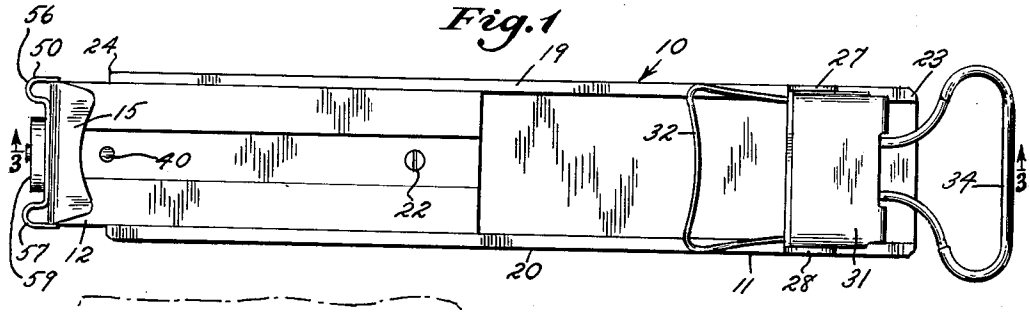
Jan. 22, 1963 P. SALZMAN 3,074,085

SKI BOOT HOLDER

Filed Jan. 18, 1961

Fig. 1



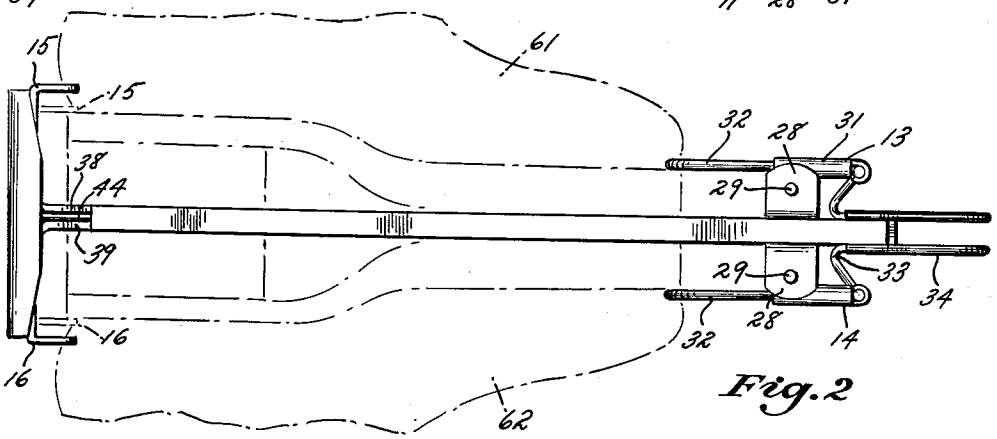


Fig. 2

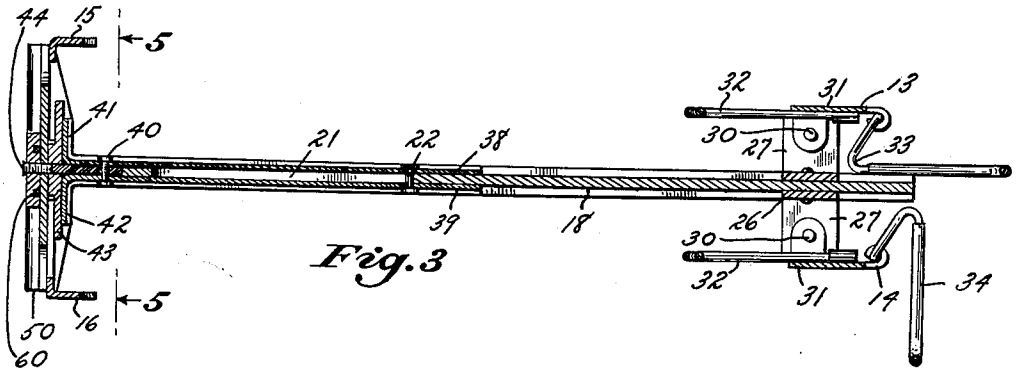


Fig. 3

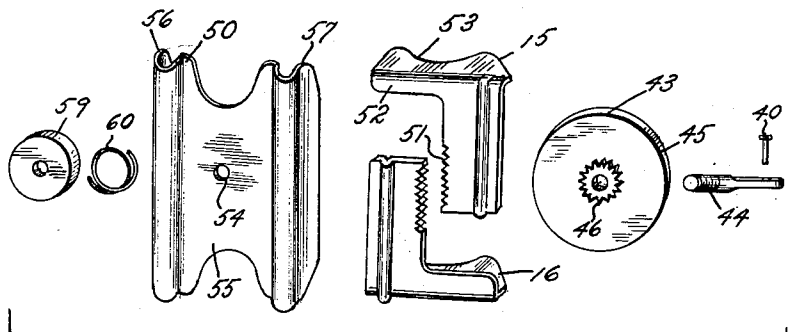


Fig. 4

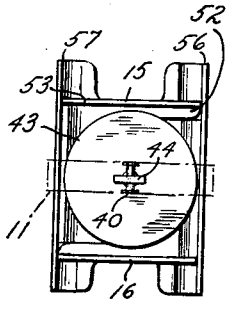


Fig. 5

United States Patent Office 3,074,085 Patented Jan. 22, 1963

3,074,085

SKI BOOT HOLDER

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Filed Jan. 18, 1961, Ser. No. 83,517
2 Claims (Cl. 12—120.5)

This invention relates generally to the art of maintaining footwear in tension during those periods in which the same is not worn. Devices of this type are generally known in the art, and the invention lies in specific constructional details which permit improved adjustability with accompanying mechanical strength. While the invention has application to supporting a wide variety of types of footwear, I have chosen to illustrate the same as a ski boot tree for use in conjunction with relatively heavy footwear.

In devices of this type, it is necessary to support the footwear externally, since it is not practical to make a tree of sufficient mechanical strength to withstand the natural tendency to curl in boots having thick leathers and soles. In ideal form, a suitable device includes a central longitudinal element of extendable nature to accommodate different lengths of footwear, and pairs of clamps on each side of the longitudinal element, each of which engages the heel portion or toe portion of the article of footwear. As the height of the heel is also a variable encountered, a suitable device also includes means for adjustment to compensate for different heights of heels prior to engagement therewith.

It is therefore among the principal objects of the present invention to provide an improved shoe tree of the class described and possessed of the above enumerated advantages.

