United States Patent

[11] 3,582,067

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[21] Appl. No. **824,792**
[22] Filed **May 15, 1969**
[45] Patented **June 1, 1971**

[54] **EXERCISING WEIGHT FOR ICE SKATES OR THE LIKE**
8 Claims, 6 Drawing Figs.

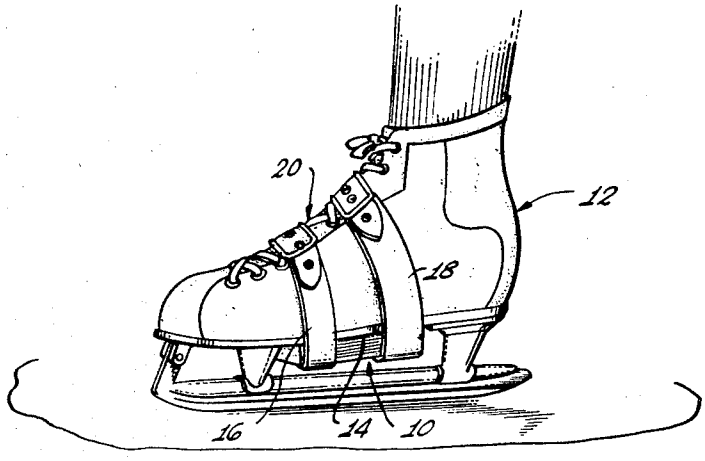
[52] **U.S. Cl.** **272/57,** 272/81, 280/11.37
[51] **Int. Cl.** **A63b 23/04**
[50] **Field of Search** ..... 273/194; 272/57 R; 280/11.37

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ABSTRACT: An exercising weight for attachment to the arch portion of an ice skate or the like by means of straps buckled across the instep of the shoe of the skate. A weight element is enclosed in a sheath of unitary construction with integral straps. The weight element is completely enveloped by the sheath by means of multiple cemented overlapping flaps.



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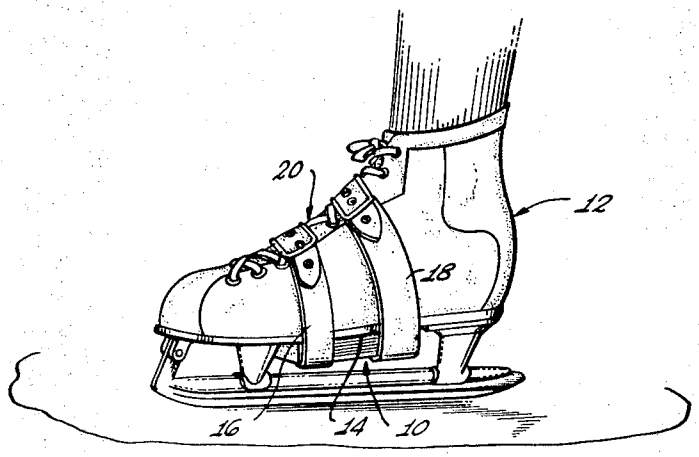


