No. 753,394. PATENTED MAR. 1, 1904.

W. HECTOR.

ANCHOR.

APPLICATION FILED JAN. 5, 1903.

NO MODEL.

Fig. 1.

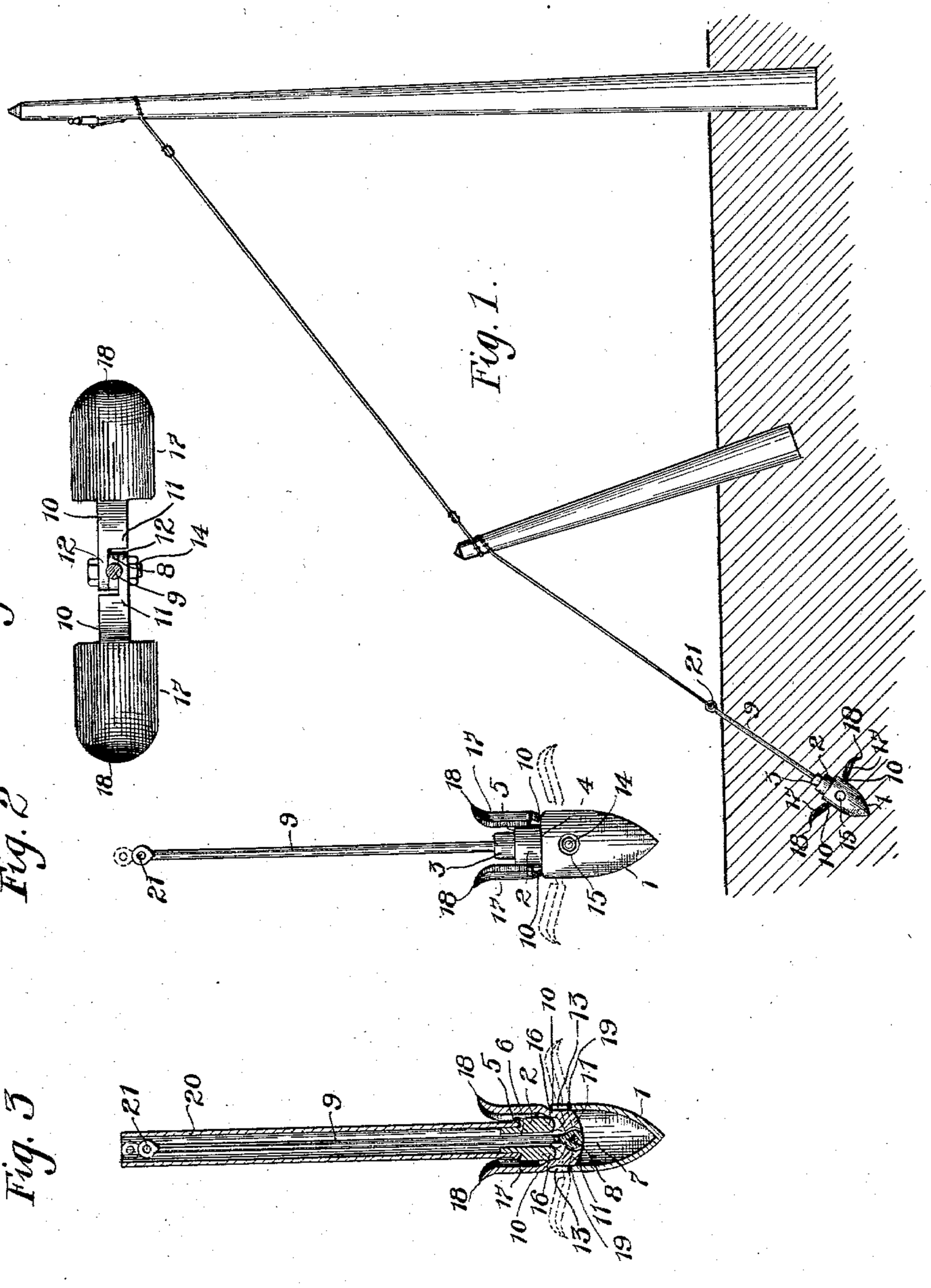

Fig. 4.

Fig. 2

Fig. 3

Witnesses:
Leonard W. Novander.
Charles J. Schmidt.

Inventor
William Hector.
By Charles A. Brown
Attorney

No. 753,394. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM HECTOR, OF CHICAGO, ILLINOIS.

ANCHOR.

SPECIFICATION forming part of Letters Patent No. 753,394, dated March 1, 1904.

Application filed January 5, 1903. Serial No. 137,762. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HECTOR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Anchors, (Case No. 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to anchors, and has for its object a novel and improved anchor adapted for use on land for anchoring objects to the earth.

My invention is particularly adaptable in pole-line construction for telephone, telegraph, or electric-power service or the like, where it is necessary to anchor strain-poles, for instance, at corners or at line-terminals.

Heretofore the usual method for applying anchoring means has been to bury an anchor-log connected with an anchor-rod. This method is laborious and costly, as it requires the digging and refilling of a hole for receiving the anchor-log; and it is the principal and particular object of my invention to provide means for inserting an anchor without any digging whatever. To accomplish this, I construct my improved anchor with the anchor fluke-arms pivotally disposed and adapted to be driven into the earth, preferably by means of a wedge. The fluke-arms terminate in wings, and upon tension being applied to the anchor-rod after the wedge has been driven into the earth the anchor fluke-arms and wings penetrate into the earth and dispose themselves at right angles to the anchor-rod.

