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 [21] Appl. No. **797,768**  
 [22] Filed **Feb. 10, 1969**  
 [45] Patented **Mar. 16, 1971**  
 [32] Priority **Feb. 9, 1968**  
 [33] **Germany**  
 [31] **P 16 78 268.6**

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[54] **RACK FOR THE STORAGE OF SKIS IN PAIRS**  
**10 Claims, 3 Drawing Figs.**

[52] U.S. Cl. .... **211/60**  
 [51] Int. Cl. .... **A47F 7/00**  
 [50] Field of Search ..... 211/60, 60  
 (S); 280/11.37 (K); 24/81 (CE)

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**ABSTRACT:** Apparatus for the storage of skis in pairs, comprising a support rail and clamping assemblies mounted on the support rail to enable distortion-free clamping of the skis at their points of contact near their tips and ends when placed together in a sole-to-sole relationship. Each of the clamping assemblies comprises a movable slide having clamping arms connected thereto in a substantially perpendicular direction from the support rail with the clamping arms supporting rocking arms having wheels at each end. The wheels are pressed onto the surface of the skis when the skis are clamped in the desired position.

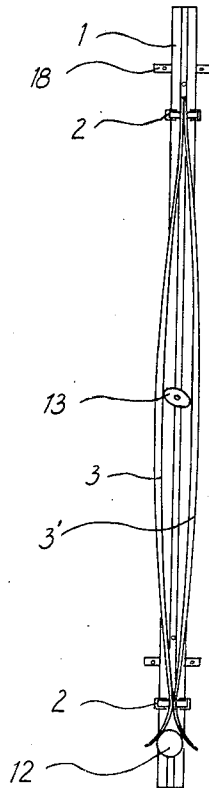
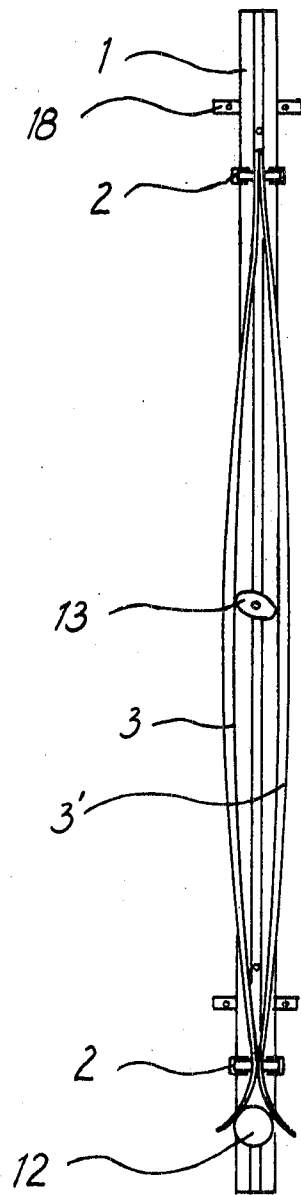


Fig. 1



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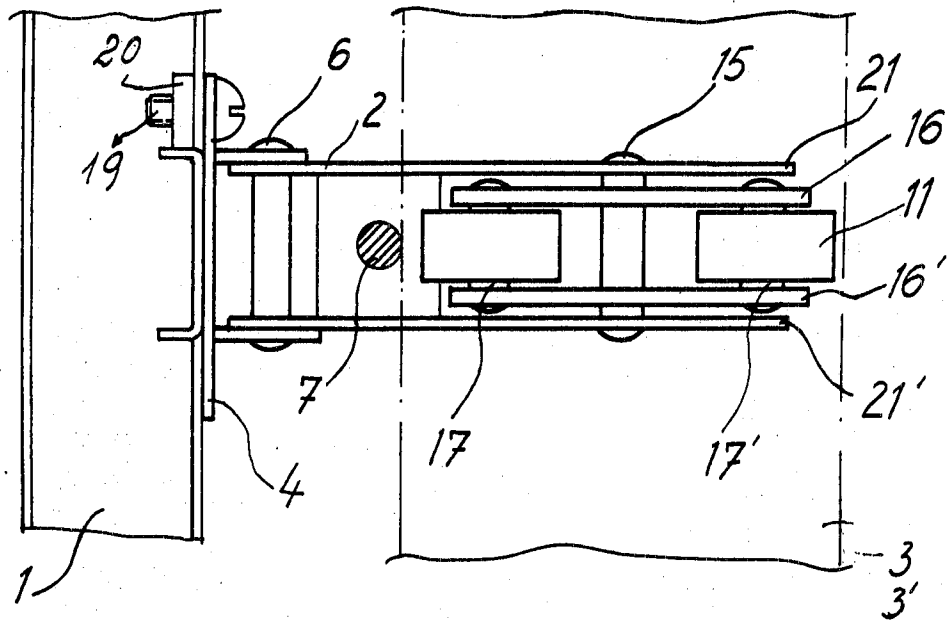


Fig. 3

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## RACK FOR THE STORAGE OF SKIS IN PAIRS

The present invention generally relates to ski storage apparatus and particularly relates to apparatus for the storage of skis in pairs.

