

R. H. VESEY.
POST HOLE AUGER.
APPLICATION FILED JAN. 17, 1910.

980,853.

Patented Jan. 3, 1911.

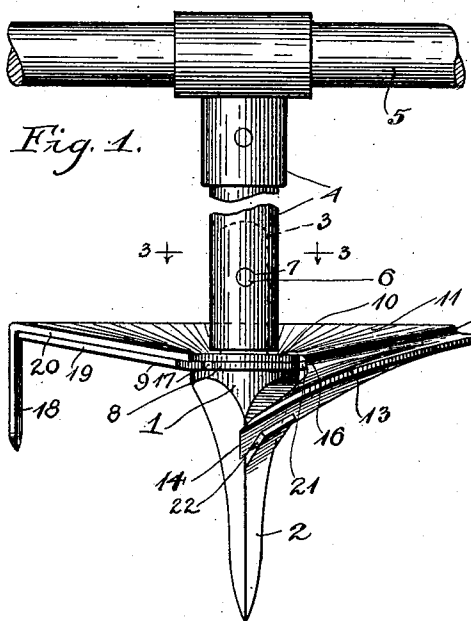


Fig. 2

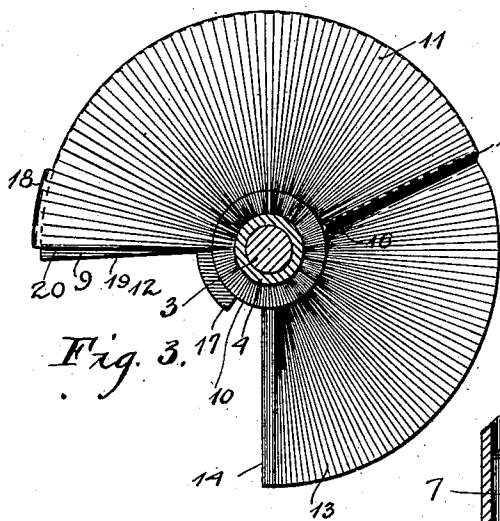
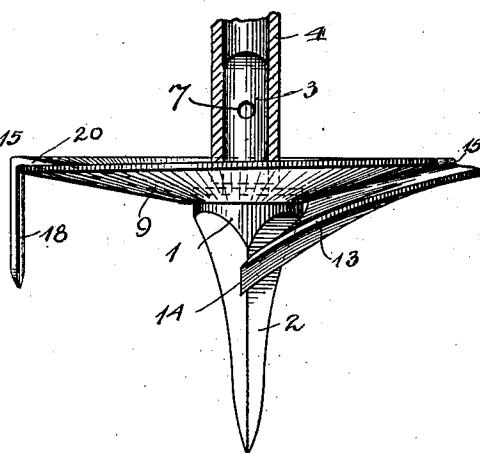


Fig. 3.

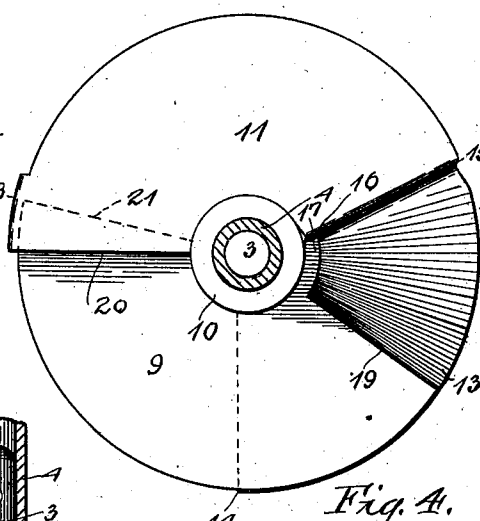


Fig. 4.

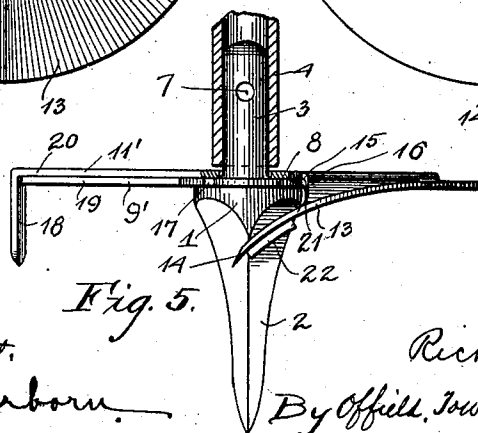


Fig. 5.

