

United States Patent Office.

JOHN H. PEAKE, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 92,998, dated July 27, 1869.

IMPROVEMENT IN ZINCKING IRON.

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, JOHN H. PEAKE, of the city of Washington, in the District of Columbia, have invented a new and improved Process of Zincking Iron; and I do hereby declare the following to be a full and correct description of the same.

The nature of my invention consists in an improved process of protecting the surfaces of malleable, wrought, and cast-iron articles, from rust or oxidation, by zincking:

When iron is zincked by any of the processes now in use, it is necessary that the article be thoroughly cleansed from oxide before receiving the zinc coating, and as this is accomplished by hammering, filing, and scrubbing with sand and emery-paper, with or without a prior subjection of it to a bath of heated sulphuric acid and water or heated hydrochloric acid and water, it is attended with much labor and expense.

By the known and used processes, also, the coating of zinc obtained will crack and come off in scales, when the zincked article is exposed to rough usage, or subjected to hammering.

A nice calculation of the galvanic current, in the process by electro-deposit, will sometimes insure a coating that will stand the test of hammering, and will weld with the iron, but it is both difficult and uncertain.

By my invention, the roughest and most badly-oxidized specimens can be thoroughly zincked without any such preparation, and not only is the zincking-process simplified and cheapened, by dispensing with the preliminary cleansing, but such a zinc coating is obtained, that, without peeling or cracking, will adapt itself to alterations in the form of the article coated, produced

by hammering or other force, and will not interfere with the process of welding.

To enable others to use my invention, I will proceed to describe it.

I first subject the article to be zincked to a bath, composed of one hundred and fifty (150) pounds of saturated solution of chloride of ammonium, fifty (50) pounds of hydrochloric acid, and five (5) pounds of metallic zinc, dissolved in hydrochloric acid, with the addition of five (5) pounds of chloride of potassium, the proportions stated being preferred.

I allow it to remain therein from fifteen minutes to one hour; then take it out, and after allowing it to dry for a few moments, immerse it in melted zinc a very short time—the time of immersion in the bath, as well as in the melted zinc, being proportioned to the nature and size of the article zincked—when, on being removed, it will be well coated with zinc.

Having described my improved process,

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

A composition of saturated solution of chloride of ammonium, hydrochloric acid, and metallic zinc dissolved in hydrochloric acid, with the addition of chloride of potassium, in the proportions stated, or equivalent proportions, for the purpose specified.

The above specification of my said invention signed and witnessed, at Washington, this 12th day of June, A. D. 1869.

JOHN H. PEAKE.

Witnesses:

L. FROST,
P. A. DELANO.