

(No Model.)

J. E. FEHN.  
COMBINED BLASTING BARREL, MEASURING RULE, AND DRILL HOLE  
SCRAPER.

No. 334,765.

Patented Jan. 26, 1886.

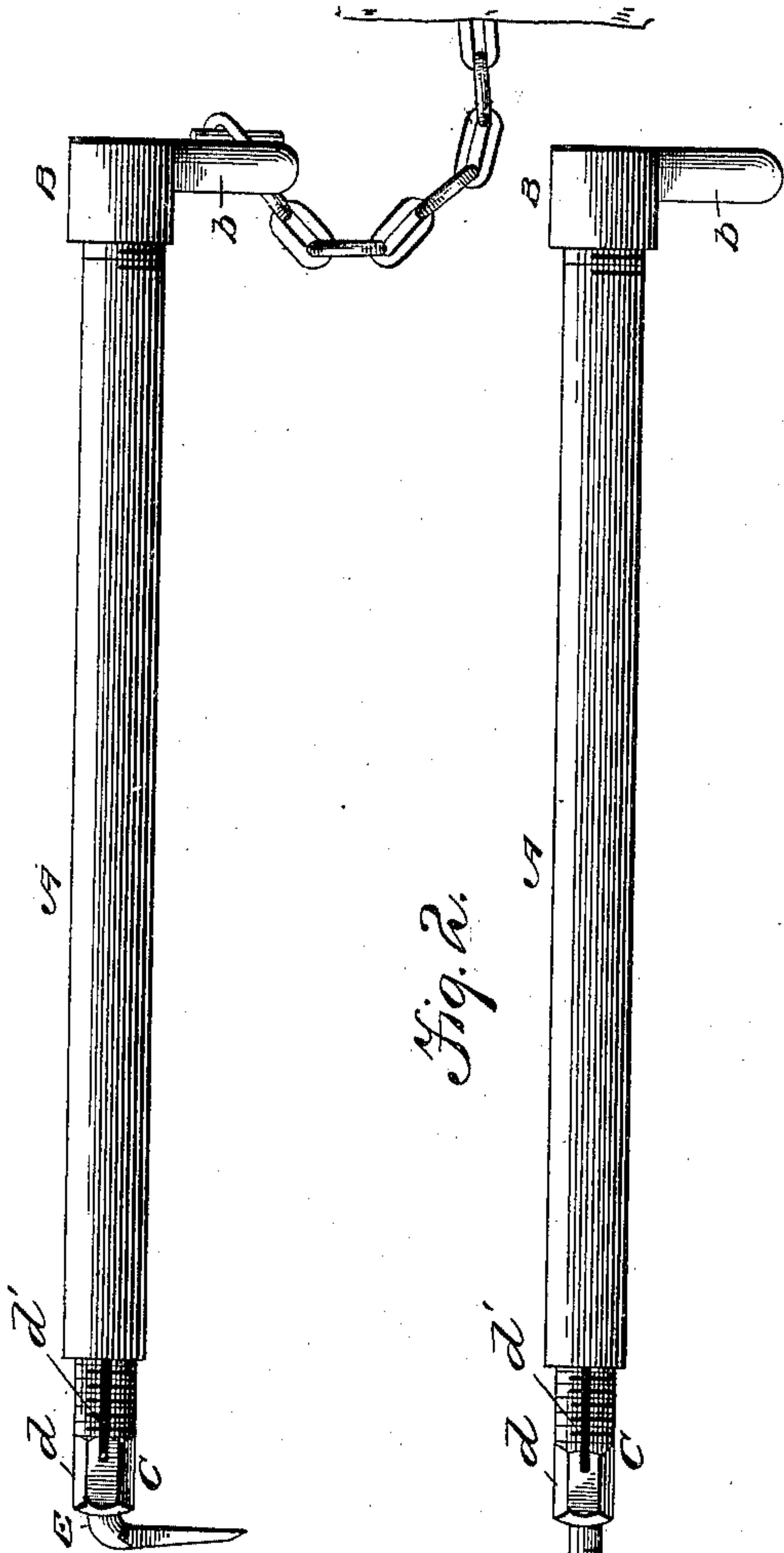


Fig. 2.

Fig. 1.

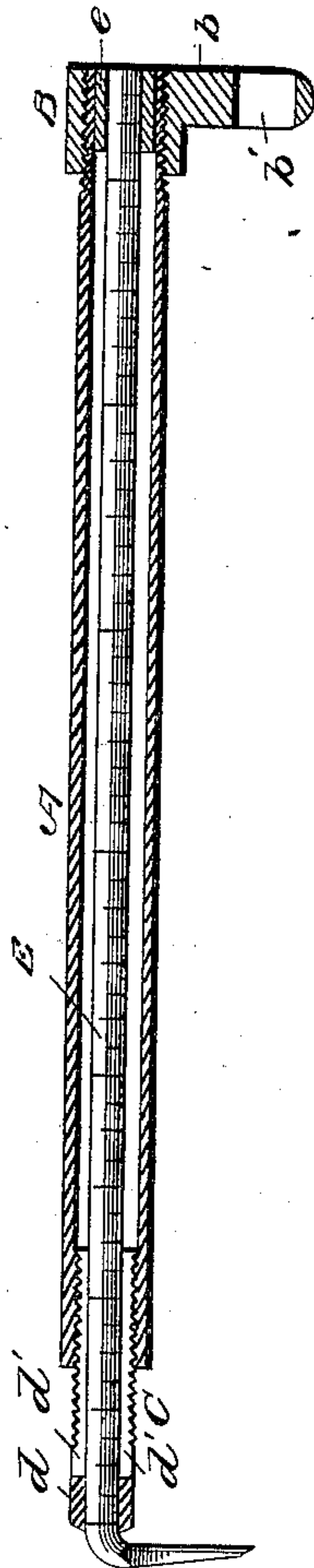


Fig. 3.