Fig. 1

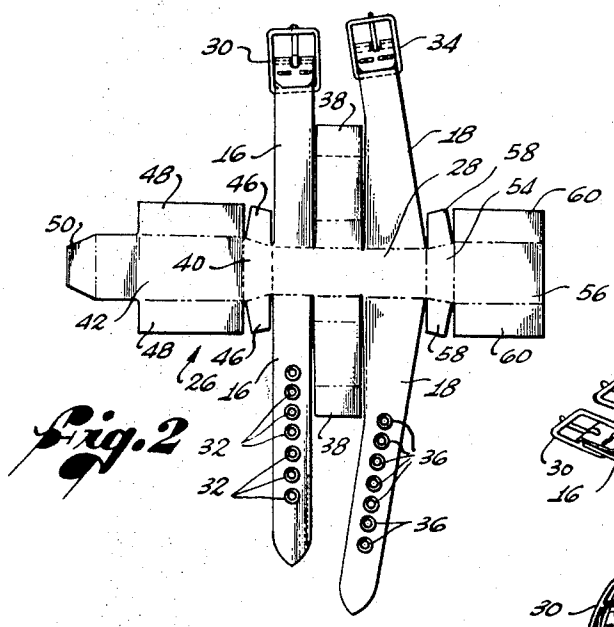


Fig. 2

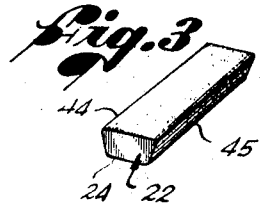


Fig. 3

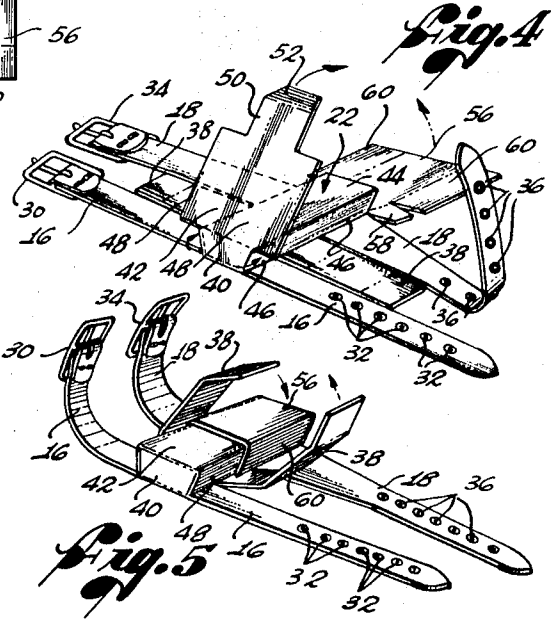


Fig. 4

Fig. 5

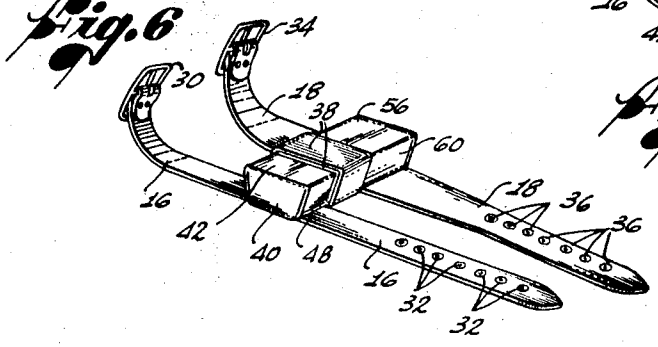


Fig. 6

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EXERCISING WEIGHT FOR ICE SKATES OR THE LIKE

BACKGROUND OF THE INVENTION

It is common practice for athletes to "warm up" before athletic contests by initially exercising, or playing a practice game, with equipment which is oversized or heavier than that used during the actual game. The regular equipment then seems lighter and easier to handle during the actual game.

In athletic contests where ice or roller skates are used, such as hockey and ice or roller racing, the weight of the skates is substantially greater than the weight of street shoes and the skaters sometimes acclimate themselves to the relatively heavy skates by warming up with additional weights around their ankles. Then, when the ankle weights are removed for the actual game, the skater does not feel the effect of the heavy skates as much.

However, weights placed around a skater's ankles tend to be cumbersome and can interfere with the skating technique of the skater. Moreover, weights above the ankles are in an unnatural position and the effect on the flexing ankles of the skater is not the same as if the skates themselves were heavier.

Thus in the area of warmup exercising weights for ice or roller skaters, there has long been a need for an exercising weight construction which would simulate the effect of heavier than normal ice or roller skates, without employing cumbersome ankle weights.

SUMMARY OF THE INVENTION

The present invention provides an exercising weight for ice skates and the like which places an additional weight under the arch of the shoe of the skate to simulate the effect of a heavier than normal skate. The position of the added weight under the arch of the shoe results in a more natural feel of the additional weight and causes no unnatural balancing problems other than the effect of the added weight itself. The position of the weight also does not interfere with normal skating techniques.

The exercising weight of the present invention utilizes a unitary sheath construction having multiple cemented folds to completely enclose the weight element in a relatively soft sheath material while providing integral straps extending from the encased weight element. The relatively heavy weight element is thus provided with a tightfitting sheath with attaching straps without relying on stitching or other more costly forms of construction.

Further, the weight element is formed with a trapezoidal cross section which, when in place, tapers inwardly down from the arch of the shoe of the skate. An ice skater may then execute even very tight turns without the bottom of the exercising weight contacting the ice.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a pictorial view of an ice skate with the exercising weight of the present invention in place;

FIG. 2 is a plan view of the opened pattern for the sheath and straps of the exercising weight of the present invention;

FIG. 3 is a perspective view of the weight element of the exercising weight showing its trapezoidal cross section;

FIG. 4 is a perspective view of the sheath with the weight element in place and the direction of the folding of the flaps of the sheath indicated by the arrows;

FIG. 5 is a perspective view of the exercising weight with the flaps partially folded and the folding of the remaining flaps being indicated by the arrows; and

FIG. 6 is a perspective view of the completed exercising weight.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now to the drawings, and particularly to FIG. 1 thereof, an exercising weight 10 constructed according to the present invention is shown in place on an ice skate 12. The exercising weight 10 is positioned under the arch 14 of the skate and a pair of straps 16, 18 attached to each end of the weight are buckled over the instep 20, of the skate 12. Thus positioned, the exercising weight 10 simulates the effect of a much heavier skate 12.

