

# UNITED STATES PATENT OFFICE.

CHARLES AUGUSTE PAILLARD, OF GENEVA, SWITZERLAND.

## ALLOY.

SPECIFICATION forming part of Letters Patent No. 384,709, dated June 19, 1888.

Application filed November 23, 1887. Serial No. 255,998. (No specimens.)

*To all whom it may concern:*

Be it known that I, CHARLES AUGUSTE PAILLARD, of Geneva, Switzerland, have invented a new and useful Improvement in an Alloy of Metals, of which the following is a full description.

My invention relates to a metallic alloy composed of the metals hereinafter mentioned, and it is particularly adapted to and useful in the construction of non-magnetic compensation-balances for watches, although it may be used for other purposes.

The object of my invention is to produce a non-magnetic inoxidizable metallic alloy which shall possess the qualities of steel—such as hardness, elasticity, and capability of being tempered—and at such a price as will enable it to be employed in the construction of cheap compensation-balances to be used in the more ordinary grades of watch-movements. This I have accomplished with my present alloy.

I have heretofore obtained patents on palladium alloys—viz., United States patents dated July 26, 1887, Nos. 367,158, 367,159, 367,160, and 367,161; but the alloys mentioned and described in said patents are too expensive for use in ordinary low-grade watch-movements. I have succeeded in producing non-magnetic compensation-balances with this present alloy at about one-half the cost of the balances made from the alloys mentioned in the aforesaid patents.

The alloy which I have now invented is composed of the following metals, in about the proportions specified, viz: palladium, twenty-five to forty-five parts; copper, thirty to sixty parts; silver, five to twenty parts; steel, two to five parts.

My present alloy is non-magnetic, inoxidizable, elastic, hard, possesses slight dilation, and can be successfully used in compensation-balances for cheap watches, inasmuch as it is far less expensive than my former palladium alloys.

In smelting this alloy I use the same process as I fully described in my former patent, No. 367,159, granted July 26, 1887, and consequently I do not regard it as necessary to repeat said description here.

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

1. An alloy composed of palladium, copper, silver, and steel, in about the proportions stated.

2. An alloy composed of palladium, twenty-five to forty-five parts; copper, thirty to sixty parts; silver, five to twenty parts, and steel, two to five parts, substantially as described.

CHARLES AUGUSTE PAILLARD.

Witnesses:

CHARLES WILLIS WARD,  
SIDNEY CALVERT SMITH.