P. J. HINDMARSH.

POST ANCHOR.

APPLICATION FILED MAR. 26, 1915.

1,224,925.

Patented May 8, 1917.

2 SHEETS—SHEET 1.

Fig. 1.



Fig. 2.

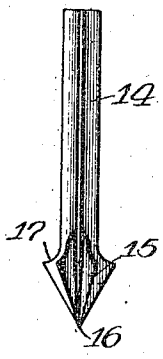


Fig. 3.

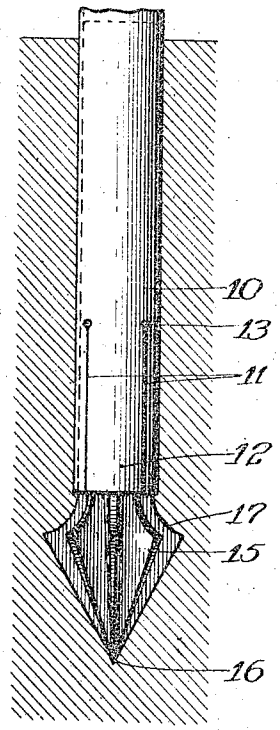


Fig. 4.

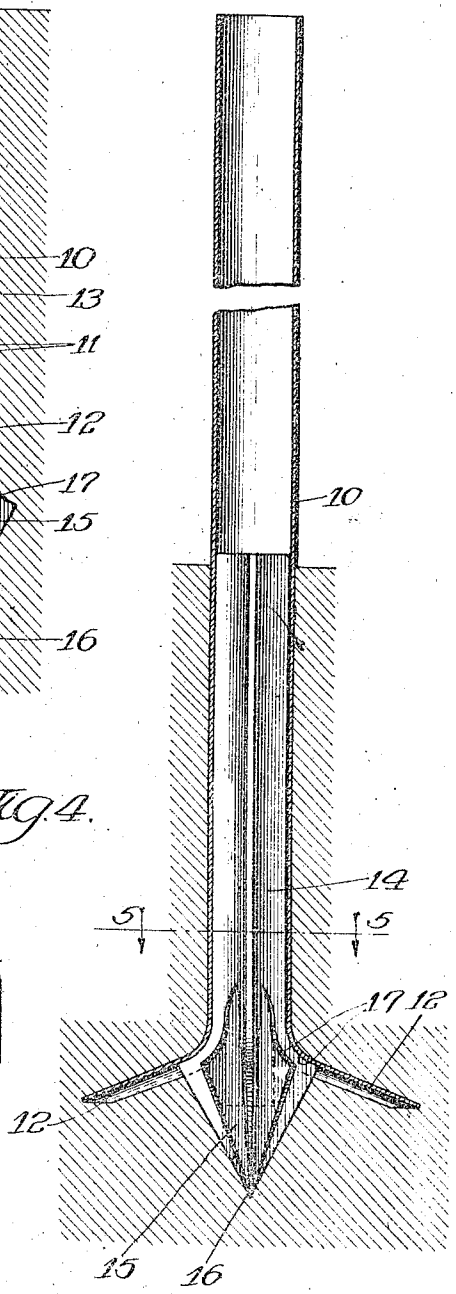
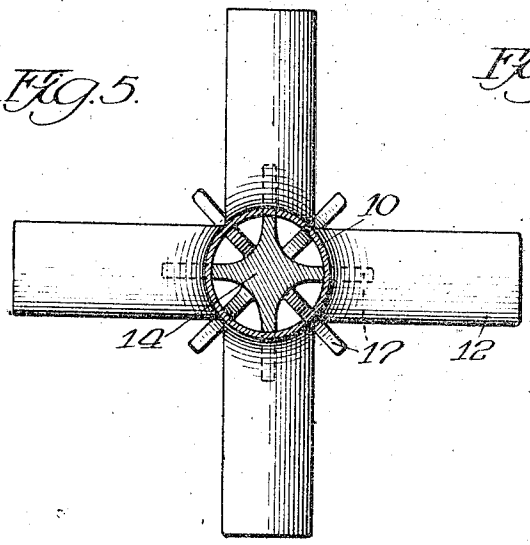


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 6.