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UNITED STATES PATENT OFFICE.

RICHARD H. VESEY, OF DENVER, COLORADO, ASSIGNOR TO TRUMAN E. STEVENS, OF OMAHA, NEBRASKA, AND CHRISTOPHER C. DENNY, OF CHICAGO HEIGHTS, ILLINOIS.

POST-HOLE AUGER.

980,853.

Specification of Letters Patent.

Patented Jan. 3, 1911.

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To all whom it may concern:

Be it known that I, RICHARD H. VESEY, a resident of Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Post-Hole Augers, of which the following is a full, clear, and precise specification.

My invention relates to post hole diggers, particularly to those of the auger type.

My invention may be considered as an improvement over the devices disclosed in my Patents Nos. 957,127 and 957,128, both issued May 3, 1910. In these patents the auger shown comprises one member which is rigid with reference to a centering point and which at its periphery carries a downwardly extending blade for defining the circumference of the hole and for loosening the earth, while the other member is free to rotate with reference to the centering point and its end tapers downwardly to draw the auger into the ground and to scoop up the earth loosened by the cutting extension on the first member in advance thereof, the relative movement between the members allowing the first member to be rotated reversely a distance after a hole has been dug deep enough, in order to close the gap which extends between the members during the digging operation so that the two members when closed form a complete dish for lifting up the earth out of the hole. In this arrangement, however, the cutting extension on the first member must be forced back through the earth upon reverse rotation to close the gap, and this resistance encountered by the cutting extension introduces unnecessary work.

The main purpose of my present invention is, therefore, to apply the cutting extension to the same member which has the tapered digging end, leaving the first member in the form of a smooth, segmental disk which can more readily be rotated in reverse direction to close the gap.

My invention is clearly described in the following specification and shown on the accompanying drawing, in which drawing Figure 1 is an elevation view of an auger showing the members in open position, Fig. 2 is a similar view showing the parts in closed position, Fig. 3 is a view taken from plane 3—3, Fig. 1, Fig. 4 is a top view of

Fig. 2, and Fig. 5 is a view similar to Fig. 2, showing a modified form of members.

The auger comprises a cylindrical casting or forging 1 whose lower end tapers down to form a centering point 2 and from whose upper end extends a stud 3 for entering the lower end of a hollow stem 4 terminating at its upper end in a handle 5, the stem being secured to the stud by a pin 6 passing through the stem and through an opening 7 through the stud. On the supporting part 1 a hub 8 rests and is rigidly secured thereto, this hub expanding to form one of the members 9, this member being almost semi-circular, as best shown in Fig. 4. Engaging over the hub 8 and rotatable about the stud 3 is the hub 10 of the other member 11 which extends through about 270 degrees to leave a gap 12, the horizontal projections of both members forming circular segments. Both members, however, deflect upwardly from their hubs in order to be dish shaped, as shown. The front end 13 of member 11 deflects downward gradually, as shown, and terminates in a cutting edge 14 so that as the auger is turned the end 13 will dig into the ground and draw the auger downwardly, the earth traveling up the inclined end 13 onto the main dish part of the member. Along a radial line just in advance of the deflecting end 13 the member 11 is offset downwardly to form an abutment shoulder or stop 15 along its back, while the inner end 16 on the deflected part forms an abutment for the abutment tongue 17 which extends from the hub 8. From the periphery of the member 11 at the follower end thereof a cutting tooth 18 extends downwardly beyond the periphery of the member 9, this tooth serving to define the circumference of the hole and to loosen up the earth in advance of the cutting edge 14 and the deflecting or scoop part 13.

