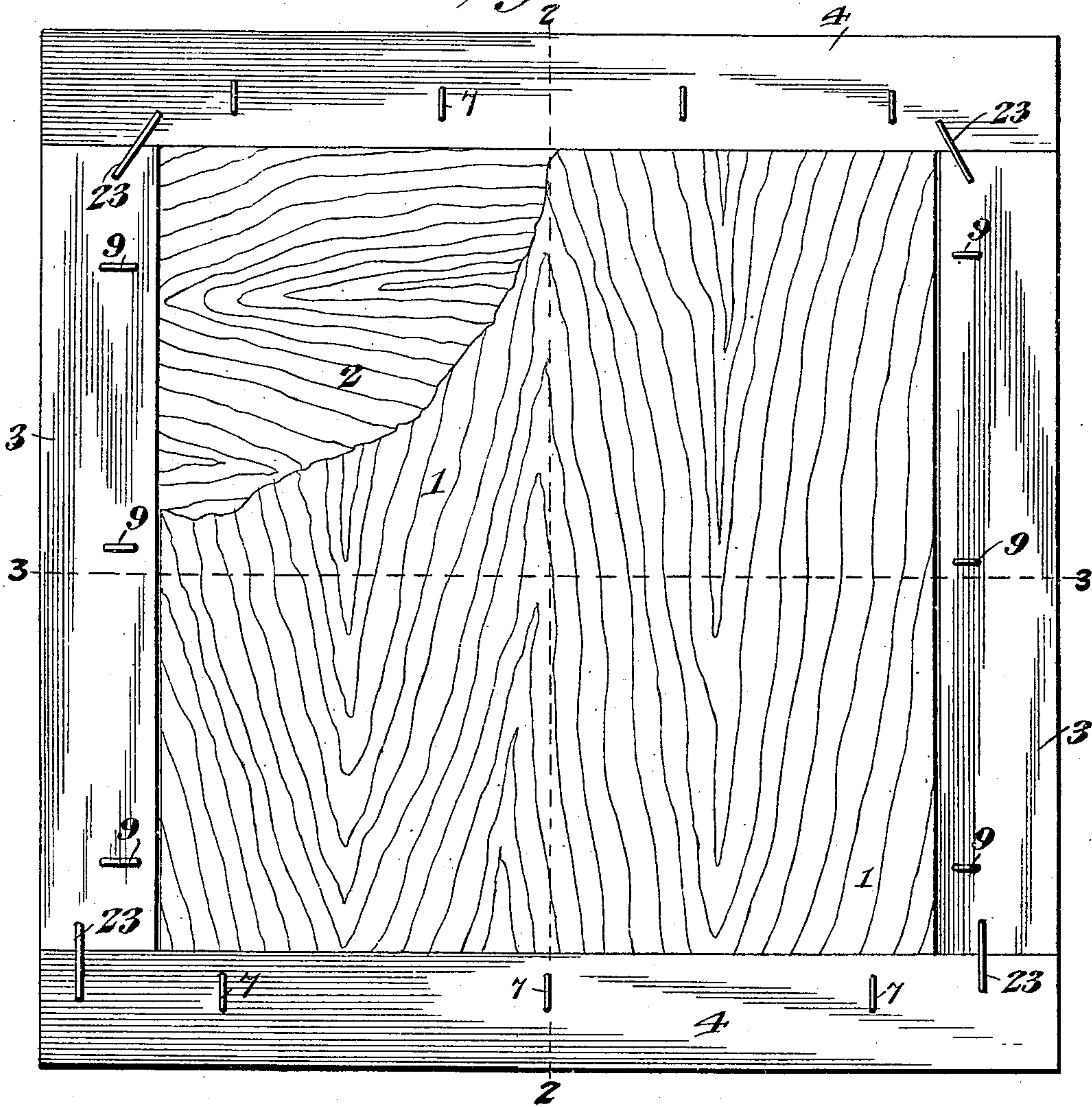


O. C. FENLASON.  
 PANEL FOR WOODEN STRUCTURES.  
 APPLICATION FILED OCT. 25, 1907.

935,747.

