Enhanced Aglet with Specialized Attachment Means

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ABSTRACT
An enhanced aglet that can be attached to original aglets, or used as a replacement aglet. The enhanced aglet can be in the shape of an animal, cartoon character, symbol or logo. Attractive characters and rounded shapes make seeing and grasping the ends of a shoelace with the present invention easier, especially for older and younger hands. An attachment means within the enhanced aglet is designed to latch onto the original aglet of the shoelace, and allow for pulling and tagging of the shoelace. The attachment means also allows the enhanced aglet to be attached to shoelaces that no longer have their original aglets.
1000 Place tip of original aglet in opening of KickTips

1001 Push entire aglet through opening

1002 Enjoy enhanced aglet

Figure 10
ENHANCED AGLET WITH SPECIALIZED ATTACHMENT MEANS

BACKGROUND OF THE INVENTION

[0001] The present invention relates generally to the field of footwear and more specifically to an enhanced aglet ornament to be attached to ends of shoe laces or similar types of laces.

[0002] Shoelaces are well known in the field of footwear. Also referred to as shoe strings, shoelaces were an indispensable part of early footwear and remain an extremely popular means for securing shoes on feet today. A shoelace comprises a long, narrow length of material that is traditionally threaded through eyelets in a shoe and the ends of the lace are tied together to secure the shoe to the wearer’s foot. Shoelaces can be made of many different materials including leather, cotton, and synthetic materials. In order to make threading the shoelace easier, the ends of a shoelace are typically cramped with an aglet. An aglet is traditionally a short, tubular piece of plastic that is heat sealed around the ends of a shoelace. The aglet keeps shoelaces made of fabric from fraying, and greatly assists in the threading process.

[0003] Traditional aglets are small in size and hard to see. After assisting in threading a shoelace through eyelets, their main purpose has been served and they actually become a hindrance. Since aglets compress the ends of a shoelace, the ends of the shoelace become hard to see, hard to find, and are hard to grasp. This difficulty in distinguishing the ends of a shoelace causes problems when teaching a child to tie their shoes. The child is challenged in just finding the ends of the lace and seeing where the ends of the lace go, during the tying process. Small aglets also cause problems for the visually impaired and the elderly. Thin laces and even smaller aglets are hard to see, and hard to grasp and maneuver.

[0004] What is needed in the field is an enhanced aglet which could be in the form of an ornament that allows the ends of a shoelace to easily be seen and grasped. The ideal device would easily attach to a traditional aglet after the aglet has been threaded through the eyelets of the shoe.

[0005] What is further needed in the field is an enhanced aglet that can be provided in different shapes and forms to be attached as an ornament to laces and to serve as a form of expression, promotion or pride.

SUMMARY OF THE INVENTION

[0006] An enhanced aglet that is adapted for attachment to the end of a shoelace, wherein the aglet provides both utilitarian and decorative enhancement to the shoelace. The enhanced aglet comprises a body and a means for attaching to the shoelace. The aglet body has an exterior, an interior, a top and a bottom. The attachment means is located in the interior of the aglet body, and has an opening at the top of the aglet body. The opening of the attachment means is adapted for insertion there-through of the end of the shoelace, and the attachment means resists removal of the end of the shoelace, after insertion. The attachment means further includes a capture area wherein the capture area has a diameter that is substantially equal to a diameter of the end of the shoelace. The capture area may further include a holding means that is adapted to hold the end of the shoelace within the capture area. The holding means is preferably a lower portion of the opening of the attachment means, wherein the lower portion of the opening has a diameter that is smaller than a diameter of an original aglet of the shoelace.

[0007] The present aglet enhancement may also be used as a replacement aglet. When the shoelace no longer has the original aglet, the holding means of the present aglet includes at least one barb that is adapted to hook into the material at the end of the shoelace, which preferably is knotted prior to insertion.

