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(54) **Elongate member for use with a trouser leg**

(57) The present disclosure refers to an elongate member (22) for preventing a trouser leg (14) from becoming caught between a wearer's shoe (12) and a wearer's foot (10). The elongate member (22) may be attached to the trouser leg (14) in a variety of ways. The elongate member (22) may be permanently or removably attached to the trouser leg (14). The elongate member (22) may be decorated, or may be designed to be not noticeable on the back of the trouser leg (14).

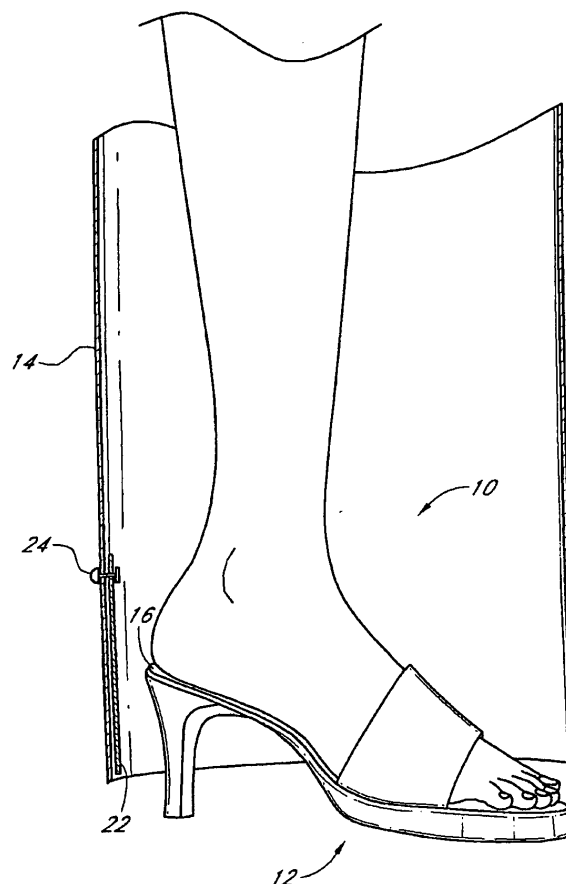


FIG. 1

Description

Field of the Invention

[0001] The present disclosure refers to a system and method for using an elongate member with a trouser leg, and, more particularly, for preventing the trouser leg from becoming engaged with a bed of a wearer's shoe.

Background

[0002] The action of walking may cause the bottom edge of a trouser leg to move in relation to the shoe of a wearer. Also, as the wearer walks, the heel of the foot of the wearer may rise off the shoe bed as the wearer takes a forward step. During the forward step, gravity and the extension of the leg of the wearer may cause the material of the trouser leg to come into contact with the back of the leg, and also the heel, of the wearer.

[0003] The combination of factors that the wearer's heel may rise off the bed of the wearer's shoe, and that the trouser leg may come into contact with the back of the wearer's leg and the wearer's heel may cause the trouser leg to become caught between the wearer's foot and a portion of the shoe.

[0004] Having a trouser leg caught between the wearer's foot and a portion of the wearer's shoe is unsightly and uncomfortable for the wearer.

[0005] The present disclosure is directed, at least in part, to improving or overcoming one or more of these disadvantages.

Summary of the Disclosure

[0006] The present disclosure describes a device (20) for preventing a trouser leg (14) from catching between a wearer's foot and a footbed of a shoe, comprising a bar (22) configured to be placed proximal to a lower portion of the trouser leg (14) and on a rear portion of a trouser leg, wherein the bar is rigid, wherein the bar has a length between 2 and 8 inches, and wherein the bar has a width of between 0.5 and 2 inches; an attachment element (24); and an attachment receiving member (32) located on a top portion of the bar (34), wherein the attachment element is configured to engage the attachment receiving member through a material of the trouser leg.

