

C. H. QUIMBY, JR.
METAL SHEET PILING.
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1,060,858.

Patented May 6, 1913.

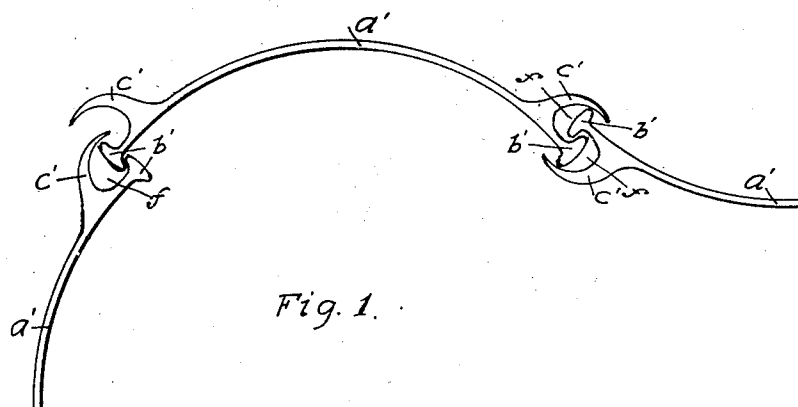


Fig. 1.

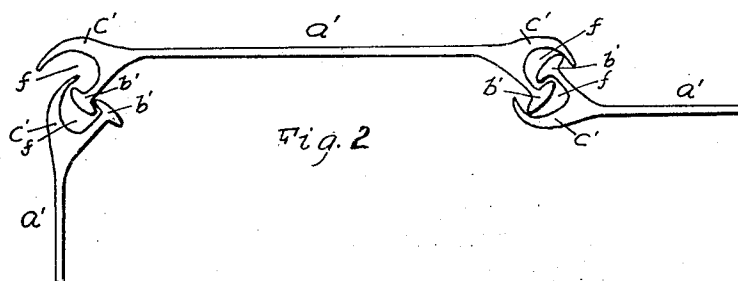


Fig. 2

Witnesses:

Francis E. Hoff
James B. M. Hunter

Inventor:

By Chas. H. Quimby Jr.
Adam E. Schatz

UNITED STATES PATENT OFFICE.

CHARLES H. QUIMBY, JR., OF MOUNT VERNON, NEW YORK.

METAL SHEET-PILING.

1,060,858.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES HENRY QUIMBY, JR., citizen of the United States, and resident of Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Metal Sheet-Piling, of which the following is a specification.

My invention relates more particularly to steel sheet piling of the kind which is built up of separate piles or sections, provided with interlocking flanges along both edges, whereby the pile as driven, interlocks with the adjoining pile and forms a continuous wall or sheet of piling. Such piling is now generally used for coffer-dams, retaining walls, core-walls of dams, sheeting of excavations and for numerous other purposes.

The object of the invention is to provide a novel metallic sheet piling having novel interlocking edges, the construction of which permits the piling being assembled in various forms without using special constructed pieces.

Another object of this invention is to provide a metallic sheet piling of such construction that the independent piles or sections will have their metal so distributed as to give them the greatest strength for the amount of material used.

Another object of this invention is to provide a metallic sheet piling of such construction that the independent sections of piling can be easily and quickly assembled, forming lines of sheeting straight, or curved.

My invention provides an interlock between the several piles or sections which forms a double or triple hook arrangement, depending on which form is used.

With the above and other objects in view, the invention consists in the novel construction, combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this application and wherein like letter of reference indicate like parts throughout the several views, in which—

Figure 1 is a top plan view of one form of my improved metal sheet piling, showing one pile or section complete, engaging the adjoining piling of like form or cross-section, and Fig. 2 illustrates a top plan view

showing a full pile section engaging like adjoining pile sections.

By reference to the drawings it will be seen that Fig. 1, illustrates a form of piling in which *a'* is the curved web; *c'* the hook flange and *b'* the T flange. The general line of the piles forms a corrugated sheet similar to Fig. 1 but the interlock is so arranged that the hook flange and the near leg of the T flange form a groove of suitable size and form to receive a like T flange on the adjoining pile. This form of piling gives a triple hook interlock when assembled in a straight or curved line of sheeting but only a double hook interlock when assembled in the right-angle formation. This form may be modified so that the web *a'* will curve to the opposite side of the line of sheeting or have one or more corrugations in same, the flanges remaining in the same position with respect to the line of sheeting.

The novelty of the invention is principally in the manner of curving the web portion of the piles so as to form a corrugated line of sheet piling and the arrangement of the flanges so as to form a triple hook interlock. The corrugated line of sheet piling is very much more stiff and resisting to the lateral pressures to which sheet piling is generally put and the individual piles are stiffer for handling and driving. The curved form of the web will facilitate the rolling of the pile in its manufacture thereby making it more economical. The triple interlock of the flanges in the form of hooks presents a feature that will materially increase the strength of the interlock over present known forms. The arrangement of the flanges in the triple hook interlocks are such that the rolling of the piles in their manufacture may be done with a comparatively little bending of the metal in the final pass, which is an economical feature of considerable value.

In the device, I have provided a groove *f* which allows sufficient room for the T flange or the inclosed flanges of the adjoining pile, to move freely and permit of the piles following a curved line. The curved line along which a sheet of piling may follow, is limited to a few degrees between the adjoining piles, the most common angle of about 90 degrees, being provided for by reversing the pile in the interlock. The

extra space in the groove *f* may be used, if desired, to insert strips of wood or other material as packing to add to the watertightness of the interlock. This, however, is not very often necessary as the contacts of the flanges are generally sufficient to prevent any considerable amount of leakage.

The piles will be manufactured from steel or other suitable material, the best plan being to use steel and roll them in integral sections. These piling forms can be economically rolled.

It will be understood that slight variations may be resorted to without departing from the spirit of my invention.

What I claim as new and desire to secure by Letters Patent is:—

1. A metal-sheet piling composed of piles or sections having a curved web with like flanges at each of its vertical edges, one of

the said flanges being a curved hook lateral to the web, the other said flange being of a T shape and alined with the web produced, said hook flanges and the near leg of the T flange forming a groove adapted to receive a like T flange of the adjoining pile.

2. A metal sheet piling composed of piles or sections having a web with like flanges at each of its vertical edges, one of the said flanges being a curved hook lateral to the web, the other said flange being of a T shape and alined with the web produced, said hook flange and the near leg of the T flange forming a groove adapted to receive a like T flange of the adjoining pile.

CHARLES H. QUIMBY, JR.

In presence of—

ARTHUR LELEINFELDT,
WILLIE GOLDSMITH.