

UNITED STATES PATENT OFFICE.

JOHN M. O'CONNOR, OF PORT WASHINGTON, WISCONSIN, ASSIGNOR TO THE CONNORITE MANUFACTURING COMPANY, OF PORT WASHINGTON, WISCONSIN.

METHOD OF TREATING SCRAP-METAL.

SPECIFICATION forming part of Letters Patent No. 715,211, dated December 2, 1902.

Application filed March 13, 1902. Serial No. 98,050. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN M. O'CONNOR, a citizen of the United States, and a resident of Port Washington, in the county of Ozaukee and State of Wisconsin, have invented certain new and useful Improvements in Methods of Treating Refractory Scrap-Metal; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to a method of remelting refractory scrap-metal, so that the same may be readily cast, thereby converting the same from a comparatively worthless into a very valuable product; and it consists in certain steps performed with the hereinafter-named ingredients in a certain manner and order, as well as in the new alloy thereby produced, all as will be fully set forth herein and subsequently claimed.

Heretofore German-silver scrap-metal, especially in the form of sheet-scrap, has been of practically little, if any, value, owing to the fact that the same is incapable of being remelted and cast by the ordinary processes; but I have discovered that by taking a suitable quantity—say from forty to fifty pounds—of the said sheet-scrap metal and putting the same in a crucible and adding thereto a small percentage of a suitable soft metal, such as lead, (the proportions of the latter being from one to twenty per cent. of the weight of the scrap-metal, according to the use to which the final article is to be put,) and placing the crucible, with its contents, in an ordinary brass melting furnace and subjecting it to a temperature sufficient to produce a white heat for approximately two hours the said scrap-metal and soft metal will thoroughly mix and fuse together in a homogeneous mass, and as soon as this point of fusion is reached (whether the time required for this result be two hours or more or less) I add a small quantity of aluminium, (less than ten per cent. in weight of the weight of the mixture in the crucible,) which instantly mixes intimately with the mass in the crucible, and then the entire mixture is immediately poured into previously-prepared molds, which latter may

be such molds as are ordinarily used in making brass castings. My herein set forth process not only utilizes the said German-silver sheet-scrap, but, further, it removes therefrom its objectionable yellow color, leaving a pure white metal alloy, resembling nickel, capable of receiving a high polish when the said castings are subjected to the action of suitable buffing or polishing wheels, the said alloy being of practically the strength and consistency of brass. The soft metal is added, as stated, in the proper proportion necessitated by the use to which the castings are to be put. For example, if a great deal of machine-work is to be performed on the castings more of the soft metal is added (to render the castings soft enough for subsequent operations) than if the castings are not to be so treated.

The metallic alloy produced by this process may also be rolled into sheets or formed into tubes or other articles, as desired. It can also be cast into suitable plates to serve as anodes in electroplating, being equally as good as, if not superior to, nickel for this purpose and, in brief, for any purpose for which nickel or brass can be used.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The herein-described method of utilizing German-silver scrap-metal, consisting in placing the same in a crucible, adding thereto a small quantity of a soft metal, such as lead, and subjecting the mass to a proper heat for a length of time sufficient to thoroughly mix and fuse the same into a homogeneous mass; then mixing therewith a small proportion of aluminium, and immediately thereafter pouring the entire mixture into suitable molds.

In testimony that I claim the foregoing I have hereunto set my hand, at Port Washington, in the county of Ozaukee and State of Wisconsin, in the presence of two witnesses.

JOHN M. O'CONNOR.

Witnesses:

CLARENCE HILL,
H. W. BOLENS.