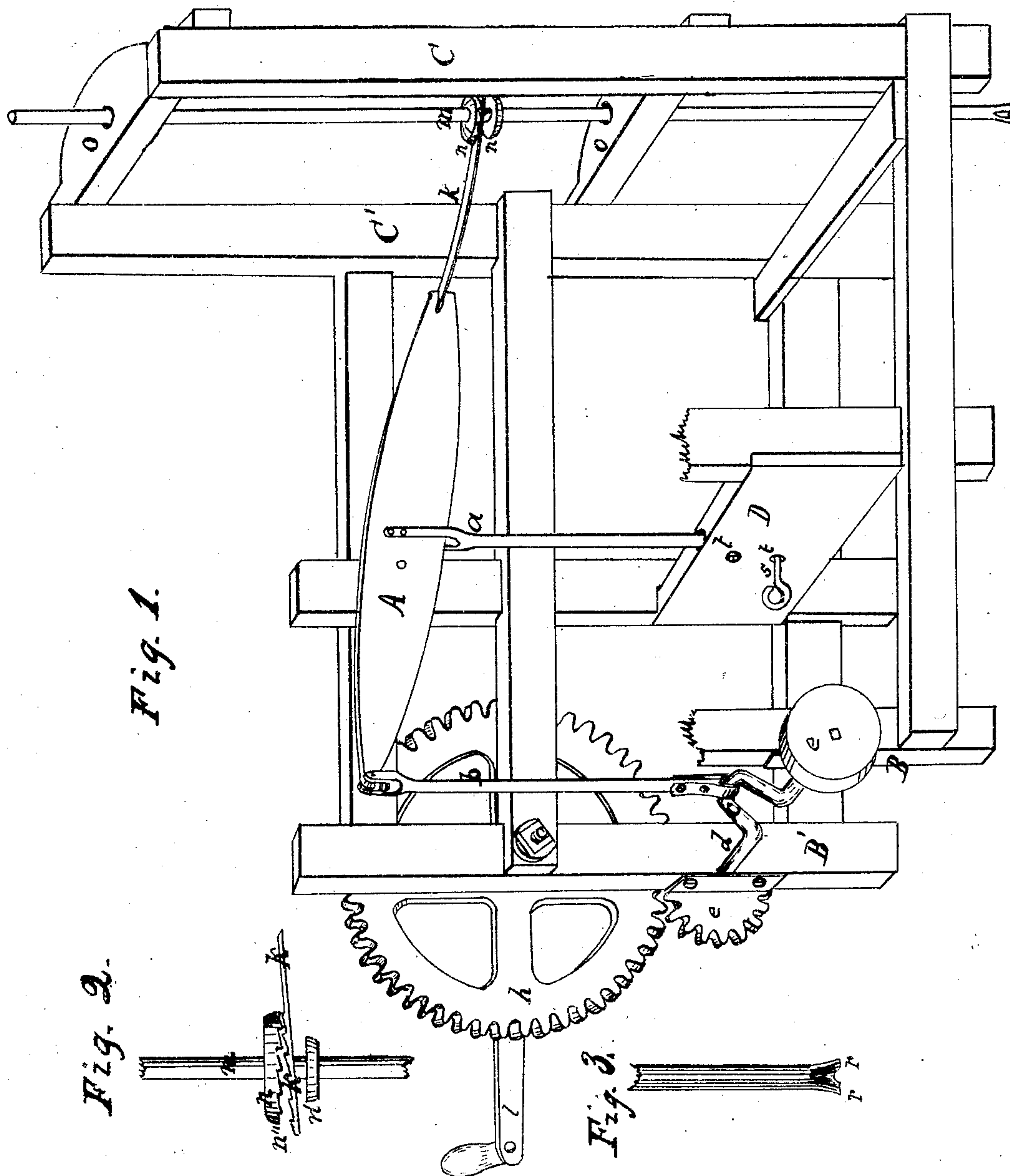


J. Peavy.
Rock-Drill.

N^o 76242

Patented Mar. 31, 1868.



