

United States Court of Appeals for the Federal Circuit

THE OHIO WILLOW WOOD COMPANY,
Plaintiff-Appellant,

v.

ALPS SOUTH, LLC,
Defendant-Cross Appellant.

2012-1642, 2013-1024

Appeals from the United States District Court for the Southern District of Ohio in No. 04-CV-1223, Judge Gregory L. Frost.

Decided: November 15, 2013

JEFFREY S. STANDLEY, Standley Law Group, LLP, of Dublin, Ohio, argued for plaintiff-appellant. With him on the brief were JAMES L. KWAK, F. MICHAEL SPEED, JR., and MICHAEL STONEBROOK.

RONALD A. CRISTALDI, Shumaker, Loop & Kendrick, LLP, of Tampa, Florida, argued for defendant-cross appellant. With him on the brief was MINDI M. RICHTER. Of counsel on the brief was DAVID W. WICKLUND, of Toledo, Ohio.

Before DYK, BRYSON, and REYNA, *Circuit Judges*.

REYNA, *Circuit Judge*.

This suit was filed by The Ohio Willow Wood Company (“OWW”) against Alps South, LLC (“Alps”) for infringement of United States Patent No. 5,830,237 (the “’237 patent”). The United States District Court for the Southern District of Ohio granted summary judgment that: (1) OWW was collaterally estopped from challenging the invalidity of claims 1, 2, 4, 15, 16, and 20 of the ’237 patent; (2) claims 18, 19, 21, 22, and 23 of the ’237 patent were invalid for obviousness; and (3) Alps failed to raise a genuine issue of material fact with respect to inequitable conduct. We affirm on the issues of collateral estoppel and obviousness, but reverse and remand on the issue of inequitable conduct.

I. BACKGROUND

OWW is the owner of a family of related patents directed to cushioning devices that go over the residual stumps of amputated limbs to make the use of prosthetics more comfortable. A variety of these patents have been asserted in patent infringement suits and many have also been involved in reexamination proceedings before the Patent and Trademark Office (“PTO”).

In the present suit, OWW filed its complaint against Alps for infringement of the ’237 patent on December 27, 2004. The ’237 patent, entitled “Gel and Cushioning Devices,” lists Bruce G. Kania as the sole inventor and has an application date of March 5, 1996. The parties exchanged contentions, documents, and testimonial evidence related to invalidity and infringement and on March 31, 2006, the district court issued its claim construction order. Shortly after receiving the claim construction order, Alps initiated the first of two consecutive *ex parte* reexaminations of the ’237 patent in the PTO.

The district court stayed the litigation during these reexamination proceedings.

A. The First Reexamination of the '237 patent

Alps requested the first *ex parte* reexamination of the '237 patent on October 5, 2006. The primary reference submitted by Alps to support this reexamination was a prior art gel liner manufactured by Silipos, Inc. ("Silipos") called the "Silosheath." The Silosheath is a sock-shaped piece of nylon fabric that was turned inside out and dipped into a mineral oil-based polymeric gel material to create a coating on the interior of the sheath. The gel coating acts as a cushion and the mineral oil lubricates the skin when worn over a residual limb.

The examiner reviewing Alps' reexamination request for the '237 patent was also responsible for a parallel reexamination proceeding involving OWW's U.S. Patent No. 6,964,688 (the "688 patent"). The '688 patent is entitled "Tube Sock-Shaped Covering" and also lists Bruce G. Kania as the sole inventor. During reexamination of the '688 patent, the examiner issued a rejection of all challenged claims based on the Silosheath prior art. This same rejection applied equally against the similar claims of the '237 patent.

The examiner held an interview on July 16, 2007, to discuss the rejections. At the interview, OWW was represented by attorneys Mr. Eric M. Gayan and Mr. Jeff Standley, Mr. Jim Colvin, a representative of OWW, and Mr. Bruce Kania, the named inventor. To overcome the rejections, a sample Silosheath was shown to the examiner and OWW pointed out that the polymeric gel bled through the permeable nylon fabric, which resulted in small amounts of residual gel material on the exterior of the Silosheath. According to OWW, these small amounts of gel on the outer surface of the Silosheath created points

of friction between a prosthetic and the Silosheath. The friction points would be uncomfortable to the user and cause the nylon fabric to rip or tear prematurely.

OWW argued that the '688 and '237 patents claimed gel liners that excluded *any* gel on the exterior surface of the fabric, thereby distinguishing them from the Silosheath. Based on this distinction, the examiner allowed OWW to overcome the Silosheath prior art by amending the claims to clarify that the gel coating was *only* on the interior of the claimed gel liners and, accordingly, excluded any liners with fabric that allowed gel to bleed through to the exterior surface. The PTO issued the first reexamination certificate for the amended '237 patent claims on September 2, 2008.

B. The Second Reexamination of the '237 patent

On September 8, 2008, six days after completion of the first reexamination, Alps initiated a second *ex parte* reexamination of the '237 patent challenging the validity of the amended claims based on another Silipos product called the "Single Socket Gel Liner" ("SSGL"). Alps argued that the SSGL was an invalidating prior art gel liner that did not have any gel on its exterior surface. Alps supported this assertion with a prior art advertisement of the SSGL and testimony from Mr. Jean-Paul Comtesse, who had been affiliated with Silipos and involved in the development and production of both the Silosheath and SSGL.

