

UNITED STATES PATENT OFFICE.

JACOB H. LINVILLE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN THE ART OF PROTECTING METALLIC COLUMNS FROM CORROSION.

Specification forming part of Letters Patent No. 129,241, dated July 16, 1872.

To all whom it may concern:

Be it known that I, JACOB H. LINVILLE, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Art of Protecting Tubular Metallic Columns from Corrosion, of which the following is a specification:

The object of my invention is to provide means for protecting the interior surfaces of tubular metallic columns, posts, struts, arches, &c., from the deleterious effects of oxidation; to which end my improvement consists in a novel method of applying anti-corrosive liquids thereto, as hereinafter fully set forth.

Tubular columns used in civil engineering and architecture have been and are made of various forms by riveting or otherwise uniting together segments of metal. It is impracticable to prevent the access of damp air to the interior of such columns as ordinarily constructed, and in some instances water may also find its way through their joints. The oxidation resultant therefrom weakens the column, and the requirements of construction are such that it has been hitherto difficult to afford effectual means of counteracting this injurious effect. Holes may be punched in the segments to admit a brush for applying paint to their inner surfaces, but if the openings be made sufficiently large to admit of the proper movements of the brush they would impair the strength of the column; and if the column were to be permanently filled with any anti-corrosive material its weight would be too great for the requirements of the service in which it is to be employed.

To carry out the object of my invention, I close the extremities of the column, if not

already closed, by caps or other fittings, and tap a small hole near each extremity. A plug is then inserted in the hole next to the lower end of the column, and the same filled with paint, asphaltum, or other anti-corrosive liquid through the hole adjacent to the other end. After allowing the liquid to remain in the column long enough to form a coating on its entire inner surface I withdraw the plug from the lower hole and draw off the surplus liquid, which may be again employed for a similar purpose. By this means I am enabled to properly apply the liquid to all portions of the interior of the column which are practically inaccessible in any other manner, and this without perforating the column to any perceptible or injurious extent. In the application of my process to columns which have undergone corrosion for any length of time it may be advisable to first fill the column with dilute acid or other liquid suitable for detaching the scale from its interior, and after withdrawing this liquid and removing the detached scale to apply the anti-corrosive liquid in the manner hereinbefore set forth.

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

The improvement in the art of protecting the interior of tubular metallic columns, struts, or arches from corrosion by filling the same with anti-corrosive liquid, and withdrawing the liquid after it has formed a coating upon their inner surfaces, substantially as set forth.

J. H. LINVILLE.

Witnesses:

WM. B. DAYTON,
R. G. WESTMORE.