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Cherneski

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(54) **FOOT GRIPPING GARMENT**

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A41B 11/00 (2006.01)

(52) **U.S. Cl.** **66/185**; 2/239

(58) **Field of Classification Search** 66/185–188; 2/239–241
See application file for complete search history.

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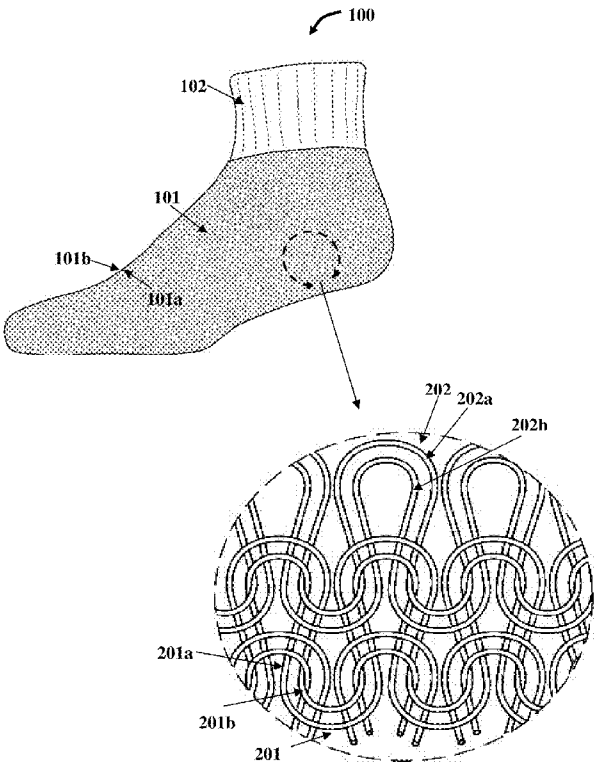
(57) **ABSTRACT**

Disclosed herein is a hosiery garment for providing grip to a person's foot between the foot and the hosiery garment, and for simultaneously providing grip to the person's foot between the hosiery garment and the inside of a footwear. The hosiery garment comprises a foot enclosure configured to conform to the person's foot. The foot enclosure defines an inner surface and an outer surface. A first pair comprising a first tacky thread and a first supplementary thread defines the inner surface. A second pair comprising a second tacky thread and a second supplementary thread defines the outer surface. The inner surface defined by the first pair provides grip to the person's foot between the foot and the hosiery garment, and the outer surface defined by the second pair simultaneously provides grip to the person's foot between the hosiery garment and the inside of the footwear.