The prior art advertisement was published on January 1, 1995, in a prosthetics trade magazine called O & P Business News (the "1995 COMFORT ZONE" reference). The advertisement included a photograph of an actual device being worn and bearing a graphical label identifying it as a "Silipos, Gel Liner, Made in USA," and the

advertisement further indicated that the device in the photograph was the “Single Socket Gel Liner”:

COMFORT ZONE

SINGLE SOCKET GEL LINER

NEW

Below knee gel liner laminated with patented tri block polymer.

- Ensures comfortable fit
- Absorbs body weight and shear forces that cause skin breakdown and blisters
- Gel liner is available with a single sock or double sock
- Excellent elasticity and gentle compression for anatomical fit
- Will conform around bony prominences
- Available in 3 sizes

AVAILABLE IN 3 SIZES

PATENTED SILOPAD™

Silosheath
PRODUCT LINE

SILIPOS
ADVANCED POLYMER TECHNOLOGY

2150 Liberty Drive, L.R.O. 211
Niagara Falls, New York 14304
Tel: 716-283-0700 • Fax: 716-283-0600
Toll Free USA and Canada: 800-229-4404

The 1995 COMFORT ZONE reference further described the SSGL as a “[b]elow knee gel liner laminated with tri block copolymer.”

In addition to the advertisement, Alps provided the PTO with testimony from Mr. Comtesse in the form of a declaration and deposition transcript. The deposition occurred in the present litigation prior to the court's issuance of the stay. According to Alps, Mr. Comtesse's testimony proved that the SSGL did not have the same gel bleed-through issues as the Silosheath since he testified that the SSGL was constructed using a proprietary DuPont fabric called "Coolmax," which was different from the nylon material used with the Silosheath. Mr. Comtesse testified that the Coolmax material was thicker and denser than nylon, making it impermeable so that gel did not bleed-through to the outer surface of the SSGL. Thus, Alps asserted that Mr. Comtesse's testimony, coupled with the disclosure of the SSGL advertisement, demonstrated that the amended claims from the first reexamination were invalid because the prior art SSGL had no gel on the exterior surface.

The examiner agreed with Alps and, ultimately, issued a final rejection that all claims of the '237 patent were obvious in view of the SSGL and other undisputed prior art. The examiner concluded that the 1995 COMFORT ZONE reference substantially disclosed the limitations of independent claim 1 of the '237 patent, but conceded that the advertisement was not conclusive regarding whether the SSGL had gel only on the interior of the liner. To address this shortcoming of the reference, the examiner accepted the Comtesse declaration and deposition testimony as proof that the SSGL was manufactured using the proprietary DuPont Coolmax material as a fabric. The examiner also accepted Comtesse's testimony that the Coolmax material was thicker and less permeable than the nylon fabric of the Silosheath and, accordingly, that the SSGL would not allow the gel to bleed-through to the exterior surface.

Faced with the examiner's final rejection of the claims in view of the SSGL, OWW appealed to the Board of Patent Appeals and Interferences ("BPAI"). OWW's arguments on appeal to the BPAI were entirely legal in nature. OWW asserted that the examiner's rejection was improper because it relied on the uncorroborated testimony of Mr. Comtesse, whom OWW characterized as a highly interested party. According to OWW, the uncorroborated testimony of a highly interested witness, such as Mr. Comtesse, was inadmissible and therefore could not be used to reject the claims. In its brief to the BPAI, OWW portrayed Mr. Comtesse as follows:

Mr. Comtesse admits that he is an interested party with respect to the outcome of this Reexamination and the related litigation. First, Mr. Comtesse is the owner and manager of Vorum Research Corporation . . . a company that appears to sell products that compete with products offered by Patent Owner. Further, Mr. Comtesse has admitted that he continues to receive royalties on the Socket Gel Liner products he helped develop for Silipos. These Socket Gel Liner products would clearly compete with products of Patent Owner covered by the '237 patent. A party having a personal financial interest in the outcome of a patent suit is considered an interested party. It is well settled that issues of corroboration become more important and the amount of weight afforded to such testimony may be lessened when the witness is an interested party.

OWW also expressly denied the existence of any other evidence that would support Mr. Comtesse's testimony that SSGL was constructed using Coolmax fabric. According to OWW, the only evidence of record was the 1995 COMFORT ZONE advertisement, which was "wholly

devoid of any mention of Coolmax.” OWW asserted that there was “no other evidence of any sort in this regard” and because “the Comtesse testimony is not corroborated as required it cannot be properly used to cure the very deficiencies in the Comfort Zone Ad for which corroboration is lacking.”

OWW’s brief to the BPAI was submitted and signed by Mr. Gayan. During oral argument before the BPAI on July 20, 2011, Mr. Gayan reiterated OWW’s position that Mr. Comtesse claimed to be *the* inventor of the SSGL, that he was still receiving royalties from Silipos for sales of the SSGL, and there was no corroborating evidence for his testimony concerning the construction of the SSGL.

The BPAI issued its decision regarding OWW’s appeal on September 30, 2011. The BPAI characterized the appeal as involving a single dispositive issue: whether the examiner erred in crediting the uncorroborated testimony of Mr. Comtesse. The BPAI found that Mr. Comtesse did not provide any corroborating evidence to support his assertion that the SSGL depicted in the COMFORT ZONE-SSGL reference used the Coolmax material. It also found that Mr. Comtesse “is an interested third party who is testifying regarding an alleged prior invention said to have been made by himself and others, namely Silipos’s Single Socket Gel Liner with Coolmax, to demonstrate the claims of the ’237 patent are unpatentable.” Based on the evidence of record, the BPAI concluded that Comtesse’s testimony was insufficient to sustain the examiner’s rejection:

Here, we have not been directed to the requisite corroborating evidence. The statements in Comtesse’s Declaration are largely conclusory, unaccompanied by credible factual support (e.g., details of experiments or tests performed) and/or other acceptable evidence (e.g., testimony of a

credible corroborating witness). . . . Even if the Comfort Zone advertisement could be said to corroborate the Comtesse testimony that a Single Socket Gel Liner was made, we have not been directed to evidence sufficient to corroborate the Comtesse testimony indicating that the Liner was covered in fabric with no gel bleed-through. For these reasons, we conclude that the Examiner erred.

