

UNITED STATES PATENT OFFICE.

GEORGE NIMMO, OF JERSEY CITY, NEW JERSEY.

IMPROVED BLACK-LEAD CRUCIBLES.

Specification forming part of Letters Patent No. 42,959, dated May 31, 1864.

To all whom it may concern:

Be it known that I, GEORGE NIMMO, of Jersey City, in the county of Hudson and State of New Jersey, have invented, made, and applied to use a certain new and useful Improvement in the Manufacture of Black-Lead Crucibles; and I do hereby declare the following to be a full, clear, and exact description of my said invention and of the objects attained by the same.

In the manufacture of black-lead or plumbago crucibles it has been usual heretofore to mold the black-lead with certain proportions of clay and sand, and then bake and burn the pots previous to sending them to market. This requires the use of costly kilns that will subject the pots to the heat necessary for driving off the gases that are formed in the said material by the action of heat, and this baking operation has to be performed with great care to prevent the crucibles flying or breaking, and said crucibles often crack and break when subjected to the heat necessary for melting steel, &c., and the pots, after being used from three to five heats on steel and from eighteen to thirty heats on brass, are valueless.

The nature of my said invention consists in the use of calcined plumbago with a proper admixture of clay and sand, whereby I am enabled to produce crucibles adapted to use, after drying, without requiring to be first burned, care being taken not to heat the crucible too suddenly at the first.

The calcining of the black-lead previous to

mixing drives off the gaseous materials that ordinarily cause the pots to crack and break. Hence said crucibles are merchantable when dried, instead of requiring burning in costly kilns, and are much more durable in use than those made from uncalcined plumbago.

I have found practically that calcined black-lead or old back-lead crucibles, when ground up finely and mixed with about one measure of fire-sand and one and a half measure of German clay and half a measure of china-clay to four measures of black-lead, will form about the best proportion for molding into crucibles to be dried simply before using, the said proportion of four measures of black-lead being composed entirely of old crucibles ground, or of one-half or one-quarter part of new calcined black-lead mixed with such old ground crucibles.

If desired, the crucibles might be burned after drying previous to sending to market, in which case they may be subjected to an ordinary open fire without the use of a kiln.

What I claim, and desire to secure by Letters Patent, is—

The manufacture of crucibles from calcined plumbago, in the manner and for the purposes specified.

In witness whereof I have hereunto set my signature this 6th day of April, 1864.

GEORGE NIMMO.

Witnesses:

THOS. GEO. HAROLD,
CHAS. H. SMITH.