United States Patent [19]

Nerger

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[54] **SKI CARRYING CASE**

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[52] **U.S. Cl.** ..... **224/45 S,** 190/44, 220/8

[51] **Int. Cl.** **A45c 7/00**

[58] **Field of Search** ..... 224/45 S, 46 R, 2 A, 5 Z, 224/47; 206/16 R; 220/4 A, 4 C, 8; 190/44; 150/52 R

[56] **References Cited**

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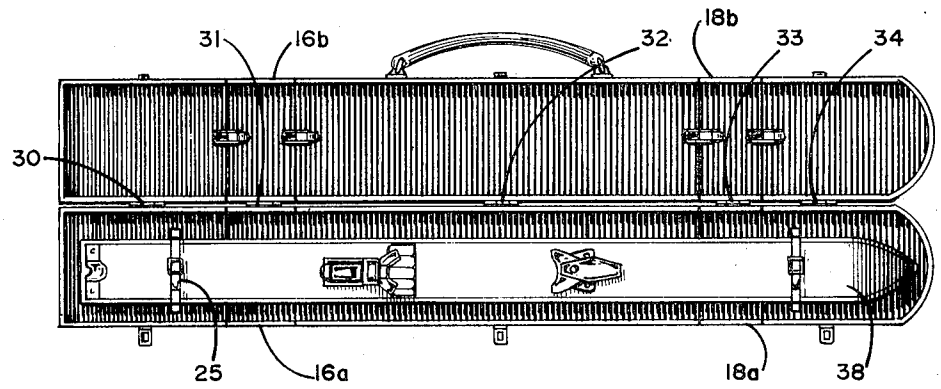
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Assistant Examiner—Kenneth Noland
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[57] **ABSTRACT**

A case for carrying skis comprises a rigid case having oppositely disposed hollow case portions and one or more removable case sections which sections may be removed for varying the length of the ski case.

6 Claims, 6 Drawing Figures



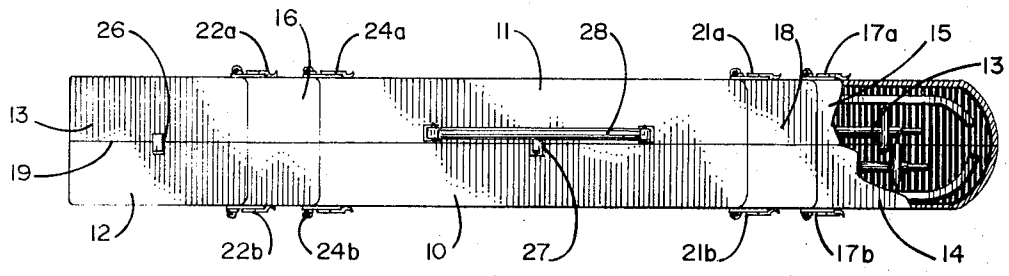


FIGURE 1.

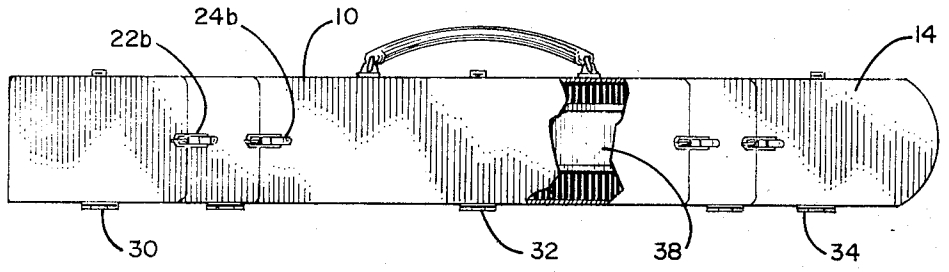


FIGURE 2.

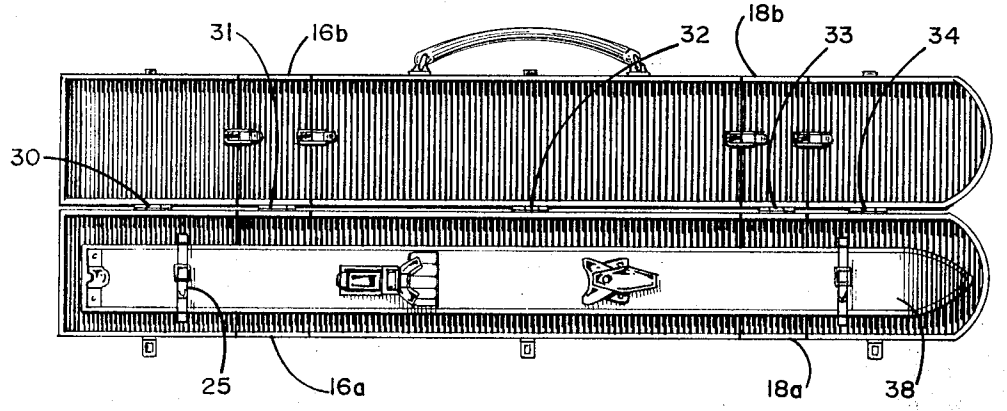


FIGURE 3.

