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(54) **GARMENT CONNECTION SYSTEM**

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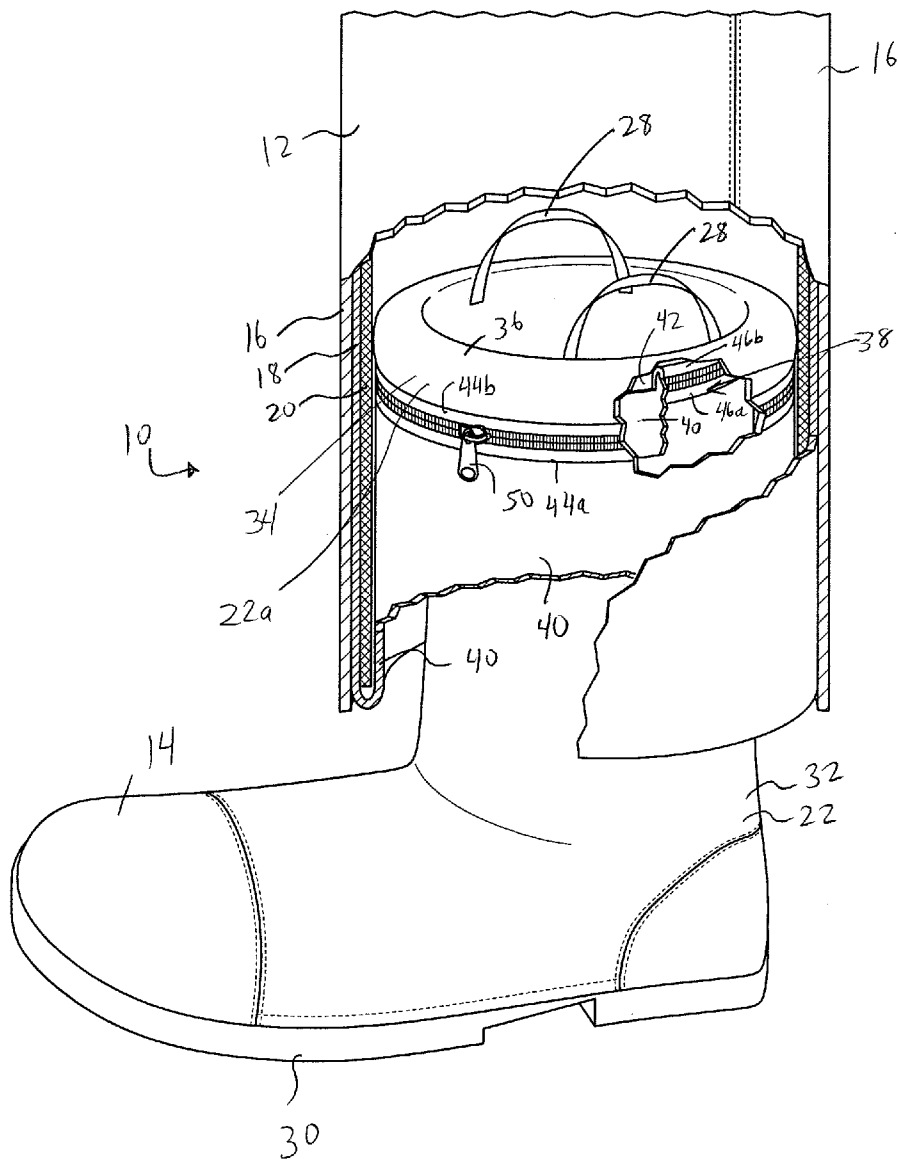
(57) **ABSTRACT**

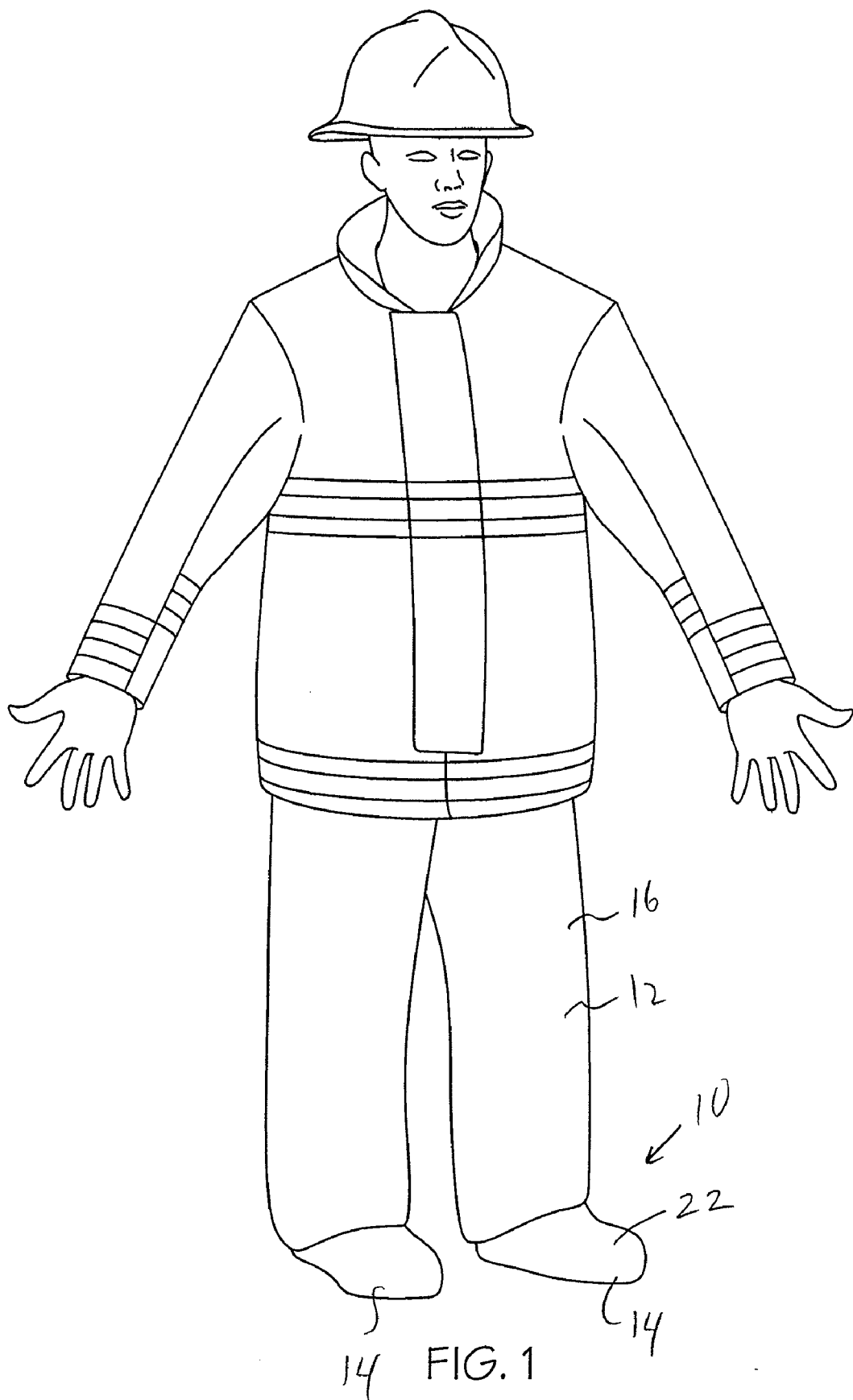
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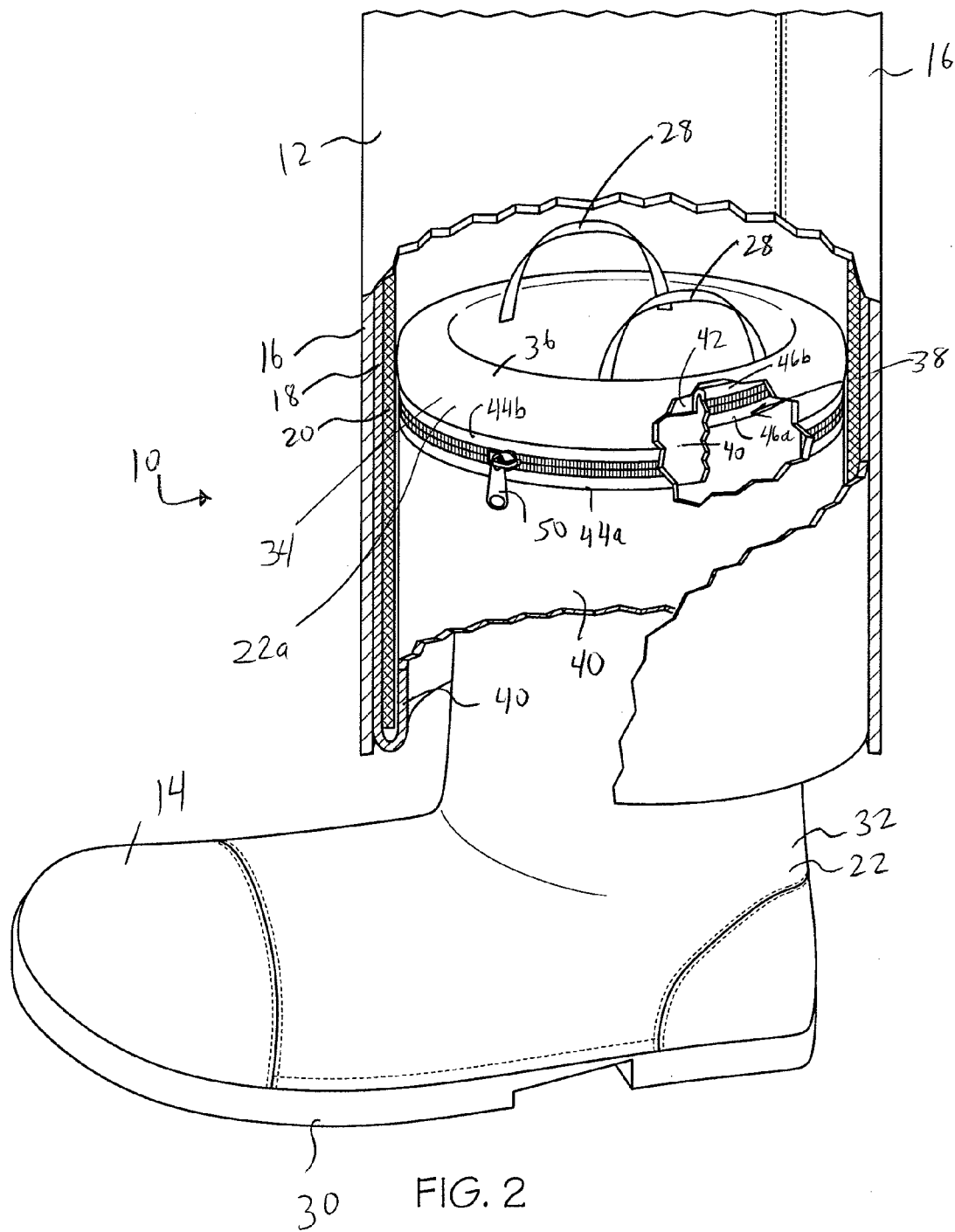
A boot and trousers system including a pair of trousers, the trousers including a barrier material which is generally impermeable to undesired fluids. The system further includes a boot having a body and an upper portion, wherein the upper portion is folded about the body of the boot to define a flap portion. The barrier material is releasably coupled to the flap portion and to the body.

