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GROUND ANCHOR AND LIKE ANCHORING DEVICE

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Fig. 1.

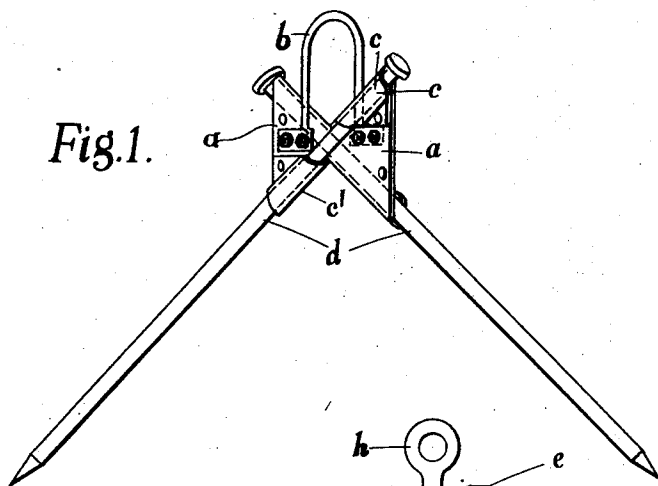


Fig. 2.

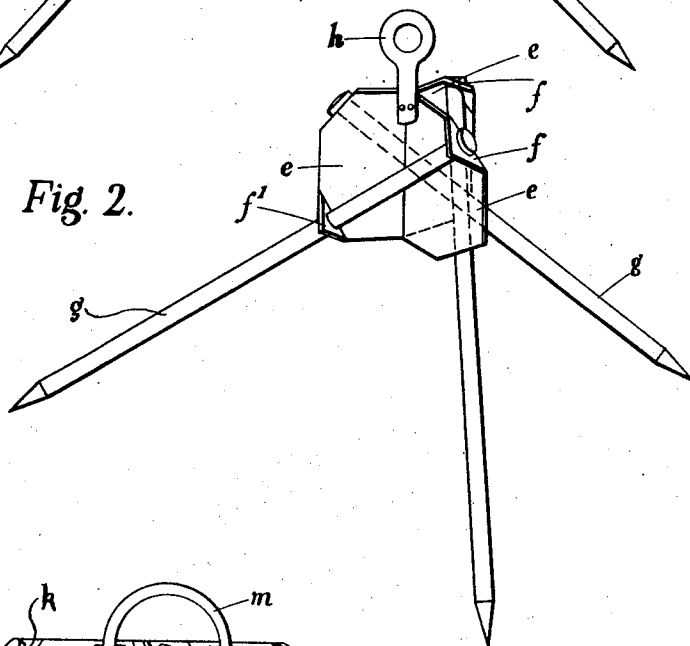
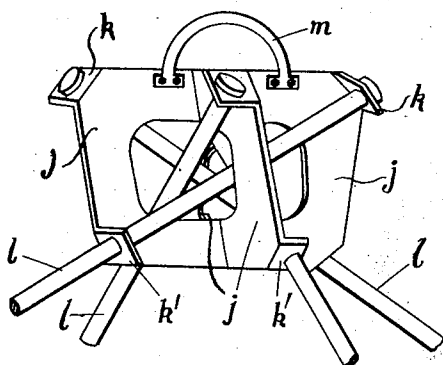


Fig. 3.



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## UNITED STATES PATENT OFFICE

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## GROUND ANCHOR AND LIKE ANCHORING DEVICE

Application filed December 17, 1929, Serial No. 414,803, and in Great Britain December 17, 1928.

This invention relates to ground anchors and the like of the kind comprising an anchor member and a plurality of pins or the like adapted to pass obliquely and downwardly through said member.

The object of the present invention is to provide an improved and more efficient construction of ground anchor or the like of the above mentioned kind.

To this end, a ground anchor or the like constructed in accordance with this invention comprises an anchor member having a plurality of wings radiating from the vertical axis thereof, each wing having in its extreme corners a pair of guides disposed one above the other and through which stakes or the like are adapted to be driven diagonally downwards so that each stake passes through an upper guide and then through the lower guide of the nearest possible opposite wing.

In order that the invention and its mode of operation may be readily understood by those skilled in the art, I have, in the accompanying drawings and in the detailed description based thereupon, set out the preferred embodiments of the invention.

In these drawings:

Figure 1 is a perspective of one form of ground anchor constructed in accordance with this invention;

Figure 2 is a similar representation of a modified construction of the ground anchor, and

Figure 3 illustrates a further modification of the device.

Referring to Figure 1; the anchor member consists of two wings  $a$ ,  $a$  formed out of a single sheet of metal,  $b$  is a loop secured to the said wings and to which the article to be anchored is attached. Each wing is formed with a pair of guides  $c$ ,  $c'$  disposed one above the other so that stakes  $d$  may be passed through the top guide  $c$  of one wing and then through the bottom guide  $c'$  of the other wing. The said guides  $c$ ,  $c'$  are formed by portions of the metal sheet being bent over and secured by rivets or the like.

If desired, the loop may be dispensed with,

a rope or the like may be fastened at the crossing point of the two wings.

Referring to Figure 2. The anchor member here illustrated has three wings  $e$  secured together and radiating at an angle of  $120^\circ$  from one another. The extreme corners of each wing are formed with guides  $f$ ,  $f'$  so that stakes  $g$  may be passed through the top guide  $f$  of one wing and through the bottom guide  $f'$  of its adjacent wing. The said guides are formed by providing apertures in the bent over corners of the wings.  $h$  is a ring provided on the anchor member.

Referring now to Figure 3 which illustrates an anchor member having four wings  $j$ ,  $j$ , secured to and arranged substantially at right angles to one another. The said wings are not arranged vertically but slantwise. This is necessitated by the fact that the stakes or the like have to be passed through the anchor member.

As in the previous construction described above, each wing  $j$  is formed with a pair of guides  $k$ ,  $k'$  disposed one below the other and on opposite sides of the wing.  $l$ ,  $l$  are stakes, each of which is adapted to be passed through an upper guide  $k$  of one wing, through the aperture in the adjacent wing and then through a lower guide  $k'$  in the opposite wing.  $m$  is a loop for securing purposes.

In use, the anchor member, that is, the wings, is preferably placed below the level of the ground and then the stakes are driven through the guides.

It is not essential that any or all of the pins be driven close home, and it follows that if an impassable obstruction is met, the anchor is still effective.

The two guides holding each stake or the like can be spaced well apart and thus considerable play is permissible in the guides with resultant ease in driving and withdrawing both straight and damaged stakes.

By forming the top and bottom guides at the corners of the wings, a direct tie is formed between those parts of the opposing stakes which tend to move with relation to each other when stress is applied to the anchor

member; lightness and cheapness are thus attained.

Any number of stakes can be used and they can be of any section or length.

5 What I claim is:—

10 A ground anchor of the character described comprising a vertical ground body consisting of a plurality of radiating wings, each having two separate guides disposed at opposite sides and at the upper and at the lower corner of the wing respectively, and stakes driven through said guides, each stake being held by an upper guide of one of the wings and by a lower guide of an adjacent opposite wing, whereby said stakes radiate obliquely from the vertical ground body.

15 In testimony whereof he affixes his signature.

EDMUND CLIFTON CARVER.

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