

(No Model.)

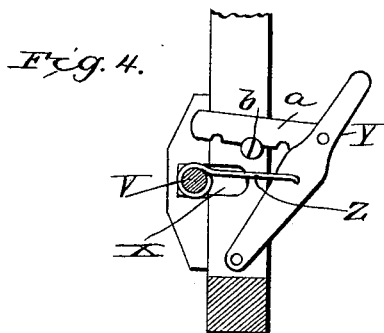
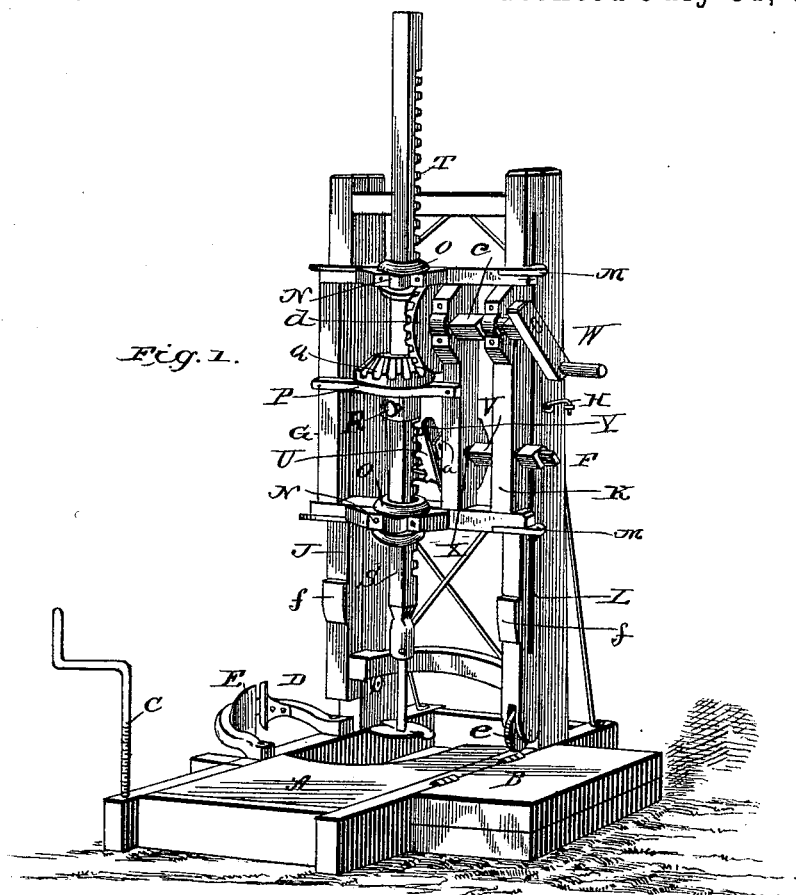
2 Sheets—Sheet 1.

F. P. STANLEY.

POST HOLE AUGER.

No. 386,901.

Patented July 31, 1888.



Witnesses,

Jos. A. Ryan
R. H. Bishop

Inventor,

Frank P. Stanley

By *W. H.* Attorneys.