Another object of the invention lies in the provision of an improved shoe tree of the class described in which the adjustment for the height of the heel of the pair of shoes or boots being engaged may be accomplished simultaneously and uniformly by merely adjusting one of the heel-retaining structures.

A further object of the invention lies in the provision of an improved shoe tree of the class described which may be of extremely durable construction, and capable of exerting continuous tension upon an article of footwear without fatigue.

A further object of the invention lies in the provision of an improved shoe tree of the class described, in which the cost of fabrication may be of a reasonably low order, with consequent wide sale, distribution and use.

Still another object of the invention lies in the provision of a shoe tree device of the class described in which all of the component parts may be of metallic construction, and many of which may be of extruded tempered aluminum, whereby the weight of the device may be materially reduced to facilitate carrying.

A feature of the invention lies in the attractive appearance of the device in fully assembled condition.

These objects and features, as well as other incidental ends and advantages, will more fully appear in the progress of the following disclosure and be pointed out in the appended claims.

In the drawing, to which reference will be made in the specification, similar reference characters have been employed to designate corresponding parts throughout the several views.

FIGURE 1 is a view in elevation of an embodiment of the invention.

FIGURE 2 is a second view in elevation as seen from the lower portion of FIGURE 1.

FIGURE 3 is a longitudinal sectional view as seen from the plane 3—3 in FIGURE 1.

FIGURE 4 is an exploded view in perspective of the parts comprising the left hand portion of FIGURE 3.

FIGURE 5 is a transverse sectional view as seen from the plane 5—5 in FIGURE 3.

