W. L. STRICKLIN.

POST HOLE DIGGER.

APPLICATION FILED MAR. 11, 1910.

961,656. Patented June 14, 1910.

Fig. 1.

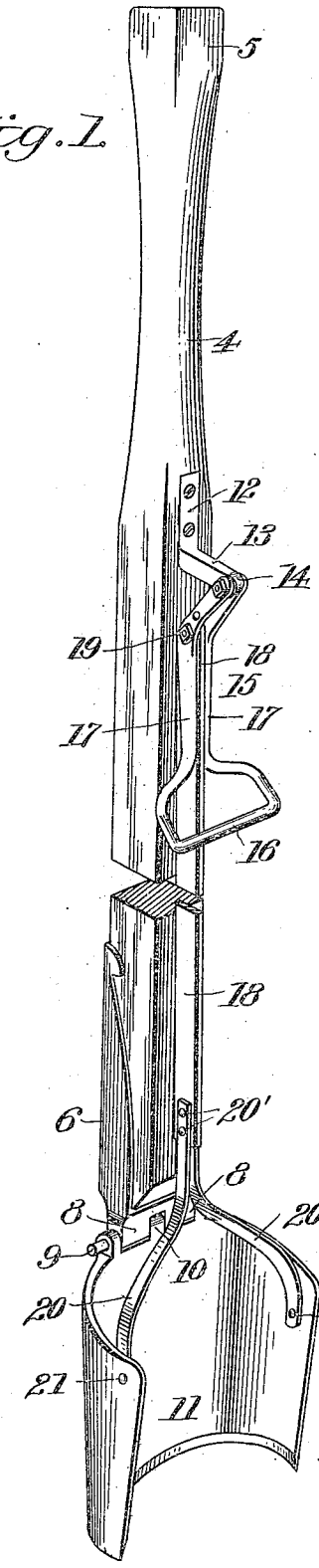


Fig. 2.

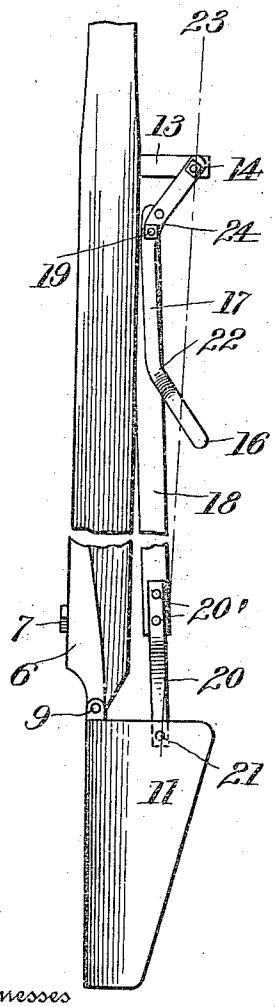
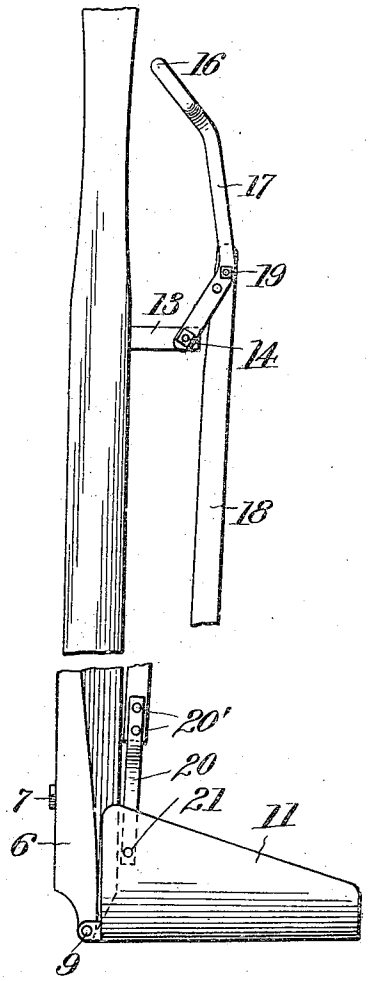


Fig. 3.



Witnesses

C. H. Walker

Annie Cooper.

Inventor

W. L. Stricklin

by S. Brashears

Attorney

UNITED STATES PATENT OFFICE.

WALTER L. STRICKLIN, OF MEMPHIS, TENNESSEE, ASSIGNOR OF ONE-HALF TO MOSES PLOUGH, OF MEMPHIS, TENNESSEE.

POST-HOLE DIGGER.

961,656. Specification of Letters Patent. Patented June 14, 1910.

Application filed March 11, 1910. Serial No. 548,555.

To all whom it may concern:

Be it known that I, WALTER L. STRICKLIN, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Post-Hole Diggers, of which the following is a specification.