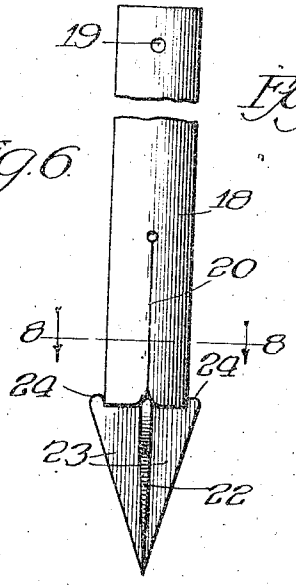


Fig. 8.

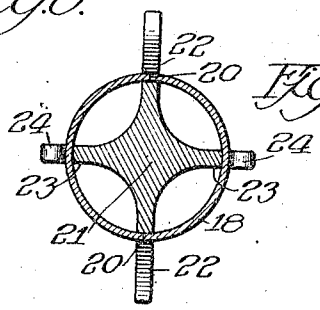


Fig. 7.

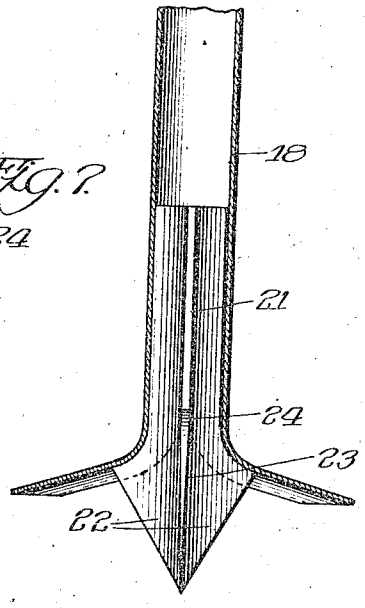


Fig. 9.

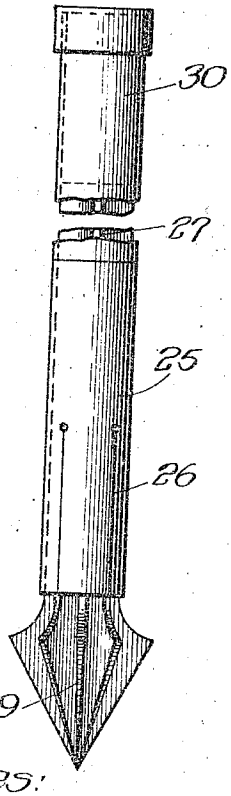
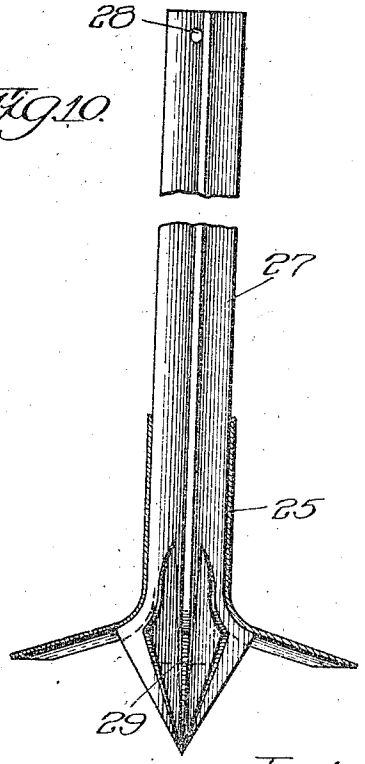


Fig. 10.



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Atty.

UNITED STATES PATENT OFFICE.

PERCY J. HINDMARSH, OF LINCOLN, NEBRASKA, ASSIGNOR TO THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, OF HOBOKEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

POST-ANCHOR.

1,224,925. Specification of Letters Patent. Patented May 8, 1917.

Application filed March 26, 1915. Serial No. 17,098.

To all whom it may concern:

Be it known that I, PERCY J. HINDMARSH, a citizen of the United States, and resident of Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Post-Anchors, of which the following is a specification.

