

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SKECHERS U.S.A., INC.,
Petitioner

v.

NIKE, INC.,
Patent Owner

Patent No. 9,986,781

**PETITION FOR INTER PARTES REVIEW
OF U.S. PATENT NO. 9,986,781**

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EX1001	U.S. Patent No. 9,986,781 (the "'781")
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EX1003	Declaration of Grant Delgatty
EX1004	Declaration of Ingrid Hsieh-Yee
EX1005	Joint Claim Construction and Prehearing Statement, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Dkt. 50, Case No. 2:23-cv-09356 (C.D. Cal.)
EX1006	Exhibit A to Joint Claim Construction and Prehearing Statement – Chart of Disputed Constructions, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Dkt. 50-1, Case No. 2:23-cv-09356 (C.D. Cal.)
EX1007	Nike, Inc.'s Opening Claim Construction Brief, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Dkt. 55, Case No. 2:23-cv-09356 (C.D. Cal.)
EX1008	Skechers U.S.A., Inc.'s Opening Claim Construction Brief, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Dkt. 56, Case No. 2:23-cv-09356 (C.D. Cal.)
EX1009	Nike, Inc.'s Responsive Claim Construction Brief, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Dkt. 60, Case No. 2:23-cv-09356 (C.D. Cal.)
EX1010	Skechers U.S.A., Inc.'s Responsive Claim Construction Brief, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Dkt. 61, Case No. 2:23-cv-09356 (C.D. Cal.)
EX1011	Nike, Inc.'s Initial Infringement Contentions for U.S. Patent No. 9,986,781, <i>Nike, Inc. v. Skechers U.S.A., Inc.</i> , Case No. 2:23-cv-09356 (C.D. Cal.) (served March 1, 2024)
EX1012	Director Vidal's June 21, 2022 Memorandum regarding Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation ("Guidance Memorandum")
EX1013	Certified file history of U.S. Patent No. 9,986,781 (15 volumes)

Exhibit No.	Document
EX1014	European Patent Application EP 1,338,690 A1 ("Cusinato")
EX1015	U.S. Patent No. 1,841,518 ("Bellak")
EX1016	U.S. Patent No. 2,400,692 ("Herbert")
EX1017	U.S. Patent No. 6,910,288 ("Dua")
EX1018	U.S. Design Patent No. D461,591 ("Hlavacs")
EX1019	U.S. Patent No. 1,902,780 ("Holden")
EX1020	U.S. Patent No. 9,060,562 ("562 patent")
EX1021	U.S. Patent No. 9,730,484 ("484 patent")
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EX1023	<i>Adidas Covers the Field 1980 Vintage Sneaker Ad</i> , The Deffest® A vintage and retro sneaker blog, https://www.thedeffest.com/vintage-ads/adidas-covers-the-field-1980-vintage-sneaker-ad
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EX1025	<i>Sears the Winner II 1979 Sneakers</i> , The Deffest® A vintage and retro sneaker blog, https://www.thedeffest.com/vintage-ads/tag/sears+the+winner+sneakers
EX1026	<i>Kmart Trax Vintage Sneaker Commercial From 1985 Featuring Malcolm Marshall</i> , The Deffest® A vintage and retro sneaker blog, https://www.thedeffest.com/vintage-ads/tag/Kmart
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EX1031	Vintage 1980s Nike Dynasty Low 801101 Blue Swoosh Athletic Shoes, Ebay, https://www.ebay.com/itm/224072772852
EX1032	<i>Vans: World's Number One Skateboard Shoe</i> , Skate and Annoy, https://skateandannoy.com/galleries/vintageadverts/vans-worlds-number-one-skateboard-shoe/
EX1033	<i>Hoop Stars: Puma Hoop Hoop Hooray 1987 Sensation Basketball Shoes Vintage High Top Sneakers</i> , The Deffest® A vintage and retro sneaker blog, https://www.thedeffest.com/vintage-ads/hoop-stars-puma-hoop-hoop-hooray-1987-sensation-basketball-shoes-vintage-high-top-sneakers
EX1034- EX1049	RESERVED
EX1050	David J. Spencer, <i>KNITTING TECHNOLOGY: A COMPREHENSIVE HANDBOOK AND PRACTICAL GUIDE</i> (3rd ed.) (Woodhead Publishing Limited, Cambridge, England 2001)
EX1051	U.S. Patent No. 1,803,554 ("Knilians")
EX1052	U.S. Patent No. 2,047,724 ("Zuckerman")
EX1053	U.S. Patent No. 2,675,631 ("Doughty")
EX1054	Excerpts of Sandy Black, <i>KNITWEAR IN FASHION</i> (Thames & Hudson 2002)
EX1055	CN 2187379Y ("Li") - Translation
EX1056	CN 2187379Y ("Li")
EX1057	Excerpts of Man-Made Fiber and Textile Dictionary (4th ed.) (Celanese Corporation, December 1978)
EX1058	M. Legner, <i>3D-Products for Fashion and Technical Textile Applications from Flat Knitting Machines</i> , MELLIAND INTERNATIONAL (September 2003), 238-241
EX1059	KNITTING INTERNATIONAL (February 2004), 35-39

Exhibit No.	Document
EX1060	Oswald Rieder, <i>Flat and Circular Knitting Machine Trends</i> , INTERNATIONAL TEXTILE BULLETIN (December 2003), 49-51
EX1061	Derek T. Ward, <i>The Future of Knitting</i> , INTERNATIONAL TEXTILE BULLETIN (May 2023), 46-50
EX1062	Sabit Adanur, WELLINGTON SEARS HANDBOOK OF INDUSTRIAL TEXTILES (Johnston Industries Group 1995)

CLAIM LISTING

Claim/ Element	Text of Claim
1[pre]	An upper for an article of footwear, the upper comprising:
1[a1]	a flat knit textile element having: (1) flat knit edges free of surrounding textile structure such that the flat knit edges are not surrounded by textile structure from which the textile element must be removed,
1[a2]	and (2) a plurality of ribs integrally knitted into the flat knit textile element,
1[b]	wherein one or more ribs extend longitudinally along one or more of a lateral side and a medial side of the upper, the one or more ribs extending from the forefoot region toward the heel region and terminating in one of the midfoot region or the heel region.
2	The upper of claim 1, wherein the one or more ribs terminate in the heel region of the upper.
3	The upper of claim 1, wherein the one or more ribs affect stretch properties of the upper.
4	The upper of claim 1, wherein the one or more ribs extending longitudinally comprises ribs spaced apart from an area adjacent an instep region of the upper to an area adjacent a lower region of the upper.
5	The upper of claim 4, wherein the lower region of the upper comprises a bottom surface of the upper.
6	The upper of claim 4, wherein the ribs are spaced apart at a uniform distance from the area adjacent the instep region to the area adjacent the lower region.
7	The upper of claim 1, wherein the one or more ribs are adjacent one or more regions having a smooth texture.
8	The upper of claim 1, wherein the one or more ribs comprise a plurality of ribs, at least one rib terminating in the heel region and at least one rib terminating in the midfoot region.
9	The upper of claim 1, wherein the one or more ribs includes one or more ribs extending longitudinally along the lateral side and one or more ribs extending longitudinally along the medial side.
10	The upper of claim 9, wherein the one or more ribs extending along the lateral side mirror the one or more ribs extending longitudinally along the medial side.

Claim/ Element	Text of Claim
11	The upper of claim 1, wherein the one or more ribs comprise ribs of varying lengths.
12[pre]	An article of footwear comprising: an upper comprising:
12[a1]	a flat knit textile element having: (1) flat knit edges free of surrounding textile structure such that the flat knit edges are not surrounded by textile structure from which the textile element must be removed,
12[a2]	and (2) a plurality of ribs integrally knitted into the flat knit textile element,
12[b]	wherein the plurality of ribs include one or more ribs extending longitudinally along a lateral side and one or more ribs extending longitudinally along a medial side of the upper, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side extend from the forefoot region toward the heel region and terminate in one of the midfoot region or the heel region.
13	The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side terminate in the heel region of the upper.
14	The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side affect stretch properties of the upper.
15	The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side each comprise ribs spaced apart from an area adjacent an instep region of the upper to an area adjacent a lower region of the upper.
16	The article of footwear of claim 15, wherein the ribs are spaced apart at a uniform distance.
17	The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side are adjacent one or more regions having a smooth texture.
18	The article of footwear of claim 12, wherein at least the one or more ribs on the lateral side comprise a plurality of ribs, at least one rib terminating in the heel region and at least one rib terminating in the midfoot region.
19	The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side comprise ribs of varying lengths.

Claim/ Element	Text of Claim
20	The article of footwear of claim 12, further comprising a sole structure secured to the upper.

I. INTRODUCTION

US9,986,781 (EX1001 ("the '781")) relates to footwear made using a flat knit textile having both flat knit edges and ribs integrally knitted into the textile. However, this combination of elements was rejected by the Examiner as obvious over the prior art. In order to overcome the rejection, Patentee made arguments regarding the location and orientation of the ribs. But in litigation, Patentee disavowed these arguments, (1) arguing for a claim construction that would capture the cited prior art and (2) accusing footwear with purported ribs having the same location and orientation as ribs in the prior art.

Additionally, Patentee's litigation infringement contentions confirmed that the integrally knitted ribs for 18 of the 20 claims can be present solely for *aesthetic* purposes. Thus, aside from the ribs being integrally knitted into the textile (which was disclosed in the last-cited prior art combination), *the ribs recited in those 18 claims need not have any functional or structural purpose whatsoever and may be present solely for aesthetic purposes*. But integrally knitted ribs (for aesthetic and/or functional purposes) are one of the oldest of all machine-knitted patterns (dating back to 1759), and have been hand-knit for even longer.

During prosecution, the Examiner did not consider that integrally knitted ribs (and stripes, their printed counterparts) are among the simplest and most ubiquitous aesthetic design elements to appear on footwear and knitted textiles. Additionally,

the functional limitation of the remaining two claims (that the ribs "affect stretch" in the article made of the knitted textile, appearing in claims 3 and 14) has been common knowledge for centuries. Indeed, socks typically have ribs to "affect stretch."

Moreover, the Examiner did not have the opportunity to consider expert testimony regarding what was common knowledge, and obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. Such an oversight is particularly notable here, where the critical limitations that secured the allowance of the claims were simply a *written* recitation of broad, aesthetic design elements far more expansive than what Patentee could have received in a *pictorial* design patent.

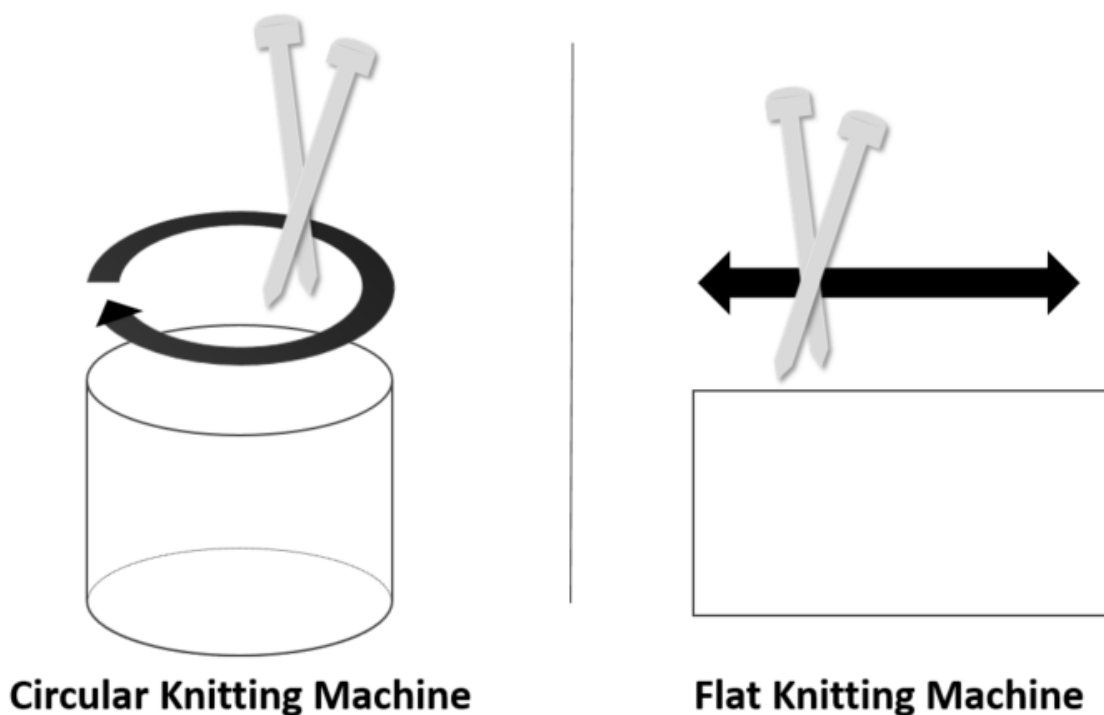
For these reasons and others set forth below, the Board should institute *inter partes* review of the '781.

II. TECHNOLOGICAL OVERVIEW

A. Knitting Machines Were Well-Known In The Prior Art

Knitting machines, such as the stocking frame (invented in 1589), have been used in manufacturing textiles for centuries. EX1050 ("Spencer"), 9; EX1002 (Adanur Declaration), ¶¶47-68. By the early 2000s, commercially-available tricot, raschel, flat bar, straight bar, and circular knitting machines were in common use. *Id.*; see also EX1001, 7:33-50.

Two common machine-knitting techniques are circular knitting and flat knitting. EX1002, ¶¶51-55. Circular knitting machines knit textiles in a continuous circle or tube, while flat knitting machines knit textiles in sheets. *Id.*



Both techniques are described in the '781 Background. *Id.*, ¶¶67-68; EX1001, 7:21-50. Both techniques have long been used to produce a single workpiece to avoid having to stitch together multiple workpieces. EX1002, ¶¶54-69. And both techniques can be used to manufacture footwear. *Id.*, ¶¶67-75; EX1016, 2:15-16 (disclosing use of either circular or flat knitting machines for making a slipper).

In some instances, flat knitting can be more efficient than circular knitting. EX1002, ¶¶54-69; EX1050, 379 ("[A]dvantages of flat knitting are...[the p]ossibility of *knitting to shape*"); EX1021, 4:51-55 ("[F]lat knitting can be used to

provide textile structures for use in footwear uppers of *a final desired shape* such that textile cutting steps can be avoided (which eliminates waste, avoids the need to finish cut edges, saves time, saves money, etc.).¹

Flat knitting can also be used to produce flat knit edges, for example, when knitting to shape. Knitting to shape eliminates the need to cut the workpiece (whatever shape it takes) from surrounding textile structure. EX1050, 45, 83; EX1002, ¶¶54-56, 68-69. The use of such techniques is consistent with a long-time industry goal of reducing wastage of yarn and knitted material wherever possible. *Id.*; see also EX1014 ("Cusinato"), [0007]-[0013] ("aim is to obtain a fabric in one piece from which it is possible to directly make the stocking or footwear," thus eliminating drawbacks of prior approaches and "avoiding waste"); EX1050, 185 (Advantages of flat knitting include that "[t]he firm, fashioned selvedge edges can be...seamed together, without the need for cutting...involving loss of expensive fabric").

B. Footwear Having Integrally Knitted Ribs Was Well-Known In The Prior Art

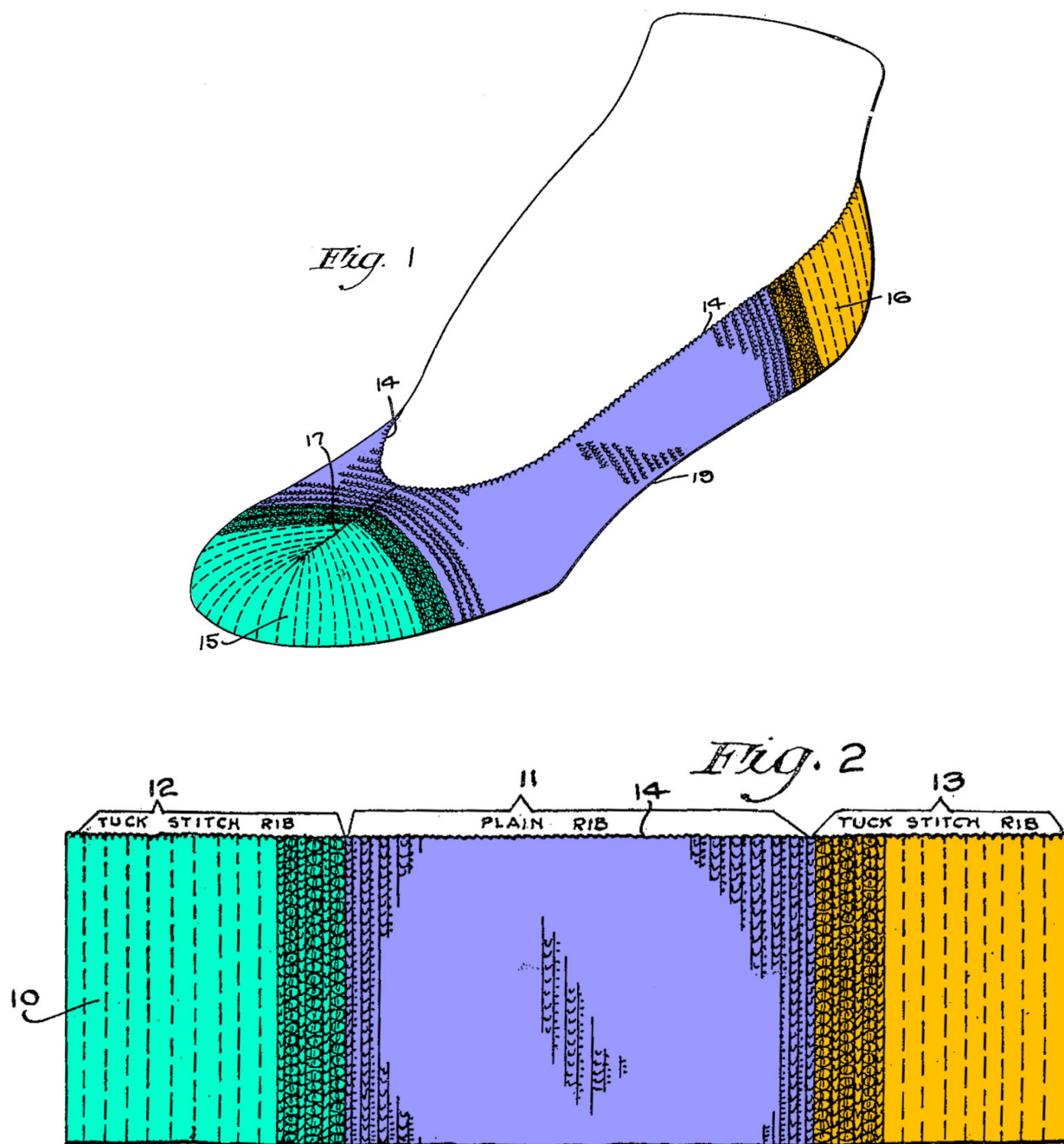
Knitting can be used to make textiles having a variety of different patterns and textures, including patterns where ribs are integrally knitted into the textiles. Knitted ribs are ubiquitous in footwear, including both socks and shoes. EX1002, ¶¶70-76.

¹ Unless otherwise noted, all emphases are added.

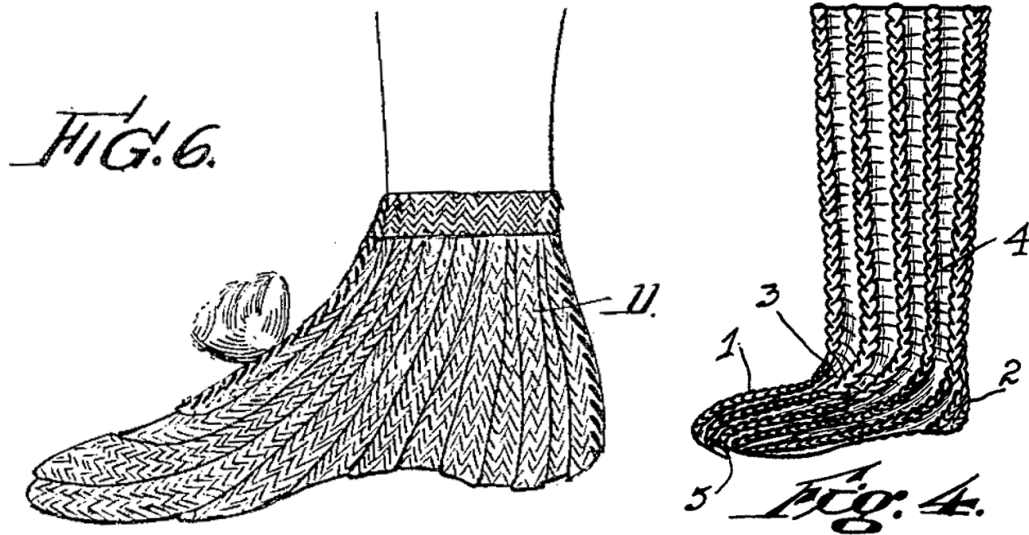
(Note the varying locations and orientations of the ribs in all of the footwear depicted below.)



See also EX1016 (images below) (Fig. 1 disclosing a "slipper foot covering" and Fig 2 disclosing "plain rib[s]" 11 (purple) and "tuck stitch rib[s]" 12 (green) and 13 (orange)).

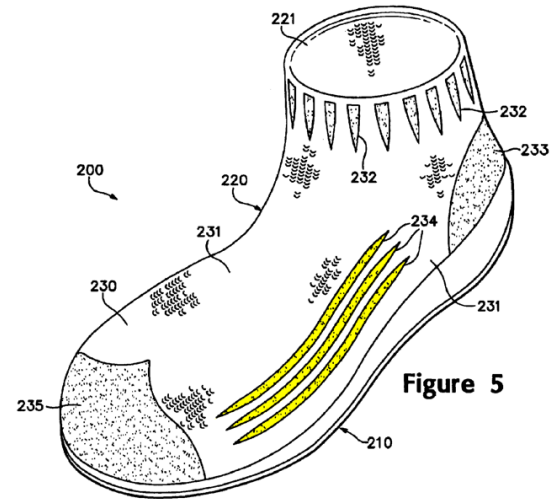
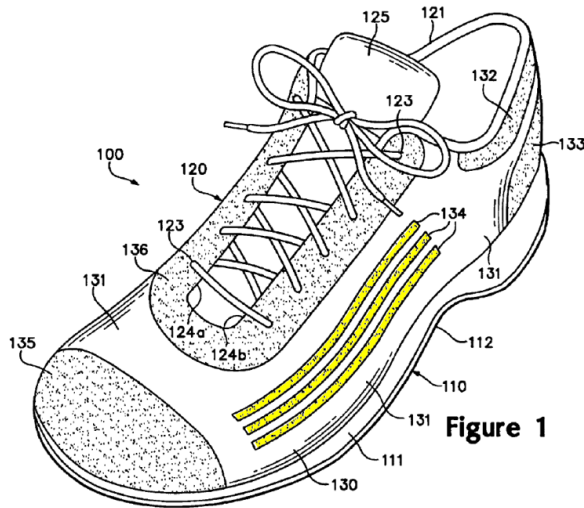


In prosecution, the Examiner cited US1,841,518 ("Bellak," EX1015, below left) and US1,902,780 ("Holden," EX1019, below right) as two examples of knitted footwear, a slipper and sock, respectively, having integrally knitted ribs:



Notably, ribs can serve aesthetic and/or functional purposes. EX1001, 9:43-44; EX1002, ¶¶72-73. As an aesthetic and/or functional design element, horizontal ribs (and their printed counterpart, stripes) are common in knitted footwear. For example, US6,910,288 ("Dua," EX1017) was cited in prosecution as disclosing a knitted shoe design comprising (horizontal) longitudinal ribs (highlighted elements 134 and 234 below) formed of fusible yarn, which are structurally different than integrally knit ribs, but still take on the appearance of ribs or stripes.² EX1002, ¶¶73-74.

² Unless otherwise noted, all coloring and annotations are added to patents and published references.



EX1017, Figs. 1, 5.