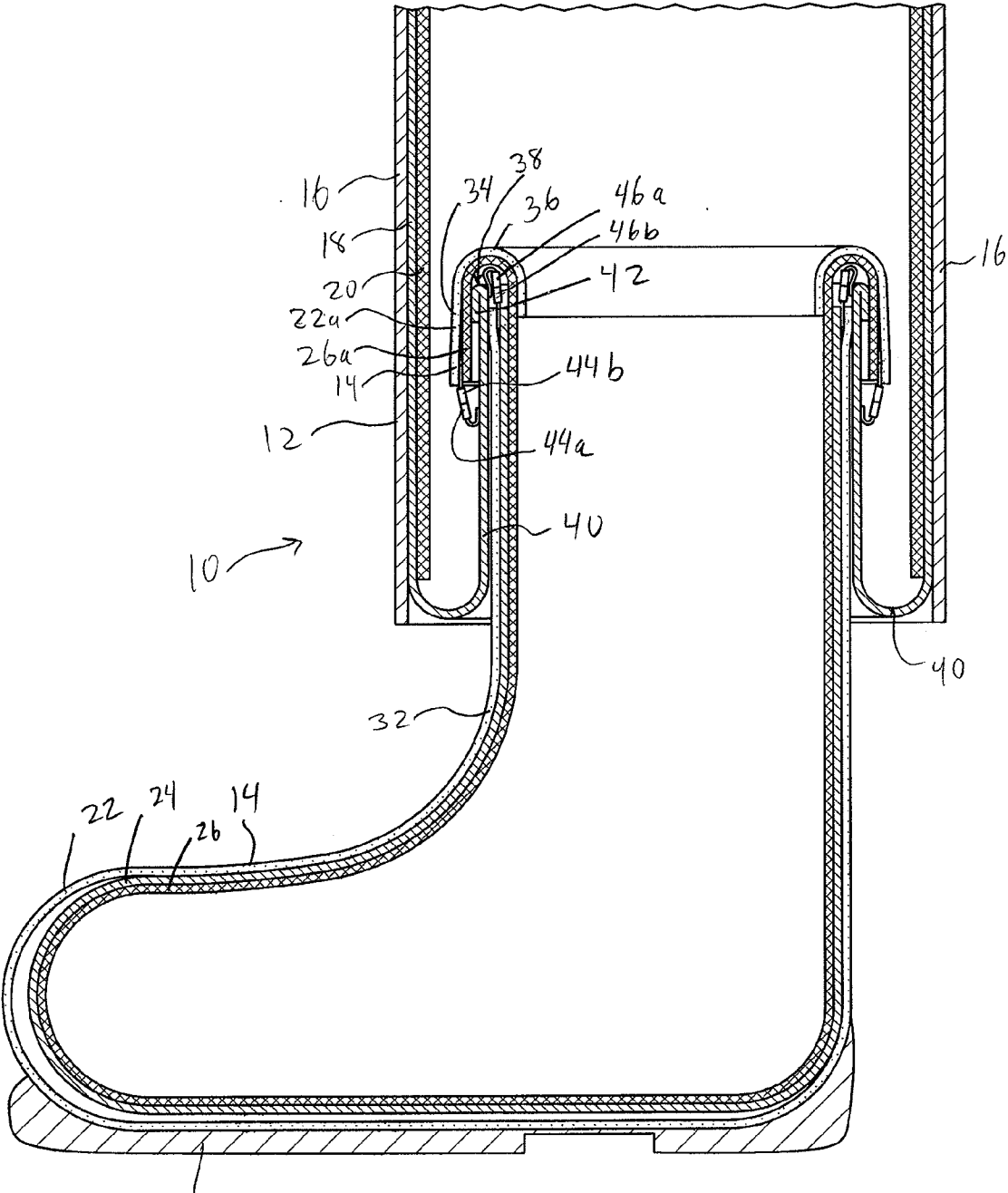
**Related U.S. Application Data**

(60) Provisional application No. 61/239,232, filed on Sep. 2, 2009.