My invention relates to anchoring devices for posts and has particular reference to a novel two-part anchoring device, each of which may be driven to secure the anchoring action.

It is well known that in the use of metallic structures for corner or end posts of fences, anchors for guy wires for poles or other structures, some efficient means should be provided for securing the positive retention of the member in the ground. Different forms of anchoring devices have been proposed, many of which are so constructed as to obviate the possibility of merely driving the posts or anchoring members.

An object of my invention is to provide a very simple, inexpensive and efficient anchoring device which may be positioned by driving action and requiring no excavating or the use of concrete. The invention may take many different forms, but one of the essentials of the present device is the employment of a spreader and reinforcing element which is first driven into the ground, and a cylindrical metallic member which may be driven over the spreader, the lower end of the last driven element being slitted, to the end that when such slitted end contacts the flared end of the previously driven spreader the slitted ends will flare and form an efficient anchor.

The invention will be more readily understood by reference to the accompanying drawings, wherein—

Figure 1 is an elevation of a fence post of hollow cylindrical form, the lower end of which is slitted.

Fig. 2 is an elevation of a spreader, such as is contemplated by me,

Fig. 3 is a view showing the spreader after having been driven into the ground and the post also driven into the ground but just prior to the point of spreading the lower end thereof,

Fig. 4 is a view similar to Fig. 3, but showing the position of the parts after the spreading action has been completed,

Fig. 5 is a section on the line 5—5 of Fig. 4,

Fig. 6 is a view similar to Fig. 3, showing a slightly modified form of the construction,

Fig. 7 is a view similar to Fig. 5, illustrating the completed position of the form shown in Fig. 6,

Fig. 8 is a section on the line 8—8 of Fig. 6,

Fig. 9 is a view similar to Fig. 3, showing a slightly modified construction, and

Fig. 10 is a view of the parts shown in Fig. 9 in completed position.

Referring particularly to the construction shown in Figs. 1 to 5 inclusive, it will be seen that I provide a post 10, which may be circular or of other desired cross section, the lower end of the post being slitted, as at 11, to provide segments 12 which act as anchors. The number of these slits, and therefore of the anchoring members, is immaterial. Preferably, however, I provide four slits. In order to accentuate the bending action at the proper point, I may provide apertures 13 at the termination of the slits. For use in connection with the post just described, I provide a combined reinforcing element and spreader, which may consist in the shank portion 14 and the spreader portion, including the wings 15. The shank portion may be cruciform in cross section, or of such other section as will serve to secure the desired result. It will be understood that as this element is to act as a reinforcement for the lower end of the tube it should provide a plurality of points of contact with the interior of the post. The wings or webs 15, of which I preferably provide eight, extend radially from the axis of the shank 14 and terminate in a driving point 16. The upper edges 17 of the webs 15 are curved or beveled in such manner as to suitably expand or flare the segments 12 at the lower end of the post. I preferably provide a number of the webs 15 which shall be in excess of the number of segments of the post to be anchored; this to obviate the possibility of the posts being so located that the slits 11 therein should each register with a wing 15. In the construction shown in Fig. 5 the spreader has been driven until its top is substantially flush with the surface of the ground. The post 10 is then driven to the point where the

lower end is about to be flared by the webs 15. In Fig. 4 the driving has been completed and it will be seen that the segments 12 of the posts have been flared and a positive anchor is secured thereby. Furthermore, it will be seen that the shank 14 of the spreader serves to reinforce the lower end of the post and prevent any bending thereof at a point below the ground. This is an important advantage which should not be overlooked.

In the construction shown in Figs. 6 to 8 inclusive a modified form has been shown as an anchor for a guy wire. In that construction the anchor 18 is provided at its upper end with an opening 19, to which the guy wire is secured. In this instance I have provided but two slits 20 in the lower end of the cylinder, the metal in such cases being sufficiently light that the bending or flaring action may take place. In this construction the spreader is composed of the cruciform shank 21, and a pair of wings 22 which serve to flare the lower end of the anchor. In this construction both the anchor and the spreader are driven simultaneously, the parts being assembled in the position shown in Fig. 6, the lower end of the cylinder being held against two wings 23 and prevented from spreading by reason of the lugs 24 on the upper edges thereof. After the assembled parts have been driven, the cylinder is given a quarter turn, or until the slits 20 thereof register with the wings 23. Continued driving of the anchor member serves to flare the segments thereof. In the case of the construction just described the spreader may have a very short shank; in fact, only of sufficient length to insure the proper holding engagement between the parts during the driving action.

