

**United States Patent and Trademark Office
Before the Patent Trial and Appeal Board**

lululemon usa inc. v. Nike, Inc.

IPR2023-01460

U.S. Pat. No. 9,730,484

Patent-Owner's Presentation

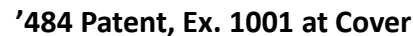
December 16, 2024



- 1. Overview of '484 Patent and Instituted Grounds**
- 2. Claim Construction**
- 3. The Grounds: lululemon Failed to Prove Unpatentability by a Preponderance of the Evidence**
 - A. lululemon concedes Grounds 1 and 2 in view of the Board's construction of "domed, three-dimensional structure"
 - B. Ground 3: lululemon Fails To Show That Dua in view of Hong and Lockwood Renders Obvious Any of Claims 1–19
 - C. Ground 4: lululemon Fails To Show That Dua in view of Hong, Lockwood, and Voughlohn Renders Obvious Any of Dependent Claims 2–4, 18, and 19

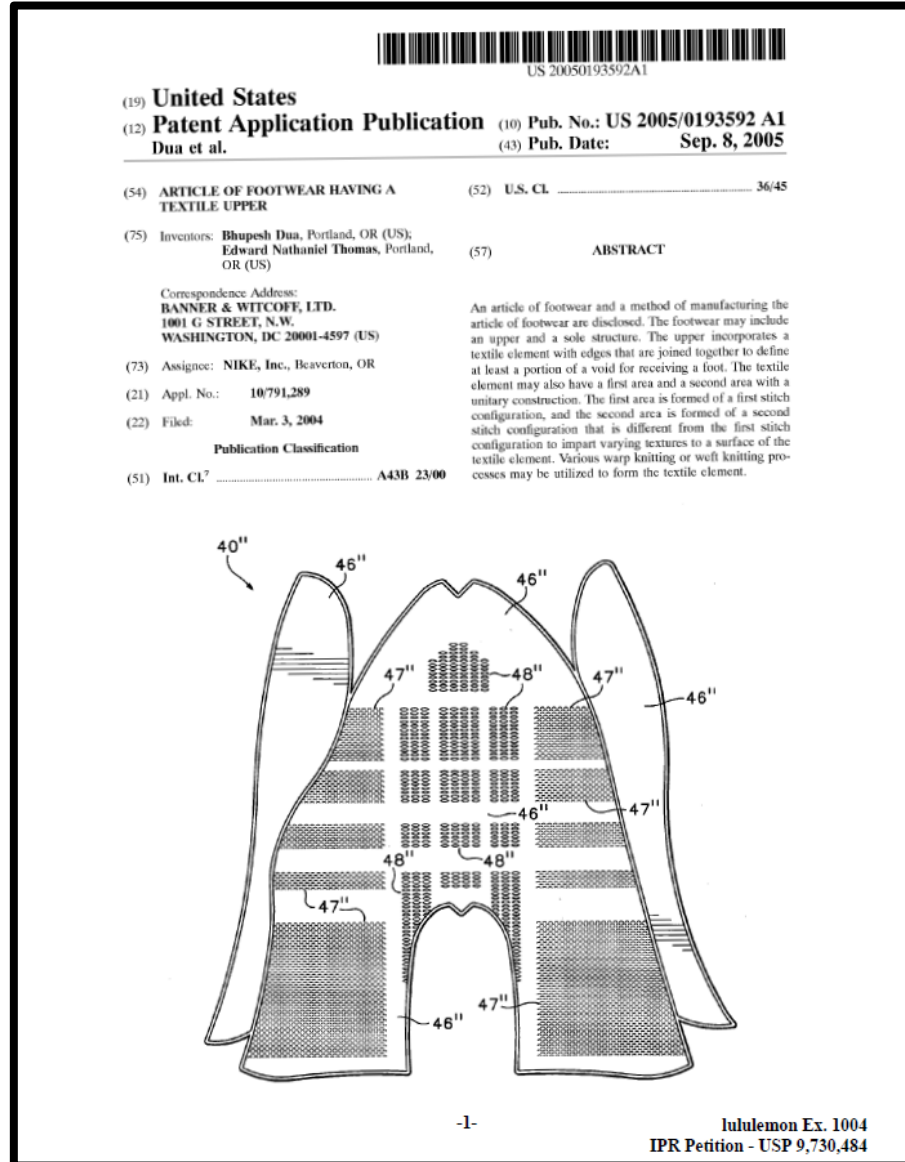


Overview of '484 Patent and Instituted Grounds





Ground	35 U.S.C. §	Claims	Reference(s)
1	§ 103	1, 5–9	Lockwood and Dua
2	§ 103	1, 5–9	Lockwood, Dua, Norton
3	§ 103	1–19	Dua, Hong, Lockwood
4	§ 103	2–4, 18, 19	Dua, Hong, Lockwood, Voughlohn



Dua, Ex. 1004 at Cover

- Nike patent
- Directed to “an upper for an article of footwear, the upper incorporating a textile element formed with a knitting machine.” Dua, Ex. 1004 at [0013].
- Dua’s upper has a “generally planar configuration.” Dua, Ex. 1004 at [0039].

POR, Paper 19 at 8



Indian Journal of Fibre & Textile Research
Vol. 19, September 1994, pp. 189-194

The development of 3D shaped knitted fabrics for technical purposes on a flat knitting machine

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The use of a new electronic flat knitting machine (Shima Seiki SES 122FF) for producing three-dimensional shaped fabrics for technical purposes is described. The three methods which can be applied to knit to shape, i.e. using different structural combinations, using different loop lengths, and altering the number of knitting needles and knitted courses, are discussed. Further, the different knitted elements (tubular forms, spherical forms, box forms and car seat covers) developed on the SES 122FF machine are described in detail.

Keywords: Flat knitting machine, Knitted fabrics, Loop structure, Technical textiles,
Three-dimensional shaped knitted fabrics

1 Introduction

Technical textiles have been applied in different fields such as protection clothing, transportation related textiles (cars, planes and space crafts), geotextiles, building construction related textiles, packaging materials, military related textiles, medical textiles, sports related textiles, etc.

