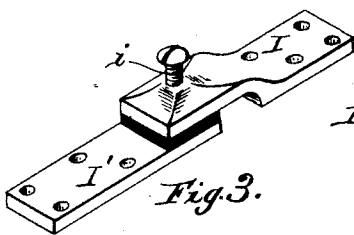
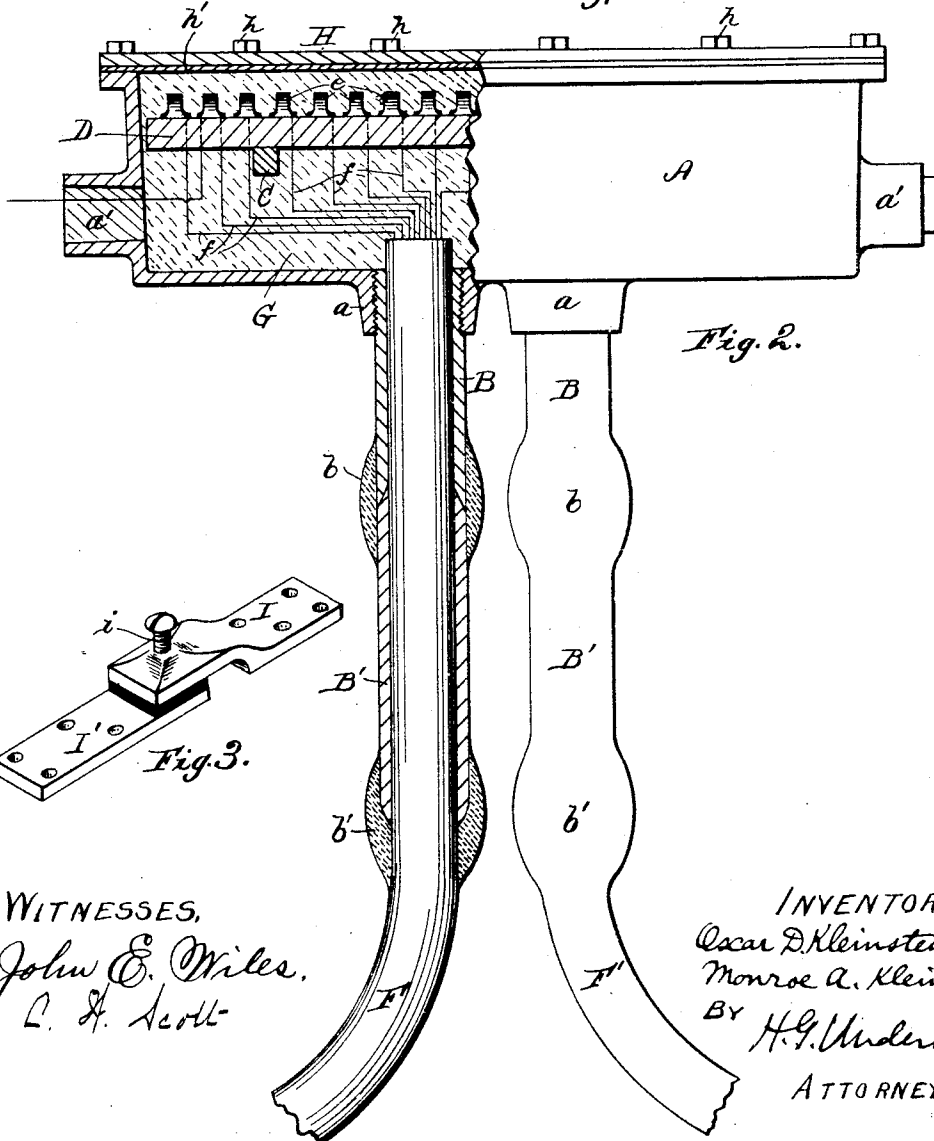
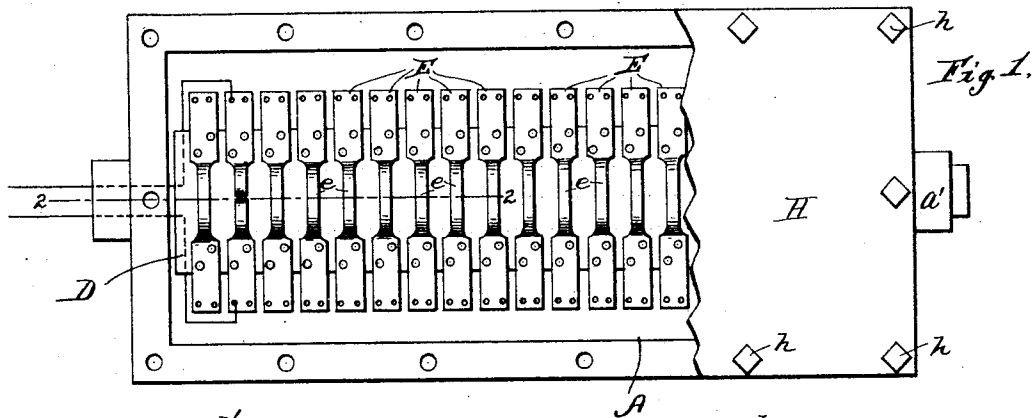


(No Model.)

O. D. & M. A. KLEINSTEUBER.
ELECTRIC DISTRIBUTION BOX.

No. 515,087.

Patented Feb. 20, 1894.



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PLACE.

ELECTRIC DISTRIBUTION-BOX.

SPECIFICATION forming part of Letters Patent No. 515,087, dated February 20, 1894.

Application filed June 27, 1893. Serial No. 478,947. (No model.)

