

[54] **SKI BOOT CARRIER**
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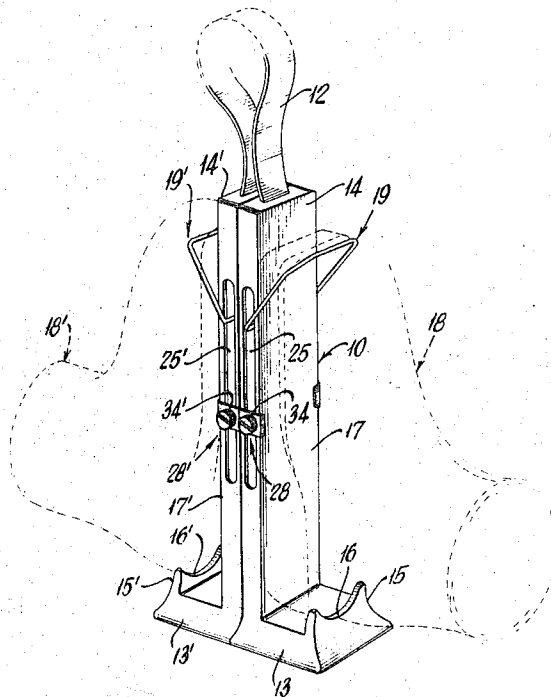
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