W. R. STEWART.

METALLIC FENCE POST.

APPLICATION FILED APR. 23, 1910.

978,505. Patented Dec. 13, 1910.

Fig. 1.

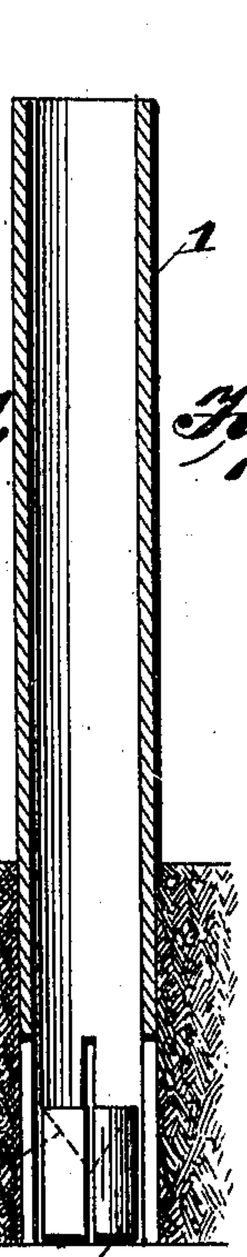


Fig. 2.

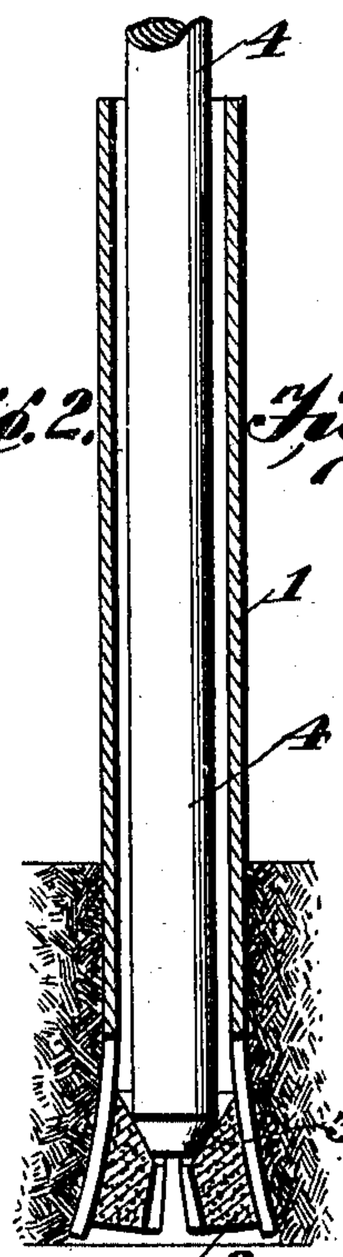


Fig. 3.