Thereafter, a second reexamination certificate for the '237 patent was issued on November 29, 2011.

C. The *Thermo-Ply* Litigation

While this case was stayed, OWW sued Thermo-Ply, Inc. (“Thermo-Ply”) in the United States District Court for the Eastern District of Texas for infringement of United States Patent No. 7,291,182 (“the '182 patent”). The '182 patent issued from a continuation application of the '237 patent, is entitled “Gel and Cushioning Devices,” and lists Bruce G. Kania as the sole inventor.

On summary judgment, the Eastern District of Texas found the claims of the '182 patent invalid for obviousness. *Ohio Willow Wood Co. v. Thermo-Ply, Inc.*, No. 9:07-CV-274, 2009 WL 6499349, at *1 (E.D. Tex. Nov. 20, 2009). The *Thermo-Ply* court based its obviousness determination on the combination of the Silosheath in view of U.S. Patent No. 4,923,474 (“the Klasson patent”) and known techniques in the relevant field. The *Thermo-Ply* court rejected OWW’s argument that gel bleeding through to the exterior surface of the Silosheath fabric rendered the '182 patent non-obvious because it would have been obvious to one of ordinary skill in the art to select an impermeable fabric. The obviousness determination was affirmed on appeal. *Ohio Willow Wood Co. v. Thermo-Ply, Inc.*, 440 F. App’x 926 (Fed. Cir. 2011).

D. District Court Proceedings

The district court stayed the litigation from November 22, 2006, to November 3, 2011, pending completion of the reexaminations proceedings. After the stay was lifted, the parties filed motions for summary judgment. The district court granted summary judgment to Alps on issues of invalidity, finding claims 1, 2, 4, 15, 16, and 20 of the '237 patent invalid due to the collateral estoppel effect of the *Thermo-Ply* litigation and claims 18, 19, 21, 22, and 23 of the '237 patent invalid for obviousness. The district court also granted OWW's motion for summary judgment of no inequitable conduct.

The parties appeal these summary judgment determinations. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

We review a trial court's application of collateral estoppel, also known as issue preclusion, *de novo*. *Shell Petroleum, Inc. v. United States*, 319 F.3d 1334, 1338 (Fed. Cir. 2003). Likewise, we review a district court's grant of summary judgment *de novo*, drawing all reasonable inferences in favor of the non-moving party. *Teleflex, Inc. v. Ficoso N. Am. Corp.*, 299 F.3d 1313, 1323 (Fed. Cir. 2002).

A. Collateral Estoppel

Collateral estoppel protects a party from having to litigate issues that have been fully and fairly tried in a previous action and adversely resolved against a party-opponent. *Pharmacia & Upjohn Co. v. Mylan Pharm., Inc.*, 170 F.3d 1373, 1379 (Fed. Cir. 1999). Our review of a collateral estoppel determination is generally guided by regional circuit precedent, but we apply our own precedent to those aspects of such a determination that involve

substantive issues of patent law. *Aspex Eyewear, Inc. v. Zenni Optical Inc.*, 713 F.3d 1377, 1380 (Fed. Cir. 2013); *see also Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1341 n.1 (Fed. Cir. 2012) (“[T]he question whether a particular claim in a patent case is the same as or separate from another claim has special application to patent cases, and we therefore apply our own law to that issue.”).

OWW seeks reversal on appeal by arguing that the mere existence of different language in the adjudicated claims of the '182 patent and unadjudicated claims of the '237 patent is sufficient to overcome collateral estoppel. We disagree. Our precedent does not limit collateral estoppel to patent claims that are identical. Rather, it is the identity of the *issues* that were litigated that determines whether collateral estoppel should apply. *See Bourns, Inc. v. U.S.*, 537 F.2d 486, 491 (Ct. Cl. 1976); *Westwood Chem., Inc. v. U.S.*, 525 F.2d 1367, 1372 (Ct. Cl. 1975). If the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies. *Bourns*, 537 F.2d at 493.

It is without dispute that the asserted claims of the '237 patent are substantially similar to the invalidated claims of the '182 patent:

The twice-reexamined independent claim 1 of the '237 patent claims:

1. A tube sock-shaped covering for enclosing an amputation stump, said amputation stump being a residual limb, said covering having an open end for introduction of said residual limb and a closed end opposite said open end, said covering comprising fabric in the shape of a tube sock, said fabric having a coating of a foamed or non-foamed block

copolymer and mineral oil gel composition residing on only an interior surface thereof.

Independent claim 1 of the '182 patent recites:

1. A cushion liner for enclosing an amputation stump, said liner comprising a fabric covering having an open end for introduction of said stump and a closed end opposite said open end, said fabric coated seamlessly on only an inside surface thereof with a polymeric cushioning gel that substantially conforms to the shape of said amputation stump when said liner is worn; wherein said liner is configured such that said polymeric cushioning gel is in contact with the skin of said amputation stump when said liner is worn by a user thereof.

