April 19, 1932. K. NOLTE 1,855,113

SHEET PILING

Filed Sept. 11, 1929

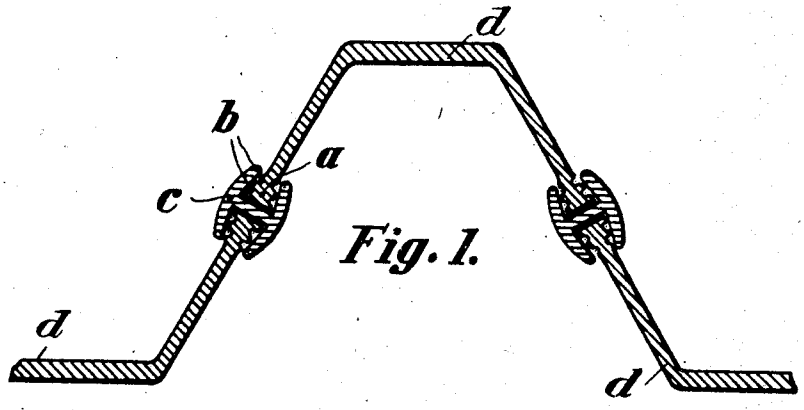


Fig. 1.

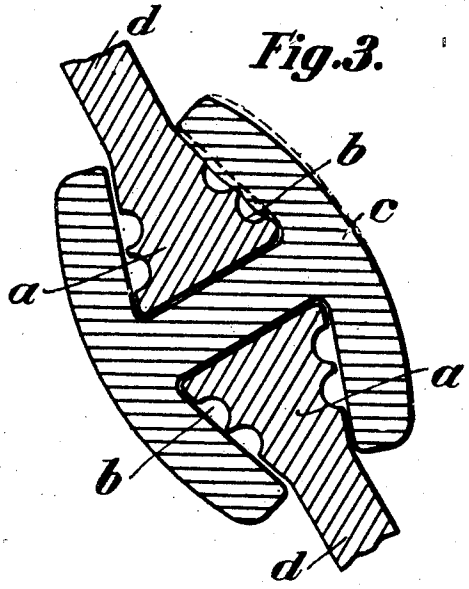


Fig. 3.

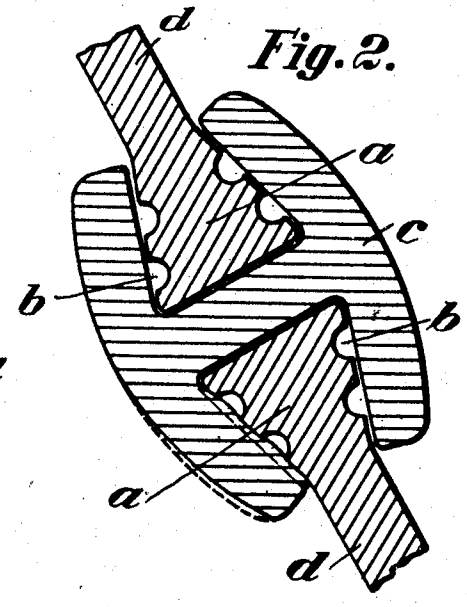


Fig. 2.

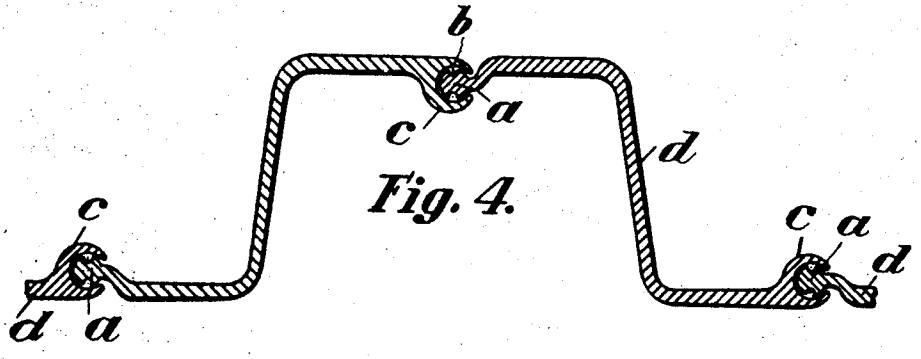


Fig. 4.

