



Knobbe Martens

The Name of the Game is the Claim

Presented by:

Bruce S. Itchkawitz, Ph.D. and
Greg Hermanson

as part of the
National Venture Plan Competition

September 24, 2020

Introduction

Claims are the most important part of the patent and the most difficult to get right

- Judge Giles Rich (then Chief Judge of the Federal Circuit):
 - “To coin a phrase, the name of the game is the claim.”
- U.S. Supreme Court:
 - “The ... claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy.” *Topliff v. Topliff* (1892).
 - Inexperienced individuals “frequently fail to describe with requisite certainty the exact invention of the patentee, and err either in claiming that which the patentee had not in fact invented, or in omitting some element which was a valuable or essential part of his actual invention” *Sperry v. Florida* (1963).

Goals for today

What we hope to cover:

- What are the claims and their scope
- What is the role of claims in:
 - Determining whether you can get a patent
 - Determining whether you infringe your competitor's patent
 - Determining whether your competitor infringes your patent

What we hope you'll get out of it:

- Not trying to turn you into patent attorneys or give legal advice
- Want to help you to better communicate/work with your patent attorney in drafting valuable claims and getting valuable claims through the USPTO
- Want to help you make a “first pass” in deciding whether to ask your patent attorney to do a “deeper dive” on a third party's patent.

What are the claims?

- Numbered “sentences” at the end of a patent/application
- Define the boundary between what is and what is not the protected invention (“the fence” or “the metes and bounds”)

17

by applying the phosphor material to the outside surface of the tube produces an increase of the light output area by approximately 1.67 times, as compared to applying the phosphor material to the inner surface.

Certain embodiments described herein provide gas discharge lamps which have longer lifetimes than lamps formed using conventional techniques. In addition, certain embodiments described herein provide gas discharge lamps with very small diameters and very thin wall thicknesses that are well suited for use in miniature lighting applications. By integrating the vacuum processing steps and the coating steps with continuous tubing production, certain embodiments produce gas discharge lamps with significant cost savings, less complexity, and with more uniform results than lamps produced using conventional techniques. By having integral protective coatings, certain embodiments described herein advantageously avoid problems with assembly and reliability, particularly for miniature electronic lighting applications.

Various embodiments of the present invention have been described above. Although this invention has been described with reference to these specific embodiments, the descriptions are intended to be illustrative of the invention and are not intended to be limiting. Various modifications and applications may occur to those skilled in the art without departing from the true spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. A tubular lamp comprising:
a tube having an outer surface and an inner region containing a gas, the tube substantially transmissive to ultraviolet light, the gas generating ultraviolet light in response to electrical excitation;
at least one electrode on the outer surface of the tube, the at least one electrode capacitively coupled to the gas;
a phosphor material on the outer surface of the tube, the phosphor material generating visible light in response to excitation by ultraviolet light from the gas; and
a protective material on the outer surface of the tube, the protective material providing environmental protection and mechanical protection to the phosphor material.

2. The tubular lamp of claim 1, wherein the tube has an outer diameter of less than approximately 3 millimeters.

US 7,095,176 B2

18

3. The tubular lamp of claim 1, wherein the tube has an inner diameter of less than approximately 3 millimeters.

4. The tubular lamp of claim 1, wherein the tube has a wall thickness less than approximately 0.3 millimeters.

5. The tubular lamp of claim 1, further comprising an intervening material between the tube and the phosphor material.

6. The tubular lamp of claim 5, wherein the intervening material is substantially transmissive to ultraviolet light and is substantially reflective to visible light.

7. The tubular lamp of claim 1, further comprising an intervening material between the phosphor material and the protective material.

8. The tubular lamp of claim 7, wherein the intervening material is substantially reflective to ultraviolet light and is substantially transmissive to visible light.

9. The tubular lamp of claim 8, wherein the phosphor material and the protective material are mixed together in a coating.

10. The tubular lamp of claim 1, wherein the gas has a pressure substantially less than atmospheric pressure.

11. The tubular lamp of claim 1, wherein the gas comprises at least one of the following gases: mercury vapor, argon, and neon.

12. The tubular lamp of claim 1, wherein the tube has sufficient flexibility to flexibly bend along a bending radius equal to or less than approximately 6 feet.

