No. 803,697. PATENTED NOV. 7, 1905.

A. LANQUIST.

WOOD SHEET PILING.

APPLICATION FILED AUG. 13, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

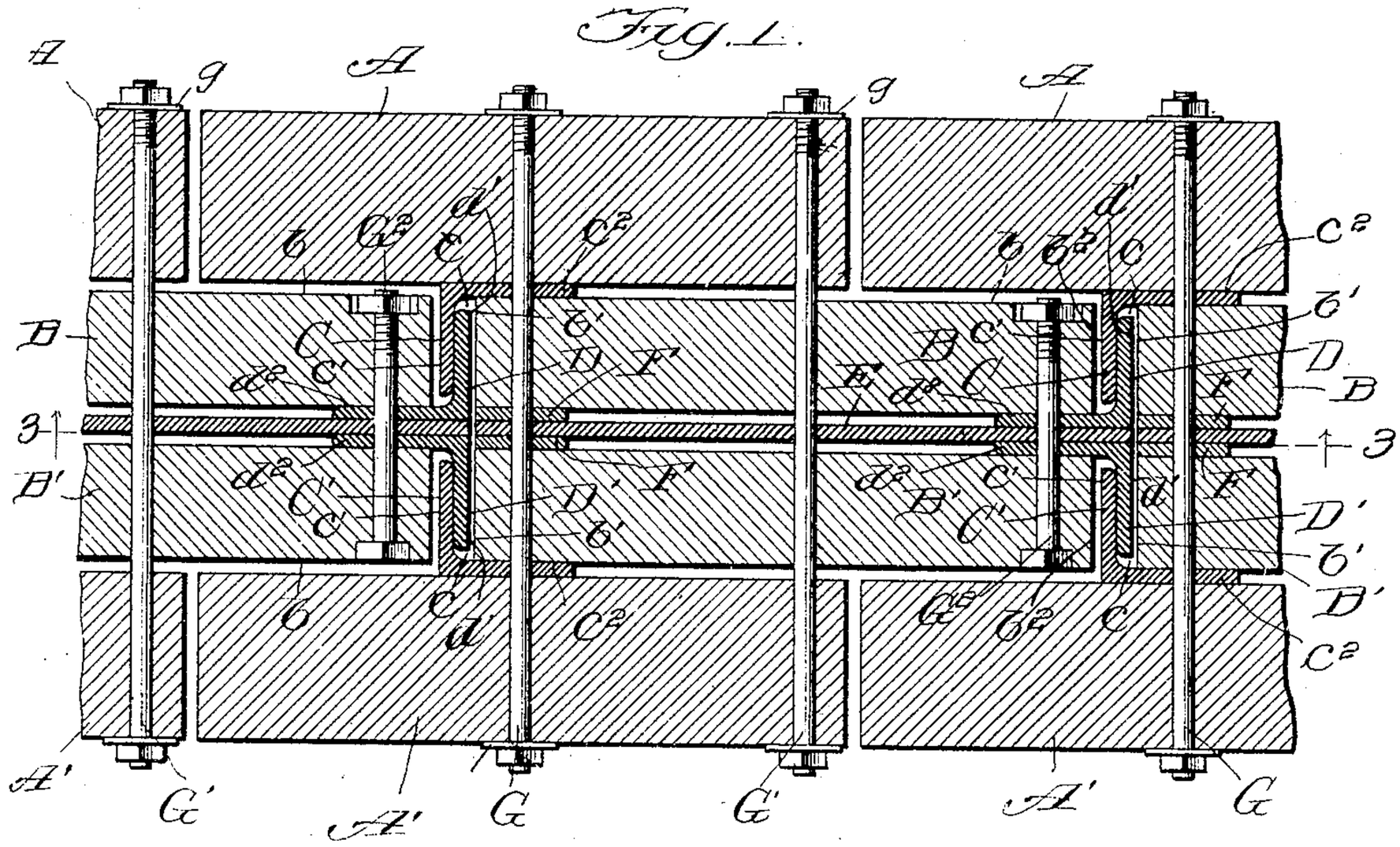
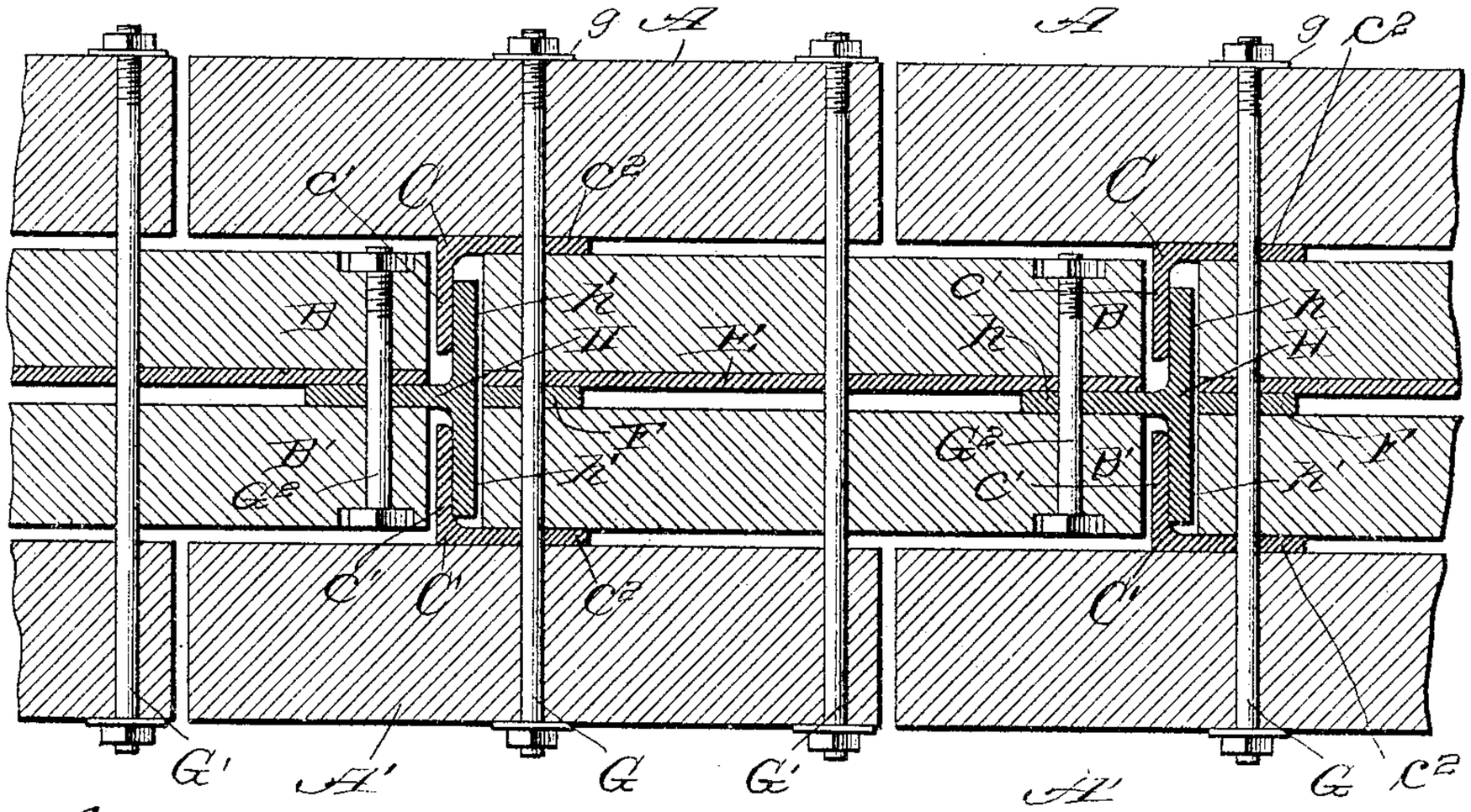


