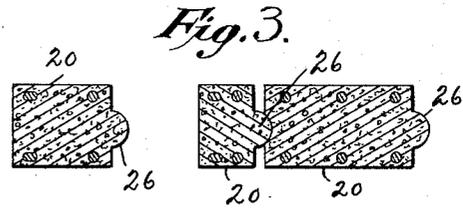
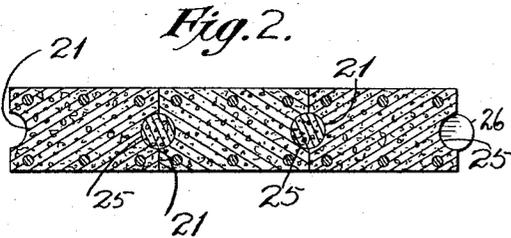
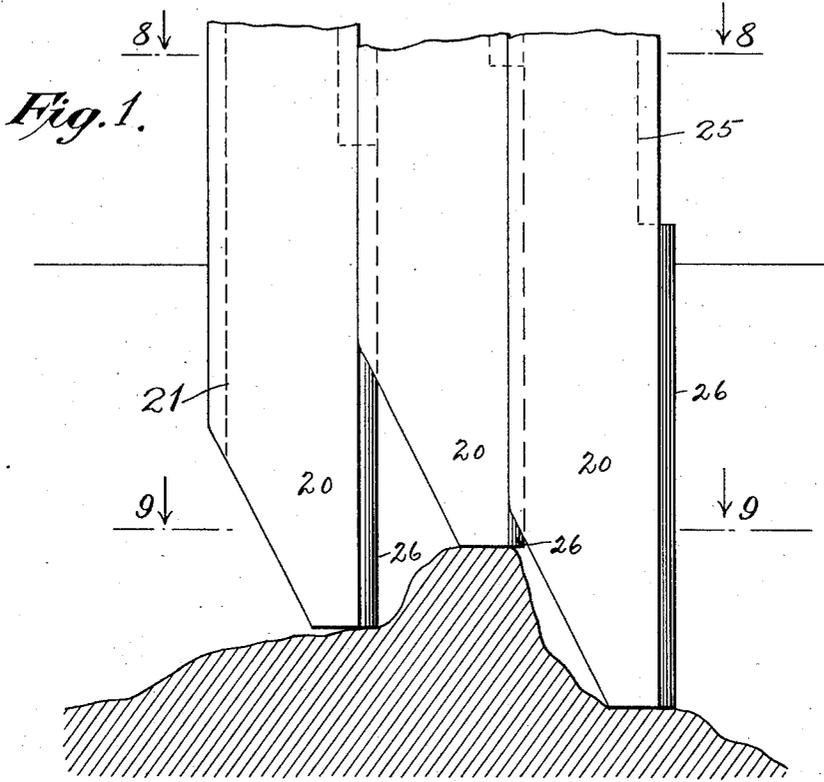


W. MUESER.
REINFORCED CONCRETE PILING.
APPLICATION FILED OCT. 9, 1911.

1,034,277.

Patented July 30, 1912.



Attest:
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Atty

UNITED STATES PATENT OFFICE.

WILLIAM MUESER, OF NEW YORK, N. Y.

REINFORCED-CONCRETE PILING.

1,034,277.

Specification of Letters Patent.

Patented July 30, 1912.

Application filed October 9, 1911. Serial No. 653,487.

To all whom it may concern:

Be it known that I, WILLIAM MUESER, a citizen of the United States, residing at 1741 Clay avenue, New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Reinforced-Concrete Piling, of which the following is a specification.

This invention relates to reinforced concrete piling and its object is to produce a piling which when assembled and in place does not readily leak, one which is easy to assemble, can be driven into a bottom having an irregular upper surface, is not injured readily by the blows of the driver and is of comparatively low cost.

