

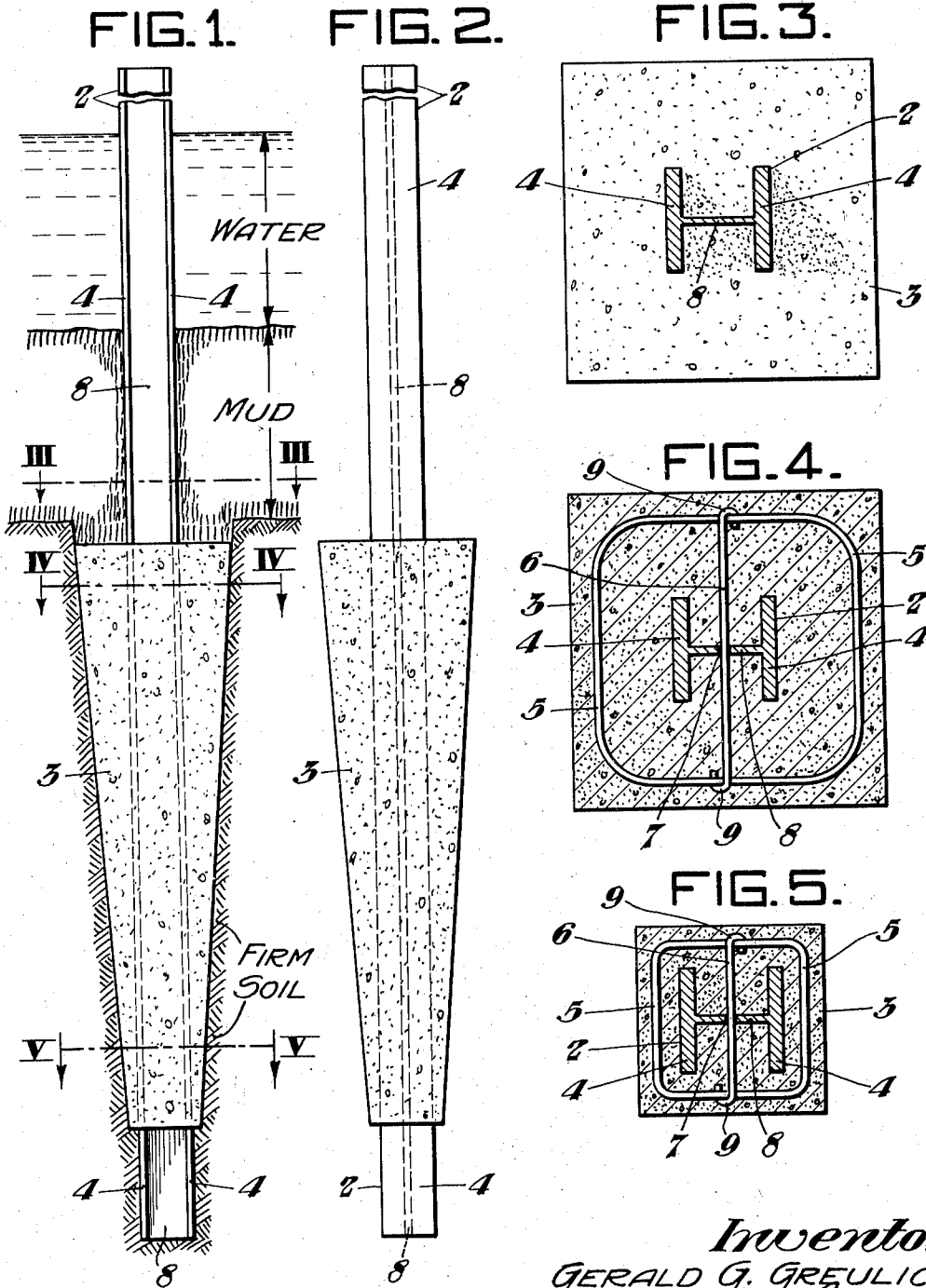
Jan. 16, 1940.

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2,187,316

BEARING PILE CONSTRUCTION

Filed Nov. 23, 1938



UNITED STATES PATENT OFFICE

2,187,316

BEARING PILE CONSTRUCTION

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Application November 23, 1938, Serial No. 242,085

1 Claim. (Cl. 61—53)

This invention relates to the application of enlargements to the normal bearing pile section only in that portion of the pile which is in firm load-carrying soil.

5 An object of this invention relates to applying an enlargement to the body of the bearing pile which is tapered and increases in width and size toward its upper end.

10 Another object of this invention is to provide an H or I-shaped member with tapered enlargements so that the pile will develop high load capacities in clay or cohering soil.

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

Figure 1 is an elevational view showing a conventional metal H or I-shaped pile extending down through the water and mud into firm soil and having the reinforced tapered enlargement extending on all four sides of the beam;

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

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

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

Figure 5 is a section on line V—V of Figure 1. In the drawing, the numeral 2 represents the main body portion of the bearing pile and comprises a conventional type metal H or I-shaped member extending down through the water and mud into the stratum of firm soil.

On that portion of the main body of the bearing pile which penetrates the firm soil stratum, there is provided a reinforced concrete tapered enlargement 3. This enlargement 3 extends outwardly beyond the outer faces of the flanges 4 of the H or I-shaped member so as to form a substantially equal distribution around the main body portion of the pile.

This tapered enlargement 3 surrounds the main body portion 2 of the pile for that portion of the length of said pile engaging firm soil with the taper of the enlargement decreasing in size from its top downward toward the point of said pile.

The tapered enlargement 3 is reinforced

throughout its length with square-shaped metallic members 5 embedded within the concrete adjacent the outer faces thereof and cross-members 6 extending through apertures 7 formed in the web 8 of the H or I-shaped member at spaced 5 intervals. These cross-members 6 are bent around or secured, in any conventional manner, as indicated at 9 to the spaced sides of said metallic members 5.

From the foregoing construction, it will be 10 seen that the tapered enlargement completely surrounds the H or I-shaped member and is provided with reinforcing members, spaced throughout its length as desired, with said reinforcing members spaced from and completely 15 encircling said member 2 and connected with reinforcing cross-members which pass through the web of said H or I-shaped member.

While I have shown and described a specific embodiment of the present invention, it will be 20 seen that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the specification, as defined by the following claim:

I claim:

25 A steel bearing pile having an H or I-shaped cross section, spaced openings formed in the web of said bearing pile throughout that portion of the pile which is in firm load carrying soil, a tapered concrete enlargement formed on 30 said portion, said enlargement tapering gradually from its top to its bottom to provide a greater cross sectional area at the top than at its bottom portion with the enlargement extending outwardly beyond the outer faces of the 35 flanges of said bearing pile and completely surrounding the same to form a substantially equal load distribution around said bearing pile, metallic reinforcing members embedded within the tapered concrete enlargement at spaced intervals from each other, and spaced from and 40 surrounding said H or I-shaped member, and cross members extending through said openings formed in the web and connected to said first mentioned reinforcing members.

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