C. G. ETTE.

GROUND ANCHOR.

APPLICATION FILED MAY 4, 1908.

908,082.

Patented Dec. 29, 1908.

Fig.1.

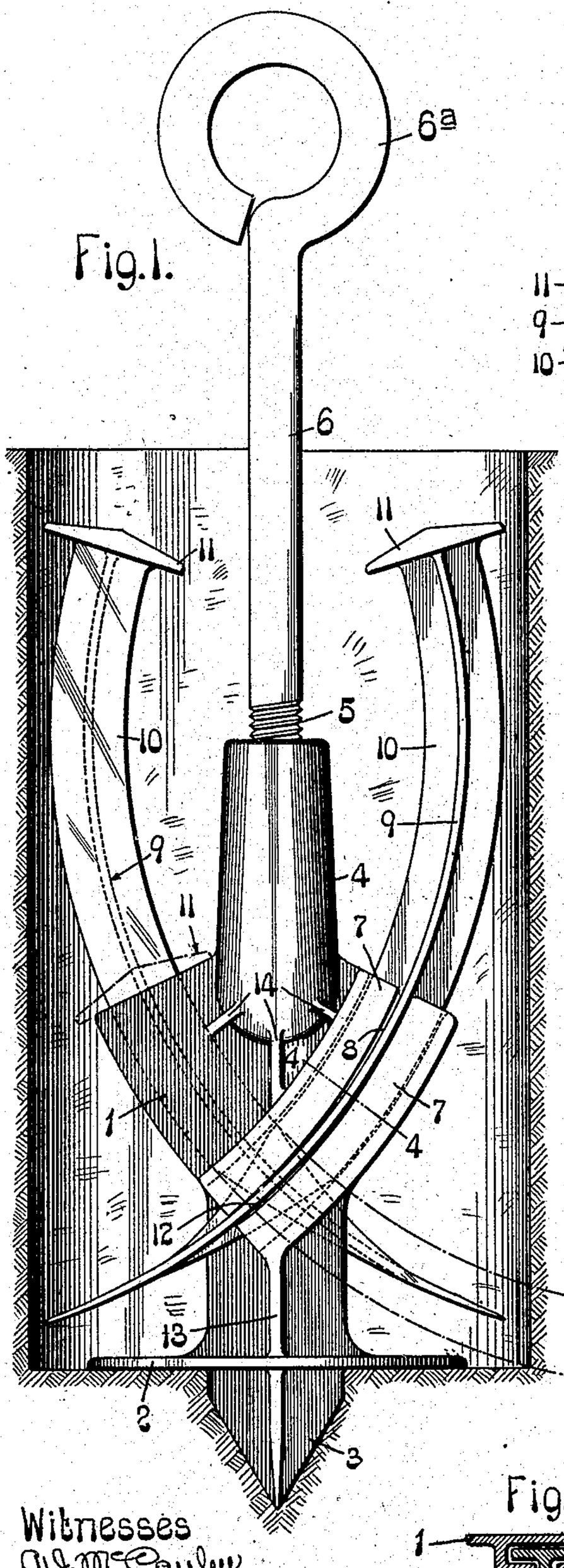


Fig.2.

