

UNITED STATES PATENT OFFICE.

GEORGE PHILLIPS, OF KEY WEST, FLORIDA.

COATING FOR WOODEN STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 414,246, dated November 5, 1889.

Application filed November 24, 1888. Serial No. 291,818. (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 Coating for Piles and other Timbers; and I do hereby declare that the following is a specification thereof.

My invention relates to the covering of wooden structures which are exposed in water, and has for its object the protection of such structures from decay and injury by marine insects, such as the *Teredo navalis*. It is intended to be applied to the surfaces of such structures and those parts which are exposed to the water or in places where they are liable to damage.

The invention consists of an inner coating of asphaltic material combined with an outer coating of pulverized calcareous material. The asphaltic material used is preferably of asphaltum of the Val de Travers in Switzerland, and the nearer the asphalt used approaches to that standard the better it is adapted to my invention.

In forming the coating above referred to the asphalt is reduced to a liquid or semi-liquid condition, which can be readily done by the application of heat, care being taken not to scorch or overheat it. I reduce it for the purpose to the consistency of thick paint, and, while the asphalt is an essential ingredient, some mineral tar may be added to assist in thinning. While the asphalt is in this liquid or semi-liquid condition it is applied directly to the wooden surface by a swab or brush or by immersion, and one or more of such coatings may be applied, according to the thickness required. While it is still in a soft condition upon the surface I sift upon this coating as much pulverized calcareous material as the asphalt coating will absorb. The calcareous material suited for this purpose and heretofore used by me with great success is a kind of sand found in Florida, and consists of decomposed shells and coral. This sand is first heated to calcination and is applied while hot, to cause the materials the better to mix and cohere. Instead of this sand of decomposed shells and coral, I may use unslaked lime in the same manner. The calcareous material is an essential element of the invention, though some silicious sand may be mixed with it to save cost. After the coating is thus formed it is

allowed to harden, and constitutes a close covering for the structure impervious to the elements and insects. The obvious and most common use of the material applied to structures exposed to the action of the water and marine insects is for covering piles and the bottoms of sea-going vessels; but my invention is not limited to this.

For the better union of the lime or other calcareous material with the asphalt I have heated the lime or pulverized calcareous material and sifted it upon the asphaltic covering while in a heated condition. The whole, when completed, forms a single compact coating for the wood, the asphalt adheres strongly to the wood and forms a close firm protecting-coat, while the calcareous material or lime unites with the surface of the asphalt, hardens the asphalt, and makes it insect-proof.

I do not claim, broadly, asphaltum in any composition for the purpose above explained, as the use of it has been suggested in connection with sand or earth; nor do I claim the use of calcareous material as an element of the covering for exposed wood, as pulverized shells have been heretofore described for this purpose in connection with pitch and tar.

I am also aware that lime and asphalt have been used with other mixtures for pavements.

I do not herein claim the above-described process, that being the subject of another application filed in the United States Patent Office of even date herewith, Serial No. 291,820.

I claim as my invention—

1. A covering for piles and wooden structures, consisting of an inner coating of asphalt applied directly to the wood, combined with an outer coating of calcareous material, substantially as described.

2. A covering for piles and wooden structures, consisting of an inner coating of asphalt applied directly to the wood, combined with an outer coating of lime, substantially as described.

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

GEO. PHILLIPS. [L. S.]

Witnesses:

W. C. MALONEY,
RAMON ALVAREZ.