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[11] **3,730,816**

[45] **May 1, 1973**

[54] **APPARATUS FOR LAYING UP MULTIPLE-PLY CROSS-BONDED PLYWOOD PANELS**

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[52] **U.S. Cl.** **156/559,** 156/563, 156/570, 156/299

[51] **Int. Cl.** **B32b 31/04**

[58] **Field of Search**.....156/542, 556, 563, 156/569, 570, 299, 559, 229, 494

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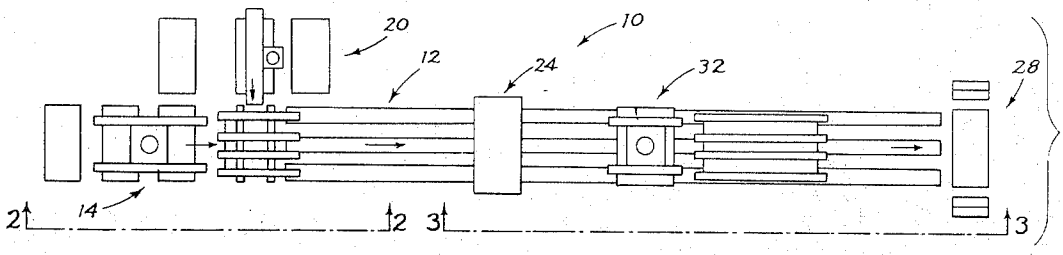
[57] **ABSTRACT**

Apparatus for laying up cross-bonded multiple-ply plywood panels comprising a main conveyor line for moving veneer sheets and core sheets, one after the other, through a glue applicator. The applicator applies a glue coating to the upper surfaces of the sheets. The sheets then move to a stacking region where the core and veneer sheets are stacked one on top of the other in the order in which they have been carried on the main conveyor line. Core sheet supply means positioned laterally of the main conveyor line delivers core sheets onto the main conveyor line. Veneer sheet supply means positioned in line with the main conveyor line delivers veneer sheets to the conveyor line. Face veneer sheet supply means superposed over the conveyor line, intermediate the glue applicator and stacking region, delivers uncoated face veneer sheets to be layed on top of a stack of core and veneer sheets in the stacking region.

11 Claims, 8 Drawing Figures



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3 Sheets-Sheet 1

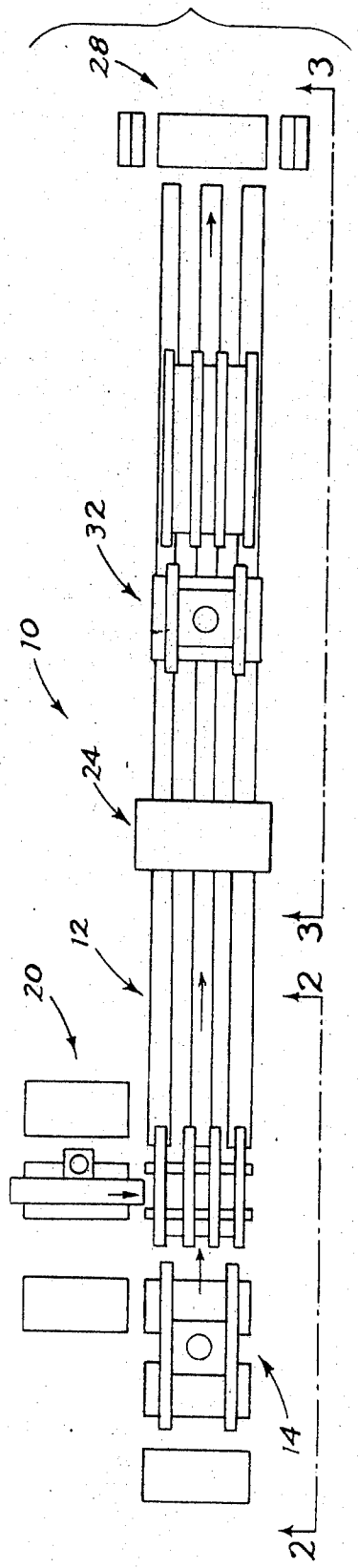

Fig. 1.

