

UNITED STATES PATENT OFFICE.

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CASE-HARDENING COMPOUND.

1,036,435.

Specification of Letters Patent.

Patented Aug. 20, 1912.

No Drawing.

Application filed March 7, 1912. Serial No. 682,279.

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, both in the State of Pennsylvania, have invented new and useful Improvements in Case-Hardening Compound, of which the following is a specification.

Our present invention pertains to the case hardening of articles of iron and other metals; and it consists in a case hardening compound made up of the following ingredients, combined in the proportions stated, viz:

Cyanid of potassium (powdered)	2 ounces.
Bicarbonate of soda	1 ounce.
Bicarbonate of potassium (powdered)	1 ounce.
Bone dust	$\frac{1}{2}$ ounce.

The above ingredients are thoroughly mixed by agitation.

In using the said case hardening mixture the article of iron or steel is heated in a slow fire and is then rolled in or otherwise sub-

jected to the action of the mixture until dark. The article is then again subjected to the action of a slow fire and is heated to about a bright red, after which it is plunged in water.

Practical experience has demonstrated that the depth of the case hardening will depend upon the number of times the article of iron or steel is heated and then rolled in the case hardening mixture.

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

A case hardening compound comprising cyanid of potassium, bicarbonate of soda, bicarbonate of potassium, and bone dust, 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:

WM. BLANNING,
C. F. BLANNING.