

No. 895,877.

PATENTED AUG. 11, 1908.

E. E. MESSMORE.

ROCK DRILLING DEVICE.

APPLICATION FILED AUG. 30, 1907.

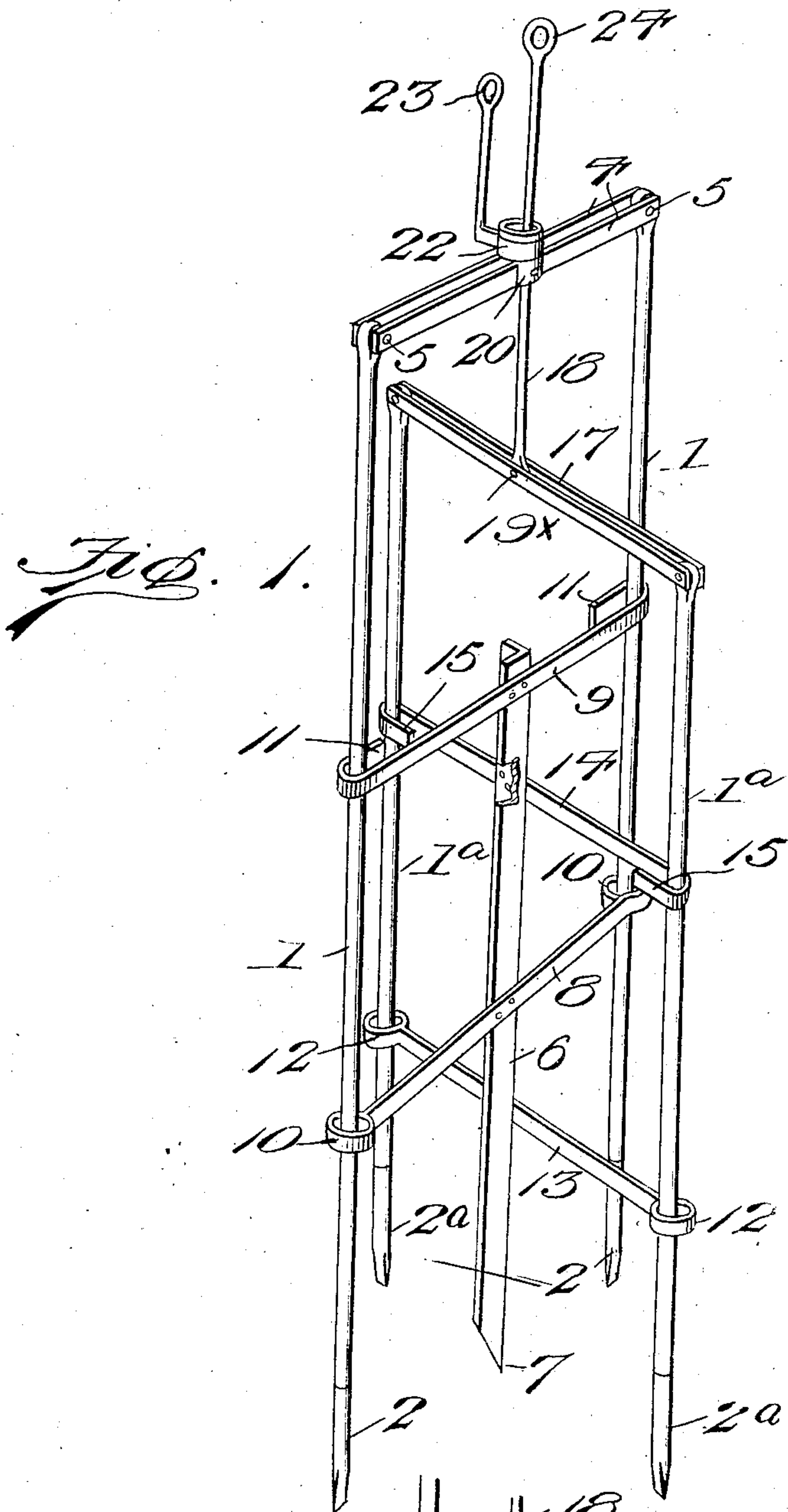


Fig. 1.

