

UNITED STATES PATENT OFFICE.

GEORG WEGNER AND PAUL GÜHRS, OF BERLIN, GERMANY.

COATING ALUMINIUM AND ALUMINIUM ALLOYS.

SPECIFICATION forming part of Letters Patent No. 505,864, dated October 3, 1893.

Application filed February 3, 1893. Serial No. 460,877. (No specimens.)

To all whom it may concern:

Be it known that we, GEORG WEGNER and PAUL GÜHRS, subjects of the King of Prussia, residing at Berlin, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Coating Aluminium and Aluminium Alloys, of which the following is a specification.

This invention relates to the coating of aluminium or aluminium alloys and it has for its object to do so by an improved process.

The coating, which has a color and possesses a high gloss protects the aluminium from the action of damp, &c.

In carrying out the process under our method with pure aluminium or an alloy containing at least eighty per cent. of aluminium, we first brush the metal over with a solution of acetous verdigris, oxide of iron, sulphur, and sal-ammoniac, and then heat it to a high temperature; thereafter the metal is again brushed over with the solution and then reheated. The metal is now brushed with a sharp brush and then painted over with sulphur dissolved in turpentine and then again fired or heated. The metal is finally dipped into a hot bath of pure linseed oil and kept there until the oil has entirely evaporated.

By this process the metal is covered with a colored coating which adheres so strongly that it will not peel off or crack even though the metal itself is bent or broken.

A gloss or glaze is or may be formed on the coating by brushing it over with a solution of bees-wax dissolved in turpentine. The effect of the brushing is to slightly heat up the metal whereupon the wax forces itself into the coating and imparts to it a certain degree

of flexibility. The bees-wax also promotes the adhesion of the coating and it serves to protect the metal from the action of the atmosphere.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

1. A process of coating aluminium or its alloys consisting in first painting the metal with a solution of acetous verdigris, oxide of iron, sulphur and sal-ammoniac and then subjecting it to heat, thereafter again painting with the same solution and heating the metal, subsequently brushing it, and then painting it over with sulphur dissolved in turpentine and firing it; and finally steeping it in a bath of linseed oil, substantially as hereinbefore described.

2. A process of coating aluminium or its alloys consisting in first painting the metal with a solution of acetous verdigris, oxide of iron, sulphur, and sal-ammoniac and then subjecting it to heat; thereafter again painting with the same solution and heating the metal; subsequently brushing it, and then painting it over with sulphur dissolved in turpentine, and firing it; and then finally steeping it in a bath of linseed oil and brushing over the surface with bees-wax, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

GEORG WEGNER.
PAUL GÜHRS.

Witnesses:

G. W. ARNOD,
J. M. SPEAR.