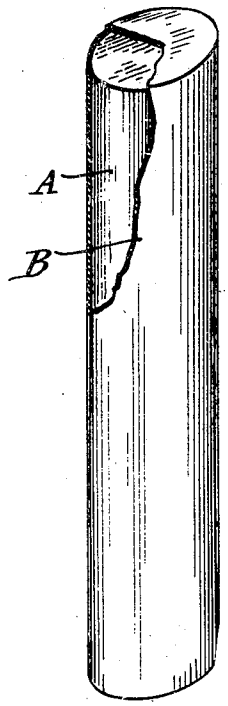
July 11, 1933. D. E. PEARSALL 1,917,540

PLASTIC WATERPROOF COATING FOR BLASTING DYNAMITE AND THE LIKE

Filed Aug. 5, 1931



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Patented July 11, 1933 1,917,540

UNITED STATES PATENT OFFICE

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PLASTIC WATERPROOF COATING FOR BLASTING DYNAMITE AND THE LIKE

Application filed August 5, 1931. Serial No. 555,234.

The present invention relates to explosive cartridges or charges, for example, blasting dynamite or the like, and aims to provide certain improvements therein.

According to current practice, dynamite, blasting gelatine and other explosives are put up in the form of cartridges which are usually of cylindrical shape varying from about eight inches to twenty-four inches in length and of various diameters from about one inch upward, the explosive charge being wrapped in paper, the ends of which are folded in and the resulting cartridge coated with paraffine. Notwihstanding the fact that the cartridges of this type have been in almost universal use for a long period of years, they possess inherent disadvantages, among which may be enumerated the following: The paraffine is usually of low melting point so that in hot weather it melts, causing the cartridges to stick together in the packing box. The melting of the paraffine also allows the nitroglycerine to exude through the paper, thus giving rise to a source of danger. When used in mines, the paper on the cartridges is usually slit and at times it becomes necessary to entirely remove it so that the charge may be spread inside the drill hole. It is also necessary to take into account the chemical composition of the paper casings of the cartridges in order to secure a proper oxygen balance of the explosive charge.

I have found that the foregoing disadvantages enumerated, and others not specifically set forth, can be obviated by the simple expedient of omitting the paper wrapper entirely and directly coating the dynamite, gelatine or other explosive with a plastic waterproof material, which is preferably of sufficient strength and rigidity when set, to hold the cartridge in its original shape.

The coating materials which I have found practicable for this purpose are waxes, lacquers, rosins, rubber, asphalts, tars, and practically most other materials embodied in the broad class known as plastics. More specifically, the petrolatum stock waxes which have ceresine-like properties have been found particularly adaptable for this purpose since they have a relatively high melting point, are impervious to nitroglycerine, and are frangible when sufficient pressure is applied thereto, so that the explosive charge may be easily spread inside the drill hole. I have also found that excellent results are obtainable with the cellulose acetate and cellulose nitrate lacquers. The explosive cartridge or charge may be coated by dipping, spraying, brushing or otherwise applying the plastic waterproof composition either in the melted state or in solution to a self-sustaining mass of dynamite, gelatine or other explosive body and permitting said coating composition to set in in situ thereon. The explosive cartridge as thus formed has a so-called skin coating of waterproof composition which is of substantially uniform thickness throughout and which is coextensive with the explosive mass.

An explosive cartridge embodying the present invention is illustrated in the accompanying drawing, wherein a self-sustaining, cylindrical mass or stick of explosive, such as dynamite A, is entirely enclosed within a skin coating B of a plastic waterproof material which is formed in situ on the mass A. The coating B is of sufficient rigidity when set to sustain the explosive charge A in its original shape.

From the foregoing detailed description it will be appreciated that the production of explosive cartridges or charges of the character described will not only speed up the manufacturing operations, but will also substantially reduce the manufacturing costs and will expedite the loading of the cartridges into the drill holes. It will also permit the economical production of explosive charges of any desired shape or dimensions for special blasting practices.

What I claim is:

1. An article of manufacture consisting of a blasting cartridge comprising a charge of explosive of the type embracing dynamite and blasting jellies, said cartridge having a skin coating of a plastic waterproof composition of substantially uniform thickness throughout, which is co-extensive with the explosive.

2. A blasting cartridge comprising a charge of explosive of self-sustaining form

of the type embracing dynamite and blasting jellies, said cartridge having a plastic waterproof coating applied directly thereto, said coating being of sufficient rigidity to sustain the explosive charge in its original shape.

3. A blasting cartridge or charge of the type embracing dynamite and blasting jellies having a coating of a cellulose plastic applied directly thereto and entirely enclosing said cartridge.

4. An article of manufacture consisting of a blasting cartridge or charge of the type embracing dynamite and blasting jellies having a wax composition coating applied directly thereto and coextensive therewith, said wax composition having a relatively high melting point.

In witness whereof, I have hereunto signed my name.

DAVID E. PEARSALL.