(No Model.)

A. D. POOLE.

SAFETY SUPPORT FOR OVERHEAD ELECTRICAL CONDUCTORS.

No. 537,715. Patented Apr. 16, 1895.

Fig. 1.

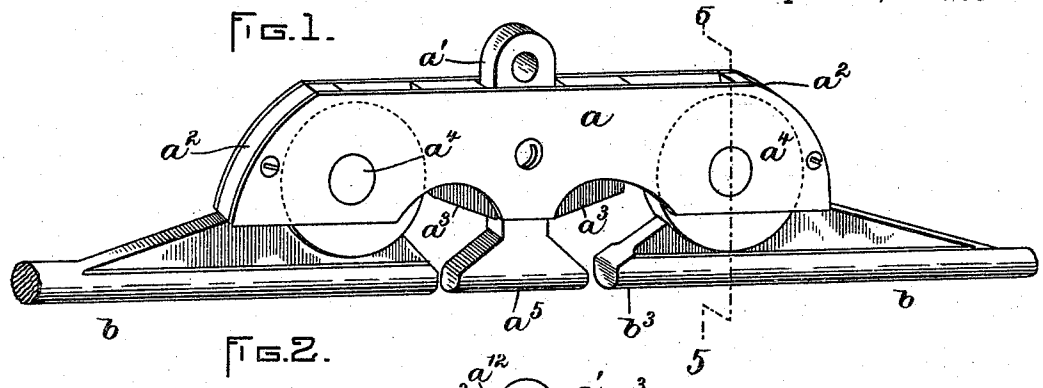


Fig. 2.

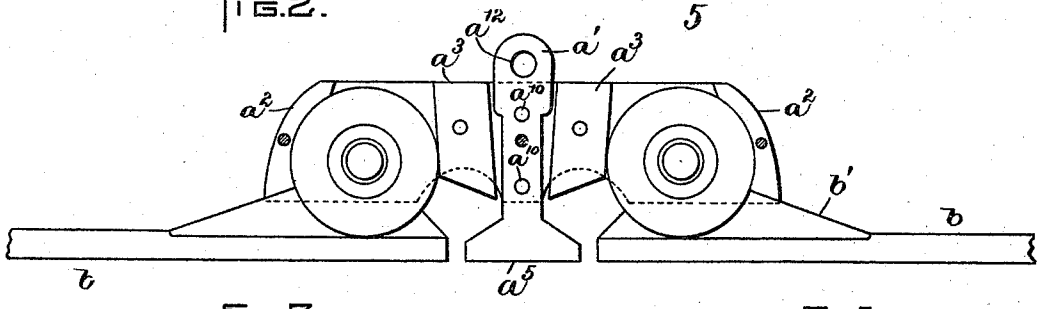


Fig. 3.

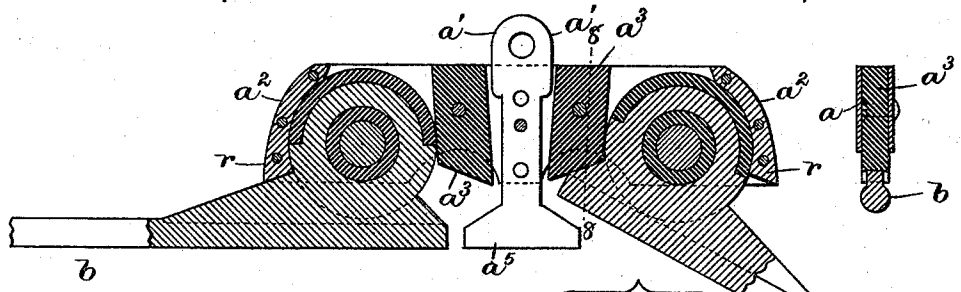


Fig. 8.

Fig. 6.

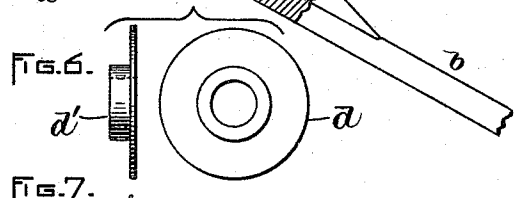


Fig. 4.

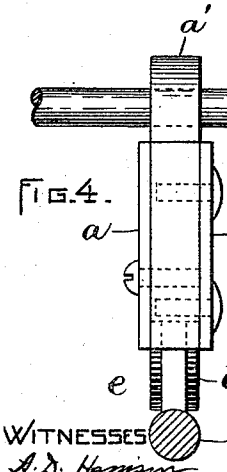


Fig. 5.

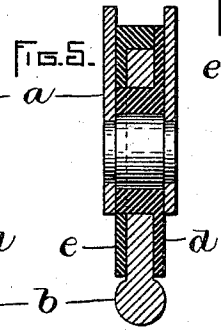


Fig. 7.

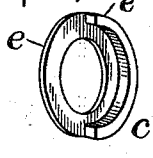
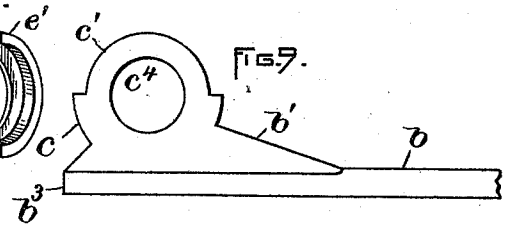


Fig. 9.



