Patented May 23, 1933 1,910,656

UNITED STATES PATENT OFFICE

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PRODUCTION OF AN ALUMINIUM ALLOY

No Drawing. Application filed September 8, 1932, Serial No. 632,184, and in Great Britain October 27, 1931.

This invention relates to the production of a refined aluminium alloy having stainless properties as well as hardness.

The improved alloy contains, besides aluminium, magnesium, chromium, manganese and titanium, and may also contain a small quantity of boron, as well as iron and silicon.

In the production of the improved alloy a quantity of chromium-aluminium alloy rich in chromium is added to a bath of already molten aluminium, the heating being continued so that the molten condition is maintained. There is then added to the bath manganese-titanium-aluminium alloy rich in manganese and titanium. Then elemental magnesium is added, the molten condition being maintained.

The vapour of boron trichloride or the volatile halide of a metal having a grain-refining influence may then be introduced into the bath as described for example in the specification of U. S. Letters Patent No. 1,636,881 issued 26th July, 1927.

By way of example suitable proportions of the ingredients of the alloy are as follows:—

	Percent
Chromium	.1 to 1
Manganese	.2 to 2
Titanium	.1 to 1
Magnesium	.5 to 5

the remainder being aluminium, and, in certain cases, small quantities of boron or other element introduced by the refining operation.

Iron and silicon are usually present as impurities in the aluminium, up to .75% of iron and .75% of silicon.

We claim:—

A refined aluminium alloy consisting of:—

	Percent
Chromium	.1 to 1
Manganese	.2 to 2
Titanium	.1 to 1
Magnesium	.5 to 5

the remainder being substantially aluminium.

In testimony whereof we have signed our names to this specification.

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