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CONCRETE BEARING PILE

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1 Claim. (Cl. 61—56)

This invention relates to bearing piles and, more particularly, to reenforced bearing pile constructions having an enlargement over that portion of the bearing pile in firm load-carrying soil.

An object of the present invention is to provide a bearing pile having a tapered enlargement over a portion of its length with the enlargement decreasing in size down to a point adjacent the penetrating end of the pile so that the cross-sectional area of the lower and upper portion of the pile is substantially the same.

Other objects and advantages of the present invention will become apparent as the description proceeds and reference is had to the accompanying drawing in which:

Figure 1 is an elevation of a bearing pile constructed in accordance with the present invention and showing the tapered enlargement extruding down through the water and mud into firm soil;

Figure 2 is an elevation taken at right angles to Figure 1;

Figure 3 is a section on line III—III of Figure 1;

Figure 4 is a section on line IV—IV of Figure 1;

Figure 5 is a section on line V—V of Figure 1; and,

Figure 6 is a detailed elevation of a modified form of tapered enlargement of the bearing pile.

In the drawing, the bearing pile of the present invention comprises a unitary structure of reenforced concrete and includes an upper straight portion 2 of square-shaped cross-section, which is shown in Figure 1 as penetrating through the water and mud area. Directly below the top of the firm soil area, the pile is enlarged, as shown at 3. This enlargement tapers downwardly from its upper extremities so that the cross-sectional area of the tapered enlargement decreases in size down to a point adjacent the penetrating end of said reenforced concrete bearing pile where the dimensions are of substantially the same cross-sectional area as the upper straight portion 2. The pile extends downwardly from the tapered enlargement 3 to pro-

vide a substantially straight section 4 of equal cross-sectional area as the upper portion 2, while the penetrating end of the pile terminates in a pointed end portion 5.

The entire unitary piling structure is provided with spaced reenforcing members 6 extending transversely of the axis of the bearing pile and vertically positioned reenforcing members 7 welded or otherwise secured to the transverse reenforcing member 6.

The unitary reenforced concrete bearing pile of the present invention is so constructed and arranged as to provide two parallel straight sides indicated, in Figure 2, at 8 and 9, while the sides at right angles to the straight sides 8 and 9 project outwardly over that portion of the tapered enlargement so as to provide sufficient taper in order to develop high load capacity of the bearing pile in clay or cohering soil and provide oblique load-carrying components acting to support the sides of the tapered area.

The unitary structure, as illustrated, is of square cross-section but it may be of rectangular cross-section or any other desired shape.

While I have shown and described as specific embodiment of the present invention, it will be seen that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the invention, as defined by the following claim.

I claim:

A bearing pile comprising a unitary reenforced concrete member of uniform thickness throughout its length comprising an upper straight portion of uniform cross-section, a penetrating end, an intermediate enlargement tapering downwardly from said upper straight portion so that the cross-sectional area thereof decreases in size to a point adjacent said penetrating end and a straight portion between said penetrating end and said intermediate enlargement of a cross-sectional area substantially equal to that of said upper straight portion, said unitary bearing pile having two parallel straight sides and vertical and transverse reenforcing members embedded within said tapered enlargement.

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