

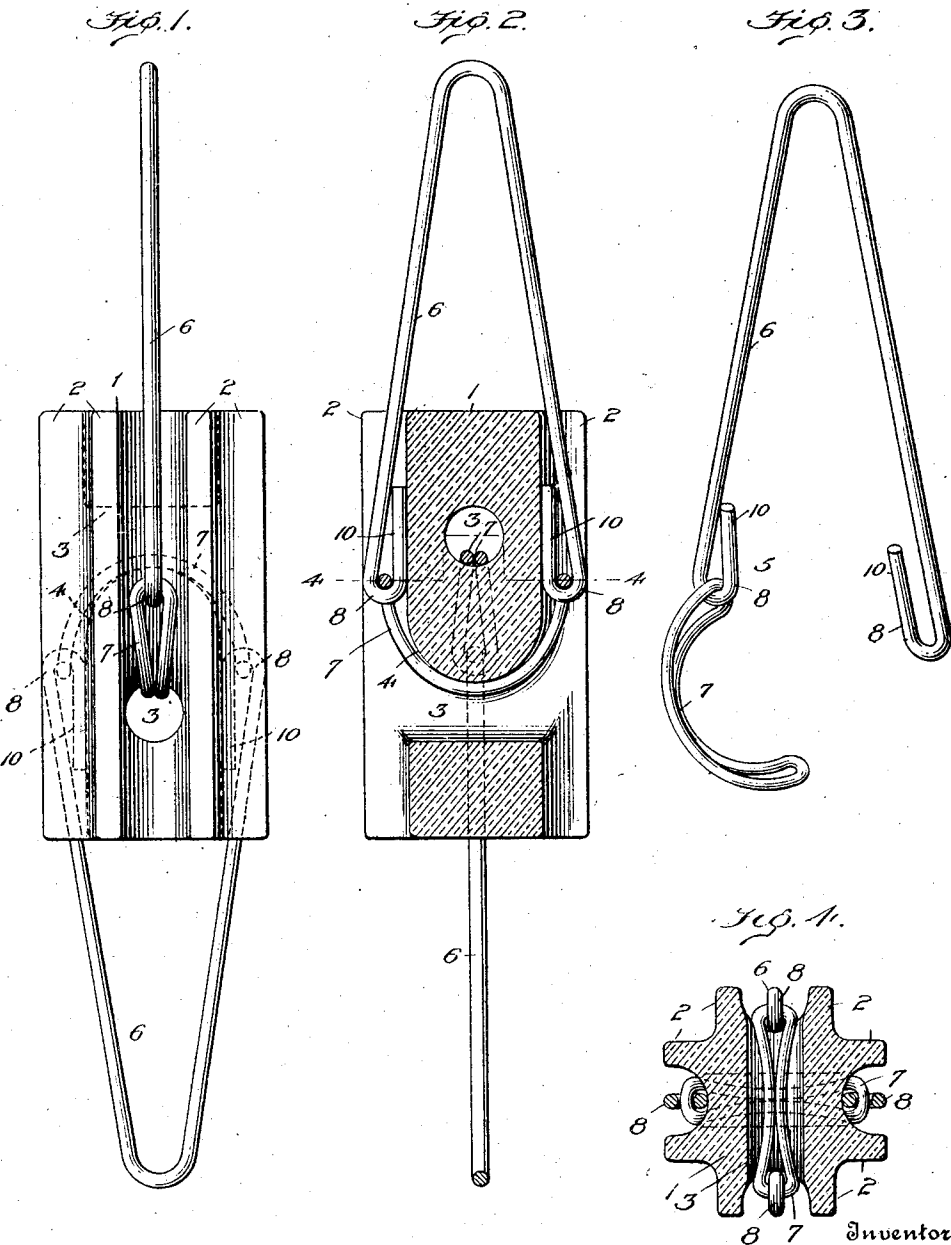
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INSULATOR

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Witness

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UNITED STATES PATENT OFFICE.

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INSULATOR.

Application filed September 8, 1921. Serial No. 499,295.

The invention relates to insulators, and more particularly to improved means for connecting insulators to guy ropes and similar members.

5 The invention relates to improvements in the connecting device illustrated and described in the copending application of Minor F. H. Gouverneur, filed September 8, 1921, Serial No. 499,172.

10 The principal object of my invention, generally stated, is to simplify the connection between a ball strain insulator and a guy rope or the conductor terminating on tower or pole. To this end I provide a simple, reliable and economical connection adapted to be engaged by the linemen without the use of tools other than those usually carried by those men.

In the drawings, wherein I have illustrated a single embodiment of my device,—

20 Figure 1 is a view in side elevation of a ball strain insulator showing the improved form of connector applied thereto.

