Feb. 12, 1924. 1,483,825

A. A. MARTINEZ

SHEET PILING

Filed May 11, 1923 2 Sheets-Sheet 1

Fig. 1.

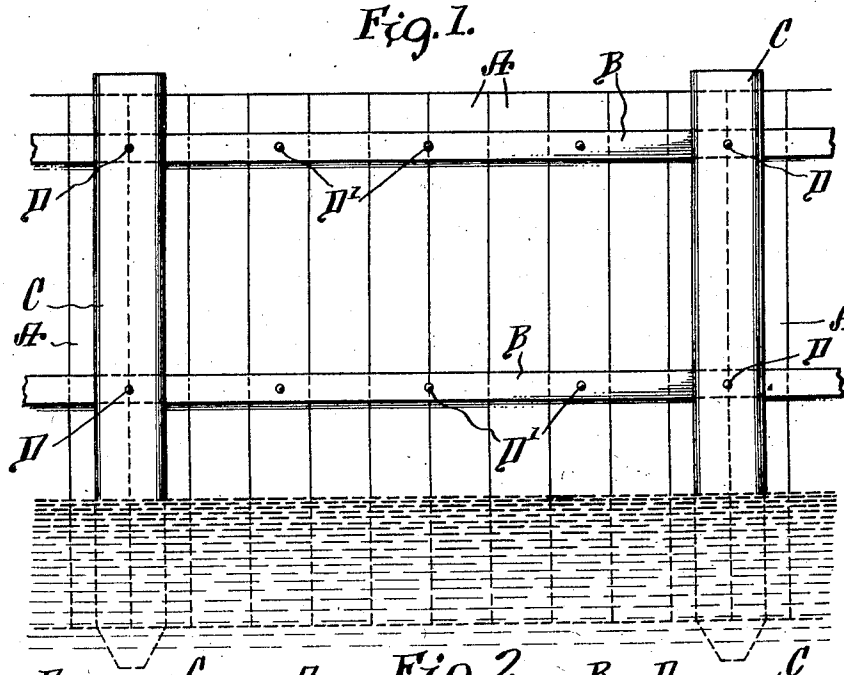
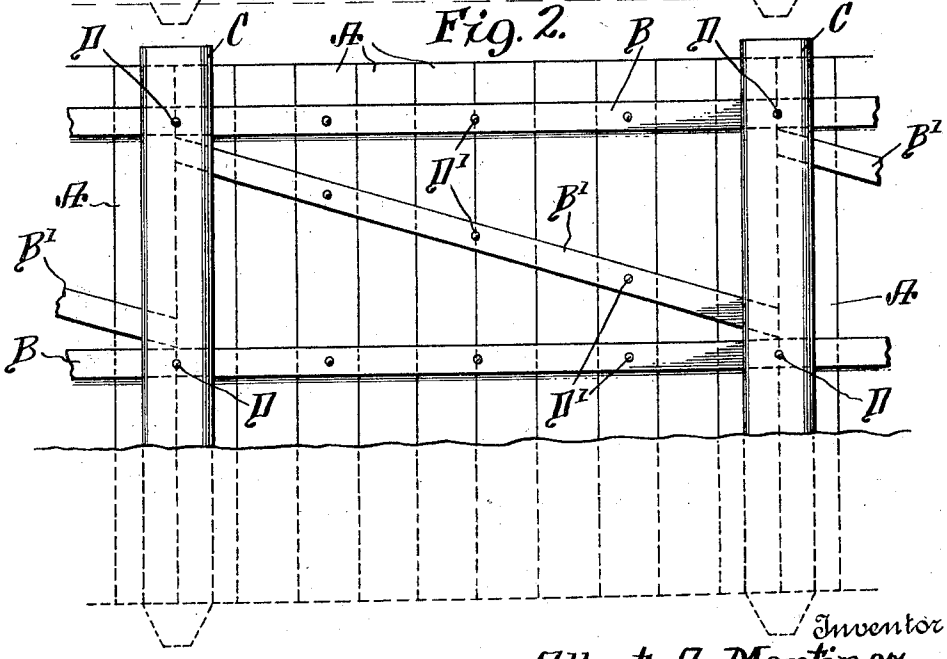


Fig. 2.



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Fig. 3.

