

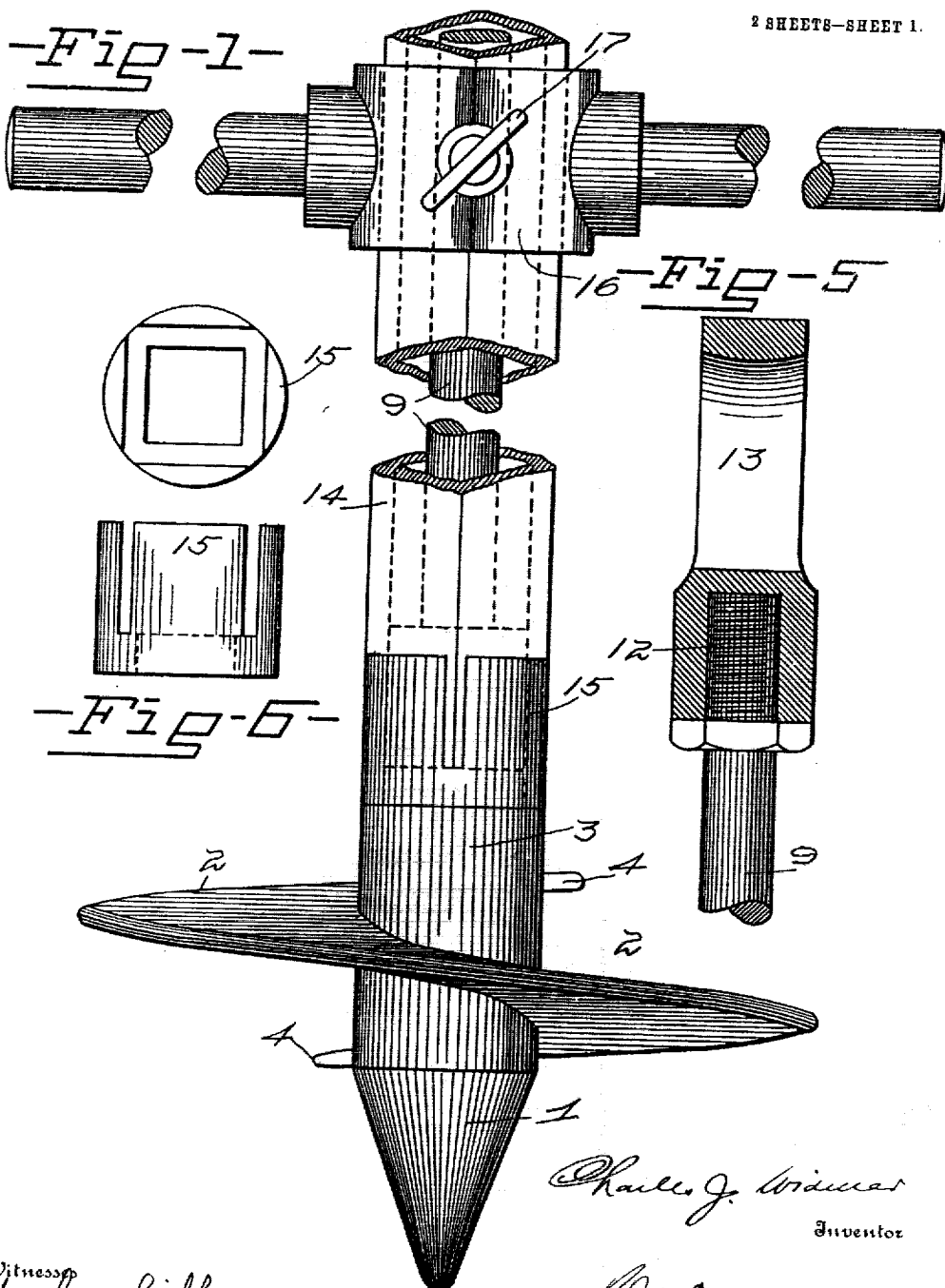
No. 816,631.

PATENTED APR. 3, 1906.

C. J. WIDMER.
GUY ANCHOR.

APPLICATION FILED SEPT. 14, 1905.

2 SHEETS-SHEET 1.



Charles J. Widmer
Inventor

Witnesses
Matthew S. Linder
Carolyn M. Theobald.

