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Forman

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[54] **PLATFORM ATTACHMENT FOR AN IN-LINE SKATE**

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[52] **U.S. Cl.** **280/811**; 280/11.22

[58] **Field of Search** 280/11.19, 11.22, 280/809, 811, 825, 14.2, 87.041, 87.042

[56] **References Cited**

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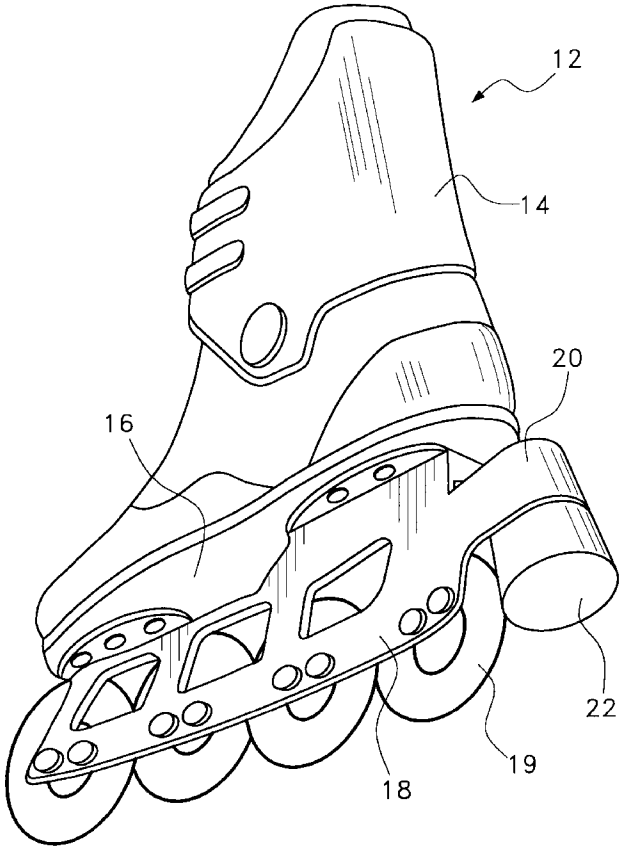
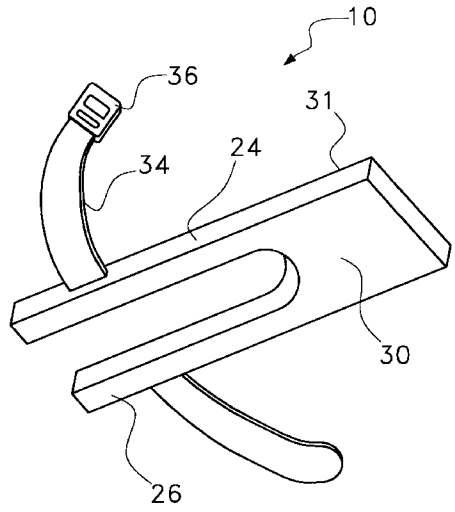
[57] **ABSTRACT**

A skate assembly that includes a skate and a platform that extends from the skate. The purpose of the platform is to provide a place for a skater to place his/her free foot when skating on one foot. The skate has a boot, a rigid sole disposed at the bottom of the boot and a rail structure that descends from the sole. The sole has a first predetermined width. The rail structure has a second predetermined width that is more narrow than that of the sole. The platform extends rearwardly from the skate. The platform extends beyond the sole of the skate a distance sufficient to provide a surface external of the skate boot that is large enough for a skater's foot to rest. The platform can be made either as an integral part of the skate itself or as an independent unit that can be retroactively added to an existing prior art skate.

