

Sheet 1. 2 Sheets.

*J. K. Miller's
Post-Hole Borer.*

Nº 75,947

Patented Mar. 24. 1868.

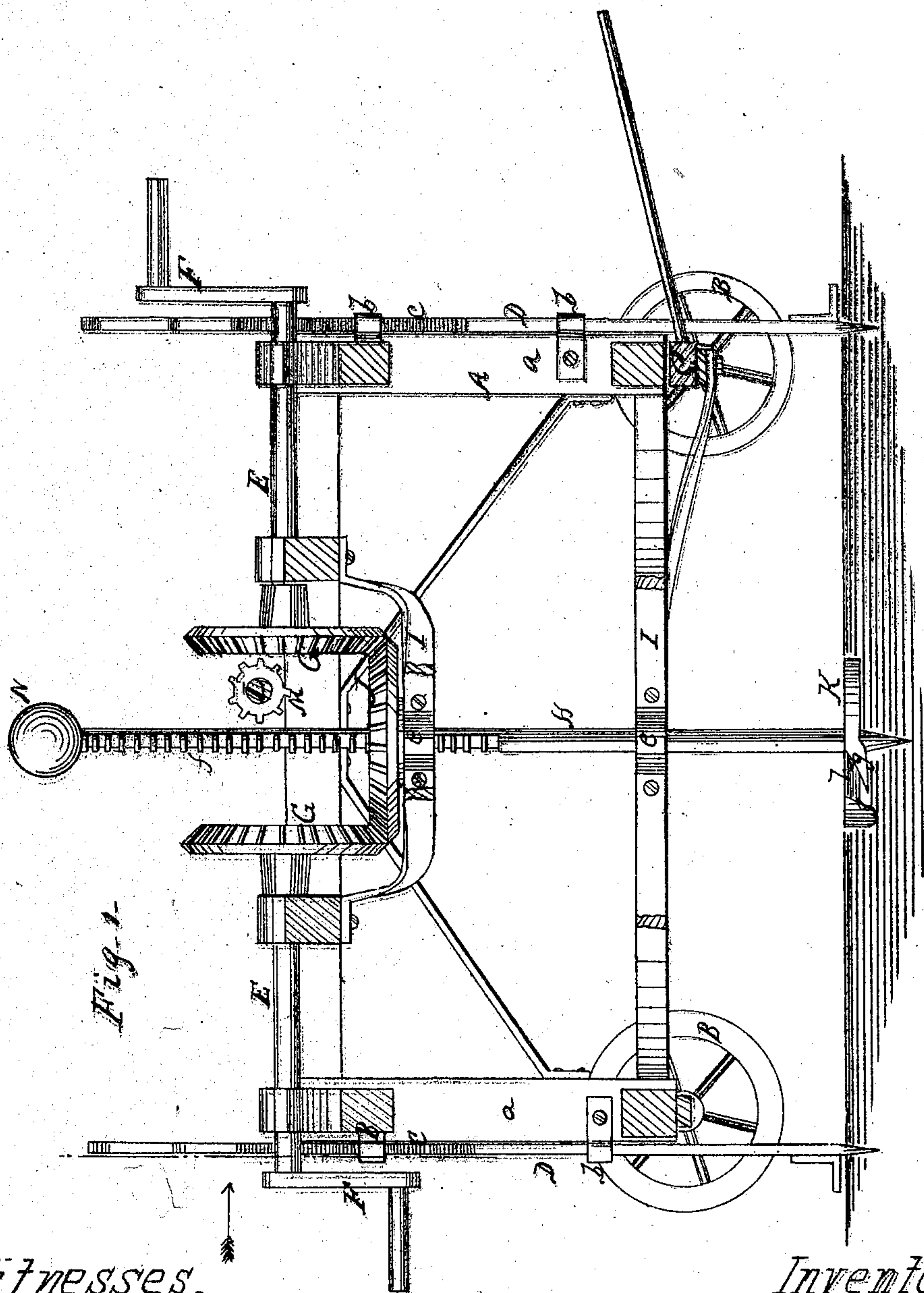


Fig. 1.

Witnesses.

*Theo Tucho
J. A. Service.*

Inventor.

*Gas K. Miller.
Per Munnif Co
Attorneys*

*J. K. Miller,
Post-Hole Borer.*

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Fig. 3.

