

J. H. NORTON.
TELEGRAPH POLE.

APPLICATION FILED OCT. 25, 1909.

Patented Jan. 17, 1911.

982,188.

3 SHEETS-SHEET 1.

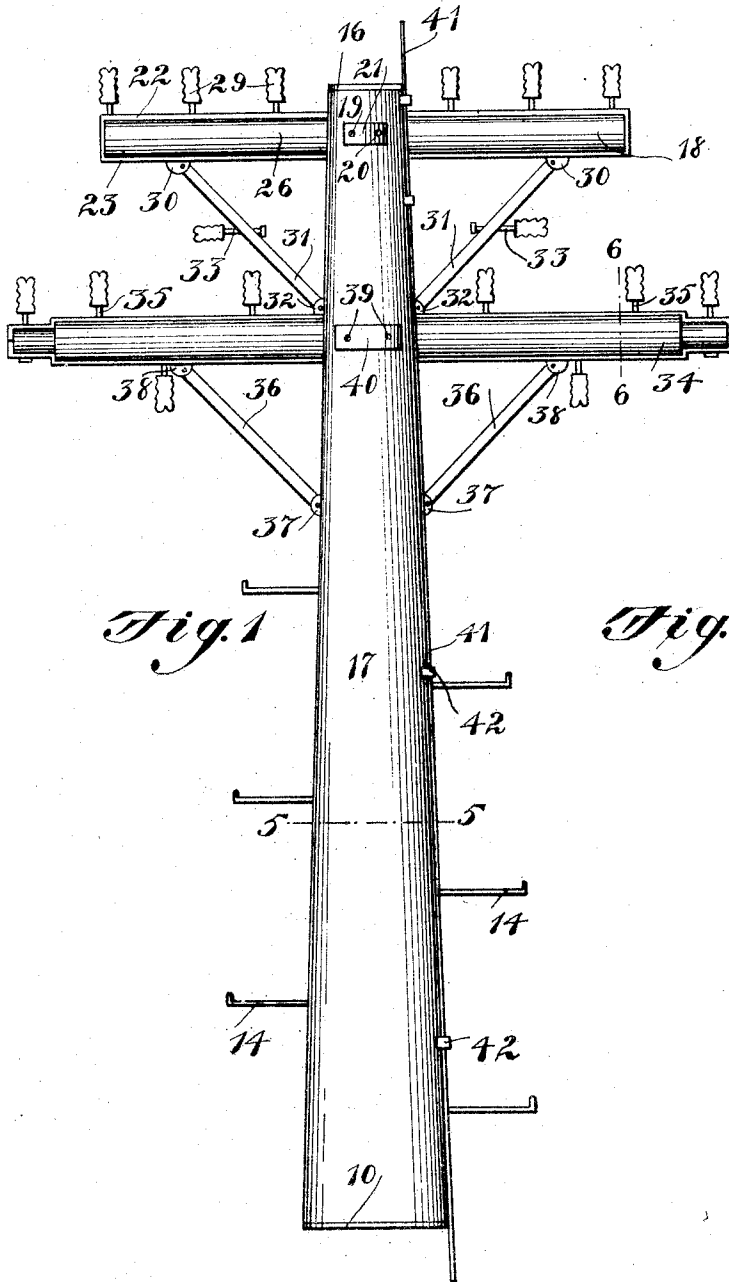


Fig. 1

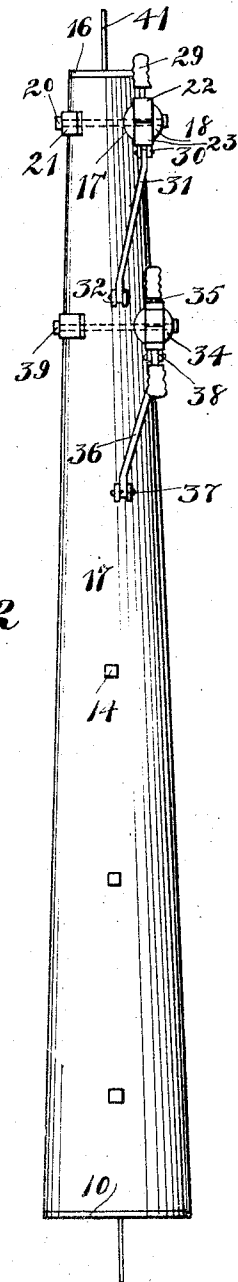


Fig. 2

WITNESSES

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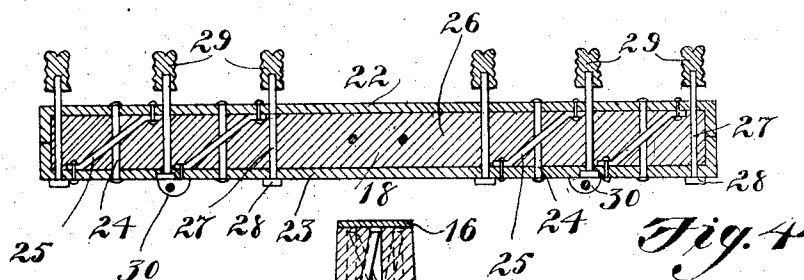
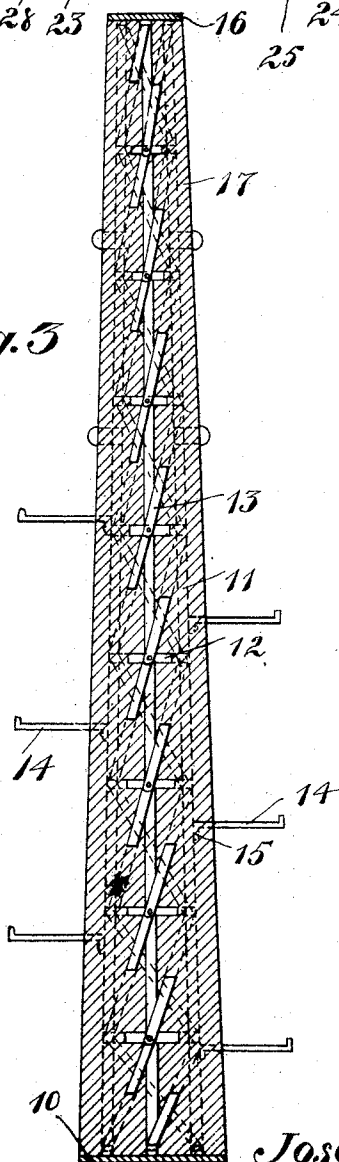


