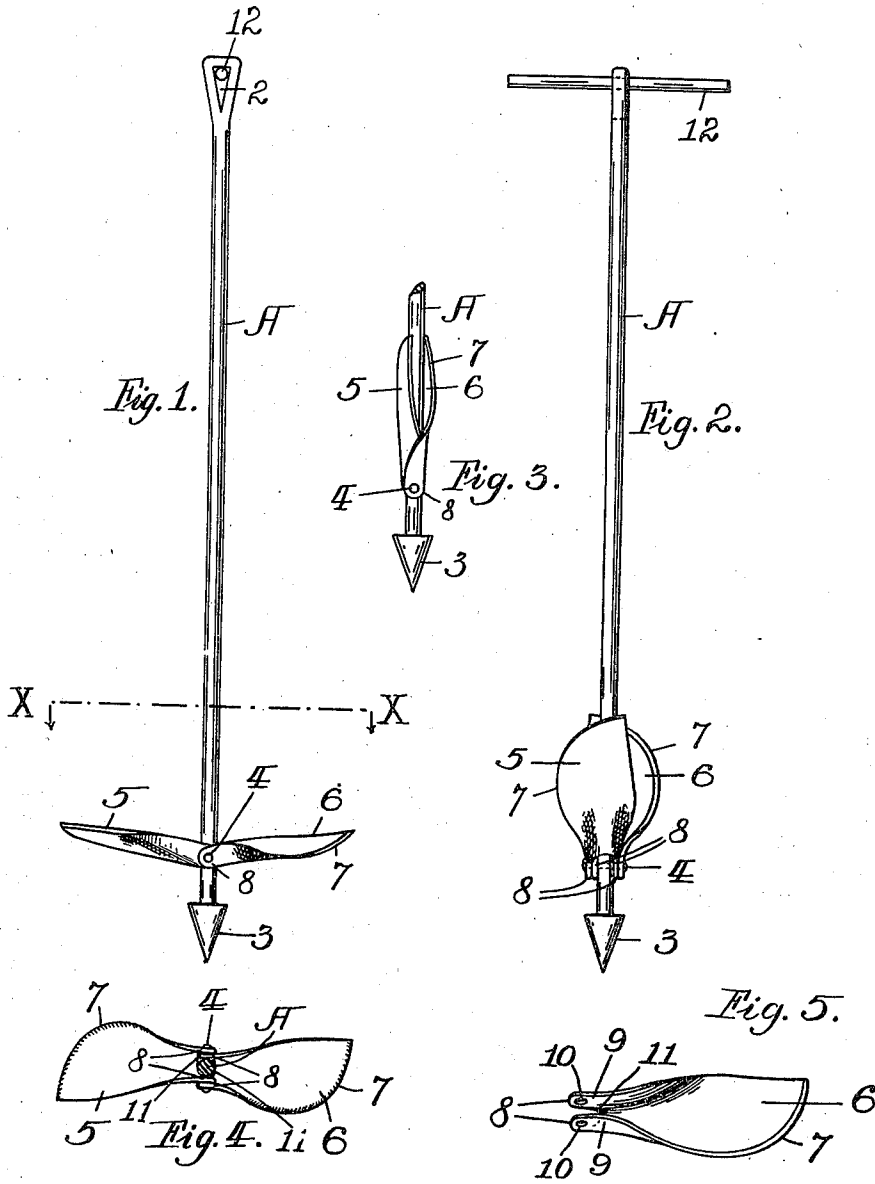


C. D. ENOCHS.
GUY WIRE ANCHOR.

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1,044,870.

Patented Nov. 19, 1912.



Witnesses:

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Inventor:

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by: W. H. Bradbury,
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UNITED STATES PATENT OFFICE.

CLAUDE D. ENOCHS, OF LA CROSSE, WISCONSIN, ASSIGNOR TO THE VOTE BERGER COMPANY, A CORPORATION OF WEST VIRGINIA.

GUY-WIRE ANCHOR.

1,044,870.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed August 20, 1906, Serial No. 331,319.

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To all whom it may concern:

Be it known that I, CLAUDE D. ENOCHS, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented a new and useful Guy-Wire Anchor, of which the following is a specification.

My invention relates to improvements in guy-wire anchors and more particularly is an improvement on the construction described in my Letters Patent of the United States, No. 829,578, issued on the 23rd day of August, 1906.

The primary object of this invention is the saving of labor and expense and the installing of the anchor without disturbing the ground.

Further objects are increased strength of construction, to provide means, which is not damaged by the heavy driving necessary to install the anchor, on the upper end of the shaft for turning it, and to provide means on the lower end of the anchor for protecting the blades when the anchor is being installed.

My invention also provides the improved details of construction and combination of parts hereinafter more particularly described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a side view of my invention, showing the blades extended; Fig. 2 is another side view, showing the blades folded upon the shaft; Fig. 3 is a detail side view of the lower end of the shaft looking at the edges of the blades; Fig. 4 is a sectional view taken on the line X—X of Fig. 1, and Fig. 5 is a perspective view on a slightly larger scale of one detached anchor blade.

In the drawings A represents a shaft, which is adapted to be driven into the ground and rotated after it is inserted. Heavy driving, by means of a sledge or other implement, on the upper end of the shaft tends to upset the metal and close an opening, such as disclosed in the construction described in my patent above referred to, therein provided. This defect is overcome by providing a V-shaped opening 2, the sides of the opening being straight and converging toward the body of the shaft. Upon driving the shaft the resultant force carries directly to the body and forging of

the metal and closing of the opening are avoided.