Athletic shoes with diagonal (and what Patentee argues are also longitudinal) ribs/stripes are also commonplace. EX1002, ¶¶74-75. For background purposes only, some examples are provided below. Note in particular, the prominence of diagonal stripes across multiple brands:

**PRESENTING
THE WINNING TEAM
KINNEY NBA'S!**

Pick a winner!
Pick a pair of
Kinney NBA's! For every
sport: running, tennis,
baseball, basketball, soccer.
And for every member of
the family, Kinney NBA's
are everything the high-priced
athletic shoes are. Without
the high price. Kinney
NBA's offer full arch
support, reinforced stress
points, wrap-around
heel and toe protection,
padded tongue
and heel.

Join the winning
team. Come! Win
with us!

Kinney
The Great American Shoe Store

HOW ONE BRAND

Fencing Leisure Golf Free-style wrestling Indoor Sports Long Jump
Car racing Cross-country Steeplechasing Cross-country skiing Gymnastics Ski jumping
Shot-putting Shooting Marathon running Volleyball Javelin Football
Greco-roman wrestling Soccer Baseball Basketball Parachuting High Jump Straddle
Coaching Rowing Sprinting Walking Rugby Weightlifting
Softball Racquetball Hiking Cycling Triple Jump Training
Windsurfing Relaxing High Jump Flop Boxing Tennis Hammer throwing

adidas covers the field.
... and the court ... and the gridiron ... and the course ... and the track ...

adidas
We've got a feeling for winning.

DEFFEST

**The Winner.
Built by
Converse.
Just for Sears.**

thick, tough rubber soles
cushioned "shock absorbers"
padded comfort all around
racing stripes

At the Shoe Place
Sears

Low-Cuts and High-Tops At
larger Sears, Roebuck and Co.
retail stores. And in the catalog.

DEFFEST

**Introducing Trax ... Very Basic...
Very Competitive Footwear.**

Nobody ever won anything because of the labels
on his shoes. Winning takes basics... basics like
practice, sweat, effort, desire... in short, the
fundamentals. That's why Trax are your best bet when it comes to
athletic shoes. They're built solid. They offer the support,
comfort and durability you get with
expensive shoes... but Trax give you these basic features
for under fifteen dollars. Whatever your age,
whatever your game... from men's hurdles to women's doubles
... Trax are priced to beat the competition.

\$7.97
\$9.97

Sold Exclusively at
Kmart
The Saving Place

© 1988 Kmart Company, K.M. Troy, Michigan 48068

DEFFEST

Van's world's number one skateboard shoes

Style #36 "Off The Wall" Shoe
 Van's, the world's number one skateboard shoe, has added a NEW style to its popular "Off The Wall" shoe line. Available in 3 colors: Red, Blue or Gold only, with leather toe cap, leather heel, leather eyelets and a fancy side leather racing stripe PLUS . . . the same outstanding construction features as style #95

Style #95 "Off The Wall" Shoe
 Our most popular shoe, this top quality shoe is hand made in the U.S.A. of super duck canvas with Van's exclusive waffle designed super grip pure crepe sole. Other outstanding features include cushioned insole and arch support with reinforced heel and padded collar. Available in 9 colors, colors may be combined, style #95 only



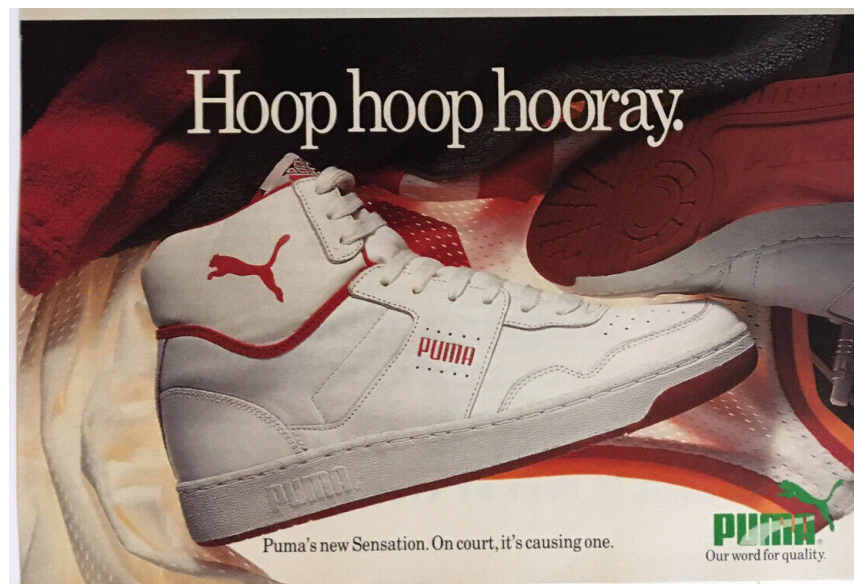
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EX1024, 14; EX1023, 3; EX1025, 19; EX1026, 13; EX1032, 1; EX1033, 2 (showing shoes from adidas, Converse, Puma, Vans, etc.).

Using machine-knitting to make integrally knitted ribs was also well-known in the prior art. EX1002, ¶¶58-66, 76. The first rib frame machine was introduced in 1755. *See* EX1050, 67. Knitting machines in the early 2000s were easily programmable to manufacture various ribbed patterns, some examples of which are shown below. EX1002, ¶¶58-66, 76. Indeed, Spencer devotes entire sections of his book to describing the use of knitting machines for integrally knit ribs. *Id.*; EX1050, 67-72; 181-183.

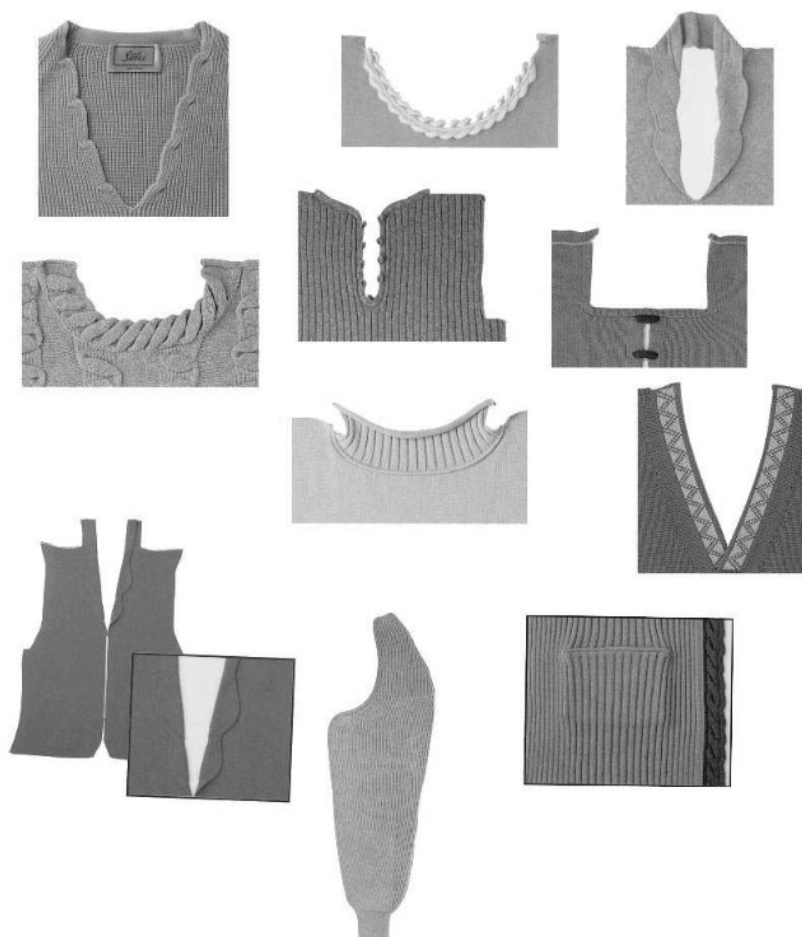


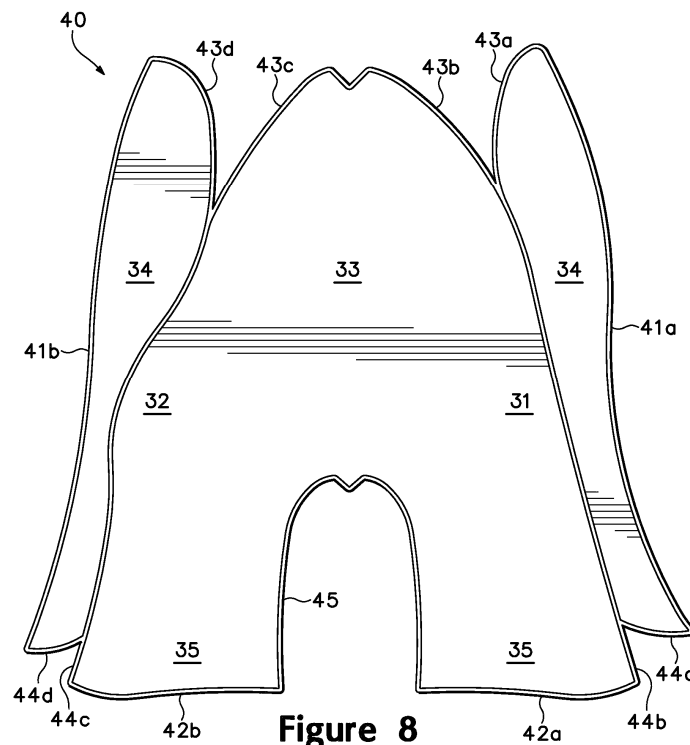
Fig. 16.9 Integrally shaped rib garment pieces. The machine has an additional bed containing the transfer points [Shima Seiki].

Id., 186.

III. OVERVIEW OF THE CHALLENGED PATENT

A. Overview of the '781

The '781 is generally directed to an article of footwear with a knitted upper. The upper comprises "a flat knit textile element" having what the patent describes as "flat knit edges." EX1001, claims 1, 12. These "flat knit edges" are *not* discussed in the written specification, but are purportedly shown in Fig. 8 below, and claimed in the limitation, "the flat knit edges are not surrounded by textile structure from which the textile element must be removed." *Id.*; EX1002, ¶79.



EX1001, Fig. 8.

The '781 also recites "a plurality of *ribs* integrally knitted into the flat knit textile element." *Id.*, claims 1, 12. The "one or more ribs extend longitudinally

along one or more of a lateral side and a medial side of the upper, the one or more ribs extending from the forefoot region toward the heel region and terminating in one of the midfoot region or the heel region." *Id.*; EX1002, ¶80. Figure 10 is reproduced below and has been rotated 90 degrees clockwise, with exemplary longitudinal ribs highlighted:

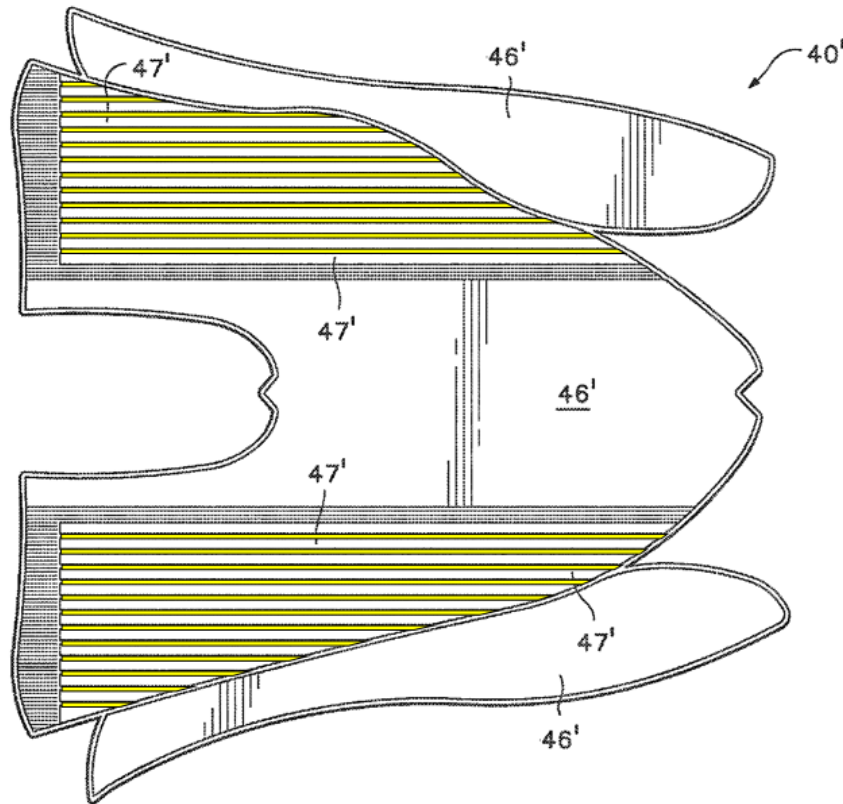


Figure 10

EX1001, Fig. 10.

Forefoot and midfoot regions are claimed but not defined in the specification. While heel region 35 is referenced, the boundary between it and the midfoot region is not defined. *Id.*, 5:51-53; EX1002, ¶81. But in other patents, Patentee defined the

forefoot (101), midfoot (102), and heel (103) regions with reference to the following figure:

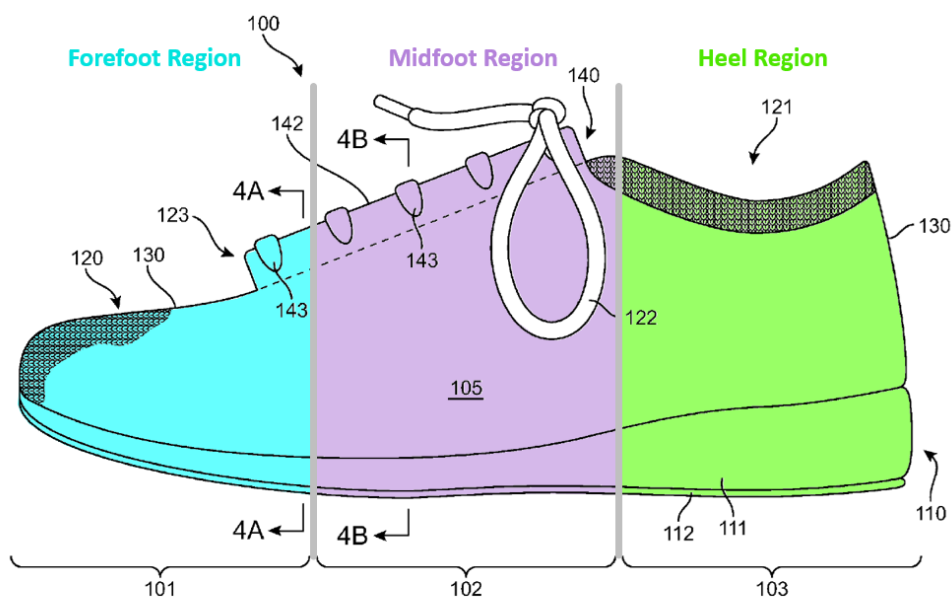


FIG. 3

US9,060,562 ("the '562 patent," EX1020), Fig. 3; EX1002, ¶82. Figure 10 of the '781, annotated to identify the forefoot, midfoot, and heel regions, is provided below:

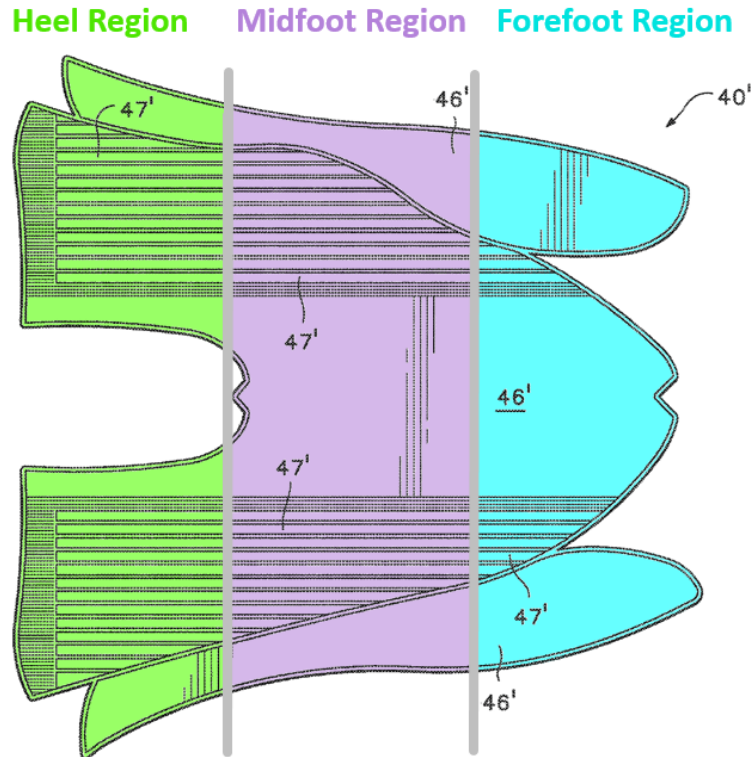


Figure 10

The longitudinal ribs are described in the specification as follows:

[A] central area...has a first texture 46' that is generally smooth [and]... a second texture 47' that is a plurality of longitudinal ribs. ***When incorporated into footwear 10***, the ribs will extend longitudinally along lateral region 31 and medial region 32, and the ribs may extend into heel region 35. The ribs may be present for aesthetic purposes, or may affect the stretch properties of upper 20...

EX1001, 9:36-44; EX1002, ¶¶83-84.

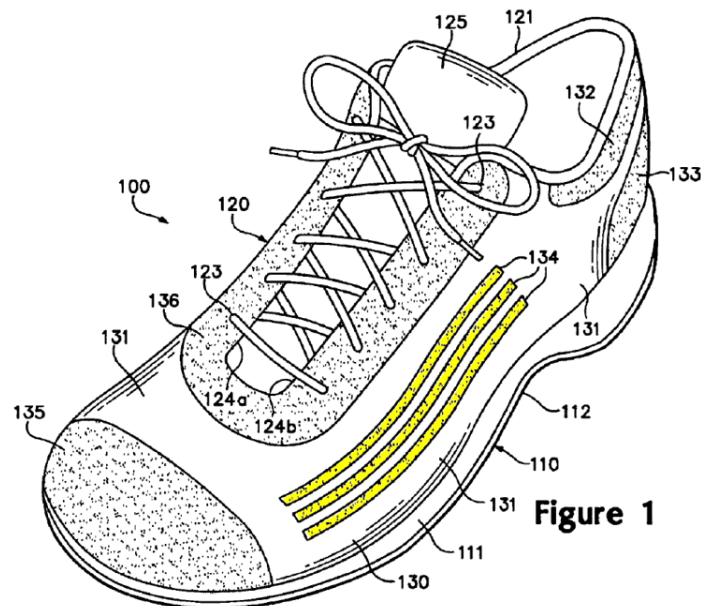
Of critical importance to this Petition, ***other than dependent claims 3 and 14, none of the claims require that the ribs serve any functional purpose.*** The patent specification confirms this: "***The ribs may be present for aesthetic purposes...***"

EX1001, 9:43-44; EX1002, ¶¶85-86.

Other than claims 3 and 14, the dependent claims generally recite various design configurations and arrangements of the integrally knitted ribs or recite non-rib elements. *Id.*

B. Prosecution History of the '781

On June 19, 2017, the Examiner rejected all claims as anticipated and/or obvious under 35 U.S.C. §§ 102 and/or 103 by Dua. EX1013-1, 84. The Examiner explained that "Dua shows a knitted...upper (130) with a plurality of ribs (134) [highlighted below] which are considered to be integrally knitted and extend longitudinally on the medial and lateral sides with varying lengths..." *Id.*

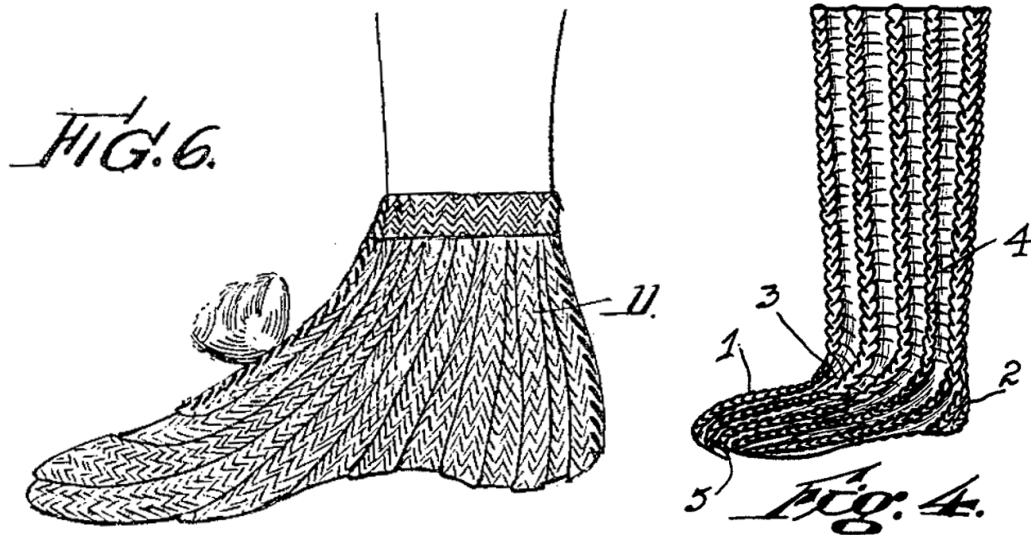


EX1017, Fig. 1.

An interview was conducted on July 17, 2017, and the claims were allowed on August 8, 2017. EX1013-1, 91. The Examiner accepted Applicant's definition of "ribs integrally knitted" as a "structure made of face wales and back wales" where

“the lengthwise ridges are formed on both sides of the fabric by pulling stitches first to the face and next to the back of the fabric in adjacent stitches or groups of stitches.” EX1013-14, 7320. Critically, Patentee does not claim to have invented flat knit edges, integrally knitted ribs, or the techniques for fabricating them, and indeed, there is nothing in the '781 disclosing these techniques. Instead, as Applicant's statement demonstrates, flat knit edges and integrally knitted ribs are made using existing (and undisclosed) techniques.

On January 17, 2018, after Applicant requested RCE, the Examiner rejected all claims under 35 U.S.C. § 103 as obvious with reference to Bellak and Holden, whose relevant figures are reproduced below. EX1013-15, 7839-41.



EX1015, Fig. 6; EX1019, Fig. 4.

In a February 23, 2018 response, Applicant amended the claims to add limitations regarding the location and orientation of the ribs: "the one or more ribs

extending from the forefoot region toward the heel region and terminating in one of the midfoot region or the heel region." EX1013-15, 7850.

In the accompanying remarks, Applicant argued that Bellak did not disclose the added feature because "the bands and hollows...extend along the lateral or medial side in a diagonal or vertical orientation up *towards the ankle opening*." *Id.*, 7856. Applicant also argued that "the rib stitches in Holden extend through the entire footwear, extending from the toe region or the bottom portion up *towards the ankle opening*." *Id.*

On April 20, 2018, the Examiner allowed the claims as amended without further comment. *Id.*, 7866; EX1002, ¶¶87-95.

IV. DISCRETIONARY FACTORS

A. § 314(a) Does Not Favor Denial

This Petition raises a compelling case of unpatentability for all claims of the '781. Per the Director's June 21, 2022, Memorandum on the "Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation, this fact "alone demonstrates that the [Board] should not discretionarily deny institution under *Fintiv*." EX1012, 4-5.

B. § 325(d) Does Not Favor Denial

None of Cusinato (the primary reference for Ground 1), Hlavacs, or Spencer were before the Examiner. Moreover, while Herbert, Bellak and Dua were cited during prosecution, the Examiner did not discuss Herbert or have before her the

testimony of Dr. Adanur to explain why a person of ordinary skill in the art would understand that Bellak and/or Dua, in combination with Cusinato, rendered obvious all of the claims. In addition, the Examiner did not have before her Patentee's litigation infringement contentions, which shed additional light on the '781 claims. Furthermore, the Examiner did not discuss the aesthetic nature of the vast majority of the claims, including the location and orientation of the ribs, and why they represent obvious design choices. Finally, the Petition makes a strong showing that all claims are unpatentable. Therefore, the Board should not discretionarily decline institution.

