SYSTEM FOR INTERLOCKING A PAIR OF SHOES

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Filed: Aug. 11, 2009

Publication Classification

Int. Cl.
A44B 17/00 (2006.01)
A43B 13/00 (2006.01)

U.S. Cl. ........................................ 24/594.11; 36/103

ABSTRACT

An embodiment of the present invention is a system for interlocking a pair of shoes for storage. The system comprises a right shoe having a sole and a first cavity within the sole of the right shoe; a left shoe having a sole and a second cavity within the sole of the left shoe; a male fastener rotatably mounted within one of either the first cavity or the second cavity; and a female fastener rotatably mounted within the other of either the first cavity or the second cavity; wherein the male fastener and the female fastener may be releasably fastened to each other when rotated in a position which is substantially perpendicular to the soles of the right shoe and the left shoe so as to couple the right shoe and left shoe together.
SYSTEM FOR INTERLOCKING A PAIR OF SHOES

FIELD OF INVENTION

[0001] The present invention generally relates to shoes and a system for releasably interlocking a pair of shoes.

NO GOVERNMENT LICENSE RIGHTS

[0002] No federal government funding was used to develop the present invention. Rather, the present invention was conceived as part of a class project at the Abraham Joshua Heschel School in New York City, N.Y.

SUMMARY OF THE INVENTION

[0003] According to an embodiment of the present invention, a system is provided for interlocking a pair of shoes particularly for storage purposes. The system comprises a right shoe having a sole and a first cavity within the sole of the right shoe; a left shoe having a sole and a second cavity within the sole of the left shoe; a male fastener rotatably mounted within one of either the first cavity or the second cavity; a female fastener rotatably mounted within the other of either the first cavity or the second cavity; wherein the male fastener and the female fastener may be releasably fastened to each other when rotated in a position which is substantially perpendicular to the soles of the right shoe and the left shoe so as to couple the right shoe and left shoe together.

[0004] In at least one embodiment, the male fastener may be mounted within the right shoe and the female fastener may be mounted within the left shoe. Alternatively, in another embodiment, the male fastener may be mounted within the left shoe and the female fastener may be mounted within the right shoe.

[0005] In at least one embodiment, the fastener may be a buckle.

[0006] In at least one embodiment, the fastener may be a side release buckle.

[0007] In at least one embodiment, the fastener may be a center release buckle.

[0008] In at least one embodiment, the sum of the length of the male fastener and female fastener, when interconnected, is greater than two inches and less than five inches.

[0009] In at least one embodiment, the system may further comprise: a third cavity within the sole of the right shoe; a fourth cavity within the sole of the left shoe; a male fastener rotatably mounted within one of either the third cavity or the fourth cavity; and a female fastener rotatably mounted within the other of either the third cavity or the fourth cavity.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The above and related objects, features and advantages of the present invention will be more fully understood by reference to the following, detailed description of an embodiment of the present invention when taken in conjunction with the accompanying figures, wherein:

[0011] FIG. 1 is a bottom schematic view of a pair of shoes in accordance with an embodiment of the present invention depicting the fastening mechanism in the stowed position;

[0012] FIG. 2 is a side schematic view of one of the shoes shown in FIG. 1 depicting the rotation of the fastening mechanism 30 for use;

[0013] FIG. 3 is a rear schematic view of the pair of shoes in accordance with an embodiment of the present invention depicting the fastening mechanism aligned for interconnection but not connected;

[0014] FIG. 4 is a rear schematic view of the pair of shoes in FIG. 3 depicting the fastening system in the coupled position;

[0015] FIG. 5 is a side schematic view of a pair of shoes in accordance with the present invention depicting the fastening system in the coupled position;

[0016] FIG. 6 is a bottom schematic view of a pair of shoes in accordance with another embodiment of the present invention comprising two sets of interlocking fasteners; and

[0017] FIG. 7 is a side schematic view of the pair of shoes in FIG. 6 depicting the two sets of interlocking fasteners in the coupled position.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

[0018] The following is a description of various embodiments of the present invention. Although the intention is not to narrowly limit the present invention to the exact specifics described herein but to cover systems that lie within the spirit and scope of the invention.