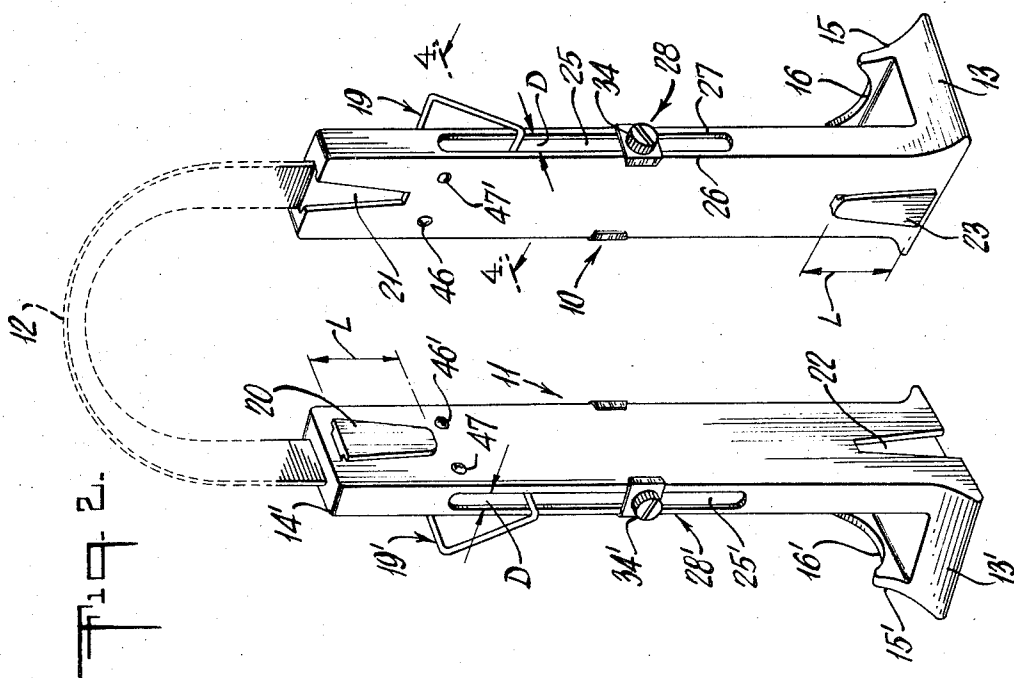
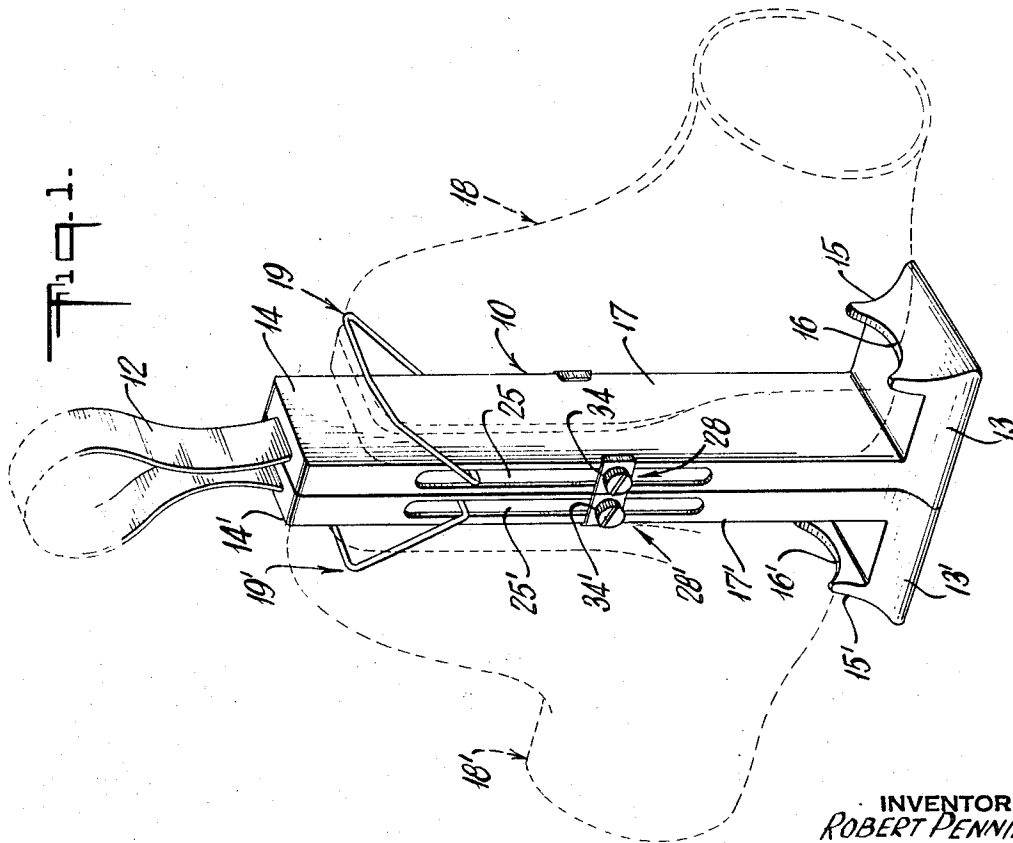
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[57] **ABSTRACT**

