clamp frame **105** and having a camming surface **107** adapted to engage the outer vertical surface of rail **89**. A clamping lug **109** is provided on camming surface **107** and is adapted to engage the lower surface of rail **89** to clamp the rail between the lug and the lower surface of the base **33** (see FIG. 7). The cam may be rotated between the clamped position shown in FIG. 7 and a fully unclamped position shown in FIG. 8 by a pinned linkage mechanism generally indicated at **111** comprising a crank arm **113** secured to the cam **103**, a driver link **115** to which a handle **117** is secured, and an idler link **119**, the latter being pin-connected to a mounting member **121** secured to the base **33** of the stand. The linkage is such that when the cam is moved to its clamping position (FIG. 7), the linkage assumes an overcenter locking position thereby retaining the cam in its clamped position. As the cam **103** is rotated from its unclamped position (FIG. 8) to its clamped position (FIG. 7), the camming surface **107** contacts the outer vertical surface of rail **89** to exert a lateral force on the stand base **33** to laterally move the stand base relative to the track until the vertical guide members **99** engage rail **91** thereby aligning the stand relative to the track. As the cam is further rotated to its clamped position, lug **109** engages the lower surface of rail **89** for stand clamping purposes. The lug **109** may be moved clear of rail **89** by moving the clamp linkage **111** to the fully unclamped position shown in FIG. **8**. With the clamp linkage in the latter position, a stand **9** may be quickly removed from the track **35** by rotating the entire stand about the uppermost outer edge of rail **91** and lifting the stand clear of the track.

In operation, truss fabricating apparatus of this invention is compatible with conventional truss fabricating apparatus and is adapted to fabricate a wide variety of flat trusses and pitched trusses having a relative flat slope. Once a particular truss configuration has been selected, the stands **9** are moved along track **35** to correspond to different spacings of the joints in the truss to be fabricated and clamped to the track by the respective clamp means **95** as heretofore described.

Next, the work holders **13** are moved in and out relative to each other to the required positions for supporting the precut wood members M in position (according to the height of the truss) and to hold the lower nailing plates LN for being driven upwardly into the wood members. The work holders may be moved relative to the stand support post **37** to occupy their required holding positions (as shown in FIG. **1**) by rotating the head **11** relative to the post about vertical axis X—X, by moving the work holders toward and away from each other (being mounted by means of arms **51** and **53** for sliding movement relative to the head), and by rotating each work holder about its vertical axis Y—Y extending through the pivotal attachment point to its respective base plate **49**. The above-described movement of the stands along the track, the in and out movement of the work holders relative to the stand support post **37**, the rotation of the head **11** about the central axis of the support post, and the rotation of each work holder **13** about its respective vertical axis Y—Y permit the work holders readily to be moved to various positions for the fabrication of most types of flat trusses commonly used in the building industry. By moving and rotating the stands and work holders as above-described, trusses such as shown in FIG. 1 having diagonal members D with intersections **15** and **17** offset from each other on opposite sides of a line extending vertically relative to the truss between the intersections **15** and **17** may be fabricated without having a separate stand for each of the intersections **15** and **17**. Thus, such trusses may be fabricated using a minimum number of stands. Once the work holders **13** have been moved to their desired position, cam clamps **81** are actuated to clamp each work holder to its respective base **49**, cam clamp **63** is actuated to clamp the arms **51** and **53** to the head **11**, and screw clamp **47** is tightened to fix the head relative to support post **37**.

Next, the lower nailing plates LN are placed on the upper surface of each locator plate **83** with their teeth pointing upwardly. The single support post **37** of each stand enables precut wood members M to be stored as close as possible to the stands on which they will be supported without unduly cluttering the work area. The precut wood members M are then placed on the work holders **13** supported by bars **71** and **73**. An upper nailing plate is then manually placed on the wood members immediately above each lower nailing plate.

The hydraulic press **3** is then moved to its operating position (shown in FIG. **5**) within one of the work holders **13** by moving the carriage **25** along I-beam **27** and by rotating the boom **19** about the pivotal hanger **23**. The gyroscopic action of the electric motor armature in the hydraulic pump and electric motor assembly **21** effects a stabilizing action on the counterbalanced boom **19** and press **3**, and only a slight manual force need be exerted on the press by the operator to conveniently and precisely control the movement and positioning of the press. The lower end of the press **3** is guided into the work holder by guide members **75**. With the press in its operating position, the fixed lower platen **7** is immediately below the locator plate **83**, and the movable upper platen **5** is positioned over the upper nailing plate. The operator then actuates the press to permit hydraulic fluid to enter the hydraulic power cylinder **29** to move the upper platen toward the lower platen. As the upper platen **5** contacts the upper nailing plate, the press frame **28** is moved upwardly relative to the wood members so that the fixed lower platen **7** is moved upwardly to engage the locator plate and to move the latter upwardly. When the teeth of the lower nailing plate contact the lower side of the wood members, the press **3** drives the upper and lower nailing plates into the wood members. The nailing plates are driven into the wood members without exerting any

substantial net upward or downward force on the wood members thereby assuring that the wood members are maintained in their desired position as they are secured together by the nailing plates. The press is then actuated to open the platens and the press can then be moved to each of the other work holders and the above-described operation repeated.