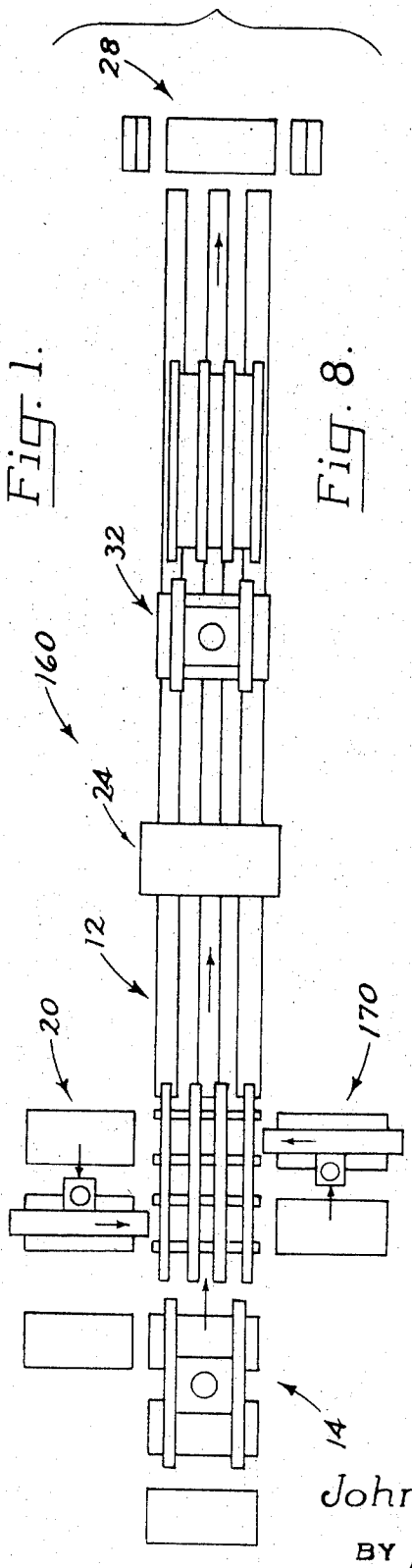

Fig. 8.

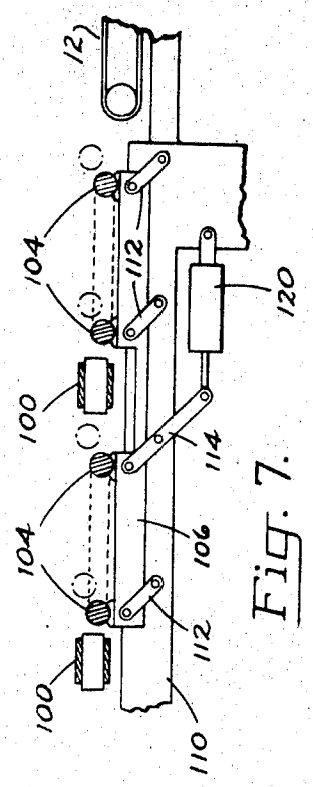

Fig. 7.

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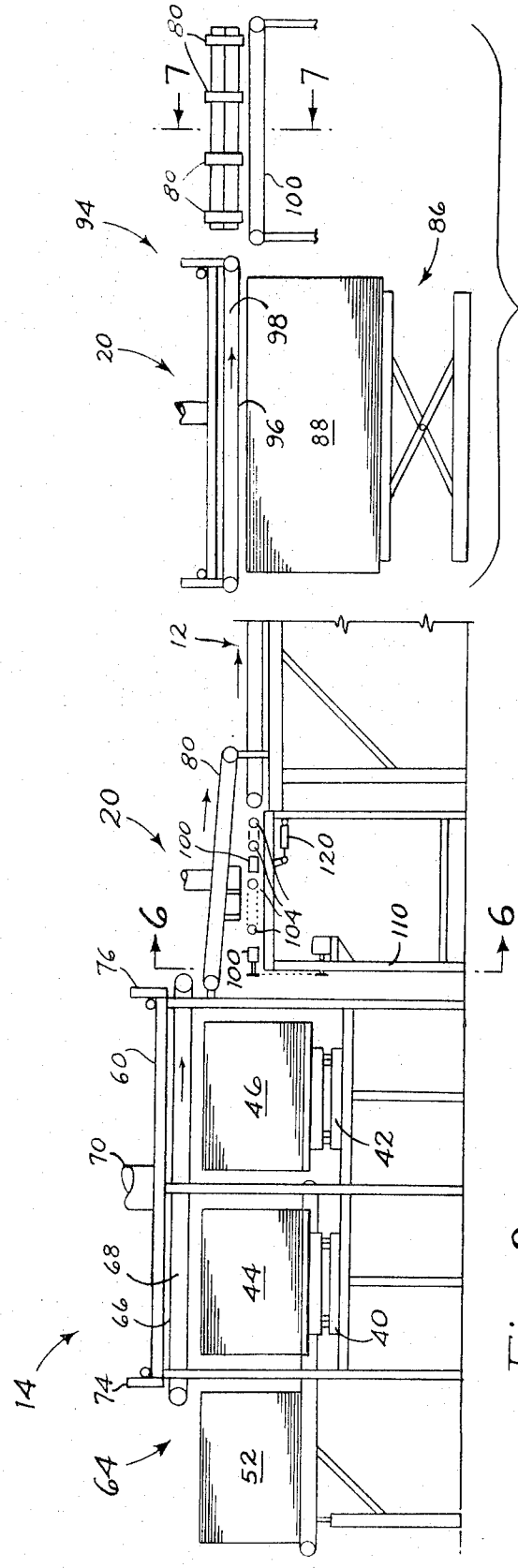

Fig. 2.

Fig. 6.

