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UNITED STATES PATENT OFFICE.

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TARNISH-RESISTING SILVER ALLOY, ETC., AND PROCESS FOR PRODUCING THE SAME.

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This invention relates to a silver alloy or intimate mixture having preferably the silver content of coin or sterling standards and which is also tarnish-resisting, and to a process for producing such alloys.

The alloy provided by the present invention is designed primarily for use in the manufacture of silverware, but the invention is not to be so limited, the alloy or intimate mixture produced being adapted and designed for the other purposes for which silver is now used or may be used.

The tarnishing of silverware articles, on the shelves of the dealer and in the house or other place of use, is a source of much inconvenience and expense in that frequent cleaning of the articles, by rubbing, polishing, etc., is necessary to restore them to their natural color and brightness. Such cleaning also, in time, results in more or less wear of the polished surface and surface ornamentation of the article.

It is the object of the present invention to provide a silver alloy or intimate mixture in which the silver predominates which will resist tarnish and from which, therefore, tarnish resisting silverware and other articles may be produced; the alloy so provided preferably having, as before indicated, the percentage of silver required by coin or sterling standards or, if desired, a higher percentage.

The metal preferably used for the purpose is silicon.

In operating with silicon we introduce into a suitable crucible a predetermined quantity of silver and also a predetermined quantity of silicon which is in a finely powdered state. The temperature of the furnace containing the crucible is raised considerably above the melting point of silver and is held at this high temperature until the required amount of silicon has been absorbed by the silver. The two elements being then intimately combined or mixed, the molten mass is then poured off into ingots which may be used for all purposes for which silver of the coin or sterling grade now are used or may be used. The quantity of silicon used is such as to render the product substantially non-tarnishable.

As before stated, the silver alloy of the present invention is one having preferably a silver content such as required by coin or sterling standards. Therefore, the quantity of silicon so added to and mixed with the silver must be such that the alloy content of the ingot will not exceed ten per cent. It may be a great deal less. In fact, we have secured good ingots, as to tarnish resisting quality, with the alloy content varying from ¼ of one percent to 3%.

What is claimed is:

1. A silver alloy or intimate mixture having a silver content of about 90% or more and silicon in sufficient quantity to render the alloy or mixture substantially non-tarnishable.

2. As a new article of manufacture, a workable alloy consisting predominantly of silver and containing silicon in proportion to produce a substantially non-tarnishable alloy.

In testimony whereof, we have hereunto set our hands.

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