

**UNITED STATES
PATENT AND TRADEMARK OFFICE**





Empowering Innovation: Patent Process

Wright State University IP Day

Dr. Christal Sheppard
Director, Elijah J McCoy Midwest Regional USPTO

September 7, 2016

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Objectives

- Overview of the Patent Process
- America Invents Act: First Inventor to File
- Prior Art Searching
- Patent Examination

Patent Process Overview

<http://www.uspto.gov/patents-getting-started/patent-process-overview>

The screenshot shows the top portion of the USPTO website. At the top left is the 'uspto' logo and 'UNITED STATES PATENT AND TRADEMARK OFFICE'. To the right is a search bar with 'Search uspto.gov' and a magnifying glass icon. Below this is a navigation bar with links for 'Patents', 'Trademarks', 'IP Policy', and 'Learning and Resources', along with a 'Quick Links' dropdown menu. The main content area has a breadcrumb trail: 'Home / Patents: Getting Started / Patent Process Overview'. There are 'Share' and 'Print' icons. The main heading is 'Patent Process Overview' with a sub-heading: 'An overview of a patent application and maintenance process'.

Helpful 198

Not Helpful 69

- Determine the type of Intellectual Property protection that you need**
- Determine if your invention is patentable
- What kind of patent do you need?
- Get ready to apply

Step 1

Determine the type of Intellectual Property protection that you need

To protect your invention, you may need a patent, trademark, copyright, marketing plan, trade secrets, or some combination of these. Before you begin preparing a patent application, find out if you really need a patent or some other form of Intellectual Property protection.

- [What are Patents, Trademarks, Servicemarks, and Copyrights?](#)
- [From Concept to Protection \(Video Training - 18 min\)](#)
- [Inventor Resources](#)
- [Online Services](#)

Contact Patents
Contact information for all stages of the patent process



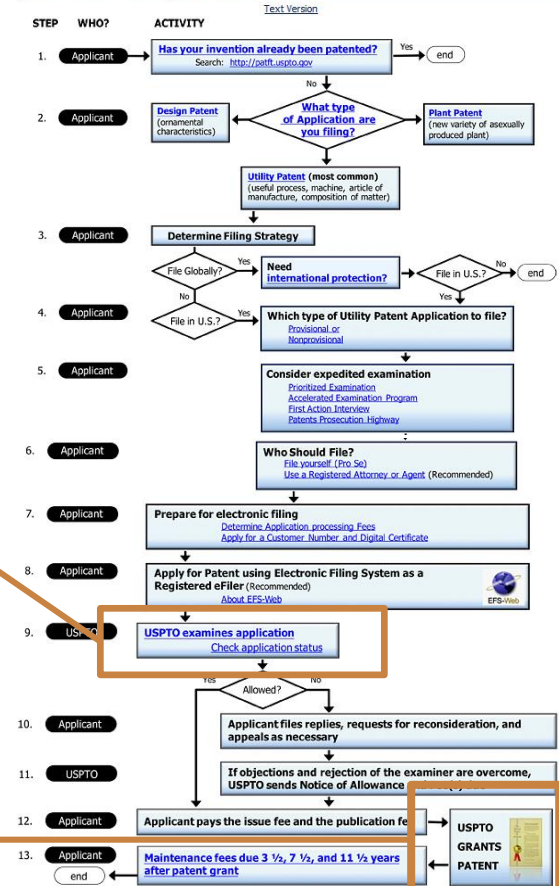
Process to a Patent

- Patent Law is complex
 - Applicant's must make many decisions along the way
- What happens after I get my patent?
 - Licensing
 - Enforcement
 - More innovation and competition
 - Administrative Trials
 - Litigation
 - Etc...

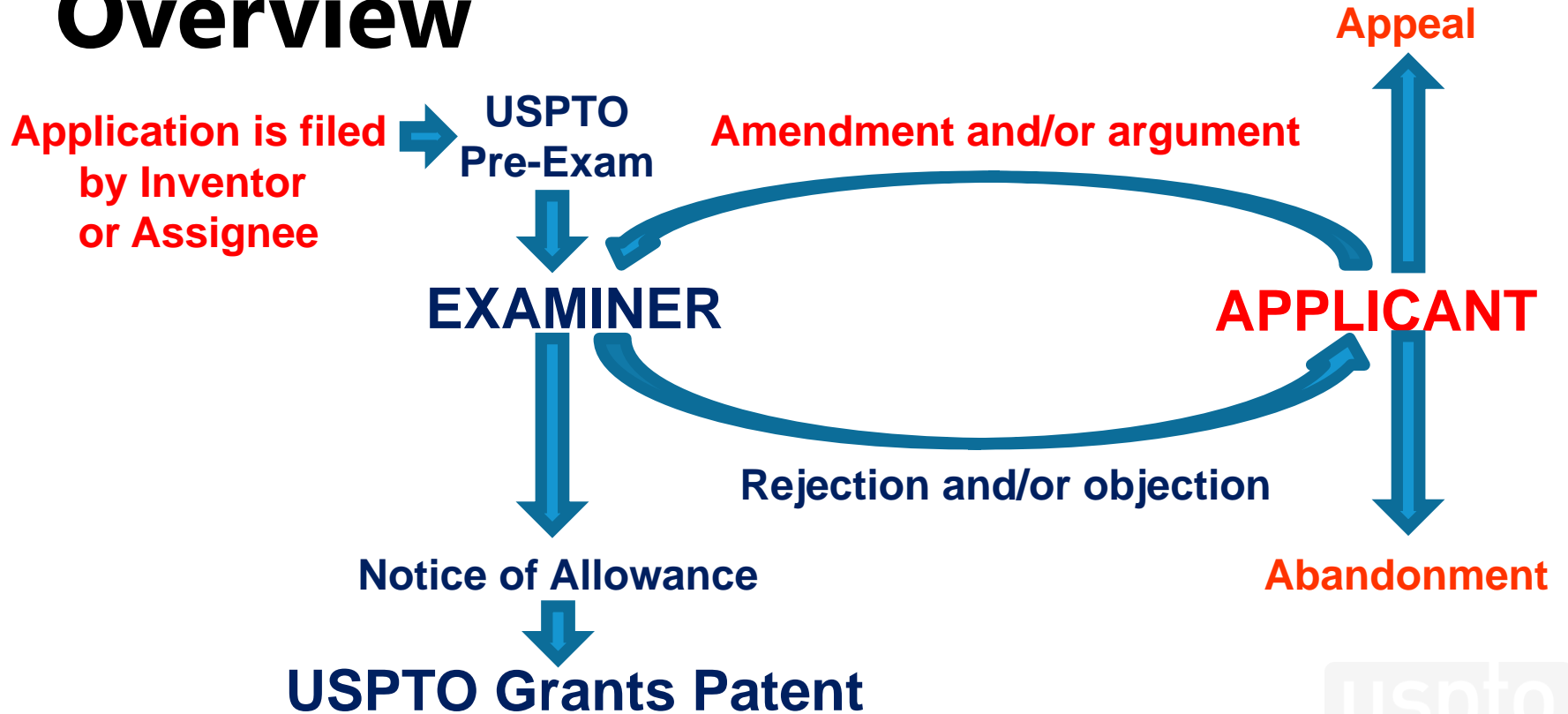
USPTO examines application
Check application status