9 Claims, 10 Drawing Sheets



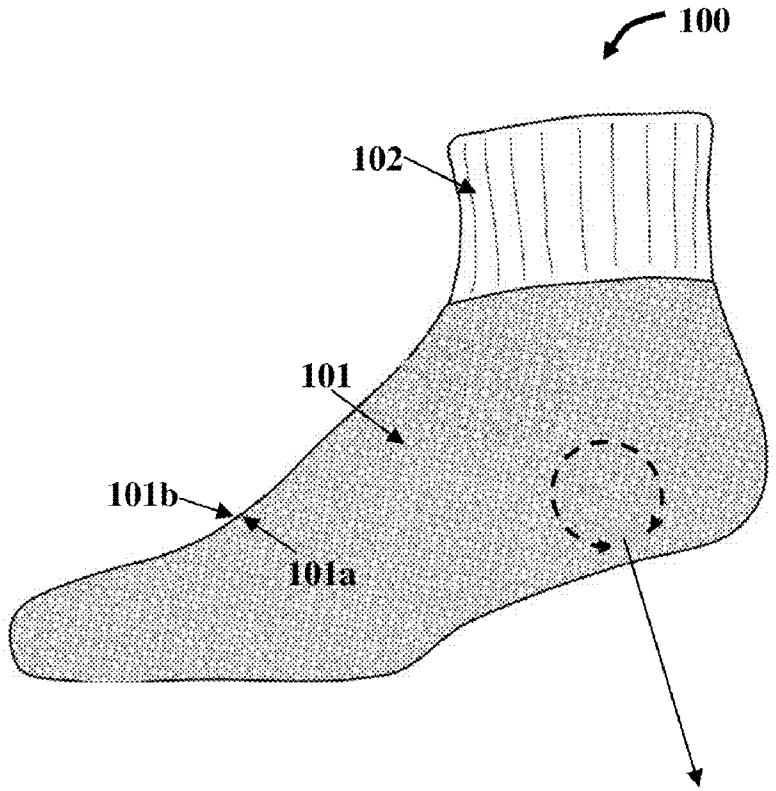


FIG. 1

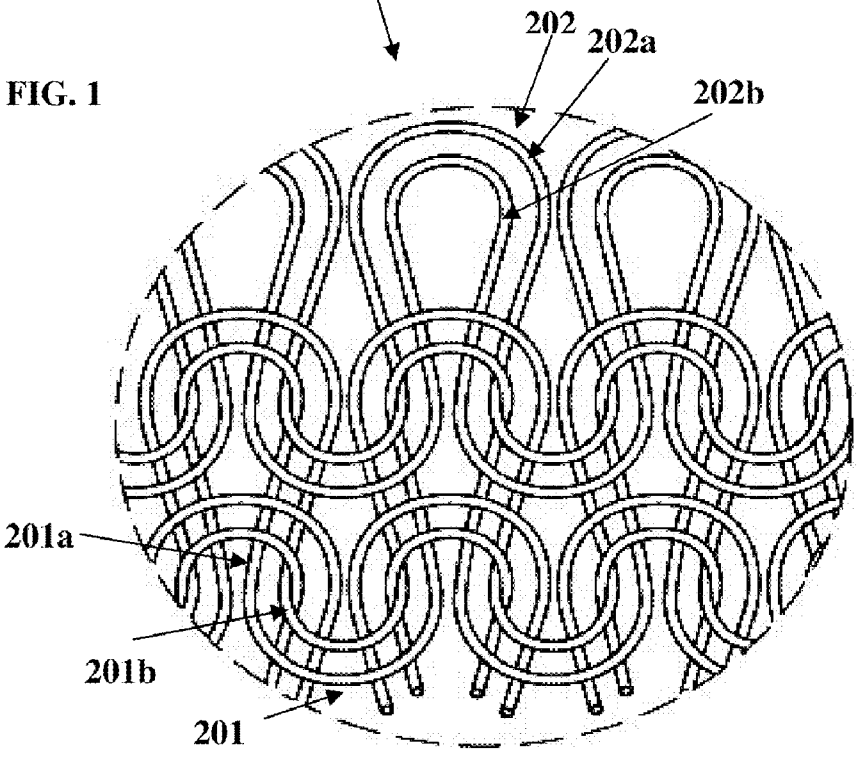


FIG. 2

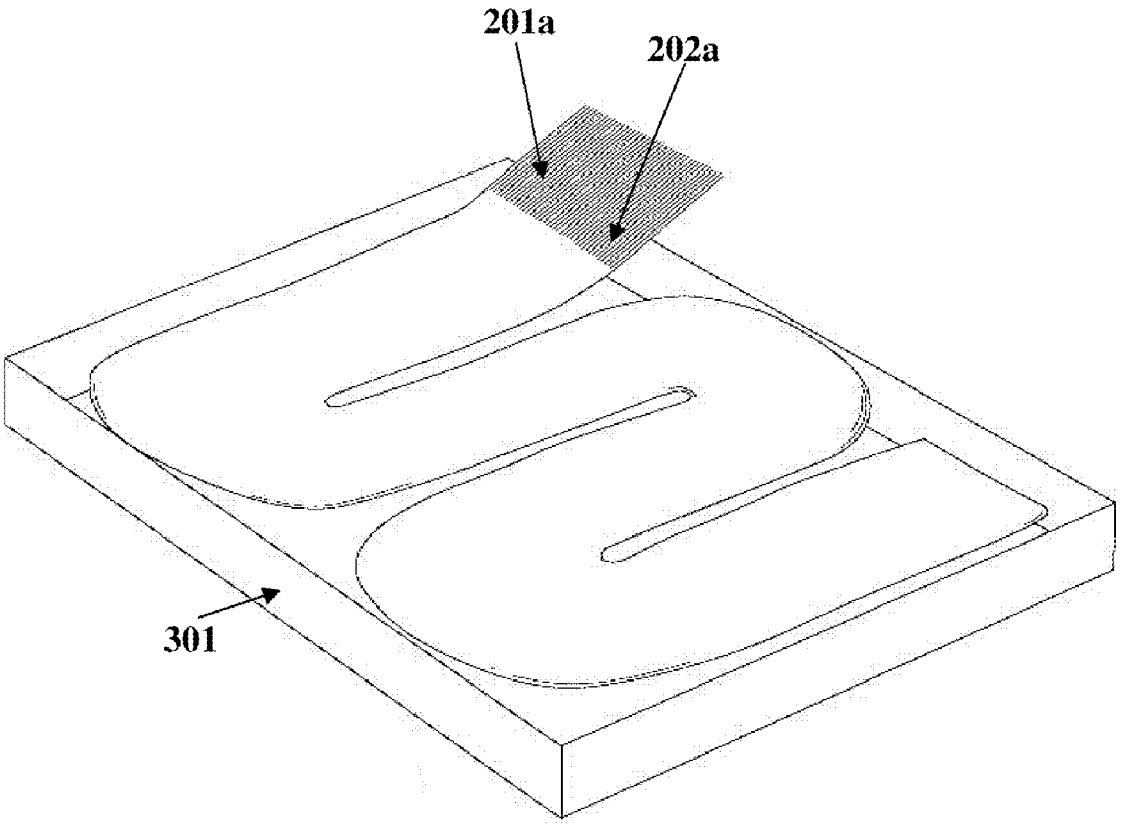


FIG. 3

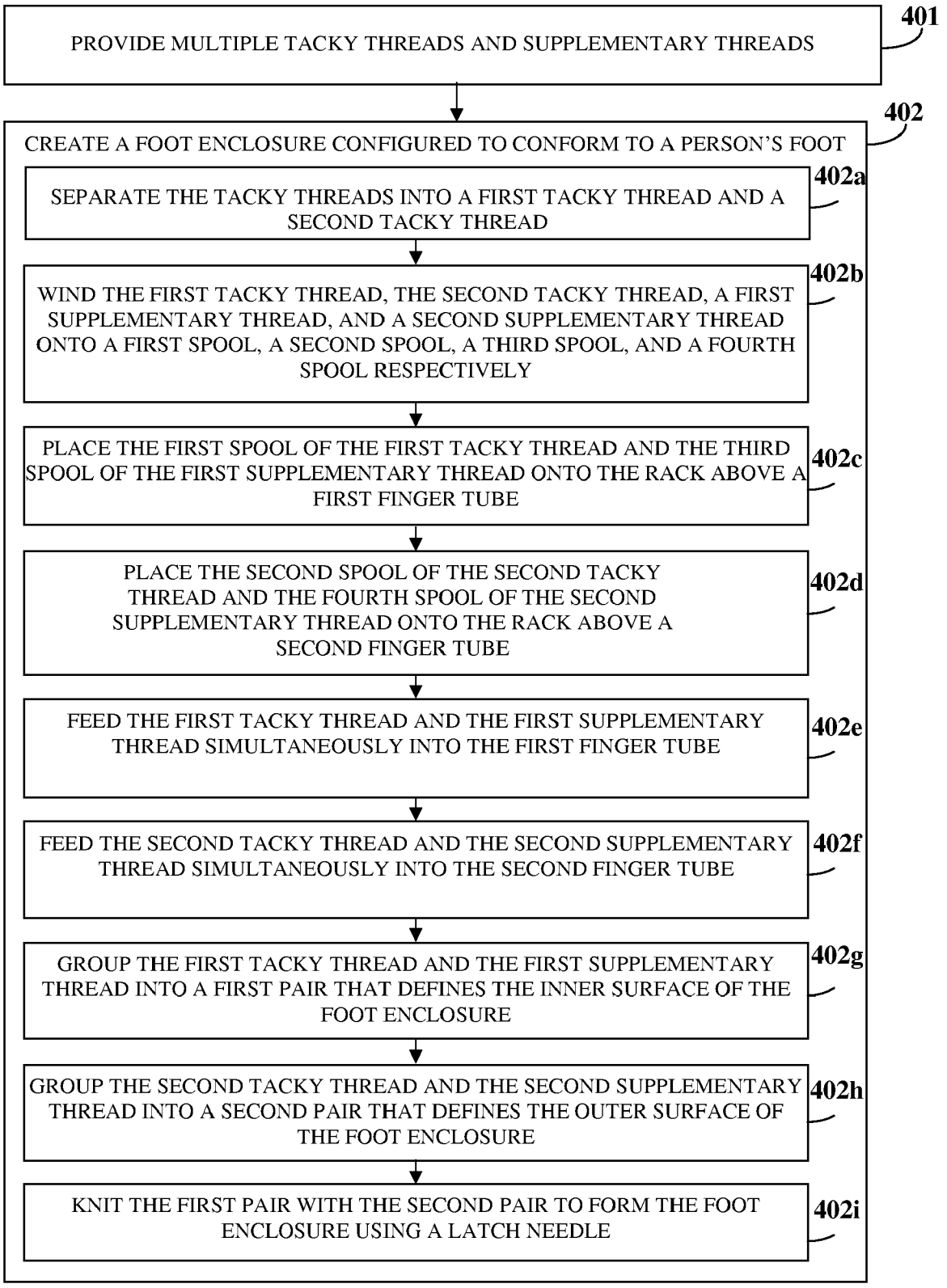

PROVIDE MULTIPLE TACKY THREADS AND SUPPLEMENTARY THREADS
401
CREATE A FOOT ENCLOSURE CONFIGURED TO CONFORM TO A PERSON'S FOOT
402
SEPARATE THE TACKY THREADS INTO A FIRST TACKY THREAD AND A SECOND TACKY THREAD
402a
WIND THE FIRST TACKY THREAD, THE SECOND TACKY THREAD, A FIRST SUPPLEMENTARY THREAD, AND A SECOND SUPPLEMENTARY THREAD ONTO A FIRST SPOOL, A SECOND SPOOL, A THIRD SPOOL, AND A FOURTH SPOOL RESPECTIVELY
402b
PLACE THE FIRST SPOOL OF THE FIRST TACKY THREAD AND THE THIRD SPOOL OF THE FIRST SUPPLEMENTARY THREAD ONTO THE RACK ABOVE A FIRST FINGER TUBE
402c
PLACE THE SECOND SPOOL OF THE SECOND TACKY THREAD AND THE FOURTH SPOOL OF THE SECOND SUPPLEMENTARY THREAD ONTO THE RACK ABOVE A SECOND FINGER TUBE
402d
FEED THE FIRST TACKY THREAD AND THE FIRST SUPPLEMENTARY THREAD SIMULTANEOUSLY INTO THE FIRST FINGER TUBE
402e
FEED THE SECOND TACKY THREAD AND THE SECOND SUPPLEMENTARY THREAD SIMULTANEOUSLY INTO THE SECOND FINGER TUBE
402f
GROUP THE FIRST TACKY THREAD AND THE FIRST SUPPLEMENTARY THREAD INTO A FIRST PAIR THAT DEFINES THE INNER SURFACE OF THE FOOT ENCLOSURE
402g
GROUP THE SECOND TACKY THREAD AND THE SECOND SUPPLEMENTARY THREAD INTO A SECOND PAIR THAT DEFINES THE OUTER SURFACE OF THE FOOT ENCLOSURE
402h
KNIT THE FIRST PAIR WITH THE SECOND PAIR TO FORM THE FOOT ENCLOSURE USING A LATCH NEEDLE
402i

