Nov. 7, 1933. C. E. DALE 1,933,660

WRAPPED BUNDLE OF COILED WIRE

Filed Jan. 2, 1932 2 Sheets-Sheet 1

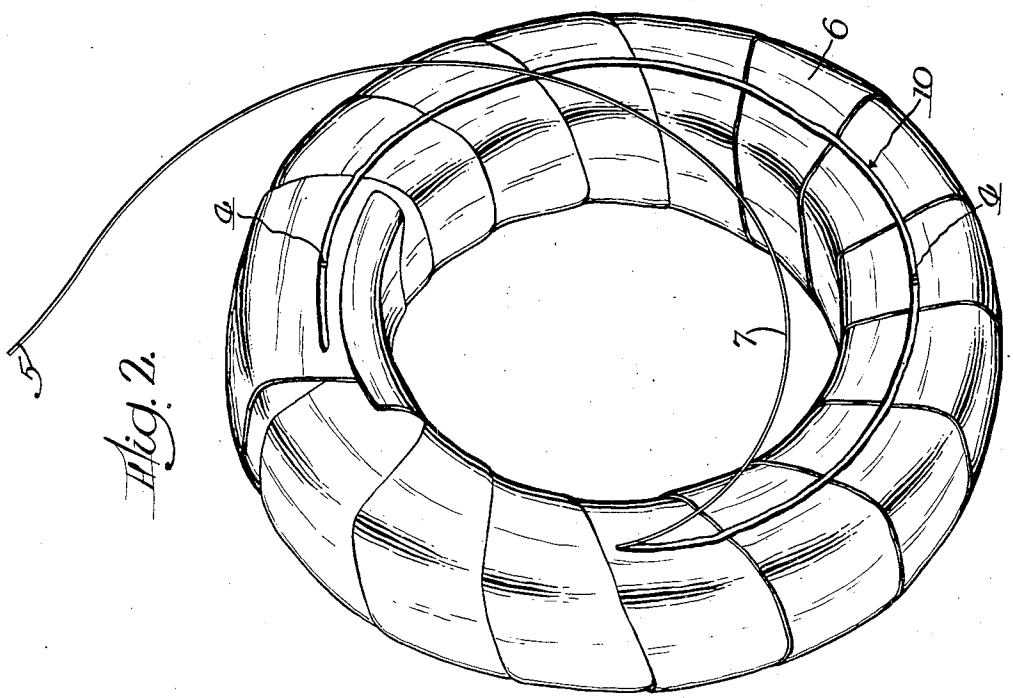


Fig. 2.

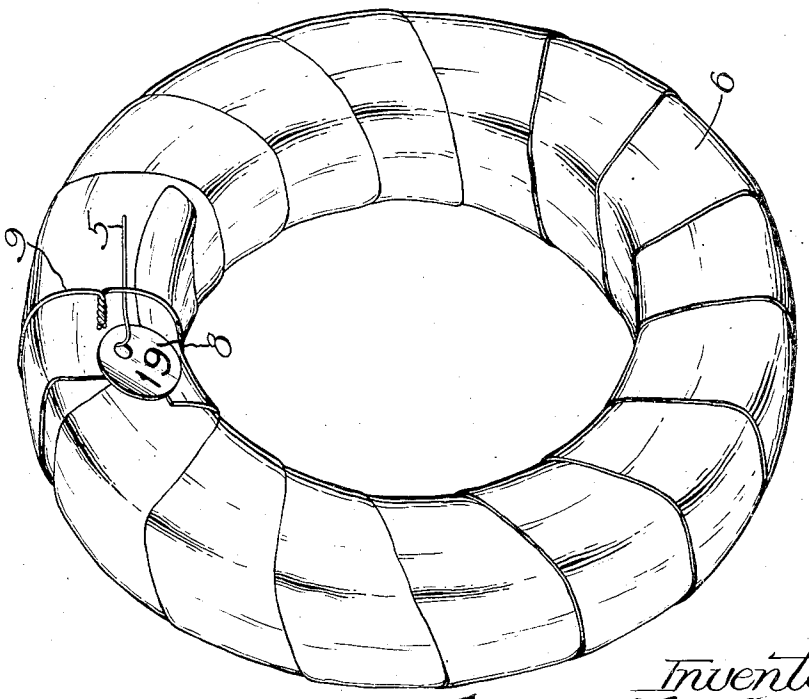


Fig. 1.