[0007] The present disclosure further describes a trouser assembly for preventing a trouser leg (14) from being caught between a wearer's foot and the shoe bed of an open-back shoe, comprising a trouser leg (14), wherein the trouser leg is composed of fabric, and wherein the trouser leg has a lower end, and an elongate member receiving portion (42, 44) located proximal to a lower portion of the trouser leg and on a rear portion of the trouser leg, wherein the elongate member receiving portion is configured to receive a rigid elongate member (22) having a length of between 2 and 8 inches and a width of between 0.5 and 2 inches, wherein the reinforcement

member receiving portion is located on the inside surface of the fabric of the trouser leg, and wherein the reinforcement receiving member is located at a distance along the longitudinal axis of the trouser leg from the lower end of the trouser leg such that the reinforcement member does not protrude from the lower end of the trouser.

[0008] The present disclosure still further describes a method of preventing a trouser leg (14) from becoming caught between a shoe bed (16) and a wearer's foot (10), comprising positioning an elongate member (22) proximal to a bottom of the trouser leg and on a rear portion of the trouser leg such that the elongate member does not extend below the bottom of the trouser leg, and wherein the elongate member has a length between 2 and 8 inches and a width of between 0.5 and 2 inches; coupling the elongate member to the trouser leg on at least a top portion of the elongate member (34), orientating the elongate member so that the length is to be oriented substantially in a vertical direction.

[0009] Other features and aspects of this disclosure will be apparent from the following description and the accompanying drawings.

Brief Description of the Drawings

[0010] The accompanying drawings, which are incorporated herein and constitute part of the specification, illustrate exemplary embodiments of the disclosure and, together with the description, serve to explain the principles of the disclosure. In the drawings:

[0011] Fig. 1 is a pictorial view of an exemplary embodiment of the present disclosure, with the trouser leg cut-away,

[0012] Fig. 2 is a cutaway view of an exemplary embodiment of the present disclosure,

[0013] Fig. 3 is a cutaway view of an exemplary embodiment of the present disclosure,

[0014] Fig. 4 is a cutaway view of an exemplary embodiment of the present disclosure,

[0015] Fig. 5 is a pictorial view of an exemplary embodiment of the present disclosure,

[0016] Fig. 6 is a cutaway view of an exemplary embodiment of the present disclosure,

[0017] Fig. 7 is a cutaway view of an exemplary embodiment of the present disclosure,

[0018] Fig. 8 is a cutaway view of an exemplary embodiment of the present disclosure, and

[0019] Fig. 9 is a cutaway view of an exemplary embodiment of the present disclosure.

Detailed Description

[0020] An elongate member located proximal to the end of a trouser leg may prevent the trouser leg from becoming caught between the wearer's foot and the wearer's shoe.

[0021] Figure 1 shows a wearer's foot 10 wearing a shoe 12. The wearer is also wearing a trouser leg 14. An

elongate member 22 is shown located proximal to a bottom portion of the trouser leg 14, and attached to the trouser leg 14 by an attachment element 24.

[0022] As shown in Fig. 1, the elongate member 22 is attached to the trouser leg 14 by a pin-type device; however, the elongate member 22 may be attached to the trouser leg 14 in a number of different ways, discussed further with respect to Figs. 2-9.

[0023] The shoe 12 of the wearer has a footbed 16. The heel of the foot 10 may rise off the footbed 16 when the wearer takes a forward step with the opposite foot 10. The shoe 12 of Fig. 1 is a backless shoe, i.e., a shoe having no back covering the wearer's heel in a vertical direction. However, the teachings of the present disclosure may also be applicable to shoes having a back covering at least a portion of the wearer's heel in the vertical direction.

[0024] The elongate member 22 may be approximately 2-8 inches long, 0.5 - 2 inches wide, and approximately 0.25 inches thick. The elongate member 22 may be composed of wood, plastic or metal.

[0025] The material and dimensions of the elongate member 22 may be chosen to provide different advantages. For instance, if the wearer is wearing a shoe 12 having a very high heel, a longer elongate member 22 may provide advantageous results in preventing the trouser leg 14 from becoming caught between the wearer's heel and the wearer's shoe 12. Alternatively, if the wearer is wearing a shoe with no heel, or a shoe that is not backless, the length of the elongate member 22 may be smaller and may provide satisfactory results. The elongate member 22 may preferably be located on the trouser leg 14 such that it extends sufficiently above and below the footbed 16 and/or back of the shoe 12 so that the trouser leg 14 is prevented from becoming caught between the wearer's foot 10 and the wearer's shoe 12. Further, the material and weight of the elongate member 22 may be varied based on the weight and material of the trouser leg 14.