As shown in FIG. **9**, a modified stand generally indicated at **113**, is freely movable on the floor to support the end of a hip truss HT which extends beyond the end of the track **35**. The modified stand **113** comprises a circular base **115**, a support post **117** secured to the center of the circular base, and a single work holder assembly **119** (which corresponds to the work holder **13**) is rigidly secured to the upper end of the support post. The base **115** has three leveling screws, each indicated at **121**, mounted therein and projecting downwardly therefrom to engage the floor and to support the stands. By threading the leveling screws up or down relative to the base, the height of the stand and its vertical relation may be adjusted to ensure that the wood members M are in the proper position to be secured together by nailing plates N. The work holder assembly **119** includes a bottom member **123**, side walls **125**, bars **127** and **129**, guide members **131** secured to the bottom member, and a locator plate **133**. The parts **123–133** are similar to the corresponding parts heretofore described for work holder **13**. A workman may readily move the stand **113** by tilting it so that it rests on the outer edge of the circular base, and then rolling the stand on the outer edge of the base. One or more of the stands **113** may be used to support wood members of a special truss (i.e., a truss longer than the track **35**) at locations not along the track **35**.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is

1. Assembling and securing apparatus for fabricating wood structures utilizing a C-shaped press having an upper platen and a lower platen which are relatively movable toward one another for driving nailing plates into two or more wood members from above and below, said apparatus comprising a stand for holding work to be operated upon by the press, said stand comprising a head rotatable relative to the stand about a vertical axis, and a pair of work holders carried by the head on opposite sides of said axis, said work holders being mounted on said head for relative adjustment toward and away from one another, each work holder being rotatable on a vertical axis to vary its angular relationship to the head as the head is rotated to different angular positions of adjustment about the first-mentioned vertical axis.

2. Apparatus as set forth in claim **1** wherein each of said work holders has means for holding a lower nailing plate to be driven upwardly into the wood members from below, said plate holding means being carried by the work holder for upward and downward movement relative to said work holder.

3. Apparatus as set forth in claim **2** wherein said plate holding means comprises a locator plate adapted to have a lower nailing plate placed thereon to be driven upwardly by the lower platen of the press to drive said lower nailing plate upwardly into the wood members.

4. Apparatus as set forth in claim **1** wherein each work holder is mounted on means horizontally slidable on the head toward and away from said vertical axis.

5. Apparatus as set forth in claim **5** having means for clamping each slidable means in adjusted position relative to the head.

6. Apparatus as set forth in claim **1** wherein each holder is mounted for rotation about a vertical axis on a base, with means mounting the base for horizontal sliding movement on the head toward and away from said first-mentioned vertical axis.

7. Apparatus as set forth in claim **6** having means for clamping each said sliding mounting means in adjusted position relative to the head, and means for clamping each holder in adjusted angular position relative to the respective base.

8. Apparatus as set forth in claim **7** wherein each holder has a bottom member pivoted on said base and two vertical side wall members extending upwardly therefrom, said side wall members being spaced sufficiently apart to permit the entry of the lower platen of the press into the work holder from the front side thereof to an operating position between said side walls.

9. Apparatus as set forth in claim **8** wherein each said side wall carries a horizonal bar at the top thereof adapted to support said wood members in position for being secured together by the nailing plates, said apparatus further having a second bar at the level of said first bars extending between the back ends of said first bars, the plane of the top surface of said bars being spaced from the top surface of the lower platen of said press when the latter is in its operating position a distance sufficient to accommodate a lower nailing plate arranged with its teeth pointing up for being driven into the wood members supported on the top surface of said bars.

10. Apparatus as set forth in claim **9** wherein said work holder further comprises means for holding a lower nailing plate to be driven upwardly into the wood members from below, said plate holding means being carried by the work holder for upward movement between said side walls by the lower platen of the press from a position below the plane of the top surface of said bars to drive a nailing plate positioned thereon into the wood members from below.

11. Apparatus as set forth in claim **10** wherein said holding means comprises a locator plate adapted to have a nailing plate placed thereon for being driven upwardly into the wood members from below.

12. Apparatus as set forth in claim **11** wherein said work holder has means for supporting said locator plate to be movable upwardly and downwardly with the locator plate having a lowered retracted position for receiving a nailing plate thereon below wood members bearing on said bars.

