TOE PROTECTION INSERT FOR AN ATHLETIC SHOE

Applicant: Mark Sturgis, Rehoboth Beach, DE (US)

Inventor: Mark Sturgis, Rehoboth Beach, DE (US)

Appl. No.: 14/542,975

Filed: Nov. 17, 2014

ABSTRACT

A toe protection insert for an athletic shoe surrounds the big toe and laces up to protect the toe from injury. The laces of the insert are designed to pull through the shoelace holes of the athletic shoe, to enable the user to position the toe as desired. Specialized socks are also provided, which separate the big toe from the other toes.
TOE PROTECTION INSERT FOR AN ATHLETIC SHOE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 61/905107, filed Nov. 15, 2013, which is hereby incorporated by reference.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable

PARTIES TO A JOINT RESEARCH AGREEMENT

[0003] Not Applicable

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM LISTING COMPACT DISK APPENDIX

[0004] Not Applicable

BACKGROUND OF THE INVENTION

[0005] The invention relates generally to sports equipment and accessories and in particular to a toe protection insert for an athletic shoe. All athletes are well aware that protecting their feet and toes, both from new injuries and aggravation of existing injuries, is essential for mobility and staying competitive. But with the proliferation of Astroturf® and similar artificial surfaces, the injury known as “turf toe” has unfortunately become widespread among athletes. Applying athletic tape before training and competition, and removing it afterward, has provided some degree of protection but it often must be fixed multiple times during the sporting activity and is therefore time-consuming and inconvenient. A toe protection insert for athletic shoes would help to resolve this problem. In particular an insert that surrounds the big toe and laces up to protect the toe from injury would be useful. The laces of the insert are designed to pull through the shoe lace holes of the athletic shoe, to enable the user to position the toe as desired. Specialized socks are also provided, which separate the big toe from the other toes.

SUMMARY OF THE INVENTION

[0006] Accordingly, the invention is directed to a toe protection insert for an athletic shoe. The insert surrounds the big toe and laces up to protect the toe from injury. The laces of the insert are designed to pull through the shoe lace holes of the athletic shoe, to enable the user to position the toe as desired. Specialized socks are also provided, which separate the big toe from the other toes.

[0007] Additional features and advantages of the invention will be set forth in the description which follows, and will be apparent from the description, or may be learned by practice of the invention. The foregoing general description and the following detailed description are exemplary and explanatory and are intended to provide further explanation of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The accompanying drawings are included to provide a further understanding of the invention and are incorporated into and constitute a part of the specification. They illustrate one embodiment of the invention and, together with the description, serve to explain the principles of the invention.

[0009] FIG. 1 shows a top view of the first exemplary embodiment, displaying the insert 10, the laces 10A, the fabric sleeve 11, the toe sleeve 12, the strap 13, and the cushion bubble layer 15.

[0010] FIG. 2 shows a side view of the first exemplary embodiment, displaying the insert 10, the laces 10A, the fabric sleeve 11, the toe sleeve 12, the tabs 14, and the cushion bubble layer 15.

DETAILED DESCRIPTION OF THE INVENTION

[0011] Referring now to the invention in more detail, the invention is directed to a toe protection insert 10 for an athletic shoe. The insert 10 surrounds the big toe in two parts and laces up to allow adjustable tension on the toe. Tension on the laces 10A will protect the toe from injury. The laces 10A of the insert 10 are intended to be pulled through the shoe lace holes of the athletic shoe, according to a method of use, to enable the user to position the toe as desired by tightening the laces 10A to a desired tension, threading the laces 10A through the shoe lace holes of the athletic shoe, adjusting the position of the toe to a desired location, and tying the laces 10A outside of the athletic shoe. For this reason, the laces 10A are preferably long relative to the length of the insert as shown. Specialized socks are also provided, which separate the big toe from the other toes.

[0012] The first exemplary embodiment features an insert 10 which is generally footprint shaped according to well-known methods of producing shoe inserts and is preferably manufactured from a semi-rigid, durable material such as plastic. The insert 10 is sufficiently flexible to enable the ball of the user’s foot to bend comfortably without significant resistance. A fabric sleeve 11 covers the insert 10, providing a thin layer of shock-absorbing foam padding for the user’s comfort, and is easily removable and machine washable. The insert 10 is preferably available in a plurality of colors to match professional, college, and high school sports colors. In addition, a cushion bubble layer 15 is provided throughout the sole of the insert as a shock absorber; the cushion bubble layer 15 comprises a pattern of circular bubble made of a flexible membrane and filled with air or other compressible fluid.

