E. O. SCHWEITZER.

ELECTRICAL DISTRIBUTING MEANS.

APPLICATION FILED NOV. 26, 1915.

1,224,966.

Patented May 8, 1917.

2 SHEETS—SHEET 1.

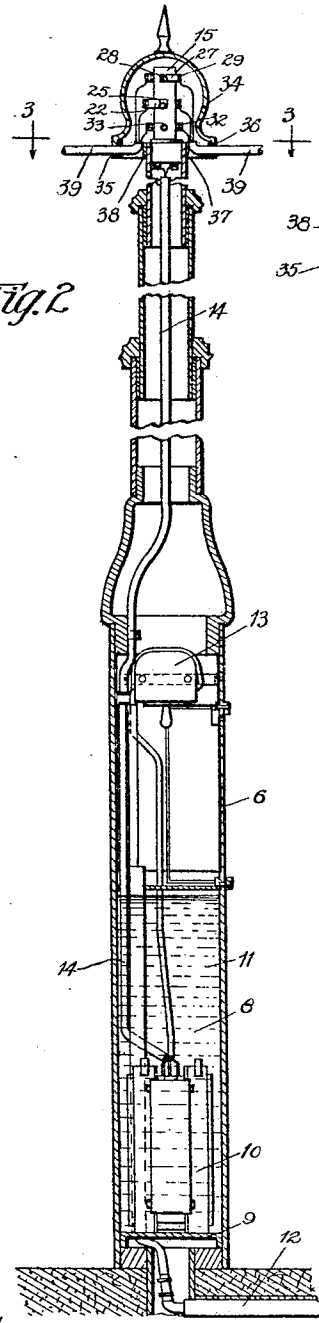


Fig. 2

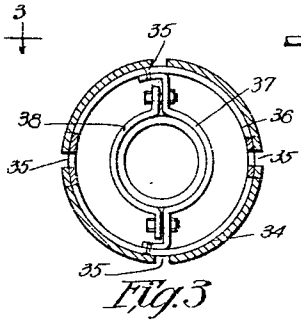


Fig. 3

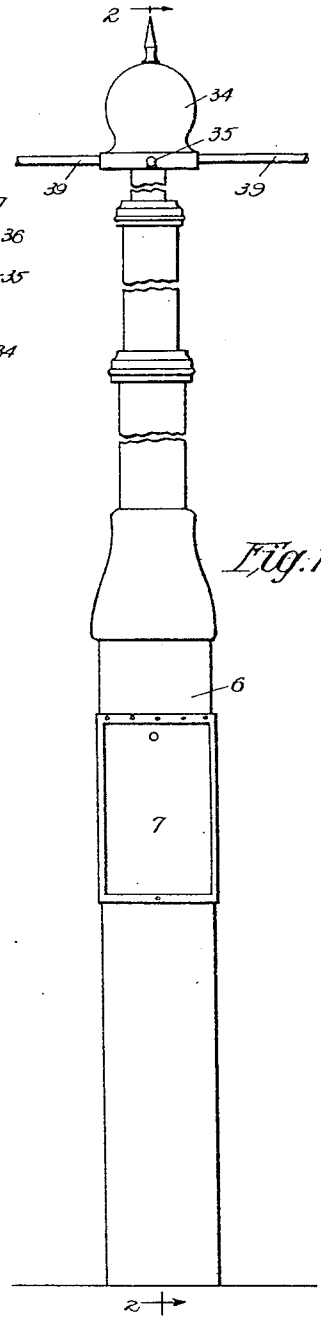


Fig. 1

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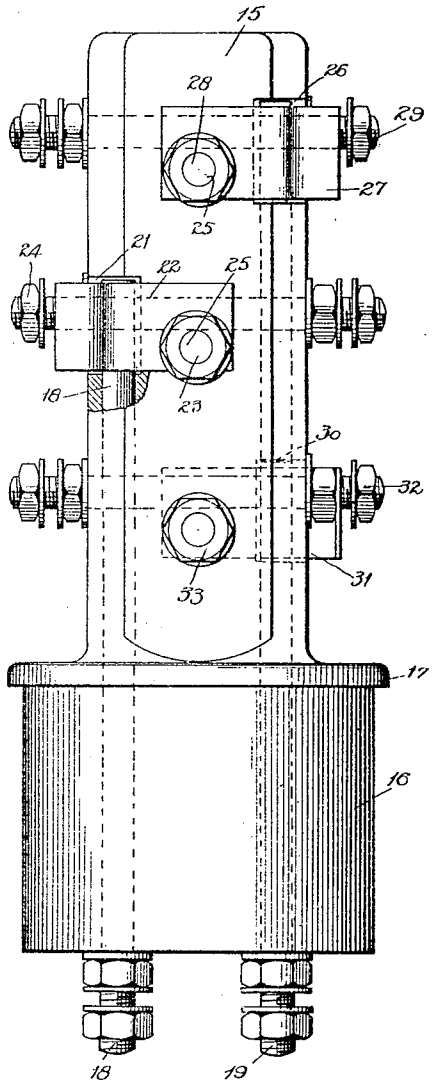
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2 SHEETS—SHEET 2.