Up to now no methods or apparatus have been developed for a suitable and technically reasonable storage of skis which at the same time will save room and costs. The object of the present invention is to provide apparatus for the storage of skis in pairs in order to solve the above problem.

The ski storage apparatus of the present invention generally comprises movable clamping assemblies which are positioned along a support rail to clamp ski sections in place, means for maintaining the ski tip profiles and means for adjusting the distance between the center section of the clamped pair of skis.

The storage rack according to the invention is characterized by clamping assemblies fitted to a support rail allowing distortion-free clamping of the skis at their points of contact near their tips and ends, when put together sole to sole. According to the invention, the support rail may consist of section material, e.g. of a V-channel section in which the clamping assemblies provided with locking means are located and are movable along the V-shaped channel section. The clamping assemblies may consist of a slide having swivel type clamping means movable within a longitudinal slot of the V-shaped channel section and lockable in the desired position. The clamping assemblies are fitted to the support rail normal to its longitudinal centerline, with an adjusting and clamping bolt being provided for adjusting the position of the clamping arms relative to each other and/or clamping angle which joins the two clamping arms of a clamping assembly. This bolt can be adjusted by means of a nut, preferably a wing nut.

The adjusting and clamping bolt can preferably have the form of a headed bolt with rubber washer or cup springs being provided between the head and one clamping arm on the one side and an adjusting nut and the second clamping arm on the other side. The clamping arms forming the clamping assemblies may have rocker arms, comprising two arms each, parallel to each other and movable about their central axis running parallel to the longitudinal centerline of the support rail, which are joined together by the axles of plastic wheels contacting the surface of the skis when the latter are in the stored position. Thus the skis can be clamped distortion-free, since the rocker arms would compensate any existing or possible distortion. This arrangement offers a great advantage, since it is not necessary to specify close manufacturing tolerances for the parallelism of the edges of the V-shaped channel section, nor must it be absolutely free from distortion, thus enabling an economical manufacture of the storage rack invention. As an alternative, the rocker arms could be replaced by pads of elastic material such as caoutchouc, synthetic rubber or foam rubber on the inner side of the clamping arms which would serve the same purpose.

Another embodiment of the invention provides for a device on the support rail for maintaining the ski tip profile. This device should preferably consist of a cylinder, arranged in line with the gap between the clamping assemblies and normal to the longitudinal centerline of the support rail. In this case, the bottom sides of the ski tips are forced against the cylinder which would hold them in a certain position relative to each other and thus under a certain tension. The device for maintaining the ski tip profile, however, can also have the form of a stop plate normal to the longitudinal centerline of the support rail, against which the ski tips are forced.

For the adjustment of the center section tension of the two skis clamped in the storage rack, an infinitely adjustable tensioning cam may be provided on the support rail, featuring a locking device being arranged between the clamped pair of skis, so that their distance from each other in the center section and thus their center section tension can be varied. The tensioning cam can be retained in the desired position by friction but it would also be possible to lock the tensioning cam in the desired position by tightening a butterfly bolt. In order to

avoid any scratches on the skis between the clamping assemblies, the adjusting and clamping bolt can be provided with a plastic sleeve over the section where it is in contact with the skis.

The storage rack according to the invention can be used where ever skis must be stored, e.g. in private households, in hotels of winter sport centers or in sports shops. The adjustability of the clamping assemblies as provided allows an adaptation of the device according to the invention to any ski length, a feature which is of particular advantage. The skis can easily be stored in a proper manner by just pushing them between the clamping arms and will not touch the ground with their rear ends which may have an adverse effect over a long period. Moreover, it should be pointed out that the device according to the invention can be combined with a burglary-proof device, e.g. by connecting the clamping arms of one or both clamping assemblies of the device according to the invention by a latch and engaging a suitable lock so that the pair of skis cannot be taken out without opening the lock.

In the following a description of an embodiment of the device according to the invention is given in conjunction with the drawing in which:

FIG. 1 is a schematic view of an embodiment of the device according to the invention with the skis in the stored position.

FIG. 2 is a schematic sectional transverse view normal to the longitudinal centerline of the support rail of an embodiment of the clamping assembly according to the invention.