By

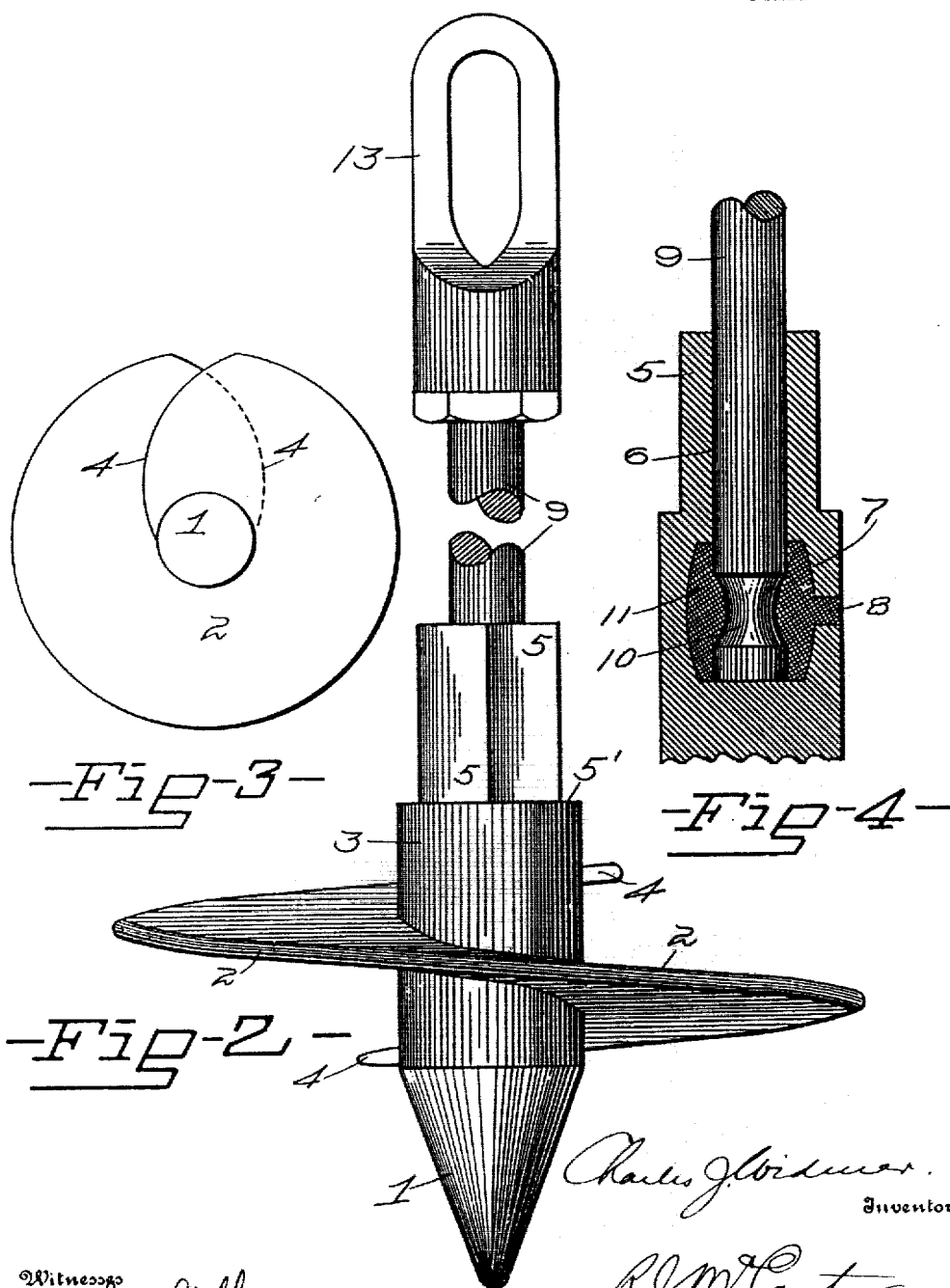
R. M. Canty
his Attorney

No. 816,631.

PATENTED APR. 3, 1906.

C. J. WIDMER.
GUY ANCHOR.
APPLICATION FILED SEPT. 14, 1905.

2 SHEETS—SHEET 2.



Witnesses
Martha Seibler
Carolyn W. Fierbald.

Charles J. Widmer.
Inventor

R. J. M. Hart
his. Attorney

UNITED STATES PATENT OFFICE.

