Feb. 18, 1964 R. E. BRANCH ETAL 3,121,608

APPLICATOR FOR CONTROLLING BANDAGES FOR PRESERVING POLE TOPS

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FIG. 1

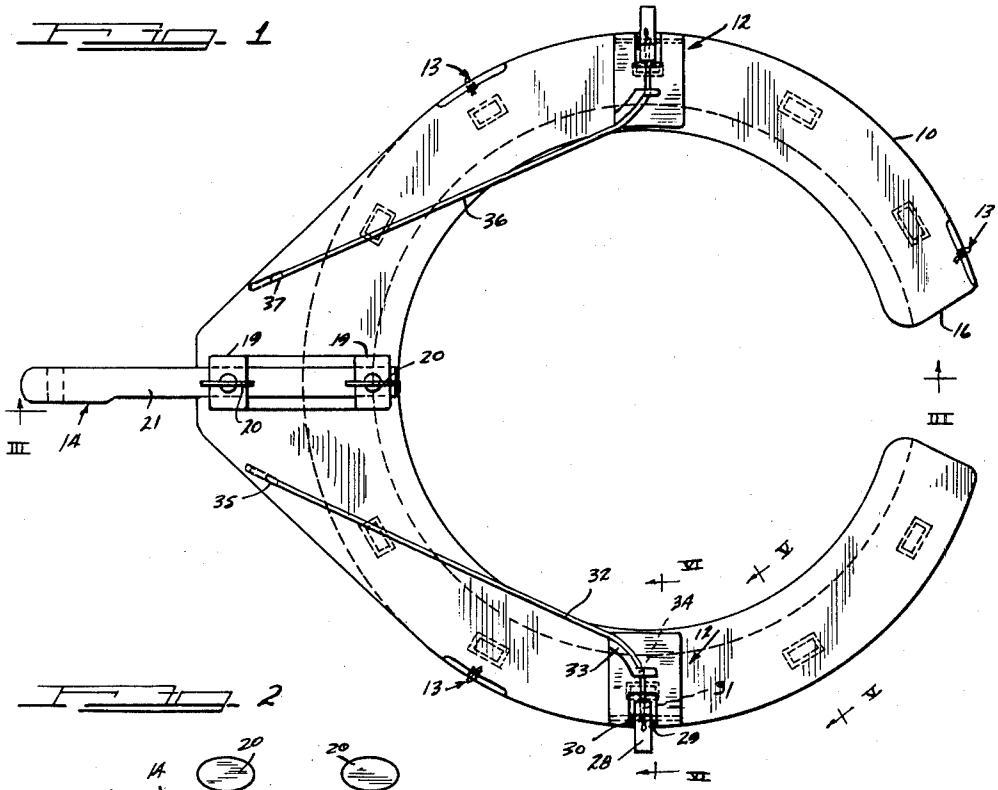
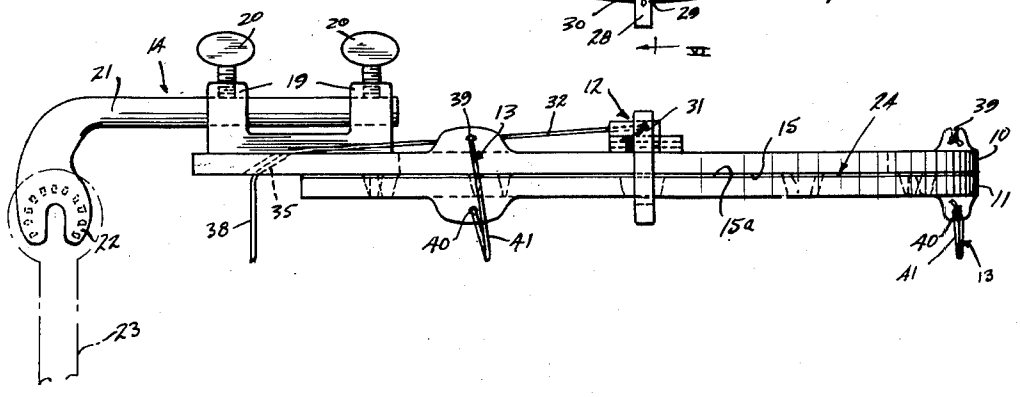


