

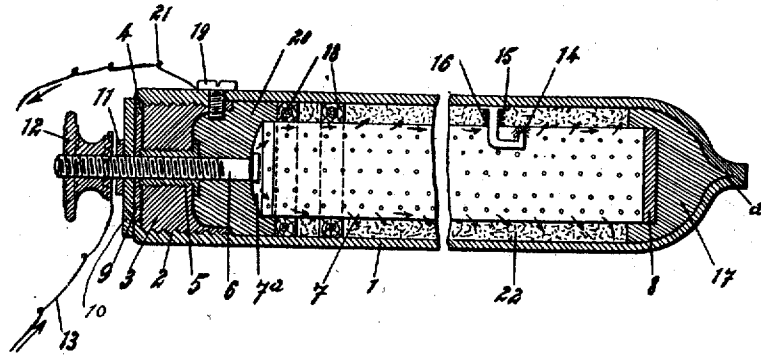
A. J. STROTZKA & J. BERGER.

EXPLOSIVE MINE.

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952,478.

Patented Mar. 22, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

ANDREAS JOSEF STROTZKA AND JOHANN BERGER, OF HAINFELD, AUSTRIA-HUNGARY.

EXPLOSIVE MINE.

952,478.

Specification of Letters Patent.

Patented Mar. 22, 1910.

Application filed January 3, 1910. Serial No. 535,988.

To all whom it may concern:

Be it known that we, ANDREAS JOSEF STROTZKA and JOHANN BERGER, subjects of the Austro-Hungarian Emperor, and residents of Hainfeld, a. Gölsen, Austria-Hungary, have invented Improvements in Explosive Mines, of which the following is a specification.

The subject of the present invention relates to improvements in explosive mines.

The essential features consist of a casing formed of a Mannesman steel tube, a cylinder carried in the interior of said tube, and a layer of cotton wool which fills the space between the cylinder and the casing, said cotton wool being saturated with a mixture which consists of four parts of rain water, one part of sulfuric acid and one part of nitric acid.

In order that this invention may be clearly understood reference is made to the accompanying drawing, wherein the mine is shown in sectional elevation.

The outer casing 1 is made of a seamless steel tube formed into a nose α at one end. The casing is provided with a thread 2 on the inner surface, at the outer end, which serves to receive a steel ring 3 meshing with the thread 2, and prevented from coming out of the casing by beading over the end 4 of said casing. The ring is threaded in the center, so as to receive an ebonite plug 5 which serves as an insulating medium for the positive electrode 6 passing through said plug. The electrode is firmly secured to the cap 7^a of a perforated metal cylinder which is closed by a wooden plug 8. The space formed by beading over the end of the casing is filled with red lead 9 and closed by a wooden disk 10 which is kept in position by a metal ring 11 carried on the electrode 6. The positive wire 13 is secured to a nut or ring 12, carried on the electrode 6. A contact pin 14 projects into the interior of the cylinder 7, is protected by a short fiber casing in the space between the cylinder and the casing, and is kept in position by a spring 16 coiled around the part of the pin between the casing 1 and the cylinder 7.

The cylinder is kept in position by pouring colophonium 17 into the tube when in a vertical position. The cylinder is surrounded by pure cotton wool 22 which is

saturated with a mixture of 4 parts of rain water, 1 part of sulfuric acid, and 1 part of nitric acid, which is soaked up by the cotton wool. While at the other end the cylinder is supported by wooden rings 18. The space between the rings 18 and the ring 3 is also filled in with colophonium 20 which is poured in through the hole, in the casing, which is closed by means of the screw 19. The second wire 21 is secured to the screw 19. If the current be now turned on it will pass through the electrode 6, the cylinder 7, cotton wool 22, casing 1, screw 19 and wire 21. The passage of the current through the saturated wool creates oxy-hydrogen gas and this develops until the pressure in the tube is so great that it begins to expand until the end of the pin 14 is brought so close to the cylinder 7 that a spark is formed, which ignites the gas and explodes the mine.

While the gas is being generated the cotton is turned into gun cotton thereby making the mine still more powerful. The mixture is not capable of turning the cotton into nitrate, but with the continued generation of the gas, the nitration of the cellulose goes on, so that in the end cellulose-nitrate gun cotton is formed.

Before fitting in the cotton wool, the inside of the tube must be thoroughly cleaned and the outside given a coat of paint. The tube and cylinder are then suspended in a platinum-bath and given a coat of platinum so as to protect them against the action of the acids.

Having fully described our invention, what we claim and desire to secure by Letters Patent is:—

Improvements in explosive mines, comprising in combination, a casing pointed at one end, a ring (3) carried in said casing, a plug passing through the ring, an electrode passing through the plug, a wooden disk covering the end of said casing, a metal ring pressing against said disk, a nut carried on said electrode, a current wire secured to the latter, a perforated cylinder carried in said casing, wooden rings for keeping the cylinder in position, a plug closing one end of the cylinder, a cap at the other end, said electrode being secured to said cap, a contact pin projecting into said tube, a spring adapted to keep the pin in

position, and a layer of cotton wool filling the space between the cylinder and the casing, said wool being saturated with a mixture consisting of 4 parts rain water, 1 part
5 sulfuric acid and 1 part nitric acid, substantially as described and shown, and for the purpose set forth.

In testimony whereof we have hereunto

set our hands in the presence of two subscribing witnesses.

ANDREAS JOSEF STROTZKA.
JOHANN BERGER.

Witnesses:

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AUGUST FUZZER.