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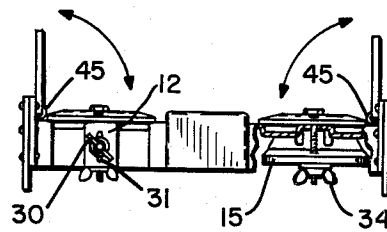
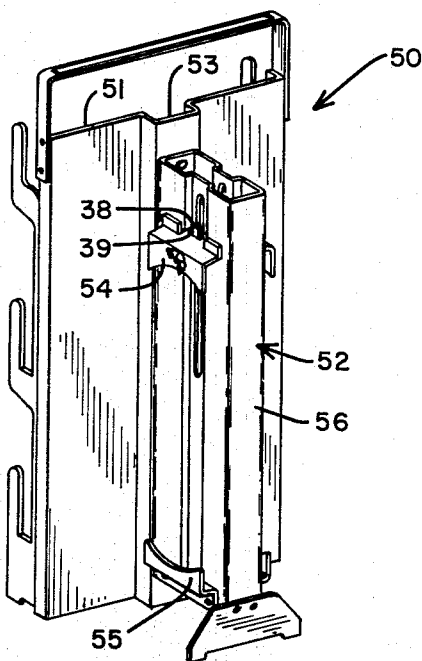
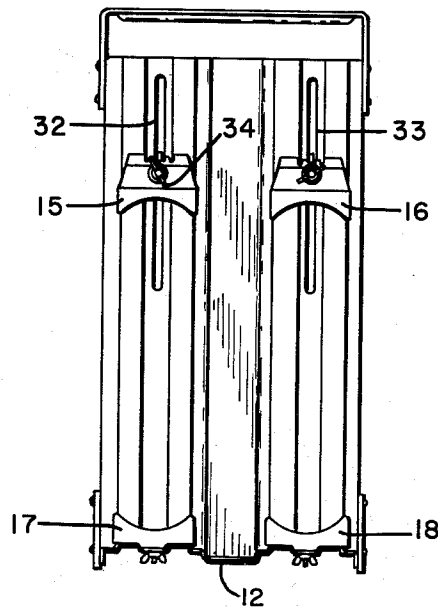
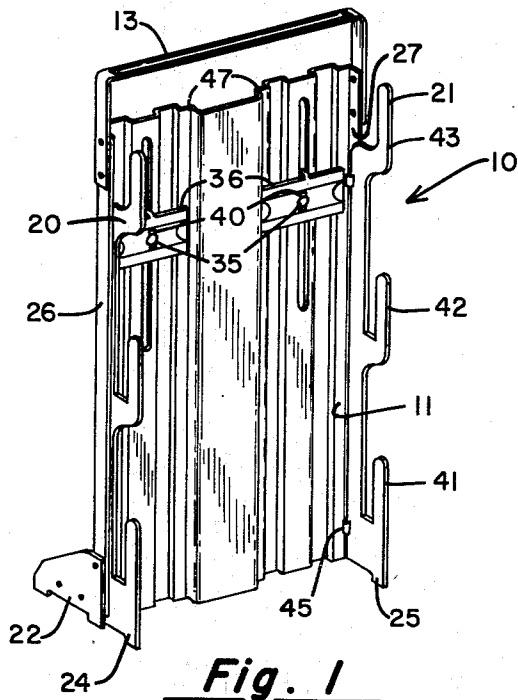
R. E. PFLEIDER

