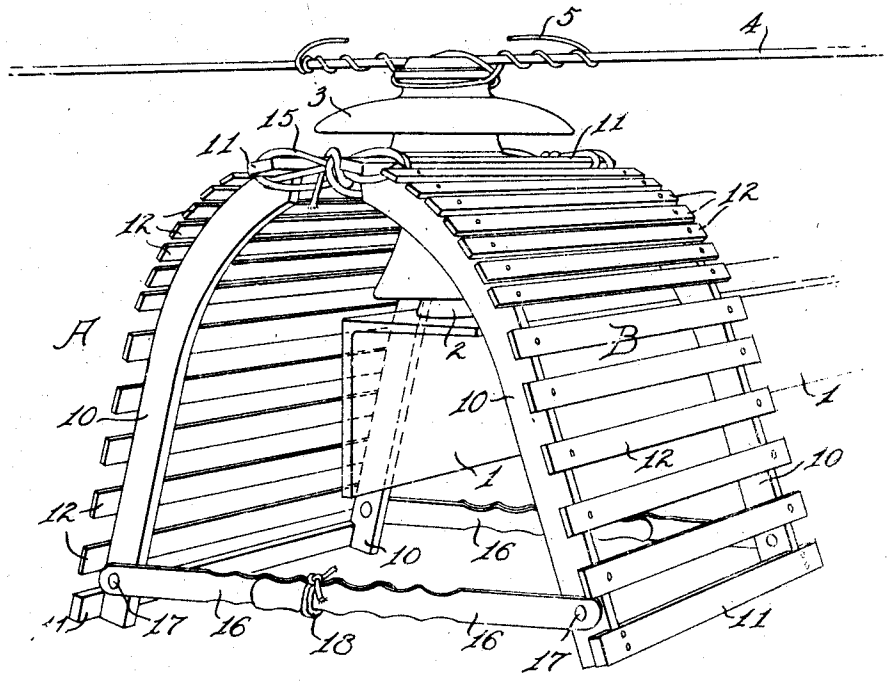
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H. B. BUSH

LINEMAN'S GUARD

Filed Aug. 16, 1920



Inventor

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By

Hull, Smith, Brock & West Atty's

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UNITED STATES PATENT OFFICE.

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LINEMAN'S GUARD.

Application filed August 16, 1920. Serial No. 404,008.

To all whom it may concern:

Be it known that I, HAZEL B. BUSH, a citizen of the United States, residing at Bedford, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Linemen's Guards, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to means for guarding electrical linemen, while working on charged or conductive elements, against striking their arms or other parts of their bodies against adjacent objects through which a circuit might be completed or grounded.

Others have sought to attain this end by providing heavy guards of insulating material, such as a rubber composition, and designed for direct application to the charged element, as to an electric wire, the prior devices with which I am familiar being in the nature of thick sleeves. These have proven only limitedly successful, in many cases being dangerous in that they are relied upon and then failed to stand the test because of their easy puncturability by the current due to the inferior original quality of the insulating substance or its deterioration from age, unfavorable temperatures, or climatic conditions.

My invention is conceived on the principle that air is a dependable insulating medium and practically constant as to its insulating qualities; and the invention consists in providing a guard or shield that is adapted to be supported in juxtaposition to the element or object from contact with which the lineman is to be protected and to be spaced therefrom a safe marginal distance beyond the flash-over scope of the current that is, the air gap through which the current is capable of jumping wherewith the lineman is concerned.

An embodiment of the invention is shown in the accompanying drawing, the figure being a perspective view of the guard applied to an insulator that is supported by a metallic beam. The beam, designated 1, may be the cross arm of a pole, and from it is supported, through the pin 2, an insulator 3 which carries an electrical conductor 4 that is held within the grooved top of the insulator by the tie wire 5.