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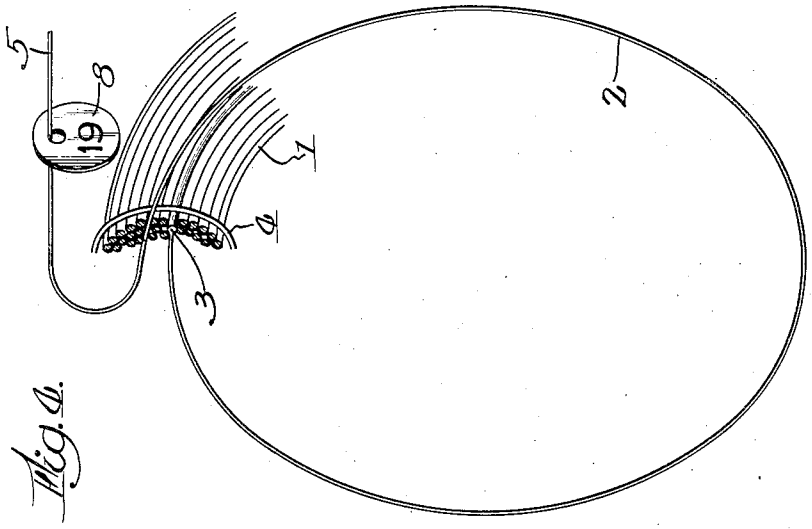


Fig. 4.

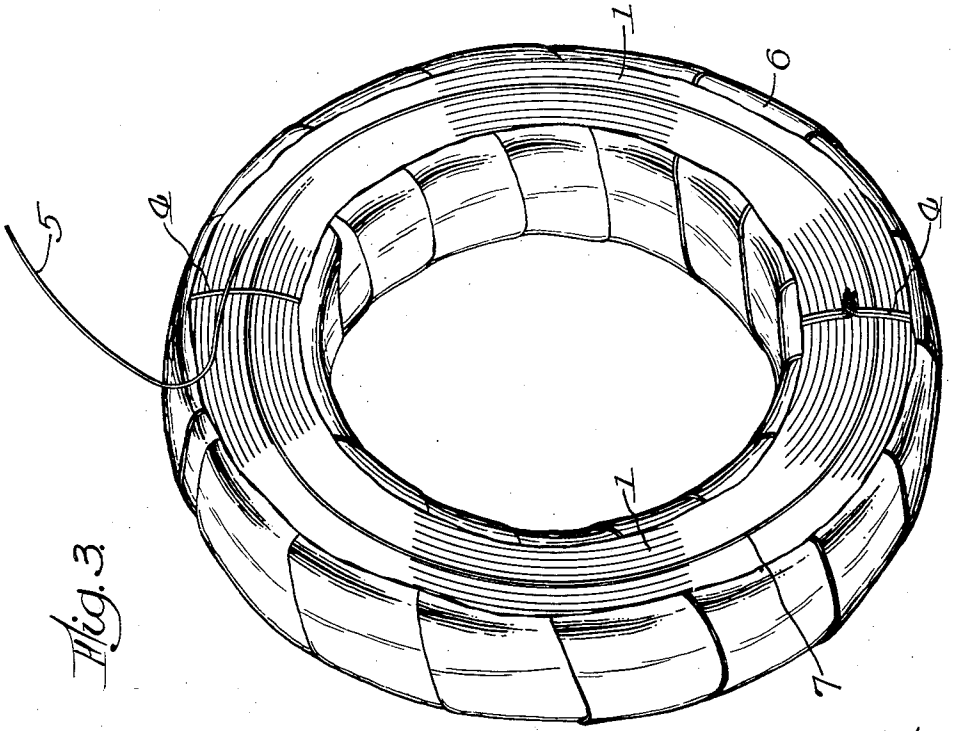


Fig. 3.

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UNITED STATES PATENT OFFICE

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WRAPPED BUNDLE OF COILED WIRE

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7 Claims. (Cl. 206—59)

This invention relates to a new and improved wrapped bundle of coiled wire and has for its primary object to provide a bundle wherein the wrapping, preferably in paper, can be easily and quickly removed as a unit.

It is a common practice among manufacturers of wire to coil the same in proper size bundles, and in order to protect the finish on the wire and keep the wire in a clean condition, the coils of these bundles are covered by wrapping a continuous strip of paper transversely and circumferentially of the bundle. Wire such as I have in mind is used in the basket industry; the box industry, where boxes are wire bound; manufacturers of hardwood lumber who use wire for tying purposes; stitching machines; users of tinned wire; telephone wire; users of bright galvanized wire, which on account of the locality into which the wire is shipped must be protected from moisture, as for instance jobbers and distributors who carry this wire in stock and are located near salt water; black annealed wire which must be kept from rusting when stored for an indefinite period, and for other and various purposes and uses.

