Feb. 4, 1964 H. LEPKOFKER 3,120,397

TRAINING BLADES FOR ICE SKATES

Filed Nov. 19, 1962 2 Sheets-Sheet 1

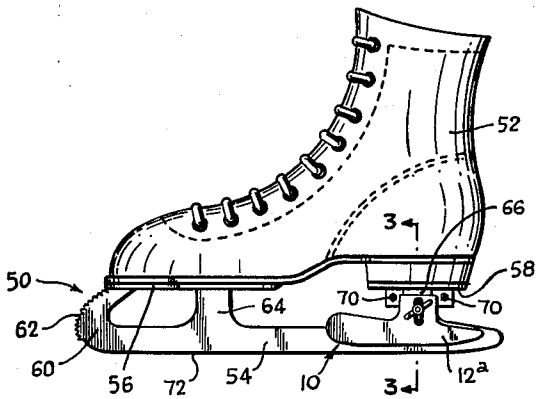


Fig. 1

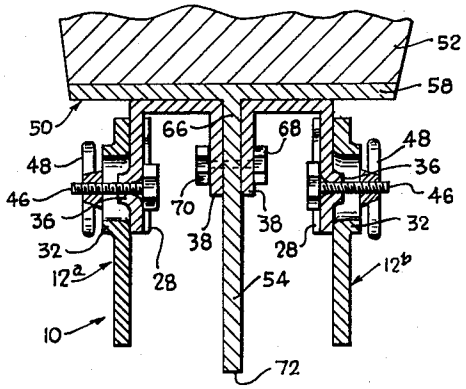


Fig. 3

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TRAINING BLADES FOR ICE SKATES

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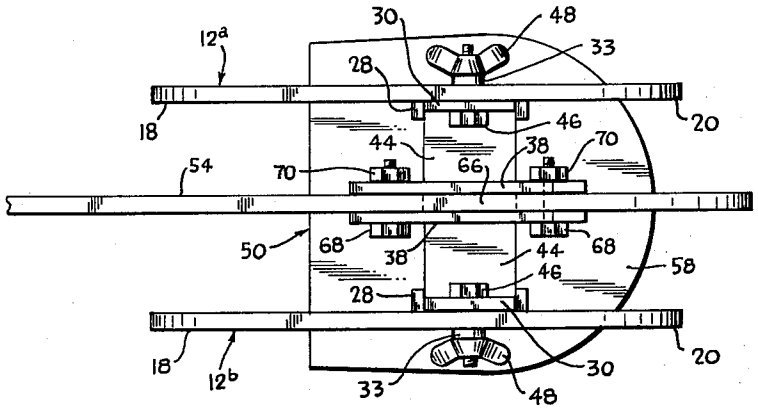


Fig. 2

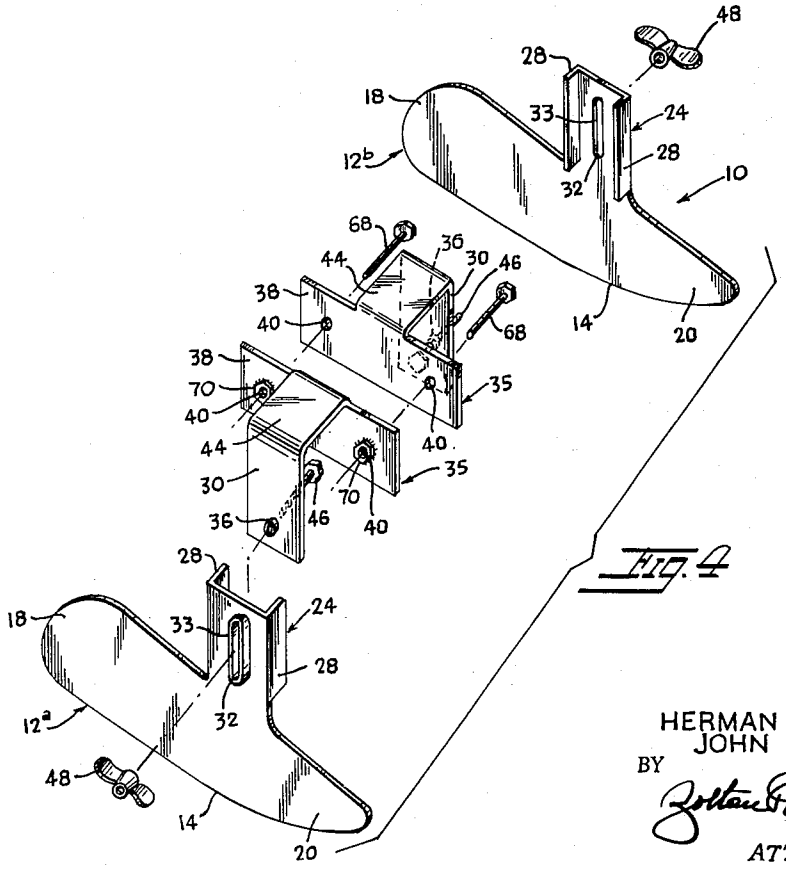


Fig. 4

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TRAINING BLADES FOR ICE SKATES

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This invention concerns training blades or runners for ice skates.

