No. 878,230. PATENTED FEB. 4, 1908.

R. S. ORR.

POLE.

APPLICATION FILED MAY 2, 1907.

Fig. 1.

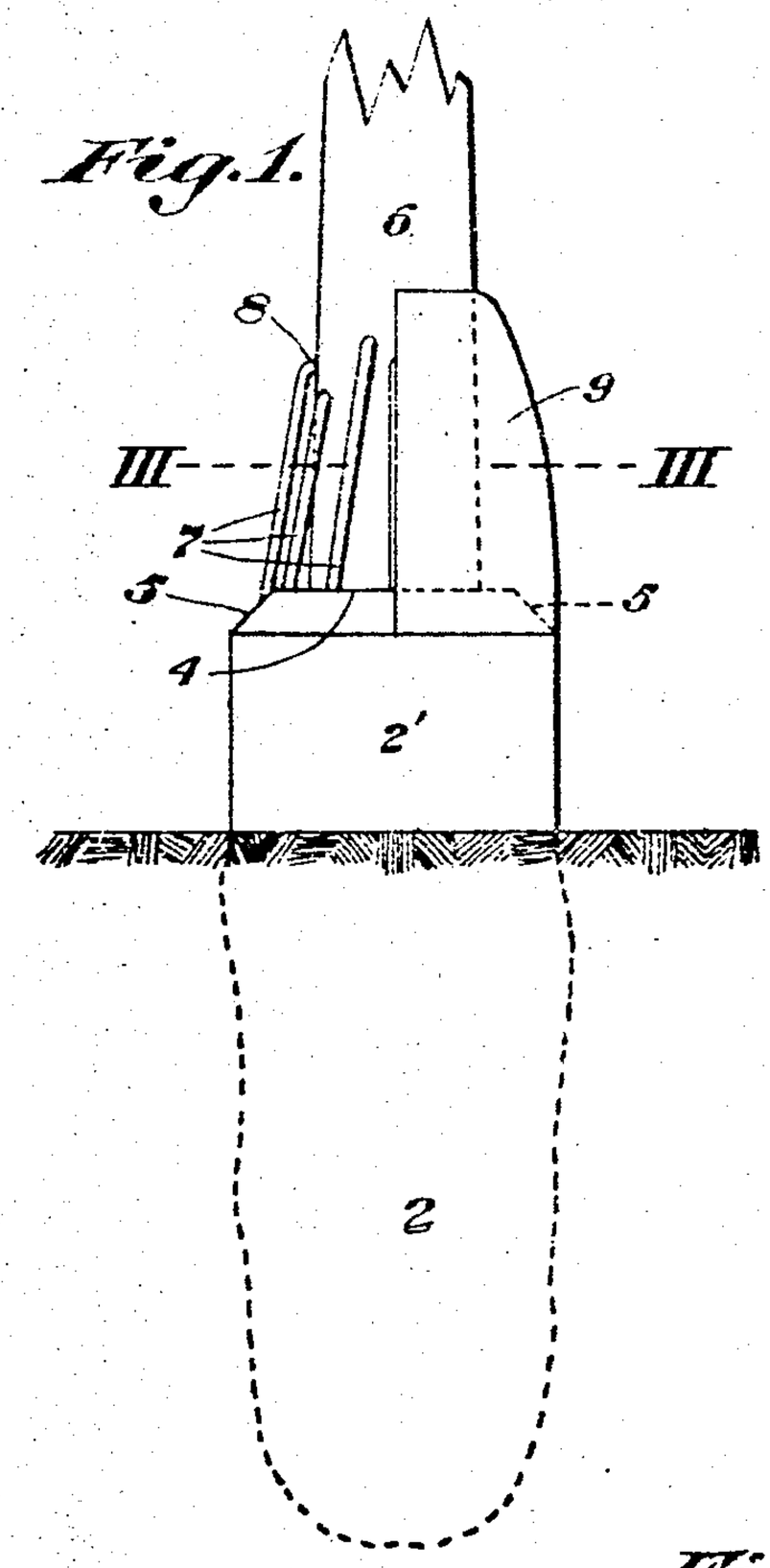


Fig. 2.

