

United States Patent Office.

GEORGE AUGUSTUS FREDERICK FOWKE, OF WESTMINSTER, GREAT BRITAIN.

Letters Patent No. 70,826, dated November 12, 1867.

IMPROVED COMPOSITION FOR COATING SHIPS' BOTTOMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE AUGUSTUS FREDERICK FOWKE, of the Conservative Club, Saint James street, Westminster, in the Kingdom of Great Britain, gentleman, have invented an "Improvement in Compositions for Preventing the Fouling of the Bottoms of Iron or other Ships, floating-docks, and other similar structures, for protecting wood-work of any sort exposed to the ravages of the worm, and in the mode or means of applying the said compositions;" and I do hereby declare that the following is a full and exact description thereof.

My invention consists in the manufacture of new or improved compositions or mixtures for the coating and thereby more effectually preserving the bottoms of iron or wooden ships, floating-docks, and other such like structures from fouling; and protecting piers, piles, or other wood-work from the worm; and in the mode of applying the said compositions or mixtures to the surface or surfaces which it is desired to protect.

I. In order to carry out my invention, I take the following ingredients, in or about the following relative proportions or quantities, namely, of pitch, three parts; of resin or other gums, one part; of plumbago, five parts; of tallow or other grease, one-third of a part; and of cement, one part. I melt these ingredients in a metal vessel, which I find it convenient to have of considerable thickness, so that the heat can be kept uniform, nor does the sulphur so readily take fire as in a thin vessel. The ingredients are thoroughly mixed and amalgamated during the process. I spread the mixture whilst in a warm state over the surface to be coated, and I smooth or thin the coat applied with hot irons so as to make it uniform in thickness.

II. I next prepare, in a similar manner, a composition or mixture of the same ingredients, (with the exception of the tallow,) and in or about the same relative proportions or quantities; and I prepare this composition and use it in identically the same manner as that first hereinabove described, (I,) but as a second coating over or above the first.

III. I now take of the following ingredients in or about the following proportions, namely, of sulphur, eight parts; of plumbago, five parts; and of cement as may be required. I melt these materials in a similar manner, and, thoroughly mixing them together, I run this composition into moulds, so as to form plates of any thickness or form that may be desired, rolling it during the process, for the purpose of rendering the plates of sufficient density, and forcing it into the moulds. I propose to make the edges bevelled. I coat the plates thus made with a dressing of both or either of the compositions or mixtures hereinbefore described, I and II.

The composition already spread upon the ship being warmed, and that upon the plates being also warmed, the plates are pressed on to their places on the surface to be coated, where they adhere, and the interstices between the plates are carefully filled up at the bevelled edges with the composition, III, in a soft state, which is pressed in with hot irons or small rollers, making a perfect joint, and forming one homogeneous surface without any seam; the bevelled edges being themselves slightly melted.

I propose, in some cases, to apply the plates directly on to the composition first described, that with the tallow, and dispense with the use of the second composition. I propose also, in some cases, to make these compositions, or some or any of them, without the cement; the cement being added, if required, for the purpose of giving stiffness in the case of the compositions I and II, so as to prevent the composition from running, and greater hardness in case of composition III. The resin also, in cases of compositions I and II, is added for the purpose of giving greater firmness; the quantity used depending upon the quality of the pitch.

What I claim as my invention, and desire to secure by Letters Patent, is—

The composition, in its forms I, II, and III, and its application and use, as hereinbefore in this specification described, for the purpose of coating the bottoms of iron and wooden ships, floating-docks, and other similar structures, and submarine works, and thereby preventing them from fouling and the ravages of the worm.

GEORGE AUGUSTUS FREDERICK FOWKE.

Witnesses:

MATTHEW AUGUSTUS SOUL,
GEORGE POLLARD.