In accordance with the invention, the device, generally indicated by reference character 10, comprises broadly: a first, or relatively fixed, longitudinal element 11, a second, or relatively movable, longitudinal element 12, first and second toe clamp elements 13 and 14, respectively, as well as first and second heel clamp elements 15 and 16, respectively. As has been previously mentioned, the device is preferably made almost entirely from aluminum or other rust-proof metal, thereby suiting the device for use out of doors and in moisture-laden locations.

The first longitudinal element 11 is preferably made as a continuous extrusion of tempered aluminum, and is of generally I-beam cross section, including a centrally disposed member 18 and edge members 19 and 20. An elongated slot 21 extends longitudinally through the left hand portion of the element 11 as best seen in FIGURE 3, the same being engaged by a pin 22. As seen in FIGURE 1, the element 11 includes a first end 23 and a second end 24.

The second longitudinal element 12 is also preferably formed from extruded aluminum, and is generally bifurcated in nature to include first and second sliding members 38 and 39 which are interconnected by the pin 40 and the previously mentioned pin 22. Each of the members 38 and 39 is provided with an angularly disposed portion 41 and 42, respectively. Supported by the portions 41 and 42 is a platform member 43 which is pivotally mounted upon a pin 44 through which the pin 40 passes. The platform member 43 includes a circular portion 45 and an integrally formed spur gear portion 46, best seen in FIGURE 4.

The first and second toe clamp elements 13 and 14, respectively, are generally similar, and accordingly a detailed description of one of said elements will serve equally well to describe the other. Each includes a generally U-shaped mounting bracket 26, the upstanding ears 27 and 28 of which are provided with pintles 29 and 30 which support a relatively movable bracket 31. The bracket 31, in turn, supports a toe-engaging member 32 of wire-like configuration on one side thereof, as well as a cam member 33 preferably formed integrally with a handle portion 34.

The first and second heel clamp elements 15 and 16 are also similar and symmetrical, and accordingly a detailed description of one of such elements will suffice to describe the other.

As best seen in FIGURES 3, 4 and 5, both heel clamp elements 14 and 15 are supported on the outer surface of the platform member 43, and are resiliently pressed thereagainst by a retaining member 50. Each of the elements 15 and 16 includes an elongated rack portion 51 and an angularly disposed heel-engaging flange 52 having a curvilinear edge 53 which corresponds to the shape of the heel which it engages. The retaining member 50 includes a planar central portion 55 as well as retaining flange portions 56 and 57 which maintain the rack portion 51 in engagement with the spur gear 46. The central portion 55 includes an opening 54 which engages the pin 44, the pin also engaging a lock nut 59 and accompanying spring 60.

To engage a pair of boots indicated in FIGURE 2 by reference characters 61—62, it is necessary only to loosen the lock nut 59, and move outwardly or inwardly the elements 15 and 16 to correspond to the desired heel height, following which the nut 59 is tightened to maintain the adjustment. The heel portions of the boot 61–62 may then be slipped therebeneath, following which the toe portions are engaged by the elements 13 and 14, the latter

being moved from the position shown in the lower right hand portion of FIGURE 3 to the upper right hand portion of FIGURE 3 to provide a locking action. With the boots engaged, the entire device and attached boots may then be conveniently carried by the handle portions 34 which are then aligned as shown in FIGURES 1 and 2.

I wish it to be understood that I do not consider the invention limited to the precise details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the invention pertains.

I claim:

1. In a footwear tree construction, first and second selectively movable longitudinal elements, said first longitudinal element having means thereon for engaging the toe portion of each of a pair of footwear, said second longitudinal element having means thereon for engaging the heel portions of each of said pair of footwear; said last-mentioned means including a pair of members each having a rack portion and a heel-engaging flange, a spur gear supported for rotation about an axis parallel to the principal axis of said longitudinal elements and engaged with said rack portions of each of said pair of members.

2. In a footwear tree construction, first and second selectively movable longitudinal elements, said first longitudinal element having means thereon for engaging the toe portion of each of a pair of footwear, said second longitudinal element having means thereon for engaging the heel portions of each of said pair of footwear; said last-mentioned means including a pair of members each having a rack portion and a heel-engaging flange, a spur gear supported for rotation about an axis parallel to the principal axis of said longitudinal elements and engaged with said rack portions of each of said pair of members, and means for selectively locking said spur gear against movement.

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