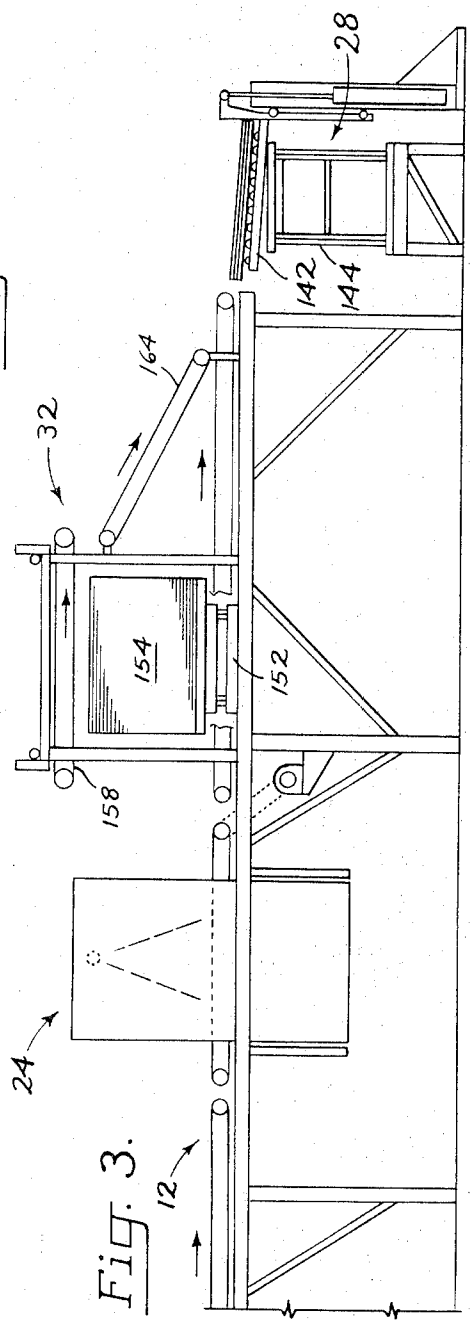

Fig. 3.

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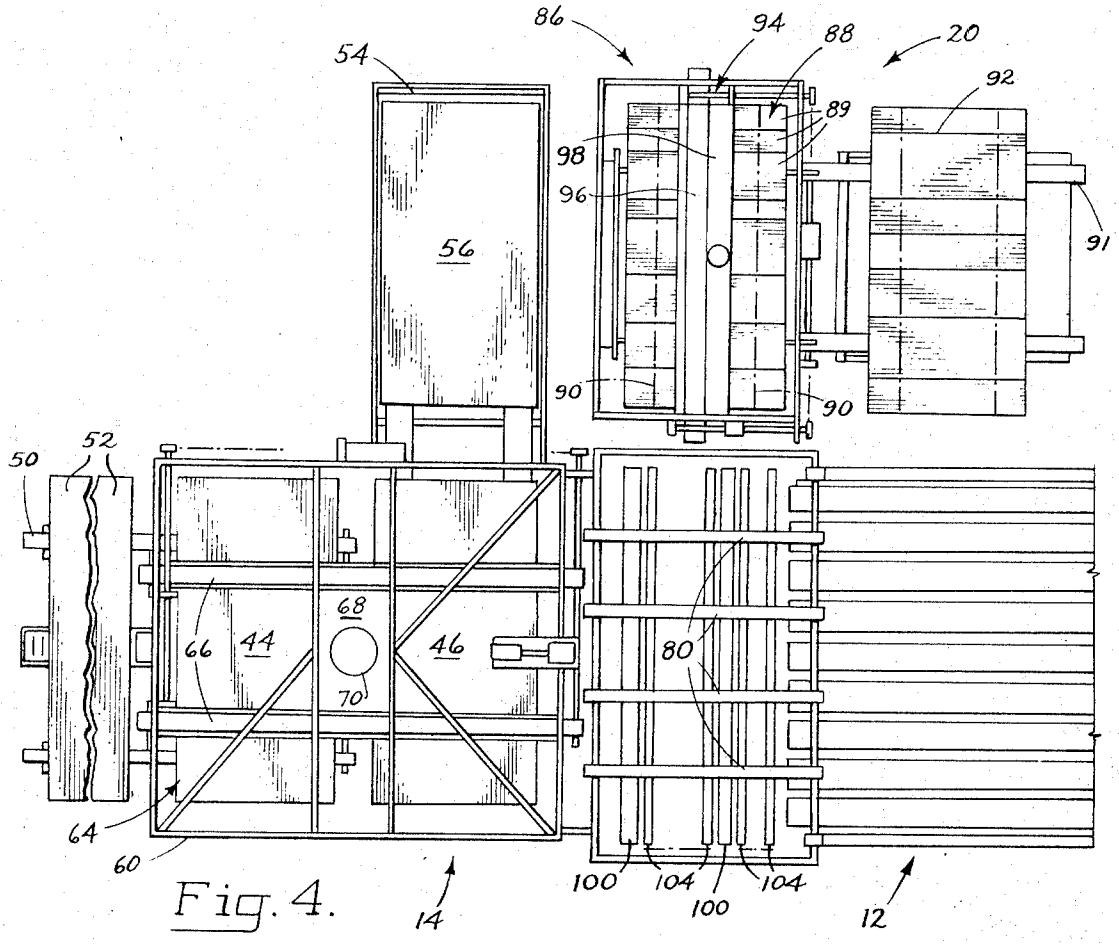

Fig. 4.

