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(54) **INTERLOCKING SYSTEM FOR WANEY LUMBER**

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(57) **ABSTRACT**

A hollow core composite wood product comprising four elongated pieces of lumber, at least two of which are waney pieces of lumber. The elongated pieces are profiled to remove both longitudinally extending edges on one side thereof such that each of said elongated pieces has longitudinally extending indented portions on one side. The indented portions are shaped so as to be complementary to and engageable with the indented portions of adjacent pieces. The pieces are positioned adjacent to one another such that the indented portions are engaged with one another and the pieces together define a longitudinally extending cavity in the center of the hollow core composite wood product. The indented portions of said first pieces are bonded to the indented portions of said second pieces by an adhesive. The indented portions are shaped such that adjacent pieces fit into a self-aligning, interlocking engagement, preventing lateral movement of the pieces relative to one another. This enables the hollow core composite product to be pressed in a conventional one-dimensional press.

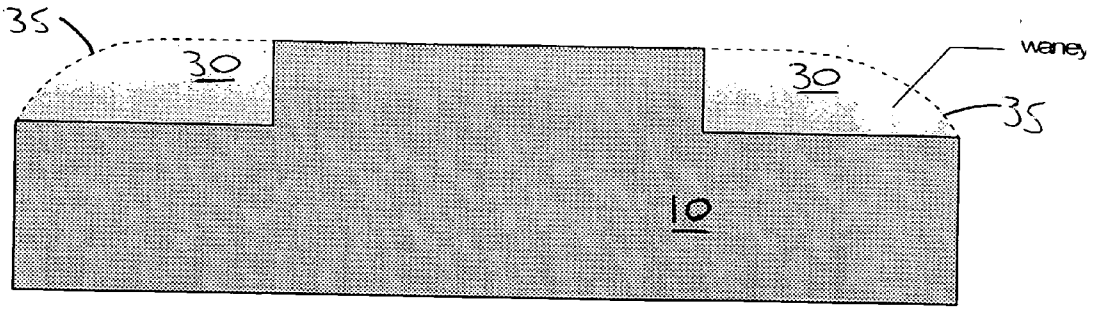


Fig. 1A

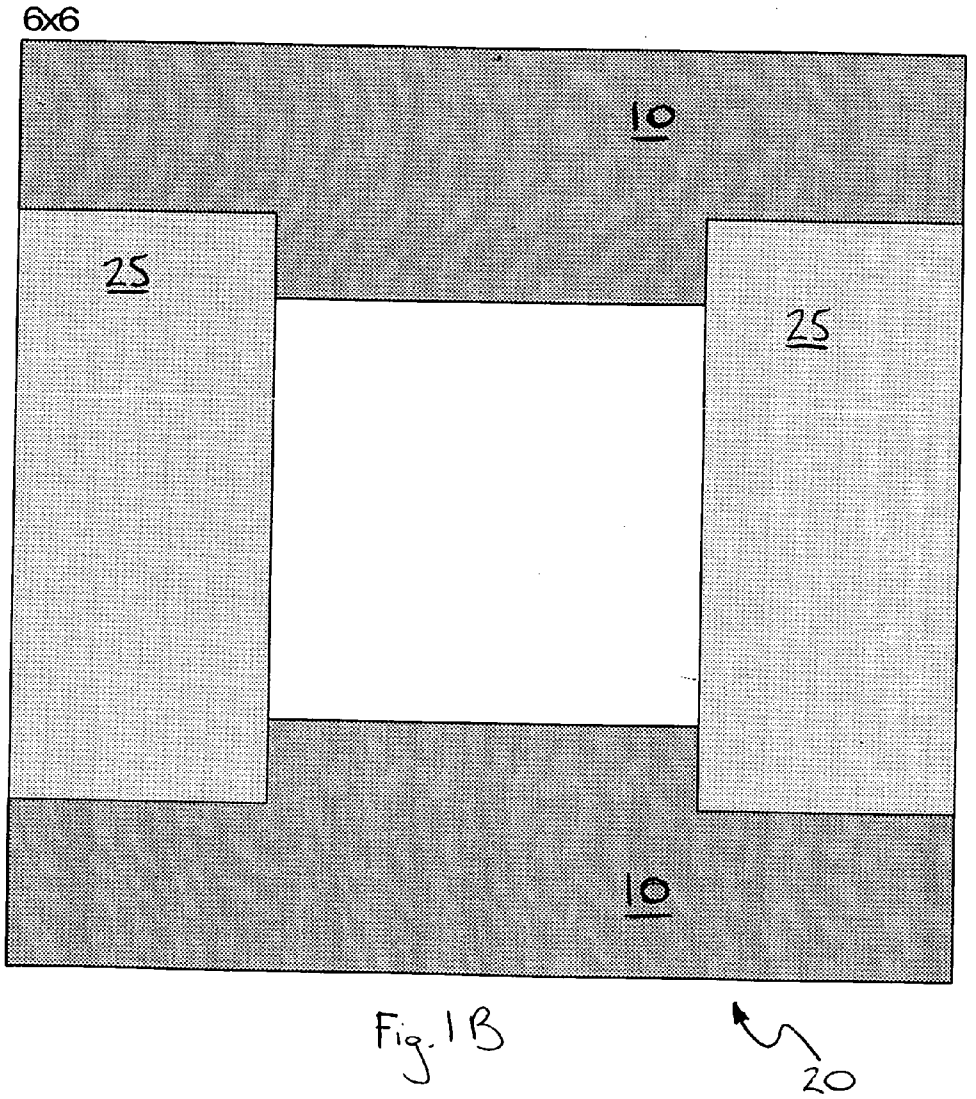


Fig. 1B

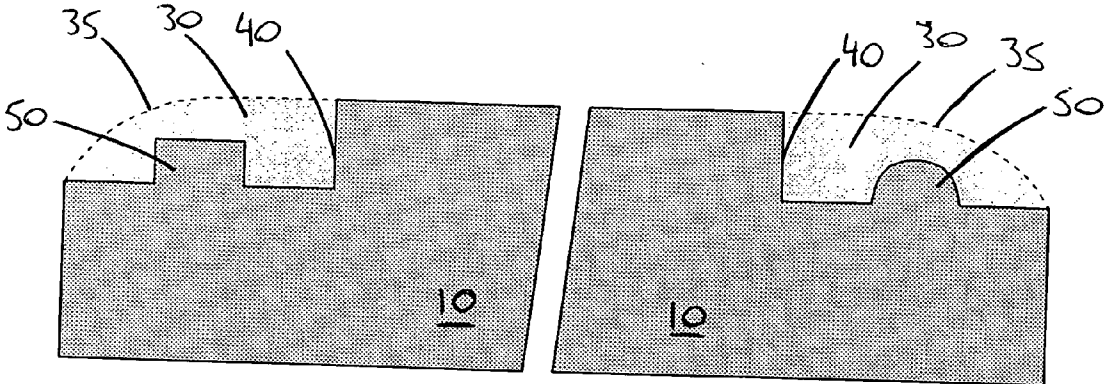


Fig. 2A

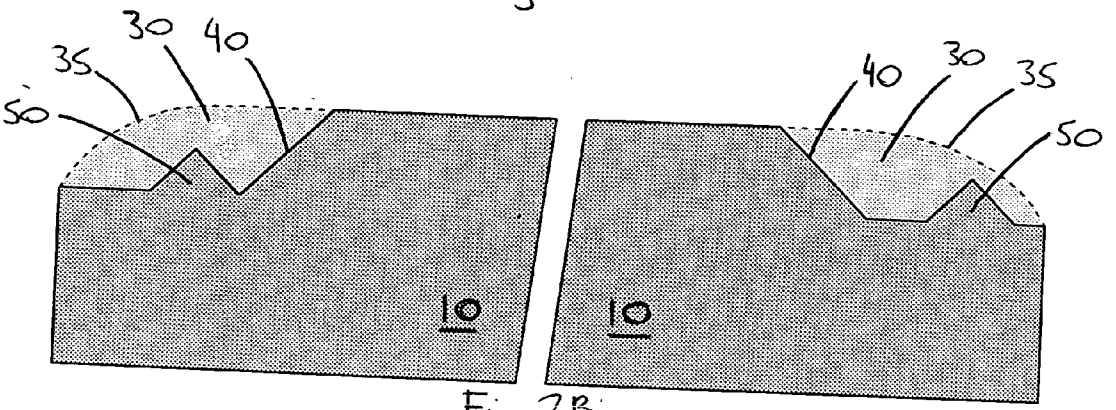


Fig. 2B

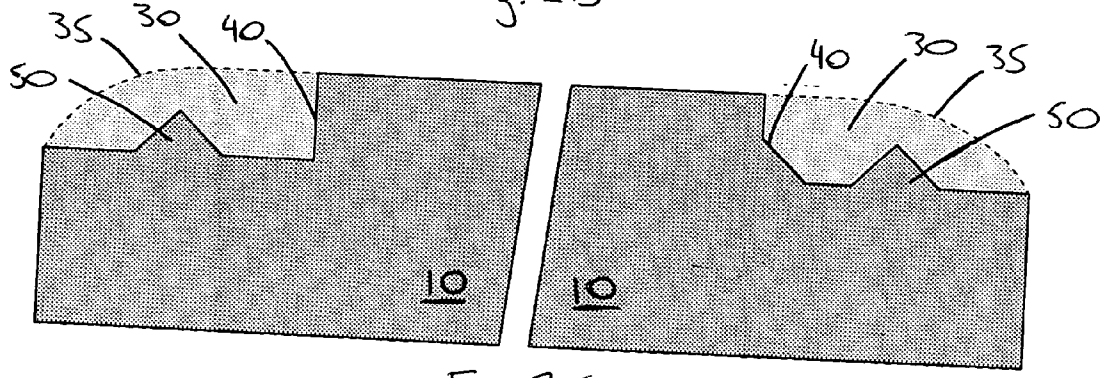


Fig. 2C

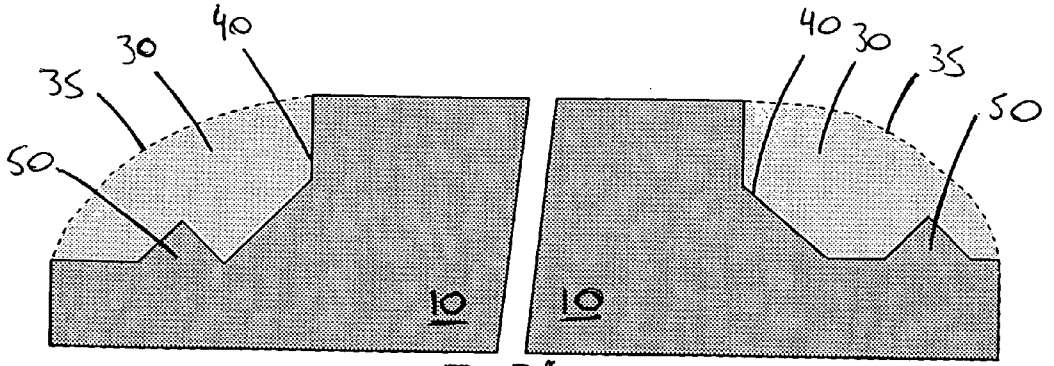


Fig. 3A

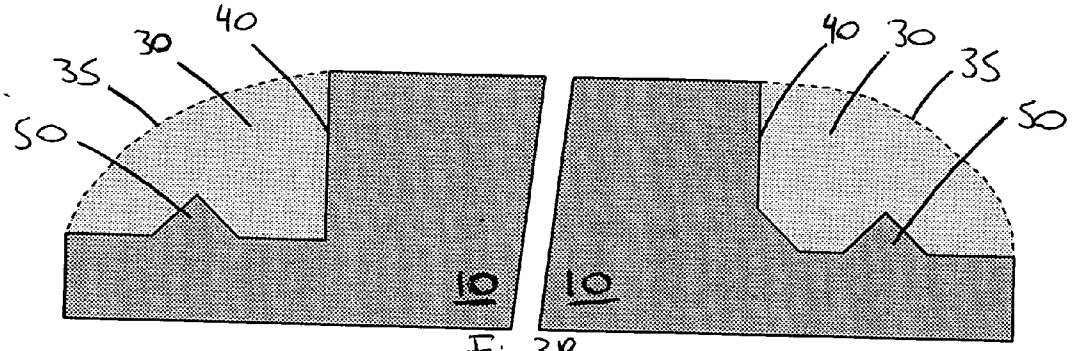


Fig. 3B

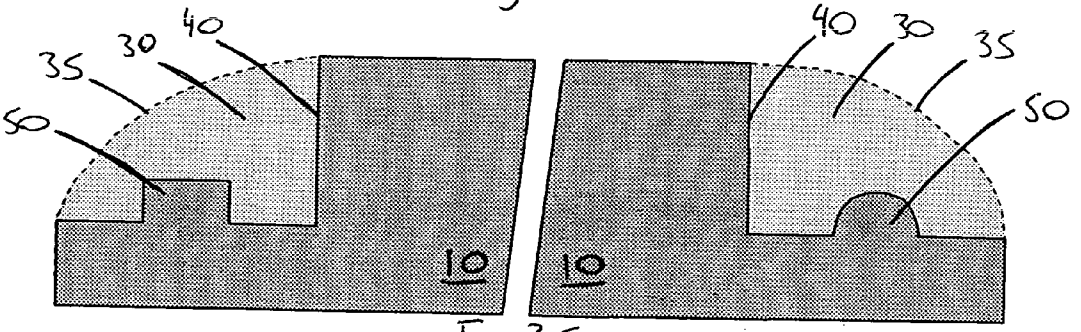


Fig. 3C

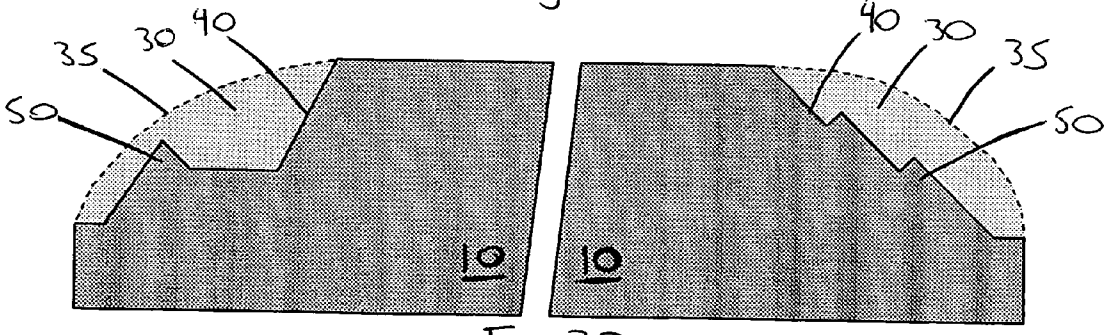


Fig. 3D

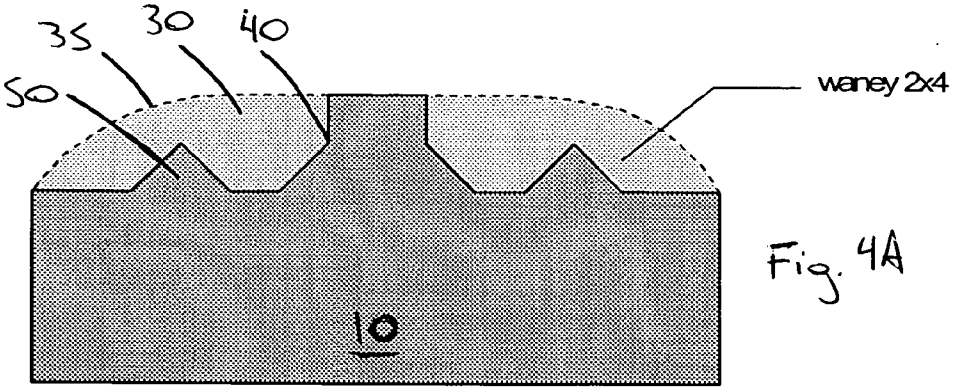


Fig. 4A

