United States Patent [19]

Andersson

[11] **3,833,160**

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[54] **SKI-HOLDING DEVICE WITH MOUNTINGS FOR CLAMP STRAPS**

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[52] **U.S. Cl.** ..... **224/42.1 F**

[51] **Int. Cl.** **B60r 9/12**

[58] **Field of Search** ..... 224/42.1 F, 42.1 B, 45 S

[56] **References Cited**

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[57] **ABSTRACT**

The invention concerns a ski-holding device for use on a motor car roof. At least two supporting members, secured on the roof, have clamp strap mountings which are arranged detachably to hold at least two clamp straps which are parallel to the supporting members and coact with each other (to clamp a ski or other object) in such manner that should one strap fail to function properly the companion strap acts as a reserve.

11 Claims, 6 Drawing Figures

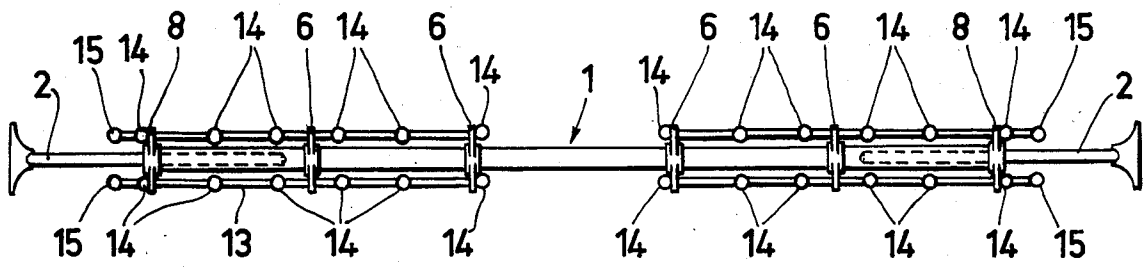


FIG.1

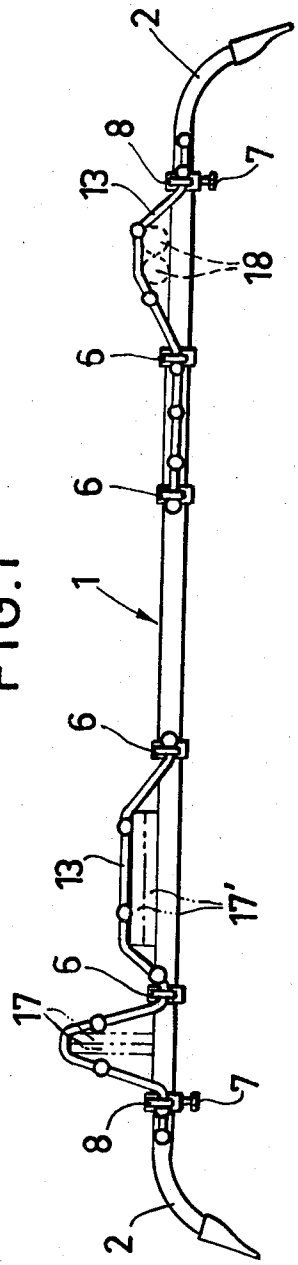

2
8
7
13
18
6
6
1
6
13
17'
6
17
7
8
2

FIG.2

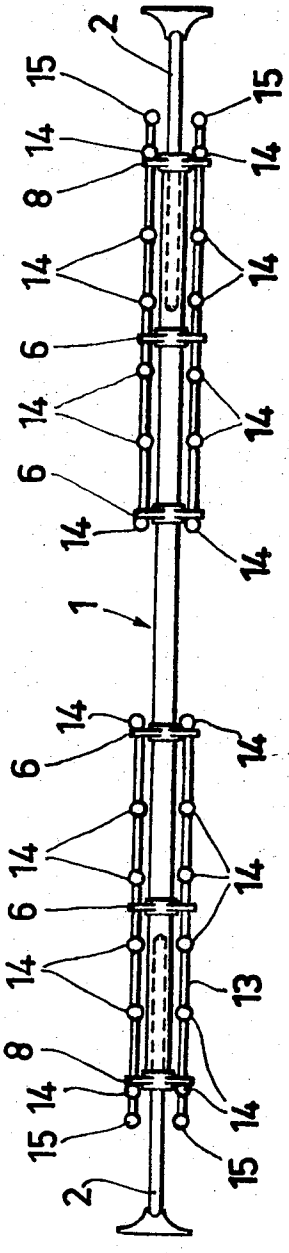

2
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15
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1
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2

