

UNITED STATES PATENT OFFICE.

GEORG WEGNER AND PAUL GÜHRS, OF BERLIN, GERMANY.

METHOD OF ELECTROPLATING ALUMINIUM AND ITS ALLOYS.

SPECIFICATION forming part of Letters Patent No. 496,176, dated April 25, 1893.

Application filed February 3, 1893. Serial No. 460,878. (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 German Empire, have invented a new and Improved Method of Plating or Coating Aluminium and Aluminium Alloys of which the following is a full, clear, and exact description.

10 This invention relates to a new or improved method of producing electrolytic depositions on aluminium and aluminium alloys and it has for its object to do so in such a manner that the deposit will adhere so firmly that the articles coated may be hammered, cut, or bent without the coating coming off.

Our method of procedure is as follows: The article of aluminium or of an alloy of aluminium is first steeped in a bath consisting of acetic verdigris dissolved in vinegar, oxide of iron, sulphur, and ammonium chloride. After this treatment the article is brushed with a soft brass-wire brush. As a result of the brushing a metal ground is formed which absorbs the fat of the aluminium and fills up the pores. The ground becomes firmly fixed to the aluminium without any intermediate strata. The article is now rinsed well in clear water and is then placed in a silver, nickel, gold, copper, brass, or other electrolytic bath to be plated in the usual man-

ner. The articles can be coated to any thickness to suit different requirements. The hereinbefore described process is mainly suited for sheets or wire made of aluminium or its alloys and which have to be worked up after treatment by stamping, perforating, sawing, cutting, bending, &c., as, since the plating adheres very firmly, there is no probability of the plating scaling or stripping off. The plating will not come off even though the sheet or wire is bent backward and forward.

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

The hereinbefore described method of plating or coating aluminium or its alloys, consisting in, first, steeping the aluminium article to be operated on in a bath composed of acetic verdigris dissolved in vinegar, oxide of iron, sulphur, and ammonium chloride, then brushing it with a soft brass-wire brush, and thereafter rinsing it in water, and finally subjecting it to treatment in an electrolytic bath.

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

GEORG WEGNER.
PAUL GÜHRS.

Witnesses:

W. H. EDWARDS,
W. HAUPT.