Without criticizing the present methods in vogue of making and assembling concrete piling it may be said that such piles usually require the provision of a metal foot, do not form tight joints vertically when assembled, cannot be bonded together efficiently after assembly, and are liable to split while being driven, while individual piles must usually be driven to substantially the same level. Piles made and used according to my invention are free from these disadvantages.

In the drawings Figure 1 is a side elevation of several piles assembled together over a bottom having an irregular upper surface, Fig. 2 is a transverse section on the plane of the line 8—8 in Fig. 1, Fig. 3 is a transverse section on the plane of the line 9—9 in Fig. 1.

In the drawings 20 is the body of a pile made of concrete in any manner usual to the art. In the form illustrated it is shown as rectangular in cross section, but it may be of any desired section without departing from the spirit of the invention. Longitudinally arranged within the body at suitable transverse intervals are reinforcing rods or wires of any usual or desired form.

On one side of the body indicated at 21 it is provided with a longitudinal groove which extends practically the entire length of the body until it arrives at a point 22 relatively near the bottom where the body is truncated as indicated at 23 to form a blunt foot. On the opposite side of the body indicated at 25 it is provided with a longitudinal groove which extends a long distance along the body but terminates well above the foot where it is replaced by a long tongue 26 which extends to the bottom

of the foot. I prefer to make the body 20 straight on this side 25 and to extend the tongue to the bottom so that no truncation occurs on this side, but as will be hereafter apparent, I may truncate it in that side also, in which case naturally the tongue 26 would terminate at the truncating plane.

In use one pile is first driven in place in the usual manner. Then the next pile is put into position, its groove being caused to engage at the bottom with the tongue of the pile already in place. As the foot of each pile is without a shoe the second pile can be driven to stop at a point either above or below the first pile, as the nature of the bottom may require, the long tongue and cooperating groove holding the two piles together within any varying limits of relative positions apt to occur in practice. When a number of piles have been thus assembled, between each pair then will be found a long recess formed by the grooves of adjacent piles above the tongues. These grooves are filled with grouting and serve to form a monolithic structure. Such formation is further promoted by placing a concrete envelop over the top of the assembled piles, the projecting reinforcing rods serving to grip such envelop which is located above the pile-heads and between them above the pile bodies. This construction makes an excellent bond between the several parts.

I have found the driving buffer very useful in practice. The cast iron saddle fits accurately over the head of the pile and serves as a support for the capped wooden block which receives the direct impact of the pile driver, while the cushion of rope or similar material interposed between the head of the pile and the saddle serves to prevent any splitting shock from being transmitted to the body of the pile itself.

It will be noted that by my construction piles may be driven into the ground where there is a hard rock underneath of irregular upper surface, because although the adjacent piles are connected together by the cooperating tongues and grooves, yet adjacent piles may be driven to varying depths to suit the contour of such a ground, and the corresponding grooves and tongues are long enough to bind together the piles, no matter what may be their difference in height, after they are placed in position.

What I claim is:

1. A pile of reinforced concrete, compris-

ing a body having a longitudinal groove in one side that is open at its lower end, said body having a longitudinal groove in its opposite side that has its upper end open and
5 having its lower end terminating short of the lower end of the body, and a tongue projecting longitudinally from said opposite side of the body and below and in line with the groove therein, said tongue being longi-
10 tudinally movable in and through the lower open end of the opposing groove of an adjacent similar pile.

2. A pile of reinforced concrete, comprising a body having a longitudinal groove in
15 one side that is open at its lower end, said body having a longitudinal groove in its opposite side that has its upper end open

and having its lower end terminating short of the lower end of the body, and a tongue projecting longitudinally from said oppo- 20 site side of the body and extending to the lower end thereof, and having its upper end terminating at the lower end of said groove, being disposed in alinement therewith, said tongue being longitudinally movable in and 25 through the lower open end of the opposing groove of an adjacent similar pile.

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

WILLIAM MUESER.

Witnesses:

E. W. SCHERR, Jr.,

MARY H. LEWIS.

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