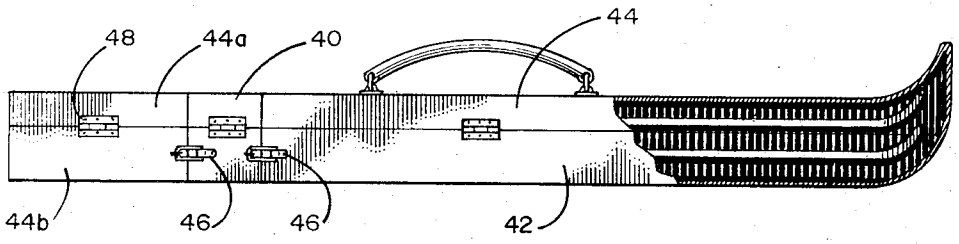


FIGURE 4.

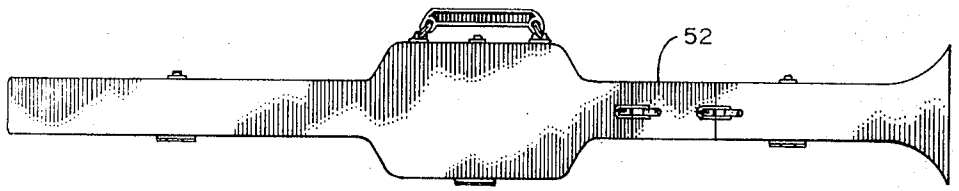


FIGURE 5.

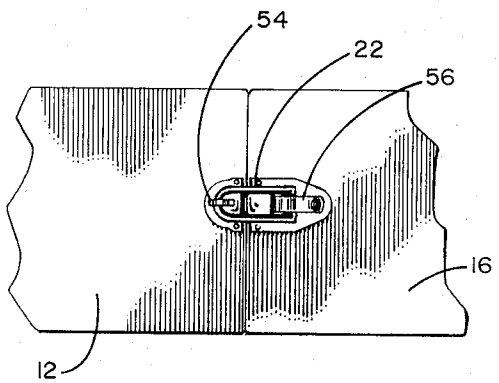


FIGURE 6.

SKI CARRYING CASE

BACKGROUND OF THE INVENTION

A variety of ski carrying cases have been proposed to be used by skiers especially when traveling by airplane or similar transportation where the skis are handled as baggage. The carrying cases provide protection for the skis from scratching and scuffing as well as simply affording ease of handling and carrying. Heretofore, such ski cases are in the form of flexible bags or covers, usually having a zipper, snaps or the like together with a carrying handle and are often constructed of leather, synthetic leather materials, canvas, sail cloth or lightweight flexible plastics and the like. Such cases provide sufficient protection but they are not at all durable because sharp ski edges often quickly cut through the materials. Although the carrying bags may be repaired, in a rather short time they become unsightly and generally unsuitable for their intended purpose.

Skis have different lengths and yet generally available carrying cases are obtainable in one length which may not be long enough or may be too long for the particular skis of the purchaser. Especially, where the skis are of a shorter length, for shorter persons, the excess ski bag length makes it more cumbersome to handle as well as causing the bag to wrinkle and flex which further attributes to cutting of the bag along the sharp ski sides. It is to the elimination of the aforesaid problems that the ski carrying case of the present invention is directed.

SUMMARY OF THE INVENTION

The present invention is directed to a substantially rigid ski carrying case having oppositely disposed case portions comprising components or segments also provided with one or more removable sections which may be attached to and between the case portions for extending or reducing the length of the case. The case comprises a substantially rigid material so that it does not flex against the sharp sides or edges of the skis and thereby does not become easily cut. The case may have a variety of cross-section shapes which embodiments will be pointed out hereinafter. The case portions may be hinged along one side or provided with clips or fasteners for securing the case when closed. These as well as other features and advantages will be evident from the following detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a top view of an embodiment of the ski case of the invention partially broken away for exposing skis and poles stored therein;

FIG. **2** is a side view of the device of FIG. **1** partially cut away;

FIG. **3** shows a ski carrying case in an open position;

FIG. **4** is a side view of another embodiment of a ski case of the invention, partially broken away;

FIG. **5** is a side view of still another embodiment of a ski carrying case according to the invention; and