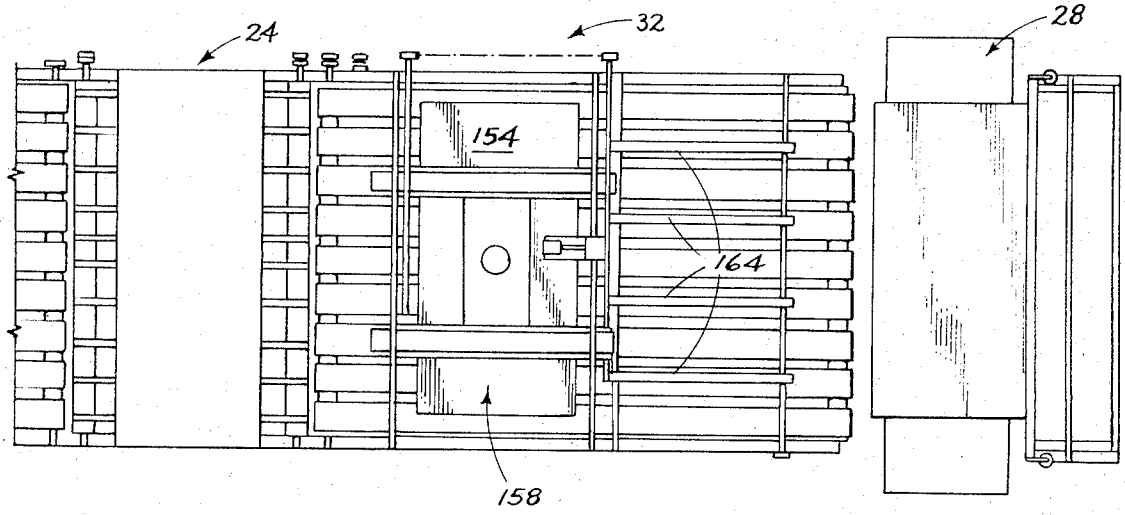

Fig. 5.

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APPARATUS FOR LAYING UP MULTIPLE-PLY CROSS-BONDED PLYWOOD PANELS

This invention relates to apparatus for laying up plywood panels.

In the manufacture of plywood panels, a panel generally is laid up having a back veneer sheet forming one outer surface for the panel, a face veneer sheet forming the other outer surface for the panel, and inner plies between the face and back veneer sheets. The inner plies may comprise core sheets or a combination of core and center veneer sheets. In such a panel, the face, back, and center veneer sheets generally are positioned with their grain extending in a common direction and the core sheets are positioned with their grain extending transversely of the grain in the veneer sheets.

A general object of the invention is to provide novel apparatus operable rapidly and efficiently to lay up multiple-ply plywood panels.

Another object is to provide novel apparatus for continuously laying up multiple-ply plywood panels which is compact and requires a minimum amount of floor space.

Yet another object is to provide novel apparatus for laying up multiple-ply plywood panels which includes a main conveyor line for carrying veneer sheets which are to form part of a panel and veneer sheet supply means for delivering such veneer sheets to the main conveyor line with the veneer sheets traveling in the same direction and at substantially the same speed as they are to be moved on the main conveyor line. With such delivery, more accurate alignment and spacing of the veneer sheets on the main conveyor line may be obtained. Also, the main conveyor line may be operated faster to obtain greater production.

More specifically, an object of the invention is to provide apparatus for continuously laying up multiple-ply cross-bonded plywood panels which includes a main conveyor line for carrying veneer and core sheets along a path with the grain in the core and veneer sheets extending transversely of each other and with the conveyor line transporting the sheets to a stacking region wherein they are stacked one on top of the other. Also included in the apparatus is veneer sheet supply means for moving veneer sheets onto the conveyor line with the sheets moving at substantially the same speed and in the same direction as the conveyor line, and core sheet supply means disposed laterally of the conveyor line and operable to move core sheets onto the conveyor line with such being interspersed on the conveyor line with veneer sheets from the veneer sheet supply means.

A further object of the present invention is to provide apparatus for supplying to the main conveyor line, presized core sheets made up of multiple edge-connected core pieces, which apparatus stretches such core sheets, whereby any overlap between adjacent core pieces is removed from the core sheet.

These and other objects and advantages will become more fully apparent as the following description is read in conjunction with the drawings, wherein:

FIG. 1 is a schematic top plan view of plywood lay-up apparatus according to the invention;

FIGS. 2 and 3 are enlarged side elevation views taken generally along lines 2—2 and 3—3, respectively, in FIG. 1;

FIG. 4 is a top plan view of that portion of the apparatus illustrated in FIG. 2;

FIG. 5 is a top plan view of that portion of the apparatus illustrated in FIG. 3;

FIG. 6 is an elevation view of core supply means in the apparatus taken generally along the line 6—6 in FIG. 2;

FIG. 7 is an enlarged view of mechanism in the core supply means taken generally along the line 7—7 in FIG. 6; and

FIG. 8 is a schematic top plan view of another embodiment of plywood lay-up apparatus according to the invention.

Referring now to the drawings, and first specifically to FIG. 1, at 10 is indicated apparatus according to the invention for continuously laying up multiple-ply plywood panels. In general terms, the apparatus includes a main conveyor line 12 which is operable to support veneer and core sheets substantially horizontally and to convey them to the right in FIG. 1. A veneer sheet supply means 14 is disposed adjacent the upstream end of the main conveyor line and is substantially in line therewith. A core sheet supply means 20 is positioned adjacent the upstream end of main conveyor line 12 and laterally thereof. As will be explained in greater detail below, the core sheet supply means is operable to move a presized core sheet in a direction laterally of the main conveyor line onto the main conveyor line, and the veneer sheet supply means is operable to move veneer sheets in the direction of travel of the main conveyor line onto the main conveyor line with veneer sheets and core sheets being interspersed on the main conveyor line.

