March 1, 1966 D. J. GJESDAHL 3,237,226

BOOT TREE DEVICE

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FIG. 1

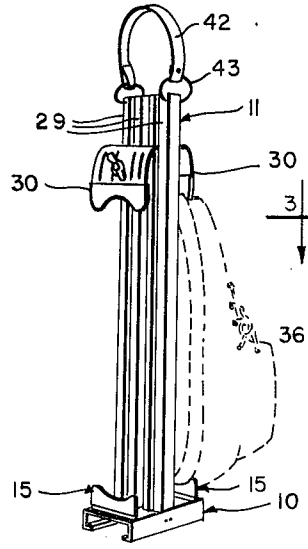
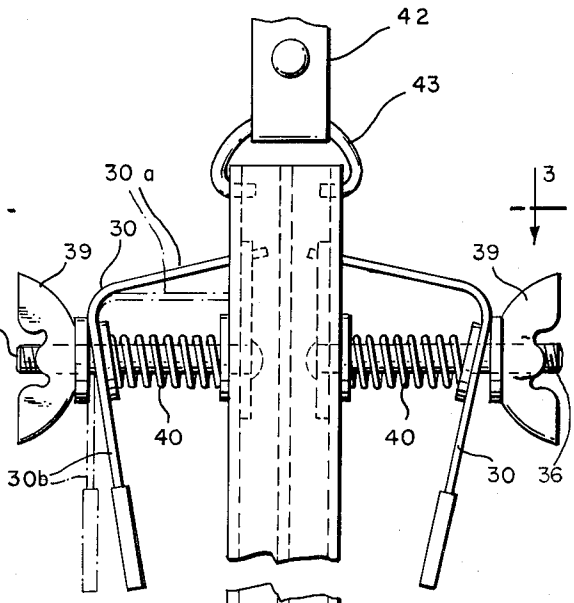


FIG. 2



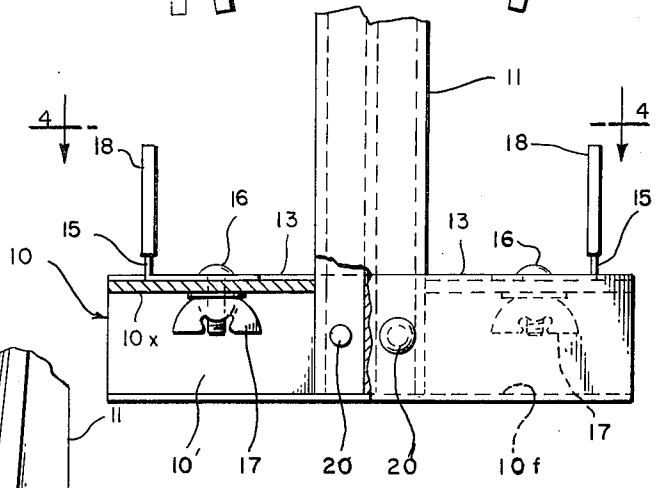
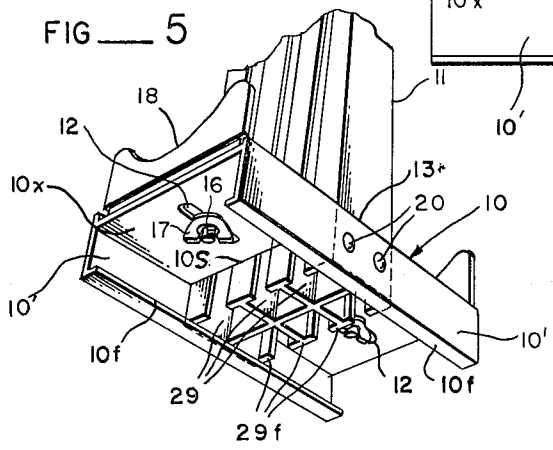