3,248,027

CARRIER DEVICE FOR SKIERS

Filed April 17, 1964

2 Sheets-Sheet 1



INVENTOR
RONALD E. PFLEIDER

BY *Meyers & Peterson*
ATTORNEYS

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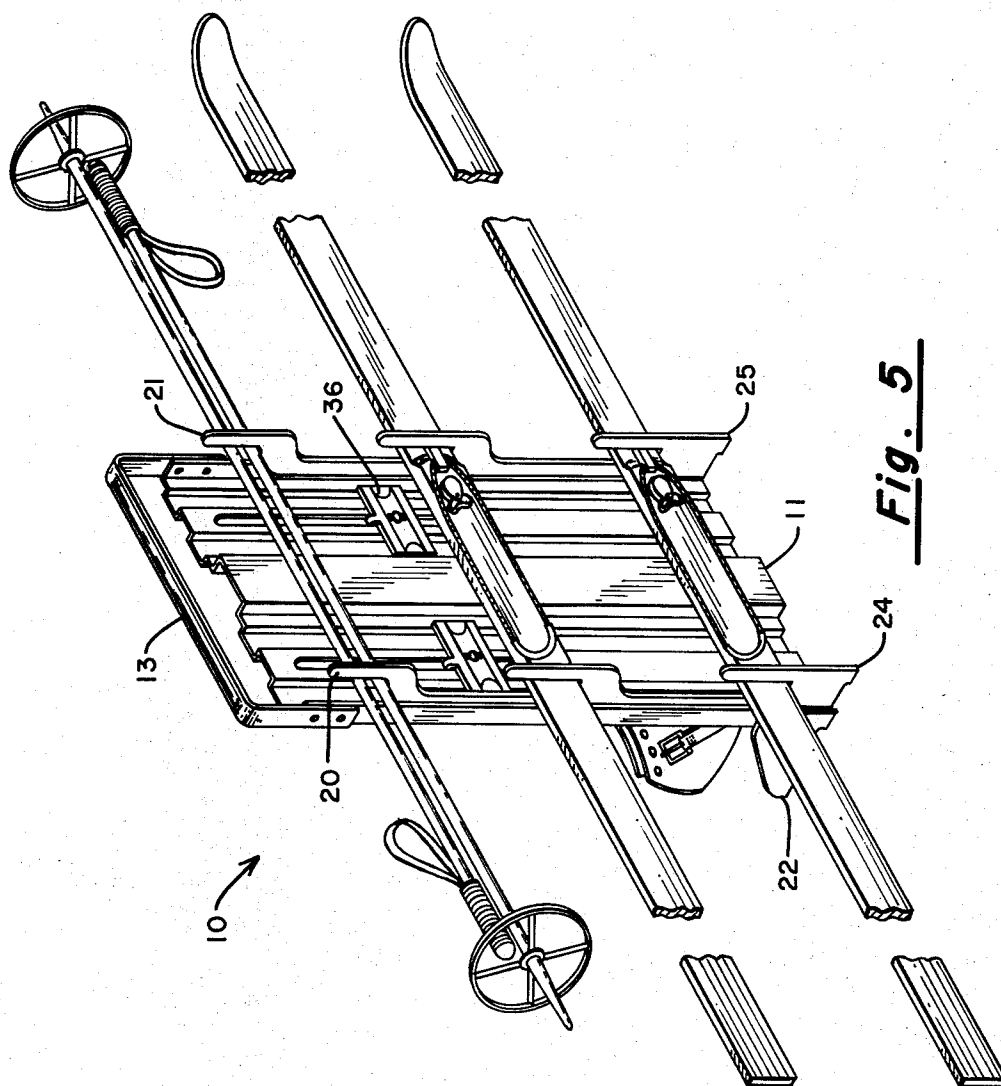
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INVENTOR
RONALD E. PFLEIDER
BY *Mayers & Peterson*
ATTORNEYS

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CARRIER DEVICE FOR SKIERS

Ronald E. Pfeider, 1811 Independence Ave. S.,
Minneapolis, Minn.

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8 Claims. (Cl. 224-45)

The present invention relates generally to a carrier device for skiers, and more particularly to a carrying device which functions as a compact supporting member and carrier for skis, ski boots, and ski poles. In an ordinary situation, a skier is frequently obliged to carry skis, poles and boots from one area to another, and this equipment is exceedingly difficult to move because of its size.

The quantity of equipment normally used by the skiers is substantial. The skis are normally quite long and accordingly difficult to carry. The skier normally includes a pair of ski poles in his equipment which are likewise long and somewhat difficult to carry. Furthermore, the equipment includes a pair of boots which are normally required to be blocked or otherwise held or maintained flat in order to preserve the shape or configuration thereof. Thus, the skier's equipment will normally include a boot tree for maintaining the soles of the boot in substantially flat, planar, and non-curved configuration. This is particularly important when the boots are wet, and accordingly, the skier will be frequently required to carry boots which are necessarily blocked along with his skis and poles. In accordance with the present invention, a carrier device has been devised which functions as a compact unit for supporting or carrying skis and poles, and also serves as a rigid supporting panel or boot tree. The carrying device comprises a main panel or body member, and the boots are adapted to be retained along one surface thereof, while the skis and ski pole supporting portions are disposed on the opposite side of the panel. The weight of the individual items on one side of the carrying panel substantially counterbalances the weight which is provided on the other side of the panel, and thus the device, when loaded, provides an evenly balanced and easily transported load.

Therefore, it is an object of the present invention to provide an improved carrier device for skiers which comprises a substantially rigid panel member and wherein the panel is provided with means for receiving a pair of boots along one major surface thereof, and is adapted to receive a pair of skis along the other surface thereof.

