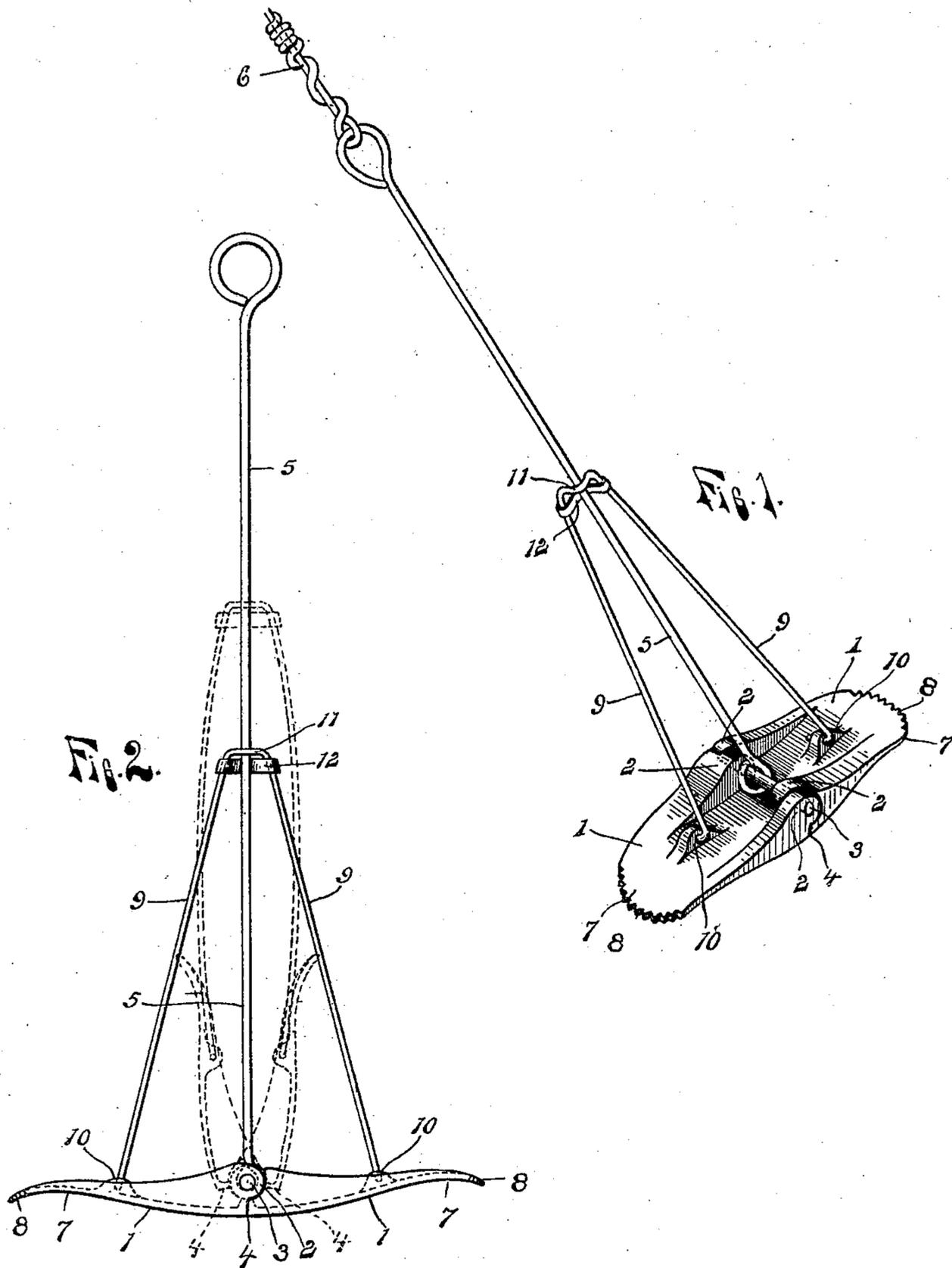


No. 836,678.

PATENTED NOV. 27, 1906.

W. J. GALLAGHER.  
GROUND ANCHOR.  
APPLICATION FILED JULY 16, 1906.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

WILLIAM J. GALLAGHER, OF DETROIT, MICHIGAN.

## GROUND-ANCHOR.

No. 836,678.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed July 16, 1906. Serial No. 326,514.

*To all whom it may concern:*

Be it known that I, WILLIAM J. GALLAGHER, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Ground-Anchors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improved ground-anchor for guy-wires and similar purposes; and the object of the invention is to provide a very simple, strong, and efficient device for the purpose, which may be cheaply manufactured, and which may be very quickly and easily secured in place by inserting the same in a suitable hole in the ground, said device being so constructed that it will automatically engage the sides of the hole upon outward movement therein and effectually prevent its being withdrawn therefrom.

To this end the invention consists in providing oppositely-extending hinge-connected blades attached at their pivot to one end of a draft-rod and adapted to be folded up against said rod, so that they may be readily inserted in a hole in the ground and adapted to automatically unfold upon outward strain on the rod when so inserted and engage the sides of the hole to effectually secure the device in the ground.