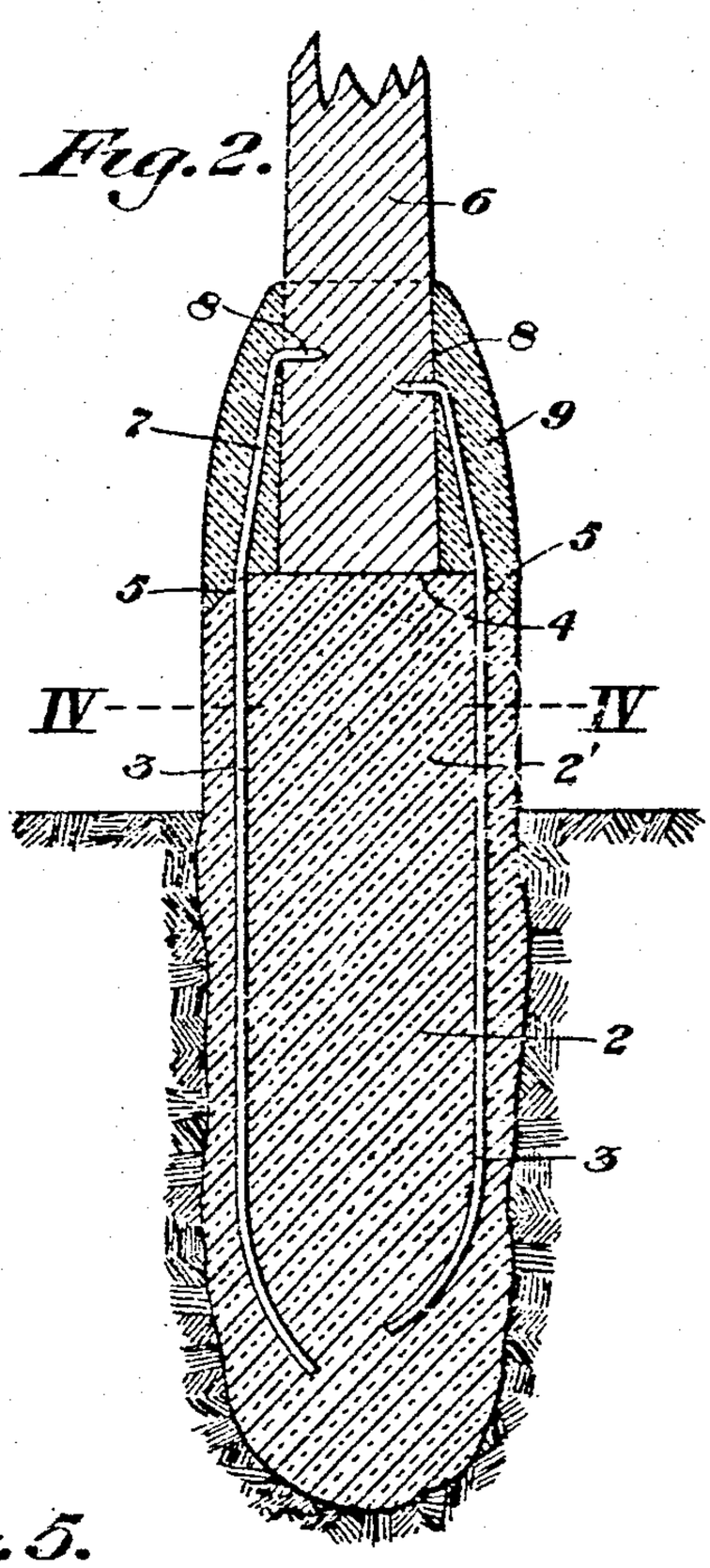


Fig. 5.

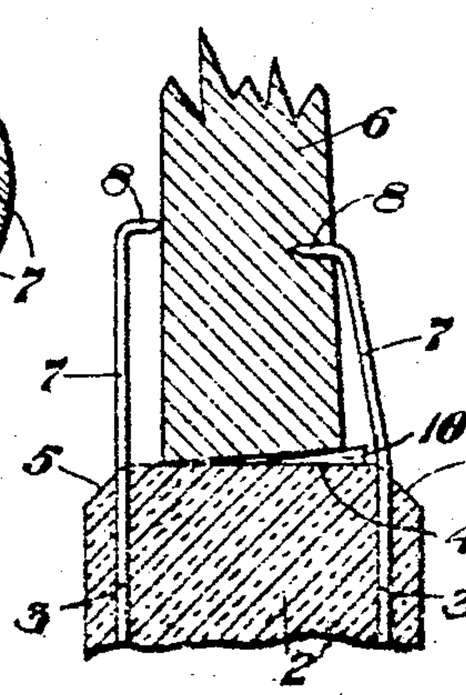


Fig. 3.