V. IDENTIFICATION OF CHALLENGE AND GROUNDS

The asserted grounds rely on the following references:

- European Patent Application EP1,338,690A1 ("Cusinato") was filed on February 5, 2003 and published on August 27, 2003 (EX1014). Cusinato is prior art to the '781 under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).
- US1,841,518 ("Bellak") was filed on March 20, 1931 and issued on January 19, 1932 (EX1015). Bellak is prior art to the '781 under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

- US6,910,288 ("Dua") was filed on December 18, 2002 and issued on June 28, 2005 (EX1017). Dua is prior art to the '781 under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).
- *Knitting Technology, A Comprehensive Handbook And Practical Guide* (Third Edition) by David J. Spencer ("Spencer") was published in 2001 (EX1050). Spencer is prior art to the '781 under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).
- US2,400,692 ("Herbert") was filed on March 24, 1943 and issued on May 21, 1946 (EX1016). Herbert is prior art to the '781 under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).
- D461,951 ("Hlavacs") was filed on February 1, 2002 and issued on August 27, 2002 (EX1018). Hlavacs is prior art to the '781 under at least pre-AIA 35 U.S.C. §§ 102(a), (b), and (e).

The asserted grounds are:

- Ground 1: Claims 1-20 are obvious over Cusinato in view of Bellak and/or Dua, and if necessary, Spencer, under 35 U.S.C. § 103.
- Ground 2: Claims 1-20 are obvious over Herbert in view of Cusinato and Hlavacs, and if necessary, Spencer, under 35 U.S.C. § 103.

VI. LEVEL OF ORDINARY SKILL IN THE ART

The '781 relates to an article of footwear made using a flat knit textile having both flat knit edges and ribs integrally knitted into the textile. EX1001, Abstract; claim 1. A person of ordinary skill in the art ("POSITA") in the field of the '781 in March 2004 would have been someone with at least a few years of experience in knit materials and knitting methods and machines that can be used in making footwear, or a bachelor's degree in textile-related sciences, engineering, or industrial product design, or equivalent academic or work experience, including in the footwear industry. *See* EX1002, ¶78. Such a person of ordinary skill would have at least a general understanding of general construction processes and materials used in the manufacturing process of fabric-based articles. *Id.* For individuals with a lower educational level, a person could still be of ordinary skill in the art provided that person's working experience compensates for any such lower educational level, or vice versa. *Id.*

This Petition does not turn on this definition of the level of ordinary skill. The claims would have been obvious from the perspective of any reasonable definition.

VII. CLAIM CONSTRUCTION

Other than as set forth below, Petitioner submits that the issues presented in this Petition do not require additional claim terms to be construed. EX1002, ¶106.

A. "article of footwear"

"[A]rticle of footwear" should be construed as "any foot covering in the form of shoes, boots, slippers, or hose (*e.g.*, socks) used for utility and/or dress wear. Not necessarily synonymous with shoes, which are simply one category of footwear." Petitioner's construction is taken nearly verbatim from *The Complete Footwear Dictionary*, with further clarification (from the same source) that "hose" includes socks, and is not just panty hose, for example. EX1022, 67, 88; *see also* EX1008, 23.

This definition is consistent with the specification. While some embodiments are described as having an upper and a sole structure, the '781 indicates a sole is optional. EX1001, Abstract ("The footwear *may* include an upper and a sole structure.").

Additionally, none of claims 1-19 recite a sole. ***Only dependent claim 20 recites a sole ("article of footwear...further comprising a sole structure secured to the upper")***. Claim differentiation dictates that an "article of footwear" includes footwear ***without*** soles because claim 20 adds "sole structure" as an additional limitation. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314-15 (Fed. Cir. 2005). Other intrinsic evidence includes US2,675,631, cited during prosecution of the '781, which recites that "the invention is generally applicable to knitted ***footwear*** of all types, *e.g.* ***hose...socks***." EX1053 ("Doughty"), 4:55-58.

Even if Patentee's narrower construction is adopted, *see* EX1007, 6-7, the Grounds below nevertheless meet all limitations. EX1002, ¶¶97-98.

B. "a flat knit textile element having: (1) flat knit edges free of surrounding textile structure such that the flat knit edges are not surrounded by textile structure from which the textile element must be removed"

Petitioner proposes, as in the district court litigation, construing this term as "a textile element that has only flat knit edges, where a flat knit edge is itself flat knit, *e.g.*, not formed by cutting from a flat knit textile element or by otherwise removing the textile element from a larger textile material." Patentee proposed giving this term its "ordinary and customary meaning" with "no further construction necessary." EX1007, 9-10. Regardless of whose proposed construction is adopted, the prior art asserted in the Petition meets all limitations, including under 35 U.S.C. § 103, as set forth in detail below. EX1002, ¶¶99-100.

C. "wherein one or more ribs extends longitudinally...toward the heel region"

In litigation, Patentee proposed giving this term its "ordinary and customary meaning" with "no further construction required." EX1007, 12-13. Specifically, Patentee contends that there is no prosecution disclaimer, EX1009, 14-15, arguing that the claims would encompass ribs extending in the direction of the ankle opening, and/or extending in a diagonal or vertical orientation. *Id.* Indeed, Patentee's

infringement contentions accuse footwear having purported ribs extending in the direction of the ankle opening and extending in a diagonal orientation:





EX1011, 39, 55 (Patentee's annotations).

Petitioner proposed construing this term as "extending in the direction of the heel region, **not** in a diagonal or vertical orientation up towards the ankle opening of the article of footwear." EX1008, 21-22.

Under either construction, the prior art asserted in the Petition meets all limitations, as set forth in detail below. EX1002, ¶¶101-103.

D. Ribs/Integral Knit

The parties agreed in the litigation to the following proposed constructions for "ribs integrally knitted" and "ribs":

a structure made of face wales and back wales wherein lengthwise ridges are formed on both sides of the fabric by pulling stitches first to the face and next to the back of the fabric in adjacent stitches or groups of stitches.

EX1005, 2. This definition was proffered by Applicant during prosecution to distinguish integrally knitted ribs in the '781 from thermally fused ribs (formed from knitted yarn) in the Dua reference. EX1013-13, 7320; EX1002, ¶¶104-105.

VIII. GROUND 1: CUSINATO IN VIEW OF BELLAK AND/OR DUA, AND IF NECESSARY, SPENCER, RENDERS OBVIOUS THE CHALLENGED CLAIMS

As set forth below, challenged claims 1-20 are rendered obvious under 35 U.S.C. § 103 by Cusinato in view of Bellak and/or Dua, and if necessary, Spencer.

A. Overview of Cusinato

Cusinato is directed to "a process for making a knitted fabric and a product obtained with this process." EX1014, [0001]. "The knitting manufacturing is made by using knitting machines or looms in which a support, called a needle bar, houses several needles placed side by side and parallel to each other, in order to pass over the stitches of the new row with the stitches of the previous row." *Id.*, [0005]-[0006]. Cusinato explains that this process makes it "possible to produce a one-piece fabric which has suitably *shaped side edges* (by increasing or decreasing the fabric)." *Id.*, [0015]. Cusinato then discloses that "*the stocking or footwear* is directly obtained by wrapping the fabric in a boot-like manner and carrying out a simple sewing in order to join the two side edges." *Id.* "In such a way the fabric, so obtained, can be

made into a stocking or a footwear which is form-fitting to the foot or the leg of a person." *Id.*, [0018].

Figure 1 "illustrate[s] a fabric 10 in order to obtain a stocking or a footwear with the process of the present invention." *Id.*, [0020].

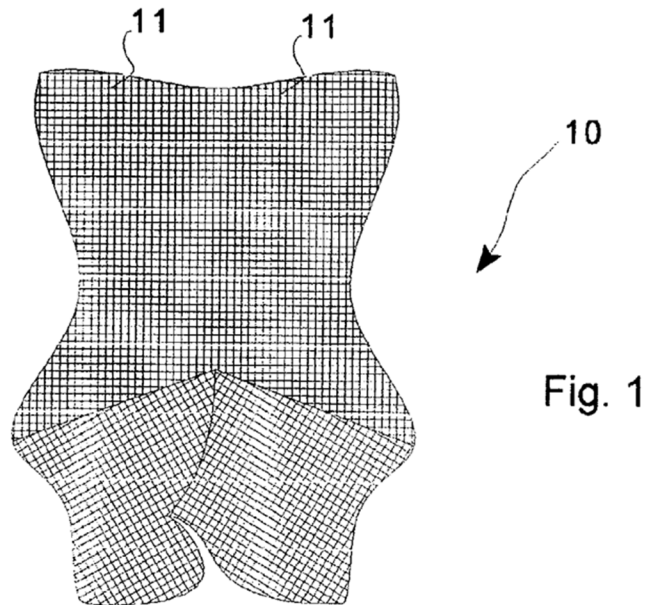
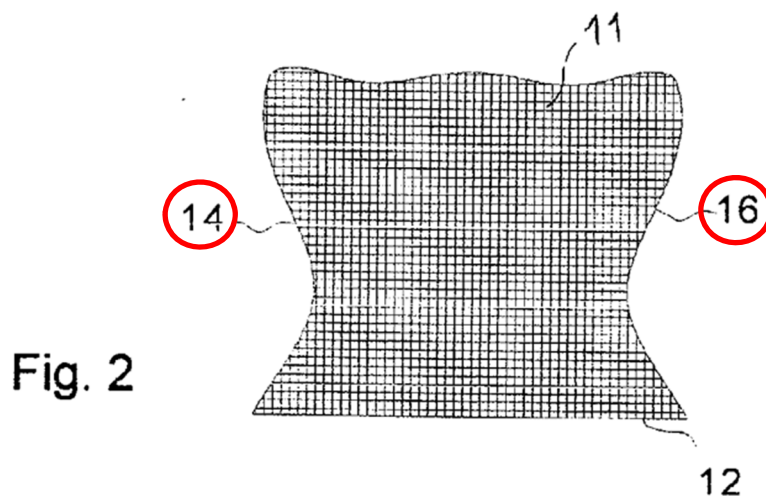


Fig. 1

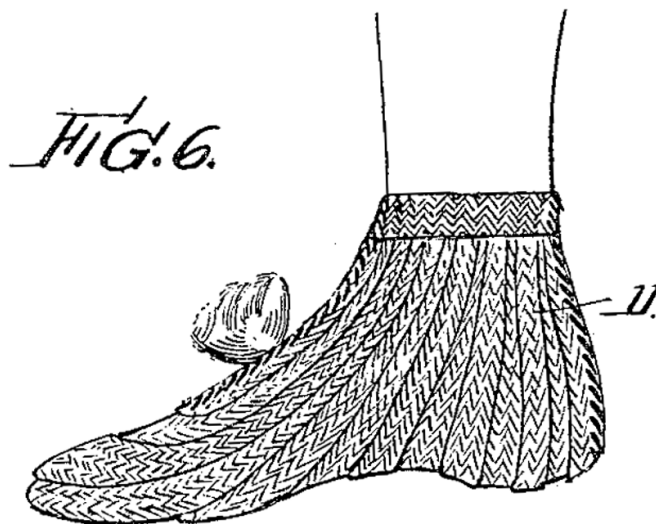
Figures 2-5 "illustrate[]" the various phases of the process in order to produce the fabric 10, starting from the top of the stocking or the upper part of the footwear." *Id.* This process, "wherein decreases and increases operations have been made," forms a "**boot-leg**, which is defined by a left side edge 14 and a right side edge 16." *Id.*, [0021].



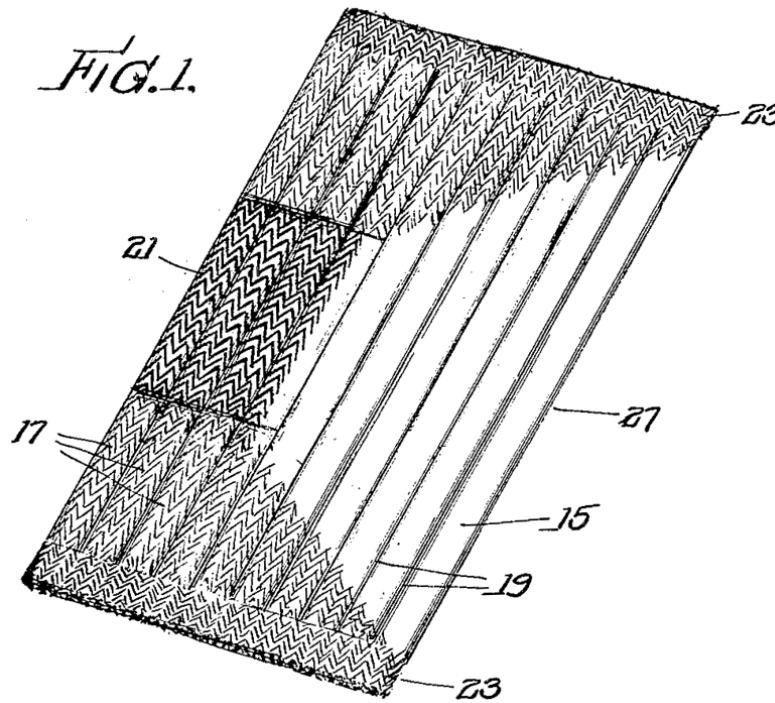
Id., Fig. 2; *see also id.*, Figs. 3-5; [0029]-[0031]; EX1002, ¶¶107-115.

B. Overview of Bellak

Bellak, entitled "Knitted Article And Method Of Making Same," discloses a "knitted *slipper*." EX1015, 1:55. Figure 6, reproduced below, "illustrat[es] the use of the article as a *slipper*." *Id.*, 1:49-50.



The manufacture of the slipper starts with "a rectangular *flat* strip 15," *id.*, 1:65, that "can be easily and quickly made on simple machinery," *id.*, 1:89-90, as depicted in Figure 1:



Bellak discloses that the workpiece comprises "a single...strip...." *Id.*, 1:11. Bellak states that "[t]he fabric is preferably formed by practicing a known knitting...stitch." *Id.*, 1:67-71.

Bellak teaches that the folded workpiece is:

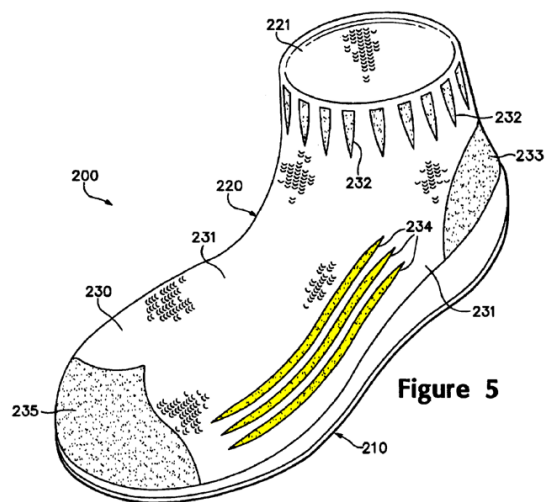
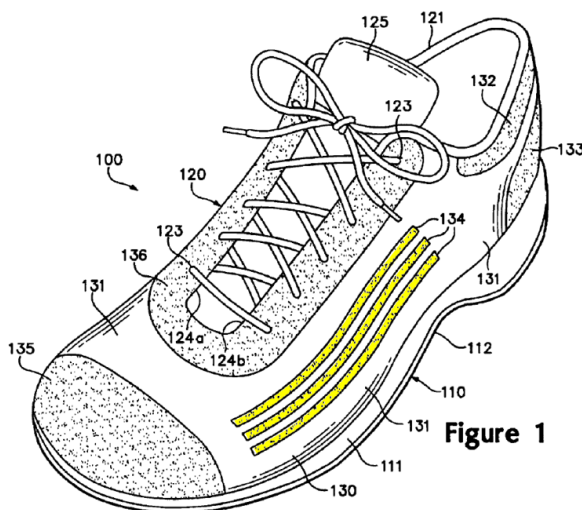
sewed or otherwise secured together...to form a substantially rectangular bag, the neck of which is sufficiently expansible to permit the insertion of the wearer's foot and the body of which is sufficiently expansible to cover the foot of the wearer as indicated in Figure 6.

Id., 2:15-27. Bellak explicitly discloses that "[t]he fabric is preferably the so-called *ribbed* type comprising a plurality of projecting bands 17 and intermediate hollows

19, when the same is viewed from either side of the fabric." *Id.*, 1:71-75. However, as noted in prosecution by Patentee, in the finished footwear shown in Figure 6, the ribs "extend along the lateral or medial side in a diagonal or vertical orientation up towards the ankle opening" (although Patentee maintains that the claims are not so limited). EX1013-15, 7856; EX1002, ¶¶116-22.

C. Overview of Dua

Dua, which shares a named inventor with the '781, is entitled "Footwear Incorporating A Textile With Fusible Fibers And Filaments" and discloses shoes having what the Examiner described as "a plurality of ribs (134) [and corresponding (234) (both highlighted below)] which...extend *longitudinally* on the medial and lateral sides with varying length." EX1013-1, 84. The only relevant difference between Figures 1 and 5 is that the former is made of conventional textile and *the latter is made of knitted textile*.



EX1017, Figs. 1, 5.

Dua confirms the Examiner's impression that the "[f]used area 134...[comprises] generally elongate strips that extend...*longitudinally* along the lateral side of upper **120**." *Id.*, 5:64-66. The patent further describes a "[f]used area **134**...on the *lateral* side of footwear 100" as well as "[a] *similar* fused area [that] may be located on the *medial* side of footwear 100." *Id.*, 5:66-6:2. Dua also teaches that "fused area[s] may have increased *stretch*-resistance." *Id.*, 2:46-47; EX1002, ¶¶123-25.

Notably, the fused stripes 134/234 are an integral part of the appearance of the shoe. Indeed, Dua teaches that "[d]epending upon... *the desired aesthetics of the footwear*, other articles of footwear may include fused and unfused areas that are located in other portions of an upper." EX1017, 5:45-48. Thus, fused areas, such as ribs/stripes 134/234, can be added, subtracted, or modified as necessary to achieve a desired aesthetic appearance. EX1002, ¶¶126-27.

D. Overview of Spencer

Spencer is entitled *Knitting Technology, A Comprehensive Handbook And Practical Guide* and was written by David J. Spencer. The Third Edition was published in 2001.

Structure Of Ribs. Spencer teaches that machine-knitting of integrally knit ribs is old technology: "Strutt's *Derby Rib* attachment dates from **1759**." EX1050, 12. Spencer also discusses at length the capabilities of modern flat knit machines to

make integrally knit rib patterns, as depicted below. *See, e.g., id.*, 67-72; 181-183; EX1002, ¶¶128-29.

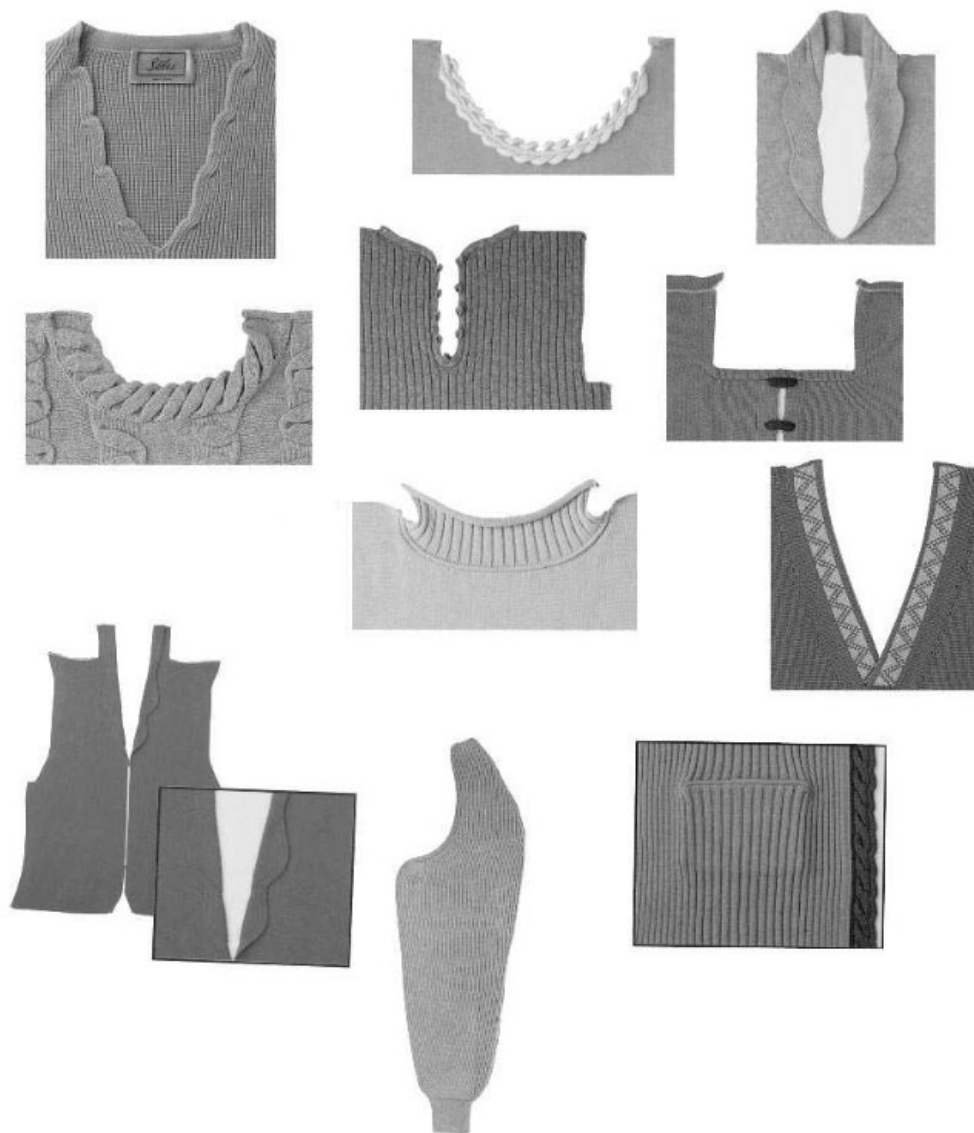


Fig. 16.9 Integrally shaped rib garment pieces. The machine has an additional bed containing the transfer points [Shima Seiki].

EX 1050, 186. Spencer teaches how integrally knit ribs have a cord-like appearance (*i.e.*, "ridges"). *Id.*, 68. Ribs can be both "vertical" (above) and "horizontal" (below). EX1002, ¶130.

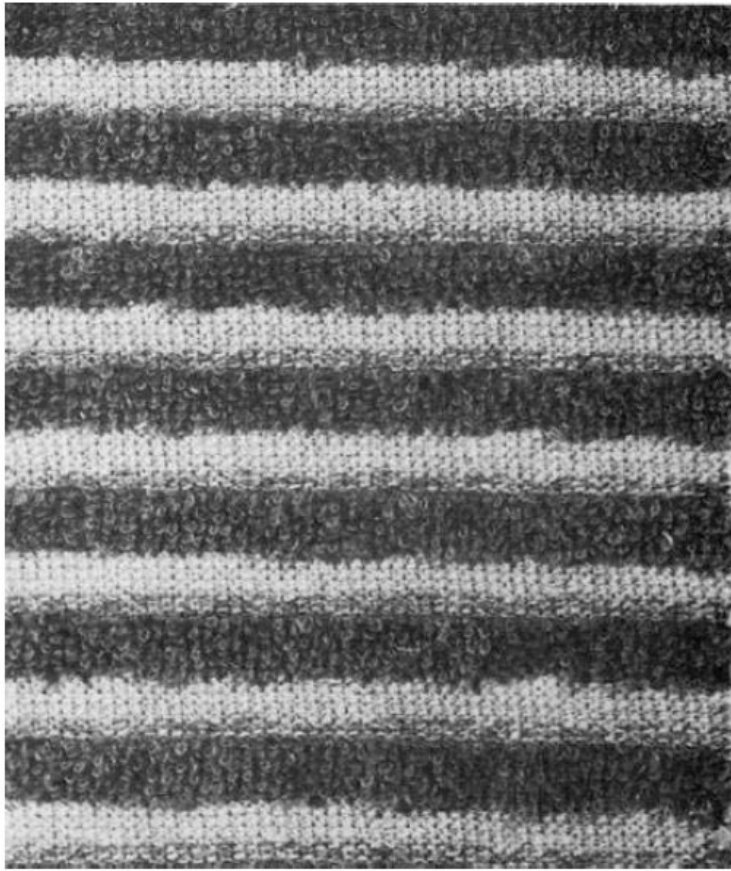


Fig. 14.4 Horizontal ribs with an ottoman effect on two-tone towelling [Alwin Wild, Switzerland].