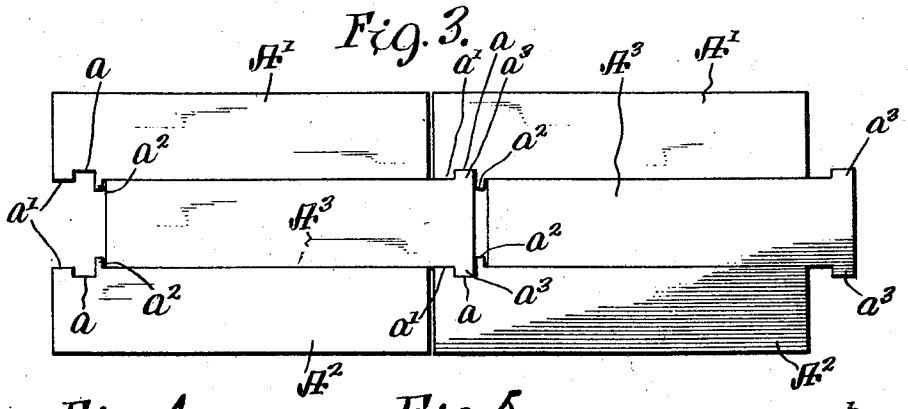


Fig. 4.

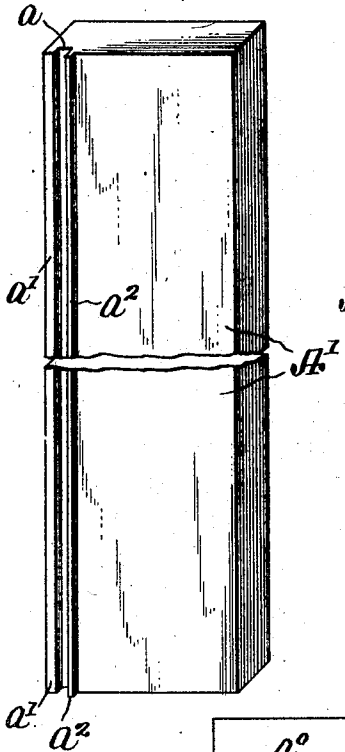
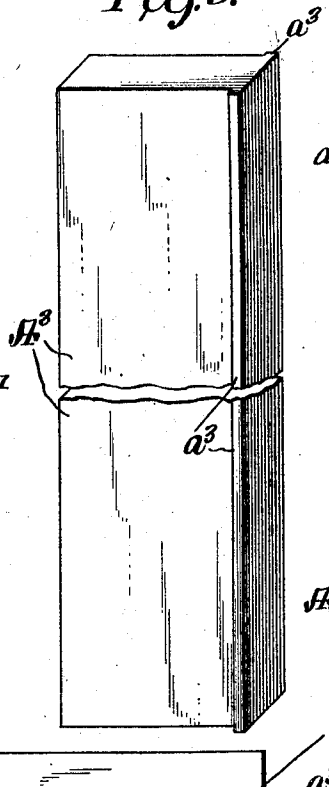


Fig. 5.



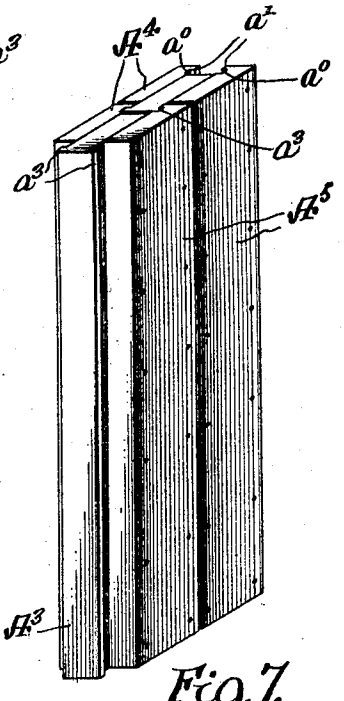
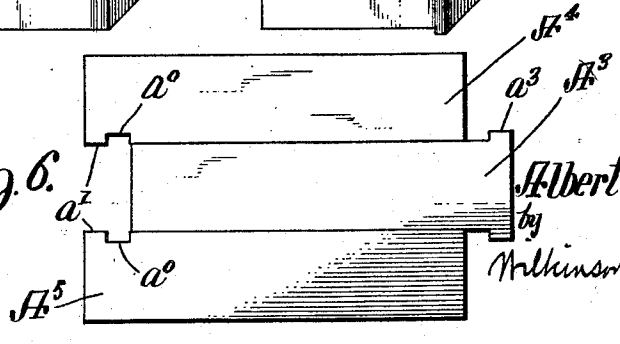


Fig. 7.

Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT ALLEN MARTINEZ, OF NEW ORLEANS, LOUISIANA.

SHEET PILING.

Application filed May 11, 1923. Serial No. 638,280.

To all whom it may concern:

Be it known that I, ALBERT ALLEN MARTINEZ, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Sheet Piling; and I do hereby 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 appertains to make and use the same.

My invention relates to improvements in wooden sheet-piling, and it is intended to provide a cheap, durable and efficient piling that will serve as revetments for levees and other embankments, and may also be used in the construction of caissons, coffer-dams, in the foundations of buildings and for other purposes where a continuous wall of driven sheet-piling is desirable.

