

UNITED STATES PATENT OFFICE.

JAMES NAULTY AND JOHN SCANLIN, OF PHILADELPHIA, PENNSYLVANIA.

COMPOSITION METAL.

959,156.

Specification of Letters Patent.

Patented May 24, 1910.

No Drawing.

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To all whom it may concern:

Be it known that we, JAMES NAULTY and JOHN SCANLIN, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Composition Metals, of which the following is a specification.

Our invention relates to a new and useful improvement in composition metals, and has for its object to combine chromium with copper or its alloys to produce a metal which will be approximately as hard as steel, thereby permitting edged tools to be made therefrom, and adapting the metal for rolling hot or cold welding and forge work.

In accomplishing the above named object, we mix the chromium with the copper in approximately the ratio of one to nine, having found that this gives the most satisfactory results, and this ratio is maintained whether the copper be in pure state or in a composition, making an alloy.

In detail our process is as follows: The copper or any of its alloys is heated to a suitable temperature and may be subjected to the action of the chromium in about the proportion of nine to one. Where the alloys of copper have the chromium mixed

therewith the most satisfactory results are obtained by first melting the copper, then adding the chromium, and then the other ingredients to form the alloy desired, as for instance, in adding the chromium with other metals the copper is first melted and the amount is equal to about forty-five per cent. of the whole. To this is added five per cent. chromium, with this is mixed twenty-five per cent. nickel, and then is added twenty-five per cent. zinc.

Of course we do not wish to be limited to the exact details of construction as these may be varied within the limits of the appended claim without departing from the spirit of our invention.

Having thus fully described our invention, what we claim as new and useful, is—

A composition of metals comprising fifty per cent. copper and chromium in ratio of nine to one combined with other metals.

In testimony whereof, we have hereunto affixed our signatures in the presence of two subscribing witnesses.

JAS. NAULTY.
JOHN SCANLIN.

Witnesses:

PRICE I. PATTON,
S. M. GALLAGHER.