

UNITED STATES PATENT OFFICE.

HANS LEYENDECKER, OF COLOGNE-EHRENFELD, GERMANY.

ALLOY.

SPECIFICATION forming part of Letters Patent No. 682,330, dated September 10, 1901.

Application filed April 10, 1901. Serial No. 55,263. (No specimens.)

To all whom it may concern:

Be it known that I, HANS LEYENDECKER, a subject of the King of Prussia, German Emperor, residing at Cologne-Ehrenfeld, in the Province of the Rhine, Kingdom of Prussia, German Empire, have invented a new and useful Alloy, of which the following is a specification.

It is a known fact that sheet-lead and lead piping, even when made from the best doubly-refined metal, show a very varying behavior with regard to their durability and power of resistance when used for sulfuric-acid chambers and many other contrivances that serve for the treatment and concentration of acids. Chemical science has devoted much attention to this question, and many different reasons have been brought forward to account for the above-mentioned curious behavior. They have been looked for now in the physical, now in the chemical, nature of the metal. While, on the one hand, the greatest possible purity of the lead for use in sulfuric-acid chambers and the like has been asked for, it has, on the other hand, been asserted that lead, with certain metallic admixtures, is to be preferred. Especially has an alloy of lead, with a lead antimonite containing fourteen to twenty-five per cent. antimony, become known, without, however, any really satisfactory result having been achieved. Now I add to the lead a very small quantity of copper, and thereby succeed in rendering it quite considerably less sensitive than hitherto to the action of acids and other chemicals. The quantity of the added cop-

per, which, as just mentioned, may only be very small, is regulated according to the use to which the lead is to be put and varies between the limits one-tenth and five-tenths per cent. of the quantity of lead. The copper before being mixed with the lead, which is of course likewise in a molten state, is melted and added in this condition, and care must be taken in the process that the distribution is effected as uniformly as possible, as otherwise, the quantity of the copper added being so small, it is quite possible for parts of the lead to be left without their share of the same. Besides the admixture of copper, moreover, antimony may also be added as well, but likewise only in very small quantities. A suitable proportion would be one thousand parts of lead, one to five parts of copper, and one to three parts of antimony.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. An alloy composed of lead and copper containing from one-tenth to five-tenths per cent. of copper.

2. An alloy composed of lead, copper and antimony containing one-tenth to five-tenths per cent. of copper and one-tenth to three-tenths per cent. of antimony.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HANS LEYENDECKER.

Witnesses:

KARL SCHMITT,
CHARLES L. SIMPLE.