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PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION

Improvement relating to a Process of Bending Wood and to Articles made thereby

I, ALVAR AALTO, of Mechelinkatu 20, Helsinki, Finland, a Finnish subject, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to a process of bending wood and to articles made thereby.

10 When a piece of wood of considerable thickness is to be bent the ordinary method is to steam it and then make the bend in a bending machine. This naturally results in a very considerable strain of the material and the thicker the piece to be bent the greater is the maximum strain.

15 According to the present invention the wood is split or slotted longitudinally into separate layers perpendicularly to the plane of the bend, so that the layers slide over one another during bending, and the layers are then secured in the new relationship preferably by gluing so that they retain the desired form when the glue is dry.

20 Thus for example in producing an approximately right angled bend at the top of a furniture leg for securing under a seat, table top or the like, the wood is placed in a bending device and longi-

tudinal saw cuts are made extending in from the end. The cuts preferably extend different distances, one or more possibly to beyond the further end of the area where the bend is to be made and others not quite so far. Pieces of thin material, preferably wood (for instance strips of veneer) are fitted and glued in the resulting slots: while the glue is still wet the whole is bent to the required form and when the glue is dry the wood retains its bent form. Or two pieces of wood might be split or slotted and interleaved over the area of a bend.

Numerous other forms can be made in which a portion of the solid wood is cut into separate layers and interleaved with other strips over the area of a bend prior to bending, and the lamination secured in their resulting relationship, but the above example should suffice for an understanding of the nature of the invention.

Dated the 8th day of November, 1933.
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201—6, Bank Chambers,
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COMPLETE SPECIFICATION

Improvement relating to a Process of Bending Wood and to Articles made thereby

55 I, ALVAR AALTO, of Mechelinkatu 20, Helsinki, Finland, a Finnish subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

60 This invention relates to a process of bending wood and to articles made thereby.

65 When a piece of wood of considerable thickness is to be bent the ordinary method is to steam it and then make the bend in a bending machine. This naturally results in a very considerable strain of the material and the thicker the piece to be bent the greater is the

maximum strain.

70 According to the present invention the wood is split or slotted longitudinally into separate layers with free ends and interleaved with other strips more or less perpendicularly to the plane of the bend, so that the layers slide over one another during bending, and the layers are then secured in the new relationship preferably by gluing so that they retain the desired form when the glue is dry.

75 The invention is illustrated by the accompanying drawings, wherein:

80 Figure 1 shows a piece of straight wood at the area to be bent after cuts have been made in the end but before bending, and

85 Figure 2 shows the same bent in

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accordance with the invention.

The drawings illustrate the production of an approximately rightangled bend suitable, for example, for the top of a furniture leg for securing under a seat, table top or the like. In producing such a bend the wood 1 is placed in a bending device and longitudinal saw cuts 2 are made extending in from the end. The cuts preferably extend different distances, one or more possibly to beyond the further end of the area where the bend is to be made and others not quite so far. Pieces 3 of thin material, preferably wood (for instance strips of veneer) are fitted and glued in the resulting slots: while the glue 4 is still wet the whole is bent to the required form as indicated at Figure 2 and when the glue is dry the wood retains its bent form.

Alternatively, two pieces of wood might be slotted and after cutting the resultant layers required to form the bend to their bent lengths when interleaved with the layers of the other piece the gluing and bending process can be carried out similarly.

Numerous other forms can be made in which a portion of the solid wood is cut into separate layers and interleaved with other strips over the area of a bend prior to bending, and the laminations secured in their resulting relationship, but the above examples should suffice for an understanding of the nature of the invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A process of bending wood in which a portion of the solid wood is cut into separate layers with free ends and interleaved with other strips over an area to be bent, and the laminations permitted to slide over one another during bending and secured in the resulting relationship.

2. A process of bending wood wherein the solid wood is slotted longitudinally from an end into separate layers approximately perpendicular to the plane of the bend, thin strips are fitted between the layers with adhesive and the whole is bent before the adhesive has set and held until the adhesive has sufficiently set and the bend retains its form.

3. A process according to Claim 1 or Claim 2 in which the layers are interleaved with strips of thin wood or veneer.

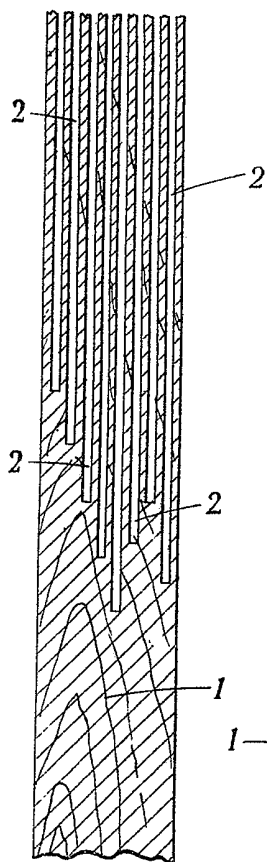
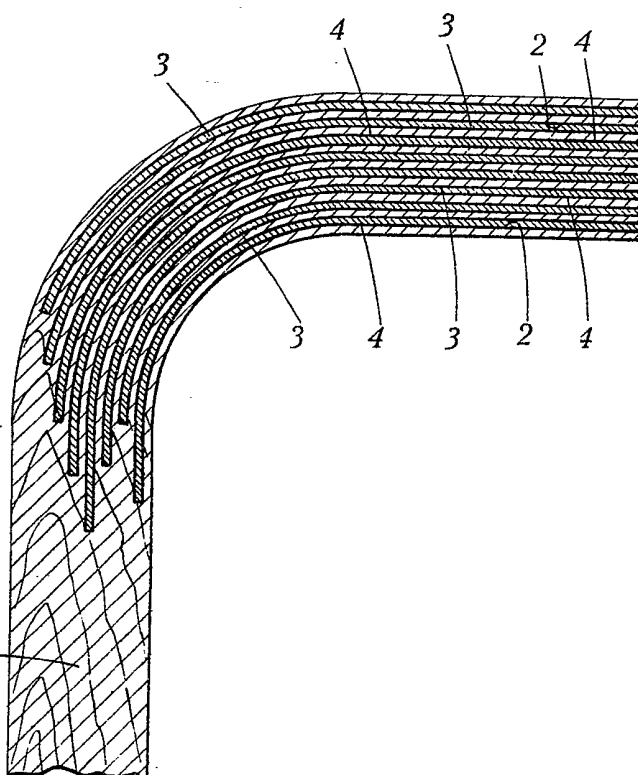
4. A process according to any of the preceding claims in which the cuts or slots extend different distances from the free ends of the adjacent layers.

5. Bent wood having a solid portion and a bend composed of layers cut from the solid portion and interleaved with other strips, the layers and strips being secured together each under substantially the same strain as it would be under if independently bent to the same form.

6. Bent wood or bent wood articles made by the process claimed in any of Claims 1 to 4.

7. The improved process of bending wood substantially as described and articles made thereby.

Dated the 27th day of October, 1934.
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Fig. 1.*Fig. 2.*

[This Drawing is a reproduction of the Original on a reduced scale.]