For many years, technical textiles were considered as very high-modulus fabrics, exhibiting extremely high structural stability and made of high-tenacity, low-elongation yarns. With the further development of new end uses, it has been realized that each technical product requires a different technical textile, with a different set of characteristics and some of these characteristics might be found in "loop based" structures.

Flat knitting machines are traditionally used for producing pullovers and other outerwear garments. One of the main advantages is the facility of these machines to knit fabric pieces to a particular shape or form. The combination of the individual needle selection technique and the use of the presser foot or holding down sinkers on the new generation of computer-controlled flat knitting machines increase this ability a great deal. By using the new flat knitting machines, it is possible not only to knit the new loop structures which are not possible on the conventional flat knitting machines, but also knit fully fashioned garments. This is very important to reduce the waste of expensive materials during cutting as well as in eliminating the additional making up operation. If

the ability of knitting to shape of the flat knitting machines is used to produce 3D knitted technical textiles, it is not difficult to foresee their new end uses in the future.

This work describes the use of the new flat knitting machines to knit 3D structures by using different techniques in the Shima Seiki SES 122FF flat knitting machine. It is thought that these knitted shapes can be interesting as technical textiles and may also stimulate the imagination towards new applications.

2 Short Description of the Shima Seiki SES 122FF Flat Knitting Machine

The SES 122FF machine is one of the new generation of computer-controlled flat knitting machines. The main features of this machine are as follows:

- the double cam system for knitting and transfer facilities at each cam system in which 31 different stitch lengths can be set;
- the combination of holding down sinkers and presser foot is the machine facility which enables the knitting of fancy stitch effects and knit to shape;
- the belt drive system gives smooth and high-speed carriage travel which enables the yarn to be picked-up or not, as required;
- the set-up device and finely tuned take-down system for added take-down requirements; and
- the machine controller which is programmed for knitting and shaping from a micro computer.

- Directed to using “[f]lat knitting machines ... to knit fabric pieces to a particular shape or form.” Hong, Ex. 1005 at 1.
- Hong’s “technique consists in transferring the three-dimensional form to two-dimensional patterns.” Hong, Ex. 1005 at 3.

POR, Paper 19 at 9



United States Patent

Lockwood

[15] 3,641,603

[45] Feb. 15, 1972

[54] SHOE MAKING

[72] Inventor: Charles A. Lockwood, Kettering, England

[73] Assignee: The Shoe and Allied Trades Research Association, Northamptonshire, England

[22] Filed: Jan. 29, 1970

[21] Appl. No.: 6,837

[30] Foreign Application Priority Data

Jan. 29, 1969 Great Britain 4,864/69

[52] U.S. Cl. 12/146 C, 12/54.1

[51] Int. Cl. A43D 11/00

[58] Field of Search 12/146 R, 146 C, 54.1

[56] References Cited

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3,309,722 3/1967 Staden 12/54.1

3,309,723 3/1967 Dew 12/54.1

3,309,725 3/1967 Staden 12/146 C
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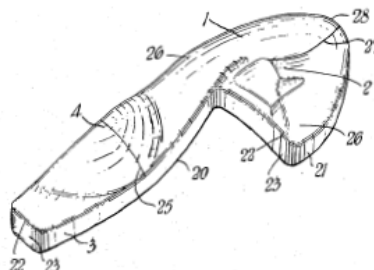
Primary Examiner—Patrick D. Lawson
Attorney—Lerner, David & Littenberg

[57]

ABSTRACT

Methods of preforming shoe uppers are provided using molds of a novel shape. The shape of the mold is such that the material is not stretched more than, in preferred embodiments, about 25 percent. The mold corresponds to the shape of the whole upper but is flatter than the last, is preferably unitary but can be in two or more parts. The methods involve heating the material and carrying out a pressure differential forming operation. Mechanical movement of the molds into the material, just prior to the vacuum forming is also described. When forming several uppers simultaneously, a template may be placed over the molds and subsequently used as a cutting guide. The difficulties of lasting in the normal way are avoided by the invention.

26 Claims, 37 Drawing Figures



-1-

Inlulemon Ex. 1003
IPR Petition - USP 9,730,484

- Directed to “preforming shoe uppers [] using molds.” Lockwood, Ex. 1003 at Abstract.

POR, Paper 19 at 8

Lockwood, Ex. 1003 at Cover




US 20060053658A1

(19) **United States**
(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0053658 A1**
Voughlohn (43) **Pub. Date: Mar. 16, 2006**

(54) **UNIQUE SYSTEMS AND METHODS FOR FASTENING FOOTWEAR**

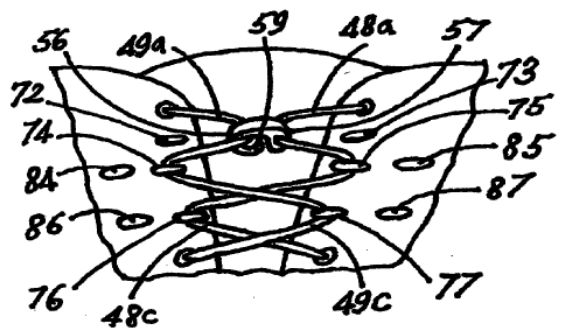
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(21) **Appl. No.:** 11/226,934
(22) **Filed:** Sep. 14, 2005

Related U.S. Application Data
(60) Provisional application No. 60/610,287, filed on Sep. 15, 2004.

Publication Classification
(51) **Int. CL**
A43C 11/00 (2006.01)
A43B 23/26 (2006.01)
(52) **U.S. CL** 36/50.1; 36/54
(57) **ABSTRACT**
A unique system comprises a tongue of a predetermined footwear, a lace, a lace-end fastener, and at least one lace-section fastener. The footwear has two opposite sides and a plurality of lace receivers disposed thereon. The footwear is laced with the lace to define opposite lace sections, each of which extends between two of the lace receivers on the same side. The tongue has at least one opening. The tongue comprises a plurality of layers. The lace is threaded through the at least one opening. The lace ends are fastened by the lace-end fastener. The lace ends are hidden inside the tongue. The at least one lace-section fastener is for at least one of the lace sections to be fastened thereon and for at least one of the lace sections to be unfastened therefrom, to fasten the footwear on and to unfasten the footwear from a foot, respectively.