Witnesses.

C. F. Brown.

Geo. H. Mellen.

Inventor.

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Atty.

United States Patent Office.

JOSEPH PEEVY, OF ORONO, MAINE.

Letters Patent No. 76,242, dated March 31, 1868.

IMPROVED ROCK-DRILL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOSEPH PEEVY, of Orono, in the county of Penobscot, and State of Maine, have invented an Improvement in Machines for Drilling Rock; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, with letters of reference marked thereon, making a part of this specification, of which—

Figure 1 is a perspective view, with a portion of the side frame removed.

Figure 2, an apparatus for imparting a rotary motion to the drill; and

Figure 3, a view of the point of the drill.

This invention consists of a mechanism for drilling rocks, the main features of which are a walking-beam, resting on an adjustable support, and a device for automatically rotating the cutting-instrument, as will hereinafter more fully appear.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.—

A represents a walking-beam, supported on the forked post *a* by means of a pivot. The connecting-rod *d*, jointed at its upper end to one extremity of said beam in the usual manner, is connected at its lower end to a crank, *e*, on a shaft, *d*, the latter being supported in suitable bearings in the uprights B B' of the frame of the machine. On one end of the shaft *d* is placed a pinion, *e*, matching with a spur-wheel, *h*, supported in suitable bearings higher on the upright B', said spur-wheel being provided with a crank, *i*, to which power is applied from the motor. To the other end of the shaft *d* is applied a balance-wheel, *l*, which I propose shall be a grindstone. To the opposite extremity of the walking-beam A is attached one end of a piece of elastic metal, *k*, bifurcated at its other end, within which bifurcation is received the drill-shank *m*, on which are placed two collars, *n n'*, one just above the end of the spring *k*, and the other just below it. These collars are intended to be connected by a piece of tubing, and to be fastened to the drill-shank, at any point, by a set-screw, in such manner that they may be moved up or down thereon, by which means the length of the drill-shank may be practically increased or decreased at pleasure. The upper collar, *n*, is provided on its under side with teeth, *n''*, so cut as to match with teeth *k'* on the upper side of one of the forks of the spring *k*. By this means the automatic rotation of the drill is effected, for, as the spring *k* is raised by the action of the walking-beam, since the drill-shank moves only in a vertical plane, being held therein by guides *o o*, on the uprights C C' of the frame, the said spring, as it moves upward, moves also backward, in relation to said shank, and its teeth, *k*, acting on the teeth *n''* of the collar *n*, cause the shank to turn by the space of one notch at each upward movement.

The point of my drill is forked, as shown at *r r*, fig. 3, the two spurs projecting outward at each corner, for the purpose of enabling the drill to pass a seam in the rock it may be cutting through, without being thereby made to deviate from its true vertical course. The lower part of the post *a*, which supports the walking-beam A, enters a hole in the sill D, and rests upon a bar, *s*, of the proper strength, which passes through an orifice in the post *a*, and through an orifice, *t*, in the sill D. There are two or more orifices *t* in the sill D, one above another, through either of which the bar *s* may be passed, by which means the height of the walking-beam above the sill may be increased or diminished at pleasure. By setting the post *a* at its lowest point, and the collars *n n'* at their highest point, the depth to which the drill may be made to attain may be greatly increased.

The use of the spring-bar *k* is to diminish the shock on the apparatus when the lifting-strain commences. This it does to a very material extent, operating to a great advantage, and preventing weakening and breakage of the parts.

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

1. The adjustable and notched collars *n n'*, in combination with the drill-shank *m* and the bifurcated and notched shaft *k*, as and for the purpose set forth.
2. The spring arm *k*, in combination with the walking-beam A and the drill-rod, as and for the purpose set forth.

JOSEPH PEEVY.

Witnesses:

FRED. W. HILL,

NEWTON E. BONNY.