13. The tubular lamp of claim 1, wherein the at least one electrode is not in physical contact with the gas.

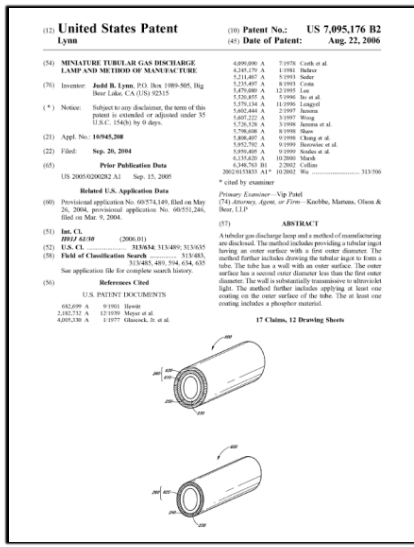
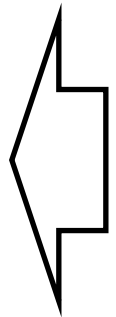
14. The tubular lamp of claim 1, wherein the at least one electrode comprises two electrodes positioned at respective ends of the tube.

15. The tubular lamp of claim 1, wherein the at least one electrode comprises a conductive coating applied to the tube.

16. The tubular lamp of claim 15, wherein the conductive coating comprises a conductive epoxy.

17. The tubular lamp of claim 15, wherein the conductive coating comprises at least one of the group consisting of: copper-bearing conductive epoxy, silver-bearing conductive epoxy, metallic spray, foil wrap, and conductive foam.

* * * * *



- Not the figures or the rest of the text
 - Although these sections do provide examples of the claimed invention and can be relevant to defining claim terms

What are the claims? (cont.)

Organized in one or more groups:

- Independent {
- 1. A tubular lamp comprising:
 - a tube having an outer surface and an inner region containing a gas, the tube substantially transmissive to ultraviolet light, the gas generating ultraviolet light in response to electrical excitation;
 - at least one electrode on the outer surface of the tube, the at least one electrode capacitively coupled to the gas;
 - a phosphor material on the outer surface of the tube, the phosphor material generating visible light in response to excitation by ultraviolet light from the gas; and
 - a protective material on the outer surface of the tube, the protective material providing environmental protection and mechanical protection to the phosphor material.
 - 2. The tubular lamp of claim 1 wherein the tube has an outer diameter of less than approximately 3 millimeters.
- Dependent {

Dependent claims include the features of the independent claims, along with additional features.

