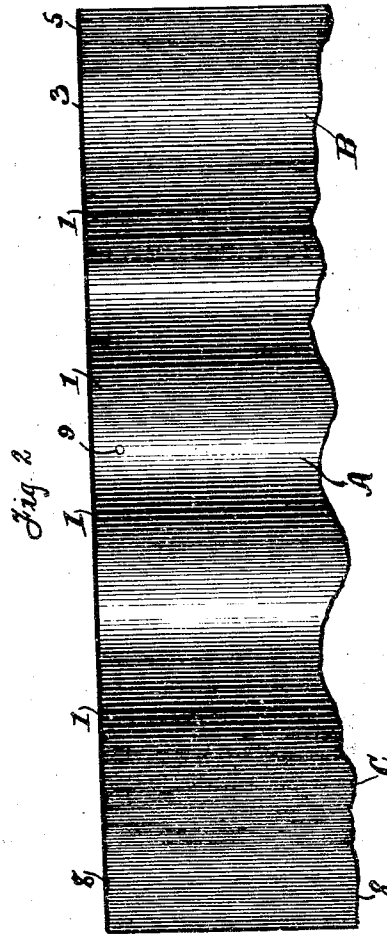
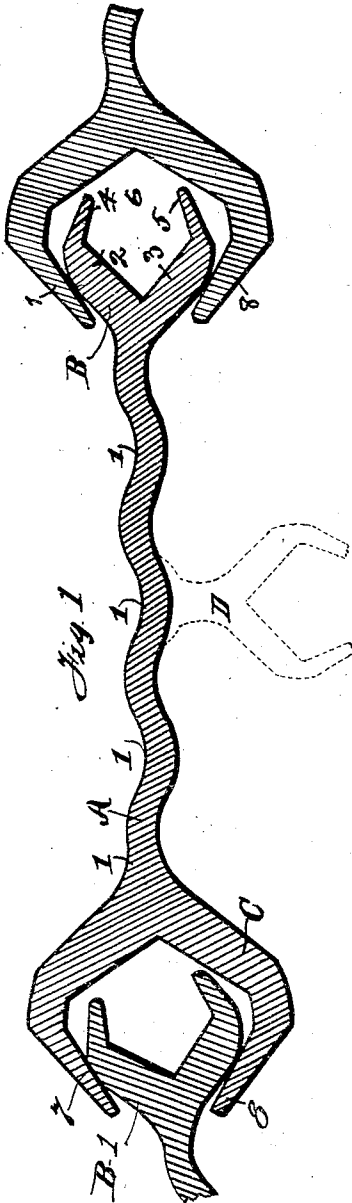


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SHEET PILING.
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1,042,581.

Patented Oct. 29, 1912.



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SHEET-PILING.

1,042,581.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE WILLIAM McFARLANE, a citizen of the Dominion of Canada, residing at Paris, in the county of Brant and Province of Ontario, Canada, mechanical engineer, have invented a certain new and useful Improvement in Sheet-Piling, of which the following is a full, clear, and exact description.

My invention relates to sheet metal piling, and its object is to provide sections of great resisting power to a lateral strain, and which may be locked together either in straight or curved lines, the interlocking means being designed with a view to the easy withdrawal of the sections when their usefulness at any point is ended.

Referring to the drawing in which similar letters and numerals refer to similar parts throughout, Figure 1 is a cross section of a pile, with portions of the neighboring piles with which it interlocks. Fig. 2 is an elevation of one section of the piling.

Each section of the piling consists of a web portion A, a ball portion B and a socket portion C. The web portion A, I prefer to wave or corrugate longitudinally, the corrugations being shown as 1 in both figures. It is a well known fact that the corrugating of a metal adds greatly to its resisting power when opposed to a strain exerted at right angles to the direction in which the corrugations run, but this has been, not to my knowledge, applied to the manufacture of sheet metal piling. A further advantage is secured by the corrugation of the sections, in that a lighter weight of metal may be used than if uncorrugated, yet the same or even greater strength be secured and at a much less cost for material and handling.

For the formation of the ball and socket portions of the pile, the opposite edges of the web A are as it were split into two wings, those forming the ball portion B being shorter than those forming the socket portion C. The wings 2 and 3 of the ball portion B extend away from each other and diagonally away from the web for about half their length at which point they are turned in toward each other, their extremities 4 and 5 being however separated by the opening 6, thus forming a practically diamond shaped male member.

The formation of the female member C is similar to that of the male member B both being diamond shaped, the interior of the

member C being of a size sufficient to receive the member B¹ of an adjoining pile telescopically and to coact therewith in the formation of a range of piling, the extremities 7 and 8 of the member C being brought sufficiently close to each other to prevent the withdrawal of the member B¹ from the member C in any but a longitudinal direction.

It will be noted that the ball portion B¹ fits the socket portion C very loosely and that the diamond shape of each admits of a certain amount of rotation of the part B¹ within the part C so that a considerable amount of angling would be possible in a wall formed of a series of the interlocked sections. This is shown in the position the part B¹ has taken in relation to the part C.

I have found the diamond shape to be a very preferable form of interlock, the contact between the male and female members being thereby reduced to a mere point, so that the risk of these being kept apart by grit or gravel, thereby preventing a water tight joint is reduced to a minimum; also, the fact that the contact of the parts in the interlock is so small greatly facilitates the drawing of the piles when they have served their purpose at any given point.

It is preferable that the parts be rolled integral from a single ingot of metal.

The dotted member D is introduced to show the means of attaching a range at right angles to the main wall or as a means of turning the main wall when a rectangular inclosure is desired.

9 indicates an aperture in the web A by means of which a pulling means may be attached to the pile.

Having thus fully described my said invention what I claim is:—

1. A rolled metal pile having a corrugated web, and divided terminal edges, the edges at one side of said web forming a hollow diamond shaped male member and those at the opposite side a hollow diamond shaped female member said members being designed to slidably interlock with the corresponding parts of piles of similar construction.

2. In rolled sheet metal piling, the combination of similar sections, each section being rolled integral, and comprising a longitudinally corrugated web, having divided terminal edges, the divided edges on one side of the web extending diagonally away from

the web for a portion of their length, then
approaching each other to form a hollow
diamond shaped male member, and the di-
vided edges at the other side extending
5 diagonally away from the web for a portion
of their length then approaching each other
to form a hollow diamond shaped female
member, adapted to receive the male mem-
ber of an adjacent section and slidably in-
10 terlock therewith.

3. In rolled sheet metal piling, the com-
bination of a plurality of similar sections,
each comprising a longitudinally corrugated
web, having divided terminal edges, the di-

vided edges on one side of the web forming 15
a hollow diamond shaped male member, and
those on the other side a hollow diamond
shaped female member adapted to receive
the male member of an adjacent section and
allow of a certain amount of rotation there- 20
in whereby a wall being constructed by the
interlocking of said sections might be de-
flected from a straight line.

GEORGE WILLIAM McFARLANE.

Witnesses:

KATHLEEN GRADY,
PEARL ARROWSMITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."