7 Claims, 5 Drawing Sheets





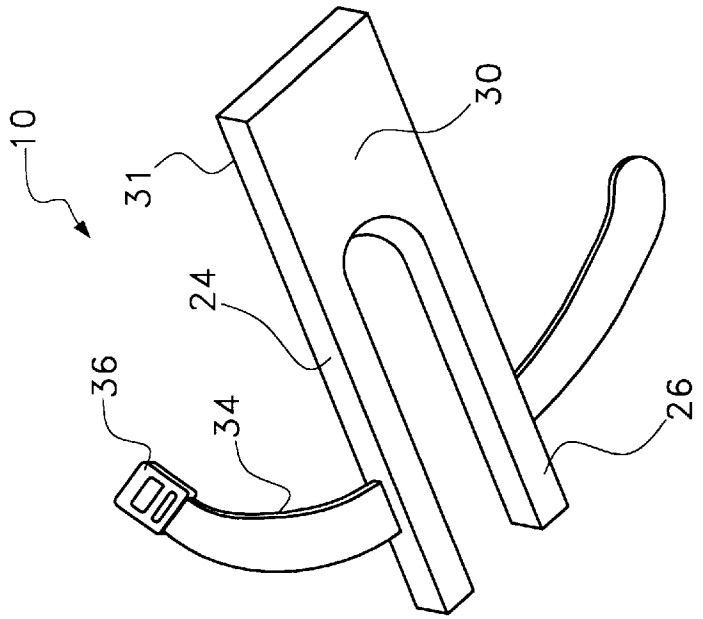
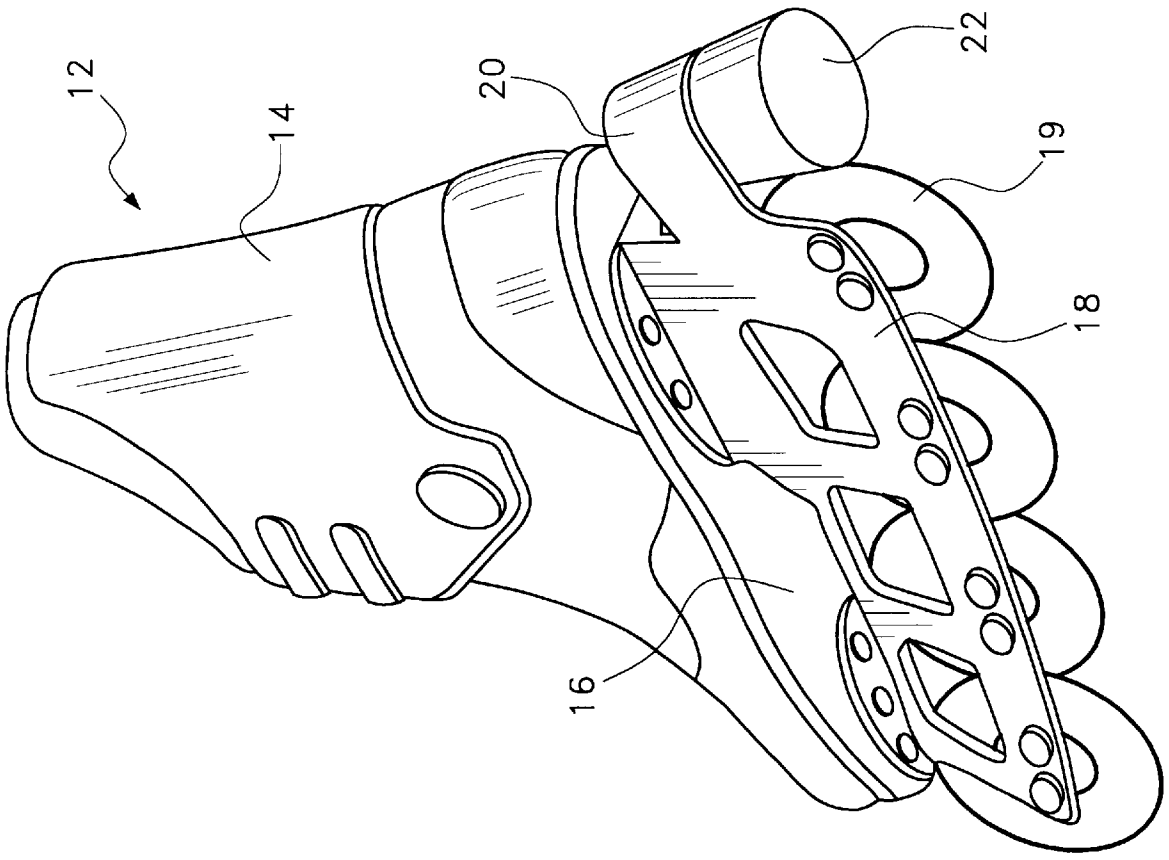