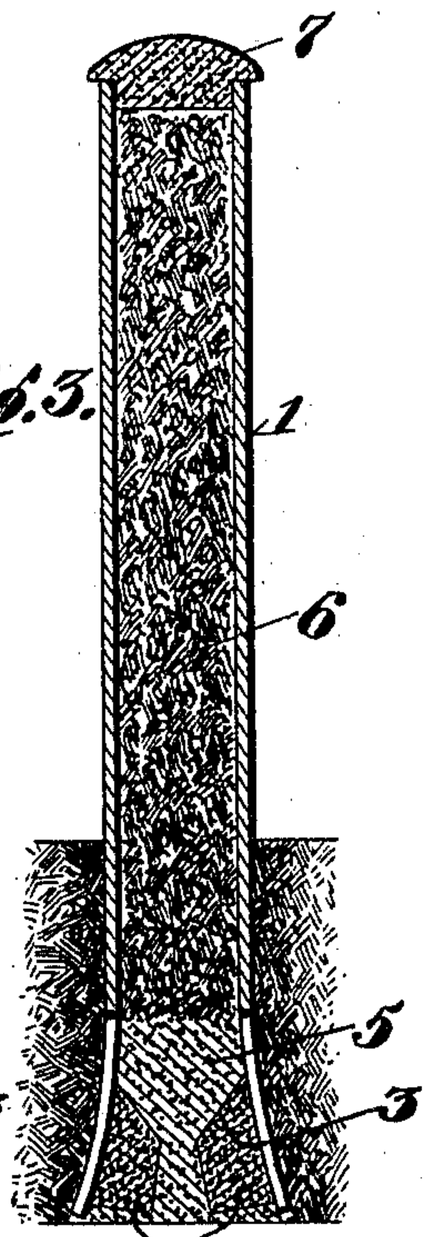


Fig. 4.

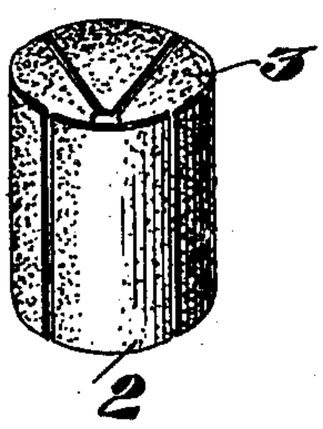


Fig. 5.

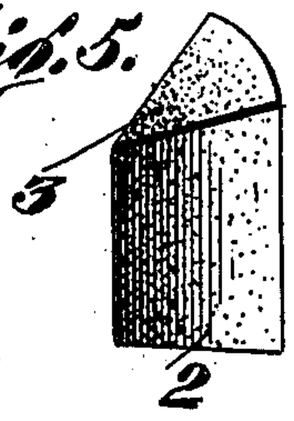


Fig. 6.

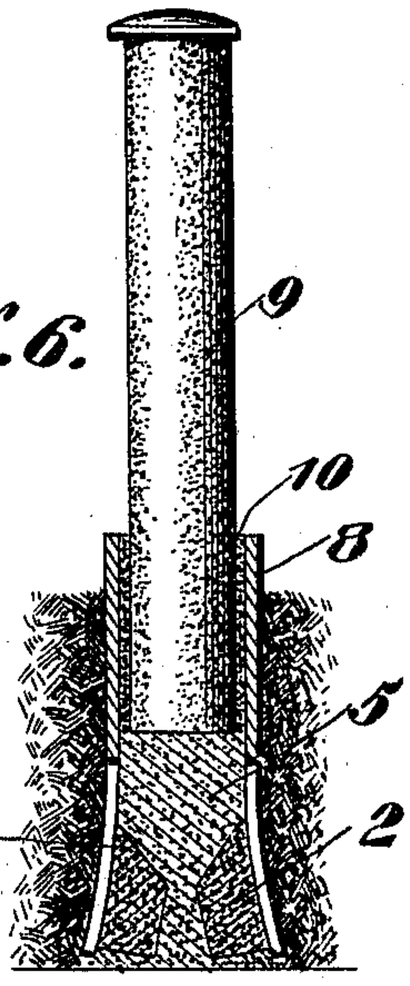
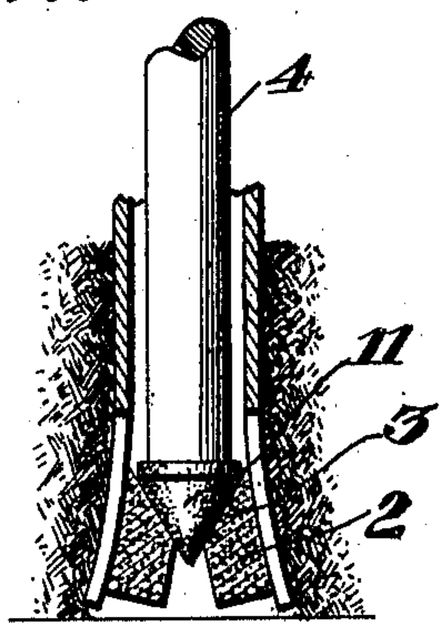


Fig. 7.



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UNITED STATES PATENT OFFICE.