Referring now to the construction shown in Figs. 9 and 10, it will be seen that there is a similarity to the construction shown in Figs. 1 to 5. In the construction of Figs. 9 and 10 I provide a short tube 25, slitted at 26 at its lower end, which tube acts as the anchor. The spreader in this case acts as the attaching element for the guy wire, and its shank 27 may be of the described cross section and have a hole 28 in its upper end to which a wire may be secured. The lower end 29 may be a duplicate of that described in connection with the construction shown in Figs. 1 to 5. In the present construction the element 27 is first driven into the ground the required distance, after which the tube or cylinder 25 is located thereon and a driving tube 30 abutted thereagainst; the short tube 25 is then driven until the segments at the lower end thereof are flared and a suitable anchor is secured for the attaching element 27, after which the driver is removed, leaving the parts in the ground in the position shown in Fig. 10.

The flared end of the spreader acts merely to start the spreading action of the flukes or segments, their contact with the ground continuing the spreading without a great deal of assistance from the spreader wings. The advantageous result secured by the use of the present device is secured by reason of the fact that the spreader is so constructed as to cause an initial curl to the lower end of the slitted post whereby the flukes are caused to project or move in a substantially horizontal line, the points of the flukes entering easily into the packed earth. This result is not secured where the lower end of the post is merely flared as in that instance the only flare is secured by compressing the adjacent earth and the lower end of the post is held solely by friction, and in a manner similar to that of an expansion bolt. In applicant's construction the post is held against a vertical pulling action by reason of the fact that the flukes underlie a large extent of earth and this entire quantity of earth must be lifted or the flukes must be bent before the post can be raised. While the spreader has been described as of angular cross section, it will be understood that a tubular form might be employed with equal facility; also that the shape and proportions of the tube and spreader might be varied, and such modifications as are within the scope of my claims I consider within the spirit of my invention.

I claim:

1. In fence post construction, a spreader having a plurality of lateral wings, the lower portions of the wings converging to a point and the upper edges of the wings being inclined outwardly and downwardly from the body of the spreader, the inclination being such as to provide a relatively abrupt angle between the shank and the wings, in combination with a tubular post having a slitted lower end and adapted to be driven over said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, substantially as described.

2. In fence post construction, a spreader having a plurality of lateral wings, the lower portions of the wings converging to a point and the upper edges of the wings being inclined outwardly and downwardly from the body of the spreader, the inclination being such as to provide a relatively abrupt angle between the shank and the wings, in combination with a tubular post having a slitted lower end and adapted to be driven over said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, the section of metal in the post at the inner end of the slit being lessened, there-

by inducing a more abrupt bend of the said lower end portion, substantially as described.

3. In a fence post construction a spreader having a plurality of lateral wings, the upper edges of the wings being joined to the shank of the spreader by a curve, the arc of which is struck from a point outside of said shank, the radius of the curve being sufficiently short to provide a relatively abrupt angle between the shank and the wings, in combination with a tubular post having a slitted lower end and adapted to be driven over said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, substantially as described.

4. In a fence post construction a spreader having a plurality of lateral wings, the upper edges of said wings being inclined outwardly, the inclination being such as to provide a relatively abrupt angle between the shank and the wings in combination with a tubular post, having its lower end slitted to provide a plurality of segments, the number of segments being different from the number of wings on said spreader, the construction of the spreader being such that the slitted lower end of the post is caused to flare outwardly to substantially a horizontal position, substantially as described.

Signed at Chicago, Illinois, this 13th day of March, 1915.

PERCY J. HINDMARSH.

Witnesses:
A. F. SELEN,
D. A. DEIGNAN.