Patented Oct. 5, 1909.  
 2 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2.*



Orin C. Fenlason, Inventor

Witnesses  
 Jas. E. McLaughlin  
 J. T. Riley

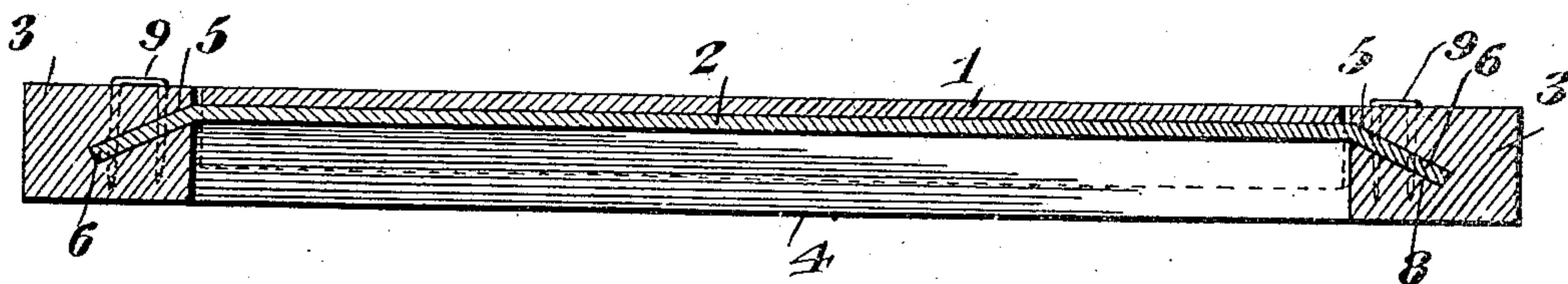
By *E. G. Siggers*  
 Attorney

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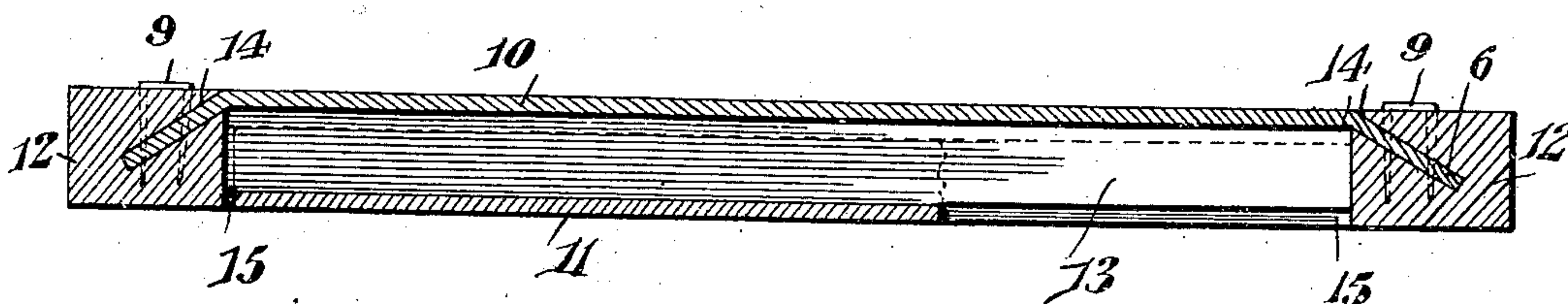
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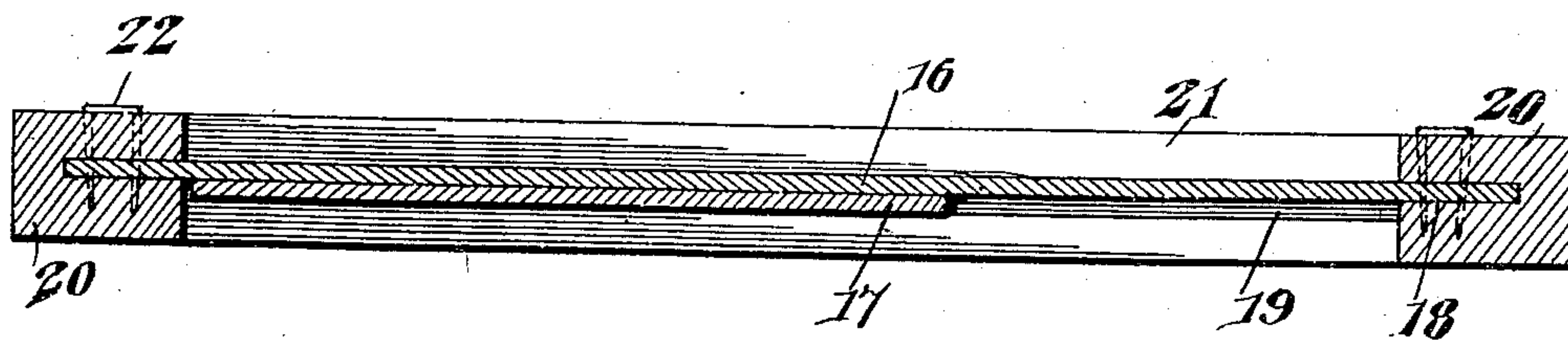
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

ORIN C. FENLASON, OF HOQUIAM, WASHINGTON.