To all whom it may concern:

Be it known that we, OSCAR D. KLEINSTEUBER and MONROE A. KLEINSTEUBER, citizens of the United States, and residents of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Electric Distribution-Boxes; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to new and useful improvements in the construction of electric distribution boxes for underground wires, and consists in the matters hereinafter described and pointed out in the appended claims.

In the accompanying drawings illustrating our invention:—Figure 1 is a plan view of one of our improved distribution boxes, showing the cover broken open so as to expose the connections. Fig. 2 is a view of the same partly in side elevation and partly in section on line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of a somewhat different form of connecting strip.

Referring by letter to said drawings, A represents a suitable casing or box which is conveniently made from cast metal and is provided with suitable tubular projections *a a* on its lower or bottom wall, which are arranged to extend somewhat below the bottom of said box and are preferably screw threaded for the reception of screw threaded nipples B B in the same manner shown. As also shown in the drawings, the box or casing A is provided in its side or end walls with similar tubular projections *a' a'*. Within the box or casing A are provided suitable transverse supports C C, upon which a longitudinal bar or strip D of insulating material is secured. A series of transverse connecting strips E E are secured to the upper surface of the bar or strip D, each of said connecting strips being constructed with an upwardly arched central part *e*, as shown. When a strip is divided in the middle, making a pair of contact sections as shown in the second of the strips E from the left of Fig. 1, the fact that the said middle part is thus arched allows the severed ends to be easily depressed so as to come into

contact, or they may overlap as shown in the modification illustrated by Fig. 3, so that some form of connecting device may be passed through one of them and into or against the other. The arching of one of them will suffice to allow the making and breaking of circuit in this latter way. The opposite ends of the connecting strips E E are arranged to extend slightly beyond the sides of the bar D and are provided with suitable apertures or slots *e' e'* for the reception of the ends of the wires of the cable, and those leading to the instruments to be operated.

Upon the lower ends of the nipples B B, are conveniently secured downwardly extending sections B' B' preferably of lead pipe, and these sections are preferably secured to the ends of the nipples, by means of "wiped joints" *b b*. These sections B' B' are made of pipe somewhat larger in diameter than the cables F F', which carry the electric wires, and these cables are slipped up through said sections and the nipples B B, into the casing A. Both cables contain the same number of wires *f f* which are insulated from each other in the ordinary manner. In connecting up the wires of the cables within the box, the wires *f f* of one cable are electrically connected with the ends of the strips E E upon one side of the bar D, and the wires *f f* of the other cable with the ends of said strips upon the other side of the bar D, so that, so long as said strips remain intact, each pair of wires is electrically joined by one of said strips. When the ends of the lengths of cable have been properly inserted and the wires connected with the strips, the cables may be secured to the tubular sections B' B' by "wiped joints" *b' b'* similar to the joints *b b*, thereby making a strong and absolutely water tight connection.

The tubular extensions *a' a'* are normally closed by tight fitting corks or rubber plugs, but when it is desired to connect an instrument with a pair of the wires which are carried into the box, the cork or plug is removed, the service wires carried through the tubular extension *a'*, and electrically joined to the opposite ends of the desired connecting strips

E, after which the arched central part *e* of said strip is severed in twain and the ends bent apart so as to prevent accidental contact. When all the connections have been properly made, the entire box is preferably filled with an insulating compound G, as shown, and a suitable cover H secured upon the top of the box by suitable bolts or screws *h h'*, with a packing *h'* of rubber between the cover and the top of the box.

In the particular form of construction shown in Fig. 3, the connecting strip is formed from two sections I I' arranged to extend one above the other, and normally electrically connected by a screw *i*. By this construction, when it is desired to connect an instrument with a pair of wires, the screw *i* is simply removed in order to sever the connection between the sections I and I', instead of cutting the strip in two as in the form first described. By this method of connection, the circuits remain intact, and continuous throughout the entire length of the cable, and the service wires leading to the individual instruments to be operated, simply form loops in the several circuits.

As many pairs of service wires as desired may be carried out of the box through the tubular extensions *a'*, but in the drawings, we have shown but one pair.

Our improved form of distribution box is exceedingly simple and cheap of construction, and is rendered safe against any leakage of the current, by reason of the perfectly tight joints between the several parts, and the consequent imperviousness to moisture.

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

1. A series of pairs of contact sections, each pair being constructed and adapted to open or close the circuit at will, in combination with an inclosing casing for the series, and two lengths of cable, each containing a plurality of wires and leading into the said casing, each contact section being connected to one of the wires, and the other contact section of the same pair being connected to the

corresponding wire of the other cable substantially as set forth.

2. A series of pairs of contact sections, each pair being constructed and adapted to open or close the circuit at will, in combination with a common support for the said series, an inclosing casing for the same, and two lengths of cable each containing a plurality of wires and leading into the said casing, each contact section being connected to one of the wires and the other contact section of the same pair being connected to the corresponding wire of the other cable substantially as set forth.

3. The combination of two lengths of cable and a plurality of line wires contained in each of them with a suitable box or casing into which the ends of the said cables are led, a bar or support of insulating material arranged within the said box or casing and the connecting strips E attached to the said support and having raised middle parts to facilitate the opening and closing of the circuit through them, the said strips being respectively connected to the several pairs of wires substantially as set forth.

4. The combination with two lengths of cable and a plurality of line wires contained in each of them with a suitable box or casing into which the ends of the said cables are led, a bar or support of insulating material arranged within the said box or casing, connecting strips or contacts supported by the said bar and arranged in pairs, insulating material interposed between the proximate ends of each pair of contacts, and a screw connecting at will the said ends, each pair of wires being connected to a pair of contacts, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

OSCAR D. KLEINSTEUBER.
MONROE A. KLEINSTEUBER.

Witnesses:

JOHN E. WILES,
N. E. OLIPHANT.