USPTO
GRANTS
PATENT

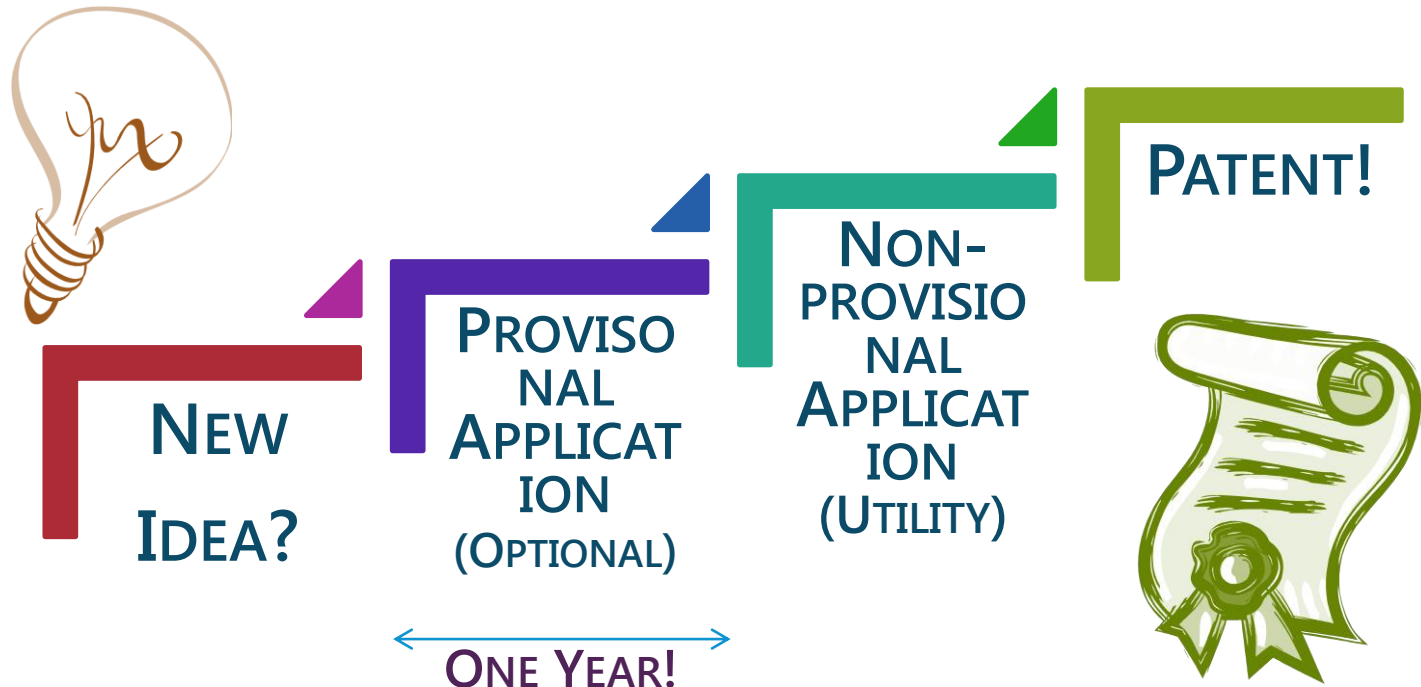
Process for Obtaining a Utility Patent



Patent Examination Process Overview



The Path to a Patent





America Invents Act First Inventor to File

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America Invents Act (2011)

Public Law 112–29
112th Congress

An Act

Sept. 16, 2011
[H.R. 1249]

Leahy-Smith
America Invents
Act.

35 USC 1 note.

To amend title 35, United States Code, to provide for patent reform.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the “Leahy-Smith
America Invents Act”.

(b) TABLE OF CONTENTS.—The table of contents for this Act
is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Definitions.
- Sec. 3. First inventor to file.
- Sec. 4. Inventor's oath or declaration.
- Sec. 5. Defense to infringement based on prior commercial use.
- Sec. 6. Post-grant review proceedings.
- Sec. 7. Patent Trial and Appeal Board.
- Sec. 8. Preissuance submissions by third parties.
- Sec. 9. Venue.
- Sec. 10. Fee setting authority.
- Sec. 11. Fees for patent services.
- Sec. 12. Supplemental examination.
- Sec. 13. Funding agreements.
- Sec. 14. Tax strategies deemed within the prior art.
- Sec. 15. Best mode requirement.
- Sec. 16. Marking.
- Sec. 17. Advice of counsel.
- Sec. 18. Transitional program for covered business method patents.
- Sec. 19. Jurisdiction and procedural matters.
- Sec. 20. Technical amendments.
- Sec. 21. Travel expenses and payment of administrative judges.
- Sec. 22. Patent and Trademark Office funding.
- Sec. 23. Satellite offices.
- Sec. 24. Designation of Detroit satellite office.
- Sec. 25. Priority examination for important technologies.
- Sec. 26. Study on implementation.
- Sec. 27. Study on genetic testing.
- Sec. 28. Patent Ombudsman Program for small business concerns.
- Sec. 29. Establishment of methods for studying the diversity of applicants.
- Sec. 30. Sense of Congress.
- Sec. 31. USPTO study on international patent protections for small businesses.
- Sec. 32. Pro bono program.
- Sec. 33. Limitation on issuance of patents.
- Sec. 34. Study of patent litigation.
- Sec. 35. Effective date.
- Sec. 36. Budgetary effects.
- Sec. 37. Calculation of 60-day period for application of patent term extension.

35 USC 1 note.

SEC. 2. DEFINITIONS.

In this Act:

(1) DIRECTOR.—The term “Director” means the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

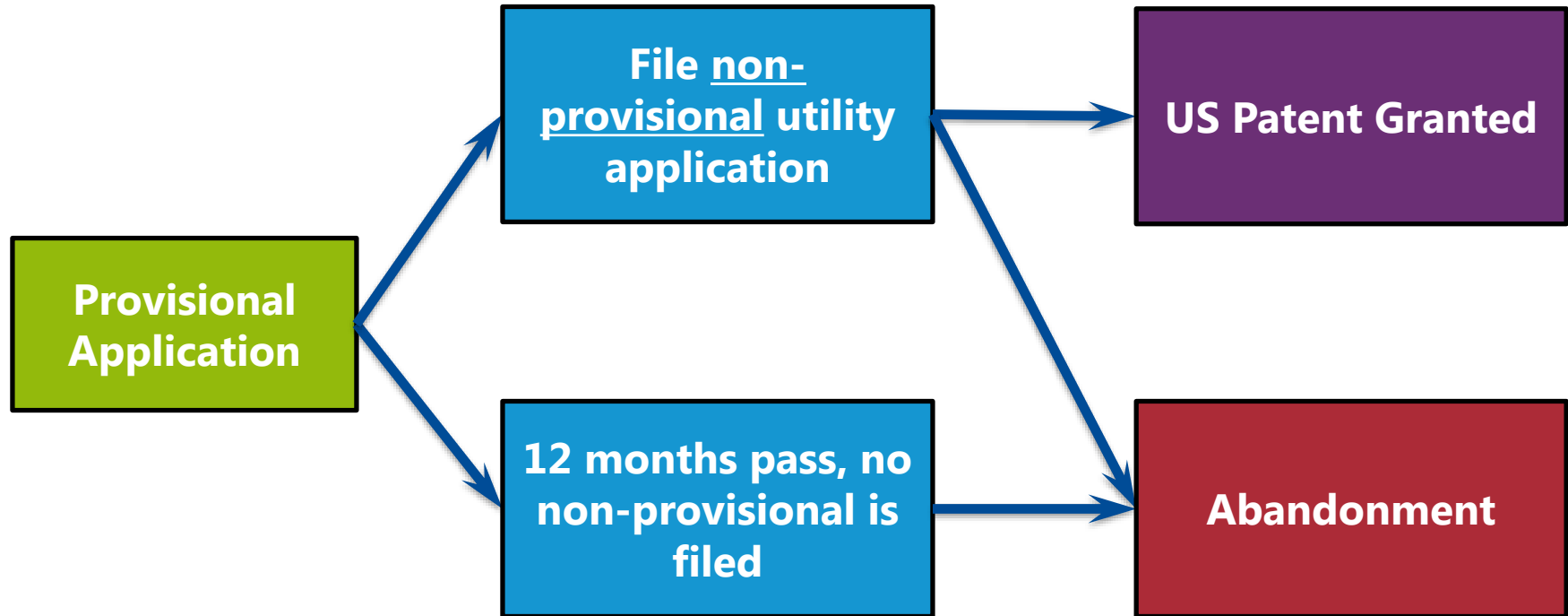
uspto

When should you file?

