Nov. 3, 1931. J. L. SCHORK, JR 1,830,411

CABLE MARKER

Filed Feb. 24, 1930

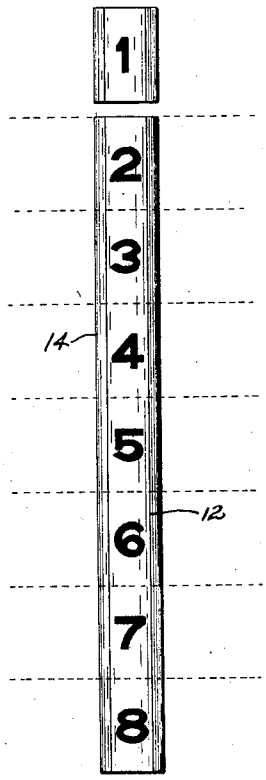


Fig. 1

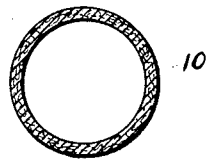


Fig. 3



Fig. 2

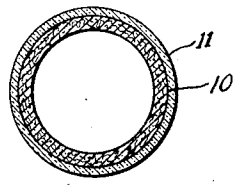


Fig. 5

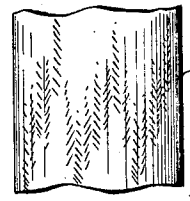


Fig. 4

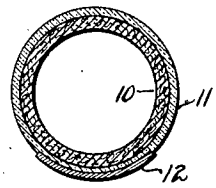


Fig. 7

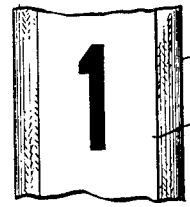


Fig. 6

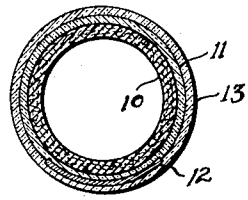


Fig. 9

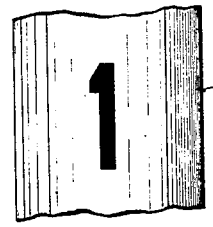


Fig. 8

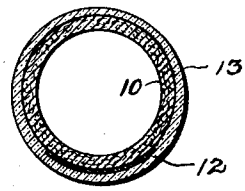


Fig. 10

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UNITED STATES PATENT OFFICE

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CABLE MARKER

Application filed February 24, 1930. Serial No. 430,665.

This invention relates, generally, to means for marking electric conducting leads or cables so that the same may be identified one from another; and the invention has reference more particularly, to a novel non-metallic cable marker adapted to be applied to a lead or cable for identifying the same.

Heretofore, it has been common to fasten identifying numbers or other marks to a metal clip and to then wrap the clip around the lead or cable desired to be identified. Owing to the action of the metal clip in setting up abnormal electric stresses within the cable insulation, which often resulted in failure of such insulation, it was found necessary in many instances to employ a non-metallic marker, such as a coated or varnished cotton or other non-metallic sleeving. Originally, attempts were made to print or stamp the identification marks directly upon the braided cotton or other sleeving and then to superimpose a varnish film upon the marks. The identification means thus formed was not successful in use for the reason that the ink used to make the marks would diffuse into the sleeving and into the varnish film, thereby rendering the marks faded and blurred so that they were not legible. Later attempts were made to initially apply several coats of varnish to the sleeving and then to stamp the identifying marks upon the varnish and thereafter to apply more coats of varnish. However, the resulting product was unsatisfactory because the ink used would diffuse into the varnish films, thereby becoming so smudged as to render the marking illegible.

The principal object of the present invention is to provide a novel cable identification means employing markings on a non-metallic base, which markings are clearly and permanently legible.

Another object of the present invention lies in the provision of an identification means of the above character which is of simple construction and which may be readily and easily applied to a cable or electric lead.

In carrying out the invention in its preferred form, a non-metallic base preferably of sleeve shape is employed, such sleeve being readily adapted to fit over and adhere to a cable or lead. Upon this base a varnish film which may take the form of a quick drying varnish or lacquer or a plurality of varnish films forming a varnish undercoat is applied, whereupon a marker strip of fibrous material and bearing the desired identification characters is adhered to the varnish film or films. Thereafter, a transparent varnish film or films constituting a varnish overcoat is applied over the marker strip and the exposed portions of the varnish undercoat.

