## United States Patent Office.

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## IMPROVED GUNPOWDER.

Specification forming part of Letters Patent No. 55,795, dated June 19, 1866.

To all whom it may concern:

Beitknown that I, Louis Henry Gustavus Ehrhardt, of Aldridge Road Villas, Bayswater, England, have invented an Improved Gunpowder; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in the combination of mineral carbon with cutch, tannin, or gambier to form an inexplosive powder, which, when subsequently mixed with a second powder, composed of chlorate and nitrate of potash, will form an improved explosive gunpowder of great power, and also in the immediate combination of mineral carbon with chlorate and nitrate of potash and cutch to form an explosive gunpowder.

I prefer in all cases to manufacture and to transport until required for immediate use the ingredients composing my improved gunpowder in such manner as will obviate all risk and danger of accidental or premature explosion. I therefore divide them into two powders, which may each be separately handled and transported without risk of explosion.

The first powder is composed of one part of cutch, or its equivalent, to four parts of mineral carbon; the second of two parts of chlorate of potash to three parts of nitrate of potash. When required for use as an explosive

compound these two powders are to be mixed together in the proportion of twenty-five pounds of the cutch and carbon to fifteen pounds of the chlorate and nitrate of potash.

I contemplate the use of tannin, catechu, gum-kino, or other equivalent of cutch in the stead thereof as an ingredient in my compound.

I do not claim, broadly, the use of tannin and its equivalent in the composition of an explosive gunpowder; but

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

1. The combination of mineral carbon with cutch, tannin, or gambier, substantially as herein described, to form a safety-powder, which may be rendered explosive at will by the addition of chlorate and nitrate of potash, in proportions substantially as herein set forth.

2. The combination of tannin, or its equivalent, with mineral carbon, chlorate of potash, and nitrate of potash, substantially in the manner and for the purpose herein set forth.

L. H. G. EHRHARDT.

Witnesses:

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