A principal object of the invention is to provide an auxiliary runner or runners attachable to an ice skate for supporting in balanced condition an inexperienced skater's foot.

Another object is to provide a training device which can be quickly applied to an ice skate when required for training purposes and which can be quickly partially or entirely removed as the skater gains experience in skating.

A further object is to provide an attachment for an ice skate which will support a skater's ankle and will prevent twisting and strain if the ankle tends to weaken while skating.

A still further object is to provide a simple rugged, low cost training device for an ice skate.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a side elevational view of a skater's shoe with an ice skate embodying the invention attached thereto.

FIG. 2 is a bottom plan view of the heel portion of the skate.

FIG. 3 is an enlarged sectional view taken on the line 3—3 of FIG. 1.

FIG. 4 is an exploded perspective view on an enlarged scale of parts of the skate.

Referring to the drawings, there is shown the training device **10** including two similar runners **12a**, **12b** which are reverse or mirror images of each other. Each runner includes an elongated flat body or blade **14**. The blade has an enlarged rounded forward end **18** and a narrower tapered rear end **20**. Each blade has a flat rectangular plate portion **24** extending upwardly between opposite ends of the blade. This plate portion has two parallel inwardly extending flanges **28** defining a channel therebetween which slidably receives a first rectangular plate portion **30** of a bracket **35**. An elongated slot **32** is formed in plate portion **24**. This slot has edges **33** pressed outwardly to receive an outwardly pressed tubular tit **36** formed in plate portion **30** of the bracket.

The bracket has an elongated plate portion **38** provided with holes **40** near opposite ends. Plate portion **38** is held parallel to and spaced from plate portion **30** by a rectangular spacer plate section **44** perpendicular to plate portions **30** and **38**. A threaded bolt **46** is inserted through tubular tit **36** and slot **32** and is engaged by a wing nut **48**.

The training device **10** is adapted to be removably attached to an ice skate **50** shown secured to a skater's shoe **52** in FIG. 1. The skate **50** comprises an elongated blade or runner **54**, a sole supporting front plate **56** and a heel supporting rear plate **58**. The sole supporting plate **56** is connected to the blade **54** by means of a front curved upwardly extending post or web **60** formed with teeth **62** on its front edge, and by means of an intermediate upstanding post or web **64**. The heel supporting plate **58** is connected to the blade **54** by a rear post or web **66**. Attachment of the training device is accomplished by clamping the brackets **35** to one of the connecting posts or webs, for example, the rear post or web **66**. For this purpose, the plate portions **38** are placed on opposite sides of the post or web **66** so that the perforated ends of the plates project beyond the post or web. Bolts **68** are then passed through the aligned holes **40** in the plate portions **38** and through nuts **70** welded on one side of the plate portions thereby drawing the plate portions toward each other in tight clamping engagement with the post or web **66**, as shown in FIG. 3. The training device **10** may be attached to intermediate post **64** if desired.

It will be noted that the runners **12a**, **12b** can be independently adjusted on opposite sides of the blade **54** to locate the bottom edges of the runners different distances from the plane of the bottom edge **72** of blade **54**. This adjustment is made possible by the elongated slots **32** in the plate portions **24** of the two runners. The flanges **28** prevent the runners from twisting in their planes with respect to the brackets and insure that the bottom edges of the runners remain parallel to each other and to edge **74** of the blade **54**.

If desired, either one of the runners **12a** or **12b** and its holding bracket can be removed as the skater gains experience and no longer tends to turn his ankle inwardly or outwardly. Later the remaining runner can be removed from the skate when the skater no longer needs any training attachment. For most effective use, the device with two training runners will be installed initially with their lower long edges located slightly above the plane of blade edge **72**. As the skater gains experience, both runners will be positioned higher and higher with respect to blade edge **72**. Later one runner may be removed and finally both runners will be removed.

The device thus serves as an adjustable means for training an ice skater, which device can be accommodated to the different stages of skating experience and ability of the skater. The device employs simple parts which can be readily and inexpensively replaced. The device can be mounted on skates having flat or tubular web **64**, **66**.

It will be noted that the runners **12a**, **12b** are completely out of the way of the front end of the skate so that the skater can execute all normal skating movements without any interference from the runners. The runners can be easily and quickly installed without requiring any special tools or any particular skill. The device is preferably made of metal but its several parts can be made of strong, rigid, durable plastic material.