CHARLES J. WIDMER, OF SIDNEY, OHIO.

GUY-ANCHOR.

No. 816,631.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed September 14 1905. Serial No. 278,386.

To all whom it may concern:

Be it known that I, CHARLES J. WIDMER, a citizen of the United States, residing at Sidney, in the county of Shelby and State of Ohio, have invented certain new and useful Improvements in Guy-Anchors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in ground-anchors for posts—such, for example, as telegraph-posts, telephone-posts, and any post which must be firmly and securely held in position in the ground.

The object of the invention is to provide a ground-anchor which may be inserted in the ground by turning the same by means of a wrench which is easily attached to and detached from the rod of the anchor.

A further object of the invention is to provide a ground-anchor in which the eye for the attachment of the guy-wire is detachable in order that any desirable size of eye may be attached after the anchor has been inserted in the ground.

The anchor has other advantages due to its structural features, which are hereinafter described and claimed.

Preceding a detail description of the invention reference is made to the accompanying drawings, of which—

Figure 1 is an elevation of a ground-anchor made in accordance with my invention, showing the same with the wrench applied and ready to be inserted in the ground, parts being broken away. Fig. 2 is a similar elevation with the wrench removed and part of the anchor-rod broken away. Fig. 3 is a bottom plan view of the spiral or ground portion of the anchor. Fig. 4 is a sectional view showing the connection of the anchor-rod in the body of the anchor. Fig. 5 is a sectional view of the eye, showing its connection with the upper end of the anchor-rod. Fig. 6 represents detail views of the reinforcing members to which the detachable wrench sleeve or stem is connected.

In a detail description of the invention similar reference characters indicate corresponding parts.

The ground portion or anchor proper consists of a cone-shaped penetrating end 1, above which a spiral blade 2 is placed, which surrounds the cylindrical body 3 and terminates below the upper extremity of said cylindrical body. This spiral blade 2 in order to insure a proper entrance into the soil or an entrance that minimizes the resistance of said penetration is provided with a ground surface on the entering edge 4. Owing to this construction, the said entering edge of the spiral or blade enters the soil in a manner which causes the spiral to meet with the least resistance, the operation of penetrating the anchor being similar in all respects to the insertion of a screw.

Above the cylindrical body of the anchor there is an integral extension 5, which is square or rectangular in cross-section and has a bore or opening 6, communicating with a chamber 7 below said extension in the cylindrical body 3. Extending from this chamber 7 there is an orifice 8, which communicates with the exterior surface of said body 3. The purpose of this chamber 7 and orifice 8 will be seen presently.

9 designates an anchor-rod which is a separable part of the anchor, but which is made secure to said anchor as follows: This anchor-rod is projected through the bore 6 and into the chamber 7. The portion of said anchor-rod lying within said chamber has its diameter reduced, as at 10, for the purpose of attaching the rod to the body of the anchor. This attachment is effected by pouring molten babbitt 11 into the chamber 7 through the orifice 8 until said metal thoroughly fills the chamber and surrounds the reduced portion of the rod. After this inserted Babbitt metal becomes cooled or set it will be readily seen that a rigid connection is made between the anchor proper and the rod. The upper end of the rod is provided with screw-threads 12 for the attachment of eye 13, to which the guy-wire is connected. It will therefore be seen that the guy-wire eye is a detachable part of the device and that the anchor is therefore susceptible of the attachment of different sizes of eyes to meet the requirements. In other words, an anchor of a given size may be utilized in connection with guy-wires of varying diameters. This is due to the fact that an eye of any suitable size for the guy-wire may be readily attached to the anchor-rod, and thus the necessity of having

a variety of anchors for a variety of different sizes of eyes is dispensed with.

14 is a detachable wrench-sleeve which is only utilized in connection with the wrench 16 in the operation of inserting the anchor in the ground. This sleeve is square in cross-section or of any other rectangular shape and fits over the anchor-rod 9. At the lower end of the sleeve there is placed a reinforcing member 15, which fits over the square extension 5 and rests upon the shoulder 5'. This nut has a square opening which receives the extension 5 and a rectangular space inclosed by the walls of said member 15, which receives the lower end of the sleeve 14, so that when said sleeve is placed in position, as in Fig. 1, it is locked through means of said nut and the square portion 5 of the anchor.