EX1050, 165. Indeed, a vertical rib can be made horizontal simply by changing the orientation of the workpiece. EX1002, ¶130.

Spencer notes that "[t]he simplest rib fabric is [a] 1x1 rib." EX1050, 67. To make a rib fabric, "wales of face stitches and wales of reverse stitches are knitted on each side of the fabric." *Id.*, 60. In the case of 1x1 ribs, "face wales" are stitched adjacent to "back wales" (*i.e.*, "reverse wales") which are stitched adjacent to "face wales" and so on in a repeating pattern. *Id.*, 68. This results in ribs that appear on both sides of the fabric..

Spencer also discloses that "[b]road ribs have a number of adjacent rib as well as plain wales, for example, 6/3 *Derby Rib*." EX1050, 69. Thus, Spencer discloses knit patterns that alternate between plain texture and rib texture. *Id.*; EX1002, ¶¶131-32.

Elasticity Of Ribs. Spencer discloses that "[r]ib structures are elastic [and] form-fitting..." EX1050, 68; EX1002, ¶133.

Flat Knit Edges And Knit To Shape. Spencer discloses the use of flat knit machines to knit selvedged or finished "self-edge[s]." EX1050, 45. The advantages include that "[t]he firm, fashioned selvedge edges can be...seamed together, without the need for cutting...involving loss of expensive fabric." *Id.*, 185; EX1002, ¶134.

E. Combination of Cusinato With Bellak And/Or Dua, And If Necessary, Spencer

At the time of the invention, a POSITA would have been motivated to combine the teachings of Cusinato with Bellak, Dua, and/or Spencer, and would have had a reasonable expectation of success in doing so. EX1002, ¶148.

Both Cusinato and Bellak relate to machine-made, flat-knitted footwear. EX1014, [0005]; EX1015, 1:89-90. EX1002, ¶149. And both Cusinato and Bellak seek to reduce cost and/or manufacturing effort by making footwear using a single workpiece. *See, e.g.*, EX1014, [0007]-[0013] ("aim is to obtain a fabric in one piece from which it is possible to directly make the stocking or footwear," thus eliminating drawbacks of prior approaches and avoiding waste); EX1015, 1:1-17 (object of the

invention is "to provide an inexpensive...knitted...article" made from "a single...strip of...material"). EX1002, ¶149. Finally, both Cusinato and Bellak utilize a sewing operation after the flat knitting operation to join the edges of the textile into a footwear-shaped workpiece. EX1014, [0015]; EX1015, 2:15-27. Thus, using Cusinato to make the ribbed slipper of Bellak would have yielded predictable results, would have constituted simple substitution or application of a more modern knitting technique for an older one, and would have been obvious to try with reasonable expectations of success. EX1002, ¶150.

A POSITA in possession of Cusinato would have been motivated to further improve the appearance of or create variations in the appearance of the knitted footwear by combining or substituting the Cusinato pattern with ribs. (Notably, the claimed ribs in 18 of the 20 claims of the '781 recite no functional purpose, consistent with the specification's teaching that "the ribs may be present for aesthetic purposes." EX1001, 9:43.) *Id.*, ¶151. Such a motivation is commonplace due to design incentives and market forces in the fashion industry, of which footwear and textiles are a part. *Id.*, ¶152. Thus, a POSITA attempting to create Cusinato's knitted footwear would investigate aesthetic aspects of design elements from other footwear designs such as Bellak and Dua. Insofar as the changes are aesthetic, a POSITA would have reasonable expectations of success. *Id.*

Moreover, a POSITA in possession of Cusinato or Bellak would have been motivated to further improve the manufacturing efficiency, functionality, and/or appearance of the knitted footwear, and would have consulted Spencer, a seminal "handbook" and "practical guide," regarding how to do so. EX1002, ¶153. Such a reference would teach how to substitute or use known methods to yield predictable results, how to apply known techniques to improve a known method or product, which techniques or structures would be obvious to try (with reasonable expectations of success – they're in a reference book), and the use of other teachings, suggestions, and motivations to combine. *Id.* Indeed, much of the information provided in Spencer would have been known to a POSITA, and in addition to constituting a combinable prior art reference, Spencer would also constitute evidence of what would have been known to a POSITA and/or what was inherent in prior art knit textiles/structures and knitting machines. *Id.*

A POSITA in possession of Cusinato, Bellak, and/or Spencer would also have been motivated to substitute the ribs made of fusible yarn in Dua with integrally knitted ribs to achieve a predictable result, because both types of ribs affect stretch in knitted shoes, and such a modification would have been obvious to try in Dua's knitted shoe with expectations of success insofar as knitted ribs serve the same purpose. EX1002, ¶154.

Finally, the consideration and possible use, on the same knitted textile or footwear, of (1) rib or stripe patterns; (2) varying patterns; (3) differently shaped elements in the pattern; (4) different orientations of the elements in the pattern; and (5) different locations of the elements in the patterns, among other things, is a long-standing and integral part of fashion design, including knitted design, and would have been obvious or obvious to try from the perspective of a POSITA familiar with either footwear or textiles, including because available knitting machines before the time of the invention were readily programmable to implement known knitting techniques that would produce such patterns and variations, as explained *supra* §II (collectively, “the Obvious Design Choices”). EX1002, ¶155. Design changes that do not "result in a difference in function or give unexpected results" are "no more than obvious variations consistent with the principles known in th[e] art." *In re Rice*, 341 F.2d 309, 314 (CCPA 1965)). Indeed, rib or stripe patterns are among the simplest and most ubiquitous of a finite number of aesthetic design elements in footwear and in knit fabrics, and their use and success is predictable. *Id.*, ¶156. Thus, at the time of the invention, a POSITA would have been motivated to combine the teachings of Cusinato with Bellak, Dua, Spencer, and the Obvious Design Choices, and would have had a reasonable expectation of success in doing so, as the changes are aesthetic. *Id.* And, at the time of the invention, a POSITA would have thought it obvious or obvious to try modifying Cusinato, Bellak, Dua, Spencer, or any

combination thereof to add elements (1), (2), (3), (4), and/or (5) above. *Id.* Insofar as the changes are aesthetic, a POSITA would have expectations of success. *Id.*

F. Claim 1

1. Element 1[pre]: An upper for an article of footwear, the upper comprising:

As explained above in §VII.A, "article of *footwear*" should be construed as "any *foot covering* in the form of *shoes, boots, slippers*, or hose (*e.g., socks*).\" If the preamble is limiting, Cusinato, Bellak, and Dua each disclose an upper for an article of footwear.

- Cusinato: "a fabric...[that] directly forms the stocking or *footwear*" having a "*boot*-like shape." EX1014, [0010], [0013].
- Bellak: a "*foot covering*" in the form of a knitted "*slipper*." EX1015, 1:14-26.
- Dua: a *shoe*. EX1017, 4:1-11.

If Patentee were to argue, contrary to the intrinsic and extrinsic evidence, that "footwear" must include a sole, a sole is disclosed in Dua, and a POSITA would consider it obvious to add a sole to Cusinato's "*boot*-like" form or Bellak's "*slipper*\" See EX1017, 4:17-37; EX1002, ¶¶164-70.

2. **Element 1[a1]: a flat knit textile element having: (1) flat knit edges free of surrounding textile structure such that the flat knit edges are not surrounded by textile structure from which the textile element must be removed,**

Cusinato discloses this element, as a POSITA would understand the "flat knit edges" term under either Petitioner's or Patentee's proposed constructions. *See* §VII.B, *supra*. EX1002, ¶171.

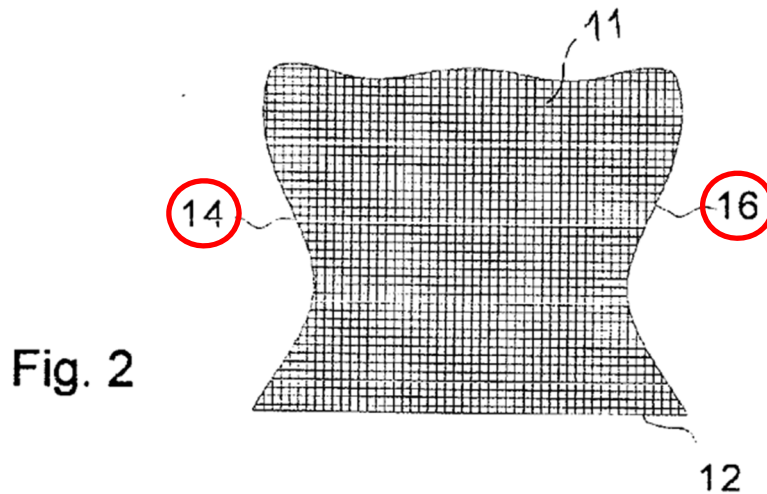
First, Cusinato discloses "flat knit textile elements," referring to "the different parts or shapes of the stocking or footwear" as "**flat** parts." EX1014, [0007]-[0009]. Moreover, a POSITA would understand that Cusinato teaches using flat knitting through its disclosure of using a knitting machine with a straight needle bar. EX1014, [0041]; EX1002, ¶¶172-73. A POSITA would understand that Cusinato's claimed process is also consistent with the use of a flat knitting machine with a straight needle **bed**, used in weft knitting machines. *Id.* Straight needle beds have long been associated with flat knitting, and circular knitting techniques cannot use straight needle beds. *See id.*; EX1050, 63, 86-87.

Cusinato also describes using "needles **placed side by side and parallel to each other**, in order to pass over the stitches of the new row with the stitches of the previous row." EX1014, [0005]; *see also* [0014], [0021]-[0031]. A POSITA would recognize these descriptions as consistent with the use of a flat knitting machine. EX1002, ¶174.

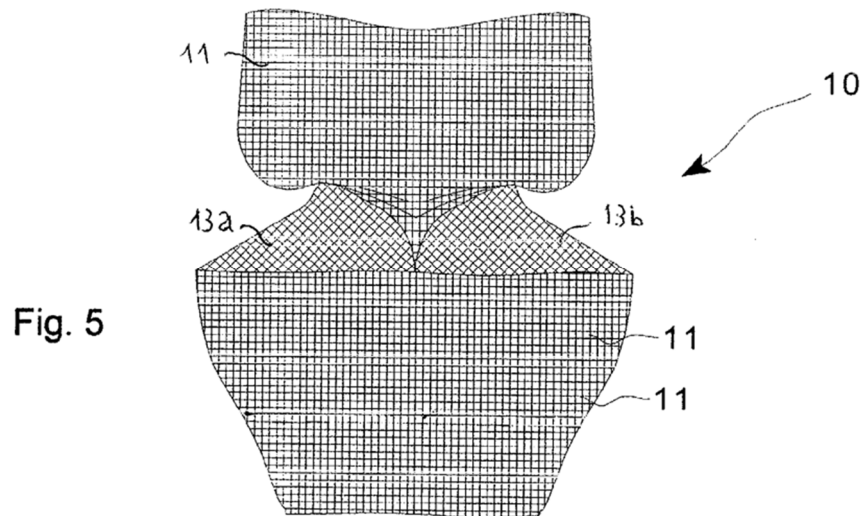
Moreover, Cusinato explains that the invention includes “the use of *any* machine,” which would include flat knitting machines, and a POSITA would recognize that a flat knitting machine would be particularly suitable. EX1014, [0042]; *see also* EX1050, 87; EX1002, ¶175.

Second, Cusinato discloses flat knit edges. Cusinato teaches that well-known knitting machines at the time of the invention made it "possible to generate a decrease or an increase of the fabric, namely it is possible to obtain *shaped* fabrics." EX1014, [0006]; EX1002, ¶176. An "increase" is created by inserting needles at the ends of the knitting machine's needle bar/bed, and a "decrease" is created by removing needles from the ends of the needle bar/bed. EX1014, [0005]-[0007]. "The number of needles is, obviously, equal to the number of the stitches per row." *Id.*, [0005]; EX1002, ¶177. Thus, a flat knit textile element may be knit to its final shape by adjusting the number of needles used in each row and, consequently, the number of stitches in each row. EX1050, 184 (explaining that "weft knitting provides unique opportunities for width-wise shaping during knitting," including by "varying the number of needles in action in the knitting width"); 188; EX1002, ¶178.

By making use of so-called "increase" and "decrease" operations, a shaped textile element such as that shown in Cusinato's Figure 2 may be obtained, with "suitably shaped side edges [14 and 16]":



EX1014, [0015]; Fig. 2; *see also* claims 2-3; EX1002, ¶179-80. Flat knit edges would be a natural and obvious result of increasing or decreasing the number of needles (and, therefore, stitches) used from row to row. *Id.* The finished shaped element, with flat knit edges, is provided below:



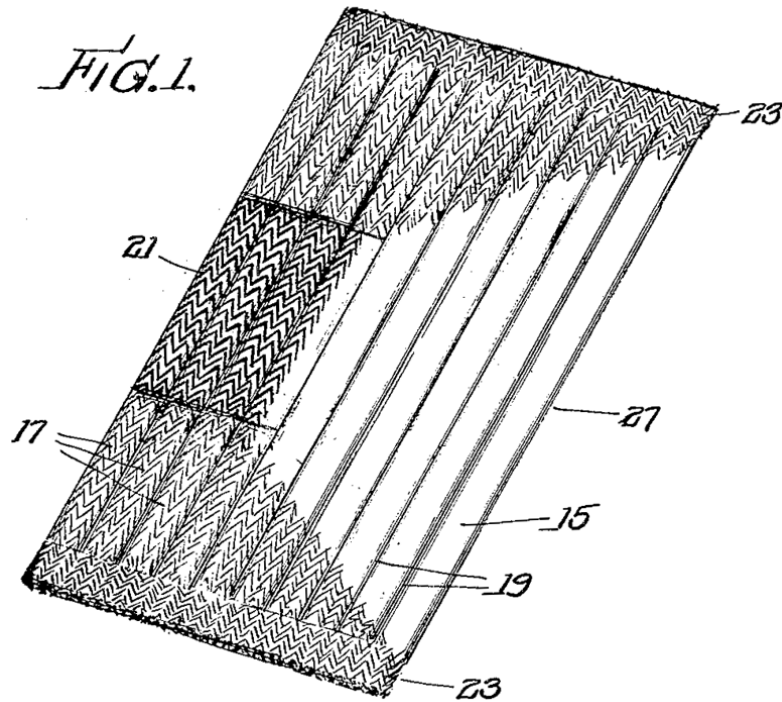
EX1014, Fig. 5.

Third, Cusinato discloses that the flat knit edges are "free of surrounding textile structure...from which the textile element must be removed." There is no

disclosure of the Cusinato "shaped fabrics" being further cut before sewing (nor would there be any need to do so). EX1002, ¶181. Indeed, Cusinato explicitly *distinguishes* its method from prior art methods in which "the different parts or shapes of the stocking or footwear...may be obtained starting from a rectangular fabric and *cutting* from it the component parts of the stocking or footwear." EX1014, [0007]-[0008]; *see also id.*, [0010]-[0016], [0021]-[0032]; EX1050, 379 (flat knitting machines allow "knitting to shape without cutting waste or making-up time"). EX1002, ¶¶182-83.

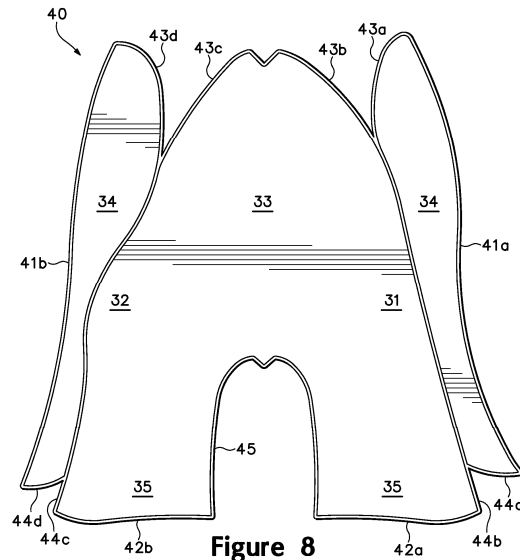
A POSITA would therefore understand that Cusinato's consistent references to "shaped fabrics" and distinguishing prior art techniques utilizing cutting (*i.e.*, removing "different parts or shapes of the stocking or footwear" from surrounding material) confirm that its flat knit textile element comprises "flat knit edges free of surrounding textile structure...from which the textile element must be removed." EX1002, ¶184.

Bellak also discloses "a flat knit textile element having flat knit edges free of surrounding textile structure...from which the textile element must be removed." Figure 1 depicts "a rectangular *flat* strip 15" that "can be easily and quickly made on simple machinery." EX1015, 1:65-90; EX1002, ¶¶185-86.

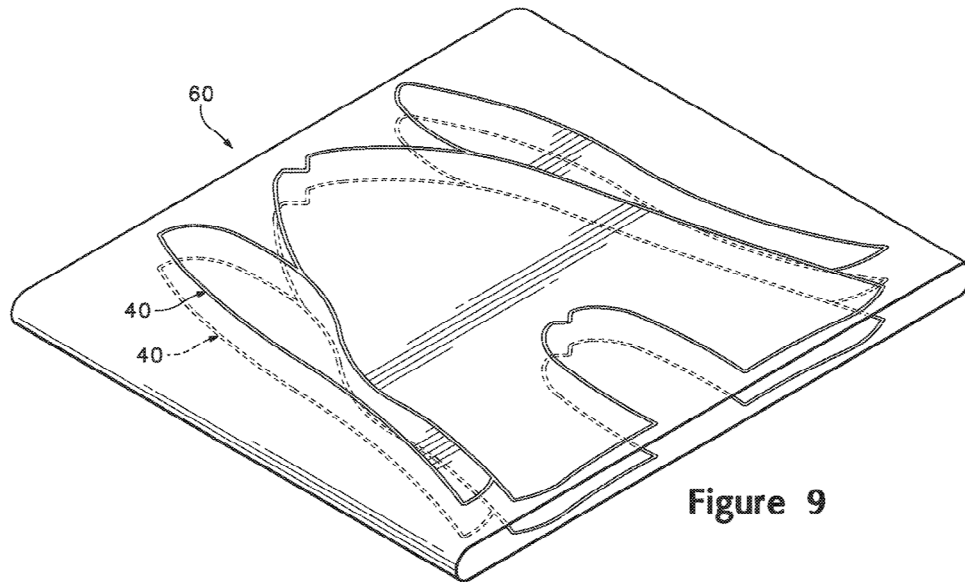


Bellak states that "[t]he fabric is preferably formed by practicing a known knitting...stitch." *Id.*, 1:67-68. Bellak discloses that certain of the workpiece edges are sewn after the knitting process to form the slipper *without* disclosing an intervening cutting step. *Id.*, 2:15-27; EX1002, ¶187. This was confirmed by the Examiner: "Bellak shows an article of footwear comprising a flat knit textile element (figure 1)...." EX1013-15, 7840; EX1002, ¶188.

It is important to note that the disclosure in Bellak of the finished edges and the lack of surrounding textile is *at least at the same level of detail as the '781*. Patentee expressly relied on a comparable figure below for its support for the claimed flat knit edges in textile element 40" in the '781. EX1001, 6:13-29; EX1002, ¶189.



EX1001, Fig. 8. Indeed, *the '781 arguably contains less disclosure than Bellak*, as the '781 teaches, as shown in Figure 9 below, "textile element 40 is then removed from textile structure 60 with a die-cutting, laser-cutting, or other conventional cutting operation." *Id.*, 8:31-33; EX1002, ¶191.



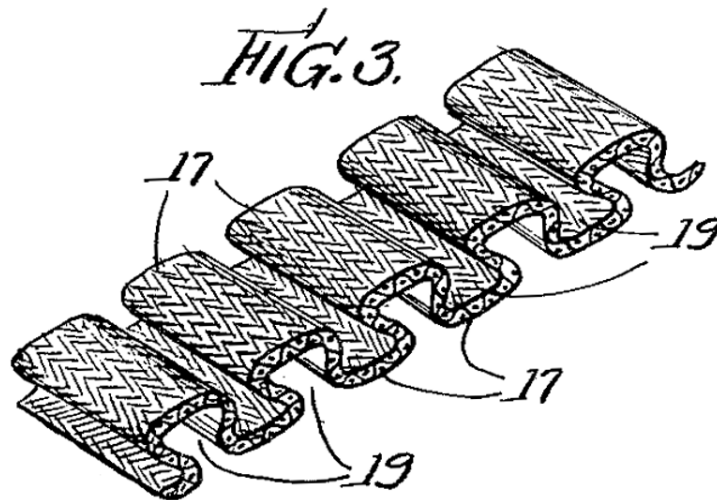
Id., Fig. 9. Patentee may argue that Figure 9 shows a cylindrical textile structure: "Unlike textile structure 60, which exhibits a generally cylindrical configuration, the textile structure formed with the jacquard double needle-bar raschel knitting machine will have a flat configuration." *Id.*, 11:46-49. But the '781 discloses the *same* cutting operation for the flat textile structure: "Like textile structure 60, however, an outline of a textile element may be imparted to the textile structure formed with the jacquard double needle-bar raschel machine...Accordingly, the textile element may be *removed from the textile structure* and incorporated into footwear 10." *Id.*, 11:50-57; EX1002, ¶191.

Thus, whereas neither Bellak nor Cusinato teach a cutting step (suggesting that the flat knit edges are *not* surrounded by textile structure from which the textile element must be removed), the '781 explicitly teaches a cutting step for the flat textile structure (suggesting that such surrounding textile structure needs to be removed). EX1002, ¶¶192-93. Thus, if Patentee contends there is insufficient disclosure in Bellak or Cusinato for this limitation, then the '781's disclosure cannot support an interpretation of this limitation that distinguishes the prior art because it would suffer from even greater deficiencies.

3. Element 1[a2]: and (2) a plurality of ribs integrally knitted into the flat knit textile element,

It is important to note that the '781 explains that "[t]he ribs may be present for *aesthetic purposes*, or may affect the stretch properties of upper..." EX1001, 9:43-44; EX1002, ¶194.

A POSITA would understand that Bellak discloses ribs integrally knitted into the flat knit textile element. Indeed, Bellak explicitly discloses that "[t]he fabric is preferably the so-called *ribbed* type comprising a plurality of projecting bands 17 and intermediate hollows 19, *when the same is viewed from either side of the fabric.*" EX1015, 1:71-75; EX1002, ¶195.

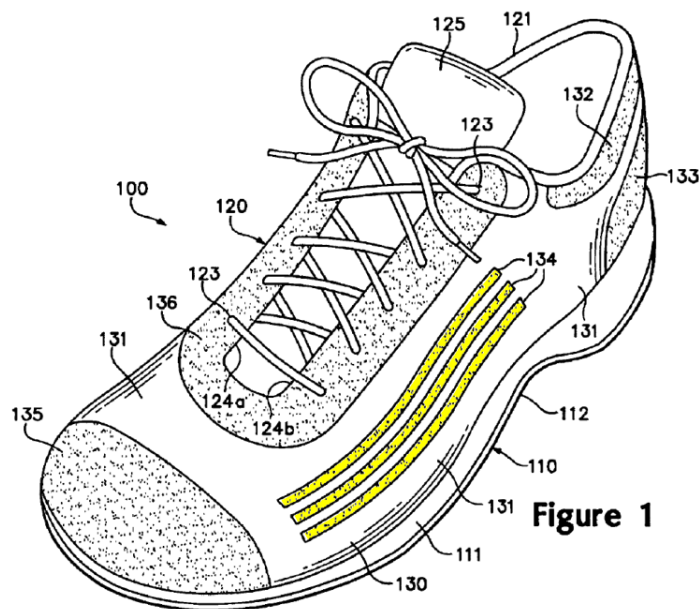


Id., Fig. 3. This meets the limitations of the claim as it relates to integrally knit ribs under the parties' agreed upon claim construction. EX1002, ¶196.

