

UNITED STATES PATENT OFFICE.

GEORGE D. COLEMAN, OF BROOKLINE, MASSACHUSETTS.

STRUCTURAL PRESERVATIVE.

No 823,205.

Specification of Letters Patent.

Patented June 12, 1906.

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To all whom it may concern:

Be it known that I, GEORGE D. COLEMAN, a citizen of the United States, residing at Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Structural Preservatives; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in structural preservatives.

Much difficulty has been experienced in securing an efficient protective coating for such steel structural work as bridges, piers, lighthouses, train-sheds, and the like, and particularly in the last named, in which the sulphurous-acid gases promote the oxidization of the structure.

The object of the present invention is to produce a coating for structural work which will be capable of being securely attached to the surface of the structure and which at the same time will present a surface of weather and gas resistant quality.

To this end the present invention consists in the coating hereinafter described, and particularly defined in the claims.

The surface of the structure to be coated will first be cleaned, and if old and rusty the cleaning is best done by the use of a sand-blast, and then to the surface of the structure thus cleaned is applied a layer of slow-drying-paint—as, for example, a paint made of red lead and raw linseed-oil in which no drier is used—the result being a resilient and elastic but dense layer which will securely attach itself to the surface of the structure irrespective of its irregularities and which will not break or crack with the come and go of the parts thereof. While this layer of paint is still moist and tacky the surface is sprayed with comminuted lead or sharp sand. The particles of this layer partially embed themselves in the layer of paint and by reason of their irregularities securely affix themselves thereto. The paint above referred to is sufficiently dense and tough to carry the layer of lead or sand and to hold it firmly in place. Upon the surface of the coating as thus applied is sprayed a coating of hydraulic or,

preferably, Portland cement about the consistency of cream, which enters the interstices between the particles of lead or sand, and is thus anchored to the surface thereof and affords when it hardens a surface substantially of stone, which will afford an efficient protection against the attacks of weather and injurious gases.

The intermediate layer, which has been referred to as a "layer of lead or sand" comprises an anchoring layer, which by reason of the irregular surface of the particles thereof anchors the cement coating to the paint layer. This layer may be of any suitable material, lead being preferred because of its quality of becoming passive under the influence of the atmosphere wherever the surface of the cement is disturbed; but in the broader aspects of the invention it is considered that any suitable granular material is within the contemplation of the invention for use as the anchoring layer.

Having thus described the invention, what is claimed is—

1. A structural preservative consisting of a layer of slow-drying paint applied to the surface of the structure, an anchoring layer of granulated material embedded in but projecting from the surface of the paint, and a layer of hydraulic cement secured to and covering the anchoring layer, substantially as described.

2. A structural preservative, consisting of a layer of slow-drying paint applied to the surface of the structure, an anchoring layer of comminuted lead, and a layer of Portland cement applied to the anchoring layer of lead, substantially as described.

3. A structural preservative consisting of a layer of oil-paint applied to the surface of the structure, an anchoring layer of granulated material embedded in but projecting from the surface of the paint, and a layer of cement secured to and covering the anchoring layer, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE D. COLEMAN.

Witnesses:

HORACE VAN EVEREN,
ALFRED H. HILDRETH.