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FIG. 3

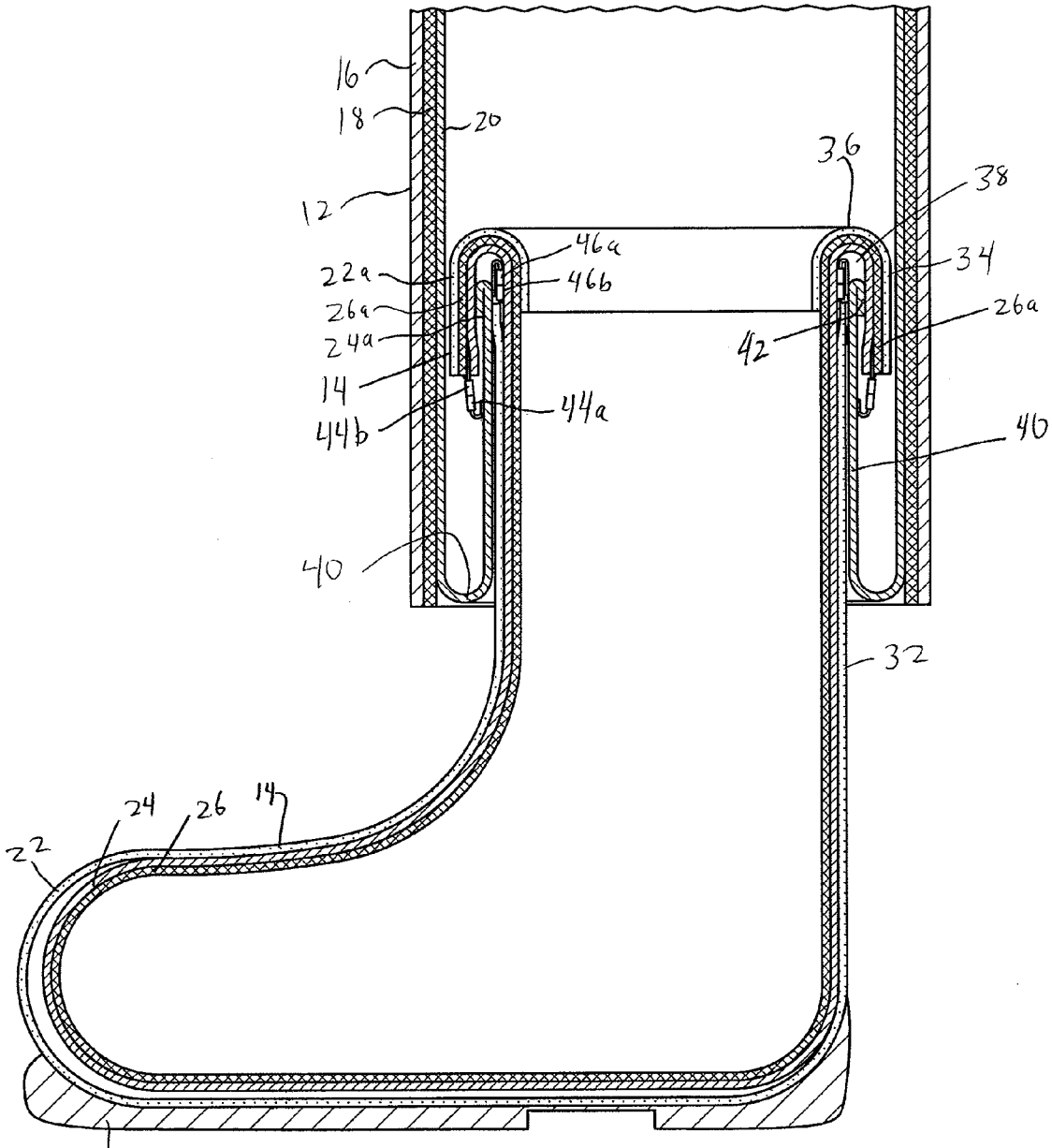
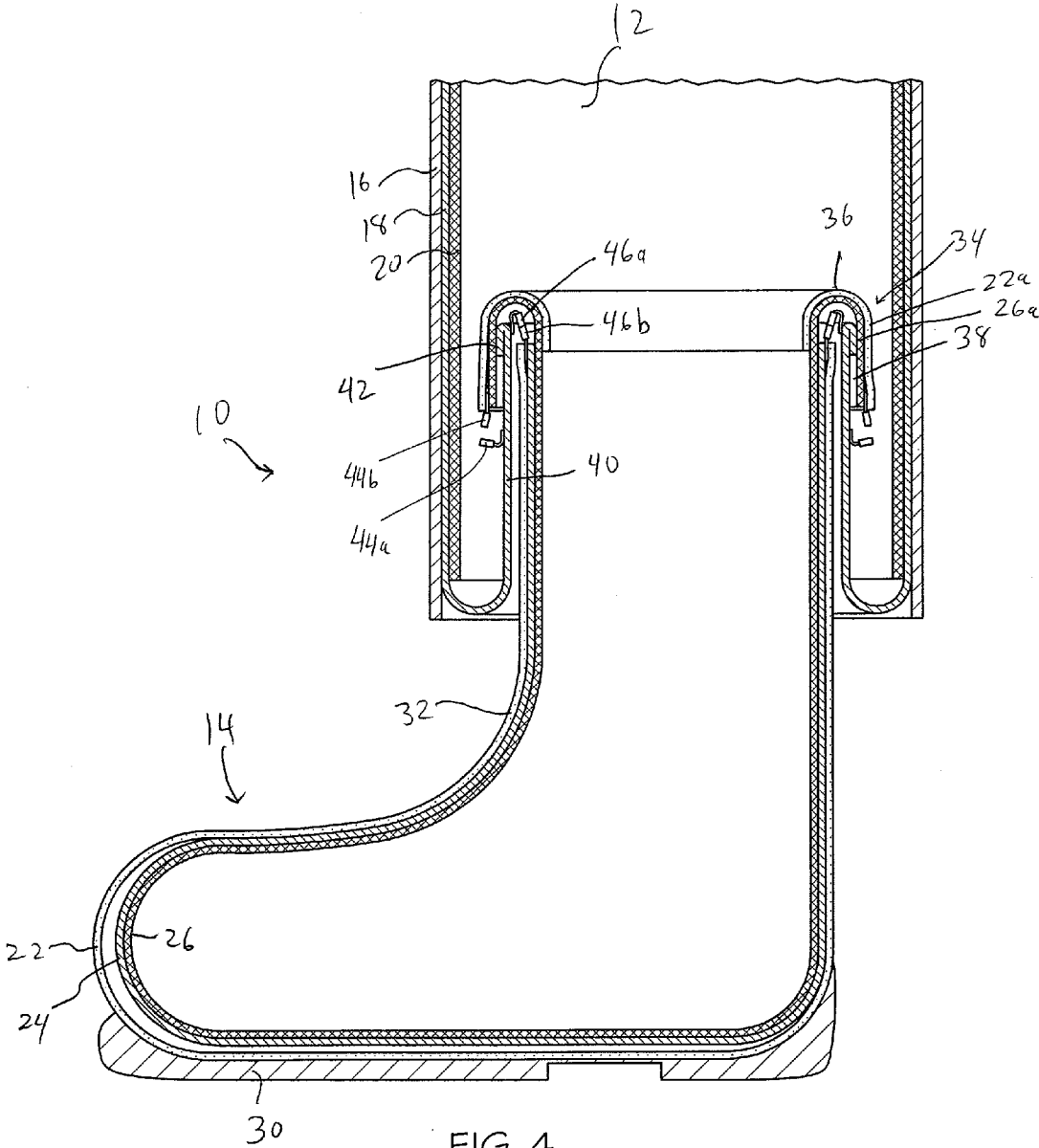


