# UNITED STATES PATENT OFFICE.

AMOS C. MANN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-FOURTH TO FRANZ KREIN, OF SAME PLACE.

## PROCESS OF PRODUCING BABBITT METAL.

SPECIFICATION forming part of Letters Patent No. 285,638, dated September 25, 1883.

Application filed November 6, 1882. (No specimens.)

*To all whom it may concern:*

Be it known that I, AMOS C. MANN, of the city of St. Louis, State of Missouri, have invented a new and useful Process of Producing Babbitt Metal, which process is fully described in the following specification.

This invention relates to that class of compounds used generally in all journal-boxes; and it consists in a composition formed by mixing copper, antimony, and block-tin.

It is well known that very slight modifications in the proportion of the elements in the manufacture of alloys often constitute valuable improvements therein, and also that it is not a matter of indifference in what order these metals are melted together to form an alloy, as the fusibility, ductility, &c., are greatly altered thereby.

To prepare my improved metal I take one pound of copper, one pound of antimony, and one pound of block-tin, place and melt them in one crucible together. I then pour this composition off into ingots to cool. This composition I term my "hardening metal." I then take one pound of the above composition and melt it in a separate vessel by itself. I then mix it with five pounds of block-tin in a melted state and stir the mixture well till it becomes of a cherry-red heat. I then pour out the mixture into ingots, and it is ready for immediate use.

I have found by repeated experiments that the mode of forming the alloy above described and the employment of the ingredients in the proportions named bring about several beneficial results not possessed by the ordinary Babbitt metal now produced. As the melting-point of copper in its separate state is much higher than the hardening metal I describe, it will be seen that when it is desired to form the alloy the heat required for fusing the elements entering into the composition will be much less than that required to melt the copper originally, and as the elements are apt to oxidize readily at a high temperature, it is desirable to decrease the possibility of such an accident as much as possible. The alloy thus produced will not melt out of the journals, nor will it cut them in the least. It will also stand any amount of pressure that may be brought to bear upon it. In molding it runs easily into any gooove or journal it may be poured into.

The advantage obtained in my mode of procedure arises from the double melting, as I am enabled by so doing to form a much more homogeneous alloy.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

The process herein described of forming Babbitt metal by taking equal parts of copper, antimony, and block-tin and melting them together, and afterward remelting the same and adding thereto block-tin in the manner and in the proportion specified.

AMOS C. MANN.

Witnesses:
GEO. H. KNIGHT,
ALBERT G. FISH.