[0019] The present invention relates to a system 1 for interlocking a pair of shoes 10 and 15. By interlocking a left shoe 10 and a right shoe 15 in a pair of shoes together, the present invention makes loss or misplacement of one shoe, relative to the other shoe, far less likely. It also reduces the need for a separate storage device, such as a bag or box for keeping the pair of shoes together. This may be further advantageous, not only to the shoes’ owners, but also to retailers who can dispense with the need to store large, space-consuming, shoe boxes. It can accomplish these purposes by utilizing at least one fastener mechanism comprising at least one male fastener 30 and at least one female fastener 40 releasably mounted in the soles of each shoe in the pair.

[0020] According to an embodiment of the present invention, there is provided a system for interlocking a pair of shoes through the use of a fastening mechanism. This fastening mechanism allows the shoes to be easily and quickly interlocked or released. Since the system and fastening mechanism are readily available, a user may be more likely to utilize the system. This is in contrast to the use of a bag or case, which a user may be more likely to leave at home or otherwise misplace. An embodiment of the present invention is capable of being quickly and easily detached and rotated to a stowed position within the sole of the shoe.

[0021] In an embodiment of the present invention, the interconnection is accomplished through the use of a side-release buckle. The location of the buckle within the sole, as well as the length of the buckle, is designed to facilitate ease of connection.

[0022] Various embodiments of the present invention are hereto described by references to the Figures. These embodiments are meant to be merely illustrative and not limiting of the present invention.

[0023] FIGS. 1-7 illustrate exemplary embodiments of the fastening mechanisms that can be used in conjunction with the present invention. While one or more side-release buckles are illustrated in FIGS. 1-7, this is merely intended to illustrate how the side-release buckle can be used with the present invention. It is understood that in applying the present invention various types of fastening mechanisms may be used, such
as pairs of buckles, including by way of example side-release buckles, center-release buckles, and other kinds of releasable mechanisms known in the art.

An embodiment of the present invention using a single pair of fasteners is shown in the context of FIGS. 1-5. FIG. 1 is a bottom schematic view of the system in the form of a pair of shoes comprising a left sole (25) and a right sole (20). In this particular embodiment, the female fastener (40) is rotatably mounted within the first cavity (60) of the right sole (20) of the right shoe (10) and the male fastener (30) is rotatably mounted within the second cavity (65) of the left sole (25) of the left shoe (15). It is within the spirit and scope of the invention that the male fastener (30) could instead be mounted within the first cavity (60) of the right sole (20) of the right shoe (10) and the female fastener (40) could be mounted within the second cavity (65) of the left sole (25) of the left shoe (15). In either case, the first cavity (60) and the second cavity (65) should be located in their respective soles so that the shoes (10) and (15) will be properly aligned in a desirable manner when the fasteners are interconnected. FIG. 1 illustrates an embodiment where the fasteners are in the stowed position, such as when the shoes are being worn by an individual.

FIG. 2 represents a side view of the right shoe (10) shown in FIG. 1, where the fastener (40) is being rotated between a stored position and an operational position. When the user wishes to couple the pair of shoes, the fastener (40) is rotated from within the first cavity (60) to a position substantially perpendicular to the sole (20).

FIG. 3 represents a rear view of the embodiment shown in FIGS. 1 and 2, where the pair of shoes is not connected, but the fasteners (30) and (40) are in the operational position. In particular, FIG. 3 depicts how a user could align the right shoe (10) and the left shoe (15) for coupling. As shown, the male fastener (30) has been rotated outward from the first cavity (65) and the female fastener (40) has been rotated outwardly from the second cavity (60), with the sole of the right shoe (20) and the sole of the left shoe (25) being placed in a substantially face-to-face configuration. FIG. 3 illustrates the pair of shoes before the fasteners are coupled. In one embodiment, the sum of the length of the male fastener (30) and female fastener (40), when interconnected is greater than two inches and less than five inches. While the fastener has been shown in the figures to be aligned with the length of the soles (20) and (25), it is within the spirit and letter of the present invention that the fasteners may be rotated in any desirable direction such that when rotated into an operational position the fasteners can be coupled to keep the two shoes together.

