## UNITED STATES PATENT AND TRADEMARK OFFICE



# Path to a Patent, Part IV: Learn how to draft a patent application

## **Notice**

This content is for informational purposes only and is not legal advice. Please consult with appropriate sources for legal authority and guidance on these matters.

# **Objectives**

- Contents of a Patent application disclosure
  - Detailed Description
  - Drawing
  - Abstract
  - Claims
- Enablement Requirement
- Limitations of claims can be modified based only on the disclosed invention at the time of filing
- Important to capture the invention using clear and consistent language throughout the disclosure

## **Utility applications**

#### **Provisional**

- Not examined or published
- One-year time limit
- Only for utility

### **Nonprovisional**

- Examined: claims required, written description must meet requirements
- Published
  - 18 months from earliest filing date
  - Unless request for non-publication at filing
- Can become a patent

#### 100/06481774D1

#### (12) United States Patent

(10) Patent No.:	US	6,481,724 B
(15) Date of Potents		Nov 10 200

#### (54) ADAPTER FOR CONVERTING IN-LINE ROLLER SKATES TO ICE SKATES

(76)	Inventor:	Renny Carl Whipp, R.R. 3, Ilderton, Ontario (CA), M0M 2A0
(*)	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.:	09/828,178

(22)	Pateur.	Apr. 9.	, 2001		
(51)	Int. CL7	arm crewe no			A63C 17/1
(52)	U.S. Cl.		280/7.13;	280/11.18;	280/11.221
					280/11.22

#### 280/11.18, 11.221, 11.223, 11.27

U.S	S. PATENT	DOCUM	IENTS

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1,266,386	Λ	٠	5/1918	Barr 280/11.32
				Chomin 280/11.223
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6,039,328	Α	*		Pawlowski et al 280/11.12
6 (169 269	A	٠	5/2000	Cornelius et al. 280/11 16

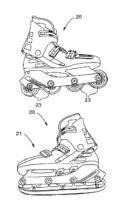
<sup>&</sup>quot; cited by examin

Primary Examiner—Robert P. Olszewski
Assistant Examiner—James S. McClellan
(74) Attorney, Agent, or Firm—Anthony Asquith &

#### 7) ABSTRA

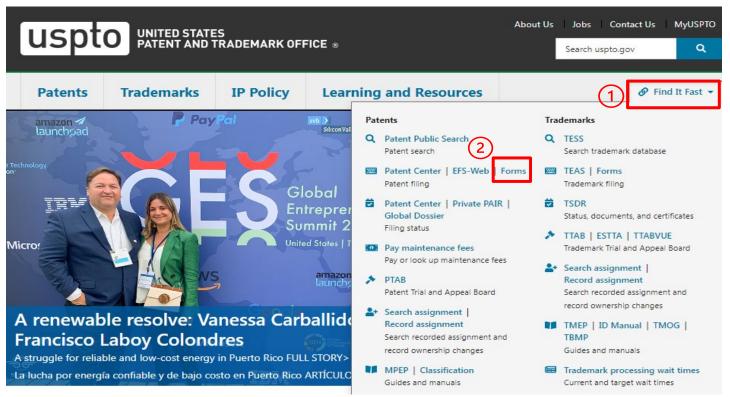
The adapter comprises an ice-blade mounted in a bladechassis. The blade-chassis is a plastic moking, which fits between the spport rails of an in-line roller skate, and is clamped therebetween by the spindle-rods that serve as the spindles of the rollers. The ice-blade resides in a channel in the blade-chassis, the roof of the channel, and of the blade, being clear of, and below, the spindle rods's.

#### 19 Claims, 6 Drawing Sheets



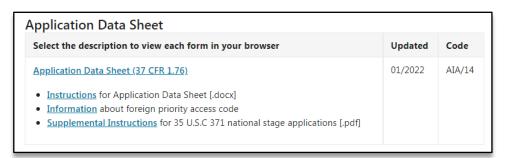


## Where to find patent forms





# Key forms for filing a nonprovisional utility patent application



Select the description to view each form in your browser	Updated	Code
Declaration (37 CFR 1.63) For Utility Or Design Application Using An Application Data Sheet (37 CFR 1.76)  • Download AIA/01 INSTRUCTIONS, [PDF]	06/2012	AIA/01
Declaration For Utility Or Design Patent Application (37 CFR 1.63)  Download AIA/08 INSTRUCTIONS. [PDF]	11/2015	AIA/08

#### **Application Data Sheet**

- Instructions for Application Data Sheet (ADS)
- Optional if not claiming priority
- Required if claiming priority to a provisional