[0008] The exterior of the aglet body can be provided in any number of shapes, colors and styles, including ornaments, charms, figures, silhouettes, characters, names, numbers, animals, and models. The exterior of the aglet body can also be provided in the shape of sports balls, including basketball, baseball, soccer and footballs. The exterior of the aglet body may also advertise the logo for a school, sports team or business. Other embodiments of the present enhanced aglet include electronic circuitry that allow for portions of the ornament to light up, and to make sounds or play music.

[0009] It is an object of the present invention to provide an aglet that makes learning to tie your shoes or other types of laces or belts easy and fun.

[0010] It is another object of the present invention to provide an aglet that is easy to grasp and pull.

[0011] It is still another object of the present invention to provide an aglet that provides self expression and/or selected promotion for the wearer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] The invention of the present application will be described in detail with reference to the accompanying drawings, given only by way of example, in which:

[0013] FIG. 1 is a frontal view of an exemplary embodiment of the present enhanced aglet;

[0014] FIG. 2 is a transparent view of the exemplary embodiment showing the preferred attachment means;

[0015] FIG. 3 is a detailed view of the preferred attachment means;

[0016] FIG. 4 illustrates the versatility of the preferred attachment means;

[0017] FIG. 5 shows an alternative embodiment and an alternative attachment means;

[0018] FIG. 6 shows a third embodiment of the present enhanced aglet;

[0019] FIG. 7 shows a fourth embodiment of the present enhanced aglet;

[0020] FIG. 8 shows a fifth embodiment of the present enhanced aglet;

[0021] FIG. 9 is a circuit diagram of optional hardware; and,

[0022] FIG. 10 is a flow chart with steps for attaching the preferred embodiment.

DETAILED DESCRIPTION OF THE INVENTION

[0023] FIG. 1 shows an exemplary embodiment 100 of the present enhanced aglet, referred to herein as KickTips, in an operational position, attached to the end of a shoelace 105. In this embodiment 100, the shoelace’s aglet has been enhanced with an ornament in the shape of a basketball. The enhanced aglet can be made from any number of materials and combinations of materials, including rubber, plastic, foam, resin, silicon, stone and wood. The enhanced aglet can also be produced using any number of production methods, or combination of production methods, including molding, extru-
sion, stamping and loss-wax method. While the exemplary embodiment 100 has been shown as a basketball, the present invention can be provided in virtually any shape, including other sports ball, and other shapes, as will be seen later.

**[0024]** FIG. 2 is a transparent view of the exemplary embodiment 100 showing the original aglet 200 of the shoe-lace 105 being held in place within the capture area 205 of the enhanced aglet. The exemplary embodiment 100 completely covers the original aglet 200 and only the shoe-lace 105 can be seen protruding from the top of the enhanced aglet 100. The capture area 205 is complementary in size to the original aglet 200 and has features that make sure the aglet 200 is securely held within the interior of the enhanced aglet 100. After the enhanced aglet 100 has been attached, the user can pull and tug on the ends of the shoe-lace 105, while tying his shoe for example, and the decorative enhancement will not pull off.

**[0025]** FIG. 3 is a transparent view of the preferred embodiment 100 showing the preferred attachment means, without an original aglet inserted. The preferred attachment means includes an opening 300, at the top of the enhanced aglet 100, and a capture area 205, which as the name implies, is intended to capture and hold the original aglet on the shoe-lace. The opening 300 of the attachment means is conical in shape, wherein the upper portion of the opening 300 is wider than the lower portion of the opening. The wide upper portion of the opening 300 is intended to aid the user during the attachment process; discussed further below. The more narrow, lower portion of the opening 300 assists in the capture portion of the attachment process. The diameter of the lower portion of the opening 300 is intentionally less than the diameter of the capture area 205. This design creates a ledge, or catch 305 at the top of the capture area 205. After an original aglet is inserted through the opening 300 and into the capture area 205, the back edge of the original aglet becomes engaged with the catch 305 and is prevented from being pulled back out through the opening 300. The capture area 205 may be totally contained within the interior of the enhanced aglet 100, or the capture area may extend toward the bottom of the enhanced aglet, so as to provide for shoelaces with original aglets that are extremely long.

