

# UNITED STATES PATENT OFFICE.

HARRY ARMER CALLAHAN, OF BRADFORD, PENNSYLVANIA; WILLIAM C. CALLAHAN, ADMINISTRATOR OF SAID HARRY ARMER CALLAHAN, DECEASED, ASSIGNOR OF ONE-HALF TO LE ROY L. HIGGINS, OF SAME PLACE.

## DYNAMITE.

SPECIFICATION forming part of Letters Patent No. 525,188, dated August 28, 1894.

Application filed July 21, 1893. Serial No. 481,117. (No specimens.)

*To all whom it may concern:*

Be it known that I, HARRY ARMER CALLAHAN, of Bradford, in the county of McKean and State of Pennsylvania, have invented a new and Improved Composition of Matter to be Used as an Explosive, of which the following is a full, clear, and exact description.

This composition is to be used as an explosive of a high or low grade, as may be desired, and which is safe to transport and to handle.

In order to produce an explosive having fifty per cent. of nitro glycerin I use forty pounds of pulverized coke put into a tray for mixing with ten pounds of acetate of lime, and fifty pounds of nitroglycerin, to produce one hundred pounds of the explosive, which then forms a mixture curiously water-repellent.

For one hundred pounds of fifty per cent. safety powder or dynamite in granular form, I use fifty pounds of acetate of lime and fifty pounds of nitroglycerin, thoroughly mixed together to prepare the explosive ready for use.

To make an explosive of a different grade, I use different proportions or weights of the absorbents above referred to.

The explosives thus prepared are safe to handle and to transport. I am enabled to make dynamite as low as seven and one-half per cent., and which can be exploded in confinement only and with a mercury cap alone.

As before stated, the absorbents are acetate of lime and powdered coke, and with these materials I am enabled to produce a powder in regular dynamite form or in granular form, so that the explosive can be put up in kegs the same as ordinary gun-powder.

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

1. An explosive comprising nitroglycerin and acetate of lime, substantially as described.

2. An explosive consisting of nitroglycerin and a mixture of pulverized coke and acetate of lime, substantially as described.

HARRY ARMER CALLAHAN.

Witnesses:

LE ROY L. HIGGINS,  
ANDREW P. HIGGINS.