Still another object of the present invention is to provide an identification means or marker of the above character embodying a marker strip, which means when applied to a flexible cable may be readily flexed without injury to the marker strip or other portions of the identification means.

Other objects of this invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the same.

The invention is clearly illustrated in the accompanying drawings, in which:—

Fig. 1 is a view in elevation of a length of marker sleeving fabricated in accordance with the principles of the present invention, and which is adapted to be transversely severed along the dotted lines indicated in this figure to produce a plurality of cable markers.

Fig. 2 is a fragmentary view in elevation of a non-metallic base employed in making up the novel marker of this invention, which base is illustrated as being of flexible material;

Fig. 3 is a transverse sectional view of the structure shown in Fig. 2;

Fig. 4 shows the flexible base of Fig. 2 equipped with a varnish undercoat;

Fig. 5 is a transverse sectional view of the structure shown in Fig. 4;

Fig. 6 illustrates a marker strip adhering to the varnished base of Fig. 2;

Fig. 7 is a transverse sectional view of the structure shown in Fig. 6;

Fig. 8 illustrates the structure of Fig. 6 equipped with a varnish overcoat;

Fig. 9 is a transverse sectional view of the structure shown in Fig. 8; and

Fig. 10 is a transverse sectional view of a slightly modified form of the cable marker of this invention.

Similar characters of reference are employed in all of the above described views, to indicate corresponding parts.

Referring now to said drawings, the reference numeral 10 designates a suitable non-metallic base illustrated as of sleeve form and having such internal diameter as to adapt the same to be slipped over cables for adhering thereto. Obviously the internal diameter of the base or sleeve 10 will vary in accordance with the dimensions of the cable to which it is intended to be applied. The base 10 is illustrated as being made up of braided flexible material, such as cotton or linen braid. This construction is especially adapted for use on flexible cable as the base 10 may then be readily flexed without injury thereto when the cable is flexed. However, it is to be understood that in cases where the marker of this invention is to be applied to a rigid cable, the base 10 may as well be made of a suitable rigid non-metallic material, such as a suitable condensation product, or of a fibrous material, such as paper.

According to the preferred arrangement, an undercoat 11 is applied to the exterior surface of the base or sleeve 10. This undercoat 11 preferably comprises a plurality of varnish films applied successively. It has been found in practice that three such varnish films or coats are very satisfactory although it is to be understood that either a lesser or greater number of such varnish films may be used. Preferably while the last applied film of the undercoat is still wet, a fibrous tape or marker strip 12 is applied to the undercoat 11 so as to extend longitudinally of the sleeve 10 as especially illustrated in Fig. 1. This fibrous tape or marker strip may be made of paper or felt or any other suitable fibrous material and has applied thereon as by stamping the desired identification characters indicated by way of example, in the drawings as numerals running from 1 to 8. The markers or numbers on the tape 12 are spaced from one another, as especially illustrated in Fig. 1, to provide for the severing of the marker sleeving at points between the successive numerals. The marker strip 12 is preferably pressed firmly against the wet outermost film of the undercoat 11 so as to adhere firmly thereto or in the event that the undercoat should be dry when the tape 12 is applied, the same may be secured by means of a suitable adhesive. In applying the marker strip or tape 12 to the undercoat, it is desired to press all portions of the tape uniformly against the undercoat so as to eliminate as far as possible any voids or air pockets which may tend to form between these members.

With the marker strip 12 applied to the undercoat 11, a transparent varnish overcoat 13 is applied to the marker strip and to the exposed portions of the undercoat 11, thereby producing the completed marker sleeving designated as a whole by the reference numeral 14. Though this varnish overcoat 13 may consist of but a single varnish film, preferably the same consists of a plurality of varnish films. In practice it has been found that a varnish overcoat 13 comprising five varnish films works very satisfactorily producing a lasting and permanent protecting marker overcoat although a lesser or greater number of films or coats may be used. The transparent varnish overcoat 13 adheres to and protects the marker strip 12 from abrasion or injury and prevents the fraying or peeling off of this strip from the undercoat. Further, the overcoat 13 renders the exterior surface of the marker sleeving uniformly smooth over its entire circumference. Since the marker strip 12 is entirely confined between the undercoat 11 and the overcoat 13, and as these coats firmly adhere to and strengthen the marker strip, the completed marker sleeving 14 may be bent or flexed considerably without causing injury to the marker strip or any buckling or wrinkling thereof.

