

(No Model.)

J. A. SEELY.
INSULATOR.

No. 296,881.

Patented Apr. 15, 1884.

Fig. 1,

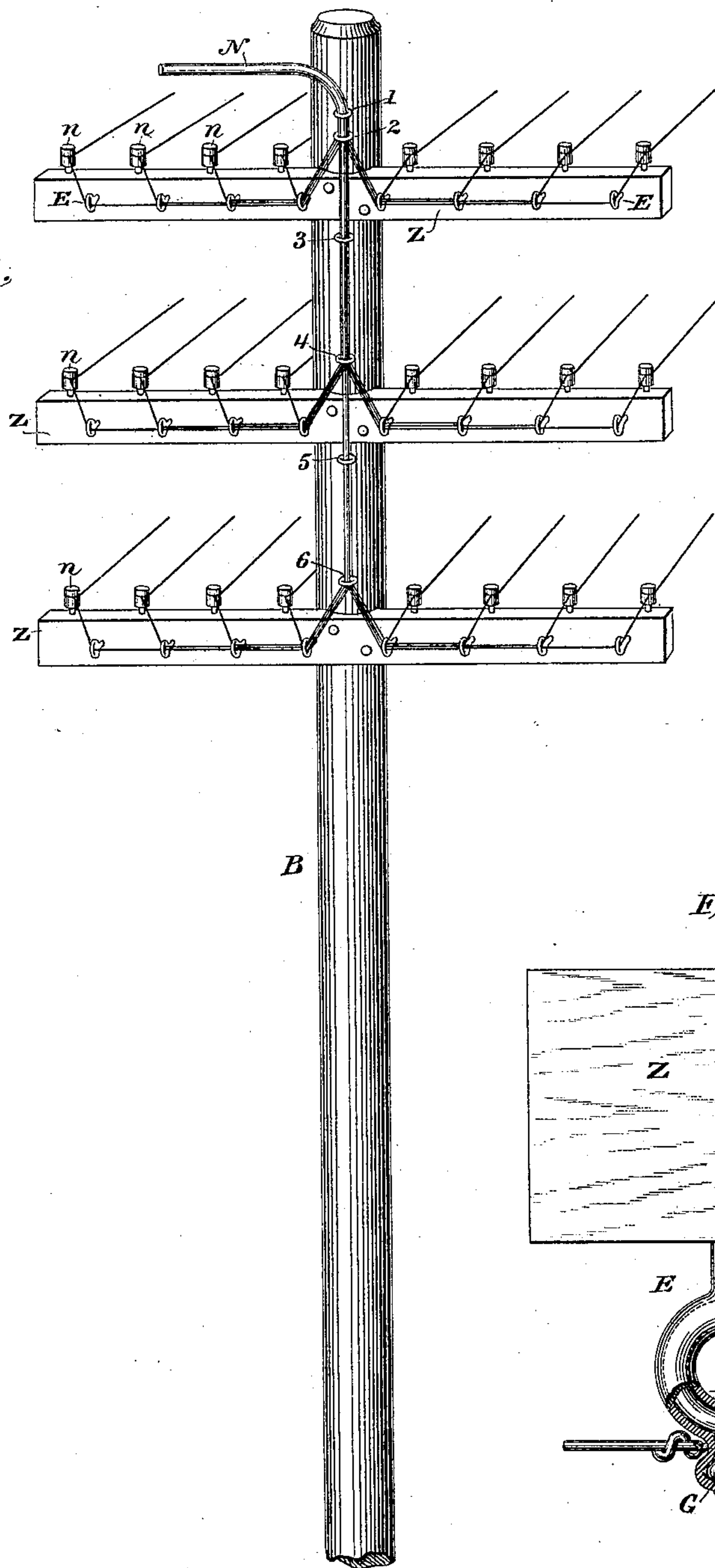
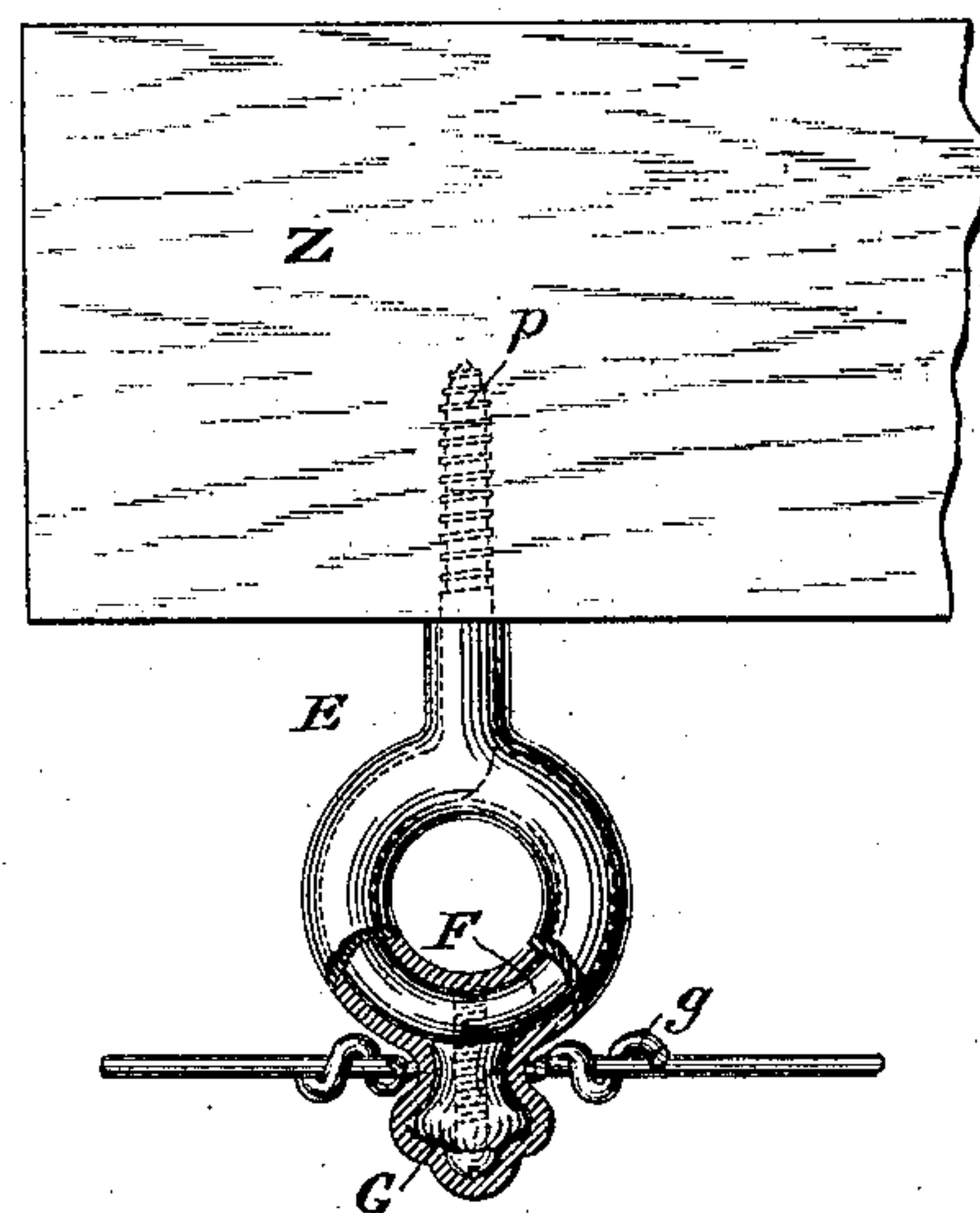