-1-
Inulemon Ex. 1006
IPR Petition - USP 9,730,484

- Directed to a “system compris[ing] a tongue of a predetermined footwear, a lace, a lace-end fastener, and at last one lace-section fastener.” Voughlohn, Ex. 1006 at Abstract.

POR, Paper 19 at 11



Claim Construction



“domed, three-dimensional structure” (claims 1, 10, and 11)



1. An article of footwear comprising an upper including a flat-knitted element formed from at least one yarn mechanically manipulated in a flat-knitting process, the flat-knitted element including a first layer having:

- a central portion having a domed, three-dimensional structure configured for extending over the top of a foot;
- a first side portion being formed of unitary construction with the central portion and extending from a first side of the central portion; and
- a second side portion being formed of unitary construction with the central portion and extending from a second side opposite the first side of the central portion, the domed, three-dimensional structure shaped to extend above the plane of the first side portion and the second side portion when the flat-knitted element is in a flattened configuration.

'484 Patent, Ex. 1001 at 13:6–21



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON USA INC.,
Petitioner,

v.

NIKE, INC.,
Patent Owner.

IPR2023-01460
Patent 9,730,484 B2

Before JOSIAH C. COCKS, CARL M. DEFRANCO, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

B. Claim Construction

lululemon asserts that “the plain and unambiguous language of the claim[s] requires that the flat-knitted element having the claimed features must be formed from a flat-knitting process.” Pet. 13–14. Nike agrees with lululemon’s construction of the claims, i.e., “that the flat-knitted element, including the ‘domed, three dimensional structure,’ ‘must be formed from a flat-knitting process.’” Prelim. Resp. 9–10 (quoting Petition 13–14). In doing so, Nike explains that the claims do not cover “a flat knitted element with a three-dimensional structure formed only *after* the knitting process is complete.” *Id.* at 10. Thus, consistent with the parties’ reasoning, we construe the claims to require that the “central portion having a domed, three-dimensional structure” be formed during the flat-knitting process, and not afterward.

Institution Decision, Paper 9 at 6



**Iululemon Concedes Grounds 1 and 2 in View of the Board's
Construction of “domed, three-dimensional structure”**



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LULULEMON USA INC.,
Petitioner,

v.

NIKE, INC.,
Patent Owner.

Case IPR2023-01460
Patent 9,730,484

**PETITIONER'S REPLY IN SUPPORT OF PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 9,730,484**

III. GROUND 1-2

In light of the Board's claim construction in the Institution Decision, Petitioner will refrain from further arguing Grounds 1-2.

Petitioner's Reply, Paper 22 at 3



**Ground 3: lululemon Fails To Show That Dua in view of Hong and
Lockwood Renders Obvious Any of Claims 1–19**



Ground	35 U.S.C. §	Claims	Reference(s)
~~1~~	~~103~~	~~1, 5–9~~	~~Lockwood and Dua~~
~~2~~	~~103~~	~~1, 5–9~~	~~Lockwood, Dua, Norton~~
3	103	1–19	Dua, Hong, Lockwood
4	103	2–4, 18, 19	Dua, Hong, Lockwood, Voughlohn



lululemon Fails To Show That Hong Teaches or Suggests Forming Three-Dimensional Structures During the Knitting Process

lululemon relies only on Hong for allegedly knitting three-dimensional structures



Hong discloses flat knitting three-dimensional structures, including domed, three-dimensional structures, and a POSA would have been motivated to include such a three-dimensional structure in Dua's upper or a similar upper. *Id.*

Petition, Paper 1 at 41

100. Hong confirms a POSA would have known that flat knitting three-dimensional structures was well-known and common.

Brookstein Declaration, Ex. 1002 at ¶100 (POR, Paper 19 at 19)

Do any of the other prior references in this proceeding disclose the formation of three-dimensional objects during the knitting process?

A No.

Q In your opinion, only Hong discloses that?

A In my opinion, that's correct.

Brookstein Dep. Tr., Ex. 2005 at 114:9–17 (POR, Paper 19 at 19)



When this method is used to knit three-dimensional structures, the main technique consists in transferring the three-dimensional form to two-dimensional patterns, because the fashioning operation (increasing or decreasing the number of knitting needles) is only determined according to two-dimensional patterns. The three-dimensional shaped knitted fabrics presented in this work are all knitted by using this technique.

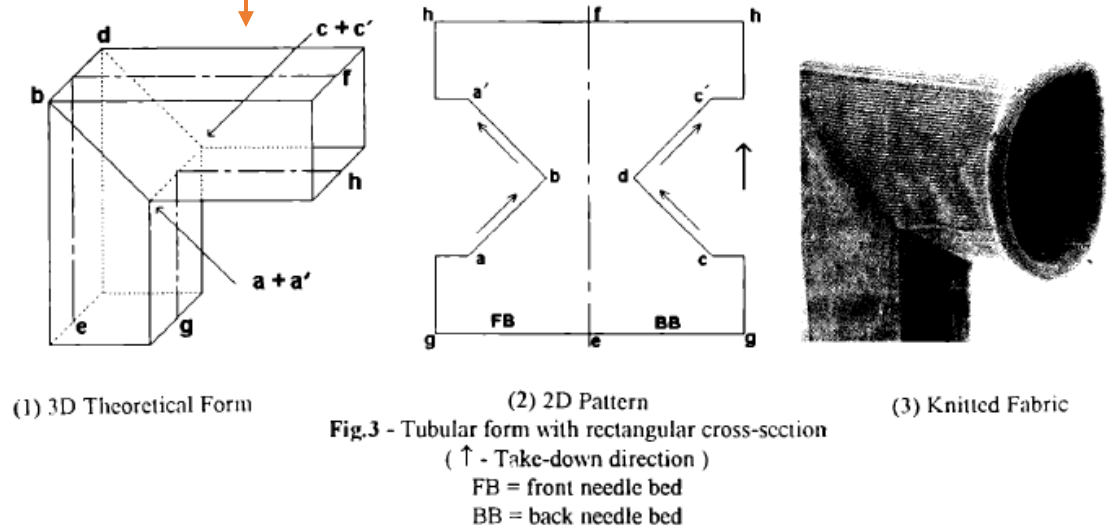
Hong, Ex. 1005 at 3 (POR, Paper 19 at 22–23)