United States is a **First Inventor to File System!**

- Looking for international protection?
 - You must file **before** public disclosure
- Only want US protection?
 - You can file within **one year after** public disclosure

Provisional Utility Applications



Provisional Utility Applications

- Simplified filing requirements
- Items required:
 1. Specification - CLEAR DESCRIPTION - in compliance with 35 USC 112, Paragraph (a)
 - enablement, written description, best mode
 2. Drawings (needed in almost all cases)
 3. Filing fees
 4. Cover Sheet identifying Provisional Application



Provisional Utility Applications

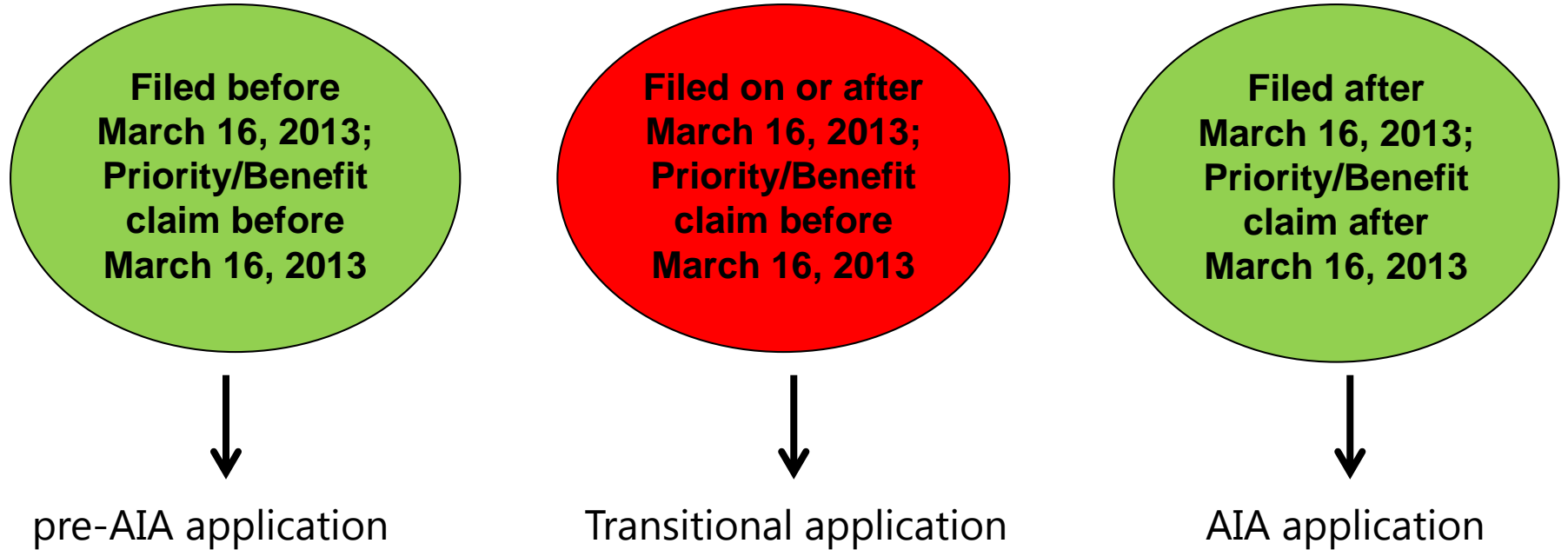
MPEP 201.04(b)

- Provisional application is abandoned automatically at 12 months and is not examined
 - ✓ MUST FILE a non-provisional application before the one year period ends!
- Inventor given time to investigate market potential or make improvements
 - ✓ Changing too much could result in loss of priority date
- Term “Patent Pending” allowed to be applied
- A low-cost way to establish an early priority date in non-provisional patent application with fewer formalities
 - ✓ Claims not required
 - ✓ \$65 for a micro-entity

Critical Date for Claimed Invention

- Pre-AIA: date of invention
- AIA: effective filing date

Applicability of AIA



35 U.S.C. 100(i)(1): New Definition for Effective Filing Date

Effective filing date of a claimed invention under examination is the earlier of:

- the actual filing date of the patent or application containing a claim to the invention;

or

- the filing date of the earliest application for which the patent or application is entitled to a right of **foreign priority or domestic benefit** as to such claimed invention

Non-Provisional Patent Application

- 20-year patent protection from filing date
- Examined for patentability
- At least one claim required
- Published after 18 months
 - Unless non-publication request submitted

What Does a Non-Provisional Utility Application Include?

Governed by Manual of Patent Examining Procedure (MPEP) Chapter 600

- Title
- Specification
 - ✓ Background of the Invention
 - ✓ Brief Summary of the Invention
 - ✓ Brief Description of the Drawings
 - ✓ Detailed Description
 - how to make and use the claimed invention
 - ✓ Claims
 - particularly describe the metes and bounds of inventors intellectual property rights
- Drawings
 - ✓ if necessary to explain invention

AIA Impact on pre-AIA 35 U.S.C. 102

Pre-AIA 35 U.S.C. 102 A person shall be entitled to a patent unless—	AIA 35 U.S.C. 102 Concordance
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or	102(a)(1)
(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or	102(a)(1)
<p>(c) Abandonment of invention</p> <p>(d) Premature foreign patenting</p> <p>(d) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or</p>	No corresponding provision
<p>(e) The invention was described in</p> <p>(1) An application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or</p> <p>(2) A patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except than an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language, or</p>	102(a)(2)
(f) He did not derive the invention directly or indirectly from another person	101 and 115
<p>(g) Prior invention by another</p> <p>(1) during the term of the patent, the invention was known to the public, or</p> <p>(2) Before the invention was made, it was known to the public, or</p>	No corresponding provision

AIA Statutory Framework

Prior Art 35 U.S.C. 102(a) (Basis for Rejection)	Exceptions 35 U.S.C. 102(b) (Not Basis for Rejection)	
102(a)(1) Disclosure with Prior Public Availability Date	102(b)(1)	(A) Grace Period Disclosure by Inventor or Obtained from Inventor
		(B) Grace Period Intervening Disclosure by Third Party
102(a)(2) U.S. Patent, U.S. Patent Application, and PCT Application with Prior Filing Date	102(b)(2)	(A) Disclosure Obtained from Inventor
		(B) Intervening Disclosure by Third Party
		(C) Commonly Owned Disclosure

35 U.S.C. 102(a)(1):

Prior Public Disclosures as Prior Art

- 35 U.S.C. 102(a)(1) precludes a patent if a claimed invention was, before the effective filing date of the claimed invention:
 - patented;
 - described in a printed publication;
 - **in public use**;
 - **on sale**; or
 - **otherwise available to the public**

“Otherwise Available to the Public”

- Introduced by the AIA; no corresponding language in pre-AIA 35 U.S.C. 102
- Catch-all to account for other means of making an invention publicly available