#### Inventor's Oath or Declaration

Different forms for filing with or without an Application Data Sheet

Transmittals and Cover Sheets		
Select the description to view each form in your browser	Updated	Code
Utility Patent Application Transmittal	10/2017	AIA/15

**Utility Patent Application Transmittal** 

# Provisional patent application requirements

### Law requires:

- Clear indication that applicant is filing a provisional application
- Fee
- Description of invention must enable someone to make and use the invention
- Drawing, if necessary to understand invention



# Provisional patent application requirements (cont'd)

Cover Sheet provides a clear indication that applicant is filing a provisional form PTO/SB/16

- Inventor name(s)
- Inventor residence(s)
- Title of the invention
- Correspondence address
- Attorney information (if any)
- U.S. government interest (if any)



## Provisional application for patent cover sheet

	PTO/SB/16 (10-20 Approved for use through 11/30/2020. OMB 0651-003  U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERC  Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number  PROVISIONAL APPLICATION FOR PATENT COVER SHEET — Page 1 of 2				
		ng a PROVISIONAL APPLICATION FOR PA			
	Priority Mail Express® Label No.				
		INVENTOR(S)			
Inventor name(s)	Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)		
inventor name(s)	<b>—</b>	<b>—</b>			
Inventor recidence(s)					
Inventor residence(s) ———					
	Additional inventors are being named on the	separately numbered	sheets attached hereto.		
	TITLE	OF THE INVENTION (500 characte	ers max):		
Title of the invention ——					
ſ	Direct all correspondence to:	CORRESPONDENCE ADDRESS			
	The address corresponding to Customer	Number:			
Correcpondence address	OR				
Correspondence address \	Firm or Individual Name				
	Address				
	City	State	Zip		
L	Country	Telephone	Email		
	ENCLO:	SED APPLICATION PARTS (check all	that apply)		
	Application Data Sheet, See 37 CFR 1.76	. CD(s), Numbe	er of CDs		

### Provisional application for patent cover sheet

Attorney information (if any)

OR				
Firm or Individual Name				
Address				
City	State		Zip	
Country	Telephone		Email	
ENCLOSED APPLIC	ATION PART	'S (check all that ap	ply)	
Application Data Sheet. See 37 CFR 1.76.		CD(s), Number of CDs		
Drawing(s) Number of Sheets		Other (specify)		
Specification (e.g., description of the invention) Num	nber of Pages _			
Fees Due: Filing Fee of \$300 (\$150 for small entity) (\$75 for	for micro entity).	If the specification and o	drawings ex	xceed 100 sheets of paper,
an application size fee is also due, which is \$420 (\$210 for sm	all entity) (\$105	for micro entity) for each	th additiona	al 50 sheets or fraction
thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).	DI ICATION CIT	Till ppoi		DUICATION FOR RATERIT
METHOD OF PAYMENT OF THE FILING FEE AND AP	PLICATION SIZ	E FEE FOR THIS PROVIS	IONAL AP	PLICATION FOR PATENT
Applicant asserts small entity status. See 37 CFR 1.27.				
Applicant certifies micro entity status. See 37 CFR 1.29.  Applicant must attach form PTO/SB/15A or B or equivalent.				
A check or money order made payable to the Director	of the United Si	tates Patent		
and Trademark Office is enclosed to cover the filing fe	e and application	n size fee (if applicable).		TOTAL FEE AMOUNT (\$)
Payment by credit card. Form PTO-2038 is attached.				
The Director is hereby authorized to charge the filing for	ee and applicati	on size fee (if applicable	) or credit	any overpayment to Deposit
Account Number:				
USE ONLY FOR FILING A				
This collection of information is required by 37 CFR 1.51. The informal process) an application. Confidentiality is governed by 35 U.S.C. 122 and gathering, preparing, and submitting the completed application form amount of time you require to complete this form and/or suggestions Trademark Office. U.S. Department of Commerce. P.O. Box 1450. Alex	nd 37 CFR 111 an to the USPTO. Tim for reducing this	d 1.14. This collection is est ne will vary depending upon burden, should be sent to t	imated to tal the individu he Chief Info	ke 10 hours to complete, including all case. Any comments on the ormation Officer, U.S. Patent and
Trademark Office, 0.5. Department of Commerce, P.O. Box 1450, Alex		1430. DO NOT SEND FEES C	IN COMPLET	ED FORMS TO THIS ADDRESS. SEND

### Provisional application for patent cover sheet

U.S. government interest (if any)