Hong fails to teach forming a three-dimensional structure *during* a knitting process



In Figures 3–9, Hong shows three-step knitting operations: (1) generating a “3D Theoretical Form,” (2) knitting to shape a “2D Pattern,” and (3) assembling and seaming a “Knitted Fabric.” In my opinion, each of Hong’s “Knitted Fabrics” would have required post-knitting processing to reach the form shown in Figures 3(3)–3(9).

Pastore Declaration, Ex. 2003 at ¶49 (POR, Paper 19 at 22–24)

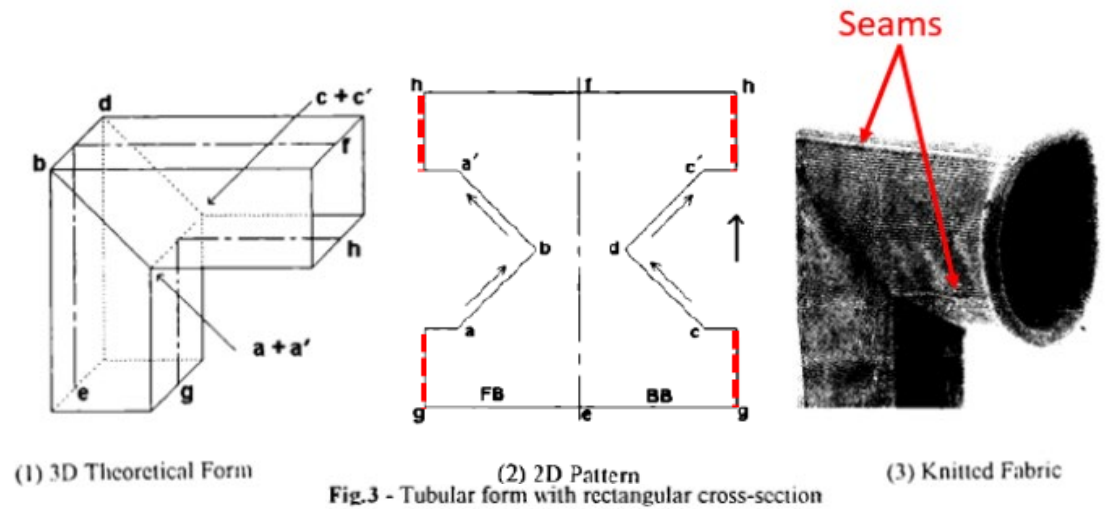


Hong, Ex. 1005 at Fig. 3 (POR, Paper 19 at 24)



In my opinion, the structure shown in Figure 3(3) could only have been assembled into its finished shape *after* the knitting process. This is because it would not have been possible to join edges “h” (or edges “g”) of Figure 3(3) together, i.e., the left and right edges of the “2D Pattern,” *during* a flat-knitting process. In my experience, there is no way to connect edges “h” (or “g”) to one another during knitting on a flat-knitting machine. Instead, in my opinion, Hong’s “three-dimensional form[s]” are assembled by folding and seaming together its knit-to-shape “two-dimensional patterns.” For example, Figure 3(3) shows seams (annotated) joining edges of the two-dimensional pattern of Figure 3(2).

Pastore Declaration, Ex. 2003 at ¶51 (POR, Paper 19 at 23, 28)



Hong, Ex. 1005 at Fig. 3 (annotated)
(POR, Paper 19 at 24; Patent Owner’s Sur-reply, Paper 23 at 5)



Unrebutted

expert testimony shows that joining the vertical edges on opposite sides of Hong's two-dimensional patterns *during* a flat-knitting process is impossible. Ex. 2003 at ¶51.

Patent Owner's Sur-Reply, Paper 23 at 7



Q: So when you reviewed the Hong reference . . .

A: Right.

Q: . . . 2 times I think you said . . .

A: At least.

Q: . . . you never considered figures 3, 4, 5, 6, 8, or 9 or their corresponding descriptions; is that right?

A: That's what I testified to, yes.

Brookstein Dep. Tr., Ex. 2005 at 108:23–109:9 (POR, Paper 19 at 24)



50. In my opinion, Hong never teaches the process by which a skilled artisan could form the “Knitted Fabrics” depicted in Figures 3(3)–3(9) during the knitting process. In my opinion, a skilled artisan viewing Hong could not reasonably expect to succeed in forming, during the knitting process, the “Knitted Fabrics” shown in Figures 3(3)–3(9).

Pastore Decl., Ex. 2003 at ¶51 (Patent Owner’s Sur-reply, Paper 23 at 7)

Hong's "knitting to shape" refers to two-dimensional knitting



3 Techniques for Knitting to Shape

On flat knitting machines, it is possible to use the following techniques for knitting to shape:

- using different structural combinations;
- using different loop lengths; and
- altering the number of operating needles from course to course.

Hong, Ex. 1005 at 2 (POR, Paper 19 at 34)

Computer-aided machine knitting of knit-to-shape patterns was a cutting-edge developing technology in the mid-1990's. *See, e.g.,* Ex. 1005 at 1.

Pastore Declaration, Ex. 2003 at ¶24 (Patent Owner's Sur-reply, Paper 23 at 8)

Q: And articles that are knit to shape, could those include two-dimensional shapes?

A: Yes, some of the early knit to shape fully fashioned things were like knitting a triangle.

