United States Patent [19]

Johnson

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[54] **ANTI-SKID DEVICE FOR BOOTS AND SHOES**

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[21] Appl. No.: **397,983**

Related U.S. Application Data

[63] Continuation of Ser. No. 328,790, Feb. 1, 1973.

[52] **U.S. Cl.** **36/7.7**

[51] **Int. Cl.** **A43b 3/10**

[58] **Field of Search** ..... 36/59 R, 7.6, 7.7

[56] **References Cited**

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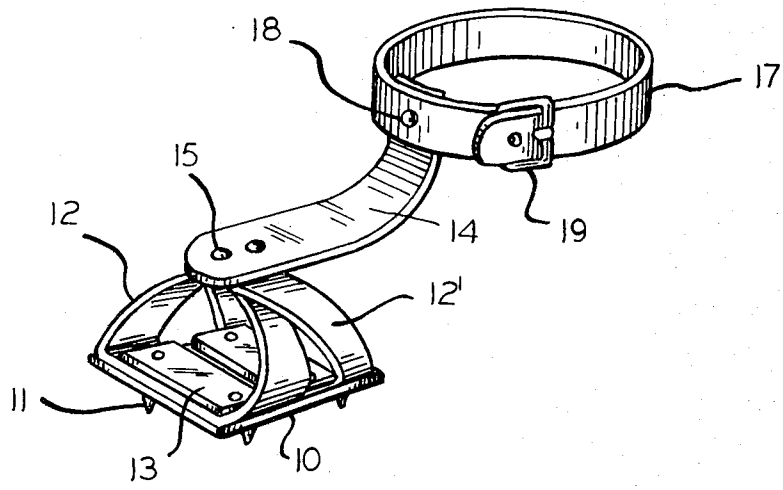
[57] **ABSTRACT**

An anti-skid cleat for the toe of a shoe or boot. The cleat is attached to the shoe or boot by means of a crossed pair of straps in an X-shaped configuration which are connected to an ankle band by means of a strap connected near the cross points of the X shape. The cross point is adjustable to fit different size shoes.