[0026] It may be desirable that the elongate member be very thin to reduce the visibility of the elongate member 22. Alternatively, the elongate member 22 may be ornamental and may extend below the bottom edge of the trouser leg 14. Further, the elongate member 22 may have a cross section other than rectangular, for instance, the elongate member may have a circular, oval, or other shape of cross section.

[0027] The elongate member 22 may maintain the shape of the trouser leg 14 by contacting the trouser leg 14. Thus, the straight shape of the elongate member 22 in the vertical direction may keep the trouser leg straight, and may prevent the trouser leg 14 from being caught between the wearer's heel and the wearer's shoe.

[0028] As shown in Fig. 2, the elongate member 22 may be attached to the trouser leg 14 with a pin 28 having a pin head 36 and a finding 30. The pin 28 may be pushed through the material of the trouser leg 14 from the exterior of the trouser leg 14 and may pass through a hole 32

located on the elongate member 22. A finding 30 may be placed over the end of the pin 28 to keep the pin from coming out of the hole 32. The elongate member may be in this way fixed to the trouser leg 14.

[0029] Depending on the weight of the elongate member 22, it is possible that the weight of the elongate member 22 suspended from the pin 28 may cause the elongate member 22 to maintain a substantially vertical orientation while the wearer is standing or sitting.

[0030] The pin 28 may be located at the top end of the elongate member 22, or on another location on the elongate member 22. A single pin 28 or a plurality of pins 28 may be used to fix the elongate member 22 to the trouser leg 14. As shown in Fig. 3, a pin 28 may be located in at least two positions on the elongate member 22, and may keep the elongate member 22 from moving or rotating significantly in relation to the trouser leg 14.

[0031] The pin head 36 may be covered in fabric so that it is less noticeable on the back of the trouser leg 14. The pin head 36 may also be painted or colored so that it is less noticeable on the back of the trouser leg 14. The pin head 36 may be manufactured in a variety of colors and patterns, and may be interchangeable with the elongate member 22 such that the wearer may select the pin head 36 so that it is less noticeable on the back of the trouser leg 14. Alternatively, the pin head 36 may be designed to match a particular pair of trousers. This may provide a discreet method for keeping the trouser leg 14 from becoming caught between the wearer's shoe 12 and the wearer's foot 10.

[0032] Alternatively, the pin head 36 may be ornamented, to provide an aesthetically pleasing look on the back of the trouser leg 14. Further, if the elongate member 22 is attached to the trouser leg 14 in more than one location, the elongate member 22 could also be located on the outside of the trouser leg 14. The elongate member may also be ornamented to provide an aesthetically pleasing look on the back of the trouser leg 14.

[0033] The pin head 36 and/or elongate member 22 may be ornamented in a number of ways. For instance, the pin head 36 and/or elongate member 22 may be colored or patterned, may be embedded with rhinestones or jewels, may have the appearance of a metal rivet or a jean rivet, or may be metallic or another other texture or material. Further, the shape of the pin head 36 and the elongate member 22 may be ornamental. For instance, the pin head 36 may be spherical, disc-shaped, may have the appearance of a number or letter, or any other symbol or shape. Similarly, the shape of the elongate member 22 may be helical, circular, faceted, or another shape.

[0034] As shown in Fig. 4, the elongate member 22 may be attached to the trouser leg 14 by thread 42 passing through a hole located on the elongate member 22. The elongate member 22 may be attached in one location, or in multiple locations. For example, in Fig. 4, the elongate member is sewn with thread 42 to the trouser leg 14 at a top portion of the elongate member 22 and a bottom portion of the elongate member 22.