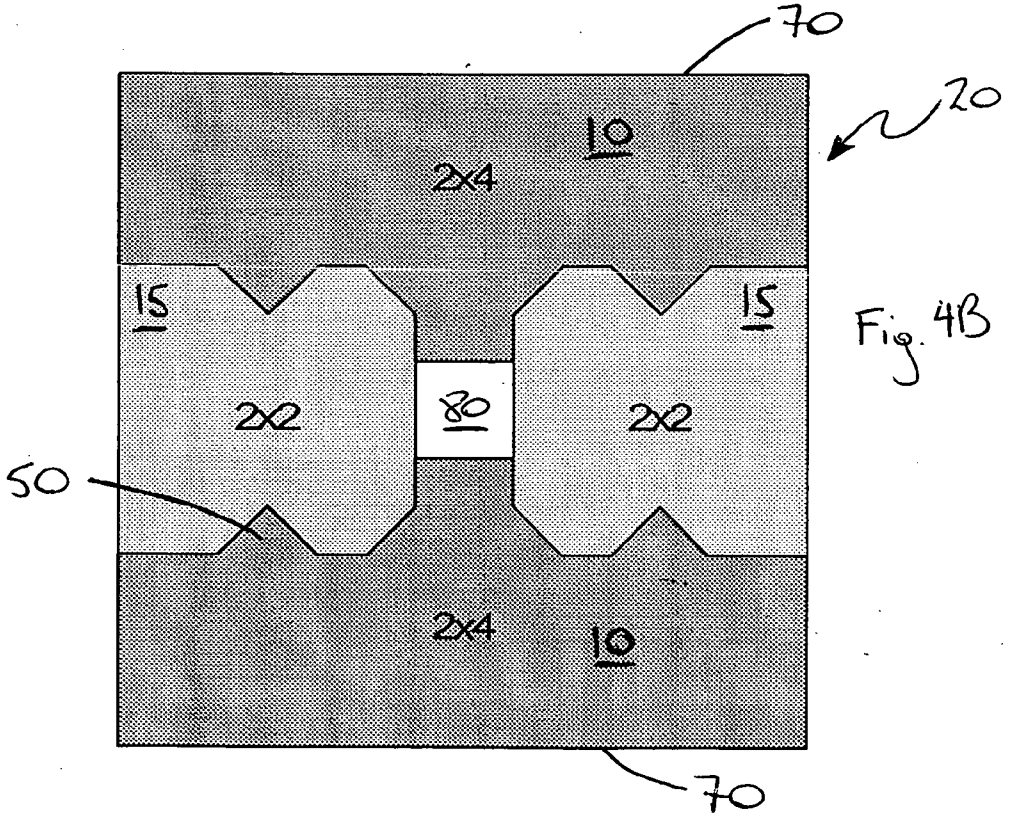


Fig. 4B

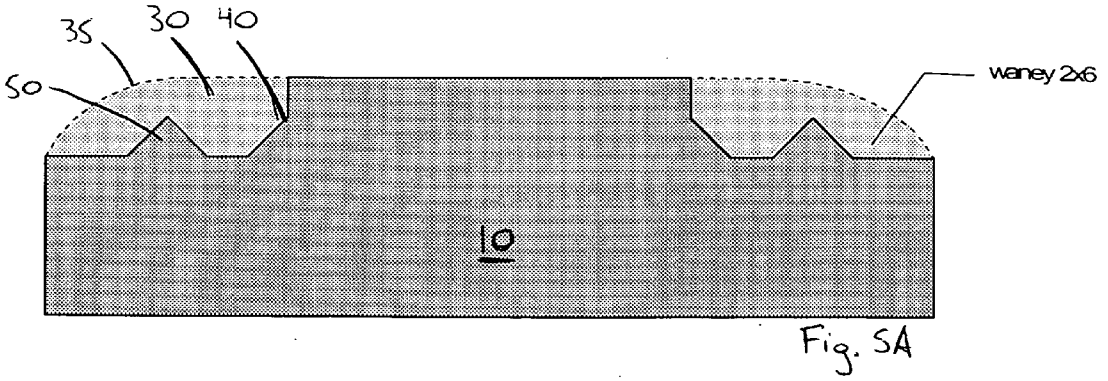


Fig. 5A

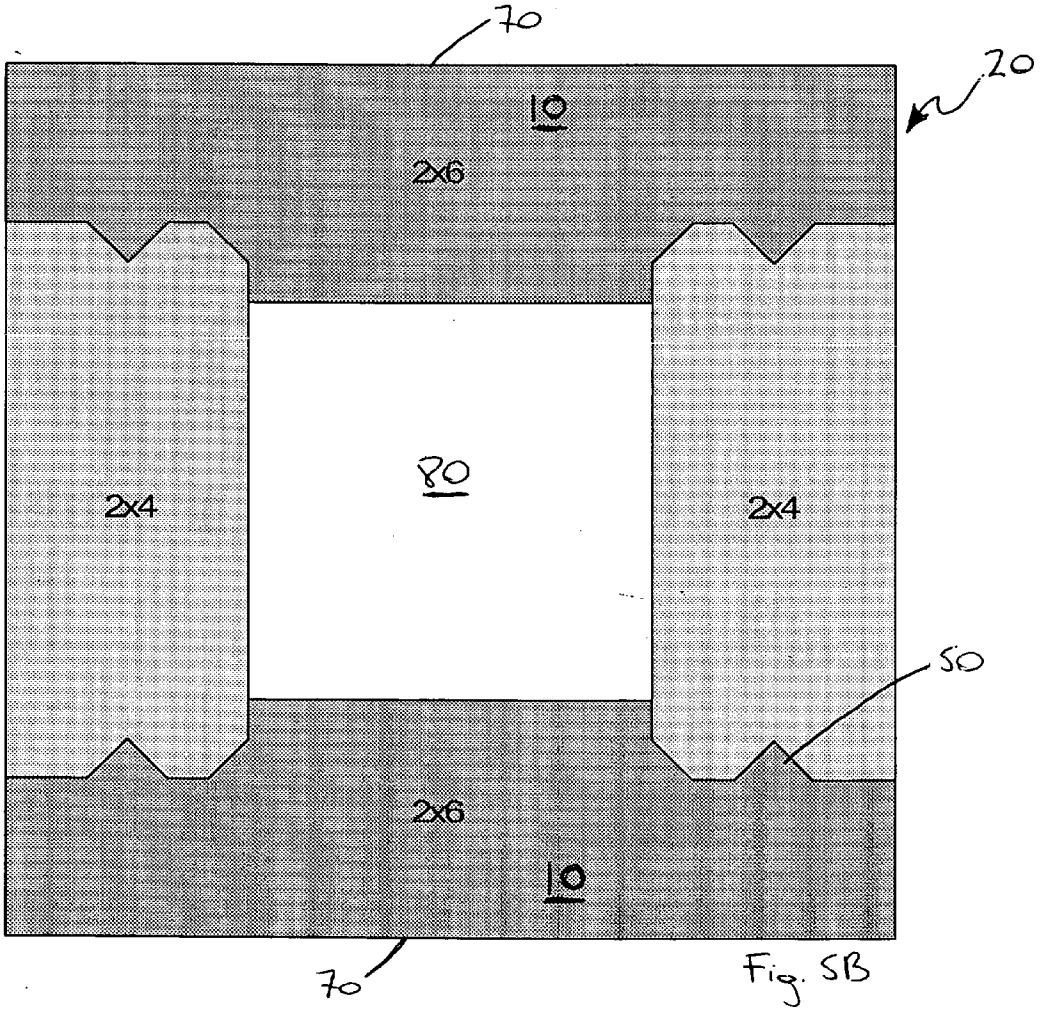


Fig. 5B

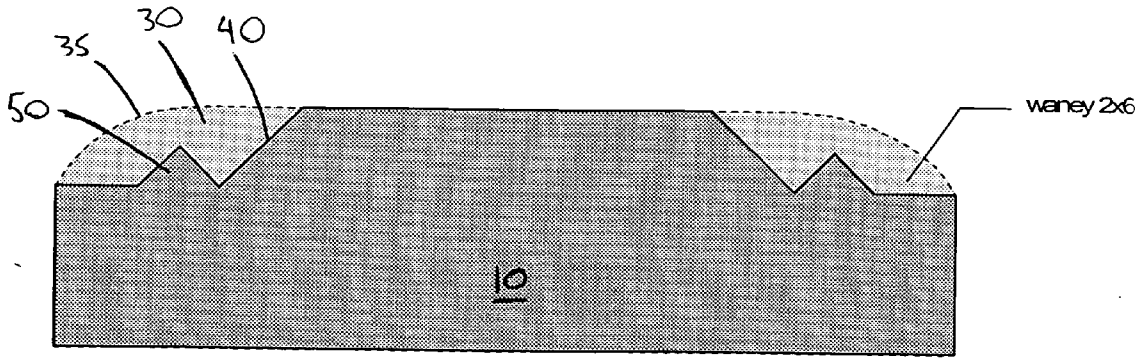


Fig. 6A

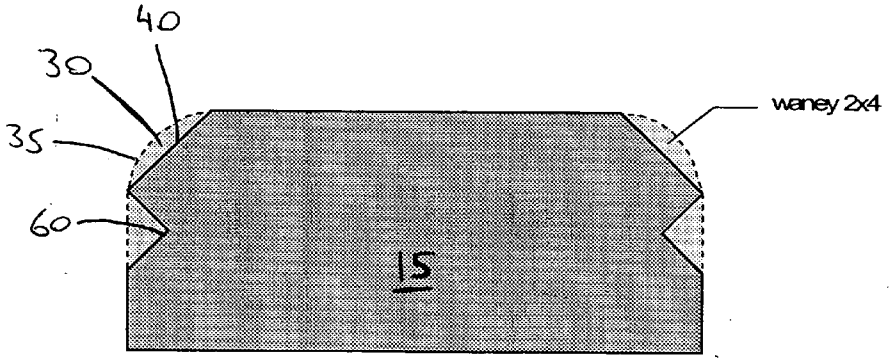


Fig. 6B

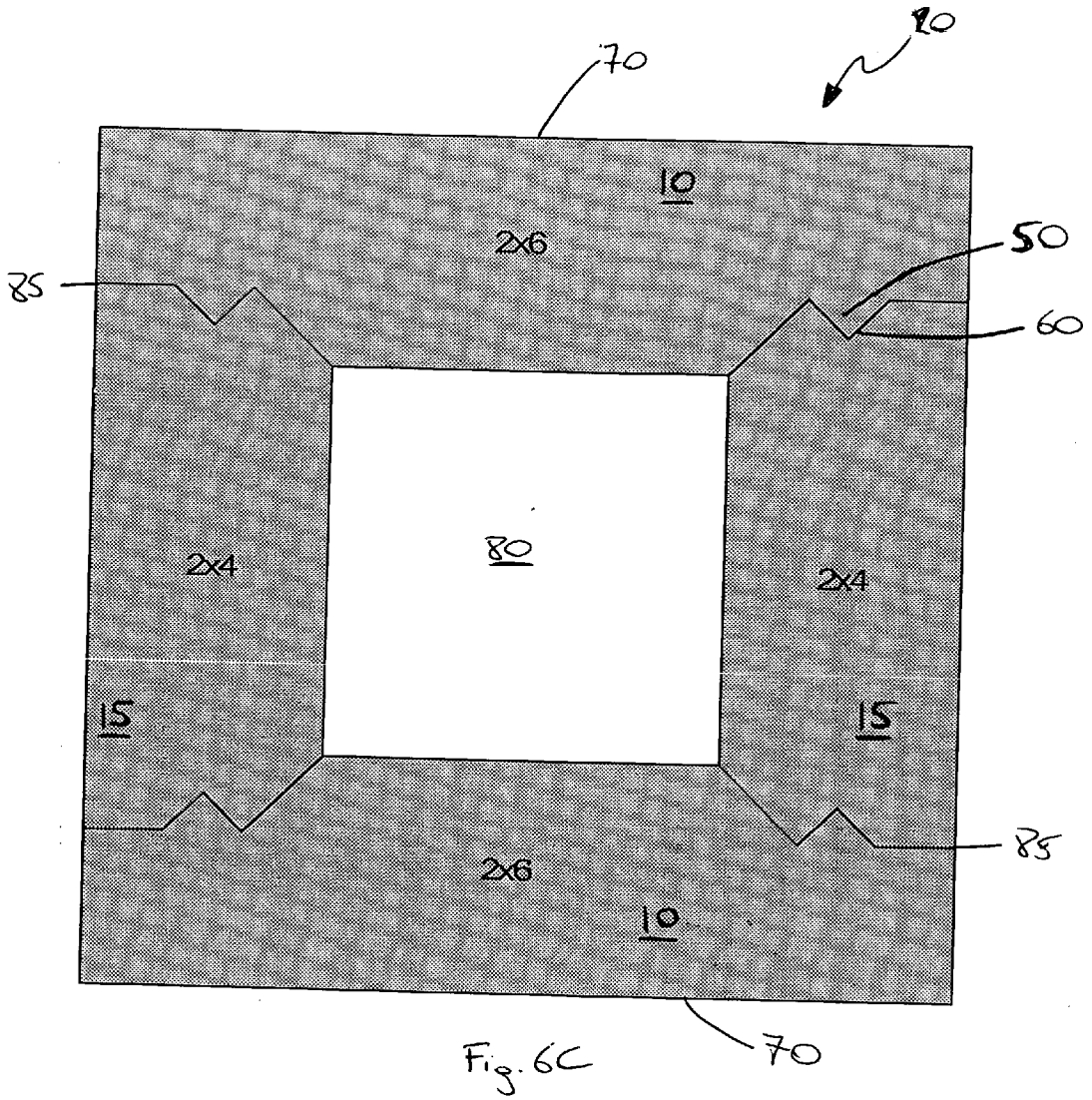
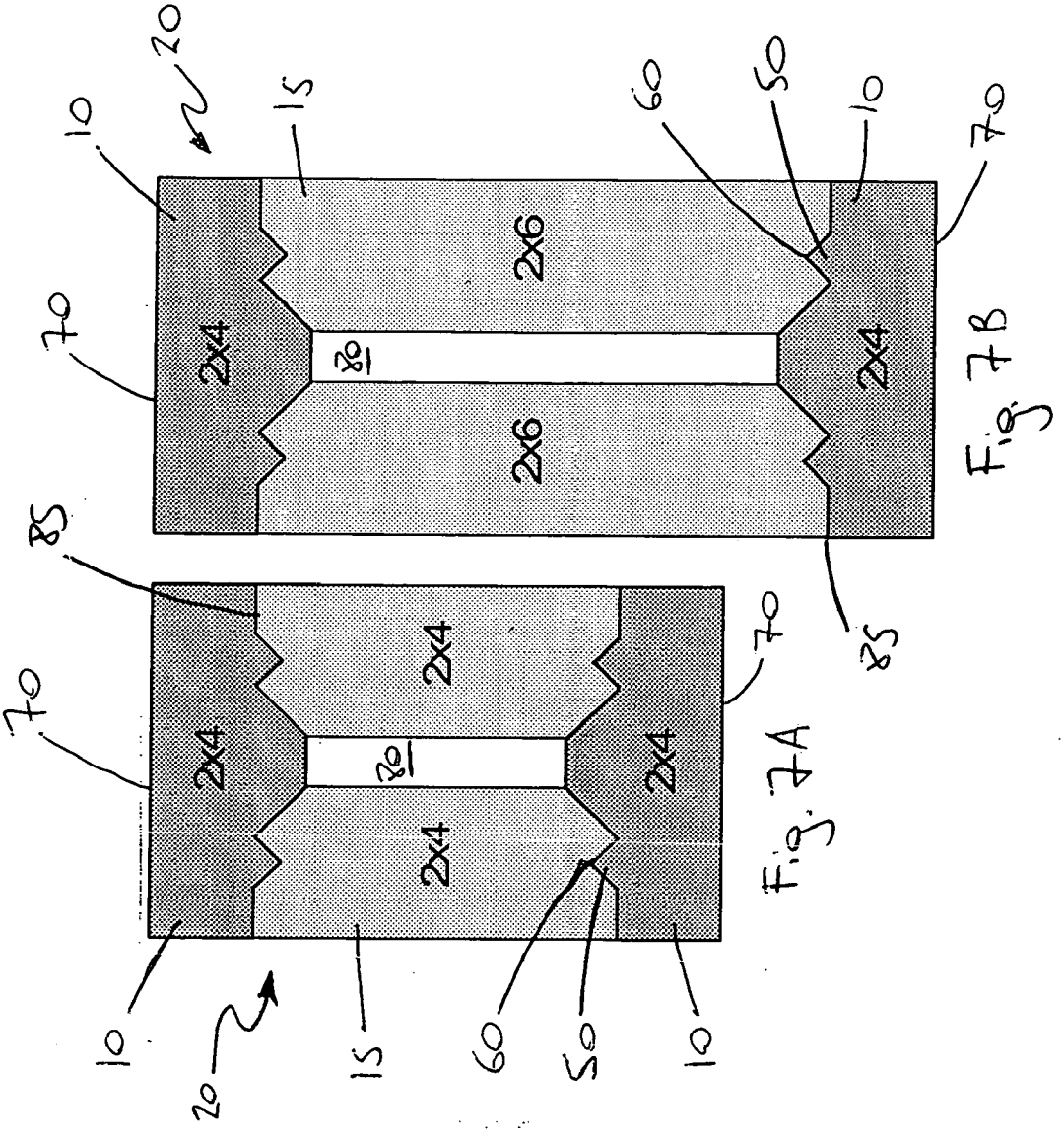


Fig. 6C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10
15
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50
10
70
2x6
70
2x4
30
2x4
2x6
85
Fig. 7B
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2x4
Fig. 7A
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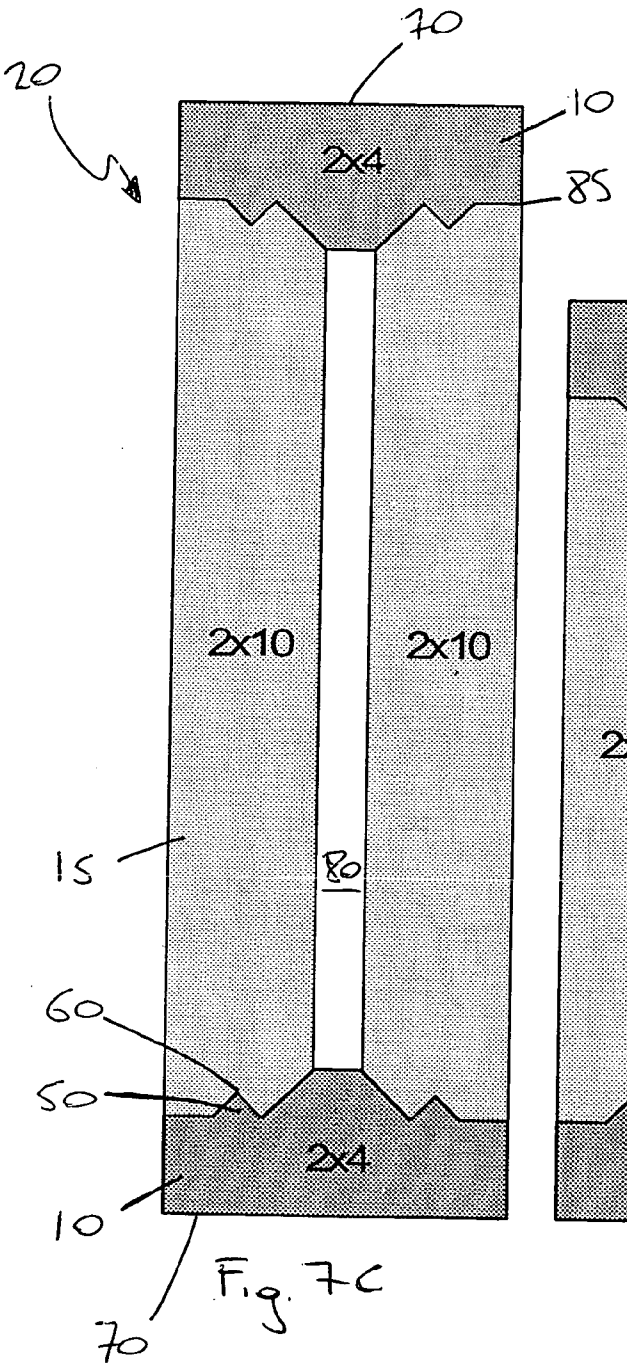
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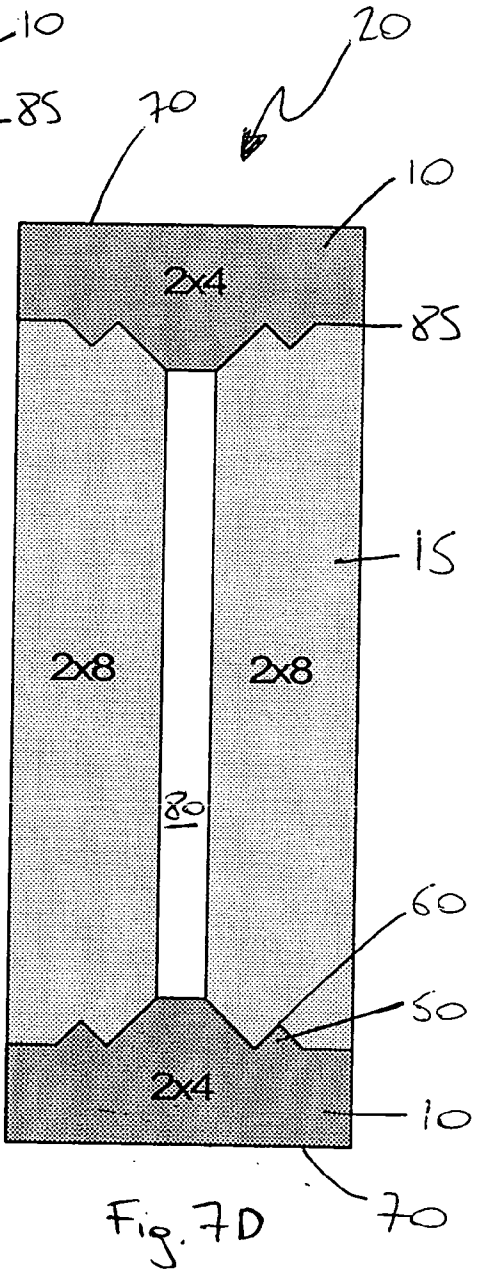
Fig. 7C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10
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Fig. 7D

