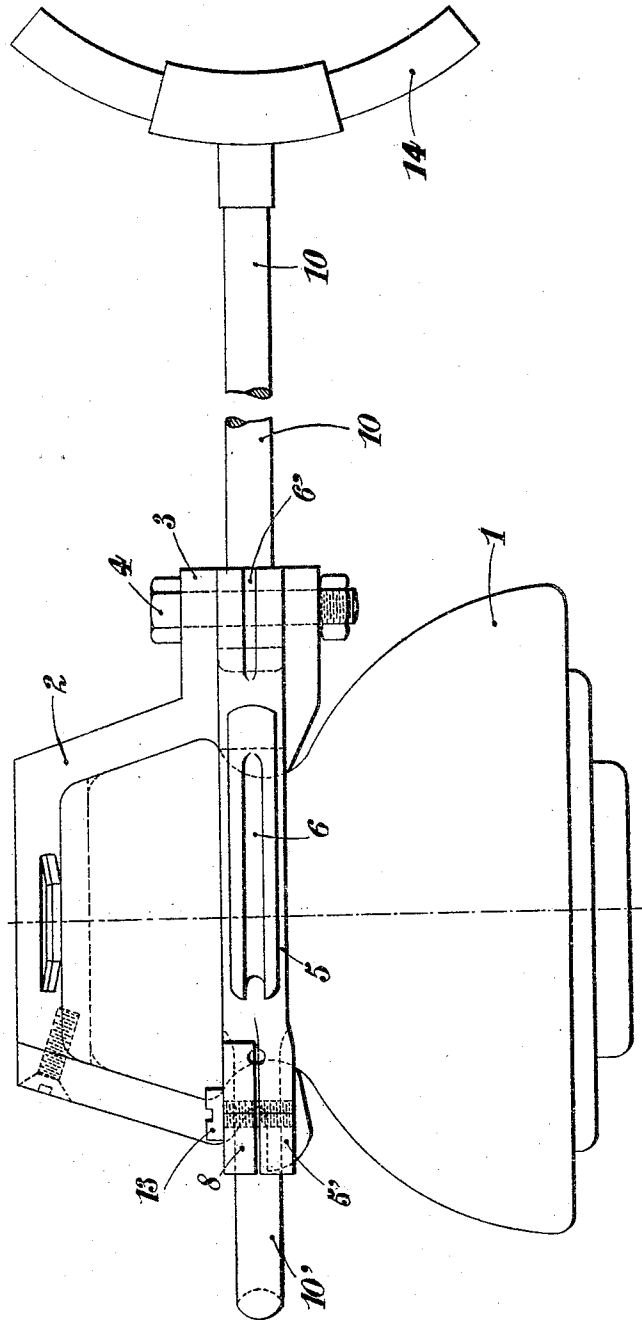


E. GIRAUD.
SAFETY DEVICE FOR OVERHEAD ELECTRIC CONDUCTORS.
APPLICATION FILED OCT. 4, 1906.

940,525.

Patented Nov. 16, 1909.
3 SHEETS—SHEET 1.

Fig. 1.



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Fig. 2.