At 24 is indicated a glue sprayer, or applicator, for applying glue to the upper surfaces of core and veneer sheets carried therethrough on the main conveyor line. Adjacent the downstream end of the main conveyor line, at the far right in FIG. 1, is a stacking support 28 onto which core and veneer sheets may be deposited one after the other from the main conveyor line to form a panel.

Intermediate glue applicator 24 and stacking support 28 is a face veneer supply means 32 superposed over conveyor line 12. The face veneer supply means is operable to feed face veneer sheets toward the stacking support.

Referring now to FIGS. 2 and 4, veneer sheet supply means 14 includes a pair of veneer sheet stack supports 40, 42 for supporting stacks of veneer, such as a stack of center veneer sheets indicated at 44 and a stack of back veneer sheets indicated at 46. The stack supports comprise conventional scissor-lift mechanisms which are operable automatically to maintain the tops of stacks 44, 46 at a substantially constant level.

Center veneer sheet storage is provided by a conveyor 50 at the left of stack support 40 in FIGS. 2 and 4. A reserve stack of center veneer sheets 52 is supported on conveyor 50.

Positioned to one side of stack support 42 and stack 46 in FIG. 4 is a back veneer sheet storage 54 on which is supported a reserve stack of back veneer sheets 56.

Mounted on a frame 60 above stack supports 40, 42, and above the level at which the stack supports maintain the tops of stacks 44, 46, is a vacuum belt conveyor 64. Conveyor 64 includes a pair of endless, elongated,

parallel and laterally spaced porous belts **66** having substantially horizontal lower reaches. The belts are power driven, whereby their lower reaches travel to the right in FIGS. **2** and **4**. The belts are trained about a vacuum chamber **68**. The vacuum chamber may be evacuated by a vacuum pump (not shown) which is connected to chamber **68** through a conduit **70**. Chamber **68** has openings along its lower margin over which the belts pass, whereby air may be drawn through the belts and into the chamber.

Mounting vacuum belt conveyor **64** on frame **60** are a pair of rack and pinion gear assemblies **74**, **76** (see FIG. **2**) adjacent opposite ends of the belt conveyor. These assemblies provide for vertical movement of conveyor **64** relative to frame **60**. Each of assemblies **74**, **76**, includes a vertical rack gear connected to the vacuum belt conveyor and a pinion gear rotatably mounted on frame **60**. The pinion gear is power-driven for rotation about a horizontal axis, with its teeth intermeshing with the teeth on the rack gear. Rotation of the pinion gear in one direction lowers the vacuum belt conveyor, whereby the lower reaches of belts **66** may contact the upper surfaces of the top veneer sheets in stacks **44**, **46**. With a subatmospheric pressure produced in chamber **68**, the veneer sheets contacted will be held against the lower reaches of the belts. Reverse rotation of the pinion gear raises the vacuum belt conveyor, to raise such sheets from the stacks. Driving of the belts moves the veneer sheets held thereagainst to the right in FIGS. **2** and **4**.

Also included in the veneer sheet supply means are a series of parallel, laterally spaced, power-driven, endless, inclined belts **80** positioned to the right of and somewhat below vacuum belt conveyor **64** (see FIGS. **2** and **4**). The upper reaches of belts **80** are inclined downwardly, progressing away from vacuum belt conveyor **64** and toward the main conveyor line. Belts **80** are adapted to receive veneer sheets transported thereto by vacuum belts **66**. When belts **80** are driven, their upper reaches move to the right in FIGS. **2** and **4** to move veneer sheets supported thereon onto the main conveyor line. The veneer sheets are moved from the inclined belts onto the main conveyor line in the same direction and at substantially the same speed as the main conveyor line is moving.

Vacuum belt conveyor **64** is actuated automatically by conventional controls, to supply veneer sheets to inclined belts **80** only at such time as belts **80** are empty. Inclined belts **80**, in turn, are controlled automatically for intermittent operation, to supply center and back veneer sheets to main conveyor line **12** in spaced relationship, as will be described in greater detail below.

Referring to FIGS. **4** and **6**, core sheet supply means **20** includes a core sheet stack support **86**. Stack support **86** is a conventional scissors lift mechanism which is controlled automatically to maintain the top surface of a stack of presized core sheets **88** supported thereon at a substantially constant level. As is best seen in FIG. **4**, each core sheet in stack **88** may be formed of multiple, narrow core pieces **89** joined together in edge-abutting relationship by a pair of strings **90** adjacent opposite side margins of the core sheet. The strings extend across the abutting edges of the core pieces and are glued to the top surfaces thereof to form an integral presized sheet of core material.

Positioned adjacent core sheet stack support **86** is a core sheet stack storage support **91** which is operable to store a reserve stack of core sheets **92**.