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UNITED STATES PATENT OFFICE

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SHEET PILING

Application filed September 11, 1929, Serial No. 391,945, and in Germany September 11, 1928.

This invention relates to sheet piling.

It has recently become the practice to connect the piling members, either directly or through intermediate members, by pressure applied at the joints.

An object of the invention is to facilitate the pressure connection in the case of sheet piling members having co-acting claw and bulb joints.

To the attainment of this object I provide channels or recesses in the bulbs in such manner that sharp edges are produced which are easily upset and thus serve to ensure correct ramming and to furnish tight joints.

Typical embodiments of the invention are illustrated by the accompanying drawings whereon:—

Fig. 1 represents the cross section of a wall or piling wherein the piling members are connected through intermediate jointing members;

Fig. 2 represents a cross section through one of the joints on a larger scale with only one side or portion thereof pressed inwardly in deformation of the sharp edges of the recesses according to the invention;

Fig. 3 is a view similar to Fig. 2 but of a modified joint with only a portion thereof pressed inwardly similarly to the preceding figure; and

Fig. 4 shows in cross section, the application of the invention to a wall or piling composed of Z-section members.

As shown, each piling member *d* has bulbous jointing edges *a* each of which is formed with a plurality of recesses or channels *b* in which the corresponding jointing claw *c* forces its way when the parts of the joint are firmly pressed together as shown in Figs. 2 and 3.

According to Figs. 1, 2 and 3, the piling members *d* are connected by separate, intermediate claws *c* of H section. In the construction illustrated by Figs. 1 and 2 each bulb *a* has channels *b* on each side thereof separated by a flat portion substantially equal in width to the width of a channel, whereas in the modified construction illustrated by Fig. 3, said channels are set relatively close to provide a narrow edge therebetween.

When the sides or embracing claw portions of the jointing members *c* are pressed inwardly, as shown by parts of Figs. 2 and 3, the edges of the recesses *b* in the bulbous ends of the piling members are upset or deformed sufficiently to bite into said sides or claw portions, and so engage or frictionally bind therewith as to hold the parts securely and rigidly together with very little chance of turning.

According to Fig. 4, the connecting claws *c* are integral with the piling members *a*, there being a claw *c* at one end and a bulb *a* with channels *b* at the other end of each Z-shaped piling member.

I claim:—

1. A coffer-dam wall comprising sheet-piling sections having bulbous side margins or edges formed with grooves extending longitudinally therealong, and interconnecting bars having jaw portions between which said margins or edges of the sections fit in a socket-like joint; said jaw portions of the bars being pressed inwardly with deforming effect upon the edges of said grooves in the sections so as frictionally and rigidly to bind the parts together.

2. A coffer-dam wall comprising sheet-piling members formed with bulbous side margins or edges having grooves extending longitudinally thereof, and connector bars formed with jaw portions embracing said margins or edges of adjacent members; said jaw portions being pressed inwardly into deforming or biting engagement with the edges of said recesses of the members thereby frictionally binding them together.

3. A coffer-dam wall comprising sheet-piling members formed with bulbous side margins or edges having grooves extending longitudinally thereof and interconnecting members having jaw-like portions between which said margins or edges fit in a socketed joint; said jaw-like portions of the members being pressed inwardly against the edges of said grooves in the sections with a deforming or biting effect frictionally binding and rigidly holding the parts together.

4. A coffer-dam wall comprising sheet-piling members formed with bulbous side margins or edges having grooves extending

longitudinally thereof, and bars interconnecting the members in side-to-side arrangement; said bars having jaw portions embracing said margins or edges of the members and indents thereof at intervals therealong pressed into deforming or biting engagement with the edges of said grooves in the members with frictionally binding effect.

5. A coffer-dam wall comprising sheet-piling sections having bulbous side margins or edges formed with grooves extending longitudinally thereof, and interconnecting lock-bars of socket form having jaw portions embracing said bulbous portions of adjacent sections arranged in side-to-side relation; said jaw portions of the bars being conformed substantially to said bulbous portions of the sections and having indents therealong pressed against the edges of said recesses in the latter with a deforming effect thereby engaging or frictionally binding the parts rigidly together.

In testimony whereof I affix my signature.

KARL NOLTE.