It is a further object of the present invention to provide an improved carrier device for skiers which includes a substantially rigid panel having means for receiving a pair of boots in substantially planar disposition, and which is adapted to receive and support a pair of skis and ski poles along the other surface thereof.

It is yet a further object of the present invention to provide a substantially light-weight panel which is adapted to receive a pair of ski boots in clamped relationship therewith, the panel being rendered rigid in a direction parallel to the length of the boots clamped thereon, and which is adapted to support a pair of skis along an axis which is rigid along the axis of the skis.

It is yet a further object of the present invention to provide an improved self-supporting carrier device for skiers which employs a substantially rigid panel having means for receiving a pair of ski boots in clamped relationship along one surface thereof, and means for receiving and supporting a pair of elongated skis along the second surface thereof.

Other and further objects of the present invention will become apparent to those skilled in the art upon a study of the following specification, appended claims, and accompanying drawings, wherein:

FIGURE 1 is an isometric view showing the ski sup-

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porting portions of the carrier device of the present invention;

FIGURE 2 is a top plan view of the ski boot supporting surface of the carrier device of the present invention;

FIGURE 3 is an isometric view of the carrier device of the present invention and showing a modified boot carrier arrangement along the surface thereof;

FIGURE 4 is a rear elevational view of the apparatus of the present invention and showing the alternate disposition of the ski and ski pole supporting members thereof; and

FIGURE 5 is an isometric view of the carrier device of the present invention and showing the disposition of skis, ski poles, and boots arranged thereon.

In accordance with the preferred modification of the present invention, as shown in FIGURES 1 and 2, the carrier device generally designated 10 includes a rigid body panel 11 having embossed or groove areas extending longitudinally thereof to enhance the rigidity thereof, the panel having a lower flange member 12 extending at right angles thereto, together with an upper substantially rigid handle 13. The flange 12 and the handle 13 each extend across the entire transverse dimension of the carrier apparatus. The front face of the device includes a pair of toe clamps 15 and 16 for engaging the toe portion of a skier's boot, along with heel clamps 17 and 18 for engaging the heel portions of the boot. In addition, the back side of the supporting panel includes a pair of ski supporting brackets 20 and 21 which are hingedly secured to the edge surface of the panel 11 in order to assume a pair of positions as indicated in FIGURE 4. In order to support the carrier device in an upright position, a pair of flange feet gussets or the like 22 and 23 are provided, the support base being extended by the provision of depending feet or the like along the ski supporting brackets 20 and 21 as at 24 and 25. Thus, when loaded, the carrier device is self-supporting and may be placed in an upright standing position, as desired.

Turning now to the details of the panel 11, it will be appreciated that the individual elevated areas therealong enhance the rigidity of the panel 11, particularly along the longitudinal axis. This arrangement provides for sufficient rigidity to enable a pair of ski boots to be securely clamped to the surface thereof, and with 0.040 inch aluminum being used, the rigidity is adequate to resist any flexure and provide a flat planar boot supporting surface. It will be observed that the panel 11 has a pair of edge flanges as at 26 and 27, these edge flanges also assisting in the longitudinal rigidity of the panel member. Furthermore, the various elevated areas along the surface provide for substantial rigidity in the longitudinal axis of the carrying device. It will be appreciated that the panel may be made rigid in a direction other than along the vertical carrying axis. In this regard, the panel may be formed so that it is rigid in a direction which is horizontal to the normal carrying direction, and the boots could be mounted on the panel in that manner.

Turning now to the boot clamping feature of the device, it will be observed that the unit is provided with toe clamps 15 and 16 and heel clamps 17 and 18. As shown in FIGURES 2 and 4, the heel clamp is adjustable in its spacing from the surface of the plate 11 by means of the combination of a wing nut 30 and a slot 31 which is made in the flange member 12. Thus, the heel portion of the boot may be held in firmly clamped relationship relative to the panel 11 by means of the adjustable members 17 and 18. As an alternative, the flange along the bottom portion of the panel may be turned away from the boot supporting surface, and an elongated slot may be formed in the heel clamp. Turning now to the toe clamp, the panel 11 is provided with elongated slots 32

