O. H. NAVILLE.

RATCHET HEAD FOR POST HOLE DIGGERS.

APPLICATION FILED DEC. 23, 1910.

1,105,448. Patented July 28, 1914.

Fig. 1.

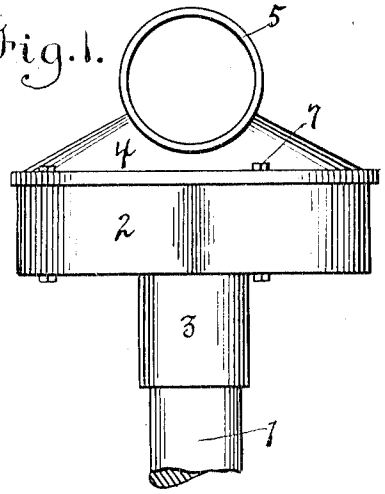


Fig. 2.

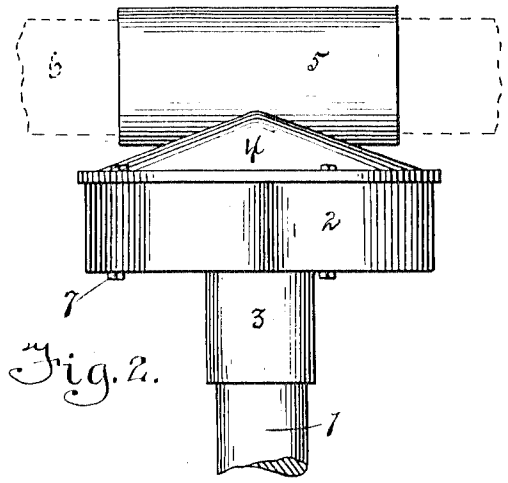


Fig. 3.

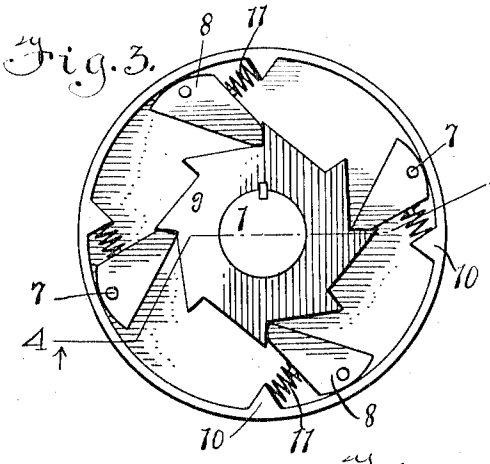


Fig. 4.

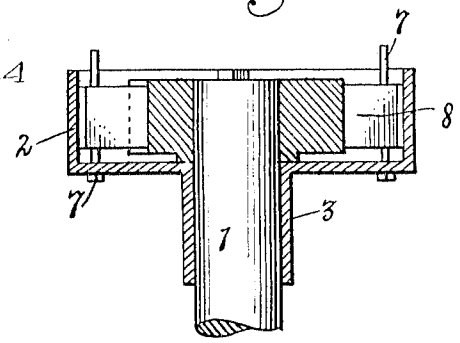


Fig. 5.

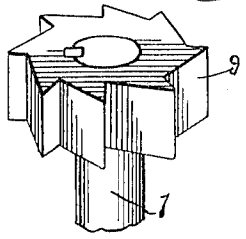
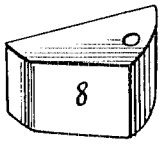


Fig. 6.



WITNESSES

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RATCHET-HEAD FOR POST-HOLE DIGGERS.

1,105,448. Specification of Letters Patent. Patented July 28, 1914.

Application filed December 23, 1910. Serial No. 598,951.

To all whom it may concern:

Be it known that I, OSCAR H. NAVILLE, a citizen of the United States, residing at Ambia, in the county of Benton and State of Indiana, have invented new and useful Improvements in Ratchet-Heads for Post-Hole Diggers, of which the following is a specification.

