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POLE TOP BAND

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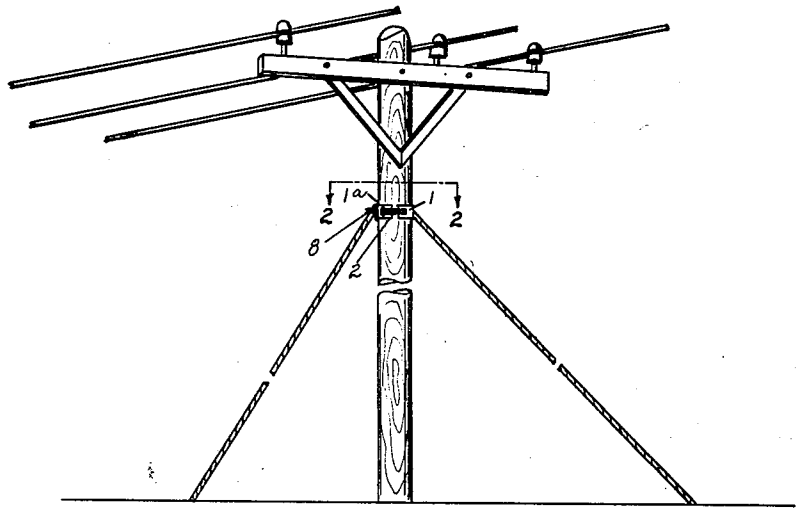


Fig. 1

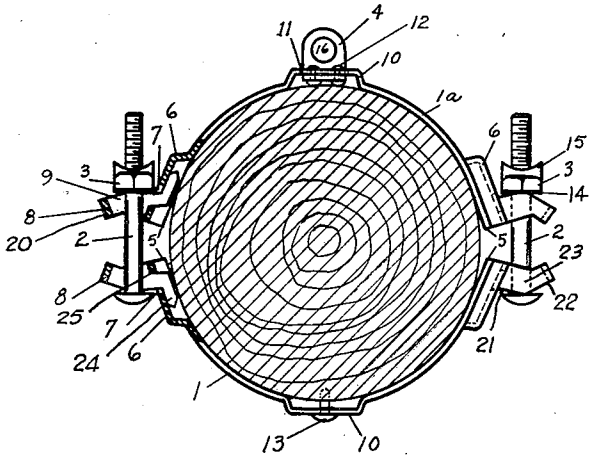


Fig. 2

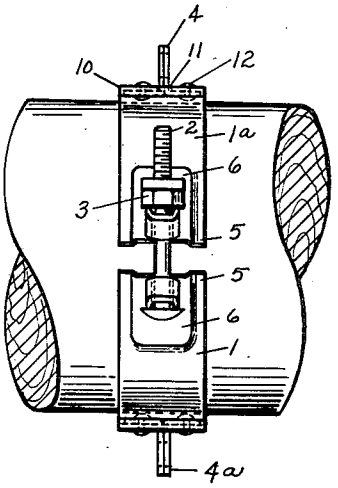


Fig. 3

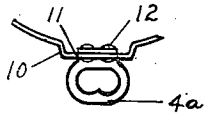


Fig. 4

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POLE TOP BAND

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3 Claims. (Cl. 248—230)

This invention relates to an improvement in pole band fittings for the attachment of guy wires to wood poles used in power distribution lines. Experience has proven that the best supports for power distribution lines are wood poles as the wood affords a natural dielectric not possible even in steel pylon structure equipped with insulators. The "flash over" value of such distribution lines is very favorable and instead of wood poles being outmoded they are now the desired support for distribution lines. However, wood poles are produced by nature and pose problems of uniformity such as, among other things, the cross-sectional dimensions at the point where they are to be guyed.

Further, the location of the guying anchor on the pole is determined by many factors such as the terrain and pole distance, which are not always constant. Uneven stress on the guying anchor often involves serious damage to the surface of the pole such as cuts or fractures. With continued uneven stress, the erectness of the poles is often changed.

The need for a pole band ideally suited to the above conditions became acute and widespread and was not met until the advent of this invention.

One of the objects of this invention is to provide a strong pole band that can be adjusted to various sized poles.

Another object of this invention is to provide a pole band which can accommodate either a single or double take off loop.

And another object is to provide a pole band that will preserve the surface of the pole and distribute the stress evenly around the pole.

Other objects will appear from time to time in the course of the specification and claims.

An embodiment of this invention is illustrated in the accompanying drawings in which:

Fig. 1 is a perspective view of a pole showing the use of a pole band.

Fig. 2 is a horizontal section through the pole above the pole band taken approximately on the line 2—2 of Fig. 1.

Fig. 3 is a side view of the pole band with two take-off loops inserted.

Fig. 4 is a double take-off loop that can be inserted when needed.

Like reference figures represent like parts in the following specification.

It is generally believed advisable to keep attachments for wood electric line poles on the outside of the pole and to use as few entering points as possible for electrical safety reasons and so as not to destroy the natural structure of the wood. Also, it is desirable to provide a pole band that can be attached to a pole with the minimum number of metal inserts into the pole and which can be further adapted to various sized poles. Accordingly, this pole band has been invented. It consists of two approximately semi-circular bands 1 and 1*a* clamped together by bolts 2 and nuts 3 with single 4 or double take-off loops 4*a* inserted midway between the bolts 2 on the semi-circular band.

