J. J. WALSH.

NICKEL ANODE AND PROCESS OF MANUFACTURE.

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1,185,959. Patented June 6, 1916.

Fig. 2.



Fig. 1.

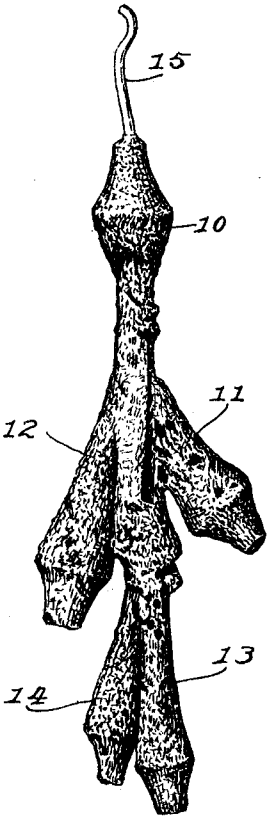


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES J. WALSH, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE PREST-O-LITE COMPANY, INC., OF INDIANAPOLIS, INDIANA, A CORPORATION OF NEW YORK.

NICKEL ANODE AND PROCESS OF MANUFACTURE.

1,185,959. Specification of Letters Patent. Patented June 6, 1916.

Application filed June 24, 1915. Serial No. 36,090.

To all whom it may concern:

Be it known that I, JAMES J. WALSH, a citizen of the United States, residing at Indianapolis, Marion county, and State of Indiana, have invented and discovered certain new and useful Improvements in Nickel Anodes and Processes of Manufacture, of which the following is a specification.

In the art of nickel plating as commonly practised the nickel anodes are hung in chemical preparation in the plating tubs of the apparatus and the nickel is eaten off by the chemicals and deposited on the work. In such process a considerable portion of the nickel anodes employed is wasted from the fact that after said anodes have been consumed to 75% to 85% of their contents they become ineffective and new anodes must be supplied of adequate size and capacity. It has been the custom to discard these partially used anodes notwithstanding they still contain from 15% to 25% of their original metal and efficiency. They are usually returned to the manufacturers of the anodes as scrap nickel at approximately half the original price, it being necessary to re-cast them of proper form and size before the metal they contain is available for use. I have discovered by a series of experiments that it is possible to so unite these scrap anodes as to form anodes of efficient size and capacity for practical use without recasting, such uniting being effected by means of autogeneous welding. By such process I take a partially used anode, such as shown in Figure 2 of the accompanying drawing and weld thereto scrap anodes, such as shown in Fig. 3, forming an anode of a form and arrangement similar to that shown in Fig. 1, which shows an anode 10 with hanger 15, forming the base of the structure, with scrap anodes 11, 12, 13 and 14 welded thereto by said autogeneous welding process which consists in heating the metal of the anode to be attached and the metal of the anode to which it is to be attached by subjecting it to an oxy-acetylene flame until it is in a substantially fusible condition and then by a higher degree of heat depositing molten metal from a welding stick of the same material on the joint between said two parts, building up a joint which becomes practically homogeneous with the metal of the two parts. In this way scrap anode after scrap anode can be attached to the base anode until a sufficient number of scraps have been attached thereto to form an anode of substantially the weight and efficiency of a new one, or of any weight and efficiency desired. By this method I am enabled to utilize such scrap anodes and use them until all the nickel therein has been eaten off in the plating bath, thereby saving a large per cent. of the cost of anodes and reducing the expense of the nickel plating process materially.

While this invention is described herein as relating to "nickel" anodes, it will be understood to extend to anodes of any metal where it may be successfully employed.

Having thus described my said invention, what I claim is:

1. In the art of plating, the process of utilizing scrap anodes which comprises uniting to a support or base anode, a number of scrap anodes by the autogeneous welding process.

2. In the art of plating the process of continuing the life of the anodes by uniting several scrap anodes to one another by a welding process to form a single anode, substantially as set forth.

3. In the art of plating, the process of forming plating anodes from scraps which consists in building up an anode by permanently uniting a number of said scraps directly one to another, whereby a single anode composed of scraps is provided adapted to be supported in the plating bath from one of the original component parts thereof, substantially as set forth.

4. An anode for use in the art of plating, consisting of several scrap anodes one of which is utilized as a base or supporting part and the others of which are integrally united thereto, substantially as set forth.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this 19th day of June, A. D. nineteen hundred and fifteen.

JAMES J. WALSH. [L. S.]

Witnesses:
E. W. BRADFORD,
A. C. RICE.