WITNESSES
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W. P. Abell.

INVENTOR:
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by Wright, Brown & Quinby
attys

UNITED STATES PATENT OFFICE.

ALEXANDER D. POOLE, OF BOSTON, MASSACHUSETTS.

SAFETY-SUPPORT FOR OVERHEAD ELECTRICAL CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 537,715, dated April 16, 1895.

Application filed August 13, 1894. Serial No. 520,143. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER D. POOLE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Safety-Supports for Overhead Electrical Conductors, of which the following is a specification.

My invention relates to an improvement in safety supports for overhead electrical conductors in which an overhead wire or conductor forms one part of the circuit, the other part of the circuit being the ground or an underground wire, as is common in electrical railways.

My invention has for its object, among other things, to provide a more simple mechanism than is now employed, whereby when the overhead wire or conductor is broken, the circuit may be instantaneously cut off from the broken portion of the wire which hangs down in order to prevent accidents.

My invention consists in certain novel features of construction and arrangement of parts, which will be fully hereinafter described and particularly pointed out.

In the claim reference is to be had to the accompanying drawings and the characters marked thereon, which form part of this specification, like characters designating like parts or features as the case may be, wherever they occur.

In the drawings, Figure 1 is a side elevation of my improved device. Fig. 2 is a similar view with one side of the plate removed. Fig. 3 is a view similar to Fig. 2, showing one of the arms in the position it would occupy when the connecting wire is broken. Fig. 4 is an end view of the support. Fig. 5 is a section on the line 5—5 of Fig. 1. Figs. 6, 7, 8 and 9, are detailed views.

In the drawings a a represent two plates of conducting material of the general form shown in the drawings, one of said plates being provided with a stud or bearing, a^4, which projects into an opening formed therefor in the other plate. a' is a bar of conducting material secured between these plates by bolts or rivets a^{10}. This bar is provided at its upper end with an aperture a^{12} in which the usual cap is secured, for holding up the wire and support. This bar is provided at its lower end with an enlargement a^5, as shown.

a^2 represents two pieces of conducting material secured between the ends of the plate, the inner side of such pieces being recessed in a circular form. a^3 represents blocks of insulating material secured between these plates and between the bar a' and the studs a^4.

b b represent two arms of conducting material to the ends of which the conducting wire is attached, on which the trolley rolls. The other ends of these arms when in position are situated closely to the enlargement a^5, so that enlargement a^5 forms practically a continuation of the two arms. These arms are provided with a circular web c, having an aperture c^4 and a reduced portion c'. b' is a raised part or web of the arm b connecting the web and arm and arranged to form contact with the pieces a^2 at the lower end r thereof. Since these arms are practically duplicates of each other, a description of one will suffice for both.

b^3 is a projection on the inner ends of the arms, arranged to come in contact with the insulating blocks a^3. The insulating sleeve d' is mounted upon the studs a^4 having formed integrally therewith a disk d, the parts d' and d being formed of insulating material.

e represents a ring or disk of insulating material having formed on a portion of its outer edge circular flange e', arranged to fit over the depressed portion c' of the web c. In assembling the parts, the sleeves d' and disk d are slid upon the studs a^4. The arms b are then placed in the position shown in the drawings, the aperture in the web of the arm fitting over the sleeves d'. The disk or ring e is then placed upon the web c, the flange e' fitting over the reduced portion c' of said web.

From this form, construction and arrangement, it will be seen that the arms b are insulated from the frame or plates and from each other, except when the raised portion or web b' of said arm is in contact with the lower end r of the pieces a^2. This position of the arms is the normal position when the wires are intact and the circuit closed. Should, however, the wire attached to either of the arms b become broken, the arm b to which such broken wire is attached, will drop by gravity and swing upon pivot or stud a^4, the projection b^3 of said arm coming in contact with the insulating block a^3, and the web b' leaving the piece a^2, thus breaking the circuit

and rendering the wire attached to said arm safe to handle and free from danger by contact.

From the foregoing it will be seen that I have provided an exceedingly simple and efficient form of safety support, one in which from the small number and simplicity of the parts is not liable to get out of order, and which is efficient and certain in operation.

In places where there are curves this frame may be bent if desired, to conform to the curvature of the line.

Having thus explained the nature of my invention and described the way of constructing and using the same, though without attempting to set forth all the forms in which it may be made or all the modes of its use, what I claim, and desire to secure by Letters Patent, is—

A safety support for electrical circuits, comprising a frame of conducting material, two studs mounted upon the ends of said frame, an insulating sleeve and disks on said studs, arms of conducting material mounted upon said sleeves and between said disks, insulating blocks between said studs in the path of a projection b^3 on said arms, and a raised portion or web b' on said arms arranged to form contact with the outer end of said frames substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 3d day of August, A. D. 1894.

ALEXANDER D. POOLE.

Witnesses:
WILLIAM QUINBY,
A. D. HARRISON.