**[0026]** The present enhanced aglet can also be an aglet itself, or used as a replacement aglet. Sometimes, due to wear and tear, the original aglet can become frayed and eventually just disappear. Therefore, a tool that is almost impossible to grasp and pull. In such a case, the present attachment means can be provided with one or more bars 310 located within the capture area and placed so as to allow for the insertion of an amount of shoe-lace material, but then resist the removal of the material.

**[0027]** FIG. 4 illustrates the versatility of the present attachment means, which can be attached to a shoe-lace 400 that no longer has its original aglet. When the original aglet is missing, the user merely ties the end of the shoe-lace 400 into a knot 405 and presses the knot through the opening of attachment means and into the capture area 205. The straightened end of a hanger, or other rigid, narrow utensil may be used to assist during this process. After the knotted end 405 of the shoe-lace 400 is in the capture area 205, removal is prevented by the one or more bars and the catch 305. The present-invention can breathe new life into old shoe-laces and make an old pair of shoes seem like new again.

**[0028]** FIG. 5 shows an alternative embodiment 500 with an alternative attachment means 505. The alternative embodiment 500 is in the shape of a football, which is appealing to football players and fans, young and old. The enhanced aglet, or football, can be provided in any color, including team colors, and could include a team logo, team name, or other text. The alternative attachment means 505 is in the shape of a cone or funnel, and is intended to cause the original aglet to become wedged within the attachment means 505 upon insertion. The original aglet is held in place by friction. A small amount of epoxy or other adhesive could also be placed within the attachment means 505 prior to insertion of the original aglet to assist in attachment.

**[0029]** FIG. 6 shows another embodiment 600 of the present enhanced aglet. Imagine a child's pride when they can't wait to show off their shoes, because their favorite animal or character is on them. A small claw that grasps the attention of a child, such as enhanced aglet 600, will make learning to tie their shoes a lot more fun. The multiple curves and surfaces of the enhanced aglet 600 will also make grasping and pulling the shoe-lace 105 easier. Small hands with young muscles, and older hands with arthritic joints, will both benefit from the present invention.

**[0030]** FIG. 7 shows a fourth embodiment 700 of the present enhanced aglet. This embodiment shows that the present invention can be provided in the shape of a symbol, such as a flag. Symbols such as flags, mascots, and trademarks allow older shoe wearers to show their pride in their country and/or school, for example. The present invention includes enhanced aglets that provide benefits to senior citizens without embarrassment.

**[0031]** FIG. 8 shows that the present invention can take advantage of the fact that shoe-laces move, and as such they draw attention. When an object is attached to a walking person's foot, the human eye is naturally drawn to it. An enhanced aglet 800 with a logo for a school, business or sports team provides an efficient means for advertisers to promote their school, product or team. The logo could be an image, text, including a slogan, a combination of an image with text, or a combination of an image, text and another feature, such as faux jewelry, a contrasting border, or in combination with a shaped aglet, such as the aglet shown in FIG. 6.

**[0032]** FIG. 9 is a circuit diagram of electronic circuitry 900 that can be provided within the present enhanced aglet. The electronic circuitry 900 includes: a power source, such as a battery 905; a switch 910, wherein the switch could be a push button (toggle) switch or a motion sensitive switch that is activated whenever movement is detected; a light source 915, which preferably is a light emitting diode (LED); and, a speaker 920. One or more audio files can be stored in simple hardware that is co-located with the switch 910, and the audio files can be played sequentially when the switch is activated. More than one light could also be provided in the present invention and the lights could be provided in key areas of a character's face, such as the eyes and/or nose. Combined with a motion detector as the switch 910, a child could have a couple dogs on each foot that barked and had eyes and tails that flip up every time the child took a step.

