April 18, 1933. J. F. SWENSON 1,904,177

FENCE POST ANCHOR

Filed Sept. 18, 1930

Fig. 1.

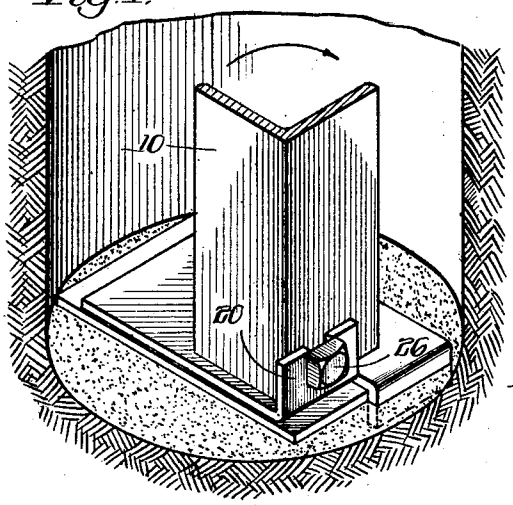


Fig. 2.

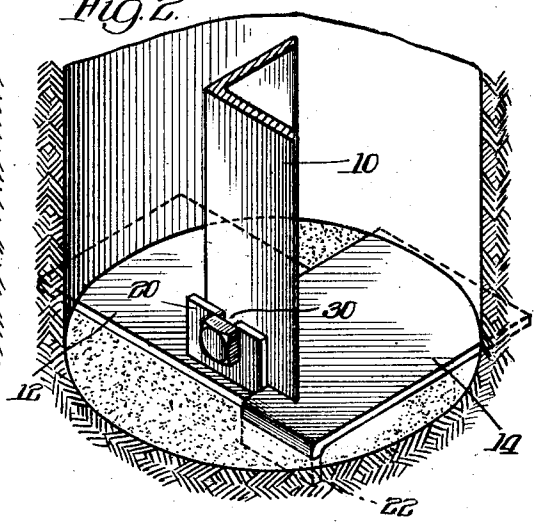


Fig. 3.

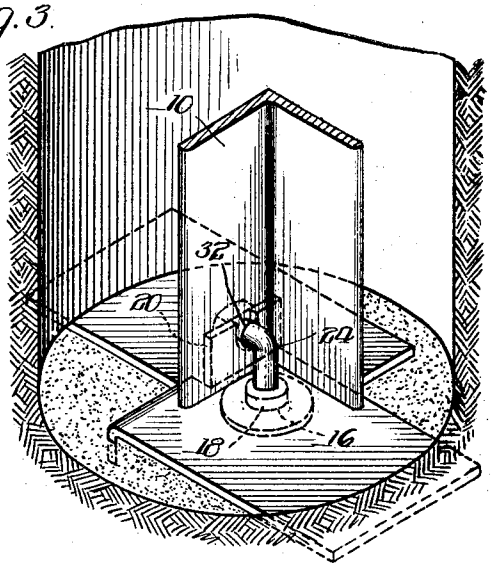
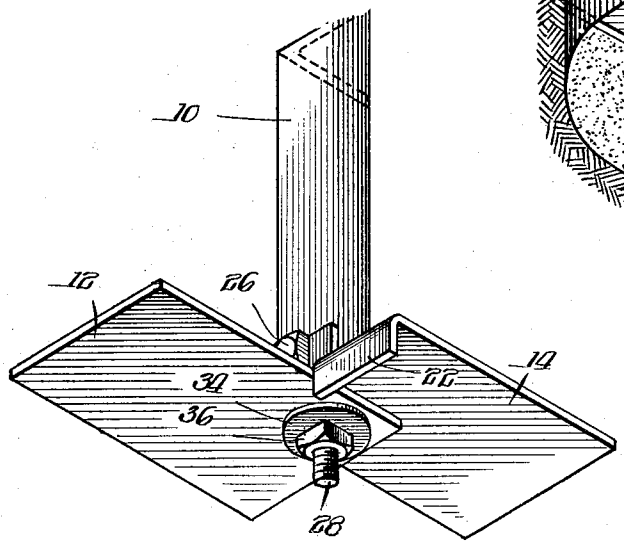


Fig. 4.