Fig. 1



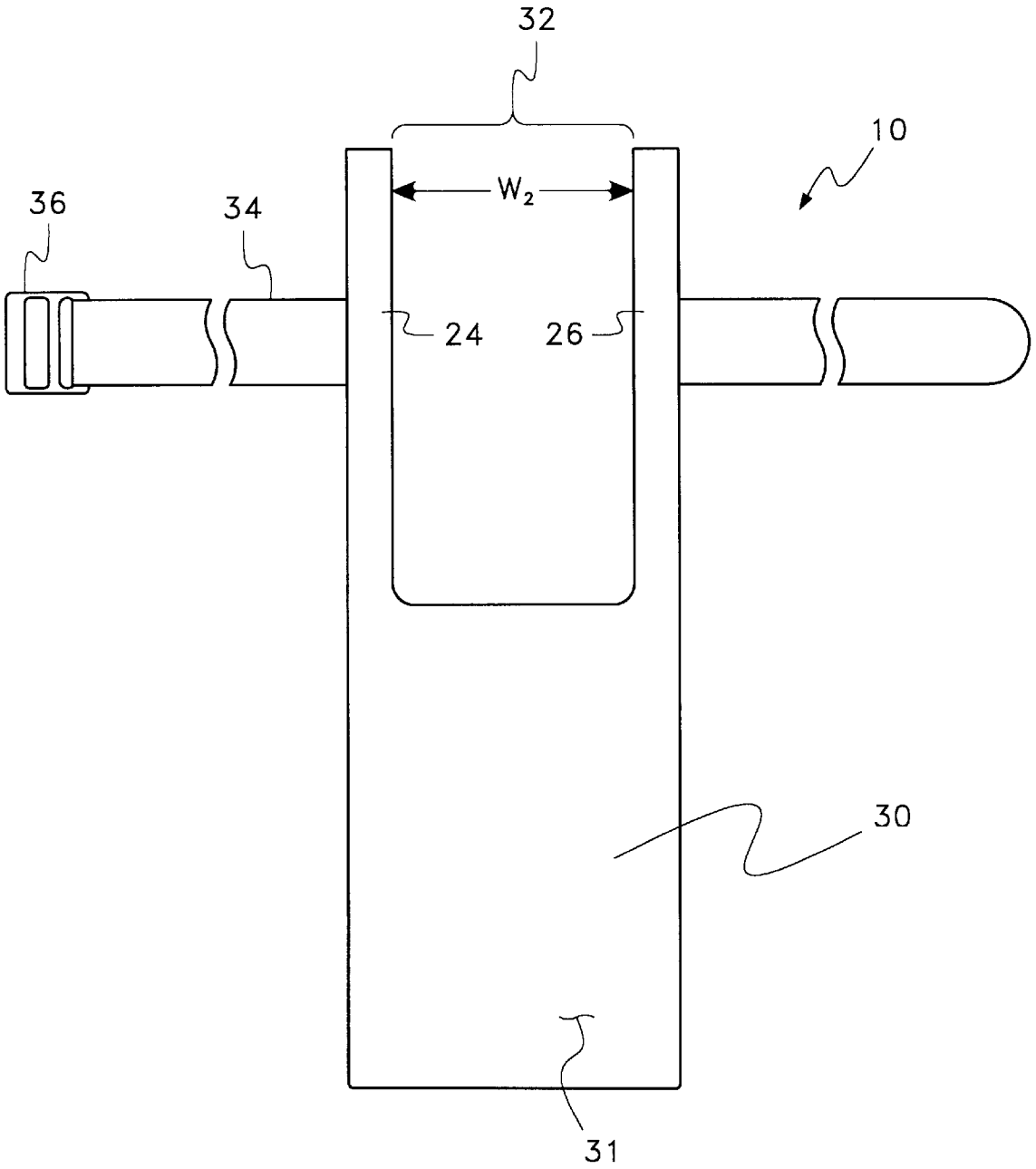


Fig. 2

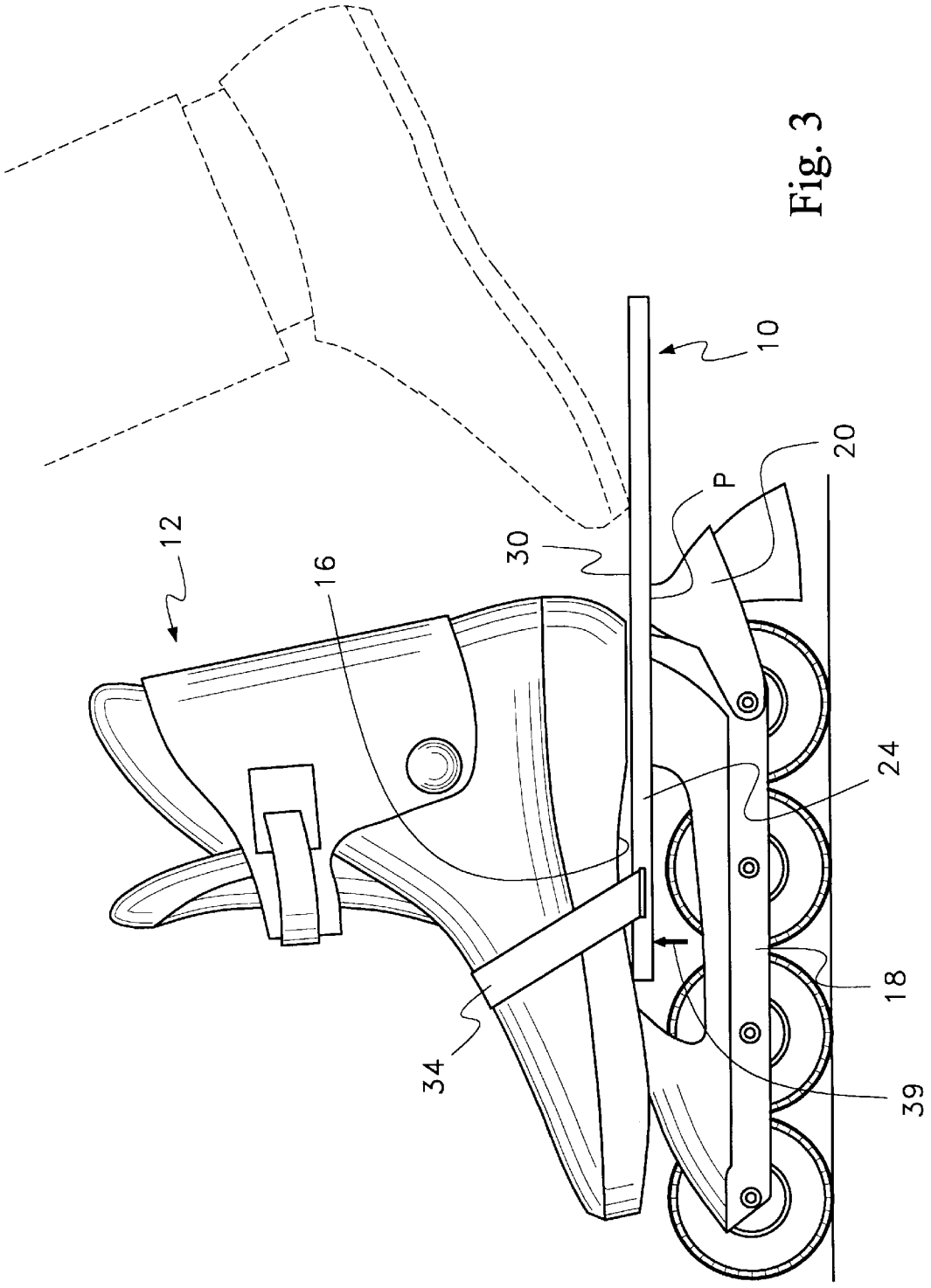


Fig. 3

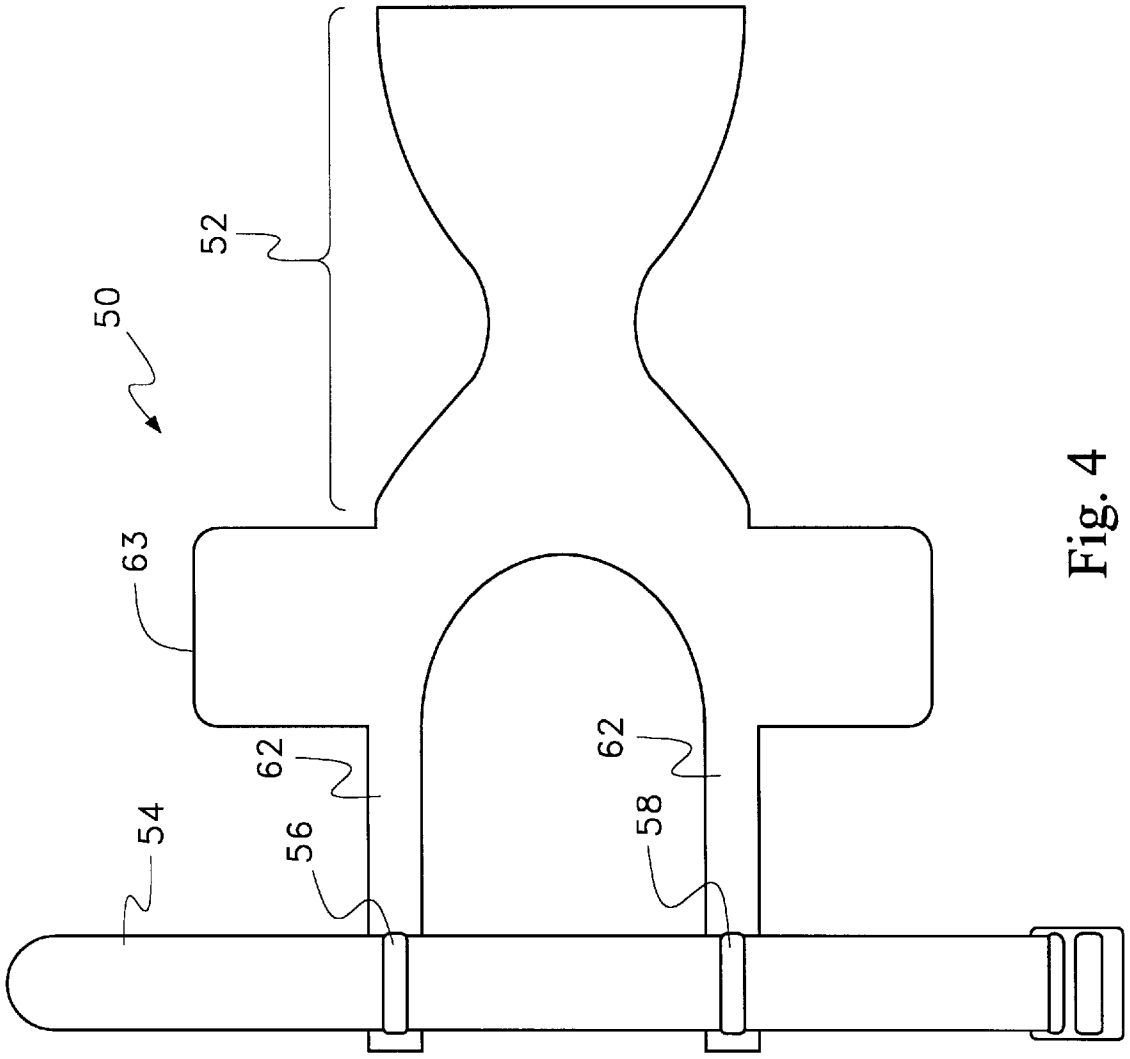


Fig. 4

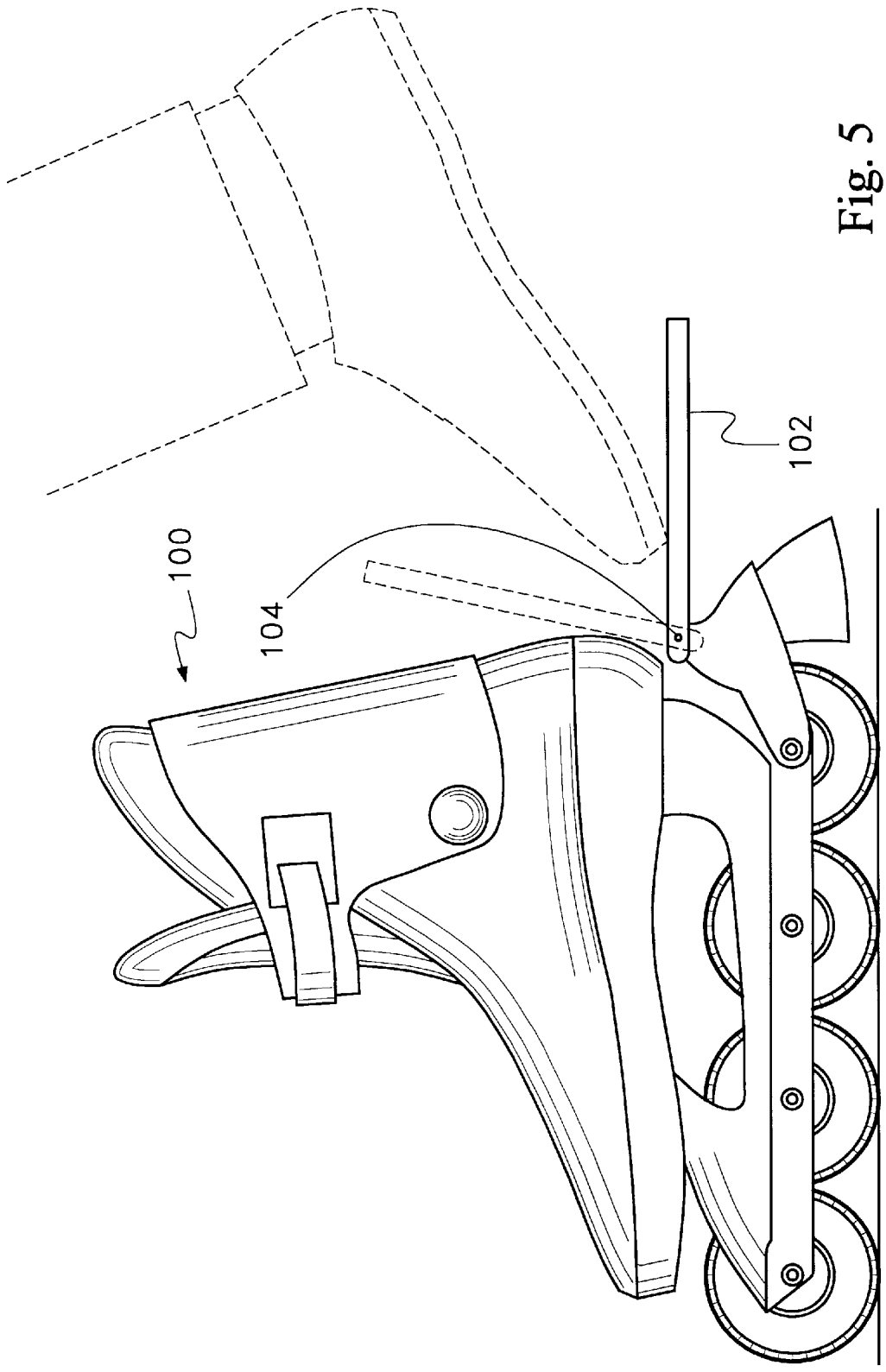


Fig. 5

PLATFORM ATTACHMENT FOR AN IN-LINE SKATE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates in general to skates such as in-line skates and ice skates. More particularly, the present invention relates to devices that attach to the structure of an in-line skate in order to enhance the performance of the in-line skate.

2. Description of the Prior Art

In recent years, skating with both in-line skate and ice skates have become increasingly popular. In addition to recreational use, there now exist many professional and semi-professional sport activities where the players wear skates. For example, there are roller hockey leagues, speed skating competitions, free style skating competitions and the like.