## PANEL FOR WOODEN STRUCTURES.

935,747.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed October 25, 1907. Serial No. 399,132.

*To all whom it may concern:*

Be it known that I, ORIN C. FENLASON, a citizen of the United States, residing at Hoquiam, in the county of Chehalis and State of Washington, have invented a new and useful Panel for Wooden Structures, of which the following is a specification.

The invention relates to improvements in panels for boxes and other wooden structures.

The object of the present invention is to simplify and lessen the cost of constructing wooden boxes, etc., and to increase their strength and durability and enable the sides, ends and partitions of a box to be easily constructed of a frame and veneer, and to arrange the veneer so that the tensile strength will operate to hold the framing together.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a plan view of a panel, constructed in accordance with this invention, the upper sheet of veneer being broken away to show the lower sheet. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a sectional view on the line 3—3 of Fig. 1. Fig. 4 is a sectional view, illustrating a modification of the invention, the veneer being arranged flush with both of the side faces of the frame. Fig. 5 is a sectional view, illustrating another form of invention, the sheets of veneer being fitted against each other and spaced from the side faces of the frame.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The panel, which is designed to form the sides, ends and partition of a box, or analogous receptacle, is applicable to various other wooden structures, and comprises a rectangular frame and two sheets of veneer 1 and 2, which, as clearly illustrated in Fig. 1 of the drawings, are arranged with the

grain of one sheet at right angles to the grain of the other sheet. The rectangular frame is composed of side and end bars or members 3 and 4 of uniform thickness, and having their side faces in flush relation, the terms "side" and "end" applied to the bars or members being employed for convenience only, as the panel may be arranged either at the ends, sides, or top and bottom of a box, or in any other position in a wooden structure. The end bars or members 4 are provided at their inner edges with grooves 5, extending downwardly and inwardly from the adjacent corners of the said bars or members 4, and arranged at an angle to the contiguous faces of the same, as clearly illustrated in Fig. 2 of the drawings. The opposite edges 6 of the top sheet of veneer are fitted in the grooves 5, which when the sheet of veneer is in position, operate to grip or clamp the same, and thereby prevent the sheet from being pulled out of the grooves.

The attached edges 6 of the top sheet of veneer are positively secured to the bars or members 4 by suitable fastening means, such as staples 7, and the latter are embedded in the bars or members 4 and pierce the edges 6 of the veneer. The staples also operate to cause the side walls of the grooves to more firmly grip the edges of the veneer. The side edges of the top sheet are free and are not attached to the side bars or members 3 of the frame.

The bottom or lower sheet 2 of veneer is fitted against the inner faces of the outer sheet, as clearly illustrated in Figs. 2 and 3 of the drawings, and the side edges of the sheet 2 are fitted in inclined or angularly disposed grooves 8, which have their openings located in a plane below the openings of the grooves of the end bars or members. This arrangement permits the top sheet of veneer to be arranged flush with the upper faces of the bars or members of the frame, and places the lower sheet of veneer in position for supporting and stiffening the upper sheet. The end edges of the bottom sheet of veneer are free, and the attached side edges are secured to the side bars or members 3 by staples 9.

The arrangement of the top sheet of veneer in flush relation with the bars or members of the rectangular frame provides a smooth flat face at one of the faces of the panel, and the latter is especially adapted



for use in the construction of orange and other fruit boxes, and is designed to be arranged with its smooth flat face at the inside of the box to avoid cutting, or otherwise injuring the fruit. In constructing such orange boxes, the side pieces will be nailed or otherwise secured in the usual manner to the outer edges of the panels, which will constitute the ends of the box. When it is desired to use the panel as a partition for orange boxes and other receptacles, both of the sheet of veneer 10 and 11 will be arranged in flush relation with the frame bars or members, as clearly illustrated in Fig. 4 of the drawings. The frame bars or members 12 and 13 are provided at the faces of the panel with grooves 14 and 15, extending from the corners of the respective bars or members and receiving the opposite edges of the veneer. This brings the sheets of veneer in flush relation with the faces of the frame bars or members, and the panel will present a smooth flat face or surface at each side so as not to injure the fruit.

