

# United States Patent Office.

LEVIN ALBERT MESSINGER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 101,899, dated April 12, 1870.

## IMPROVED PAINT OR COATING FOR SHIPS' BOTTOMS.

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

I, LEVIN ALBERT MESSINGER, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Paint or Coating for the Bottoms of Vessels, &c., of which the following is a specification.

### General Description.

My improved paint is composed of arsenite of copper, verdigris, sugar of lead, South Carolina or other vegetable tar, and turpentine.

For the first of these ingredients, ordinary arsenite of copper may be used, but I prefer to prepare it in the following manner:

Arsenic and an alkali (potassium, for instance,) are dissolved together by the aid of heat, and with the liquid thus obtained is mixed a proper quantity of sulphate of copper, (blue vitriol,) previously dissolved in water. A precipitate results from this mixture, which is the arsenite of copper.

To make one gallon of the improved paint, the several ingredients are mixed in about the following proportions:

Arsenite of copper, two pounds; verdigris, one pound; sugar of lead, one-fourth pound; South Carolina or other vegetable tar, two quarts; turpentine, one and one-half pint.

In mixing the above, the tar is thinned by means of the turpentine, after which the first three ingredients are added, either separately or after having been ground together.

In applying the paint to the bottom of a vessel or other structure, the surface of the same should be perfectly dry and clean, and all particles of old paint scraped or otherwise removed from the same. The

paint, when thus applied, will dry quickly and be perfectly water-proof; will protect ships' bottoms or other structures against the destructive action of worms, and will also effectually prevent the adhesion of barnacles and sea-grasses to the same.

I am aware that both copper and arsenic have been used in protective compositions for ships' bottoms, &c., for the purpose of destroying and preventing the adhesion of animalculæ to the same, but such ingredients have never been combined with sugar of lead and tar, the former of which is a most active poison, and aids the arsenic and copper in destroying both animal and vegetable deposits, and has also well-known drying properties, which render it of value in the paint. The latter ingredient, the tar, is used on account of its adhesive and water-proofing qualities.

The turpentine serves merely as a drier and solvent for the tar, and, if any additional drier is required, a small proportion of Japan or equivalent substance may be added in mixing the paint.

Without confining myself to the exact proportions stated of the several ingredients,

I claim—

A paint or coating for ships' bottoms, &c., composed of arsenite of copper, verdigris, sugar of lead, South Carolina or other vegetable tar, and turpentine.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEVIN ALBERT MESSINGER.

Witnesses:

FRANK B. RICHARDS,  
LOUIS BOSWELL.

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