The lower end of the shaft is provided with a cone-shaped point 3, the base of the cone being larger in diameter than the diameter of the shaft. The purpose of this conical point is to open the ground so that the supports on the anchor blades are admitted freely and protected against the resistance of the earth when the shaft is being driven.

At a place on the lower end of the shaft, above and distanced from the base of the conical point, is attached by means of a pivot 4 a pair of screw blades 5 and 6, which are similar in construction. Each blade is formed with a curved front cutting edge 7, which reduces the force necessary to open it. A double support 8 on the blade is formed by flanges 9, which are turned up and perforated at 10. Between these flanges a shoulder 11 is provided, which is adapted to impinge against the shaft and limit the unfolding movement of the blade. When both blades are opened, they assume a position a little below ninety degrees from the shaft to allow for a slight set in the metal under a heavy strain. The ends of the pivot 4 are upset so that the blades will not become detached.

In use the shaft is driven into the ground by pounding with a sledge or other implement upon its upper end, the blades folding upon the shaft into the position shown in Figs. 2 and 3 while it is entering. A lever 12 is then passed through the opening 2 and the shaft turned two or as many times as are necessary to spread the blades into extended position, as shown in Fig. 1. The cone-shaped point on the shaft clears a passageway for the supports on the blades, thus removing any obstruction, so that the blades will be protected when entering the ground and free to open when the shaft is turned. By distancing the hinge joints of the blades above the base of the cone there is no danger of earth or stones lodging on the base and preventing the blades fully extending.

While I have shown a pair of blades on the shaft, it is obvious that any number desired may be used without departing from the spirit of this invention, and I do not confine myself to the exact details of construction which have been described.

It is obvious that the length of the shaft can be easily modified and the form of means for twisting the shaft changed within the spirit of my invention. In one form of modification when the shaft is made extremely short the entire shaft can be embedded in the ground the anchor being turned by a tool equivalent to the part 12 applied to the twisting means on the shaft. 10 The claims following this specification are intended to include such modifications.

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

15 1. A device of the class set forth, comprising a rotatable shaft, to be driven into the ground, provided with a V-shaped opening in its upper end, the apex of which is directed toward the body of the shaft, and a conical point on its lower end, the base of which is larger in diameter than the diameter of said shaft, and a screw blade provided with a double support, the arms of which are diametrically opposite each other on said shaft 20 and above said conical point, said blade being pitched to unfold by the resistance of the earth when the shaft is turned in one direction and to rest upon said shaft when reversed, and provided with a stop shoulder 25 for limiting its unfolding movement at less than ninety degrees from said shaft. 30

2. A device of the class set forth, comprising a rotatable shaft, to be driven into the ground, provided with a V-shaped opening 35 in its upper end, the apex of which is directed toward the body of said shaft, and a conical point on its lower end, the base of which is larger in diameter than the diameter of said shaft, and a screw blade provided with a double support, a curved cutting edge, and a stop shoulder to limit its unfolding movement. 40

3. A device of the class set forth, comprising a substantially round, rotatable 45 shaft, to be inserted into the ground, provided with a V-shaped opening in its upper end, the apex of which is directed toward the body of said shaft, and a conical point on its lower end, the base of which is slightly larger in diameter than the diameter of said shaft, and screw blades pivoted to, and adapted to unfold when, the shaft is turned, 50

each of said blades being provided with a stop which limits its unfolding movement, a cutting edge, and a double support, the arms 55 of which are diametrically opposite each other on said shaft.

4. A rotatable shaft to be first driven into the ground and then twisted and having a cone on its lower end, the base of said cone 60 being larger in diameter than the diameter of said shaft, and an unfolding screw blade hinged upon said shaft and having a forward cutting edge adapted to reduce the force necessary to unfold said blade by the turning of said shaft and a stop to limit the unfolding movement, said hinge attachment 65 placed at distance said blade above and out of contact with said base when unfolded.

5. A rotatable shaft to be first driven into the ground and then twisted and an unfolding screw blade having a pair of flanges 70 astraddle said shaft, and a shoulder between said flanges and a transverse pivot through said shaft and said flanges, said pivot with said flanges and shaft forming a hinge joint 75 for said blade on said shaft and distancing said blade out of contact with the base of said cone when extended and said shoulder forming a stop for said blade against said shaft to limit the unfolding movement of 80 said blade.

6. An earth anchor, comprising a rotatable shaft to be inserted into the ground provided with turning means upon its upper 85 end and a conical point on its lower end, the base of which is larger in diameter than the diameter of said shaft and a screw blade provided with a double support, the parts of which are adapted to straddle said shaft and 90 are pivoted thereto whereby said blade is adapted to unfold when said shaft is turned in the ground, said blade having an edge between said supports adapted to impinge against the side of said shaft to limit the 95 unfolding movement of said blade.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLAUDE D. ENOCHS.

Witnesses:

W. H. WILLIAMS,
F. G. BRADBURY.

It is hereby certified that the assignee in Letters Patent No. 1,044,870, granted November 19, 1912, upon the application of Claude D. Enochs, of La Crosse, Wisconsin, for an improvement in "Guy-Wire Anchors," was erroneously described and specified as a "corporation of West Virginia" whereas said assignee should have been described and specified as *a corporation of Wisconsin*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of April, A. D., 1913.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.