If Patentee argues that Bellak's disclosure of ribs is insufficient, Cusinato and Bellak may be combined with Spencer, which discloses integrally knit ribs and the

knitting thereof. Spencer teaches how integrally knit ribs have a cord-like appearance (*i.e.*, "ridges"). EX1050, 68. EX1002, ¶197. In other words, "face wales" are stitched adjacent to "back wales" (*i.e.*, "reverse wales") which are stitched adjacent to "face wales" and so on in a repeating pattern, resulting in ribs that appear on both sides of the fabric. *Id.*, 60, 218; EX1002, ¶197. The ribs of such a combination would meet the limitations of the claim as it would include the use of knitting machines to make integrally knit ribs under the parties' agreed upon claim construction. *Id.*

Additionally, Dua discloses a knitted shoe with what the Examiner described as "a plurality of ribs (134) [(highlighted below)] which...extend longitudinally on the medial and lateral sides..." as shown in Figure 1. EX1013-1, 84; EX1002, ¶198.



These ribs form part of the functional and aesthetic design of the shoe, which would lead a POSITA to modify the footwear in Cusinato or Cusinato with Bellak to add longitudinal ribs. EX1002, ¶199. A POSITA would look to Spencer for teachings regarding how to modify Cusinato to use integrally knit ribs rather than fused yarn ribs. *Id.* Such a modification would be obvious because a POSITA would understand that the ribs of Bellak, Dua, and Spencer can be used for both aesthetic and functional purposes (affecting stretch). *Id.* The ribs of such a combination would meet the limitations of the claim, as it would include the use of knitting machines to make integrally knit ribs under the parties' agreed upon claim construction. *Id.*

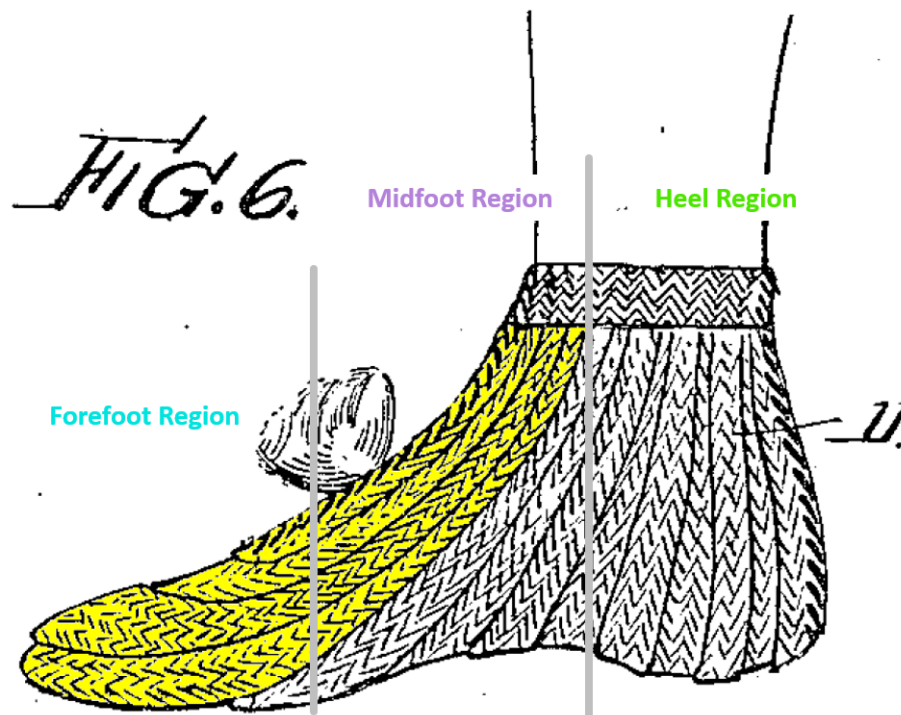
Given the ubiquity of ribs (and their printed counterpart, stripes) in apparel and footwear, as well as the design incentives and other market forces in those product markets, it would have been obvious or obvious to try to add ribs like the ones in Bellak to the footwear in Cusinato or, in the alternative, Dua to the footwear in Cusinato, or in the further alternative, Bellak and Dua to the footwear in Cusinato. EX1002, ¶200. To the extent the claim construction for integrally knit ribs is argued by Patentee to constitute a limitation not disclosed in these combined references, Spencer would provide that teaching and could be further combined with the combinations in the preceding sentence. EX1002, ¶¶201-202.

4. **Element 1[b]: wherein one or more ribs extend longitudinally along one or more of a lateral side and a medial side of the upper, the one or more ribs extending from the forefoot region toward the heel region and terminating in one of the midfoot region or the heel region.**

The location and orientation of these ribs may be solely for aesthetic purposes.

Cusinato in view of Bellak and/or Dua discloses ribs that meet the limitations of element 1[b]. EX1002, ¶203.

Regarding location, the ribs (in yellow) in Figure 6 of Bellak are compared below with Patentee's delineation of regions from the '562 patent. *See §III.A supra.*



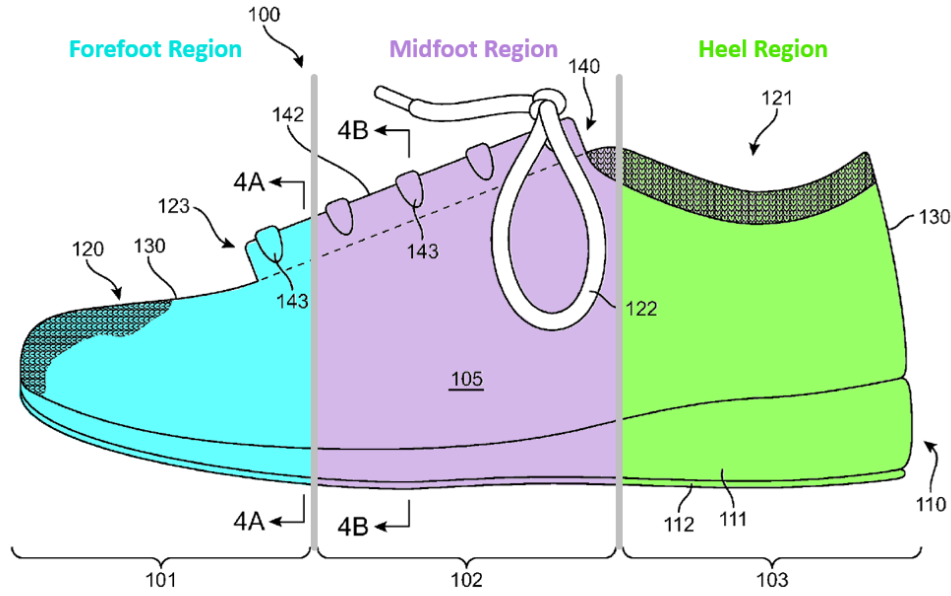


FIG. 3

EX1015, Fig. 6; EX1020, Fig. 3.

As evident, the ribs: (a) run longitudinally (*i.e.*, lengthwise from the forefoot region towards the heel region, not widthwise from the lateral side to the opposite medial side); and (b) run along a lateral or medial side. EX1002, ¶¶204-205. The ribs: (c) extend from the forefoot region (blue) towards the heel region (labeled in green); and (d) terminate in the midfoot region (purple). *Id.*

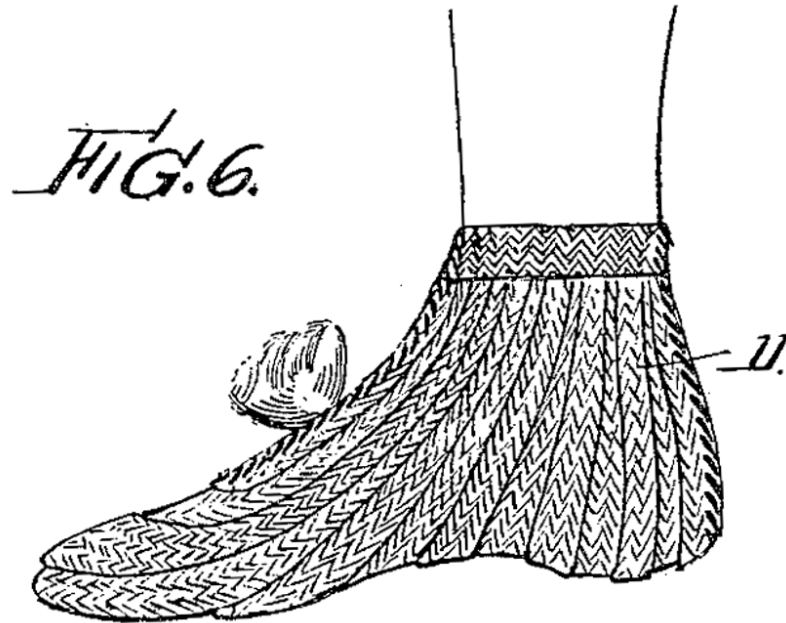
Regarding orientation, Patentee contends in the parallel litigation that this claim element should be given its plain and ordinary meaning and that no prosecution disclaimer applies. Consequently, Patentee accuses of infringement footwear having what Patentee contends are ribs both: (1) extending in the direction of the ankle opening and (2) having a diagonal orientation:





EX1011, 39, 55; EX1002, ¶206.

Under Patentee's apparent claim construction, the combination of Cusinato with Bellak would meet the limitations of Element 1[b]. *Id.*, ¶207. That Bellak's ribs run diagonally or extend toward the ankle opening is irrelevant under Patentee's claim construction, as evidenced by a comparison between Bellak and an exemplar accused shoe.



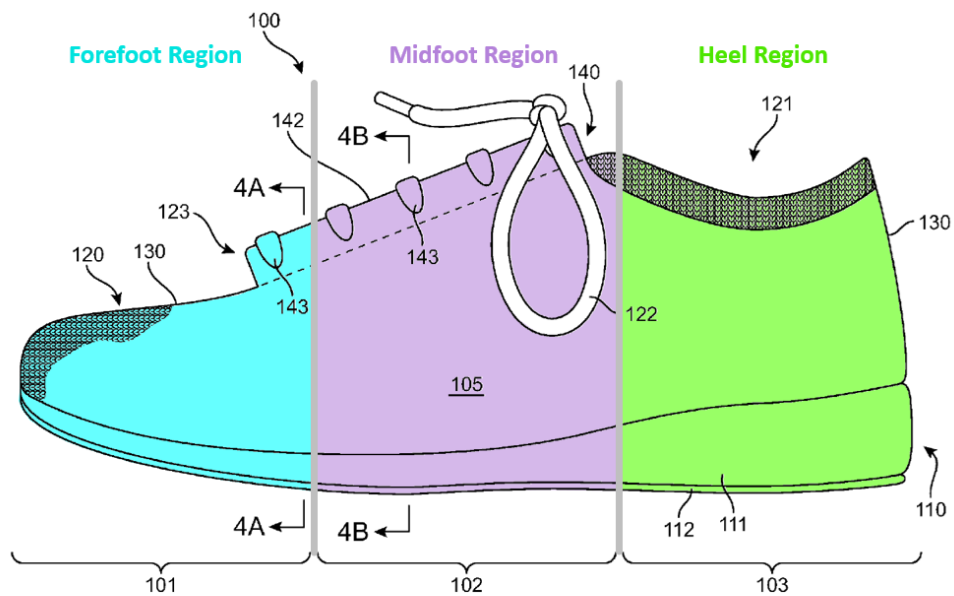
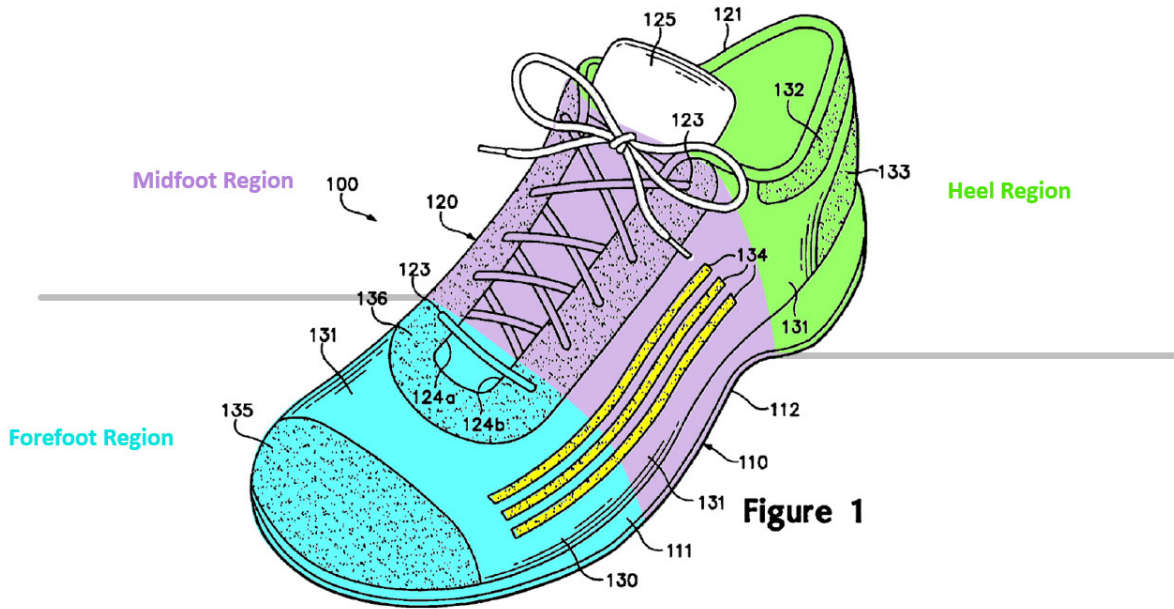
EX1015, Fig. 6; EX1011, 55. EX1002, ¶208.

And under either party's claim construction, it would have been obvious to a POSITA to use the ribs of Bellak for aesthetic purposes in Cusinato, but to locate and/or orient them in accordance with the limitations of Element 1[b]. *Id.*, ¶209. Such a design choice would be obvious or obvious to try in the fashion industry, of

which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶209. Indeed, rib or stripe patterns are among the simplest and most ubiquitous of a finite number of aesthetic design elements in footwear and in knit fabrics. *Id.*

Under either claim construction, the combination of Cusinato with Bellak *and Dua* would meet the limitations set forth in Element 1[b]. EX1002, ¶210. It would have been obvious to a POSITA to re-orient the ribs in the Cusinato and Bellak combination to achieve the longitudinal appearance of the ribs/stripes in Dua. *Id.* Not only does Dua disclose that such fused ribs/stripes could be used for aesthetic purposes, but such a design choice would be obvious or obvious to try for the same reasons described in the preceding paragraph. *Id.*

As can be seen in the comparison below between Patentee's defined regions of the shoe in the '562 patent and Dua, Dua's fused ribs (labeled in yellow) run (a) longitudinally (*i.e.*, lengthwise from the forefoot region towards the heel region, rather than widthwise from the lateral side to the opposite medial side) and (b) along a lateral or medial side. EX1002, ¶¶211-12. The ribs (c) extend from the forefoot region (labeled in blue) towards the heel region (labeled in green) and (d) terminate in the midfoot region (labeled in purple). EX1002, ¶¶211-12.



Id.; EX1017, Fig. 1; EX1020, Fig. 3.

Finally, a POSITA in possession of Cusinato, Bellak, and/or Spencer would also have been motivated with expectation of success to substitute the ribs made of fusible yarn in Dua's shoe with integrally knitted ribs because both types of ribs

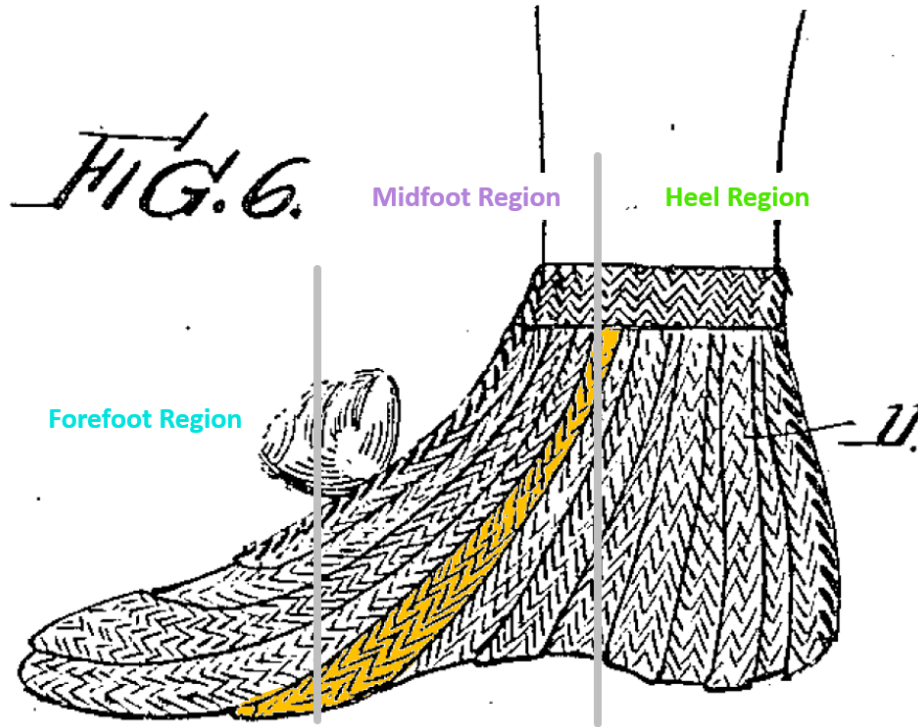
affect stretch, Dua's shoe may also be knitted (EX1017, 8:65-9:48; Fig. 5), and using integrally knitted ribs would have simplified construction (by eliminating the use of fusible yarn and the fusing step). EX1002, ¶213.

Any design choices creating ribs, orienting ribs, or locating ribs would be easily implemented using programmable knitting machines available in the early 2000s. EX1002, ¶¶214-15.

G. Claim 2: The upper of claim 1, wherein the one or more ribs terminate in the heel region of the upper.

For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Cusinato, Bellak, and/or Dua to create the upper of claim 1 with the additional *aesthetic* limitations of claim 2. EX1002, ¶216.

As discussed above, under Patentee's claim construction, Bellak teaches one rib that terminates in the heel region of the upper (the orange rib that extends from the blue forefoot region through the purple midfoot region to the green heel region). EX1002, ¶217.



EX1015, Fig. 6.

And under either party's claim construction, Bellak and Dua teach one or more longitudinal ribs that terminate in the heel region of the upper (because Dua teaches longitudinal ribs under Petitioner's claim construction and Bellak teaches a rib that terminates in the heel region). EX1002, ¶218.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. *Id.*, ¶219. Ribs may be oriented in any direction and start/terminate at any point. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶¶219-20.

H. Claim 3: The upper of claim 1, wherein the one or more ribs affect stretch properties of the upper.

This is one of only two functional limitations in the '781. For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Cusinato, Bellak, Spencer, and/or Dua to create the upper of claim 1 with ribs that affect the stretch properties of the upper. EX1002, ¶¶221-25.

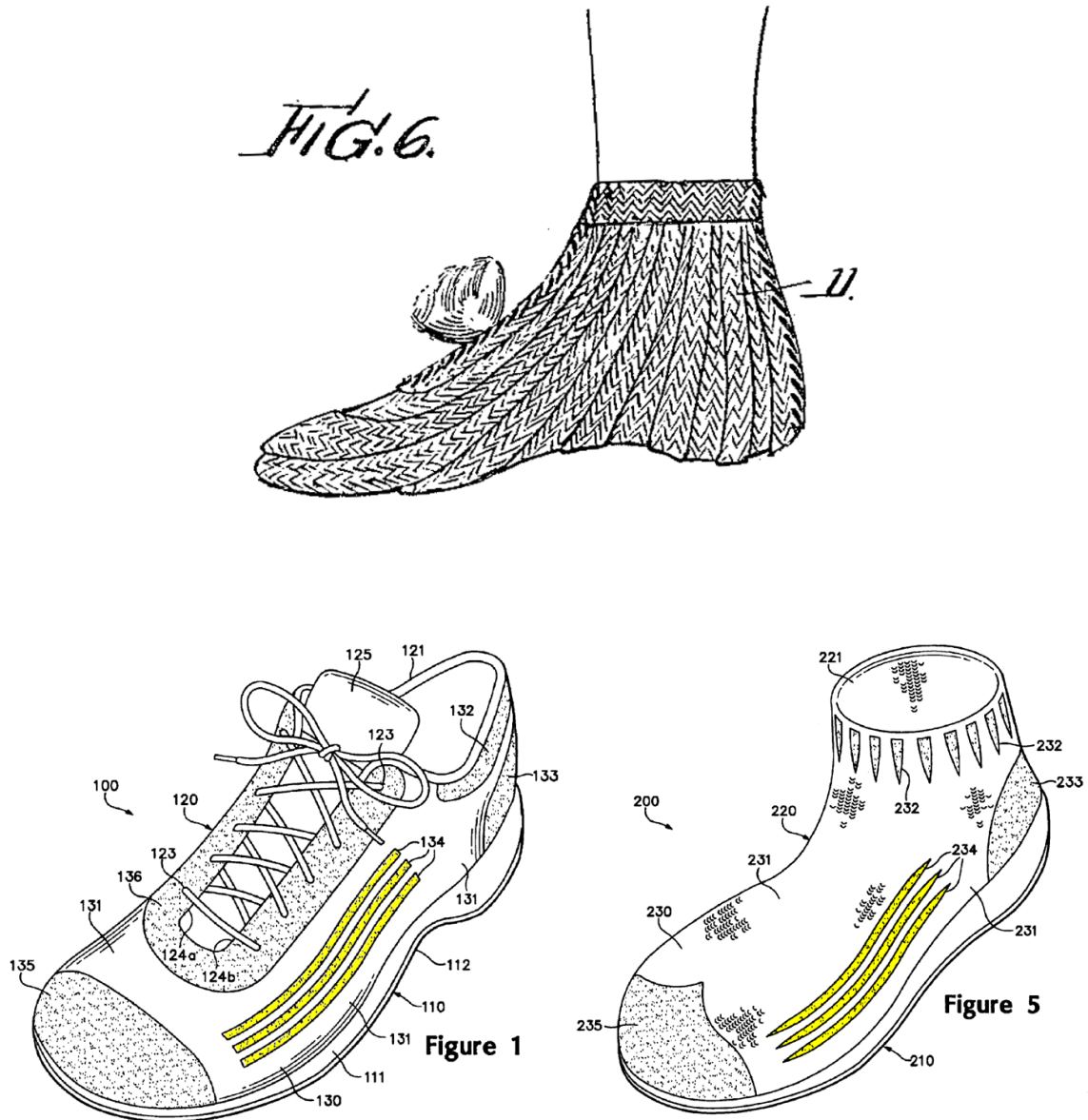
The use of ribbed knit patterns to affect the stretch properties of the article of manufacture is obvious in view of the prior art. *Id.* For example, Spencer discloses that "[r]ib structures are elastic [and] form-fitting...." EX1050, 68. The stretch properties of ribs are also well-known to POSITAs. EX1002, ¶¶221-25.

I. Claim 4: The upper of claim 1, wherein the one or more ribs extending longitudinally comprises ribs spaced apart from an area adjacent an instep region of the upper to an area adjacent a lower region of the upper.

For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Cusinato, Bellak, and/or Dua to create the upper of claim 1 with the additional *aesthetic* limitations of claim 4. EX1002, ¶226. Notably, the claims do not require the ribs to be absent from other areas. EX1002, ¶227.