Supported above stack support **86** is a vacuum belt conveyor **94**, which is somewhat similar to that previously described at **64** in the veneer sheet supply means. Vacuum belt conveyor **94** includes a single endless, elongated, porous vacuum belt **96** trained over a vacuum chamber **98**. The vacuum chamber may be evacuated by a vacuum pump connected thereto by a conduit. Vacuum belt conveyor **94** is mounted for vertical movement on rack and pinion gear assemblies similar to assemblies **74**, **76** described above. Such assemblies are operable to lower vacuum belt **96** to place its horizontal lower reach against the upper surface of the top core sheet in stack **88**. With a subatmospheric pressure produced in vacuum chamber **98**, the core sheet contacted will be held against belt **96**, and raising of the vacuum belt conveyor **94** will lift such core sheet from the stack. Belt **96** is power driven whereby its lower reach travels to the right in FIG. **6**. A core sheet lifted from stack **88** thus may be moved with the lower reach of belt **96**.

Positioned below and to the right of vacuum belt conveyor **94** in FIG. **6**, and toward the viewer from conveyor **94** in FIG. **2**, are a pair of elongated, endless, power-driven belts **100**, which have substantially horizontal upper reaches. These belts are driven, whereby their upper reaches travel to the right in FIG. **6** and toward the viewer in FIG. **2** at a greater speed than belt **96**. With belts **100** traveling faster than belt **96**, when the leading edge of a core sheet is deposited on belts **100** by belt **96**, the more rapid travel of belts **100** tends to stretch the core sheet in the direction of its leading edge to draw out any possible overlap which may have developed between adjacent core pieces within the core sheet. Conventional sensing means connected to drive means for belts **100** is operable to stop these belts when a core sheet is moved into position in line with main conveyor line **12**.

Positioned adjacent belts **100** are a series of power-driven jump rolls **104**, as is best seen in FIGS. **2** and **7**. The jump rolls are driven rotatably, in a clockwise direction as viewed in FIGS. **2** and **7**, about axes which extend parallel to the direction of travel of belts **100**. The jump rolls are mounted on a common support **106** for vertical shifting between a normally lowered position, illustrated in solid outline in FIG. **7**, where the tops of the rolls are below the level of the top reaches of belts **100**, and a raised position, illustrated in dot-dashed outline, where the tops of the rolls are above the tops of belts **100**.

Support **106** is swingably mounted on a frame **110** through a series of upwardly inclined swing arms **112**. The swing arms are journaled at their upper set of ends to support **106** and are journaled at their lower set of ends on frame **110**. An elongated inclined lever arm **114** is journaled at its upper end to support **106**, at its center to frame **110**, and at its lower end to the rod end of a fluid-operated ram **120**. Extension of ram **120** swings lever arm **114** about its central journal connection with frame **110**, which raises support **106** and rolls **104** to their raised positions. Contraction of ram **120** lowers the support and rolls. Swing arms **112** are of equal length and serve to maintain the tops of rolls **104** in a common, substantially horizontal plane as they are

raised and lowered. With the rolls in their normally lowered position, a core sheet from stack **88** may be moved fully onto belts **100** and into line with main conveyor line **12**. Ram **120** then may be extended to raise rolls **104**, which rolls engage the undersurface of such core sheet, lift it from belts **100** and move the core sheet onto main conveyor line **12**.

Automatic control and sequencing mechanism interconnects the means for driving veneer sheet supply means **14** and core sheet supply means **20**, whereby veneer sheets and core sheets are deposited, one after the other, on main conveyor line **12** with the core sheets and veneer sheets interspersed.

Referring now to FIG. **3** and describing the panel stacking support **28** in greater detail, it comprises a support platform **142** onto which veneer sheets and core sheets may be deposited one after the other from the main conveyor line, with a sheet deposited being superposed over a sheet immediately preceding it on the stacking support. The stacking support further includes a scissor-lift mechanism **144** which lowers the support platform incrementally to maintain the top surface of a stack of veneer and core sheets deposited thereon at a level slightly below the level of the top of main conveyor line **12**.

Disposed intermediate stacking support **28** and glue applicator **24** is the face veneer supply means **32**. Referring to FIGS. **3** and **5**, face veneer supply means **32** includes a face veneer stack support **152**, which may be a scissors-lift mechanism. Such mechanism is operable to maintain the top of a stack of face veneers, indicated generally at **154**, with its top surface at a substantially constant elevation. Supported above stack support **152** and above stack **154** is a vertically shiftable, power-driven vacuum belt conveyor **158** which is substantially similar to that previously described at **64**. Belt conveyor **158** is operable to engage the upper surface of a face veneer sheet on the top of stack **154** and to convey such to the right in FIGS. **3** and **5**, onto a series of parallel, laterally spaced, inclined, power-driven endless belts **164**. Belts **164** are positioned below belt conveyor **158** and incline downwardly on progressing from belt conveyor **158** toward stacking support **28**. The face veneer supply means is operable to move a presized sheet of face veneer from stack **154** onto a stack of core and veneer sheets on support platform **142**. Automatic control means are connected to the face veneer supply means, whereby a face veneer sheet with no glue coating is transported to the support platform after a predetermined number of core and veneer sheets have been stacked thereon.

Describing now the operation of the apparatus, to produce five-ply plywood panels, presized center and back veneer sheets are disposed in stacks **44**, **46**, respectively, with the grain in the sheets extending transversely of conveyor belts **66**, and transversely of main conveyor line **12**. The presized core sheets are disposed in stack **88** with the grain in the individual core pieces within the core sheets substantially paralleling the direction of travel of main conveyor line **12**. Face veneer sheets in stack **154** are positioned with their grain extending transversely of the main conveyor line.