In Fig. 5 of the drawings the sheets 16 and 17 of veneer are located in planes centrally of the panel and have their attached edges secured in grooves 18 and 19 of bars or members 20 and 21 of the frame. The grooves 20 are arranged in parallelism with the faces of the bars or members at opposite sides of the panel, and the veneer is secured to the frame by staples 22, or other suitable fastening devices.

Owing to the arrangement of the sheets of veneer so that the tensile strength of the veneer serves to bind the bars or members of the frame together, the adjacent ends of the bars or members may be secured together by staples 23, or other suitable fastening devices, but the said bars or members may be jointed in any well known manner, if desired. When the panels are assembled in a box, the tensile strength of the veneer carries the weight of the material contained in the box whether such weight rests upon the sides, top, bottom or ends of the receptacle.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A partition or panel of the class described including an open rectangular frame composed of bars or members connected together at their ends, and separate sheets of veneer, each having two of its edges attached to two opposite bars or members of the frame, the other two edges of each sheet of veneer being free, one sheet being connected to one pair of the bars or members and the other sheet to a different pair of bars or members, and the grain of the two sheets of veneer being disposed in angular relation so that the tensile strength of the veneer will hold the bars or members of the frame together.

2. A partition or panel of the class described comprising a rectangular frame composed of side and end bars or members provided at their inner edges with grooves, the grooves of the side bars or members being arranged in a different plane from the groove of the end bars or members, and separate sheets of veneer, one of the sheets having its side edges secured in the grooves of the side bars or members and the other sheet having its end edges secured in the grooves of the end bars or members, and the grain of the two sheets of veneer being arranged in angular relation so that the tensile strength of the veneer will operate to hold the frame members together.

3. A partition or panel of the class described comprising a frame composed of side and end bars or members provided at their inner edges with grooves, the grooves of the side bars or members being arranged in a different plane from the grooves of the end bars or members, and separate sheets of veneer having their opposite edges secured in the grooves of the frame bars or members, one of the sets of grooves opening at the corners of the respective bars or members, whereby one of the sheets of veneer is arranged in flush relation with the bars or members of the frame.

4. A panel or partition of the class described comprising a frame composed of bars or members provided at their inner edges with grooves, and separate sheets of veneer, each sheet having two of its edges attached to the opposite bars or members and the other two edges of the sheet being free, one of the sheets being arranged in flush relation with the faces of the bars or members at one side of the panel.

5. A panel or partition of the class described comprising a frame composed of bars or members provided at their inner edges with grooves, and separate sheets of veneer, each sheet having two of its edges attached to the opposite bars or members and the other two edges of the sheet being free, one of the sheets being arranged in flush relation with the faces of the bars or members at one side of the panel, and the other sheet of veneer being contiguous to and supporting the first mentioned sheet.

6. A panel or partition of the class described comprising a frame composed of bars or members provided at their inner edges with grooves, and separate sheets of veneer, each sheet having two of its edges attached to the opposite bars or members and the other two edges of the sheet being free, one of the sheets being arranged in flush relation with the faces of the bars or members at one side of the panel, and the other sheet of veneer being contiguous to and supporting the first mentioned sheet, said sheets of veneer having their grain arranged in an-



gular relation, whereby the tensile strength of the veneer will operate to bind the bars or members of the frame together.

5 7. A partition or panel comprising an open rectangular frame composed of sides and ends, and two sheets filling the space between the sides and ends and placed with the grain of one crossing the grain of the other, the opposite ends of one sheet being  
10 secured to the sides while the opposite ends of the other sheet are secured to the ends, the remaining portions of the sheets being unattached.

15 8. A panel or partition comprising a frame composed of bars or members provided at their inner edges with grooves, and separate sheets of veneer, one of the sheets having its opposite edges fitted in the grooves of the end bars or members, and the other  
20 sheet being fitted in the grooves of the side bars or members, the remaining edges of the sheets being unattached, and fastening devices extending across the grooves and piercing the sheets of veneer and causing the

walls of the grooves to grip the sheets of veneer. 25

9. A panel or partition comprising a frame composed of bars or members provided at their inner edges with inclined grooves, and separate sheets of veneer, one  
30 of the sheets having its opposite edges fitted in the grooves of the end bars or members of the frame, and the other sheet having its opposite edges fitted in the grooves of the side bars or members of the frame, the re-  
35 maining edges of the sheets of veneer being unattached, and staples piercing the attached edges of the sheets of veneer and extending across the grooves and causing the side walls thereof to grip the veneer. 40

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ORIN C. FENLASON.

Witnesses:

S. GEORGE TATE,  
HOWARD D. ORR.