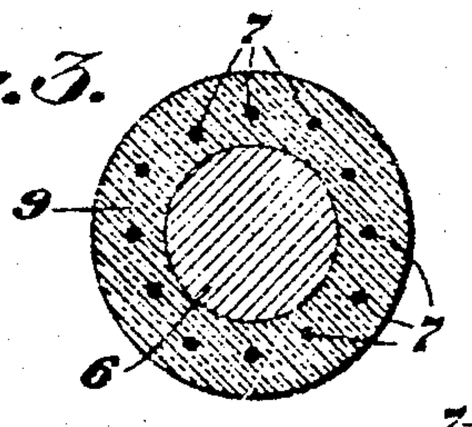
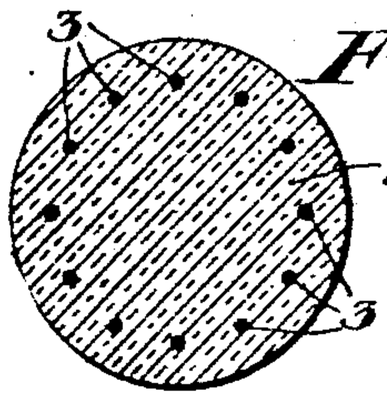


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT S. ORR, OF PITTSBURG, PENNSYLVANIA.

POLE.

No. 878,230. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed May 2, 1907. Serial No. 371,432.

To all whom it may concern:

Be it known that I, ROBERT S. ORR, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Poles, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention refers to improvements in posts or poles, more particularly telephone, telegraph, electric light or similar poles, and it has for its object to provide a construction capable of withstanding the destructive effects of moisture and the elements and which shall be strong and durable for the purpose intended.

The invention consists of a cement or concrete base set in the earth and projecting above the surface thereof to provide a pedestal, combined with an upper pole of wood or other material, with strengthening or anchoring rods embedded in the concrete base and connected with the pole to firmly anchor it to said base, with an additional surrounding covering, as shall be more fully hereinafter described.

Referring to the drawings: Figure 1 is a view in elevation of the base portion and a portion of the attached pole, portions of some of the anchoring rods being exposed. Fig. 2 is a vertical sectional view of Fig. 1. Figs. 3 and 4 are cross sectional views on the lines III. III. and IV. IV. of Figs. 1 and 2 respectively. Fig 5 is a sectional detail view illustrating the use of a tightening wedge.

In the drawings, 2 represents the base of concrete or cement set within a receiving hole in the ground around an annularly arranged series of vertical anchoring rods 3, of steel or iron, of any suitable form adapted to make holding engagement with the base 2. Said base is continued upwardly beyond the ground level as indicated at 2′ for any desired distance, within a suitable removable forming mold, and finished off preferably with a flat top 4 and beveled edges 5, although any other suitable form may be given to the top of the base to adapt it to receive the pole 6. The particular advantage of the bevel 5 is that the lower edge of the shell 9 more tightly embraces the base 2′. The anchoring rods 3 are extended upwardly through and beyond the upper end of the base 2′ as shown at 7 for a suitable distance and terminate in any suitable form for attachment to the pole as inwardly turned tips or extremities 8. When the pole 6 is firmly set upon the top of the concrete base, the extremities 8 are driven into the pole as shown in Figs. 1 and 2 or connected to it in any other suitable manner, thereby firmly connecting the pole and base together.

An outer covering 9 of concrete or cement is then formed around the holding ends of the anchoring rods, firmly embedding them, embracing the base of the pole, and effectually connecting it within a permanent upwardly extending concrete shell to the main base. Said outer covering may conveniently be molded within any suitable outer mold or shell and preferably tapers upwardly as shown, giving a good finished appearance.

When desired, the pole 6 may be tightened or adjusted to vertical or any desired inclined position by the insertion of wedges 10 between the bottom of the pole and top of the base 2′ as shown in Fig. 5, the tension of the rod terminals 7 being thereby increased and absorbing all intervening clearance. By such means the pole may be rigidly set upon the base in the desired position and fixedly attached thereto before application of the surrounding shell 9. Fig. 5 also shows at the left side one of the anchoring rod terminals 9 in its original position before being driven into the pole.

The advantages of my invention will be readily appreciated by all those familiar with the use of poles.

Ordinarily wooden poles set directly into the ground became decayed at the surface of the ground when exposed to the destructive effect of the elements, and their life and efficiency is thus proportionally reduced.

By my invention the base of the wooden pole, being entirely above the ground and protected by the inclosing shell 9, is not subject to deterioration, while the renewal of posts due to breakage or other injury is rendered easy and cheap by merely removing the shell 9, disconnecting terminals 7 and inserting a new post. Likewise, old posts may be cut off above ground and then mounted on concrete bases without sacrificing any of their necessary height.

The number, form and arrangement of the anchoring rods is within the judgment of the builder, and I preferably make the terminals 7 of varying length as shown in Figs. 1 and 2, thus staggering their points of attachment to the pole, to insure the best results.

