

UNITED STATES PATENT OFFICE.

FRIEDRICH AUGUST JAECKEL, OF BUCKAU-MAGDEBURG, PRUSSIA, AS-
SIGNOR TO BERNARD SCHAFFER AND C. BUDENBERG.

IMPROVED BLASTING-POWDER.

Specification forming part of Letters Patent No. 42,913, dated May 24, 1864.

To all whom it may concern:

Be it known that I, FRIEDRICH AUGUST JAECKEL, of Buckau-Magdeburg, in the Kingdom of Prussia, have invented a new and Improved Blasting-Powder; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of this invention is to produce a blasting-powder which, when lighted in the open air will give no explosion, but which will explode with great force when lighted in a closed space.

The invention consists in a composition of nitrate of potash, nitrate of soda, sulphur, charcoal mineral coal, (either anthracite or bituminous,) and potassio-tartrate of soda, or any other equivalent vegetable or mineral substance capable of increasing the temperature of the combustion, and consequently the pressure of the gaseous products of combustion. These ingredients are mixed together in various proportions, according to the desired strength of the powder.

A powder of very great strength is obtained by using the following proportions: nitrate of potash, thirty-six parts; nitrate of soda, forty parts; sulphur, eight parts; charcoal, seven parts; mineral coal, three parts; potassio-tartrate of soda, four parts. The object of the mineral coal and potassio-tartrate of soda is to produce a perfect combustion of the mixture, and

consequently obtain the useful effect of all the gases contained in the same. The nitrates, sulphur, and coals are finely pulverized and intimately mixed, and to this mixture a requisite quantity of potassio-tartrate of soda is added.

This powder is not granulated, and it differs from ordinary blasting-powder, particularly in that it does not explode when lighted in the open air; but when placed in a closed space and ignited it causes an explosion of superior force. It emits but little smoke and much less noxious gas than ordinary blasting-powder, and it can be made cheap and kept with little danger when not packed in a closed space.

I am aware that blasting-powder has before been made which was explosive only when burned in a close place; but,

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A blasting-powder consisting of nitrate of potash, nitrate of soda, sulphur, charcoal, mineral coal, and potassio tartrate of soda, and other equivalent vegetable or mineral substances, compounded substantially as herein described.

FRIED. AUG. JAECKEL.

Witnesses:

CARL ROHKOHL,

WILHELM KOTHWITZ.