[0035] As shown in Fig. 5, the elongate member 22 may be inserted into a pocket 44 located on the trouser leg 14. The pocket 44 may be located on the interior or exterior of the trouser leg 14. The pocket 44 may be attached to the trouser leg 14 using thread or another type of attachment method such as adhesive or rivets. The pocket 44 may have an opening on a top portion so that the elongate member 22 may be inserted into the pocket 44, and may be later exchanged or replaced if desired. Alternatively, the elongate member 22 may be permanently secured on all sides of the pocket 44 such that the elongate member 22 may not be removed or may not come out of the pocket 44 during walking or washing of the trousers.

[0036] As shown in Fig. 6, the elongate member 22 may be attached to the trouser leg 14 with a fabric hook and loop fastener 46, 47, for example, Velcro®. The fabric hook and loop fasteners 46, 47 may be located on a portion of the elongate member 22 and a portion of the trouser leg 14, and may have different sizes and shapes relative to each other.

[0037] As shown in Fig. 7, the elongate member 22 may be attached to the trouser leg 14 with a magnet 48 which attracts a magnetic portion 49 of the elongate member. The magnetic portion 49 of the elongate member may be a magnetized area of a metal elongate member 22, or may be a separate magnetic element attached to the elongate member, for example, with adhesive.

[0038] As shown in Fig. 8, the elongate member 22 may also be attached to the trouser leg 14 with a hook and eye device. The eye 52 may have an oval or rectangular shape, the cross section of which is visible in Fig. 8. One portion of the eye 52 may be attached to the elongate member 22, and the opposite portion of the eye 52 may be placed in the hook 50 to attach the elongate member 22 to the trouser leg 14. The hook 50 is shown in Fig. 8 as being attached to the trouser leg 14 with thread 42 and the eye 52 is shown as being attached to the elongate member 22 with thread 42; however, the two pieces may be switched so that the hook 50 is attached to the elongate member, and may alternatively be singly formed with the elongate member, and the eye 52 may be attached to the pant leg. The eye may be composed of metal, or may also be composed of fabric or thread.

[0039] As shown in Fig. 9, the elongate member 22 may also be attached to the trouser leg 14 with a hinged pin 53, for example, a safety pin. The hinged pin 53 may have a pin hinge portion 54, which is attached to the elongate member 22 and which is configured to engage the hinged pin 53 so that the hinged pin 53 can rotate around the pin hinge portion 54. A pin hook 55 may be located on another location on the elongate member 22, such that, when the hinged pin 53 passes through the material of the trouser leg 14 at a first location, and again through the material of the trouser leg 14 in a second location located at a distance from the first location, the hinged pin 53 may be engaged by the hook 55 such that the hinged pin 53 is secured by the hook 55. The hinged

pin 53 may be oriented in a horizontal or vertical orientation when it is attached to the trouser leg 14.

[0040] It will be apparent to those skilled in the art that various modifications and variations can be made in the disclosed system without departing from the spirit or scope of the invention. Other embodiments of the invention will be apparent to those skilled in the art from consideration of the specification and practice of the invention disclosed herein. It is intended that the specification and example be considered as exemplary only.

It is explicitly stated that all features disclosed in the description and/or the claims are intended to be disclosed separately and independently from each other for the purpose of original disclosure as well as for the purpose of restricting the claimed invention independent of the composition of the features in the embodiments and/or the claims. It is explicitly stated that all value ranges or indications of groups of entities disclose every possible intermediate value or intermediate entity for the purpose of original disclosure as well as for the purpose of restricting the claimed invention, in particular as limits of value ranges.

