

No. 645,222.

Patented Mar. 13, 1900.

C. L. TUTTLE.
POST HOLE AUGER.

(Application filed Dec. 4, 1899.)

(No Model.)

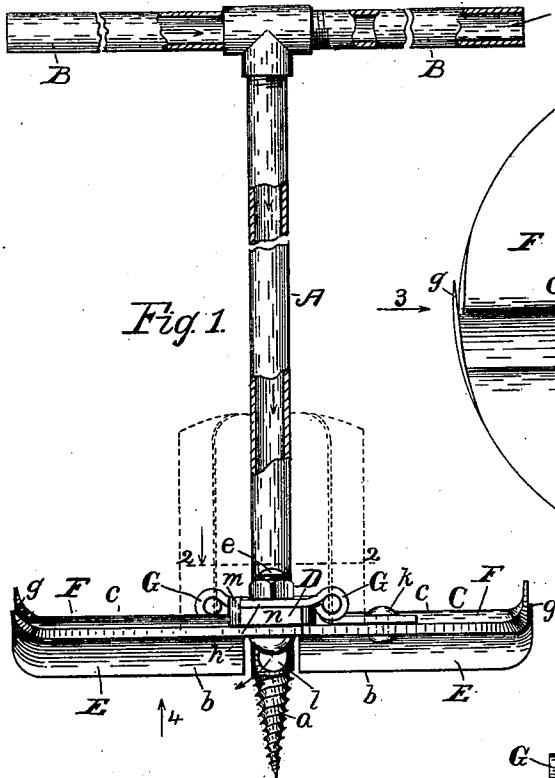


Fig. 1.

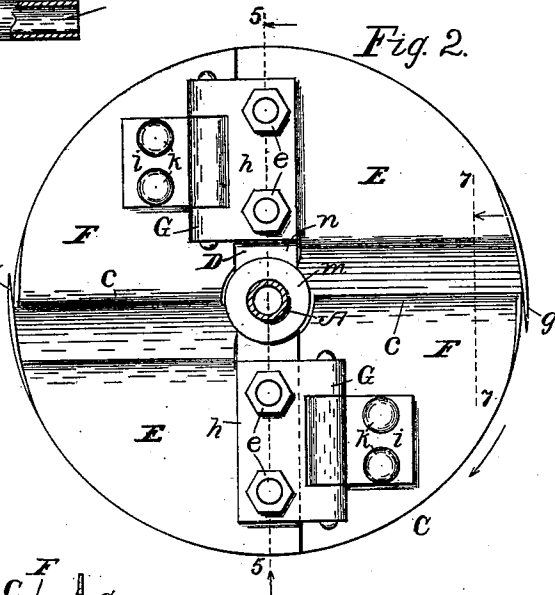


Fig. 2.

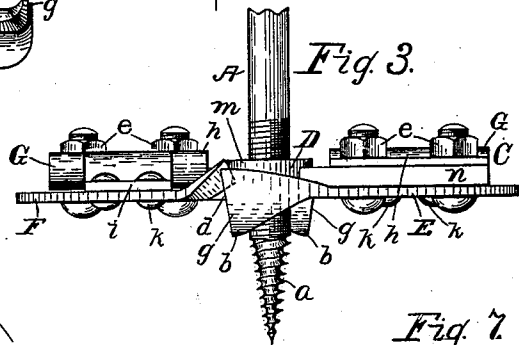


Fig. 3.

