Oct. 24, 1967 R. G. ANDRETICH 3,348,665

COMBINED SKI BOOT RETAINER AND CARRIER

Filed July 15, 1966 2 Sheets-Sheet 1

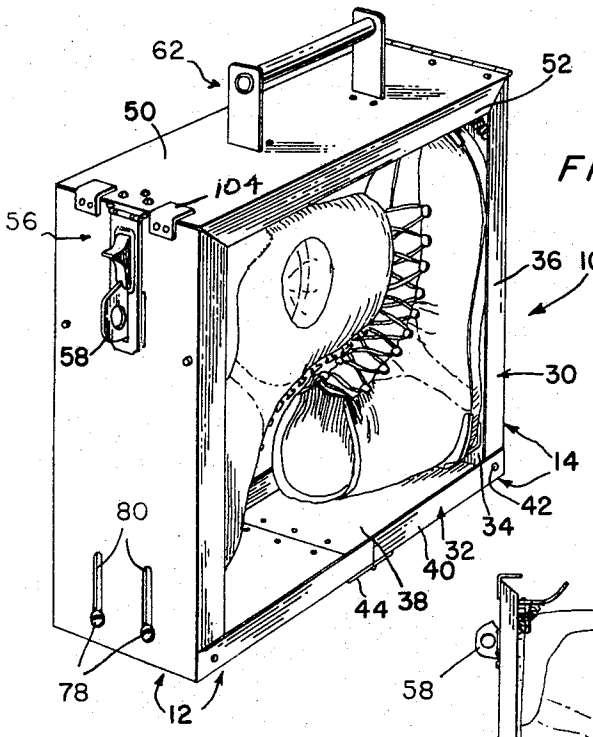


FIG. 1

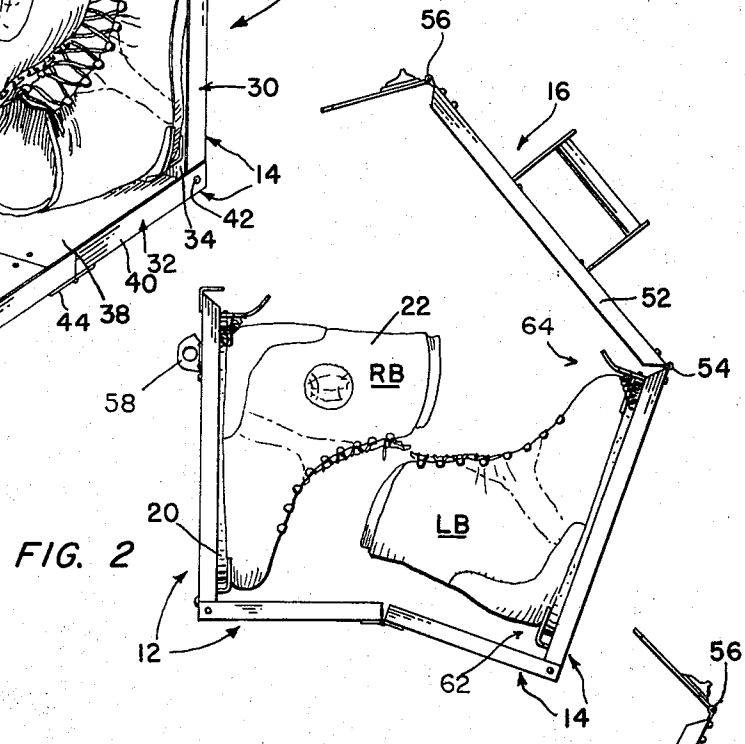