As reflected in the claim language above, these patents use slightly different language to describe substantially the same invention. For example, where the '237 patent recites a “tube sock-shaped covering,” an “amputation stump being a residual limb,” and “fabric in the shape of a tube sock,” the '182 patent analogously recites the same claim scope in the form of a “cushion liner for enclosing an amputation stump, said liner comprising a fabric covering having an open end for introduction of said stump and a closed end opposite said open end.” Thus, the mere use of different words in these portions of the claims does not create a new issue of invalidity.

Nor has OWW explained how any other alleged differences in claim scope alter the invalidity determination. It is undisputed that the adjudicated claims of the '182 patent only require a “polymeric” gel whereas the unadjudicated claims of the '237 patent specifically require a “block copolymer” gel. OWW argues that this difference in claim scope precludes summary judgment. But OWW

has not adequately supported this contention because it has not provided any explanation regarding *how* the “block copolymer” limitation is patentably significant in view of the obviousness determination regarding the claims of the ’182 patent. Since OWW failed to explain how the “block copolymer” limitation changes the invalidity analysis, OWW has not met its burden of opposing summary judgment based on this distinction. Thus, summary judgment that claims 1, 2, 4, 15, 16, and 20 of the ’237 patent are invalid on the basis of collateral estoppel was appropriate.

B. Obviousness

OWW also appeals the district court’s grant of summary judgment of obviousness of dependent claims 18, 19, 21, 22, and 23 of the ’237 patent. These dependent claims place numerical limits on certain characteristics of the “gel composition” and “fabric” of independent claim 1 of the ’237 patent. Claim 18 and 23 limit the “gel composition” to those that have “60-85% by weight mineral oil” or “a Shore A Durometer of from [sic] 1-20,” respectively. Claims 19, 21, and 22 each require a “fabric” having “an elasticity of 10-400%.”

A claim is not patentable “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103. Obviousness is a question of law based on underlying facts. *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). An assessment of patent invalidity under § 103 involves the following factors: (1) determining the scope and content of the prior art; (2) identifying the differences between the prior art and the claims at issue; (3) determining the level of ordinary skill in the art; and (4) reviewing the objective indicia of non-obviousness. *See*

Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966). To support a finding of obviousness on summary judgment, the court must conclude that one of ordinary skill in the pertinent art would have found it obvious to bridge the differences between the subject matter of the claims and the prior art when the facts are viewed in a light most favorable to the patentee. *See Fed. R. Civ. P.* 54.

OWW seeks reversal by arguing that the district court did not perform an adequate obviousness analysis to support summary judgment. OWW alleges that the district court used an improper “piecemeal” approach that was unduly focused on the mere presence of the dependent limitations within the prior art while failing to analyze the combination of dependent and independent claim limitations in their entirety. OWW’s argument hinges on its assertion that the district court provided “no reasoning” as to why one of ordinary skill in the art would have combined the identified references to obtain the claims of the invention.

While it is true that “[t]he determination of obviousness is made with respect to the subject matter as a whole, not separate pieces of the claim,” *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1085 (Fed. Cir. 2008), nothing in the record indicates that confining the otherwise obvious “gel composition” and “fabric” limitations to the recited numerical limits in the disputed dependent claims was anything other than the exercise of routine skill. Each of these features were well-known in the prior art and their use would have been predictable by one of ordinary skill in the art. *See Western Union Co. v. MoneyGram Payment Sys., Inc.*, 626 F.3d 1361, 1369-71 (Fed. Cir. 2010) (“the common sense of those skilled in the art demonstrates why some combinations would have been obvious”).

The record also indicates the existence of devices embodying the features that OWW argues were lacking in the prior art. The *Thermo-Ply* court found independent claim 1 of OWW's '182 patent invalid for obviousness based on the combination of the Silipos Silosheath and the Klasson patent, the latter of which was commercially embodied in the ICEROSS liner. The district court concluded that Silipos also had created prior art Gel Liners, which embodied "gel compositions" with mineral oil between 60-85% and a Shore A durometer range of 1-20 using a stretchable Coolmax "fabric" having an elasticity of 10-400%. The SSGL therefore demonstrates the motivation to combine the features of the Silosheath and Klasson/ICEROSS to meet each of the dependent claim limitations. Thus, we find there is no genuine issue of material fact that one of ordinary skill in the art would have combined the references in a manner that render the claims obvious.

We have also considered the evidence presented by OWW regarding the secondary indicia of non-obviousness. OWW argues that its commercial liners have been a success, have satisfied a long-felt but unmet need, have been copied, and have been praised by the industry, and this evidence should be enough to demonstrate non-obviousness. However, these factors equally apply to the prior art SSGL device and OWW has not shown the requisite nexus between the secondary indicia and the patented inventions. *See, e.g., In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) ("For objective evidence to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention."). Additionally, where a claimed invention represents no more than the predictable use of prior art elements according to established functions, as here, evidence of secondary indicia are frequently deemed inadequate to establish non-obviousness. *See Western*

Union Co. v. MoneyGram Payment Sys., Inc., 626 F.3d 1361, 1373 (Fed. Cir. 2010) (“weak secondary considerations generally do not overcome a strong prima facie case of obviousness”). Thus, OWW’s arguments related to the secondary indicia do not overcome the conclusion that dependent claims 18, 19, 21, 22, and 23 of the ’237 patent are invalid for obviousness.