My invention comprises primarily the construction of a wall of sheet-piling consisting of three separate parallel layers of sheet-piling interlocking, as will be hereinafter described, each unit being preferably composed of a single piece of yellow pine or other suitable wood, planed or otherwise machined to standard construction, as will be hereinafter more fully described.

The wall as so constructed is suitably braced by heavy posts and stringers or braces, in the usual way.

My invention will be more fully understood after reference to the accompanying drawings, in which like parts are indicated by similar reference symbols throughout the several views, and in which:

Fig. 1 represents the front elevation of the protecting wall constructed according to my invention, as seen from the riverside; and

Fig. 2 is a similar view as seen from the rear or land side;

Fig. 3 is a plan view on a larger scale of a portion of the wall;

Figs. 4 and 5 are detail views on a still larger scale, showing two of the units in building up the wall, parts being broken away;

Fig. 6 is a plan view of three of the units, showing a slightly modified form of construction; and

Fig. 7 is a perspective view, showing on a somewhat smaller scale the construction shown in Fig. 6.

Referring first to Figs. 1 and 3 A represents the wall, which is composed of a series of outside units A′ and A^2 and interior units A^3, all assembled as shown in detail in Fig. 3, in which the outside units A′ and A^2 have reversely disposed grooves *a*, bounded on one side by the inwardly projecting shoulders *a′* and on the other side by the ribs a^2, which project inward slightly further than the shoulders *a′*, so as to form stops for the end of the center unit A^3, to prevent the center unit A^3 from engaging the adjacent center unit, as shown most clearly in Fig. 3. These center units have ribs a^3, which engage in the guide grooves *a* as the center piles are driven down between the side piles, as shown.

Thus, it will be seen that when the parts are assembled, there will be a clearance space between the edge of one center pile A^3 and the edge of the other adjacent pile, which clearance space will do no harm in that part of the wall projecting above the water, and that pile below the water will speedily become filled up with water bearing sediment, forming a substantially tight wall.

In the form of device shown in Figs. 6 and 7, the construction is similar, except that the spacing ribs a^2 are omitted from the side piles A^4 and A^5, but the center pile being of the same construction as before.

This form of construction shown in Figs. 6 and 7 may be preferable under certain cases, as for instance, where high walls are not required. The individual piles are driven in the usual way, and may be held in place by suitable stringers B and braces B′ and reinforced by the posts C, the whole being connected together by the bolts D and D′.

It will be seen that I provide a sheet-piling structure, in which a wall is provided, in which the individual piles are made of single units, with the guide ribs integral therewith, the parts being constructed in a planer or other suitable machine.

This construction has special advantages over composite construction, where the ribs or shoulders of the grooves are separate pieces secured in place, which are apt to

come out of alinement, causing the parts to bind, with the result that there is difficulty in driving the piles.

Moreover, by the construction shown in Figs. 1 to 3, there is more or less clearance at the joints, so that the units of the walls can have an opportunity to expand or contract, without causing the wall to buckle or bend out of shape.

The individual piles should preferably be made of hard pine, or other suitable wood, which will be durable when in use.

While I have described the invention in its preferred form, it will be obvious that various modifications might be made in the construction, combination, and arrangement of parts, which could be used without departing from the spirit of my invention, and I do not mean to limit my invention to such details, except as particularly pointed out in the claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

1. A wall of sheet piling comprising three parallel layers of vertically disposed interlocking units, each outer unit being provided with a guide groove on the inside near the edge thereof, with an inwardly projecting rib adjacent to said groove, and each central unit being provided with laterally projecting guide ribs near one edge thereof adapted to engage in said grooves in the outer units, said central unit having its opposite edge engaging respectively said ribs on the outer units, whereby the adjacent edges of said central units are separated by a small clearance space, substantially as described.

2. A wall of sheet piling comprising three parallel layers of vertically disposed interlocking units, each outer unit being made of a single stick of timber provided with a guide groove on the inside near the edge thereof, with an inwardly projecting rib integral therewith and adjacent to said groove, and each central unit being also made of a single stick of timber provided with laterally projecting guide ribs integral therewith near one edge thereof adapted to engage in said grooves in the outer units, said central unit having its opposite edge engaging respectively said ribs on the outer units, whereby the adjacent edges of said central units are separated by a small clearance space, sustantially as described.

3. A wall of sheet piling comprising three parallel layers of vertically disposed interlocking units, each outer unit being made of a single stick of timber provided with a guide groove on the inside near the edge thereof, and parallel to said edge and each central unit being also made of a single stick of timber provided with laterally projecting guide ribs integral therewith near one edge thereof, parallel to said edge and adapted to engage in said grooves in the outer units, substantially as described.

ALBERT ALLEN MARTINEZ.