Approved for use through 11/30/2020. OMB0651-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number
PROVISIONAL APPLICATION FOR PATENT COVER SHEET – Page 2 of 2
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government. (NOTE: Providing this information on a provisional cover sheet, such as this Provisional Application for Patent Cover Sheet (Form PTO/SB/16), does not satisfy the requirement of 35 U.S.C. 202(c)(6), which requires that the specification contain a statement specifying that the invention was made with Government support and that the Government has certain rights in the invention.)
No.  Yes, the invention was made by an agency of the U.S. Government. The U.S. Government agency name is:
Yes, the invention was made under a contract with an agency of the U.S. Government.
The contract number is:
The U.S. Government agency name is:
In accordance with 35 U.S.C. 202(c)(6) and 37 CFR 401.14(f)(4), the specifications of any United States patent applications and any patent issuing thereon covering the invention, including the enclosed provisional application, must state the following:
"This invention was made with government support under [IDENTIFY THE CONTRACT] awarded by [IDENTIFY THE FEDERAL AGENCY]. The government has certain rights in the invention."

#### WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly

# Provisional v. nonprovisional

#### **Provisional**

- Automatically abandoned after one year period
- No claims required
- Written disclosure must meet same requirements as nonprovisional
- Note: provisional applications are not allowed for design patent applications

### **Nonprovisional**

- At least one claim required
- Written disclosure must meet requirements of 35 USC 112 1st paragraph (pre AIA), or 35 USC 112(a) paragraph (post AIA)
- Examined for patentability, can result in a patent

35 USC 112 (1)/(a): The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

## **Application Data Sheet (optional)**

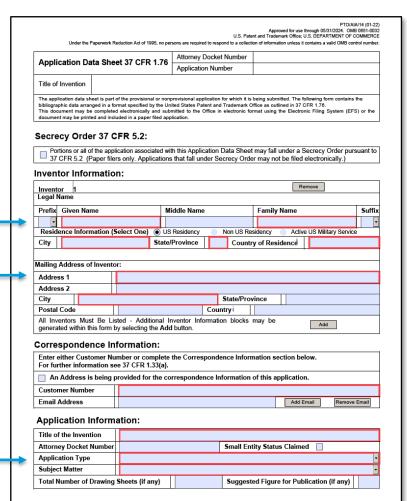
Application Data Sheet (ADS) is required if you are claiming priority to provisional, continuation, divisional, or foreign application.

Inventor name

Address

Correspondence information: check the box or enter a customer number (if you have one)

Application type: provisional or nonprovisional



#### Priority (if any) to

- -Provisional or
- -National Stage entry

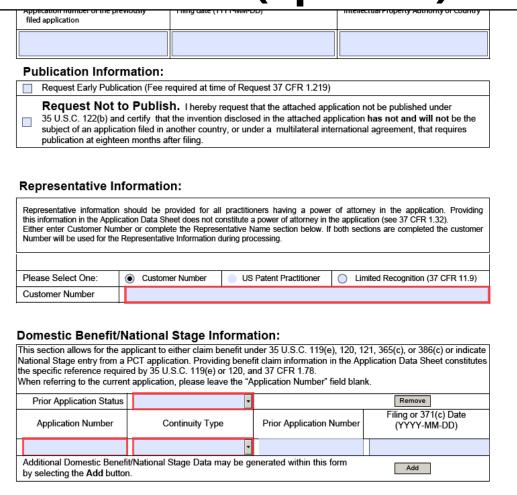
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Application Dat	ta Sheet 37 C	FR 1.76	Application	Number		
Title of Invention				<u> </u>		
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by selecting the Add button.

**Application Data Sheet (optional)** 

Priority (if any) to:
Provisional or
National Stage entry



# Nonprovisional (Utility) Patent Application Filing Guide

- A nonprovisional utility patent application must include a specification, including
  - a description and a claim or claims;
  - drawings, when necessary;
  - an oath or declaration; and
  - prescribed filing, search, and examination fees.
- Online guide: <u>www.uspto.gov/NonProvisionalPatent</u>
- File Wrapper Images of published or patented applications: <a href="www.uspto.gov/PatentCenter">www.uspto.gov/PatentCenter</a>

## Declaration (37 CFR 1.63)- with ADS

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMR control number DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) Title Title of Invention As the below named inventor. I hereby declare that: This declaration The attached application, or is directed to: Select one of United States application or PCT international application number these boxes The above-identified application was made or authorized to be made by me. I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO. petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Print inventor name LEGAL NAME OF INVENTOR Inventor signature Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor. This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, If you need assistance in completing the form, call 1,800,PTO,9199 and select option 2