C. Inequitable Conduct

Inequitable conduct is an equitable defense to patent infringement. *Therasense, Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011). It is only applied where the patentee has unfairly obtained an unwarranted patent through misconduct. *Id.* at 1292. Thus, “[t]o prove inequitable conduct, the challenger must show by clear and convincing evidence that the patent applicant (1) misrepresented or omitted information material to patentability, and (2) did so with specific intent to mislead or deceive the PTO.” *In re Rosuvastatin Calcium Patent Litig.*, 703 F.3d 511, 519 (Fed. Cir. 2012) (citing *Therasense*, 649 F.3d at 1287).

Alps argues that there are genuine issues of material fact regarding OWW’s conduct during the reexamination proceedings that preclude summary judgment of no inequitable conduct. Alps’ assertions rely on information made known to OWW’s counsel in the course of litigation that was allegedly either withheld or misrepresented in order to improperly obtain issuance of the ’237 patent during the reexamination proceedings.¹ Specifically, Alps alleges that OWW was only able to overcome the examin-

¹ Alps also argues that OWW committed inequitable conduct by intentionally withholding information from the PTO regarding the Silosheath and Fay liners. We do not address Alps’ arguments regarding these prior art devices.

er's final rejection in the second reexamination proceeding by withholding evidence that corroborated Mr. Comtesse's testimony and by falsely exaggerating his interest in the dispute so that the BPAI would disregard his testimony. Alps contends that the circumstantial evidence is sufficient to conclude that OWW's counsel acted with the specific intent to deceive the PTO.

OWW responds that there is no evidence to support an allegation of inequitable conduct. OWW claims that it did not withhold any information from the PTO and did not make any intentional misrepresentations material to the BPAI's determination that Mr. Comtesse was a highly interested individual and that his testimony was not corroborated. Moreover, regardless of any determination of materiality, OWW contends that there is a lack of clear and convincing evidence demonstrating that it misrepresented or withheld any information with specific intent to deceive the PTO.

We agree with Alps. When viewing the evidence in a light most favorable to Alps, there are genuine issues of material fact regarding whether OWW committed inequitable conduct during the reexamination proceedings that preclude summary judgment.

1. Materiality

Typically, an allegation of inequitable conduct before the PTO requires proof that the patentee withheld or misrepresented information that, in the absence of the withholding or misrepresentation, would have prevented a patent claim from issuing. *Therasense*, 649 F.3d at 1291. Because the analysis of this *but-for* materiality requirement is from the perspective of the PTO, we apply the preponderance of the evidence standard in assessing whether the withheld or misrepresented information would have blocked patentability. *Id.* at 1291-92.

A party alleging inequitable conduct, however, need not strictly demonstrate but-for materiality in all cases. Rather, “[w]here the patentee has engaged in affirmative acts of egregious misconduct, such as the filing of an unmistakably false affidavit,” materiality is presumed. *Id.* at 1292 (citations omitted). *See also Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1294 (Fed. Cir. 2012) (“a false affidavit or declaration is per se material”). In this context, materiality is premised on the notion that “a patentee is unlikely to go to great lengths to deceive the PTO with a falsehood unless it believes that falsehood will affect issuance of the patent.” *Id.*

OWW was only able to obtain issuance of the ’237 patent in the reexamination proceedings by arguing that the prior art lacked gel liners with no observable gel material on their exterior surfaces. In the first reexamination proceeding, OWW expressly amended its claims to distinguish them over the prior art Silosheath by emphasizing this alleged point of novelty over the small amounts of gel that bled-through the nylon fabric of a sample Silosheath that OWW brought to an examiner’s interview. In the second reexamination, OWW was only able to overcome the examiner’s final rejection in view of the SSGL by convincing the BPAI that Mr. Comtesse was a highly interested witness and there was no evidence, as required by law, to corroborate his testimony that the SSGL was constructed using a Coolmax fabric. In doing so, contrary to the district court’s finding below, the BPAI did not render a substantive conclusion on patentability in view of the SSGL as prior art. Rather, the BPAI concluded that the 1995 COMFORT ZONE advertisement was not by itself sufficient to corroborate Mr. Comtesse’s testimony regarding the construction of the SSGL. Since there was no other evidence of record in support of Mr. Comtesse’s testimony on this subject, the BPAI disregard-

ed the substance of his testimony and reversed the final rejection for lack of evidentiary support that the SSGL was constructed using a Coolmax fabric before the March 5, 1995, critical date.

The crux of our materiality determination therefore hinges on whether OWW withheld or misrepresented information that, in the absence of the withholding or misrepresentation, would have led the BPAI to credit Mr. Comtesse's testimony that the pre-critical date SSGL was constructed using a Coolmax fabric. Although our precedent requires testimony asserted to invalidate a patent to be corroborated, we do "not impose an impossible standard of 'independence' on corroborative evidence by requiring that every point . . . be corroborated by evidence having a source totally independent of the witness." *Lazare Kaplan Int'l, Inc. v. Photoscribe Techs., Inc.*, 628 F.3d 1359, 1374 (Fed. Cir. 2010) (quoting *Knorr v. Pearson*, 671 F.2d 1368, 1374 (CCPA 1982)). Rather, whether testimony regarding invalidating prior art is sufficiently corroborated by documentary, physical, or testimonial evidence is evaluated under a "rule of reason" standard. *Adenta GmbH v. OrthoArm, Inc.*, 501 F.3d 1364, 1371 (Fed. Cir. 2007).