Fig. 2.



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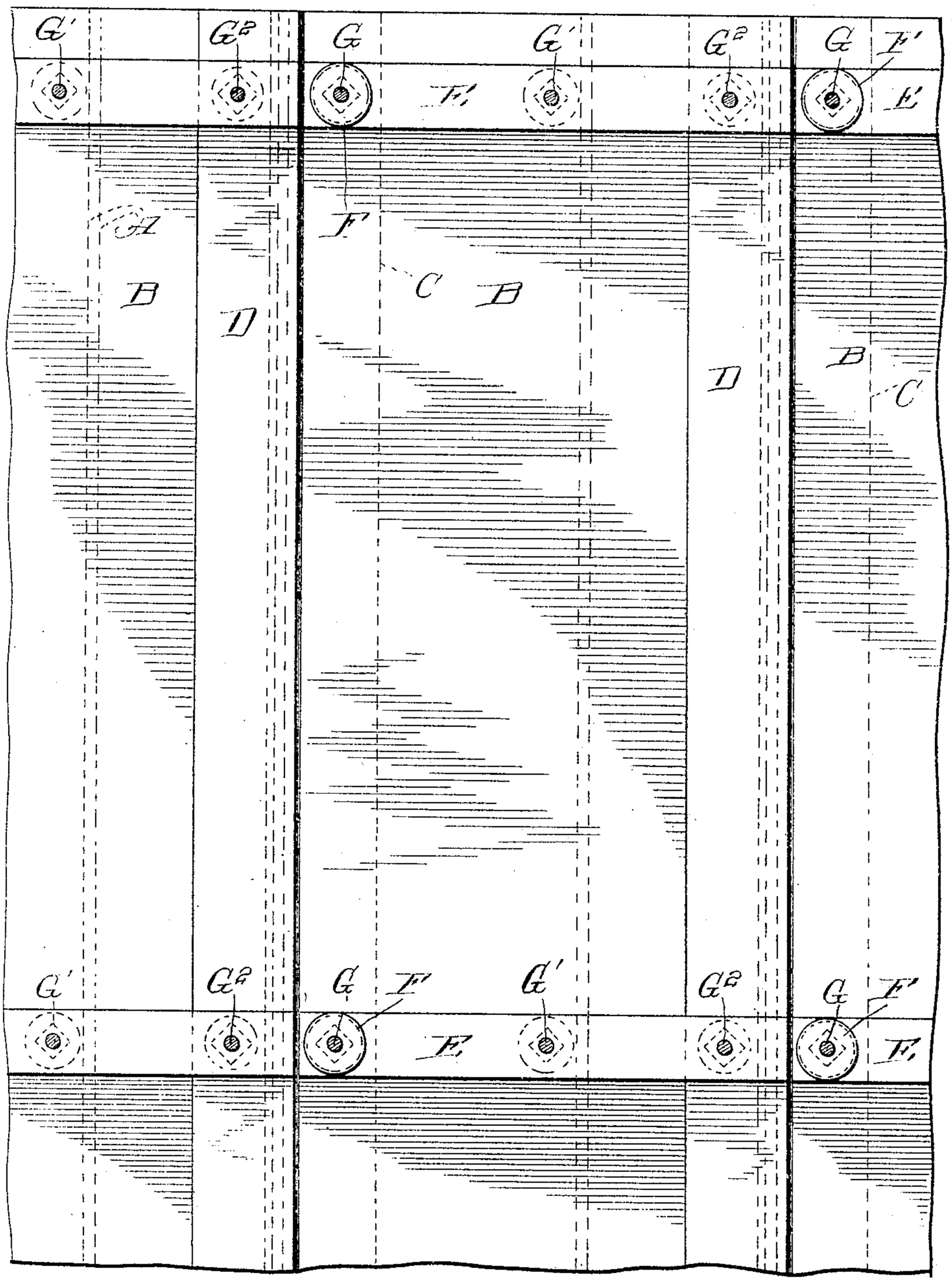
2 SHEETS—SHEET 2.

Fig. 3.



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ANDREW LANQUIST, OF CHICAGO, ILLINOIS.

WOOD SHEET-PILING.

No. 803,697. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed August 13, 1904. Serial No. 220,621.

To all whom it may concern:

Be it known that I, ANDREW LANQUIST, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Wood Sheet-Piling; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates generally to an improved sheet-piling, and is designed particularly as an improvement on what is known as "wood sheet-piling."

Heretofore pilings have been made, each post or section of the piling being built up of wooden planks or blocks, so that one edge is provided with a tenon, while the other edge is provided with a groove, the tenon of each section when driven into place fitting in the groove of the adjacent section. The difficulty with this form has been that there was nothing to keep the sections when they were being driven close together edgewise.

My invention has for its particular object, therefore, to provide a means whereby when a section is being driven it will be kept closely adjacent edgewise to the adjoining section already driven.

In the drawings, Figure 1 is a horizontal section of my piling, showing one full section and portions of the adjacent sections on each side. Fig. 2 is a similar view showing a modification; and Fig. 3 is a sectional view with the parts principally in elevation, taken along the line 3 3, Fig. 1.