The amount of the added weight is subject to wide variation but it has been found that a weight element 22 in the form of a generally elongated lead block, such as that shown in FIG. 3, sized to fit under the arch 14 of an ice or roller skate 12 provides an adequate amount of extra weight for ordinary warmup exercises. The weight element 22 used in the preferred embodiment of the exercising weight 10 weighs slightly over 2 pounds and fits easily under the arch 14 portion of the skate 12. However, the actual weight and size of the weight element 22 will be determined, of course, by whether it is to be used with an ice or roller skate, and for adult or children's skates.

The cross section of the weight element 22 is generally trapezoidal with the lesser base of the trapezoid forming the bottom 24 of the weight element. When positioned under the arch 14 of a skate 12, the weight element 22 then tapers inwardly down from the arch of the skate. When worn on an ice skate 12, the skater may then execute very sharp or tight turns without the bottom of the exercising weight 10 contacting the surface of the ice.

While lead is the best material for the weight element 22 from a practical standpoint, it has certain disadvantages. First, even when perfectly cast, lead tends to be unsightly and the unsightliness increases as the outer surface of the lead oxidizes. Second, lead leaves black marks on almost any slightly rough surface, such as floors and walls. Therefore, it is desirable that the lead weight element 22 be covered with some material for an aesthetic reason and to prevent the lead marring other surfaces.

The presently preferred embodiment of the exercising weight 10 utilizes a construction which not only provides for the secure attachment of the straps 16, 18 to the weight element 22 but also provides a sheath which completely encloses the weight element in a soft, nonmarring material.

The sheath and straps 16, 18 are preferably formed from a single sheet of material cut to the pattern 26 shown in FIG. 2. The weight element 22 is placed on the center portion of the laid-out pattern, and the various flaps and tabs are folded and cemented, as shown in FIGS. 4 through 6, to provide a substantially completely enclosed weight element with a pair of straps 16, 18 extending from either side of the ends of the element.

More particularly, the pattern 26 for the combined sheath and straps 16, 18 has a rectangular bottom panel 28 which conforms to the size of the lesser base or bottom 24 of the trapezoidally shaped weight element 22. A divided front strap 16 extends outwardly from either side of the front end of the bottom panel 28. One section of the divided front strap 16 is provided with a buckle 30 and the other section has a number of grommeted holes 32 for use with the buckle.

A divided rear strap 18 extends outwardly from the sides of the rear end of the bottom panel 28 and its sections are also provided with a buckle 34 and corresponding holes 36. The sections of the rear strap are angled slightly toward the front strap in order to provide a smoother fit across the instep of the skate, as shown in FIG. 1. Between and parallel to the straps 16, 18, a pair of generally rectangular center flaps 38 extend outwardly from the middle area of the sides of the bottom panel 28.

A front end flap 40 extends outwardly from the front end of the bottom panel 28 and generally flares from the bottom panel to a front top flap 42 which has a width corresponding to the width of a greater base, or top 44, of the weight element 22. The front end flap 40 thus has a shape corresponding to the trapezoidal cross section of the weight element 22. Extending outwardly from the angled sides of the front end flap 40 are a pair of front tabs 46 which are adapted to be folded over and engage the sides 45 of the weight element 22.

The front top flap 42 is adapted to extend over the entire length of the weight element 22 with a short end tab 50 ex-

tending down over the rear end of the element. Accordingly, the tab **50** is tapered to fit the trapezoidal shape of the rear end of the weight element **22**.

A pair of front side flaps **48** extend outwardly from the sides of the front top flap **42** and are adapted to engage the sides **45** of the weight element **22**. The front side flaps **48** extend along the length of the front top flap **42** from the front end flap **40** a distance slightly more than halfway across the top **44** of the weight element **22**.

Extending rearwardly from the rear end of the bottom panel **28** is a corresponding tapered rear end flap **54** and a rear top flap **56**, each having rear tabs **58** and rear side flaps **60**, respectively, extending outwardly from their sides. The length of the rear top flap **56** is also such that it extends slightly more than halfway across the top **44** of the weight element **22**.