FIG. 3A



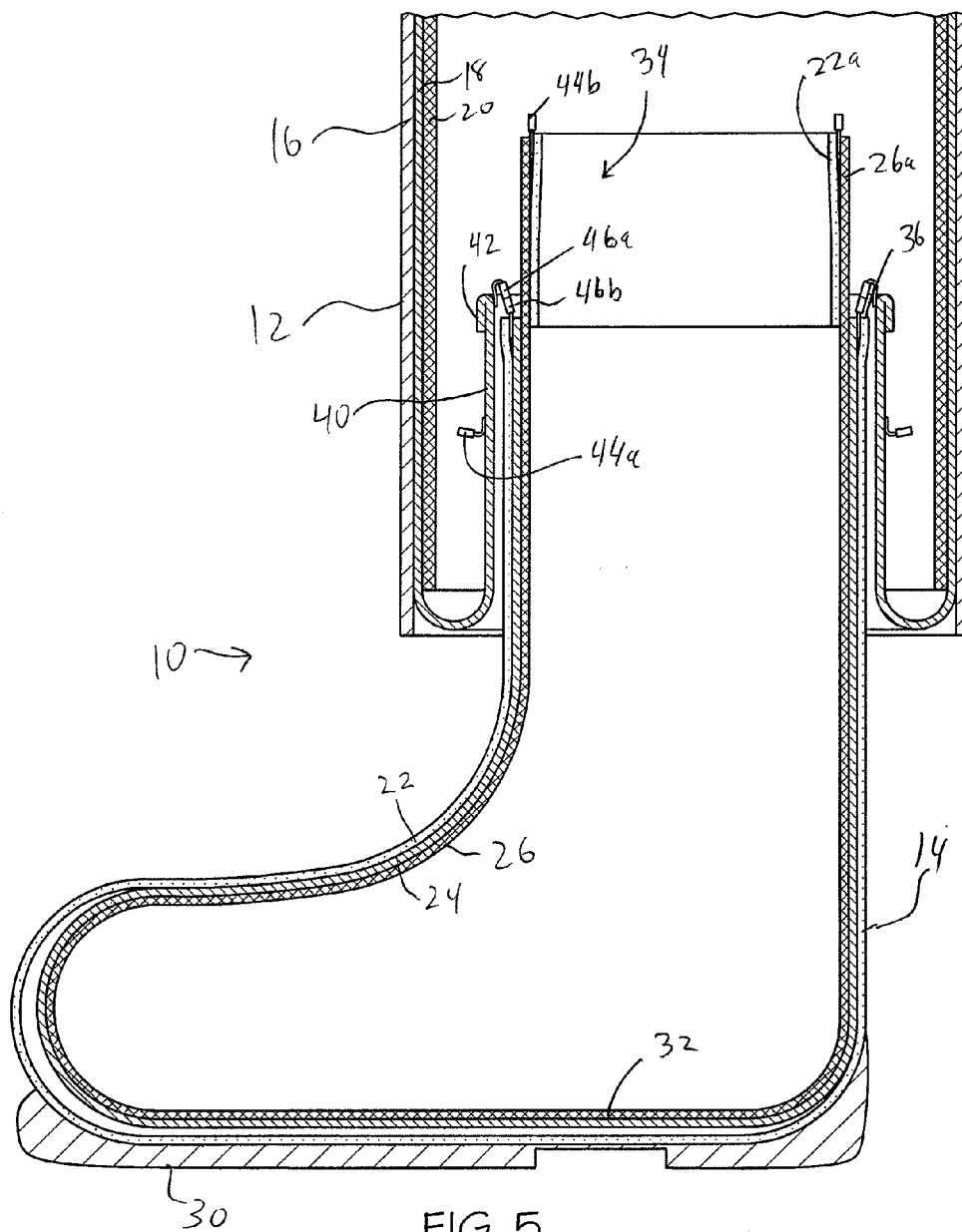


FIG. 5

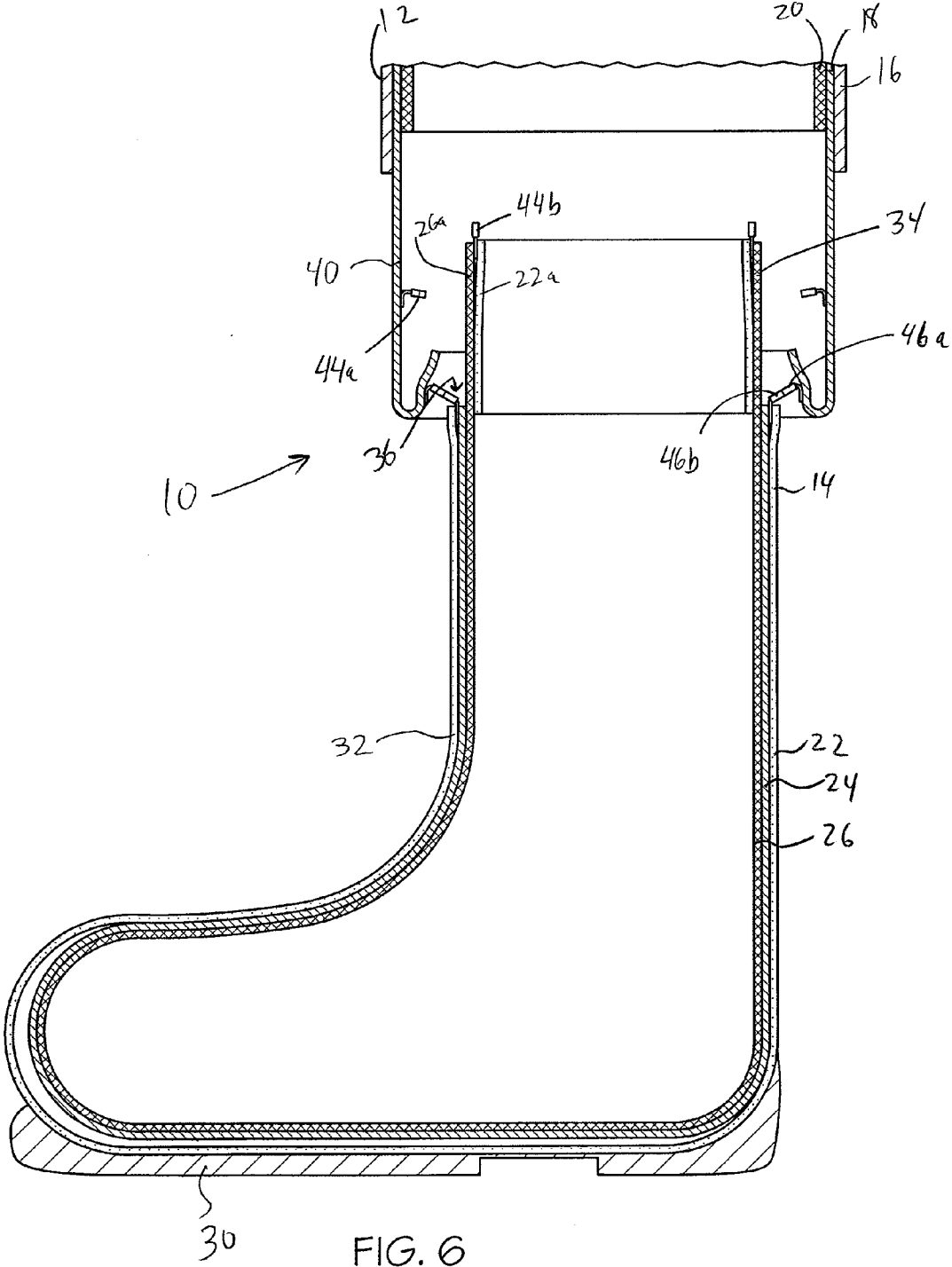


FIG. 6



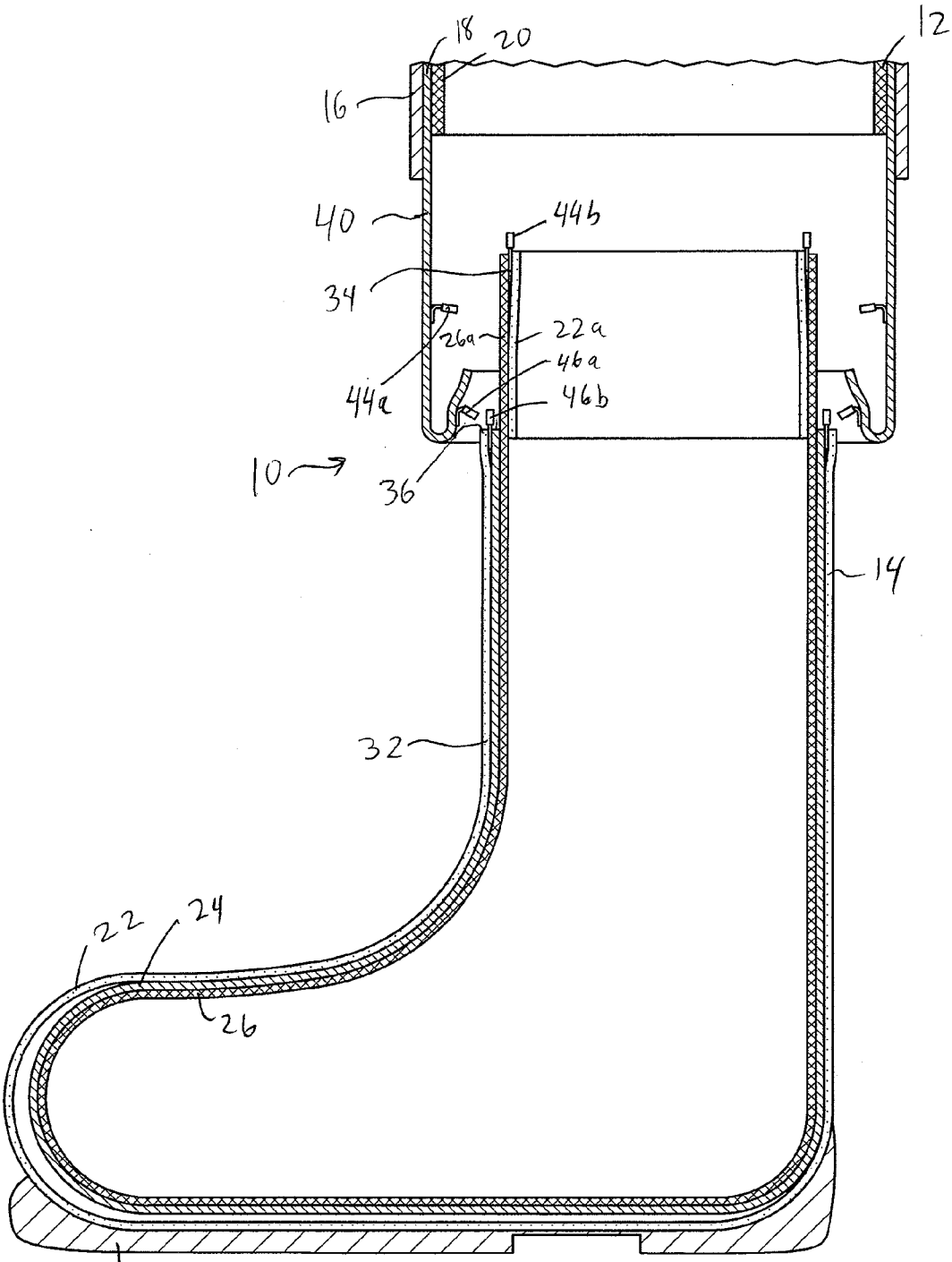


FIG. 7

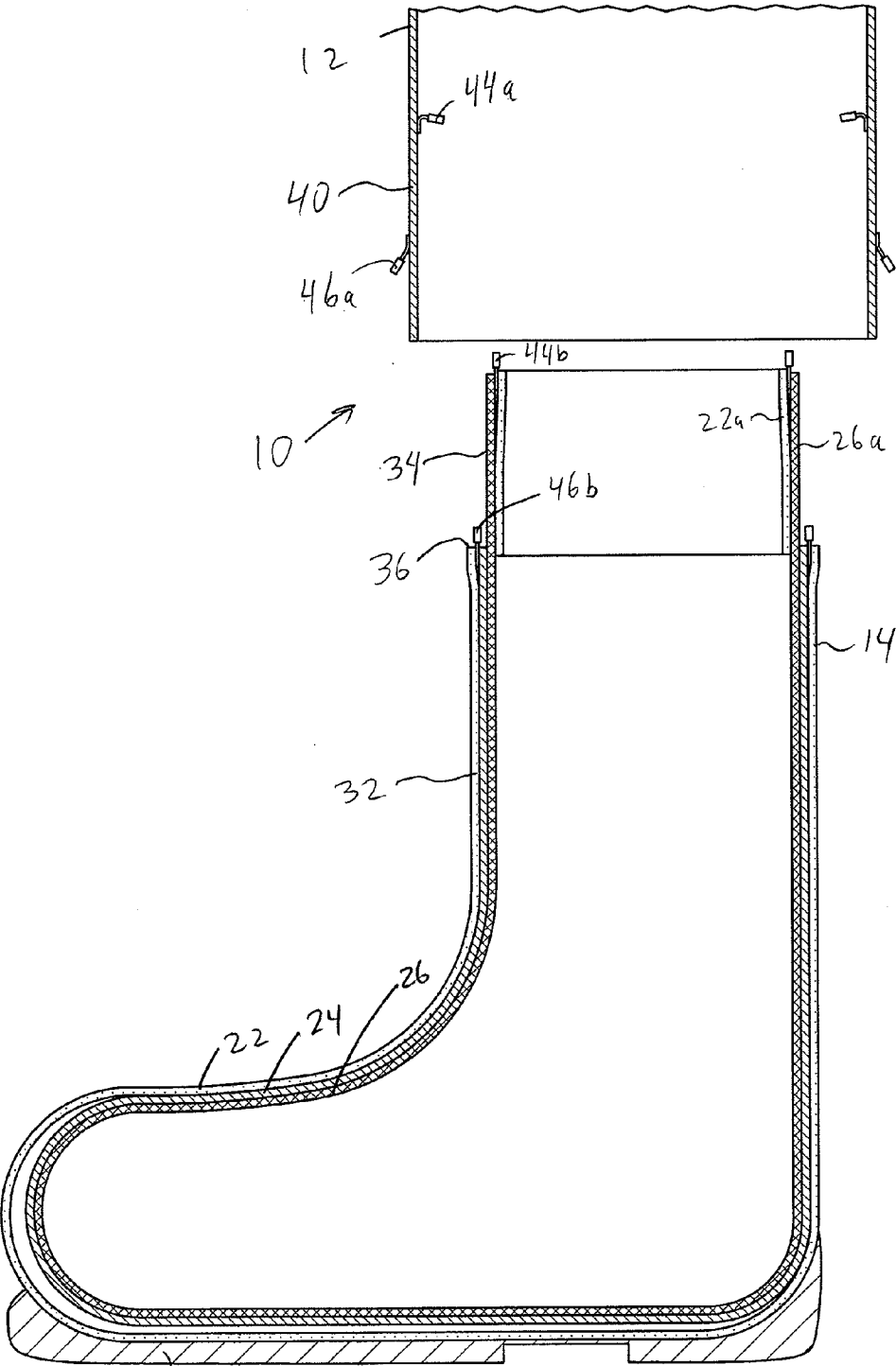


FIG. 8

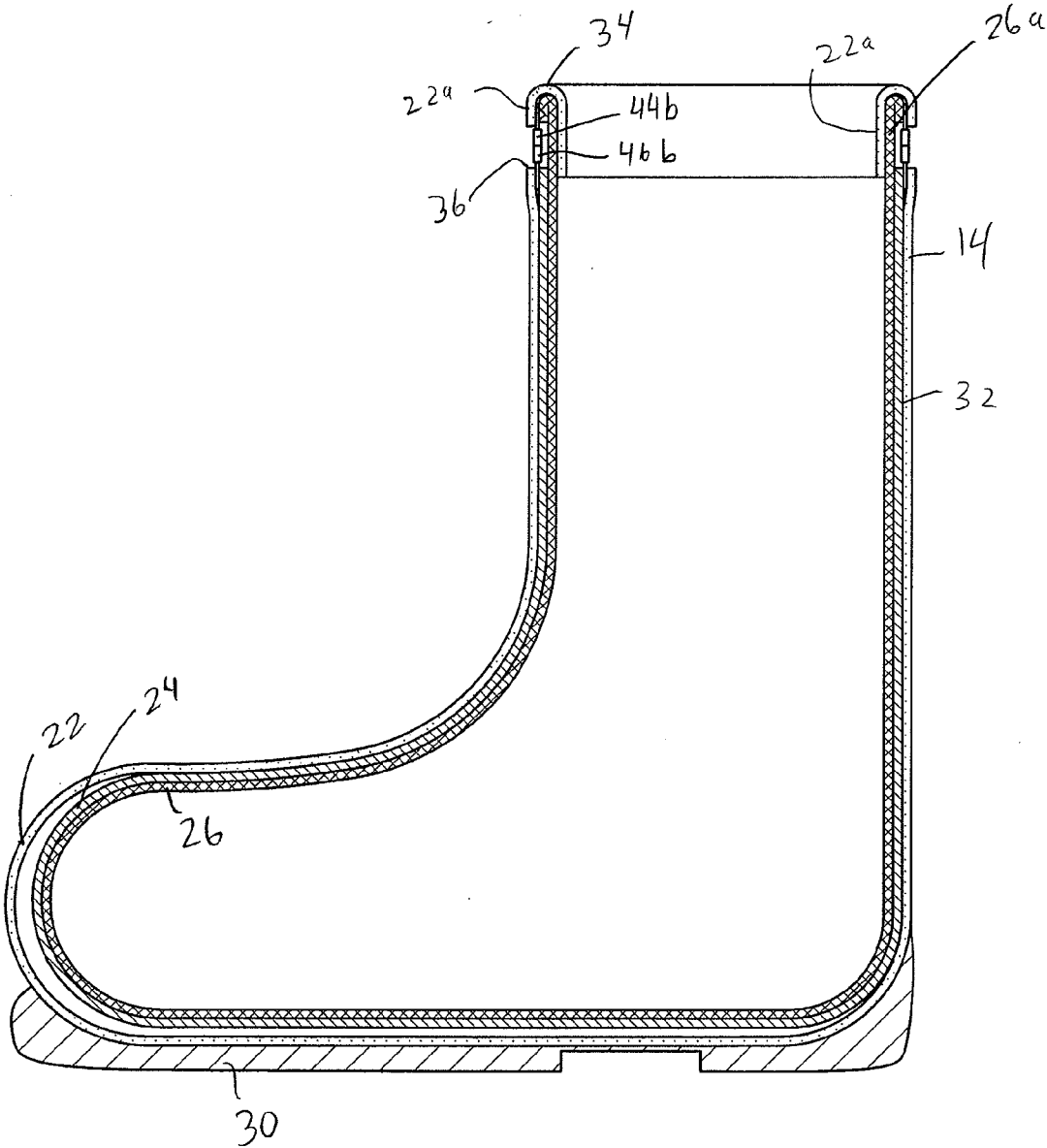


FIG. 9

## GARMENT CONNECTION SYSTEM

This application claims priority to U.S. Provisional Application Ser. No. 61/239,232, filed on Sep. 2, 2009, the entire contents of which are hereby incorporated by reference.

**[0001]** The present invention is directed to a garment connection system, and more particularly, to a fluid-resistant garment connection system.

### BACKGROUND

**[0002]** Protective or hazardous duty garments are used in a variety of industries and settings to protect the wearer from hazardous conditions such as heat, fire, smoke, cold, sharp objects, chemicals, liquids, fumes and the like. Such protective or hazardous duty garments are often used in adverse conditions, such as in the presence of high temperatures, smoke, chemicals, vapors and the like. However, existing garments may not provide sufficient protection from harmful vapors or fluids, particularly at garment junctions.

### SUMMARY

**[0003]** In one embodiment, the invention is a boot and trousers system including a pair of trousers, the trousers including a barrier material which is generally impermeable to undesired fluids. The system further includes a boot having a body and an upper portion, wherein the upper portion is folded about the body of the boot to define a flap portion. The barrier material is releasably coupled to the flap portion and to the body.

**[0004]** In another embodiment, the invention is a boot and trousers system including a pair of trousers, the trousers including a barrier material which is generally impermeable to undesired fluids. The system further includes a boot having a body and an upper portion, wherein the upper portion is folded about the body of the boot to define a flap portion. At least part of the barrier material is positioned between the flap portion and the body.

