No. 765,917. PATENTED JULY 26, 1904.

S. H. COCHRAN & A. E. ANDERSON.

HANGER FOR OVERHEAD CONDUCTORS.

APPLICATION FILED MAR. 24, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

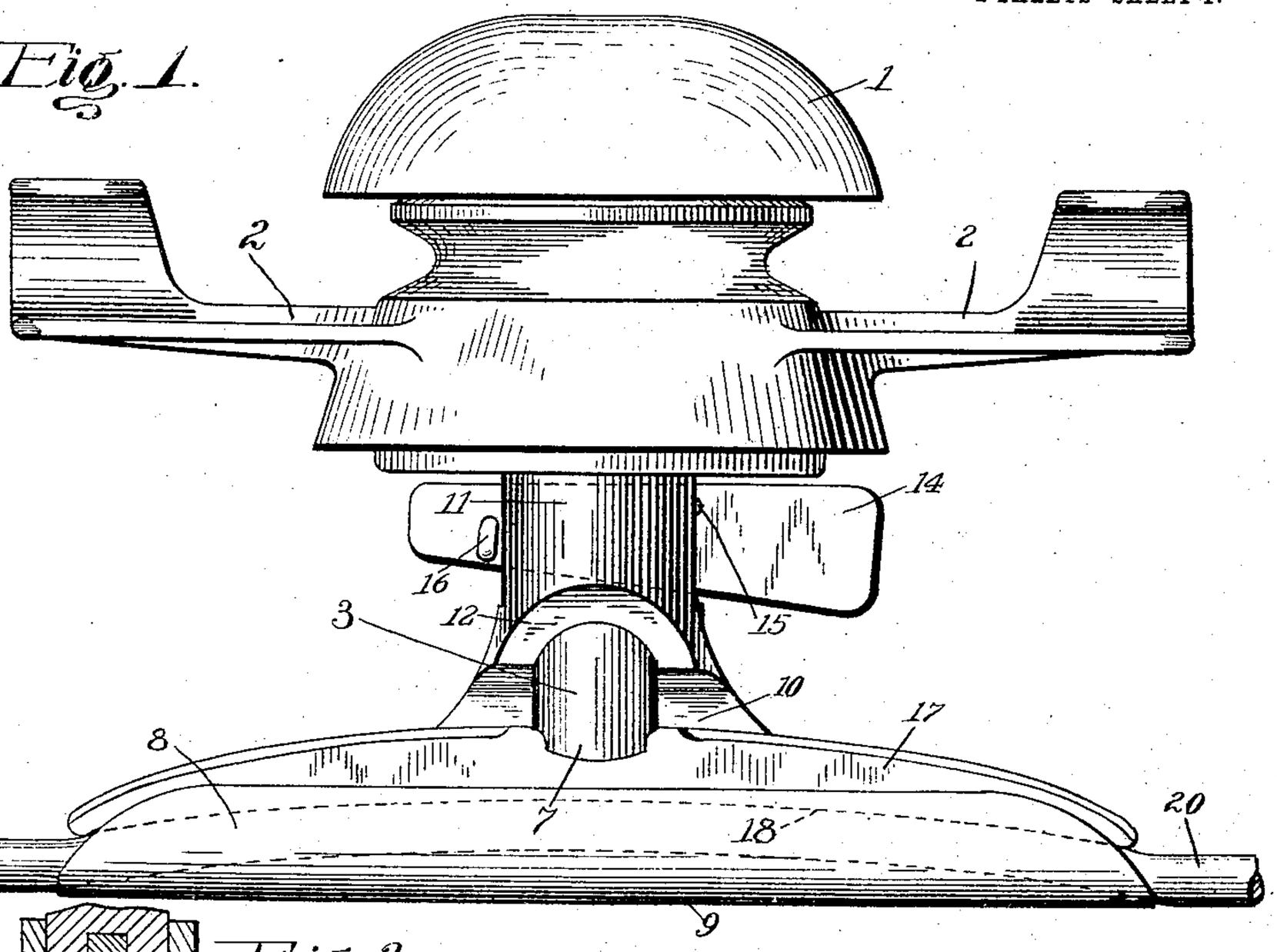

Fig. 3.

