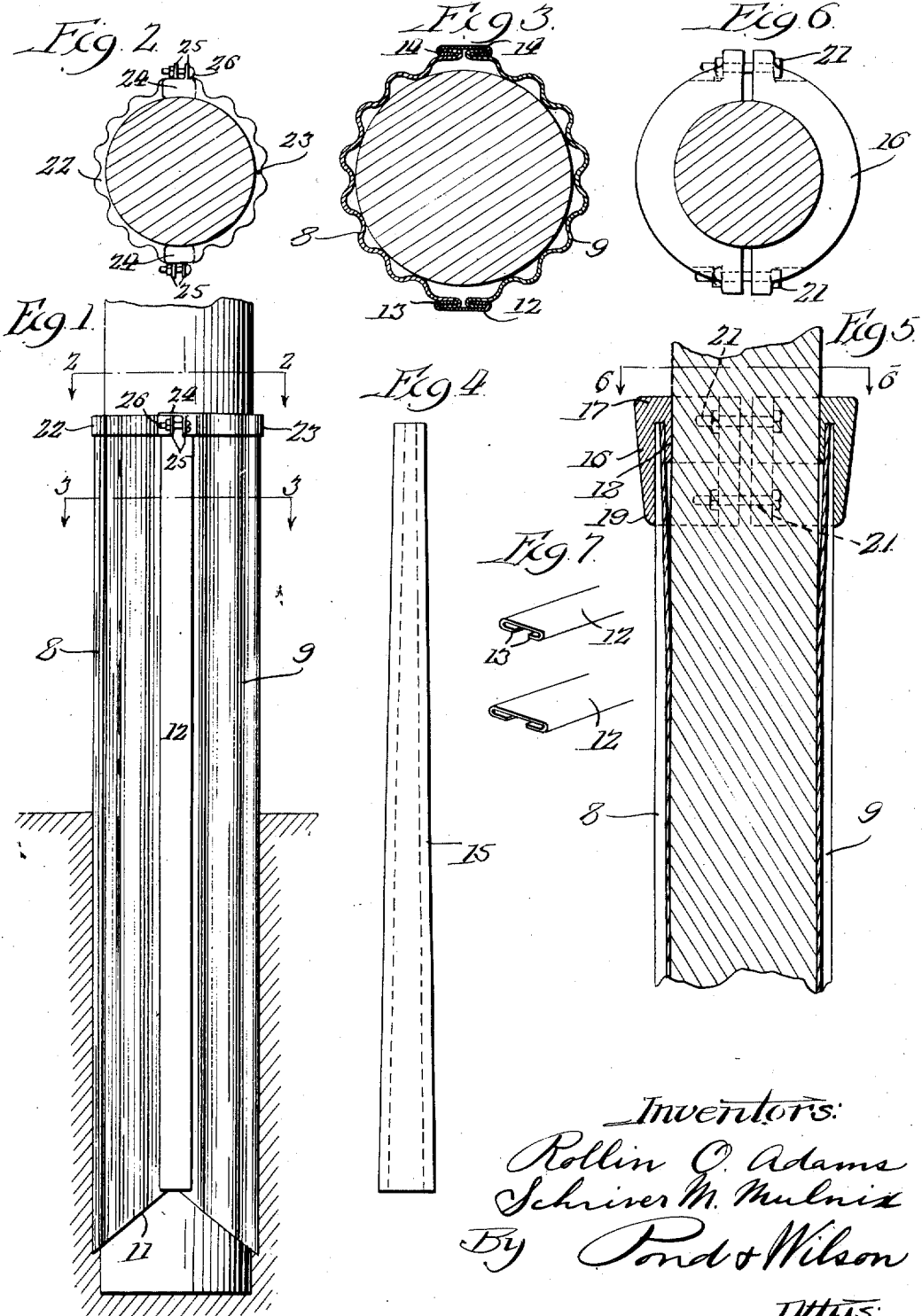


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POLE PROTECTIVE MEANS.
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UNITED STATES PATENT OFFICE.

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POLE-PROTECTIVE MEANS.

1,244,119.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, SCHRIEVER M. MULNIX and ROLLIN O. ADAMS, citizens of the United States, residing at Lena and Freeport, respectively, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Pole-Protective Means, of which the following is a specification.