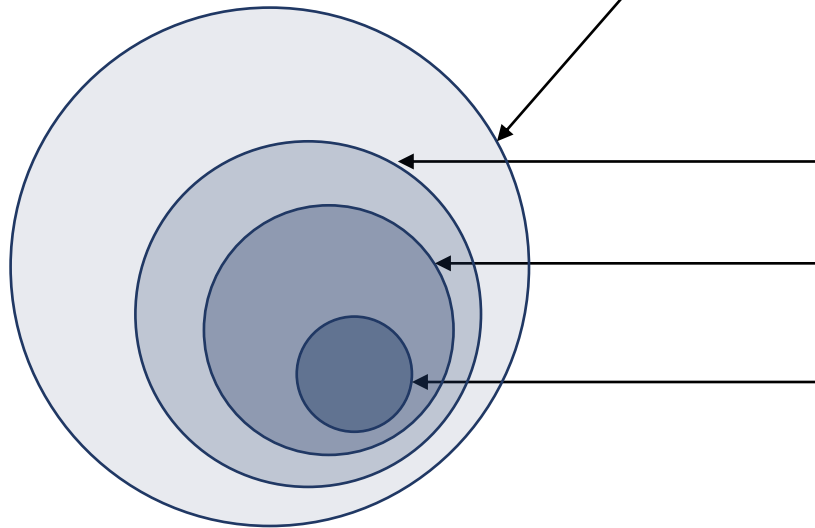
Dependent

- 3. The tubular lamp of claim 1, wherein the tube has an inner diameter of less than approximately 3 millimeters.
- 4. The tubular lamp of claim 1, wherein the tube has a wall thickness less than approximately 0.3 millimeters.
- 5. The tubular lamp of claim 1, further comprising an intervening material between the tube and the phosphor material.
- 6. The tubular lamp of claim 5, wherein the intervening material is substantially transmissive to ultraviolet light and is substantially reflective to visible light.
- 7. The tubular lamp of claim 1, further comprising an intervening material between the phosphor material and the protective material.
- 8. The tubular lamp of claim 7, wherein the intervening material is substantially reflective to ultraviolet light and is substantially transmissive to visible light.
- 9. The tubular lamp of claim 8, wherein the phosphor material and the protective material are mixed together in a coating.
- 10. The tubular lamp of claim 1, wherein the gas has a pressure substantially less than atmospheric pressure.
- 11. The tubular lamp of claim 1, wherein the gas comprises at least one of the following gases: mercury vapor, argon, and neon.
- 12. The tubular lamp of claim 1, wherein the tube has sufficient flexibility to flexibly bend along a bending radius equal to or less than approximately 6 feet.
- 13. The tubular lamp of claim 1, wherein the at least one electrode is not in physical contact with the gas.
- 14. The tubular lamp of claim 1, wherein the at least one electrode comprises two electrodes positioned at respective ends of the tube.
- 15. The tubular lamp of claim 1, wherein the at least one electrode comprises a conductive coating applied to the tube.
- 16. The tubular lamp of claim 15, wherein the conductive coating comprises a conductive epoxy.
- 17. The tubular lamp of claim 15, wherein the conductive coating comprises at least one of the group consisting of: copper-bearing conductive epoxy, silver-bearing conductive epoxy, metallic spray, foil wrap, and conductive foam.

What are the claims? (cont.)

Claims provide the “legal definition” of the invention

- Claim covers any product/method that includes each and every feature recited by the claim
 - Covered product/method can include other features as well.
- Independent claims are the broadest, dependent claims are narrower
- The longer a claim, the narrower it is.



A 1. A tubular lamp comprising:
a tube having an outer surface and an inner region containing a gas, the tube substantially transmissive to ultraviolet light, the gas generating ultraviolet light in response to electrical excitation;
B at least one electrode on the outer surface of the tube, the at least one electrode capacitively coupled to the gas;
C a phosphor material on the outer surface of the tube, the phosphor material generating visible light in response to excitation by ultraviolet light from the gas; and
D a protective material on the outer surface of the tube, the protective material providing environmental protection and mechanical protection to the phosphor material.

E 7. The tubular lamp of claim 1, further comprises an intervening material between the phosphor material and the protective material.

F 8. The tubular lamp of claim 7, wherein the intervening material is substantially reflective to ultraviolet light and is substantially transmissive to visible light.

G 9. The tubular lamp of claim 8, wherein the phosphor material and the protective material are mixed together in a coating.

What are the claims? (cont.)

Claims must meet certain requirements under the patent laws

- Patent-eligible subject matter
 - Devices, materials/drugs, processes (e.g., method of fabrication; method of use)
 - Not merely abstract ideas, physical phenomena, algorithms, compounds found in nature
 - Most often comes into play for software and pharmaceutical inventions
 - Technical solutions to technical problems
 - Not business practices, data, goals
 - Instead of mere goal (e.g., “cheaper” or “more durable”), focus on technical features that achieve the goal (e.g., material; fabrication step)

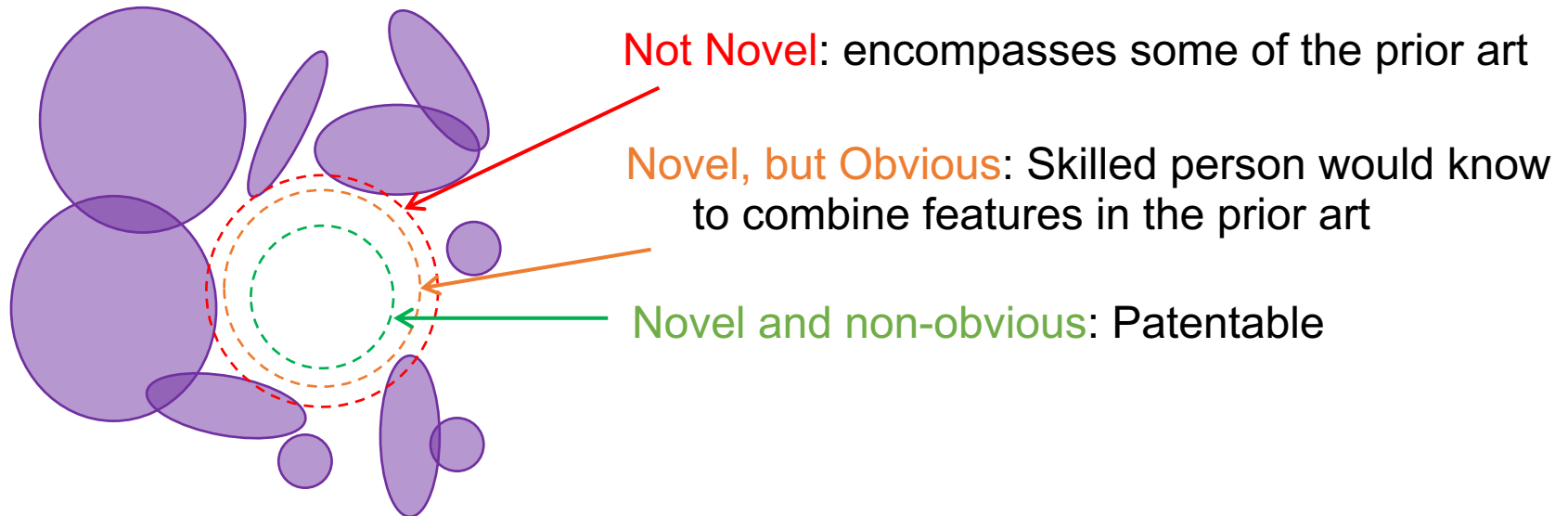
Claims must also be:

- Clear, not indefinite (e.g., not “bigger than a bread box”)
- Specific, not omnibus (e.g., not “what is shown in the figures”)
- Supported by the originally-filed disclosure (Important when amending claims)
- Patentable (novel and non-obvious) in view of all prior art in the world

What are the claims? (cont.)

Patentable claims:

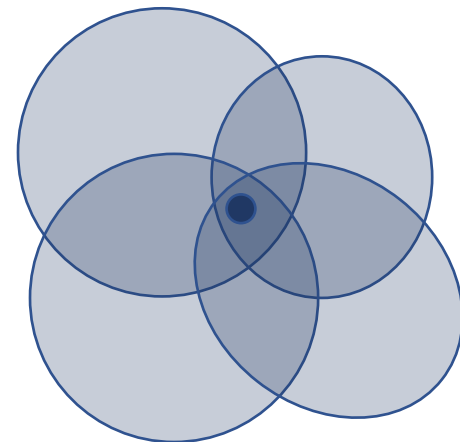
- Novel:
 - Claimed invention is not already known
- Non-obvious:
 - Claimed invention would not be obvious to “person skilled in the art” in view of publicly known information (“prior art”)



How should claims be drafted?

Written with an eye towards the ultimate goal

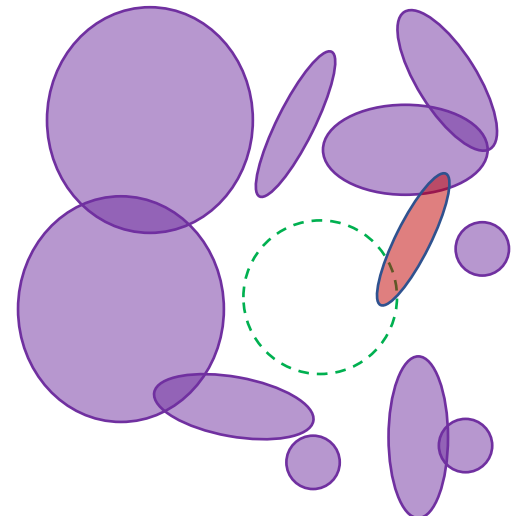
- Valuable protection in the marketplace
 - Right to exclude others from making/using the claimed invention
 - Target: “choke points” that are needed for value
 - E.g., phosphor on outside of tube lamp to achieve desired uniformity, fabrication ease, etc.
- Mixture of claims with different scopes of protection
 - Broad claims: include only “essential features”
 - Features that, if omitted, would result in a substantially inferior product/method
 - So competitors cannot easily “design-around” your claims
 - Narrower claims: fallback positions in examination/litigation; protect against direct copying
- Cover invention in various, overlapping ways
 - Device
 - Subassemblies within the device
 - Combinations of the device with other structures
 - Method of fabricating the device
 - Method of using the device
 - Intermediate product during fabrication



How should claims be drafted? (cont.)

Written with an eye towards the prior art

- USPTO will examine the claims to ensure they do not encompass the prior art
 - Probability of allowance increases if claims are written with a rationale in mind for why the claims are novel and non-obvious
- Prior art searching
 - No obligation to search for prior art before filing a patent application
 - But there is an obligation to tell the USPTO of all the relevant prior art of which you are aware
 - Good idea to do some searching before filing
 - To guide drafting of claims
 - To avoid surprises during examination
 - Helpful for self-searching:
 - <https://patents.google.com>
 - <http://patft.uspto.gov/> (USPTO text searching)
 - <https://www.pat2pdf.org> (Free PDFs)



How do claims evolve during examination?