FIG. 2



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FIG. 3

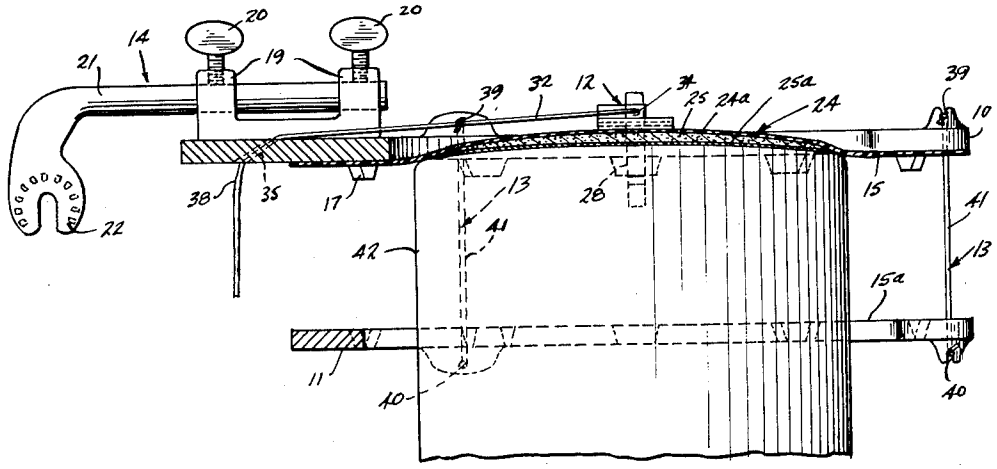


FIG. 4

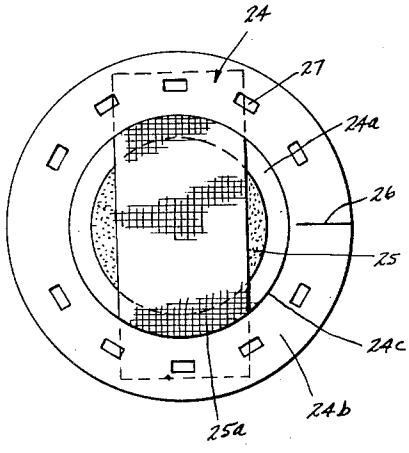


FIG. 5

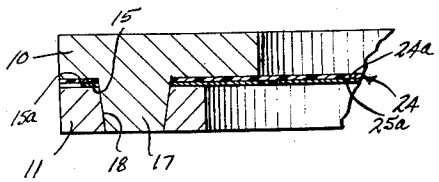
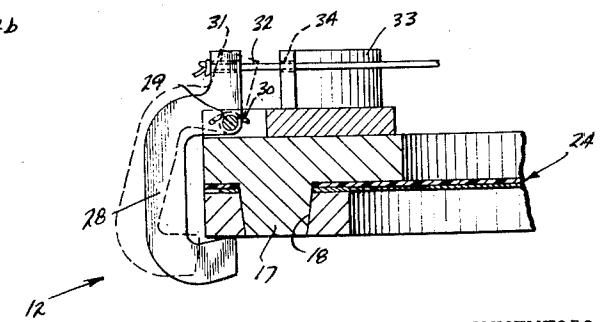


FIG. 6



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APPLICATOR FOR CONTROLLING BANDAGES FOR PRESERVING POLE TOPS

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8 Claims. (Cl. 21—61)

The present invention relates to an improved applicator for supporting a bandage bearing a wood treating grease product and applying the bandage to the top of a line pole.

The invention pertains to the practice of treating wood with preservatives after the wood is put in use, and particularly treating wood posts or poles such as utility line poles. The poles are treated by applying wood preservative to the top end where it can penetrate the end grain of the wood. This extends the usable life of pole already in the line and the application of preservative will add extra years to the life of the pole. Poles which were poorly treated upon installation or were not treated, or were treated with inferior preservatives can be treated with materials of an improved nature. The preservative material is a grease or grease-like composition which for convenience is carried on a sheet or bandage. For application to the tops of line poles a water soluble bandage material is employed. The preservative grease-like composition is carried in a thick deposit at the center of a sheet and the deposit or slab of grease is pressed to the top of the pole, with the sheet dissolving with precipitation.

