

UNITED STATES PATENT OFFICE.

PATRICK W. BRENNAN, OF PHILADELPHIA, AND MICHAEL MEEHAN, OF WILLIAMSTOWN, PENNSYLVANIA.

COMPOUND FOR HARDENING STEEL AND OTHER METALS.

1,036,434.

Specification of Letters Patent.

Patented Aug. 20, 1912.

No Drawing.

Application filed December 9, 1911. Serial No. 664,767.

To all whom it may concern:

Be it known that we, PATRICK W. BRENNAN and MICHAEL MEEHAN, citizens of the United States, residing at Philadelphia, in the county of Philadelphia, and Williamstown, in the county of Dauphin, respectively, State of Pennsylvania, have invented new and useful Improvements in Compounds for Hardening Steel and other Metals, of which the following is a specification.

Our invention pertains to the hardening and toughening of steel and other metals, and consists in a compound made up of the following constituents, combined in the proportions stated, viz:

Cyanid of potassium (powdered) -	2 ounces.
Bicarbonate of soda -	1 ounce.
Bicarbonate of potassium (powdered) -	1 ounce.

These ingredients are to be thoroughly mingled by agitation.

In using the above named compound, the article of steel or other metal that is to be hardened is dressed and heated to a cherry red, and is then rolled in or otherwise subjected to the action of the hardening com-

pound until the steel or other metal becomes dark. The article is then returned to the fire and heated until it is a dark red, whereupon it is plunged in water until it is cold.

In the manner described steel and other metal can be expeditiously hardened and toughened to a material extent by a novice; it being simply necessary to properly heat the article before the immersion thereof in water and to otherwise follow the directions stated.

Having fully described our invention, what we claim and desire to secure by Letters-Patent, is:

The herein described compound, comprising cyanid of potassium, bicarbonate of soda, and bicarbonate of potassium, substantially as described and for the purpose specified.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

PATRICK W. BRENNAN,
MICHAEL MEEHAN.

Witnesses:

WENDELL Y. BLANNING,
WM. BLANNING.