Claims are often amended to address USPTO rejections

- Focus of examination is on the claims
- Examiner searches for relevant references and sends out an “Office Action” with initial evaluation of patentability
 - Claim 1: Ref. X discloses A+B+C+D+E; so Claim 1 is **not novel**.
 - Claim 2: Ref. Y discloses F, and obvious to combine with A+B+C+D+E from Ref. X, so Claim 2 is **obvious**.
 - Claim 3: Prior art doesn't disclose G, so Claim 3 is **patentable**

1. (Original) A method of forming a gel monolith, the method comprising:
- A preparing a first solution comprising metal alkoxide;
 - B preparing a second solution comprising a catalyst;
 - C preparing a third solution by mixing the first solution and the second solution together;
 - D cooling at least one of the first, second, and third solutions to achieve a mixture temperature for the third solution which is substantially below room temperature, wherein the third solution has a significantly longer gelation time at the mixture temperature as compared to a room temperature gelation time for the third solution; and
 - E allowing the third solution to gel, thereby forming the gel monolith.
2. (Original) The method of Claim 1, wherein the metal alkoxide comprises tetramethylorthosilicate (TMOS).
3. (Original) The method of Claim 2, wherein the metal alkoxide further comprises tetraethylorthogermanium (TEOG).



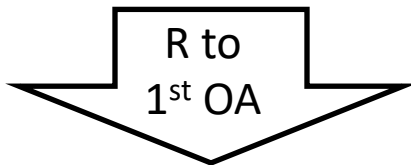
How do claims evolve during examination? (cont.)

- You may decide to respond with arguments and no claim amendments (e.g., if Examiner misinterprets the claims or references or misapplies the law)
- You may decide to amend the claims to overcome the rejections (e.g., adding features to Claim 1)
 - Careful to not unduly narrow the claims so that they are no longer valuable.
 - If Claim 3 is valuable, you may decide to add the features of Claims 2 and 3 to Claim 1, so that all the other dependent claims are allowable.
 - If Claim 3 isn't valuable, you have to develop alternative amendments.
 - Strategic analysis of what you're willing to take vs. what USPTO is willing to give.
- Can't pull features out of thin air - Can only add features that were described in the originally-filed application.
 - If claim is being pursued to cover competitor's product, need to consider:
 - Competitor's product (target; choke-point)
 - Prior art
 - Original disclosure

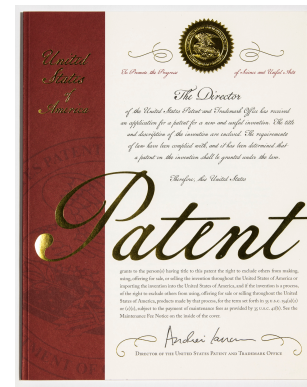
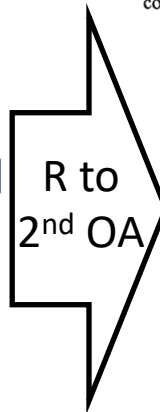
How do claims evolve during examination? (cont.)

Example:

- (Original) A method of forming a gel monolith, the method comprising:
 - preparing a first solution comprising metal alkoxide;
 - preparing a second solution comprising a catalyst;
 - preparing a third solution by mixing the first solution and the second solution together;
 - cooling at least one of the first, second, and third solutions to achieve a mixture temperature for the third solution which is substantially below room temperature, wherein the third solution has a significantly longer gelation time at the mixture temperature as compared to a room temperature gelation time for the third solution; and
 - allowing the third solution to gel, thereby forming the gel monolith.



- (Currently Amended) A method of forming a gel monolith, the method comprising:
 - preparing a first solution comprising metal alkoxide;
 - preparing a second solution comprising a catalyst;
 - preparing a third solution by mixing the first solution and the second solution together, **the third solution having a catalyst concentration greater than 3 mole percent of the third solution;**
 - cooling at least one of the first, second, and third solutions to achieve a mixture temperature for the third solution which is substantially below room temperature, wherein the third solution has a significantly longer gelation time at the mixture temperature as compared to a room temperature gelation time for the third solution; and
 - allowing the third solution to gel, thereby forming the gel monolith.