Figure 2 is a transverse vertical section of Fig. 1.

25 Figure 3 is a perspective view of the connector showing the same unlocked or in condition to be assembled with an insulator.

Figure 4 is a section on line 4—4 of Fig. 2.

30 Throughout the specification and drawings like parts are designated by like reference characters.

In the particular embodiment of the device here illustrated the conventional type of ball strain insulator is indicated by the reference numeral 1. It might be here pointed out that although I have shown my connector with a ball strain insulator, I do not limit my device to use in that connection, since my form of connecting device may advantageously be employed with many other types of insulators, as will be readily apparent to those skilled in the art.

35 The insulator 1 is provided on its exterior surface with a plurality of outwardly projecting wings or fins 2 the purpose of which is to increase the surface leakage distance between the parts of the connector. Passing between the aligned pairs of the projections 2 are openings 3 suitably spaced from the ends of the insulator and arranged at right angles to each other. The upper face or surface of the lower opening and the lower face of the upper opening 3 are preferably provided with curved surfaces 4, as clearly indicated in 40 Figs. 1 and 2.

To connect the insulator to a guy rope or to the tower carrying the transmission line, I provide a connecting device generally designated by the reference numeral 5. This device preferably comprises a loop member 6 and a link member 7. Said link is for convenience formed from a ring having the adjacent ends thereof welded together. The ring is then flattened or suitably shaped into the form shown most clearly in Fig. 3.

60 The loop member 6 is provided at its free ends with integral hooks 8 which engage the coacting ends of the link member 7.

65 It is the custom to provide strain insulators of the type illustrated with openings having a maximum diameter of approximately three quarters of an inch, and in fact it is of vital importance to limit the size of the openings in all insulators. The connecting device is preferably formed with a wire having a diameter of one quarter of an inch, since wire of this gage has a maximum strength far in excess of that required for a connector in an insulator. It is to be observed that the flattened ring forming the link member 7 and likewise the hook portions 8 of the loop member 6, have a maximum width which permits either the hooked end of the loop member 6 or the looped ends of the link member 7 to pass freely through the opening in the insulator.

70 To connect the device the link member 7 is preferably joined to one of the hooks 8 of the members 6 as shown in Fig. 3. The opposite leg of the loop member 6 is then passed through the opening in the eye bolt or looped end of the guy rope, as the case may be, and the link member 7 is then inserted within the opening 3. The curved face of the link member is preferably symmetrical with the curved bearing faces 4 of the insulator and the link is associated with the insulator in such manner as to bring these curved bearing faces into engagement. The open hook of the opposite leg of the loop member 6 is then forced into coupling engagement with the free end of the link 7 and is then forced upwardly into substantially the position shown in Fig. 2. In assembled position the bills 10 of the hooks 8 are substantially parallel to the walls of the insulator against which they contact. This engagement holds the ends of the hooks in fixed position so that strain upon the loop member serves to force the latter into close engagement with the adjacent members. The 110

wire is of sufficient rigidity to prevent the flexing of the hook portion under strain. By my arrangement I provide a simple form of insulator connecting mechanism in which the
5 greater the strain placed upon the insulator the tighter the connection between the parts of the connector becomes.

What I claim is:—

1. The combination with an insulator of the
10 strain type provided with a plurality of curved passages therein, of means for connecting said insulator to an adjacent member, said means comprising a pair of coacting
15 members, one of said last named members conforming to and being adapted to extend through one of the said passages in said insulator, the other coacting member having
20 integral hooks for connecting the said members, the ends of the hooks engaging against the sides of the insulator and being held
25 closed thereby for preventing the disengagement of said coacting members.

2. Supporting means for a strain insulator having a curved passage therethrough and
25 longitudinal grooves merging thereinto, com-

prising a link adapted to be located within said passage and terminating in eye portions, and a loop including arms having their ends formed with inwardly extending hooks engageable within said eyes, the bill portions of
30 the hooks engaging against the insulator at the bottom of the grooves therein whereby the hooks will be maintained closed to prevent disengagement thereof from the link.

3. Supporting and connecting means for an
35 insulator having a passage therethrough, comprising a link adapted to be disposed within said passage and formed as two curved integral arm portions connected by eye portions, and a loop having a pair of arms ter-
40 minating in hooks for engagement within said eye portions, one hook being initially in engagement with the link and closed and the other hook being initially open, said hooks
45 having bill portions directed toward each other and said bill portions engaging against the opposite sides of the insulator and being held closed thereby.

In testimony whereof I affix my signature.

KENT ALLEN HAWLEY.