Other changes or variations may be made by the skilled mechanic without departing from the scope of the following claims:

What I claim is:

1. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending upwardly beyond the base and having inwardly turned securing terminals, said terminals being spaced apart for insertion of an upper pole and adapted to be driven thereinto and to be assembled more closely together to secure the pole to the base, substantially as set forth.

2. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending upwardly of varying lengths beyond the base and having inwardly turned securing terminals, said terminals being spaced apart for insertion of an upper pole and adapted to be driven thereinto and to be assembled more closely together to secure the pole to the base, substantially as set forth.

3. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending vertically upward beyond the base and having inwardly turned securing terminals, said rods being adapted to embrace the base of an upper pole and to be driven thereinto by their terminals, whereby the rods are inclined inwardly towards their points of attachment with the pole, substantially as set forth.

4. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending vertically upward beyond the base and having inwardly turned securing terminals, said rods being adapted to embrace the base of an upper pole and to be driven thereinto by their terminals whereby the rods are inclined inwardly towards their points of attachment with the pole, and provide intervening spaces between them and the pole for a surrounding covering material, substantially as set forth.

5. As an article of manufacture, the combination with a cylindrical base of concrete having a flat top and a beveled edge, of an annularly arranged series of anchoring rods projecting beyond the top of the base and provided with inwardly turned extremities.

6. The combination with a base of concrete and a pole set thereon, of anchoring devices embedded in the concrete at one end, sloping upwardly and inwardly and secured in the pole at the other end, and an inclosing shell of concrete or the like embracing the base of the pole and said portions of the anchoring devices above the base, substantially as set forth.

7. The combination with a base of concrete and a pole set thereon, of anchoring devices embedded in the concrete at one end, sloping upwardly and inwardly, and driven into the pole at the other end, and an inclosing shell of concrete or the like embracing the base of the pole and said portions of the anchoring devices above the base, substantially as set forth.

8. The combination with a base of concrete and a pole set thereon, of anchoring rods embedded in the concrete projecting upwardly and inwardly around the base of the pole and having inwardly turned securing terminals driven into the pole, and an inclosing shell of covering material embracing the base of the pole and the anchoring rods above the base, substantially as set forth.

9. The combination of a concrete base, a pole set thereon of less cross sectional area than the base, a concentrically located series of anchoring rods, embedded in the base, extending upwardly and inwardly around the pole with intervening spaces and secured by their terminals in the pole, and a surrounding covering material embracing the base of the pole and the anchoring rods, substantially as set forth.

10. The combination of a concrete base, a pole set thereon, anchoring rods embedded in the base and extending upwardly around and secured to the base of the pole, and an inclosing shell of concrete embracing the base of the pole and said holding portions of the rods above the concrete base, substantially as set forth.

11. The combination of a concrete base, a pole set thereon, anchoring rods embedded in the base and extending upwardly around and into the base of the pole, and an inclosing shell of concrete embracing the base of the pole and said holding portions of the rods above the concrete base, substantially as set forth.

12. The combination of a cylindrical concrete base having a flat top and a beveled edge, a pole set centrally thereon, and anchoring rods embedded in the base, projecting above its top and around the pole, and having inwardly turned extremities driven into the pole, substantially as set forth.

13. The combination of a cylindrical concrete base having a flat top and a beveled edge, a pole set centrally thereon, and anchoring rods embedded in the base, projecting above its top and around the pole and having inwardly turned extremities driven into the pole, with an embracing shell of concrete extending above the top of the base and around the lower end of the pole and said anchoring terminals, substantially as set forth.

14. The combination with a base of concrete, a pole set thereon, and anchoring means connecting the pole with the base; of tightening devices inserted between the pole and the base, substantially as set forth.

15. The combination with a base of concrete, a pole set thereon, and means connecting the pole with the base; of tightening devices inserted between the pole and the base and a surrounding shell of concrete embracing the base of the pole and said anchoring means.

16. The combination with a base of concrete, a pole set thereon, and anchoring means connecting the pole with the base; of a wedge inserted between the pole and the base, substantially as set forth.

17. The combination with a pole, of a base of concrete provided with upwardly extended anchoring rods spaced apart and outwardly beyond the base of the pole and attached to it above its base, and a reinforcing body of concrete embracing the base of the pole and filling the spaces between the rods and pole.

18. The combination with a pole, of a base of concrete provided with upwardly extending anchoring rods spaced apart and outwardly beyond the base of the pole and attached to it above its base at varying heights, and a reinforcing body of concrete embracing the base of the pole and filling the spaces between the rods and the pole.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT S. ORR.

Witnesses:
C. M. CLARKE,
CHAS. S. LEPLEY.