FIG. 2

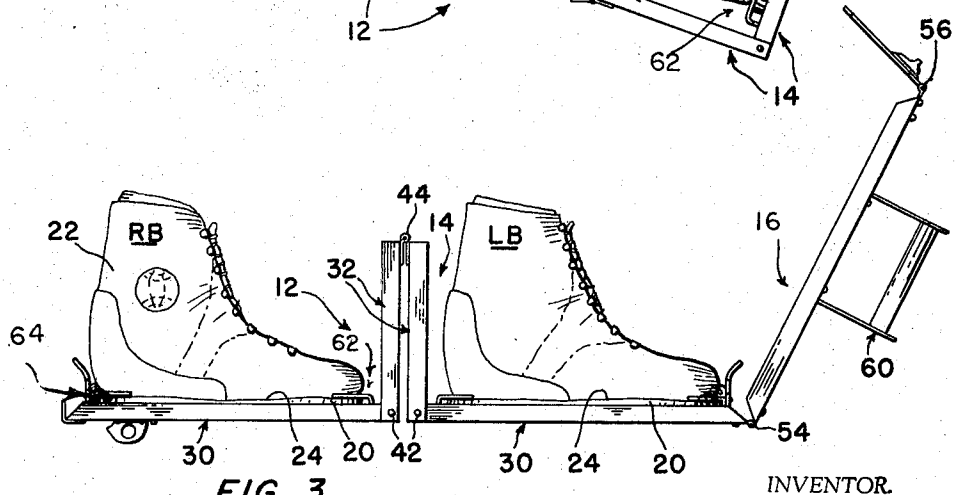


FIG. 3

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FIG. 4

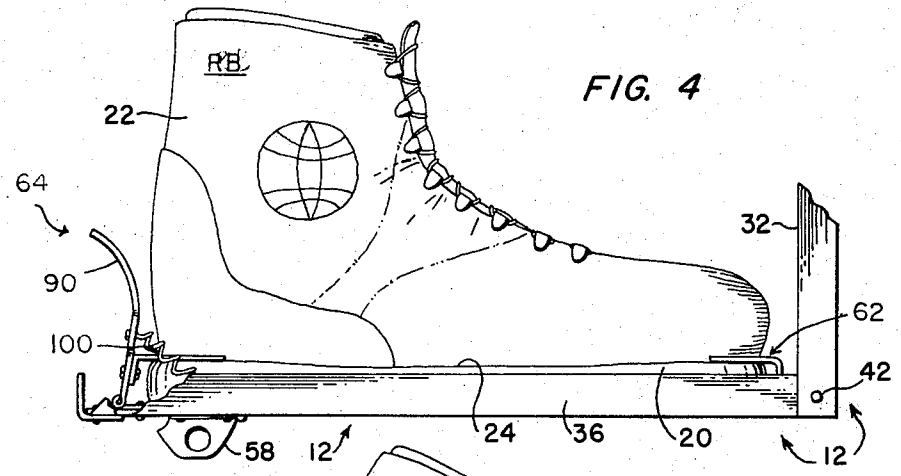
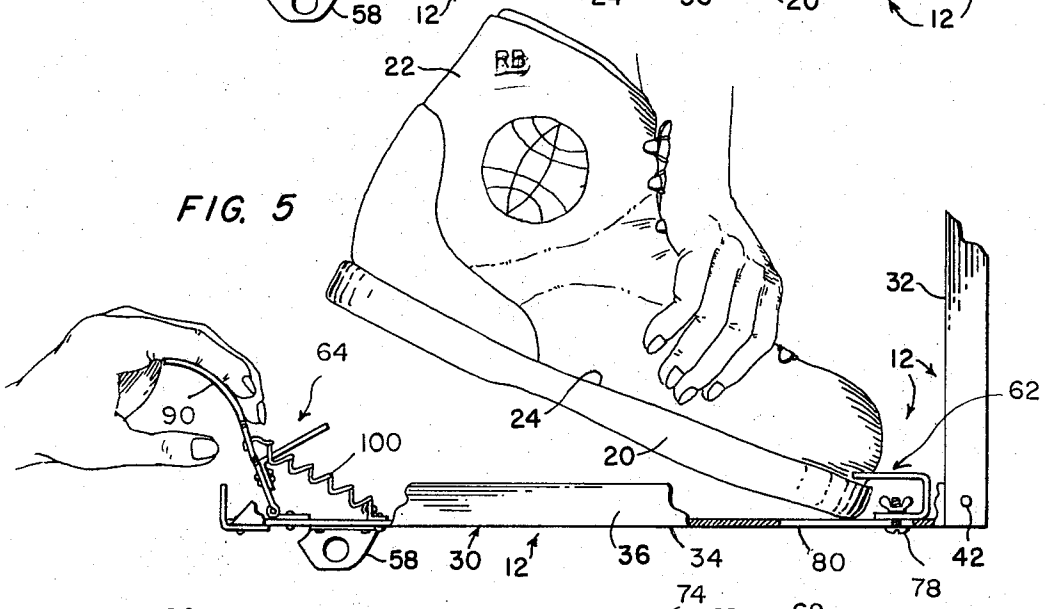