Skates are commonly worn on both feet. However, when skating, there are many times that a skater will skate with only one foot, while the other foot is held suspended in the air. Furthermore, many skaters skate with only one skate, wherein the opposite foot is clad in an ordinary shoe. When skating with only one skate, the skater has much greater control of his/her movement and can perform complex maneuvers that are not possible if both feet were in skates.

Regardless, whether a person is skating with one skate or two skates, when a person skates on only one foot, the opposite foot must be held in the air. This is tiresome to the person skating. Furthermore, the suspended foot is commonly held out to the side of the body. This alters the center of gravity of the skater, thereby making it more difficult to maintain one's balance during some skating maneuvers.

A need therefore exists for a platform device that can attach to a single skate, wherein the platform provides a place to place the opposite foot when skating with only one foot. By supporting the opposing foot, the suspended leg can be rested and the skater is provided with a consistent center of gravity throughout various maneuvers.

This need is provided for by the present invention as set forth in the below description and claims.

SUMMARY OF THE INVENTION

The present invention is a skate assembly that includes a skate and a platform that extends from the skate. The purpose of the platform is to provide a place for a skater to place his/her free foot when skating on one foot. The skate has a boot, a rigid sole disposed at the bottom of the boot and a rail structure that descends from the sole. The sole has a first predetermined width. The rail structure has a second predetermined width that is more narrow than that of the sole. The platform extends rearwardly from the skate. The platform extends beyond the sole of the skate a distance sufficient to provide a surface external of the skate boot that is large enough for a skater's foot to rest. The platform can be made either as an integral part of the skate itself or as an independent unit that can be retroactively added to an existing prior art skate.

BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the present invention, reference is made to the following description of exemplary embodiments thereof, considered in conjunction with the accompanying drawings, in which:

FIG. **1** is a perspective view of one preferred embodiment of the present invention platform device shown in conjunction with an in-line roller skate;

FIG. **2** is a top view of the embodiment of the platform device shown in FIG. **1**;

FIG. **3** is a side view of the embodiment of FIG. **1** shown while attached to an in-line skate;

FIG. **4** is a top view of an alternate embodiment of a platform device; and

FIG. **5** is a side view of a skate with an integral platform in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Although the present invention platform device can be used in conjunction with an ice skate, the present invention platform device is particularly well suited for use with an in-line skate. Accordingly, by way of example, the present invention will be described in conjunction with an in-line skate.

