N. RUSCHEL & J. F. BODEY.

BLASTING IMPLEMENT.

APPLICATION FILED MAY 23, 1912.

1,036,343. Patented Aug. 20, 1912.

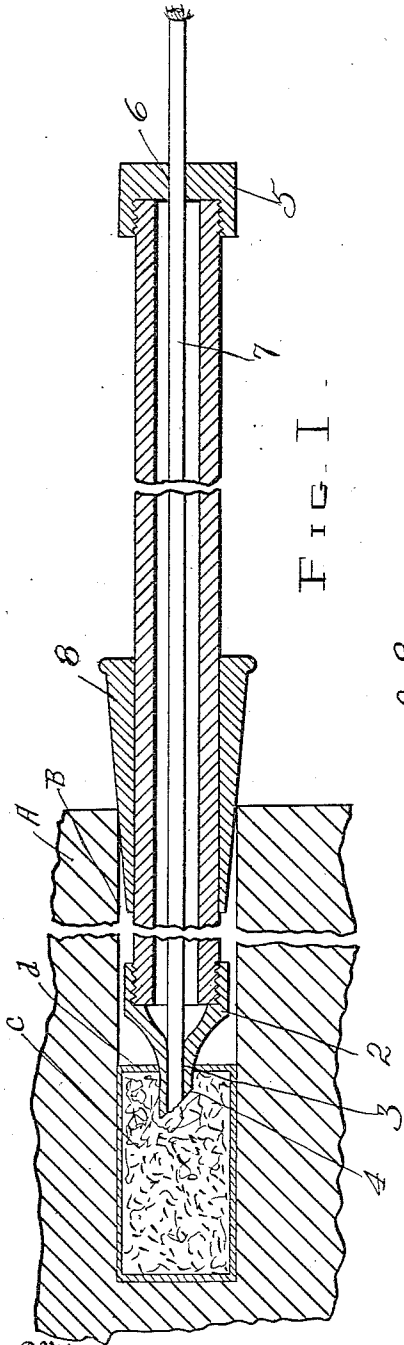

FIG. 1.

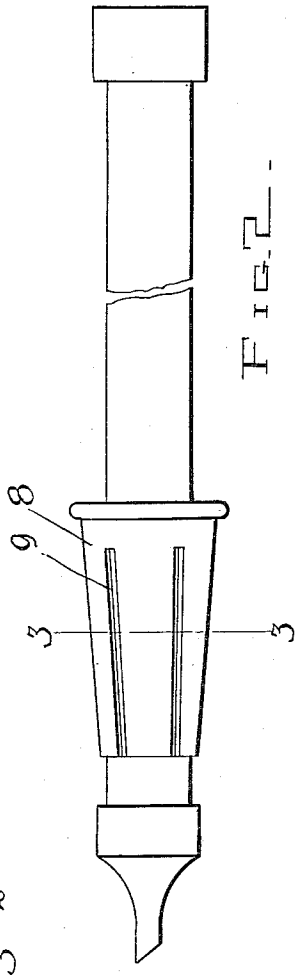

FIG. 2.

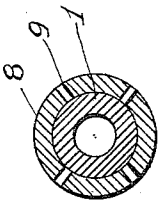

FIG. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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BLASTING IMPLEMENT.

1,036,343. Specification of Letters Patent. Patented Aug. 20, 1912.

Application filed May 23, 1912. Serial No. 699,308.

To all whom it may concern:

Be it known that we, NICHOLAS RUSCHEL and JOHN F. BODEY, citizens of the United States, residing at Federal, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Blasting Implements, of which the following is a specification.

Our invention relates to implements used in blasting and has for its object the provision of a firing needle for piercing the cartridge and carrying the fuse into the explosive and holding the fuse previous to the explosion, said needle consisting of a tubular member having a piercing point thereon and adapted to carry the fuse, said tubular member carrying a wedge sleeve that is adapted to be driven between the needle and the boring to clamp the tubular member securely therein during the blasting operation.

Our invention will be described in detail hereinafter and illustrated in the accompanying drawings, in which,

Figure 1 is a sectional view of a breast of mineral having a boring therein showing the charge in position and our improved blasting needle in place, the blasting needle being shown in section; Fig. 2, a view in elevation of the blasting needle; and Fig. 3, a cross section on the line 3—3 of Fig. 2.

In the drawings, similar reference characters will be used to designate corresponding parts throughout the several views.

A indicates a breast of mineral shown in fragment and having the boring B therein, in which is contained a cartridge C of a suitable explosive inclosed within an envelop of fragile material D, such as paper or the like.

Our improved blasting needle consists of a tubular member 1 having on one of its terminals a conoidal-shaped point 2 screwed thereto or secured in any other suitable manner and formed with a tubular opening 3, the end of said point being inclined as shown at 4. The other terminal of the tubular member 1 has removably mounted thereon a cap 5 formed with a central opening 6.

7 indicates the fuse that extends through the tubular member 1 and is mounted in the opening 3 in the point 2 and extends through the opening 6 in the cap 5.

8 indicates a tapering sleeve mounted on the tubular member 1 and formed with a plurality of longitudinal slots 9 cutting the thinner portion of said sleeve and ending short of the thicker end of the sleeve.

In use, it will be apparent that after the boring B has been made in the breast of mineral A and the cartridge C inserted therein in the usual manner, our improved blasting needle is inserted in the boring B and against the envelop D of the cartridge C so as to puncture it and carry the fuse 7 into the explosive contained within the cartridge. The sleeve 8 is then driven into the orifice of the boring B and securely clamped therein by driving it with any suitable tool. The fuse is then fired and for the period predetermined by the length of the fuse, the cartridge is exploded, the blasting needle by being securely fastened in the boring by the wedge sleeve 8 causing the gases of the explosive to be confined and the result thereof to be more effective.

Having thus described our invention, what we claim is:—

1. A blasting needle comprising a tubular member, a conoidal-shaped piercing point removably mounted on one terminal of said tubular member, said conoidal-shaped piercing point being formed with a longitudinal opening and its free terminal inclined, said tubular member and the opening in the piercing point being adapted to carry a fuse, and a tapered sleeve slidably mounted on said tubular member and having a plurality of longitudinal slots therein that terminate at the thinner portion of said sleeve.

2. A blasting needle comprising a tubular member, a conoidal-shaped piercing point removably mounted on one terminal of said tubular member and having an opening therein, the outer terminal of said piercing point being inclined, a cap removably secured to the other terminal of said tubular member and having an opening therein, said

tubular member and the openings in the piercing point and cap being adapted to carry a fuse, and a tapered sleeve slidably mounted on said tubular member and having a plurality of longitudinal slots therein that terminate at the thinner end of said tapered sleeve.

In testimony whereof we affix our signatures in presence of two witnesses.

NICHOLAS RUSCHEL.
JOHN F. BODEY.

Witnesses:
T. D. LESNETT,
WM. J. STUCKERT.