The invention contemplates a boot carrier suitable for ski boots, wherein each boot has its own separate bracket to which it is mounted and adjustably clamped. The brackets are interconnected by a flexible strap to permit the option of shoulder-slung portage. The brackets are also separately interconnectable to provide the further option of mutually braced standing support, for neat storage off the floor.

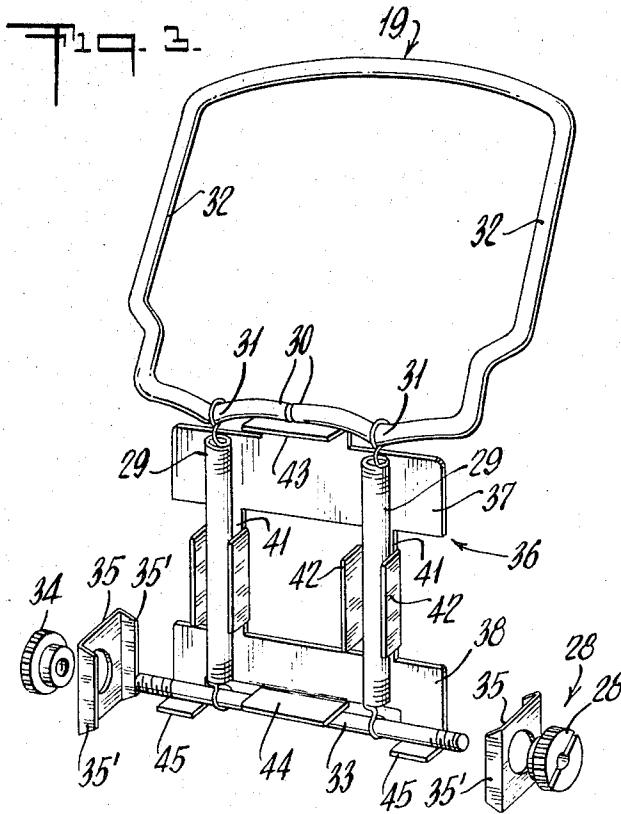
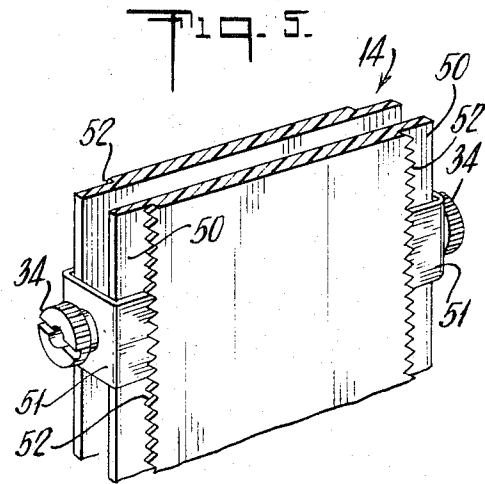
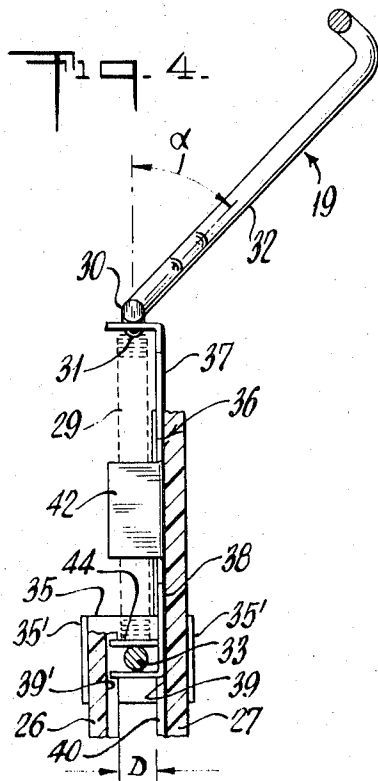
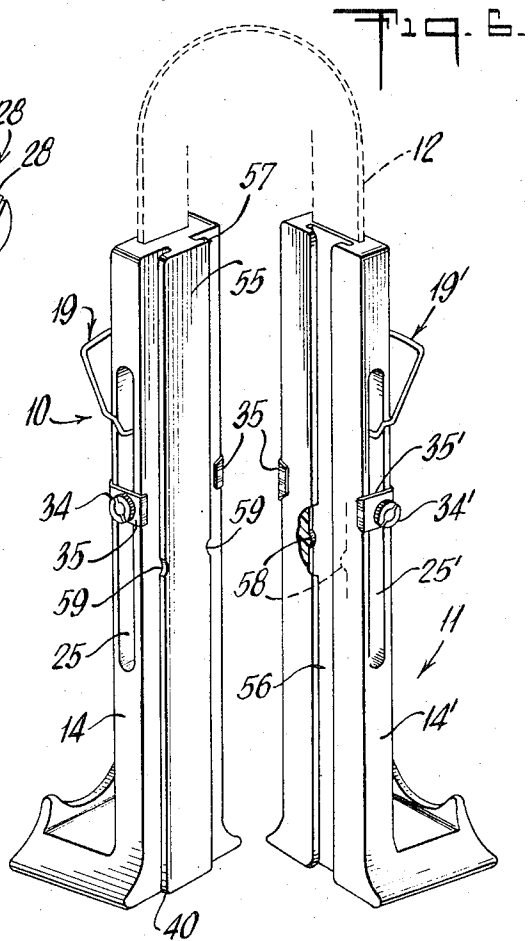
16 Claims, 6 Drawing Figures





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SKI BOOT CARRIER

This invention relates to boot handling and storage devices and is particularly concerned with more useful provision of these functions for ski boots.