Referring to FIG. **1**, an exemplary embodiment of the present invention platform device **10** is shown in conjunction with a typical in-line skate **12**. In-line skates, such as that shown, commonly have a boot **14** mounted to a rigid sole **16**. A rail structure **18** is mounted to the rigid sole **16**, wherein the rail structure **18** supports the various skate wheels **19**. In a pair of ice skates (not shown) the rail element would terminate at the bottom with the sharpened skating blade.

The rail structure **18** is typically much narrower than is the sole **16** of the skate **12**. The rail structure **18** has a predetermined width at the point where the rail structure **18** is mounted to the rigid sole **16**.

A break arm **20** typically extends rearwardly from the rail structure **18** of an in-line skate **12**. The break arm **20** supports a rubber stopping element **22** that serves as the break for the in-line skate **12**. The break arm **20** that supports the rubber stopping element **22** extends from the skate **12** beyond the rear heel of the in-line skate **12**.

Referring to FIG. **2** in conjunction with FIG. **1**, it can be seen that the platform device **10** has two elongated arms **24**, **26** that extend from a common base section **30**. A gap **32** exists between the two elongated arms **24**, **26**. The gap **32** has a width W2 that is slightly wider than is the width of the rail structure **18** (FIG. **1**) where the rail structure **18** mounts to the sole **16** of the skate **12**. The common base section **30** of the platform device **10** has a flat top surface **31**. It is preferred that the top surface **31** and the bottom surface of the common base section **30** be identical so that the platform device **10** can be put into place either right side up or upside down without discretion.

A flexible strap **34** extends from each of the elongated arms **24**, **26** on the platform device. The straps terminate with some form of a mechanical fastener **36** that can join the ends of the straps **34** together at various lengths. The mechanical fastener **36** may be any strap connecting mechanism such as buckles, clasps, or patches of hook and loop material.

Referring to FIG. **3** in conjunction with FIG. **1**, it can be seen that to attach the platform device **10** to an in-line skate **12**, the rail structure **18** of the in-line skate **12** is passed into the gap **32** (FIG. **2**) in between the elongated arms. Since the width W2 of the gap is slightly larger than the width of the rail structure **18**, the rail structure **18** passes into the gap unobstructed until the rail structure **18** abuts against the

common base section **30** between the two elongated arms **24, 26**. Once fully advanced onto the skate **12**, the bottom of the common base section **30** of the platform device **10** abuts against the break arm **20** at an abutment point P. The abutment point P acts as a fulcrum point for the platform device **10**. Referring solely to FIG. **3**, it can be seen that as a person steps upon the common base section **30** of the platform device **10**, the platform device **10** pivots about the abutment point P. This causes the elongated arms **24, 26** to pivot upwardly in the direction of arrow **39** until the elongated arms **24, 26** abut against the bottom of the skate's rigid sole **16**. The gap **32** (FIG. **2**) between the elongated arms **24, 26** is narrower than the sole **16** of the in-line skate **12**. Consequently, the arms **24, 26** abut against the skate's sole **16** when biased upwardly.

When the elongated arms **24, 26** of the platform device **12** are biased against the sole **16** of the in-line skate **12**, a cantilever structure is created that supports the common base section **30** of the platform device **10** in a generally horizontal plane. The straps **34** help to maintain the elongated arms **24, 26** in abutment with the rigid sole **16** of the in-line skate **20**. The straps **34** pass around the top of the skate **12** and are joined in a taut condition with some type of mechanical fastener. The presence of the straps **34** prevent the platform device **10** from rocking about abutment point P. Furthermore, the presence of the straps **34** prevents the platform device **10** from falling away from the skate **10** as a skater performs different maneuvers.

From FIG. **3**, it can be seen that when a person skates on one foot, the opposite foot can be placed on the common base support **30** of the platform device. Once in this position, the skater's two feet are linearly aligned. Accordingly, the skater's center of balance is maintained in line with both of his/her feet. Furthermore, a skater can use the platform device **10** to tilt the skate **12** backward and cause the skate's break to be applied. Thereby enhancing the breaking performance of the skate **12**.

