Feb. 3, 1948. M. E. SONNENBERG 2,435,473

POST HOLE DIGGER

Filed Feb. 23, 1946

Fig. 1.

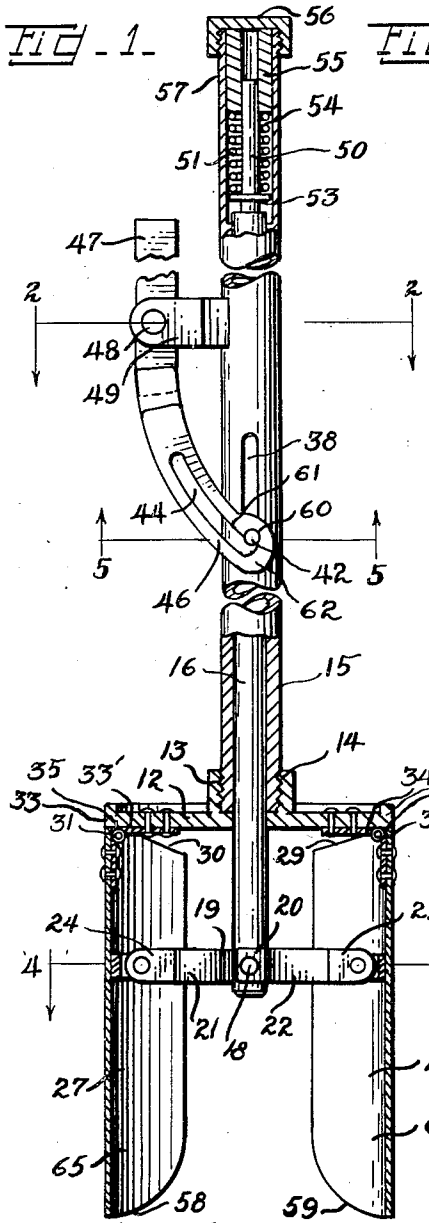


Fig. 2.

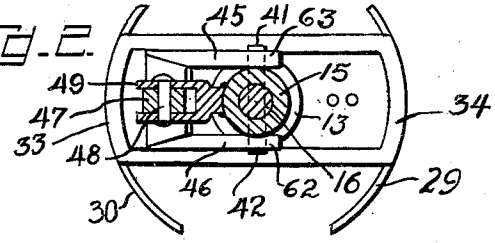


Fig. 3.

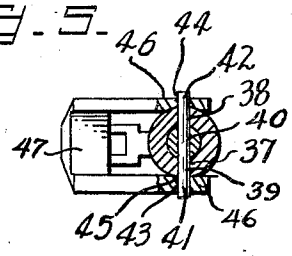


Fig. 5.

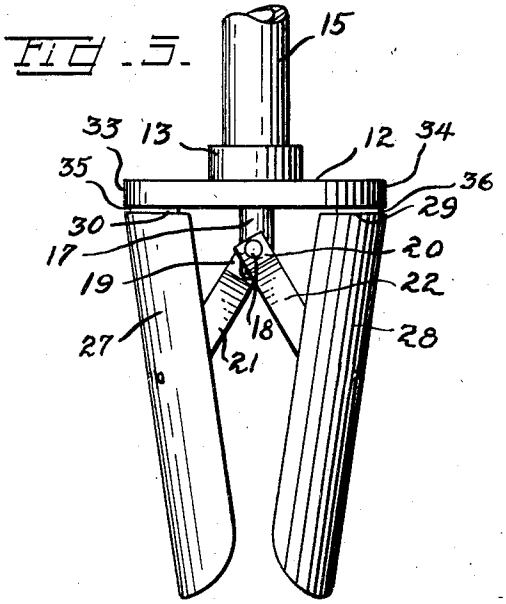
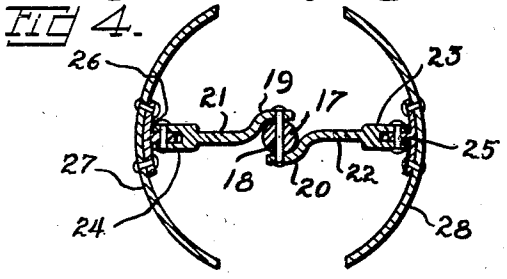


Fig. 4.



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POSTHOLE DIGGER

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2 Claims. (Cl. 294—50.8)

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The invention, one form of which is illustrated in the accompanying drawings and described in the specification to follow, has for one of its objects to provide a post hole digger provided with a single vertical handle.

Another object of the invention is to provide a post hole digger having a tubular handle through which operates a cutter blade operating means.

A still further object of the invention is to provide a post hole digger with hinged blades and a lever controlled toggle for operating the blades.