[0013] The toe sleeve 12 is affixed to the top surface of the insert 10 in the position of the big toe of a human wearer’s foot placed upon the insert 10 (in the claims, the “big toe position”). The toe sleeve 12 completely surrounds the big toe. A removable strap 13 is affixed to the top of the insert 10 in the position of the four smaller toes (in the claims, the “lesser toes positions”), preventing the foot from sliding forward within the shoe and injuring the toes. An alternate embodiment, featuring two straps 13 to secure the toes and prevent the foot from sliding, is also contemplated.

[0014] A plurality of tabs 14 is provided around the perimeter of the insert 10, to hold the insert 10 firmly in position inside the shoe. The tabs 14, and the perimeter of the insert 10, feature internal cavities which may be easily compressed to ensure a perfect fit. The socks feature additional layers of fabric between the big toe and the second toe for the user’s comfort, and also feature a high-friction microdot surface on the sole, further preventing the foot from sliding forward.
within the shoe. The socks and the fabric sleeve 11 feature a wicking property to draw perspiration away from the skin of the foot.

[0015] The insert 10, the toe sleeve 12, the strap 13, and the tabs 14 are preferably manufactured from a semi-rigid, durable material such as plastic. The laces 10A are preferably manufactured from a flexible, durable material with substantial strength, such as nylon. The fabric sleeve 11 is preferably manufactured from a flexible, durable fabric which is machine washable, such as elasticized cotton, and features a thin layer of padding which is preferably manufactured from a flexible, durable material such as foam rubber. The cushion bubble layer is preferably made of a flexible plastic membrane material. Embodiments wherein the components are manufactured from perforated compounds are also contemplated. Components, component sizes, and materials listed above are preferably, but artisans will recognize that alternate components and materials could be selected without altering the scope of the invention.

[0016] While the foregoing written description of the invention enables one of ordinary skill to make and use what is presently considered to be the best mode thereof, those of ordinary skill in the art will understand and appreciate the existence of variations, combinations, and equivalents of the specific embodiment, method, and examples herein. The invention should, therefore, not be limited by the above described embodiment, method, and examples, but by all embodiments and methods within the scope and spirit of the invention.

I claim:

1. A toe protection insert for an athletic shoe comprising an insert, a toe sleeve, said toe sleeve being affixed to the top of said insert in the big toe position of said insert.

2. The toe protection insert of claim 1 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

3. The toe protection insert of claim 1 wherein said toe sleeve is composed of two parts and adjustably tensioned by laces.

4. The toe protection insert of claim 1 wherein said insert is covered by a fabric sleeve.

5. The toe protection insert of claim 1 wherein said insert is filled by a cushion bubble layer.

6. The toe protection insert of claim 1 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

7. The toe protection insert of claim 4 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

8. The toe protection insert of claim 5 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

9. The toe protection insert of claim 4 wherein said toe sleeve is composed of two parts and adjustably tensioned by laces.

10. The toe protection insert of claim 5 wherein said toe sleeve is composed of two parts and adjustably tensioned by laces.

11. The toe protection insert of claim 5 wherein said insert is covered by a fabric sleeve.

12. The toe protection insert of claim 9 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

13. The toe protection insert of claim 10 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

14. The toe protection insert of claim 11 further comprising a strap, said strap being removably affixed to the top of said insert in the lesser toe position of said insert.

15. The toe protection insert of claim 12 wherein said insert is filled by a cushion bubble layer.

16. A method of use of the toe protection insert of claim 3 comprising tightening said laces as desired, threading the laces through the shoe laces of an athletic shoe in which said insert is installed, adjusting the position of said toe sleeve as desired, and tying said laces on the exterior of said athletic shoe in which said insert is installed.

16. (canceled)

17. A method of use of the toe protection insert of claim 6 comprising tightening said laces as desired, threading the laces through the shoe laces of an athletic shoe in which said insert is installed, adjusting the position of said toe sleeve as desired, and tying said laces on the exterior of said athletic shoe in which said insert is installed.

18. A method of use of the toe protection insert of claim 9 comprising tightening said laces as desired, threading the laces through the shoe laces of an athletic shoe in which said insert is installed, adjusting the position of said toe sleeve as desired, and tying said laces on the exterior of said athletic shoe in which said insert is installed.

19. A method of use of the toe protection insert of claim 10 comprising tightening said laces as desired, threading the laces through the shoe laces of an athletic shoe in which said insert is installed, adjusting the position of said toe sleeve as desired, and tying said laces on the exterior of said athletic shoe in which said insert is installed.

20. A method of use of the toe protection insert of claim 15 comprising tightening said laces as desired, threading the laces through the shoe laces of an athletic shoe in which said insert is installed, adjusting the position of said toe sleeve as desired, and tying said laces on the exterior of said athletic shoe in which said insert is installed.

* * * * *