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(54) **Water-resisting shoe**

(57) A water-resisting shoe is composed of a vamp (10), a sock lining (20), a waterproof cover (30), and a sole (40), wherein the waterproof cover (30) is of a one-

piece construction and completely covers the sock lining (20) to construct a middle layer inside the water-resisting shoe so as to provide an enduring and excellent water-resisting efficiency.

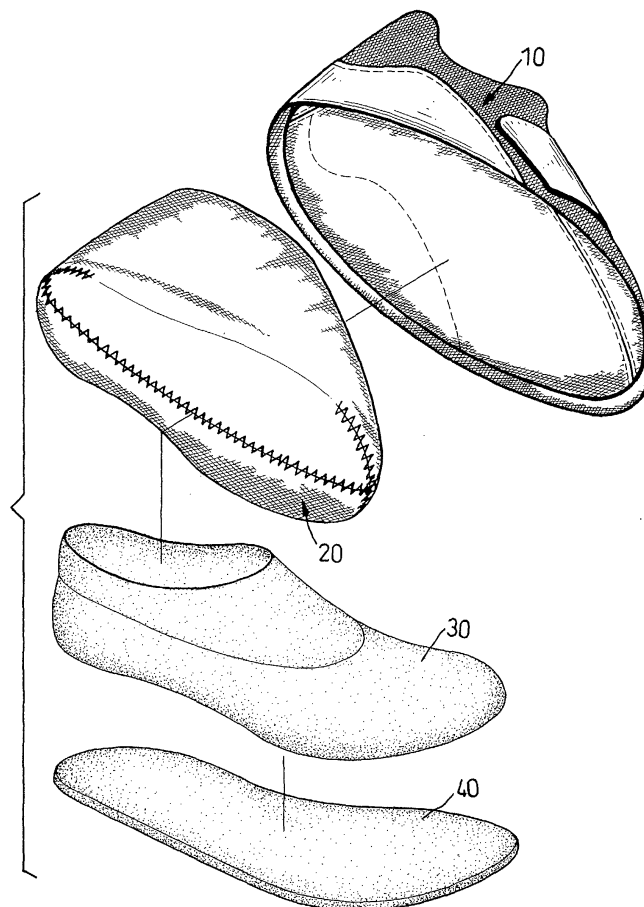


FIG.1

Description

1. Field of the Invention

[0001] The present invention relates to a water-resisting shoe, and more particularly to a shoe that has a water-tight layer secured under a vamp of the shoe to avoid water permeating inside the shoe so as to keep an inner portion of the shoe completely dry for a long period of time on wet-land.

2. Description of Related Art

[0002] When people walk on wet-land or snow covered land, water will permeate the shoe body and then wet people's feet. Therefore, people feel uncomfortable because of the damp shoes and their feet are easily exposed to fungi or become frostbitten at low temperature. In particular, the fungi can aggravate existing foot injuries by causing ulcers, etc.

[0003] With reference to Fig.4, a body of a conventional water-resisting shoe is composed of a vamp (50), a sock lining (60), and a sole (70).

[0004] The vamp (50) is combined with an upper portion of the sock lining (60) and the sole (70) is firmly secured with a lower portion of the sock lining (60), therefore, the sock lining (60) is enclosed inside the shoe body.

[0005] The sock lining (60) is made of cloth with a waterproof membrane (61) adhering on one side of the sock lining (60). The cloth is cut out pieces and then sewing together to compose in a shape of shoe and the pieces are tailored into the sock lining (60), wherein the waterproof membrane (61) is constructed on an outside of the sock lining (60) and combined with the sole (70) so as to resist water permeability.

[0006] Although the sock lining (60) is protected by the waterproof membrane (61) to resist water, seams (62) caused from sewing still allow water to permeate into the inner portion of the shoe body. Therefore, manufacturers use multiple adhesive tapes (65) which are water-resistant to adhere on the seam (62) and seal up the seam (62) to enhance the water-tight efficiency of the conventional water-resisting shoe.

[0007] However, two drawbacks of the conventional water-resisting shoe still exist which are as follow:

1. Adhering the adhesive tapes (65) is an extra process in manufacturing the water resisting shoe and that wastes time as well as adding to the manufacture cost. Additionally, the rate of defective product increases when the adhesive tapes (65) do not adhere to the exact places of the seam (62) or do not adhere on the seam tightly.