This invention is in the nature of an improved implement for digging and especially intended for digging post holes, although it will be obvious that it can be utilized for any analogous purpose.

In implements of this class as heretofore constructed, difficulties of various kinds have been encountered. Such implements have been made with a blade for digging and means for turning up the blade to substantially horizontal position to remove the dirt from the hole. A well known implement of this class is provided with a blade hinged at the bottom of a handle and a lever of the first order pivoted to the handle and projecting on each side thereof, the short end being connected to the blade so that by pressing down on the long or hand end of the lever, the blade would be raised to its carrying position. This construction is very objectionable for the reason that the operator was compelled to press downward on the lever while lifting up the handle, the two actions being in direct opposition to each other and it being necessary to exert sufficient power upward on the handle to raise the dirt and the implement and at the same time overcome the downward pressure on the lever. An attempt has been made to overcome this difficulty by utilizing a lever of the second order for turning the blade into its horizontal or lifting position, and while such a structure was an obvious improvement upon that first mentioned, there existed the difficulty that no means were provided for locking the blade in its extended or digging position, and while the power required to raise the blade into this lifting or carrying position was exerted in the direction to raise the implement and the dirt, all the parts were loose when the implement was in the digging position so that there was a tendency for the blade to leave its vertical position when being struck into the earth, thus destroying to a large extent its utility as a digger.

It is the object of the present invention to provide a construction of post hole digger in which all of these former difficulties are obviated and in which all the parts of the implement when used as a digger will be rigidly held in position, the power exerted to force the blade into the ground being in a line which causes the parts to be more rigidly held in position, and the power exerted to hold the blade in its horizontal or lifting position being in the same direction as that required to lift the implement and dirt out of the hole.

With this object in view, the invention consists in the improved construction, arrangement and combination of parts hereinafter fully described and afterward specifically claimed.

In order to enable those skilled in the art to understand the construction and operation of my invention, I will now proceed to fully describe an embodiment thereof, illustrated in the accompanying drawing, in which—

Figure 1 represents a perspective view of the digger complete with the blade in its digging position, the middle portion of the handle and connecting bar being broken out in order to shorten the figure. Fig. 2 represents a side elevation of the same parts on a slightly reduced scale, broken away in the same manner and the upper end of the handle also broken away. Fig. 3 represents a view in side elevation with the blade raised to its horizontal or lifting position.

Like reference characters refer to the same parts in all the figures of the drawing.

Referring specifically to the drawing, 4 indicates a handle made of any suitable material, preferably of a tough wood, the upper end 5 of which is preferably made of greater diameter in order that the implement may be reversed and used as a rammer.

6 indicates a partial socket of metal, of any suitable form to embrace the lower end of the handle 4, said socket being secured to said lower end of the handle for any suitable means, such for instance as a bolt or bolts 7, and provided at its lower end, projecting beyond the lower end of the handle with knuckles 8 which are provided with horizontal openings in line with each other, to receive a pin or pintle 9 which also passes through knuckles 10 formed upon or secured to the upper end of the blade 11, whereby said blade is securely hinged to the lower end of the handle in a manner which

will permit of its occupying the vertical digging position shown in Figs. 1 and 2, or the horizontal lifting position shown in Fig. 3.

The blade may be made of any material suitable for the purpose, preferably of sheet steel bent into substantially cylindrical form, the shape of the blade however, or its material forming no part of the present invention.

Intermediate the upper and lower ends of the handle, in a position suitable for its purpose, is secured an angle bracket 12, one arm 13 of which projects at substantially a right angle from the side of the handle, as clearly shown. To the outer end of the bracket arm 13, is pivotally connected, by means of a suitable pintle or bolt 14, a hand lever 15, the pintle 14 forming the fulcrum thereof and making the lever one of the second order. The lever is formed preferably of bar iron or steel bent to form a hand-hold 16, and two arms 17, said arms embracing the bracket arm 13 and the upper end of a bar 18 which is pivotally connected by means of a suitable bolt or pin 19 to the hand lever and extends downward toward the blade. At its lower end the connecting arm is forked in any suitable manner, in this instance by riveting or bolting two arms or prongs 20 on opposite sides of the connecting bar, said prongs or arms spreading apart and being pivotally connected at 21 with the blade 11 at an appreciable distance from the vertical line of the handle and blade when in digging position. The hand lever is bent at an obtuse angle at 22, and the two arms 17 of said hand lever are at a proper distance apart to require some little force to cause them to pass upon or clasp the connecting bar 18 in the manner shown in Figs. 1 and 2. At 24 the hand lever 15 is also bent at an obtuse angle, in an opposite direction to the angle 22, the pivot 19 being at the apex of this angle.