United States Patent		US 7,026,362 B2	
Wang et al.		Apr. 11, 2006	
576	CLASSIFICATION	10/200	10/200
577	CLASSIFICATION	10/200	10/200
578	CLASSIFICATION	10/200	10/200
579	CLASSIFICATION	10/200	10/200
580	CLASSIFICATION	10/200	10/200
581	CLASSIFICATION	10/200	10/200
582	CLASSIFICATION	10/200	10/200
583	CLASSIFICATION	10/200	10/200
584	CLASSIFICATION	10/200	10/200
585	CLASSIFICATION	10/200	10/200
586	CLASSIFICATION	10/200	10/200
587	CLASSIFICATION	10/200	10/200
588	CLASSIFICATION	10/200	10/200
589	CLASSIFICATION	10/200	10/200
590	CLASSIFICATION	10/200	10/200
591	CLASSIFICATION	10/200	10/200
592	CLASSIFICATION	10/200	10/200
593	CLASSIFICATION	10/200	10/200
594	CLASSIFICATION	10/200	10/200
595	CLASSIFICATION	10/200	10/200
596	CLASSIFICATION	10/200	10/200
597	CLASSIFICATION	10/200	10/200
598	CLASSIFICATION	10/200	10/200
599	CLASSIFICATION	10/200	10/200
600	CLASSIFICATION	10/200	10/200
601	CLASSIFICATION	10/200	10/200
602	CLASSIFICATION	10/200	10/200
603	CLASSIFICATION	10/200	10/200
604	CLASSIFICATION	10/200	10/200
605	CLASSIFICATION	10/200	10/200
606	CLASSIFICATION	10/200	10/200
607	CLASSIFICATION	10/200	10/200
608	CLASSIFICATION	10/200	10/200
609	CLASSIFICATION	10/200	10/200
610	CLASSIFICATION	10/200	10/200
611	CLASSIFICATION	10/200	10/200
612	CLASSIFICATION	10/200	10/200
613	CLASSIFICATION	10/200	10/200
614	CLASSIFICATION	10/200	10/200
615	CLASSIFICATION	10/200	10/200
616	CLASSIFICATION	10/200	10/200
617	CLASSIFICATION	10/200	10/200
618	CLASSIFICATION	10/200	10/200
619	CLASSIFICATION	10/200	10/200
620	CLASSIFICATION	10/200	10/200
621	CLASSIFICATION	10/200	10/200
622	CLASSIFICATION	10/200	10/200
623	CLASSIFICATION	10/200	10/200
624	CLASSIFICATION	10/200	10/200
625	CLASSIFICATION	10/200	10/200
626	CLASSIFICATION	10/200	10/200
627	CLASSIFICATION	10/200	10/200
628	CLASSIFICATION	10/200	10/200
629	CLASSIFICATION	10/200	10/200
630	CLASSIFICATION	10/200	10/200
631	CLASSIFICATION	10/200	10/200
632	CLASSIFICATION	10/200	10/200
633	CLASSIFICATION	10/200	10/200
634	CLASSIFICATION	10/200	10/200
635	CLASSIFICATION	10/200	10/200
636	CLASSIFICATION	10/200	10/200
637	CLASSIFICATION	10/200	10/200
638	CLASSIFICATION	10/200	10/200
639	CLASSIFICATION	10/200	10/200
640	CLASSIFICATION	10/200	10/200
641	CLASSIFICATION	10/200	10/200
642	CLASSIFICATION	10/200	10/200
643	CLASSIFICATION	10/200	10/200
644	CLASSIFICATION	10/200	10/200
645	CLASSIFICATION	10/200	10/200
646	CLASSIFICATION	10/200	10/200
647	CLASSIFICATION	10/200	10/200
648	CLASSIFICATION	10/200	10/200
649	CLASSIFICATION	10/200	10/200
650	CLASSIFICATION	10/200	10/200
651	CLASSIFICATION	10/200	10/200
652	CLASSIFICATION	10/200	10/200
653	CLASSIFICATION	10/200	10/200
654	CLASSIFICATION	10/200	10/200
655	CLASSIFICATION	10/200	10/200
656	CLASSIFICATION	10/200	10/200
657	CLASSIFICATION	10/200	10/200
658	CLASSIFICATION	10/200	10/200
659	CLASSIFICATION	10/200	10/200
660	CLASSIFICATION	10/200	10/200
661	CLASSIFICATION	10/200	10/200
662	CLASSIFICATION	10/200	10/200
663	CLASSIFICATION	10/200	10/200
664	CLASSIFICATION	10/200	10/200
665	CLASSIFICATION	10/200	10/200
666	CLASSIFICATION	10/200	10/200
667	CLASSIFICATION	10/200	10/200
668	CLASSIFICATION	10/200	10/200
669	CLASSIFICATION	10/200	10/200
670	CLASSIFICATION	10/200	10/200
671	CLASSIFICATION	10/200	10/200
672	CLASSIFICATION	10/200	10/200
673	CLASSIFICATION	10/200	10/200
674	CLASSIFICATION	10/200	10/200
675	CLASSIFICATION	10/200	10/200
676	CLASSIFICATION	10/200	10/200
677	CLASSIFICATION	10/200	10/200
678	CLASSIFICATION	10/200	10/200
679	CLASSIFICATION	10/200	10/200
680	CLASSIFICATION	10/200	10/200
681	CLASSIFICATION	10/200	10/200
682	CLASSIFICATION	10/200	10/200
683	CLASSIFICATION	10/200	10/200
684	CLASSIFICATION	10/200	10/200
685	CLASSIFICATION	10/200	10/200
686	CLASSIFICATION	10/200	10/200
687	CLASSIFICATION	10/200	10/200
688	CLASSIFICATION	10/200	10/200
689	CLASSIFICATION	10/200	10/200
690	CLASSIFICATION	10/200	10/200
691	CLASSIFICATION	10/200	10/200
692	CLASSIFICATION	10/200	10/200
693	CLASSIFICATION	10/200	10/200
694	CLASSIFICATION	10/200	10/200
695	CLASSIFICATION	10/200	10/200
696	CLASSIFICATION	10/200	10/200
697	CLASSIFICATION	10/200	10/200
698	CLASSIFICATION	10/200	10/200
699	CLASSIFICATION	10/200	10/200
700	CLASSIFICATION	10/200	10/200