2. The water-resisting efficiency of the shoe body is not enduring because the adhesive tapes (65) are glued on the sock lining (60) and effectiveness of the adhesive tapes (65) and the anti-water mem-

brane (61) will deteriorate after the conventional water-resisting shoe has been wetted for a long time. Accordingly, water will then permeate into the inner portion of the shoe body.

[0008] Therefore, the present invention has arisen to mitigate and/or obviate the drawbacks of the conventional water-resisting shoe.

[0009] The main objective of the present invention is to provide a water-resisting shoe with a waterproof cover in one piece whereby the shoe has enduring and complete water-resisting efficiency and is inexpensive to manufacture.

[0010] Further benefits and advantages of the present invention will become apparent after a careful reading of the detailed description with appropriate reference to the accompanying drawings.

IN THE DRAWINGS

[0011]

Fig. 1 is an exploded perspective view of a water-resisting shoe in accordance with the present invention;

Fig. 2 is a side cross-sectional view of the water-resisting shoe in assembly; Fig. 3 is a flow chart of manufacturing the water-resisting shoe in accordance with the present invention; and

Fig. 4 is an exploded perspective view of a conventional water-resisting shoe.

[0012] With reference to Figs. 1 and 2, a water-resisting shoe is composed of a vamp (10), a soft sock lining (20), a waterproof cover (30), and a sole (40).

[0013] The vamp (10) has an opening for access by a foot and is combined with the sole (40) to form a shoe body with an inner space. The waterproof cover (30) is combined with the sock lining (20) to compose a middle layer, and then the middle layer is set inside of the inner space of the shoe body.

[0014] The waterproof cover (30) is evenly adhered by an inner surface to an outside face of the sock lining (20) and also adhered at lower portion of an outer surface to the sole (40).

[0015] The procedures of the manufacturing the water resisting shoe are shown in Fig.3.

[0016] Combining the vamp (10) and the sock lining (20): the vamp (10) has an opening for access by a foot and is combined with the sock lining (20) at edges of the opening by gluing or sewing;

[0017] Putting a shoe last (not shown) into the sock lining (20): the shoe last (not shown) is inserted into the sock lining (20) to prop up the sock lining (20) inside the inner space of the shoe body.

[0018] Combining the waterproof cover (30) in one piece with the sock lining (20): the waterproof cover (30) is propped up and covers the sock lining (20) to con-

struct a middle layer. Because the shoe last supports the sock lining (20), the waterproof cover (30) is evenly adhered to the sock lining (20).

[0019] Gluing the waterproof cover (30) to combine with the vamp (10): the waterproof cover (30) is glued at an upper portion thereof to combine with the vamp (10) and ensure that the waterproof cover (30) and the vamp (10) are completely and smoothly combined with each other.

[0020] Combining the sole (40) with the waterproof cover (30) and the vamp (10): finally, the sole (40) is glued and adhered to bottom edges of the vamp (10) and adhered selectively to a lower portion of the waterproof cover (30) so that the shoe body is completed.

[0021] Additionally, the waterproof cover (30) is optionally selected from soft polymer materials such as natural rubber, polyethylene (PE), polypropylene (PP), polycarbonate (PC). The polymer materials are liquid and constructed to form the waterproof cover (30) by injecting molding or coating on a shoe mold, wherein the waterproof cover (30) is of a single-piece construction without any seams. Natural rubber is the preferred material of the waterproof cover (30) because it has excellent elasticity so as to be easily propped up to cover the sock lining (20).

[0022] The sock lining (20) is made of some soft material such as cloth to make the water-resisting shoe comfortable when people wear the shoe. However, it is easily understood that the sock lining (20) in the shoe body can be eliminated, and the water-resisting efficiency of the shoe body is still maintained.

[0023] According to the above description, the waterproof cover (30) is of one-piece construction without any seams and completely sleeves around the sock lining (20). Therefore, the water-resisting shoe is durable and there is no chance for water to permeate into the inner portion of the shoe body so that feet wearing the water-resisting shoe can keep dry for long time on wetland and even keep warm on snow covered land.