FIG. 4

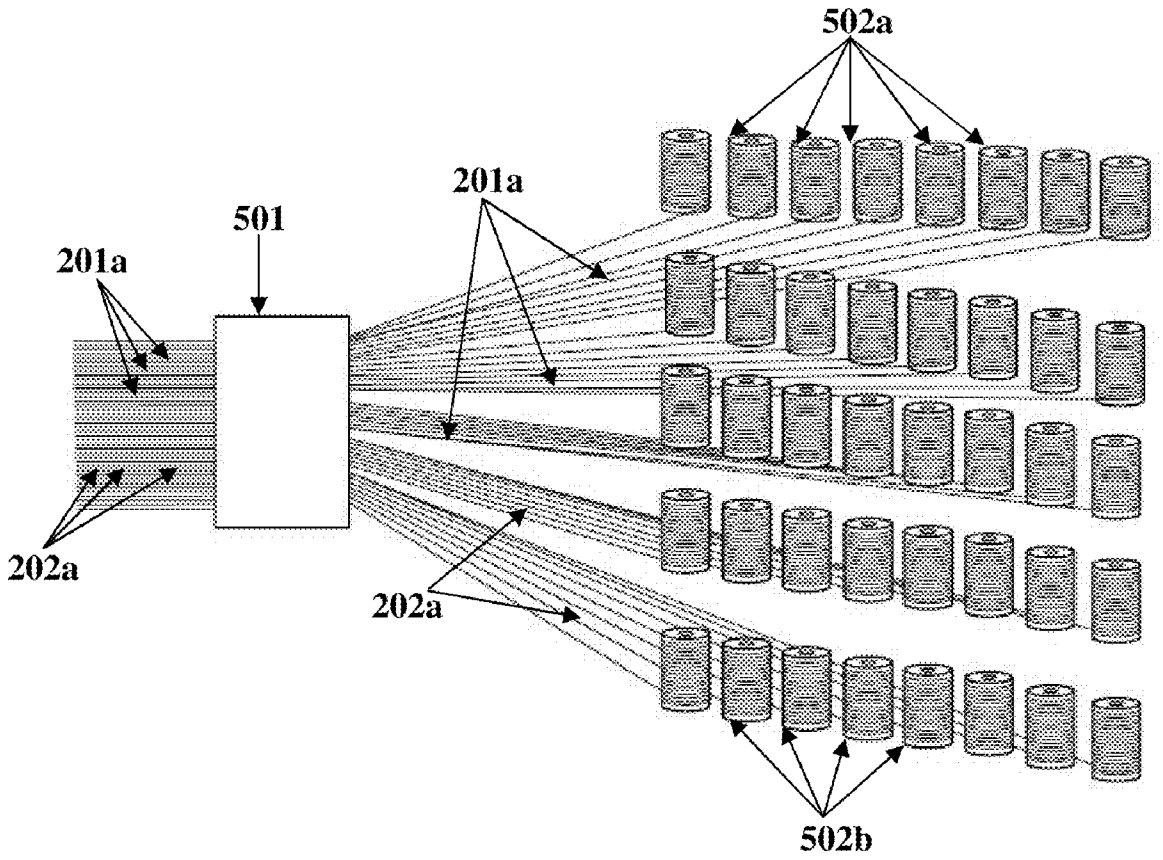


FIG. 5

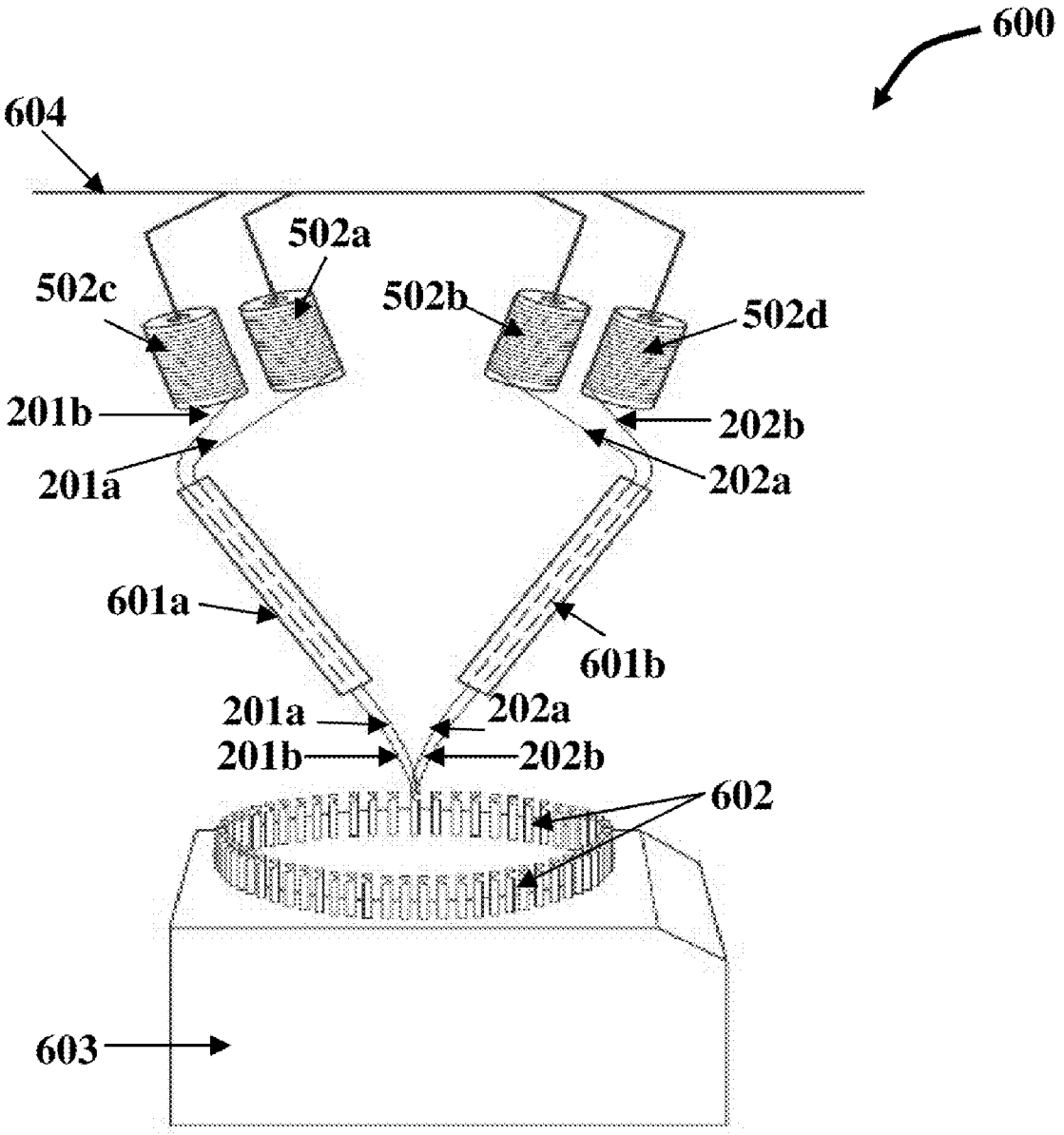

600
604
502a
502c
502b
502d
201b
202b
201a
202a
601a
601b
201a
202a
201b
202b
602
603