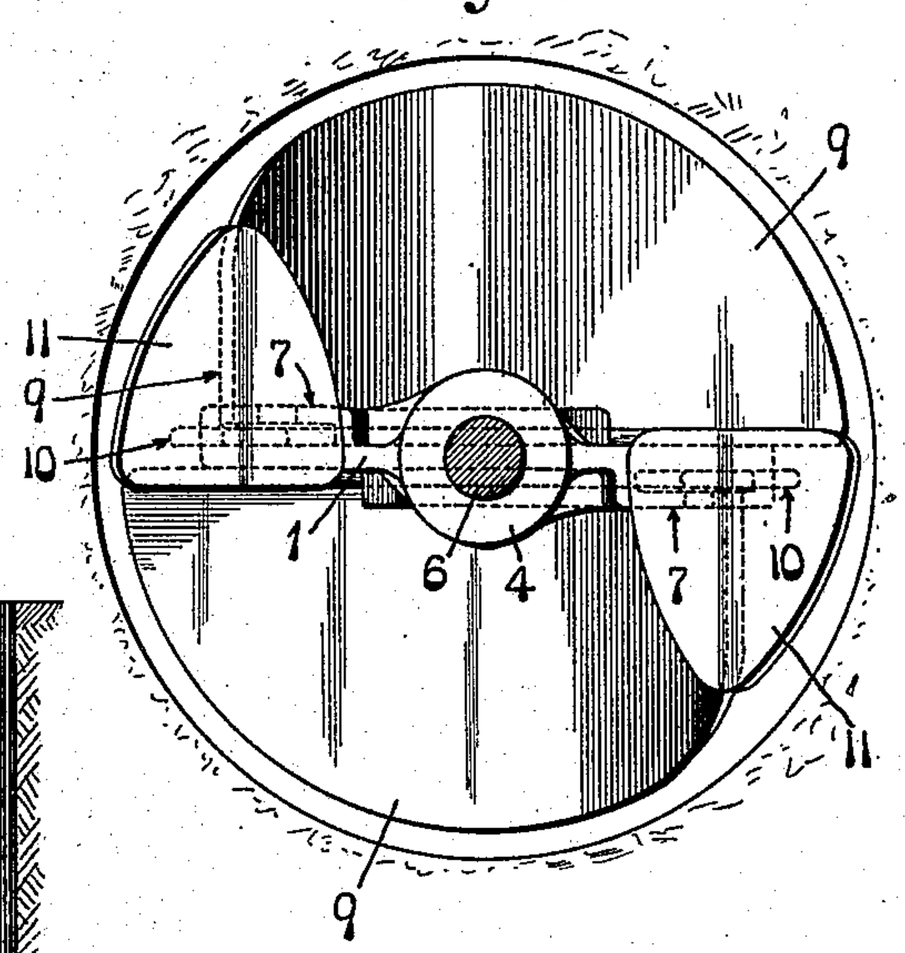


Fig.3.

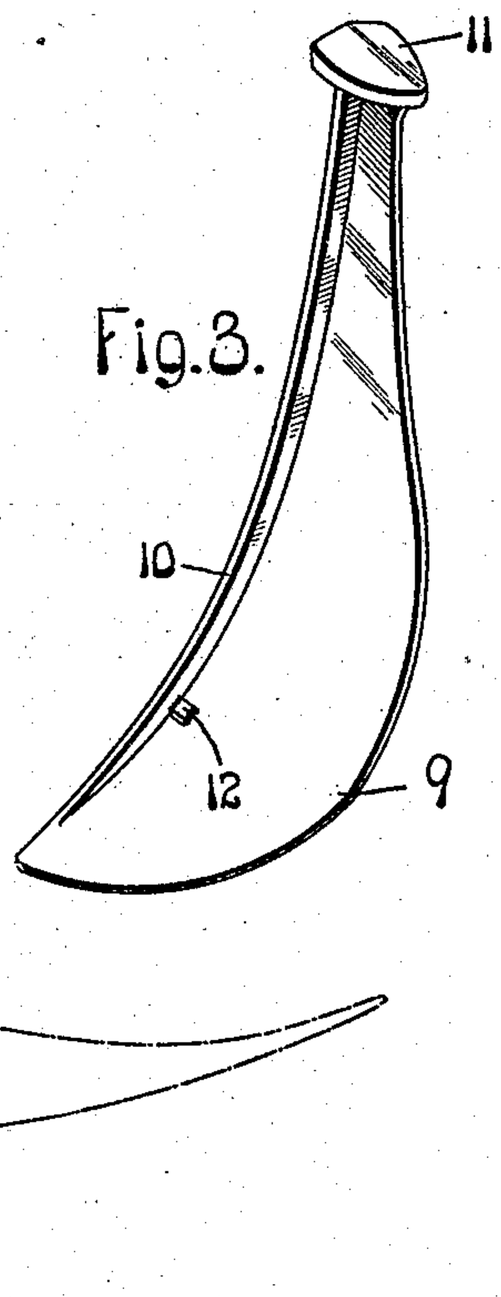
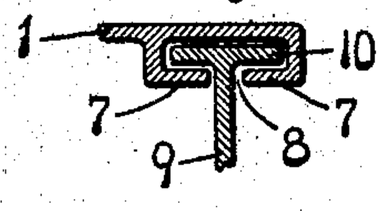


Fig.4.