10 This invention relates to protective means for poles adapted to be applied especially to telephone, telegraph and railway poles for the purpose of protecting the embedded and adjacent upper portion of a pole
15 against decay and exposure to the destroying effects of insects, fire and other influences, and to strengthen the pole.

20 The primary object of our invention is to provide a protective means of the character described, improved in construction and embodying novel features enabling the protective means to be manufactured and applied to poles and to serve the ends
25 desired in a most practical and efficient manner.

30 In furtherance of this general object, we have provided a pole protective means in the form of a segmental sleeve adapted to embrace a pole and to be interlockingly connected together by elongated keys slid
35 lengthwise on the sleeve sections so that the sleeve, a substantially integral structure, will, when driven into the ground, snugly embrace the pole above and below
40 the ground forming an effectual guard against deterioration and injury and materially strengthen the pole, thereby insuring greater longevity and usefulness thereof.

45 Another feature is in the provision of keys of different widths and longitudinally tapered keys so that when poles of different sizes are to be covered with my improved protective means, keys of proper widths may be selected and employed to
50 connect the sections of the sleeve, and thereby provide a sleeve that will snugly fit the particular pole.

55 A further feature is to assemble the segmental sleeve above the ground on a pole and then drive the sleeve as a unitary structure into the ground through the intermediary of a driving cap of novel construction. This cap receives the impact of the driving tool and is removed when the sleeve
60 has been driven to operative position.

Our invention also contemplates the pro-

vision of a protective cap to be applied to the top of the sleeve to clamp the same rigidly to the pole and to effectually protect the top of the sleeve against the entrance
60 of rain.

Referring to the drawings,—

Figure 1 is a view of a pole set in the ground and equipped with a protective means embodying our improvements; 65

Figs. 2 and 3 are sectional views taken on the line 2—2 and 3—3, respectively, of Fig. 1, Fig. 3 being somewhat enlarged;

Fig. 4 is a detail view of a tapered key;

Fig. 5 is a longitudinal sectional view
70 through our improvements showing the driving cap applied;

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 5; and

Fig. 7 shows in perspective the ends of
75 two keys of different widths.

The pole protective means consists chiefly of a segmental sleeve, the sections of which are interlockingly joined and secured together by means of longitudinal keys. The
80 sleeve sections are preferably formed of sheet metal corrugated longitudinally so that comparatively small gage material may be employed that will have ample strength to reinforce a pole and withstand even ex-
85 cessive lateral strains. In the present illustration of our invention, we have shown a sleeve comprising two sections 8 and 9 of general semi-circular shape in cross section and corrugated longitudinally, as shown,
90 although a greater number of these sections might be employed, dependent on the size of the pole and sections. The sections are sharpened at their lower ends as at 11, so that they may be more easily driven into
95 the ground.

100 Elongated keys or coupling members are employed to unite the sections and thereby form, as it were, an integral sleeve. It is desired to attach these keys when the sections have been applied to the pole above the ground and to slide the keys longitudinally upon and in engagement with the longitudinal edges of adjoining sections to interlock the same and close the gap or opening
105 therebetween. A simple and practical form of key consists of an elongated strip of sheet metal 12 having its longitudinal edges 13 bent toward one side to form opposed channels. The longitudinal edges 14
110 of the sections 8 and 9 are also bent outwardly, as clearly shown in Fig. 3, and are

adapted to be engaged in channels of the key. Thus, by entering the adjoining edges 14 of the sections into the channels of a key it may be slid lengthwise upon said edges to thereby lock the sections together and provide a continuous perforate casing about the pole. Because of the corrugated construction of the sleeve, it will be capable of considerable expansion when driven onto a pole, and thus the joints or couplings will not be unduly strained. However, in order to meet the requirements of various sized poles, keys of different widths, as shown in Fig. 7, are provided, and it will be evident that with this provision and also with sleeve sections of different widths a protective sleeve may be formed of proper size for fitting poles of practically any size. It will be here noted that the segmental sleeve is not merely composed of a plurality of interlocking sections of similar construction but consists essentially of corrugated sections interlockingly joined by keys. In some cases it is found that the base of a pole flares to some extent, and to meet this condition we have provided keys 15 tapered longitudinally, as shown in Fig. 4. Such a key will allow the sleeve to properly accommodate a pole, the base of which is of somewhat greater diameter than its portion immediately above the ground.