13. Apparatus as set forth in claim **12** wherein said bottom member has means for guiding the lower platen of said press to its operating position between said side walls and below said locator plate in its lowered retracted position.

14. Apparatus as set forth in claim 1 further comprising an elongate track means and a plurality of said stands mounted thereon for movement to different positions of adjustment along the track means.

15. Apparatus as set forth in claim 14 wherein each said stand further comprises a base, means on said base mounting the stand on said track means, and means on said base for effecting clamping of the stand to the track means at any position therealong.

16. Apparatus as set forth in claim 15 wherein said track means has upper, lower, and outer track surfaces, with said stand mounting means engaging the upper track surface, and with said clamp means engaging the outer track surface to effect lateral movement of the stand relative to the track for stand alignment purposes and engaging the lower track surface for stand clamping purposes.

17. Apparatus as set forth in claim 16 wherein said clamp means is secured to one side of said base near the center thereof adapted to engage the adjacent outer and lower track surfaces, and wherein guide means are provided on the other side of said base adapted to engage the other said outer surface for guiding the stand as the latter is moved along the track and for stand alignment purposes.

18. Apparatus as set forth in claim 17 wherein said clamp means comprises a radial cam journalled on said base having a camming surface adapted to engage the adjacent outer track surface to effect lateral movement of the stand relative to the track means to bring said guide means into engagement with the outer track surface adjacent said guide means for stand alignment purposes, said clamp means further comprising a lug secured to the camming surface of the cam adapted to be moved in under and to cooperate with the adjacent lower track surface, wherein said cam is movable between a clamped position with the camming surface of said cam and said guide means in engagement with the outer track surfaces and with said lug engaging its respective lower track surface, and a fully unclamped position with the camming surface clear of its respective outer track surface and with said lug moved clear of and from under its respective lower track surface.

19. Apparatus as set forth in claim 18 wherein said clamp means further comprises linkage means for moving said cam from its clamped position to its fully unclamped position and vice versa.

20. Apparatus as set forth in claim 19 wherein said linkage means is movable to an overcenter locking position to maintain said cam in its clamped position.

21. Apparatus as set forth in claim 20 wherein said stand may be removed from said track means by rotating the stand about the upper outer edge of said track means adjacent said guide means when said cam is in its fully unclamped position and lifting the stand clear of the track means.

22. Apparatus as set forth in claim 1 wherein said stand comprises a base having a vertical support post secured thereto and extending upwardly therefrom, said head being carried by said post for rotation of the head relative to the stand about the vertical axis of the post.

23. Apparatus as set forth in claim 22 wherein said head has a socket secured to its bottom with the socket rotatably receiving the upper end of said post.

24. Apparatus as set forth in claim 23 wherein said socket carries means for clamping and unclamping said socket to said post.

25. Assembling and securing apparatus for fabricating wood structures utilizing a C-shaped press having an upper platen and a lower platen which are relatively movable toward and away from each other for driving nailing plates into two or more wood members from above and below, said apparatus comprising a stand for holding the wood members to be operated on by the press, said stand having a base adapted to be mounted on track means for movement of the stand therealong, a relatively slender support post extending up from the base, and work holding means carried by the post for holding the wood members in position to be secured together by the nailing plates, said work holding means being readily removable from said base.

26. Apparatus as set forth in claim 25 wherein said work holding means includes a locator plate for holding a lower nailing plate to be driven upwardly into the wood members from below by the lower platen of said press.

27. Apparatus as set forth in claim 26 wherein said work holding means has a socket secured to its bottom engaging the upper end of said post thereby permitting said work holding means to be readily removed from said post for effecting said removal of the work holding means from said base.

28. Apparatus as set forth in claim 25 wherein said stand further comprises a head carried by said post rotatable relative thereto about the vertical axis of the post, and wherein said work holding means comprises a pair of work holders carried by the head on opposite sides of said axis, said work holders mounted on said head for relative adjustment toward and away from one another.

29. Apparatus as set forth in claim 28 wherein each said work holder includes a locator plate for holding a lower nailing plate below said wood members for being driven upwardly into the wood members by the lower platen of said press.

30. Apparatus for fabricating wood structures utilizing a C-shaped press having an upper platen and a lower platen which are relatively movable toward and away from each other for driving nailing plates into two or more wood members from above and below, said apparatus comprising track means, and a plurality of stands mounted on said track means for movement therealong, each stand having a head and a pair of work holders mounted thereon for relative adjustment of the work holders toward and away from one another with said work holders on opposite sides of said track means.

31. Apparatus as set forth in claim 30 wherein each stand comprises a base engaging said track means and guided thereby for movement therealong, and a relatively slender post extending up from said base supporting said head, the latter being rotatable about the axis of said post.

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