### BRIEF DESCRIPTION OF DRAWINGS

**[0005]** FIG. 1 is a front perspective view of a user wearing a coat, trousers and boots;

**[0006]** FIG. 2 is a side perspective cutaway view of a boot and a lower part of the trousers of FIG. 1;

**[0007]** FIG. 3 is a side cross section of the pant leg and boot of FIG. 3;

**[0008]** FIG. 3A is a side cross section of the pant leg and boot of FIG. 3, illustrating an alternate construction;

**[0009]** FIGS. 4-8 are a series of side cross section views illustrating how the boot can be detached from the trousers; and

**[0010]** FIG. 9 is a side cross section of the boot configured for stand-alone use.

### DETAILED DESCRIPTION

**[0011]** As best shown in FIGS. 1 and 2, the present invention may take the form of a system 10 for connecting a pair of trousers 12 to a pair of boots 14. The trousers 12 may include various layers through its thickness to provide various heat, moisture and abrasion resistant qualities so that the trousers 12 can be used as a protective, hazardous duty, and/or fire-fighter garment. For example, the trousers 12 may include an

outer shell 16, a moisture-resistant/vapor-resistant/fluid-resistant barrier 18 located inside of and adjacent to the outer shell 16, and a thermal liner/barrier 20 located inside of and adjacent to the moisture/vapor barrier 18. In the illustrated embodiment the layers 16, 18, 20 are generally annular at the lower end of each trousers leg and arranged such that the moisture barrier 18 is positioned between the thermal barrier 20 and outer shell 16. However, if desired, this configuration can be reversed such that the thermal barrier 20 is positioned between the outer shell 16 and the moisture barrier 18. If desired, an inner liner or inner face cloth (not shown) may be positioned inside the thermal barrier 20 to form the innermost layer of the trousers 12. Moreover, if desired, the trousers 10 may not necessarily include the thermal barrier 20.

**[0012]** The outer shell 16 may be made of or include a variety of materials, including a flame, heat and abrasion resistant material such as a compact weave of aramid fibers and/or polybenzamidazole fibers. Commercially available aramid materials include NOMEX and KEVLAR fibers (both trademarks of E.I. DuPont de Nemours & Co., Inc. of Wilmington, Del.), and commercially available polybenzamidazole fibers include PBI fibers (a trademark of PBI Performance Fabrics of Charlotte, North Carolina). Thus, the outer shell 16 may be an aramid material, a blend of aramid materials, a polybenzamidazole material, a blend of aramid and polybenzamidazole materials, or other appropriate materials. If desired, the outer shell 16 may be covered with a polymer, such as a durable, water repellent finish (i.e. a perfluorohydrocarbon finish, such as TEFLON® finish sold by E. I. Du Pont de Nemours and Company of Wilmington, Del.). The materials of the outer shell 16 may have a weight of, for example, between about five and about ten oz/yd<sup>2</sup>.

**[0013]** The moisture barrier 18 and thermal barrier 20 (if utilized) may be generally coextensive with the outer shell 16, or spaced slightly inwardly from the outer edges of the outer shell 16 (i.e., spaced slightly inwardly from the lower end of the legs or the waist) to provide moisture and thermal protection throughout the trousers 12.

**[0014]** The thermal barrier 20, if utilized, may be made of nearly any suitable material that provides sufficient thermal insulation. In one embodiment, the thermal barrier 20 may include a relatively thick (i.e. between about 1/16"-3/16") batting, felt or needled non-woven bulk or batting material, which can be coupled to a face cloth. The bulk material can also take the form of one or two (or more) layers of E-89® spunlace fabric made of a combination of NOMEX® and KEVLAR® fabric. The bulk material can also, or instead, include aramid fiber batting (such as NOMEX® batting), aramid needlepunch material, an aramid non-woven material, an aramid blend needlepunch material, an aramid blend batting material, an aramid blend non-woven material, foam (either open cell or closed cell), or other suitably thermally insulating materials. The thermal barrier 20 may trap air and possess sufficient loft to provide thermal resistance to the trousers 12. If desired, the thermal barrier 20, or parts thereof, may be treated with a water-resistant or water-repellent finish.

**[0015]** In one embodiment, the thermal barrier 20 has a thermal protection performance ("TPP") of at least about twenty, and in another embodiment, at least about thirty five. Moreover, in one embodiment the trousers 12 as a whole will have a TPP of at least about twenty, and in another embodiment have a TPP of at least about thirty five, although the trousers 12 may have a relatively low TPP in some cases and may not be particularly thermally insulating.

[0016] The moisture barrier **18** may be generally water vapor permeable but generally impermeable to liquid moisture, as well as generally impermeable to the vapor form of harmful/undesirable materials (i.e. non-aqueous materials in one embodiment). The moisture barrier **18** may have microscopic openings that permit moisture vapor (such as water vapor) to pass therethrough, but block liquids (such as liquid water) from passing therethrough. The microscopic openings may be small enough to allow water vapor to pass therethrough, but block vapors/airborne particulates, etc. of harmful materials, which can be larger than water vapor molecules. Thus the moisture barrier **18** can be considered a selective vapor barrier and/or can have selective vapor barrier (or near-complete vapor barrier) qualities, but is generally termed moisture barrier herein in compliance with common industry usage.

[0017] The moisture barrier **18** may be made of a microporous material that is either hydrophilic, hydrophobic, or somewhere in between. The moisture barrier **18** may also be monolithic and may allow water moisture vapor transmission therethrough by molecular diffusion. The moisture barrier **18** may also be a combination of microporous and monolithic materials (known as a bicomponent moisture barrier), in which the microporous or monolithic materials are layered or intertwined. The moisture barrier **18** may include a membrane layer bonded to a substrate of flame and heat resistant material on one or both sides thereof to provide structure and protection to the membrane layer.

[0018] The moisture barrier **18** can instead, if desired, be generally impervious to all fluids, vapors, aerosols, liquids and gases, including water and water vapor. The moisture barrier **18** can be configured to block harmful materials from passing therethrough. Such harmful materials may include liquids (including chemical warfare agents, biological warfare agents and toxic industrial chemicals), vapors and aerosols of an aqueous or non-aqueous nature (including chemical warfare agents and toxic industrial chemicals), and contaminated particulates (such as biological warfare agents). Examples of chemical warfare agents include soman (GD) nerve agent and distilled mustard (HD) blister agent. Examples of toxic industrial chemicals include acrolein (liquid), acrylonitrile (liquid), ammonia (gas), chlorine (gas), and dimethyl sulfate (liquid).

[0019] The moisture barrier **18** may be made of or include expanded polytetrafluoroethylene ("PTFE") such as GORE-TEX or CROSSTECH materials (both of which are trademarks of W. L. Gore & Associates, Inc. of Newark, Del.), polyurethane-based materials, neoprene-based materials, cross-linked polymers, polyamid, GORE® CHEMPAK® materials, sold by W. L. Gore & Associates, Inc. including GORE® CHEMPAK® Ultra Barrier Fabric, GORE® CHEMPAK® Selectively Permeable Fabric, or GORE® CHEMPAK® Sorptive Fabric, neoprene, rubber, synthetic rubber or other materials. Besides the materials outlined above, the moisture barrier **18** can be made of nearly any material that is generally impermeable to the materials which are desired to be prevented from contact with the wearer, or from contact with inner layers of the garment **12**.

[0020] In one embodiment, each layer of the trousers **12**, and the trousers **12** as a whole, may meet the National Fire Protection Association ("NFPA") 1971 standards for protective firefighting garments ("Protective Clothing for Structural Firefighting"), which are entirely incorporated by reference herein. The NFPA Structural Firefighting standards specify

various minimum requirements for heat and flame resistance and for tear strength. For example, in order to meet the NFPA standards, each of the outer shell **16**, moisture barrier **18**, and thermal barrier **20** individually, and the trousers **12** as a whole, must be able to resist igniting, burning, melting, dripping, separation and/or shrinking by more than 10% in any direction at a temperature of 500° F. for at least five minutes. Furthermore, in order to meet the NFPA standards, the combined layers of the trousers **12** must provide a thermal protective performance rating of at least thirty five.

[0021] NFPA 1971 standards include a Chem/Bio Option, also known as the CBRN (chemical, biological, radiological and nuclear) Option (the entire contents of which are hereby incorporated by reference) which provides specifications that protective ensembles must meet in order to be certified under that Option. For example, the Chem/Bio Option specifies that the garment must pass a MIST test (Man In Simulant Test). In one case the MIST test essentially consists of introducing the garment into a chamber filled with a vaporized test material (such as oil of wintergreen). Absorbent pads are placed on the wearer and/or inside the garment. After the garment has been exposed to the vaporized material for a sufficient period of time, the garment is removed from the chamber. The absorbent pads are removed and analyzed to determine how much of the vaporized test material they have absorbed. Thus, the garment disclosed herein may instead, or also, be arranged to meet the Chem/Bio Option standards.