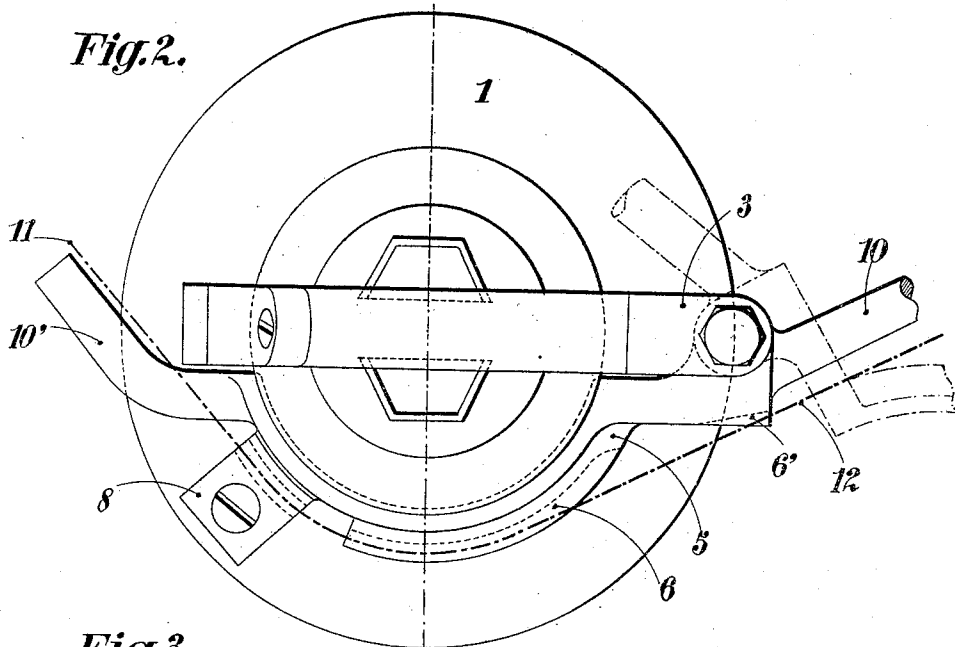
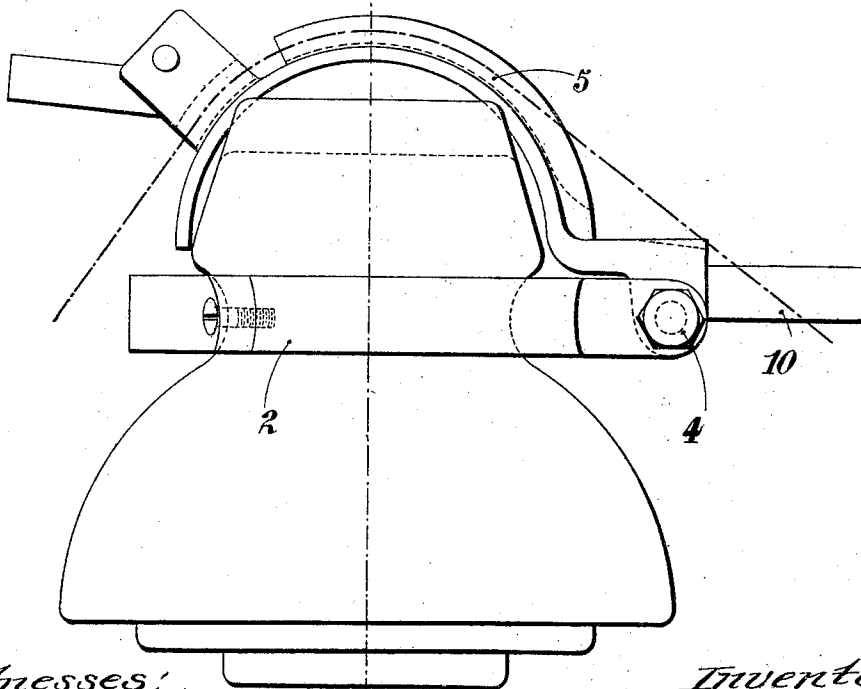


Fig. 3.



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3 SHEETS--SHEET 3.