In Figs. 2 and 3 it can be seen that the semi-circular bands 1 and 1*a* have ends 5 bent slightly outwardly at a tangent from the circular portion. Each of these end portions 5 has an outwardly depressed pocket-like central section 6 with a perforation 7 where an end lug 8 is inserted and tack welded in place. The end lugs 8 have openings 9 through which the bolts 2 are inserted.

The nuts 3 with their associated washers 14 and locking devices 15 are used to draw the two clamping bands together so as to fit tightly around the pole.

Special attention is directed to the construction of lug 8 and its mode of cooperation with the depressed pocket section 6 at the ends of bands 1. Note that the lugs 8 comprise a single piece of metal formed into a substantial U-shape. Each leg 23 of the U together with its bail 20 defines an opening 9 for receiving a bolt 2. The ends of the legs 23 of the U-shaped lugs 8 are formed into toe 24 and heel 25 portions. As seen in Fig. 1, the toe portion 24 is inserted through the perforation 7 in the pocket 6 and rocked upwardly so that it lies against the depressed pocket section 6. The heel portion 25, having a greater thickness than the toe portion 24, will not pass through perforation 7. Rather, when toe portion 24 is disposed upwardly within the pocket 6, as shown in Fig. 1, the heel portion 25 depends downwardly on the outside of the pocket 6 and bears against it in a plane parallel to the toe portion 24. Those skilled in the structural arts will recognize that lug 8 is mounted as a cantilever within the pocket 7.

Opening 9 of lug 8 is elongated in form so that bolt 2 can be readily shifted back and forth therein before tightening the two identical halves of the clamp around a pole. It should be apparent that the bolts 2 must be shifted in opening 9 in a direction away from each other when the band is clamped to a large diameter pole and that the opposite is true when band is clamped to a comparatively small diameter pole.

It will be observed that the surface of the lug 8, upon which the nut 3 and head of bolt 2 bear, is kinked to provide at least two separate bearing surfaces 21 and 22. Hence, if the bolt 2 is moved outwardly from the center of the pole within opening 9 to accommodate a larger pole than shown in Fig. 1, the nut 3 and head will bear near the end of the lug 8 on surface 22. It follows that the bolt 2 will always be square with the lugs 8 and that the bolts will remain parallel to each other regardless of pole size.

This kinked configuration of the lug 8 further causes the force of bolt 2 to be exerted in a line parallel to a tangent to the band 1 to load the band in tension throughout and minimize the bending moment in the cantilever lug 8 about its heel 25.

Approximately midway between the ends 5 of the semi-circular bands 1 and 1*a* is an outwardly bent transverse portion 10 with a slit opening 11 extending across its width in the middle. Through this slit opening 11 two L-shaped take-off loops 4 are inserted back to back and the two pieces are fastened to the transverse portion 10 by means of rivets 12. These take-off loops have openings 16 in their projecting portion and these openings 16 can be either the single kind 4 as shown in Figs. 2 and 3 or the double kind 4*a* as shown in Fig. 4. If two take-off loops are needed, one can be inserted in the transverse portion 10 of each semi-circular band. If only one take-off loop is needed, a fastening pin 13 can be inserted into the pole through the outwardly bent transverse section 10 of one semi-circular band.

With this improved pole band we are able to provide a strong band that can be easily clamped around poles of various sizes and tightened securely, and by providing single or double take-off loops midway between the clamping bolts and nuts, the tension on the pole is distributed evenly around its circumference. Further, it will be noted that this improved band does not chafe or mar the surface and structure of the wood pole. It is facilely adapted to divers cross-sectional widths without any changes or addition of parts to the band itself.

While one preferred embodiment of this invention has been described, it is only to be limited by the clear import of the following claims.

We claim:

1. A pole clamping fitting comprising a semicircular band having end portions, said end portions each being depressed to define a pocket having a perforated wall offset substantially parallel to a tangent to said band, substantially U-shaped lugs adjacent each pocket having spaced legs downwardly kinked and each terminating in toe and heel portions, said toe portions being disposed

through a perforated wall of one of said pockets, said heel portions bearing on said wall, said legs projecting from said heel portions and extending radially from said wall and spaced relative to each other to provide an elongated bolt receiving opening therein.

2. A pole clamping fitting comprising a semicircular band having end portions, a flat section integral with said band intermediate said ends and slotted to receive a take-off loop for a guy wire, said end portions each being depressed to define a pocket having a perforated wall offset substantially parallel to a tangent to said band, substantially U-shaped lugs adjacent each pocket having spaced legs downwardly kinked and each terminating in toe and heel portions, said toe portions being disposed through a perforated wall of one of said pockets, said heel portions bearing on said wall, said legs projecting from said heel portions and extending radially from said wall and spaced relative to each other to provide an elongated bolt receiving opening therein.

3. A pole clamping fitting including two arcuate complementary members, each of said members comprising a substantially semicircular band having identical end portions, a flat section intermediate said ends and slotted to receive a take-off loop for a guy wire, each of said end

portions being depressed to define a pocket having a perforated wall offset substantially parallel to a tangent to said band, substantially U-shaped lugs adjacent each pocket and having spaced legs each terminating in toe and heel portions, said toe portions being disposed through a perforated wall of one of said pockets, said heel portions bearing exteriorly on said wall, each of said lugs projecting radially from said wall and defining an elongated bolt receiving aperture having its margins kinked and in alignment with a like aperture at each end of said complementary member, and a bolt extending through the apertures of adjacent lugs and retained therein by a nut, whereby said complementary members may be bolted together in clamping relation to a pole.

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