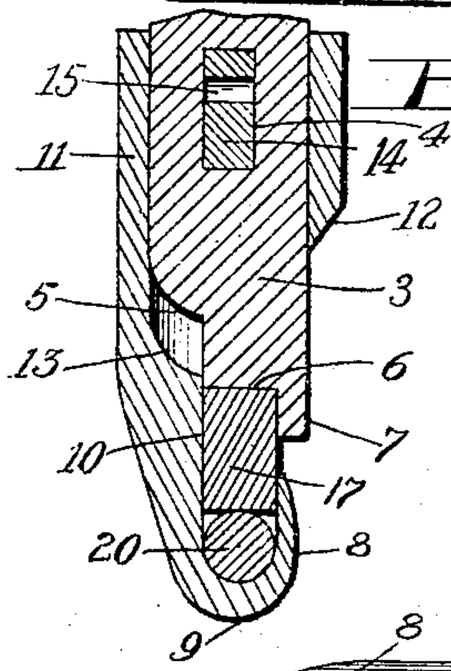

Fig. 2.

Fig. 5.

Fig. 4.

Witnesses
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NO MODEL. 2 SHEETS—SHEET 2.

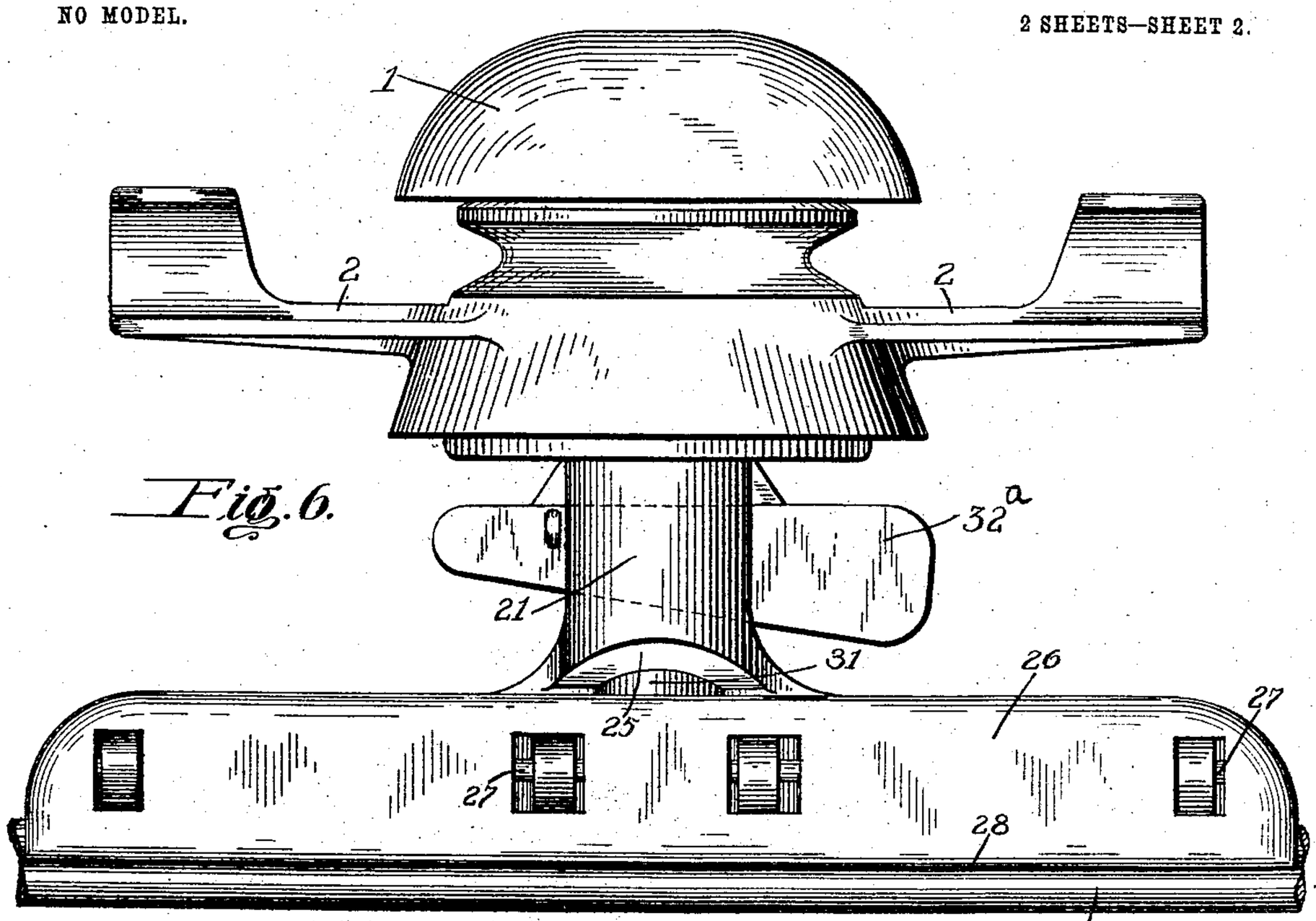

Fig. 6.

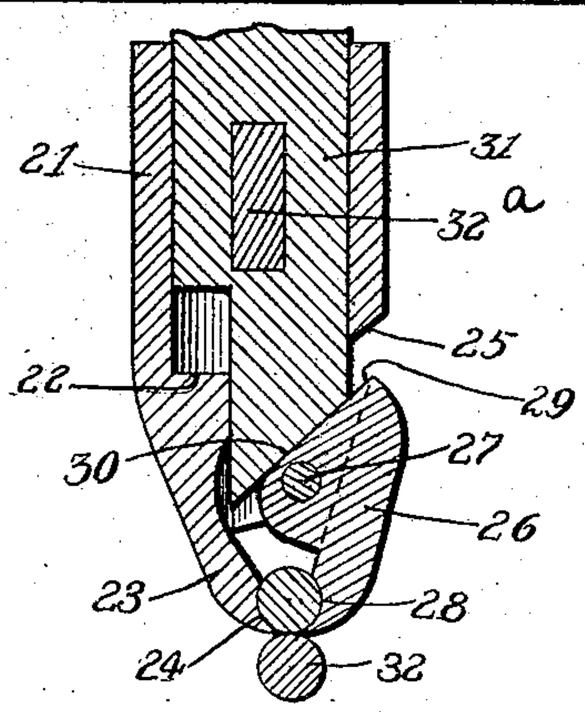

