

G. ZISTER.  
SHEET PILING.

APPLICATION FILED SEPT. 8, 1906. RENEWED JUNE 4, 1909.

932,230.

Patented Aug. 24, 1909.

*Fig. 1.*

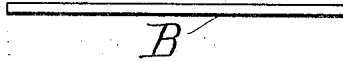
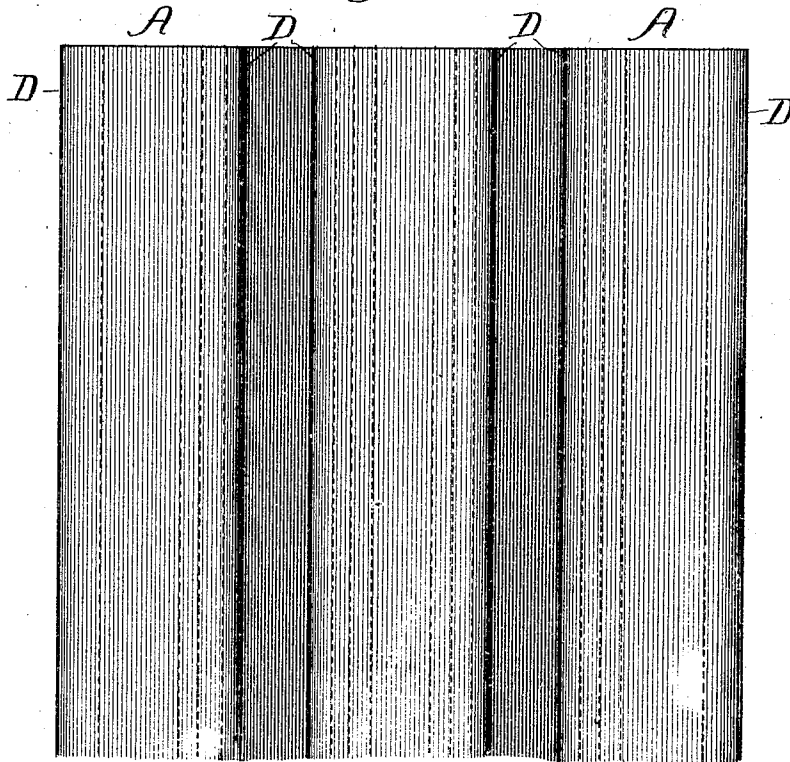


*Fig. 2.*



*Fig. 3.*



Witnesses:

*W. H. Clifford.*  
*John Enders.*

Inventor:

*George Zister.*  
By *L. B. Coupland.*  
*Atty.*

# UNITED STATES PATENT OFFICE.

GEORGE ZISTER, OF CHICAGO, ILLINOIS.

## SHEET-PILING.

932,230.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed September 8, 1906, Serial No. 333,763. Renewed June 4, 1909. Serial No. 500,198.

*To all whom it may concern:*

Be it known that I, GEORGE ZISTER, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Sheet-Piling, of which the following is a specification.

This invention relates to improvements in metal sheet piling for use in the construction of sea-walls levees, docks, coffer-dams, caissons, bridge-pier foundations and all similar work, whether of a permanent or temporary character.

The general object of my invention is to provide sheet piling sections or members wherein the interlocking features necessary for holding the sections together when assembled, are made integral with the sections, which are identical in sectional form with one another. Thus the use of separate interlocking devices mechanically secured to the members is obviated.

A more particular object of my invention is to provide a sheet piling member of the character specified which may be economically and rapidly formed by curling or bending the edges of the flat plate or strip, into the peculiar conformation illustrated in the drawings and hereinafter described. The advantage arising from the employment of a flat blank or plate is obvious, as no special rolls are necessary for manufacturing such plates.

In the drawings Figure 1 is a plan or end view of one of said plates or strips before it is acted upon by the bending rolls. Fig. 2 is a plan of a piling structure composed of a number of my improved sections assembled; and Fig. 3 is an elevation of the same.

In manufacturing the separate members, designated A, a flat plate or metal, as B, is passed through suitable mechanism which rolls or curves the longitudinal edges thereof inwardly as shown in Fig. 2, until the inner edges C stand at a certain distance from the flat web portion of the members, which distance is slightly in excess of the thickness of the metal. The two hooked edges, designated D are symmetrical and formed upon the same face of the strip.

When two of the finished members are in-

terlocked or hooked together, it will be observed that there are four lines of contact between each member and the next adjacent member. Two of these lines of contact are formed by the inner edges C and the inner faces of the hooked edges D; the other two lines of contact are formed by the outer faces of the hooked edges D and the flat portions adjacent the hooked edges.

In assembling the piling members or sections they are loosely telescoped together endwise, the form of interlock being such as to prevent any separation either laterally or otherwise in the operation of driving. The curved interlocking edges are both turned inward in the direction of each other on the same side. It is obvious that the intumed hook edges may be on opposite sides of the web-plate instead of on the same side as shown. At the same time a slight angular variation may be allowable in forming the interlocking curved walls by reason of the mutual accommodation of the hook edges D.

Having thus described my invention, what I claim is—

1. A sheet-piling wall structure composed of a plurality of piling sections having their respective edges curved inward in a loose roll interlock, the interlocking edges having four lines of contact, two of said lines being along the inner edges of the hook edges.

2. A sheet-piling wall structure, comprising a series of duplicate piling sections having their respective edges curved inward in forming a loose interlock and providing longitudinal spaces between the lines of contact when said sections are assembled edgewise.

3. A sheet-piling structure composed of a number of interlocking sections provided with integral intumed hook-edges, said hook-edges having contact along certain lines only and leaving longitudinal spaces therebetween.

4. A sheet-piling structure composed of a plurality of piling sections having interlocked hooked edges; each of said hooked edges making contact with the interlocked hooked edge along four lines of contact, two of said lines being along the inner edges of the hooked edges.

5. A sheet-piling structure comprising a

series of alternately reversely arranged piling sections having interlocked hooked edges; each hooked edge making contact with the interlocked hooked edge along four lines of contact, there being longitudinal spaces between said lines of contact or between the hooked edges of the sections.

In testimony whereof I affix my signature, in presence of two subscribing witnesses.

GEORGE ZISTER.

Witnesses:

J. B. DONALSON,  
G. E. CHURCH.