Fig. 4



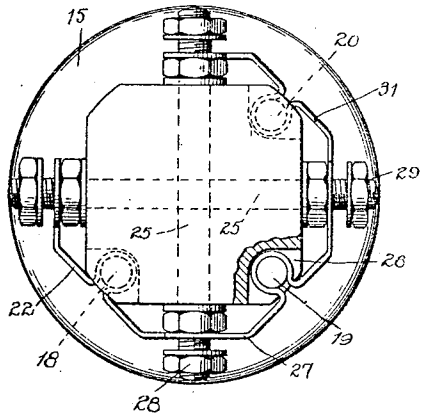


Fig. 5

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UNITED STATES PATENT OFFICE.

EDMUND O. SCHWEITZER, OF CHICAGO, ILLINOIS.

ELECTRICAL DISTRIBUTING MEANS.

1,224,966. Specification of Letters Patent. Patented May 8, 1917.

Original application filed January 2, 1913, Serial No. 739,624. (Patent No. 1,162,657.) Divided and this application filed November 26, 1915. Serial No. 63,603.

To all whom it may concern:

Be it known that I, EDMUND O. SCHWEITZER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Electrical Distributing Means, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to electrical distributing means, and has for its object the provision of a distributing block in combination with a long, hollow metallic pole, the block being arranged to be inserted into the upper end of the pole to form a plug therefor, and simultaneously to act as a means for connecting the overhead conductors, and for enabling any of the overhead conductors to be connected with conductors contained within the interior of the pole.

This application is a division of my copending application Serial No. 739,624, filed January 2, 1913, which has resulted in Patent Number 1,162,657, dated November 30, 1915. The present application relates particularly to the hollow transformer pole and the combined plug and terminal block for the overhead conductors.

Generally the device consists in a substantially cylindrical plug adapted to have a portion of its length inserted in the upper end of the hollow pole. A number of conductors are provided extending from the lower end of the plug, that is from the interior of the pole, to the upper end of the plug or to a portion of the plug which is disposed without the pole. Suitable binding posts or connectors are provided at both ends of the above mentioned conductors, so that connection with other conductors is made possible.

These and other features of my invention will be more clearly set forth in the accompanying detailed description, wherein reference is made to the accompanying drawings, in which—

Figure 1 is an elevational view of a pole embodying the features of my invention.

Fig. 2 is a vertical cross-sectional view of the same taken along the line 2—2 of Fig. 1, looking in the direction indicated by the arrows.

Fig. 3 is a horizontal sectional view of a portion of the hood extending over the upper end of the pole, showing in detail the method of securing the same to the pole. This view is taken along the line 3—3 of Fig. 2, looking in the direction indicated by the arrow.

Fig. 4 is an enlarged side elevational view of the combined plug and distributing terminal, and

Fig. 5 is a top view of Fig. 4, a portion of the plug being broken away to more clearly illustrate one of the connecting plates.

Similar characters refer to similar parts throughout the several views.

Referring first to Fig. 1, I have illustrated the hollow metallic pole at 6, which, as illustrated, is composed of several sections, adjacent sections being secured together by means of connectors, as more clearly illustrated in Fig. 2. The lower section of the pole is provided with a door 7 which, when removed, provides access to the interior of the pole. As illustrated in Fig. 2, the lowermost section of the pole contains a transformer chamber 8, which contains a water-tight floor 9. Upon this floor is mounted an alternating current transformer 10, which is completely surrounded by an insulating oil 11. This oil extends upwardly as illustrated to a portion of the pole immediately adjacent the door, and serves, in addition to acting as an insulator, as a means for effectively transferring the heat from the transformer to the pole and thence to the outside air.

In the drawings I have illustrated the primary conductor for the transformer at 12, entering the pole from the bottom. This primary conductor extends upwardly through the transformer chamber to a fuse block 13 provided immediately adjacent the doorway. From the fuse block it runs to the primary winding of the transformer 10. The secondary winding of the transformer is connected by means of a conductor 14 with the selected conductors of the terminal block of my invention.

This terminal block consists in a body portion 15 which is constructed of insulating material, such as fiber. The lower end of this plug is cylindrical, as illustrated at 16, and is provided with a flange 17 which, when

the cylindrical portion 16 is inserted into the upper end of the top section of the pole, abuts against the upper edge of the section and prevents the plug from moving downwardly into the pole beyond the depth of the cylindrical portion 16. Extending longitudinally within the body portion of the distributing block is a plurality of conductor rods, 18, 19 and 20, which are insulated from each other and which carry at their lower ends, suitable nuts and washers to facilitate the connection of the secondary conductor 14 with any one of the conductor rods 18, 19 and 20. As illustrated in Fig. 4, the rod 18 extends upwardly to a portion of the plug which is recessed at 21. Extending into this recess and embracing the upper end of the conductor rod 18 is a plate 22, which after embracing the conductor, extends away therefrom in opposite directions and is clamped at one end by a binding post 23 and is clamped at its other end by a binding post 24. These binding posts consist in a rod 25 which extends entirely through the terminal block and is provided at both ends with external threads coöperating with nuts to afford a means for forming electrical connections between the connecting plates and the conductor rods.