This invention has for another object to provide in a post hole digger a spring actuated toggle control.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings in which:

Figure 1 is a sectional elevational view of the invention,

Figure 2 is a sectional view taken on line 2—2 of Figure 1,

Figure 3 is a broken away elevational view of the invention,

Figure 4 is a sectional view taken on line 4—4 of Figure 1, and

Figure 5 is a sectional view taken on line 5—5 of Figure 1.

While one embodiment of the invention is illustrated in the above referred to drawings, it is to be understood that they are merely for the purpose of illustration and that various changes in construction may be resorted to in the course of manufacture in order that the invention may be utilized to the best advantage according to circumstances which may arise, without in any way departing from the spirit and intention of the device which is to be limited only in accordance with the appended claims. And while there is stated the primary field of utility of the invention it remains obvious that it may be employed in any other capacity wherein it may be found applicable.

In the accompanying drawings, and in the following specification, the same reference characters are used to designate the same parts and elements throughout and which comprises a post hole digger having a plate 12 provided with a screw threaded central bore 13 into which is either screwed or welded the end 14 of a vertical tube 15 forming a handle for the digger. Slidably seated in the handle is a rod 16, the lower end 17 of which is attached by a pin 18 to

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the inner offset ends 19 and 20 of toggle members 21 and 22, the outer ends 23 and 24 of which are pivotally connected to bearing members 25 and 26, riveted or otherwise secured to the inner surfaces of arcuate cutter blades 27 and 28. The upper edges 29 and 30 are connected by hinges 31 and 32 to the opposite peripheral edges 33 and 34 of the plate 12. The hinges 33' and 34' are set in sufficiently to permit the said cutter edges 29 and 30 to seat directly against the under peripheral sides 35 and 36 of the plate 12 when the blades are in spread cutting position as shown in Figure 1 of the drawings.

The tube 15 is provided with opposing slots 37 and 38, through which a pin 39 projecting transversely through a bore 40 in the rod 16 projects. The outer ends 41 and 42 of the said pin extend into arcuate longitudinal slots 43 and 44 in the arcuate furcations 45 and 46 of a lever 47 pivotally mounted by pin 48 in the clevis 49 welded or otherwise attached to the tube 15.

Coiled around the reduced upper end 50 of the rod 16 is a spring 51 seating upon an annular integral flange 53 of the rod and seated upon the upper end 54 of the spring is a short tube 55 held bearing down upon the spring by a cap 56 screw threaded upon the upper end 57 of the handle 15, whereby the rod 16 is normally held in lowered position to spread the toggles 22 and 21 to horizontal position and hold the cutters in vertical or operative position as shown in Figure 1. In order to hold the rod in said lowered position against give of the spring when striking the edges 58 and 59 down into the ground, notches 60 are provided in the upper edges 61 of the slots 43 and 44 at the ends 62 and 63 of the furcations 45 and 46 into which the ends 41 and 42 of the pin 39 are adapted to seat when the lever 47 is in raised position.

When the lever 47 is pulled down the marginal edges 64 and 65 of arcuate slots 43 and 44 bear upon the pin ends 41 and 42 and raise the rod 16 against the tension of the spring 51 and thereby raise the ends 19 and 20 of the toggles to draw in the lower ends 64 and 65 of the cutter blades and thereby bind soil which has been gathered therein from a post hole being dug. Of course, when the device has been withdrawn from the hole, the lever is raised to again spread the blades in order to release the material held therein.

Having now described the invention that which is claimed to be new and desired to be procured by Letters Patent is:

1. A post hole digger comprising a tubular handle with a flat plate secured transversely

and at one end thereof, a rod extending through said plate and into said tubular handle, a pair of arcuate blades hinged to the outer edges of said plate, toggle links between the lower end of said rod and said blades, an actuating lever secured by an offset pivot on said handle, a pin rigidly secured transversely of said rod and extending through slots in said handle and in one end of said lever, whereby the blades may be operated by said lever, a lateral notch at one end of the slot in said lever to receive said pin and to lock said rod in blade-extending position, and a spring to bias said rod into said position.

2. A post hole digger comprising a tubular handle with a flat plate secured transversely and at one end thereof, a rod extending through said plate and into said tubular handle, a pair of arcuate blades hinged to the outer edges of said plate, toggle links between the lower end of said rod and said blades, an actuating lever secured by an offset pivot on said handle, a pin rigidly secured transversely of said rod and extending

through slots in said handle and in one end of said lever, whereby the blades may be operated by said lever, a lateral notch at one end of the slot in said lever to receive said pin and to lock said rod in blade-extending position, and a spring to bias said rod into said position, said one end of the lever being bifurcated to straddle said handle, the furcations being arcuate and arcuately slotted, and said offset pivot including a clevis rigidly secured to said handle intermediate the ends thereof.

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