FIG. 5



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FIG. 3

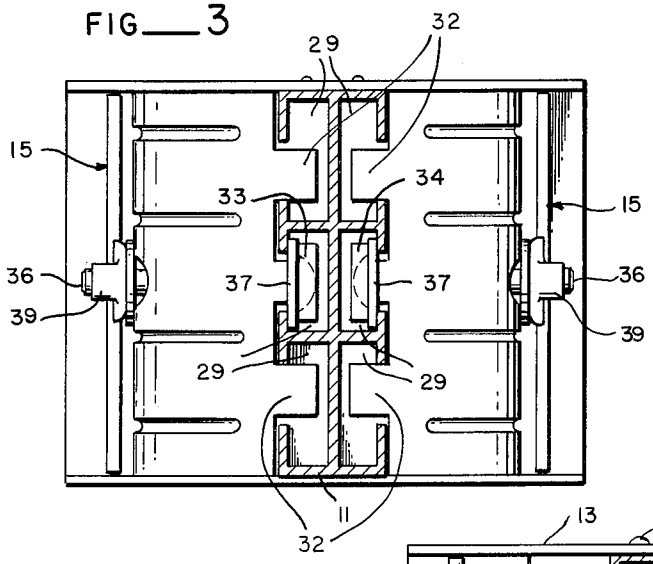


FIG. 4

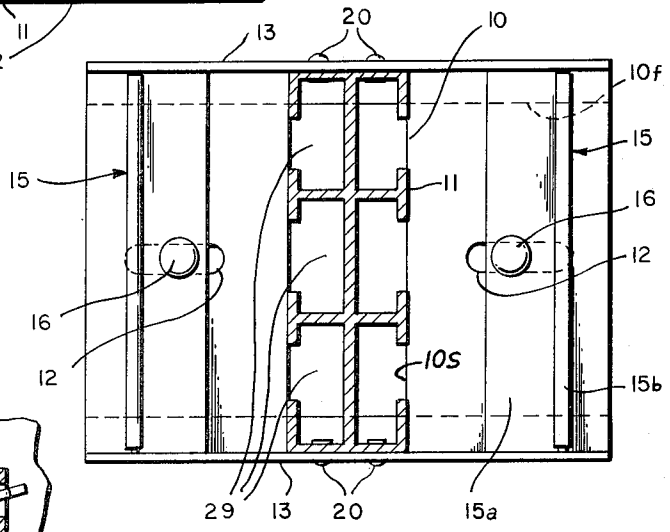


FIG. 6

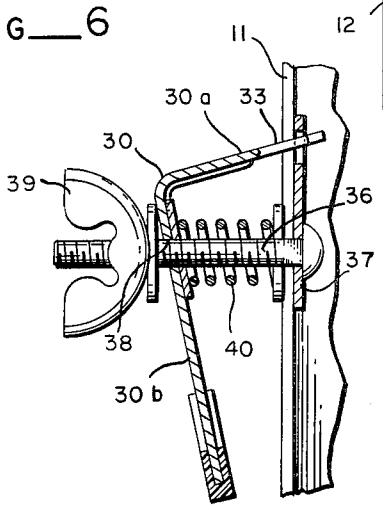
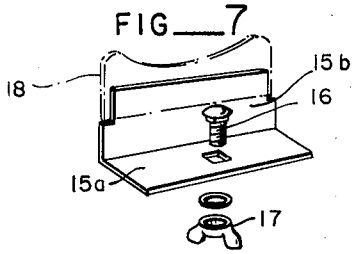


FIG. 7



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BOOT TREE DEVICE

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4 Claims. (Cl. 12—120.5)

This invention relates to articles that are presently designated as boot trees and especially those devices as designed for the holding and transporting of ski boots after use and particularly during their drying out period and storage.

It is the principal object of this invention to provide boot trees as above stated that adapt to stand upright for easy pick up and use; that will accommodate a pair of boots and will hold them while drying against any detrimental warping or curling of their soles, and from which device the secured boots may be easily and readily removed for use.

It is also an object of this invention to provide a boot tree that is made up of extruded aluminum members that are so joined so as to provide a durable, rigid and lightweight construction, and to equip it with a strap handle at its top end for convenience in carrying the boots.

Specifically stated, the present invention resides in the provision of a boot tree comprising a supporting base member that mounts an upright standard; both of these parts being formed with longitudinal channels in its opposite side faces, in which boot holding clamps are adjustably held to meet requirements for the holding of boots of various sizes.

Further objects reside in the specific details of formation of the various parts of the device and in their assembly and mode of use, as will hereafter be described.