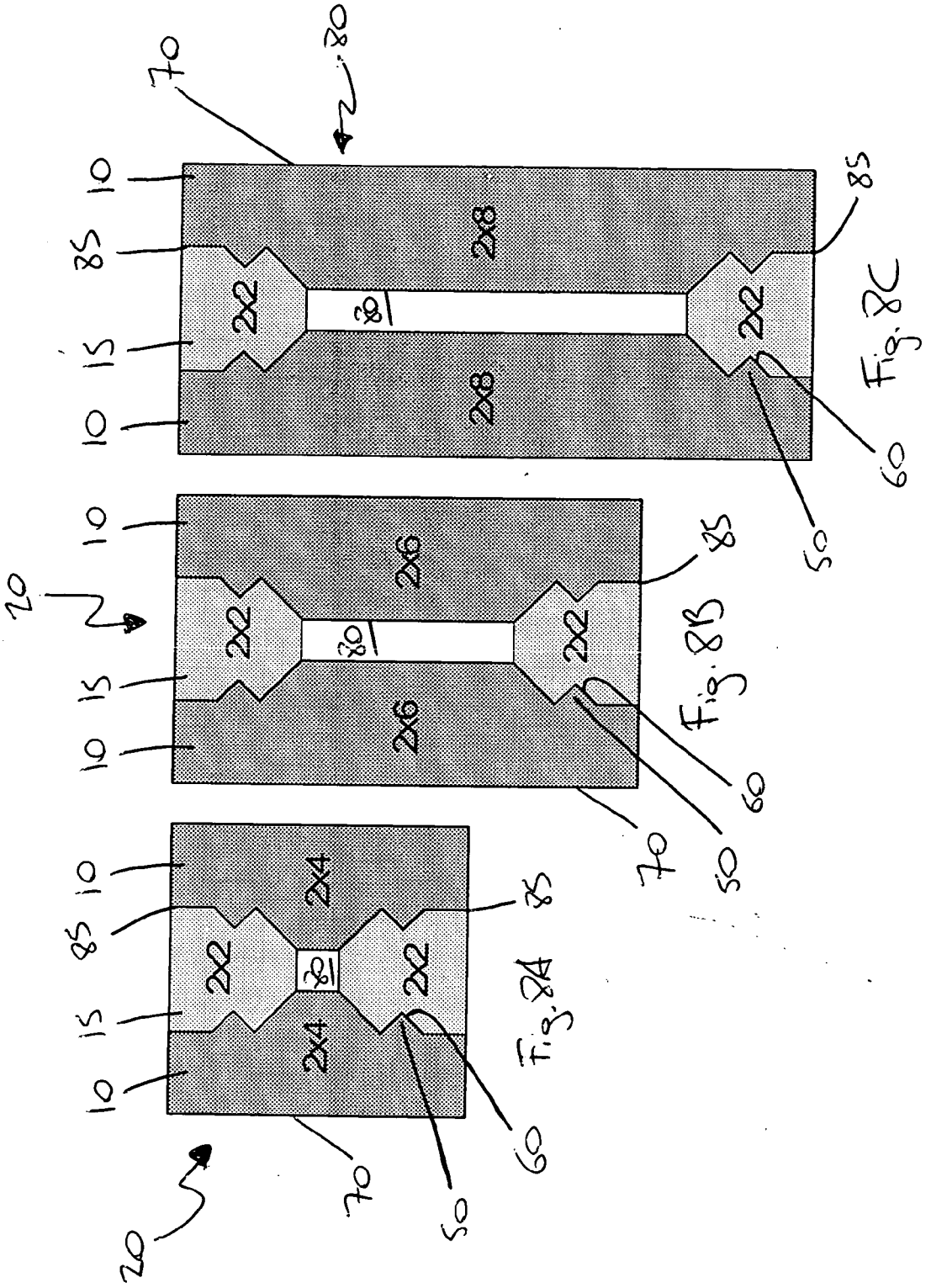
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Fig. 2C
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15
10
2x6
22
30
22
2x6
85
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Fig. 2B
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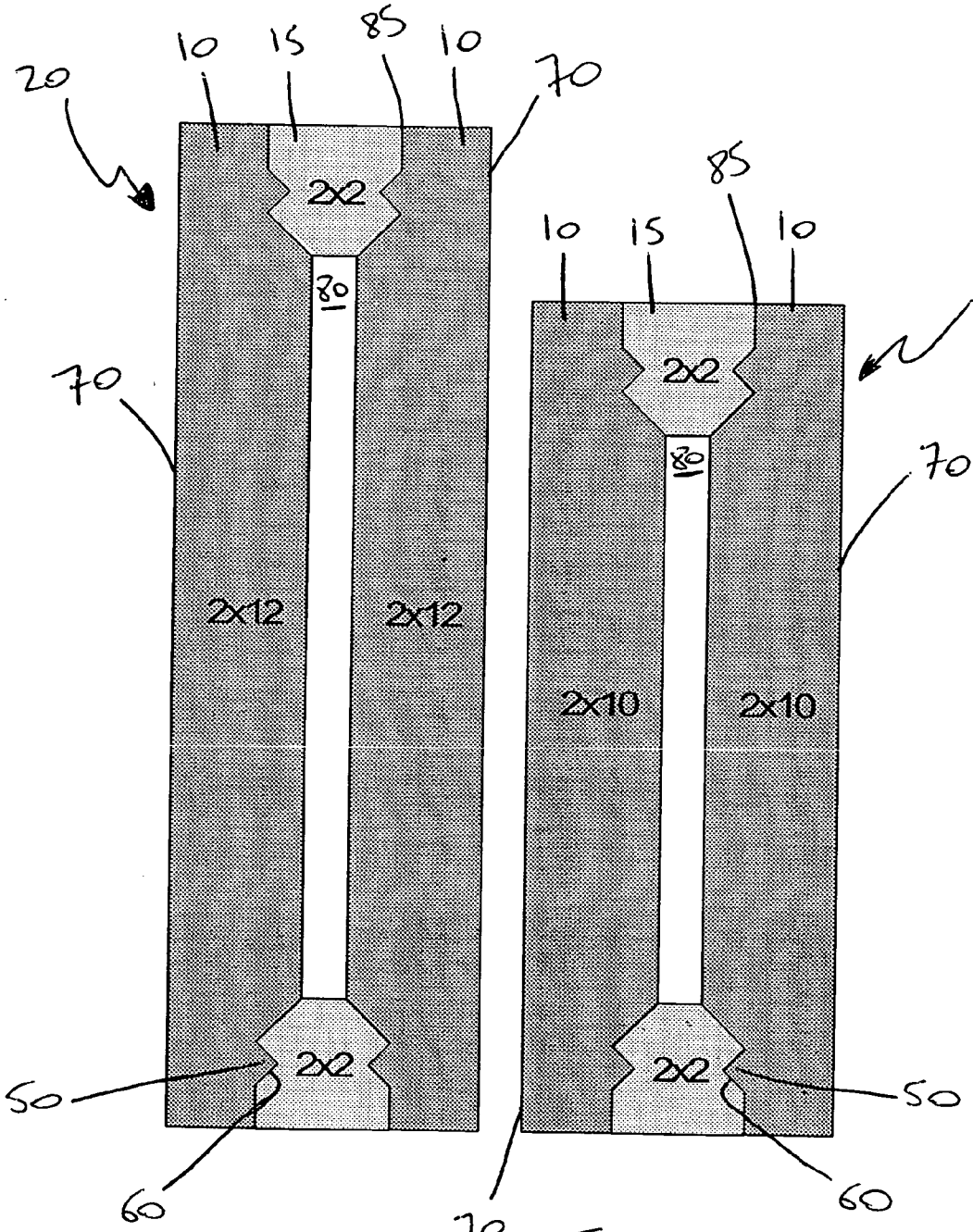
Fig. 2A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2X2
80
70
2X10
2X10
2X2
50
60

Fig. 8D

Fig. 8E

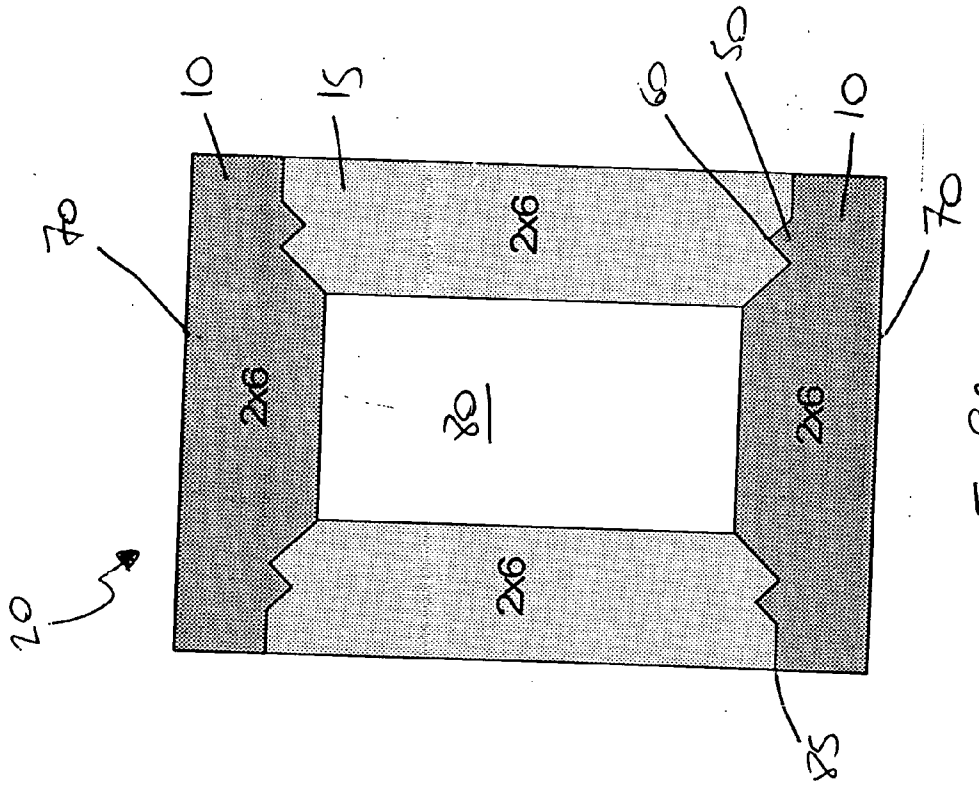
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Fig. 9B

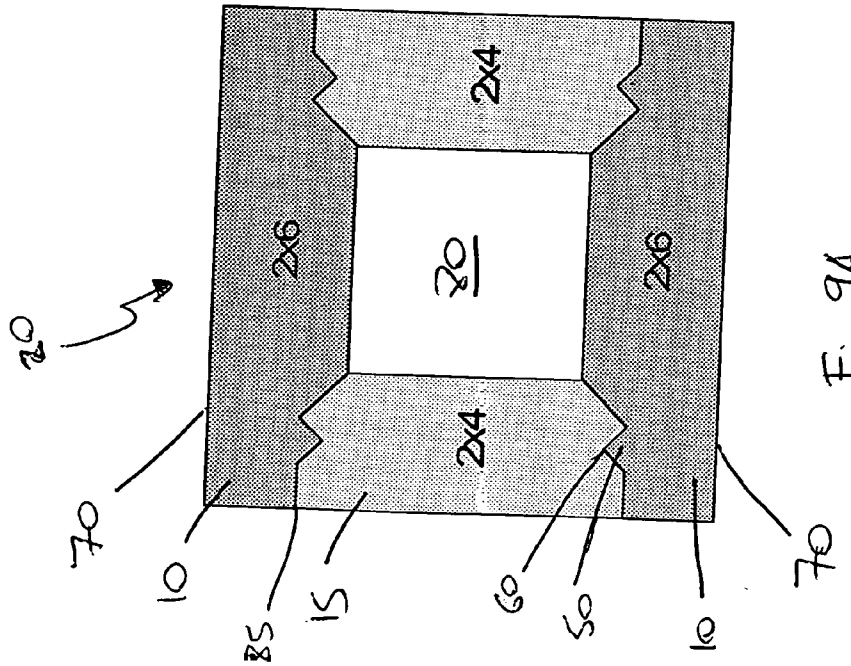
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Fig. 9A

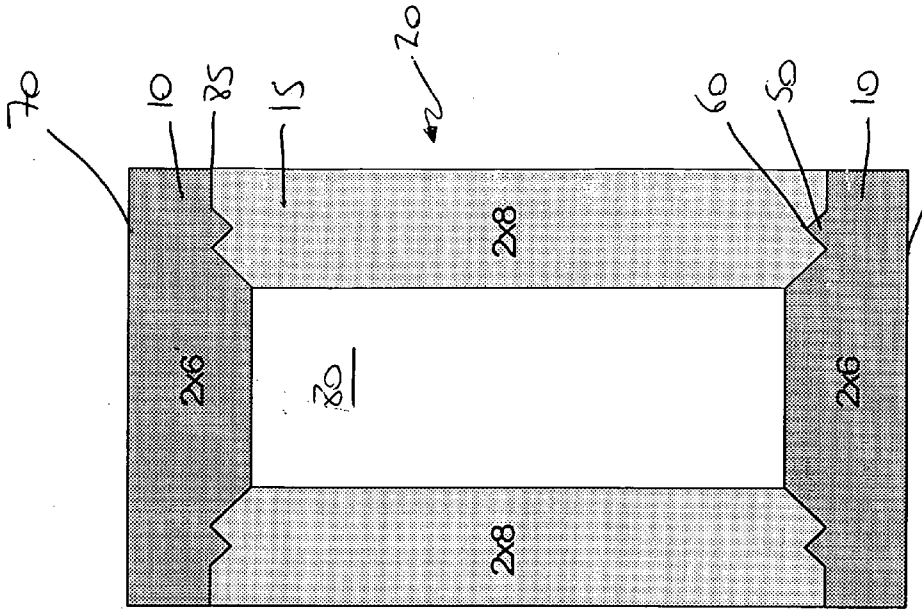
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Fig. 9C