Fig. 8.

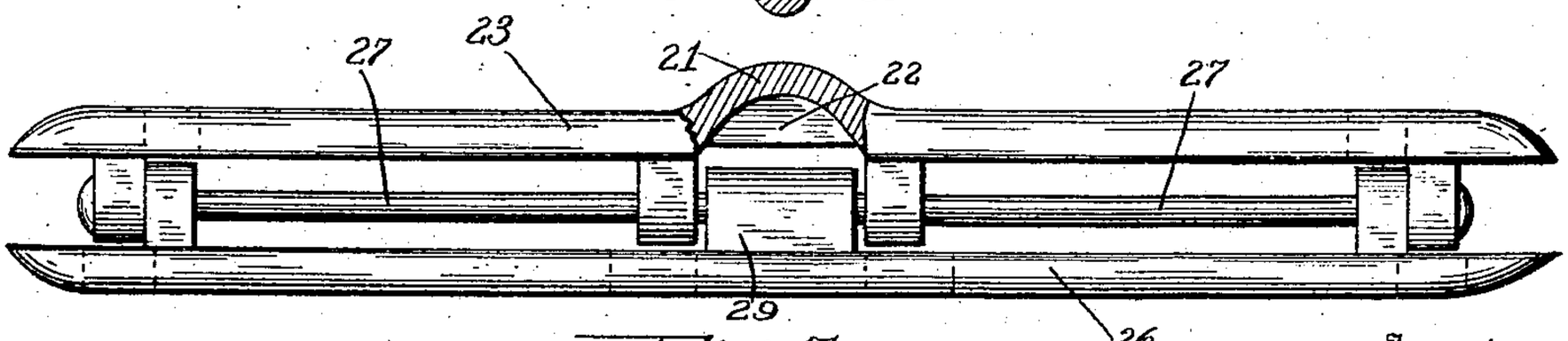

Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

SIDNEY H. COCHRAN AND AUSTIN E. ANDERSON, OF LYNCHBURG, VIRGINIA, ASSIGNORS OF ONE-THIRD TO RICHARD D. APPERSON, OF LYNCHBURG, VIRGINIA.

