

T. HARDY.
POST HOLE DIGGER.
APPLICATION FILED SEPT. 14, 1907.

931,061.

Patented Aug. 17, 1909.

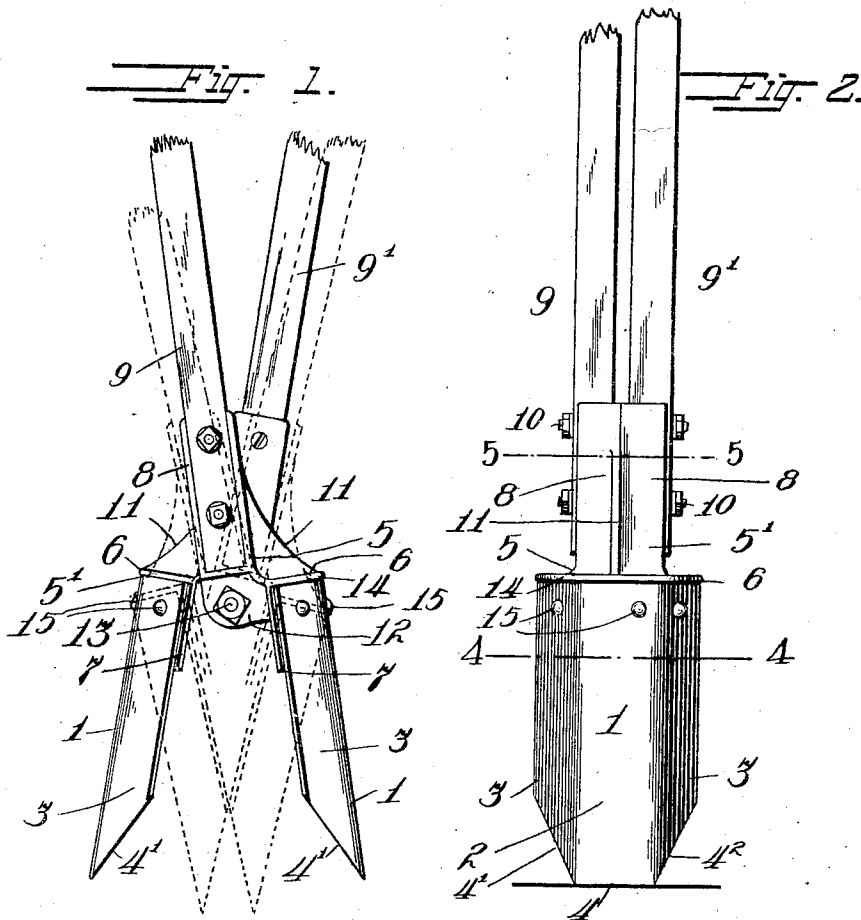


Fig. 4.

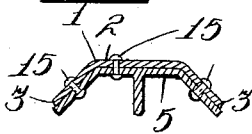


Fig. 3.

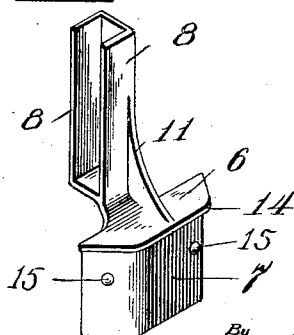
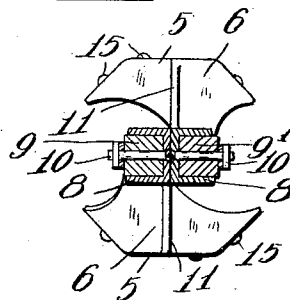


Fig. 5.



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UNITED STATES PATENT OFFICE.

TUCKER HARDY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE EUREKA DIGGER CO.,
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POST-HOLE DIGGER.

No. 931,061.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, TUCKER HARDY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Post-Hole Diggers, of which the following is a specification.

This invention relates to an improved post-hole digger and pertains more particularly to that type of digger in which a pair of spade like jaws or blades cooperate in digging and removing the dirt.

Among the salient objects of the invention are to provide a construction in which the handles are seated in metal sockets so constructed and arranged as to relieve, to the greatest practicable strength the handles of breaking stress and so arranged that the necessary bolt holes do not materially weaken the handles; to provide a construction in which the blades are susceptible of being moved into both convergent and divergent relation thus enabling the digger to be used for enlarging or terminating the post-hole and also for lifting out the dirt in the usual manner; to provide an improved form of blade of peculiar cross section shape which both adds to the efficiency of the blade in operation and contributes to the facility and accuracy with which it may be sharpened; to provide improvements in the details of the construction of the socket castings upon which the blades are mounted, contributing to the strength and rigidity of the structure as a whole and the ease with which the device may be assembled and in general to provide an improved construction of the character referred to.

