Sept. 28, 1965 R. M. WILSON 3,208,586

SKI ROPE AND REEL ASSEMBLY

Filed Feb. 8, 1962

FIG. 1

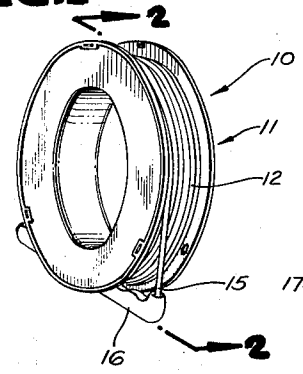


FIG. 2

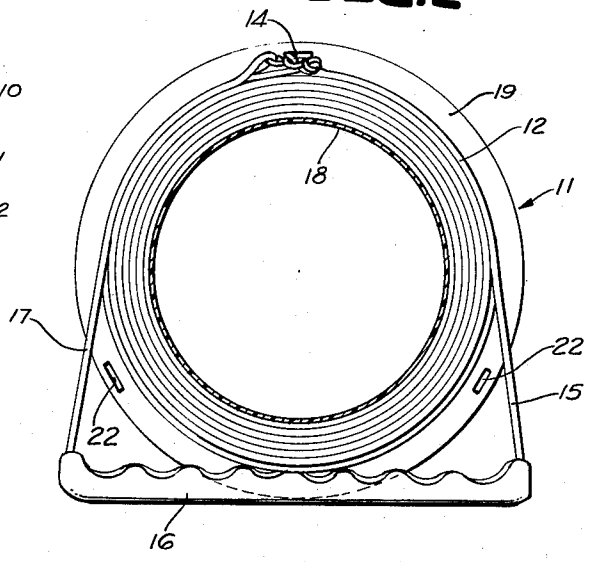


FIG. 4

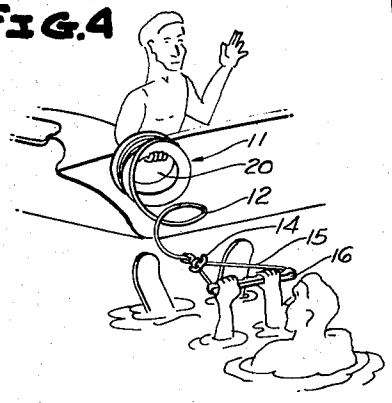


FIG. 3

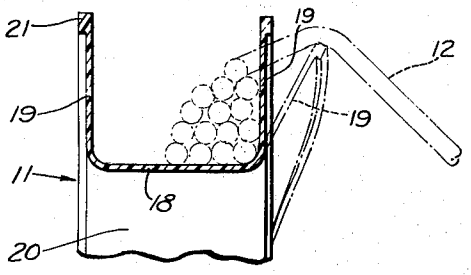
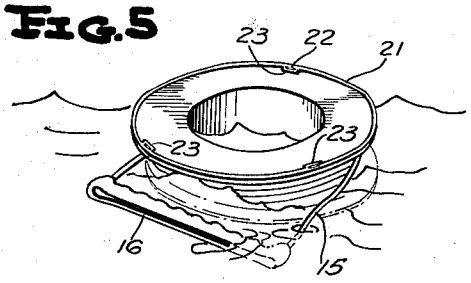


FIG. 5



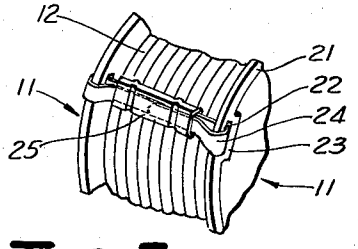
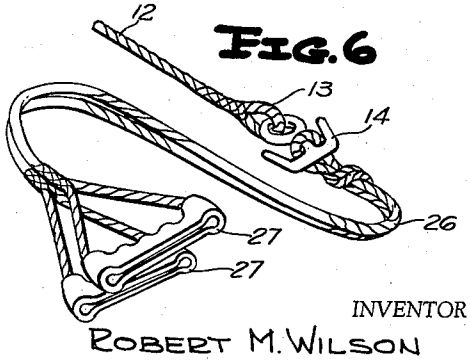


FIG. 7

FIG. 6



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SKI ROPE AND REEL ASSEMBLY

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6 Claims. (Cl. 206—53)

This invention relates in general to new and useful improvements in assemblies utilizing a reel, and more particularly to a novel reel which has general utility, but which is particularly adapted for use in conjunction with a ski rope.