Pastore Dep. Tr., Ex. 1022 at 56:1–5 (Patent Owner's Sur-reply, Paper 23 at 7–8)



54. I disagree with Dr. Brookstein that Hong's described benefits of "overcoming fabric waste and diminishing labor cost" are attributable to forming three-dimensional structures during the knitting process. *See* Ex. 1002 at ¶¶91, 94. In my opinion, these are more generic benefits of knitting-to-shape. As I discuss above in Section VII.A, knit-to-shape elements reduce waste and eliminate post-processing cutting steps.

Pastore Declaration, Ex. 2003 at ¶54 (POR, Paper 19 at 26)

Q: Earlier, we talked about some of the benefits of knitting to shape, like reducing the wasted material that you'd otherwise have to cut away and saving the steps and the labor involved in cutting away the textile element. Do you remember that?

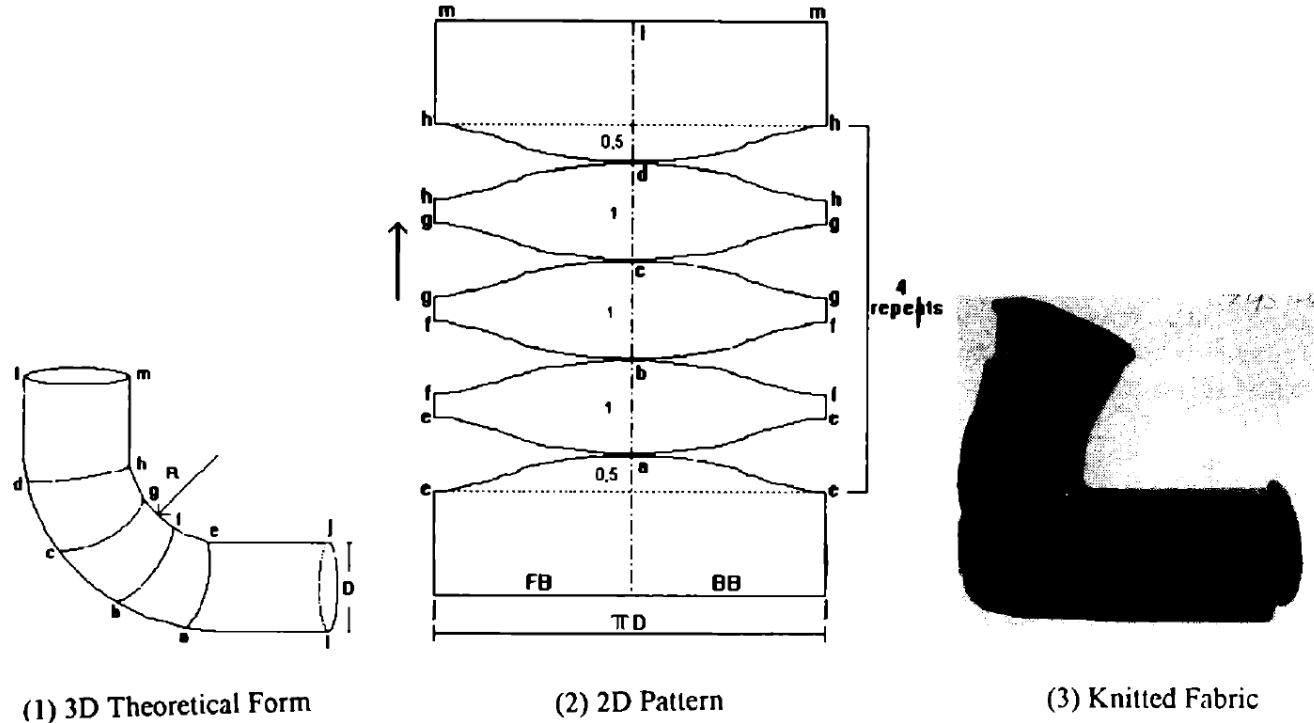
A: Yes, and the makeup operation.

Q: Right. Do those benefits apply to knit-to-shape two-dimensional objects as compared with cut-and-sew two-dimensional objects?

MR. SMITH: Objection, form. Beyond the scope.

A: Yes. Knit-to-shape is going to be more efficient than cut-and-sew.

Brookstein Dep. Tr., Ex. 2005 at 114:18–115:10 (POR, Paper 19 at 26–27)



(1) 3D Theoretical Form

(2) 2D Pattern

(3) Knitted Fabric

Fig.4 - Tubular form with circular cross-section

Hong, Ex. 1005 at Fig. 4 (POR, Paper 19 at 26)



Q: So knit-to-shape and fully-fashioned are synonyms?

A: In my mind, yes.

Q: So in your declaration when you say fully-fashioned garments, that must mean knit-to-shape garments?

A: Yes.

Brookstein Dep. Tr., Ex. 2005 at 15:5–14 (POR, Paper 19 at 27)



lululemon Fails To Show That Dua in View of Hong and Lockwood Teaches or Suggests Knitting a “domed, three-dimensional structure shaped to extend above the plane of the first side portion and the second side portion”



1. An article of footwear comprising an upper including a flat-knitted element formed from at least one yarn mechanically manipulated in a flat-knitting process, the flat-knitted element including a first layer having:

- a central portion having a domed, three-dimensional structure configured for extending over the top of a foot;
- a first side portion being formed of unitary construction with the central portion and extending from a first side of the central portion; and
- a second side portion being formed of unitary construction with the central portion and extending from a second side opposite the first side of the central portion, the domed, three-dimensional structure shaped to extend above the plane of the first side portion and the second side portion when the flat-knitted element is in a flattened configuration.

'484 Patent, Ex. 1001 at 13:6–21



In my opinion, Hong only shows the development of fully three-dimensional structures—not part three-dimensional, part flat structures. Hong includes examples of only closed-periphery three-dimensional structures held together by seams that lack any flat portions. *See* Ex.1005 at Figs. 3(3)–9(3).