Vacuum belt conveyor **64** is lowered to engage the upper surfaces of the top sheets in each of stacks **44**, **46** and then is raised to lift such sheets from their respective stacks. The belts in this belt conveyor then are driven to place a back and a center sheet on belts **80**. Vacuum belt conveyor **94** above the stack of core sheets is actuated also to pick up the top presized core sheet from stack **88** and to convey it onto belts **100**. Belts **100** move such core sheet into a position in line with the upstream end of main conveyor line **12** and also stretch the core sheet to remove any overlap between adjacent core pieces within the core sheet.

Operation of belts **80** moves a back veneer sheet onto conveyor line **12** and belts **80** then are stopped. Jump rolls **104** then are raised to move the core sheet from belts **100** onto the main conveyor in a position directly behind the back veneer sheet. As the core sheet is carried on the main conveyor line and clears the downstream ends of belts **80**, these belts are operated once again to move the center veneer sheet supported thereon onto the main conveyor line. Operation of vacuum belt conveyor **94**, belts **100**, and jump rolls **104** then place another core sheet on main conveyor line **12** directly behind the center veneer sheet. As this other core sheet is being moved onto the main conveyor line, vacuum belt conveyor **64** places another back and center veneer sheet on inclined belts **80** for another cycle.

As the back and center veneer sheets and core sheets are conveyed one after the other along the main conveyor line, through glue applicator **24**, a glue coating is applied to their upper surfaces. The veneer and core sheets then are placed one after another on stacking support **28**. After a back veneer sheet, core sheet, center veneer sheet, and another core sheet have been deposited one on top of the other, in that order, on the stacking support with glue therebetween, a face veneer sheet is deposited thereon from face veneer supply means **32**. In this manner a five-ply plywood panel is formed having alternating layers of veneer and core sheets with the grain in the core sheets extending transversely of the grain in the veneer sheets.

The above-described operation may be varied to produce plywood panels having any number of alternating core and veneer sheet layers.

Referring now to FIG. **8**, another embodiment of the invention is illustrated at **160** which includes a second core sheet supply means **170**. Core sheet supply means **170** is similar to that described at **20** and is positioned laterally to the opposite side of main conveyor line **12** from core sheet supply means **20**. All of the other component parts of apparatus **160** are similar to that previously-described for apparatus **10** of the first embodiment of the invention.

This modified plywood panel lay-up apparatus is operable to lay up plywood panels when it is desired to place a pair of core sheets in face-to-face contact with each other between a pair of veneer sheets. Explaining further, and describing the operation of this modified apparatus, a back veneer sheet is placed on conveyor line **12**, followed by a core sheet from core sheet supply means **170**. This core sheet is followed directly by a core sheet supplied from core sheet supply means **20**. Once the core sheet from supply means **20** has cleared the downstream ends of belts **80**, another veneer sheet may be placed directly behind it on conveyor line **12**. The veneer and core sheets thus follow one another

along the line with the pattern being veneer sheet, core sheet, core sheet. After this combination of veneer sheet, core sheet, core sheet has been conveyed through the glue applicator and onto the stacking support **28**, a face veneer sheet is placed thereover from face veneer supply means **32** to form a four-ply panel having exterior veneer sheets with their grain extending lengthwise of the panel and a pair of core sheets between the outer veneer sheets with their grain extending transversely of the panel.

Such apparatus is compact, since the core sheet supply means is disposed laterally of the main conveyor line and the veneer sheet supply conveyors extend over the region onto which the core sheets are supplied to the conveyor line. Further, the face veneer sheet supply is superposed over the conveyor line to conserve space. The apparatus is rapid and efficient in its operation since the back and veneer sheets may be supplied to the coneyor line traveling in the same direction and at the same speed as the conveyor line. This permits more accurate and closer spacing between the veneer sheets and core sheets as they are placed on the conveyor line.

While preferred embodiments of the invention have been described, it should be apparent to those skilled in the art that further variations and modifications are possible without departing from the spirit of the invention.

It is claimed and desired to secure by Letters Patent:

1. Apparatus for laying up multiple-ply cross-bonded plywood panels comprising

an elongated main conveyor line for carrying interspersed veneer sheets one after another horizontally and in one direction therealong with the sheets oriented on the conveyor line as they are to be layed up in the panel,

first veneer sheet supply means adjacent the upstream end of the main conveyor line and disposed substantially in line therewith including a veneer sheet stack support for supporting a stack of veneer sheets with the veneer sheets oriented as they are to be carried on the main conveyor line, and veneer sheet conveyor means operable to remove a veneer sheet from the top of the stack and move the same in said one direction onto said main conveyor line,

second veneer sheet supply means positioned adjacent the upstream end of the main conveyor line and laterally thereof, including a veneer sheet stack support for supporting a stack of veneer sheets in a position spaced laterally of the main conveyor line with the veneer sheets oriented as they are to be carried on the main conveyor line, and veneer sheet conveyor means operable to remove a veneer sheet from the stack and move the same laterally of the main conveyor line onto said main conveyor line, including means for initiating movement of a veneer sheet in the direction of the main conveyor line,

a glue applicator disposed downstream in said main conveyor line from said first and second veneer sheet supply means for applying glue to the upper surfaces of veneer sheets carried on said main conveyor line, and

a stacking support onto which veneer sheets may be deposited, one after another, from the main conveyor line with a sheet deposited being superposed over a sheet immediately preceding it on the stacking support.