Ski-boot carriers in use today rely upon a base with a central upstanding pedestal panel. The soles of the boots of a given pair are set against the opposite faces of the panel, with heel ends down against the base, and with the toe ends projecting upwardly. Suitable clamps hold the ends of the boots to the carrier, so that the soles can be straightened and so that the boots can be off the floor, for drying efficacy. Other proposals have been made for separate brackets for each boot, and these brackets have been flexibly strapped to each other to assure against loss of brackets for a given pair.

It is an object to provide improved boot-carrier means of the character indicated.

Another object is to provide improved flexibly interconnected means for the separate efficient individual clamping of the boots of a given pair.

A further object is to provide improved selectively separable boot brackets for the separate efficient individual clamping of the boots of a given pair.

A specific object is to achieve the above objects with a basically simple, inexpensive and fool-proof construction involving a minimum number of parts and affording the option of either (a) the secure engagement of separate boot brackets for stable floor-referenced storage of boots off the floor, or (b) free shoulder-slung portage of the boots by way of the flexible strap.

Other objects and various further features of novelty and invention will be pointed out or will occur to those skilled in the art from a reading of the following specification in conjunction with the accompanying drawings. In said drawings, which show, for illustrative purposes only, preferred forms of the invention:

FIG. 1 is a view in perspective of a ski-boot carrier of the invention, with mounted boots shown in phantom outline;

FIG. 2 is a perspective view of the carrier of FIG. 1, with the ski brackets thereof disengaged;

FIG. 3 is a simplified view in perspective of toe-clamp parts in the carrier of FIGS. 1 and 2;

FIG. 4 is an enlarged fragmentary sectional view taken in the plane 4-4 of FIG. 2 and showing more detail of the relation of parts during the setting of toe-clamp parts;

FIG. 5 is an enlarged fragmentary view in perspective to illustrate a modification of adjustable mechanism; and

FIG. 6 is a perspective view similar to FIG. 2 to illustrate a further modification.

Briefly stated, the invention contemplates a boot carrier suitable for ski boots, wherein each boot has its own separate bracket to which it is mounted and adjustably clamped. The brackets are interconnected by a flexible strap to permit the option of shoulder-slung portage. The brackets are also separably interconnectable to provide the further option of mutually braced standing support, for neat storage off the floor.

Referring to FIGS. 1 and 2, the invention is shown in application to a carrier comprising two similar bracket members 10-11, interconnected at their upper ends by a length of flexible strapping 12. The brackets 10-11 are selectively fastened to each other (FIG. 1) or

separated (FIG. 2), in either of which events the strapping 12 provides a convenient handle or shoulder sling, for ready portage. Generally, the strapping 12 should have a flexible span, between bracket connections, of 15 to 25 inches, a preference for substantially 20 inches being indicated.

Each of the brackets comprises similar parts; those for the bracket 11 will be distinguished from the corresponding parts of bracket 10 by use of primed notation. Bracket 10 comprises a base 13 with a flat bottom (or bottom edge) to permit standing on a shelf or floor. An upstanding panel or pedestal 14 is integral with base 13, along one side thereof. Heel-clamping means such as an upwardly projecting lug 15, with concaved upper edge 16, is part of or carried by the base 13, in spaced relation to the adjacent face 17 of the panel 14. The sole of a boot 18 is laid against the face 17 with the heel located by and received in the concave edge 16, and naturally so urged by gravity; and releasable toe-engaging and retaining means, such as a bail 19, presses the toe end of the sole to an upper part of the panel face 17.