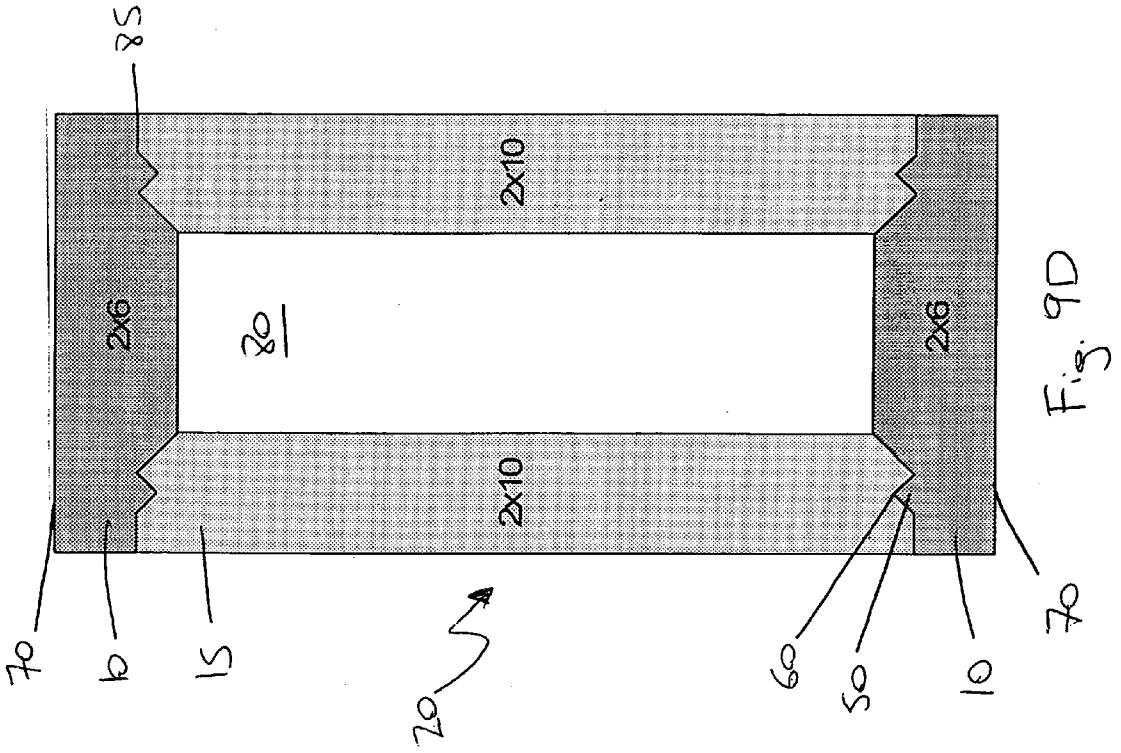
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Fig. 9D

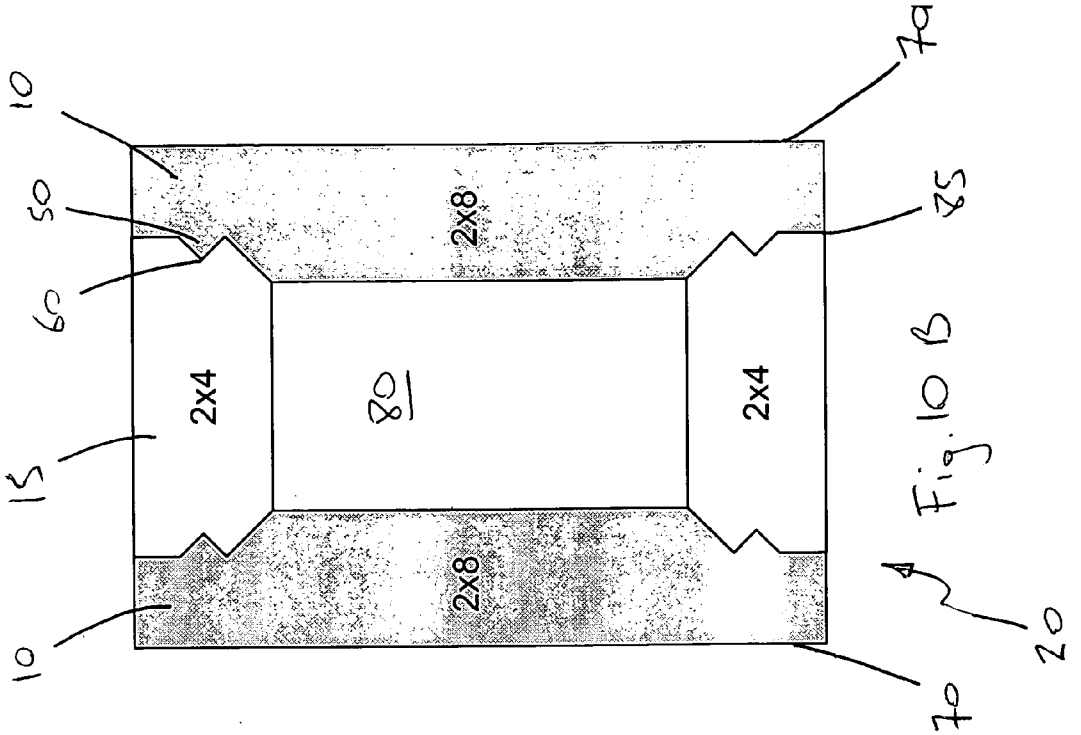


Fig. 10B

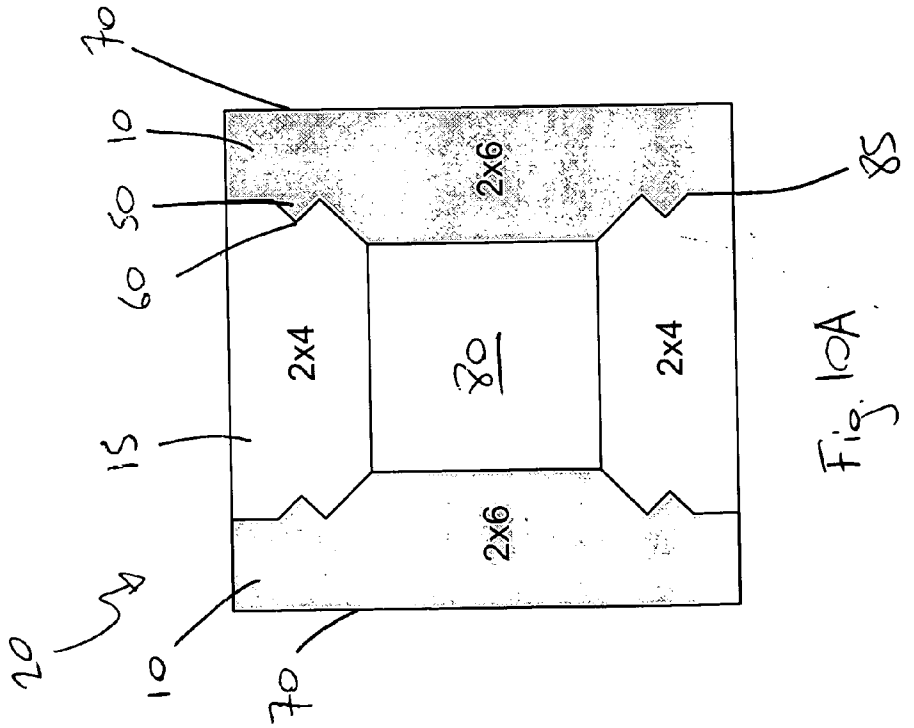


Fig. 10A

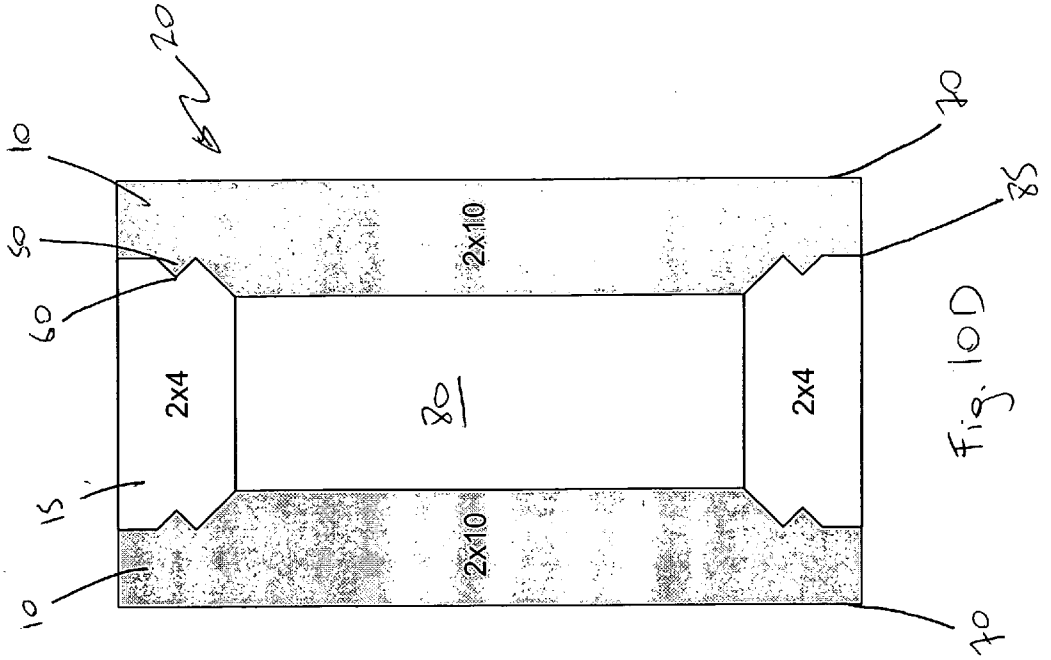


Fig. 10D

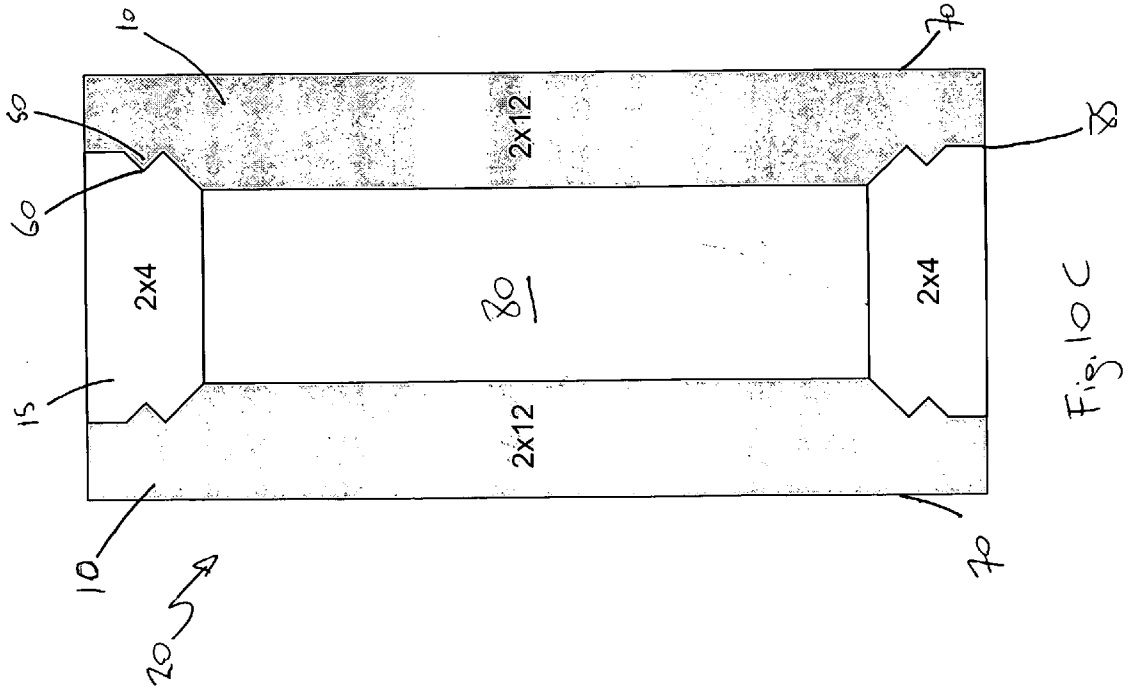
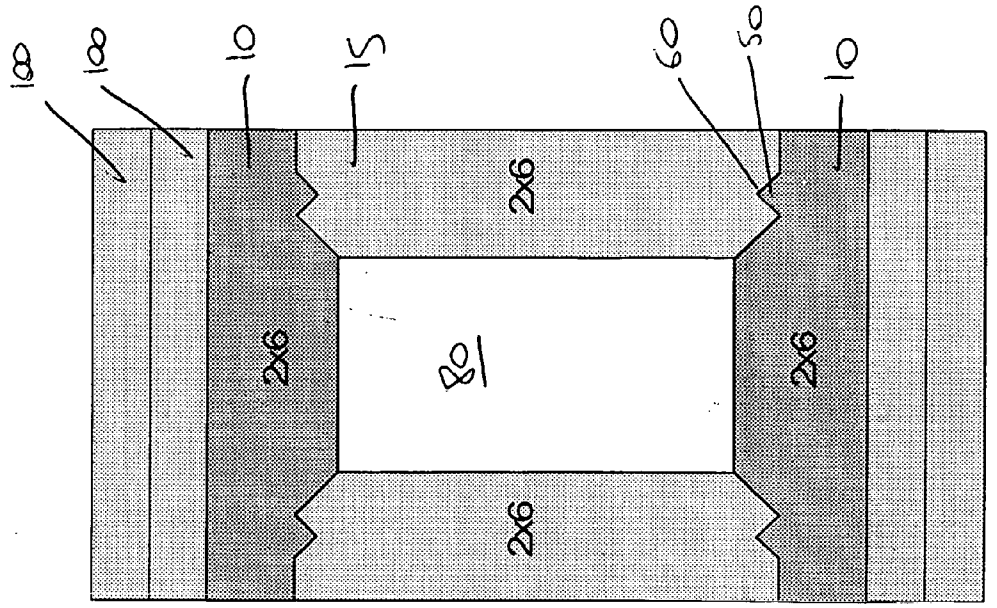