The present invention contemplates the provision of an applicator which provides a support for a sheet carrying a slab of grease-like wood preservative material and enables the operator to apply the material to the top of the pole from the ground or a position below any crossarms or electric lines leaving the sheet and material in position for treating the pole.

An object of the present invention is to provide an improved applicator which reliably and securely supports a sheet with a slab or grease preservative on the sheet and which permits the preservative and sheet to be pressed to the top of a line pole and left there.

A further object of the invention is to provide an applicator mechanism for applying a grease bandage to the top of a line pole, having improved features for supporting the bandage, for applying the bandage firmly to the top of the pole, for releasing the bandage and removing the applicator without disturbing the bandage position, and wherein the applicator can be used for successive applications.

A further object of the invention is to provide a bandage applicator of the type described having improved means for supporting and releasing a bandage and which can be used on an electrical line pole having a ground line bracket on top of the pole.

A still further object of the invention is to provide a grease bandage applicator of simplified and reliable inexpensive construction, which is easy to use and handle in the field, and which is easy to load with bandages.

Other features, objects and advantages will become more apparent with the teaching of the principles of the invention in connection with the disclosure of the preferred embodiment thereof in the specification, claims and drawings, in which:

FIGURE 1 is a top plan view of an applicator embodying the principles of the present invention;

FIGURE 2 is a side elevational view of the applicator showing the parts in position gripping a grease bandage;

FIGURE 3 is a vertical sectional view taken substantially along line III—III of FIGURE 1 illustrating the position of the parts as a bandage is applied to the top of a pole;

FIGURE 4 is a bottom plan view showing a grease bandage of the type handled by the applicator of the instant invention;

FIGURE 5 is a vertical sectional view taken substantially along line V—V of FIGURE 1; and

FIGURE 6 is a vertical sectional view taken substantially along line VI—VI of FIGURE 1.

As shown on the drawings:

The applicator mechanism includes a support ring **10** and a lower clamping ring **11** for clamping a bandage therebetween. The rings are releasably held together by latches **12** which permit the clamping ring to be dropped to the position of FIGURE 3 when the bandage is to be released. When the bandage is released, carriers **13** limit the distance that the clamping ring is dropped and carry it on the support ring. The ring assembly is manipulated by an operator and has a radial arm mechanism **14** for attaching to a hot stick.

In greater detail, the support ring **10** is annular in shape with a gap **16** on one side that is also present in the clamping ring **11** so that the assembled rings can be moved over a pole having a ground connection, without interfering with the ground connection.

The support ring has a plurality of circumferentially spaced tapered projections **17** which form holes or openings **18** in a bandage when clamped and which extend into mating openings **18** in the clamping ring. These projections **17** project through the holes in a bandage, as shown in FIGURE 5. The support ring has a lower flat surface **15** and the clamping ring has an upper flat surface **15***a* for frictionally gripping the surfaces of the bandage.

The circumferentially spaced tapered projections **17** may also fit loosely into the mating openings **18** in the clamping ring, thereby frictionally gripping the surfaces of the bandage eliminating the need for corresponding holes in the bandage.

For holding the mechanism in the air or at the top of a line pole, the radial arm mechanism **14** includes brackets **19** on the support ring and a radial rod **21** projects into holes in the brackets and is held therein by thumb screws **20** threaded into the top of the brackets **19**. The rod **21** has a downwardly turned open U-shaped end **22** for connecting to a manually handled line pole for a lineman, which is also known as a hot stick. This will be recognized by those skilled in the art and is an elongated rod of insulating material which enables the operator to stand on the ground or climb to a position below the crossarms or electric lines and safely raise the applicator to the top of a line pole without danger in the event the mechanism touches charged wires. While the rings **10** and **11** may be constructed of various materials, they are preferably formed of a nonconductive material such as fiberglass or plastisol-coated material.