4 Claims, 8 Drawing Figures



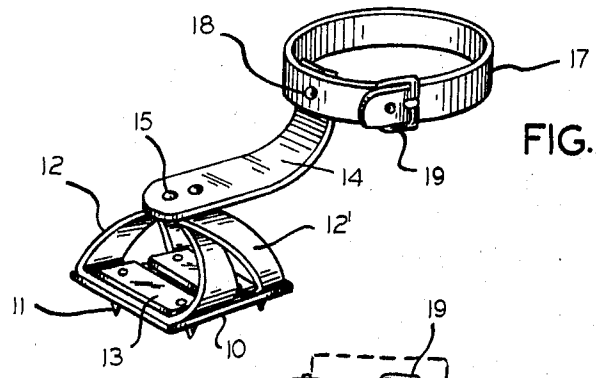


FIG.1

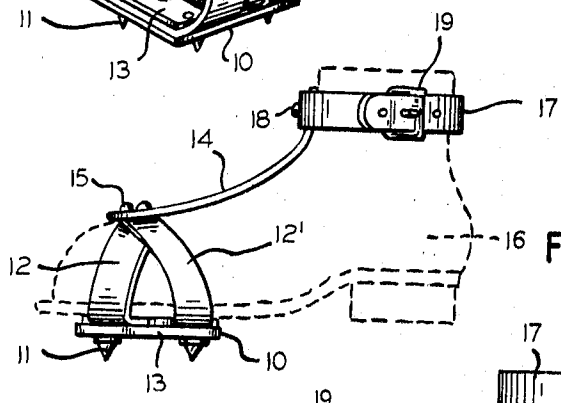


FIG.2

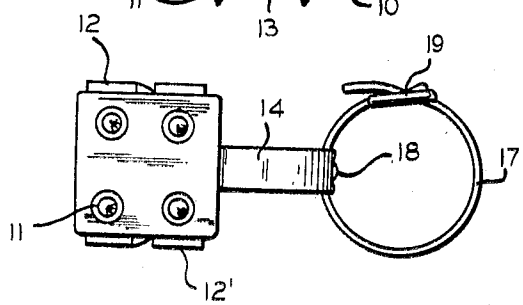


FIG.3

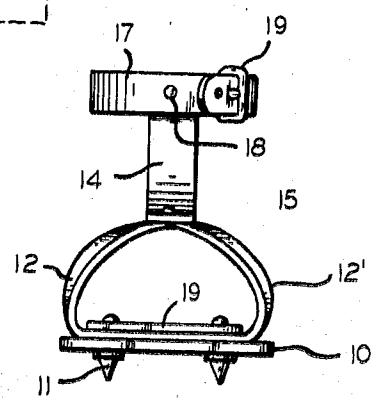


FIG.4

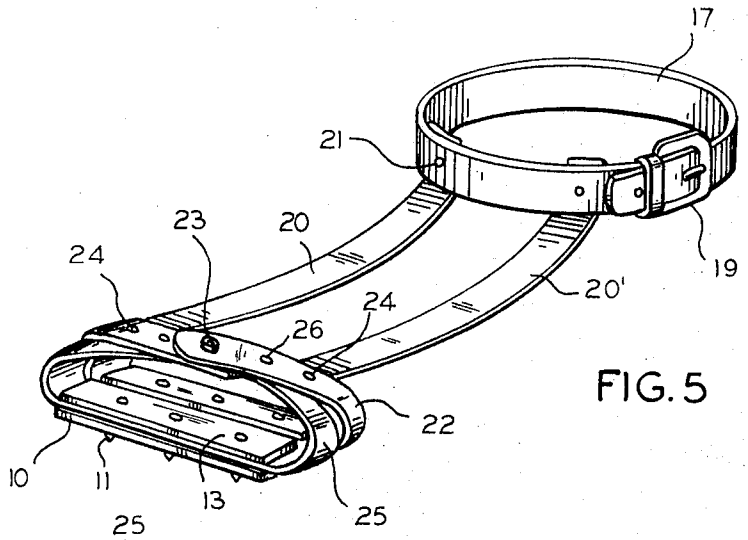


FIG. 5

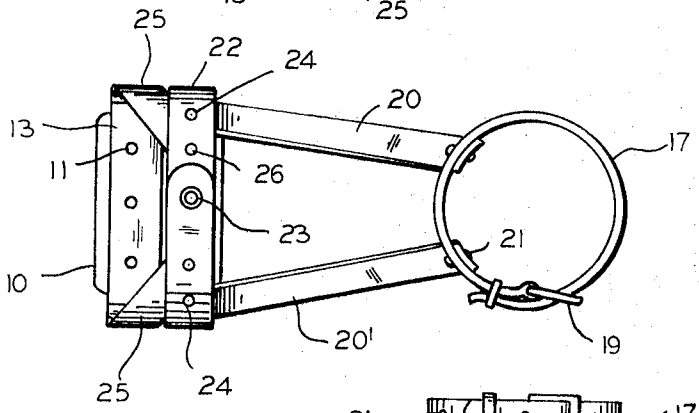


FIG. 6

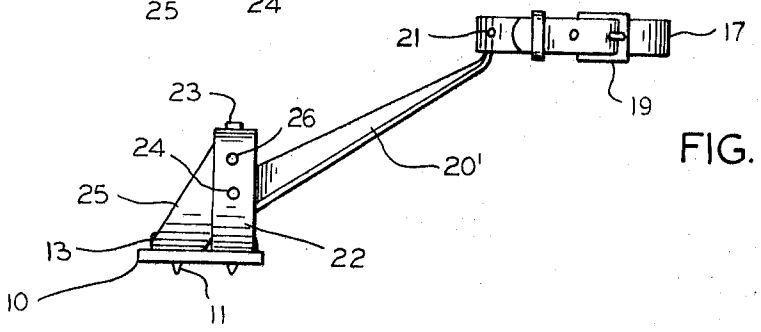


FIG. 7

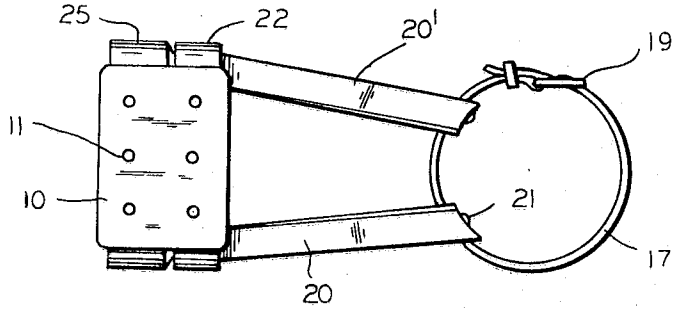


FIG. 8

ANTI-SKID DEVICE FOR BOOTS AND SHOES

This is a continuation in part of my earlier copending application Ser. No. 328,790, filed Feb. 1, 1973.

My invention relates to an anti-skid device that may be easily applied to or removed from any conventional type of boot or shoes.

Very often, it is difficult for a person to walk on glare ice because he does not have enough traction between the sole of his shoe or boot and the surface of the ice. To overcome this problem, there have been many suggestions for attaching temporary cleats to the sole or bottom of a shoe or boot. However, they have not proved satisfactory, primarily for two reasons. First, the toe of a boot has a generally tapered shape so that the toe straps tend to slip off. Second, pivoting on the toe during normal walking places severe strain on the attachment means. Therefore, this tends to work the cleat loose from the toe. Third, prior cleats have tended to require great patience during the attachment or removal from the feet.

Since the size of shoes vary greatly, it would be most helpful to preserve the advantage of my previous invention while enabling size adjustments.

Accordingly, there is a need for a cleat which is secure when anchored and which does not pivot relative to the toe.

An object of my invention is to provide an adjustable device that is designed to securely retain cleats or spikes in a fixed position on the sole toe portion of almost any boot or shoe regardless of its size.