Fig. 10C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80
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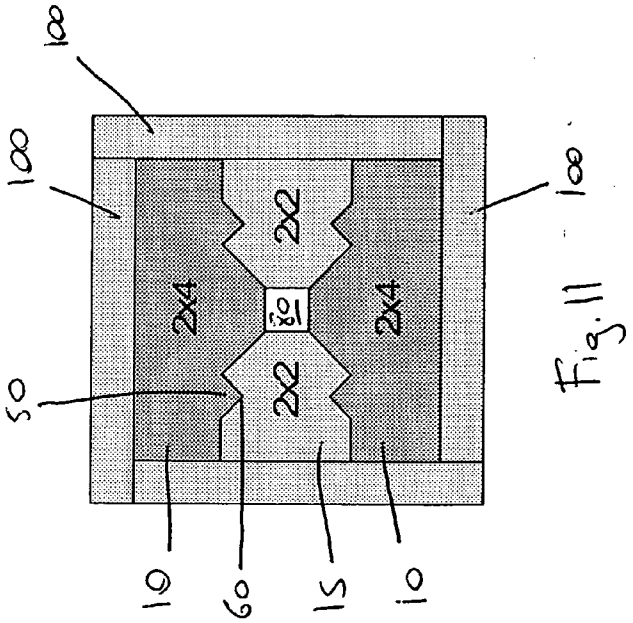
26

Fig. 12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100
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Fig. 11

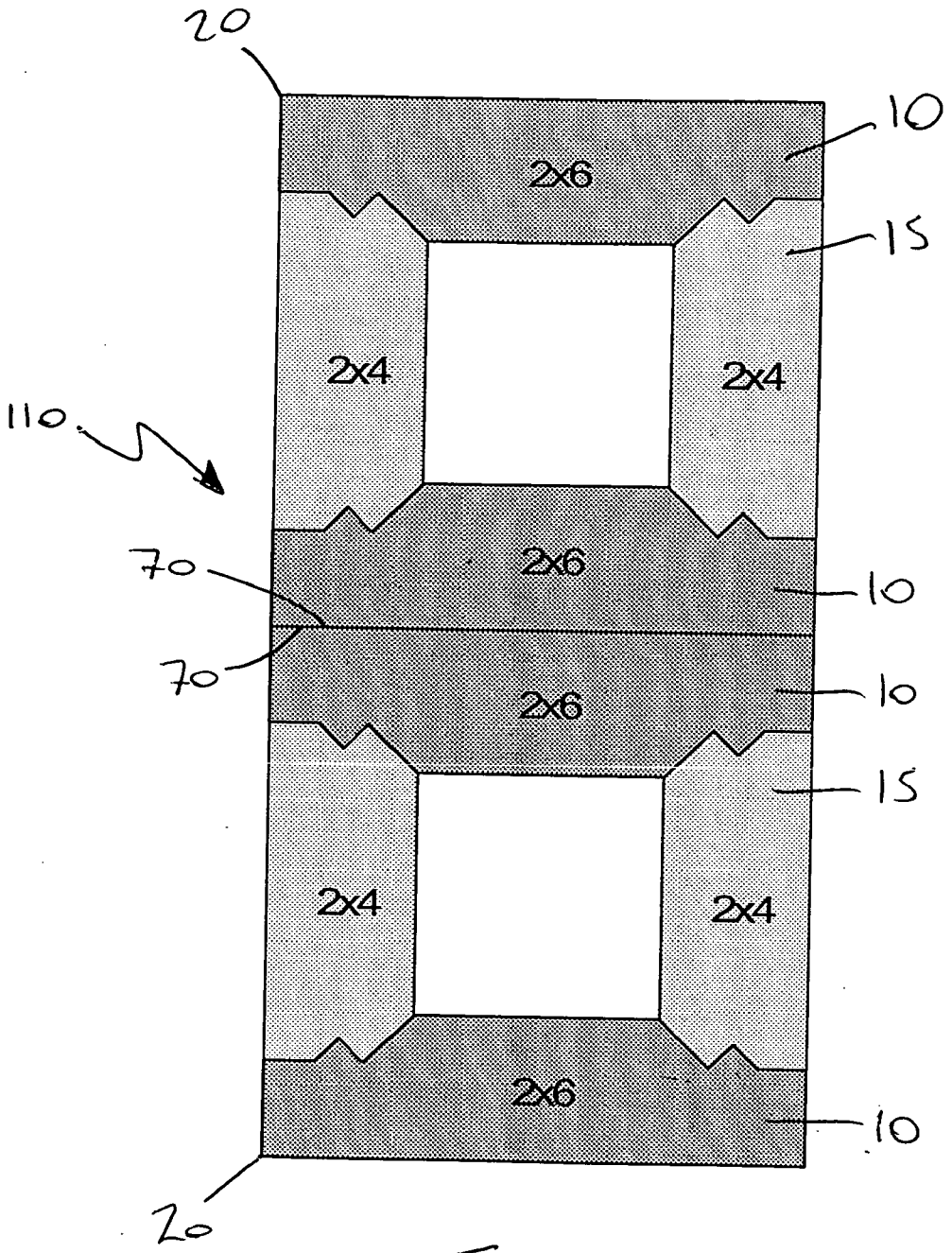


Fig. 13

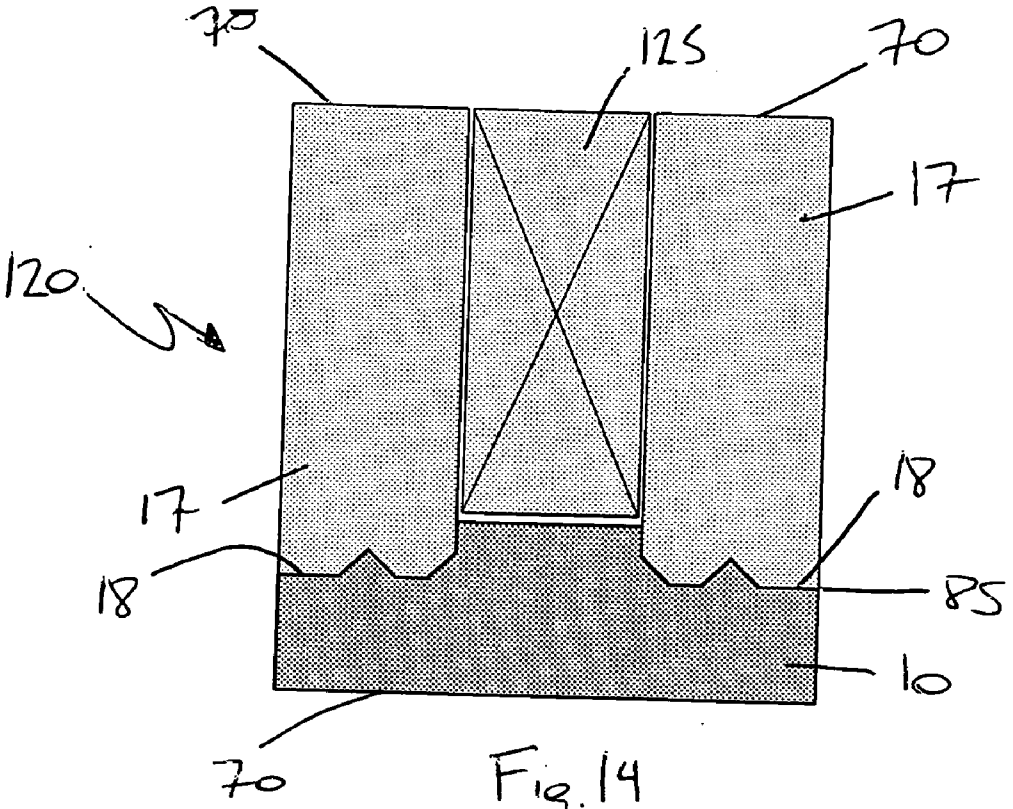


Fig. 14

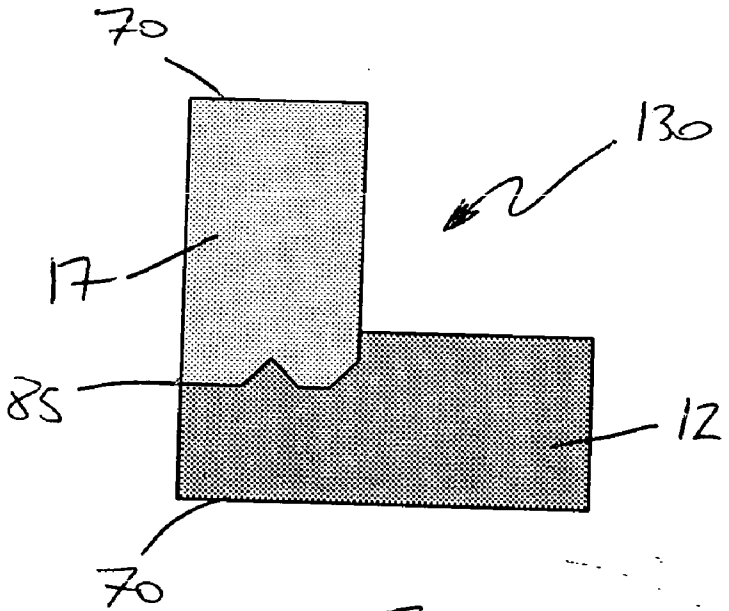
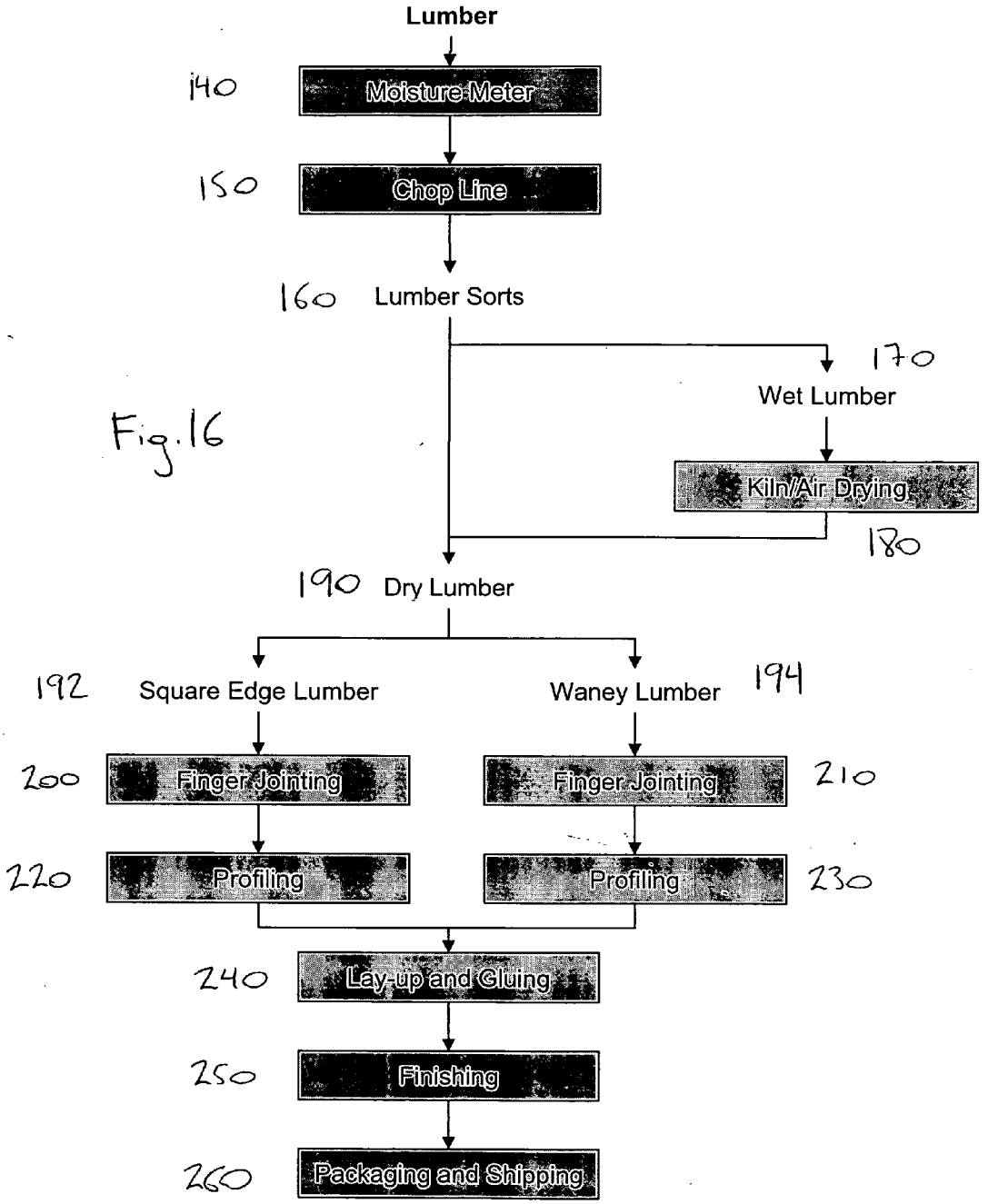