In applying the "rule of reason" test, all pertinent evidence is examined in order to determine whether the testimony is credible. *Sandt Tech., Ltd. v. Resco Metal and Plastics Corp.*, 264 F.3d 1344, 1350 (Fed. Cir. 2001) (quoting *Price v. Symsek*, 988 F.2d 1187, 1195 (Fed. Cir. 1993)). We have also recognized that:

Corroborating evidence may take many forms. Reliable evidence of corroboration preferably comes in the form of records made contemporaneously with the inventive process. Circumstantial evidence of an independent nature may also corroborate. Additionally, oral testimony from some-

one other than the alleged inventor may corroborate.

Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d 1311, 1327 (Fed. Cir. 2004) (internal quotations and citations omitted); see also *Checkpoint Sys., Inc. v. All-Tag Sec. S.A.*, 412 F.3d 1331, 1339 (Fed. Cir. 2005) (“Physical, documentary, or circumstantial evidence, or reliable testimony from individuals other than the alleged inventor or an interested party, may corroborate.”). As such, every corroboration case “must be decided on its own facts with a view to deciding whether the evidence as a whole is persuasive.” *Id.* (quoting *Cooper v. Goldfarb*, 154 F.3d 1321, 1331 (Fed. Cir. 1998)).

When conducting a rule of reason analysis, this court generally considers the following eight factors:

- (1) the relationship between the corroborating witness and the alleged prior user;
- (2) the time period between the event and trial;
- (3) the interest of the corroborating witness in the subject matter in suit;
- (4) contradiction or impeachment of the witness’ testimony;
- (5) the extent and details of the corroborating testimony;
- (6) the witness’ familiarity with the subject matter of the patented invention and the prior use;
- (7) probability that a prior use could occur considering the state of the art at the time; and
- (8) impact of the invention on the industry, and the commercial value of its practice.

Woodland Trust v. Flowertree Nursery, Inc., 148 F.3d 1368, 1371 (Fed. Cir. 1998).

a. Withheld material information

Here, we conclude that a reasonable finder of fact could conclude that OWW withheld evidence from the PTO during the second reexamination that sufficiently corroborated Mr. Comtesse's testimony regarding the construction of the SSGL. The corroborating evidence that OWW did not disclose to the PTO includes witness testimony, documents, and physical samples.

In 2006, before the reexamination proceedings, OWW was provided with three declarations from prosthetists that were knowledgeable about prosthetic liners that were available on the March 5, 1995 critical date. Mr. Robert S. Gailey, Jr., an Associate Professor at the University of Miami School of Medicine, testified that he was familiar with gel liners from the relevant time period based on his over 20 years of experience in the field of prosthetics. Mr. Gailey testified that he was familiar with Silipos' products and that their devices "employ[ed] a variety of fabrics as exterior coverings for the liners and sleeves." He further testified that OWW sent him an SSGL in the mid-1990s, that the covering of the SSGL was made from a "cotton polyester blend" fabric, that there is "no bleed-through of the gel," and that "the features of the SSGL remained the same for many years after its initial introduction." Mr. Gailey further stated that he was providing the SSGL he received in the mid-1990s as an exhibit for the case.² While Mr. Gailey stated that he had consulted for both OWW and Alps in the past,

² Alps has submitted evidence demonstrating that the SSGL was sent to Mr. Gailey on March 28, 1995, and has also provided photographs of the SSGL, which has a tag indicating it is constructed with Coolmax material.

he testified that he “ha[s] no stake in the outcome of the case.” The declarations of the other two prosthetists, Mr. James McElhiney and Mr. Jack Uellendahl, likewise asserted that there was no gel on the exterior of the SSGL because it used a fabric that was thicker and less permeable than the nylon fabric of the Silosheath and prevented gel from bleeding-through to the outside surface. Although OWW was aware of the three declarations in support of Mr. Comtesse’s testimony, it did not disclose them to the PTO in the reexamination proceedings.

OWW was also aware that Silipos had filed a patent application that allegedly covered the commercial embodiments of its products (the “Silipos Patent Application”). There is no evidence that the examiner or the BPAI was aware of this abandoned patent application. The Silipos Patent Application was filed on June 15, 1993, and Silipos provided OWW with a copy of claim amendments and remarks filed in support of the application on November 29, 1994. That filing covered “protective garments” made of a fabric outer layer and an inner gel layer worn next to the skin. Moreover, Silipos’ catalog from the summer of 1995 indicates that there was a “Patent Pending” for the SSGL, presumably referring to the claims in the patent application that Silipos disclosed to OWW. This evidence supports the conclusion that the Silipos Patent Application covered the SSGL devices and they only had gel on their interior surfaces, thereby providing further contemporaneous evidence supporting Mr. Comtesse’s testimony regarding the construction of the SSGL.

Finally, before the BPAI, Mr. Gayan argued that there were no known examples of SSGL products from the relevant time period, and during the review by the panel, he characterized them as a “ghost.” But SSGL samples from the relevant period were reviewed by Mr. Comtesse during deposition. OWW did not provide the actual

physical SSGL devices to the PTO or the BPAI, which would have corroborated Mr. Comtesse's testimony because they showed no bleed-through and also corroborate the fact that the construction of the SSGL remained unchanged since its initial launch.