2. Apparatus for laying up multiple-ply cross-bonded plywood panels comprising

an elongated main conveyor line for carrying interspersed veneer and core sheets one after another horizontally and in one direction therealong with the sheets oriented on the conveyor line as they are to be layed up in the panel,

veneer sheet supply means adjacent the upstream end of the main conveyor line and disposed substantially in line therewith including a veneer sheet stack support for supporting a stack of veneer sheets with the veneer sheets oriented as they are to be carried on the main conveyor line, and veneer sheet conveyor means operable to lift a veneer sheet from the top of the stack and move the same in said one direction onto said main conveyor line,

core sheet supply means positioned adjacent the upstream end of the main conveyor line and laterally thereof, including a core sheet stack support for supporting a stack of core sheets in a position spaced laterally of the main conveyor line with the core sheets oriented as they are to be carried on the main conveyor line, and core sheet conveyor means operable to remove a core sheet from the stack and move the same laterally of the main conveyor line onto said main conveyor line and including means for initiating movement of a core sheet in the direction of movement of the main conveyor line,

a glue applicator disposed downstream in said main conveyor line from said core and veneer sheet supply means for applying glue to the upper surfaces of core and veneer sheets carried one after the other on said main conveyor line, and

a stacking support onto which core and veneer sheets may be deposited, one after another from the main conveyor line with a sheet deposited being superposed over a sheet immediately preceding it on the stacking support.

3. The apparatus of claim **2**, wherein said core sheet conveyor means comprises a first power-driven conveyor section operable to initiate movement of a core sheet from the core sheet stack toward said main conveyor line and a second power-driven conveyor section operable to receive a core sheet from said first conveyor section and to move the core sheet onto the main conveyor line, said second conveyor section being driven at a speed greater than said first conveyor section.

4. The apparatus of claim **2**, wherein said veneer sheet conveyor means comprises a vacuum belt conveyor including an elongated, endless, power-driven vacuum belt having a substantially horizontal lower reach which substantially parallels the main conveyor line, overlies the veneer sheet stack support, and is movable under power in the direction of said main conveyor line, and means mounting said veneer sheet stack support and vacuum belt for shifting vertically toward and away from each other.

5. The apparatus of claim **4**, wherein said veneer sheet conveyor means is spaced above said main con-

veyor line and further comprises an elongated conveyor element having an upstream end disposed adjacent said vacuum conveyor belt and extending at an incline downwardly from the vacuum conveyor belt in the direction of the main conveyor line and over the region of the main conveyor line onto which the core sheet conveyor means deposits core sheets, said element being operable to receive a veneer sheet from the vacuum conveyor belt and transport the same onto said main conveyor line in a region downstream from the region in which the core sheet conveyor deposits core sheets.

6. The apparatus of claim 5, wherein said conveyor element comprises an endless, elongated belt having an upper reach adapted to support a veneer sheet, and which further comprises power-drive means operatively connected thereto actuatable intermittently for driving said upper reach in the direction of said main conveyor line in timed relation with the operation of the core supply means to deposit core sheets and veneer sheets in following relation on the main conveyor line.

7. The apparatus of claim 3, wherein said first conveyor section comprises a vacuum chamber in which a lower-than-atmospheric pressure may be produced disposed over said core sheet stack support, and an endless, elongated, power-driven, porous vacuum belt trained over said vacuum chamber and positioned above the core sheet stack support with a lower reach of the belt extending laterally of the main conveyor line and positioned to engage the upper surface of a top core sheet on said core sheet stack support, with openings in the belt communicating with the interior of said chamber, said belt on being driven and with a lower-than-atmospheric pressure in the vacuum chamber being operable to hold a core sheet against its lower reach and move the same toward the main conveyor line.

8. The apparatus of claim 7, wherein said second conveyor section comprises a power-driven conveyor belt having a substantially horizontal upper reach positioned below the level of said vacuum belt and extending transversely of the main conveyor line, said second conveyor belt being adapted to receive a core sheet from said first conveyor section and operable to move said core sheet transversely of said main conveyor line into a position in line with said main conveyor line, and said means for initiating movement of a core sheet in the direction of movement of the main conveyor line comprises a plurality of power-driven rollers adjacent said second conveyor belt rotatable under power about axes extending transversely of the main conveyor line, said rollers being mounted for shifting between a first position in which they are positioned for engaging a core sheet on the second conveyor belt and a second position out of engagement with a core sheet on the second conveyor belt.

9. The apparatus of claim 2, which further comprises face veneer sheet supply means intermediate the glue applicator and stacking support including a face veneer stack support for supporting a stack of face veneer sheets with said veneer sheets oriented as they are to be layed up in a panel, and a face veneer conveyor for moving a face veneer sheet from said stack toward said stacking support.

10. The apparatus of claim 7, which further comprises means for producing relative vertical shifting of said first conveyor section and said core sheet stack support toward and away from each other.

11. The apparatus of claim 9, wherein said face veneer stack support and face veneer conveyor are superposed over said main conveyor line.

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