Ski ropes are conventionally marketed in coil form without any means of protecting or storing same between times of use. Reels have not been commercially used for handling and storing individual ski ropes, and where they have been used for other things such as electric fence wire, plain and barbed, they have been commonly in the form of a sheet metal reel having a very small core of one to three inch diameter and sheet metal side flanges. These are not satisfactory for ski rope use, and not wholly satisfactory for many other items. It was a recognition of this problem and the complete lack of a wholly satisfactory commercial solution to same which led to the conception and development of the present invention.

Accordingly among the objects of this invention is the provision of a novel reel which is formed of a light weight plastic material and which has a smooth surfaced large center opening therein big enough for the reception of one's arm, whereby the reel may be readily carried and held during the paying out of a rope or other material wound thereon.

Another object of this invention is to provide a novel light weight reel which is formed of a flexible plastic material wherein a moderate flexing of the reel side flanges may occur during the paying out of the rope or other material wound thereon so as to permit the proper paying out of the material without damage to the reel.

Another object of this invention is to provide an inexpensive light weight reel which is formed, preferably, of plastic, such as linear polyethylene, and which has a specific gravity less than water whereby the reel will float and thus not be lost.

A further object of this invention is to provide a novel light weight plastic reel for rope or other material, the reel being of an extremely simple construction and having a large central opening for the reception of one's arm, the reel side flanges further being provided with transversely aligned pairs of openings which receive clips for holding the rope or other material on the reel during the shipment and storage of same thereupon, and which clips may be provided with a seal to indicate that the rope or other material carried by the reel is that initially packaged thereon.

Yet another object of this invention is to provide a novel ski rope and reel assembly wherein the entire assembly is floatable so that the assembly cannot be lost should it be accidentally dropped overboard.

Another object of this invention is to provide a novel ski rope and reel assembly which includes a light weight plastic reel having a large central opening for the reception of one's arm or hand to facilitate the ready handling of the reel, and the reel having wound thereupon an elongated ski rope which terminates at its end in a T-fitting, the T-fitting having connected thereto a connecting rope which, in turn, is connected to a suitable handle unit.

Still another object of this invention is to provide a novel ski rope and reel assembly wherein the reel, the ski rope, and fitting connected to the ski rope including the handle or handles, are all formed of light weight plastic material so that the assembly has flotation properties with respect to water.

A still further object of this invention is to provide a novel ski rope and special reel assembly wherein the ski rope terminates in a connecting rope and handle which combine to form a loop engageable around the reel so as to lock the ski rope in place.

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

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

In the annexed drawing:

FIGURE 1 is a perspective view showing the ski rope and reel assembly.

FIGURE 2 is an enlarged vertical sectional view taken along the line **2—2** of FIGURE 1, and shows further the details of the assembly of FIGURE 1, including the specific arrangement of the handle and connecting rope to lock the ski rope on the reel.

FIGURE 3 is an enlarged fragmentary transverse vertical sectional view taken through the upper portion of the reel, and shows the manner in which the reel flexes moderately during the paying out under tension of the rope or other material reeled thereupon.

FIGURE 4 is a schematic perspective view showing the manner in which the ski rope and reel assembly may be utilized by a skier.

FIGURE 5 is a perspective view showing the ski rope and reel assembly floating in the water.

