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MEANS FOR PROTECTING FILES

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My invention relates to posts and piles and more particularly to means for protecting the portion of the pile below the surface of the water or ground.

An important object of my invention is the provision of means for protecting the surface of piles from deterioration and from the ravages of destructive organisms in a simple and inexpensive manner.

A further object of my invention is the provision of pile protecting means which can be readily applied to the pile and which does not require a substantial amount of head room in which to work.

Other objects and advantages of my invention will be apparent during the course of the following description.

In the accompanying drawing which forms a part of this specification and wherein like characters of reference denote like or corresponding parts throughout,

Figure 1 is a side elevation of a pile having my invention applied thereto,

Figure 2 is a horizontal sectional view on the line 2-2 of Figure 1,

Figure 3 is a vertical sectional view on the line 3-3 of Figure 2, and

Figure 4 is a perspective view of a portion of the pile having my invention applied thereto, Figure 5 is a cross-sectional view of a portion of a pile having my invention applied thereto, Figure 6 is a cross-sectional view of a portion of a pile having my invention applied thereto, Figure 7 is a cross-sectional view of a portion of a pile having my invention applied thereto, and Figure 8 is a cross-sectional view of a portion of a pile having my invention applied thereto.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of my invention the numeral 10 designates a pile supporting the structure 11 at a point above the surface of the water, and having its lower end embedded in the ground below the water. My improvement consists in a generally cylindrical casing of metal or other suitable material formed in two semi-cylindrical sections 12. The meeting edges of the sections 12 are provided with abutting radial flanges which are turned back upon themselves to form J-shaped tongues 13 extending the full length of the sections. When the sections are together with the tongues 13 in abutting relation, as indicated in Figure 2, they form a cylindrical casing of substantially greater diameter than the pile about which they are to be placed, having a generally T-shaped rail at each side formed by the abutting tongues 13. In order to securely clamp the sections together I provide a series of clamping runners or channels 14 which are of generally rectangular cross-section with one of their sides slotted to receive the abutting walls of the tongues 13. When the tongues 13 are in close relation, the clamps 14 are telescoped therewith, fitting closely about the tongues and securing the sections in assembled position, as best seen in Figure 2. The clamps 14 are formed in suitable lengths and slid down over the tongues from their tops.

Spacing fingers 15 are struck out of the lower edge of the casing sections 12 and extend inwardly in a horizontal position to a point adjacent but spaced from the pile, as indicated in Figure 2. These fingers insure the proper spacing of the casing sections from the pile. While the pile and casing are illustrated as circular in cross-section, the pile may have some other configuration and the casing will conform to the general shape of the pile.

In use the two casing sections are placed about the pile and the clamps 14 forced down over the tongues 13, one at a time, preferably until the tongues are completely covered, as in Figure 1. The assembled casing may then be forced into the ground below the water, and is of a length to extend above the high water mark. The casing is of a diameter considerably greater than the pile and the fingers 15 insure an annular space between the pile and casing. This space is filled with a suitable plastic material 16 which is physically and chemically repellant to destructive marine life. A mixture of sand and asphalt or tar and sand will produce the desired results. This material below water remains in a somewhat plastic state and will consequently follow the conformation of the pile and casing.

An important feature of my invention is the fact that the protective casing and filling may be applied to a pile where there is very little head room available. The casing sections are placed in the water and can be moved laterally into position about the pile. The clamping sections are made in sections having a length of a few inches up to several feet, depending on the head room available between the top of the casing and the structure 11. They may be placed on the tongues one at a time and require only a few inches of head room when made in short lengths. The casing and its filling provide protection against the ravages of the usual marine organisms which destroy the piles, and will last indefinitely.

While I have shown and described the preferred embodiment of my invention it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.
Having thus described my invention, what I claim and desire to protect by Letters Patent is:

1. Protecting means for piles comprising a longitudinally split casing adapted to surround a pile and capable of being moved laterally into position about the pile, cooperating projections extending along the edges of the split portion of the casing, a clamping member adapted to telescopically receive the projections, said clamping member being divided into a plurality of relatively short sections, said casing being divided longitudinally into two sections, longitudinally extending flanged tongues extending along the edges of said sections, channel shaped clamping members adapted to slidably receive said tongues, said clamping members being divided into a plurality of relatively short sections, and a filling material arranged between the casing and pile.

2. Pile protecting means comprising a casing adapted to surround the pile in spaced relation therewith, said casing being divided longitudinally into two sections, longitudinally extending flanged tongues extending along the edges of said sections, channel shaped clamping members adapted to slidably receive said tongues, said clamping members being divided into a plurality of relatively short sections, spacing fingers extending inwardly from said casing towards said pile, and a filling material arranged between the casing and pile.

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