Another object of my invention is to provide a device of the character described that is retained in place by a single pair of straps attached to a band which is to be applied to the ankle of the user.

An advantage of my invention is that the cleats or spikes are positioned and retained on that portion of the sole of the boot or shoe that is most likely to come into direct contact with the slippery surface on which the user may walk. This is especially valuable when precipitation or temperature changes cause a moisture to form on the surface of snow or ice. Then the pavement or walk becomes particularly slippery and hazardous for the person walking thereon. Thus, the device illustrated, described and claimed herein, provides an economical and easy to use anti-skid device that may be carried in a handbag or the like.

Other and further objects of my invention will become more apparent as the description proceeds, when taken in conjunction with the drawings in which

FIG. **1** is a perspective view of the device constituting my invention;

FIG. **2** is a side elevational view of the device applied to a conventional shoe which is outlined in phantom;

FIG. **3** is a bottom view of the assembled device;

FIG. **4** is a front elevational view of the device;

FIG. **5** is a perspective view of a modified type of unit employing two straps and having an adjustable shoe clamp portion;

FIG. **6** is a top view of the assembled device;

FIG. **7** is a side view of the device shown in FIG. **6**; and

FIG. **8** is a bottom view of the assembled device.

Similar reference characters indicate corresponding parts and features throughout the several views. More particularly, a plate **10** may be constructed of leather

or the like and equipped with a plurality of dependent studs **11**, preferably constructed of metal. The studs may be of any convenient design.

There are a pair of crossed strap sections having a generally X-shaped configuration, identified as **12** and **12'**. The ends of the straps are attached to plate **10** in a spaced-apart relationship. At the center of the X-shape, the straps are attached together by any suitable means. The wearer thus has the device held in engagement with his shoe with the studs **11** (See FIG. **4**) dependent from the sole of his foot.

The straps **12** and **12'** being pliable, and of one piece construction, extend upwardly somewhat spirally. Their upper ends are attached to a single strap member **14**, by means of rivets **15** (See FIGS. **1** and **2**), or they may be sewed together. In this manner, they surround the toe portion of the shoe **16**, as shown in phantom in FIG. **2**.

The single strap **14** is attached by rivet or by sewing to a circular ankle band **17** at **18**. The band **17** is equipped with a buckle **19** to permit it to be placed on the person wearing the unit.

From the above description, it will become apparent that the device is designed to retain the studs **11** in position at the bottom of the shoe sole in alignment with the toe portion of the shoe. The ankle band **17** may be easily applied to hold the device on the shoe, thereby retaining the studs **11** in a permanent position for their performance.

The modified embodiment shoe in FIGS. **5** to **8**, inclusive, has an individual size adjustment. More particularly, two separate straps **20** and **20'** are here shown as being attached to the circular ankle band **17** by means of rivets **21**, and to the crossed toe strap **22** which is here shown equipped with size adjustment snaps **23**. The attachments at **24** support the lower ends of the straps **20** and **20'**. However, the straps **20** and **20'** may also be sewed to the circular band **17** and to the strap **22** if desired. The strap **22** may also be equipped with a buckle or other suitable adjustable connector (not shown), to replace the snap **23** for adjustment.

The forward strap **25** in the X-configuration is here shown attached to the strap **22** by means of the rivets **26**. These two straps **22, 25** support the plates **10** and **13** which in turn support the studs **11**. This way, the circumference of the toe encircling straps may be adjusted without sacrificing the toe gripping effect of the crossed straps.

Although I have shown a specific construction and arrangement of the parts and features constituting my invention, various changes may be made without affecting the operativeness of the device. Therefore, the appended claims should be construed to cover all equivalents which do not depart from the spirit or the scope of my invention.

I claim:

1. An anti-skid boot attachment comprising a toe plate shaped to fit under only the toe portion of the sole of the boot and having studs dependent therefrom, a pair of crossed straps, each crossed strap being attached at opposite ends thereof to opposite sides of said plate and having a somewhat X-shaped configuration across the top of the boot toe, means for adjusting the circumference of the crossed straps to have a size and shape which fits over the toe of boots of different sizes, a pair of elongated straps attached at one end to the

crossed straps near to but on opposite sides of the center of the X-shape with attachment being made to the parts of the crossed straps which are nearest the ankle, and an ankle strap attached to the other ends of said pair of straps.

2. An anti-skid boot attachment comprising a plate having studs dependent therefrom, a pair of crossed straps having a somewhat X-shaped configuration, means for adjusting the circumference of the crossed straps to a size and shape which fit over the toe of boots of different sizes, a pair of elongated straps attached at one end to the crossed straps near to but on opposite sides of the center of the X-shape with attachment being made to the parts of the crossed straps which are nearest the ankle, said pair of elongated straps being of a length which extends from the toe to the ankle of a wearer, and an ankle strap attached to the other ends of said pair of straps.

3. The attachment of claim **2** wherein the plate is pliable.

4. The attachment of claim **3** wherein said plate has a generally rectangular shape and the ends of said X-shaped straps are attached in spaced relation to the corners of said plate.

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