My invention relates to improvements in post hole diggers and augers, and more particularly to a ratchet mechanism to be applied to the head of such diggers in order to permit the use thereof in fence corners against walls, buildings or in similar places where a full turn of the handle can not be had.

An object of my invention is to provide such an attachment for diggers, which shall be strong and efficient in operation, durable and at the same time simple in construction, and comparatively cheap to manufacture.

Another object of my invention is to provide such a ratchet attachment as can be readily connected to any of the diggers now upon the market.

With the foregoing and other objects in view, my invention consists in such details of construction and in the arrangement and combination of parts as will be hereinafter more fully described and specifically pointed out, in the appended claim.

In describing my invention in detail reference will be had to the accompanying drawings in which like characters denote like or corresponding parts throughout the several views and in which,

Figure 1 is a view in elevation of my invention showing it complete as it appears upon the shaft of the digger. Fig. 2 is a similar view taken at right angles to Fig. 1. Fig. 3 is a plan view of the interior mechanism of my invention the cap of the structure having been removed. Fig. 4 is a sectional view taken upon the line 4 4 of Fig. 3. Fig. 5 is a detailed view in perspective of the ratchet and Fig. 6 is a detailed perspective view of one of the pawls.

In carrying my invention into practice I provide the usual shaft 1 upon the lower end of which is mounted the digging or excavating mechanism, this portion of the device not being shown in the drawings. A base 2, preferably in the form of a casing, having a tubular extension 3 is mounted upon the shaft 1 so as to permit said base to readily turn independently of the shaft. A cap 4 is provided for the base 2 said cap in turn being provided with a horizontally tubular member 5 which is adapted to receive the handle 6 by which the device is operated. It will be noted that the cap 4 is conical as shown in Figs. 1 and 2 and has its apex provided with a transversely-extending cut-out portion forming a seat for the tubular member 5. By having this cap constructed as shown, the side walls of the cut-out portion extend partially up the sides of the tubular member 5 and thus form means for preventing tubular member from twisting when the device is in use. This will prevent any danger of the tubular member being twisted loose and becoming detached from the cap. The base and cap are held together in spaced apart relation one to the other by means of cylindrical elements 7 such as bolts, a plurality of pawls 8 being mounted intermediate said base and cap so as to swing about said cylindrical elements which serve as fulcrums therefor.

Fixedly mounted upon the upper end of the shaft 1 is a ratchet wheel 9 which is operative intermediate said base 2 and cap 4 as shown in Figs. 3 and 4 the teeth of said wheel being adapted to be engaged by said aforementioned pawls. In order to hold said pawls normally to contact with said wheel I provide inwardly projecting abutments 10 preferably formed integral with said base 2 and interposed between said abutments and said pawls I dispose expansion springs 11, the manner of operation of which will be readily understood.

It will be seen from the foregoing description that by turning the handle in either direction the base and cap will be revolved through the intermediacy of elements 7 but as said elements are connected to the shaft of the digger only through the pawl and ratchet connection, said shaft will be revolved, and consequently the excavating jaws operated only when said handle is turned in such direction as to cause the pawls to engage the teeth of the ratchet wheel, as shown in Fig. 3. When said handle is turned in the other direction the pawls will not engage said teeth and consequently the digger will not be operated.

The advantages secured by the mechanism will be readily apparent. Where it is desired to dig a hole in a corner or against a fence, wall, building or any similar obstruction which prevents a full turn of the

handle, my invention will be found effective and will permit the hole to be easily dug.

I desire it to be understood that slight changes in the construction and in the arrangement and combination of the various parts may be resorted to without departing from the spirit of my invention, provided such changes fall within the scope of the appended claim.

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

In a ratchet head for post hole diggers, the combination of a base, a conical cap disposed in spaced relation to said base and having its apex cut to form a seat, a handle holding element mounted in said seat, the side walls of said seat extending partially up the sides of said handle-holding element to prevent the same from being twisted out of said seat, means for coupling said base and cap to move in unison, a ratchet wheel interposed between said base and cap and adapted for connection with the tool to be operated, and pawls interposed between said base and cap and engaging said ratchet wheel.

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Witnesses:
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