and 33 which extend along the axis thereof. This slot is provided in order to permit the clamps 15 and 16 to be moved longitudinally therealong, in accordance with the length requirement of the boot to be anchored on the panel. The vertical disposition of the clamps 15 and 16 is determined by the position of the wing nuts 34—34, together with the studs 35. The studs 35 are retained in the reinforcing or backing plate 36. The reinforcing plates 36 are attached directly to the toe clamps through the elongated slots 32 and 33, this being accomplished by means of a tongue or the like 38 which extends from the reinforcing plates and passes through a slot provided in the front portion of the toe clamp adjacent the edge thereof as at 38 and 39 respectively and is looped around the metal disposed between the slot and the edge of the clamp body. This arrangement provides for stability of the toe clamps 15 and 16 relative to the reinforcing plates 36. In this connection, the metal adjacent the slot 39 provides a pivot point for the clamps 15 and 16 to be moved arcuately downwardly in the direction of the surface of the panel 11 and thus accommodate any of the various normal ski boot sole thicknesses. As indicated in FIGURE 4, the reinforcing plate is provided with an elevated portion as at 40 in order to accommodate the pivoting or rocking of the bolt 35 therein. In this connection, the bolt 35 may be in the form of a carriage bolt or the like, the accommodating or corresponding hole in the reinforcing plate 36 being in the form of an elongated slot. Thus, the shank portion of the carriage bolt is square in its cross section, and will accordingly resist rotation within the slot 40.

Turning now to the ski supporting brackets 20 and 21, it will be observed that these brackets are hingedly secured to the panel, such as along the flanged surfaces 26 and 27 respectively, and may be folded in a position whereby the bracket is parallel to the surface of the panel 11, as illustrated in phantom in FIGURE 4, or normal thereto as illustrated in solid in FIGURE 4 and also in FIGURE 1. It will be appreciated that the ski supporting brackets are not necessarily hingedly attached to the panel 11, and may be alternatively rigidly secured thereto. Furthermore, it is not necessary that these ski supporting brackets be disposed at the edges of the panel. In this connection, however, it will be appreciated that the greater the spacing between the ski supporting brackets the greater will be the stability of the load. The ski supporting brackets 20 and 21 include three individual loading ears or the like, each of the brackets having the ears 41, 42 and 43. Each of these upright members 41, 42 and 43 cooperates as a pair, and as such form a pair of ski receiving channels, and one channel for receiving a pair of ski poles. It will be appreciated that the ski supporting brackets may include only one or two loading ears or the like. In this connection, it may be more convenient to carry poles separately and hence a separate channel for these items is not required. Furthermore, a single wider channel may be provided which will carry a pair of skis in back-to-back relationship. Because of the thickness of the pair of skis due to the positioning of the binding, the outer surface of the skis may be necessarily spaced from the panel a substantial distance. Accordingly, the load may become unusually cumbersome and awkward to carry. The skis are normally positioned in the channels formed by the upstanding ears 41 and 42, and the poles in the channels formed by the upstanding ears 43. It will be observed that the weight of the skis will substantially counterbalance the weight of the boots of the opposite side of panel 11. The feet or shoes 24 and 25 provide a means for supporting the panel 11 in an upright fashion. As previously indicated, the brackets 20 and 21 are hingedly secured to the flange surface 26 and 27 respectively by means of the hinge elements as at 45—45. Accordingly, in order to form a more compact unit, the brackets may be folded inwardly and permitted

to lie against the under surface of the panel 11. The phantom areas of FIGURE 4 indicate this disposition.

The panel 11 is given a substantial degree of rigidity in the transverse direction by means of the flange area 12 and the handle member 13. The support provided by the flange area 12 is conventional. The handle 13 is preferably fabricated from rigid material such as rigid tubular material and as such provides a transverse support for the panel 11. Thereby deformation which may tend to occur across that dimension is eliminated or reduced.

It will be observed that the reinforcing plates 36 are resistant to twisting about the bolt 35 by means of the disposition within the panel 11. The flange areas 26 and 27 together with the edge area 47, which is adjacent the center de-bossed area, provide resistance to twisting about the axis of the bolt 35. Therefore, the reinforcing plates are free to move longitudinally along the axis of the slots 32 and 33 without tending to twist about the central axis of the bolt 35.

In an actual use situation, the skier will clamp his boots in the boot clamping portion of the carrier as indicated. The shoe portions 22 and 23 will resist the tipping of the element about the base thereof. While in the upright position, the skier may then insert one ski in each of the channels formed by the upwardly extending ears or prongs 41—41 and 42—42, and may then insert his poles in the channel formed by the upstanding members 43—43. The entire assembly may then be carried by means of the handle 13. The wide base portion which is formed by the combination of the flanges 22—24 and 23—25 will permit the entire assembly to be placed on a horizontal surface in a substantially upright position. The skis, boots, and poles may be unloaded from the assembly, as desired. Attention is directed to FIGURE 5 which illustrates the apparatus when loaded. The effect of the counterbalancing of the boots and the skis is not lost in a normal situation. In this regard, the boot is always maintained with its heel or toe adjacent the bottom edge of the panel 11. If the skier is a young child the boots will be small, however the ski will be short and will tend to counterbalance the weight of the boots. For stability, the skis are preferably carried close to the bottom surface of the panel 11, such as is illustrated in FIGURE 5.