Pastore Declaration, Ex. 2003 at ¶56 (POR, Paper 19 at 29)

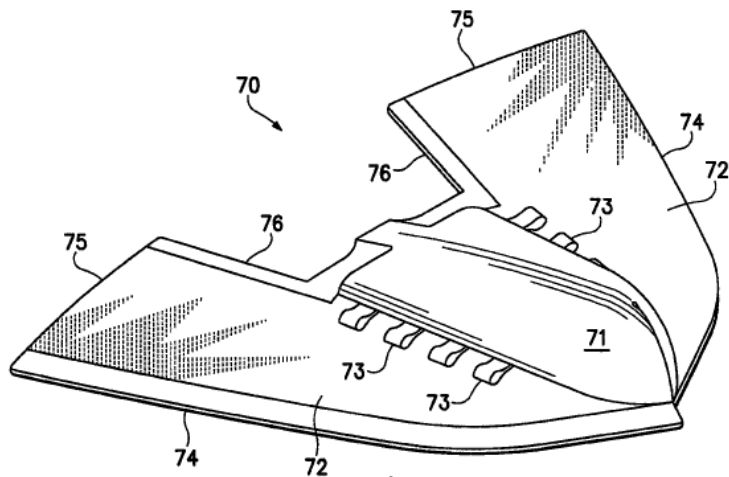
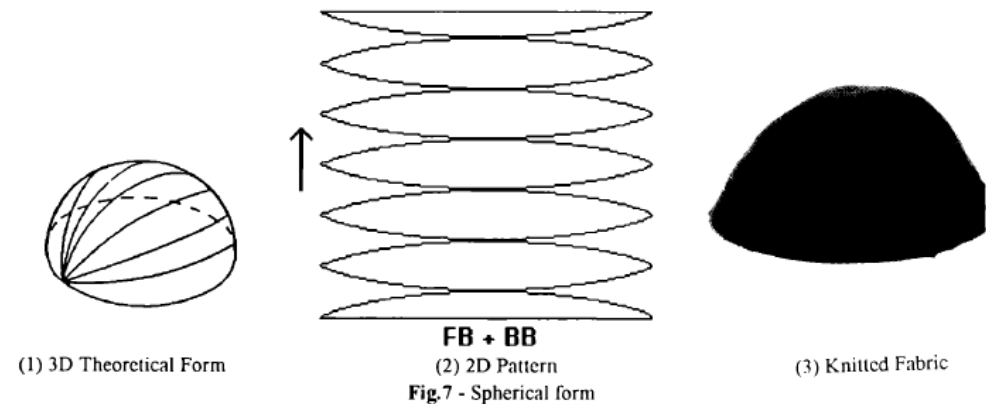


Figure 10A

'484 Patent, Ex. 1001 at Fig. 10A (POR, Paper 19 at 5)



Hong, Ex. 1005 at Fig. 7 (Patent Owner's Sur-reply, Paper 23 at 10)

No reasonable expectation of success in knitting the claimed configuration



In my opinion, a POSITA in 2006 would not have looked to combine Hong's finished structures with Dua and Lockwood to reach the claimed configuration. And in my opinion, even if a POSITA were to understand Hong's intention, they would not have a reasonable expectation of success achieving the claimed configuration.

Pastore Declaration, Ex. 2003 at ¶156 (Patent Owner's Sur-reply, Paper 23 at 12)



“[T]he expectation-of-success analysis must match the highly desired goal, not switch to a different goal that may be a less challenging but also less worthwhile pursuit.”

Institut Pasteur & Universite Pierre Et Marie Curie v. Focarino, 738 F.3d 1337, 1346 (Fed. Cir. 2017)

Case referenced Patent Owner’s Response, Paper 19 at 29



**lululemon Fails to Show That Dua or Hong Teaches or Suggests the
“Loop” Limitations of Claims 2–4, 10, or 18–19**



10. An article of footwear comprising an upper including a flat-knitted element formed from at least one yarn mechanically manipulated in a flat-knitting process, the flat-knitted element including a first layer and a second layer, the first layer including:

- a central portion having a domed, three-dimensional structure configured for extending over the top of a foot;
- a first side portion being formed of unitary construction with the central portion and extending from a first side of the central portion; and
- a second side portion being formed of unitary construction with the central portion and extending from a second side opposite the first side of the central portion; and

the second layer being flat-knitted with the first layer at opposite ends of the second layer to form an overlapped loop.

'484 Patent, Ex. 1001 at 13:50–14:9

Dua fails to disclose the claimed “loop”



[0037] Upper 30 is at least partially formed from textile element 40, which forms regions 31-35, and may also include laces or other elements associated with a conventional upper for footwear. Textile element 40 is a single material element that is formed to exhibit a unitary (i.e., one-piece) construction, and textile element 40 is formed or otherwise shaped to extend around the foot. As depicted in

Dua, Ex. 1004 at [0037] (POR, Paper 19 at 30–31)

Q: So as you sit here today, do you believe there’s any disclosure in paragraph 37 that supports your opinion that Dua discloses the loop limitation of claims 2, 10, and 18?

A: Not specifically, no.

Brookstein Dep. Tr., Ex. 2005 at 132:1–6 (POR, Paper 19 at 30–31)



[0041] Following the formation of each of seams 51-54, the manufacturing of upper 30 is essentially complete. Various finishing steps may be performed, such as reinforcing ankle opening 36, for example. Upper 30 (i.e., textile element 40) is then secured to sole structure 20, with an adhesive, for example. The insole is then placed into the void within upper 30 and adjacent to lower region 34. In some embodiments, various reinforcing members may be added to the exterior or interior surface of upper 20 in order to limit the degree of stretch in upper 20 or provide enhanced wear-resistance. In addition, a lacing system may be added to provide adjustability.

Dua, Ex. 1004 at [0041] (Petition, Paper 1 at 56)

Q: As you sit here today, is there anything in the disclosure of paragraph 41 of Dua that supports your opinion that Dua discloses the loop limitation of Claims 2, 10, and 18?

A: I just want to see something before I answer that question. Only says a lacing system.