It is a tedious job, and costly, to unwrap from each bundle of wire these strips to enable the workman or user to get possession of the proper end of the bundle for threading into a machine and then without any assurance that the wire has been started from the proper end of the bundle, which, when not properly done, will result in the wire becoming tangled and not uncoiling properly.

I have discovered a very simple and improved method of so wrapping coiled bundles of wire with strips of paper that the wrapping may be quickly and exepeditiously removed as a unit, without any labor and expenditure of time and in a manner which will absolutely insure the drawing off the wire from the bundle at the proper end of the bundle and so as to avoid any possibility of the coiled wire becoming tangled or improperly uncoiled.

My invention therefore consists in first coiling wire into a proper sized bundle and to provide preferably two or more band wires secured transversely of the coiled wires in the bundle to securely fasten the coils; but to leave the last coil on the outside of the bundle free of these bands, although lying snugly against the bundle circumferentially thereof; then wrapping a strip of paper tightly about the coils, forming the bundle, by winding such strip transversely and circumferentially of the coils so that there are no exposed wire surfaces, and as a result the bundle is kept moisture proof. On the completion of the wrapped covering, the end of the outer coil, which is unbound by the securing bands, but securely held by the covering against the coiled bundle is pierced through said covering and bent over to both form a finger grip and to secure a wire designating tag thereto. This end, as will now be obvious, is the starting end of the wire bundle to be threaded into a machine. The user of the bundle, to remove the paper wrapping or covering therefrom, will grasp the end of the wire protruding through the wrapping and by a pull on the wire, tear, sever or rupture the wrapping throughout the whole circumference of the bundle and allow its removal as a complete unit, without the tedious effort heretofore required of unwrapping the entire strip. On the removal of the wrapping there will be a free end of the wire from the designating tag to a wire band which holds the coils of the bundle intact and is the starting end of the bundle for use, by threading, into any kind of machine, and insures against tangling and of improper uncoiling of the wire from the bundle.

In the event of the invention being used on bundles of the heavier gauges of wire, as for example, heavier than #14 gauge, it is suggested that a light gauge wire be fastened on to the outer end of the heavier gauge wire, and wrap or coil this light gauge section of wire on the outside of the band wires and inside of the wrapper or covering and to pierce the covering with the end of the light gauge wire whereby to receive the tag and serve as the finger gripping end by means of which the wrapping may be ripped asunder or torn apart for its removal as a unit from the bundle. The section of light gauge wire will tear the paper much easier than a heavier gauge wire will, and is also much easier to control when left outside of the band wires securing the coils forming the bundle.

Further objects will more fully appear from the following description:

That the invention may be more fully understood, reference is had to the accompanying drawings forming part of this description illustrating preferred embodiments of the invention, in which:—

Fig. 1 is a perspective view of a wrapped bundle of coiled wire employing my method and invention and as it appears complete and intact;

Fig. 2 is a perspective view, similar to Fig. 1, except that the method of removing the wrapping as a unit by a pull on the protruding or

exposed wire is shown, which illustrates how, by a pull on the wire, the wrapping is torn asunder or ruptured;

Fig. 3 is a perspective view, similar to Figs. 1 and 2, except that the wrapping is partially broken away to show the band wires which hold the coils in position in the bundle and with the end or terminal coil free of the bands throughout one complete coil of the bundle and with an end to be exposed through the wrapping to provide a finger grip and to secure a wire designating tag thereto, and

Fig. 4 is a perspective view showing the use of a light gauge wire for tearing or rupturing the wrapping, when the wire constituting the coiled bundle is of a gauge heavier than a #14 gauge.

Like characters of reference denote corresponding parts throughout the figures.

In the drawings 1 designates a bundle of coiled wire wound or coiled into an appropriate sized bundle, see Figs. 3 and 4. If the wire constituting the coiled bundle is of a gauge lighter than #14, this gauge will preferably remain the same throughout. If, however, the wire constituting the coiled bundle is of a gauge heavier than #14, it is preferable and I recommend that the outside end for the length of a complete coil, and in fact somewhat longer, be provided of a lighter gauge and secured to an end of the coil of the heavier gauge wire, so that the end protruding through the wrapper and for a complete coil will be sufficiently light and easier of manipulation and more effective than a wire of heavier gauge, for separating, tearing asunder or rupturing the wrapping, when it is desired to remove the wrapping as a unit and with a single operation. In Fig. 4 the bundle of coiled wire 1 is wire of a gauge heavier than #14 and the outside or last coil, which is that end which is pierced or projected through the wrapper, and designated 2, is of a lighter gauge and connected to an end of the coil as at 3.

