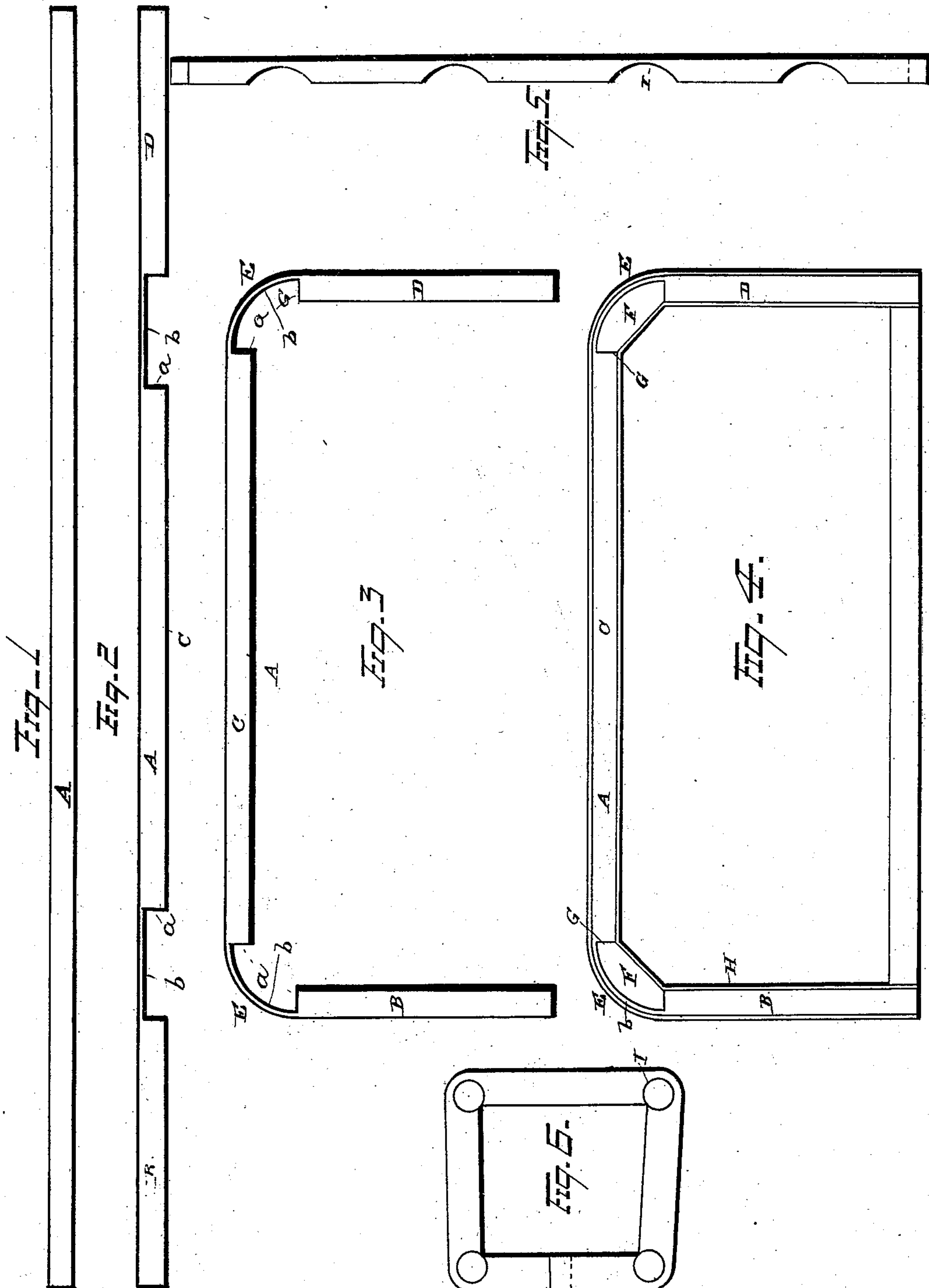


(No Model.)

L. PINE.
Method of Bending Wood.

No. 230,437.

Patented July 27, 1880.



WITNESSES

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LEIGHTON PINE, OF SOUTH BEND, INDIANA, ASSIGNOR TO THE SINGER
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METHOD OF BENDING WOOD.

SPECIFICATION forming part of Letters Patent No. 230,437, dated July 27, 1880.

Application filed May 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, LEIGHTON PINE, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and
5 useful Improvements in Bending Corners of Wood Structures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in the process of forming bent corners in wooden
15 structures, and in wooden structures provided with bent corners.

