

F. ZACHHUBER.
INSULATOR FOR AUTOMATICALLY SECURING CONDUCTING WIRES.
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1,045,353.

Patented Nov. 26, 1912.

Fig. 1

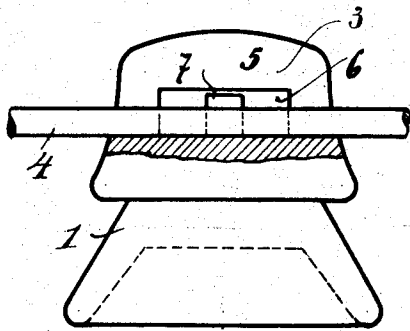


Fig. 2

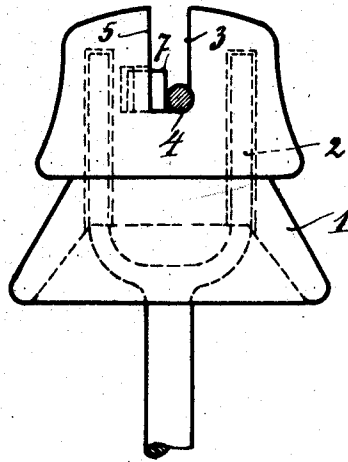
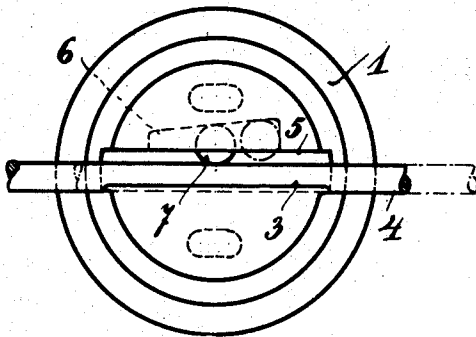


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANZ ZACHHUBER, OF NUREMBERG, GERMANY.

INSULATOR FOR AUTOMATICALLY SECURING CONDUCTING WIRES.

1,045,353.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed October 26, 1911. Serial No. 656,840.

To all whom it may concern:

Be it known that I, FRANZ ZACHHUBER, a subject of the German Emperor, and resident of Nuremberg, Germany, have invented certain new and useful Improvements in Insulators for Automatically Securing Conducting Wires, of which the following is a specification.

The invention relates to that class of insulators for conducting wires in which the wire is automatically secured in its stretched condition by means of a clamping body which is movable in a hollow of the insulator head. Insulators of this class, in which the wire is secured by means of balls which are moving in a groove of the insulator head, are known, but they are practically improper. In effect the balls are pressing at one side on the wire and at the other side on the upper edges of the groove which are partly extending, and which consequently are the weakest parts of the insulator head, so that said edges are rapidly broken off by the interior clamping pressure.

The present invention has for its object to avoid this drawback. This object is attained through the combination of an insulator provided with a groove, on one wall of which groove is disposed a hollow which is gradually enlarging toward one end of the groove and which contains a laterally acting clamping roller and of a forked support of a well known construction, to the inwardly extending prongs of which the clamping pressure is transmitted in a vertical direction.

In the accompanying drawing: Figure 1 is a view of the insulator with the top partly cut away. Fig. 2 is a top view of the same. Fig. 3 is a side view.

1 designates the body of the insulator made of the usual materials. The insulator is supported by a fork 2, the prongs of which are extending into the top or head of the insulator. Said head is provided with a vertical groove. One wall 3 of said groove is provided with a channel in which partly extends the conducting wire 4. The other wall 5 of the groove is provided with a hollow 6 which is gradually enlarging toward one end of the groove. Within said

hollow is loosely located a clamping roller 7 in such a manner that its rolling surface is applied against the wall of the hollow 55 and partly extends into the groove outside the hollow 6. The conducting wire 4 is engaged between said clamping roller 7 and the groove wall 3.

When fitting up, the wire is engaged into 60 the groove of the insulator head and located between the clamping roller 7 and the groove wall 3. The insulator is to be mounted in such a manner that the roller hollow 6, in which the roller is moving, is 65 enlarging in the direction in which the wire is being stretched. The clamping roller 7, which is forced back into the enlarging hollow 6, cannot make any resistance against the wire being stretched. To secure the 70 wire in its stretched condition, it is only necessary to engage it against the clamping roller and to let it go gently back for automatically securing the wire by the clamping roller which is forced to move with the 75 wire and acts as a wedge when rolling over the inclined bottom of the hollow 6. Consequently the clamping pressure is transmitted vertically to the prongs of the forked support, so that a bursting of the insulator 80 head under the influence of the clamping pressure will certainly be avoided. The forked supports allow of dispensing with the wire catching means which are used now for receiving wires getting loose, since if an 85 insulator gets bursted, for instance by a stone's throw, the wire is received between the prongs of the forked support. Of course the clamping roller could be substituted by any other device having the same 90 effect and the shape of the groove and of the body of the insulator might also be modified.

Having now fully described my said invention, what I claim and desire to secure 95 by Letters Patent, is:

A conducting wire insulator for automatically securing the wires, comprising a body of insulating material, a groove in the upper part of said body, a channel having 100 a rounded section provided in the lower part of one of the groove walls for receiving a part of the wire section, a clamping roller moving into a hollow which is gradually

narrowed in the direction of the pull exerted by the stretched wire so as to automatically secure said stretched wire by the wedging action of the roller, a forked support, the prongs of which are extending into the insulator head on both sides of the groove, for avoiding the bursting of said head under the wedging strain and for receiving the wire between its prongs if the insulator gets bursted.

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

FRANZ ZACHHUBER.

Witnesses:

OSCAR BOCK,

RENK PUFFCUTEMA.

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