

UNITED STATES PATENT OFFICE.

ERNST BECKER AND OTTO BECKER, OF ISERLOHN, GERMANY.

PROCESS OF ELECTROPLATING ALUMINIUM AND ITS ALLOYS.

1,014,560.

Specification of Letters Patent.

Patented Jan. 9, 1912.

No Drawing.

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To all whom it may concern:

Be it known that we, ERNST BECKER and OTTO BECKER, subjects of the Emperor of Germany, and residents of Iserlohn, Westphalia, Germany, have invented an Improved Process of Electroplating Aluminium and Its Alloys, of which the following is a specification.

The numerous attempts made to provide aluminium with a coating of some other metal, for instance nickel, show that the plating of aluminium is technically of great importance. However, the results so far obtained in this direction have not been very successful, since the metal coating, mostly applied together with an intermediate layer of some other substance, easily scales off the plated aluminium articles when the latter are put to use. The consequence is that plated aluminium articles have so far had little or no practical utility.

The present invention relates to an improved process of electroplating aluminium and its alloys with any desired metal, the improved process being such that the formation of an oxid film, or the application of an intermediate layer is avoided and a plating obtained which does not break or scale off even at a repeated bending of the plated material.

According to the invention the aluminium articles are first cleaned in a bath composed of cyanid of potassium, water and liquid ammonia, in the proportions of 50, 2000 and

100 respectively. This bath is heated to boiling, and the articles are immersed in the boiling bath for 15 seconds whereupon they are transferred to a solution, composed of 3-5 parts tartar and 100 parts of water, to cool. This cleaning process is twice repeated, the immersion in the cyanid bath being, however, in the latter instances limited to the extent of 2 or 3 seconds. After the articles have been cleared of grease in this manner, they are transferred directly, without the application of an intermediate layer, to a metal bath of known composition, to which bath boric acid and ammonia may be added in known manner, whereupon the electroplating takes place in the usual fashion.

We claim:

A process of electroplating aluminium and its alloys with any metal, consisting in immersing the aluminium articles repeatedly for a short duration of time in a boiling bath composed of cyanid of potassium, water, and liquid ammonia, the articles being cooled after each such immersion in a solution of tartar and water, the electroplating being thereafter effected directly without the application of an intermediate layer of another metal, substantially as set forth.

ERNST BECKER. [L. S.]
OTTO BECKER. [L. S.]

Witnesses:

CHAS. J. WRIGHT,
ALBERT FRANK NUFER.