FIG. 5



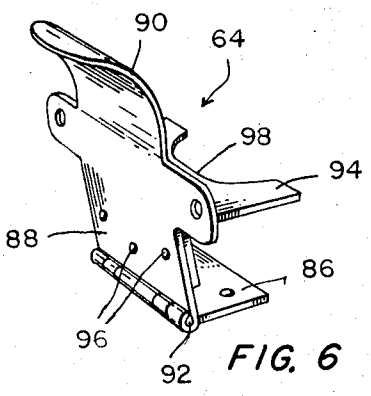


FIG. 6

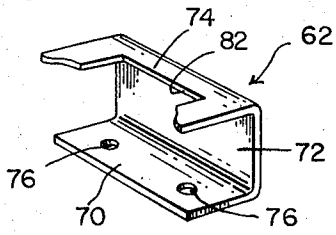


FIG. 7

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COMBINED SKI BOOT RETAINER AND CARRIER

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8 Claims. (Cl. 206—1)

The present invention relates to a combined ski boot retainer and carrier and has particular reference to a novel articulated, foldable, rectangular frame structure which in its unfolded or open condition presents a pair of boot-retaining platforms in such as accessible manner that the two boots of a matched pair of open-sided ski boots may be operatively mounted upon the platforms and securely but releasably clamped in position thereon, and which in its folded or closed condition causes the retained ski boots to become nested together so that the pair of boots occupies a minimum space while at the same time the clamping means for each ski boot is rendered inaccessible for ski boot removal purposes despite the fact that both ski boots are, for all intents and purposes, directly exposed to view.

The objects of the invention are manifold and principal among them is the provision of a ski boot retainer and carrier which is of the aforementioned type or character and in which the articulated frame structure is comprised of but three hingedly connected frame sections, two of the sections affording the above-mentioned boot-retaining platforms and the third section constituting a bridge section which, in the folded or closed condition of the frame structure, rigidifies the latter and maintains the folded structure in the form of a closed rectangular frame the width of which is only slightly wider than that of the soles of the retained ski boots. In such folded frame structure, the two ski boots are maintained wholly within the rectangular confines of the structure so that no portions thereof protrude beyond such confines. Furthermore, the two retained ski boots are maintained entirely in their free condition with no compressive forces being applied thereto, with no folding or bending of the flexible boot uppers, and with no special arrangement of the boot laces which may, for appearance sake, be entirely laced. Means are provided for locking the articulated frame structure in its folded condition and a carrying handle is associated with the aforementioned bridge section of the frame structure so that the folded structure may be transported from place to place in the manner of a suitcase or similar piece of luggage. A padlock facility in the form of a conventional hasp assembly affords a means whereby the frame structure and its contents may be locked against unauthorized unfolding for ski boot removal and, furthermore, the nature of the folded frame structure is such that the structure lends itself readily to attachment by a chain or the like to accessible fixed objects such as a locker room bench, a ground post, a portion of a vehicle or the like so that theft of the combined retainer and carrier is precluded.