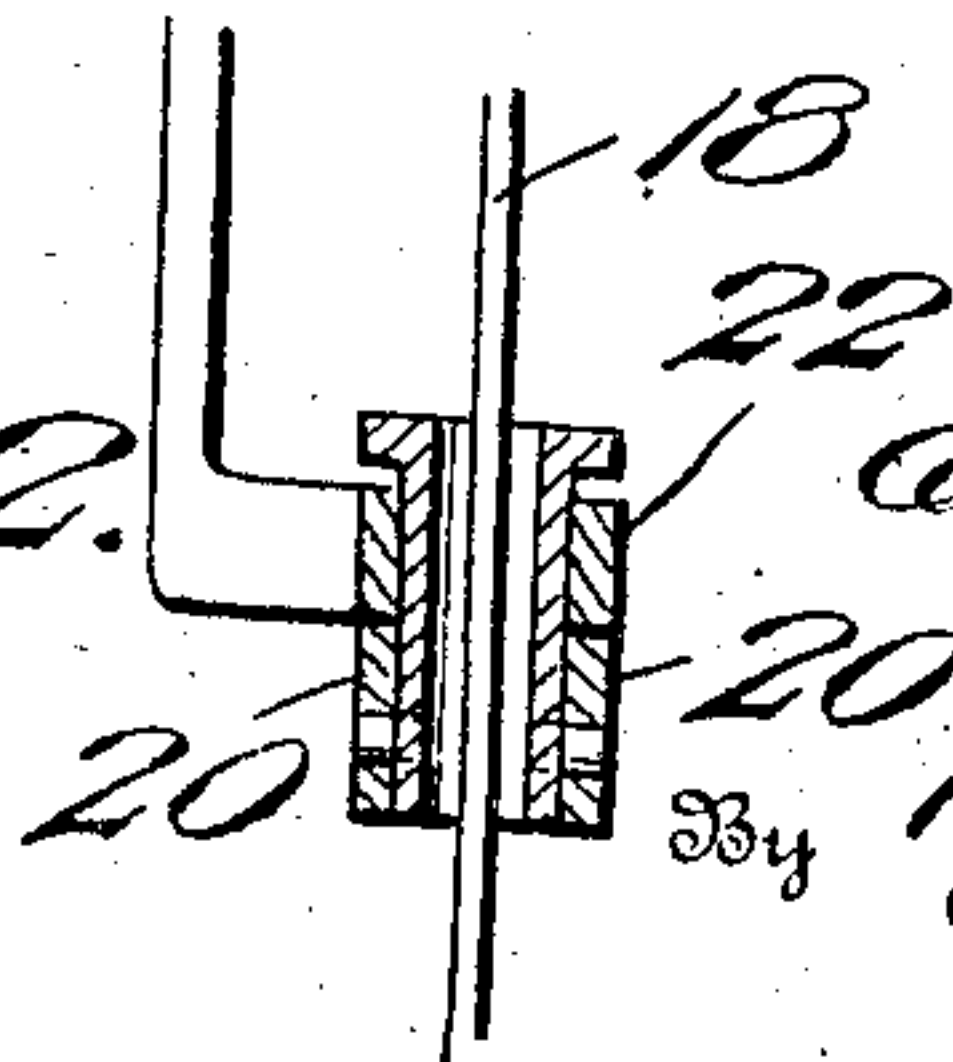


Fig. 2.

Witnesses

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EUGENE E. MESSMORE, OF EPWORTH, IOWA.

ROCK-DRILLING DEVICE.

No. 895,877.

Specification of Letters Patent.

Patented Aug. 11, 1908.

Application filed August 30, 1907. Serial No. 390,773.

To all whom it may concern:

Be it known that I, EUGENE E. MESSMORE, a citizen of the United States of America, residing at Epworth, in the county of Dubuque and State of Iowa, have invented new and useful Improvements in Rock-Drilling Devices, of which the following is a specification.

This invention relates to rock drills and one of the principal objects of the same is to provide a simple, reliable and efficient drill for removing a cylindrical block of rock.

Another object of the invention is to provide two pairs of drills mounted upon independent frames so that each pair of drills may be raised and lowered alternately and independently, the drill being held in place by a central pivot.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which:—

Figure 1 is a perspective view of a rock drill made in accordance with my invention. Fig. 2 is an enlarged vertical section and partial elevation of the bearing and swivel for the operating rod.

Referring to the drawing for a more particular description of my invention, the numerals 1 designate the longer drill supporting rods to which the drill bits 2 are secured at their lower ends in any suitable manner. The upper ends of the rods 1 are each pivoted between the cross bars 4, on pins 5. A central guide 6 comprising an angle iron bar having a sharpened point 7 is secured to a pair of cross bars 8 and 9, said cross bar 8 being provided with a loop 10 at each end through which the rods 1 pass, and the bar 9 having inwardly bent ends 11 which will permit a slight inward or outward movement of the rods 1. The shorter bit supporting rods 1^a are each provided with bits 2^a, and the rods 1^a pass through loops 12 formed upon the ends of a cross bar 13. A cross bar 14 secured to the center guide 6 provided with inwardly bent ends 15 which engage the rods 1^a and permit them to move slightly inward and outward. The operating rod 18 is con-

nected by an eye and bolt 19^x to the cross bar 17, said operating rod extending through a bearing 20 attached to the cross bar 4. Mounted to move freely on the bearing 20 is a swivel 22 provided in the outer end of its arm with an aperture 23 for a rope, this arm rotating about the operating rod 18 to prevent twisting of the two ropes, one of which is secured to the eye 24 of the operating rod 18.

The operation of my invention may be briefly described as follows:—The drill is operated by a double machine which will raise and lower the rods 1, and the rods 1^a alternately, the swivels allowing the drills to turn around the center pivot 6 and cutting a circular slot in a layer of rock. The central block of rock is lifted out by means of tongs.

From the foregoing it will be obvious that a drill made in accordance with my invention is of simple construction, is quick and efficient in operation and is not liable to get out of order.

Having thus described the invention, what I claim as new, is:—

1. A rock drill comprising a central angle iron pivot bar, a pair of bit supporting rods pivoted to a cross bar, cross bars through which said rods freely pass, a pair of shorter bit supporting rods mounted upon a cross bar, an operating rod connected to said last mentioned cross bar, and extending through a bearing, and a rope swivel mounted upon said bearing.

2. In a rock drill, a central angle iron pivot bar, two pairs of bit supporting rods, cross bars secured to said pivot bar and provided with loops through which said supporting rods are permitted to move independently in a vertical direction, an operating rod, and a swivel mounted upon a bearing upon the upper cross bar.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE E. MESSMORE.

Witnesses:

CLARENCE B. HANNA,
GEORGE SMITH.