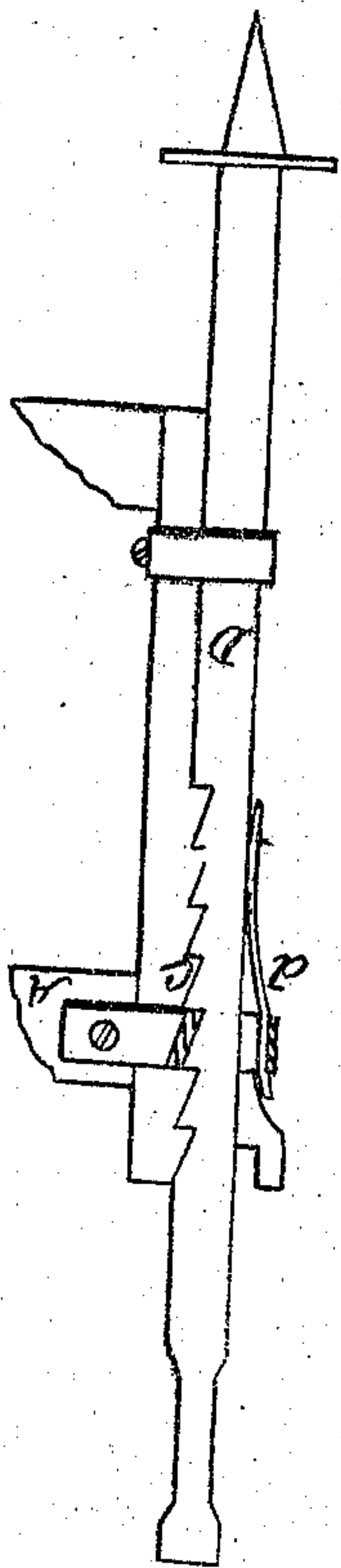
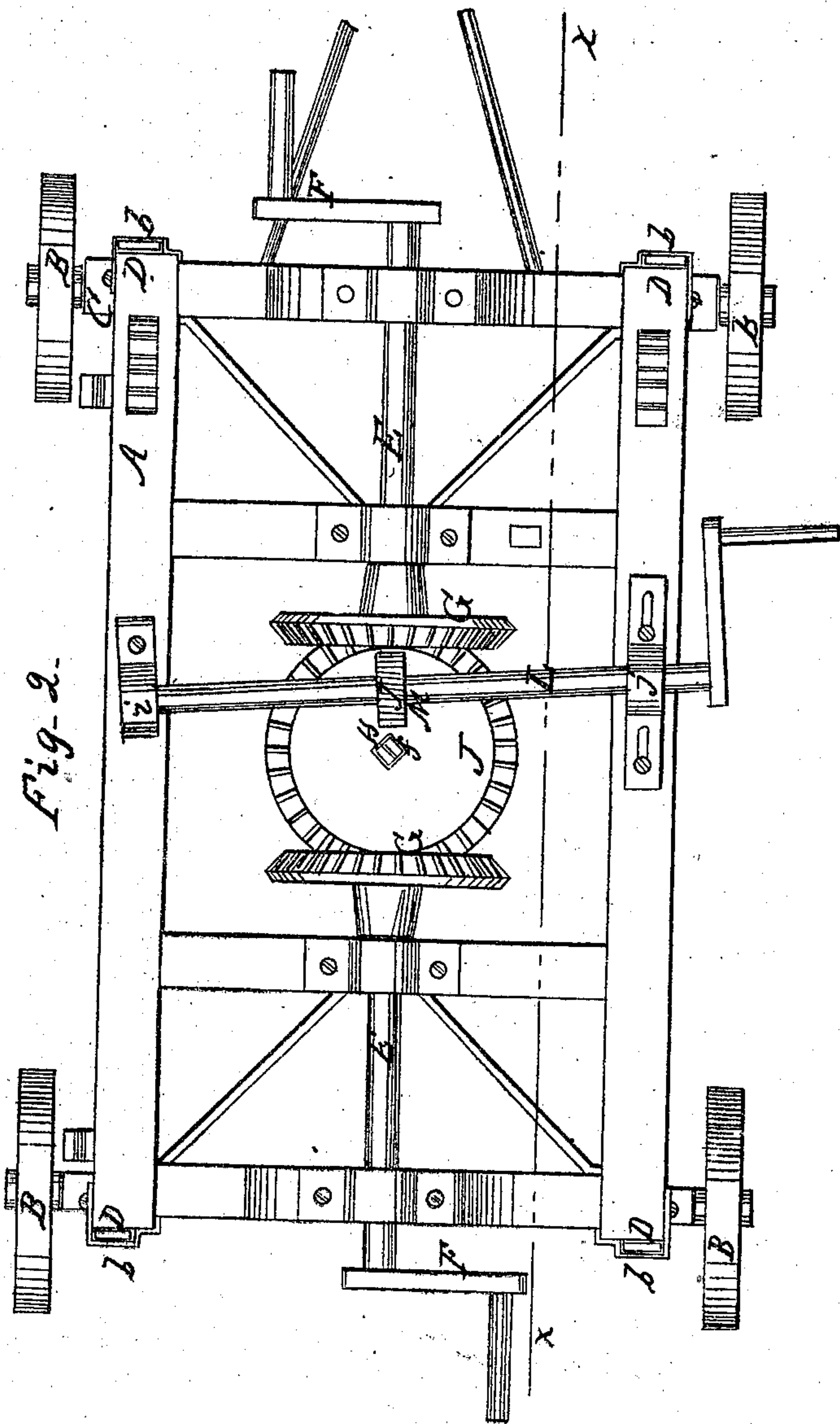


Fig. 2.