It is a further object of the invention to provide a ski boot carrier which, in either its folded or its unfolded condition, affords an effective display of the ski boots contained therein.

Another object of the invention is the provision of a combined ski boot retainer and carrier having associated therewith novel clamping means for the individual ski boots as heretofore indicated, such clamping means operating to maintain the ski boot soles in a substantially flat condition against their respective platforms. Because of the particular clamping means, the ski boots may be operatively installed within the combined retainer and carrier while they are still wet or moist, and during the

drying process, there will be no tendency for the soles of the boots to curl or otherwise become warped. Still further, because of the fact that the combined retainer and carrier is in the form of an open-sided frame structure which exposes the two ski boots that are contained therein, rapid drying of the ski boots will take place. By such an arrangement, forced drying of the retained ski boots may be resorted to by the simple expedient of placing the combined retainer and carrier either near a source of heat, such, for example, as an open fireplace, or within a current of heated air issuing from a fan or heat register.

Finally, it is an object of the invention to provide a combined ski boot retainer and carrier which will accommodate a variety of ski boots with or without special toe and heel plates as well as ski boots which vary in size throughout a comparatively wide range.

Other objects and advantages of the invention not at this time enumerated will become readily apparent from a consideration of the following detailed description or specification.

In the accompanying two sheets of drawings forming a part of this specification, one illustrative embodiment of the invention is shown.

In these drawings:

FIG. 1 is a perspective view of a combined ski boot retainer and carrier embodying the principles of the present invention, such view showing the retainer and carrier in its folded boot-retaining condition;

FIG. 2 is a side elevational view of the retainer and carrier, showing the same in a partially unfolded condition in order to illustrate the manner of articulation thereof;

FIG. 3 is a side elevational view similar to FIG. 2 but showing the combined retainer and carrier in its fully unfolded condition;

FIG. 4 is an enlarged fragmentary side elevational view of one frame section of the frame structure constituting the combined retainer and carrier, showing a ski boot operatively installed thereupon;

FIG. 5 is a side elevational view similar to FIG. 4 but illustrating the manner in which the ski boot clamping means is released;

FIG. 6 is a perspective view of one of the fixed clamping bracket assemblies which are employed in connection with the invention; and

FIG. 7 is a perspective view of one of the movable or adjustable boot-clamping brackets which are employed in connection with the present invention.

Referring now to the drawings in detail and in particular to FIGS. 1 to 3, a combined ski boot retainer and carrier constructed according to the present invention is designated in its entirety by the reference numeral **10** and is in the form of a four-sided, articulated, rectangular frame structure which is capable of assuming the folded or closed condition in which it is shown in FIG. 1, or the unfolded or open condition in which it is shown in FIG. 3. As best shown in FIG. 2, the frame structure is comprised of three rigid frame sections including two L-shaped holder sections **12** and **14**, and a straight bridge section **16**. The three sections, being individually rigid and serially connected together at adjacent ends, provide an over-all rigid frame structure when the latter is in its folded or closed condition with the adjacent ends of the sections connected together.

The two L-shaped holder sections **12** and **14** are substantially identical in construction and each constitutes an individual retainer or holder for one ski boot of a pair of matched ski boots, the ski boot that is associated with the section **12** being designated as RB and the ski boot that is associated with the section **14** being designated as LB, the designations denoting a right foot ski boot and a left foot ski boot, respectively. Each boot includes

the usual comparatively stiff sole **20** and a flexible upper **22**. As is conventional, each sole overhangs the lower rim of the boot upper so as to provide, in effect, a continuous ledge portion or sole flange **24** which extends around the periphery of the sole and exteriorly of the boot upper.

