

UNITED STATES PATENT OFFICE.

MILO A. RICHARDSON, OF WEST STRATFORD, CONNECTICUT.

IMPROVEMENT IN PROCESSES OF ORNAMENTING CASTINGS AND PROTECTING THE SURFACE OF SAME.

Specification forming part of Letters Patent No. **187,559**, dated February 20, 1877; application filed July 8, 1876.

To all whom it may concern:

Be it known that I, MILO A. RICHARDSON, of West Stratford, in the county of Fairfield and State of Connecticut, have invented a new and valuable Improvement in the Process of Ornamenting and Protecting the Surface of Metal Castings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

My invention relates to the ornamentation and protection of the surface of zinc or other metal castings; and it consists in a method or process of surfacing the same by the application of the sand-blast, and preserving the surface so obtained from oxidation by the use of oil or some gummy substance, in combination with a blast of steam, substantially as and for the purposes hereinafter set forth.

In the manufacture of zinc ornaments and monuments, it becomes desirable to provide the same with a neat and attractive finish. This I accomplish by applying the well-known sand-blast with steam or air. But the beautiful finish thus obtained is liable to be injured by exposure to moisture, which causes decomposition of the surface of the casting, and the formation of white oxide of zinc, that runs down and over the work, giving it an unpleasant look. To prevent this decomposi-

tion and oxidation I next apply (after the sand-blast) a fixing material, consisting of some oil or gummy substance, preferably linseed-oil, which will not color the metal. I then direct upon the surface of the metal a strong blast of steam, of at least fifty pounds pressure to the inch, and thereby drive off the excess of oil. Simultaneously the pores of the metal are opened, and the oil, which is greatly expanded by the heat, readily enters the metal, which it protects from moisture and consequent oxidation.

This process may be applied to other metals besides zinc.

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

The process of finishing metal castings by first directing a sand-blast upon the surface of the same, then applying an oil or gum that will retard decomposition without discoloring the metal, and finally applying a blast of steam to the metal surface so treated, all substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MILO A. RICHARDSON.

Witnesses:

SAM B. SUMNER,

EDW. STEW. SUMNER.