The present invention relates broadly to packaged goods, and more specifically to a spool on which wire is wound, and the method of anchoring the end of said wire on said spool before winding.

The standard procedure in connection with spooled wire, such as electric fence wire, has been to provide the spool with a side opening through which the starting end of the wire to be wound on the spool would be extended and a sharp cut made, like, with the starting end of the wire exposed. This procedure has led to injury of the people carrying or handling wire spooled in this manner, as well as the tearing of their clothing on the exposed starting end of the wire, and yet nothing has been done commercially to rectify this situation. It was a recognition of the problem involved, and the complete lack of any adequate solution to same which led to the conception and development of the present invention.

Accordingly, among the objects of the present invention is the provision of a spool of wire wherein there is no exposed starting end of the wire outside of a side flange of the spool to cause injury to people, items or articles coming into contact with same.

Another object of the invention is to provide a spool of wire wherein the starting end of the wire is entirely within the spool, with that end portion of the wire anchored on the outside face of the spool by means of a loop which is preferably larger than the opening through which it extends.

A further object of the invention is to provide a new method of winding wire on a spool wherein the presence of a sharp starting end of the wire on the outside of the spools is eliminated.

Still further objects and advantages of this invention will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the method steps and product product hereinafter fully described and particularly pointed out in the claims, the annexed drawing and the following description setting forth in detail one mode of carrying out the invention, such disclosed mode illustrating, however, but one of various ways in which the principle of the invention may be used.

In the annexed drawing:

FIGURE 1 shows a perspective view of a spool having wire wound on same, and with the starting end of that wire in the form of an external safety loop in accordance with the present invention.

FIGURE 2 is an enlarged side elevation of the wire carrying spool illustrated in FIGURE 1.

FIGURE 3 is an enlarged fragmentary sectional view as taken on line III—III of FIGURE 2, looking in the direction of the arrows.

FIGURE 4 is an enlarged fragmentary sectional view as taken along line IV—IV of FIGURE 3, looking in the direction of the arrows.

FIGURE 5 is an enlarged fragmentary sectional view as taken along line V—V of FIGURE 4, looking in the direction of the arrows.

Referring more particularly to FIGURE 1 of the drawing, it will be noted that there is a spool 10, which may be of any suitable material, such as plastic, having side flanges 11 and 12 joined together at their inner edges by means of a substantially cylindrical tubular web member 13, the joining edges of which are preferably rounded as shown. These side flanges 11 and 12 are also preferably provided with alined openings 14 and 15 through which can be threaded tie members (not shown) which can be sealed in conventional manner to prevent free unwinding of the wire 16 from the spool when same is ready for sale to wire customers. The spool 10 which is illustrated is of a new type having a large central opening through which the user can pass his arm and let the spool rotate as wire is payed out while the user walks down a fence line or the like.

The side of spool 10 in side flange 12 is provided, adjacent tubular web member 13, with a small opening 17 in which the starting end portion 18 of the wire 16 is fastened, for instance as shown in FIGURE 4. This starting end 18, instead of being formed in accordance with standard practice, with the unprotected end of same projecting outside of spool 10 through opening 17, is left inside of the spool, for instance, by first threading same out through opening 17, forming a loop 19, and then threading end 18 back inside of spool 10, to the position more particularly shown in FIGURES 3, 4 and 5, with this loop bent backwards against the outside face of side flange 13 in the same general direction as wire 16 is to be wound on the spool. This loop preferably is made slightly larger than opening 17 as an extra precaution against being too easily drawn back through the opening in case the loop gets accidentally caught and bent out of the turned back outside holding position shown. The outside face of side flanges 11 and 12 are preferably provided at the peripheral edge of same with a reinforcing rib 20 to strengthen as well as stiffen same to better meet conditions of rough use which are often encountered.

While the invention has been, for convenience, particularly described in connection with a plastic reel on which wire has been wound in manner eliminating the possibility of injury on the sharp starting end of the wire, it is to be noted that other types of reels can be used in like manner, and it is to be understood that the invention may be varied in equivalent manner as long as same remains within the spirit and scope of the invention set forth above.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the product and the method steps herein disclosed, provided those stated by any of the following claims or their equivalent be employed.

I therefore particularly point out and distinctly claim as my invention:

1. The method of releasably anchoring and then winding wire on a spool having side flanges with at least one of them having a small opening therethrough, and a web member for supporting said wire and joining said flanges together, which consists of the steps of doubling back the end of said wire to form a loop and a backwardly extending end portion, projecting the end of said loop out through said small opening while the end of said backwardly extending end portion remains between said flanges, bending said outwardly extending loop portion substantially against the outer face of said flanges and generally in the direction in which said wire is to be wound on said spool, and then winding the so-anchored wire on said spool.

2. The combination of a spool, and a coil of wire wound thereon, said spool having a pair of side flanges and a tubular web member supporting said wire and joining said side flanges together, said spool also having a small opening through one of said side flanges thereof, said coil of wire wound on said spool having the inner end of the wire doubled back in the form of a loop with a backwardly extending end portion, the end of said loop
3. The combination as set forth in claim 2, wherein said tubular web member is joined to said side flanges at their inner peripheries, with said small hole in one of said side flanges being near but spaced from said tubular web member and smaller than said loop extending there-through.