Considering only the basic frame structure of the combined retainer and carrier **10**, a description of one of the two sections **12** and **14** will suffice for the other by reason of the fact that such two sections are for all intents and purposes substantially identical. Each of these two L-shaped holder sections is comprised of a relatively long leg **30** and a relatively short leg **32**, the two legs being integrally formed from a single length of lightweight sheet metal such as aluminum. The legs **30** and **32** are of shallow U-shape cross section as best seen in FIG. 1. The long leg **30** constitutes a tray section for releasably supporting and retaining one of the two ski boots and it consists of a relatively wide tray bottom **34** (see FIGS. 1 and 5) and comparatively short right angle side flanges **36** along the side margins of the tray bottom **34**. The latter constitutes a platform for the associated ski boot, and the side flanges **36** extend inwards when the frame structure is in its folded or closed condition. The leg **32** constitutes a connector leg and it consists of a comparatively wide bottom wall **38** and comparatively short right angle side flanges **40** along the side margins of the bottom wall **38**. The side flanges **40**, like the side flanges **36**, extend inwards when the frame structure is in its folded or closed condition. The side flanges **36** and **40** of the two legs **30** overlap in the corner region of each holder section and are secured together by rivets **42** which lend rigidity to the holder section in its entirety.

The short legs **32** of the two L-shaped holder sections **12** and **14** are hingedly connected together at their distal ends by a conventional leaf-type hinge **44**.

The bridge section **16** is also of shallow U-shaped cross section and consists of a comparatively wide bottom wall **50** and comparatively short right angle side flanges **52** along the side margins of the bottom wall **50**. The side flanges **52** extend inwards when the frame structure is in folded condition as shown in FIG. 1. One end of the bridge section **16** of the frame structure is hingedly connected to the distal end of the long leg **30** of the holder section **14** by a conventional leaf-type hinge **54**, and the other end of the bridge section has riveted or otherwise fixedly secured thereto a conventional hinged hasp **56** which is designed for cooperation with a fixed counterpart staple **58** on the outer end of the long leg **30** of the L-shaped holder section **12**, the assembly of hasp and staple being effective releasably to maintain the frame structure in its folded or closed condition. A carrying handle **60** is secured to the central portion of the bottom wall **50** of the bridge section **16**.

Each L-shaped holder section of the frame structure is provided with clamping means for releasably maintaining one of the two ski boots in position on the long leg **30** with the boot sole **20** in a flat condition and in major coextensive contact with the inner face of the tray bottom **36** of said long leg **30**. Toward this end, the long leg of each L-shaped holder section has mounted thereon internally of the rectangular frame structure a clamping bracket **62** which is capable of longitudinal adjustment on the tray bottom **36**, and a fixedly mounted clamping bracket assembly **64**. For simplicity, only the clamping bracket **62** and the clamping bracket assembly **64** of the holder section **12** will be described, it being understood that the clamping bracket and the clamping bracket assembly of the holder section **14** are the same except reversely positioned as shown in FIGS. 2 and 3. The clamping bracket **62** is disposed on the long leg **30** of the holder section **12** for longitudinal adjustment along said leg at a region near the juncture between the long leg **30** and the short leg **32**. The fixed bracket assembly **64** is disposed on the leg **30** near the distal end of the latter, the bracket **62** and the bracket assembly **64** being disposed in opposition to each other for reception therebetween of the ski boot sole **20** with the sole extending longitudinally between the said bracket and bracket assembly.