In accordance with a feature of the invention, the two panels include coacting means by which they can be severably assembled. And in the form of FIGS. 1 and 2, such means comprises vertically spaced sets of dovetail and dovetail-slot formations on the adjacent faces of the panels 14-14'. Thus, at the upper end, panel 14' integrally carries an elongated dovetail projection 20, for reception in a dovetail-slot formation 21 in the panel 14; at the lower end, panel 14' is formed with a dovetail-slot 22 to receive a corresponding dovetail projection 23 of panel 14. Preferably, the dovetails 20-23 and their mating slot formations 21-22 are longitudinally tapered, as shown, with entering ends being gently rounded. To assemble the brackets 10-11 to each other, their adjacent faces are overlapped, with a longitudinal offset to substantially the extent L, so that the dovetail projections 20-23 will not interfere; in this relation, the dovetails 20-23 are poised for aligned entry into their respective slots 21-22, and assembly is completed by merely longitudinally sliding the panels 14-14' until in completely overlapped register. The bottoms of bases 13-13' are then aligned in a common plane, so that the brackets 10-11 can mutually stabilize each other, for floor mounting. If desired, detent means (see FIG. 2) may coact between the panels 14-14' at the assembled position, for enhanced retention of this relation; as shown, a detent concavity 46 in bracket 10 registers with a convex detent 46' in the panel of bracket 11, when the dovetail engagements are completed, and if desired further concave and convex detent means 47-47' may be provided in the bracket panels, to enhance the action.

The toe-retaining mechanism 19 is illustrated in greater detail in FIGS. 3 and 4. Basically, it relies upon guided coaction with an elongated slot 25 extending over a substantial upper region of the panel 14, between front and back faces thereof, and running the full width between upstanding side edges of panel 14. Slot 25 thus defines two spaced stiff panel legs 26-27 having the spacing D (see FIGS. 2 and 4).

The bail clamp 19 engages over the toe end of the boot sole and is referenced to adjustable panel-clamp means 28, through tensed resilient means, such as

stiffly resilient shock cork or twin coil springs 29. As shown, bail 19 comprises a single loop of stiff wire, with opposed end portions 30 which generally align and which enter the opposite open ends of the slot 25. These portions 30 provide anchorage for the upper ends of springs 29, and downwardly and angularly offset portions 31, short of the end portions 30 provide retention and assurance against loss of the spring connections to the bail. In FIG. 4, the offsets 31 are seen to incorporate an angular component α of offset, with respect to the predominant direction of the outer-arm portions 32 of bail 19.

The adjustable clamp means 28 may comprise a transverse bar or rod 33 slidably contained within slot 25, except for externally projecting threaded ends, engaged to clamp nuts 34, which set against the side edges of the panel legs 26-27, via slides 35, having outer flanges 35' for guided reference to the legs 26-27. The rod 33 passes through the looped bottom ends of springs 29, to provide a frame reference for spring action, when clamp means 28 is set. The nuts 34 may be characterized by knurls, wrench flats, screw-driver slots, or otherwise, for ready manual setting of the proper elevation of the frame reference for bail 19, as will be understood.

Although the described structure may produce useful results when clamps 28 are properly set for a given boot size, it is preferred to employ additional stabilizing means for the springs 29 to assure non-fouling action, in spite of careless use or abuse. In FIGS. 3 and 4 such stabilizing means is seen to utilize a single slide plate 36, which may be stamped from common sheet-metal stock, with piercings and lugs struck therefrom. As shown, plate 36 comprises upper and lower base portions 37-38 having lateral ends which locate in an elongated recess 39 between side shoulders 40, at each side of leg 27. The base portions 37-38 are interconnected by legs 41 on the alignment of springs 29, and side flanges 42 are bent out of the plane of plate 36, at each leg 41, to locate the respective springs 29. A top flange 43 provides fulcrum support for the offset ends 30 of the bail, resiliently elevating the bail at the angle α (about 45°), and a bottom flange 44 is also bent from plate 36 to establish a preloading bottom reference for springs 29, via rod 33; additional bottom flanges 45, beneath rod 33, stabilize the transverse orientation of rod 33. The upturned extend of flanges 42-43-44-45 should clear the adjacent face of leg 26, which may be recessed at 39', in the manner already described for leg 27.

