UNITED STATES PATENT OFFICE.

WILLIAM W. HUBBELL, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN ALLOYS FOR METRIC GOLD COIN.

Specification forming part of Letters Patent No. **211,909**, dated February 4, 1879; application filed January 3, 1879.

To all whom it may concern:

Be it known that I, WILLIAM WHEELER HUBBELL, of Washington, District of Columbia, have invented an Improved Alloy Metal for Metric Gold Coin, of which the following is a specification:

The nature of my invention consists in the proportions of the metals used to form the alloy of gold, silver, and copper.

Gold coin at an early period was made of gold as the metal of intrinsic value, and an alloy of one-tenth of silver and copper, in about equal portions, combined to give it greater density to resist wear and be capable of coinage. This proved too soft, and now the one-tenth is entirely of copper. I believe the color is too dark; the coin tarnishes, and the alloy is incapable of being made, as to its constituents and as a whole, in metric weight for coin of standard value; and, further, I believe, is still too soft.

The object of my present invention is to overcome all these faults.

This alloy I make as follows: I take thirty (30) parts or grams of pure gold, one and a half (1.5) part or gram of pure silver, and three and a half (3.5) parts or grams of pure copper, using the same kind of weights in these proportions; I melt and mix the metals together. One-tenth part of this alloy will be copper, and the combined precious metals of gold and silver will be nine-tenths fine. The quantities are all metric. Thirty-five (35) grams in weight of this alloy in mass has the intrinsic value of twenty (20) dollars, and when coined makes a double eagle. The color is more yellow than the alloy of gold coin, and does not turn dark on the surface, and is harder and more durable.

In this alloy the silver is employed for the production of a lighter yellow color and for resisting oxidation, which is effected by its union with the copper, while the one-tenth of copper, without value, is for hardening the alloy and facilitating mintage. These combined results have been attained in this alloy for gold coin. The weight of the coin is increased, and the density maintained under coinage-pressure.

Care must be taken not to burn out the copper in smelting, and the usual allowance may be made in addition for wastage in this respect in melting large quantities together in the furnace. The alloy is to be annealed and cleaned in the usual way.

This alloy does not admit of any material variation, although very slight variation in milligrams might be made, though not advantageously for gold coin. This alloy will also suit for ten-dollar, five-dollar, three-dollar, two-and-a-half-dollar, and one-dollar metric gold coin of proportionate weights. The twenty-dollar coin will weigh thirty-five grams. The ten-dollar coin will weigh 17.5 grams. The five-dollar coin will weigh 8.75 grams. The three-dollar coin will weigh 5.25 grams. The two-and-a-half-dollar coin will weigh 4.375 grams. The one-dollar coin will weigh 1.75 grams.

The metal, when rolled out, is to be cut into the planchets, annealed, cleaned, and struck into coin.

Having fully described my invention and the best manner of using the same, what I claim is—

The alloy metal for coin, consisting of gold, silver, and copper, in or about the proportions of thirty (30) parts of pure gold, one and a half (1.5) part of pure silver, and three and a half (3.5) parts of pure copper, substantially as described.

WM. WHEELER HUBBELL.

Witnesses:
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