- (Currently Amended) A method of forming a gel monolith, the method comprising:
 - preparing a first solution comprising metal alkoxide;
 - preparing a second solution comprising a catalyst **of metal alkoxide hydrolysis and polymerization;**
 - preparing a third solution by mixing the first solution and the second solution together, the third solution having a catalyst concentration greater than 3 mole percent of the third solution;
 - cooling at least one of the first, second, and third solutions to achieve a mixture temperature for the third solution which is **approximately equal to or less than zero degrees Celsius** ~~substantially below room temperature~~ wherein the third solution has a significantly longer gelation time at the mixture temperature as compared to a room temperature gelation time for the third solution; and
 - allowing the third solution to gel, thereby forming the gel monolith.

How do you evaluate a third-party patent?

Two prongs of evaluation: both focus on the claims:

- Non-infringement:
 - Do any of the claims cover your product?
 - Generally, this is the “first pass” prior to getting your patent attorney to do a “deeper dive.”
- Invalidity:
 - Do the claims covering your product also cover the prior art?
 - Generally, this is a more complex analysis that is part of the “deeper dive.”
- Caveats:
 - While we’re presenting a simple view of both non-infringement and invalidity, there are subtleties to each analysis
 - Both depend on the interpretation of claim terms, which can be affected by the non-claim text, figures, amendments and statements made to the USPTO, etc.
 - Other considerations based on patent law: e.g., infringement by substantial equivalents.

How do you evaluate a third-party patent? (cont.)

Non-infringement: Do any of the claims cover your product?

- Compare your product/method to each independent claim
 - Claim is not infringed if product omits at least one feature
 - Product=A+B+D → ✓
 - Product=A+B+C'+D → ✓
 - Product=A+B+C+D+H → ✗
- If product omits at least one feature of an indep. claim, then don't have to look at its dep. claims
- If product has every feature of an indep. claim, then should evaluate possible design-arounds to avoid infringement.

Indep. claim of 3rd-party patent:

1. A tubular lamp comprising:
 - A a tube having an outer surface and an inner region containing a gas, the tube substantially transmissive to ultraviolet light, the gas generating ultraviolet light in response to electrical excitation;
 - B at least one electrode on the outer surface of the tube, the at least one electrode capacitively coupled to the gas;
 - C a phosphor material on the outer surface of the tube, the phosphor material generating visible light in response to excitation by ultraviolet light from the gas; and
 - D a protective material on the outer surface of the tube, the protective material providing environmental protection and mechanical protection to the phosphor material.

Your product:



How do you evaluate a third-party patent? (cont.)