The entire subassembly of bail 19, plate 36, springs 29, and rod 33 is self-retaining in preloaded condition, and the base portions can readily stabilize and pilot within recess 39, for selective sliding elevation of this subassembly along the slot 25. A given position of adjustment is secured by setting the nuts 35, at which point a frame reference is established for bail action.

In use, the clamp means 26 is set at a location along slot 25, appropriate to desired toe-clamping pressure for the particular boot size involved. The toe of the boot is first engaged, at the sole, under the bail 19, and then the boot is pushed to slide the bail upwardly, against developing strong tension in springs 29. When the heel of the boot clears the lug 15, the entire boot is pressed to the panel face 17, and spring tension is al-

lowed to drop the boot into heel-nested retention at the concave lug surface 16.

FIG. 5 illustrates a slight modification wherein the outer edges of the panel legs are slightly recessed, at 50, for guidance of side arms of a flanged slide 51 against which the nuts 34 are set. As in FIGS. 1 to 4, slides 51 serve to retain control of the panel legs, against spreading at the clamp location; however, in FIG. 5, the ends of the slide flanges are shown serrated, for positively locked engagement with similar serrations 52 at an edge of the recess 50.

FIG. 6 illustrates a further modification whereby the two brackets 10-11 are releasably assembled to each other through a single elongated dovetail-and-slot engagement, the dovetail projection 55 being integral with the panel 14, and the dovetail-slot formation 56 being part of the panel 14'. The upper and lower ends of the dovetail 55 are rounded, as at 57, to facilitate initial engagement upon assembly. Resilient detent means 58 carried by one of the brackets 11 projects in yielding interference with part of the other bracket 10, as at the locally necked-down central region 59 of the dovetail 55, to lightly resiliently retain the assembled brackets.

It will be seen that I have described a simple and useful ski-boot carrier construction meeting all the stated objects. The parts are simple and are simply formed. For example, the brackets 10-11 may be of injection-molded plastic, such as ABS, and the metal parts are of elemental simplicity. The fact that the brackets 10-11 assemble back-to-back necessarily means a mutual resistance of the panels to any warping tendency, whatever the warp characteristic of the soles of the two boots of a given pair. Specifically, the invention provides:

1. Upright, compact storage of ski boots.
2. Provides for ready, slide-action adjustment to accommodate varying boot sizes; and the customer is provided with easier loading of his boots, without the need to set clamp screws every time the boots are applied or removed.
3. Optional portage over the arm, over the shoulder, or by hand-grasp of the strap 12.
4. Optional easy separation into two structures rather than one.
5. Will fit conventional ski-shop rental stands.

While the invention has been shown and described for the preferred forms shown, it will be understood that modification may be made without departing from the scope of the invention.

What is claimed is:

1. Boot-carrier means, comprising two similar upstanding boot brackets, each bracket having a base and an upstanding longitudinally extending panel integrally connected to one side of said base, heel-engaging means at said base for locating a boot heel when the sole of the boot is applied to the adjacent side of said panel, toe-engaging means carried by said panel for removably retaining the sole against said panel side near the toe end of the boot, flexible strap means including ends secured to the respective upper ends of said brackets with a free flexible length therebetween, and separably engageable means including longitudinally slidably engageable coacting dovetail-slot formations on the opposite sides of the panels of both brackets for selective assembly and disassembly of said

brackets to each other, said formations being tapered for longitudinally arrested assembly in one longitudinal direction and at the longitudinal position in which both bases are in longitudinal register, whereby the assembly is self-locking at said position.

2. Boot-carrier means according to claim 1, wherein the free flexible length of said strap means is in the order of 15 to 25 inches.

3. Boot-carrier means according to claim 1, wherein the free flexible length of said strap means is substantially 20 inches.