LIST OF ELEMENTS

TITLE: Elongate Member for Use with a Trouser Leg

[0041]

10	foot
12	shoe
14	trouser leg
16	footbed
22	elongate member
24	attachment element
28	pin
30	finding
32	hole
36	head (pin)
38	shaft
42	thread
44	pocket
46, 47	fabric hook and loop fastener
48	magnet
49	magnetic portion
50	hook
52	eye
53	hinged pin
54	pin hinge
55	pin hook

Claims

1. A device (20) for preventing a trouser leg (14) from catching between a wearer's foot and a footbed of a shoe, comprising:

- a bar (22) configured to be placed proximal to a lower portion of the trouser leg (14) and on a rear portion of a trouser leg, wherein the bar is rigid, wherein the bar has a length between 2 and 8 inches, and wherein the bar has a width of between 0.5 and 2 inches; an attachment element (24); and an attachment receiving element (32) located on the bar (34), wherein the attachment element is configured to engage the attachment receiving element through a material of the trouser leg.
2. The device of claim 1, wherein the bar can pivot around a point of engagement of the attachment element and the attachment receiving element, such that the weight of the bar causes the length of the bar to be substantially vertically oriented when the wearer is standing.
3. The device of claims 1 or 2, wherein the bar is composed of wood, plastic, or metal.
4. The device of any of claims 1-3, further comprising:
a pin finding (30), wherein the attachment element is a pin, wherein the pin has a pin shaft (38) and a pin head (36) attached to a first end of the pin shaft, wherein the attachment receiving element comprises a hole, wherein the pin shaft is received by the attachment receiving element, and wherein the pin finding is adapted to couple to an second end of the pin shaft.
5. The device of claim 4, wherein the pin head is ornamented.
6. The device of any of claims 1-3, further comprising at least a second attachment element (24) and at least a second attachment receiving element (32) located on the bar.
7. The device of claim 1, wherein the attachment receiving element is a magnetized material, and wherein the attachment element is a magnetized material.
8. A trouser assembly for preventing a trouser leg (14) from being caught between a wearer's foot and the shoe bed of an open-back shoe, comprising:
a trouser leg (14), wherein the trouser leg is composed of fabric,
- and wherein the trouser leg has a lower end, an elongate member receiving portion (42, 44) located proximal to a lower portion of the trouser leg and on a rear portion of the trouser leg, wherein the elongate member receiving portion is configured to receive a rigid elongate member (22) having a length of between 2 and 8 inches and a width of between 0.5 and 2 inches, wherein the elongate member receiving portion is located on the inside surface of the fabric of the trouser leg, and wherein the elongate member receiving portion is located at a distance along the longitudinal axis of the trouser leg from the lower end of the trouser leg such that the elongate member does not protrude from the lower end of the trouser.
9. The trouser assembly of claim 8, wherein the elongate member receiving portion is a pocket.
10. The trouser assembly of claim 8, wherein the elongate member receiving portion is one of at least one hook receiving member and at least one hook.
11. The trouser assembly of claim 8, wherein the elongate member receiving portion is a fabric hook and loop fastener.
12. A method of preventing a trouser leg (14) from becoming caught between a shoe bed (16) and a wearer's foot (10), comprising:
positioning an elongate member (22) proximal to a bottom of the trouser leg and on a rear portion of the trouser leg such that the elongate member does not extend below the bottom of the trouser leg, and wherein the elongate member has a length between 2 and 8 inches and a width of between 0.5 and 2 inches; coupling the elongate member to the trouser leg on at least a top portion of the elongate member (34), orientating the elongate member so that the length is to be oriented substantially in a vertical direction.
13. The method of claim 12, wherein the elongate member is coupled to the trouser leg by thread (42).
14. The method of claim 12, wherein the elongate member is coupled to the trouser leg by passing a pin (24) through a hole (32) located on a top portion of an elongate member such that a pin head (36) located on a first end of the pin is located on an outer surface of the trouser leg, and coupling a pin finding (30) to

the a second end of the pin.

15. The method of claim 12, wherein the elongate member is coupled to the trouser by inserting the elongate member into a pocket located proximal to the bottom of the trouser leg. 5