It is also an object of the invention to provide means to insure the unfolding of the blades and to provide certain other new and useful features in the construction, arrangement, and combination of parts, all as hereinafter more fully described, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a device embodying the invention; and Fig. 2 a side elevation of the same, showing in dotted lines the blades folded.

1 1 represent two wings or blades, which are each formed with ears 2, extending upwardly from the surface thereof at their adjacent ends and forming pivot-bearings for the pivot-bolt or pintle 3 of the hinge thus formed. The adjacent inner ends of the blades form shoulders 4 at one side of the pivot to abut against each other when the blades are turned into alinement and prevent the same from turning beyond that line, and a draft rod or wire 5 is attached to the pivot-bolt between the ears, said rod being

formed with a loop at its opposite end, to which the guy-wire 6 is secured. The blades, when extended together, form a concavo-convex anchor-plate, and the pivot or hinge is at the inner or concave side, so that when folded up adjacent to the draft-rod, as shown in dotted lines in Fig. 2, said blades will present a smooth rounded outer surface. The extreme outer ends 7 of said blades are curved outwardly or toward their convex side and provided with notches or teeth 8, so that when the anchor is inserted in its folded position in a suitable hole in the ground these ends will more readily engage the sides of the hole when there is an outward pull on the draft-rod. To further insure the automatic engagement of said ends with the earth a spring-loop, formed of a rod or wire 9, is attached at each of its ends to an ear 10 on the inner surface of each blade, and intermediate its ends is slidingly attached to the draft-rod by being bent to form a loop 11, extending around one side of the rod and having a strip 12 secured at its ends to the sides of the loop and extending across in engagement with the opposite side of said rod. When the blades are folded, the loop slides up on the rod and its sides are bent inward by the blades, and thus exert a force sufficient to turn said blades outward into engagement with the sides of the hole.

The blades together form a broad flat surface to project into the walls of the hole and to engage the earth when the hole is filled in, thus eliminating the necessity for placing it very deep in the ground, and by attaching the draft-rod to the pivot-bolt a heavy purchase is secured to turn the blades when their outer ends engage the side walls of the hole and force said ends into the earth. The form of hinge connection between the blades gives a very strong construction and obviates the possibility of said blades being turned by the strain on the draft-rod farther than into alinement, and the spring-loop not only serves to force the blades apart, but also to connect the blades and hold them relative to the draft-rod to prevent said blades from turning on the rod or independently of each other, and causing them to turn equally toward or from the rod in folding or unfolding, so that they will engage the walls of the hole equally and extend across said hole at right angles to its walls. The blades may be of

cast-iron or may be stamped from sheet metal and require no machine-work, thus making the device very cheap to manufacture.

5 Having thus fully described the invention, what I claim is—

1. In a ground-anchor, the combination of blades pivoted together at their adjacent ends, a draft-rod attached to said blades at  
10 their pivot, and means attached to said blades and engaging said rod to hold said blades and rod in a certain relation to each other.

2. In a ground-anchor, the combination of  
15 blades pivoted together at the adjacent ends, a draft-rod attached to said blades at their pivot, and means connecting said blades to prevent one from turning independently of the other.

20 3. In a ground-anchor, the combination of blades pivoted together, and yielding means interposed between said blades to normally hold the same extended in opposite directions.

25 4. In a ground-anchor, the combination of blades pivoted together, and yielding means attached to said blades and adapted to resist the turning of said blades toward each other.

30 5. In a ground-anchor, the combination with blades pivoted together, of a draft-rod attached to said blades at their pivot, and a spring member attached at its ends to the blades and slidingly engaging the rod intermediate its ends.

35 6. In a ground-anchor, the combination of

blades having ears, a pivot-bolt extending through said ears to pivotally connect the blades, a draft-rod attached to said bolt, and a spring-loop attached at its ends to the blades and slidingly engaging the rod intermediate its ends. 40

7. In a ground-anchor, the combination of blades having ears extending from one side thereof near one end and said ends forming  
45 shoulders, a pivot-bolt extending through the ears, a draft-rod having a loop at one end to engage said bolt, teeth on the outer ends of said blades, and a spring-loop attached to the rod intermediate its ends to slide thereon and pivotally attached at its ends to the blades. 50

8. In a ground-anchor, the combination of concavo-convex blades the inner ends of which form abutting shoulders and having outwardly-curved outer ends formed with  
55 teeth, ears extending from the concave side of the blades, a pivot-bolt extending through said ears, a draft-rod having a loop through which said bolt extends, a spring-loop pivotally attached at its ends to the blades intermediate their ends at their concave sides, 60 and means for securing the loop intermediate its ends to said draft-rod to slide longitudinally of said rod.

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

WILLIAM J. GALLAGHER.

Witnesses:

OTTO F. BARTHEL,  
ADOLPH BARTHEL.