4. Boot-carrier means according to claim 1, wherein said toe-engaging means includes an adjustable clamp selectively engageable along a span of the length of said panel.

5. Boot-carrier means according to claim 1, in which detent means coact between said brackets at said second position to engage and retain the same in assembled relation.

6. Boot-carrier means, comprising two similar upstanding boot brackets, each bracket having a base and an upstanding panel integrally connected to one side of said base, heel-engaging means at said base for locating a boot heel when the sole of the boot is applied to the adjacent side of said panel, toe-engaging means including an adjustable clamp for removably retaining the sole against said panel side near the toe end of the boot, said clamp and said panel having coacting elongated slidably guided means wherein said panel is longitudinally slotted near the upper end of said toe-engaging means including means engaging said panel at the slotted portion thereof, the slotted portion being a single slot extending between open ends at the lateral side edges of said panel, said toe-engaging means comprising a bail with a toe-engaging loop spanning opposite ends of the slot and with integral bail ends entering into and received within the opposite ends of said slot, and separably engageable means on the opposite sides of the panels of both brackets for selective assembly and disassembly of said brackets to each other.

7. Boot-carrier means according to claim 6, and including resilient means referenced to said panel and engaging said bail ends to vertically position the bail.

8. Boot-carrier means according to claim 7, in which the panel reference for said resilient means includes a clamp selectively engageable to said panel along the slotted portion thereof.

9. Boot-carrier means according to claim 8, in which said clamp includes toothed formations on coacting parts of said panel and clamp.

10. Boot-carrier means, comprising two similar upstanding boot brackets, each bracket having a base and an upstanding panel integrally connected to one side of said base, heel-engaging means at said base for locating a boot heel when the sole of the boot is applied to the adjacent side of said panel, toe-engaging means carried by said panel for removably retaining the sole against

said panel side near the toe end of the boot, and separably engageable means on the opposite sides of the panels of both brackets for selective assembly and disassembly of said brackets to each other, said separably engageable means including longitudinally slidably engageable coacting dovetail and dovetail-slot formations separately provided at the respective upper and lower ends of both of said bracket panels.

11. Boot-carrier means according to claim 10, in which said dovetail and dovetail-slot formations are vertically tapered to permit initial engagement with substantial clearance for a longitudinally offset relation of the two panels and to snugly locate said panels against lateral play when the offset is reduced to zero upon aligning said bases.

12. Boot-carrier means, comprising two similar upstanding boot brackets, each bracket having a base and an upstanding panel integrally connected to one side of said base, heel-engaging means at said base for locating a boot heel when the sole of the boot is applied to the adjacent side of said panel, toe-engaging means carried by said panel for removably retaining the sole against said panel side near the toe end of the boot, and separably engageable means on the opposite sides of the panels of both brackets for selective assembly and disassembly of said brackets to each other, said separably engageable means including longitudinally slidably engageable coacting dovetail and dovetail-slot formations and detent means coacting between said panels to yieldably retain the longitudinal position of complete overlap of said panels.

13. Boot-carrier means, comprising two similar upstanding boot brackets, each bracket having a base and an upstanding panel integrally connected to one side of said base, heel-engaging means at said base for locating a boot heel when the sole of the boot is applied to the adjacent side of said panel, toe-engaging means carried by said panel for removably retaining the sole against said panel side near the toe end of the boot; said toe-engaging means for each of said brackets comprising a toe-engaging bail, a slide longitudinally guided along the bracket panel, means for selectively clamping said slide to said bracket panel, and means including a resilient member connecting said bail and slide; and separably engageable means on the opposite sides of the panels of both brackets for selective assembly and disassembly of said brackets to each other.

14. Boot-carrier means according to claim 13, in which said clamping means includes a transverse rod located by said slide, and in which said resilient member is connected between said rod and bail.

15. Boot-carrier means according to claim 14, in which said slide includes lateral-positioning means for said resilient member.

16. Boot-carrier means according to claim 13, wherein the general plane of projection of said bail is inclined at an angle in the order of 45° from said panel.

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