FIG. 3

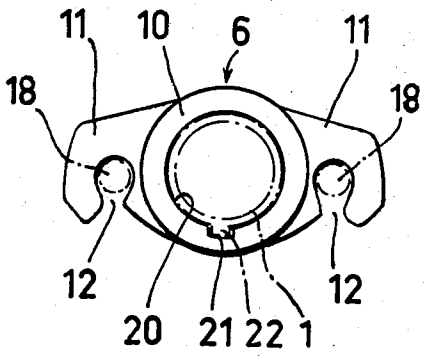


FIG. 4

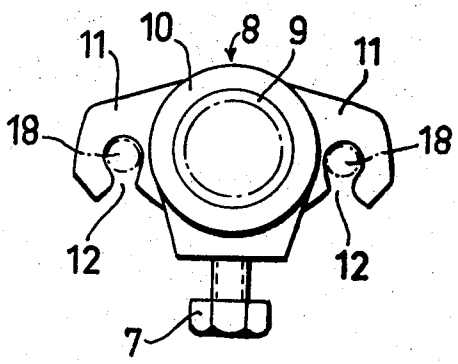


FIG. 5

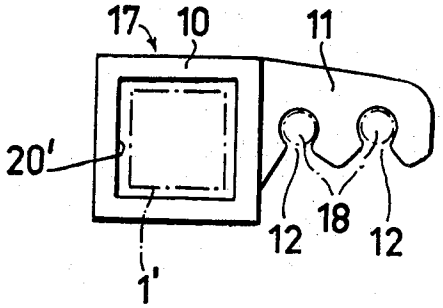
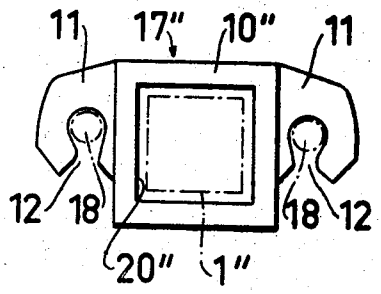


FIG. 6



SKI-HOLDING DEVICE WITH MOUNTINGS FOR CLAMP STRAPS

This invention relates to a ski-holding device with mountings for clamp straps arranged in parallel with the longitudinal direction of the ski-holding device. Said device comprises at least two supporting tubes to be fastened on a motor car roof, which are provided with said clamp strap mountings and intended for objects, such as skis, water-skis, fishing-rods or the like to be clamped on the supporting tubes by the straps.

Ski-holding devices of the aforesaid kind heretofore were arranged usually for placing, for example, two pairs of skis to the side of each other on the supporting tubes, by providing on one side of each supporting tube a single clamp strap for one pair of skis and a single clamp strap for the second pair of skis.

Said clamp straps, however, are easily damaged such, that they break or loosen. When a clamp strap does not work any longer, the corresponding pair of skis will be detached from the ski-holding device and constitute a substantial traffic risk. A further disadvantage of known ski-holding devices of this kind is the fixed attachment of the clamp strap mountings on the supporting tubes, which does not permit adjustment of the distance between the clamp strap mountings to skis of varying widths, ski-sticks or the like.

These disadvantages are eliminated by a ski-holding device of the aforesaid kind, which is constructed according to the present invention and characterized in, that the clamp strap mountings are arranged such as to hold in an easily detachable way at least two clamp straps, which are in parallel with the respective supporting tube and coact with each other for clamping an object, in such a manner, that in the event of faulty function of one strap the other strap acts as a reserve, and that the clamp strap mountings preferably are arranged for fastening the coacting clamp straps each on one side of the supporting tube. The clamp strap mountings have downwardly open recesses, which in a manner known per se are adapted for detachably fastening the straps therein. The clamp strap mountings include preferably circular through holes, so that they can be threaded onto the supporting tubes and manually moved thereon, and the circumference of said through holes advantageously is provided with an axial guide slot, which embraces a longitudinal strip on the surface of the supporting tube. The clamp strap mountings advantageously are so arranged that the centre lines of the supporting tube and clamp straps are located substantially in the same horizontal plane.

At least two of the clamp strap mountings may advantageously, by stop means or the like, be adapted to be so fixed on the supporting tubes that they cannot be moved in the direction toward each other, and between said clamp strap mountings may be provided at least one manually movable clamp strap mounting, thereby rendering it possible to move the spacing between the last mentioned clamp strap mounting and some of the other mountings, for example, when a narrow object, such as a fishing-rod, or a wide object, such as a water-ski, is to be clamped.

The clamp straps advantageously are elastomer straps with preferably round cross-section and provided at the ends in known manner with stop knobs, but they may, of course, also be designed in a different way. In order to obtain a suitable stretching of the clamp strap independently of the distance of the clamp strap mountings relative one another, the straps advantageously are provided, besides at its ends, with a plurality of stop knobs along their length.

The invention is described in the following in greater detail with reference to the enclosed drawings, which show by way of example some embodiments of the invention.

FIG. **1** shows the ski-holding device in a lateral view.

FIG. **2** shows the ski-holding device seen from above.

FIG. **3** shows by a front view and on a larger scale a clamp strap mounting according to the invention, adapted for two coacting clamp straps located each on one side of a supporting tube with round cross-section.

FIG. **4** shows a clamp strap mounting similar to that shown in FIG. **3**, showing a mounting intended for the ends or the like of the supporting tube.

FIG. **5** shows by a front view a clamp strap mounting according to the invention, adapted for at least two coacting clamp straps located on the same side of a supporting tube with square cross-section.

FIG. **6** shows a clamp strap mounting similar to that shown in FIG. **3**, adapted for a supporting tube with square cross-section.

