

# UNITED STATES PATENT OFFICE.

LAMMOT DU PONT, OF WILMINGTON, DELAWARE.

## IMPROVEMENT IN GUNPOWDER.

Specification forming part of Letters Patent No. 17,321, dated May 19, 1857.

*To all whom it may concern:*

Be it known that I, LAMMOT DU PONT, of Wilmington, in the State of Delaware, have invented a new and useful Improvement in the Manufacture of Gunpowder for Blasting and other Analogous Purposes, of which the following is a specification.

The nature of my improvement consists in the employment of nitrate of soda as an element in the manufacture of gunpowder and in the glazing of the powder so made, for the purpose of preventing the deliquescence of the powder so made.

Gunpowder has been heretofore manufactured of saltpeter, charcoal, and sulphur, in about the proportions of seventy-five per cent. of saltpeter, twelve and one-half per cent. of charcoal, and twelve and one-half per cent. of sulphur.

It has long been essayed to obtain some substitute for saltpeter (or nitrate of potash) in this manufacture, on account of the limited supply of this material and its expense. I have discovered that nitrate of soda can be substituted for nitrate of potash in the manufacture of gunpowder with practical success when the powder is glazed in the granular state.

In applying my discovery I mix together the powdered nitrate of soda, powdered sulphur, and powdered charcoal in about the proportion of seventy-two per cent. of nitrate of

soda, twelve per cent. of sulphur, and sixteen of charcoal. After they are well mixed together the powder is granulated in the ordinary way. It is then glazed by being put into a barrel with a small proportion of black-lead and rolled about for the space of nearly twelve hours.

I have discovered that the glazing of powder manufactured from nitrate of soda prevents its deliquescing to any injurious extent in ordinary use. Powder so manufactured and glazed can be substituted with economy and efficiency for gunpowder made in the ordinary way from saltpeter.

Other substances may be used for glazing besides black-lead, or its own carbon will sometimes be sufficient.

I do not desire to claim, generally, the glazing of gunpowder or the employment of nitrate of soda in the manufacture of gunpowder, except in combination with the glazing of the powder so made, as aforesaid; but—

What I do desire to secure by Letters Patent as my invention is—

The manufacture of gunpowder by the use of nitrate of soda and the glazing of the powder so made, in the manner and for the purpose above described.

LAMMOT DU PONT.

Witnesses:

J. H. B. JENKINS,

J. E. SHAW.