The adjustable clamping bracket **62** is designed for clamping cooperation with the extreme toe portion of the associated ski boot sole and, accordingly, it is comprosed of a U-shaped sheet metal stamping (see FIG. 7) having a base flange **70**, an intermediate web **72**, and a clamping flange **74**. The clamping flange is spaced from and overhangs the base flange **70**. The base flange **70** is formed with bolt holes **76** for reception therethrough of the bolts of the nut and bolt assemblies **78**. The latter, when released, are slidable in longitudinal slots **80** in the tray bottom **34**. When the nut and bolt assemblies **78** are tightened, they serve to retain the clamping bracket **62** in selected positions of longitudinal adjustment toward and away from the fixed clamping assembly **64**. The outer edge of the clamping flange **74** of the bracket **62** is provided with a recess **82** of a width conformable to the average width of the toe portions of ski boots so that it may partially encompass the toe portion of the ski boot upper **22** with the rim region thereof engaging the toe portion of the sole flange **24** in clamping relationship when said toe portion of the sole flange is inserted beneath the clamping flange **74** of the bracket **62** (see FIGS. 4 and 5). Accordingly, the spacing of the clamping flange **74** with respect to the level or plane of the tray bottom **34** is approximately equal to or very slightly less than the thickness of the ski boot sole **20**.

The fixed clamping bracket assembly **64** includes a leaf hinge structure having a short attachment leaf **86** (see FIG. 6) and a long leaf **88**. The latter constitutes a lever for manipulative purposes, the leaf having a curved outer or distal region **90** (see also FIGS. 4 and 5) to accomodate the fingers of the user. The two leaves **86** and **88** are connected together by a hinge pin **92** for relative swinging movement. The short leaf **86** fits flatly against and is riveted to the tray bottom **34**. The hinge pin **92** permits the long leaf to swing back and forth lengthwise of said tray bottom **34**. A hold-down plate **94** is secured by rivets **96** to a medial region of the long leaf **88** and projects laterally and forwardly therefrom. The distal or outer edge of the hold-down plate **94** is formed with an arcuate recess **98** having a curvature conformable to the heel portion of the ski boot upper **22** in order that it may encompass such heel portion with the rim region of the recess coming to rest upon the heel portion of the sole flange **24** as shown in FIG. 4. A spiral tension spring **100** is secured at one end to the long leaf **88** and at its other end to the tray bottom **34** and serves to bias the hold-down plate **94** in a clamping direction with respect to the ski boot sole **20**.

The ski boot RB or LB, as the case may be, is adapted to be installed on the tray bottom **34** of the long leg **30** of the holder section **12** by initially inserting the toe portion of the sole flange **24** beneath the overhanging clamping flange **74** of the adjustable clamping bracket **62** as shown in FIG. 5, and then swinging the long leaf **88** of the fixed clamping bracket assembly **64** rearwards against the force of the spring **100** and so that the outer edge of the said long leaf **88** will clear the extreme heel portion of the boot sole **20**. Thereafter the sole may be positioned flat on the tray bottom **34** and the long leaf **88** released so that the spring **100** will pull the said long leaf forwardly and downwardly and cause the hold-down plate **94** to swing into clamping contact with the heel portion of the sole flange **24**, thus securely clamping the ski boot as a whole in position on the tray bottom **34** between the two side flanges **36**.

It is to be noted that such manipulation of the long leaf **88** of the fixed clamping bracket assembly **64** can be effected only when the articulated frame structure is in its unfolded or open condition as illustrated in FIG. 3

inasmuch as when the frame structure is in its folded or closed condition as shown in FIG. 1, the bottom wall **50** of the bridge section **16** of the frame structure is in close proximity to the distal end of the long leaf **88** and prevents swinging movement of the latter in a direction to release the associated ski boot.

It is to be further noted that in connection with both holder section **12** and **14** of the frame structure, the fixed clamping bracket assemblies **64** are disposed on the tray bottoms **34** at the ends thereof which are remote from the short legs **32**. Thus, in each case, movement of the clamping bracket assembly **64** for ski boot-releasing purposes is prevented by the immediate proximity of the bottom wall **50** of the bridge section **16** when the frame structure is in its folded or closed condition.