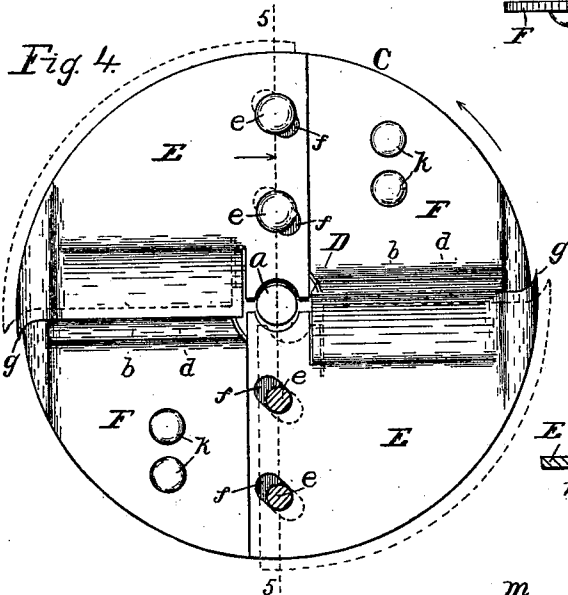


Fig. 4.



Fig. 7.

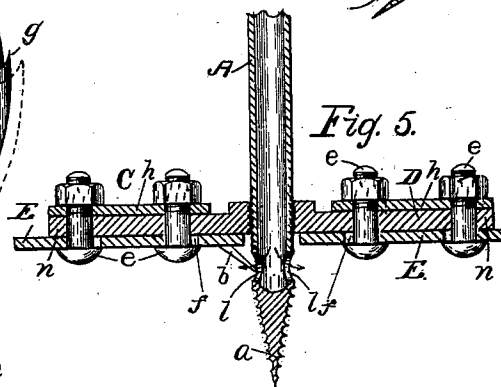


Fig. 5.

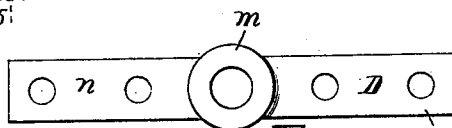


Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES L. TUTTLE, OF ROCHESTER, NEW YORK.

POST-HOLE AUGER.

SPECIFICATION forming part of Letters Patent No. 645,222, dated March 13, 1900.

Application filed December 4, 1899. Serial No. 739,153. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. TUTTLE, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Post-Hole Augers, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is an auger or device for boring post-holes by hand; and it consists in parts and devices and the operation of the same, all hereinafter fully described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of the auger, parts being broken away and axially sectioned and other parts shown in two positions by full and dotted lines. Fig. 2 is a plan of the cutting-head, the shaft being horizontally sectioned, as on the dotted line 2 2 in Fig. 1. Fig. 3 is a side elevation of the head and lower part of the shaft, seen as indicated by arrow 3 in Fig. 2. Fig. 4 is a view of the under surface of the head, seen as indicated by arrow 4 in Fig. 1, the cutter-sections being shown in different positions of adjustment by full and dotted lines. Fig. 5 is a diametrical section of the head and lower part of the shaft on the dotted lines 5 5 in Figs. 2 and 4. Fig. 6 is a plan of the head-bar detached. Fig. 7 shows a throat or passage for the loose earth, the section being on the dotted line 7 7 in Fig. 2.

In the drawings, A is the shaft of the auger, and B B the handles, said shaft and handles being preferably of hollow metal, as gas-pipe.

C is the head of the auger, substantially circular in form, preferably screw-threaded onto the lower end of the shaft A, so as to be removable therefrom, the plane of the head being at right angles with the shaft, as shown. The lower end *a* of the shaft is made solid and tapered and formed with a spiral to aid in drawing the auger into the earth as it is turned by the operator.

The head C of the auger comprises a firm transverse head-bar D, Fig. 6, formed with a central hub *m* in contact with the shaft A and arms *n n*, extending oppositely each way therefrom, the bar crossing the shaft at right angles. This head-bar carries four independent quadrantal sectors or sections E E and F

F, secured to the bar in pairs all in the same plane. The sections E E are the cutters, being formed with downwardly-projecting lips or cutting edges *b b*, turned in opposite directions, as shown. The smaller carrier-sections F F are formed with upturned edges *c c*, extending obliquely over the respective cutting edges *b b*, forming between them spaces or throats *d d*, Figs. 4 and 7, for the earth loosened by the cutters to pass up through on top of the disk or head C. The cutter-sections E E, placed diametrically opposite each other, lap across the under face of the bar D on opposite sides of the shaft A, being held to said bar by bolts *e e*. These bolts pass through inclined slots *f f*, Fig. 4, in the sections, so that the latter may be adjusted or moved bodily in the plane of the head through short distances radially toward or from the shaft for the purpose of boring larger or smaller holes. The outer front corners of the cutter-sections are preferably formed with upturned lips *g g*, as shown.