16 designates a wrench which is securable to the sleeve 14 at any suitable point by means of a clamping-screw 17, which passes through the collar of said wrench. It will be seen that by means of this wrench the anchor may be secured into the ground and the parts incorporated with said wrench—namely, the sleeve 14 and the wrench itself—removed after the anchor has been inserted to the desired depth.

The operation of inserting the anchor is briefly described as follows: The collar 15 is dropped over the rod 19 with the socket side up and fits over the extension 5, resting upon the shoulder 5'. The sleeve 14 is then placed in position, the lower end thereof entering the socket in the member 15. After this operation the wrench is placed in position on the sleeve and clamped thereto. The guy-wire eye 13 is removed by unscrewing the same in order to place the member 15 and the sleeve 14 in position over the anchor-rod 9. The eye is replaced on the rod until the anchor has been inserted a sufficient extent in the ground, after which it is removed and the wrench and the sleeve 14 are removed, the eye is then replaced on the anchor-rod, and the device is ready for the attachment of the guy-wire. The member 15 is left in position on the anchor after the removal of the sleeve 14 and need not be removed from the anchor.

Having described my invention, I claim—

1. A ground-anchor consisting of a spiral blade arranged above the point of said anchor, the body of the anchor terminating at its upper end in a socket portion rectangular in cross-section with a shoulder therebelow, an anchor-rod attachable within said square portion, an eye detachably connected to said anchor-rod, and means for engaging the square portion of said anchor to insert the anchor in the ground.

2. In a ground-anchor, a spiral blade, a socket extension above said blade, an anchor-rod securable within said extension, a reinforcing member on said socket extension,

and means engaging said reinforcing member for inserting the anchor in the ground.

3. In a ground-anchor, a spiral blade surrounding a cylindrical body above the point of the anchor, a socket extension above said cylindrical body, an anchor-rod attachable within said body, a reinforcing member surrounding said socket extension and resting upon the cylindrical body, a sleeve engaging said reinforcing member, a wrench engaging said sleeve, and means are provided for boring said anchor in the ground.

4. In a ground-anchor, a spiral blade, an integral extension above said blade, an anchor-rod projecting through said extension, a reinforcing member surrounding said extension, a sleeve engaging said reinforcing member, a wrench engaging said sleeve, and an eye adapted to be placed on the end of said anchor-rod for the guy-wire after the anchor has been inserted in the ground and the operating parts removed therefrom.

5. The combination with an anchor and a rod fixed with respect to and extending upwardly from the anchor, of an anchor-sinking device comprising a tubular portion adapted to receive the rod and provided with means for cooperating with means on the anchor and holding it against turning on the anchor, and means carried by said tubular portion for directly engaging the rod.

6. The combination with an anchor and a rod fixed with respect to and extending upwardly from the anchor, of an anchor-sinking device comprising a tubular portion adapted to receive the rod, and means carried by said tubular portion for directly engaging the rod and fixing the tubular portion with respect thereto.

7. The combination of an anchor, a rod extending upwardly from the anchor and having a shouldered portion disposed in the anchor, means in the anchor arranged to cooperate with the shouldered portion of the rod to prevent withdrawal of the rod from the anchor, and an anchor-sinking device comprising means for directly engaging the rod.

8. The combination of an anchor, a rod extending upwardly from the anchor and having a shouldered portion disposed in the anchor, means in the anchor arranged to cooperate with the shouldered portion of the rod to prevent withdrawal of the rod from the anchor, and an anchor-sinking device comprising a tubular portion adapted to receive the rod and provided with means for cooperating with means on the anchor and holding it against turning on the anchor, and means carried by said tubular portion for directly engaging the rod.

9. The combination of an anchor having a spiral blade and a socket extension above said blade and also having a bore or socket

and an integral shoulder in said bore or socket, a rod extending upwardly from the anchor and having a shouldered portion disposed in the bore or socket thereof below the
5 shoulder in said bore or socket, a tube surrounding the rod, and cooperating means on the tube and the anchor for holding the former against turning on the latter.

10. The combination of an anchor, a rod

fixed to and extending upwardly from the anchor, and an anchor-sinking device having means for directly engaging the rod.

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

CHARLES J. WIDMER.

Witnesses:

R. J. McCARTY,
C. M. THEOBALD.