Fig. 5



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3 SHEETS—SHEET 3.

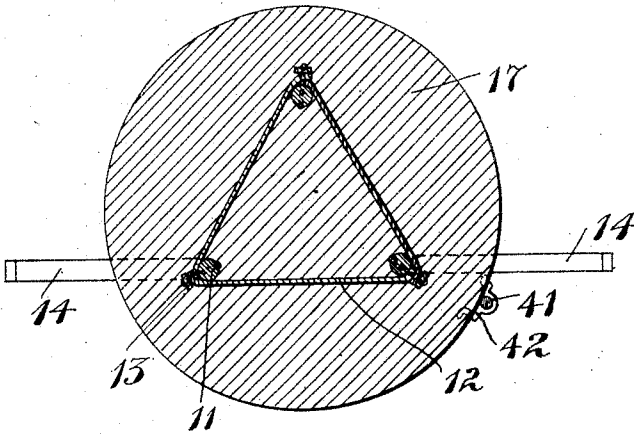


Fig. 5

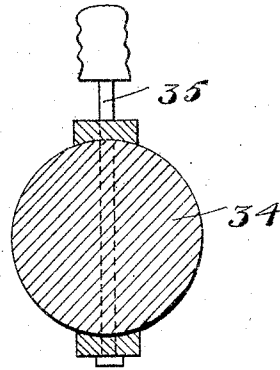


Fig. 6

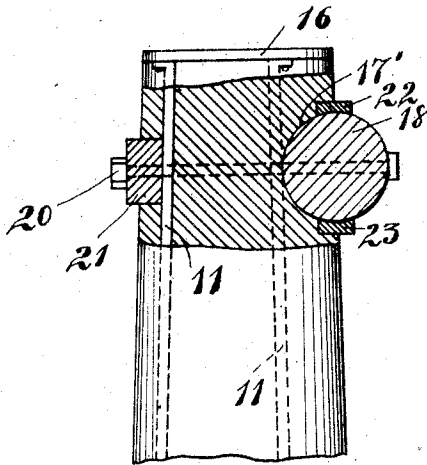


Fig. 7

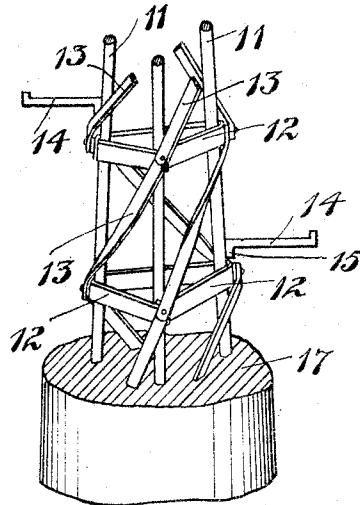


Fig. 8

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UNITED STATES PATENT OFFICE.