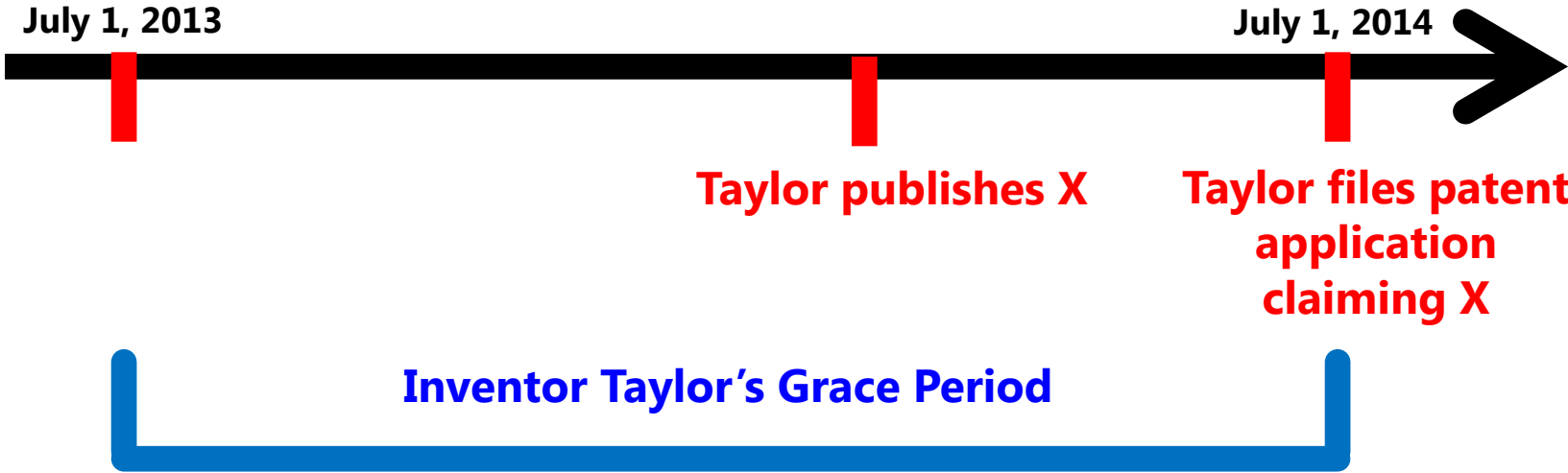
35 U.S.C. 102(b)(1)(A) Exception: Grace Period Disclosure of Inventor's Work

First exception: A disclosure made one year or less before the effective filing date of the claimed invention shall not be prior art under 35 U.S.C. 102(a)(1) if:

the disclosure was made by:

- the inventor or joint inventor; or
- another who obtained the subject matter directly or indirectly from the inventor or joint inventor

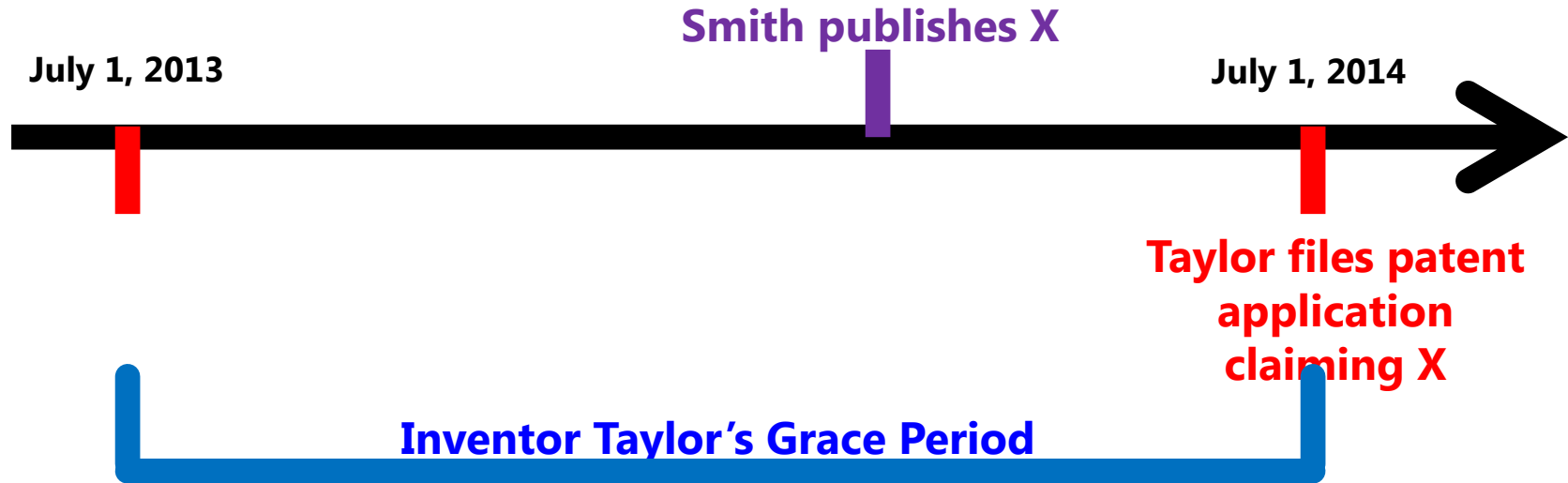
Example 1: Exception in 102(b)(1)(A)



- Taylor's publication is not available as prior art against Taylor's application because of the exception under 102(b)(1)(A) for a grace period disclosure by an inventor.

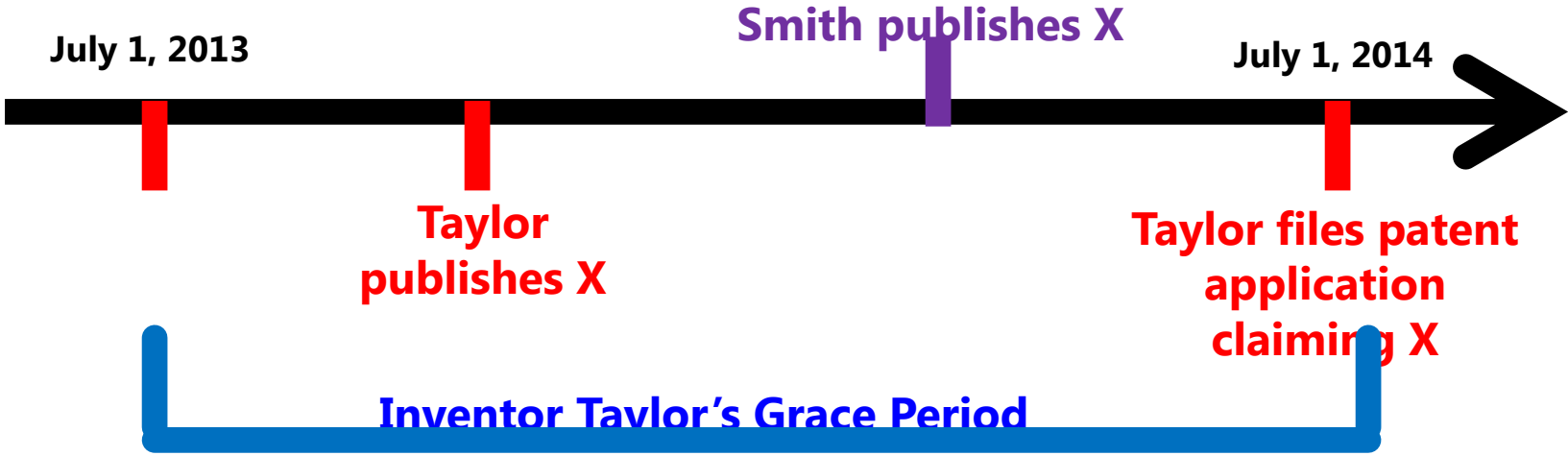


Example 2: Exception in 102(b)(1)(A)



- Smith's publication would be prior art to Taylor under 102(a)(1) if it does not fall within any exception in 102(b)(1).
- However, if Smith obtained subject matter X from Taylor, then it falls into the 102(b)(1)(A) exception as a grace period disclosure obtained from the inventor, and is not prior art to Taylor.

Example 3: Exception in 102(b)(1)(B)



- Smith's publication is not prior art because of the exception under 102(b)(1)(B) for a grace period intervening disclosure by a third party.
- Taylor's publication is not prior art because of the exception under 102(b)(1)(A) for a grace period disclosure by the inventor.
- If Taylor's disclosure had been before the grace period, it would be prior art against his own application. However, it would still render Smith inapplicable as prior art.