HANGER FOR OVERHEAD CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 765,917, dated July 26, 1904.

Application filed March 24, 1904. Serial No. 199,837. (No model.)

To all whom it may concern:

Be it known that we, SIDNEY H. COCHRAN and AUSTIN E. ANDERSON, citizens of the United States, residing at Lynchburg, in the county of Campbell, State of Virginia, have invented certain new and useful Improvements in Hangers for Overhead Conductors, of which the following is a description.

In the drawings, Figure 1 is a side elevation of our improved hanger secured to a conductor-wire broken away. Fig. 2 is a side elevation of the hanger-ear detached. Fig. 3 is a detailed sectional view of the assembled hanger, parts being broken away. Fig. 4 is a front elevation of a compressor-bar detached. Fig. 5 is a detailed view of the wedge key and pin. Fig. 6 is a front elevation of a slightly-modified form of hanger. Fig. 7 is a top plan thereof, parts being broken away. Fig. 8 is a detailed vertical central section of the hanger shown in Fig. 6, parts being broken away.

1 is the cap; 2, arms whereby the hanger is suspended from any suitable support. The cap 1 is provided with a depending post 3, having a wedge-shaped slot 4 cut through it near its lower end. The lower end of post 3 is cut away and provided with a rounded shoulder 5, the extreme lower end being cut away to provide a shoulder 6 and a downwardly-projecting lip 7.

The ear 8 is substantially U-shaped in cross-section and upon its lower face 9 is straight from end to end. The inner bottom face of the ear is convex from end to end, as shown by dotted lines in Figs. 1 and 2. The ear is provided with an upwardly-extending arm 10, which terminates in a cylindrical or tubular body 11, provided with a beveled bearing-face 12. The bottom of the bore of the tubular body 11 is rounded to form a round seat 13. A slot is cut through the walls of the tubular extension or body 11 to coincide or register with the slot 4, formed in the post 3, whereby when the parts are assembled in the position shown in Fig. 1 the key 14 passes through said slots, thus locking the ear to the post 3. The key 14 is provided with a series of perforations 15, through which a cotter-pin 16 is adapted to pass and lock said key in the desired position.

17 is a wedging-piece having a concave face 18 formed in substantially the same arc as the convex face of the ear 8. This wedging-piece 17 is provided in its upper edge with a cut-away portion or notch 19, into which the shoulder 6 of the post 3 is adapted to be seated when the parts are in position to be locked together.

In the use of the construction shown in Fig. 1 the trolley-wire is given a deflection by means of a suitable machine, and the deflected part is placed within the ear 8, said deflection resting upon the convex bottom of the ear, so that the straight portions 20 of the trolley-wire are in exact alinement with the straight face 9 of the ear, this providing a smooth unbroken way for the trolley-wheel, and consequently prolonging the life of said wheel. After the wire is placed in the ear the wedging-piece 17 is placed in the ear with its curved face 18 resting upon the upper face of the wire. The ear is now pushed upward, and the cylindrical or tubular body 11 passes over the post 3 until the shoulder 6 of said post comes in engagement with the notch 19 in the wedging-piece, the lip 8 of the post bearing upon the outer face of said wedging-piece, thereby holding it firmly in position. The wedging-key 14 is now passed through the slots in the tubular extension 11 and the post 3 and locked into position by means of the cotter-pin.