FIGURE 6 is an enlarged fragmentary perspective view showing the end of the ski rope provided with a dual handle arrangement.

FIGURE 7 is an enlarged fragmentary plan view of the upper portion of the ski rope and reel assembly and shows the reel provided with a clip for initially holding the ski rope thereon in sealed relation.

Referring now to the drawings in detail, it will be seen that there is illustrated in FIGURE 1 the ski rope and reel assembly, which is the subject of this invention, the assembly being generally referred to by the numeral **10**. The ski rope and reel assembly **10** includes a reel, referred to by the numeral **11**, having a ski rope **12** reeled thereupon. As is generally shown in FIGURE 4 and best shown in FIGURE 6, the ski rope **12** is provided at its outer end with an eye **13** carrying a T-fitting **14**. In the form of the invention best shown in FIGURES 1 through 5, there is associated with the T-fitting **14** a connecting rope **15** to which a wide handle **16** is secured. It is to be understood that the central portion of the connecting rope **15** remote from the handle **16** will be provided with a loop **17** the end of which is readily engaged over and held by the T-fitting **14** as diagrammatically shown in FIGURE 2.

Reference is now made to FIGURE 2 in particular, wherein it will be seen that the connecting rope **15**, together with the handle **16**, form a loop which is of a size to be snugly received over the ski rope **12** when it is wound on the reel **11**. In this manner, the connecting rope and the handle **16** serve to retain the ski rope **12** on the reel **11**. Incidentally, while it is preferred that the combined extent of the connecting rope **15** and the handle **16** be a single loop, it could be such as to provide multiple loops within the spirit of this invention.

At this time, it is pointed out that it is preferred that the reel **11**, the ski rope **12**, the T-fitting **14**, the con-

necting rope **15** and the handle **16** all be formed of a strong light weight plastic material so that the ski rope and reel assembly **10** will have floatation properties with respect to water. It is preferred that this plastic material be polyethylene, and with respect to the reel **11**, and the handle **16**, it is preferred that the polyethylene be linear polyethylene. The T-fitting **14** may also be made of polyethylene, or other suitable plastic, but is preferably made of "nylon," since it has great toughness and strength.

Particular reference is now made to the construction of the reel **11** which includes a cylindrical web **18** having a pair of side plates **19** integrally connected thereto. A convenient size of this reel for ski rope is 10 inches in diameter and 2½ inches thick with a 2 inch flange. It will thus be apparent that the reel **11** is provided with a large central opening **20** through which one's arm may pass or which may be engaged by one's hand, as is shown in FIGURE 4. The arrangement of the web **18** and the side plates **19** is such that the reel **11** has a generally U-shaped cross-section, as shown in FIGURE 3.

The side plates **19** are reinforced at the peripheral edge of same by an outwardly directed peripheral rib **21**, as is best shown in FIGURE 3. This rib is continuous about the peripheries of the side plates **19**. Since the reel **11** is formed of a moderately firm but flexible material, it will be apparent that the side plates **19** may flex moderately when pressure is exerted thereon during the paying out of the ski rope **12** or any other rope or other material wound thereupon, as is best shown in FIGURE 3.

Although the connecting rope **15** and the handle **16** serve to retain the ski rope **12** on the reel **11**, it is preferred that during shipment, the reel **11** be provided with suitable straps retaining the ski rope **12** thereon. In view of this, the side plates **19** are provided with pairs of transversely aligned openings **22**, as is best shown in FIGURES 1 and 2. The openings **22** are disposed just radially inwardly of the reinforcing ribs **21** and are in themselves preferably reinforced by rib portions **23**, FIGURES 5 and 7.

Referring now to FIGURE 7 in particular, it will be seen that a strap or clip **24** is passed through each pair of openings **22**. When desired, the free ends of each strap **24** may be connected together by a seal **25** to indicate that the contents of the reel, as initially shipped, have not beeen disturbed. Of course, it is only necessary to provide a seal on one of the straps when one or more are used.