FIGURE 4 shows a bandage **24** of a type to be applied by the mechanism. The bandage has a flat sheet **24***a* preferably formed of a water soluble film. The film is shown with openings **27** along its edge formed by being punched by the projections **17** in the support ring when the rings **10** and **11** are clamped together. In some instances the rings may be formed without projections and corresponding openings and the bandage may be frictionally clamped therebetween. It is also contemplated that in some instances bandages with preformed openings may be provided. It is also contemplated that an oblong bandage or shape other than round may be employed.

Although it is unhandy to prepare a bandage in the field, it can be done and it is contemplated that either

preprepared bandages or field prepared bandages may be used. One form of bandage is shown in FIGURE 4.

The bandage **24** includes the sheet **24***a* upon which has been cast a slab of the preservative-protective grease **25**, for example, such as that shown in U.S. patent, Behr, 2,904,467. The grease material is cast on the supporting film **24***a* and a sheet of loosely woven or matted material **25***a* is placed over thhe preservative-protective grease. The loosely woven material may be crinoline or a water soluble material having the porosity of crinoline. A second sheet of water soluble film **24***b* is placed over the crinoline and is sealed to the sheet **24***a* at the outer edges when the bandage is originally prepared. This permits convenient packaging and handling. In the field, when the bandage **24** is clamped between the rings **10** and **11**, the second sheet **24***b* which is over the matted material is cut at **24***c* and the center portion is stripped off. The grease is exposed at the edges of the sides and through the matted or woven material and the grease will adhere to the top of a pole when applied, as shown in FIGURE 3. The purpose of the mat is to allow easy separation of the second sheet of water soluble film from the grease and it is not necessary that it cover the entire grease surface. Another purpose of the matted or woven material is to prevent the grease from separating from the support film **24***a* after it has been clamped in the mechanism between the rings, and for this purpose a portion of the matted or woven material must extend as far as the matted openings in the clamping ring on opposite sides of the bandage. The material used for the water soluble film will be of compositions known to those skilled in the art and need not be described in detail.

When the poles have a ground line bracket on the top, the support film is slit as shown at **26** in FIGURE 4.

The latches **12**, as shown in FIGURES 1, 2 and 6, include a latch finger **28** which is pivoted on a pin **29** suitably supported on the support ring **10**. A torsion spring urges the finger **28** to a latched position as shown in FIGURE 6 in the solid line position of the finger. The latch is pulled to the release position, which is the dotted line position in FIGURE 6, to permit the clamping ring to drop down and release the bandage, by a lanyard **32**. The lanyard includes lines to each of the latches **12**, FIGURE 1, and as shown in FIGURE 6 the lanyard is passed through a hole **31** in the upper end of the finger **28** and knotted so that when pulled it will pivot the latch finger **28**. The lanyard **32** passes through an opening **34** in a guide **33** on the latch and passes down through an opening **35** in the support ring. Another similar lanyard **36** is connected to the other latch and passes through an opening **37** in the ring and joins the lanyard **32** to form a composite lanyard line **38** which is pulled by the operator when the bandage is to be released.

The carriers **13** limit the distance that the clamping ring drops, as shown in FIGURE 3, and include lugs with openings **39** on the support ring. The clamping ring has similar lugs with openings **40** and short lines **41** connect between the openings to carry the clamping ring when it is dropped down from the clamping position of FIGURE 2 to the release position of FIGURE 3.

In operation, the operator clamps a bandage **24** between the rings **10** and **11** and supports the mechanism on the hot stick **23** lifting it to the top of a pole **42**. The bandage **24** is pressed down on the top of the pole **42** so that the grease-like preservative material will squeeze against the surface of the pole causing the bandage to adhere thereto. The lanyard line **38** is then pulled and the latch fingers **28** move to the dotted line release position of FIGURE 6, permitting the clamping ring **11** to drop down to the position of FIGURE 3. The mechanism may then be elevated and the bandage will stick to the top of the pole. Elevating the hot stick will raise the ring **10** away from the top of the pole and will raise

the clamping ring **11** over the top of the pole so that the mechanism can be returned to the ground for receiving another bandage to be applied to another pole.

The applicator mechanism achieves good contact between the grease preservative and the pole top and bonds the film and grease firmly to the pole, If desired, another attachment is attached to the hot stick and is used to pull the grease down evenly over the top and edge of the pole. The small amount of grease pulled down between the film in the side of the pole will bond the film neatly to the pole until rain and weather will cause it to disintegrate and disappear.