Brookstein Dep. Tr., Ex. 2005 at 132:13–20 (POR, Paper 19 at 30–31)



[0060] Various warp knitting or weft knitting processes may be utilized to form textile element **40**, or the various other textile elements discussed above. An advantage of this process is that various stitches may be incorporated into specific locations of textile element **40** to modify the physical properties or aesthetics of textile element **40**. Whereas a conventional upper includes various elements that stitched or adhesively joined, textile element **40** is a single, unitary element of material. From the perspective of manufacturing, utilizing multiple materials to impart different properties to an article of footwear may be an inefficient practice. By forming textile element **40** to be a single, unitary element of material, however, efficiency is increased in that upper **20** may include a single textile element, rather than numerous joined elements.

Dua, Ex. 1004 at [0060] (Petition, Paper 1 at 56)

Q: Can you point me to anything in paragraph 60 of Dua that supports your opinion that Dua discloses the loop limitations of Claims 2, 10, and 18?

A: Let me read it one more time. I don't see one, no.

Q: Nothing?

A: I don't see it.

Brookstein Dep. Tr., Ex. 2005 at 136:8–15 (POR, Paper 19 at 30–31)

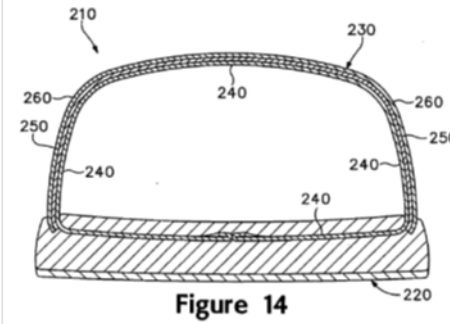
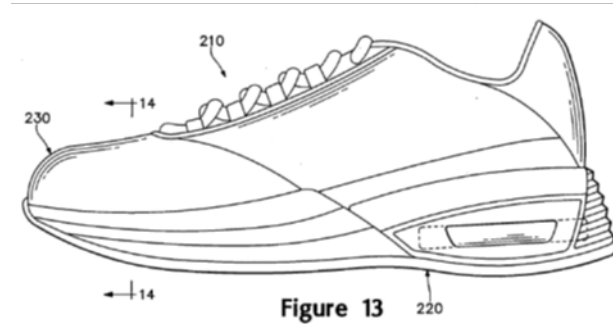


Q: So in paragraphs 37, 41, and 60, the only thing that you can point to as potential support for your opinion, that Dua discloses the loop limitations of Claims 2, 10, and 18, is the fact that paragraph 37 mentions laces, and paragraph 41 mentions a lacing system; is that right?

A: That’s correct.

Brookstein Dep. Tr., Ex. 2005 at 136:16–24 (POR, Paper 19 at 30–31)

Dua fails to disclose the claimed “loop”



Dua, Ex. 1004 at Figs. 13, 14

63. Dua explains that upper 230 is a “conventional upper” with “various material layers.” Ex. 1004 at [0059]. Upper 230 includes three layers: interior layer 240, intermediate layer 250, and exterior layer 260. *Id.* Interior layer 240 is a textile element. *Id.* Intermediate layer 250 may be formed from a “lightweight polymer foam material,” and exterior layer 260 may be formed from materials “selected based on the properties of wear-resistance, flexibility, and air-permeability.” *Id.* Dua’s description of Figure 13 is entirely silent as to the lace loops. Dua has no description that these loops are adjoined to textile element layer 240. And Dua does not disclose that the loops are knitted with textile element 240 in a “flat-knitting process.”

Pastore Declaration, Ex. 2003 at ¶163 (POR, Paper 19 at 33)

Q: Which layer has the loop structures in your opinion?

A: I can’t tell from that picture. Hold on one second. I define it as the second layer.

* * *

Q: So your opinion is that the lace loops disclosed in Dua are disclosed as being part of the intermediate layer?

A: Yes.

Brookstein Dep. Tr., Ex. 2005 at 132:1–6 (POR, Paper 19 at 30–31)

Dua's "upper" includes additional non-knitted components



lateral side of footwear 110. Whereas upper 30 was almost exclusively formed by textile element 40, upper 130 also includes lace 131 and elements 132-135. Accordingly, an upper in accordance with the present invention may incorporate a plurality of additional components.

Dua, Ex. 1004 at [0057] (POR, Paper 19 at 31)

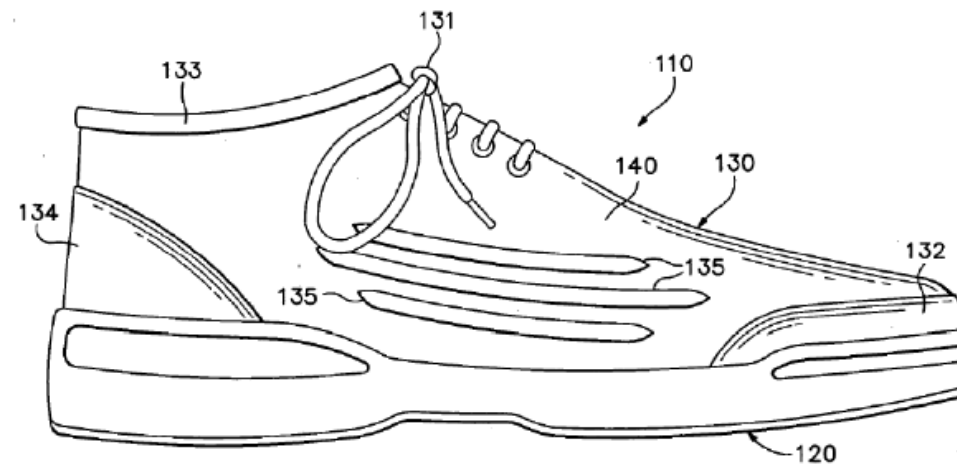


Figure 12

Dua, Ex. 1004 at Fig. 12 (POR, Paper 19 at 31)

Hong fails to disclose the claimed “loop”



In my opinion, Hong doesn't teach knitting a “loop,” as a POSITA reading the '484 Patent in 2006 would have understood that term. *See, e.g.*, Ex. 1001 at Fig. 10A, item 73. Instead, Hong teaches knitting the type of “loops” that are intrinsic to any knitting process on a micro-scale.