Finally, it is to be noted that the various hinge connections between the adjacent sections of the frame structure are such that when the frame structure is in its unfolded or open condition as shown in FIG. 3, the two L-shaped holder sections **12** and **14** assume a tandem or back-to-back relationship but with the two ski boots RB and LB facing in the same direction. The ski boots are receivable in the holder sections **12** and **14** so that they may face in either longitudinal direction. The difference between the toe curvature and the heel curvature of a conventional ski boot does not vary appreciably so that the recesses **82** and **98** may have the same over-all length and will fit either the toe or the heel portion of the associated ski boot, depending upon its direction of installation in the holder section. However, in order to insure proper nesting of the two ski boots when the frame structure is in its folded or closed condition, the user will always install the ski boots so that they extend in the same direction in the unfolded or extended frame structure as shown in FIG. 3.

If desired, and in order to relieve the stress upon the aforementioned hasp and staple assembly when the combined retainer and carrier is lifted, two angle brackets **104** may be applied to the distal end of the holder section **12** so that they overlie or extend over the distal end margin of the adjacent bridge section **16** of the frame structure when the latter is in its folded condition.

The invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification as various changes in the details of construction may be resorted to without departing from the spirit or scope of the invention. Therefore, only insofar as the invention is particularly pointed out in the accompanying claims is the same to be limited.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:

1. A portable ski boot retainer and carrier in the form of an articulated frame structure comprising three rigid frame sections including first and second frame sections each of which is of L-shape configuration and has a long leg and a short leg, and a third linearly straight frame section of an effective length substantially equal to the combined lengths of said short legs, means hingedly connecting the distal ends of the short legs of the first and second frame sections together for relative swinging movement of said first and second frame sections, means hingedly connecting one end of the third section to the distal end of the long leg of the second section for relative swinging movement of said third and second frame sections, said frame sections being relatively movable between a folded rectangular condition of the frame structure wherein said short legs are horizontal and coplanar, the long legs are vertical and parallel, and the third frame section is horizontal and has its other end abutting the distal end of the long leg of the first section, and an unfolded condition of the frame structure wherein the short legs of the first and second frame sections are vertical and folded flat upon each other in face-to-face relationship, the long legs of said first and second frame sections are horizontal and coplanar, and the third frame section is disposed with respect to the long leg to which it is hingedly connected at an angle greater than 90°, a carrying handle secured to said third frame section, and means releasably securing the sole portion of a ski boot in face-to-face relationship with respect to each of said long legs whereby the ski boots are movable with such legs and assume a nested relationship when the frame structure is in its folded condition.

2. A portable ski boot retainer and carrier as set forth in claim **1** and wherein each of the three frame sections is of flat tray-like design and includes a bottom wall of a width slightly greater than the over-all width of a ski boot sole, and inwardly extending narrow right-angle side flanges.

3. A portable ski boot retainer and carrier as set forth in claim **1** and wherein the means releasably securing the sole portion of the ski boot to each long leg comprises a clamping bracket located on one end of such long leg and overlies one end region of the ski boot sole, and a clamping bracket assembly pivoted to the other end of the long leg and having a hold-down plate movable into and out of engagement with the other end region of the ski boot sole.

4. A portable ski boot retainer and carrier as set forth in claim **3** and wherein the third frame section is disposed in the path of movement of said clamping bracket assembly when the frame structure is in its folded condition and prevents movement of the clamping arm away from its position of engagement with said other end region of the ski boot sole.

5. A portable ski boot retainer and carrier as set forth in claim **3** and wherein the clamping bracket is adjustable toward and away from the clamping bracket assembly in order to accommodate the clamping of ski boot soles of varying lengths, and said clamping bracket has means for releasably securing said clamping bracket in any selected position of adjustment.

6. A portable ski boot retainer and carrier as set forth in claim **3** and including, additionally, means for releasably locking the distal end of the long leg of the first frame section to said other end of the third frame section.

7. A portable ski boot retainer and carrier as set forth in claim **6** and wherein said releasable locking means comprises a hasp on one of said ends and a cooperating staple on the other of said ends.

8. A portable ski boot retainer and carrier as set forth in claim **7** and wherein the hasp is carried by the distal end of the third frame section.

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