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METALLIC FENCE-POST.

978,505. Specification of Letters Patent. **Patented Dec. 13, 1910.**

Application filed April 23, 1910. Serial No. 557,260.

To all whom it may concern:

Be it known that I, WILLIAM R. STEWART, a citizen of the United States, residing at Ensley, in the county of Jefferson and State of Alabama, have invented new and useful Improvements in Metallic Fence-Posts, of which the following is a specification.

My invention relates to an improvement in metallic fence posts and has for its object to provide a post formed preferably of a metal pipe having one end split so that it may be spread or expanded in a novel manner after being inserted in the ground.

One feature of my invention consists in the novel means provided for effectively spreading the split end of the post after its insertion in the earth.

Another feature of my invention consists in the means employed for locking said spreading means in the expanded position assumed when the post is anchored in the earth.

A still further feature consists in a cheap and effective means for sealing the post so that it will not fill with water which consists in filling the post to a point near the top with earth and capping it with cement or concrete composition.

As a modification of my invention I may form each post as a socket piece which projects a short distance above the ground and receives a cement or composition post.

My invention further consists in the details of construction and arrangement of parts hereinafter more particularly described and claimed in connection with the preferred embodiment of my invention which is illustrated in the accompanying drawings, wherein similar reference numerals refer to similar parts, and in which:—

Figure 1 is a sectional elevation of one of my improved posts shown as set in the ground before its split end is spread, the wedge being shown in side elevation. Fig. 2 is a view similar to Fig. 1, showing the wedge when the sections thereof have been forced apart to spread and anchor the split end of the post in the ground. Fig. 3 is a view similar to Fig. 2 showing the concrete filler inserted to hold the wedge in its expanded position and also the means for capping the post. Fig. 4 is a detail view of the split wedge for expanding the post. Fig. 5 is a perspective view of one of the segments of said wedge. Fig. 6 shows the pipe shortened to form a socket which receives a cement or concrete post. Fig. 7 is a view of the lower end of the post corresponding to Fig. 3, and showing a concrete wedge block used to expand the sections of the spreader and which is left in permanent engagement therewith.

My improved post is preferably formed of a tubular metal body or pipe 1 having the end thereof, intended to be inserted into the ground, split by a number of longitudinal slits, preferably four, cut in the pipe from the end up for a distance of from eight inches to one foot, said slits being equidistantly spaced about the pipe to form legs which are adapted to be spread apart, as shown in Fig. 2. It being my purpose to insert the pipe to the desired depth in the earth before its end sections are spread apart, I prefer to accomplish this by first driving a stake or metal rod of the same diameter as the pipe to the desired distance to which it is intended to set the pipe in the earth and, after this has been withdrawn, a spreader 2 is inserted in the split end of the pipe which is then inserted into the hole. This spreader is formed by a number of segmental wedge sections, preferably four, which when assembled, form a cylindrical body of slightly less diameter than the pipe 1. Each section has its top portion 3 tapering from its upper and outer periphery toward its inner edge, thus causing the assembled spreader to have a central depression formed by the inwardly sloping and converging tops of the wedge sections. When the assembled spreader is in the position referred to, a suitable ramming device, such as a pipe or rod 4, is passed down through the pipe 1 until its bottom end engages the sloping top walls 3 of the wedge sections. This rammer is then driven down, acting as it is driven to spread the wedge sections apart and outwardly thereby expanding the legs or split end sections of the pipe until the latter are spread outwardly as shown in Fig. 2. After the rammer has been withdrawn, concrete or like substance 5 is inserted in the pipe 1 and tamped so that the spreader is effectively locked thereby in the expanded position its sections assume when they have been spread apart. Only a small quantity of concrete need be used, sufficient to fill in around and above the wedge sections and hold the latter in position. The pipe is preferably filled

above the concrete with earth 6 to a point within a few inches from the top and after the earth has been tamped down, a concrete or cement cap 7 is formed to close and seal the upper end of the pipe.