As discussed above, under Patentee's claim construction, Bellak teaches ribs spaced apart from an area adjacent an instep region of the upper to an area adjacent a lower region of the upper, and under either parties' claim construction, Bellak and

Dura teach ribs spaced apart from an area adjacent an instep region of the upper to an area adjacent a lower region of the upper:



EX1015, Fig. 6; EX1017, Figs. 1, 5; EX1002, ¶228.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶229. The location and spacing of the ribs are a simple design choice. *Id.* Such a design choice would be obvious or obvious to try in the

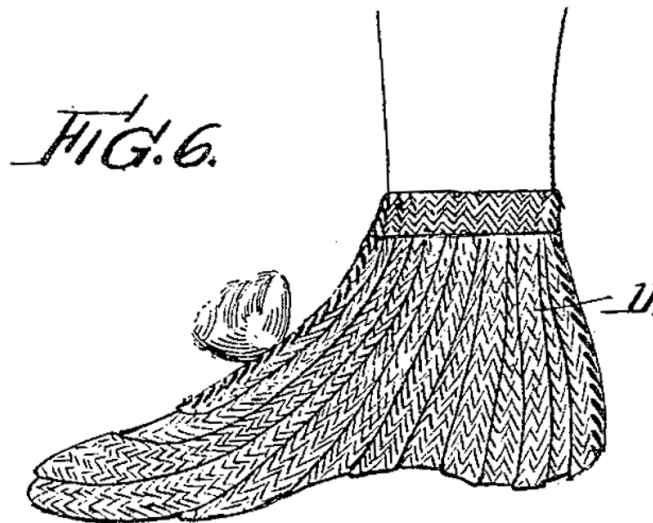
fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶229-30.

J. Claim 5: The upper of claim 4, wherein the lower region of the upper comprises a bottom surface of the upper.

For the reasons discussed regarding Claim 4, it would have been obvious to a POSITA in possession of Cusinato, Bellak, and/or Dua to create the upper of claim 4, wherein the lower region of the upper comprises a bottom surface of the upper. EX1002, ¶231.

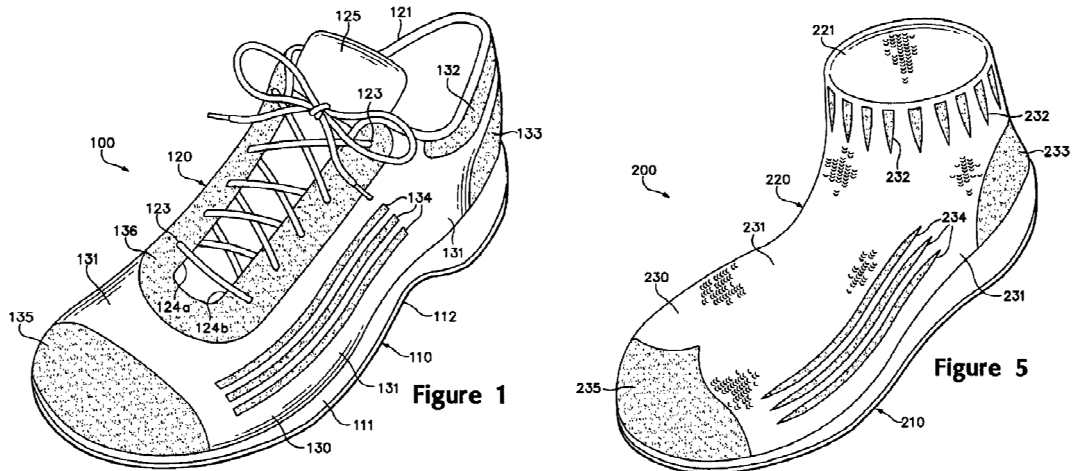
In Cusinato, a POSITA would understand that the lower region of the assembled "*boot-like*" shape comprises a bottom surface. *See, e.g.*, EX1014, [0015], [0035]; EX1002, ¶232.

In Bellak, the lower surface comprises a bottom surface:



EX1015, Fig. 6; EX1002, ¶233.

And a POSITA would understand that the Dua upper has a bottom surface (to which the sole is attached):

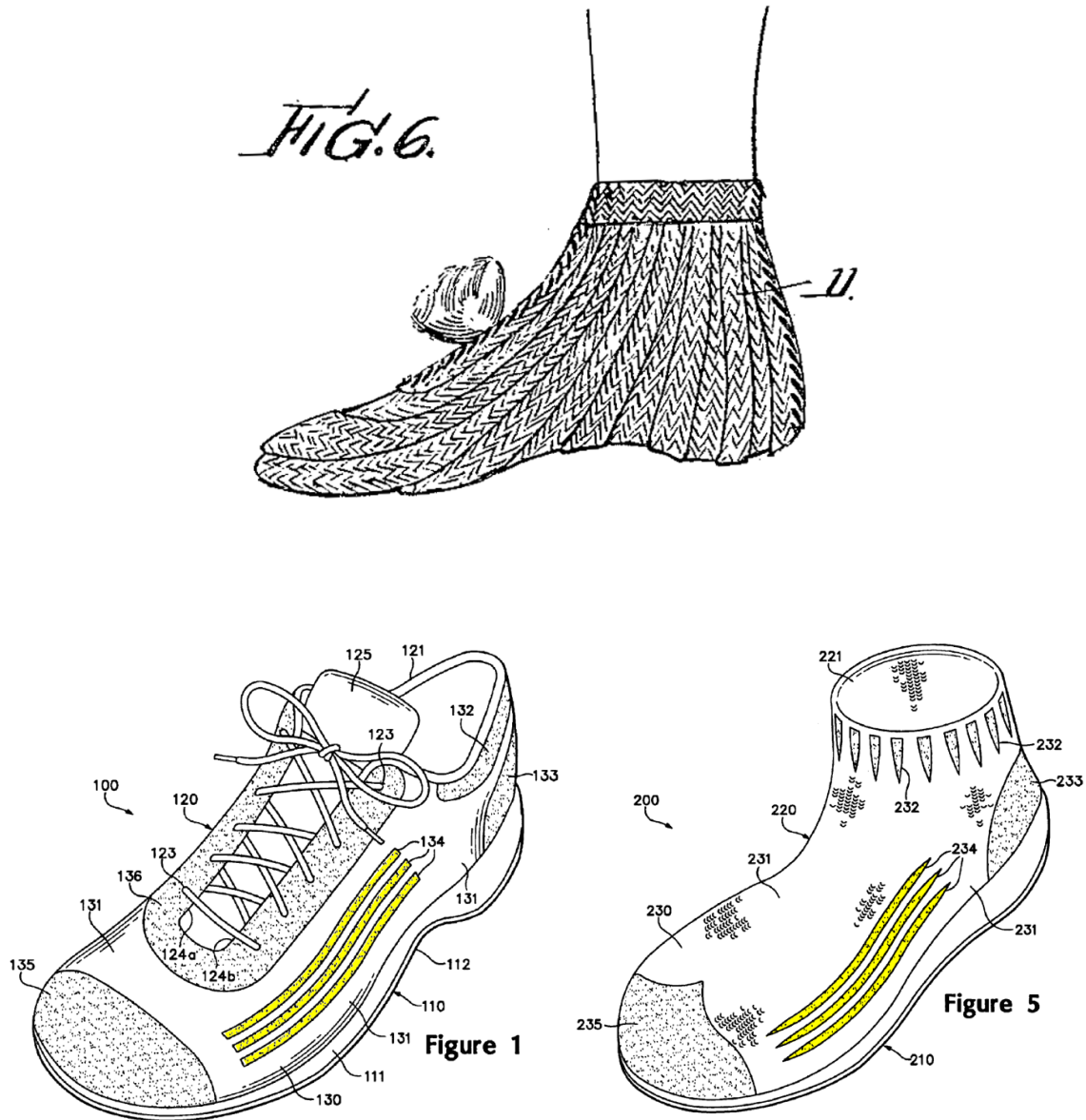


EX1017, Figs. 1, 5; EX1002, ¶¶234-35.

K. Claim 6: The upper of claim 4, wherein the ribs are spaced apart at a uniform distance from the area adjacent the instep region to the area adjacent the lower region.

For the reasons discussed regarding Claim 4, it would have been obvious to a POSITA in possession of Cusinato, Bellak, and/or Dua to create the upper of claim 4, with the additional *aesthetic* limitations of claim 6. Notably, the claims do not require the ribs to be absent from other areas. EX1002, ¶¶236-37.

As discussed above, under either party's claim construction, Bellak and Dua teach ribs that are spaced apart at a uniform distance from the area adjacent the instep region to the area adjacent the lower region. EX1002, ¶238.



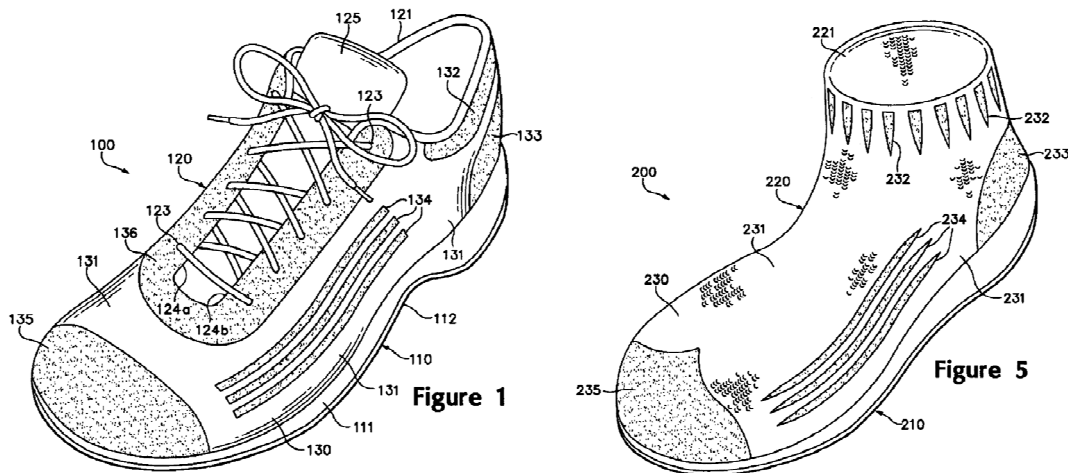
EX1015, Fig. 6; EX1017, Figs. 1, 5.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶239. The location and spacing of the ribs are a simple design choice. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. See the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶¶239-40.

L. Claim 7: The upper of claim 1, wherein the one or more ribs are adjacent one or more regions having a smooth texture.

For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA in possession of Cusinato, Bellak, Dua, and/or Spencer to create the upper of claim 1 with the additional *aesthetic* limitations of claim 7. EX1002, ¶241.

As discussed above, under either party's claim construction, Dua teaches one or more ribs are adjacent to one or more unfused regions having "an appearance of conventional textiles," EX1017, 5:18-19, which a POSITA would understand (including from Figures 1 and 5) could include smooth textures. EX1002, ¶242.



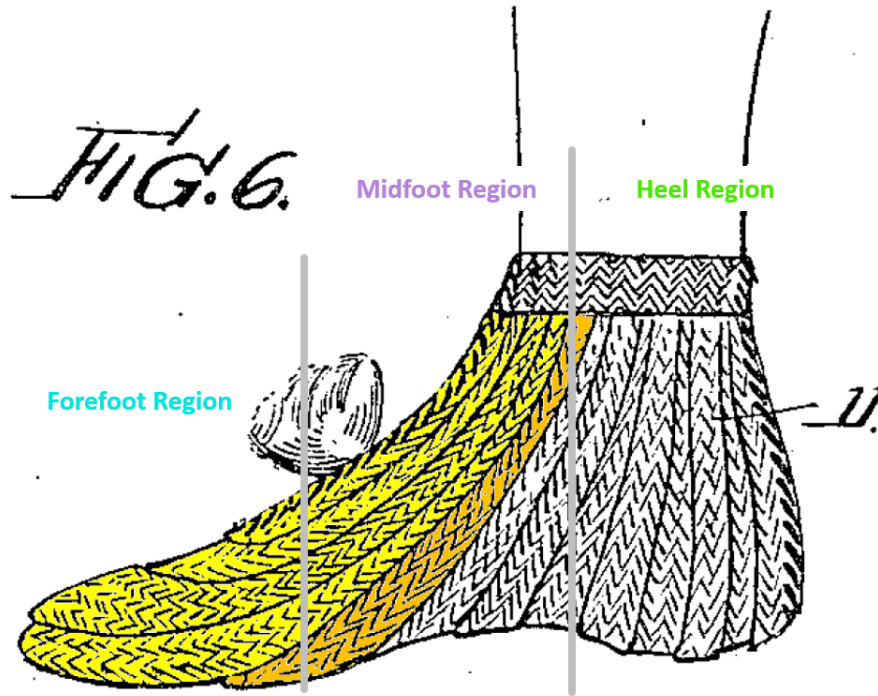
Therefore, it would have been obvious to a POSITA with access to Cusinato, Bellak, and Dua to locate one or more ribs adjacent to one or more regions having a smooth texture. Additionally, Spencer discloses this limitation, in particular, knit patterns that alternate between plain and ribbed textures. EX1050, 69 ("*Broad ribs* have a number of adjacent rib as well as plain wales, for example, 6/3 *Derby Rib*."); EX1002, ¶¶243-44.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶245. Alternating ribs and smooth textures is a simple design choice and one of a limited number of finite solutions. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. The use of (1) rib or stripe patterns; (2) varying patterns; and (5) different locations of the elements in patterns is a long-standing and integral part of fashion design and would have been obvious or obvious to try from the perspective of a POSITA familiar with either footwear or textiles. *See* the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶¶245-46.

M. Claim 8: The upper of claim 1, wherein the one or more ribs comprise a plurality of ribs, at least one rib terminating in the heel region and at least one rib terminating in the midfoot region.

For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Cusinato, Bellak, and/or Dua to create the upper of claim 1 with the additional *aesthetic* limitations of claim 8. EX1002, ¶247.

As discussed above, under Patentee's claim construction, Bellak teaches one rib that terminates in the heel region of the upper (the orange rib that extends from the blue forefoot region through the purple midfoot region to the green heel region) and multiple ribs that terminate in the midfoot region (the yellow ribs that extend from the blue forefoot region and terminate in the purple midfoot region).



EX1015, Fig. 6; EX1002, ¶248.

Under either party's construction, Bellak and Dua teach one rib that terminates in the heel region of the upper and multiple ribs that terminate in the midfoot region because Dua teaches longitudinal ribs under Petitioner's claim construction and Bellak teaches terminating a rib in the heel region and other ribs in the midfoot region. *Id.*, ¶249. Therefore, it would have been obvious to a POSITA with access to Cusinato, Bellak, and Dua to terminate one rib in the heel region and one rib in the midfoot region. *Id.*

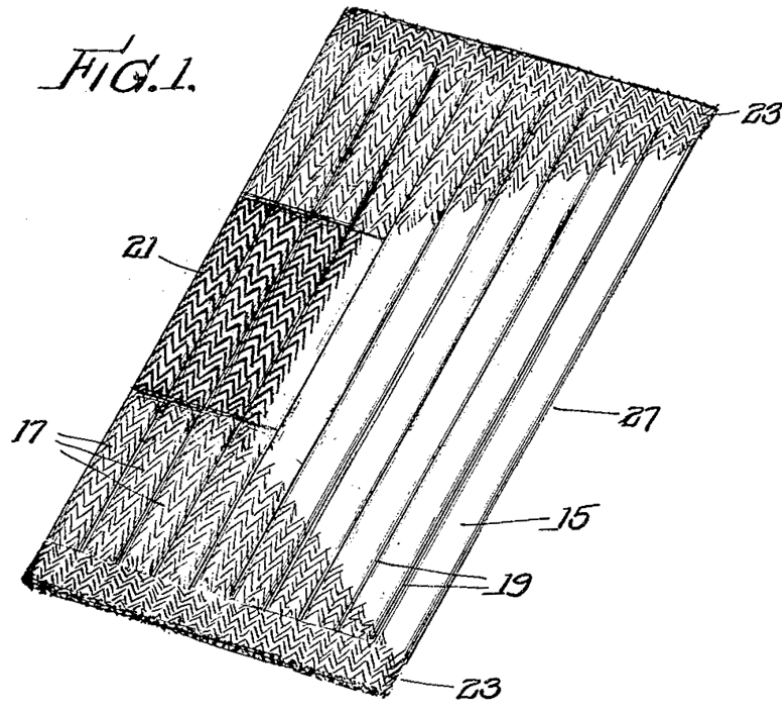
Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. *Id.*, ¶¶250-51. Ribs may start/terminate at any point. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which

footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶¶245-51.

N. Claim 9: The upper of claim 1, wherein the one or more ribs includes one or more ribs extending longitudinally along the lateral side and one or more ribs extending longitudinally along the medial side.

For the same reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Cusinato, Bellak, and/or Dua to create the upper of claim 1 with the additional *aesthetic* limitations of claim 9. EX1002, ¶252.

As discussed above, under Patentee's claim construction, Bellak teaches one or more ribs extending along the lateral side that mirror the one or more ribs extending longitudinally along the medial side. EX1002, ¶253. This is illustrated in the workpiece in Figure 1, which reflects the same uniform ribbed feature throughout, which would lead to the lateral and medial sides having the same design. *Id.*



EX1015, Fig. 1.

And under either party's claim construction, Dua teaches one or more ribs extending along the lateral side that mirror the one or more ribs extending longitudinally along the medial side: "[f]used area 134...on the *lateral* side of footwear 100.... A *similar fused area may be located on the medial* side..."

EX1017, 5:66-6:3. EX1002, ¶254.

Moreover, such an aesthetic design of medial side, lateral side, or both sides would have been an obvious design choice to a POSITA. EX1002, ¶255. Presenting the same design elements on both the medial and lateral sides of footwear is a long-standing and obvious choice in the footwear industry, as is mirroring those design elements. *Id.* Examples of both from brands including Vans, Puma, and

adidas (each arranged to show a lateral and a medial side) are provided below.

EX1002, ¶¶256-57.



EX1028, 2; EX1029, 1; EX1030, 1; EX1031, 1.

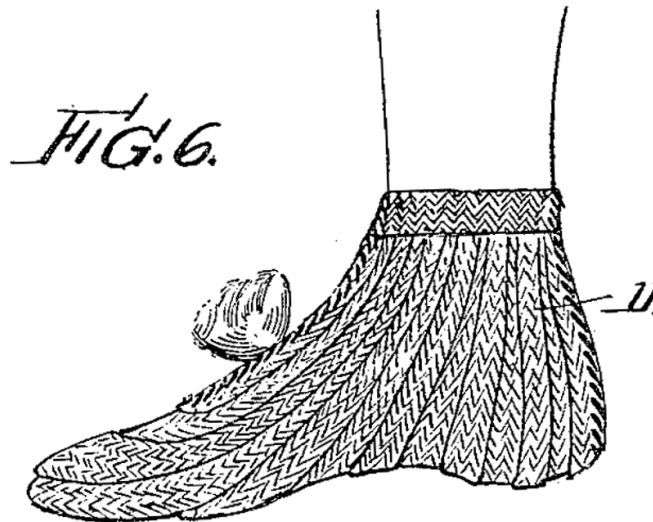
- O. Claim 10: The upper of claim 9, wherein the one or more ribs extending along the lateral side mirror the one or more ribs extending longitudinally along the medial side.**

For the same reasons discussed regarding Claim 9, it would have been obvious to a POSITA with access to Cusinato, Bellak, and/or Dua to create the upper of claim 9 with the additional *aesthetic* limitations of claim 10. EX1002, ¶258.

P. Claim 11: The upper of claim 1, wherein the one or more ribs comprise ribs of varying lengths.

For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Cusinato, Bellak, and/or Dua to create the upper of claim 1 with the additional *aesthetic* limitations of claim 11. EX1002, ¶259.

As discussed above, under Patentee's construction, Bellak teaches one or more ribs comprising ribs of varying lengths:



EX1015, Fig. 6; EX1002, ¶260.

Under either party's construction, Bellak and Dua teach one or more ribs comprising ribs of varying lengths because Dua teaches longitudinal ribs under Petitioner's construction and Bellak teaches ribs of varying lengths. EX1002, ¶261.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶262. Ribs may be oriented in any direction and start/terminate at any point. *Id.* Such a design choice would be obvious or obvious

to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §VIII.E; EX1002, ¶¶262-63.

Q. Claim 12

Independent Claim 12 is substantially similar to Claim 1 and is therefore obvious in light of the combined teachings of Cusinato, Bellak, and/or Dua, and if necessary, Spencer, for the reasons above regarding the corresponding limitations of Claim 1. EX1002, ¶¶264-65.

Claim	Corresponding Analysis
12[pre]	• Element 1[pre]; EX1002, ¶266.
12[a1]	• Element 1[a1]; EX1002, ¶267.
12[a2]	• Element 1[a2]; EX1002, ¶268.
12[b]	• Element 1[b]; EX1002, ¶¶269-70.

Element 12[b] is substantially similar to Element 1[b], with the additional requirement that one or more ribs extend longitudinally along *both* a lateral and a medial side, the same aesthetic limitation recited in Claim 9. Element 12[b] is therefore obvious for the reasons above regarding Claims 1 and 9. *Id.*, ¶¶269-70.

R. Claim 13: The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side terminate in the heel region of the upper.

Claim 13 is substantially similar to Claims 2 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 2 and 9. EX1002, ¶271.

- S. Claim 14: The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side affect stretch properties of the upper.**

Claim 14 is substantially similar to Claim 3 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 3 and 9. EX1002, ¶272.

- T. Claim 15: The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side each comprise ribs spaced apart from an area adjacent an instep region of the upper to an area adjacent a lower region of the upper.**

Claim 15 is substantially similar to Claims 4 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 4 and 9. EX1002, ¶273.

- U. Claim 16: The article of footwear of claim 15, wherein the ribs are spaced apart at a uniform distance.**

Claim 16 is substantially similar to Claims 6 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 6 and 9. EX1002, ¶274.

- V. Claim 17: The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side are adjacent one or more regions having a smooth texture.**

Claim 17 is substantially similar to Claims 7 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 7 and 9. EX1002, ¶275.

- W. Claim 18: The article of footwear of claim 12, wherein at least the one or more ribs on the lateral side comprise a plurality of ribs, at least one rib terminating in the heel region and at least one rib terminating in the midfoot region.**

Claim 18 is substantially similar to Claims 8 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 8 and 9. EX1002, ¶276.

- X. Claim 19: The article of footwear of claim 12, wherein the one or more ribs on the lateral side and the one or more ribs on the medial side comprise ribs of varying lengths.**

Claim 19 is substantially similar to Claims 9 and 11, and it would be obvious to a POSITA for the reasons above regarding Claims 9 and 11. EX1002, ¶277.

- Y. Claim 20: The article of footwear of claim 12, further comprising a sole structure secured to the upper.**

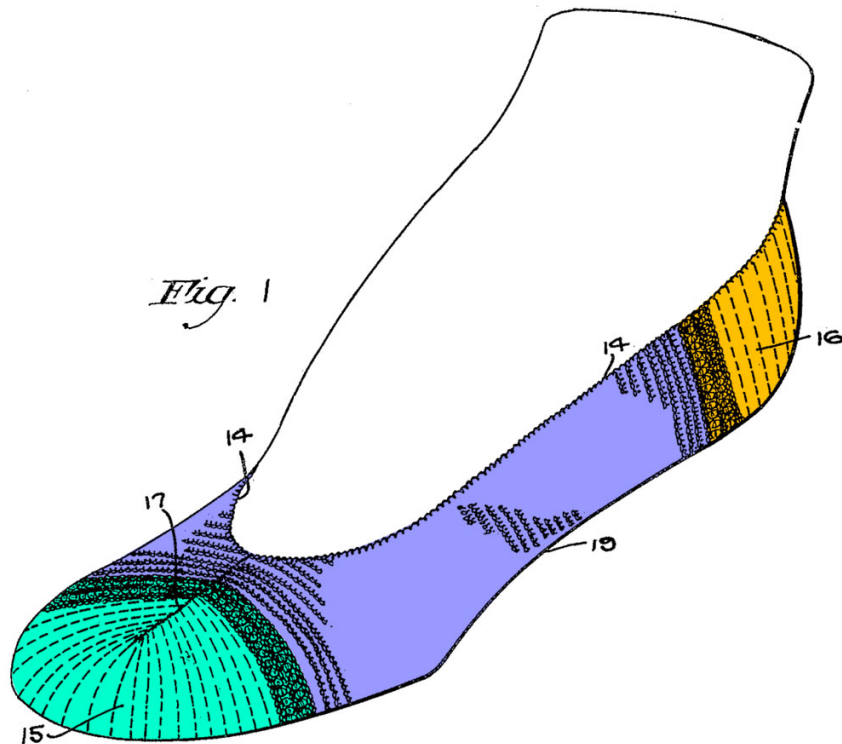
Cusinato, Bellak, and/or Dua either disclose or render obvious claim 20. Cusinato's preferred embodiment is a boot, and Bellak's is a slipper, footwear for which attachment of a sole would constitute an obvious modification to a POSITA. EX1002, ¶¶278-79. Motivations to add the sole would include protecting the bottom of the foot, as soles have done for millennia. *See* EX1017, 4:17-35; EX1002, ¶¶280-81. To the extent that this limitation is not explicitly or implicitly disclosed in these references, Dua discloses such a structure, as shown for example in Figure 1.