## **Declaration - without ADS**

DESIGN	UTILITY OR	Attorney Docket Number		
PATENT APPLIC		First Named Invent	or Pat Pen	ding
(37 CFR 1.6		(	OMPLETE IF	KNOWN
(0. 0. 1. 1.0	,	Application Numbe	r	
Declaration Submitted	Declaration Submitted After Initial	Filing Date		
With Initial OR	Filing (surcharge (37 CFR 1.16(f))	Art Unit		
Filing	required)	Examiner Name		
		Examiner Hame		
	(Title of the	e Invention)		
As a below named inventor, I hereby declar		, , , , , , , , , , , , , , , , , , , ,		
This declaration is directed to:				
The attended conficution				
The attached application,				
OR				
United States Application Number or	PCT International app	olication number		
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The above-identified application was made of	or authorized to be made	ada bu ma		
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I believe I am the original inventor or an origi	nal joint inventor of a	claimed invention in th	e application.	
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#### **DECLARATION** — Utility or Design Patent Application

#### WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identify theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO, Petitioner/applicant is advised that the record of a patent application from the documents before submitting them to the application (unless a non-publication request in compliance with 37 CPR 1.213(a) is made in the application or because of the application of the application (unless a non-publication request in compliance with 37 CPR 1.213(a) is made in the application in its personal patent. Furthermore, the record form an abandoned application may also be available to the public lift the application is referenced in a published application or an issued patent (see 37 CPR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application (such as the PTO-S030) and in the PTO-2030 submitted for payment purposes are not retained in the application (such as the PTO-S030) are placed into the Privacy Act system of necords DEPARTHENT OF COMMERCE/COMMERCE-PAT-T. System name: Paperat Application Files. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of a patent application and Electronic Funds Transfer Pofilians.

(E.g., Given Name (f	irst and middle if any) and Family	Name or Surname)				
Pat Pending						
Inventor's Signature		Date (Option	Date (Optional)			
Residence: City	State	Country				
Alexandria	VA	USA				
Mailing Address						
456 East Street						
City	State	Zip	Country			
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Alexandria	VA	22301				
	Additional inventors are being r	named on the 1 Supplementa	I sheet(s) PTO/AIA/10 attached hereto			

[Page 2 of 2]

## **Specification**

- Written description of the invention
- How to make and use the invention
- Clear, full, concise, and exact terms to allow any person skilled in the technology of the invention to make and use the invention
- At least one specific embodiment
- Concludes with at least one claim (must begin on a new page)



# **Specification page format**

- The specification, including the abstract and claims, must have lines that are 1.5 or double-spaced in a single column of text
- Written on only one side in portrait orientation
- 8.5 by 11 inches with all margins of at least ¾ inches except for a left side margin of at least 1 inch
- The application pages must be numbered consecutively (centrally located above or below the text) starting with page one
- Non-script font (e.g., Arial, Times Roman, or Courier), preferably with a font size of 12



# Specification page format

- 1.5 or double-spaced lines in a single column of text
- Only one side of page in portrait orientation
- 8.5 by 11 inches, all margins ≥ 3/4 inches, except for a left side margin ≥ 1 inch
- Pages numbered consecutively (centrally located above or below the text) starting with page one
- Non-script font (e.g., Arial, Times Roman, or Courier), preferably size 12 font

2

In-line roller skating has recently become very popular; ice-skating, of course, has been popular for many years. The invention lies in an adapter for converting in-line roller skates for ice-skating.

In comparing the different needs of the two different types of skating, it is recognised that the requirements of the skate-boot are more or less the same for both types.

Traditionally, upon purchasing both roller skates and ice-skates, the skater now has two pairs of skate-boots. The pairs are more or less the same, except for the structures underneath the boot.

The boot itself is a large part of the cost. As a result, often, a skater who wishes to enjoy both types of skating has to make do, for economic reasons, with equipment of less quality, simply because of the duplication of the expensive boots. The adapter of the invention is aimed at making possible the economies that result from being able to take the rollers off the roller-skate boot, and to attach an ice-skate unit to the boot, in their place.

A good deal of research and development has gone into the design of the boots intended specifically for in-line roller skates - perhaps even more than into the boots designed specifically for ice-skates. Many dual-mode skaters wish they could purchase a pair of ice-skate boots that have the quality and performance of their roller-skate boots. The adapter of the invention is aimed at making it possible for the high-performance boot structure often found in in-line roller-skates to be available for use with ice-skates.

Of course, it would be a simple matter to devise an ice-skate adapter system, if the adapter could be custom-fitted to every brand and size of in-line roller skate. It has been recognised, in one aspect of the invention, that custom-fitting is not necessary, and it has been recognised that a single design of adapter is all that is needed to enable the conversion of almost any brand or size of in-line roller skate into a robust, high-performance, ice-skate.