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UNITED STATES PATENT OFFICE

JOHN F. SWENSON, OF DULUTH, MINNESOTA

FENCE POST ANCHOR

Application filed September 18, 1930. Serial No. 482,810.

The invention relates to anchoring devices and the like and is illustrated herein as embodied in a device for use in connection with fence posts, tent poles and other similar objects, to prevent them from becoming accidently displaced after once being embedded in the earth.

A feature of the invention consists in providing the base of a fence post or the like with an expanding anchor, adapted when expanded, to project latterly beyond the sides of the post to engage within the surrounding earth. In the embodiment illustrated, the anchoring member consists of a plurality of flat elongated plates mounted one on the other, the upper plate being secured in perpendicular relation to the base extremity of the post. In setting up a fence post equipped with an anchor of the type described, it is contemplated to dig a hole of circular cross-sectional shape to accommodate readily the anchoring member and thereafter when the post has been seated in the hole, to rotate the post one hundred eighty degrees in a predetermined direction to cause the projecting ends of the plate to embed themselves in the undisturbed soil at the sides and bottom of the hole. The anchor thus receives its holding power not only from the earth, which is tamped in the hole, but also in a large degree from the grip it takes in the undisturbed soil at the sides and bottom of the hole.

Still another feature consists in the provision of inexpensive and efficient means for securing the anchor to the post. As illustrated, a flat elongated lower plate is employed having an upper plate of substantially similar dimensions located thereover. The upper plate is provided with a plurality of lugs, one projecting upwardly and the other downwardly. A bolt is employed to connect the plates together and to also connect the base extremity of the post to the upper plate, the upwardly extending lug serving as abutting means for joining the members non-rotatably together.

The above construction allows the turning movement of the post to be imparted to the upper plate which, as stated, forces the lower plate into the soil, and as rotation is continued, also forces the extremity of the upper plate into the soil opposite thereto. The expanded anchor takes advantage of the holding power of the original undisturbed soil in addition to that which is tamped back into the hold. By reversing the direction of rotation the anchor can be brought to a full closed position which is determined by engagement of the downwardly extending lug with the lower plate, whereupon the post on the anchor can be removed from the hole if desired.

With these and various other objects in view, the invention may consist of certain novel features of construction and operation, as will be more fully described and particularly pointed out in the specification, drawings and claims appended hereto.

In the drawing, which illustrates an embodiment of the device and wherein like reference characters are used to designate like parts—

Figure 1 is a perspective view of a hole showing a post provided with improved anchoring devices located therein;

Figure 2 is a view similar to Figure 1 but showing the anchoring device partly expanded;

Figure 3 is a view similar to Figure 1 and showing the anchoring devices fully expanded; and

Figure 4 is a perspective view showing the method of securing together the anchoring members.

As shown in the drawing the reference numeral 10 indicates a fence post of a conventional type that is made from an anchor iron or bar as more clearly shown in Figure 2. A post of this character can be efficiently set into the ground by boring a post hole by means of an ordinary post hole auger and inserting the post within the bored out hole. A hole so formed is more desirable than a dug hole inasmuch as considerably more earth must be removed in making a hole of the latter type and in replacing the earth after the post has been inserted, the back filled earth cannot be tamped so solidly in the larger hole as in the smaller cylindrical hole. For the purpose of preventing the fence post

from being dislodged or pulled out during use, it is provided with an anchoring device to be more fully described.

The device consists of a plurality of flat elongated plates 12 and 14, plate 12 comprising the lower plate and 14 the upper plate. The lower plate is provided with an opening 16 located preferably in one corner of the plate so as it decreases the amount of overlap of the plates when the same are fully expanded, thereby increasing the net holding power of the anchor. A bushing 18 is fitted into opening 16, the bushing being slightly longer than the thickness of the plate. The upper plate 14 is formed with two right-angle lugs, lug 20 extending upwardly and lug 22 extending downwardly, the former lug providing means for securing the post 10 to the upper plate.