[0024] Besides, in manufacturing procedures, the waterproof cover (30) is only sleeved on the sock lining (20) by selectively gluing or not gluing. The adhesive tapes (65) are eliminated so that the procedures of making the water resisting shoe are simplified and the potential defective product rate caused from mis-attachment of the adhesive tapes (65) is eliminated. Although the invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.

Claims

1. A water-resisting shoe comprising:

a vamp (10) having an opening for access by a

foot;

a waterproof cover (30) corresponding to the vamp (10) in shape and secured under the vamp (10); and

a sole (40) attached to a peripheral edge of the vamp (10) to construct the water-resisting shoe, wherein the waterproof cover (30) is selectively adhered to the sole (40).

2. The water-resisting shoe as claimed in claim 1, wherein a sock lining (20) attached with an edge of the opening of the vamp (10) is covered by the waterproof cover (30) to construct a middle layer received in the water-resisting shoe.

3. The water-resisting shoe as claimed in claim 1, wherein the waterproof cover (30) is selected from the group consisting of: natural rubber, polyethylene (PE), polypropylene (PP), and polycarbonate (PC).

4. The water-resisting shoe as claimed in claim 2, wherein the waterproof cover (30) is selected from the group consisting of: natural rubber, polyethylene (PE), polypropylene (PP), and polycarbonate (PC).