FIG. 3 is a schematic sectional view of an embodiment of the clamping assembly according to the invention in the direction of the longitudinal centerline of the support rail.

The illustrated embodiment of the device according to the invention comprises a V-shaped channel section 1 having mounting lugs or mounting plates 18 allowing horizontal or vertical mounting to 21', wall. The V-shaped channel section has a longitudinal guide slot serving as a rail which receives the slide 4 of the clamping assemblies 2. The clamping assemblies 2 are movable along the guide slot where the slide can be secured in any desired position by means of a screw 19 acting upon a back plate 20 located within the V-channel section. Clamping arms 5 and 5' are connected to slide 4 through swiveling bearings 6 and are arranged normal to the longitudinal centerline of the V-shaped channel section. The clamping arms consist of two plates 21, 21', arranged one above the other and are connected by a pin with rocker arms 10 and 10' located in between the plates. The rocker arms are free to move about the connecting pin 15 of the said plates. The rocker arms consist of two strips of material 16, 16', arranged one above the other and connected by the axles 17 and 17' of plastic wheels 11. The two clamping arms 5 and 5' are joined together by adjusting and clamping bolt 7 allowing an adjustment of the clamping angle by means of adjusting nut 9. Between head 8 of clamping bolt 7 and one clamping arm 5' and adjusting nut 9 and the other clamping arm 5 rubber washers or cup springs 22, 22' are provided respectively, so that the clamping assembly is free for a spring-type action within a certain range. Where the clamping bolt might contact the skis 3, 3', a plastic sleeve 14 is provided, preventing any damage to the skis.

The embodiment of the invention as shown in FIG. 1 also features a device for maintaining the ski tip profile, consisting of a cylinder 12 forced against the bottom sides of the ski tips, so that a tension counteracting the center section tension of the clamped skis is produced. Moreover, the described embodiment of the device according to the invention features a tension cam 13 for controlling the center section tension of the clamped skis. As already mentioned, this tensioning cam 13 might be locked in the desired position, for example by means of a butterfly screw.

In the above description of the present invention a support rail of V-channel section was used, since this embodiment offers both high rigidity and economy in manufacture. The clamping assembly according to the invention, however, can also be used in conjunction with a support rail of different section, e.g. flush mounted with the wall.

I claim:

1. Apparatus for the storage of skis in pairs, comprising a support rail and clamping assemblies mounted on said support rail to enable the distortion-free clamping of skis at their points of contact near their tips and ends when placed together in a sole-to-sole relationship, each clamping assembly comprising a movable slide, clamping arms connected to said slide substantially perpendicular to the longitudinal direction of the support rail, rocker arms supported on said clamping arms, and wheels mounted at the ends of said rocker arms, said wheels being pressed onto the surface of the skis when the skis are clamped in position.

2. Apparatus according to claim 1 characterized in that the support rail has a V-shaped channel section to receive the clamping assemblies, each of said clamping assemblies being movable along the centerline of the support rail and lockable in any position.

3. Apparatus according to claim 1 characterized in that the support rail defines a longitudinal slot and each clamping assembly is movable along the longitudinal slot of the support rail and is free to swivel, each clamping assembly has an adjusting and clamping bolt provided for adjusting the position of the clamping arms of said clamping assembly relative to each other, said bolt being adjusted by means of a nut.

4. Apparatus according to claim 3 characterized in that the adjustment and clamping bolt has the form of a head bolt having washers provided between the head and one clamping arm on the one side and the adjusting nut and the other clamping

arm on the other side.

5. Apparatus according to claim 4, wherein cup springs are substituted for washers.

6. Apparatus according to claim 4 characterized in that the adjustment and clamping bolt has a plastic sleeve over the section where it may contact the skis.

7. Apparatus according to claim 1 characterized in that said rocker arms are in the form of two parallel arms and a center pivot pin interconnecting said arms for pivotal movement thereabout, said rocker arms being joined together by axles of wheels which are pressed onto the surface of the skis when clamped in position.

8. Apparatus according to claim 1 characterized in that the clamping arms have pads of elastic material on their inner side.

9. Apparatus according to claim 1 characterized in that the support rail has a device for maintaining the ski tip profile, said device comprising a cylinder arranged in line with the gap between the clamping assemblies and normal to the longitudinal centerline of the support rail.

10. Apparatus according to claim 1 characterized in that an infinitely variable and lockable tensioning cam is fitted to the support rail, said cam being located between the two skis clamped in position, allowing an adjustment of the distance between the two skis in their center sections and thus the adjustment of their center section tension.

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