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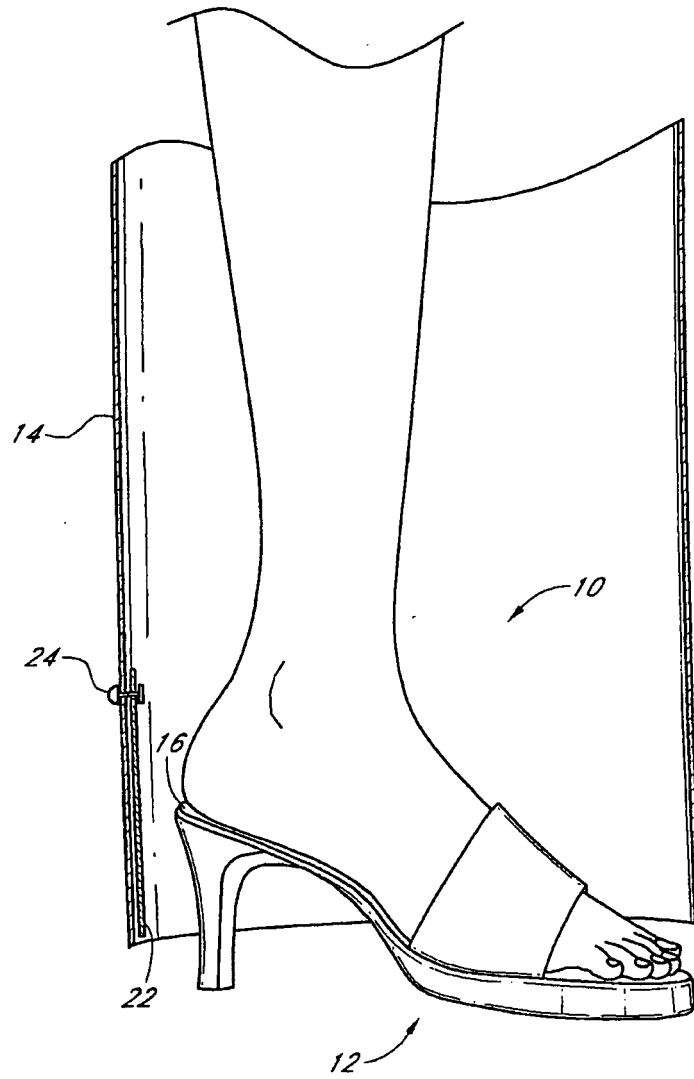


FIG. 1

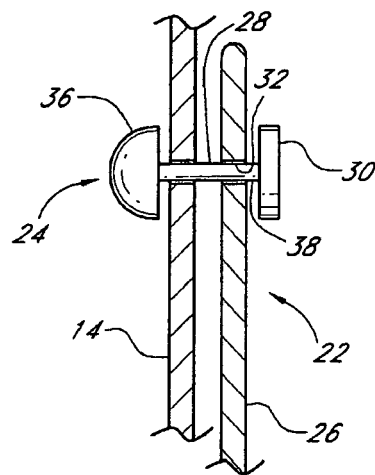


FIG. 2

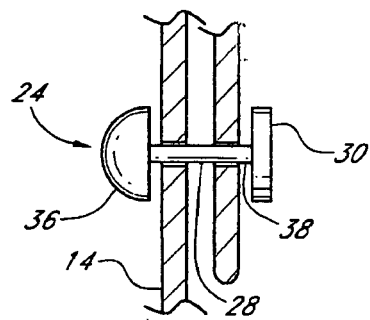
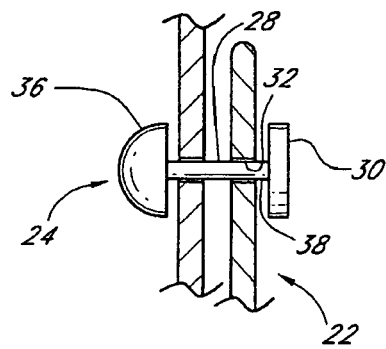