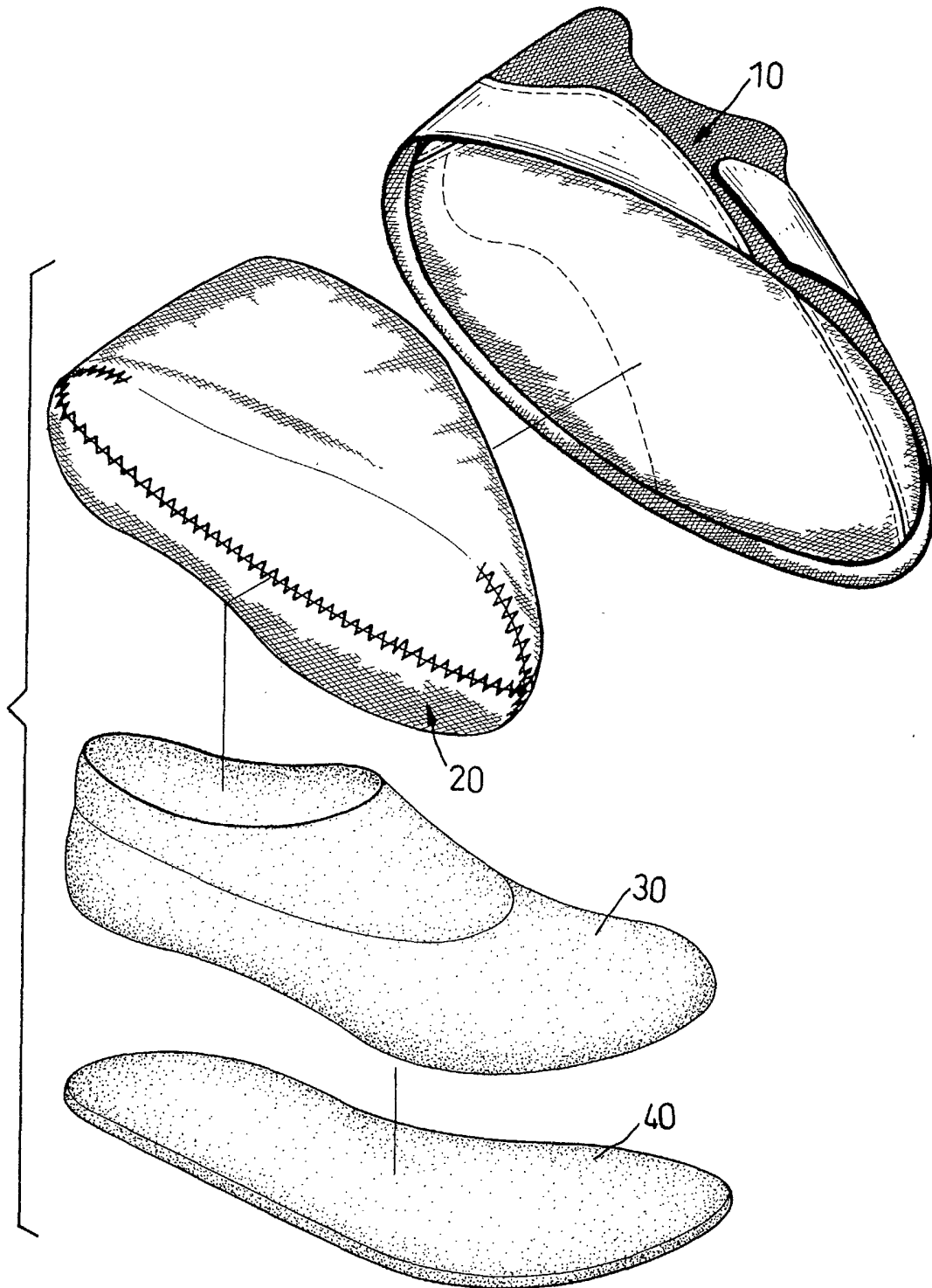


FIG.1

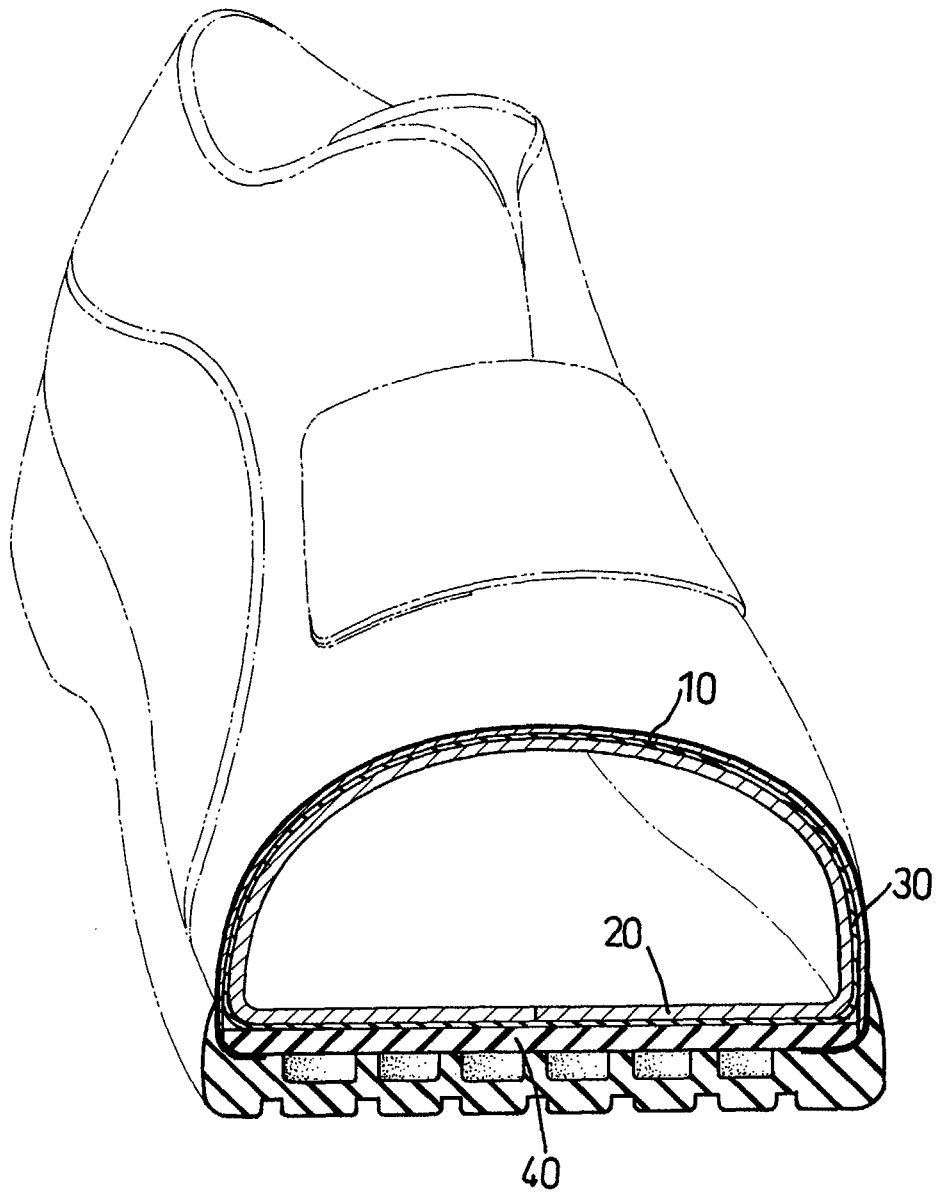


FIG.2

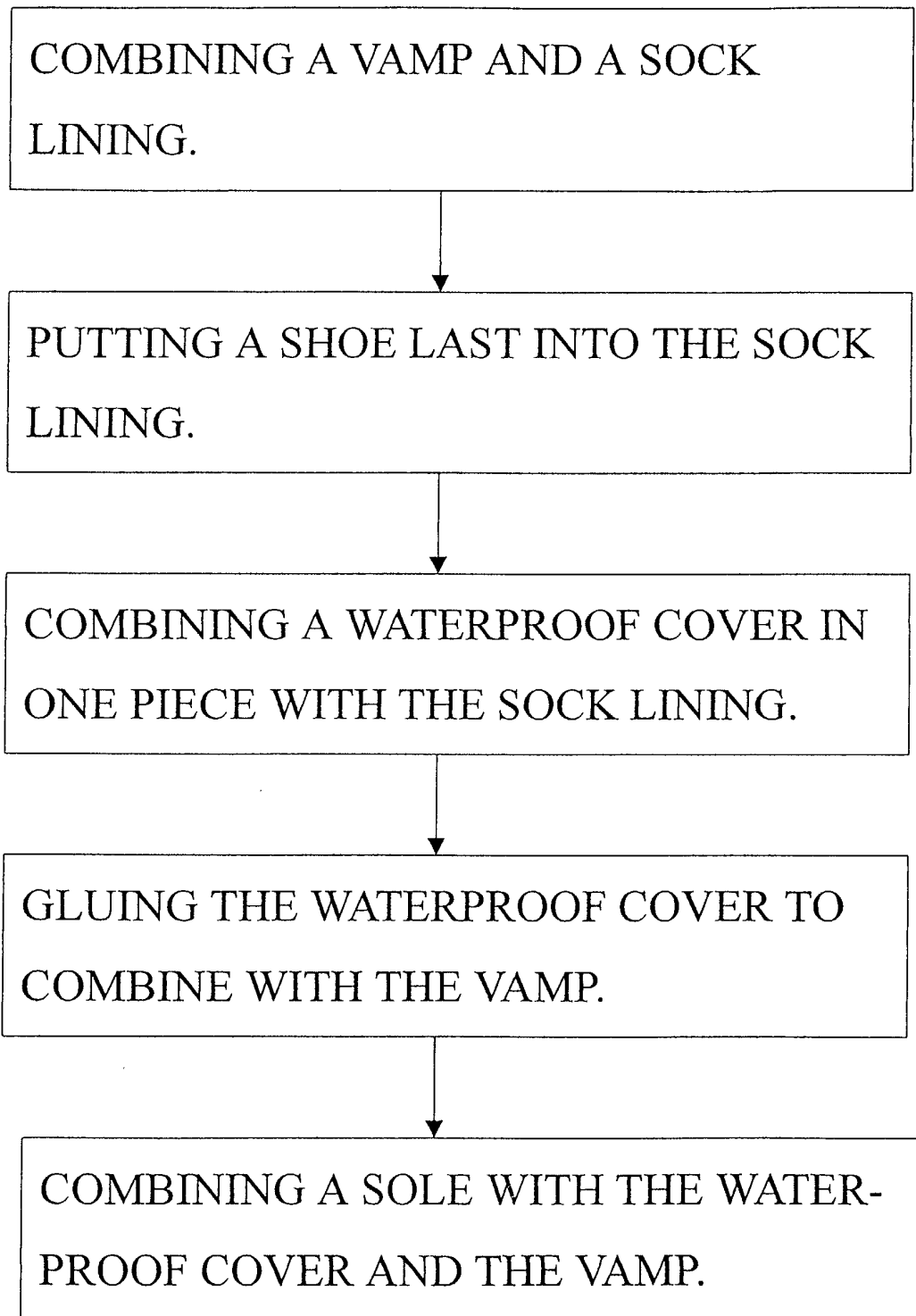
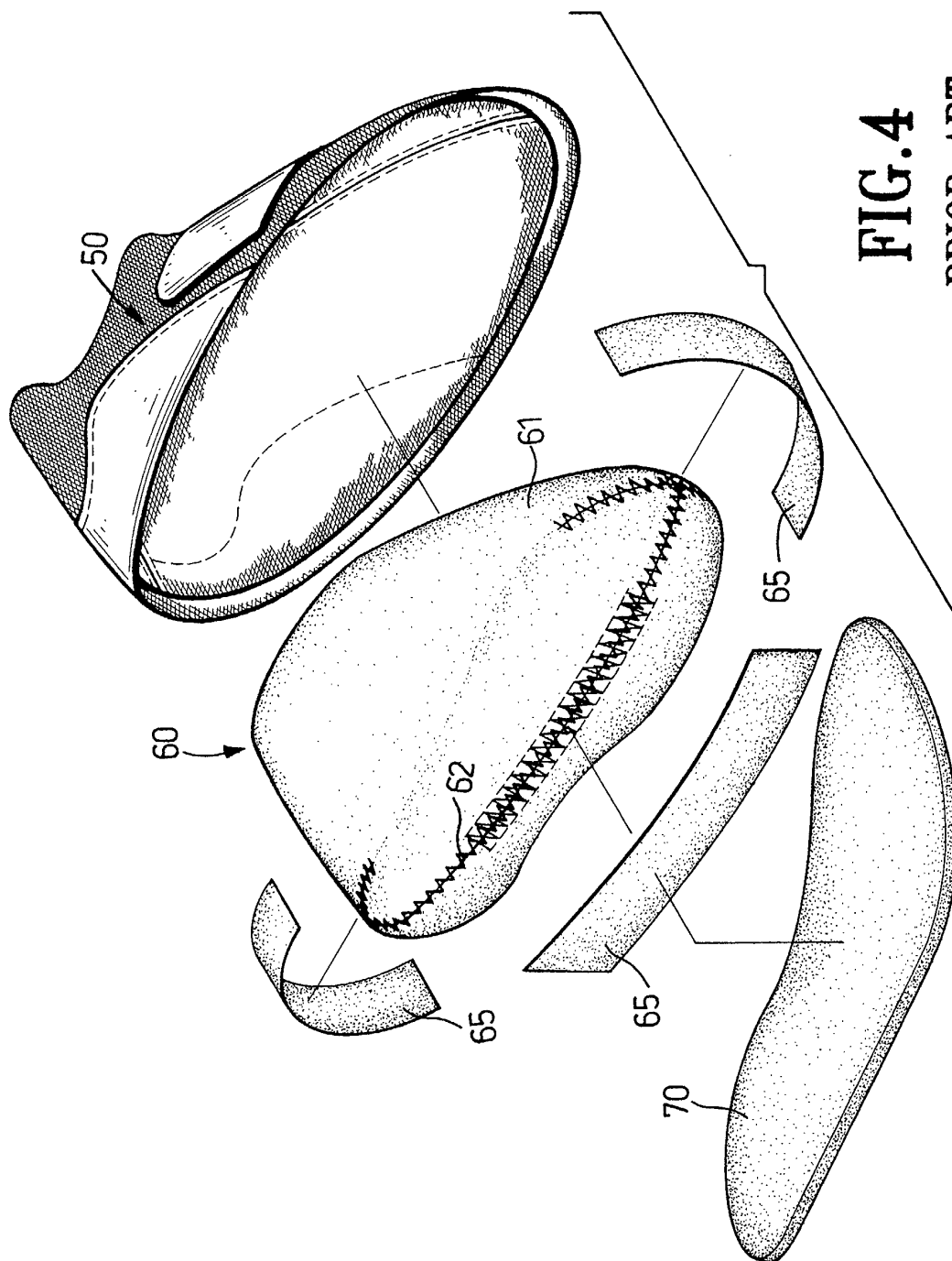


FIG.3





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EUROPEAN SEARCH REPORT

Application Number
EP 02 01 5812

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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Place of search		Date of completion of the search	Examiner
THE HAGUE		12 December 2002	Cianci, S
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 02 01 5812

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12-12-2002

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