April 9, 1935. G. D. ALVORD 1,996,894

ANTICLIMBING DEVICE

Filed July 23, 1932

Fig. 2.

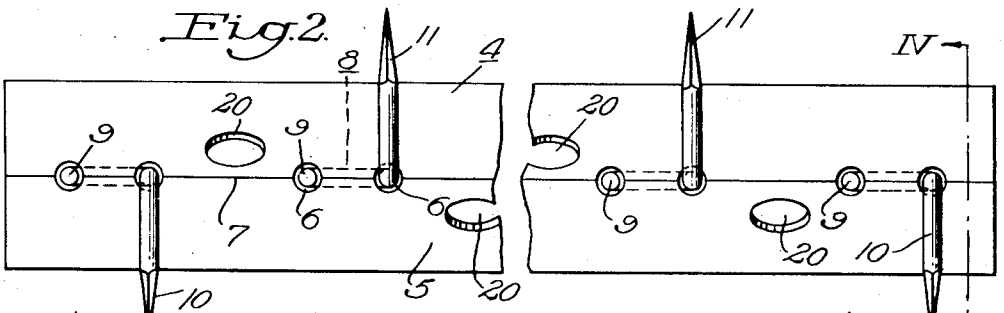


Fig. 3.

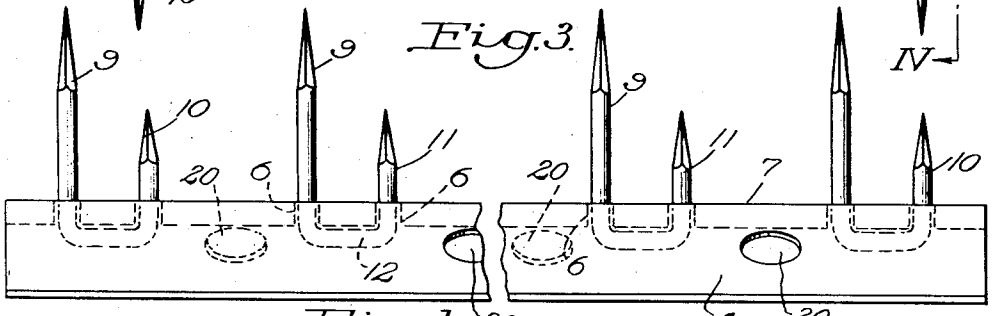


Fig. 1.

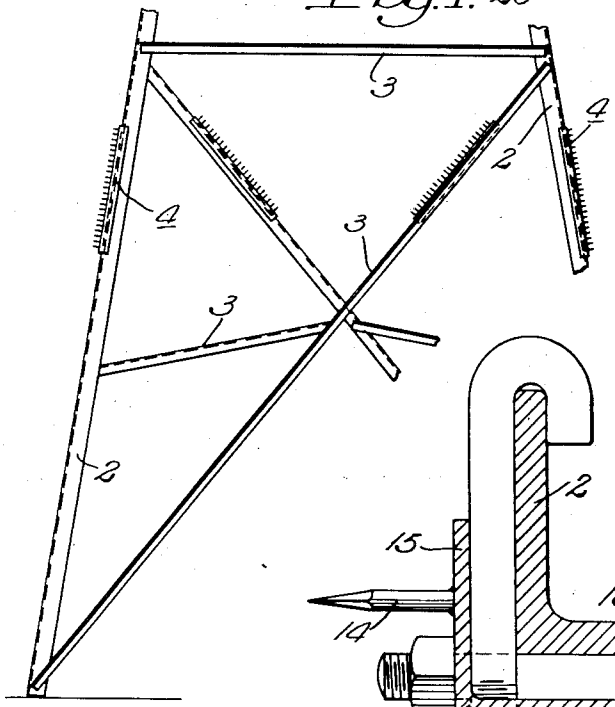


Fig. 4.