IX. GROUND 2: HERBERT IN VIEW OF CUSINATO AND HLAVACS, AND IF NECESSARY, SPENCER, RENDERS OBVIOUS THE CHALLENGED CLAIMS

For the reasons set forth below, challenged claims 1-20 are anticipated by, or obvious over, Herbert in view of Cusinato and Hlavacs, and, if necessary, Spencer.

A. Overview of Herbert

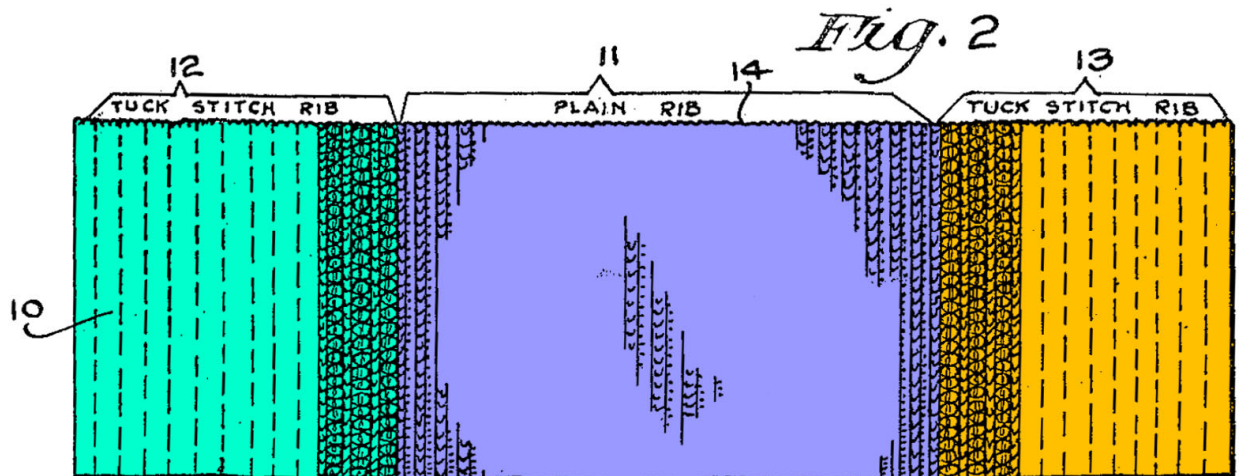
Herbert, entitled "Foot Covering," issued on May 21, 1946 and "relates to knitted *foot coverings* and more particularly to the *slipper* type." EX1016, 1:4-5. Although the preferred embodiment is a circular knit fabric, Herbert discloses that "cut and sewn *flat rib knitted* fabric may be employed." EX1016, 2:5-15; *see also id.*, 1:48-55, 2:36-38, 4:14-17; EX1050, 45.



EX1016, Fig. 1.

Herbert discloses that "one edge" of the circular knit workpiece "has a selvage, this edge forming the upper finished edge of the slipper foot covering." *Id.*, 2:36-38. "The inherent selvage edge 14...provides a finished edge for the article of apparel without any further operations." *Id.*, 2:14-17.

Herbert discloses that "[i]n the preferred embodiment[,] rib rather than plain fabric is used as the former has a greater stretch...than the latter, although the latter [plain fabric] may be used if desired." EX1016, 2:16-29; EX1002, ¶¶135-140. The rib stitching is shown in Figure 2, with area 11 comprising plain true ribs and areas 12 and 13 comprising tuck stitch ribs – though other stitches can be used such as "plain jersey fabric" to "reduce the elasticity." *Id.* at 3:1-6; *see also id.*, 1:35-36, 2:41-47.



Herbert discloses that "it is relatively immaterial which side of the [rib] fabric is outermost as both faces of the plain rib are substantially alike." EX1016, 3:36-38. Thus, there are face wales and back wales forming the ribs such that the two sides are ribbed and "substantially alike." EX1002, ¶¶141-43.

B. Overview of Cusinato

Cusinato is described above at §VIII.A.

C. Overview of Hlavacs

Hlavacs, entitled "Portion Of A Shoe Upper," was filed on February 1, 2002 and issued on August 27, 2002. The design patent claims "a portion of a shoe upper."

EX1018, 1. A side image is reproduced below.

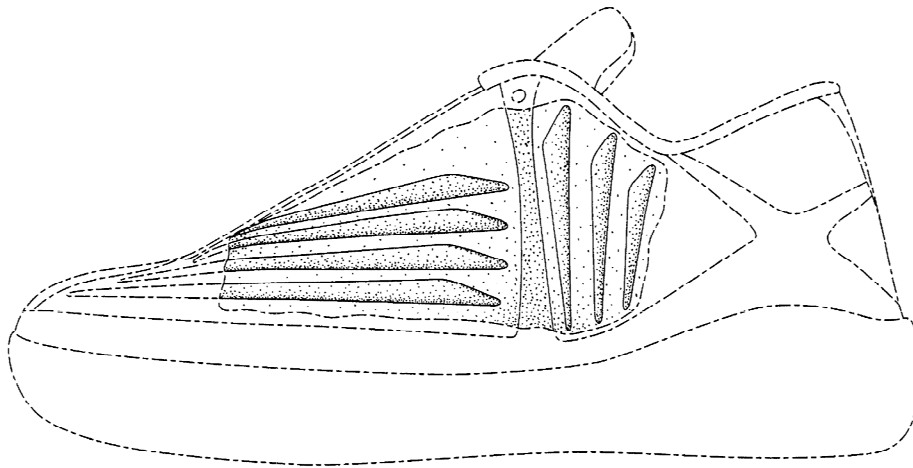


FIG. 2

EX1018, Fig. 2.

Like the ribs in claims 1-2, 4-13, and 15-20 of the '781, the Hlavacs ribs/stripes are solely for aesthetic purposes, as they must be in a design patent. Hlavacs is presented solely for its teachings regarding the aesthetic appearance of the depicted ribs/stripes and the fact that the article on which they appear is an upper for a shoe.

EX1002, ¶¶144-47.

Hlavacs acknowledges that the “broken line showing of stripes immediately adjacent to the shaded area” are stripes; they “represent an *unclaimed* extension of the design.” EX1018, “Description.”

D. Overview of Spencer

Spencer is described above at §VIII.D.

E. Combination of Herbert With Cusinato, Hlavacs, And If Necessary, Spencer

At the time of the claimed invention, a POSITA would have been motivated to combine the teachings of Herbert with Cusinato, Hlavacs, and/or Spencer, and would have had a reasonable expectation of success in doing so. EX1002, ¶157.

For example, Herbert and Cusinato relate to the design and manufacture of footwear using flat knitting. EX1002, ¶158. Herbert explicitly discloses that "cut and *sewn flat* rib *knitted* fabric may be employed without departing from the spirit of the invention." EX1016, 2:8-10. Cusinato teaches a *flat knit* fabric workpiece that is then *sewn*. EX1014, [0015]. A POSITA in possession of Herbert would have been motivated to combine it with Cusinato in furtherance of Herbert's teaching that flat knitting could be used, as well as to take advantage of the benefits of Cusinato's flat knitting, which eliminated waste and simplified manufacturing (by eliminating cutting). EX1002, ¶158. This comports with Herbert's purpose of "making the finished product...simpler and less expensive." EX1016, 2:14-15. Herbert also discloses the use and advantages of a "selvage" finished edge. EX1002, ¶159. A POSITA in possession of Herbert would have looked to Cusinato, which has all finished edges. *Id.* A POSITA would know that all finished edges would eliminate cutting, rendering the "method of making the finished product...simpler and less

expensive." EX1016, 2:14-15. Thus, using Cusinato's flat knit technology to make the ribbed slipper of Herbert would have yielded predictable results, would have constituted simple substitution or application of a more modern knitting technique for an older one, and would have been obvious to try with reasonable expectations of success. EX1002, ¶159.

Herbert discloses that instead of ribbed fabric, "plain fabric...may be used if desired." EX1016, 2:17-19. A POSITA in possession of Herbert and Cusinato would have been motivated to further improve the appearance of or create variations in the appearance of such a plain fabric slipper. EX1002, ¶160. Moreover, a POSITA attempting to create Herbert's footwear embodiment would investigate aesthetic aspects of design elements from other footwear designs such as Hlavacs, which uses longitudinal ribs as well as vertical ribs. *Id.* Insofar as the changes are aesthetic, a POSITA would have reasonable expectations of success. *Id.*

Moreover, as set forth in §VIII.E, a POSITA in possession of Herbert or Cusinato would have been motivated to further improve the manufacturing efficiency, functionality, and/or appearance of the knitted footwear, and would have consulted Spencer, a seminal "handbook" and "practical guide," regarding how to do so and would have reasonable expectations of success (it's a handbook). EX1002, ¶161.

Finally, the Obvious Design Choices, set forth above in §VIII.D, would all have been obvious or obvious to try from the perspective of a POSITA familiar with either footwear or textiles. *Id.*, ¶162. *See In re Rice*, 341 F.2d at 314. Indeed, rib or stripe patterns are among the simplest and most ubiquitous of a finite number of aesthetic design elements in footwear and in knit fabrics, and their use and success is predictable. EX1002, ¶163. Thus, at the time of the invention, a POSITA would have been motivated to combine the teachings of Herbert with Cusinato, Hlavacs, Spencer, and the Obvious Design Choices, and would have had a reasonable expectation of success in doing so, as the changes are aesthetic. *Id.* And, at the time of the invention, a POSITA would have thought it obvious or obvious to try modifying Herbert, Cusinato, Hlavacs, Spencer, or any combination thereof to add elements of any or all of the Obvious Design Choices. Insofar as the changes are aesthetic, a POSITA would have expectations of success. *Id.*

F. Claim 1

1. Element 1[pre]

If the preamble is limiting, Herbert, Cusinato, and Hlavacs disclose "an article of footwear" under either party's construction. EX1002, ¶¶282-85.

- Herbert: a "*slipper* foot covering," including a "*sole*". EX1016, 1:48, 2:17.

- Cusinato: "stocking or *footwear*," specifically a "*boot*." EX1014, [0010], [0013].
- Hlavacs: a "*shoe* upper." EX1018, 1.

If Patentee were to argue that Herbert or Cusinato do not disclose a sole, which is contrary to their disclosures and not required by the term "footwear," a POSITA would consider it obvious to add a discrete sole to the "*slipper*" in Herbert or the "*boot-like*" form in Cusinato. EX1002, ¶¶286-88. Moreover, Hlavacs depicts a sole in dotted lines:

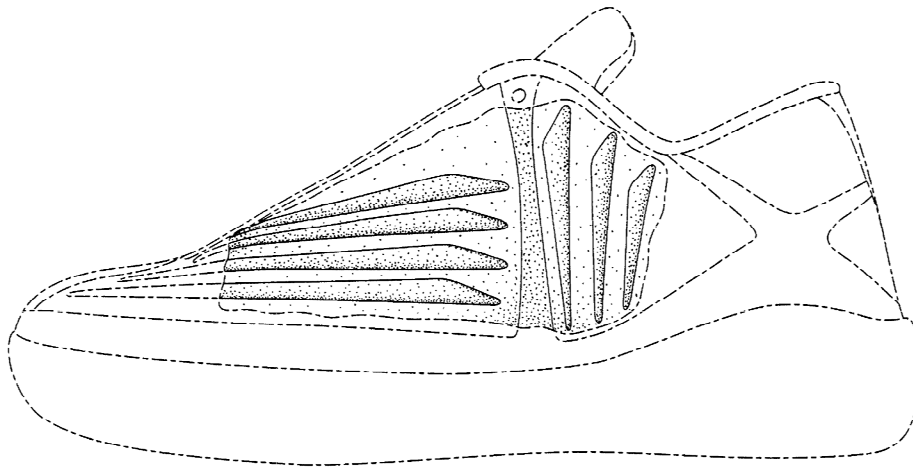


FIG. 2

EX1018, Fig. 2.

2. Element 1[a1]

Herbert in view of Cusinato, and if necessary, Spencer, discloses Element 1[a1] under either party's construction.

A POSITA would understand that Herbert teaches that "cut and sewn *flat rib knitted* fabric may be employed" to create the disclosed slipper type foot covering. EX1016, 2:8-10; EX1002, ¶289. Cusinato clearly discloses a flat knit fabric element (and manufacturing method therefor) comprising "flat knit edges free of surrounding textile structure such that the flat knit edges are not surrounded by textile structure from which the textile element must be removed," as a POSITA would understand that term under either party's construction. *Id.*

If Patentee argues that Cusinato fails to disclose how to manufacture "flat *rib knitted* fabric" or "flat knit [(selvedged)] edges" such technology is disclosed in Spencer:

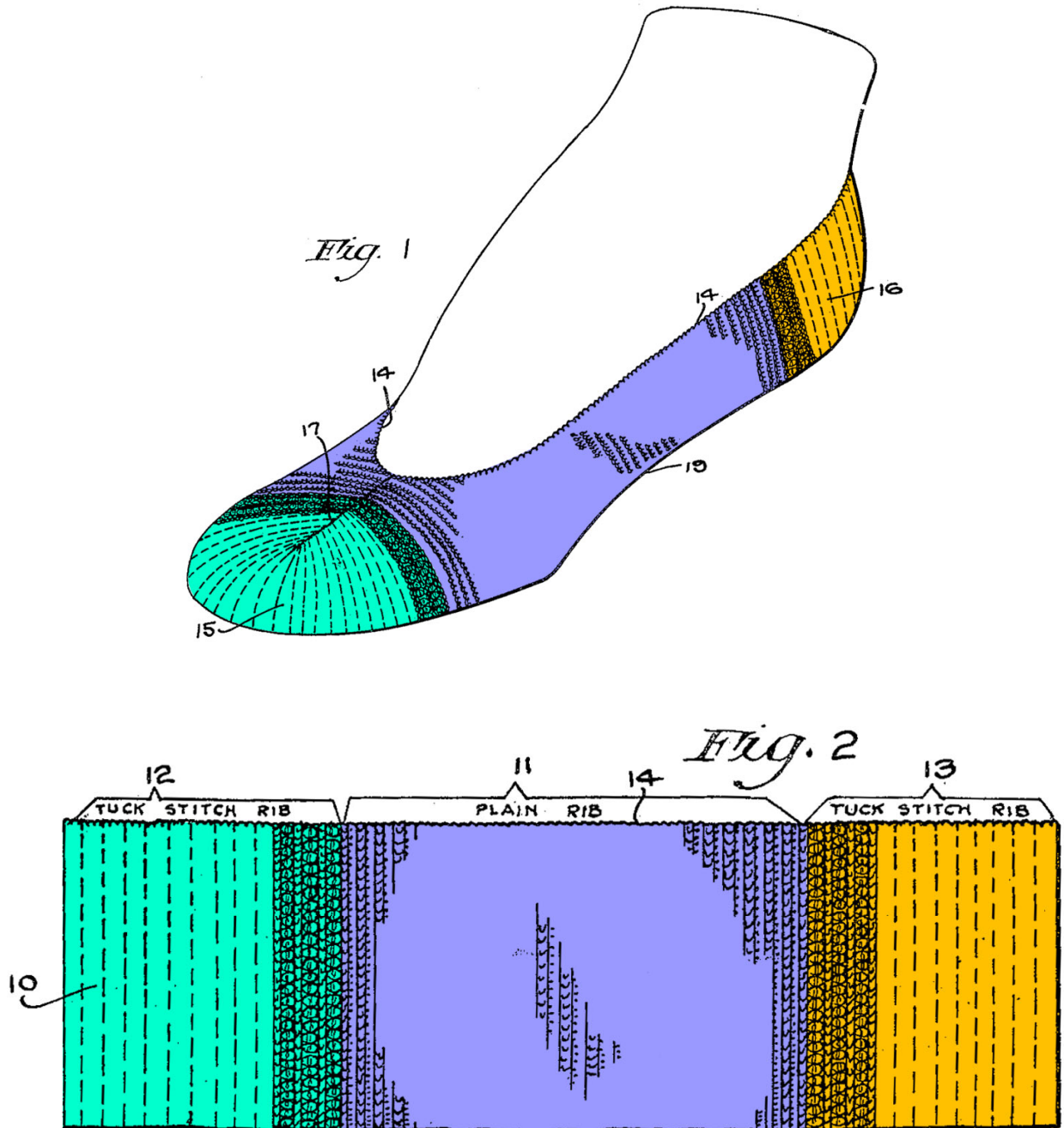
- "Typical structures knitted on flat machines" include ribs. EX1050, 218 (including discussions of the techniques).
- The advantages of flat knitting include that "[t]he firm, fashioned selvedge edges can be...seamed together, without the need for cutting...involving loss of expensive fabric." EX1050, 185 (including discussions of the techniques).

EX1002, ¶¶290-91.

3. Element 1[a2]

A POSITA would understand that Herbert, and if necessary, Spencer, discloses a plurality of ribs integrally knitted into the flat knit textile element.

Figures 1 and 2 of Herbert depict these ribs. EX1002, ¶292.



EX1016, Figs. 1-2.

Herbert discloses that "it is relatively immaterial which side of the [rib] fabric is outermost as both faces of the plain rib are substantially alike." *Id.*, 3:36-38. Thus, there are face wales and back wales forming the ribs such that the two sides are ribbed and "substantially alike." EX1002, ¶293. . This meets the limitations of the claim as it relates to integrally knit ribs under the parties' agreed upon claim construction. *Id.*

If Patentee argues that Herbert's disclosure of ribs is insufficient, Herbert and Cusinato may be combined with Spencer, which discloses integrally knit ribs and the knitting thereof, as discussed *supra*, §VIII.F.3. EX1002, ¶¶294-95.

4. Element 1[b]

The location and orientation of these ribs may be solely for aesthetic purposes. Herbert in view of Cusinato and Hlavacs discloses ribs that extend longitudinally along one or more of a lateral side and a medial side of the upper, the one or more ribs extending from the forefoot region toward the heel region and terminating in one of the midfoot region or the heel region. EX1002, ¶¶296-97.

Herbert's Ribbed Embodiment. Additionally, it would have been obvious to a POSITA to relocate, resize, and re-orient the ribs in the ***ribbed*** embodiment of Herbert to achieve the aesthetic appearance of the ribs/stripes in Hlavacs. EX1002, ¶299. Herbert teaches that the ribs are not necessary for functionality purposes. *Id.*;

EX1016, 1:17-19 ("plain fabric" may be used in lieu of the ribbed fabric). Thus, a POSITA seeking to further improve the appearance of or create variations in the appearance of the vertically ribbed slipper would investigate aesthetic aspects of design elements from other footwear designs such as Hlavacs, which uses longitudinal ribs (highlighted in yellow) as well as latitudinal ribs:

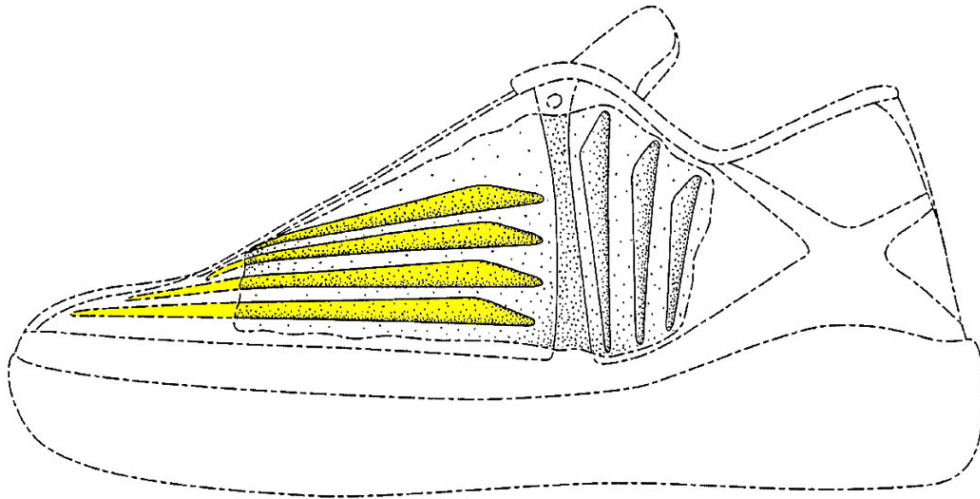


FIG. 2

EX1018, Fig. 2; EX1002, ¶299.

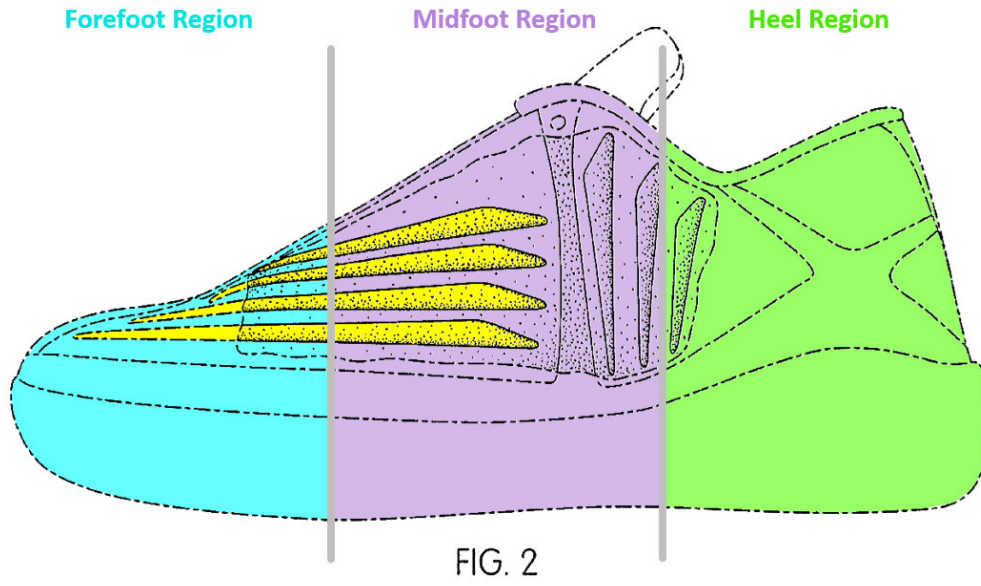
Although Hlavacs is a design patent, the rib designs for 18 of the 20 claims in the '781 can be for aesthetic purposes only. EX1002, ¶300. A design patent can supply those aesthetic elements. *Application of Aslanian*, 590 F.2d 911, 914 (C.C.P.A. 1979) ("we can find no reason for excluding design patents from the classes of prior art properly citable in a rejection under 35 U.S.C. § 103.")

Herbert's Non-Ribbed Embodiment. Herbert discloses that instead of ribbed fabric, a ***non-ribbed*** embodiment comprising "plain fabric...may be used if desired."

EX1016, 2:17-19. Thus, a POSITA attempting to create Herbert's knitted plain fabric footwear embodiment would investigate aesthetic aspects of design elements from other footwear designs such as Hlavacs. EX1002, ¶301.

Either design choice (relocating/resizing/re-orienting ribs in Herbert's ribbed embodiment or adding horizontal ribs to Herbert's non-ribbed embodiment) would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §IX.E; EX1002, ¶302. Rib/stripe patterns are among the simplest and most ubiquitous of a finite number of aesthetic design elements in footwear, and in knit fabrics. *Id.*, ¶303. The use of both longitudinal and latitudinal ribs in the same upper design in Hlavacs further illustrates the point that orientation (as well as other aesthetic aspects of the ribs) is simply a design choice. *Id.*

As can be seen in the annotated figure below, the ribs (yellow) in Hlavacs run (a) longitudinally (*i.e.*, lengthwise from the forefoot region towards the heel region, rather than widthwise from the lateral side to the opposite medial side) and (b) along a lateral or medial side. EX1002, ¶304. The ribs (c) extend from the forefoot region (labeled in blue) towards the heel region (labeled in green) and (d) terminate in the midfoot region (labeled in purple).