It being desired to use the implement as a digger, the hand lever is pressed downward into the position shown in Figs. 1 and 2, which will cause the blade to assume its vertical position, and cause the pivotal connection 19 to rest against the side of the handle, as best shown in Fig. 2, such position of the pivotal point being well within the line indicated by the broken line 23 passing through the fulcrum 14 to the hand lever and the point of connection 21 with the blade, the elasticity of the two arms 17 of the hand lever causing it to tightly clamp the connecting bar 18 and hold it in that position. If now the handle is grasped and the implement forced downward into the earth, any tendency of the blade 11 to turn on its pivot 9 from its vertical to its horizontal position, will be arrested for the reason that the power exerted to force the implement down vertically and consequently to force the pivotal point 11 of the blade upward will cause the connecting bar, the hand lever, and the pivot 19 to be pressed more tightly against the handle, all the parts being thus rigidly held in position.

By reason of the bend at 22 in the hand lever, room is provided for the operator to pass his fingers through the loop 16 and take a firm grasp of the lever. By now drawing the lever upward into the position shown in Fig. 3, the blade will be held in its horizontal lifting position, and the dirt may be lifted out of the hole, all the power exerted to raise the implement and the dirt being supplemented by the power exerted upward on the hand lever to raise the blade into its horizontal position. By reason of the obtuse angle bend of the hand lever at 24, the hand lever will lie very close to the handle when the implement is in its digging position.

The advantages attending this construction will be obvious to any one familiar with the use of this class of instruments and need not further be specified.

While I have specifically described the construction of the various parts of my device, I do not wish to be understood as restricting myself to such exact constructions, as it will be obvious that changes and variations may be made therein without departing from the spirit and scope of the invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is—

1. A post hole digger comprising a handle, a curved blade hinged to the lower end thereof with its center directly in line therewith, and adapted to be turned to one side on its hinge to a position at a right angle to the handle, a bracket arm secured to the handle and projecting therefrom on the side to which the blade may be turned and in the plane of movement of the blade, a hand lever of the second order fulcrumed at the outer end of said bracket arm and bent at an obtuse angle at a short distance from the end of the bracket, and a bar connecting the lever between its hand-hold and fulcrum with the blade at a distance from its hinge.

2. A post hole digger comprising a handle, a blade hinged to the lower end thereof, a hand lever of the second order comprising two arms pivotally connected to the handle, and a bar connecting the hand lever with the blade, the upper end of said connecting bar being pivoted between the arms of the hand lever, whereby the two bars of the hand lever will embrace and lie on opposite sides of the connecting bar, close to the handle, when the blade is in its normal digging position.

3. A post hole digger comprising a handle, a blade hinged to the lower end thereof and

adapted to be turned to one side on its hinge to a position at a right angle to the handle, a bracket arm secured to the handle and projecting therefrom on the side to which the blade may be turned and in the plane of movement of the blade, a lever of the second order comprising two arms pivotally connected on opposite sides of the bracket, and a connecting bar pivoted at its upper end between the two arms of the hand lever, and connected at its lower end with the blade, whereby the two bars of the hand lever will embrace and lie on opposite sides of the connecting bar, close to the handle, when the blade is in its normal digging position.

4. A post hole digger comprising a handle, a blade hinged to the lower end thereof, a bracket arm secured to the handle and projecting therefrom, a lever of the second order comprising two arms pivotally connected on opposite sides of the bracket, and a connecting bar located at its upper end between the two arms of the hand lever and pivoted thereto and connected at its lower end with the blade, the hand lever being constructed of elastic material whereby the two arms thereof will tightly clasp the connecting bar when forced thereon.

5. A post hole digger comprising a handle, a blade hinged to the lower end thereof and adapted to be turned to one side on its hinge to a position at a right angle to the handle, a bracket arm secured to the handle and projecting therefrom on the side to which the blade may be turned and in the plane of movement of the blade, a hand lever of the second order comprising two arms pivotally connected on opposite sides of the bracket at the outer end thereof and bent at an obtuse angle at a short distance from the end of the bracket, and a bar pivotally connected at its upper end between the two arms of the hand lever at the apex of said angle and at its lower end to the blade.

6. A post hole digger comprising a handle, a blade hinged to the lower end thereof, a bracket arm secured to the handle and projecting therefrom, a lever of the second order, bent to form two parallel bars with a hand-hold at one end at an obtuse angle thereto, and a bar pivotally connected at its upper end to the hand lever and at its lower end to the blade.

7. A post hole digger comprising a handle, a blade hinged to the lower end thereof, a bracket arm secured to the handle and projecting therefrom, a lever of the second order, bent to form two parallel bars with a hand-hold at one end at an obtuse angle thereto, and its opposite end bent at an obtuse angle and fulcrumed to the outer end of the bracket arm, and a bar pivotally connected at the apex of the obtuse angle near the fulcrum with the hand lever, and at its lower end to the blade.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER L. STRICKLIN.

Witnesses:
CHAS. P. QUINN,
JACOB W. OGLE.