FIG. 6A

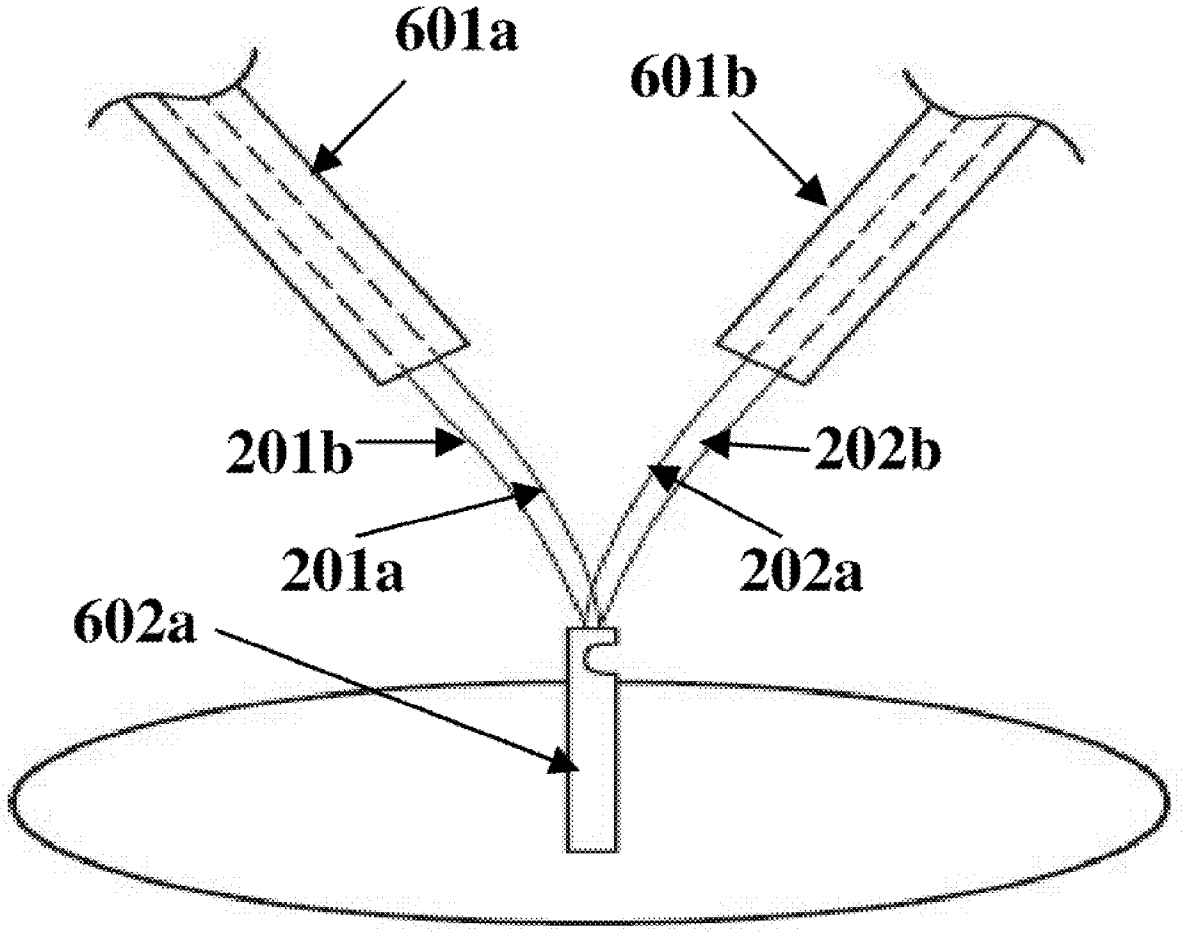


FIG. 6B

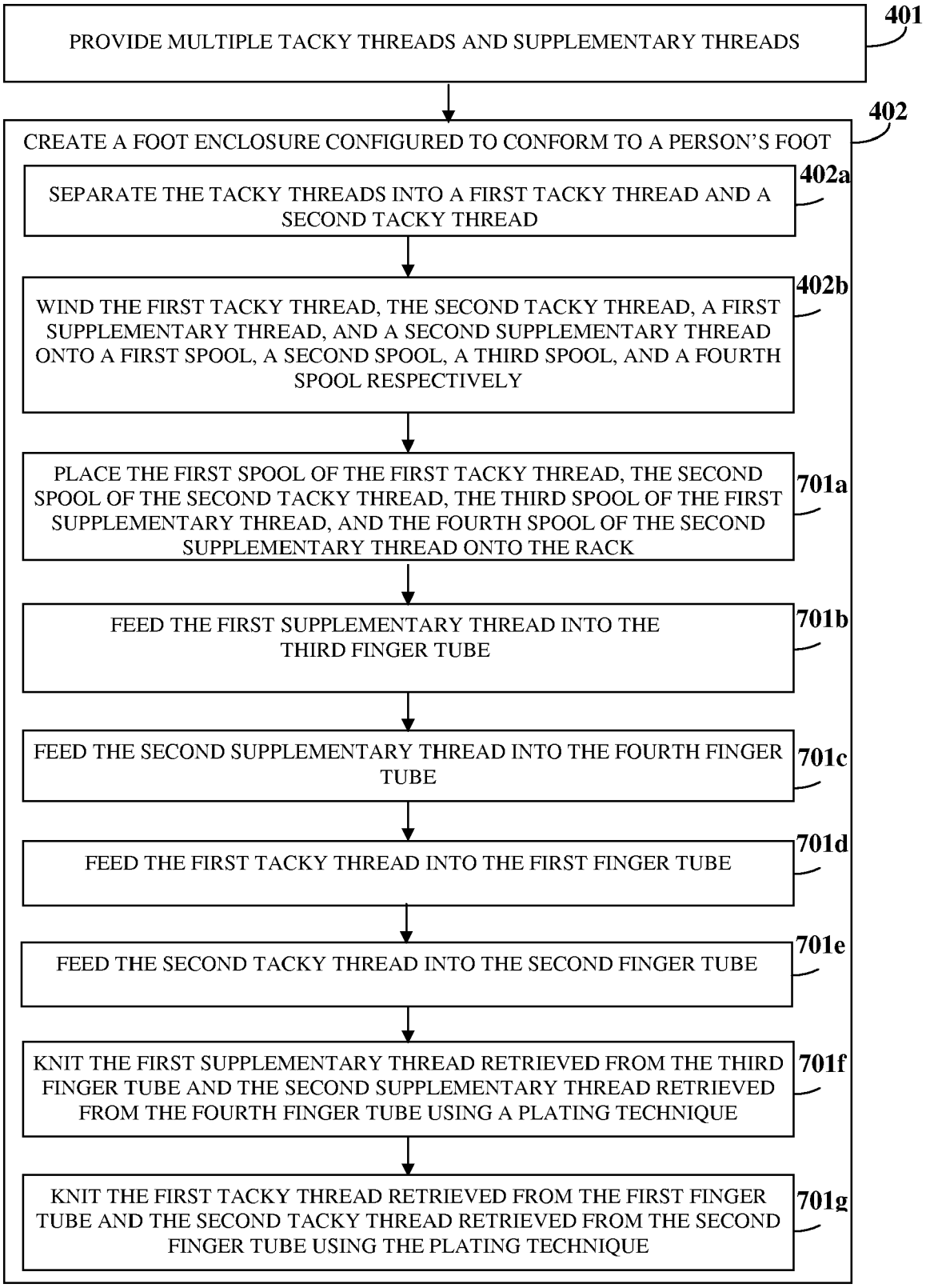

PROVIDE MULTIPLE TACKY THREADS AND SUPPLEMENTARY THREADS
401
CREATE A FOOT ENCLOSURE CONFIGURED TO CONFORM TO A PERSON'S FOOT
402
SEPARATE THE TACKY THREADS INTO A FIRST TACKY THREAD AND A SECOND TACKY THREAD
402a
WIND THE FIRST TACKY THREAD, THE SECOND TACKY THREAD, A FIRST SUPPLEMENTARY THREAD, AND A SECOND SUPPLEMENTARY THREAD ONTO A FIRST SPOOL, A SECOND SPOOL, A THIRD SPOOL, AND A FOURTH SPOOL RESPECTIVELY
402b
PLACE THE FIRST SPOOL OF THE FIRST TACKY THREAD, THE SECOND SPOOL OF THE SECOND TACKY THREAD, THE THIRD SPOOL OF THE FIRST SUPPLEMENTARY THREAD, AND THE FOURTH SPOOL OF THE SECOND SUPPLEMENTARY THREAD ONTO THE RACK
701a
FEED THE FIRST SUPPLEMENTARY THREAD INTO THE THIRD FINGER TUBE
701b
FEED THE SECOND SUPPLEMENTARY THREAD INTO THE FOURTH FINGER TUBE
701c
FEED THE FIRST TACKY THREAD INTO THE FIRST FINGER TUBE
701d
FEED THE SECOND TACKY THREAD INTO THE SECOND FINGER TUBE
701e
KNIT THE FIRST SUPPLEMENTARY THREAD RETRIEVED FROM THE THIRD FINGER TUBE AND THE SECOND SUPPLEMENTARY THREAD RETRIEVED FROM THE FOURTH FINGER TUBE USING A PLATING TECHNIQUE
701f
KNIT THE FIRST TACKY THREAD RETRIEVED FROM THE FIRST FINGER TUBE AND THE SECOND TACKY THREAD RETRIEVED FROM THE SECOND FINGER TUBE USING THE PLATING TECHNIQUE
701g