Referring to FIG. **4**, there is shown an alternate embodiment of a platform device **50** in accordance with the present invention. In this embodiment, the base section **52** of the platform device **50** is shaped like one half of an hourglass in order to add to the overall aesthetics of the device. In the shown embodiment a single strap **54** is shown. This strap **54** passes through loops **56, 58** on both of the elongated arms **60, 62**.

To apply the platform device **50**, the strap **54** is only passed through one of the loops **56, 58** on one of the elongated arms **60, 62**. The elongated arms **60, 62** are then passed along the sides of the rail structure of a skate as has been previously described. Once seated in place, the strap **54** is passed through the second of the loops on the opposite elongated arm. The strap **54** is then tightened at around the top of the boot. The presence of the strap **54** in between the elongated arms **60, 62** further prevents the platform device from moving relative the skate once attached to the skate.

In the platform device **50** of FIG. **4**, optional side projections **63** are shown. The side projections **63** extend out from the sides of the skate when the platform device **50** is added to a skate. As such, a platform would exist on the side of the skate upon which a skater can rest the opposing foot.

The purpose of showing the alternate embodiment of FIG. **4** is to illustrate that the present invention platform device can be made in a variety of different designs. The platform provided by the platform device can extend from the rear of the skate, the sides of the skate or even the front of the skate. Furthermore, the means for attaching the platform device to a skate can also be accomplished in numerous ways.

The embodiments of FIG. **1**–FIG. **4** show the described platform device as a separate structure that can be added to an in-line skate in a retroactive manner. However, it should be understood that the present invention is intended to cover skates where a supporting platform is integrated as part of the skate. Referring to FIG. **5**, there is shown an in-line skate **100**. The in-line skate **100** has a platform structure **102** that it affixed to the heel of the skate **100** with a hinge **104**. The hinge **104** enables the platform **102** to be selectively moved from a vertical stowed position to a horizontal deployed position. The platform **102** can be flat, as is shown, or can be slightly curved to conform to the rear of the skate boot when in the vertical stowed position.

It will therefore be understood that the embodiments of the present invention described and illustrated herein are merely exemplary and a person skilled in the art can make many variations to the embodiments shown without departing from the scope of the present invention. It should also be understood that the various elements from the different embodiments shown can be mixed together to create alternate embodiments that are not specifically described. All such variations, modifications and alternate embodiments are intended to be included within the scope of the present invention as defined by the appended claims.

What is claimed is:

1. A skate assembly, comprising:

i. a skate having:
  a boot;
  a rigid sole disposed at the bottom of said boot, wherein said sole has a first predetermined width;
  a rail structure extending downwardly from said sole, wherein said rail structure has a second predetermined width; and

ii. a platform extension extending from said skate, said platform extension having two generally parallel arms extending therefrom, wherein a gap exists between said arms that is wider than said second predetermined width but not as wide as said first predetermined width, thereby enabling said arms to be positioned on either side of said rail structure under said sole, said arms supporting said platform extension beyond said sole a distance sufficient to provide a surface external of said boot upon which a skater's foot may rest, and
  a strap that passes over said boot from one of said arms to the other.

2. The assembly according to claim **1**, wherein said platform extension is an independent structure that can be selectively removed and added to said skate.

3. The assembly according to claim **1**, wherein said strap engages said boot and biases said arms against said sole on either side of said rail structure.

4. A platform device for use on a skate of the type having a boot, a sole of a first predetermined width at the bottom of the boot, and a rail structure of a second predetermined width extending downwardly along the center of said sole, said platform device comprising:

a rigid element having a base section and two generally parallel arms extending from said rigid element, wherein a gap exists between said arms that is wider than said second predetermined width but not as wide as said first predetermined width;

a strap to coupled to said arms, wherein said strap is capable of passing over said boot from one of said parallel arms to the other, to engage the skate and bias said arms against the sole of the skate on either side of said rail structure.

5. A method of attaching a platform to a skate of the type having a boot, a sole of a first predetermined width at the bottom of the boot, and a rail structure of a second predetermined width extending downwardly along the center of said sole, said method comprising the steps of:

providing a platform; and

affixing said platform to a skate with at least one strap so that at least one section of said platform extends outwardly from the skate.

6. The method according to claim 5, wherein said platform defines a slot having a width that is wider than said second predetermined width and is narrower than said first predetermined width, and said step of affixing said platform to a skate includes advancing said rail structure into said slot until at least one section of said platform abuts against and is supported by said rail structure.

7. The method according to claim 6 further including the step of biasing said platform at least one point proximate said slot against said sole of said skate.

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