

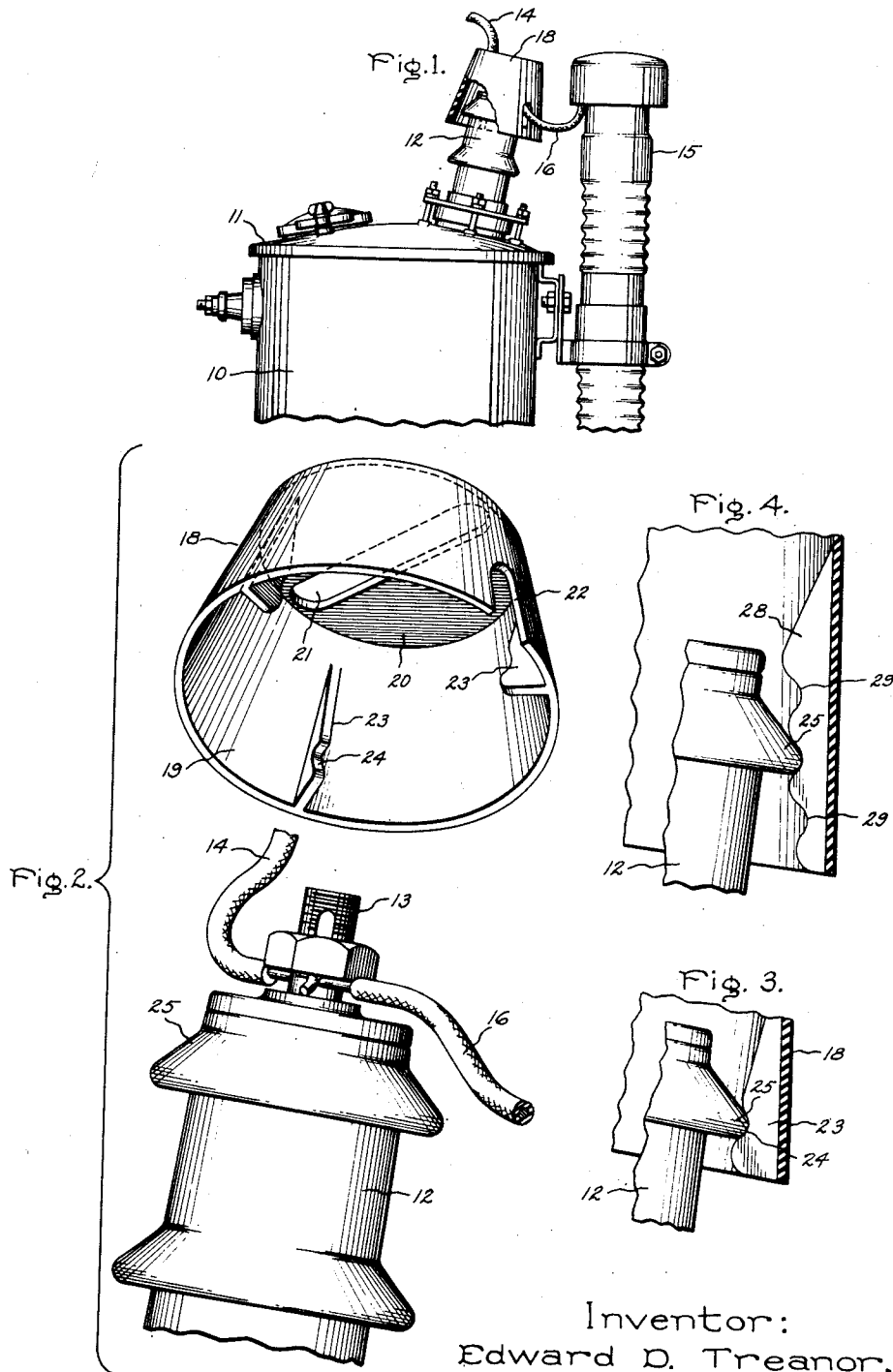
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E. D. TREANOR

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BUSHING TERMINAL GUARD

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Inventor:
Edward D. Treanor,
by *Harry C. Dunham*
His Attorney.

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BUSHING TERMINAL GUARD

Edward D. Treanor, Pittsfield, Mass., assignor to
General Electric Company, a corporation of
New York

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2 Claims. (Cl. 174-139)

The present invention relates to an insulating terminal guard and while it is not necessarily limited thereto, it is particularly suitable for use with high voltage bushings of electrical apparatus.