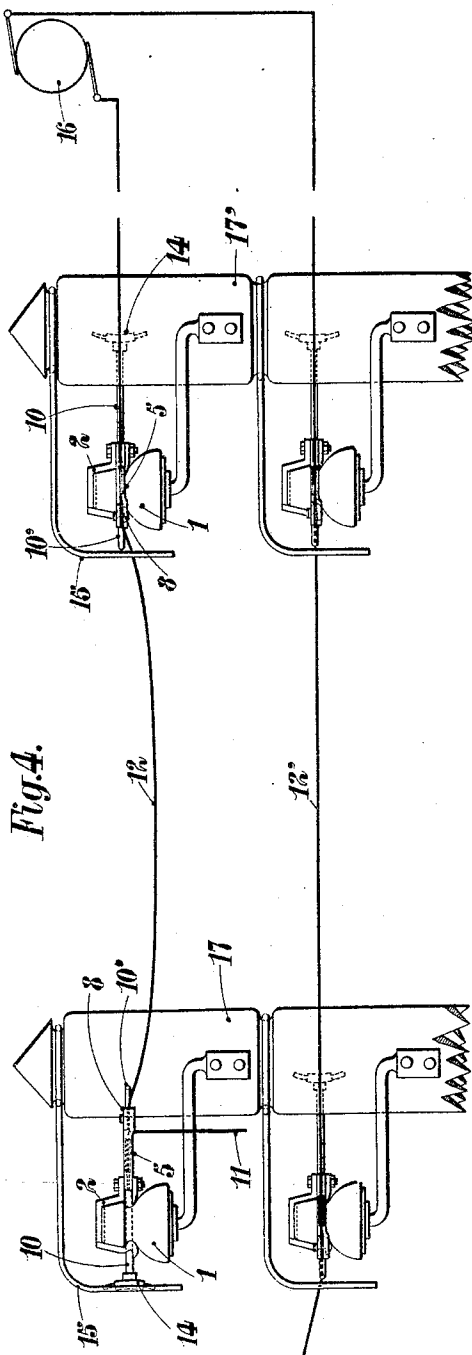


Fig. 4.

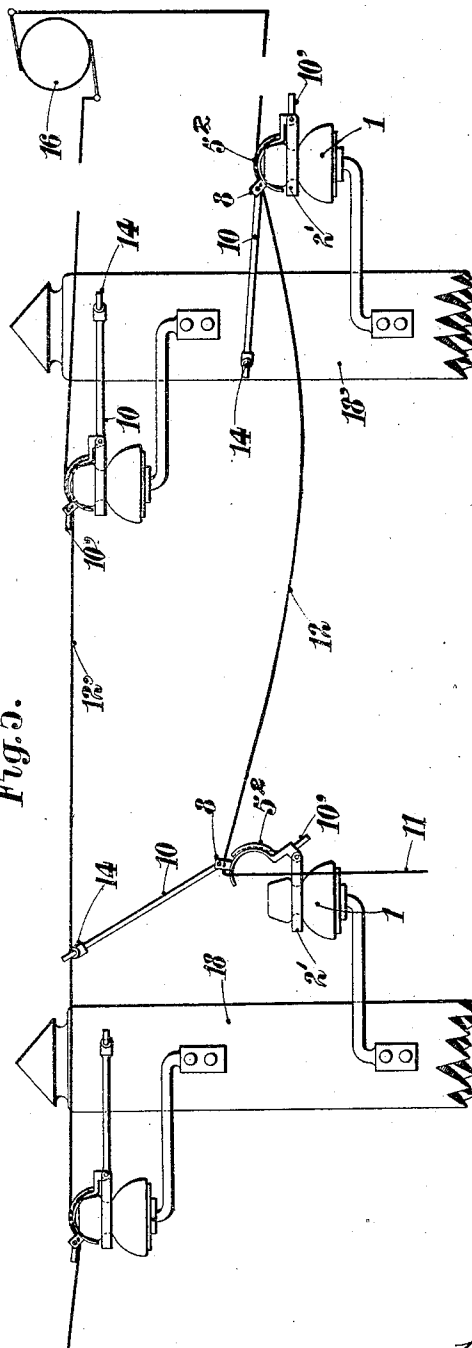


Fig. 5.

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UNITED STATES PATENT OFFICE.

EMILE GIRAUD, OF PARIS, FRANCE.

SAFETY DEVICE FOR OVERHEAD ELECTRIC CONDUCTORS.

940,525.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed October 4, 1906. Serial No. 337,457.

To all whom it may concern:

Be it known that I, EMILE GIRAUD, engineer, a citizen of the French Republic, residing at Paris, France, have invented certain new and useful Improvements in Safety Devices for Overhead Electric Conductors, of which the following is a specification.

This invention has for its object to provide means whereby in case of a high voltage overhead conductor breaking the same is connected to earth, or short circuited by another conductor in its vicinity.

The invention consists in means specifically used upon corner posts in connection with the apparatus described in U. S. Patent No. 826,845, granted July 24, 1906.