FIG. **6** is an exploded view illustrating a fastener used on the case.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIGS. **1** and **2,** there is shown one embodiment of a ski carrying case. The particular case

shown includes three portions each of which comprises a pair of opposite components or segments which cooperate with one another to form the sides of the case. For example, observing FIG. **1,** the first portion comprises opposite components **12** and **13,** the second or center portion comprises case components **10** and **11** and the third portion components **14** and **15.** These components each of which makes up approximately one-half of a hollow case portion are provided with a hinge secured to and bridging opposite components along the bottom as shown in FIG. **2.** For example, hinge **30** is secured to both components **12** and **13,** hinge **32** to components **10** and **11** and hinge **34** to components **13** and **14** so that the edges of these components along the bottom of the case are maintained adjacent to one another. Alternatively, clips or fasteners may be substituted for the hinges so that the case portions may be disassembled and assembled by engaging or disengaging the clips which secure opposite case components.

Located between the case portions are two sections **16** and **18** which may be secured to the ends of the portions by clips or fasteners. For example, observing FIGS. **1** and **2,** fasteners are located along both sides of the case. Fasteners **22***a*, **22***b*, **24***a* and **24***b* secure section **16** between the ends of case components **12** and **13** and **10** and **11.** Similarly, section **18** is secured between components **14, 15** and **10** and **11.** A fastener of the type which may be used to secure the sections between the case components are further illustrated in FIG. **6.** Accordingly, a suitable fastener is one having an engaging member which engages a catch or bar so that the fastener can be secured when a section is to be used on the case or disengaged for removal of the section.

In the embodiment shown in FIGS. **1–3,** the case may be opened at the top along part line **19.** For convenience, a lock **27** or similar clasp type device may be used for keeping components **10** and **11** closed. A similar clasp or lock **26** is provided between components **12** and **13** and between components **14** and **15.** Removable sections **16** and **18** actually comprise a pair of oppositely disposed components **16***a*, **16***b* and **18***a*, **18***b* as shown in FIG. **3** and are provided with hinges **31** and **33** so that the components may also be opened. The hinges also provide structural rigidity. However, in lieu of hinges, fasteners or clasps may be used, both on the top and bottom at the part line between the halves of the removable sections. Alternatively, the removable sections may be hollow sleeves which simply slip over the skis and are attached between the portions. When assemblying the case for longer skis, section **18** is secured to the forward components **14** and **15** by fasteners **17***a* and **17***b*, components **10** and **11** are urged against section **18** and secured by fasteners **21***a* and **21***b*, section **16** secured to the end of components **10** and **11** by fasteners **24***a* and **24***b* and finally end components **12** and **13** are secured to the end of sections **16** by fasteners **22***a* and **22***b* to complete the case assembly. When the length of the case is to be shortened, this may be accomplished by removing either section **16** or **18** or both depending on the length of the skis to be placed in the case. It will be appreciated that although only two removable sections **16** and **18** are shown, any number of such sections can be used and the length of the individual sections lengths can also be varied as can be the length of the case components. To shorten the

case, if section **16** is to be removed, latches **22***a*, **22***b* and **24***a*, **24***b* are disengaged, and section **16** is pulled off. Engaging members of fasteners **24***a* and **24***b* on components **11** and **10** respectively are then secured to bar members of fasteners **22***a* and **22***b* of components **13** and **12** and the shorter case is assembled.

The device shown in FIG. **3** is somewhat different from that shown in FIGS. **1** and **2** in that the fasteners used to attach the components are placed on the interior of the case. The particular advantage of such a feature is that the case can be secured and locked to prevent someone removing the skis by merely unsnapping the outside fasteners. The device shown in FIGS. **1–3** may also be opened as illustrated and secured to a ski luggage rack atop an automobile or other vehicle along with the skis.

The interior of the case may be provided with straps **25** or equivalent means for securing the skis placed therein so as to maintain the bottom of the skis securely against the interior case sides. Exposed ski **38** in FIGS. **2** and **3** further illustrates this feature. In a case illustrated in FIGS. **1–3,** the skis are placed with their ski tips pointing toward one another. Thus, there is room provided between the skis for ski poles **13** as shown in FIG. **1.** Moreover, there may also be sufficient space for ski boots and other articles of clothing between the skis which advantage is particularly suitable when the case is to be handled as baggage for airline travel and the like.

A ski case according to the invention having a different shape is illustrated in FIG. **4.** The case shown is designed so that the skis are installed in the case atop one another with their tips extending in the same direction. A case having such a shape is not as bulky as that illustrated in FIGS. **1–3** and need only be slightly larger in height than a pair of skis placed therein. However, a disadvantage is that there is less interior space for storing ski poles and the like. The case shown in FIG. **4** also illustrates an embodiment whereby the case portions comprise an upper portion or lid **44** and lower portion **42.** These portions are also secured by hinges **48,** for example, attached to case components **44***a* and **44***b*. Opposite these hinges a lock or clasp as previously described may also be used. The case shown is provided with a single removable section **40** secured to the adjacent case portions by fasteners **46** as previously described so that section **48** may be installed or removed as desired for increasing or decreasing the case length. It will be understood that the fasteners will also be located on the opposite side of the ski case for further supporting the case structure. The fasteners may instead be located on the case interior if greater security is desired.

