(No Model.)

F. E. WREN.

POST HOLE BORER.

No. 341,982. Patented May 18, 1886.

Fig. 2.

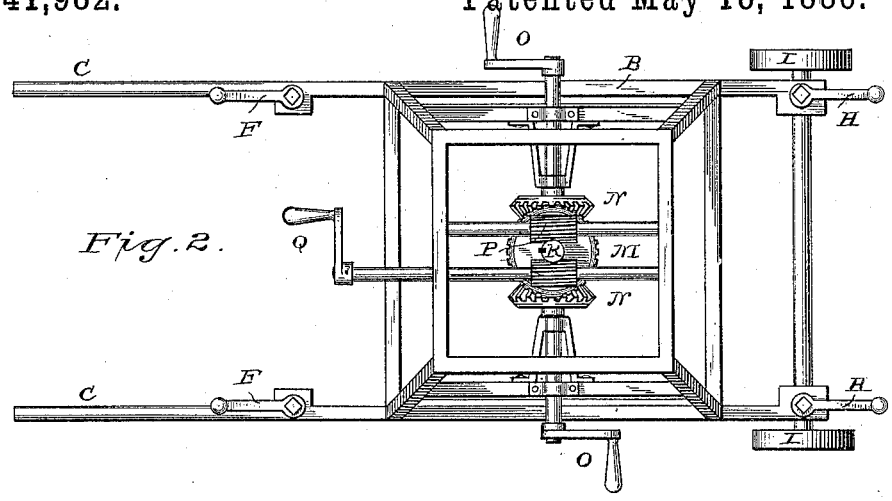


Fig. 4.

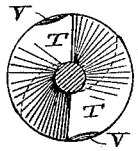


Fig. 3.

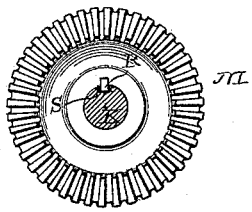
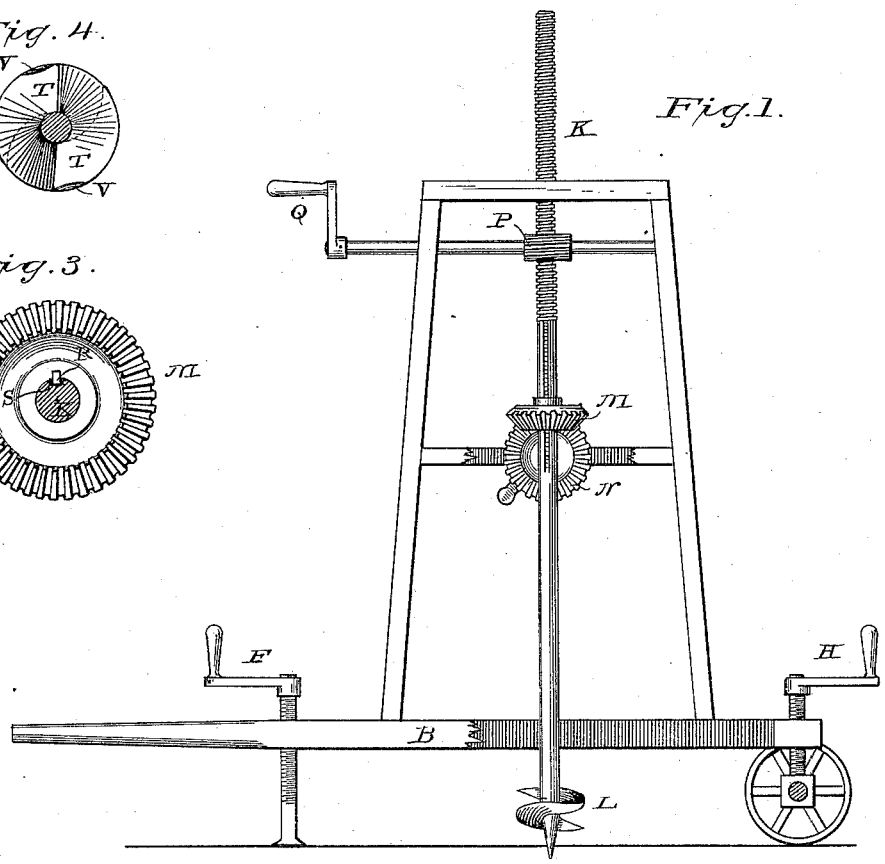


Fig. 1.



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UNITED STATES PATENT OFFICE.

FRANKLIN E. WREN, OF BLOOMFIELD, LOGAN COUNTY, OHIO.

POST-HOLE BORER.

SPECIFICATION forming part of Letters Patent No. 341,982, dated May 18, 1886.

Application filed October 17, 1885. Serial No. 180,178. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN E. WREN, a citizen of the United States, and a resident of Bloomfield township, in the county of Logan and State of Ohio, have invented a new and useful Post-Hole Borer, of which the following is a specification.

Figure 1 is a side view, part cut away, to show other parts. Fig. 2 is a top view; Fig. 3, a top view of horizontal bevel-gear, auger, shaft, key, &c. Fig. 4 is a top view of my auger proper.

My invention is an improved post-hole-boring machine; and it consists of an upright frame supported on a truck, the legs and wheels of the truck being adjustable vertically to suit the ground, the frame carrying an earth-auger attached to the end of a vertical screw, which is operated by means of the miter-wheels M N N and crank O in boring, and which is raised out of the ground when desired by means of the pinions P P and crank Q. The screw passes down through miter-wheel M and is keyed to it by means of key R, attached to wheel M, so that it must turn when wheel M turns. Key R, however, plays loosely in a vertical slot in screw K, so that it may slip endwise in wheel M without affecting the wheel. It is kept from slipping endwise, however, by the two pinions, P P, the teeth on which are made of shape to mesh with the threads of the screw.

The operation is as follows: The machine is wheeled into position and the handles O turned, operating the miter-wheels N and through them the miter-wheel M. As M revolves, the key R, fitting in spline S, revolves the auger, the threads of which mesh with the teeth of pinions P P, which cause the screw to advance into the ground, the teeth forming bearings for the threads to work in. When the hole has been bored the proper depth, the crank Q is turned, revolving pinions P P and withdrawing the auger from the ground rapidly and without revolving it, and carrying the dirt up out of the hole. The auger has a free vertical movement through wheel M, the key R fitting loosely in the slot S.

The auger consists of two separate wings crossing each other's path somewhat like an X, reaching each two-thirds around the stem, the lower ends coming to a point, and each having a small blade, V, for cutting roots, extending vertically from their faces. By this arrangement, in practice, stones five inches in diameter can pass up between the spiral blades of the auger.

The form of auger used can be varied to that shown in Fig. 1, but I prefer the one above described as the most effective, and the more readily allowing stones to pass up in boring.

My frame is provided with two handles, C C, by means of which and the wheels I the machine is readily moved about.

I am aware that earth-augers have been constructed wherein the earth-auger was advanced by means of miter-wheels, cranks, and screws, and do not claim the same, broadly, but only my improvement therein, as follows:

What I claim is—

1. The combination of screw K, wings T, root-cutter V, the miter-wheels M N, cranks O, wheels P, and handle Q, as and for the purpose set forth.

2. The combination, with the auger operated by means of screw K, wheels M N, cranks O, wheels P, and handles Q, of the handles C and wheels I, as and for the purpose set forth.

FRANKLIN E. WREN.

Attest:
W. B. CAMPBELL,
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