

UNITED STATES PATENT OFFICE.

FRANCIS J. CLAMER, OF PHILADELPHIA, PENNSYLVANIA.

PROCESS OF ALLOYING LEAD AND ZINC.

SPECIFICATION forming part of Letters Patent No. 528,923, dated November 13, 1894.

Application filed December 30, 1893. Serial No. 495,216. (No specimens.)

To all whom it may concern:

Be it known that I, FRANCIS J. CLAMER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Processes of Alloying Lead and Zinc; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Heretofore when desiring to make an admixture of lead and zinc, the two metals were placed together in a suitable retort or crucible and melted down. After being stirred or agitated so as to commingle the two metals thoroughly, the mixture was poured into molds and allowed to cool. When these two metals are simply mixed in this way the lead and zinc do not amalgamate, and during the process of cooling a separation takes place. The lead being the heavier falls to the bottom of the mold.

The object of my invention is to thoroughly amalgamate the lead with the zinc and thus produce a permanent and homogeneous alloy of the two metals.

To carry my invention into effect, I take the desired proportions of the two metals and melt them together in a suitable vessel. When both of the metals are in a liquid condition, I introduce below the surface of the

melted metal, by any convenient means, caustic soda. While the caustic soda is being thus introduced, I stir the metal and add the caustic until the surface of the melted metal presents an apple green appearance. The two metals are then thoroughly amalgamated and can be poured out into molds for use or sale.

The caustic soda should not be exposed to the atmosphere before it is put into the melted metal, and the amount necessary to use in order to make a thorough amalgamation of the two metals will vary somewhat as the proportions of lead and zinc are varied, but the desired result is obtained when the surface of the metal presents an apple green appearance.

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

The herein described process of forming an alloy of lead and zinc, consisting of melting the two metals together in a suitable vessel and introducing into the melted metal, caustic soda, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS J. CLAMER.

Witnesses:

THOS. D. MOWLDS,
CHAS. H. WHITE.