FIG. **5** illustrates still another case embodiment whereby the bottom of the skis installed in the case are facing one another with the ski ends directed oppositely. There is also shown removable section **52** although more sections may be used as desired. This section is also secured to the case portions by fasteners as previously described and illustrated in FIG. **6.** However, in this embodiment, section **15** is hollow and sleeve-like and is placed over the skis when assembling the case although the section may be divided as previously described with FIGS. **1–3** in which event it could be opened and easily stowed on a ski rack. However, such a case may not be of a depth sufficient to allow the storage of additional items such as ski boots or poles as compared to the cases of FIGS. **1–3** although it may be less bulky to handle and be of somewhat less weight.

FIG. **6** illustrates a type of fastener which may be used to secure the removable sections on the case as well as adjacent case components when a section is removed. Fastener **22** comprises an engaging member **56** attached to case component **12.** However, any similar or equivalent type of means for securing the removable sections may be used in lieu of the fastener shown which is by way of example only.

The case of the invention including the components as well as the removable sections are prepared from a rigid and preferably high-impact material. A number of plastic products may be used for this purpose including polyethylene, polypropylene, polycarbonate and ABS polymers (acrylonitrile-butadiene-styrene). These resin materials are well known to those skilled in the art and may be injection molded or otherwise formed to produce the components and removable sections of the ski case by methods also well known to those skilled in the art. Again, the high impact materials are preferred and also include high impact acrylic resins as well as fiberous glass reinforced epoxy resins sheets. The specific type of materials used to prepare the case components is not particularly critical so long as desired impact resistance, strength and relative weight characteristics are achieved. Accordingly, any such materials of this type as well as others which may be molded or otherwise formed into the case and section components may be used. It will also be understood that such materials should also be capable of not cracking or warping under ambient temperature conditions within the range of those normally found under winter ski conditions. The materials should also be such that handles, latches, clasps, locks, fasteners and hinges may be installed to complete the case as previously described. Accordingly, any materials used to meet these conditions are all considered to be within the purview of the invention.

It will be understood from the various examples and embodiments illustrated in the drawings and described herein that the case may have any convenient shape. Again, the particular case design will depend entirely on the interior storage room desired by the user for additional items such as ski poles, ski boots and the like. The other feature to be considered is the thickness or depth of the case desired where it is to be stored or secured to an automobile ski rack. Moreover, the type of removable section used, whether it be of the unitary sleeve-type or hinged so that it can be opened will depend on the characteristics and use of the case as desired and as previously described. The advantages of a case which is rigid in structure and will not become cut to avoid frequent replacement will be appreciated. Moreover, because of the structure of the case described, if one of the sections or components does become damaged, it can be replaced by simply obtaining another section which will be secured to form a case as described hereinabove. Further, because of the removable sections, a case for carrying any length of ski can be obtained by purchasing only a single case and simply removing or adding sections as desired. These as well as other advantages of the case of the invention will be evident to those skilled in the art.

I claim:

1. An elongated and substantially rigid ski carrying case comprising a section at each end thereof and a plurality of removable intermediate sections therebetween, each said section comprising a pair of opposite half case portions, each portion having top and bottom edges therealong meeting the respective top and bottom edges of the opposite portion when said case is closed, means pivotably securing said bottom edges of selected opposite pairs of portions permitting said case to be opened and closed, releasable engaging means for securing said top edges of selected opposite pairs to each other when said case is closed, disengageable fastening means for securing adjacent sections to one another, whereby said case may be lengthened or shortened by adding or removing one or more intermediate sections, and carrying handle means secured to one of said sections.

2. The case of claim 1 wherein said means securing said bottom edges of opposite pairs comprises a hinge attached adjacent the bottom edges thereof.

3. The case of claim 2 wherein said engaging means securing said top edges of opposite pairs comprises clasp means secured adjacent the top edges of said pair for holding said edges in abutment when said case is closed.

4. The case of claim 1 wherein said case comprises a plastic material.

5. The case of claim 4 wherein said plastic material comprises an impact resistant synthetic resin.

6. The case of claim 5 wherein said synthetic resin is selected from the group consisting of polyethylene, polypropylene, polycarbonate, acrylonitrile-butadiene-styrene terpolymers, acrylic resins and fiberous glass reinforced epoxy resin.

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