It may be assumed, for the purpose of illustration, that the lineman is required to "tie in" the insulator by the application of the tie wire 5 while the line wire is charged with current. It is customary in such instances for the line man to stand or sit upon an insulated support so that he is at liberty to handle the charged wire without danger, provided care is taken not to engage his body with other charged or conductive elements through which a circuit might be completed. In the present case, the only danger lies in his striking his arms or body against the metallic cross arm 1, or the engagement of the tie wire with the cross arm. To obviate these dangers I employ the form of my invention illustrated in the drawing.

This present embodiment of the invention is composed of two substantially identical shields or sections A and B, each comprising side members 10, 10 that are spaced apart and connected at their opposite ends by cross members 11, 11 which are of sufficient thickness to withstand the abuse to which they are apt to be subjected in use, and these cross members are shown as fitted into notches in the ends of the side members and connected thereto at each end by two bolts, screws, or equivalent fastening means so as to maintain the frame thus composed of the side and cross members against distortion. Cleats 12 of lighter material but of substantially the length of the cross members are distributed along the side members between the cross members, these cleats being spaced closely enough together to prevent the insertion of a hand or arm through the spaces between and into contact with the object from which the lineman is to be guarded. It will be noted that the cleats adjacent the upper ends of the shields are closer together than those lower down. This is to better protect against the accidental passage of the tie wires between cleats, the closer spacing being restricted to the vicinity where such might occur, for it is desirable to have as much space as possible consistent with safety in order to reduce the wind resistance to a minimum.

In the present style of my invention, the side members 10 of the opposed sections are curved inwardly at their upper ends to bring the cross members occurring at the top of the sections close together on opposite

sides of the neck of the insulator, and these cross members are adapted to be connected together as by lashings 15. The lower ends of the opposed shields or sections are spaced a suitable distance apart by arms 16, these arms being pivotally connected at 17 to the side members of the respective sections and notched along their opposite edges adjacent their free overlapped ends to facilitate tying them together as by means of lashings 18. By drawing the side members tightly together on opposite sides of the upwardly converging neck of the insulator, they are caused to bear firmly against the lower end of the enlargement immediately above them thereby to hold the guard against wobbling to any material extent.

The guard is constructed of wood that is especially treated for the purpose of rendering it impervious to moisture and making of it an effectual insulating medium. Adjustment of the device to insulators or other objects of various sizes is rendered exceedingly simple by the employment of rope lashings for connecting the sections together, and this proves particularly convenient to the lineman as he is accustomed to such methods. The lower ends of the sections are adjustable to various circumstances through the ability to overlap the arms 16 to a greater or less extent. In these adjustments it is only necessary that the shields or sections be spaced something more than the flash-over distance of the current from the object against contact with which the lineman is to be guarded. When the device is not in use the arms 16 may be folded up alongside the members 10 and one of the shields reversed with respect to and nested into the other in a very compact form.

It will be clear to those familiar with the art that my invention is susceptible to numerous modifications wherefore I do not limit myself to the form illustrated herein but rely for my protection upon the scope of the following claims.

Having thus described my invention, what I claim is:

1. As a new article of manufacture, a lineman's guard consisting of opposed frames of insulating material, means for connecting the corresponding ends of the opposed frames together and to a supporting structure on opposite sides of an object against contact with which the lineman is to be protected, and means for spacing apart and connecting together the opposite ends of the frames.

2. A lineman's guard consisting of opposed frames, each frame comprising side members and cross members, the latter connecting together and spacing apart the opposite ends of the side members, and cleats supported by and extending between the side members and distributed between the cross members at comparatively short distances apart, means for connecting together and to a supporting object corresponding ends of the opposed frames, the frames being disposed on opposite sides of an object against contact with which the lineman is to be protected, and means spacing apart and connecting together the opposite ends of the opposed frames.

3. A lineman's guard consisting of opposed frames of insulating material adapted to be situated on opposite sides of an object against contact with which the lineman is to be protected, means connecting together and to a supporting element the corresponding ends of the opposed frames, arms pivotally connected to the opposite ends of the opposed frames, and means for connecting the arms of the opposed frames together thereby to maintain the frames in properly spaced relation.

In testimony whereof, I hereunto affix my signature.

HAZEL B. BUSH.