While we have illustrated and described the preferred embodiment of our invention, it is to be understood that we do not limit ourselves to the precise construction herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

Having thus described our invention, what we claim as new, and desire to secure by United States Letters Patent is:

1. An ice skate training device, comprising an elongated blade having a broad rounded forward end and a narrow tapered rear end, said blade having an integral flat rectangular extension with inwardly turned opposing parallel flange elements defining a channel therebetween, a bracket having a first rectangular plate portion slidably disposed on said rectangular extension and engaged in the channel between the flange elements to prevent twisting in the plate of said plate portion, said extension having an elongated slot, said plate portion having a hole therein registering with said slot, a bolt extending through the slot and hole and engaged by a wing nut, said bracket having another rectangular plate portion held spaced from

and parallel to the first plate portion by an integral spacer plate section, said other plate portion having other holes at opposite ends for receiving other bolts to secure the bracket to a blade of an ice skate.

2. An ice skate training device, comprising a pair of similar elongated flat runners, each runner having a broad rounded forward end and a narrow tapered rear end, each said runner having an integral flat rectangular extension with inwardly turned opposing parallel flange elements defining a channel therebetween, a pair of brackets, each bracket having a first rectangular plate portion slidably disposed on said rectangular extension and engaged in the channel between the flange elements to prevent twisting in the plate of said plate portion, each said extension having an elongated slot, each said plate portion having a hole therein registering with said slot, a bolt extending through each slot and hole and engaged by a wing nut, each said bracket having another rectangular plate portion held spaced from and parallel to the first plate portion by an integral spacer plate section, said other plate portion having other holes at opposite ends for receiving other bolts to secure the bracket to a blade of an ice skate.

3. An ice skate training device, comprising a pair of similar elongated flat runners, each runner having a broad rounded forward end and a narrow tapered rear end, each said runner having an integral flat rectangular extension with inwardly turned opposing parallel flange elements defining a channel therebetween, a pair of brackets, each bracket having a first rectangular plate portion slidably disposed on said rectangular extension and engaged in the channel between the flange elements to prevent twisting in the plate of said plate portion, each said extension having an elongated slot, each said plate portion having a hole therein registering with said slot, a bolt extending through each slot and hole and engaged by a wing nut, each said bracket having another rectangular plate portion held spaced from and parallel to the first plate portion by an integral spacer plate section, said other plate portion having other holes at opposite ends for receiving other bolts to secure the bracket to a blade of an ice skate, each said slot being defined by pressed out edges of the blade extension, the hole in each said first plate portion being defined by an outwardly extending tubular tit engaging the edges of said slot, for guiding relative sliding adjusting movements of each plate and associated bracket.

4. An ice skate training device, comprising a pair of similar elongated flat runners, each runner having a broad rounded forward end and a narrow tapered rear end, each said runner having an integral flat rectangular extension with inwardly turned opposing parallel flange elements defining a channel therebetween, a pair of brackets, each bracket having a first rectangular plate portion slidably disposed on said rectangular extension and engaged in the channel between the flange elements to prevent twisting in the channel of said plate portion, each said extension having an elongated slot, each said plate portion having a hole therein registering with said slot, a bolt extending through each slot and hole and engaged by a wing nut, each said bracket having another rectangular plate portion held spaced from and parallel to the first plate portion by an integral spacer plate section, said other plate portion having other holes at opposite ends thereof, and bolts engageable in said other holes for removably securing both brackets to opposite sides of the ice skate.

5. An ice skate training device, comprising an elongated runner having a broad rounded forward end and a narrow tapered rear end, said runner having an integral flat rectangular extension with inwardly turned opposing parallel flange elements defining a channel therebetween, a bracket having a first rectangular plate portion slidably disposed on said rectangular extension and engaged in the channel between the flange elements to prevent twisting in the channel of said plate portion, said extension having an elongated slot, said plate portion having a hole therein registering with said slot, a bolt extending through the slot and hole and engaged by a wing nut, said bracket having another rectangular plate portion held spaced from and parallel to the first plate portion by an integral spacer plate section, said other plate portion having other holes at opposite ends thereof, and bolts engageable in said other holes for removably securing said other plate portion to one side of a blade of an ice skate.

6. An ice skate training device, comprising an elongated runner having a broad rounded forward end and a narrow tapered rear end, said runner having an integral flat rectangular extension with inwardly turned opposing parallel flanges defining a channel therebetween, a bracket having a first rectangular plate portion slidably disposed on said rectangular extension and engaged in the channel between the flange elements to prevent twisting in the channel of said plate portion, said extension having an elongated slot, said plate portion having a hole therein registering with said slot, a bolt extending through the slot and hole and engaged by a wing nut, said bracket having another rectangular plate portion held spaced from and parallel to the first plate portion by an integral spacer plate section, said other plate portion having other holes at opposite ends for receiving other bolts to secure the bracket to the ice skate.

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