

P. RUTZKY.
INSULATOR.

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1,016,780.

Patented Feb. 6, 1912.

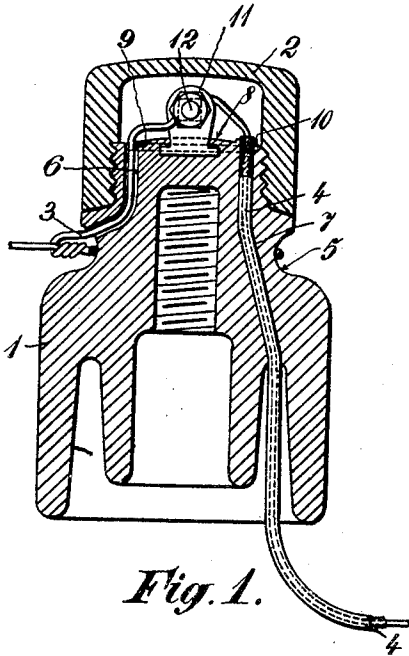


Fig. 1.

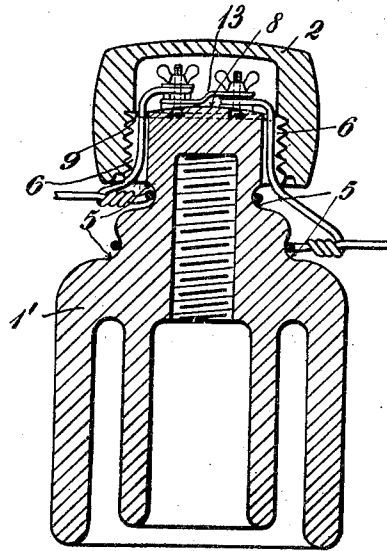


Fig. 3.

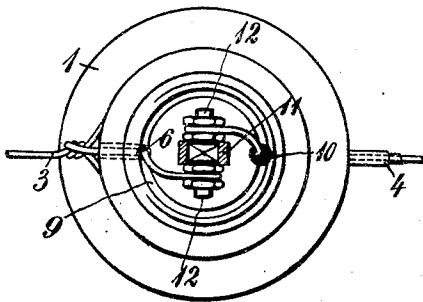


Fig. 2.

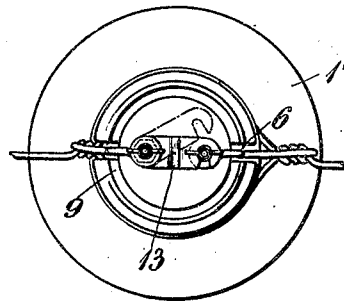


Fig. 4.

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UNITED STATES PATENT OFFICE.

PAUL RUTZKY, OF CREFELD, GERMANY.

INSULATOR.

1,016,780.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PAUL RUTZKY, a subject of the German Emperor, and residing at Crefeld, Germany, have invented certain new and useful Improvements in Insulators, of which the following is a specification.

My invention relates to insulators and particularly to insulators for telegraph and telephone lines, and a primary object is to provide improved leading-in and testing insulators for such lines.

According to my invention both the bare wire and the lead-covered, leading-in cable are led through ducts in the body of the insulator into a closed chamber under a cap screwed onto the body of the insulator and there connected electrically together, the bare wire being led directly from the outside, and the leading-in cable from under a petticoat to the chamber under the cap. Owing to this improved arrangement the most sensitive part about the insulator, *i. e.* the joint below the bare wire and the insulated, lead-covered, leading-in cable, is protected from all the influences of the weather and particularly from moisture. Consequently no shunt can arise, and the joint between the two conductors does not require to be made by soldering as heretofore, but may be made by ordinary connecting terminals or switch levers. The peculiar arrangement of the ducts for the conductors prevents the formation outside the cap of shunts between the bare wire on the one hand and the insulator support and the cable on the other hand.

Two illustrative embodiments of my invention are represented by way of example on the accompanying drawing, wherein:—

Figure 1 is a vertical section through a leading-in insulator, and Fig. 2 is a top plan view of the same after the cap has been removed; Fig. 3 is a vertical section through a testing-insulator, and Fig. 4 is a top plan view of the same after the cap has been removed.

Like reference characters designate like parts in all views.

Referring firstly to Figs. 1 and 2, 1 designates the body of the insulator, 2 the cap screwed thereon, 3 the bare line, and 4 the insulated, lead-covered leading-in cable. The body 1 of the insulator has a known

construction or groove 5 for receiving the bare line, and I arrange the duct 6 for this line leading directly from this groove into the chamber under the cap. The duct 7 for the leading-in cable does not begin outside the insulator but within the petticoat thereof. I make the end face 8 of the body of the insulator concave and provide at the foot of the curvature an annular channel, so that any water which condenses under the cap can collect in this channel and flow away through the duct 6. In order to prevent contact being made between this water of condensation and the leading-in cable, I provide duct 7 at its end under the cap with an elevated edge 10. I provide one or more projections 11 on the top of the insulator; these serve for carrying connecting bolts 12 or the like.

My invention is also particularly suitable for testing-insulators. In this event it is not a matter of connecting one bare line with an insulated cable, but of connecting two sections of the same bare wire in such manner that the line can be readily interrupted at any time for testing purposes.

Referring to Figs. 3 and 4, the body 1' of the testing-insulator has not one, but two constrictions or grooves 5. The end of one section of the line is wound in each of these constrictions around the insulator and then led through the ducts 6 to below the cap where they are connected by a switch 13.

I claim:—

1. A leading-in insulator having a detachable cap for telegraph and telephone lines, in which both the bare line-wire and also the leading-in cable are led through ducts in the body of the insulator into the closed chamber under the cap and are there electrically connected, the bare line-wire being brought in from the outside while the leading-in cable enters from the interior of the petticoat chamber, the duct for the bare line-wire opening into an annular channel at the edge of the convex head of the insulator, from which channel water collected in the chamber can flow away through the duct for the bare line-wire, while the leading-in cable is surrounded so closely by its duct that condensed water cannot issue through this duct.

2. An insulator, particularly for telegraph and telephone lines, comprising in

combination, an insulator body having a
concave top face, a lateral external groove,
and a petticoat, said face having a channel
in the same; and a detachable cap forming
5 a chamber inclosing said face; said body
having a duct leading directly from said
groove to said channel and a second duct
leading from under said petticoat to said

channel, the latter duct having an elevated
edge at said channel.

In testimony whereof, I affix my signa-
ture in the presence of two witnesses.

PAUL RUTZKY.

Witnesses:

GERTRUD BONA,
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