In accomplishing the above mentioned and other objects of the invention, I have provided the improved details of construction and assembly of parts, as illustrated in the accompanying drawings, wherein:

FIG. 1 is a perspective view of the present boot tree, showing the clamps provided for engaging and the manner of securing a boot to the tree thereby.

FIG. 2 is an edge elevation of the tree with medial parts removed to shorten the length of the view.

FIG. 3 is a horizontal section of the tree, taken on line 3—3 in FIG. 2, showing the toe clamps.

FIG. 4 is a horizontal section of the tree, taken on line 4—4 in FIG. 2, particularly showing the heel clamps.

FIG. 5 is a perspective view of the base member of the tree as seen from its underside.

FIG. 6 is a cross-section of the upper end portion of the tree showing the toe clamps as mounted thereon.

FIG. 7 is a perspective view of the heel engaging clamp and securing means.

Referring more in detail to the drawings:

It is the primary object of this invention to provide a light weight, practical and easily handled device for the carrying and holding of a pair of ski boots, or the like, particularly during a drying out period after use. In carrying out this object, I provide the present device with a horizontally positioned base member **10**, and on which a standard **11** is fixed in vertical position. To these pieces **10** and **11**, suitable boot holding toe and heel clamps are adjustably secured for tightly gripping the heel and toe portion of boots applied thereto. Also, to the upper end of the standard, a strap handle member is secured for carrying the device with or without booth mounted thereon. These parts will presently be described.

The base member **10** preferably is an aluminum extrusion of channel-like formation. Preferably this piece is approximately 3" in width, 4½" in length and 1" in depth. In its use, this base member **10** is normally positioned horizontally or flatly upon a supporting surface with the channel faced downwardly as shown, with the side walls

10'—10' thereof serving as supports for the bottom or base wall **10***x* of the piece. The base wall **10***x* is formed medially of its ends transversely thereacross with an open slot **10***s* through which the lower end portion of the standard **11** extends into supporting abutment with inturned flanges **10***f* that are formed on and to the full length of the side walls **10'—10'** of the base.

It is observed also, in FIG. 4, that the inverted channel-like form base member **10** has its top or closing wall **10***x* formed in its opposite end portions, along its central longitudinal line, with slots **12** and **12**, and along its opposite side edges, it is formed with slightly upwardly projecting ribs or flanges **13—13**.

Applied to each of the opposite end portions of this base member, **10**, transversely of the piece, is a shoe heel engaging clamp **15**, formed by an aluminum plate or piece, which has been transversely bent at a right angle to form it with a flat base flange **15***a* at one end and a vertical flange **15***b* at its other end as in FIG. 7. The flange **15***a* is disposed across and flatly against the top wall **10***x* of the base member, and is adjustably secured thereon by a bolt **16** passed downwardly through this flange **15***a* and thence through the slot **12** in that end of the top of the base member **10**. This bolt is secured by a wing nut **17** threaded onto its lower end for tightening against the bottom surface of wall **10***x* as shown in FIG. 2.

The vertical arms **15***b* of these heel clamps have soft plastic boots **18** fitted thereover to prevent any marring of the boot, by the flange, and it is seen in FIG. 5 that the top edges of these boots **18** are formed to fit the curvature of the rear surface of the heel of the boot.

The standard **11** is an extrusion of aluminum or the like. Preferably it is approximately 17" long, 1" in thickness and has a width approximately equal to that of the base piece **10**. The standard is fixed in the base member **10** by projecting its lower end portion downwardly through the base slot **10***s* to seat firmly against the inturned flanges **10***f* of the side walls of the base member and as seen in FIGS. 2 and 5 where it is secured rigidly in that position by rivets **20** applied through the side walls of the base member **10** and the adjacent side portions of the standard.

The standard **11** is formed throughout its length on its opposite faces with three parallel channels **29**; these channels being best shown in the cross-sectional FIGS. 3 and 4, wherein it is noted that each is defined between opposite side walls which have cross-head flanges **29***f* at their outer edges.