Fig. 2,



WITNESSES

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INSULATOR.

SPECIFICATION forming part of Letters Patent No. 296,881, dated April 15, 1884.

Application filed January 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. SEELY, a citizen of the United States, residing in the city, county, and State of New York, have invented
5 an Improved Insulator, adapted for attachment to cross-arms of telegraph-poles or other like supports designed to carry a series of telegraph-lines, and a method of distributing a large number of wires from a cable upon the
10 cross arms or supports.

Where many individual wires comprising a single cable are brought to a telegraph-pole, and thence distributed to different points or stations, it is preferable that the wires be run
15 in groups, when separated from the cable, along the cross-arms, and that the wires of each group be connected, one at a time, along the cross-arm to insulated and anchored supports.

20 My invention consists of an insulating-eyelet, which may be conveniently attached to the cross-arms of telegraph-poles or other supports, and which are adapted to carry a series or group of wires, whereby the individual
25 wires of the group may be separated therefrom and run in divergent directions; and my invention also consists in the method described and shown of distributing the wires of a cable to separate anchors or supports upon the cross-
30 arms, as distinguished from the ordinary method of running wires singly from the cable directly to the anchors or insulating-supports of individual wires. To this end I employ a gimlet-pointed screw having its head
35 formed into a ring or eyelet, with an open space of from one to two inches in diameter. The entire head of the screw in the process of its manufacture is covered with a coating of plastic india-rubber to a thickness of about
40 one-eighth of an inch, and thereafter the rubber coating is vulcanized in any suitable manner, thereby forming a hard and substantial coating of vulcanized india-rubber, covering not only the interior and exterior of the ring
45 or annulus, but as well a considerable portion of the screw-shank to which the ring is attached.