In the drawings, Figure 1 is a side or edge elevation of my device showing the blades extended in full lines and in closed position in dotted lines. Fig. 2 is an elevation taken at right angles to the view shown in Fig. 1. Fig. 3 is a perspective view of one of the socket castings disassociated from the other member. Fig. 4 is a transverse sectional view taken on line 4—4 of Fig. 2. Fig. 5 is a sectional view taken on line 5—5 of Fig. 2 looking downwardly.

Referring to the drawings 1 designates the two digger blades, which are semi-hexagonal in cross section and straight longitudinally; comprising a relatively wide metal portion 2 and narrower outwardly divergent sides 3—3. The lower end of the

wider metal portion 2 terminates in a square chisel shaped edge 4 while the corresponding parts of the narrower side portions 3 terminate in outwardly inclined edges 4', 4². The edges 4—4 are arranged in the same transverse plane as best seen in Fig. 1 and the degree of inclination of these edges is such that the blade may be most conveniently and effectively sharpened by simply applying the two inclined edges and the chisel shaped edge 4 simultaneously to a flat grinding surface or stone although, of course, the several edges may be beveled back separately at somewhat more acute angles to perhaps thinner edges if desired.

5 and 5' respectively designate as a whole the two socket castings which serve to support the blades and unite the latter to the handles. Each socket casting comprises a transverse base portion 6 a shank portion or web 7 formed integrally with the lower side of the base and in cross section (external at least) corresponding to the interior cross section formed of the blades and a socket portion 8 likewise formed integrally with the upper side of the base. These two socket castings are formed as rights and lefts but are otherwise identical. The socket member 8 is constructed to form an open sided channel like socket the open side of which faces outwardly away from the companion socket and handle. In these sockets are seated the handles proper 9 and 9' respectively; the ends of these handles being made of such cross sectional form as to fit snugly within their respective sockets and being secured therein by means of through bolts 10—10. It is to be particularly noted that these bolts pass through the handles in a direction at right angles to the plane of operation of the handles and at right angles to the direction in which the greatest stresses are brought upon the handles. Moreover the sides of the channel like sockets take the working stress instead of the bolts; the latter serving only to confine the handles within their respective sockets.

In order to reinforce the strength of the socket castings, each is provided with an external web like fillet 11 which occupies the angles between the upper side of the base portion 6 and the approximate side of the socket portion proper, this web or fillet being arranged co-incident with the plane of operation. So also each socket casting is pro-

vided with an internal angular web as 12; the webs of the respective socket castings being slightly offset and arranged to overlap each other at their inner angles and apertured for the pivot bolt 13 whereby the parts are united. It is to be particularly noted that the construction is such that while the two socket castings are held pivotally united and with the socket portions resting against each other side by side (see Fig. 2), nevertheless the blades may be brought into bearing with each other at their lower ends and the handles may be moved apart so as to cause the blades to assume a more or less widely divergent position as seen clearly in Fig. 1. As a minor feature of improvement the socket castings are provided with shoulders 14 at the upper ends of the faceted portions 7 upon which the blades are mounted; these shoulders serving to form abutments against which the upper edges of the blades rest. The blades are desirably united with the socket castings by means of through rivets as indicated at 15.

From the foregoing description it will be understood that I accomplish the several objects of the invention stated and produce a digger which can be manufactured at an extremely low cost; that it is of extremely rigid and durable construction and particularly efficient in operation, for example: in digging post-holes roots of trees and the like are frequently encountered and by using the digger blades as choppers, the roots will be severed by the square end portion 4 of the blades without tending to force the digger laterally in such manner as to deflect the course of the post-hole. The polygonal form

of the digger blades also contributes materially to the ease with which the blades may be cleaned with a paddle as well as facilitating the sharpening of the blades as hereinbefore pointed out. The construction which permits the blades to be opened into divergent relation is important in that it enables the hole to be enlarged or trimmed at any terminal point with the upmost facility.

While I have shown the preferred embodiment of the invention yet it will be understood that the details of construction may be somewhat modified without departing from the spirit of the invention.

I claim as my invention:

1. In a post-hole digger, a pair of shank members, pivotally united and each provided with a handle-socket, handles seated in said sockets, and a digger blade mounted on each shank member, each digger blade being polygonal in cross-sectional form, straight in longitudinal section and sharpened at one end.

2. In a post-hole digger, a pair of shank members, pivotally united and each provided with a handle-socket, handles seated in said sockets, and a digger blade mounted on each shank member, each digger blade being of uniform polygonal cross-sectional form throughout, straight in longitudinal section and provided with a square-across chisel edge at its central end portion and inclined edge portions at each side of said chisel edge.

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