For pivotally securing together the plates and for securing the post 10 to the lug 20, a right-angle bolt 24 is employed having a head 26 and a threaded end 28. The lug 20 is provided with a slot 30 into which the bolt 24 is fitted after the same has been inserted into opening 32 provided in the base extremity of the post 10 and into the openings provided in plates 14 and plate 12. A washer 34 and nut 36 serve to draw the bolt into position and hold the post in place. The plates are thus held so that movement relative to each other is possible, the movement being imparted to the upper plate by rotation of post 10. The bushing 16 described, projects slightly beyond the surface of plate 12 and thus functions to space plate 12 and 14 so that the plates never bind on each other irrespective of the tension exerted by bolt 24 and nut 36.

In the natural application of the anchor above described the same in attached relation to post 10 is first inserted into an auger hole, the plates of the anchor being in closed position. After the anchor has been seated in the bottom of the hole, the post 10 is rotated in the direction of the arrow, Figure 1. At the beginning of rotation the edges of plate 14 will bear against the sides of the hole which action will force the lower plate 12 into the side wall opposite thereto. As the rotation is continued the edge of plate 14 also begins to cut into the side of the hole, the resistance to this cutting aids in forcing plate 12 further into the undisturbed soil. When the anchor is fully expanded it assumes the position shown in Figure 3, the lug 22 engaging plate 12 to prevent any further rotation in clock-wise direction. It will be clear however, that the combined post and anchor can be turned, if desired, to properly line the same with the fence.

The type of fence post anchor described has been found to be especially advantageous due to its relatively small size when in closed position, since the anchor can be readily assembled on the posts at the factory, thereby avoiding difficulties which might be encountered by fence erectors in assembling the same. Also the use of a single bolt which assembles all the working members of the anchor results in a simplified but extremely practical and efficient device.

The plates shown are of rectangular shape, but they of course could be made in other desired shapes, such as round or oval and still maintain the same expanding feature.

It is to be understood that I do not wish to be limited by the exact embodiment of the device shown, which is merely by way of illustration and not limitation, as various and other forms of the device will of course be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

I claim:

1. The combination with a post of an anchoring device connected to the base of the post, said device comprising a lower plate member, an upper plate member rotatably secured to the lower member, an upstanding lug formed on said upper member for attaching the post to said member, and common means rotatably securing said plates and also fixedly securing said post to said upstanding lug.

2. The combination with a post, of flat anchor plates pivoted to said post at the lower end thereof, said plates being adapted to fold to a complete overlapping position, and to unfold so as to extend laterally from opposite side of the post, an upstanding lug formed on the upper of said anchor plates, openings provided in said anchor plates, and a bolt member passing through said openings in the plates and also rigidly securing said post to said upstanding lug.

3. In an anchoring device of the type described, in combination with a post, a plurality of flat elongated plates positioned in overlapping relation to each other, an opening located in each plate, one of said plates being provided with oppositely extending lugs, the downwardly extending lug forming stop means to limit the relative movement of said plates, the other lug being provided with a slot, and securing means comprising a bolt engaged within the slot and passing through an opening in said post for securing said members together, said bolt then extending in a downward direction and passing through the openings in said plates for pivotally securing said plates together.

4. The combination with a post, of an anchoring device connected to the base of the post, said device comprising a lower plate member, an upper plate member rotatable with respect to the lower member, an upstanding lug formed on said upper member for attaching the post to said member, said attaching means including a right-

angle bolt having its horizontal portion passing through an opening in the base of the post and through the lug, the vertical portion of the bolt passing through aligned openings in the plates for rotatably securing the plates to the post.

5. The combination with a post, of an anchoring device connected to the base of the post, said device comprising a lower plate member, an upper plate member rotatable with respect to the lower member, a plurality of reversely bent lugs formed on the upper of said plates, one of said lugs being bent upwardly from one end of the plate and providing means for securing the post thereto, the other lug being bent downwardly from the same end of the plate and forming a stop to limit the relative rotation of the plates.

Signed at Duluth, Minnesota, this 10th day of September, 1930.

JOHN F. SWENSON.