In Figs. 6, 7, and 8 we have shown a slight modification whereby we have adapted our hanger for use in connection with figure 8 or grooved wire, and in this construction 21 is the tubular extension comparing to the tubular extension 11 of Fig. 2, said extension 21 being provided with a square seat 22 and a depending ear 23, the lower end of which is concaved, as at 24. The tubular extension is cut away and provided with a beveled face, as at 25. 26 is an ear pivoted at 27 to the tubular extension 21, the end of said ear being provided with a concave face 28. The ear 26 is also provided with an upper beveled face

29, which is adapted for engagement with the beveled face 30 of the post 31. In this connection we have shown for purposes of illustration one wire 32 of the figure 8 pattern, and it will be readily understood that withdrawing the post 31 after removing the wedging-key 32ª will leave the pivoted ear 26 free to be moved upon its pivot 27, and upon swinging the pivoted ear 26 upon its pivot the wire may be readily released, inasmuch as the concaved face of the lower ends of the ear are removable from the groove in the conductor-wire. Upon inserting the post in the tubular extension the beveled face 30 engages the beveled face 29 of the ear 26, thereby wedging the ear into a closed position, as shown in Fig. 8, thus firmly locking the conductor-wire in position.

By the use of the construction shown in our drawings it will be obvious that the wire is locked against a sliding movement in the event of a break occurring in the wire, thus obviating one of the objections now incident to electric lines, inasmuch as in the present hangers for conductors there is no provision for positively locking the conductor against sliding movement in the hangers. These several constructions also obviate the necessity for soldering the conductor to the hanger, as by means of our construction the conductor has a perfect mechanical and electrical connection with the hanger, thus saving a great deal of time and expense in constructing and repairing the line. Another advantage of our construction is that we provide a perfect straight underrun for the trolley-wheel to pass over, thus eliminating all jars on the trolley-wheel and overhead constructions and reducing the arcing of the trolley-wheel to a minimum.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination with a suitable support, and an ear, of a post on one of said elements provided with a transverse opening, a tubular extension on the other element provided with openings to register with the openings of the post, means coöperating with the ear to hold the trolley-wire, and a wedge for insertion in the openings in the tubular extension and in the post to force the part carried by the support into engagement with the means that cooperates with the ear.

2. The combination with a suitable support and a U-shaped ear having a convex wire-bearing surface and a straight underrun for the trolley-wheel, of a post on one of said elements provided with a transverse opening, a tubular extension on the other element provided with openings to register with the openings in the post, means coöperating with the ear to hold the trolley-wire, and a wedge for insertion in the tubular extension and in the post to force the part carried by the support into engagagament with the means that coöperates with the ear.

3. In a trolley-wire hanger, the combination with a cap and a post depending therefrom, said post having a transverse slot, of an ear and cylindrical extension integral with said ear and provided with a transverse slot adapted to register with the slot on said post whereby the parts are locked together by means of a suitable key passing through said slots and a locking member coöperating with said ear to hold a wire therein, said member held in locked position by engagement with said post.

4. In a trolley-wire hanger, the combination with a cap, a post depending therefrom and provided with a transverse slot and a shoulder and lip formed on the bottom thereof, of a U-shaped ear having a convex wire-bearing face, a tubular extension integral with said ear constructed to receive said post, said extension having a transverse slot adapted to register with the slot in said post, a key passing through said slots to lock the ear and post together, and a locking member having a concaved under face adapted to bear against a wire in said ear and lock said wire against movement in said ear by reason of its engagement with shoulder and lip of the post.

5. In a trolley-wire hanger, the combination with a cap, a post depending therefrom and provided with a transverse slot and a shoulder and lip formed on the bottom thereof, of a U-shaped ear having a convex wire-bearing face, a tubular extension integral with said ear constructed to receive said post, said extension having a transverse slot adapted to register with the slot in said post, a key passing through said slots to lock the ear and post together, of a locking member having a concaved under face and provided with a notch in the center of its upper face, said member constructed to bear upon a wire in the ear and lock the same therein by reason of the shoulder of the post engaging said notch and the lip of the post bearing against the outer face of said locking member.

The foregoing specification signed this 11th day of March, 1904.

SIDNEY H. COCHRAN.
AUSTIN E. ANDERSON.

In presence of—
W. H. CRUTCHFIELD,
A. T. POWELL.