In the drawings—Figure 1 is a view in elevation of the invention; Fig. 2 is a plan view thereof; Fig. 3 is a view in elevation of a modification; Fig. 4 is a side view showing the grounding means and the construction shown in Fig. 2; and Fig. 5 shows the short circuiting means and the manner of operating the same as disclosed in Fig. 3.

Similar reference characters indicate corresponding parts throughout the several views.

In the drawings the numeral 1 designates an insulator having mounted thereon a metal piece 2, the latter embracing the upper portion of the insulator and is so attached thereto that it may be turned if desired thereon. The metal piece 2 is provided at one of its ends with an off-set 3 in which is pivoted by means of a bolt 4 an arch-shaped metal piece 5. The said piece 5 is provided with grooves 6 and 6' for receiving the electric conductor 12. The conductor 12 is maintained between a projection 5' formed on the metal piece 5 toward the free end thereof, and a detachable block 8 secured upon the projection 5' by means of a screw 13. The said piece 5 has opposite cylindrical or prismatic terminal projections 10 and 10'. Upon one of the same is mounted an arch-shaped piece 14 by means of which the conductor 12 when broken is short circuited. The insulators 1 are supported on posts 17 and 17', the latter carrying elements 15 for the grounding of the circuit and which leads to earth.

In Fig. 4 is shown the manner of arrangement of the safety devices shown in Figs. 1 and 2. On each of the posts 17 and 17' are mounted insulators 1, one arranged a dis-

tance above the other on each of said posts, and connected thereto are the metal pieces 2 which embrace the upper part of each insulator and having connected with said piece 60 the pivotal arch-shaped piece 5 carrying the conductors 12 and 12' for electrical connection with a generator 16. As stated, the pivotal piece 5 carries the arch-shaped piece 14 for contact with the ground element 15 65 when the conductor 12 is broken.

In operation, of the construction shown in Fig. 4, supposing the conductor 12 breaks at 11, the own weight of said conductor 11 causes it to sag and by reason of the same 70 being connected between the pieces 5' and 8 the pivotal piece 5 turns upon its axis 4, thus causing the arch-shaped piece 14 to be brought into contact with the ground element 15 so that the current passing through 75 the conductor 12 from the generator 16 is directed to earth and grounded.

In Fig. 5 are shown posts 18 and 18' upon which are mounted insulators 1, carrying metal pieces 2' which support the safety device as disclosed in Fig. 3, and it will be apparent that should the conductor 12 be broken at 11 the weight of conductor 12 will raise a pivotal piece as 5², elevating the arm 10 carrying the arch-shaped piece 14 so 85 that the latter will be brought into contact with the adjacent conductor 12', and by reason of this the current from the generator 16 passing through the conductor 12, will be short circuited through the medium of 90 the conductor 12'.

In the construction shown in Figs. 3 and 5 the pivotal piece 5² normally rests on the head of the insulator 1, and the raising thereof takes place by the conductor 12 bearing 95 on the projection 10' which will elevate the arm 10 to bring the arch-shaped piece 14 in contact with the adjacent conductor 12'.

Having described the invention what is claimed, is:— 100

1. In a safety device for overhead electric conductors, an insulator, a metal piece embracing said insulator, an offset on said metal piece, an arch-shaped member pivotally connected to said offset and adapted 105 to swing away from the insulator and having a groove for receiving the conductor, clamping means for securing the latter to said member, oppositely disposed projections on said member, a short-circuiting device adjacent to the insulator, and a contact arm on one of said projections and adapted 110

to be automatically brought into engagement with the short-circuiting device when the conductor has been severed.

2. In a safety device for overhead electric
5 conductors, an insulator, an embracing member carried on the insulator, an arch-shaped member pivotally connected to the embracing member and adapted to swing away from said insulator, means carried by the
10 arch-shaped member for locking the conductor thereto, a short-circuiting device located near the insulator, and means ex-

tending outwardly from said arch-shaped member and adapted to be automatically shifted into contact with the short-circuiting 15 device upon the breaking of the conductor.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EMILE GIRAUD.

Witnesses:

PAUL BLUM,
MASOR RIVAUD.