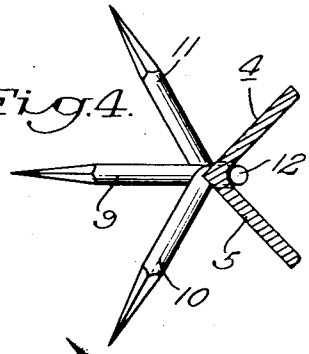


Fig. 5.

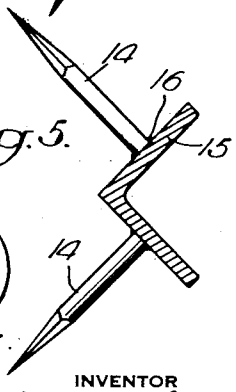
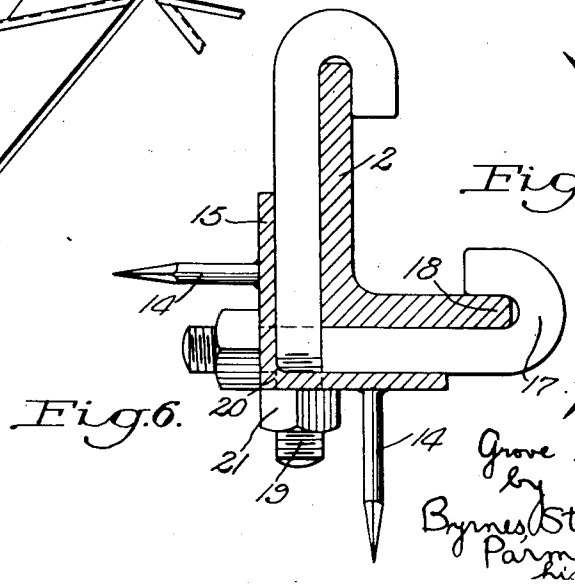


Fig. 6.



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UNITED STATES PATENT OFFICE

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ANTICLIMBING DEVICE

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Application July 28, 1932, Serial No. 625,522

5 Claims. (Cl. 189—32)

This invention relates to anti-climbing devices for preventing unauthorized persons from climbing various structures. It is described herein particularly as applied to an electric transmission tower, although it is capable of use with other structures.

On various occasions, children have climbed transmission towers and come in contact with high tension electric wires suspended therefrom, with serious and sometimes fatal results. The present invention provides a means for preventing unauthorized persons, especially small children, from climbing electric transmission towers or other structures, thereby avoiding the danger of accident from this cause.

Referring to the accompanying drawing, which illustrates two embodiments of my invention,

Figure 1 illustrates the lower portion of an electric transmission tower having the anti-climbing devices applied thereto;

Figure 2 is a plan view and Figure 3 is a side elevation of one of the devices;

Figure 4 is a section taken on the line IV—IV of Figure 2;

Figure 5 is a section similar to Figure 4, but showing a modified embodiment of the invention, and

Figure 6 is a sectional view through one of the angle members of the tower and illustrating one means for clamping the device to the tower.

Referring more particularly to the accompanying drawing, the lower part of an electric transmission tower is shown in Figure 1. The tower is constructed of angles 2 forming the corners of the tower, and reinforcing angles 3. Secured to the angles 2 and 3 at places suitable for preventing children from climbing the tower are barbed anti-climbing devices, indicated generally by the reference numeral 4.

In the form illustrated in Figures 2, 3 and 4, which is the preferred embodiment of my invention, the device comprises an angle 5 adapted to fit over the outer corner of the angle members 2 and 3 of the tower and to be detachably secured thereto. The angle 5 is provided at intervals with pairs of openings 6 which extend through the angle along the corner 7 thereof. Staples, indicated generally by the reference numeral 8, are inserted from the inside of the angle through the openings, and at least one of the prongs of each staple is bent so as to secure the staple to the angle. In the form shown in Figures 2, 3 and 4, one of the prongs 9 of each staple extends in a substantially vertical direction, but the other prongs 10 and 11 are bent at an angle so as to secure the staples to the angle 5. The shank 12 of each staple lies on the inside of the angle 5, the prongs 9, 10 and 11 extending through the openings 6. The angle has holes 20 for receiving bolts which secure the angle to the tower structure, as hereinafter described.