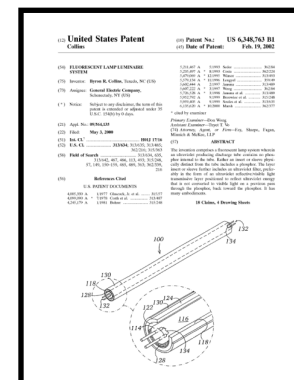
Invalidity: Do the claims covering your product also cover the prior art?

- Role-play as “USPTO Examiner”
 - Develop rejections of claims based on lack of novelty and/or obviousness
 - Ref. X=A+B; Ref. Y=C+D; Rationale to combine → Invalid
 - If can’t find every feature and a motivation to combine → Keep searching
- Cannot only focus on the indep. claims; must also analyze any “infringed” dep. claims
 - Indep. claim can be invalid while dep. claim remains valid.
- Often requires performing searching for relevant references that were not previously considered by the USPTO.

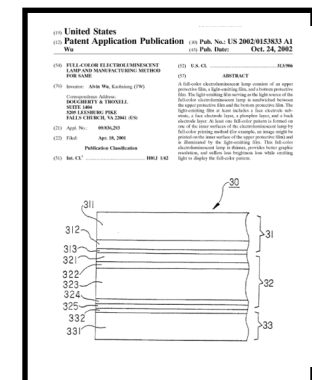
Indep. claim of 3rd-party patent:

1. A tubular lamp comprising:
 - A a tube having an outer surface and an inner region containing a gas, the tube substantially transmissive to ultraviolet light, the gas generating ultraviolet light in response to electrical excitation;
 - B at least one electrode on the outer surface of the tube, the at least one electrode capacitively coupled to the gas;
 - C a phosphor material on the outer surface of the tube, the phosphor material generating visible light in response to excitation by ultraviolet light from the gas; and
 - D a protective material on the outer surface of the tube, the protective material providing environmental protection and mechanical protection to the phosphor material.

Ref. X



Ref. Y



Does your competitor infringe your patent?

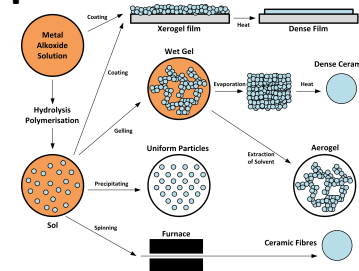
Compare your claims to competitor's product/method:

- To infringe: competitor's product/method must have each and every feature of at least one claim
- Claim is not infringed if product/method omits at least one feature
 - Method=A+B+C+E – Not infringed
 - Method=A+B+C'+D+E – Not infringed
 - Method=A+B+C+H+D+E – Infringed
- If indep. claim is not infringed, then dep. claims are also not infringed.
- If indep. claim is infringed, then want to evaluate which dep. claims are also infringed.
 - Infringed dep. claims can be easier for competitor to design around, but harder to invalidate

Your claim:

4. A method of forming a gel monolith, the method comprising:
- A preparing a first solution comprising metal alkoxide;
 - B preparing a second solution comprising a catalyst of metal alkoxide hydrolysis and polymerization;
 - C preparing a third solution by mixing the first solution and the second solution together, the third solution having a catalyst concentration greater than 3 mole percent of the third solution;
 - D cooling at least one of the first, second, and third solutions to achieve a mixture temperature for the third solution which is approximately equal to or less than zero degrees Celsius, wherein the third solution has a significantly longer gelation time at the mixture temperature as compared to a room temperature gelation time for the third solution; and
 - E allowing the third solution to gel, thereby forming the gel monolith.

Competitor's method:



Contact information



Bruce S. Itchkawitz, Ph.D.

Bruce.Itchkawitz@knobbe.com

J.D., University of Virginia

Ph.D. Physics, University of Pennsylvania

B.S. Engineering Physics, Lehigh Univ.

- Strategic Patent Portfolios with Continuing Value
<https://www.linkedin.com/pulse/strategic-patent-portfolios-continuing-value-bruce-itchkawitz/>
- 3 Approaches to Get Your Patent Application Moving Much Faster
<https://www.entrepreneur.com/article/290429>
- 7 IP Issues Startup Entrepreneurs Should Not Overlook
<https://www.knobbe.com/news/2015/09/7-intellectual-property-issues-startup-entrepreneurs-should-not-overlook-id-supra>



Greg Hermanson

Greg.Hermanson@knobbe.com

J.D., University of San Diego

B.S. Imaging Science, Rochester Inst. of Tech.