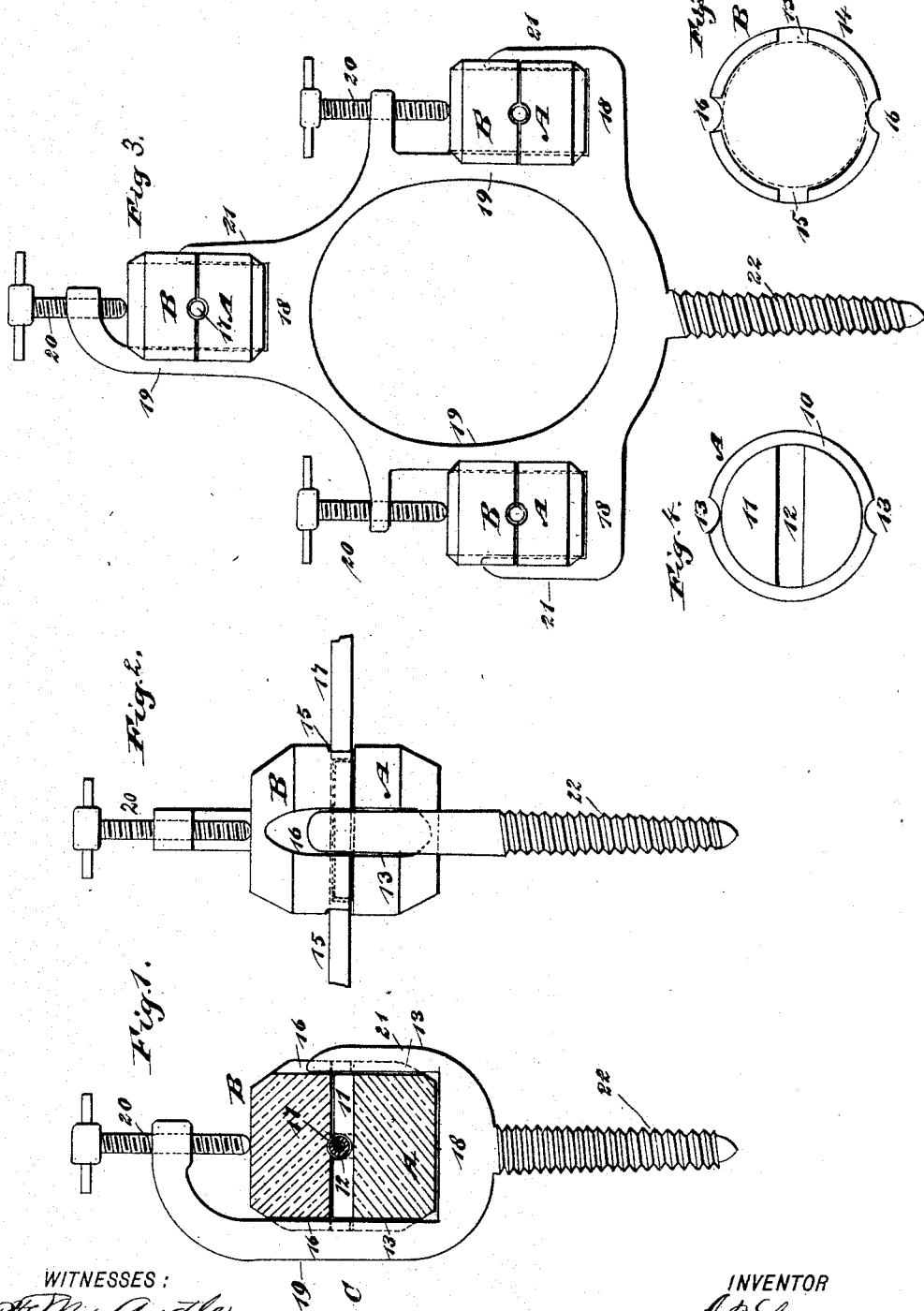


(No Model.)

A. R. LANE.
INSULATOR.

No. 491,362.

Patented Feb. 7, 1893.



WITNESSES:
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UNITED STATES PATENT OFFICE.

AUGUSTUS R. LANE, OF NEW YORK, N. Y.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 491,362, dated February 7, 1893.

Application filed May 13, 1892. Serial No. 432,857. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS R. LANE, of New York city, in the county and State of New York, have invented a new and useful Improvement in Insulators, of which the following is a full, clear, and exact description.

My invention relates to an improvement in insulators, and has for its object to construct an insulator capable of being conveniently and expeditiously applied to a support, a pole, for example, and to so construct the framing of the insulator that the latter will be firmly held in place, and may be secured to the supporting block, arm or pole without weakening the same, and further whereby the framing and required support for the framing may be made so light as to offer a minimum of surface to the wind, hail or rain and snow.