Fig. 15


Lumber
140
Moisture Meter
150
Chop Line
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Lumber Sorts
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Wet Lumber
Kiln/Air Drying
180
190
Dry Lumber
192
Square Edge Lumber
Waney Lumber
194
200
Finger Jointing
Finger Jointing
210
220
Profiling
Profiling
230
240
Lay-up and Gluing
250
Finishing
260
Packaging and Shipping

Fig. 16

INTERLOCKING SYSTEM FOR WANEY LUMBER

FIELD

[0001] The present invention relates to composite wood products, such as beams, headers, corbels and posts, manufactured from waney lumber.

BACKGROUND

[0002] The term "waney lumber" refers to boards or pieces of wood that, instead of being cut square, show the original curve of the log from which they are cut. Due to the curvature and irregular shape of waney lumber it is difficult to use in the manufacture of wood products As a result, waney lumber is relatively cheap and underutilized. Products and processes using waney lumber generally result in little added value and a great deal of waste.

[0003] Many composite lumber products are made by simply gluing pieces of lumber together. For example, elongated wood pieces can be glued and pressed together to make laminate beams, usually of rectangular cross section. Placing one wood piece over another constitutes a lamination process, which results in a maximum of wood fiber per cross-sectional area and hence a maximum cost per unit of beam. Such a lamination process also requires the use of lumber having rectangular cross-section, which means that waney lumber generally cannot be utilized. If such products can be made from waney lumber at all, a great deal of material waste results because the waney lumber must first be squared.

[0004] There exist in the art methods for making hollow core composite lumber products which use less wood fiber per cross-sectional area, however, the cost savings is generally offset by the increased cost and complexity of the manufacturing process. For example, the manufacture of some composite products, such as disclosed by International Patent application WO 90/010092 for a WOODEN STRUCTURE, AND A ROLLER PRESS FOR PRODUCING THE STRUCTURE may require the use of a two-dimensional press. The use of a one-dimensional press and guide mechanism, or the two-dimensional press, significantly increases the capital cost as well as complexity and cost of the manufacturing process when compared to one-dimensional pressing processes. The capital costs and press-line complexity for one-dimensional pressing processes are generally far lower.

[0005] Accordingly, the objects of the present invention are to provide means for making composite wood products from waney lumber, for producing such products with a conventional one-dimensional press with no guide, and for minimizing the waste of waney lumber.

SUMMARY OF THE INVENTION

[0006] A hollow core composite wood product comprising two first elongated pieces of lumber and two second elongated pieces of lumber. The first elongated pieces of lumber are preferably waney lumber. The second elongated pieces may be waney lumber or other types of lumber. Each one of the first and second pieces is profiled such that both of the longitudinally extending edges on one side thereof are removed such that each of said first and second pieces has longitudinally extending indented portions on one side. The indented portions of the first pieces are shaped so as to be complementary to and engageable with the indented portions of the second pieces. The first and second pieces are positioned adjacent to one another such that each of the indented portions of the first pieces is engaged with one of the indented portions of the second pieces and the first sides of said first and second pieces together define a longitudinally extending cavity in the center of the hollow core composite wood product.

[0007] The indented portions of said first pieces are bonded to the indented portions of said second pieces by an adhesive.

[0008] The indented portions of the elongated pieces of lumber are shaped such that adjacent pieces fit into a self-aligning, interlocking engagement to form a hollow-core composite product, such as a beam, post or header. The engagement of the indented portions of the first pieces with the indented portions of the second pieces prevents lateral movement of the first and second pieces relative to one another. In other words, movement of the first and second pieces relative to one another in a direction along an axis substantially perpendicular to a longitudinally extending axis of the hollow core composite product and substantially parallel to the second sides of the first pieces is prevented when force is applied to the second sides of the first pieces in a direction substantially perpendicular to the second sides of the first pieces and toward a center of the hollow core composite wood product. This enables the hollow core composite product to be pressed in a one-dimensional press having no guide or pressing mechanism in a second dimension. A conventional one-dimensional press is proven technology requiring less capital and a lower level of complexity, thereby reducing the overall manufacturing cost of the composite products. At the same time it permits the fabrication of sophisticated glue-up patterns all in one gluing step—e.g. compression and tension members (e.g. high rated MSR lumber or LVL (laminated veneer lumber)) can be added for higher strength.

[0009] The profiling of the elongated pieces of lumber not only provides an advantage in the sense that the hollow core composite product can be made using a one-dimensional press, but also makes it possible to utilize waney lumber. Waney lumber is difficult if not impossible to incorporate into composite wood products due to its curved and irregular shape. However, by profiling the waney lumber to create indented portions a uniform, interlocking and self-aligning interface is achieved between adjacent pieces of lumber in the composite product while maximizing utilization of the waney lumber. In addition, the waney lumber can be profiled so as to maximize utilization of waney lumber fiber.

[0010] The present invention also contemplates a method for manufacturing hollow core composite wood products. The first step in the method is to provide two first elongated pieces of lumber and two second elongated pieces of lumber. The providing step may entail sawing logs into lumber, kiln drying, finger-jointing and planing said first and second pieces. The first and second pieces are then profiled such that first and second longitudinally extending edges on one side thereof are removed such that each of said first and second pieces has indented portions extending longitudinally along that side. Each of the indented portions of the first pieces is shaped so as to be complementary to and engageable with

one of the indented portions of said second pieces. Engagement of the indented portions of the first and second pieces prevents lateral movement of the first and second pieces relative to one another.

[0011] An adhesive is then applied to the indented portions and the first and second pieces are positioned such that each of the indented portions of first pieces is engaged with one of the indented portions of the second pieces, such that a longitudinally extending cavity in a center of said hollow core composite wood product is defined by the first and second pieces. A force is then applied to the outer surfaces of the first pieces. The force is applied to the outer surface of the first pieces (i.e. the side opposite the profiled side) in a direction toward the center of the hollow core composite wood product. The force can be applied by a one-dimensional press.

[0012] The present invention provides several advantages over the prior art. The first advantage is that the invention makes use of low cost raw material, namely waney lumber. Waney lumber is the low cost since sawmillers typically process it into chips for paper production.

[0013] The present invention can also be used to achieve higher recovery from purchased lumber. The hollow core composite products can be made of lower grade or waney lumber and square edge lumber.

[0014] The present invention also enables construction of a product with the least amount of lumber necessary to meet required strength requirements. Overall a 10 to 45% fiber utilization benefit can be expected with the present hollow core composite products depending on the size of post, beam or header being manufactured. This is significant given the fact that fiber is the most important cost factor. The volume of adhesive consumed is also lower than with other engineered wood products as there are less glue lines in the products. Given the high cost of adhesives, this helps to keep costs low.

[0015] In addition to minimizing the amount of fiber used, the hollow core construction of the present invention results in a product, which is lighter to work with, thereby making it easier to handle on the job site without the use of cranes and other lifting equipment.

[0016] In comparison to conventional engineered wood products, which are susceptible to swelling when exposed to rain and moisture, the hollow core composite products of the present invention are resistant to swelling.

[0017] Finally, the lengths of waney and square-edged lumber used to construct the hollow core composite products of the present invention may be finger-jointed to achieve any desired length. Therefore the finished hollow core composite products are available in long lengths to allow customers to chop for builder specific requirements.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] Further features and advantages will be apparent from the following Detailed Description of the Invention, given by way of example, of a preferred embodiment taken in conjunction with the accompanying drawings, wherein:

[0019] **FIG. 1A** is a cross-sectional view of a profiled elongated piece of lumber made from waney lumber;

[0020] **FIG. 1B** is a cross-sectional view of a composite post made in part from the profiled elongated piece of lumber in **FIG. 1**;

[0021] **FIGS. 2A, 2B** and **2**C are cross-sectional views of profiled elongated pieces of lumber;

[0022] **FIGS. 3A, 3B, 3**C and **3**D are cross-sectional views of profiled elongated pieces of lumber;

[0023] **FIGS. 4A and 4B** are cross-sections of a profiled elongated piece of lumber and a composite nominal 4×4 post made therefrom;

[0024] **FIGS. 5A and 5B** are cross-sections of a profiled elongated piece of lumber and a composite nominal 6×6 post made therefrom;

[0025] **FIGS. 6A, 6B** and **6**C are cross-sections of profiled elongated pieces of lumber and a composite post made therefrom;

[0026] **FIGS. 7A, 7B, 7**C and **7**D are cross-sectional views of composite beams/headers, all nominal 4" wide, made from profiled elongated pieces of lumber of different sizes;

[0027] **FIGS. 8A, 8B, 8**C, **8**D and **8**E are cross-sectional views of composite post, beams/headers, all nominal 4" wide, made from profiled elongated pieces of lumber of different sizes;

[0028] **FIGS. 9A, 9B, 9**C and **9**D are cross-sectional views of composite post, beams/headers, all nominal 6" wide, made from profiled elongated pieces of lumber of different sizes;

[0029] **FIGS. 10A, 10B, 10**C and **10**D are cross-sectional views of composite post, beams/headers, all nominal 6" wide, made from profiled elongated pieces of lumber of different sizes;

[0030] **FIG. 11** is a cross-sectional view of a cladded composite post;

[0031] **FIG. 12** is a cross-sectional view of a composite beam/header built up with additional non-waney lumber (such as MSR lumber or LVL);

[0032] **FIG. 13** is a cross-sectional view of a combined composite beam/header;

[0033] **FIG. 14** is a cross-sectional view of a composite corbel;

[0034] **FIG. 15** is a cross-sectional view of a composite corner; and

[0035] **FIG. 16** is a flow chart depicting the manufacture of a composite beam.

DETAILED DESCRIPTION WITH REFERENCE TO THE DRAWINGS

[0036] **FIGS. 1A and 1B** illustrate the basic concept of the present invention in that an elongated piece of waney lumber is profiled to produce a profiled elongated piece of lumber **10**. In the profiling process waney portions or edges **30** are removed from the original waney lumber (the dotted line indicates the outline **35** of the original waney lumber). The rounded, irregular surface **35** of the waney portion **30** makes it unsuitable for use in the manufacture of composite prod-

ucts because it is not possible to achieve a strong and uniform bond between the surface of the waney lumber and other components of the composite products. The profiling process provides indented portions **40** which allow the profiled lumber **10** to have uniform contact with adjacent pieces of lumber. The profiling process also allows more of the waney lumber fiber to be used for the composite construction than would be the case if it was simply squared. The hollow core composite beam **20** in **FIG. 1B** is made from two 2×4's **25** and two profiled elongated pieces of lumber **10**, however, as will become clear below the hollow core composite beam **20** can be made solely from profiled elongated pieces of lumber **10** made from waney lumber.

[**0037**] Although **FIGS. 1A and 1B** illustrate the basic concept of the present invention, they leave out one essential feature. Referring to FIGS. **2** A-C and FIGS. **3** A-D, various embodiments of the profiled elongated pieces of lumber **10** are shown. Each profiled piece of lumber **10** has the waney portion **30** cut out, resulting in an indented portion **40** running longitudinally along the elongated piece of lumber **10**. As the waney portion **30** is cut out, a protrusion **50** is formed (as is more fully described below, removal of the waney portion **30** may alternatively result in the formation of a groove rather than a protrusion). FIGS. **2** A-C and FIGS. **3** A-D show that both the indented portion **40** and the protrusion **50** can have any of a number of shapes. The appropriate shape can be chosen according to several criteria, including the type of lumber processing machinery available, the size and quality of the lumber being used, the importance of minimizing lumber waste or maximizing utilization of the waney fiber, size and shape of the finished composite product, the use to which the finished product will be put, etc.

