(No Model.)

H. H. BOURNE.

METHOD OF BLASTING EARTH.

No. 351,959. Patented Nov. 2, 1886.

Fig. 3

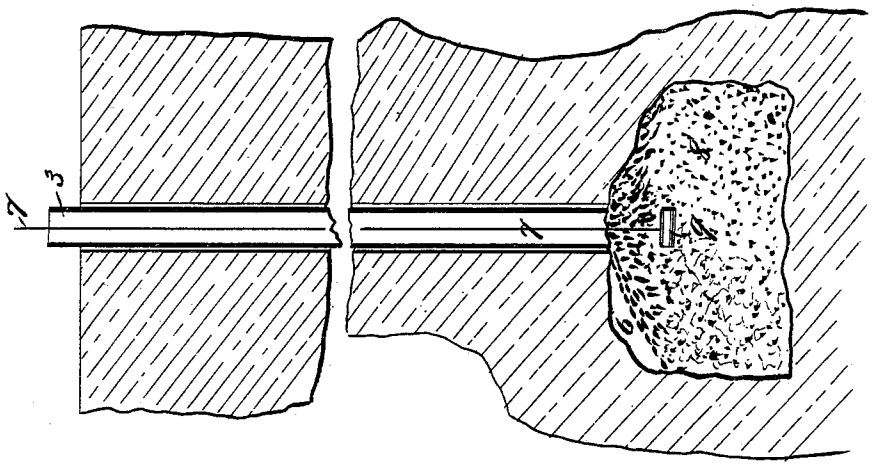


Fig. 2.

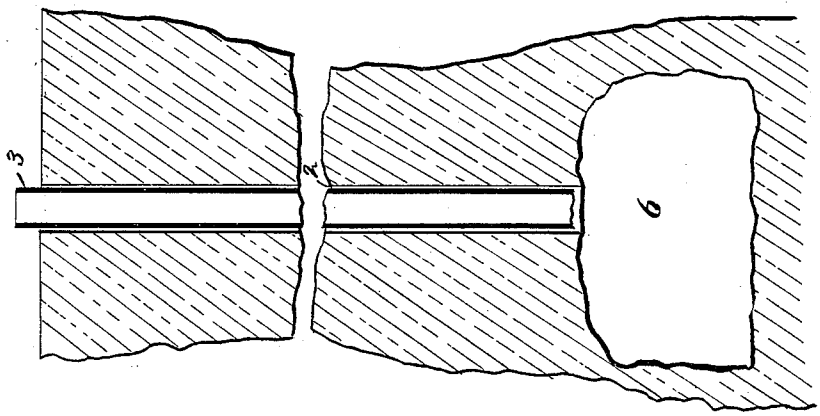
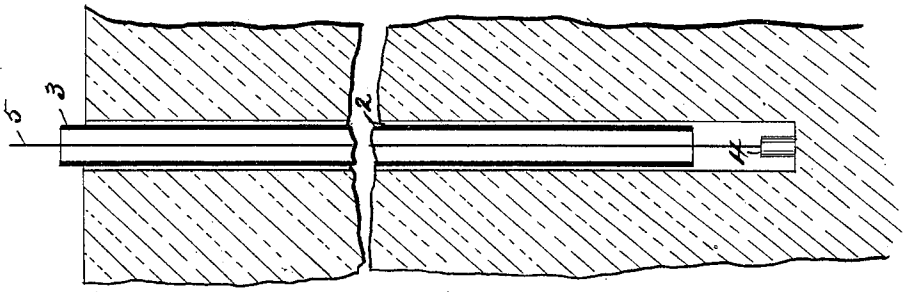


Fig. 4



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UNITED STATES PATENT OFFICE.

HENRY H. BOURNE, OF MANHATTAN, KANSAS.

METHOD OF BLASTING EARTH.

SPECIFICATION forming part of Letters Patent No. 351,959, dated November 2, 1886.

Application filed July 16, 1886. Serial No. 208,199. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. BOURNE, of Manhattan, in the county of Riley and the State of Kansas, have invented a new and Improved Method for Blasting Earth, of which the following is a full, clear, and exact description.

My invention relates to a novel method of blasting earth, applicable for use in the blasting or excavating of almost any form of earth where it is necessary to move large bodies of material.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical sectional view of a bank representing the same as it appears after the first step of my improved method of blasting earth has been taken. Fig. 2 is a similar view representing the same after the second step of the method has been taken, and Fig. 3 is a view representing the bank as it appears when ready for the final operation of blasting.

In carrying out my invention, I bore or drill a hole, 2, in a bank at a proper distance from the edge, and this hole I line with a tube or curb, 3, which extends to a point closely approaching the bottom of the hole. I then lower a dynamite cartridge, 4, to the bottom of the hole 2, said cartridge being connected to a proper fuse, 5. After the cartridge 4 has been lowered, as described, it is exploded, so as to form such a cavity as the one illustrated at 6 in Fig. 2. The cavity 6 having been formed is filled with gunpowder or any other proper kind of explosive, a fuse, 7, being lowered, so as to extend within the body of the gunpowder 8, the fuse being carried to the point required by a weight, 9. After the chamber 6 has been filled with a proper explosive, the tube 3 is withdrawn and the hole 2 is entirely or partially filled with tamping. The fuse 7 is then ignited and the powder 8 is exploded.

In practice the holes 2 are often sunk to a depth of from twenty-five to thirty-five, or even forty, feet, and it will be found that the work of the explosive contained within the chamber 6 will be very thorough and efficient.

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

The herein-described method of blasting earth, which consists in boring a hole of proper depth, inserting a tube within said hole, exploding a cartridge beneath the lower end of the tube, filling the chamber caused by the explosion of the cartridge with a proper explosive, withdrawing the tube, and exploding the explosive, substantially as described.

HENRY H. BOURNE.

Witnesses:

PHILIP C. HELDER,

JAMES T. RITCHIE.