A segmental sleeve applied to a set pole above the ground is now ready to be driven lengthwise of the pole into the ground to an operative position for the purpose of protecting the portion of the pole embedded in the ground and that portion immediately above the ground. For this purpose a driving cap designated generally by reference character 16 is employed. This cap is formed preferably of malleable iron of suitable proportions to withstand the blows of a sledge or tool employed for driving the sleeve into the ground. The cap is preferably formed in two sections, each of which is shaped to provide a semi-circular head 17 resting upon the top edge of the sleeve and having a portion 18 extending beneath such edge and engaging the inner side of the sleeve. The cap is also formed with a semi-circular portion 19 engaging the periphery of the sleeve a substantial distance, as shown clearly in Fig. 5. Bolts 21 or other suitable means may be employed to clamp the sections of the driving head together to constitute the same a practically rigid structure and also to secure the cap rigidly to the segmental sleeve. It will be noted that the cap rests on the top edge of the segmental sleeve and is shaped to engage the inner and outer sides thereof, this peculiar shape enabling the cap to be properly secured to the sleeve and also serving to prevent buckling or flaring of the upper end of the sleeve when the same is forcibly driven into the ground.

The driving blows of the tool are applied to the top of the head portions 17.

When the sleeve has been driven into operative position through the use of the driving cap just described, this cap is removed and a protective cap is applied to the top of the sleeve. It is desired that this protective cap shall embrace the periphery of the sleeve and cover the top or open end thereof, that is, the portion between the periphery of the pole and that of the sleeve, and also that the cap shall serve as a means to rigidly clamp the upper end of the sleeve sections together and to the pole. The protective cap shown in Figs. 1 and 2 is in the form of semi-circular metallic sections 22 and 23 shaped to fit the periphery of the upper end of the sleeve and to extend over the top of the sleeve and engage the periphery of the pole, thus closing the openings formed by the corrugations in the sleeve. At the ends of these cap sections their top portions 24 overlap and their side portions are bent outwardly to form flanges 25 through which are passed bolts 26 for the purpose of drawing the sections together. It will be manifest that when the protective cap sections 22 and 23 are drawn tightly together by means of the bolts 26 these sections will securely bind the sleeve sections 8 and 9 and keys 12 together and will also clamp them to the post. Thus by means of a simple cap of this nature the protective sleeve is held together and clamped to the post in a very substantial manner and at the same time the upper end of the sleeve is effectually sealed, and if desired, tar or pitch or suitable sealing substance may be poured around the top of the cap to fill any crevices between the same and the pole.

It has been found that a pole protective means constructed as above described serves the purposes for which it is designed in a very satisfactory and effective manner and that because of the novel construction of the several parts the same may be manufactured of small gage sheet metal at a comparatively low cost, and the manner in which the sleeve is applied to a pole, driven into operative position and finally protected and clamped together at its top by the protective cap, insures practicability and ready adaptation of the protective means to poles of various sizes.

While we have illustrated and described one mechanical embodiment of our improvements, it should be understood that various changes and modifications might be made in details of construction without departing from the spirit and scope of the invention as expressed in the appended claims.

We claim:

1. A pole protective means comprising a plurality of transversely curved longitudi-

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nally corrugated sheet metal sections having their opposed edges formed to provide projecting locking flanges, and relatively narrow elongated locking means structurally independent of said sections shaped to engage with said flanges and securely unite said sections together throughout their length whereby to produce a closed cylindrical protector adapted to surround and snugly embrace a pole.

2. A pole protective means comprising a plurality of transversely curved longitudinally corrugated sheet metal sections having their opposed edges formed to provide projecting locking devices, and elongated relatively narrow tapered locking means shaped

to cooperate with said devices to securely unite said sections together throughout their length whereby to produce a tapered cylindrical protector adapted to surround and snugly embrace a pole.

3. A pole protective means comprising a plurality of transversely curved longitudinally corrugated sheet metal sections, means for securely uniting said sections together throughout their length to surround a pole, and a sectional cap adapted to fit over and embrace the upper end of said protector and cover the space between a pole and the surrounding protector.

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