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UNITED STATES PATENT OFFICE.

OTTO LIEBKNECHT, OF FRANKFURT, GERMANY, ASSIGNOR TO THE ROESSLER & HASSLACHER CHEMICAL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

GOLD ALLOY.

No Drawing.

Application filed April 27, 1922. Serial No. 556,879.

To all whom it may concern:

Be it known that I, OTTO LIEBKNECHT, a citizen of Germany, and resident of Myliusstrasse 2, Frankfurt-on-the-Main, Germany, have invented certain new and useful Improvements in Gold Alloys, of which the following is a specification.

This invention relates to alloys and more particularly to precious metal alloys, commonly called white gold, and has for its object to improve the physical characteristics as well as the color thereof.

While many previous alloys of this type have been proposed, some are not entirely satisfactory for one or more of several reasons such as color, malleability, hardness, ductility, etc., and it is desirable to increase the facility of reworking as far as possible, as annealing is neither satisfactory nor effective in all cases. Many of the alloys heretofore proposed are open to serious objection because they cannot be readily reworked which is a requisite especially in the manufacture of jewelry rings and similar articles.

According to this invention, I have discovered an alloy in which previous objections are overcome and which furnishes the desired facility for reworking and yet having the desired color and hardness. I have discovered that small quantities of palladium produce the desired result and especially

ally when added to a tertiary or quaternary alloy of gold with metals such as zinc, nickel and copper.

A preferred composition of such an alloy is:

	Parts by weight.	
Gold -----	800	
Nickel -----	139	
Zinc -----	50	40
Copper -----	10	
Palladium -----	1	

Such an alloy can be reworked several times after being initially formed, without showing cracks or becoming excessively hard, is resistant to acids and corrosion, has a good color and is advantageous in many respects for the manufacture of jewelry rings and similar articles which require various reworking steps and which heretofore could only be done, if at all, with difficulty.

What I claim is:

An alloy comprising gold, nickel, zinc, copper and palladium, in about the percentages stated.

Signed at Frankfurt a. M. this eleventh day of March, 1922.

OTTO LIEBKNECHT.

Witnesses:

BASIL E. SEWARD,
G. FLESCH.