C. H. Snow & Co.

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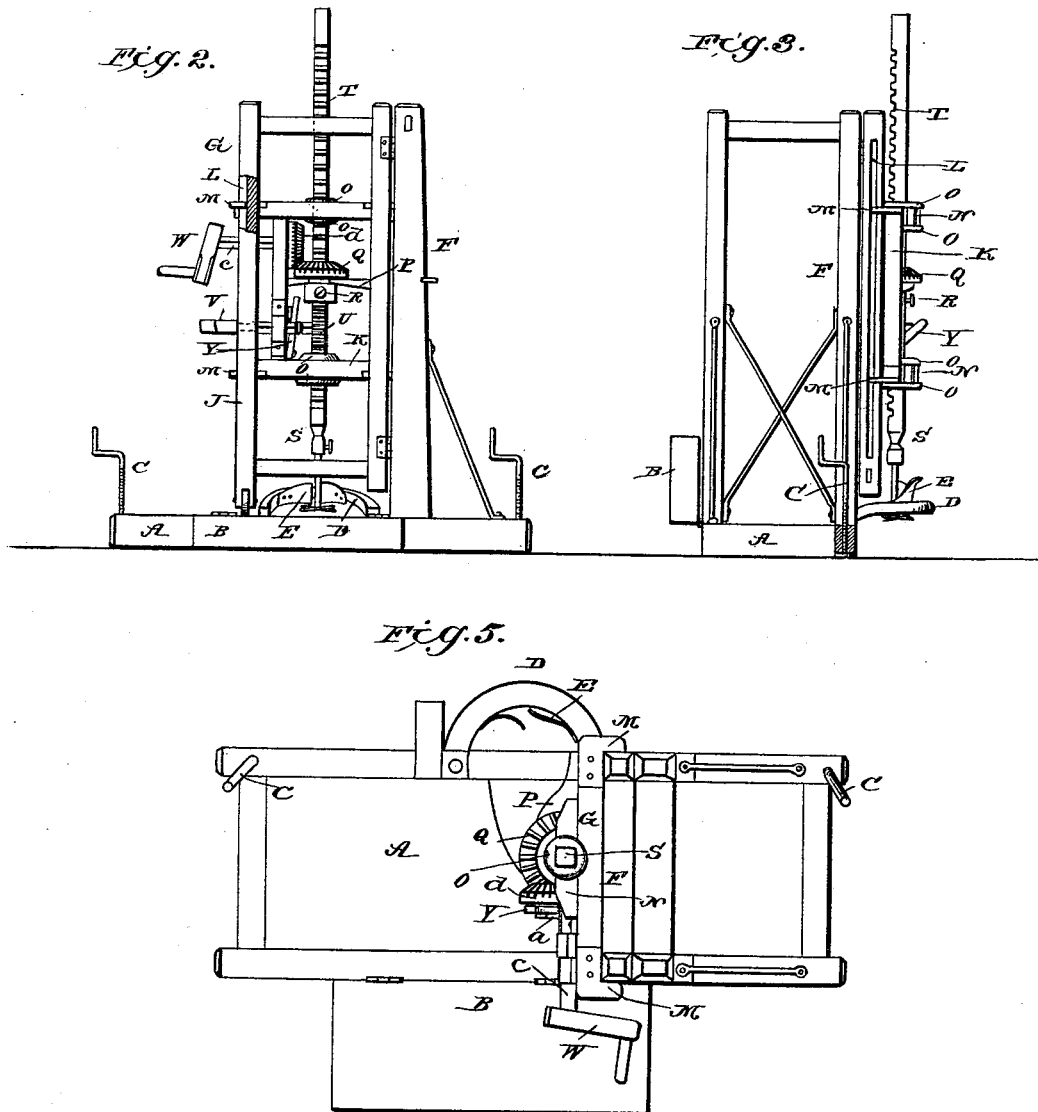
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UNITED STATES PATENT OFFICE.

FRANK PIERCE STANLEY, OF SPENCER, IOWA.

POST-HOLE AUGER.

SPECIFICATION forming part of Letters Patent No. 386,901, dated July 31, 1888.

Application filed April 19, 1888. Serial No. 271,132. (No model.)

To all whom it may concern:

Be it known that I, FRANK PIERCE STANLEY, a citizen of the United States, residing at Spencer, in the county of Clay and State of Iowa, have invented a new and useful Improvement in Post-Hole Augers, of which the following is a specification.

My invention relates to improvements in post-hole augers; and it consists in certain novel features, hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of my improved machine. Fig. 2 is a side view showing the drill carrying frame swung around to one side, so as to clean the bit. Fig. 3 is an end view. Fig. 4 is a detail vertical section, and Fig. 5 is a plan view.

