

UNITED STATES PATENT OFFICE.

GEORGE PHILLIPS, OF KEY WEST, FLORIDA.

PROCESS OF PRESERVING WOOD.

SPECIFICATION forming part of Letters Patent No. 414,249, dated November 5, 1889.

Application filed November 24, 1888. Serial No. 291,821. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE PHILLIPS, a citizen of the United States, residing in the city of Key West, in the county of Monroe and State of Florida, have made a new and useful invention—to wit, a Process of Preparing Piles or other Timbers for Preservation; and I do declare that the following is a specification thereof.

My invention relates, primarily, to a process for preparing piles or other timbers for preservation in water to protect them from decay and the ravages of the *Teredo navalis* and other marine insects; but it may also be successfully applied to the bottoms of boats, vessels, and other water-craft, and to timbers for railroads, bridges, pavements, houses, and submarine and other wooden structures.

In describing the invention I shall, for convenience, describe it as applied to piles; but I do not limit it to that application.

The invention consists, generally, in coating the outer surface of the pile or other timber with a hot asphaltic material, then winding around and fastening to the surface so coated a strip of stout fabric, then coating the fabric surface with said hot asphaltic material, and finally applying to the last surface calcareous material in a dry, hot, pulverized state and allowing the mass to set and indurate.

The base of the compound used for the coating is asphalt. There are many varieties of this material, and I do not confine myself to any particular variety. I prefer to use that of the Val de Travers in Switzerland, which is almost pure carbonate of lime and bitumen. The nearer the asphalt approaches to that standard the better it is adapted to my invention. The asphalt is melted by heat in any suitable manner, care being taken not to burn, scorch, or overheat it until it acquires the consistency of thick paint. Mineral tar may be added during the process to assist the thinning. The pile, having been previously barked, is then coated with the asphaltic mixture while boiling hot, either by a swab, mop, or brush or by immersion. More than one such coating may be applied, if desired, to secure the requisite thickness. Around the pile so coated I wind a strip of

stout fabric, with edges overlapping, so as to cover the surface, and then fasten it to the pile by flat-headed nails made of copper or galvanized iron. The fabric best suited for this purpose is canvas or sail-cloth; but any fabric may be used, even wire cloth or gauze. Another coating of the asphaltic mixture is then applied as before, this time to the outer surface of the woven fabric. Over this last surface of asphaltic coating I sift as much dry, hot, pulverized calcareous material as the asphaltic coating will absorb. The calcareous material best suited for this purpose, and heretofore used by me with great success, is a species of sand found in Florida, and consisting of decomposed shells and coral. Instead of this sand in calcined state, hot unslaked lime may be used, a calcareous material being essential to my invention, though silicious sand may be mixed with it to save cost. The coating so formed is allowed to set and indurate, and thereby a tight-fitting jacket is formed around the pile of a firm stone-like hardness, impervious to the action of the elements and the attacks of the *Teredo navalis* and other insects.

In applying the invention to other structures the mode of application will be varied according to the circumstances of each case.

I am aware that asphaltum in connection with sand or earth is not new as a coating for piles, and also that pulverized shells have been used in connection with tar, and I do not broadly claim these materials in connection with my process; nor do I claim the above-described coating, as that is claimed in another application filed in the United States Patent Office by me of even date herewith, Serial No. 291,819.

I claim as my invention—

1. The process of preparing piles and other timbers for preservation, consisting in the following steps, viz: first, coating the surface of the same with hot asphalt; second, winding around the pile or timber so coated and attaching thereto a fabric; third, applying to the surface of the fabric so wound around the pile another coat of said hot asphalt, and, fourth, applying calcareous material to the last-mentioned surface and allowing the same to set and indurate, substantially as described.

2. The process of preparing piles or other
timbers for preservation, consisting in the fol-
lowing steps, viz: first, coating the surface of
the same with a mixture of hot asphalt; sec-
5 ond, winding around the pile or timber so
coated and attaching thereto a fabric; third,
applying to the surface of the fabric so wound
around the pile another coat of said hot as-
phaltic mixture, and, fourth, applying un-

slaked lime to the last-named surface and al- 10
lowing the mass to set and indurate, substan-
tially as described.

In witness whereof I have hereunto set my
hand and seal.

GEO. PHILLIPS. [L. s.]

Witnesses:

W. C. MALONEY,
RAMON ALVAREZ.