While the sheath pattern **26** has been described as having various front and rear flaps, it will be appreciated that the transition from the front top flap **42** to one of the front side flaps **48**, for example, can be seen only when they are folded over the weight element **22** because the entire sheath is preferably cut from a single piece of material.

As briefly mentioned above, the exercising weight **10** of the present invention is assembled by placing the weight element **22** on the bottom panel **28** and first folding the front flaps **40** and **42** over the top **44** of the weight element. Thus, the front end flap **40** engages the end of the weight element **22**, and the front top flap **42** extends over the top **44** of the weight element with the end tab **50** extending over the rear end of the weight element. The flaps **40** and **42** and tab **50** are then preferably cemented in place on the weight element **22**.

The front tabs **46** are then folded around the sides **45** of the weight element **22** and the front side flaps **48** also folded down over the sides of the weight element over the tabs and cemented in place. The rear flaps **54** and **56** are then folded up and over the front top flap **42** and end tab **50** and the rear tabs **58** and rear side flaps **60** are folded down over the sides **45** of the weight element **22** and also cemented in place.

The two center flaps **38** are then folded around the center portion of the weight element **22** and cemented in place, as shown in FIG. **5**, to complete the exercising weight **10** as is shown in FIG. **6**.

It is preferable to cement each flap and tab in place as it is folded over the weight element **22** so that the finished construction is sturdy and no other fasteners are required. It will be seen that the cemented multiple flap arrangement results in an exercising weight construction which securely fastens the straps **16**, **18** to the weight element **22** though the weight element is relatively heavy and there are appreciable strains on the straps.

The cemented, multiple flap construction also permits the use of a relatively inexpensive sheath material, such as leatherette, which would not be suitable for a stitched sheath. The comparatively expensive stitched construction is also avoided.

While a particular preferred embodiment of the exercising weight of the present invention has been described and illustrated, it should be understood that numerous variations are possible without departing from the spirit and scope of the invention.

I claim:

1. In combination, an ice skater, an exercising weight for use with said skate, comprising:

a weight element adapted to fit under the arch portion of said skate; and

strap means attached to said weight element and adapted to pass over the instep portion of the skate to hold said weight element in place underneath said arch portion of the skate.

2. The exercising weight of claim **1** wherein said weight element is generally elongated and has a trapezoidal cross section.

3. The exercising weight of claim **1** including a sheath substantially completely enclosing said weight element, said strap means being integrally formed with said sheath.

4. The exercising weight of claim **3** wherein said weight element is generally elongated and has a generally trapezoidal cross section.

5. The exercising weight of claim **3** wherein said sheath is of a unitary construction having a planar pattern including multiple flap portions and adapted to substantially completely enclose said weight element by means of multiple folding of said flap portions of said planar pattern over said weight element.

6. The exercising weight of claim **5** wherein the multiple flaps are cemented in place after folding.

7. In combination, an ice skate, an exercising weight to be worn under the arch portion of said skate, comprising:

a generally elongated weight element having a generally trapezoidal cross section and sized to fit under the arched portion of the skate;

a sheath for said weight element formed from a planar pattern including a bottom panel and front and rear end, top and side flaps, said planar pattern also including a pair of integral straps extending outwardly from said bottom panel,

said flaps being foldable over said weight element to substantially completely enclose said weight element, said flaps being cemented in place.

8. In combination, an ice skate, an exercising weight to be worn under the arch portion of said skate, comprising:

a generally elongated weight element having a generally trapezoidal cross section with the lesser base thereof being the bottom of said weight element, said weight element being sized to fit under the arch portion of the skate;

a sheath for enveloping said weight element including a generally elongated bottom panel substantially conforming to the width and length of said bottom of said weight element, said bottom panel having integral strap elements extending outwardly from the sides thereof and integral center flaps extending outwardly from the center of the sides of said bottom panel, said strap elements having buckle means on the outer ends thereof for fastening the ends together, front and rear end and top flaps integral with said bottom panel and extending outwardly from the ends thereof, each of said end and top flaps being adapted to be folded up and over the ends and top, respectively, of said weight element in place on said bottom panel, the shape of said front and rear end flaps being substantially that of the generally trapezoidally shaped ends of said weight element and the width of said front and rear top flaps being substantially that of said weight element, the length of said front and rear top flaps being such that they overlap when folded over the top of said weight element, said front and rear end and top flaps having a pair of front and rear tabs and side flaps, respectively, extending from either side thereof adapted to fold over the sides of said weight element, said folded-over end, top tab and side flaps being held in place by cement and by folding and cementing said central flaps over and around said weight element.