FIG. 4 shows a rear view of the same pair of shoes as illustrated in FIG. 3 after the fasteners (30) and (40) have been coupled. Similarly, FIG. 5 shows a side view of the same pair of shoes as illustrated in FIG. 4 after the fasteners (30) and (40) have been interconnected. In one embodiment, the total length of the female fastener (40) and the male fastener (30) after being coupled has been designed to allow sufficient space for a user to reach between the right sole (20) and the left sole (25) and release the fastening mechanism. In this embodiment, utilizing a side release buckle, the user requires only sufficient space to manipulate the male fastener (30).

FIGS. 6 and 7 represent a further exemplary embodiment of the present invention having a pair of fastening mechanisms. As shown in FIG. 6, the soles of each of the pair of shoes have two cavities for storage of fasteners. For example, in this embodiment, the left sole (19) of the left shoe (17), has two cavities (31) and (75) for storage of fasteners (66) and (85), respectively. Similarly, the right sole (12) has two cavities (61) and (80) for storage of fasteners (41) and (70), respectively. While as shown in FIG. 6, the left sole (19) has a male fastener (66) and a female fastener (85), and the right sole (22) has a corresponding female fastener (41) and corresponding male fastener (70), the present invention is not limited to this configuration. It is consistent with the present invention that the male fastener and female fastener can be within the sole of either shoe, as long as each sole in the pair of shoes has either a female fastener or a male fastener and the other sole in the pair of shoes has a corresponding male fastener or corresponding female fastener, respectively. It is also consistent with the present invention that there can either be two male fasteners in one sole, or one male and one female fastener in one sole, as long as the other sole has the appropriate corresponding fastener.

FIG. 7 depicts another view of the embodiment shown in FIG. 6. As can be seen in FIG. 7 both sets of fastening mechanisms have been rotated to a substantially perpendicular position, in relation to the sole of the shoe, and interlocked. This embodiment provides yet additional security, and further decreases the possibility of misplacing one shoe relative to the other.

In each embodiment, the fastening mechanisms are capable of being completely stowed within the sole of the right and left shoe. The fastening mechanism may be retained in the stowed position through the use of a detent molded to the fastener, by the friction of the rotation mechanism, or by other mechanisms known to those skilled in the art.

Now that various embodiments of the present invention have been shown and described in detail, various modifications and improvements thereon will become readily apparent to those skilled in the art. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims, and all changes that come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed is:

1. A system for interlocking a pair of shoes comprising:
   a right shoe having a sole and a first cavity within the sole of the right shoe;
   a left shoe having a sole and a second cavity within the sole of the left shoe;
   a male fastener rotatably mounted within one of either the first cavity or the second cavity;
   and a female fastener rotatably mounted within the other of either the first cavity or the second cavity;
   wherein the male fastener and the female fastener may be releasably fastened to each other when rotated in a position which is substantially perpendicular to the soles of the right shoe and the left shoe so as to couple the right shoe and left shoe together.

2. The system of claim 1, wherein the male fastener is mounted within the right shoe and the female fastener is mounted within the left shoe.
3. The system of claim 1, wherein the male fastener is mounted within the left show and the female fastener is mounted within the right shoe.
4. The system of claim 1, wherein the fastener is a buckle.
5. The system of claim 1, wherein the fastener is a side release buckle.
6. The system of claim 1, wherein the fastener is a center release buckle.
7. The system of claim 1, wherein the sum of the length of the male fastener and female fastener, when interconnected, is greater than two inches and less than five inches.

8. The system of claim 1 further comprising:
a third cavity within the sole of the right shoe;
a fourth cavity within the sole of the left shoe;
a male fastener rotatably mounted within one of either the third cavity or the fourth cavity; and
a female fastener rotatably mounted within the other of either the third cavity or the fourth cavity.

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