Attention is now directed to FIGURE 3 which shows a somewhat modified version of the carrying device of the present invention. In this connection, a carrier 50 is provided with a base panel 51, as was indicated in connection with FIGURES 1 and 2, however, the boot carrying portion of the device is shown generally at 52. In this connection, the panel 51 is essentially flat with one mounting pad area 53 arranged thereon to receive an existing boot tree thereon. The clamping arrangement for the toe and heel of the boot may be substantially identical to that shown in connection with the device of FIGURES 1 and 2, or may be of any other suitable configuration. A separate flange member is required at the base thereof in order to provide a varying elevation for the heel clamping portion 53 of the boot clamping member 52. The toe clamping mechanism shown at 54 may be substantially identical to that shown in connection with the devices of FIGURES 1 and 2 or may be of any other suitable configuration. Stated another way, the toe clamp 54 may be identical to the toe clamps 15 and 16. A corresponding clamp is positioned on the opposite side of the area 52 as at 55. The body portion 56 of the boot carrier portion 52 is preferably mounted securely to the face of the panel 51 by means of conventional mounting screws, or the like. If desired, the boot carrier portion 52 may be mounted on the panel 51 by means of a pair of lugs, screws, ears or the like which are adapted to be received in appropriate slots formed in the body portion 56 of the member 52. In this regard, it will be appreciated that the modification of FIGURE 3 provides the same counterbalance in effect as is available in con-

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nection with the apparatus of FIGURES 1 and 2, and the assemblies are otherwise similar.

It will, of course, be understood that various changes may be made in the form, details, arrangements and proportions of the parts without departing from the scope of the invention as set forth in the appended claims.

What is claimed is:

1. A carrier device for skiers comprising a substantially rigid panel having first and second major surfaces on opposite sides thereof, clamping means disposed along said first major surface for receiving a pair of boots in clamped position thereon, means disposed along said second major surface for receiving and supporting elongated skis, said ski supporting means including a pair of supporting brackets each of which is hingedly secured to an edge portion of said rigid panel.

2. A carrier device for skiers comprising a substantially rigid panel having first and second major surfaces on opposite sides thereof, clamping means disposed on the first major surface for receiving and retaining a pair of boots in clamped sole face to sole face position adjacent said first surface, means disposed along the second surface for receiving and supporting elongated skis and ski poles, and a rigid carrying handle mounted on said panel, said carrying handle being spaced from the panel and having a gripping portion thereon.

3. The apparatus as defined in claim 1 being particularly characterized in that each of said ski carrying brackets is foldable between a first position parallel to said panel and a second position normal to said panel, and each is provided with a plurality of upstanding ears which, when said ski carrying means is in a position normal to said panel, form a plurality of ski retaining channels.

4. A carrier device for skiers comprising a substantially rigid panel having first and second major surfaces on opposite sides thereof, clamping means being disposed along said first major surface and including heel clamping means and toe clamping means for receiving a pair of boots therebetween, said clamping means being adapted to retain a pair of boots in parallel juxtaposed position therealong, the toe clamping means including a reinforcing plate arranged in cooperative relationship therewith

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and disposed along said second major surface, means disposed along said second major surface for receiving and supporting elongated skis therealong, and rigid carrying handle mounted on said panel, said carrying handle being spaced from the panel and having a gripping portion thereon.

5. The apparatus as defined in claim 4 being particularly characterized in that an elongated slot is provided along the surface of said rigid panel for receiving said toe clamping means therealong, and a reinforcing plate arranged in cooperative relationship with said toe clamping means along the second major surface of said rigid panel.

6. The carrying device as defined in claim 4 being particularly characterized in that support means are provided along the bottom of said panel for maintaining the carrying device in upright position.

7. The carrying device as defined in claim 6 being particularly characterized in that support feet are provided along the bottom portion of said first major surface, and along the outer edge of said ski supporting means.

8. A carrier device for skiers comprising a substantially rigid panel having first and second major surfaces on opposite sides thereof, clamping means being disposed along said first major surface and including heel clamping means and toe clamping means for receiving a pair of boots therebetween, said heel clamping means being adjustable relative to the surface of said panel, and means disposed along said second major surface for receiving and supporting elongated ski therealong, said ski supporting means being hingedly secured to the edge surface of said rigid panel member.

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GERALD M. FORLENZA, *Primary Examiner*,

HUGO O. SCHULZ, *Examiner*.