The bundle 1 of coiled wire, of whatever gauge, is securely held in the form of a coiled bundle, by means of band wires 4, see Fig. 3, which are preferably disposed on the bundle diametrically opposite each other. When placing the band wires 4, one complete coil, or longer, is left free, see Fig. 3, and the whole bundle of wire, with the exception of a projected end 5 is wrapped with a preferably paper wrapper 6. The end 5 being pierced or projected through the wrapper in the manner shown in Fig. 1. The wrapper 6 is wrapped tightly and firmly about the coiled bundle 1, circumferentially and transversely, as shown. When the wrapping 6 is applied the last complete coil 7, which has the projecting end 5, is held firmly against the bundle but is free for movement, by a pull on the end 5, for one complete turn of the bundle and to the band wire 4, see Fig. 3, which holds the bundle intact.

After the wrapping 6 has been applied and the end 5 of the free coil has been pierced through the wrapping, see Fig. 1, a designating tag 8 is slipped onto the end 5 and said end then laid against the wrapped bundle and the wrapping and exposed end 5 of the wire firmly secured or held by a preferably wire band 9. The end 5 of the wire is preferably bent over to provide a finger hold and also to receive and hold the tag 8.

When it is desired to use the bundle of wire, for whatever purpose, an attendant or an operator will first sever the band 9 and will then grasp the exposed end 5 of the wire in one hand, grip the wrapped bundle in his other hand and by a pull on the wire 5 circumferentially of the bundle, the wrapping 6 may be severed, torn asunder or ruptured in the manner shown at 10 in Fig. 2. It should be obvious therefore, that with a pull on the end 5 of the wire for the distance of substantially one complete turn of the bundle that the complete wrapping is ripped or torn apart so that the wrapping may be removed as a unit and with a single operation and without the otherwise and necessarily tedious operation of unwrapping, by a series of unwindings, which is at present the case.

On the wrapping 6 being removed the coiled bundle is still intact and an attendant or operator may, when grasping the end 5 of the loose coil of wire 7 be assured that he has hold of the proper end of the wire of the bundle for feeding into a machine or for whatever purpose, and then by severing the bands 4 the wire of the bundle may be unwound or uncoiled without danger of tangling or being improperly uncoiled.

What I claim is:—

1. The within described article comprising a bundle of coiled wire, means for holding the bundle in its coiled formation, one end of the wire being free for substantially a complete coil of the bundle, and a wrapping of fragile material wound tightly of the bundle both circumferentially and transversely thereof and with the end of the free coil projecting through said wrapping, as and for the purposes set forth.

2. The within described article comprising a bundle of coiled wire, bands securing the wire in the bundle with an end free for substantially a complete coil of the bundle, and a wrapping of fragile material wound tightly of the bundle both circumferentially and transversely thereof and with the end of the free coil projecting through said wrapping to provide a finger gripping and tag designating portion, as and for the purposes set forth.

3. The within described article comprising a bundle of coiled wire, bands securing the wire in the bundle with an end free for substantially a complete coil of the bundle, a wrapping of fragile material wound tightly of the bundle both circumferentially and transversely thereof and with the end of the free coil projecting through said wrapping to provide a finger gripping and tag designating portion, and a binder for holding the terminals of the wrapper and projecting end of the wire against the wrapper.

4. The hereindescribed article comprising a bundle of coiled wire, means for holding the bundle in its coiled formation with one end of the wire free for substantially a complete coil of the bundle and disposed on a side face of the bundle, and a wrapping of fragile material disposed about the bundle so as to completely enclose the latter and with the end of the free coil projecting through the wrapping.

5. The hereindescribed article comprising a bundle of coiled wire, means for holding the bundle in its coiled formation, one end of the wire being free for substantially a complete coil of the bundle and being disposed on one side face of the bundle, and a wrapping of fragile material wound tightly about the bundle both circumferentially and transversely thereof, and with the end of the free coil projecting through the wrapping.

6. The hereindescribed article comprising a bundle of coiled wire having one end of the wire for substantially a complete coil disposed circumferentially of and forming a part of the

exterior of the bundle and a wrapping of fragile material disposed about the bundle and engaged with the latter to hold the entire wire in its coiled form, the free end of the coil projecting through the wrapping, whereby upon pull of said free end the said coil will rupture the entire wrapping.

7. The hereindescribed article comprising a bundle of coiled wire having one end of the wire for substantially a complete coil disposed circumferentially about one side face of and forming a part of the exterior of the bundle and a wrapping of fragile material disposed about the bundle and engaged with the latter to hold the entire wire in its coiled form, the free end of the coil projecting through the wrapping, whereby upon pull of said free end the said coil will rupture the entire wrapping.

CLAYTON E. DALE.