AIA Statutory Framework

Prior Art 35 U.S.C. 102(a) (Basis for Rejection)	Exceptions 35 U.S.C. 102(b) (Not Basis for Rejection)	
102(a)(1) Disclosure with Prior Public Availability Date	102(b)(1)	(A) Grace Period Disclosure by Inventor or Obtained from Inventor
		(B) Grace Period Intervening Disclosure by Third Party
102(a)(2) U.S. Patent, U.S. Patent Application, and PCT Application with Prior Filing Date	102(b)(2)	(A) Disclosure Obtained from Inventor
		(B) Intervening Disclosure by Third Party
		(C) Commonly Owned Disclosure

35 U.S.C. 102(a)(2): U.S. and PCT Patent Documents Are Prior Art as of the Date They Are “Effectively Filed”

35 U.S.C. 102(a)(2) precludes a patent if a claimed invention was described in a:

- U.S. Patent;
- U.S. Patent Application Publication; or
- PCT Application Publication designating the U.S.

that names another inventor and was **effectively filed** before the effective filing date of the claimed invention

35 U.S.C. 102(d): Determining the Date that a U.S. or PCT Patent Document Is “Effectively Filed”

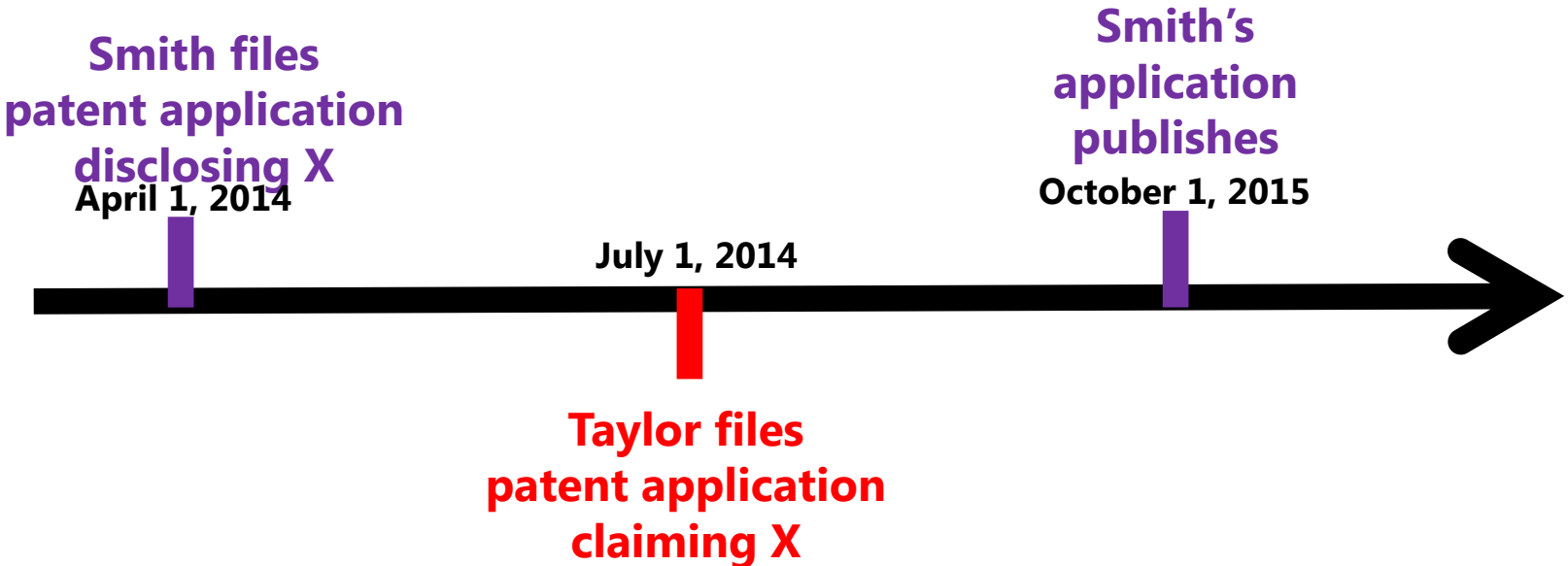
- Date that a U.S. or PCT patent document being applied as a reference is **effectively filed** is the earlier of:
 - the actual filing date of the U.S. patent or published application;or
 - the filing date of the earliest application to which the U.S. patent or published application is entitled to claim a right of foreign priority or domestic benefit which describes the subject matter
- Date that a patent document used as a reference is effectively filed may be different depending on whether the application under examination is subject to AIA or pre-AIA law

35 U.S.C. 102(b)(2)(A) Exception: Disclosure Obtained from Inventor

First exception: A disclosure in an application or patent shall not be prior art under 35 U.S.C. 102(a)(2) if:

the disclosure was made by another who obtained the subject matter directly or indirectly from the inventor or joint inventor

Example 4: Exception in 102(b)(2)(A)



- Smith's patent application publication is not prior art if Smith obtained X from Inventor Taylor because of the exception under 102(b)(2)(A) for a disclosure obtained from the inventor



Resources

- Statutory Framework Chart: http://www.uspto.gov/aia_implementation/FITF_card.pdf
- FAQs: http://www.uspto.gov/aia_implementation/faqs_first_inventor.jsp
- Examiner Introductory Video: http://helix-1.uspto.gov/asxgen/AIA_Close_Cpt.wmv
- Examiner Overview Training Slides: (available on AIA micro-site soon)
- Examiner Follow-up Video: (available on AIA micro-site soon)



AIA Help Center

- 1-855-HELP-AIA (1-855-435-7242)
- HELPAIA@uspto.gov



Prior Art Searching

UNITED STATES
PATENT AND TRADEMARK OFFICE



Why perform a prior art search?

- Ensure you do not waste time and money on an unpatentable idea
 - ✓ Initial Filing fees and maintenance fees
 - ✓ Attorney fees to file and prosecute an application can be \$10,000 dollars or more
- Helps with claim drafting: Allows you to draft claims around prior art the patent examiner is likely to find
- If invention is in early stages of development, allows inventor to design around prior art.
- Avoid infringement of existing patents
 - ✓ Infringement or “freedom to operate” search
- Hone your business plan
 - ✓ Identify potential competitors
 - ✓ Identify potential customers or licensees



Prior Art Search Resources

USPTO Detroit Regional office public search room

- Free patent and trademark searching
- Patent searching with EAST, same software used by patent examiners
- Open 9 AM – 4 PM, Monday- Friday

Patent and Trademark Resource centers located at:

- Hennepin County Library, Minneapolis Central

Google Patents: <https://patents.google.com/>

Free Patents Online: <http://www.freepatentsonline.com/>

Espacenet: <http://worldwide.espacenet.com/>

Patent Search Firms:

- Charge 600- 1200 for simple prior art searches
- Example search firms: <http://cardinal-ip.com/> , <http://www.lanuon-ip.com/PatentSearches.aspx>.



When should you search?

- During development of your idea?
- Prior to filing a provisional application?
- Prior to filing a regular application?

- Search may be an ongoing process, not necessarily a point in time.



Yes!

Search Strategies

- Use multiple differing search strategies
- Forward/Backward Search on a good reference
- “Building Block” Method
 - Search various features or concepts individually
 - Combine features and concepts to get closer to the invention
- Using synonyms or multiple versions of words
 - Not everyone calls a widget a widget
 - We frequently accept British English spellings
 - We don't always catch misspellings
- Classification searching can be extremely helpful
 - CPC schedule
 - Common classifications in prior art

How to Read a Patent: Cover Page



(12) **United States Patent**
Van Halen (10) Patent No.: **US 7,183,475 B2**
 Date of Patent: **Feb. 27, 2007**

(54) **STRINGED INSTRUMENT WITH ADJUSTABLE STRING TENSION CONTROL**

(75) Inventor: **Edward Van Halen**, Los Angeles, CA (US)

(73) Assignee: **E.L.V.H., Inc.**, Burbank, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 10/770,361

(22) Filed: Feb. 18, 2003

(65) **Prior Publication Data**
 US 2004/0145203 A1 Aug. 19, 2004

(51) Int. Cl. **G10D 3/04** (2006.01) **84/298**

(52) U.S. Cl. **84/297 R**, **84/313**, **298**, **299**, **307**, **312 R**

(58) **Field of Classification Search** See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS

3,142,121 A *	7/194	Boyd	84/313
4,535,670 A *	8/1983	Bonhoff	84/312
4,610,190 A *	9/1985	Maloney	84/312 R
4,686,883 A *	8/1987	Piche et al.	84/313
5,127,298 A *	7/1992	Saape et al.	84/313
5,542,330 A *	8/1996	Bonhoff	84/298
5,765,321 A *	6/1998	Sambet	84/312 R
5,907,114 A *	5/1999	Oliver	84/313

OTHER PUBLICATIONS

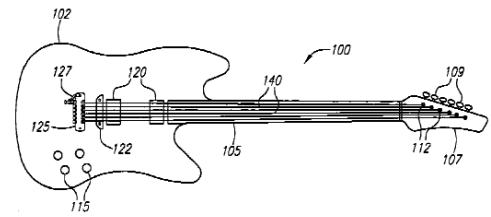
"The tone and volume controls," The electric guitar: analysis of components, undated, 2 pages.
 "Schaller Floyd Rose Tremolo Diagram," Guitar Body Schaller Floyd Tremolo, undated, 2 pages.
 "Schaller 456 Fine Tuning Stud Mount Bridge Diagram," Guitar Body 456 Schaller Bridge, undated, 1 page.
 Van Halen, Eddie, "Finally . . . an easy way to drop from E down to D and back, without unclamping," undated, 2 pages.
 "Dueser Instruction Manual," undated, 2 pages.
 Brochure from Hipshot Products, Inc., Jan. 2002.

* cited by examiner
 Primary Examiner—Kimberly Lockett
 (74) Attorney, Agent, or Firm—Irell & Manella LLP

ABSTRACT

A tension adjustment mechanism for a stringed musical instrument suitable for use on a tailpiece assembly comprises a pivoting member (such as a string receptor), an adjustable stop, and a lever handle engaged with the pivoting member. The pivoting member preferably has a post for securely receiving an end of a string and an elongate arm. Placement of the handle in a first position preferably causes the adjustable stop to engage and depress the elongate arm of the pivoting member, thereby increasing tension on the string. Placement of the handle in a second position preferably causes the adjustable stop to disengage the elongate arm of the pivoting member, thereby allowing the pivoting member to return to its original position, and decreasing tension on the string. A fine tuning adjustment may be included in the tailpiece assembly. The adjustable stop and/or fine tuning adjustment may comprise adjustable screws.

28 Claims, 8 Drawing Sheets



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Van Halen

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Scope of protection is not defined by the title or the picture on the front!



How to Read a Patent: Cover Page



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Van Halen (45) **Date of Patent:** Feb. 27, 2007

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(52) **U.S. Cl.** 84/298

(58) **Field of Classification Search** 84/297 R, 84/313, 298, 299, 307, 312 R
 See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,142,221 A *	7/1964	Boyd	84/313
4,535,670 A	8/1985	Borisoff	84/312
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4,686,883 A	8/1987	Piche et al.	84/313
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5,542,330 A	8/1996	Borisoff	84/298
5,760,321 A *	6/1998	Seabert	84/312 R
5,907,114 A *	5/1999	Culver	84/313

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"The tone and volume controls," The electric guitar: analysis of components, undated, 2 pages.
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 "Schaller 455 Fine Tuning Stud Mount Bridge Diagram," Guitar Body 456 Schaller Bridge, undated, 1 page.
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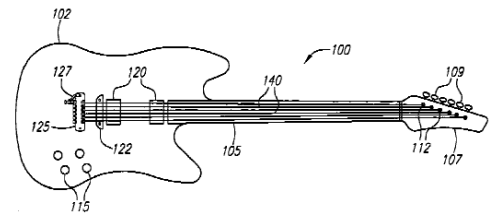
* cited by examiner

Primary Examiner—Kimberly Lockart
 (74) *Attorney, Agent, or Firm*—Ircll & Mazella LLP

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A tension adjustment mechanism for a stringed musical instrument suitable for use on a tailpiece assembly comprises a pivoting member (such as a string receptor), an adjustable stop, and a lever handle engaged with the pivoting member. The pivoting member preferably has a post for securely receiving an end of a string and an elongate arm. Placement of the handle in a first position preferably causes the adjustable stop to engage and depress the elongate arm of the pivoting member, thereby increasing tension on the string. Placement of the handle in a second position preferably causes the adjustable stop to disengage the elongate arm of the pivoting member, thereby allowing the pivoting member to return to its original position, and decreasing tension on the string. A fine tuning adjustment may be included in the tailpiece assembly. The adjustable stop and/or fine tuning adjustment may comprise adjustable screws.

28 Claims, 8 Drawing Sheets



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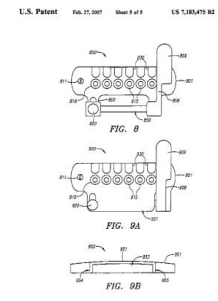
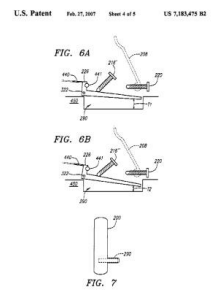
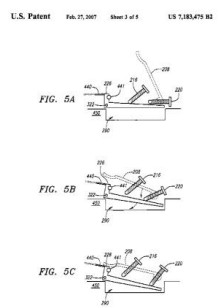
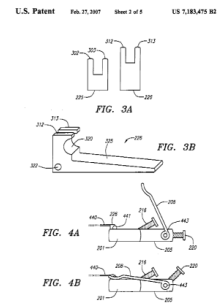
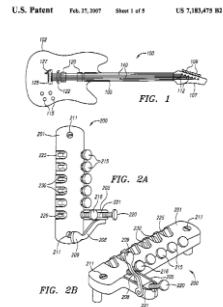
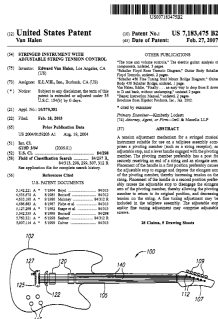
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5,542,330 A	8/1996	Borisoff	84/298
5,760,321 A *	6/1998	Seabert	84/312 R
5,907,114 A *	5/1999	Culver	84/313

The USPTO is moving to harmonize with the European Patent Office on a classification scheme. G10D is Stringed Instruments.



How to Read a Patent: Disclosure



US 7,183,475 B2

ADJUSTABLE TENSION COUPLER

Angus S. Lee, Inc., Berkeley, CA (US)

FIELD OF THE INVENTION

The present invention relates to adjustable tension couplers for use in musical instruments, and more particularly to adjustable tension couplers for use in stringed musical instruments.

BACKGROUND OF THE INVENTION

Stringed musical instruments, such as guitars, violins, and cellos, typically use adjustable tension couplers to adjust the tension of the strings. These couplers are typically made of metal and are attached to the strings by a screw mechanism. The tension of the strings is adjusted by turning the screw, which either tightens or loosens the string.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an adjustable tension coupler in a first position.

FIG. 2A-2Z are perspective views of the adjustable tension coupler in various positions and configurations.

FIG. 3A-3Z are perspective views of the adjustable tension coupler in various positions and configurations.

FIG. 4A-4Z are perspective views of the adjustable tension coupler in various positions and configurations.

FIG. 5A-5Z are perspective views of the adjustable tension coupler in various positions and configurations.

FIG. 6A-6Z are perspective views of the adjustable tension coupler in various positions and configurations.