When the centering point 2 is stuck into the ground preparatory to digging a hole the members will already have or will immediately assume the relative position shown in Figs. 1 and 3, the follower edges 19 and 20 of the members 9 and 11 being practically coincident and the advance edge 21 of the member 19 abutting against the back of the abutment 15, the abutment tongue 17 extending from the hub 8 at the

base of the edge 19. As before stated, the member 9 is rigid with the centering pin part and the auger handle, and as the auger is now turned member 9 rotates therewith and carries with it the member 11, the tooth 18 defining the circumference of the hole and loosening up the earth which can then readily be received by and passed up the incline 13 to the top of the member 11. When the hole has been dug deep enough a reverse rotation is given the handle and the member 9 will rotate in reverse direction until abutment tooth 17 strikes the abutment section 16 on member 11, the follower edge of the member 9 then overlapping the deflecting portion 13 of member 11, as shown in Figs. 2 and 4, this overlapping of the members forming a completed shelf for supporting the earth, which can then be lifted in compact form from the hole. The member 9 being entirely smooth and free from any projections can be very readily and with little exertion moved to its overlapping position. The dished formation of the members causes the dug earth to be compressed more or less radially inwardly so that the earth can be lifted in a compact mass from the post hole. When the earth is removed from the members and the auger is again inserted in the ground the initial rotation will rotate the members apart so that earth can again pass along the incline to the top of member 11.

In order to support the digging end 13 during operation and to prevent bending or breaking thereof, I provide a supporting lug or shelf 22 on the centering pin 2, this lug receiving the cutting end of the extension 13 during digging operation of the auger, as illustrated in Fig. 1. The members 9 and 11 can each be stamped and formed integral from metal plate, and the body part 1 with its centering pin and lug can also be cast, forged or otherwise formed integral. The auger proper has, therefore, a minimum number of parts and is exceedingly strong. The cutting tooth 18 by defining the opening and by loosening the earth in advance of the digging member greatly relieves the deflected end of this member from strains.

In Fig. 5 I have shown a form of auger having the same parts cooperating in the same manner except that the members 9' and 11' are flat and not dished, as shown in the other figures, this form being perhaps better adapted for certain kinds of soil.

I do not desire to be limited to the precise forms and construction which I have shown, as modifications are possible which will still come within the scope of my invention, and I, therefore, desire to secure the following claims by Letters Patent:

1. A post hole digger comprising a vertical body part, a segmental closure plate

rigidly mounted on said body part, a cutting plate pivoted to said body part over said closure plate and having a segmental gap, one end of said cutting plate being deflected downwardly gradually to form a cutting edge and an incline for conveying the cut earth to the top of the cutting plate, and a tooth extending from the peripheral edge at the other end of said cutting plate for loosening the earth and defining the circumference of the hole to be dug in advance of the cutting end of said plate, rotation of the body part in the cutting direction causing said closure plate to leave said gap, and rotation of the body part in reverse direction causing said closure part to be carried over and to close said gap.

2. A post hole digger comprising a vertical body part, a segmental closure plate rigidly secured at its axle to said body part, a segmental cutting plate pivotally mounted at its axis to said body part over said closure plate, one end of said cutting plate being deflected downwardly gradually to form a cutting edge and an incline for carrying the cut earth to the top of the cutting plate, a cutting tooth depending from the periphery of the cutting plate at the other end thereof for loosening the earth and for defining the circumference of a hole to be dug in advance of said cutting end, and an abutment formed on said cutting plate, rotation of the body part in the cutting direction causing said closure plate to be primarily carried against said abutment to open the gap between the cutting tooth and the cutting end of the cutting plate and then to move together with said cutting plate, and rotation of the body part in reverse direction causing rotation of the closure in the opposite direction against said abutment to primarily close said gap and then to move the cutting plate in reverse direction.

3. A post hole digger comprising a vertical body part, a closure plate rigidly secured at its axis to said body part, a cutting plate pivoted to the body part over said closure plate and extending partly around said body part to leave a gap, one end of said cutting plate being deflected downwardly gradually to form a cutting end and an incline for conveying cut earth to the top of the cutting plate, said cutting plate being offset downwardly at the base of the incline and along a substantially radial line to form an abutment, a cutting tooth depending from the periphery of the cutting plate at the other end thereof for loosening the earth and defining the circumference of the hole to be dug in advance of said cutting end, rotation of the body part in the cutting direction causing primarily only rotation of the closure part to carry its one radial edge against said abutment, whereafter both plates travel together, and a projection at

the base of the other radial edge of said
closure plate, reverse rotation of said clo-
sure part causing primary rotation of the
closure part to carry said projection against
5 said abutment and to close said gap, where-
after both plates can travel together in re-
verse direction.

In witness hereof, I hereunto subscribe
my name this 10th day of January, A. D.,
1910.

RICHARD H. VESEY.

Witnesses:

CHARLES J. SCHMIDT,
C. C. DENNY.