Witnesses  
W. Ashlee  
J. W. Garner

Inventor  
John E. Fehn.  
By his Attorneys  
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# UNITED STATES PATENT OFFICE.

JOHN E. FEHN, OF ST. CLAIR, PENNSYLVANIA.

COMBINED BLASTING-BARREL, MEASURING-RULE, AND DRILL-HOLE SCRAPER.

SPECIFICATION forming part of Letters Patent No. 334,765, dated January 26, 1886.

Application filed October 30, 1885. Serial No. 181,430. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. FEHN, a citizen of the United States, residing at St. Clair, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in a Combined Blasting-Barrel, Measuring-Rule, and Drill-Hole Scraper, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention is an improved combined blasting-barrel, measuring-rule, and drill-hole scraper; and it consists in the peculiar construction and combination of devices that will be more fully described hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my invention adapted for use as a scraper. Fig. 2 is a similar view of the same adjusted to form an extensible scraper. 20 Fig. 3 is a longitudinal sectional view.

A represents a hollow cylindrical tube, which may be of any desired length. On one end of this tube is screwed a metallic bushing, B, from one side of which extends a short arm, *b*, having an opening or eye, *b'*. The opposite end of the tube A is interiorly screw-threaded, in which is screwed a clamping-chuck, C, which is threaded for a portion of its distance, and is provided with an angular head, *d*. The threaded portion of the chuck has a number of longitudinal slits, *d'*, by which means arms are formed in the threaded portions of the chuck, which arms, as the chuck is screwed into the tube, approach each other and clamp a rod, E, which passes through a central longitudinal opening in the chuck. 35

This rod is slightly longer than the tube A, and is provided on its inner end with a collar, *e*, which prevents it from being drawn out from the chuck, and at the outer end of the said rod is formed a right-angled scraper which is used in scraping out the small particles that are left in the drill-hole when the rock or ore to be blasted is drilled. Usually this scraper is formed on the lower end of the tube A, which tube is usually above five feet in length. It frequently becomes necessary to drill a hole for the blast exceeding five feet in depth, and it will be readily understood that a scraper 45 five feet long could not be employed to re-

move all the fine particles from such a hole. My invention remedies this defect by providing an interior extensible rod in the tube and forming the scraper on the lower end of said rod, which may be extended to any length desired, as will be very readily understood, and thereby adapts the scraper to be used in removing the fine particles from a drill-hole of any ordinary depth. 55

The timbers which are used in propping and lining a mine have frequently to be measured, as they are not always cut of exactly the right length before being sent into the mine, and in order to provide the miner with a measuring-rule which will be readily accessible at all times, and which cannot be easily lost, I inscribe a rule in feet and inches on the rod E, as shown, which may be used for all ordinary purposes to which a measuring-rule can be applied. 60 65 70

When blasting a rock or body of ore in a damp or wet place, it is necessary to line the drill-hole with a blasting-barrel. When this is necessary, the rod E and the chuck are removed from the tube A, which then forms a blasting-barrel perfectly adapted for the purpose. In order to prevent this barrel from being blown away and lost by the discharge of the blast, I attach a chain to the eye of the arm *b*, and the other end of the chain I attach to one of the timbers in the mine, or other immovable object. When the explosion occurs, the tube is prevented from being blown away by the force of the blast. 75 80

Having thus described my invention, I claim— 85

1. The combination of the tube and the extensible rod in the tube having a scraper at its outer end, substantially as described.

2. The combination of the tube, the chuck screwed into one end thereof, and the extensible rod passed through the chuck and entering the tube, said rod having the scraper at its outer end, substantially as described. 90

3. The combination of the tube with the extensible rod therein having the scraper at its lower end, the said rod being inscribed or marked to form a measuring-rule, substantially as described. 95

4. The tube having a chain-attaching device 100



at one end and an extensible detachable rod working through the other end of the tube and provided with a scraper, as set forth.

5 5. The combination of the tube having the bushing screwed on one end, the said bushing having an arm provided with an opening, and the extensible rod in the tube having a scraper at its outer end, substantially as described.

10 6. The combination of the tube having a chain-attaching device at one end, the chuck screwed into the opposite end thereof, and the

extensible rod passed through the chuck and entering the tube, the said rod having the scraper at its outer end, substantially as described.

15 In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN E. FEHN.

Witnesses:

ALFRED O. BLANCH,  
PETER SHIRE.