The smaller carrier-sections F F are held to the upper side of the head-bar D by hinges G G, so as to swing from their normal horizontal positions in the plane of the head upward against the shaft A, as shown in Fig. 1. The main parts *h h* of the hinges are held to the bar D by the bolts *e e*, the minor parts of the hinges *i i* being secured to the respective sections F F by some suitable fasteners *k k*.

The upward swinging of the carrier-sections F F allows small stones or other hard bodies loosened by the cutters to pass upward onto the head that would otherwise, if the sections were rigid, be liable to lodge in the throats *d d* and so clog the auger and render it necessary to lift it out of the unfinished hole to be cleared. When the parts F F descend to their normal positions after being raised at any time, their edges under the hinges abut against the opposing edges of the rigid parts E E, as shown, which prevents them from turning or dropping below the plane of the head C.

The sections F F and the hinges G G do not change their positions relatively with the bar D, except as to the upward swinging of the sections, as above described. The cutter-sections E E are relatively adjusted with reference to said bar, the slots *f f* being pref-

erably made at an angle of about forty-five degrees with the bar D.

Openings 7, Figs. 1 and 5, are formed through the sides of the shaft below the head C to admit air under the head to prevent a vacuum being formed thereunder when the latter is drawn out of a hole to lift out the loosened earth above it. This is essential, particularly when boring into wet clay or quicksand.

10 What I claim as my invention is—

1. A post-hole auger comprising a shaft with handles, a head and head-bar held by said shaft, and two pairs of independent quadrantal sections secured to said head-bar, the 15 diametrically-opposite sections of one pair forming cutters and those of the other pair forming carriers, the adjacent edges of the sections overlapping and turned in opposite directions and the carrier-sections hinged to the upper 20 side of the head-bar, and means for limiting the downward movement of the carrier-sections, as set forth.

2. A post-hole auger comprising a shaft with handles, a head and a head-bar held by said 25 shaft, and two pairs of quadrantal sections secured to the said bar each independently of each other with the diametrically-opposite sections of one pair forming cutters and those of the other pair forming carriers, the adjacent 30 edges of the sections overlapping and turned in opposite directions and the carrier-sections hinged to the upper face of said bar and hav-

ing their edges adjacent the hinges extended beneath the adjacent edges of the cutter-sections to limit the downward movement of the 35 carrier-sections, as set forth.

3. A post-hole auger comprising a shaft provided with handles, and a head removably connected with the shaft, consisting of a head 40 cross-bar, and two pairs of independent sections in the same plane and together forming a circle, one section of each pair being radially adjustable in the plane of the head, and the other section of each pair being adapted 45 to turn out of said plane, the adjacent edges of the sections being overlapped and turned in opposite directions, substantially as specified.

4. A post-hole auger comprising a shaft with handles therefor, a cross-bar on the shaft, cutter-sections secured to the under face of the 50 cross-bar, and carrier-sections hinged to the upper side of the cross-bar, and fastening-bolts for the cutter-sections and the cross-bar, the cutter-sections having slots inclined to the cross-bar to receive said fasteners, sub- 55 stantially as shown and described.

In witness whereof I have hereunto set my hand this 1st day of December, 1899, in the presence of two subscribing witnesses.

CHARLES L. TUTTLE.

Witnesses:

ENOS B. WHITMORE,
M. L. WINSTON.