Referring to the drawings by letter, A designates the base of my machine, which may be an open frame, or, if preferred, may be a platform or closed frame having a suitable opening for the passage of the bit into the ground. At one side of the base I hinge the platform B, upon which the operator stands when the machine is at work, and which may be swung upward, as shown in Fig. 3, when the machine is to be moved. At the ends of the base I provide the vertical adjusting-screws C, by means of which the machine may be adjusted to a hillside or other inclined or uneven surface. To the side of the base opposite the platform I secure the open casting D, in which I arrange the bit cleaning knives E. At a suitable point of the base I provide the standard or main frame F, which is suitably braced, as shown. To the side of this standard or main frame, adjacent to the casting D, I hinge the drill-carrying frame G, which is held to the standard when the machine is at work by a hook or latch, H, engaging a projection or staple on the standard. This drill-carrying frame consists of the swinging frame J, secured to the standard, as above described, and the sliding frame K, mounted on said swinging frame. The swinging frame is provided in its vertical side edges with the longitudinal grooves L, and the sliding frame is provided at its corners with the hooks or clips M, which engage the said grooves and thereby hold the sliding frame to the swinging frame and guide the same in its movements.

The sliding frame is composed of suitable vertical and horizontal bars, and in the horizontal bars I secure the journal-boxes N, having rectangular openings and provided with the horizontal flanges O at their ends, which rest against the upper and lower sides of the said horizontal bars, as will be readily understood upon reference to the drawings.

Upon an intermediate cross-bar, P, of the sliding frame I journal the bevel gear-wheel Q, in the hub of which I mount a set-screw, R. The drill-rod S is inserted vertically through the gear-wheel Q and the journal-boxes N, and is provided on one side with a series of cog-teeth forming a rack-bar, T. This rack-bar T is engaged by a gear-wheel, U, when it is desired to raise or lower the drill, as will be presently more fully referred to. This gear-wheel U is mounted on the inner end of a transverse shaft, V, mounted in the sliding frame, and provided on its outer end with an angular portion adapted to be engaged by a removable operating-crank, W. This shaft V passes through a slot, X, in the frame, so as to be capable of being thrown into and out of engagement with the rack-bar on the drill-rod. A lever, Y, is pivoted to the frame below the slot X, and is connected to the shaft by means of a link, Z, as shown. A rack-bar, a, is pivoted to the lever Y and projects inward over a stud or pin, b, secured to the frame, so as to hold the said shaft in either of its adjusted positions, as will be readily understood on reference to Fig. 4. Near the upper end of the sliding frame I arrange a second transverse shaft, c, on the inner end of which I mount a bevel gear-wheel, d, which meshes with the bevel gear-wheel Q. In the lower end of the swinging frame I provide a roller, e, which, by traveling over the base, aids in supporting the frame and takes the weight thereof off the hinges, and on the side of the said frame I provide the offsets or stops f, which limit the downward movement of the sliding frame, as will be readily understood.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the operation of my machine will be readily understood. The machine is placed in position over the point where it is desired to form the post-hole, and the gear-wheel Q is then secured to the drill-rod by

tightening up the set-screw R. The wheel U is then disengaged from the rack-bar on the drill-rod, and the crank-handle is applied to the upper shaft, c, and the said shaft is rotated. 5 The motion of this shaft will be communicated to the drill-rod, and it will be thereby driven into the ground. When the bit is full of dirt, the wheel U is thrown into engagement with the drill-rod, and the wheel Q released there- 10 from. The wheel U is then rotated, so as to raise the drill, after which the frame is swung to one side, as shown in Fig. 2, and the drill is pushed downward between the knives E, thereby removing the dirt therefrom. The 15 frame is then swung back into its former position, and the operation proceeded with as before. As the drill descends, the sliding frame will be carried downward with it until arrested by the stops on the swinging frame, 20 when the operator will perceive that the desired depth has been reached.

It will be seen that my device is very simple and efficient, and its advantages are thought to be obvious.

25 Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

1. The combination, with the base, of the drill-carrying frame mounted over the same and the bit-cleaning knives secured to the side 30 of the base, as set forth.

2. The combination, with the base and the standard erected thereon of the swinging frame hinged to the standard and the sliding frame mounted on the swinging frame and 35 carrying the drill, as set forth.

3. The combination, with the frame having a slot, X, of the shaft passing through said slot, the lever pivoted below said slot and connected to said shaft, and the rack-bar pivoted 40 to the lever and adapted to engage a stud on the frame, as set forth.

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

FRANK PIERCE STANLEY.

Witnesses:

SAMUEL HUMLER,
A. C. HEWLING.