[0022] However, the trousers **12** may include various arrangements of liners/materials, as desired, in which the various layers described herein are included, omitted, and/or rearranged. For example, the trousers **12** may lack any thermal barrier **20**, or lack any moisture barrier **16**, or include only an outer shell **12** and lack other layers, etc., or may take on various other configurations as desired to meet various other NFPA requirements, and need not even necessarily be NFPA compliant.

[0023] The boots **14** may also, in one embodiment, be compliant with NFPA regulations. Each boot **14** may include an outer layer **22** made of a relatively strong, durable and abrasion-resistant material, such as leather, synthetic leather, rubber, synthetic rubber, fibrous materials such as NOMEX® or KEVLAR® fibers, or various other materials as desired. Each boot **14** can include various inner layers as shown, for example, in FIGS. 3-9. In one embodiment, each boot **14** includes a fluid barrier/moisture barrier **24** and a thermal barrier **26** positioned inside the outer layer **22**. Each of these layers **22**, **24**, **26** may be generally annular about upper portions of the boot **14**. The moisture barrier **24** and thermal barrier **26** may be made of the same or similar materials and/or have the same qualities as those outlined above for the moisture barrier **18** and thermal barrier **20** of the trousers **12**. However, the thermal liner **26** for the boots **14**, if utilized, may not necessarily be fire resistant, and can be made of a non-woven synthetic fabric such as CAMBRELLE® material sold by Camtex Fabrics Limited of Cumbria, United Kingdom, with a moisture barrier attached thereto. FIGS. 3-9 illustrate the moisture barrier **24** positioned between the outer layer **22** and the thermal barrier **26**; however, if desired, the position of these layers may be reversed such that the thermal barrier **26** is positioned between the outer layer **22** and the moisture barrier **24**.

[0024] In one embodiment, the moisture barrier/fluid barrier **24** is generally continuous and extends throughout the boot **14** to provide continuous moisture/vapor/fluid protec-

tion thereto. Similarly, the moisture barrier **18** of the trousers **12** may be generally continuous and extend throughout the trousers **12** to provide continuous moisture/vapor/fluid protection thereto. By "continuous" it is meant that continuous moisture/vapor/fluid protection is provided; not necessarily that only a single seamless moisture/vapor/fluid barrier layer is provided. In other words, multiple pieces of a moisture barrier **18/24** can be coupled together in a moisture tight/vapor tight/selectively vapor tight manner and still be continuous as intended herein (although a one-piece moisture could also of course be utilized and considered continuous). If desired, the moisture barrier **22** and thermal barrier **26** of the boots **14** can be made of a differing material than the particular moisture barrier **18** and thermal barrier **20** of the associated trousers **12**.

[0025] Each boot **14** may include a pair of pulls **28** (FIG. 2) on opposite sides thereof to aid the wearer in pulling the boot **14** over his or her feet. Each boot **14** may include a durable, puncture-resistant tread or sole **30** on its bottom surface thereof and made of a differing material than the outer layer **22**, or moisture barrier **24** or thermal barrier **26**. Each boot **14**, and the tread **30**, is thus designed to provide the outer-most surface protecting a wearer's foot to protect from abrasion, wear, and rough or sharp materials (such as broken glass, metal shards, etc.) on ground surfaces.

[0026] Each boot **14** includes a body portion **32** and an upper portion, flap or flap portion **34** forming, and/or extending away from, an upper edge **36** of the body portion **32**. When folded as shown in FIG. 3, the flap portion **34** defines a space **38** between the flap portion **34** and the body portion **32**. In the illustrated embodiment, the flap portion **34** includes an outer protective portion **22a** that can be of the same (or differing) material as the outer layer **22** of the boot **14**. If desired, the flap portion **34** may include one or more of the inner layers **24**, **26** of the boot **14** (or other inner layers, if included). For example, in the embodiment of FIGS. 3-9, the flap portion **34** includes a portion **26a** of the thermal barrier material **26**. In the illustrated embodiment, the thermal barrier **26a** of the flap **34** is continuous with the thermal barrier **26** of the body portion **32**. However, if desired, the thermal barrier **26a** in the flap **34** can be separate and discrete from the thermal barrier **26** in the body portion **32** of the boot **14**. Alternately, if desired, the thermal barrier **26a** can be omitted from the flap **34**.

[0027] As shown in FIG. 3A, in one embodiment the flap **34** includes a moisture barrier portion **24a**. In the embodiment of FIG. 3A, the flap moisture barrier **24a** is continuous with the body moisture barrier **24**, but the moisture barriers **24**, **24a** can be made of separate pieces of material if desired.

[0028] As best shown in FIGS. 2 and 3, the moisture barrier **18** of the trousers **12** includes a generally annular extension portion **40** which extends away (generally upwardly in the configuration of FIGS. 2 and 3) from the lower edge of the trousers **12**. A distal end of the extension portion **40** is received in the space **38** between the flap portion **34** and the body **32** of the boot **14**. In the illustrated embodiment, the end of the extension **40** is folded about itself under the flap portion **34**, as shown in FIGS. 2-4, to form a two-ply folded section of the barrier material **42**. The folded section **42** can be omitted but may aid in sealing the boot **14**/trousers **12** connection, as will be described in greater detail below.

[0029] The moisture barrier extension **40** includes a pair of fastening components **44a**, **46a** on opposite sides thereof. As can be seen in FIG. 3, fastening component **44a** on the radi-

ally outer surface of the extension portion **40** releasably engages a corresponding fastening component **44b** at or adjacent to the end of the flap portion **34**. Fastening component **46a** on the radially inner surface of the extension portion **40** releasably engages a corresponding fastening component **46b** at or near the upper edge **36** of the body **32** of the boot **14**.

[0030] In the illustrated embodiment, each fastening component **44a**, **44b**, **46a**, **46b** takes the form of a zipper/zipper track such that a zipper pull (i.e., see zipper pull **50** of FIG. 2 which is associated with fastening components **44a**, **44b**) can be extended about the periphery of the fastening components **44a**, **44b**, **46a**, **46b** to couple or decouple the associated fastening components. The fastening components **44a**, **44b**, **46a**, **46b** can be configured to form a fluid and/or vapor tight seal when closed (i.e., in the case of a zipper the zipper is fluid/vapor tight), or if desired the components **44a**, **44b**, **46a**, **46b** may not form a seal when closed. Moreover, the fastening components **44a**, **44b**, **46a**, **46b** can take any of a wide variety of other forms besides zippers such as hook-and-loop fastening material (i.e., VELCRO®), a plastic zipper seal utilizing linear beads such as that analogous to a seal found on ZIPLOC® plastic bags (also known as "press-to-close" zippers, or reclosable or releasable closures), snaps, hooks, clasps, magnets, frictional engagement, interlocking shapes or the like.

[0031] The arrangement shown in FIGS. 2 and 3 provides a relatively vapor tight/fluid tight/selectively vapor tight arrangement to the wearer. In particular, instead of having trousers which are open at the bottom in which an annular gap is formed about each boot **14**, the moisture barrier extension **40** extends from the radially inner surface/lower edge of the trousers **12** to the boot **14**, and is coupled thereto. Moreover, each boot **14** includes its own moisture barrier **24** that is coupled to the moisture barrier extension **40** in a fluid tight/vapor tight manner via the fastening components **46a**, **46b**. In this manner, when harmful vapors are introduced into the surrounding environment, such vapors are prevented from entering the boot **14** and/or inner cavity of the legs of the trousers **12**. The wearer can thus remain relatively protected from harmful vapors and the trousers **12**/boot **14** form a sealed connection/cavity therebetween. Moreover, should any vapor or moisture penetrate through the outer layer **22** of the boots **14**, the moisture barrier **24** within the boots **14** helps to protect the wearer from contamination.

[0032] Because the moisture barrier extension **40** is trapped or sandwiched between the flap **34** and the body **32** of the boot **14**, a relatively vapor tight connection is formed therebetween, and in particular the folded portion **42** can be compressed by the folded portion **34**, and held in place by the fastening components **44a**, **44b** to improve the seal provided by the folded portion **42**. In the embodiment of FIG. 3A, the folded portion **42** is pressed into contact with, and directly engages, the moisture barrier **24** of the boot **14** to aid in sealing of the boot **14**.

[0033] Moreover, the fastening components **44a**, **44b**, **46a**, **46b** also help to mechanically and/or fluid-tightly securely couple the moisture barrier extension **40** to the boot **14**, thereby further protecting against vapor penetration. If desired, more complete vapor protection can be provided by using vapor-tight fasteners (at least for fastening components **46a**, **46b**), and ensuring the fastening components **46a**, **46b** (i.e., their fastener flaps) are attached in a fluid-tight manner (i.e., any stitching is secured by vapor-tight sealing tape or the like, or adhesives or other non-penetrating methods are used

to attach the fastening components **46a**, **46b**). The coupling arrangement **10** shown herein, in combination with various other protective features, may provide a garment/ensemble which passes the MIST test, and more broadly, meets the Chem/Bio Option of NFPA 1971 standards.