FIG. 7

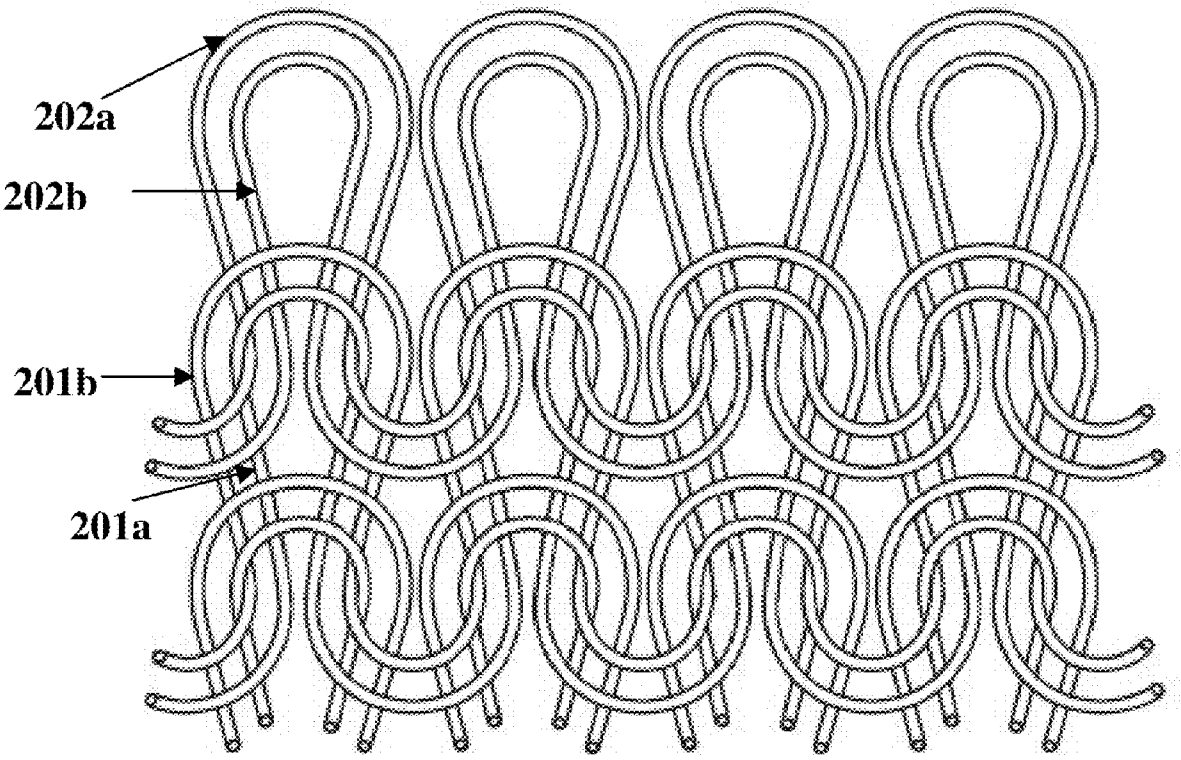


FIG. 8A

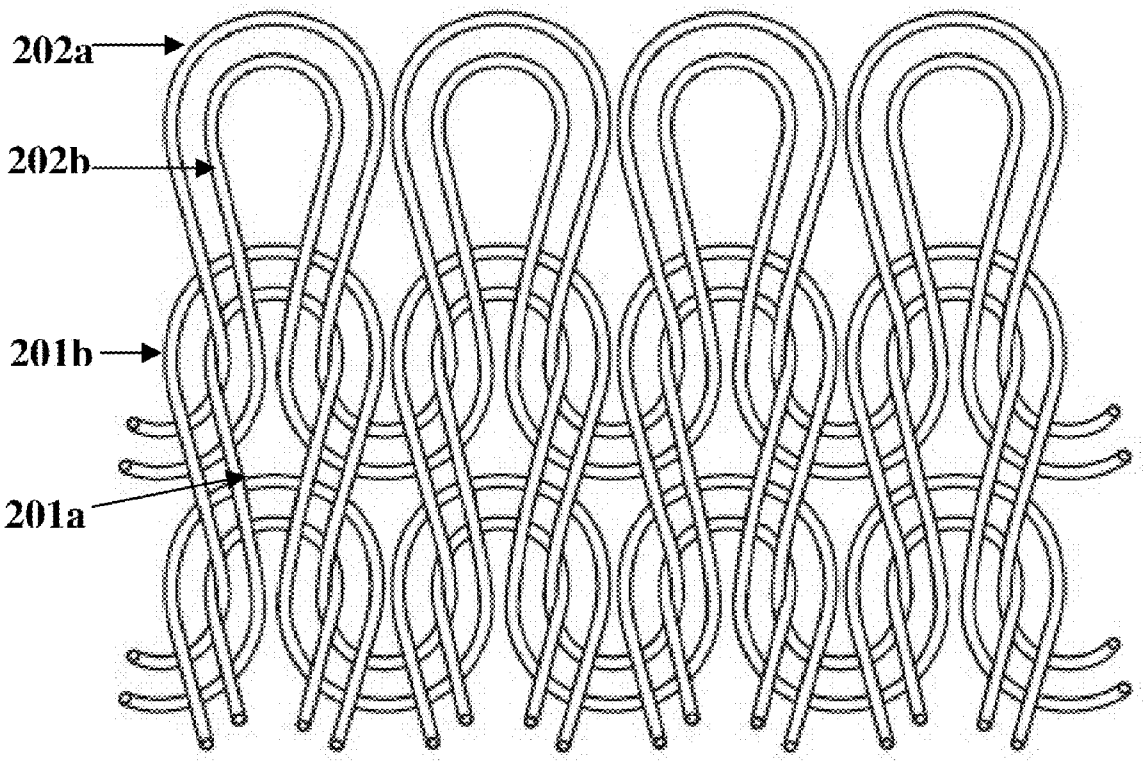


FIG. 8B

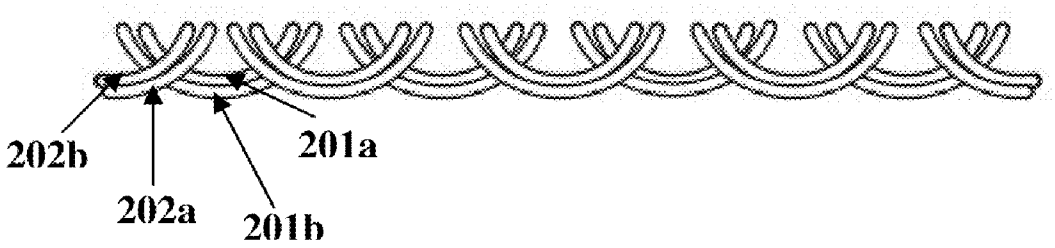


FIG. 8C

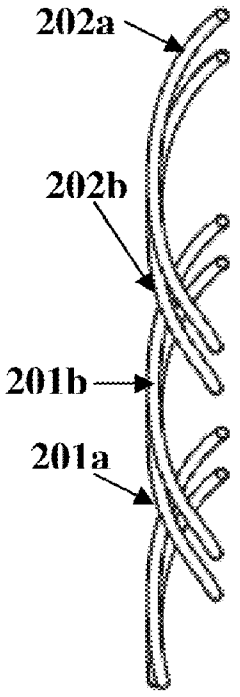


FIG. 8D

FOOT GRIPPING GARMENT

BACKGROUND

This invention, in general, relates to hosiery garments. More particularly, this invention relates to a sock for providing grip to the foot of a person when the person is engaged in a sports or other activity.

In sports that involve running, skating, etc. where the person engaged in the sports activity changes directions quickly, the person's foot tends to slip inside the sock and also the sock tends to slip inside the shoe due to lack of sufficient grip between the feet and the sock and between the foot and the shoe respectively. This slippage also causes a lack of response time when the person moves in the new direction. Lack of sufficient grip may also cause the person playing the sport to slip or roll inside their shoe and suffer injuries. For example, the foot of the person wearing the sock and shoe may slip at the base of the shoe during a sharp turn leading to an ankle injury.

A conventional sock is typically constructed by knitting natural or synthetic yarns or both, utilizing circular knitting machines. The yarn is wrapped or packaged on cones or spools by machinery and then shipped to knitting mills for production of the conventional sock. The yarn cones hang from racks overtop the circular knitting machines. The yarn is then fed through finger tubes and moved through a series of latch needles that knits the yarn together. The upper section of the conventional sock is completed as a circular opening. The opening at the bottom of the sock is completed to form a toe seam. The foot of the person wearing the shoe may slip within the conventional sock worn and may result in the foot moving inside the shoe and may also lead to injuries. Athletes, in various sports that require sharp turns of direction, purchase extremely tight shoes to avoid slipping. However, this does not provide a total solution and is also rather uncomfortable and unhealthy for the athletes' feet. The conventional sock thus constructed using yarn may not provide sufficient grip to the person's foot.