EX1018, Fig. 2; EX1002, ¶305.

Any design choices creating ribs, orienting ribs, or locating ribs would be easily implemented using programmable knitting machines available in the early 2000s. EX1002, ¶306.

G. Claim 2

For the reasons discussed regarding Claim 1, it would have been obvious to a POSITA with access to Herbert, Cusinato, and Hlavacs to create the upper of claim 1 with the additional *aesthetic* limitations of claim 2. EX1002, ¶307.

Such an aesthetic design would have been an obvious design choice to a POSITA. *Id.* Ribs may be oriented in any direction and start/terminate at any point. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §IX.E; EX1002, ¶¶308-309.

H. Claim 3

This is a functional limitation. For the reasons above regarding Claim 1, it would have been obvious to a POSITA with access to Herbert, Cusinato, Hlavacs, and Spencer to create the upper of claim 1 with ribs that affect the stretch properties of the upper. EX1002, ¶310-11.

The use of ribbed knit patterns to affect the stretch properties of the article of manufacture is obvious in view of the prior art. EX1002, ¶312. For example, Spencer discloses that "[r]ib structures are elastic [and] form-fitting..." EX1050, 68. Herbert discloses that "[i]n the preferred embodiment[,], rib rather than plain fabric is used as the former has a greater stretch...than the latter, although the latter [plain fabric] may be used if desired." EX1016, 2:16-19. The stretch properties of ribs are also well-known to POSITAs. EX1002, ¶¶313-14.

I. Claim 4

For the reasons above regarding Claim 1, it would have been obvious to a POSITA with access to Herbert, Cusinato, and Hlavacs to create the upper of claim 1 with the additional *aesthetic* limitations of claim 4, as shown in Figure 2 of Hlavacs. EX1002, ¶¶315-16.

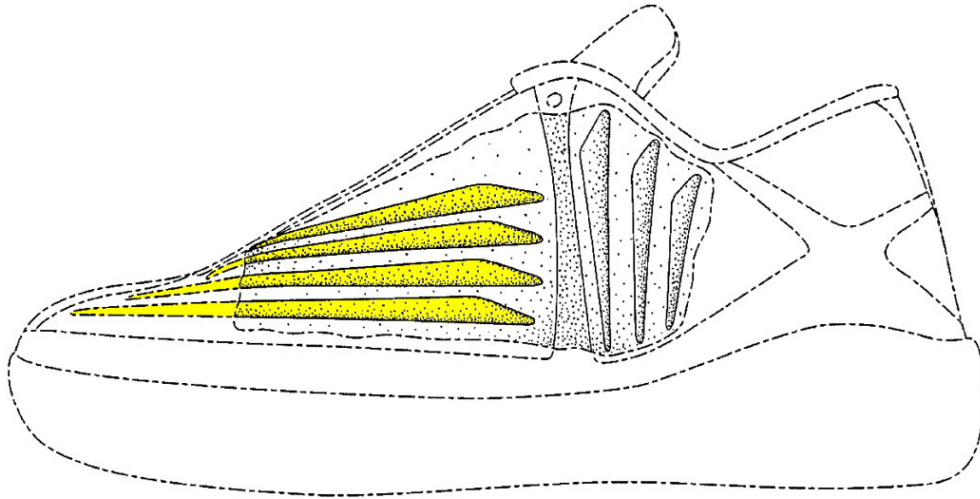


FIG. 2

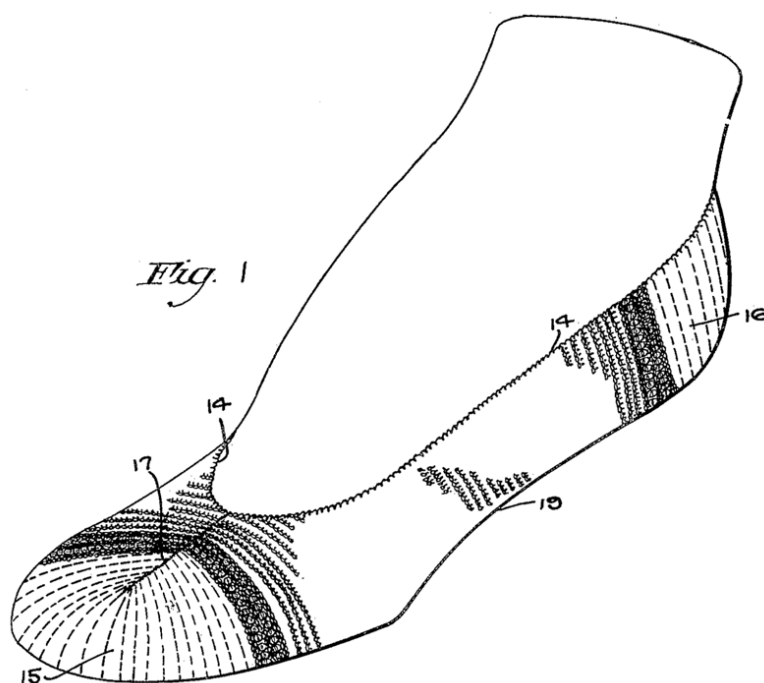
EX1018, Fig. 2.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶317. The location and spacing of the ribs are a simple design choice. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See the Obvious Design Choices, supra* §IX.E; EX1002, ¶¶317-18.

J. Claim 5

For the reasons above regarding Claim 4, it would have been obvious to a POSITA in possession of Herbert, Cusinato, and/or Hlavacs to create the upper of claim 5, wherein the lower region of the upper comprises a bottom surface of the upper. EX1002, ¶319.

In Herbert, the slipper has "[a] bottom or sole portion 19 of the slipper foot covering." EX1016, 3:17-18; Fig. 1; EX1002, ¶320.



In Cusinato, a POSITA would understand that the lower region of the assembled "*boot-like*" shape comprises a bottom surface. See, e.g., EX1014, [0015], [0035]; EX1002, ¶321.

A POSITA would understand that the Hlavacs upper has a bottom surface (to which the sole is attached):

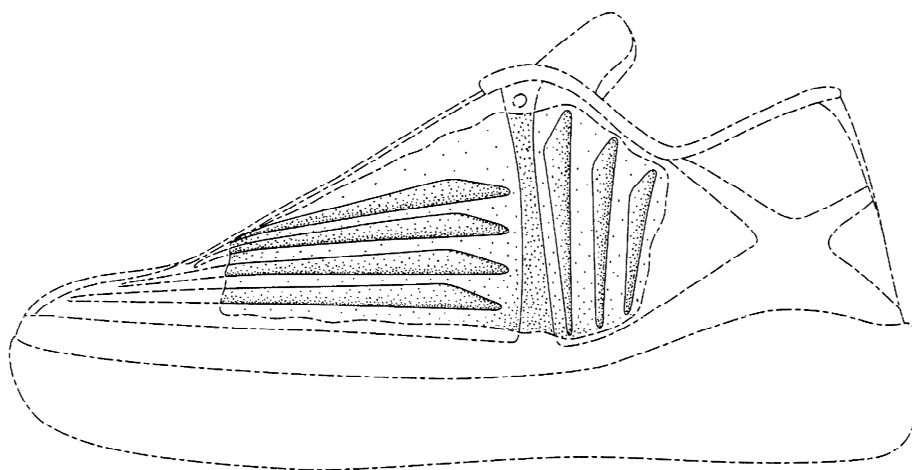


FIG. 2

EX1018, Fig. 2; EX1002, ¶¶322-23.

K. Claim 6

For the reasons above regarding Claim 4, it would have been obvious to a POSITA in possession of Herbert, Cusinato, and Hlavacs to create the upper of claim 4 with the additional *aesthetic* limitations of claim 6, as shown in Figure 2 of Hlavacs. EX1002, ¶¶324-25.

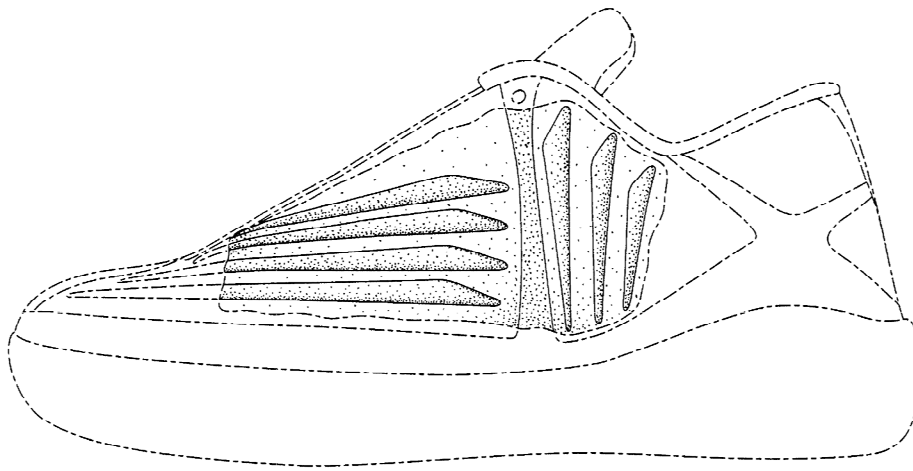


FIG. 2

EX1018, Fig. 2.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶320. The location and spacing of the ribs are a simple design choice. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §IX.E; EX1002, ¶¶326-27.

L. Claim 7

For the reasons above regarding Claim 1, it would have been obvious to a POSITA in possession of Herbert, Cusinato, Hlavacs, and Spencer to create the upper of claim 4 with the additional *aesthetic* limitations of claim 7. EX1002, ¶328.

Spencer discloses this limitation, in particular, knit patterns that alternate between plain and ribbed textures. EX1050, 69 ("*Broad ribs* have a number of adjacent rib as well as plain wales, for example, 6/3 *Derby Rib*"). EX1002, ¶329. Such a configuration would match the design in Hlavacs and create contrast between the ribs and the rest of the upper:

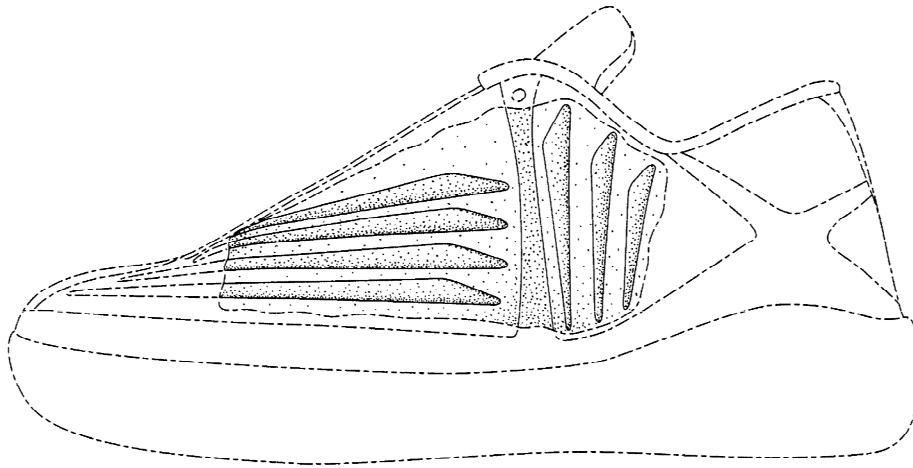


FIG. 2

EX1018, Fig. 2; EX1002, ¶330.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶331. Alternating ribs and smooth texture is a simple design choice. *Id.* Such a design choice would be obvious or obvious to try in the fashion

industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §IX.E; EX1002, ¶¶331-32.

M. Claim 8

For the reasons above regarding Claim 1, it would have been obvious to a POSITA with access to Herbert, Cusinato, and Hlavacs to create the upper of claim 1 with the additional *aesthetic* limitations of claim 8. EX1002, ¶333.

Such an aesthetic design would have been an obvious design choice to a POSITA. *Id.* Ribs may start/terminate at any point. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §IX.E; EX1002, ¶¶334-35.

N. Claim 9

For the reasons above regarding Claim 1, it would have been obvious to a POSITA with access to Herbert, Cusinato, and Hlavacs to create the upper of claim 1 with the additional *aesthetic* limitations of claim 9. EX1002, ¶¶336-37.

Notably, Hlavacs does not limit the claimed design to either the lateral or medial side, leaving open the possibility that it could be applied to either or both. *Id.*

Moreover, such an aesthetic design of medial side, lateral side, or both sides would have been an obvious design choice to a POSITA. *Id.*, ¶338. Presenting the same design elements on both the medial and lateral sides of footwear is a long-

standing and obvious choice in the footwear industry, as is mirroring those design elements. *Id.* Examples of both from brands including Vans, Puma, and adidas (each arranged to show a lateral and a medial side) are provided below. *Id.*, ¶¶339-40.



EX1028, 2; EX1029, 1; EX1030, 1; EX1031, 1.

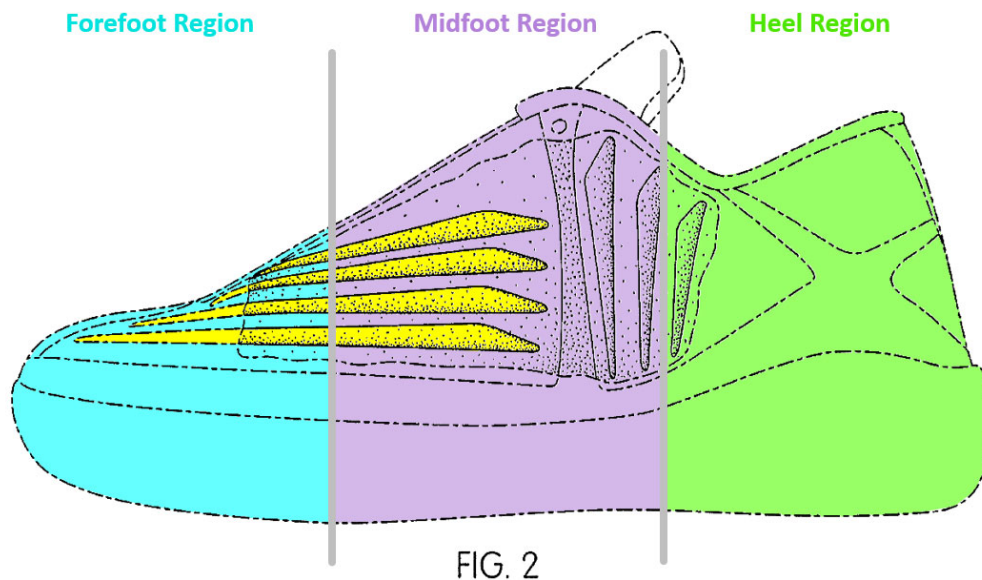
O. Claim 10

For the reasons above regarding Claim 9, it would have been obvious to a POSITA with access to Herbert, Cusinato, and Hlavacs to create the upper of claim 9 with the additional *aesthetic* limitations of claim 10. EX1002, ¶341.

P. Claim 11

This is an aesthetic limitation. For the reasons above regarding Claim 1, it would have been obvious to a POSITA with access to Herbert, Cusinato, and Hlavacs to create the upper of claim 1 with the additional *aesthetic* limitations of claim 11. EX1002, ¶342.

Hlavacs shows vertical ribs having varying lengths, as well as longitudinal ribs (when unclaimed portions are considered) having varying lengths, as shown in Figure 2:



EX1018, Fig. 2; EX1002, ¶343.

Moreover, such an aesthetic design would have been an obvious design choice to a POSITA. EX1002, ¶344. Ribs may be oriented in any direction and start/terminate at any point. *Id.* Such a design choice would be obvious or obvious to try in the fashion industry, of which footwear and textiles are a part. *See* the Obvious Design Choices, *supra* §IX.E; EX1002, ¶¶344-45.

Q. Claim 12

Independent Claim 12 is substantially similar to Claim 1 and therefore obvious in light of the combined teachings of Herbert, Cusinato, and Hlavacs, and if necessary, Spencer, for the reasons above regarding the corresponding limitations of Claim 1. EX1002, ¶¶346-47.

Claim	Corresponding Analysis
12[pre]	• Element 1[pre]; EX1002, ¶348.
12[a1]	• Element 1[a1]; EX1002, ¶349.
12[a2]	• Element 1[a2]; EX1002, ¶350.
12[b]	• Element 1[b]; EX1002, ¶¶351-52.

Element 12[b] is substantially similar to Element 1[b], with the additional requirement that one or more ribs extend longitudinally along ***both*** a lateral and a medial side, the same aesthetic limitation recited in Claim 9. Element 12[b] is therefore obvious for the reasons above regarding Claims 1 and 9. *Id.*, ¶¶351-52.

R. Claim 13

Claim 13 is substantially similar to Claims 2 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 2 and 9. EX1002, ¶353.

S. Claim 14

Claim 14 is substantially similar to Claim 3 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 3 and 9. EX1002, ¶354.

T. Claim 15

Claim 15 is substantially similar to Claims 4 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 4 and 9. EX1002, ¶355.

U. Claim 16

Claim 16 is substantially similar to Claims 6 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 6 and 9. EX1002, ¶356.

V. Claim 17

Claim 17 is substantially similar to Claims 7 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 7 and 9. EX1002, ¶357.

W. Claim 18

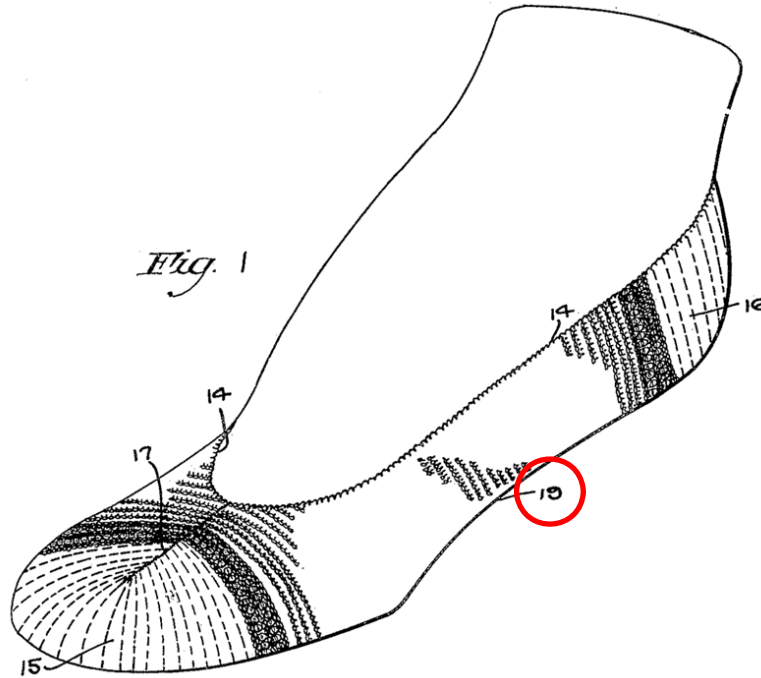
Claim 18 is substantially similar to Claims 8 and 9, and it would be obvious to a POSITA for the reasons above regarding Claims 8 and 9. EX1002, ¶358.

X. Claim 19

Claim 19 is substantially similar to Claims 9 and 11, and it would be obvious to a POSITA the reasons above regarding Claims 9 and 11. EX1002, ¶359.

Y. Claim 20

Herbert discloses "[a] bottom or *sole* portion 19 of the slipper foot covering," which would meet the claim limitation "a sole structure secured to the upper." EX1016, 3:17-18; EX1002, ¶¶360-61.



EX1016, Fig. 1. Hlavacs does as well. EX1018, Fig. 2; EX1002, ¶363:

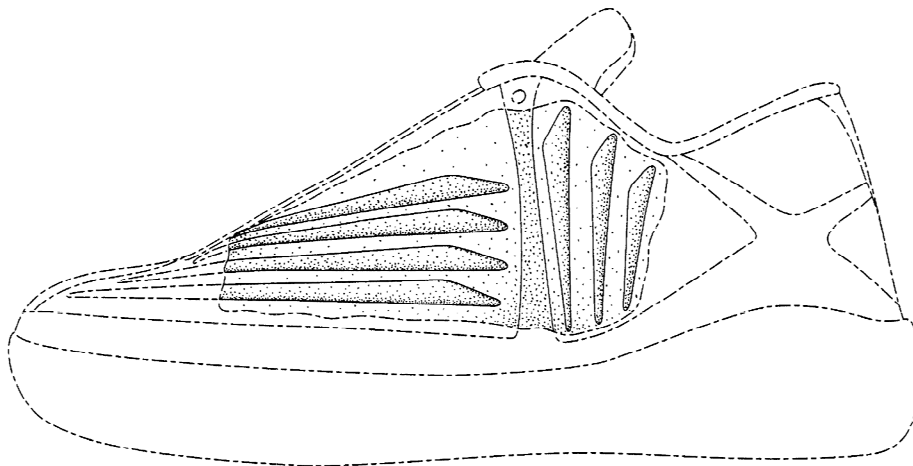


FIG. 2

If Patentee argues that a discrete structure must be secured to the Herbert slipper, adding a discrete sole structure to a slipper would constitute an obvious modification. EX1002, ¶362. Motivations to add the sole would include protecting the bottom of the foot, as soles have done for thousands of years. *Id.*

X. STATUTORY REQUIREMENTS

A. Notice of Real Party-In-Interest (37 C.F.R. § 42.8(b)(1))

Real party-in-interest is Skechers U.S.A., Inc.

B. Notice of Related Matters (37 C.F.R. § 42.8(b)(2))

The '781 is involved in the following litigations:

- *Nike, Inc. v. Skechers U.S.A., Inc.*, Case No. 2:23-cv-09346-AB-PVC
(C.D. Cal.)

To Petitioner's counsel's knowledge, there are no other judicial or administrative matters regarding the '781 that would affect or be affected by a decision in this proceeding.

C. Designation of Lead And Back-Up Counsel (37 C.F.R. § 42.8(b)(3))

Lead Counsel: Samuel K. Lu (Reg. No. 40,707)

Backup Counsel: Keith Orso (Reg. No. 52,084)

Backup Counsel: Jonathan M. Lindsay (Reg. No. 45,810)

Backup Counsel: Michael Rosen (*pro hac vice* to be requested)

Backup Counsel: Jie Gao (Reg. No. 73,835)

Backup Counsel: Connor He-Schaefer (*pro hac vice* to be requested)

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D. Service Information (37 C.F.R. § 42.8(b)(4))

Please address all correspondence to lead counsel at the address above.

Petitioner consents to email service at: SkechersNikeIPRs@irell.com

E. Fees

The Office is authorized to charge Deposit Account No. 09-0946 for any fees required.

F. Grounds for Standing

Petitioner certifies that the '781 is eligible for IPR and that Petitioner is not barred or estopped from requesting an IPR of the '781.

XI. CONCLUSION

For the reasons above, the claims of the '781 are unpatentable.

Dated: November 6, 2024

Respectfully submitted,

By: /Samuel K. Lu/
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CERTIFICATE OF WORD COUNT

I hereby certify, pursuant to 37 C.F.R. section 42.24, that the foregoing Petition contains 13,984 words, excluding the words in the table of contents, table of authorities, exhibit list, this certificate of word count, and certificate of service. The word count is based on the word count of the Microsoft Word program used to prepare the Petition.

/Jonathan M. Lindsay/
Jonathan M. Lindsay

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. sections 42.6 and 42.105, that a complete copy of the Petition for *Inter Partes* Review of U.S. Patent No. 9,986,781 and Exhibits are being served via Priority Mail Express on November 6, 2024, the same day as the filing of the above-identified documents in the United States Patent and Trademark Office/Patent Trial and Appeal Board, upon the patent prosecution counsel of record for the Patent Owner:

78342 - SHOOK, HARDY & BACON LLP/NIKE, INC.
2555 Grand Boulevard
Kansas City, MO 64108

Courtesy copies were also sent via ShareSite to Patent Owner's counsel of record in the related district court litigation at the following addresses:

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