Pastore Declaration, Ex. 2003 at ¶63 (POR, Paper 19 at 32)

ing machines increase this ability a great deal. By using the new flat knitting machines, it is possible not only to knit the new loop structures which are not possible on the conventional flat knitting machines, but also knit fully fashioned garments.

Hong, Ex. 1005 at 1 (POR, Paper 19 at 34)

Interlooping involves the formation of a plurality of columns of intermeshed loops, with knitting being the most common method of interlooping.

'484 Patent, Ex. 1001 at 2:53–54 (POR, Paper 19 at 34)

The term *knitting* describes the technique of constructing textile structures by forming a continuous length of yarn into columns of vertically intermeshed loops.

Spencer, Ex. 2004 at § 2.1 (POR, Paper 19 at 32)



Q: Do you see Claim 2 says, “The article of footwear in Claim 1 further comprising a first loop being formed as a second layer of unitary construction with the first layer”? You see that?

A: I do.

Q: What does the term loop mean in that claim?

A: In that claim, they’re talking about loops for laces.

Q: That’s different than the loops that we discussed in Hong?

A: Totally different.

Brookstein Dep. Tr., Ex. 2005 at 118:17–119:5 (POR, Paper 19 at 34–35)



“We see no error in the district court’s legal conclusion of nonobviousness” where “[n]either Takayasu nor Smiley discloses” claimed limitation.

St. Jude Med., Inc. v. Access Closure, Inc., 729 F.3d 1369, 1381–82 (Fed. Cir. 2013)

Case referenced Patent Owner’s Response, Paper 23 at 14



Ground 4: lululemon Fails to Show That Dua in View of Hong, Lockwood, and Voughlohn Renders Obvious Any of Claims 2–4, 18, and 19



Ground	35 U.S.C. §	Claims	Reference(s)
~~1~~	~~103~~	~~1, 5–9~~	~~Lockwood and Dua~~
~~2~~	~~103~~	~~1, 5–9~~	~~Lockwood, Dua, Norton~~
3	103	1–19	Dua, Hong, Lockwood
4	103	2–4, 18, 19	Dua, Hong, Lockwood, Voughlohn



2. The article of footwear of claim 1, further comprising a first loop being formed as a second layer of unitary construction with the first layer.

3. The article of footwear of claim 2, wherein the first loop extends outward from the central portion.

4. The article of footwear of claim 2, further comprising eight loops being formed as a second layer of unitary construction with the first layer.

'484 Patent, Ex. 1001 at 13:23–30



Voughlohn doesn't teach a knitted upper:

Q: As you sit here today, aside from paragraph 345, are you aware of any mention of knitted footwear or a knitting process in Voughlohn?

A: Without reading it all, I'd say no.

Brookstein Dep. Tr., Ex. 2005 at 152:13–18 (POR, Paper 19 at 37)

[0345] 6) Footwear:

[0346] A footwear, equivalent to any footwear in the present invention, can be partially or entirely made of at least one material, which can be elastic, non-elastic, flexible, non-flexible, resilient, non-resilient, rigid, semi-rigid, transparent, non-transparent, fluorescent, light-reflecting, glittered, glow-in-the-dark, fabric, cotton, leather, vinyl, nylon, rubber, plastic, thread, eye-catching, metallic, steel, bronze, zinc, copper, aluminum, iron, alloy, tin, the like, the equivalent, or a combination of at least two of the above.

Voughlohn, Ex. 1006 at ¶¶345–46 (Petition, Paper 1 at 74)



Voughlohn doesn't teach a knitted lace receiver knitted to an upper:

[0377] For example, FIG. 10 illustrates some examples of a lace receiver and/or a part of a lace-section fastener. The lace receiver and/or a part of the lace-section fastener is equivalent to any lace receiver and/or a part of any lace-section fastener in the present invention. The lace receiver and/or a part of the lace-section fastener can comprise:

[0378] a metallic or plastic hook 102, attached to or integrated into the top-side of a footwear with rivet(s) or thread(s), so that the hook is fixed or movable; or

[0379] a plastic or fabric ring 103, 104, or 105, attached to or integrated into the under-side of a footwear with rivet(s) or thread(s) (each of rings 103, 104, and 105 is a strip of material riveted or sewn to the footwear to create a fixed or movable ring). Rings 103, 104, and 105 are disposed on the top-side of, at the edge of, and on the under-side of one of the two opposite sides of the footwear, respectively.

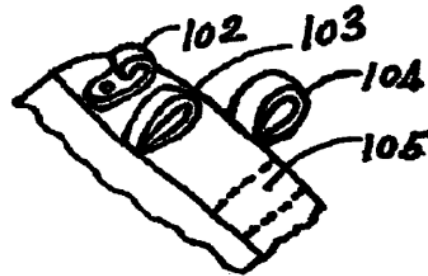


Fig. 10

Voughlohn, Ex. 1006 at Fig. 10

Voughlohn, Ex. 1006 at ¶¶377–79 (POR, Paper 19 at 37)

Q: And in the parenthetical, each of rings, 103, 104 and 105, is a strip of material rivetted or sewn to the footwear to create a fixed or movable ring; right?

A: Yes.

Q: And that tells us that those are separate components that are attached to the article of footwear by either being sewn or riveted; correct?

A: That's the way I read it, yes.

Q: So those rings are not knitted into any sort of knitted upper; right? They're not formed simultaneously with the upper; correct?

A: In Figure 10, right.

Q: Correct?

A: Correct.

Brookstein Dep. Tr., Ex. 2005 at 155:1–22 (POR, Paper 19 at 37)



As a result, a POSA would have found it obvious in view of Voughlohn to form a first loop as a second layer and form the first loop as a unitary construction with a first layer to flat knit a first layer like Dua's closer to fully fashioned article of footwear.

Brookstein Declaration, Ex. 1002 at ¶152 (Petition, Paper 1 at 77)