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METHOD OF APPLYING A PROTECTIVE CAP ON A WOODEN POLE

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METHOD OF APPLYING A PROTECTIVE CAP ON A WOODEN POLE

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This invention relates to method of applying a protective cap or covering to utility poles of the type commonly installed by telephone and electric companies.

The present application is a continuation-in-part of our application Ser. No. 288,172 filed June 17, 1963, now Patent No. 3,250,050, which in turn is a continuation-in-part of our application Ser. No. 225,663 filed Sept. 24, 1962.

In accordance with the general objects set forth in the above-mentioned applications, it has been found that the life of utility poles can be substantially extended if the tops of the poles are protected from the inroads of weather, rotting, fungus, etc. An elastic cap fabricated in accordance with the description herein can be utilized to protect the top of a pole and the present invention relates to such an improved cap together with a frame or hoop for applying the cap at a distance.

A primary object of the invention, therefore, is to provide a method of using an improved protective covering or cap for a pole or post fabricated of two lengths of elastomeric material such as rubber.

A further object of the invention is to provide a method of using an improved stretching frame attached to a handle for applying a stretched cap to a pole from a remote position such as the platform of a "cherry-picker." A further object of the invention is to provide a method for attaching a protective cap to a utility pole while the cap is in a stretched condition.

Further objects will be apparent from the specification and drawings in which:

FIGURE 1 is a schematic view showing the manner of applying our improved protective pole cap by means of the frame of the present invention.

FIGURE 2 is a side view of the cap after it has been applied to the top of a pole or post.

FIGURE 3 is a top view as seen at 3—3 of FIGURE 2.

FIGURE 4 is an enlarged view partly sectioned of the cap before application to a pole.

FIGURE 5 is a bottom view of the structure of FIGURE 4.

FIGURE 6 is a fragmentary view showing the manner in which the cap is constructed.

FIGURE 7 is an enlarged view of the positioning hoop or frame for maintaining the cap in a stretched condition in readiness for application to the top of a pole, and

FIGURE 8 is a section seen at 8—8 of FIGURE 7.

Referring now more particularly to the drawings, the improved cap 13 is conventionally fabricated of two substantially rectangular strips of rubber or stretchable rubber-like material 14 and 15 (FIGURE 6). These strips are centrally superimposed to form a cross with the arms at right angles to each other. The arms or flaps are then bent inwardly and stitched together along their respective abutting edges 16, 16 to provide a generally box-like structure. The stitching 17, 17 along each of the four edges 16, 16 is reinforced with a rigid slat 18 at each corner. Each slat 18 is secured to the cap by means of rivets or fasteners 19, 19 and the center rivet 19a on each slat attaches a loop 20 at the midpoint of the slat 18. A protective gusset 21 may be used as shown in FIGURE 4 between the top of each slat 18 and the corner of the cap. The gussets 21, 21 may be anchored by the topmost rivets such as 19b, 19b. It will be understood that each of the four edges 16 is constructed substantially as described above and as shown clearly in FIGURE 4.

A square frame 30 (FIGURE 7) is supplied with an elongated handle 31 fastened in a socket 32 formed rigidly with the frame 30. The handle 31 may be of a predetermined fixed length or may be constructed in a telescopic manner as desired. The dimensions of the frame 30 are so calculated that the length of two loops 20, 20 plus the diagonal dimension of the cap is slightly less than the distance between four pegs or posts 35, 35, 35, 35 positioned near the midpoints of the sides of the square frame 30. When the loops 20 of a cap of a predetermined size are positioned over the 4 posts 35, 35, 35, 35 the cap will be stretched sufficiently taut to retain it on the frame. The stretching, of course, under these conditions is at a minimum. However, the diameters of the tops of such utility poles vary from pole to pole and it is, therefore, highly desirable to provide a cap and apparatus for applying the cap that can be used on the greatest number of poles. With the present invention we are able to provide a substantially range within which it is possible to apply the predetermined size cap without exchanging or using any different piece of equipment or application technique. The dimensions of the cap in this case are intended to be sufficient to maintain the cap on the smallest diameter of pole in the range. If the diameter of the pole is so great that the cap will not fit over the pole when applied to the four posts 35, the operator can then increase the effective dimensions of the cap by applying a larger cap to the cap of the on a second set of 4 pegs 36, 36, 36, 36. This of course, stretches the cap to substantially increase the inside lateral dimensions thereof. A third set of posts 37, 37, 37, 37 is located at the corners of the frame 30 and this third set of posts provides maximum dimensions for stretching the cap to be used on this particular frame. It will be understood that for any given square frame 30, the four posts 35, 35 located at the midpoints of the frame sizes will be a minimum stretching position for small poles whereas the four posts 37, 37 located at the corners of frame 30 represent the maximum stretching position for the particular frame 30. Intermediate post positions such as 36, 36 or additional ones may be used should it become desirable to do so.

With the cap stretched in its proper position on all 4 pre-selected posts of frame 30, the workman may climb the pole for applying the cap in which event he may decide to use a short handle 31 or to remove the handle altogether. Preferably, however, the operator will use the common "cherry-picker" which is a hydraulically controlled platform mounted on the rear of a truck, the platform of which is shown at 32 in FIGURE 1. This procedure is especially indicated where there are cross arms 33 on the pole 34. FIGURE 1 illustrates one such cross arm but customarily, particularly in rural sections, each pole has a considerable number of cross arms so that it is virtually impossible for a workman to gain access to the top of the pole by climbing. With the frame and the cap positioned as shown in FIGURE 1, the operator lowers the cap over the top of the pole until it bottoms whereupon continued downward motion of the frame releases the four pegs from the loops 20 after which the operator lifts the frame over the top of the pole and the cap.

It will, therefore, be understood that the improvements described in the present invention provide a vastly improved and highly satisfactory method for applying protective caps to utility poles under severe weather conditions and without the necessity for throwing off the current in even high voltage power lines. The slats 18 serv-
ice in permitting limited air circulation inside the cap thus avoiding all tendency to rot or mildew inside the cap and the slats assist in stretching and retaining the shape of the cap when it is applied to the frame 30.

Having thus described our invention, we claim:

The method of applying a protective cap to a wooden pole or the like which comprises the steps of stretching an elastic cap, engaging external loops on the expanded cap with axially extending pins on a frame to maintain the expanded cap in the stretched condition, elevating the frame and the expanded cap to a point accessible to the top of the pole, lowering the frame and expanded cap over the top of the pole to position the expanded cap on the pole, further lowering the frame to disengage the expanded cap from the pins on the frame to allow the stretched cap to contract onto the pole, and removing the frame from the pole by raising the frame over the pole and the released cap.

References Cited by the Examiner

UNITED STATES PATENTS
1,669,053 5/1928 Hamel 29—235
1,707,397 4/1929 Hurst 52—301 X
1,996,400 4/1935 Bowen 52—301
2,714,912 8/1955 Gonnella
3,267,805 8/1966 Ackerman 52—301 X

FOREIGN PATENTS
82,427 1/1935 Sweden
222,331 7/1962 Austria

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