Witnesses
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UNITED STATES PATENT OFFICE.

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GROUND-ANCHOR.

No. 908,082. Specification of Letters Patent. Patented Dec. 29, 1908.

Application filed May 4, 1908. Serial No. 430,770.

To all whom it may concern:

Be it known that I, CHARLES G. ETTE, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Ground-Anchors, of which the following is a full, clear, and exact description, 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, forming part of this specification, in which—

Figure 1 is a side elevation of a ground anchor constructed in accordance with my invention; Fig. 2 is a top plan view of said anchor; Fig. 3 is a detail perspective view of one of the gripping members; and Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 1.

This invention relates to ground anchors.

The main object of my invention is to provide an inexpensive ground anchor that can be embedded in the ground easily and which is provided with large gripping members that insure a permanent anchorage of the device to which the anchor is connected. I have herein shown a ground anchor that is adapted to be used for anchoring a guy wire or stay wire such, for example, as are used in connection with telegraph poles, but this same form of anchor can be connected to the lower end of a post or pole that is embedded in ground.

Referring to the drawings which illustrate the preferred form of my invention, 1 designates the vertically disposed central web of a cast member, preferably formed of malleable iron, and provided with a disk-shaped base 2 having an integral downwardly projecting pointed portion 3 which is preferably of cruciform shape in cross section. On the opposite sides of the web 1 of said cast member are integral guideways that are located above the base 2, and at the upper end of said web is a cylindrical-shaped portion 4 having a longitudinally extending screw-threaded bore which receives a screw-threaded portion 5 on a rod 6. This rod 6 is provided with an eye 6^a to which a stay wire or guy wire, not shown, is adapted to be connected and thus forms an adjustable connection between the guy wire and the cast member that is embedded in the ground.

The guideways on the central web 1 are inclined in opposite directions, and each guideway is composed of two angle-shaped flanges 7 that have their inner edges spaced away from each other to form a slot 8, as shown in Fig. 1.

A gripping member, preferably made of malleable iron, is slidingly mounted in each of said guideways, and each of said gripping members comprises a curved wing 9 provided at its inner edge with a flange 10 that coöperates with the wing 9 to form a member that is approximately T-shaped in cross section. The flange 10 of the gripping member is arranged inside of the guideway on the central web 1 and the wing 9 projects laterally through the slot 8 in said guideway, as shown in Fig. 4. The wing 9 of the gripping member is widest adjacent its lower end and diminishes gradually in width towards its upper end where it merges into a flat head 11 which is formed integral with the wing 9 and the flange 10. The lower end of the wing 9 is preferably pointed, as shown in Fig. 3 so that it will penetrate the ground easily, said wing being of approximately semi-circular shape. If desired, said wing can be provided with a lug 12 which coöperates with a contracted portion of the slot 8 in the guideway to hold the gripping member in a certain position during the operation of inserting the anchor in the ground.

The central web 1 of the cast member is preferably provided with vertically disposed strengthening ribs 13 that are integrally connected to the base 2 and to the lower flanges 7 of the guideways, and the upper flanges 7 of said guideways are strengthened by means of inclined ribs 14 that are integrally connected to said flanges, to the central web 1 and to the cylindrical-shaped portion 4 of the cast member.

To arrange the anchor in operative position, I first bore a hole in the ground and then place the cast member in same, as shown in Fig. 1, the gripping members being mounted in the guideways on the central web 1 of said cast member. The lugs 12 on the wings of the gripping members engage the contracted portions of the slots 8 of the guideways so that the gripping members will be retained in the position shown in full lines

in Fig. 1 until they are subjected to sufficient pressure to cause said lugs to be flattened or mashed down. After the cast member has been arranged in position the gripping members are forced laterally into the ground, as shown in dotted lines in Fig. 1, by pounding on the heads 11 of said members, the lugs 12 on the wings of the gripping members being soft enough so that they will flatten down and pass the contracted portions of the slots 8.

