

UNITED STATES PATENT OFFICE.

STEWART W. YOUNG, OF PALO ALTO, CALIFORNIA, ASSIGNOR TO GLOBE CHEMICAL WORKS, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

FUME-DESTROYING COMPOSITION.

1,007,409.

Specification of Letters Patent.

Patented Oct. 31, 1911.

No Drawing.

Application filed February 15, 1911. Serial No. 608,754.

To all whom it may concern:

Be it known that I, STEWART W. YOUNG, citizen of the United States, residing at Palo Alto, in the county of Santa Clara and State of California, have invented new and useful Improvements in Fume-Destroying Compositions, of which the following is a specification.

This invention relates to fume destroying compositions.

In explosions of dynamite and similar explosives, the noxious gases which remain appear to consist largely of what are called "nitrous" or "acid" fumes, and a very small amount of unburned or partially burned dynamite.

The object of the present invention is to provide a composition which will not only effect the neutralization of the nitrous or acid fumes, but will also result in the ultimate combustion of the explosive materials so that there will be no unburned or partially burned dynamite. To effect this result I employ a mixture of ammonium carbonate and a suitable oxygenizing agent. Under the conditions of the explosion, the oxygen becomes available for the combustion of the minute particles of unburned dynamite.

I have found by a series of experiments extending over a considerable period of time and under actual working conditions, especially in several of the mines of Nevada, that by using a cartridge containing a mix-

ture of ammonium carbonate and a carrier of oxygen, the gases resulting from the explosion are sweet, and inoffensive. Among the carriers of oxygen with which I have operated and which have done the work successfully, are the following:—1, potassium chlorate; 2, potassium bichromate; 3, potassium permanganate; 4, manganese dioxid. All give excellent results, and must be looked upon as equivalent, one to the other in their action, and to any other carrier of oxygen which will accomplish the same result. Manganese dioxid is the cheapest of such oxygen carriers, and when used in the proportion of 65 parts of ammonium carbonate to 35 parts of manganese dioxid gives thoroughly satisfactory results. In practice, a cartridge or capsule containing the composition is placed in the blast hole with the explosive and the blast discharged in the ordinary way.

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

A fume destroying cartridge containing 35 parts manganese dioxid and 65 parts ammonium carbonate.

In testimony whereof I have hereunto set my hand in the presence of subscribing witnesses.

STEWART W. YOUNG.

Witnesses:

J. NIELSEN,
B. P. HALL,
HERBERT COOLIDGE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."