Conversely, OWW does not provide any direct evidence indicating that the SSGL had the same gel bleed-through issue as the Silosheath. Instead, OWW argues that none of the documentary or physical evidence before March 5, 1995, conclusively identifies Coolmax as the fabric used by the SSGL.³ OWW's arguments are misplaced. Corroboration does not require that every detail of the testimony be independently and conclusively supported by explicit disclosures in the pre-critical date documents or physical exhibits. *See Lazare*, 628 F.3d at 1374; *Juicy Whip, Inc. v. Orange Bang, Inc.*, 292 F.3d 728, 741 (Fed. Cir. 2002) (the standard of proof required to corroborate testimony related to prior public use is not "beyond a reasonable doubt") (citing *Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 261 U.S. 45, 60 (1923)). Under a "rule of reason" approach, we view the totality of the evidence pertinent to the testimony, including circumstantial evidence, in order to ascertain whether the testimonial assertions are credible. *See In re Jolley*, 308 F.3d 1317, 1325 (Fed. Cir. 2002) (quoting *Cooper*, 154 F.3d at

³ OWW also seeks to discredit the cross-corroborating evidence from the three prosthetists by arguing that they are interested witnesses whose testimony is not itself corroborated. We disagree. While it appears that Mr. McElhiney acted as a consultant to Alps, there is no evidence that Mr. Gailey or Mr. Uellendahl have any interest in this dispute. Nevertheless, as indicated above, we find that the testimony of these witnesses is consistent with, and therefore corroborated by, documentary and physical evidence regarding the SSGL.

1327 (“[c]orroboration may be established by ‘sufficient circumstantial evidence of an independent nature’”). Thus, evidence of corroboration can take many forms and such evidence does not become irrelevant to the credibility determination simply because a patentee questions whether it was created shortly after the critical date. *See Lazare*, 628 F.3d at 1375 (undated photograph and video supplied further evidence to corroborate witness testimony where it was consistent with documentary evidence and their accuracy was not challenged by the patentee).

OWW also argues that Mr. Comtesse testified that the pre-critical date SSGL was the same product as the Silosheath. This argument is not supported by the record. First, OWW relies on truncated excerpts of Mr. Comtesse’s testimony that are, at best, ambiguous. However, when viewed against the entirety of Mr. Comtesse’s testimony and the other evidence available to OWW, those excerpts are insufficient to support OWW’s contention that Mr. Comtesse testified that the SSGL and Silosheath were the same products. Second, the assertion is directly refuted by other portions of Mr. Comtesse’s testimony that unequivocally state the Silosheath and SSGL were separate products, and that the Silosheath was developed using a nylon fabric and the SSGL developed with Coolmax fabric. Additionally, OWW’s contention that the products were the same is also directly contradicted by the fact that the Silosheath and SSGL were identified as separate products in Silipos’ pre-critical date price lists, with distinctly different catalog numbers, prices, and sizing charts. All of this information indicates that the Silosheath and SSGL were different products and OWW’s subjective assertions to the contrary do not appear to be meritorious.

Overall, the testimony from the three prosthetists, the patent application, and the physical exhibits provide

consistent and convincing evidence that corroborates Mr. Comtesse's testimony regarding the structure of the SSGL prior to March 5, 1995. It is the cumulative weight of this evidence that lends credibility to Mr. Comtesse's testimony. Accordingly, viewing the evidence in a light most favorable to Alps, we conclude that there is a genuine issue of fact regarding whether OWW withheld evidence from the PTO that was sufficient to corroborate Mr. Comtesse's testimony.

b. Misrepresented material information

Alps further argues that materiality is demonstrated by OWW's misrepresentations to the BPAI in the second reexamination proceeding. In its brief to the BPAI, OWW asserted that "Mr. Comtesse admits that he is an interested party with respect to the outcome of this Reexamination and the related litigation" and that "Mr. Comtesse has admitted that he continues to receive royalties on the Socket Gel Liner products he helped develop for Silipos." During the hearing before the BPAI, OWW's counsel, Mr. Gayan, reiterated these assertions and further asserted that Mr. Comtesse was the inventor of the SSGL product. Alps contends that OWW's statements of admission and Mr. Comtesse's inventorship are unfounded and that OWW made them in order to exaggerate Mr. Comtesse's interest in the dispute and undermine the credibility of his testimony.

We agree that OWW misrepresented Mr. Comtesse to the BPAI. Mr. Comtesse never admitted that he was interested in the outcome of the present dispute nor did he ever admit that he was receiving royalty payments at the time of his deposition in 2006. To the contrary, Mr. Comtesse's testimony indicated that his relationship with Silipos ended in 1999 and that he had no personal stake in the outcome of the dispute between Alps and OWW:

Q. Mr. Comtesse, as we sit here today, are you – do you have any relationship currently with Silipos?

A. Absolutely none.

Q. When was the last time you had any relationship with Silipos?

A. It was the day when we signed the contract to sell the company to SSL.

Q. And that was what year approximately?

A. It was '99.

Q. 1999?

A. Yeah.

Q. And do you currently design, manufacture, or sell any prosthetic devices?

A. No.

Q. Do you have any financial interest in the outcome of the lawsuit between ALPS South Corporation and Ohio Willow Wood?

A. No.

Q. Are you involved in any other lawsuits or litigation with The Ohio Willow Wood or ALPS South Corporation?

A. No.

Q. Have you ever received any money or promise of money from ALPS South Corporation?

A. No.

Q. Do you have any business relationship currently with ALPS South Corporation?

A. No.

Q. Will the outcome of this lawsuit have any affect either way on you?

A. No.

Mr. Comtesse also testified that he was not receiving royalty payments from Silipos:

Q. Are you still getting a royalty from --

A. No.

Q. Silipos?

A. I sold my share and when [I] sold my share in '98, they pay me out.

The foregoing testimony and other record evidence directly contradict OWW's representations to the BPAI of Mr. Comtesse's purported admissions. OWW nevertheless claims its statements to the BPAI were justified by other portions of Mr. Comtesse's testimony. But the ambiguous testimony OWW identifies does not plausibly support a conclusion that Mr. Comtesse made admissions that he was receiving royalty payments and had a stake in the outcome of the dispute when viewed against the entirety of the record evidence.