Hence there is an unmet need for a hosiery garment that provides grip to the person's foot and prevents the person's foot from slipping inside the hosiery garment and also prevents the hosiery garment from slipping inside the shoe.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing summary, as well as the following detailed description of the invention, is better understood when read in conjunction with the appended drawings. For the purpose of illustrating the invention, exemplary constructions of the invention are shown in the drawings. However, the invention is not limited to the specific methods and instrumentalities disclosed herein.

FIG. **1** illustrates a hosiery garment for providing grip to a foot of a person between the foot and the hosiery garment, and for simultaneously providing grip to the foot of the person between the hosiery garment and the inside of a footwear.

FIG. **2** illustrates a first pair comprising a first tacky thread and a first supplementary thread knitted with a second pair comprising a second tacky thread and a second supplementary thread, used in the construction of the hosiery garment.

FIG. **3** exemplarily illustrates multiple tacky threads packed in a box received from a tacky thread manufacturer.

FIG. **4** illustrates a method of constructing a hosiery garment for providing grip to a foot of a person between the foot and the hosiery garment, and for simultaneously providing grip to the foot of the person between the hosiery garment and inside of a footwear.

FIG. **5** exemplarily illustrates multiple tacky threads being separated and wound around spools.

FIGS. **6**A-**6**B exemplarily illustrate knitting of a first pair comprising a first tacky thread and a first supplementary thread with a second pair comprising a second tacky thread and a second supplementary thread.

FIG. **7** illustrates an embodiment for constructing a hosiery garment for providing grip to a foot of a person between the foot and the hosiery garment, and for simultaneously providing grip to the foot of the person between the hosiery garment and the inside of a footwear.

FIG. **8**A exemplarily illustrates a rear elevated view of the first pair comprising the first tacky thread and the first supplementary thread knitted with the second pair comprising the second tacky thread and the second supplementary thread.

FIG. **8**B exemplarily illustrates a top view of the first pair comprising the first tacky thread and the first supplementary thread knitted with the second pair comprising the second tacky thread and the second supplementary thread.

FIGS. **8**C-**8**D exemplarily illustrate side views of first pair comprising the first tacky thread and the first supplementary thread knitted with the second pair comprising the second tacky thread and the second supplementary thread.

DETAILED DESCRIPTION OF THE INVENTION

The hosiery garment disclosed herein prevents the foot from slipping inside the hosiery garment and also prevents the hosiery garment from slipping inside a footwear by adhering to the skin on the foot and the inside material of the footwear respectively by the use of a first tacky thread knit on an inner surface of a foot enclosure and a second tacky thread knit to an outer surface of the foot enclosure using a plating technique where a circular knitting machine knits one thread of a material or more than one threads of different materials to the inner surface of the foot enclosure, and one thread of a material or more than one threads of different materials to the outer surface of the foot enclosure.

The first tacky thread is exposed on the inner surface but not the outer surface of the foot enclosure. The second tacky thread is exposed on the outer surface but not the inner surface of the foot enclosure.

FIG. **1** illustrates a hosiery garment **100** for providing grip to a foot of a person between the foot and the hosiery garment **100**, and for simultaneously providing grip to the foot of the person between the hosiery garment **100** and the inside of a footwear. The footwear is, for example, shoes such as soccer shoes, football shoes, basketball shoes, tennis shoes, skate boots, ski boots, etc. The hosiery garment **100** comprises a foot enclosure **101**. The hosiery garment **100** is a fabric made of a traction, tacky yarn herein referred to as a first tacky thread **201***a* and a second tacky thread **202***a*, knitted with yarns made of a traditional material herein referred to as supplementary threads **201***b* and **202***b*. The first tacky thread **201***a* and the second tacky thread **202***a* are made of the same material. In an embodiment, the first tacky thread **201***a* and the second tacky thread **202***a* are made of different traction, tacky materials. The first tacky thread **201***a* and the second tacky thread **202***a* may, for example, be made, of a synthetic material such as a synthetic rubber, or a natural material such as latex also known as a natural rubber. In an embodiment, the tacky thread is an extruded vulcanized natural latex, gauge 68 and 75, made by the following company: Heveafil Sdn. Bdh.,

No. 1, Jalan Heveafil, 44300 Batang Kali, Ulu Selangor, Selangor Darul Ehsan, Malaysia.

The supplementary threads **201***b* and **202***b* may, for example, be made of materials such as cotton, nylon, Lycra®, acrylic, wool or other traditional materials used in the manufacture of socks. In an embodiment, the hosiery garment **100** may have a first type of supplementary thread **201***b* used for the inner surface **101***a* of the foot enclosure **101** and a second type of supplementary thread **202***b* used for the outer surface **101***b* of the foot enclosure **101**. For example, the first supplementary thread **201***b* used to make the inner surface **101***a* of the foot enclosure **101**, that accompanies the first tacky thread **201***a*, is made of cotton, while the second supplementary thread **202***b* used to make the outer surface **101***b* of the foot enclosure **101**, that accompanies the second tacky thread **202***a* is, for example, made of nylon. In an embodiment, the supplementary threads **201***b* and **202***b* used for the inner surface **101***a* and the outer surface **101***b* are made of the same material.

The first tacky thread **201***a* and the second tacky thread **202***a* are coated with an anti-adhesive material, for example, silicon, talcum powder, etc, to allow the free flow of the tacky threads **201***a* and **202***a* through the circular knitting machine **603**. Also, the first tacky thread **201***a* and the second tacky thread **202***a* are not intertwined or covered with an additional fabric or supplementary thread. The first tacky thread **201***a* and the second tacky thread **202***a* may have a thickness ranging from about 1 millimeter diameter to about 0.3 millimeters diameter. The tacky threads **201***a* and **202***a* may be packed in a box **301** as exemplarily illustrated in FIG. **3** and sent to a twisting mill to be wound into spools **502***a* and **502***b*. The box **301**, for example, contains approximately about 40 to 60 tacky threads **201***a* and **202***a* that are packaged side by side, to form a tape like appearance. The tacky threads **201***a* and **202***a*, for example, latex threads, in the box **301** are then separated into 40 to 60 tacky threads **201***a* and **202***a* and wound onto spools **502***a* and **502***b* or cones.

The foot enclosure **101** of the hosiery garment **100** is configured to conform to the person's foot. The foot enclosure **101** defines an inner surface **101***a* and an outer surface **101***b*. A stitch pattern, for example, plating, is used for creating the inner surface **101***a* and the outer surface **101***b* of the foot enclosure **101**. The inner surface **101***a* is proximal to the person's foot and distal to the footwear when the person is wearing the foot enclosure **101** and the footwear. The outer surface **101***b* is distal to the person's foot and proximal to the footwear when the person is wearing the foot enclosure **101** and the footwear.

A first pair **201** comprising the first tacky thread **201***a* and the first supplementary thread **201***b* defines the inner surface **101***a* of the foot enclosure **101**. The first tacky thread **201***a* is exposed on the inner surface **101***a* of the foot enclosure **101**. The first tacky thread **201***a* is not exposed on the outer surface **101***b* of the foot enclosure **101**. A second pair **202** comprising the second tacky thread **202***a* and the second supplementary thread **202***b* defines the outer surface **101***b* of the foot enclosure **101**. The second tacky thread **202***a* is exposed on the outer surface **101***b* of the foot enclosure **101**. The second tacky thread **202***a* is not exposed on the inner surface **101***a* of the foot enclosure **101**. The second pair **202** is knitted with the first pair **201** to define the foot enclosure **101**. The first pair **201** comprising the first tacky thread **201***a* and the first supplementary thread **201***b* knitted with the second pair **202** comprising the second tacky thread **202***a* and the second supplementary thread **202***b* are illustrated in FIG. **2**.

For purposes of illustration, the first pair **201** refers to threads **201***a* and **201***b* and a second pair **202** refers to threads **202***a* and **202***b*. However, the scope of the hosiery garment **100** disclosed herein is not limited to the first pair **201** and the second pair **202** but may be extended to include multiple pairs of multiple threads.