+ 4 more pages of text

Disclosure should be written for one of "ordinary skill in the art"



How to Read a Patent: Claims

28 Claims, 5 Drawing Sheets


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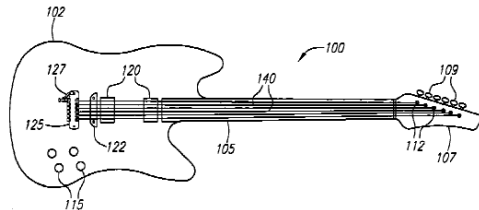
(12) **United States Patent** (10) **Patent No.:** US 7,183,475 B2
Van Halen (45) **Date of Patent:** Feb. 27, 2007

(54) **STRINGED INSTRUMENT WITH ADJUSTABLE STRING TENSION CONTROL** OTHER PUBLICATIONS
 (75) **Inventor:** Edward Van Halen, Los Angeles, CA (US) "The tone and volume controls," The electric guitar: analysis of components, undated, 3 pages.
 (73) **Assignee:** E.L.V.H., Inc., Burbank, CA (US) "Schaller Floyd Rose Tremolo Diagram," Guitar Body Schaller Floyd Tremolo, undated, 2 pages.
 (*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days. "Schaller 456 Fine Tuning Stud Mount Bridge Diagram," Guitar Body 456 Schaller Bridge, undated, 1 page.
 (21) **Appl. No.:** 10/770,361 "Van Halen, Eddie, 'Finally... an easy way to drop from E down to D and back, without unclamping,'" undated, 2 pages.
 (22) **Filed:** Feb. 18, 2003 "Drezer Instruction Manual," undated, 2 pages.
 (65) **Prior Publication Data** (57) **ABSTRACT**
 US 2004/015203 A1 Aug. 19, 2004 A tension adjustment mechanism for a stringed musical instrument suitable for use on a tailpiece assembly comprises a pivoting member (such as a string receptor), an adjustable stop, and a lever handle engaged with the pivoting member. The pivoting member preferably has a post for securely receiving an end of a string and an elongate arm. Placement of the handle in a first position whereby causes the adjustable stop to engage and depress the elongate arm of the pivoting member, thereby increasing tension on the string. Placement of the handle in a second position preferably causes the adjustable stop to disengage the elongate arm of the pivoting member, thereby allowing the pivoting member to return to its original position, and decreasing tension on the string. A fine tuning adjustment may be included in the tailpiece assembly. The adjustable stop and/or fine tuning adjustment may comprise adjustable screws.

(56) **References Cited**
 U.S. PATENT DOCUMENTS
 3,142,221 A * 7/1964 Boyd 84313
 4,535,670 A * 8/1985 Bonhoff 84312
 4,610,180 A * 9/1985 Maloney 84312 R
 4,686,883 A * 8/1987 Fitch et al. 84313
 5,127,298 A * 7/1992 Saape et al. 84313
 5,542,330 A * 8/1996 Bonhoff 84298
 5,765,321 A * 6/1998 Sander 84312 R
 5,907,114 A * 5/1999 Culver 84313

28 Claims, 5 Drawing Sheets

8. An apparatus for adjusting the tension of at least one string of a stringed musical instrument, comprising: a pivoting member configured to engage an end of a string and comprising an elongate arm; an adjustable stop; and a handle adapted for manual actuation; wherein placement of the handle in a first position causes a contact member to engage and depress the elongate arm of the pivoting member, thereby increasing tension on the string, and wherein placement of the handle in a second position causes the contact member to disengage the elongate arm of the pivoting member, thereby allowing the pivoting member to come to rest against the adjustable stop and decreasing tension on the string; wherein said tailpiece comprises a plurality of string receptors substantially serially aligned between a first end and a second end of said tailpiece; wherein said handle is secured proximate to the first end of said tailpiece; wherein said contact member is secured proximate to the second end of said tailpiece; and wherein said handle is mechanically engaged with said contact member via a rod extending substantially from the first end of said tailpiece to the second end of said tailpiece.



Scope of protection is defined by the claims!



Claims

- The claims are the legal definition of the invention, and are read in light of the definitions provided in the written description and the understanding of one of ordinary skill in the art.
- A claim in a Utility application or patent has three (3) main parts
 - ✓ A **preamble** or the introduction;
 - ✓ A **transitional phrase** such as
 - comprising (having at least);
 - consisting of (includes only); and
 - ✓ A **body** reciting the elements of the invention.

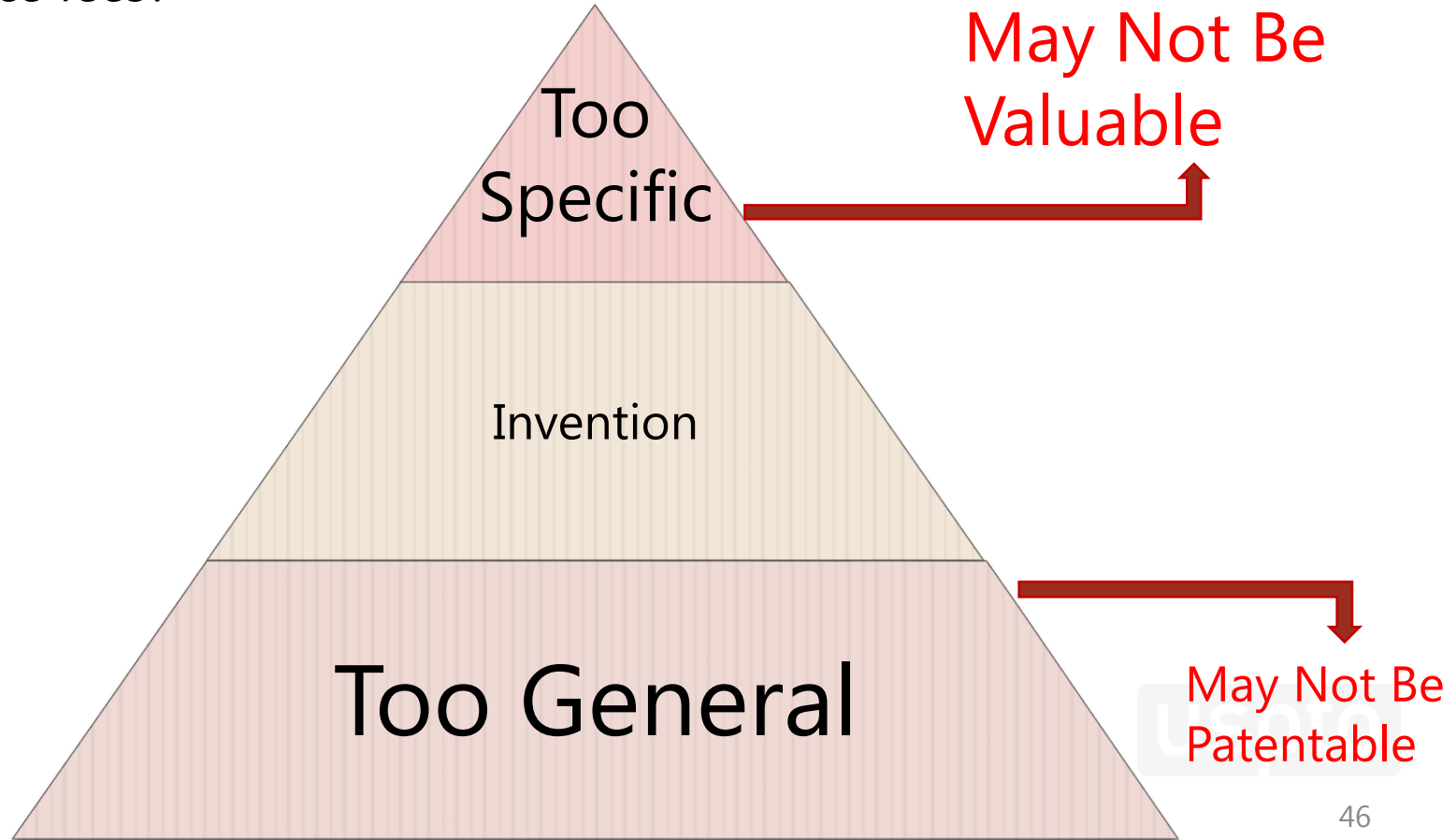
Focus on the “Heart” of the Invention

- A claimed invention must be novel, non-obvious and have a utility
- A Patent is not a marketing brochure
- Understand what the invention really is:
 - What are the advantages of the new design?
 - Is there more than one inventive feature?