I will describe my invention more clearly with reference to the accompanying drawings, in which—

Figure 1 shows the anchor in service. Fig. 2 is an elevation view thereof. Fig. 3 is a longitudinal sectional view thereof. Fig. 4 shows the construction of the fluke-arms and the connection of the anchor-rod therewith.

Like characters of reference refer to like parts throughout the several figures.

A hollow conical wedge 1 has a smaller annular body part 2 and an annular neck 3, forming shoulders 4 and 5. The throat 6, leading into the hollow 7, is adapted to allow the entrance of a bearing 8 at the lower end of an anchor-rod 9. Anchor fluke-arms 10 10 terminate at their inner ends in bearing members 11 11, preferably disposed at an angle to said arms and ending in bearings 12 12. Slot-openings 13 13 through shoulder 4 permit the entrance of the bearing ends of said fluke-arms, said bearings 12 12 and bearing 8 of the anchor-rod engaging a common shaft, preferably in the shape of a bolt 14, which bolt may be applied and secured through holes 15 15. The lower edge of the body part 2 is rounded at the openings 13 13 to form bearing-surfaces 16 16 to be engaged by the fluke-arms. The free ends of said fluke-arms terminate in spade-shaped enlargements 17 17, having their end edges 18 18 flared outwardly. As the wedge 1 is driven into the ground the fluke-arms are disposed as shown in full lines in Figs. 2 and 3, enlargements 17 17 lying parallel to and against the body portion 2, the diameter through the enlargements being approximately equal to the diameter of the wedge 1. The flared edges 18 18 extend slightly beyond this diameter and have more or less side pressure exerted against them as the wedge is driven. Upon tension being applied to anchor-rod 9 the fluke-arms operate upon the principle of a toggle, and enlargements 17 17 penetrate into the earth and tend to assume a position preferably at right angles to the anchor-rod, members 11 11 engaging bearing-surfaces 16 16 and the top edges 19 19 of openings 13 13 as the fluke-arms distend. When fully distended, said fluke-arms are disposed as shown in dotted lines in Figs. 2 and 3 and are held in such position by said bearing-surfaces 16 16 and edges 19 19. The flared edges 18 18 very readily engage and penetrate into the earth upon tension being applied to the anchor-rod, and thus prevent the withdrawing of the wedge without distension of the fluke-arms.

As a preferred means for driving the anchor into the ground I employ a pipe 20, adapted to pass over the anchor-rod and the neck 3 of the wedge to engage the shoulder 5. After the anchor has been driven down the required depth said pipe may be withdrawn or may be

left in the ground. An anchor-wire may now be fastened to the anchor-rod through an eye 21, and upon tension being applied the anchor-flukes distend and the anchor assumes its service position, as shown in Fig. 1.

I do not wish to be limited to the precise construction herein outlined, as changes may readily be made without departing from the spirit of my invention; but

I claim as new and desire to secure by Letters Patent—

1. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, and anchor fluke-arms extending into said wedge for engagement at their lower end with the end of said anchor-rod, said arms normally extending upward and parallel to said anchor-rod, substantially as described.

2. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms extending into said wedge for engagement at their lower end with the end of said anchor-rod, said arms normally extending upward and parallel to said anchor-rod, and means for causing said fluke-arms to swing downwardly to become distended as tension is applied to said rod, substantially as described.

3. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms having one end extending into said wedge for engagement therein with said anchor-rod, and enlargements at the other end of said arms, substantially as described.

4. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms having one end extending into said wedge for engagement therein with said anchor-rod, enlargements at the other end of said arms, and means for causing said fluke-arms to distend as tension is applied to said anchor-rod, substantially as described.

5. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms having one end extending into said wedge for engagement therein with said anchor-rod, enlargements at the other end of said arms, said enlargements being adapted to lie parallel to said anchor-rod, and means for causing said arms to assume a position at an angle thereto upon tension being applied to said rod, substantially as described.

6. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms having one end extending into said wedge for pivotal engagement therein with said anchor-rod, and enlargements at the other end of said fluke-arms, said enlargements having their end edge flared, substantially as described.

7. An anchor consisting of a hollow wedge having an opening from the top and side openings, an anchor-rod adapted to project into said wedge through said opening from the top, fluke-arms terminating in wings and extending into said wedge through said side openings for engagement therein with said anchor-rod, and means whereby upon longitudinal motion of said rod in one direction with respect to said wedge, said wings are disposed parallelly to said rod or distended at an angle thereto upon longitudinal motion of said rod in the other direction, substantially as described.

8. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms extending into said wedge for pivotal engagement therein with the end of said anchor-rod, and bearing-surfaces on said wedge acting in conjunction with said rod and said arms pivoted thereto to form a toggle mechanism whereby upon a pull being applied to said rod said arms are forced outwardly to become distended, substantially as described.

9. An anchor consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms extending into said wedge for engagement therein at their lower end with said anchor-rod, said arms normally extending upward and parallel to said rod, means for causing said fluke-arms to swing downwardly to become distended as said rod is moved in a direction away from said wedge, and means for causing said fluke-arms to refold back to their normal position as said anchor-rod is moved in a direction toward said wedge, substantially as described.

10. An anchor, consisting of a hollow wedge, an anchor-rod extending into said wedge, anchor fluke-arms extending into said wedge for engagement therein at their lower end with said anchor-rod, said arms normally extending upward and parallel to said rod, and means for causing said fluke-arms to penetrate point foremost into the earth to become distended as said rod is moved in a direction away from said wedge, substantially as described.

In witness whereof I hereunto subscribe my name this 31st day of December, A. D. 1902.

WILLIAM HECTOR.

Witnesses:
LYNN A. WILLIAMS,
CHARLES J. SCHMIDT.