The inner surface **101***a* of the foot enclosure **101** defined by the first pair **201** provides grip to the person's foot between the foot and the hosiery garment **100**, and the outer surface **101***b* of the foot enclosure **101** defined by the second pair **202** simultaneously provides grip to the person's foot between the hosiery garment **100** and the inside of the footwear. The first pair **201** of threads and the second pair **202** of threads are knitted into the hosiery garment **100** such that the inner surface **101***a* of the foot enclosure **101** and the outer surface **101***b* of the foot enclosure **101** are made of the same traction, tacky material-supplementary material thread. In an embodiment, different traction, tacky material-supplementary thread combinations are used. The upper section **102** of the hosiery garment **100** may comprise any traditional fabric and has an opening at the top similar to traditional socks. The upper section **102** may be of different lengths.

FIG. **4** illustrates a method of constructing a hosiery garment **100** for providing grip to a foot of a person between the foot and the hosiery garment **100**, and for simultaneously providing grip to the foot of the person between the hosiery garment **100** and inside of a footwear.

Multiple tacky threads **201***a* and **202***a* and supplementary threads **201***b* and **202***b* are provided **401**. The tacky threads **201***a* and **202***a* are coated with an anti-adhesive material, for example, silicon, talcum powder, etc. to prevent gathering and tangling in the machinery. A foot enclosure **101** configured to conform to the person's foot is created **402**. To create the foot enclosure **101**, the tacky threads **201***a* and **202***a* are separated out of the box **301** as exemplarily illustrated in FIG. **3**. The tacky threads **201***a* and **202***a* are separated **402***a* into a first tacky thread **201***a* and a second tacky thread **202***a*. The box **301** of tacky threads **201***a* and **202***a* is shipped from the tacky thread supplier to a twisting mill. The tacky threads **201***a* and **202***a* in the box **301** may be wound into 40 different spools **502***a* and **502***b* or cones of tacky threads **201***a* and **202***a* in the twisting mill. FIG. **5** exemplarily illustrates multiple tacky threads **201***a* and **202***a* being separated and wound around spools **502***a* and **502***b*. The tacky threads **201***a* and **202***a* are then shipped to a hosiery mill for final production of the hosiery garment **100**. An inner surface **101***a* using the first tacky thread **201***a* and the first supplementary thread **201***b*, and an outer surface **101***b* using the second tacky thread **202***a* and the second supplementary thread **202***b*, conforming to the person's foot are then created as follows:

Consider an example where the first tacky thread **201***a*, the second tacky thread **202***a*, a first supplementary thread **201***b*, and a second supplementary thread **202***b* are wound **402***b* onto a first spool **502***a*, a second spool **502***b*, a third spool **502***c*, and a fourth spool **502***d* respectively. The first spool **502***a* of the first tacky thread **201***a* and the third spool **502***c* of the first supplementary thread **201***b* are placed **402***c* onto a rack **604** positioned on a knitting unit **600** above a first finger tube **601***a* as exemplarily illustrated in FIGS. **6**A-**6**B. The second spool **502***b* of the second tacky thread **202***a* and the fourth spool **502***d* of the second supplementary thread **202***b* are placed **402***d* onto the rack **604** positioned on the knitting unit **600** above a second finger tube **601***b* as exemplarily illustrated in FIGS. **6**A-**6**B.

To create the inner surface **101***a*, the first tacky thread **201***a* and the first supplementary thread **201***b* from the first spool **502***a* and the third spool **502***c* respectively are simultaneously fed **402***e* into the first finger tube **601***a* as exemplarily illustrated in FIGS. **6**A-**6**B. The first tacky thread **201***a* and the

first supplementary thread **201***b* are grouped **402***g* into a first pair **201** that defines the inner surface **101***a* of the foot enclosure **101**. The inner surface **101***a* forms a foot yarn.

To create the outer surface **101***b*, the second tacky thread **202***a* and the second supplementary thread **202***b* from the second spool **502***b* and the fourth spool **502***d* respectively are fed **402***f* simultaneously into the second finger tube **601***b* as exemplarily illustrated in FIGS. **6**A-**6**B. The second tacky thread **202***a* and the second supplementary thread **202***b* are grouped **402***h* into a second pair **202** that defines the outer surface **101***b* of the foot enclosure **101**.

The first pair **201** is knitted **402***i* with the second pair **202** to form the foot enclosure **101** using one or more of multiple latch needles **602** in the circular knitting machine **603** as illustrated in FIG. **6**A. The circular knitting machine **603** is, for example, a Lonati 454 machine, Lonati Co., Brescia, Italy. The technique of knitting one or more pairs **201** of threads **201***a* and **201***b* to the inside of the foot enclosure **101** and one or more pairs **202** of the same or different material threads **202***a* and **202***b* to the outside of the foot enclosure **101** is known as plating. The first tacky thread **201***a* of the first pair **201** is exposed on the inner surface **101***a*. The first tacky thread **201***a* of the first pair **201** is not exposed on the outer surface **101***b*. The second tacky thread **202***a* of the second pair **202** is exposed on the outer surface **101***b*. The second tacky thread **202***a* of the second pair **202** is not exposed on the inner surface **101***a*.

A latch needle **602***a* accepts the first pair **201** of threads and the second pair **202** of threads at the same time to form the inner surface **101***a* and the outer surface **101***b* of the foot enclosure **101** simultaneously as illustrated in FIG. **6**B. The gauge of the first tacky thread **201***a* and second tacky thread **202***a* may, for example, be in the range of about 1 millimeter diameter to about 0.3 millimeter diameter.

FIG. **7** illustrates an embodiment for constructing a hosiery garment **100** for providing grip to a person's foot between the foot and the hosiery garment **100**, and for simultaneously providing grip to the person's foot between the hosiery garment **100** and the inside of a footwear. Consider an example where there are four finger tubes active on the circular knitting machine **603**. The first spool **502***a* of the first tacky thread **201***a*, the second spool **502***b* of the second tacky thread **202***a*, the third spool **502***c* of the first supplementary thread **201***b*, and the fourth spool **502***d* of the second supplementary thread **202***b* are placed **701***a* onto the rack **604** as explained in the detailed description of FIG. **4**. In this embodiment, the first supplementary thread **201***b* is fed **701***b* into the third finger tube, the second supplementary thread **202***b* is fed **701***c* into the fourth finger tube, the first tacky thread **201***a* is fed **701***d* into the first finger tube, and the second tacky thread **202***a* is fed **701***e* into the second finger tube.

In this method of construction, the latch needles **602** simultaneously retrieve the first supplementary thread **201***b* and the second supplementary thread **202***b* from the third finger tube and the fourth finger tube respectively. The first supplementary thread **201***b* retrieved from the third finger tube and the second supplementary thread **202***b* retrieved from the fourth finger tube is knitted **701***f* using the plating technique, where the first supplementary thread **201***b* goes to the inner surface **101***a* of the foot enclosure **101** and the second supplementary thread **202***b* goes to the outer surface **101***b* of the foot enclosure **101**. The first supplementary thread **201***b* is exposed on the inner surface **101***a* of the foot enclosure **101** and the second supplementary thread **202***b* is exposed on the outer surface **101***b* of the foot enclosure **101**. After the first course of knitting is complete, the latch needles **602** on the circular knitting machine **603** simultaneously retrieve the first tacky thread **201***a* from the first finger tube and the second tacky thread **202***a* from the second finger tube simultaneously. The first tacky thread **201***a* and the second tacky thread **202***a* are then knitted **701***g* in the plating technique, where the first tacky thread **201***a* goes to the inner surface **101***a* of the foot enclosure **101** and the second tacky thread **202***a* goes to the outer surface **101***b* of the foot enclosure **101**. The first tacky thread **201***a* is exposed on the inner surface **101***a*. The first tacky thread **201***a* is not exposed on the outer surface **101***b*. The second tacky thread **202***a* is exposed on the outer surface **101***b*. The second tacky thread **202***a* is not exposed on the inner surface **101***a*. The first pair **201** comprising the first tacky thread **201***a* and the first supplementary thread **201***b* defines the inner surface **101***a* of the foot enclosure **101**. The second pair **202** comprising the second tacky thread **202***a* and the second supplementary thread **202***b* defines the outer surface **101***b* of the foot enclosure **101**.