Thus it will be seen that we have provided an improved applicator mechanism which meets the objectives and advantages above set forth. The applicator holds the pole top preservative treatment bandage while the bandage is prepared for application and raises it to a position over the pole top and releases the bandage so that it falls into place on top of the pole. It permits application of bandages for the top of any size or shape pole top and to poles having a ground line connection at the top.

The drawings and specification present a detailed disclosure of the preferred embodiment of the invention, and it is to be understood that the invention is not limited to the specific forms disclosed, but covers all modifications, changes and alternative constructions and methods falling within the scope of the principles taught by the invention.

We claim as our invention:

1. An applicator adapted for installing bandages carrying a wood treating grease product on the tops of poles comprising a support ring having a gap at one side and having a lower planar surface, a radial arm adjustably attached to the support ring for attaching a supporting rod to lift the ring to pole top height, circumferentially spaced tapered downwardly extending projections on the lower surface of said support ring, a clamping ring having an upper planar surface for clamping a bandage against the surface of the support ring and having openings accommodating the projections on the support ring so that the projections may extend through openings in the bandage, said rings formed of an electrically nonconductive material, spring held latches mounted on the support ring and having releasable latch fingers extending downwardly over the outer edge and below the clamping ring for holding it to clamp the bandage, connectors on said latches for connecting a lanyard to release the latches and permit the clamping ring to drop downwardly, and a plurality of flexible carrying lines connected between said rings for limiting the separation distance between the rings and carrying the clamping ring on the support ring when said latches are released.

2. An applicator adapted for installing bandages carrying a wood treating grease product on the tops of poles comprising a rigid support ring for carrying a grease bearing bandage at its edges, means on the support ring for attaching a supporting rod to lift the ring to pole top height, a rigid clamping ring for clamping the bandage to the support ring, a releasable latch holding the rings axially together in a clamping position, means for releasing said latch means to permit axial separation of said rings so that the clamping ring can drop to a release position, and members connected to each of said rings and between the rings in release position for carrying the clamping ring on the support ring in said release position.

3. An applicator adapted for installing bandages carrying a wood treating grease product on the tops of poles comprising a support ring for carrying a grease bearing bandage at its edges, means on the support ring for attaching a line pole to lift the ring to pole top height, and a plurality of axially extending projections on the support ring extending downwardly to project through positioning openings in a bandage for supporting the bandage.

4. An applicator adapted for installing bandages carry-

ing a wood treating grease product on the tops of poles comprising a support ring for carrying a grease bearing bandage at its edges, means on the support ring for attaching a line pole to lift the ring to pole top height, a clamping ring for clamping the bandage to the support ring, a releasable latch positively rigidly holding the rings together in a clamping position and permitting separation of the rings for releasing the bandage, and means for releasing said latch.

5. An applicator adapted for installing bandages carrying a wood treating grease product on the tops of poles comprising a rigid support ring for carrying a grease bearing bandage at its edges, a gap at one side of the ring for straddling an interfering element, means on the support ring for attaching a line pole to lift the ring to pole top height, and means for releasably holding a bandage on the support ring.

6. An applicator adapted for installing bandages on the tops of poles comprising a rigid support member having means for spreadably positively attaching and supporting flat, flexible bandages in a horizontal position, means on said support member for attaching a lifting element to position the support member at pole top height, and a bandage release means on said support member for releasing a positively attached bandage on a pole top in

order to remove the support member from the pole and leave the bandage on the pole top after the bandage has been positioned.

7. An applicator adapted for installing bandages carrying a wood treating grease product on the tops of poles comprising a support frame having a central opening and adapted for carrying a grease bearing bandage at its edges, means on the frame for gripping a bandage at a plurality of substantially uniformly circumferentially spaced location, and means for releasing the bandage from the frame.

8. An applicator adapted for installing bandages carrying a wood treating grease product on the tops of poles comprising a rigid support ring for carrying a grease bearing bandage, a rigid clamping ring axially movable against the lower surface of the support ring for clamping the edges of the grease bearing bandages, and means for releasably locking the clamping ring against the support ring.

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