Nor does the evidence conclusively establish that Mr. Comtesse was the sole inventor of the SSGL, as OWW represented to the BPAI. In patent law, the "inventor" is the person who conceived of the invention. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998); *Sewall v. Walters*, 21 F.3d 411, 415 (Fed. Cir. 1994) ("[d]etermining 'inventorship' is nothing more than determining who conceived the subject matter at issue"). Here, Mr. Comtesse never admitted he was an "inventor" or that he conceived of the idea for the SSGL. He only testified that he was involved in the development of

Silipos' products and had particular skills that were beneficial to developing and manufacturing the SSGL. Conversely, OWW was aware that Mr. Robert Gould (not Mr. Comtesse) was listed as the inventor on Silipos' patent application that allegedly covered the SSGL device. Thus, even if Mr. Comtesse had testified to inventorship or conception, which he did not, applying the proper evidentiary standards to OWW's assertions of Mr. Comtesse's sole inventorship required clear and convincing evidence not only that Mr. Comtesse conceived of the SSGL but also that Mr. Gould had not conceived of any aspect of the SSGL. OWW did not possess any such information, but nevertheless made the self-serving assertion to the BPAI that Mr. Comtesse was "the inventor" of the SSGL.

The record also indicates that OWW's counsel was aware that Mr. Comtesse's level of interest was critical to convincing the BPAI to reverse the examiner's final rejection in the second reexamination. OWW asserted that: "[i]t is well settled that issues of corroboration become more important and the amount of weight afforded to such testimony may be lessened when the witness is an interested party," "Mr. Comtesse's interest in the outcome of this proceeding goes to the weight to be given to his testimony," and "Mr. Comtesse is an interested party and, thus, corroborating evidence of the asserted SSGL construction is even more necessary." These statements demonstrate that OWW's counsel knew that the misrepresentations about Mr. Comtesse's interest and inventorship would "affect issuance of the patent" by triggering heightened scrutiny of his testimony. *See Therasense*, 649 F.3d at 1292. Accordingly, viewing the foregoing facts in a light most favorable to Alps, we find OWW's misrepresentations to the BPAI tantamount to the filing of an unmistakably false affidavit. Since we recognize such misconduct may be sufficient to satisfy the

materiality prong of inequitable conduct, *id.*, the identified misrepresentations further demonstrate the existence of genuine issues of material fact regarding materiality.

2. Intent

The specific intent to commit inequitable conduct may be inferred from indirect and circumstantial evidence. *Id.* at 1290. But, deceptive intent must be “the single most reasonable inference drawn from the evidence.” *Id.* at 1290 (quoting *Star Scientific Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1366 (Fed. Cir. 2008)). The inference cannot be based on gross negligence and “when there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found.” *Id.* at 1290-91 (citing *Scanner Techs. Corp. v. ICOS Vision Sys. Corp.*, 528 F.3d 1365, 1376 (Fed. Cir. 2008)). Additionally, because the burden of proof is on the party alleging inequitable conduct, the patentee need not offer a good faith explanation for its alleged misconduct unless a threshold level of deceptive intent has been demonstrated. *Id.* at 1291.

The facts, when viewed in a light most favorable to Alps, preclude summary judgment on the issue of deceptive intent. There is no dispute OWW’s counsel knew that if the BPAI accepted Mr. Comtesse’s account of the prior art SSGL then the ’237 patent would not have emerged from the second reexamination proceeding. Thus, OWW’s counsel in that proceeding, Mr. Gayan, sought to discredit Mr. Comtesse’s testimony and, as noted in the foregoing section, did so by making misrepresentations and misleading statements that were directly refuted by credible evidence that OWW did not otherwise disclose. Under the circumstances, this evidence creates a genuine issue of material fact as to whether Mr. Gayan’s conduct before the PTO was undertaken for the deliberate purpose of obtaining an otherwise unwarranted patent.

Nor do OWW's subjective assertions of good faith unsupported by affidavits or declarations from the attorneys outweigh the evidence of deceptive intent on summary judgment. If OWW had simply withheld a single piece of information or made a single misrepresentation, this would be a different case. However, OWW withheld various pieces of material information and had no reasonable explanation for the several misrepresentations it made to the PTO. In total, the collective weight of this evidence supports our conclusion that the evidence would support a finding of intent that is the single most reasonable inference to be drawn from the evidence at this stage of the proceedings.

We have considered OWW's remaining arguments and do not find them persuasive. We leave it to the district court to determine if the inference of deceptive intent that we hold could be drawn when viewing the evidence in a light most favorable to Alps remains after assessing the credibility of OWW's witnesses. *See, e.g., Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1334-1337 (Fed. Cir. 2012) (affirming on the issue of inequitable conduct because patentee's asserted good faith belief for withholding material information from the PTO was contrary to record evidence and the district court concluded that the patentee's witness lacked credibility).

III. CONCLUSION

In conclusion, we affirm the district court's grant of summary judgment on the issues of collateral estoppel and obviousness. However, we hold that there are genuine issues of material fact regarding whether OWW's counsel committed inequitable conduct during the reexaminations of the '237 patent. We therefore reverse the district court's grant of summary judgment on the issue of inequitable conduct and remand that issue for trial.

**AFFIRMED IN PART, REVERSED IN PART,
AND REMANDED**

COSTS

Each party shall bear its own costs for this appeal.