**[0033]** FIG. 10 is a flow chart with exemplary steps for attaching the preferred embodiment to a shoe-lace. In step 1000, the original aglet on the shoe-lace is grasped and the tip of the aglet is placed in the opening at the top of the present enhanced aglet, aka KickTips. In the step 1001, the entire original aglet is pushed through the opening, so that the original aglet ends up within the capture area, where it is securely held in place. In step 1002, the enhanced aglet is in place and the wearer is provided with all the benefits, includ-
ing easier to grasp and pull, more fun to tie, and pride of personal expression, shown by the choice of ornament, character or symbol.

[0034] The foregoing description of the specific embodiments will so fully reveal the general nature of the invention that others can, by applying current knowledge, readily modify and/or adapt for various applications such specific embodiments without departing from the generic concept. Therefore, such adaptations and modifications should and are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology of terminology employed herein is for the purpose of description and not of limitation.

1. An enhanced aglet that is adapted for attachment to an end of a shoelace, providing both utilitarian and decorative enhancement to the shoelace, the enhanced aglet comprising: an aglet body, the body having an exterior, an interior, a top and a bottom; and, an attachment means, the attachment means being located in the interior of the aglet body, and having an opening at the top of the aglet body, wherein the opening of the attachment means is adapted for insertion there-through of the end of the shoelace, and wherein the attachment means resists removal of the end of the shoelace after insertion.

2. The enhanced aglet of claim 1, wherein the attachment means further includes a capture area wherein the capture area has a diameter that is substantially equal to a diameter of the end of the shoelace.

3. The enhanced aglet of claim 2, wherein the capture area includes a holding means that is adapted to hold the end of the shoelace within the capture area.

4. The enhanced aglet of claim 3, wherein the holding means is a lower portion of the opening of the attachment means, the lower portion of the opening having a diameter that is smaller than a diameter of an original aglet of the shoelace.

5. The enhanced aglet of claim 3, wherein the holding means is at least one barb that is adapted to hook into the end of the shoelace after insertion.

6. The enhanced aglet of claim 1, wherein the exterior of the aglet body is in a shape of an animal or character.

7. The enhanced aglet of claim 1, wherein the exterior of the aglet body is in a shape of a sports ball.

8. The enhanced aglet of claim 1, wherein the exterior of the aglet body includes a logo for a school, sports team or business.

9. The enhanced aglet of claim 1, wherein the exterior of the aglet body is in a form of a symbol, including a flag.

10. The enhanced aglet of claim 2, wherein the capture area extends through the bottom of the aglet body.

11. A method for attaching an enhanced aglet to an end of a shoelace, wherein the enhanced aglet includes an attachment means with a capture area, the method comprising the steps of: grasping the end of the shoelace; inserting the end of the shoelace into an opening of the attachment means; and, pushing the end of the shoelace through the opening and into the capture area of the attachment means.

12. The method of claim 11, wherein the end of the shoelace includes an original aglet, and the opening of the attachment means has a diameter that is smaller than a diameter of the original aglet.

13. The method of claim 11, wherein the end of the shoelace does not include an original aglet, and the end of the shoelace comprises a knot of shoelace material.

14. The method of claim 11, wherein the capture area has a cylindrical shape that extends from a bottom of the opening to a bottom of the enhanced aglet.

15. The method of claim 14, wherein the capture area extends through the bottom of the aglet.

16. The enhanced aglet of claim 1, further comprising electronic circuitry that allows at least a portion to the aglet to light up.

17. The enhanced aglet of claim 1, further comprising electronic circuitry that allows the aglet to make sounds.

18. The method of claim 11, wherein the enhanced aglet further comprises electronic circuitry that allows the aglet to light up and make noises.

19. The method of claim 11, wherein the enhanced aglet is in the shape of a sports ball, flag, ornament, charm, figure, silhouette, character, name, number, animal, or model.

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