The flat base 2 on the cast member prevents said member from sinking into the ground when the gripping members are forced into the ground, and the projection 3 on the underneath side of said base centers same and holds the cast member in an upright position before the gripping members are forced into the ground. The wings of the gripping members are of such shape that they fill the hole that has been bored in the ground to receive the anchor, and said wings also penetrate the ground easily and obtain such a firm hold on the ground that a permanent anchorage is insured.

The gripping devices and the member on which said devices are mounted are preferably made of malleable iron so that the anchor is strong and can be produced at a low cost.

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

1. A ground anchor, comprising a member provided with inclined guideways, and gripping members slidingly mounted in said guideways and provided with wide wings that project laterally through slots in said guideways; substantially as described.

2. A ground anchor comprising a member provided with a pair of oppositely inclined guideways and a flat base, and gripping members slidingly mounted in said guideways and provided with wide wings that project laterally through slots in said guideways; substantially as described.

3. A ground anchor comprising a member that is adapted to be arranged in a hole in the ground, a pair of oppositely curved guideways on said member, and gripping devices slidingly mounted in said guideways and each consisting of a curved semicircular-shaped wing that projects laterally from said member and is adapted to be forced into the ground; substantially as described.

4. A ground anchor comprising a member provided with oppositely inclined guideways, and gripping devices slidingly mounted in said guideways and each consisting of a member that is approximately T-shape in cross section; substantially as described.

5. A ground anchor comprising a member provided with inclined guideways, and gripping members each of which is provided with a head that is arranged in one of said guideways, and a wide wing that projects laterally from the guideway; substantially as described.

6. A ground anchor comprising a member provided with a flat base, a pointed projection on the underneath side of said base, inclined guideways on opposite sides of said member, and gripping members slidingly mounted in said guideways and provided with wings that project laterally through slots in the guideways; substantially as described.

7. A ground anchor consisting of a cast member provided with a central web, a flat base, and oppositely inclined guideways, gripping members slidingly mounted in said guideways and provided with wide wings that project laterally through slots in said guideways, and heads on the upper ends of said gripping members; substantially as described.

8. A ground anchor consisting of a cast metal member provided with a vertically disposed central web, a disk-shaped base at the lower end of said web, a pointed projection on the underneath side of said base, inclined guideways on said web, and a cylindrical-shaped portion at the upper end of said web having a screw-threaded bore, and gripping members slidingly mounted in the guideways on said web; substantially as described.

9. A ground anchor consisting of a cast metal member provided with a number of pairs of angle-shaped flanges that form guideways, and gripping members each of which consists of a wide wing that is provided at one edge with a flange that is arranged between the angle-shaped flanges on said cast member; substantially as described.

10. A ground anchor comprising a malleable iron member having a vertically disposed central web, a disk-shaped base at the lower end of said web provided on its underneath side with a pointed projection, curved guideways on said web, a cylindrical-shaped portion at the upper end of said web provided with a screw-threaded bore, malleable iron gripping members slidingly mounted in said guideways and provided with curved wings that project laterally through slots in said guideways, and heads at the upper end of said gripping members; substantially as described.

11. A ground anchor comprising a malleable iron member provided with oppositely inclined guideways, and malleable iron gripping members slidingly mounted in said guideways and adapted to be forced laterally into the ground, and means for holding said gripping members in an inoperative position preparatory to forcing them into the ground; substantially as described.

12. A ground anchor comprising a malleable iron member provided with oppositely

inclined guideways, malleable iron gripping members slidingly mounted in said guideways and adapted to be forced laterally into the ground, and lugs on said gripping members which hold them in an inoperative position while the anchor is being inserted in the ground; substantially as described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this twenty ninth day of April 1908.

CHARLES G. ETTE.

Witnesses:

WALTER CLARENCE RAITHEL,

EDWARD SCHWIDDE,