Mounted on each of the channeled surfaces of this standard for up and down sliding adjustment therealong, is a shoe toe clamp, each being designated in its entirety by numeral **30**. It is shown in FIG. 2 that each toe clamp is formed by a single metal plate bent in a transverse rounded curve substantially to bring its opposite end portions into right angular relationship to provide a horizontal mounting end portion **30***a* and a downwardly directed boot toe engaging end portion **30***b*. It is shown in FIG. 3 that the inner edge of the horizontal portion **30***a* of this clamp is formed with tooth-like guides **32** that project therefrom into the two outside channels **29** of corresponding faces of the standard and with a single medial projection **33** that extends into the medial channel **29** where it is equipped with a cross-head **34** that retains the clamp against outward displacement from the standard without interference with its vertical adjustment along the standard.

It is further to be noted in FIG. 6 that a clamp tightening bolt **36** is disposed with its head end disposed in the medial slot **29** of the standard where it is anchored by means of its head in the lower end portion of a flat plate **37**, that at its upper end, is interlocked with the inner end portion of the medial projection **33** of the clamp.

The outer end of the bolt **36** extends through a vertical slot **38** in the downwardly extending portion of the clamp where it is held by a wing nut **39**. A coil spring **40** is applied about the bolt and held under compression between the standard and flange **30***b*.

At its upper end, the standard is equipped with a strap handle **42** that is looped at its ends about wire bales **43** which, in turn, are engaged at their ends in holes formed in side edges of the standard.

Assuming that the device is constructed as described, it is used for holding a pair of ski boots, or the like, as follows: First, the toe clamps **30** are loosened and adjusted to the upper end of the standard. Then, a boot is applied to each face of the standard, as shown in FIG. 1, with the back surface of its heel portion rested upon the top edge of the vertical flange **15***b* so that the edge of this flange will holdingly engage over the projecting edge of the boot sole. Then, the toe of each boot is pressed inwardly against the adjacent face of the standard and the corresponding toe clamp is slid downwardly to cause the end of the flange **30***b* to engage over the toe edge of the boot sole where it is secured by tightening the wing nut **39** on the bolt **36**. By proper adjustment of the heel and toe clamps and their proper securement by their tightening bolts, the boots can and will be held secure for carrying and during the drying out period. Both boots are applied and are secured in place in the same manner.

For release of the boots, the upper clamp for each is released and shifted upwardly thus to clear the toes of the boots and this automatically releases the heel so that they can be lifted clear of the heel clamp.

What I claim as new is:

1. A boot tree of the character described comprising a base member, an elongated standard formed as a unitary metal extrusion, said standard being mounted on and secured to said base member intermediate the opposite ends thereof, boot heel engaging clamps movably secured to the top surface of said base member on opposite sides of said standard, said standard being generally rectangular in cross-section and having a first longitudinal slot formed in each of the opposite faces thereof, a boot toe engaging clamp slidably secured in each of said slots, each of the slots having flanges along the opposite edges thereof to constrict the slot opening, each of said toe clamps including a toe engaging portion and being formed from a single plate bent on a transverse line intermediate the ends thereof so as to be generally of L-shaped configuration, a toe clamp anchoring tooth formed on one end of said toe clamp, said anchoring tooth being generally of T-shape and of greater width than the constricted opening of the said slots, a holding plate positioned on said anchoring tooth and the anchoring tooth and holding plate being slidably contained within a respective slot inwardly of said flanges, a toe clamp securing bolt having the head end thereof anchored to said plate and the shank thereof projecting through said toe engaging portion of said toe clamp and a nut applied to said bolt to tighten the toe clamp against the sole of the boot.

2. A boot tree as in claim **1** including a spring on said bolt between said plate and toe engaging portion of the toe clamp to urge said toe engaging portion away from the standard.

3. A boot tree as in claim **1** wherein two additional longitudinal slots are formed parallel to said first slot in each face of said standard lengthwise thereof and guide teeth are formed on the toe clamps on opposite sides of said anchoring tooth for engagement with said slots.

4. A boot tree as in claim **1** wherein said base member is of inverted channel form and includes a top wall and opposite side walls, a transverse slot formed in said top wall medially of its ends, inturned flanges formed along bottom edges of said side walls, said standard being fitted in and extending downwardly through said transverse slot into supporting abutment with said inturned flanges and means securing the standard to the adjacent side walls of the base member.

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