In carrying out the invention A A′ represent planks or boards of any suitable dimensions—say, for sake of illustration, each three inches thick, twelve inches wide, and the desired length. B B′ represent similar boards slightly thinner than the boards A A′—say two inches thick, twelve inches wide, and the desired length. The boards B B′ are placed between the boards A A′ in the position shown in Fig. 1, so that when the four boards are clamped together the portion *b* of the boards B B′ constitute a tenon or tongue running the vertical length of the section, while the space between the boards A A′ and beyond the edge *b′* of the boards B B′ constitutes a groove in which the portion *b* of the next adjacent section can fit.

C C′ represent angle-irons fitted to the corners of the sections B B′, so as to leave a space *c* between the flanges *c′* of the angle-irons and the edge *b′* of the portions B B′.

D D′ represent angle-irons fitted to the edges of the sections B B′, so as to leave a space between the flanges *d′* of the angle-irons D D′ and the edges b^2 of the portions B B′. The angle-irons C C′ and D D′ are of a length substantially corresponding to the length of the boards A A′ and B B′, although this is not essential, and the angle-irons may, if desired, be only of such length as will cause them to properly hold the parts together, as hereinafter explained.

E is a metal plate inserted between the flanges d^2 of the angle-irons D D′ and extending across to the opposite edges of the boards B B′, where washers F are provided to compensate for the thickness of the flanges d^2.

G is a bolt passing through the board A, through the flange c^2 of the angle-iron C, through the board B, through the washers F and plate E, through the board B′, through the flanges c^2 of the angle-iron C′, and through the board A′, suitable washers *g* being placed on the outside surfaces of the boards A A′. G′ is a similar binding-bolt, and G^2 is a shorter bolt that clamps the boards B, flanges d^2 of the angle-irons D D′, and board B′ together.

It will thus be seen that when the parts are clamped together, as above described, each section is made up of the four-board sections so arranged that a tongue is provided on one vertical edge of the section and a groove on the other vertical edge of the section, and that as the sections are driven the tongue of one section engages in the groove of the adjacent section. Now by the provision of the angle-irons, as shown and above described, as a section is driven the flanges *c′* of the angle-irons C C′ engage the flanges *d′* of the angle-irons D D′ and hold the adjacent sections against any lateral edgewise movement between the sections.

In Fig. 2 I have shown a slight modification in that instead of the angle-irons D D′ I provide a metal section of T shape in cross-section, (shown at H.) The flange *h* of this T-section is clamped between the boards B B′ by the bolt G^2, while the flanges *h′* correspond with the flanges *d′* in the preferred form.

The manner of interlocking and driving the sections is the same in both embodiments of

my invention, and the same character of piling results from both forms in which my invention is shown as embodied.

It is obvious that my structure might be modified in various ways without departing from the spirit of the invention, which consists, essentially, in providing in a wood sheet-piling a means whereby the sections are interlocked to prevent any lateral edgewise movement away from each other.

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

1. In a wooden sheet-piling, a section thereof comprising two or more wooden planks clamped together, the vertical edges of said section provided with metal pieces adapted to engage with the metal pieces on the adjacent sections.

2. In a wooden sheet-piling, a section thereof comprising wooden planks clamped together to form tongue-and-groove joints with the adjacent section, the vertical edges of said section provided with metal pieces adapted to engage with the metal pieces on the adjacent sections.

3. In a wooden sheet-piling, a section thereof comprising a plurality of wooden planks clamped together, the edges of said planks provided with metal strips, each of said strips having a portion adapted for engagement to the wooden planks and another portion extending at an angle therefrom to engage the metal strip on the adjacent section.

4. In a wooden sheet-piling, a section thereof comprising four wooden strips bolted together side by side, the edges of the two inner strips projecting beyond the edges of the two outer strips so that a tongue-and-groove connection is formed, the edges of the inner strips being provided with angle-bars having their flanges spaced from the edge of the wooden strips to form recesses whereby the metal strips can engage those of the adjacent section.

5. In a wooden sheet-piling, a section comprising parallel wooden planks, metal pieces secured to the vertical edges of the section adapted to engage with metal pieces on adjacent sections, a tie-plate interposed between said planks, and fastening devices rigidly uniting said planks and tie-plate to the metal pieces at each side of the section.

In testimony whereof I sign this specification in the presence of two witnesses.

ANDREW LANQUIST.

Witnesses:
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