FIG. 3

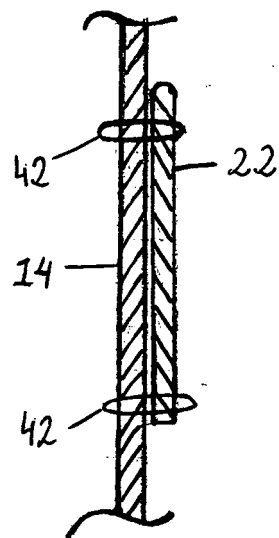


FIG. 4

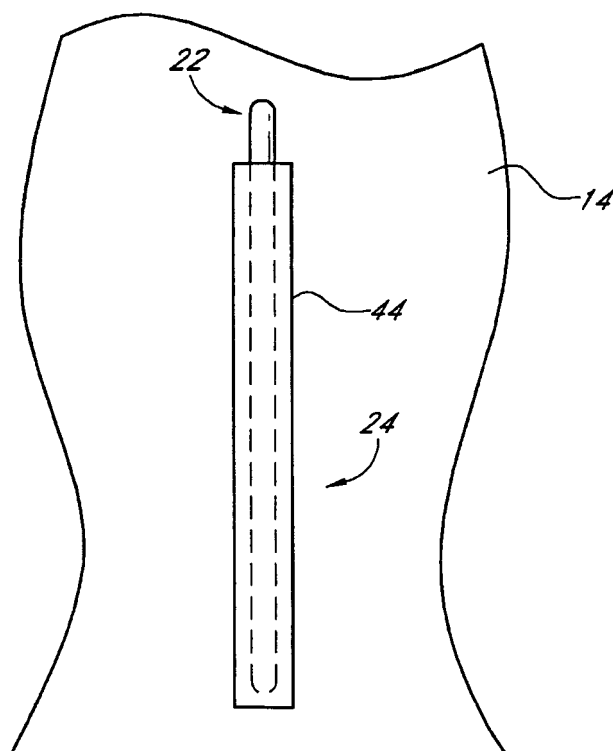


FIG. 5

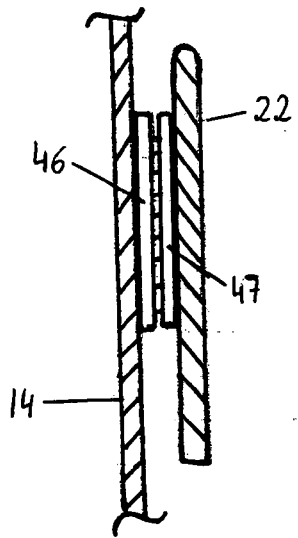


FIG. 6

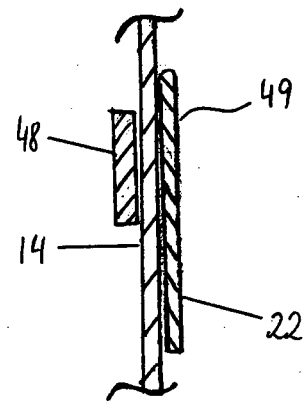


FIG. 7

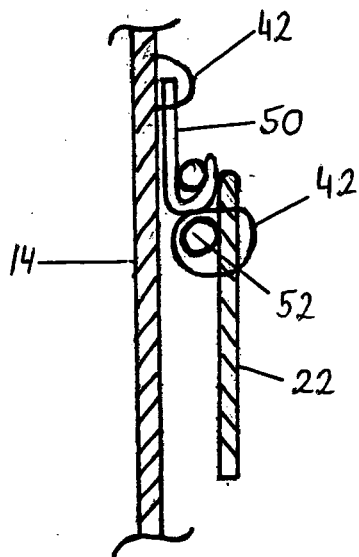


FIG. 8

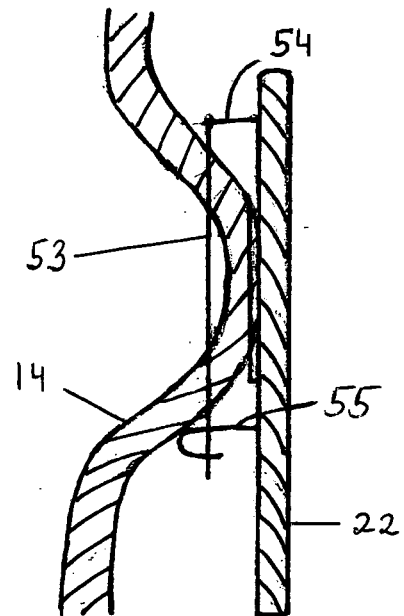


FIG. 9