Instead of vulcanized india-rubber, vulcanized gutta-percha may equally well be employed as a covering for the annulus of my in-

55 sulator. Both vulcanized india-rubber and vulcanized gutta-percha have the requisite insulating qualities, and both are sufficiently hard and tenacious to withstand the blows from a hammer which are required to start the gimlet-point of the screw into a wooden support.

My insulator having a gimlet-pointed screw and a ring-head, it may be screwed into an ordinary wooden cross-arm without first boring
60 holes therein. As hereinafter described, I fasten a knob upon the eyelet in the line of the shank by means of a strong screw, which passes directly through the knob, and also through the annulus of the eyelet. The gim-
65 let-screw may be started into the cross-arm by the blow of a hammer, and then, by means of a pin placed in the eyelet, it may be screwed into the cross-arm until firmly set.

Owing to the insulated covering of the ring
70 or eyelet, insulated wires may be passed through the eyelet without danger of cross-connecting the several conductors passing through the same, even though the insulated covering of the wires should be broken by
75 resting upon the annulus of the ring, since the ring would not form a metallic connection between two or more denuded conductors. An additional purpose in making the heads of the insulators into ring-eyelets rather than
80 hooks, as has heretofore been done, is to enable wires converging from all directions about the axis of the eyelet as they enter and emerge therefrom to be reliably held in position without the necessity of twisting or winding them
85 about anchors or shoulders.

As will be seen in Figure 1, E is a series of eyelet-headed insulating-supports; and the planes of the rings are, as nearly as may be, at right angles to the general direction of the
90 groups of wires passing through the eyelets. It is apparent, however, that, for a convenient distribution of the individual wires of the cable N, individual wires must be supported at all parts of the inner circumference of the eye-
95 let, which would be impossible were the eyelet only an open hook.

In Fig. 1, B is a telegraph-pole having cross-arms Z, in whose vertical faces the eyelet-headed supports are fixed, while upon their upper
100

horizontal surfaces glass or other insulating-supports are placed, to which the individual wires are separately anchored. The cable N, after having been anchored to the pole B, is
 5 passed through eyelets 1 2, and at the latter point the wires which are attached to cross-arm Z are separated from the others of the cable, and in like manner, after the remaining wires of the cable have passed through
 10 rings 4, 6, and 8, they are carried in groups along the faces of the cross-arms, through the eyelet-supports, and connected to insulators n, as shown.

Fig. 2 represents the eyelet-headed screw, having an eyelet, F, covered with gutta-percha, and Z is a cross-arm, into which the gimlet-point p of said insulator may readily be screwed. The ring-head of the screw is also provided with an insulating-knob, G, which is fastened
 20 to the eyelet F by a strong screw, to which a screw-driver may be applied for screwing the gimlet-point of the insulator into the cross-arm, and around the neck of knob G a conducting-wire, g, may be twisted for support.

I am aware that A. W. Hale's United States Letters Patent No. 294,384 disclose an insulator-hook which is provided with an insulating-covering, upon which is superposed a reinforcing sheet of metal, in order that the shank
 30 of said hook may be set into a wooden support by the blow of the hammer without injuring the insulating material. This feature I desire to disclaim, as it forms no part of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. An insulator having a shank provided with a gimlet-point for attaching said insulator

to a cross-arm, and a wire-supporting head whose surface is covered with vulcanized india-rubber or an equivalent material, as described. 40

2. An insulator for supporting electrical conductors, consisting of a gimlet-pointed screw, and a ring-eyelet whose surface is covered with vulcanized india-rubber or its equivalent, as described. 45

3. An insulator having a shank for attaching the same to a cross-arm, and an eyelet-head formed of a ring whose surface is covered with vulcanized india-rubber or its equivalent material, substantially as described. 50

4. The combination of an eyelet-headed screw, the ring of which is covered with insulating material, and an insulating-knob placed upon said ring, around the neck of which wire 55 may be wound.

5. The combination of a telegraph-pole, a cable made up of many individual wires, cross-arms, eyelet insulating supports, as described, and anchors placed upon said cross-arms, to which the wires are individually connected. 60

6. The combination of devices for distributing the wires of a cable upon the cross-arms of a telegraph-pole, which consist of means for separating the wires of the cable into groups, means for taking a group at a time from the cable at different points of its length, means for carrying each group along a cross arm or support, and for taking a wire at a time at different points along its length from the group, for the purpose set forth. 70

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Witnesses:

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