JOSEPH H. NORTON, OF MULLINVILLE, KANSAS.

TELEGRAPH-POLE.

982,188.

Specification of Letters Patent. **Patented Jan. 17, 1911.**

Application filed October 25, 1909. Serial No. 524,447.

To all whom it may concern:

Be it known that I, JOSEPH H. NORTON, a citizen of the United States, residing at Mullinville, in the county of Kiowa and State of Kansas, have invented certain new and useful Improvements in Telegraph-Poles, of which the following is a specification.

This invention relates to concrete posts, to which insulators may be conveniently attached.

An object of the invention is to construct a telegraph pole or the like which will withstand usage and conditions to which it is liable to greater advantage than the poles of like nature which are employed at the present time, and to provide a pole which may be readily erected and upon which may be placed any desired number of conductors. The invention has for another object the provision of a device of this character which is of simple construction, is of great strength and which may be easily and economically manufactured.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a front elevation of the device, Fig. 2 is a side elevation of the same, Fig. 3 is a longitudinal section through the standard, Fig. 4 is a detailed sectional view of one of the cross arms employed in connection with the device, Fig. 5 is a section on the line 5-5 of Fig. 1, Fig. 6 is a section on the line 6-6 of Fig. 1, Fig. 7 is a detailed sectional view of the connection between the standard and the lower cross arm, Fig. 8 is a detail perspective view of a portion of the reinforcing standard.

Referring to the drawings, 10 designates a base of circular formation upon the upper face of which are secured three vertically disposed rods 11; which are equidistant from each other and indicate the vertices of a triangle. These rods are slightly convergent at their upper extremities. The rods 11 are held in position by means of the horizontally disposed braces 12 and are se-

cured further by means of the diagonally disposed bars 13 which are positioned between the braces 12 at their extremities where the same are fastened to the rods 11. The rods 11 are also provided with laterally extended steps 14 which are oppositely disposed in staggered relation upon the same and which are secured thereto by means of the depending flanges 15 formed upon the inner extremities of the steps 14 which are riveted to the outer faces of the rods 11. The upper extremity of the standard, which is formed by the rods 11, is provided with a circular plate 16 which extends slightly beyond the outer edges of the rods 11 and which serve to hold a concrete casing 17 which is disposed upon the base 10 and extended upwardly about the rods 11 and engaged against the lower face of the plate 16. The braces 12 and bars 13 also serve the purpose of reinforcing the concrete casing 17 and of holding the same in position.

At the upper extremity of the standard and at one side thereof, the casing 17 is provided with a semi-circular notch 17' to admit of the positioning of an upper cross arm 18 which is positioned against and across two of the rods 11 upon the outer faces thereof and secured in such position by means of bolts 19 and 20 which extend through the cross arm 18 between the rods 11 and are engaged at their opposite extremities in a clamping plate 21. The clamping plate 21 engages the outer face of the remaining rod 11 and is positioned in parallel with the cross arm 18 and serves to securely hold the cross arm rigidly in position. The cross arm 18 comprises metallic bars 22 and 23 which are held in parallel relation by means of the braces 24 positioned between the same and which are reinforced by the diagonally disposed arms 25 which are engaged between the bars 22 and 23 and pass the central portions of the braces 24. Between and about the bars 22 and 23 is positioned a concrete filling 26 which serves the purpose of protecting the bars 22 and 23 and the adjoining members disposed upon the same. The bars 22 and 23 are provided with a plurality of equidistantly spaced and vertically disposed rods 27 which are detachably engaged therethrough and which are secured in position by clamping nuts 28 which admit of the extension of the rods 27 beyond the same. These rods are threaded and insulators 29 are adapted to be engaged therewith upon

which are secured the electrical conductors. For the purpose of further supporting the upper cross arm 18 the lower bars 23 are provided with depending ears 30 between which are pivotally secured the brace arms 31 which extend downwardly and inwardly where they are engaged with outwardly extended lugs 32 carried by the rods 11. The brace arms 31 are also provided with insulator rods 33 which are horizontally positioned through the same upon which are adapted to be secured additional conductors.