In the embodiment shown in Figure 5, barbs 14 are welded to an angle 15, as indicated by the reference numeral 16. The construction is otherwise similar to that already described in connection with the embodiment shown in Figures 2 to 4.

In Figure 6 there is illustrated one means for securing the anti-climbing devices to the angle member 2 or 3 of the electric transmission tower, although other means may be employed. In this figure, the device is of the type illustrated in Figure 5, in which the barbs are welded to the angle, but it will be understood that the embodiment in which the staples extend through openings in the angle 5, as illustrated in Figures 2 to 4, may be clamped in a similar manner to the tower. The angle 15 of the anti-climbing device is secured to the angle member 2 of the tower by two J bolts, the curved ends 17 of which hook over the edges 18 of the angle member 2. The other end 19 of each bolt passes through an opening 20 in the angle 15. Nuts 21 hold the angle 15 spaced from the member 2 a distance equal to the thickness of the bolts.

The anti-climbing devices are preferably made up in lengths of about 4 ft. and are attached to the tower structure between the joints thereof. The space between the joints or places where the angles are bolted to one another is usually considerably more than 4 ft. and frequently as much as 10 or 12 ft. so that when one of the devices is attached midway on such a span, it is difficult for anyone, and impossible for a small child, to climb past the devices without scratching himself considerably. These devices, however, do not prevent the employee of the power company from climbing the tower when necessary since the employee may be provided with suitable means for passing the anti-climbing devices.

Although it is preferred to secure the spikes or barbs to a rigid member such as the angle 5 or 15 and then secure the angles to the tower structure as by clamping, the barbs or spikes may be secured directly to the tower by welding or by providing openings through which the barbs of the staples project in a manner similar to that shown in Figures 2, 3 and 4. The embodiment in which the barbs are secured to a member which, in turn, is secured to the tower structure is

preferred since with this arrangement the difficulty of handling tower members with barbs secured thereto is eliminated. It is inconvenient to handle the tower members during shipment and erection where the barbs are secured to the tower members before the tower is erected. There also is less danger of damaging the devices where they are handled and shipped separate from the tower members. The barbs may be secured to the angle 5 or 15 in various ways either by welding or by the method illustrated in Figures 2, 3 and 4. Of the two illustrated methods, the method of providing openings in the angle and inserting the staples therein is preferred over the welding method, since the former method eliminates the necessity of welding and also enables the barbs to be turned in the desired directions according to the particular place in which the anti-climbing device is located.

I have illustrated and described two embodiments of my invention. It is to be understood, however, that the invention may be otherwise embodied within the scope of the following claims.

I claim:

1. A device for preventing persons from climbing a structure, comprising an angle adapted to be detachably secured to the structure, said angle being perforated at intervals along its corner, barbs extending through the perforations and secured to the angle, and means for securing the angle to the structure.

2. A device for preventing persons from climbing a structure, comprising an angle adapted to be detachably secured to the structure, said angle being perforated at spaced intervals along its corner, staples extending through the perforations and secured to said angle, and means for detachably securing the angle to the structure.

3. A device for preventing persons from climbing a structure, comprising an angle adapted to be detachably secured to the structure, said angle being perforated at spaced intervals along its corner, staples extending through the perforations, at least one prong of the staples being bent to secure it to the angle.

4. A device for preventing persons from climbing a structure, comprising an angle adapted to be secured to a member of the structure, said angle being provided with barbs, and J bolts securing said angle to said member of the structure, said member being imperforate at the point of attachment of said angle.

5. The combination with a structure having uprights, of an anti-climbing device comprising an angle secured to and extending longitudinally of an upright, said angle having openings along its corner, and staples having barbs extending through said openings.

GROVE DEAN ALVORD.