Witnesses.

*Thos. Lusche
J. A. Service.*

Inventor.

*Jas. K. Miller
Per Munn & Co.
Attorneys.*

United States Patent Office.

JAMES K. MILLER, OF NEW YORK, N. Y.

Letters Patent No. 75,947, dated March 24, 1868.

IMPROVED POST-HOLE BORER.

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, JAMES K. MILLER, of the city, county, and State of New York, have made and invented new and useful Improvements in Machines for Boring Post-Holes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a new and improved machine for boring holes in the earth to receive posts, more especially fence-posts.

The invention consists, first, in a novel means for rotating the borer, and elevating the same; and second, in a means employed for adjusting the machine in a horizontal position, on uneven or inclined ground, so as to insure the holes being bored vertically into the earth. In the accompanying sheet of drawings—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, fig. 2.

Figure 2, a plan or top view of the same.

Figure 3, a detached view of a portion pertaining to the same.

Similar letters of reference indicate like parts.

A represents a rectangular framing, which may be constructed in any proper manner to support the working-parts. This framing, when the machine is not at work, or when at work on even or horizontal ground, is supported by wheels B, two at each end, the wheels at one end being on an axle, C, which is attached to the frame by a central king-bolt, as in an ordinary wagon, thills or a draught-pole being attached to this axle. To each corner-post *a* of the framing there is fitted, in metal guides *b*, an upright bar, D. These bars are notched at one side, as shown at *c*, and each bar has a spring, *d*, attached to it, at the opposite side to that where the notches are made, (see fig. 3.) These springs *d* pass up through the upper guides *b*, and have a tendency to keep the notches *c* engaged with the sides of the guides *b* which are opposite to them, so that by adjusting the bars D, the framing A may be raised or lowered, and supported in a perfectly horizontal position, however uneven the ground may be. On the upper part of the framing A there are placed, longitudinally, two shafts, E E, which have cranks F F on their outer ends, and bevel-wheels G G, on their inner ends. H represents a vertical shaft, of square or rectangular form, in its transverse section, and having its bearings *e e* in bars I in the framing. One side of the shaft H is provided with teeth *f*, to form a rack, and on the shaft there is placed a bevel-wheel, J, into which the wheels G G of the shafts E E gear, the wheel J resting on the upper bearing of shaft H, having a square central hole, through which the shaft H passes, to cause said shaft to turn with the said wheel. On the lower part of shaft H the borer K is placed, which is composed of a circular plate, having a cutting-lip, *g*, and a throat, *h*, as shown in fig. 1. L is a shaft, placed on the framing A, and having one bearing, *i*, fixed, and the other bearing, *j*, arranged so that it may slide. On the shaft L a pinion, M, is firmly keyed, and by moving the sliding bearing *j*, the pinion M may be shoved in gear with the teeth *f* of shaft H, or shoved out of gear therewith.

The device is used as follows: The machine is adjusted so that the borer K will be over the place where the hole is to be bored, and the framing, through the media of the bars D, is adjusted to bring the framing A in a perfectly horizontal position. The shafts E E are then turned, and the shaft H rotated from E E through the media of the wheels G G and J. The borer K penetrates the earth, the gravity of the shaft H feeding it to its work, a weight, N, if necessary, being placed on the shaft to effect that result. At suitable intervals the pinion M of shaft L is adjusted in gear with the teeth *f* of shaft H, and the latter elevated by turning shaft L, so that the borer may raise the loose earth out of the hole.

This device is extremely simple and efficient, and may be constructed at a very moderate cost, and will effect a great saving in labor in making post-holes.

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

1. The weighted shaft H, provided with rack-teeth *f* at one side, and the borer K, serrated at its lower end, in connection with the wheel J, placed loosely on the shaft, and the driving-wheels G G, on the shafts E E, one or more of the latter being used.

2. The pinion M on the adjustable shaft L, in combination with the rack-shaft *f* on shaft H, all arranged substantially as and for the purpose set forth.

Witnesses:

WM. F. McNAMARA,
ALEX. F. ROBERTS,

JAS. K. MILLER.