At the upper end of the standard, at a distance slightly below the upper cross arm 18, is positioned a second cross arm 34 which is of similar construction to the upper cross arm 18 but which is slightly elongated for the purpose of admitting of the protruding of the outer extremities of the same beyond the ends of the cross arm 18. The cross arm 34 is provided with a plurality of insulator rods 35 which are vertically disposed through the same, having their threaded portions alternately arranged to extend upwardly and downwardly from the cross arm. The cross arm 34 is also provided with brace arms 36 which are secured to lugs 37 extended laterally from the rods 11 and engaged at their upper diverged extremities to the depended ears 38 carried upon the under side of the cross arm 34. At the point of contact where the cross arm 34 is secured to the standard, the concrete casing 17 is transversely recessed to admit of the positioning of the cross arm 34 against the rods 11 and to admit of the securing of the same in such position, by means of the bolts 39 which are secured through the cross arm 34 and through a plate 40 disposed across the opposite side of the rods 11 for rigidly securing the cross arm 34 in such position. For the purpose of protecting the pole and the several parts of the same, a lightning rod 41 is positioned down one side of the concrete casing 17 and is held in such position by means of cleats 42 embedded in the concrete casing a distance outward of the rods 11. The lightning rod 41 is carried to the ground in the usual manner and is extended centrally over the standard for the purpose of protecting the cross arms 18 and 34.

When the device is to be employed the standard is first erected and the cross arms 18 and 34 are then positioned as the casing 17 is so molded as to form a cutaway portion to admit of the positioning of the cross arms and the lugs 32 and 37 are projected beyond the sides of the casing 17 to secure the brace arms 31 and 36 after the cross arms 18 and 34 have been properly positioned.

What is claimed is:—

1. A device of the class described comprising a standard, cross arms detachably secured upon said standard each of which is composed of parallel bars embedded in a

body portion composed of cement, braces disposed between the outer ends of said cross arms and said standard, and insulator pins passing through the cement and bars forming the arms as and for the purpose described.

2. A device of the class described comprising a standard, cross arms detachably secured upon said standard and composed of metallic bars embedded in a body portion of cement extending the full length of said bars, insulator pins passing through the cement formation of the arms and fixed to the bars, and braces attached to the arms thus formed and to the standard.

3. A device of the class described comprising a standard, cross arms disposed upon the upper end of the latter, each of said arms comprising bars mounted in parallel relation upon a body of cement, braces disposed between said bars, and passing through the cement forming a part of the arms, means for supporting the opposite ends of the arms in respect to the standard, and insulator pins secured to the cross arms thus constructed.

4. A device of the class described comprising a standard, cross arms disposed upon the upper end of the latter, each of said arms comprising a body of cement and parallel bars embedded in said cement and extending the full length of the same, insulator pins fixed to said arms and passing through the cement of which the arms are composed, and means for securing the said arms to the standards.

5. A device of the class described comprising a standard, a cross arm adapted to be secured to the latter and composed of a body of plastic material and exterior bars, insulator pins passing through screw threaded openings formed in the bars, and means for bracing the arms in respect to the standard to which the same are secured.

6. In a device of the class described, a cross arm composed of a body of plastic material and oppositely located parallel exterior bars, the latter being screw threaded, and insulator pins provided with screw threaded stems the latter being adapted to be screwed into the screw threaded openings formed in said bars, as and for the purpose described.

7. A device of the class described comprising a standard, cross arms disposed upon the upper end of the latter and composed of a plastic body and two bars embedded in said arms and arranged in parallel relation to one another, braces connecting said bars and passing through the plastic material and vertically arranged, insulator pins passing freely through the plastic material and secured to the bars, and brace arms depended from the outer ends of the cross arms thus constructed and engaging with said standard.

8. A device of the class described comprising a standard, cross arms disposed upon the

upper end of the latter and composed each
of a body of cement and parallel metallic
bars embedded in said body and oppositely
positioned, braces disposed between said bars,
5 brace arms diagonally positioned between
said bars and engaged with said standard,
and screw threaded insulator pins positioned
vertically through the plastic material and

received by screw threaded sockets formed
in the bars of said cross arms.

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

JOSEPH H. NORTON.

Witnesses:

J. E. GOODEN,
L. A. BROWN.