Service outages frequently result from bushing arc-overs which have been initiated by foreign objects establishing a low resistance path from the apparatus terminals to ground. To cite a specific example, in the case of distribution transformer installations it has been observed that birds are prone to alight on the transformer covers, and attracted by the adjacent bright metal terminals' parts, peck at them and thus initiate an arc-over of the bushing. For preventing service interruptions from causes as these, it is desirable to provide a simple means for covering or guarding the bushing terminals of electrical apparatus.

It is therefore an object of the present invention to provide a simple, inexpensive terminal guard for high voltage bushings and the like apparatus.

It is a more specific object of the present invention to provide a new and improved terminal guard for bushings which may be readily attached onto the upper end of the bushings.

In accordance with one form of the invention, the terminal guard comprises a cup-shaped member of relatively resilient insulating material, such as of a molded resinous composition, which is provided on the inner walls with a plurality of spaced and suitably notched fins for snapping over the peripheral edge of the uppermost skirt of the bushing insulator.

Further objects and advantages of the invention will appear from the following description and the claims appended thereto taken in connection with the accompanying drawing.

In the drawing, Fig. 1 is a view of the upper portion of a transformer the high voltage bushing of which is provided with a terminal guard constructed in accordance with the present invention; Fig. 2 is an enlarged view illustrating the invention in greater detail; Fig. 3 is an enlarged fragmentary view further illustrating certain details; and Fig. 4 is a fragmentary view illustrating a modification of the invention.

While in the drawing the invention is illustrated as it may be adapted for application to the high voltage bushing of a transformer, it will be obvious that the invention is not to be necessarily so limited. It will become apparent, as the description proceeds, that the guard of the present invention may be applicable for the

protection of exposed terminals of insulator structures generally.

In the drawing the transformer 10 is provided with a cover 11 upon which is mounted a high voltage bushing 12 having a terminal stud 13 at the upper end thereof to which is connected the line lead 14. The transformer may also be provided with a lightning arrester 15 which is mounted by a suitable bracket upon the side wall of the transformer tank and connected by means of the lead 16 to the bushing terminal stud 13.

For the protection of the terminal parts at the upper end of the high voltage bushing 12 against accidental contact by foreign objects, such as a bird standing on the transformer cover, a guard 18 is attached to the upper end of the bushing. The guard 18 may be of any suitable shape, such as frusto-conical or cup-shaped as shown, having a tapered side wall 19 and a flat end wall 20. The end wall 20 is provided with an elongate slot 21 through which the line lead 14 may be extended and the side wall with a slot 22 for cooperatively straddling the lead wire 16 to the lightning arrester. Formed integrally with the inner side wall 19 of the guard are a plurality of spaced, inwardly extending radial fins 23 which are provided with notches 24 for cooperatively fitting around the peripheral edge of the upper skirt 25 of the bushing insulator.

The guard 18 may be of any suitable insulating material, such as of a molded plastic composition. Preferably a composition of the resinous type is selected so that the guard will have a certain inherent resiliency. As the guard is pressed downwardly upon the upper skirt of the insulator, the side walls 19 will flex somewhat to permit the lowermost beads of the notched fins 23 to slip over the skirt edge whereby the guard will be held firmly in position.

In the modification illustrated in Fig. 4, the inwardly extending radial fins 28 of the guard are provided with a plurality of notches 29 which are so tapered as regards the longitudinal axis of the guard as to accommodate insulator skirts of varying diameters.

Having described my invention in what I consider to represent a preferred embodiment thereof, I desire to have it understood that the specific form shown is merely illustrative and that I intend in the following claims to cover all such modifications as fall within the true spirit and scope of the invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A guard for a bushing terminal comprising

a cup-shaped member of insulating flexible material, said member having a flat end wall and a tapered side wall, an opening in said end wall for a line lead, an opening in said side wall to accommodate another lead, a plurality of fins integral with said side wall and extending inwardly from the inner surface thereof, and notches in said fins for cooperatively fitting around the peripheral edge of an insulator skirt of said bushing.

2. A guard for a bushing terminal comprising

a cup-shaped member of relatively resilient insulating material, a plurality of fins extending inwardly from the inner side walls of said member, said fins each having a plurality of notches for cooperatively fitting around the peripheral edge of an insulator skirt of said bushing, said notches extending into a tapered portion of said fins so that a guard may accommodate insulator skirts of varying diameters.

EDWARD D. TREANOR.