**[0034]** In order to detach the boot **14** and trousers **12**, the fastening components **44a**, **44b** are first separated, as shown in FIG. 4. Next, as shown in FIG. 5, the flap portion **34** is unfolded until the flap portion **34** extends vertically upwardly from the upper edge **36** of the body **32** of the boot **14**. Next, the extension portion **40** is inverted (i.e. turned inside-out), such as by partially extracting the boot **14** out from the trousers **12**, as shown in FIG. 6. Inverting the extension portion in this manner may help to provide easier/direct access to the fastening components **46a**, **46b**. Next, as shown in FIG. 7, the fastening components **46a**, **46b** are decoupled and, as shown in FIG. 8, the boot **14** is completely separated from the trousers **12**.

**[0035]** Next, as shown in FIG. 9, the boot **14** can be configured for use as a stand alone boot; i.e., for use in a manner in which the boot **14** is not sealingly coupled to the trousers **12**. In particular, the fastening component **44b** of flap portion **34** can be releasably coupled to the fastening component **46b** of the body **32** of the boot **14** to provide a finished appearance and generally sealed functionality to the boot **14**. For example, in the illustrated embodiment the outer portions **22**, **22a** (which can be made of the same material and have the same appearance) form the entire outer surface of the boot **14** (except of the fastening components **44b**, **46b**) providing a continuous and finished appearance. In this manner, the boot **14** can be used with various other trousers, including trousers which do not include the moisture barrier extension **40** or otherwise contribute to form a generally vapor-tight or vapor-resistant connection with the boot **14**.

**[0036]** The boot **14** shown herein thus has dual use capability as it can be used in standard firefighter trousers or other protective garments when a moisture or fluid tight, vapor-tight or vapor-resistant connection is desired. In order to couple the boot **14** to the trousers **12**/moisture barrier extension **40**, the steps shown in FIGS. 3-9 are carried out in reverse. It should be noted that the pulls **28** (FIG. 2) are located on, or protrude outwardly from, a radially inner surface of the boot **14**. In this manner, the pulls **28** are spaced away from the flap **34** and fastening components **44b**, **46b**, and do not interfere with the coupling of the moisture barrier extension **40** to the boot **14**.

**[0037]** Thus, the system **10** may utilize boots **14** that are detachable from the trousers **12** so that the trousers **12** and boots **14** can each be separately cleaned, maintained, and replaced as desired. Moreover, the boots **14** can be used as a stand-alone components with other trousers which do not require a vapor-tight or vapor-resistant connection therewith (i.e., for non-CBRN suits).

**[0038]** The system and method shown herein can also be used to form vapor/fluid-tight or vapor/fluid-resistant connections at other portions of garments. For example, the system can be utilized to attach gloves to the sleeve of a coat; a hood to the body of the coat; a coat to a pair of trousers (i.e. about the waist of the coat and trousers, etc.), and make other connections in the same manner as described above and shown herein. The method and structure disclosed herein can be used to detachably, yet sealingly, attach various other garments and parts thereof together to provide the advantages specified herein.

**[0039]** Although the invention is shown and described with respect to certain embodiments, it should be clear that modifications will occur to those skilled in the art upon reading and understanding the specification, and the present invention includes all such modifications.

What is claimed is:

1. A boot and trousers system comprising:  
a pair of trousers, the trousers including a barrier material which is generally impermeable to undesired fluids; and  
a boot having a body and an upper portion, wherein said upper portion is folded about said body of said boot to define a flap portion, wherein said barrier material is releasably coupled to said flap portion and to said body.
2. The system of claim 1 wherein said barrier material is generally impermeable to water vapor.
3. The system of claim 1 wherein at least part of the barrier material is positioned between said flap portion and said body.
4. The system of claim 1 wherein the trousers includes an outer shell, and wherein part of the barrier material is positioned adjacent to said outer shell, and wherein the barrier material includes an extension portion extending beyond a lower edge of said outer shell, and wherein at least part of said extension portion of said barrier material is positioned between said flap portion and said body and wherein said extension portion is releasably coupled to said flap portion and to said body.
5. The system of claim 1 wherein a distal end of said barrier material is positioned between said flap portion and said body portion and folded about itself to form a two-ply portion of barrier material.
6. The system of claim 1 wherein said barrier material includes a first attachment portion positioned on a first side thereof and configured to be releasably coupled to a corresponding attachment portion of said flap portion, and wherein said barrier material includes a second attachment portion positioned on a second side thereof and configured to be releasably coupled to a corresponding attachment portion of said body.
7. The system of claim 6 wherein said first attachment portion and said corresponding attachment portion of said flap portion are configured to be releasably attached in a fluid-tight manner, and wherein said second attachment portion and said corresponding attachment portion of said body are configured to be releasably attached in a fluid-tight manner.
8. The system of claim 6 wherein said attachment portion of said flap portion and said attachment portion of said body are configured to be releasably attachable to each other.
9. The system of claim 6 wherein each second attachment portion extends around substantially the entire perimeter of the associated boot or trousers leg.
10. The system of claim 6 wherein said second attachment portion is positioned between said flap portion and said body.
11. The system of claim 1 wherein said boot has a barrier material extending throughout the body thereof which is generally impermeable to undesired fluids.
12. The system of claim 11 wherein the barrier material of the trousers is directly releasably coupled to the barrier material of the boot to provide generally continuous barrier material protection.
13. The system of claim 1 wherein said flap portion lacks a barrier material which is generally impermeable to undesired fluids.

**14.** The system of claim **1** wherein said barrier material is generally liquid impermeable but generally moisture vapor permeable.

**15.** A boot and trousers system comprising:

a pair of trousers, the trousers including a barrier material which is generally impermeable to undesired fluids; and a boot having a body and an upper portion, wherein said upper portion is folded about said body of said boot to define a flap portion, wherein at least part of the barrier material is positioned between said flap portion and said body.

**16.** The system of claim **15** wherein said barrier material is releasably coupled to said flap portion and to said body.

**17.** A boot and trousers system comprising:

a pair of trousers, the trousers including an outer shell and a barrier material which is generally impermeable to undesired fluids and positioned adjacent to said outer shell, wherein said barrier material includes an extension portion extending beyond a lower edge of said outer shell; and

a boot including a barrier material which is generally impermeable to undesired fluids, wherein the extension portion of said barrier material is directly releasably coupled to the barrier material of the boot to provide generally continuous fluid protection.

**18.** The system of claim **17** wherein said boot has a body and an upper portion, wherein said upper portion is folded about said body of said boot to define a flap portion, and wherein at least part of the barrier material of said trousers is positioned between said flap portion and said body.

**19.** The system of claim **18** wherein said barrier material is releasably coupled to said flap portion and to said body.

**20.** A system comprising:

a first item configured to be worn by a wearer, the first item including a barrier material which is generally impermeable to undesired fluids; and

a second item configured to be worn by a wearer and including a barrier material which is generally impermeable to undesired fluids, wherein said second item includes a body and a flap portion folded about said body, wherein the barrier material of the first item is

releasably coupled to the flap portion and the body of the second item to provide generally continuous barrier protection.

**21.** The system of claim **20** wherein one of the items is a pair trousers and the other item is a boot; or one of the items is a coat and the other item is a glove; or one of the items is a coat and the other item is a hood; or one of the items is a coat and said the other item is a pair of trousers.

**22.** A boot system comprising:

a boot shaped and configured to receive a wearer's foot therein, said boot including first and a second attachment portions at or adjacent to an upper end thereof, wherein the boot is movable between a first configuration in which the first and second attachment portions are releasably attached together, and a second configuration in which the first attachment portion is attached to a first side of a barrier material of a pair of trousers which is generally impermeable to undesired fluids, the second attachment portion is attached to a second side of the barrier material of said trousers.

**23.** The system of claim **22** wherein the first and second attachment portions are positioned on an outer surface of the boot and extend entirely around the perimeter thereof

**24.** The system of claim **22** wherein said boot has a barrier material extending throughout a body thereof which is generally impermeable to undesired fluids.

**25.** The system of claim **22** wherein said boot is in said second configuration in which the first attachment portion is attached to said first side of said barrier material of the trousers, and wherein the second attachment portion is attached to said second side of the barrier material of said trousers.

**26.** The system of claim **25** wherein said boot an upper portion folded about said body thereof to define a flap portion, and wherein at least part of the barrier material of said trousers is positioned between said flap portion and said body.

**27.** The system of claim **22** wherein the trousers includes an outer shell, and wherein part of the barrier material of said trousers is positioned adjacent to said outer shell, and wherein the barrier material of said trousers includes an extension portion extending beyond a lower edge of said outer shell, and wherein said extension portion of said barrier material is directly releasably coupled to the barrier material of the boot.

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