F. B. MILLER.

EARTH ANCHOR.

APPLICATION FILED MAR. 30, 1908.

915,784.

Patented Mar. 23, 1909.

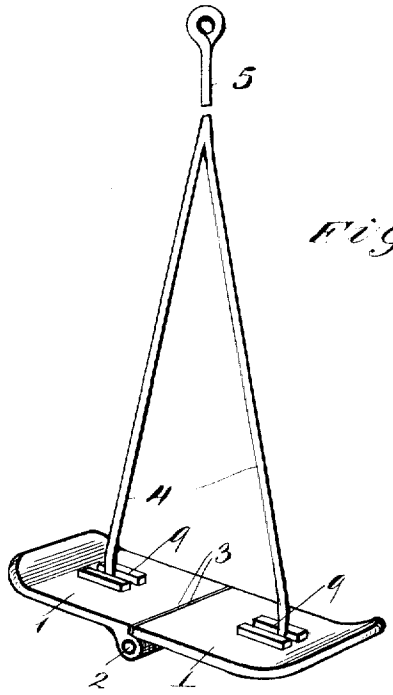


Fig. 1

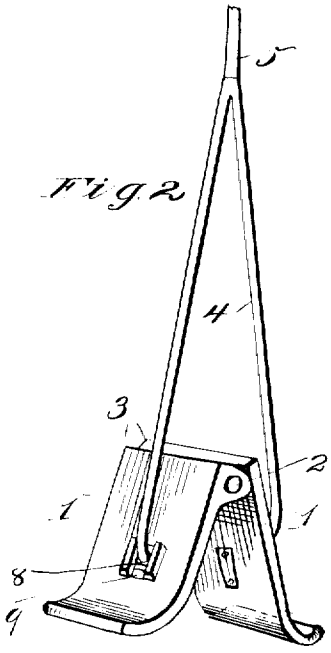
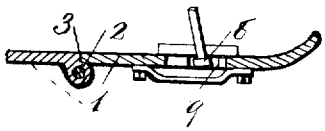


Fig. 2

Fig. 4



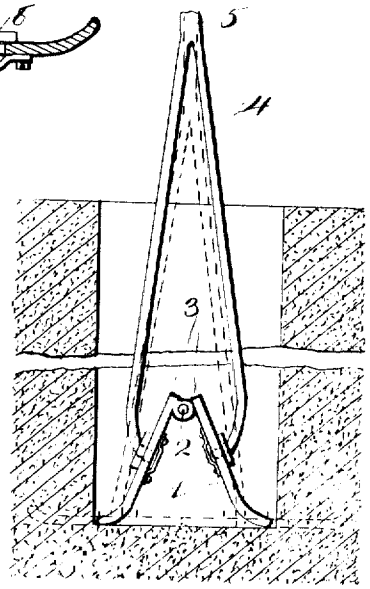


Fig. 3



Fig. 5

Witnesses:
Geo. S. Goff,
C. H. Olds

Inventor:
Frank B. Miller
by Wm. H. Hamer
Attorney.

UNITED STATES PATENT OFFICE.

FRANK B. MILLER, OF NORWALK, OHIO.

EARTH-ANCHOR.

No. 915,784. Specification of Letters Patent. Patented March 23, 1909.

Application filed March 30, 1908. Serial No. 424,113.

To all whom it may concern:

Be it known that I, FRANK B. MILLER, a citizen of the United States, and resident of Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Earth-Anchor, of which I hereby declare the following to be 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.

The objects of the invention are to provide a form of folding anchor, adapted to hold firmly in the ground, and to provide an efficient and serviceable tool having great simplicity in construction and absolute rigidity and capacity for resisting all pulling strains.

The device is adapted for use with the guy ropes of derricks, telegraph and electric wire poles and in all situations where resistance to a pulling strain is required.

The invention comprises a hinged plate adapted to fold in only one direction and to resist any force applied to open it in the other direction, in a draw bar by means of which the guy rope or wire may be attached thereto and in forked arms to the draw bar having a natural spring action tending to fold the hinged sides of the plate together and therefore reduce the extent of the spread thereof so that the anchor can be inserted into a comparatively small hole in the ground.

An important feature of the invention is the effect of the mechanical construction of the hinged blades to provide a toggle joint such that when compressed from above an increased power is obtained to force the tips of the blades outward into the ground at the sides of the hole.

The invention in detail consists in the combination and arrangement of parts, and forms of construction, hereinafter described, shown in the accompanying drawings and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of the device showing the blades in the horizontal position; Fig. 2 is a similar view showing the blades partially folded in the ordinary position ready for insertion in a hole in the ground; Fig. 3 shows the device in the hole ready for spreading the blades and in dotted lines the blades are shown extended in the horizontal position; Fig. 4 is a longitudinal central section of one blade showing manner of attachment of the forked draw bar; Fig. 5 is a perspective view of one T shaped end of the forked draw bar.

In these views 1, 1 are the blades hinged together on the lower side at 2 in such a manner that their meeting edges form shoulders at 3 so as to oppose any effort to fold the blades in an upward direction.

Pivotally secured to the blades and extending upward from their upper sides are the arms 4 of a fork which forms the termination of the draw bar 5. These arms tend to draw together and fold the blades back to back so that when in the normal condition they are ready for insertion in the hole made for them, but permit the blades to be expanded after insertion in the hole, by pushing upon the centrally placed hinged edges, and thus by lowering the central portion, the edges are extended as shown in dotted lines in Fig. 3. The tips of the blades are curved upward to assist them in entering the ground.

The expanding force is applied as in a toggle joint, until the arms are spread to a horizontal position. The hole is then filled with dirt, tamped down hard and no amount of pull upon the draw bar can fold or release the anchor, since the anchor can be folded only by raising the central portion thereof.

The fork ends are preferably T headed at 8 for simplicity in construction and are inserted in suitable slots 9 in the blades.

I believe myself to be the first to provide an anchor composed of hinged blades adapted to fold in only one direction and to attach a draw bar thereto at points spaced from the hinged edges and extending at an angle to the planes of the blades and contrary to the direction of folding the blades.

Having described the invention what I claim as new and desire to secure by Letters Patent is:—

In an earth anchor, the combination with blades hinged together and adapted to fold in one direction only, of draw bar extremities attached thereto, said draw bar extremities forming a spring fork adapted to retain the blades in a partially folded position.

In testimony whereof I hereunto set my hand this 24th day of March 1908.

FRANK B. MILLER.

In presence of—

WM. M. MONROE,
ERNEST T. HALL.