I prefer to make the wedge 2 of concrete or cement composition as it will not be affected by the moisture of the earth and will be permanent, though hard wood or metal may be used if desired.

In Fig. 6 I illustrate a modified form of my invention in which the pipe is formed as a socket 8 which is similar to pipe 1, only shorter, and is inserted and anchored in the ground in the same manner. Into the upper end of this socket I introduce a concrete or cement composition post 9 and secure it in the socket by cement or mortar 10. The post 9 stands thus firmly rooted in the ground and makes a most durable and satisfactory post.

It will be noted that the pipe is spread after it is driven into the ground and that, in fact, in forming the post hole the earth into which the pipe is expanded has already been packed. I find that the pull required to draw my improved post out is nearly twice that of the ordinary posts of twice its diameter.

I have illustrated in Fig. 7 the use of a cone-shaped wedge 11 which may be made of concrete or cement composition and which is introduced with the spreader and adapted to receive the rammer and be forced downwardly to spread apart the sections of the spreader. This wedge 11 is left in position holding the spreader expanded, and concrete may be used above it or not as may be desired.

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

1. A device of the character described, a hollow metal body split longitudinally at its lower end, in combination with expansible wedging means located within the split portion of said body and adapted to be expanded to spread said split portion, substantially as described.

2. A device of the character described, a hollow metal body split longitudinally at its lower end, in combination with expansible wedging means located within the split portion of said body and adapted to be expanded to spread said split portion, and means to hold said wedging means in the position assumed after the end sections have been spread out, substantially as described.

3. A fence post formed by a hollow metal body having its lower end divided into sections by longitudinal slits, in combination with means to spread said sections apart after the post has been inserted in the ground, which means comprise a sectional spreader having slanting upper surfaces to receive an instrument which spreads the sections of both spreader and pipe outwardly, and means to permanently space the sections of the spreader, substantially as described.

4. A fence post formed by a hollow metal body having its lower end divided into sections by longitudinal slits, in combination with means to spread said sections apart after the post has been inserted in the ground, which means comprise a sectional spreader having slanting upper surfaces to receive an instrument which spreads the sections of both spreader and pipe outwardly, and a composition filler inserted to hold said spreader sections in their expanded position.

5. The combination with a hollow post having an end thereof split, of a sectional spreader adapted to be inserted in the split end of said post and expanded by means passed lengthwise through the post, and a composition filler introduced in said post to hold said spreader sections expanded, substantially as described.

6. The combination with a hollow post having an end thereof split, of a sectional spreader adapted to be inserted in the split end of said post and expanded by means passed lengthwise through the post, a composition filler introduced in said post to hold said spreader sections expanded, said post having earth tamped in said filler, and a composition cap resting on said earth and covering the upper end of the pipe, substantially as described.

7. The combination with a hollow post having a split end, of a spreader for said end formed of sections which have diverging and outwardly slanting top walls to receive between them a spreading instrument to expand the spreader, and means to permanently space the sections of the spreader, substantially as described.

8. The combination with a hollow post having a split end, of a spreader for expanding said end, which spreader forms a permanent part of the post and is preferably formed of a composition sectional body which will fit into the post in assembled position and which is adapted to be expanded to spread said split end of the post after its insertion in the earth, and means to hold said spreader in its expanded position.

9. A fence post having a bottom portion adapted to be inserted in a hole in the earth and having sections thereof capable of being spread outwardly laterally to anchor the said portion in the earth, and means which serve to permanently spread and hold said portions in expanded engagement with the earth, said means comprising a sectional spreader and locking means to hold the sections expanded, substantially as described.

10. A fence post having a bottom portion adapted to be inserted in a hole in the earth

and having sections thereof capable of being spread outwardly laterally and anchor the said portion in the earth, expansible spreader means adapted to be operated after the bottom portion has been inserted in the hole, and means which serve to permanently hold the spreader means in its expanded position, as and for the purposes described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM R. STEWART.

Witnesses:
C. W. COLE,
J. H. STEWART.