Identify Fundamental Elements

- Understand scope of the prior inventions
 - What have competitors previously done?
 - Conduct a patentability search
- Defines the potential claim limits
 - what is the target?
- Alternatives
 - prior inventions may be used to develop alternative embodiments

Which claim limitations will be novel and non-obvious over the prior art while still retaining value for the Applicant and worth the cost of maintenance fees?



Proposed Example Claim: **relatively broad scope**

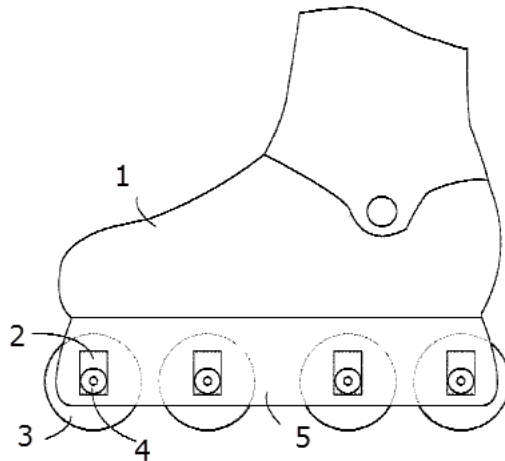
1. *Footwear comprising:*

a boot including a sole;

a frame mounted on underside of the sole;

a plurality of wheels arranged in a straight line beneath the frame; and

an axle suspension comprising metal which connects the wheels to said frame using screws.



(1) boot (2) axle suspension (3)
wheel (4) screw (5) frame

Proposed Example Claim: **unnecessarily narrow scope**

1. A *skate consisting of:*

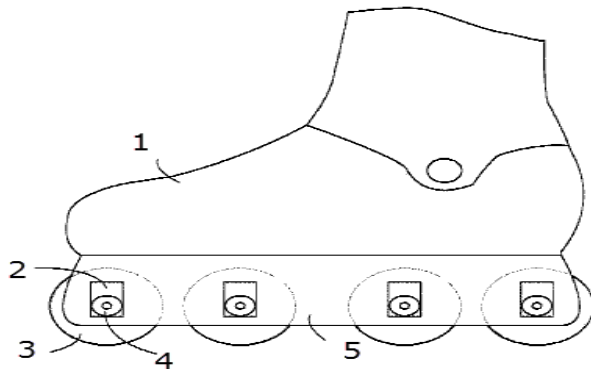
a boot including a sole;

a frame mounted on underside of the sole wherein the frame is mounted to the underside of the sole by urethane epoxy;

four of wheels each having a diameter of 72 millimeters arranged in a straight line beneath the frame; and

an axle suspension which connects the wheels to said frame using screws;

wherein the axle suspension consists of SAE grade 4118 steel.



(1) boot (2) axle suspension (3)
wheel (4) screw (5) frame



Patent Examination

UNITED STATES
PATENT AND TRADEMARK OFFICE



Who is the Patent Examiner?

- A U.S. government employee
- An engineer or scientist with an appropriate technical degree
- A person who has received training in how to examine a patent, according to the patent laws, rules, USPTO policies, and relevant court decisions
- Assigned to an Art Unit

Patent examination Process at the USPTO

1. Application **filed**

2. Application is **classified** in a particular technology area

3. Art Unit Supervisor **assigns** application to a patent examiner's docket of new cases

6. Examiner performs **prior art search** in view of Application filing date

5. Examiner **reviews** specification, claims, and drawings and formulates a prior art search strategy

4. Examiner **selects** application to work on from eDAN docket



Date	Code	Dist. App #	Gender	Team	Text
04012003	ADHOC	88123.456	DTALBOTT	2622ExamClass	574 for classifier
04020003	ADHOC	88123.456	UCHAU	OPPEExamClass	New application for
05022003	CLMPTO	88234.567	DZARNEKE	2622ExamClass	574 please classify
05030003	ADHOC	88234.567	DZARNEKE	2622ExamClass	it looks like your train

7. Examiner compares prior art to application claims, **writes office action** (rejection or allowance) and sends applicant the office action

8. **Correspondence with Applicant** (interview, amendments, attorney arguments) prior to allowance or final rejection

9. Applicant may appeal a final rejection to Patent Trial and Appeal Board

The Examination

Patent Examiner reviews contents of the application for compliance with all U.S. patent legal requirements.

“An applicant is entitled to a patent unless...” * The requirements of U.S. patent law are not met. **(35 USC §102)*

The burden is on the examiner to show if a patent is not warranted.



The Examination (*con't.*)

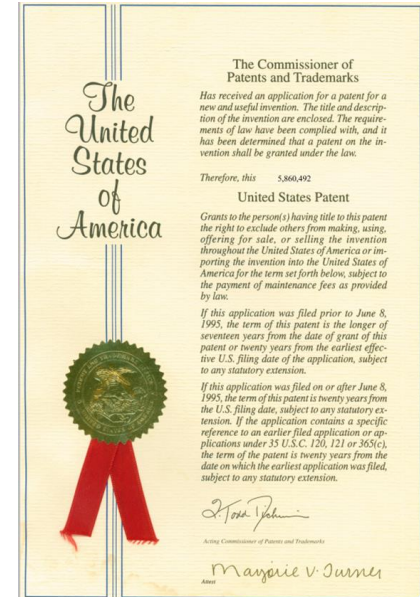
The claims, as supported by the rest of the application, are reviewed for compliance with:

- **35 USC §101**: Patent eligible subject matter, utility, double-patenting
- **35 USC §102**: Must be new
- **35 USC §103**: Must not be obvious over what's been done before
- **35 USC §112(a)**: The claims must be described in the specification including the manner of making and using the claimed invention
- **35 USC §112(a)**: The claims must clearly define what applicant is trying to protect

Examination:

The Role of the Patent Examiner

- Reads and understands the invention as set forth in the specification
- Interprets drawings
- Interprets the claims (metes and bounds)
- Searches the prior art
- Makes legal/engineering determinations
- Writes Office Actions (opinion)
- Issues Valid Patents



Why do Examiners search?

- Learn technology
- Keep abreast of state of the art
- Ensure no prior art exists
- Determine patentability
- Where do Examiners search?
 - US and International Patent Literature
 - Electronic Searching (publications, web sites)
 - **Anywhere** they might find the information they need with evidence of the date of publication or availability

Applicant's Response

Applicant may respond to an office action by:

- Amendment to the claims, specification or both
- Arguing that the Examiner's rejections are incorrect
- Submitting evidence
- Submitting prior art
- No "new matter" may be added to the claims or specification

Non-Final, or Final?

- The first Office Action is almost always **non-final**, meaning applicant has the right to amend and reply
- The second Office Action may be **final**, if no new rejections are made that were necessitated by applicant's amendment in response to the previous Office Action.
- Applicant may reply to a final action, but has no **right** to have that reply entered.
- After a final rejection, the applicant may file a Request for Continued Examination (RCE) to enter another amendment
- The examiner may **allow** the application at any step in the process.

Interviews

Having an interview with the examiner can speed prosecution

- Applicant may request an interview with the examiner prior to filing the response to an Office Action:
 - If applicant doesn't feel the examiner understands their invention or position
 - If applicant doesn't understand the examiner's position
- Interviews may be on the phone, video conference, or in person.
- If the applicant is not *pro se*, i.e. has an attorney or agent, that attorney or agent **MUST** be present at the interview (no dual correspondence).



What Else May an Examiner Do?



- Advise on advantages of, and appropriate classification fields for, pre-examination search
- Advise on advantages of securing services of a competent patent attorney or agent
- Advise on Office fees and Office procedures in general
- Assist public in conducting a search, short of rendering patentability advice or opinion as to whether an application should be filed

What May an Examiner **NOT** Do?



- Apply for a patent
- Represent someone who has applied for a patent
- Give an opinion on patentability (other than in the course of their work)
- Comment on the validity of an issued patent- all issued patents are presumed to be valid

Patent Examination: The Results

- The examiner can allow or reject an application
- The applicant can amend, argue, abandon or (after a second rejection) appeal
- No mechanism for the examiner to force examination to end if the applicant wants to continue