Reference is now made to FIGURE 6 in particular wherein it will be seen that the T-fitting **14** is provided with a connecting rope **26**. The connecting rope **26**, unlike the connecting rope **15**, has the ends thereof provided with separate handles **27**. It is to be understood that the handles or grips **27** are a matter of choice as compared to the handle or grip **16**. It is also to be understood that the connecting rope **26** and the handles **27** are preferably formed of the same material as the connecting rope **15** and the handle **16**.

At this time, it is pointed out that while the reel **11** is particularly adapted for use in combination with a ski rope, it is not so limited. The reel **11** is readily suitable for the reeling of different forms of rope or similar material, and may be placed to good advantage in fields other than that of ski ropes.

Although only a specific embodiment of the invention has been illustrated and described herein, it is to be understood that minor modifications may be made in the invention within the spirit and scope of the invention, as herein described and illustrated.

Other modes of applying the principle of my invention may be employed instead of those explained, change being made as regards the apparatus herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

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

1. A ski rope unit comprising a reel, a ski rope coiled on said reel, an attaching T-fitting on the outer end of said ski rope, and at least one handle having a connecting rope, said connecting rope being releasably connected to said T-fitting, said connecting rope and said handle forming a loop snugly engaging around said reel to retain said ski rope thereon, at least said reel and handle being formed of plastic.

2. A ski rope unit comprising a reel, a ski rope coiled on said reel, an attaching T-fitting on the outer end of said ski rope, a pair of handles, and a connecting rope extending between and connected to said handles, a central portion of said connecting rope being releasably connected to said T-fitting.

3. A ski rope unit comprising a plastic reel with upstanding flexible side plates, a ski rope coiled on said reel between said side plates, handle including rope means connected to the outer end of said ski rope, said reel having pairs of transversely aligned openings in the outer edge of said side plates, and a clip means extending through at least one of said pairs of openings to releasably retain said ski rope on said reel between said side plates.

4. A ski rope unit comprising a plastic reel with upstanding flexible side plates, a ski rope coiled on said reel between said side plates, handle including rope means connected to the outer end of said ski rope, said reel having transversely aligned openings in the outer edge of said side plates, a clip means extending through said transversely aligned openings to releasably retain said ski rope on said reel between said side plates, and a seal for said clip means.

5. A ski rope unit comprising a plastic reel, a ski rope coiled on said reel, handle means connected to the outer end of said ski rope, said reel having a substantially uniform diameter tubular web with substantially parallel outwardly extending end plates having pairs of transversely aligned openings, and a clip extending through at least one of said pairs of openings to releasably retain said ski rope on said reel, said clip being provided with a seal, said end plates being reinforced around said openings.

6. A plastic reel for ropes or other freely coilable material, said reel having an annular outline in side view and a web with a smooth central arm receiving opening therethrough, said reel having side plates and being of a unitary U-shaped cross-section, said web and said side plates being of substantially uniform thickness, said side plates also having peripheral reinforcing ribs on the outer face of same, said side plates of said reel also being flexible and provided with pairs of transversely aligned clip receiving openings adjacent said ribs, and reinforcing ribs around said openings and cooperatively merging with said peripheral reinforcing ribs.

References Cited by the Examiner

UNITED STATES PATENTS

218,211	8/79	Anderson	294—82
447,618	3/91	Miller	294—82
1,029,212	6/12	Moore et al.	206—53 X
1,408,261	2/22	Brookhart	242—85.1
1,640,368	8/27	Obetz et al.	206—59
2,472,248	6/49	Cox.	
2,580,900	1/52	Epstein	206—59
2,603,429	7/52	Jaworowski	242—85.1
2,894,620	7/59	Campbell	206—53
3,051,118	8/62	Calk et al.	
3,092,068	6/63	Brownson	115—6.1
3,098,463	7/63	Brown	242—86.5

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