In FIGS. **1–4** a ski-holding device according to the invention is shown which comprises two supporting tubes, of which one tube **1** is shown in FIGS. **1** and **2**. The supporting tube **1** has round cross-section and is provided at the ends with feet **2**, which consist substantially of pipes projecting in a telescopic way into the supporting tube and are adapted to be fastened on a motor car roof in a known unspecified manner. Onto said supporting tube **1** are threaded a plurality of clamp strap mountings **6** manually movable thereon, and onto both ends of the tube are threaded clamp strap mountings **8** provided with fastening screws **7** for securing the mountings on the supporting tube by screwing. The mountings **8** have an internal projection **9**, which is intended for stopping against the end surface of the supporting tube and which is provided with a through hole, through which the tubular portions of the feet **2** are inserted.

The clamp strap mountings **6** comprise a manually movable annular portion **10**, which is threaded onto the supporting tube and provided with two lugs **11** projecting each on one side of the clamp strap mounting. Said lugs **11** are provided with downwardly open recesses **12**, which slightly taper downwards and each of which is adapted in a known manner for easily detachably fasten therein a clamp strap **13**. Each clamp strap **13** consists of an elastomer, for example rubber, with round cross-section and is provided with a number of stop knobs **14**, which cannot pass through the recesses **11**. The clamp straps **13**, besides, have at one end a similar knob **15** intended as a finger grip.

The clamp strap mountings **6**, as appears from FIGS. **1** and **2**, are threaded onto the supporting tube **1**, on the ends of which the clamp strap mountings **8** are secured by screws **7**.

In FIGS. **1** and **2** two pairs of skis **17**, **17'** and a pair of ski-sticks **18** are indicated, all of which are clamped on the supporting tubes **1** by means of the clamp straps **13** coacting in pairs relative each other. Only one of the tubes is shown in the Figure. The clamp straps are lo-

cated above the skis, which, however, is shown only in FIG. 1.

The clamp strap mountings 6 are manually movable on the supporting tube 1 and thereby render it possible so to adjust the spacings between the clamp strap mountings that they are smaller or greater, so that the clamp straps can better hold, for example, skis, a fishing-rod, a water-ski or the like on the ski-holding device.

In the embodiment shown in FIG. 3, the through holes 20 of the clamp strap mountings are provided at their circumference with a guide slot 21 adapted so to embrace a longitudinal strap 22 on the surface on the supporting tube, that the clamp strap mounting cannot be rotated on the supporting tube (the strip 22 is only indicated in FIG. 3).

In FIG. 5 a clamp strap mounting 17 is shown in a modified embodiment of the invention. The mounting 17 is intended to be secured on a supporting tube with square cross-section and provided with only one laterally projecting lug 11 arranged for two clamp straps 13 coacting relative each other and fastened on the same side of the supporting tube.

In another embodiment of the invention the supporting tube 1 may be arranged, for example, in a telescopic way in the center, and the ends of the supporting tube be elevated such as to form the feet 2 of the supporting tube, in which case the supporting tube and feet, thus, are manufactured integral.

Also other embodiments of the invention described above can be imagined within its scope.

What I claim is:

1. A ski-holding device for holding objects such as skis and water-skis on a motor car roof, comprising at least two supporting tubes for mounting transversally on such motor car roof a plurality of clamp strap mountings attached to said tubes for detachably holding elastic clamp straps alongside of said tubes, each clamp strap mounting being arranged for holding at least two coacting parallel clamp straps mutually constituting a reserve for each other.

2. A ski-holding device according to claim 1, wherein each of said clamp strap mountings is capable of holding at least two clamp straps on the same side relative to said supporting tube.

3. A ski-holding device according to claim 1, wherein each of said clamp strap mountings is capable of holding at least one clamp strap on each side relative to a supporting tube.

4. A ski-holding device according to claim 1, wherein said supporting tubes have a substantially circular cross section and wherein each of said clamp strap mountings has a corresponding bore with a substantially circular cross-section.

5. A ski-holding device according to claim 4, in which the bore of each clamp strap mounting has an axial guide slot arranged to embrace a strip arranged on the surface of said supporting tube.

6. A ski-holding device according to claim 1, in which said supporting tube has a substantially square cross-section, and in which said clamp strap mountings each has a corresponding through hole with substantially square cross-section.

7. A ski-holding device according to claim 1, wherein said clamp strap mountings are capable of being manually moved along said supporting tubes.

8. A ski-holding device according to claim 1, wherein each clamp strap mounting is so arranged that the center lines of said supporting tubes and clamp straps are located substantially in the same horizontal plane.

9. A ski-holding device according to claim 1, wherein said clamp strap mountings are provided with downwardly open recesses in which clamp straps are easily detachably fastenable therein.

10. A ski-holding device according to claim 1, wherein at least one of said supporting tubes comprises at least one manually movable clamp strap mounting arranged between two clamp strap mountings which are fixed on said supporting tube.

11. A ski-holding device according to claim 10, in which said clamp straps are provided with a plurality of stop knobs intermediate the ends thereof.

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