[**0038**] In the preferred embodiment waney lumber is profiled to produce longitudinally extending indented portions of said elongated profiled pieces of lumber. However, it will be obvious to those skilled in the art that a conventional square-edged piece of lumber (e.g. a 2×4) may also be profiled by removing both longitudinally extending edges on one side of the piece of lumber.

[**0039**] Referring to **FIGS. 4A and 4B**, 5A and 5B, a profiled piece of lumber **10** and hollow core composite post **20** made therefrom are shown. The protrusions **50** and grooves **60** have slightly different configuration from those of FIGS. **6**A-C.

[**0040**] **FIGS. 6A and 6B** show profiled elongated pieces of lumber **10, 15** from which waney portions **30** of different configurations have been removed. The profiled piece of lumber **10** in **FIG. 6A** has a protrusion **50** and the profiled piece of lumber **15** in **FIG. 6B** has a groove **60** complementary in shape to the protrusion **50** of **FIG. 6A**. The indented portions **40** of the profiled pieces of lumber **10, 15** in **FIGS. 6A and 6B** are complementary in shape so that they fit together as shown in **FIG. 6C**. **FIG. 6C** shows the cross section of a hollow core composite post **20** made from two profiled pieces of lumber **10** of **FIG. 6A** and two profiled pieces of lumber **15** of **FIG. 6B**. The composite post **20** of **FIG. 6C** is made entirely from waney lumber. In the manufacturing process, an adhesive is placed in the interfaces **85** between the indented portions **40** of the profiled pieces of lumber **10, 15** and a press is used to apply force to each of the external faces **70** in a direction perpendicular to each said face and towards the center **80** of the hollow core composite beam **20**. It can be seen that the mutual engagement of the protrusions **50** and grooves **60** prevents lateral movement of the profiled pieces of lumber **10, 15** relative to one another, thereby eliminating the need for a guiding or pressing mechanism in a second dimension. The grooves **60** and protrusions **50** result in profiled lumber pieces **10, 15** that are self-aligning, such that they do not tend to drift laterally when compressed. In other words, movement of the profiled elongated pieces of lumber **10, 15** relative to one another in a direction substantially perpendicular to a longitudinally extending axis of the hollow core composite post **20** and substantially parallel to the external faces **70** of the elongated pieces **10** when force is applied to the faces **70** of the elongated pieces **10** in a direction substantially perpendicular to the faces **70** of the pieces **10** and toward the center **80** of the hollow core composite post **20**.

[**0041**] Referring to **FIGS. 7-10**, different sizes and configurations of hollow core composite beams **20** are shown. In each case, the beam **20** is made from two pairs of profiled pieces of lumber **10, 15**. The profile of each profiled piece of lumber is complementary to that of the adjacent profiled piece of lumber such that there is a mutual engagement at an interface **85** therebetween. In each case, the preferred embodiment is shown in that the composite beam **20** comprises two elongated profiled pieces of lumber **10** whose width is equal to that of the composite beam **20**. The two other elongated profiled pieces **15** are positioned opposite one another and have a width, which is less than that of the composite beam **20**. It is to the external faces **70** of the profiled pieces of lumber **10** that force is applied during the pressing stage of the manufacturing process.

[**0042**] Referring to **FIGS. 4-10**, the protrusions **50** and grooves **60** may have any of a number of configurations, however, in the preferred embodiment each protrusion **50** forms a raised bead that runs longitudinally along the indented portion **40** and substantially parallel to the elongated profiled piece of lumber **10**. Correspondingly, in the preferred embodiment the groove **60** runs longitudinally along the indented portion **40** and substantially parallel to the elongated profiled piece of lumber **15** may be used. In one example of an alternate embodiment, the protrusion **50** and groove **60** are in the form of a series of spaced apart raised protrusions and grooves, respectively, running along the length of the elongated profiled piece of lumber **10, 15**. The protrusion **50** is engaged by a corresponding and complementary groove **60** on the indented portion of an adjacent piece of lumber. The purpose of protrusion **50** and groove **60** is to prevent lateral movement of the pieces of lumber during the pressing process and to eliminate the need for a guide mechanism or two-dimensional press during that process.

[**0043**] Referring to **FIG. 11**, a cross-sectional view of a cladded hollow core composite post is shown, wherein the composite beam **20** is enclosed by members **100**. The members **100** may be made of wood or other suitable material and may serve a structural or decorative purpose. In a structural role the members **100** may act as tension or compression members. Referring to **FIG. 12**, a cross-sectional view of a composite beam/header **20** built up with members **100** is shown. As in **FIG. 11**, the members **100** in **FIG. 12** may serve a structural or decorative purpose. In a structural role they may act as tension members or as

compression members. Referring to **FIG. 13**, a cross-sectional view of a combined composite beam/header **110** is shown. The combined composite beam/header **110** is made by bonding together two hollow core composite posts or beams **20**. The composite beams **20** may be bonded together by applying an adhesive and pressing them together or by other suitable means. This is typically achieved in the same pressing process which produces the individual posts or beams, i.e. the whole configuration is laid-up in the press at the same time. In **FIGS. 11 and 12** the members **100** may be attached to the composite beams **20** by adhesive or by any other appropriate means.

[**0044**] The present invention contemplates further structures and products, such as the U-shaped beam or corbel **120** of **FIG. 14**, which can be used in building construction to engage a rafter tail **125**. The corbel **120** is made from hollow core posts, such as those shown in FIGS. **9**A-D and **10**A-D, which are subsequently cut in half. Alternatively, the corbel **120** can be made of a profiled piece of lumber **10** and two other pieces of lumber **17** profiled only along one side **18**. Alternatively, L-shaped corner structures **130** such as that shown in **FIG. 15** can be made. The L-shaped corner structure is made from hollow core posts, such as those shown in FIGS. **9**A-D and **10**A-D, which are subsequently cut in four pieces. As with the hollow core composite products discussed above, the products of **FIGS. 14 and 15** are made using a conventional one-dimensional pressing process. In the case of the corbel **120** of **FIG. 14**, adhesive is applied to the interface **85** between the profiled elongated piece of lumber **10** and the other pieces **17**, then the corbel **120** is pressed by applying force to the external surfaces **70** of the piece of lumber **10**, **17**. Referring to **FIG. 16**, the process of fabricating hollow core composite products according to the present invention begins with conventional lumber, running it through a moisture meter **140** and sorting it in the chop line **150** into different lumber sorts **160**. Wet lumber **170** is kiln dried **180** when required. The sorting **150** produces both square-edged lumber **192** and waney lumber **194**. Although the present invention is particularly advantageous in that it maximizes utilization of waney lumber, it is applicable to square-edged lumber as well. As discussed above, waney lumber is lumber cut from near the outside of the log and one or two edges are rounded off and irregular. At steps **200** and **210**, the shorter square edged and waney lumber pieces may be finger jointed to achieve the requisite length.

[**0045**] After finger jointing **200**, **210**, the lumber is profiled to provide an indented portion having either a protrusion or groove, (see **FIGS. 2-15**) which is complementary in shape to an adjacent profiled piece of lumber in the finished composite product. In the case of waney lumber, the profiling step also makes it possible to utilize lumber that previously was not useable in composite construction. The profiling step removes the waney portions of the waney lumber or square edges in the case of square edged lumber.

[**0046**] The profiled lumber is then laid up **240** and glued together to form a composite post, beam/header or other product. This step involves the application of adhesive in the interfaces **85** between the elongated profiled pieces of lumber **10**, **15** (see **FIGS. 2-15**). Once the adhesive has been applied the elongated profiled pieces of lumber **10**, **15** are pressed in a conventional one-dimensional press. No guide mechanism or pressing is required in a second dimension because the profiling of the lumber (i.e. the notches and grooves) prevent lateral movement of the lumber during the pressing process. Once the glue has set, the product is finished **250** and packaged for shipping **260**.

[**0047**] It is obvious that one can bypass the finger-jointing step if lumber of sufficient length and quality is available.

[**0048**] Accordingly, while this invention has been described with reference to illustrative embodiments, this description is not intended to be construed in a limiting sense. Various modifications of the illustrative embodiments, as well as other embodiments of the invention, will be apparent to persons skilled in the art upon reference to this description. It is therefore contemplated that the appended claims will cover any such modifications or embodiments as fall within the true scope of the invention.

I claim:

1. A hollow core composite wood product comprising:

a) two first elongated pieces of waney lumber, wherein each of said first pieces is profiled such that first and second longitudinally extending edges of a first side thereof have been removed such that each of said first pieces has indented portions extending longitudinally along said first side, said first elongated pieces of lumber additionally having a second side opposite said first side;

b) two second elongated pieces of lumber, wherein each of said second pieces is profiled such that first and second longitudinally extending edges of a first side thereof have been removed such that each of said second pieces has indented portions extending longitudinally along said first side, said second elongated pieces of lumber additionally having a second side opposite said first side;

wherein each of said indented portions of said first pieces is shaped so as to be complementary to and engageable with one of said indented portions of said second pieces;

wherein said first and second pieces are positioned adjacent to one another such that each of said indented portions of said first pieces is engaged with one of said indented portions of said second pieces, such that said first sides of said first and second pieces together define a longitudinally extending cavity in a center of said hollow core composite wood product, and such that said second sides of said first and second pieces together define an outside surface of said hollow core composite product;

wherein engagement of said indented portions of said first pieces with said indented portions of said second pieces prevents lateral movement of said first and second pieces relative to one another when force is applied to said second sides of said first pieces in a direction substantially perpendicular to said second sides of said first pieces and toward a center of said hollow core composite wood product; and

wherein said indented portions of said first pieces are bonded to said indented portions of said second pieces by an adhesive.

2. The hollow core composite wood product of claim 1, wherein said first pieces are made from waney lumber and wherein said first and second edges thereof are waney edges.

3. The hollow core composite wood product of claim 1, wherein a width of said second sides of said first pieces is substantially equal to that of said hollow core composite wood product.

4. The hollow core composite wood product of claim 1, wherein said indented portions of said first pieces each have a longitudinally extending protrusion and said indented portions of said second pieces each have a longitudinally extending groove and wherein said groove is operative to receive said protrusion.

5. The hollow core composite wood product of claim 1, wherein said hollow core composite wood product has a square or substantially rectangular cross-section.

6. The hollow core composite wood product of claim 1, wherein at least one of said first and second pieces is finger jointed.

7. The hollow core composite wood product of claim 1, wherein said hollow core composite wood product is cut in four by cutting each of said first and second pieces longitudinally in two to provide four L-shaped corner products.

8. The hollow core composite wood product of claim 1, wherein said hollow core composite wood product is cut in two by cutting each of said first pieces longitudinally in two to provide two corbels.

9. A method for making a hollow core composite wood product, comprising:

(a) providing two first elongated pieces of lumber, each of said pieces having a first side and second side opposite said first side;

(b) providing two second elongated pieces of lumber, each of said pieces having a first side and second side opposite said first side;

(c) profiling each of said first pieces such that first and second longitudinally extending edges of a first side thereof are removed such that each of said first pieces has indented portions extending longitudinally along said first side;

(d) profiling each of said second pieces such that first and second longitudinally extending edges of a first side thereof are removed such that each of said second pieces has indented portions extending longitudinally along said first side;

(e) applying an adhesive to said indented portions of said first and second pieces;

(f) positioning said first and second pieces such that each of said indented portions of first pieces is engaged with one of said indented portions of said second pieces, such that said first sides of said first and second pieces together define a longitudinally extending cavity in a center of said hollow core composite wood product, and such that said second sides of said first and second pieces define an outer surface of said hollow core composite product;

(g) applying a force to each of said second sides of said first pieces, said force being applied in a direction substantially perpendicular to said second sides of said first pieces and toward a center of said hollow core composite wood product;

wherein each of said indented portions of said first pieces is shaped so as to be complementary to and engageable with one of said indented portions of said second pieces;

wherein said engagement of said indented portions of said first pieces with said indented portions of said second pieces prevents lateral movement of said first and second pieces relative to one another when said force is applied to said second sides of said first pieces.

10. The method of claim 9, wherein said first pieces are made from waney lumber and wherein said first and second edges thereof are waney edges.

11. The method of claim 9, wherein said second pieces are made from waney lumber and wherein said first and second edges thereof are waney edges.

12. The method of claim 9, wherein a width of said second sides of said first pieces is substantially equal to that of said hollow core composite wood product.

13. The method of claim 9, wherein said indented portions of said first pieces each have a longitudinally extending protrusion and said indented portions of said second pieces each have a longitudinally extending groove and wherein said groove is operative to receive said protrusion.

14. The method of claim 9, wherein said hollow core composite wood product has a substantially square or rectangular cross-section.

15. The method of claim 9, wherein said first and second pieces are finger jointed.

16. The method of claim 9, wherein said providing steps include sawing logs into lumber, kiln drying, finger-jointing and planing said first and second pieces.

17. The method of claim 9, wherein said force is applied by a one-dimensional press.

18. The method of claim 9, further comprising the following step: after applying said force, cutting each of said first and second pieces longitudinally in two to provide four L-shaped corner products.

19. The method of claim 9, further comprising the following step: after applying said force, cutting each of said first pieces longitudinally in two to provide two corbels.

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