The rod 19 extends upwardly to a recessed portion 26 of the terminal block which portion is disposed above the aperture 21 as illustrated in Fig. 4. A connecting plate 27 embraces the upper end of the conductor rod 19 in a manner similar to the connector plate 22, and is held by binding posts 28 and 29.

In a similar manner, the conductor rod 20 terminates in the recess 30, provided in the terminal block below the recess 21 and is adapted to be clamped by the connector plate 31 which, in turn, is electrically connected with the binding posts 32 and 33.

From the construction thus far described, it will be seen that if a conductor is connected with the lower end of, say, the conductor rod 19, and it is desired to connect an overhead wire with the terminal block in a manner so as to electrically connect with only the conductor rod 19, all that is necessary is to connect the overhead wire with either end of one of the binding posts 28 and 29. The same applies to both of the other connector rods. Although I have illustrated but three of these connector rods, it will be readily understood that any number may be employed, depending upon the size and capacity of the terminal block which it is desired to employ.

For holding the overhead conductors so as not to allow them to place a stress upon the terminal block, I provide a hood 34 which carries a number of notches 35—35. Secured to the inner face of the hood is a ring 36 provided with apertures registering with the notches 35 as illustrated in Fig. 3. The ring, in turn, is riveted to a semi-circular clamping member 37, which coöperates with a second member 38 to embrace the upper end of the pole in holding the hood in place. Bolts and nuts are provided for clamping the members 37 and 38 together as illustrated. The overhead conductors 39—39 extend through the notches 35 and the apertures contained by the ring 36, and are then connected to the desired binding posts of the terminal block.

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

1. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and constituting a plug which fills and closes the upper end of said pole, a plurality of conductors embedded in the block and extending from the lower end of the block within the pole to the upper end of the block without the pole, means for insulating the conductors from each other, and binding posts for the conductors at each end thereof.

2. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block containing in its body portion disposed without the pole a plurality of grooves, a plurality of conductors embedded in the block, each extending from the lower end of the block within the pole to and within one of the grooves, binding posts for the upper ends of the conductors, and connector plates for electrically connecting the exposed portions of the conductors with the binding posts.

3. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block having a portion of its length without the pole polygonal in cross-section and provided with recesses at its corners, and a plurality of conductors embedded within the block and extending from the lower end thereof within the pole to the recesses in the upper end of the block without the pole.

4. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block having a portion of its length without the pole polygonal in cross-section and provided with recesses at its corners, a plurality of conductors embedded within the block and extending from the lower end thereof within the pole to the re-

cesses in the upper end of the block without the pole, and binding posts for the conductors at each end thereof.

5. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor, said block having a portion of its length without the pole substantially polygonal in cross-section and provided with recesses at its corners, a plurality of conductors embedded within the block and extending from the lower end of the block within the pole to the recesses in the upper end thereof without the pole, a connector plate for each conductor adapted to electrically engage that portion of the conductor exposed by the recessed portion of the block, and a binding post for each connector plate.

6. A device of the class described comprising a long body portion of insulating material, and a plurality of straight conductors longitudinally embedded in the body portion and extending through one end thereof, said body portion being cut away at portions one above the other to reveal parts of the conductors and to afford access thereto.

7. A device of the class described comprising a long body portion of insulating material, a plurality of straight conductors longitudinally embedded in the body portion and extending through one end thereof, said body being cut away at portions one above the other to expose parts of the said straight conductors, and a plurality of conductor plates electrically connected with the conductors at the said exposed portions.

8. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor said block having a portion of its length without the pole substantially square in cross-section and provided with recesses at its corners, a plurality of conductors embedded within the block and extending from the lower end of the block within the pole to the recesses in the upper end thereof without the pole.

9. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor said block having a portion of its length without the pole substantially square in cross-section and provided with recesses at its corners disposed one above the other, a plurality of conductors embedded within the block and extending from the lower end thereof within the pole to the recesses in the upper end of the block without the pole, an angle plate for each of the conductors adapted to engage the conductors at portions exposed by the recesses each angle plate extending away from the conductor in two directions parallel to the side walls of the block including the corner associated with the said last mentioned conductor, and binding posts carried by the block for both ends of the connector plate to provide two points of electrical connection.

10. In a device for the distribution of electrical energy the combination of a long rigid hollow pole open at its upper end, a distributer block extending part way into the upper end of the pole and forming a plug therefor said block having a portion of its length without the pole substantially square in cross-section and provided with recesses at its corners disposed one above the other, a plurality of conductors embedded within the block and extending from the lower end thereof within the pole to the recesses in the upper end of the block without the pole, an angle plate for each of the conductors adapted to engage the conductors at portions exposed by the recesses each angle plate extending away from the conductor in two directions parallel to the side walls of the block including the corner associated with the said last mentioned conductor, and binding posts carried by the block for both ends of the connector plate said posts extending entirely through the connector block to provide four points of electrical connection.

In witness whereof, I hereunto subscribe my name this 23rd day of November, A. D. 1915.

EDMUND O. SCHWEITZER.

Witnesses:

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MARY A. COOK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."