Owing to the transparency of the overcoat 13, the identifying characters stamped or printed on strip 12 are readily legible from without. Also, since the markings are previously applied to the strip 12 and as they are firmly retained by this strip there is no tendency for the ink of the marks to diffuse into the varnish overcoat and render the markings illegible.

In some instances, the varnished undercoat 11 may be omitted as illustrated in Fig. 10 in which case the marker strip 12 is adhered directly to the untreated base sleeve 10 as by a suitable adhesive. The varnish overcoat 13 is used however to protect the marker strip and the markings thereon from contact with outside objects which would otherwise quickly destroy the marker strip and obliterate its markings. The form of construction illustrated in Fig. 10 is especially suitable for marker sleeving that is not intended to be flexed considerably such, for example, as that employing a rigid base sleeve 10. Considerable flexure of the form of construction shown in Fig. 10 will cause wrinkling of the marker strip 12.

The marker sleeving 14 such as illustrated in Fig. 1 is adapted to be cut transversely intermediate the consecutive markings as along the dotted lines in this figure. It will be apparent that the novel cable markers so formed may be readily slipped over the ends of cables to be identified and will remain in use upon

the cables indefinitely. The markings indicated in Fig. 1 of the drawings are especially suitable for an eight cylinder engine as of the airplane type, the markers being employed to distinguish the several ignition cables.

It will be apparent in some instances that the base 10 may be omitted and the marker strip 12 applied to the cable directly. In such cases the marker strip would ordinarily have a length merely sufficient to accommodate a single indicating means, or number, and such strips would be spaced at desired intervals along the length of the cable. The undercoat 11 may or may not be used as above described, but the overcoat 13 would be used in any event.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:—

1. A cable marker of the character described comprising a base of textile material having the form of a sleeve for slipping over a cable, a marker strip of fibrous material extending longitudinally along and carried by said base, said marker strip having an identification mark thereon, and a varnish overcoat comprising a varnish film surrounding said marker strip and said base in protective relation therewith.

2. A cable marker of the character described comprising a base of electrically nonconductive material having the form of a sleeve for slipping over a cable, a varnish undercoat adhering to said base, a marker strip bearing an identification mark, said marker strip overlying and being secured to said varnish undercoat, and a protective varnish overcoat overlying and adhering to said marker strip and the exposed portions of said varnished undercoat.

3. A cable marker of the character described comprising a base of textile material having the form of a sleeve for slipping over a cable, a varnish undercoat comprising a varnish film adhering to the exterior surface of said base, a marker strip of fibrous material pressed against and adhering to said varnish undercoat, said marker strip having identification means stamped in ink thereon, and a surrounding varnish overcoat comprising a varnish film adhering to the exterior surface of said marker strip and the exposed portions of said undercoat.

4. A flexible non-metallic cable marker structure, comprising a tubular base of textile material, a marker strip of fibrous material longitudinally imposed on said base, said marker strip bearing marker indicia longitudinally spaced thereon, and a protective coating of transparent varnish overlying said base and strip, said structure being severable intermediate the marker indicia to provide individual distinguishing markers for purposes described.

5. A flexible non-metallic cable marker structure, comprising a tubular base of textile material, a varnish undercoat comprising a varnish film adhering to the exterior surface of said base, a marker strip of fibrous material longitudinally adhering to said varnish undercoat, said marker strip having marker indicia longitudinally spaced thereon, and a protective overcoat of transparent varnish overlying said marker strip and the exposed portions of said undercoat, said structure being severable intermediate the marker indicia to provide individual distinguishing markers for the purposes described.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 20th day of February 1930.

JOHN LEONARD SCHORK, JR.