It is a further object of the invention to provide an insulator capable of being constructed in a simple, durable and economic manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a support for a single insulator, the insulator being in vertical section; Fig. 2 is an edge view of the insulator support, and a side view of the insulator located in the support; Fig. 3 is a side elevation of a support illustrated as carrying three insulators; Fig. 4 is a plan view of one section of the insulator; and Fig. 5 is a bottom plan view of the other section.

The insulator is made of glass or of a like material, preferably glass, and is constructed in two sections A and B, the section A being the lower and the section B the upper section. The section A, is provided upon its upper face with a marginal rabbet or recess 10, whereby a central projection or stud 11, is formed, and in this stud a diametrical groove 12, is produced, extending through it from one side to the other, and the base of the groove is in the plane with the rabbeted surface 10, as shown best in Fig. 4. Both sections are preferably

made circular in cross section, and each section is provided at opposite sides with exterior grooves or concavities 13, the grooves or concavities 13 in the section A, being at opposite sides of the central channel 12.

The section B, upon its upper face, is provided with a marginal flange 14, adapted, when one section is closed over the other, to fit snugly down upon the rabbeted surface 10 of the said lower section; and in opposite sides of the flange, channels 15, are produced, which channels are adapted to register with the ends of the channel 12 in the lower section; and in the outer side surface of the section B, grooves or concavities 16, are made, diagonally opposite to the channels 15, and when the two sections are placed together the grooves or concavities 16 and 13 in both sections are brought into registry. The upper face of the upper section is made more or less flat, as is likewise the lower face of the lower section.

In the manipulation of the insulator the wire 17, is placed in the channel 12, extending beyond the ends of the channel, as shown in Fig. 2, and the upper section B, is then placed upon the lower section in such a manner as to bring the channels 15 in its flange 14 over the wire, while the flange fits down in the rabbeted portion 10 of the lower section, and a firm contact is thus obtained between the two sections of the insulator; and when the channels 15 register with the channel 12, the exterior concavities or grooves 13 and 16 of the sections are brought into registry.

If a single insulator is to be employed, it is mounted in a frame C, shown best in Figs. 1 and 2. This frame comprises a base section 18, from one side of which an arm 19, is carried upward and curved laterally at its upper end, so as to be practically in alignment with the central portion of the base. This arm is provided at its upper end with an aperture, the wall of which is threaded to receive a set screw 20, which may be turned by hand or by means of a wrench or other tool. At the opposite end of the base 18 of the frame, a short arm 21, is projected upward parallel with the longer arm 19; and the inner faces of both of the arms are preferably made more or less cylindrical, while the inner face of the

base may be flat, and is preferably so made. The base of the frame has pendent therefrom a screw section 22, and this section is adapted to be screwed into a block, an arm, or into a pole direct, as may be required. It will be observed that by screwing the frame into the pole or other support, the support is not to any extent weakened, and the pole may be made more slender than ordinary, and if the frame is secured to cross arms upon the pole these arms may be made quite light, and shorter than heretofore, and will therefore present but a small surface for the action of the elements.

In placing the insulator in the frame the bottom section is first dropped between its arms, the arms being entered in the grooves or concavities 13 of the section; the wire is then placed in the channel 12 of the lower section, and the upper section of the insulator is dropped down upon the lower section, the arms of the frame entering its recesses or concavities 16. Thus the insulator is prevented from turning in its frame, and it is prevented from having vertical or end movement by turning the set screw 20, in such a manner as to bring it in firm contact with the upper face of the upper section of the insulator.

It is evident that an insulator may be expeditiously and conveniently placed in the frame and a joint made, and that the wire may be as readily and conveniently removed from the insulator when desired. It is further evident that a cup flange may be made to surround the lower edge of the upper section, if in practice it is found desirable, and that the frame may be readily attached to any support at hand.

In Fig. 2 I have illustrated a frame in which

three framings of the form shown in Fig. 1 are connected by a web-work, and this frame is capable of carrying three insulators in such manner that the wire of one will not interfere with either of the other wires, as two insulators are located one opposite the other, while above and between these two a third insulator is stationed. Thus it is evident that any number of the frames may be grouped and joined together to accommodate any desired number of insulators, and one screw extension 22, of proper size, may be employed to secure a series of united frames to any support.

Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

The combination, with a frame comprising a base having a fastening device secured thereto, the said base being provided with a short arm, and a longer, parallel arm curved inward over the base, of an insulator constructed in two sections, a lower section having a rabbeted outer marginal surface, a channel extending from side to side of its central raised portion created by the rabbet, and an upper section, said section being provided with a flange to fit into the rabbeted portion of the lower section, and with channels in its flange registering with the channel in the lower section, both sections being provided with exterior registering grooves receiving the arms of the frame, and set screws carried by the frame and engaging with the upper section, as and for the purpose set forth.

AUGUSTUS R. LANE.

Witnesses:

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