The circular knitting machine **603** then continues to alternate on each course of knitting between the tacky threads **201***a* and **202***a* and the supplementary threads **201***b* and **202***b* until the hosiery garment **100** is complete. This technique is also not limited to alternating between the tacky threads **201***a* and **202***a* and supplementary threads **201***b* and **202***b* on each and every course. As an example, the tacky threads **201***a* and **202***a* may be knitted into the hosiery garment **100** on the third course, the fourth course, or any combination thereof.

Consider an example of constructing a hosiery garment **100**, for example, a sock that provides grip to a person's foot. Multiple tacky threads **201***a*, **202***a*, etc. for example, made of rubber are coated with an anti-adhesive material, for example, silicon, talcum powder, etc. or both to prevent the threads from gathering and tangling in the machinery.

A foot enclosure **101** configured to conform to the person's foot is then created in the circular knitting machine **603**. To create the foot enclosure **101**, the tacky threads **201***a*, **202***a*, etc. are separated into two separate spools **502***a* and **502***b* of tacky threads **201***a*, **202***a*, etc. using a twisting machine **501** as exemplarily illustrated in FIG. **5**. The spools **502***a* and **502***b* of tacky threads **201***a*, **202***a*, etc. are placed on a rack **604**. The rack **604** is positioned on a knitting unit **600** as illustrated in FIG. **6**A.

A single tacky thread **201***a* and a single strand of a first supplementary thread **201***b*, for example, cotton, are drawn simultaneously from the spools **502***a* and **502***c* into the first finger tube **601***a* for grouping into the first pair **201**. The first pair **201** defines the inner surface **101***a* of the foot enclosure **101**. The second tacky thread **202***a* and a single strand of the second supplementary thread **202***b*, for example, nylon, are drawn simultaneously from spools **502***b* and **502***d* into a second finger tube **601***b* for grouping into the second pair **202**.

The first pair **201** and the second pair **202** are knitted using a latch needle **602***a* as illustrated in FIG. **6**B. The latch needle **602***a* accepts the first pair **201** and the second pair **202** at the same time to form the inner surface **101***a* and the outer surface **101***b* simultaneously, for example, in the knitting pattern known as plating. The inner surface **101***a* formed by the first pair **201** comprising the first tacky thread **201***a* and the first supplementary thread **201***b* and the outer surface **101***b* formed by the second pair **202** comprising the second tacky thread **202***a* and second supplementary thread **202***b* provide grip to the person's foot within the foot enclosure **101** and also between the foot enclosure **101** and the shoe. The first pair **201** may be knitted with the second pair **202** in a twin-threaded pattern as exemplarily illustrated in FIGS. **8**A-**8**D. The rear elevated view, the top view, and the side views of the first pair **201** comprising the first tacky thread **201***a* and the first supplementary thread **201***b* knitted with the second pair **202** comprising the second tacky thread **202***a* and the second supplementary thread **202***b* are exemplarily illustrated in FIG. **8**A, FIG. **8**B, and FIGS. **8**C-**8**D respectively.

The foregoing examples have been provided merely for the purpose of explanation and are in no way to be construed as limiting of the present invention. While the invention has

been described with reference to various embodiments, it is understood that the words, which have been used herein, are words of description and illustration, rather than words of limitation. Further, although the invention has been described herein with reference to particular means, materials and embodiments, the invention is not intended to be limited to the particulars disclosed herein, rather, the invention extends to all functionally equivalent structures, methods and uses, such as are within the scope of the appended claims. Those skilled in the art, having the benefit of the teachings of this specification, may effect numerous modifications thereto and changes may be made without departing from the scope and spirit of the invention in its aspects.

I claim:

1. A hosiery garment for providing grip to a foot of a person between said foot and said hosiery garment, and for simultaneously providing grip to the foot of said person between said hosiery garment and inside of a footwear, comprising:

a foot enclosure, said foot enclosure being configured to conform to the foot of the person, said foot enclosure defining an inner surface and an outer surface, said inner surface being proximal to the foot of the person and distal to said footwear when the person is wearing said foot enclosure and the footwear, said outer surface being distal to the foot of the person and proximal to the footwear when the person is wearing said foot enclosure and the footwear;

a first pair, said first pair comprising a first tacky thread and a first supplementary thread, said first pair defining said inner surface of said foot enclosure, wherein said first tacky thread is exposed on said inner surface of said foot enclosure, and wherein said first tacky thread is not exposed on said outer surface of said foot enclosure; and

a second pair, said second pair comprising a second tacky thread and a second supplementary thread, said second pair defining said outer surface of said foot enclosure, wherein said second tacky thread is exposed on said outer surface of said foot enclosure, and wherein said second tacky thread is not exposed on said inner surface of said foot enclosure, and wherein said second pair is knitted with said first pair to define said foot enclosure;

whereby said inner surface of the foot enclosure defined by said first pair provides grip to the foot of the person between said foot and said hosiery garment, and said outer surface of the foot enclosure defined by said second pair simultaneously provides grip to the foot of the person between the hosiery garment and said inside of the footwear.

2. The hosiery garment of claim **1**, wherein said first tacky thread and said second tacky thread are made from tacky materials comprising synthetic rubber and natural latex.

3. The hosiery garment of claim **1**, wherein the first supplementary thread and the second supplementary thread are selected from materials comprising cotton, nylon, Lycra, and wool.

4. A method of constructing a hosiery garment for providing grip to a foot of a person between said foot and said hosiery garment, and for simultaneously providing grip to the foot of said person between said hosiery garment and inside of a footwear, comprising the steps of:

providing a plurality of tacky threads and supplementary threads;

creating a foot enclosure configured to conform to said foot of said person, said foot enclosure comprising an inner and an outer surface, wherein said step of creating said foot enclosure comprises the steps of:

separating said tacky threads into a first tacky thread and a second tacky thread;

winding said first tacky thread, said second tacky thread, a first supplementary thread, and a second supplementary thread onto a first spool, a second spool, a third spool, and a fourth spool respectively;

grouping said first tacky thread and said first supplementary thread into a first pair;

grouping said second tacky thread and said second supplementary thread into a second pair; and

knitting said first pair with said second pair to form said foot enclosure, said first pair defining said inner surface of said foot enclosure, said second pair defining said outer surface of said foot enclosure, said first tacky thread of said first pair is exposed on said inner surface, and wherein said first tacky thread of said first pair is not exposed on said outer surface, said second tacky thread of said second pair is exposed on said outer surface, and wherein said second tacky thread of said second pair is not exposed on said inner surface;

whereby said inner surface defined by said first pair provides grip to the foot of the person between said foot and said hosiery garment, and said outer surface defined by said second pair simultaneously provides grip to the foot of the person between the hosiery garment and said inside of the footwear.

5. The method of claim **4**, further comprising the step of placing said first spool of the first tacky thread, said second spool of the second tacky thread, said third spool of the first supplementary thread, and said fourth spool of the second supplementary thread on a rack positioned on a knitting unit prior to creation of the inner surface and the outer surface.

6. The method of claim **4**, further comprising the step of feeding the first tacky thread and the first supplementary thread from said first spool and said third spool respectively into a first finger tube.

7. The method of claim **4**, further comprising the step of feeding the second tacky thread and the second supplementary thread from said second spool and said fourth spool respectively into a second finger tube.

8. The method of claim **4**, wherein the inner surface and the outer surface are created by performing the steps of:

feeding the first tacky thread, the second tacky thread, the first supplementary thread, and the second supplementary thread into a first finger tube, a second finger tube, a third finger tube, and a fourth finger tube respectively;

knitting the first supplementary thread retrieved from said third finger tube and the second supplementary thread retrieved from said fourth finger tube using a plating technique, wherein the first supplementary thread is exposed on the inner surface and the second supplementary thread is exposed on the outer surface; and

knitting the first tacky thread retrieved from said first finger tube and the second tacky thread retrieved from said second finger tube using a plating technique, wherein the first tacky thread is exposed on the inner surface and the second tacky thread is exposed on the outer surface, wherein a first pair of the first tacky thread and the first supplementary thread define the inner surface, and a second pair of the second tacky thread and the second supplementary thread define the outer surface.

9. The method of claim **4**, wherein the tacky threads are coated with one of silicon and talcum powder.

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