Heretofore in wooden structures made of a single continuous piece of wood the corners have been formed by first steaming the wood
20 and then bending the corners into the desired form. Again, bent corners have been made by sawing grooves in the wood on the inside of the bend. Also, wooden structures with bent corners have been made by forming the structure of several thin veneers bent into the re-
25 quired shape, the veneers being glued together.

The several methods above referred to for forming bent corners of wooden structures are objectionable for various reasons. Costly and
30 expensive apparatus must be employed to form the bends by steaming, and considerable time is required to effect the result, as the structure must remain in clamps a considerable length of time to allow the fiber of the wood to be-
35 come set in its distorted condition.

In making short bends it is necessary to cut away a portion of the structure on the inside of the bend to allow the piece of wood to be bent into shape. When grooves are sawed into
40 the wood on the inside of the bend the bent corners are rendered the weakest portion of the structure, and hence such process is defective.

In making a wooden structure of thin veneers it requires a great outlay of labor and expense in first making the veneers, and then considerable time and expense are incurred in gluing the veneers together and bending then into shape.

The object of my invention is to obviate the
50 objectionable features hereinbefore referred to, and to form bent corners in wooden structures by a slight outlay of time and expense, the corners to be strong and capable of receiving a high finish on one or both surfaces thereof. 55

With these ends in view my invention consists, first, in the process of forming bent corners in wooden structures, consisting, essentially, in removing from the wooden strip a
60 portion of the wood equal in length to the length of the curve of the bent corner, and leaving a thin connecting-piece on the outer side of the wooden strip, and after the bend has been formed, or in the process of its formation, inserting and securing a fillet of wood in
65 such cut-away portion.

My invention further consists in a wooden structure having one or more bent corners, the wood being cut away and removed from the inside of the bend or corner, having a thin
70 connecting-piece on the outer side of the bent portion and a fillet of wood equal in length to that of the bent corner secured within such cut-away portion.

In the accompanying drawings, Figure 1 is
75 a plan view of a strip of wood from which the sides of a bent wooden structure are to be formed. Fig. 2 is a similar view, showing portions of the piece cut away at the points where the corners are to be formed. Fig. 3 is a plan
80 view, representing the piece after it has been bent into the desired form. Fig. 4 represents the bent piece with fillets inserted in the cut-away portions at the bent corners. Figs. 5
85 and 6 are views of a modification.

A is a strip of wood of any desired width and length. One side of the strip is cut away at *a a*, forming rectangular openings at such points, the main portions B C D of the strip being jointed by the thin connecting-strips *b*
90 *b*. Before the strip of wood is bent the cut-away portions *a a* are covered with hot glue or other adhesive material, and then the strip is bent around a form, producing the bent corners E E. This operation is readily effected,
95 as the wood being removed from the inside of the corners enables the piece to be readily bent into the desired shape. A fillet, F, is

then inserted within each opening G at the corners.

5 The fillet is made of wood bent or cut into the proper form to snugly fit said openings G, thereby imparting strength and solidity to the bent corners of the wooden structure.

10 One or both sides of the wooden strip may be furnished with veneer H, to allow of a high finish to the interior or exterior or both surfaces of the structure.

This improvement is adapted to the manufacture of all kinds of wooden structures made of continuous pieces of wood having corners or angles to be formed therein.

15 Boxes, furniture, chairs, sewing-machine tables and drawers, wagon seats and bodies, cornices, and innumerable wooden structures may be constructed in accordance with my invention.

20 In Figs. 5 and 6 I have represented a chair-seat frame having the cut-away portions formed by a rotary cutter, so that when the frame is bent into form circular openings I will be formed at the corners of the frame for the insertion of the chair-legs.

25 I am aware that bent wood corners have been formed by forming a number of scores in the piece of wood on the inner side of the bend and filling the several narrow openings
30 with sawdust and glue, and hence I would

have it understood that I make no claim to such process or structure.

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

1. The process of forming bent corners in wooden structures, consisting, essentially, in removing from the wooden strip a portion of the wood equal in length to that of the curve of the bent corner, and leaving a thin connecting-piece on the outer side of the wooden strip, and after the bend has been formed, or in the process of its formation, inserting and securing a fillet of wood in such cut-away portion, substantially as set forth. 35 40 45

2. A wooden structure having one or more bent corners, the wood being cut away and removed from the inside of the bend or corner, leaving a thin connecting-piece on the outer side of the bent portion, and a fillet of wood equal in length to that of the bent corner secured within such cut-away portion, substantially as set forth. 50

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of May, 1880. 55

LEIGHTON PINE.

Witnesses:

S. F. ALLEN,
F. P. CARMANY.