# Specification page format, part 1

<u>></u> 1" margin

- Portrait orientation
- 8.5" x 11" page

In-line roller skating has recently become very popular; ice-skating, of course, has been popular for many years. The invention lies in an adapter for converting in-line roller skates for ice-skating.

In comparing the different needs of the two different types of skating, it is recognised that the requirements of the skate-boot are more or less the same for both types.

Traditionally, upon purchasing both roller skates and ice-skates, the skater now has two pairs of skate-boots. The pairs are more or less the same, except for the structures underneath the boot.

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conversion of almost any brand or size of in-line roller skate into a robust, highperformance, ice-skate. <u>></u> ¾" margin

-1.5 or double spaced

Text only on one side of page

<u>></u> ¾" margin

# Specification page format, part 2

Pages numbered consecutively (centrally located above or below the text) starting with page one

Non-script font, preferably size 12 pt

2

In-line roller mating has recently become very popular; ice-skating, of course, has been popular for many years. The invention lies in an adapter for converting in-line roller skates for ice-skating.

In comparing the different needs of the two different types of skating, it is recognised that the requirements of the skate-boot are more or less the same for both types.

Traditionally, upon purchasing both roller skates and ice-skates, the skater now has two pairs of skate-boots. The pairs are more or less the same, except for the structures underneath the boot.

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conversion of almost any brand or size of in-line roller skate into a robust, highperformance, ice-skate. Single column of text

## **Specification sections**

- Title of the Invention (short and specific)
- Most common applicable sections
  - Background (e.g., state of the art before your invention)
  - Brief Summary of the Invention
  - Brief Description of the Drawings (list of all figures by number with brief statement of what the figure depicts)
  - Detailed Description of the Invention
- Claims (on a separate sheet)
- Abstract (less than 150 words, one paragraph, on separate sheet)

## Lesser used sections

- Cross reference to related applications
  - Include if you are filing a continuation or divisional or claiming priority to a provisional application
- Statement regarding federally sponsored research
- Names of parties to a joint research agreement
- Incorporation by reference of material submitted via compact disk or text file
- Statement regarding prior disclosure by the inventor or a join inventor
- Sequence listing



## Title of the invention

The title should be as specific as possible in describing the invention.

- Think of the title as the quick description of your invention
- Avoid generic language such as "system and method for ..."
- Should allow a reader to readily ascertain what your invention is
- Subject to change as a result of prosecution
- If a satisfactory title is not supplied by the applicant, the examiner may, at the time of allowance, change the title by an examiner's amendment

## **Abstract**

- Starts on a separate sheet with the heading "Abstract"
- Must be 150 words or less; 1.5 or double spaced
- Narrative form; single paragraph
- Points out what is new in the technology
- Not a repeat of the claim(s) or Brief Summary
- Written to enable the public to quickly determine the nature of the technical disclosures of the invention

See MPEP § 608.01(b) for more information



## **Example abstract**

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Abstract of the Disclosure

Title: ADAPTER FOR CONVERTING IN-LINE ROLLER SKATES TO ICE SKATES

The adapter comprises an ice-blade mounted in a blade-chassis. The blade-chassis is a plastic moulding, which fits between the support rails of an in-line roller skate, and is clamped therebetween by the spindle-rods that serve as the spindles of the rollers. The ice-blade resides in a channel in the blade-chassis, the roof of the channel, and of the blade, being clear of, and below, the spindle rods.

## **Background of the invention**

- Field of invention
  - Describe at a high level the areas pertinent to your invention
- Description of related art
  - Describe what you know has been done before
  - Describe what prior art you know about
  - Describe the problems that lead you to come up with your invention



# **Example written description**

Title: ADAPTER FOR CONVERTING IN-LINE ROLLER SKATES TO ICE SKATES 2 This invention relates to skate-boots, and to an adapter whereby the same skate-boots may be utilised interchangeably as both ice skates and in-line roller skates. BACKGROUND TO THE INVENTION In-line roller skating has recently become very popular; ice-skating, of course, has been popular for many years. The invention lies in an adapter for converting in-line roller 10 11 skates for ice-skating. 12 In comparing the different needs of the two different types of skating, it is recognised that 13 the requirements of the skate-boot are more or less the same for both types. Traditionally, upon purchasing both roller skates and ice-skates, the skater now has two pairs of skate-boots. The pairs are more or less the same, except for the structures underneath the boot. 17 18 The boot itself is a large part of the cost. As a result, often, a skater who wishes to enjoy 19 both types of skating has to make do, for economic reasons, with equipment of less 20 quality, simply because of the duplication of the expensive boots. The adapter of the invention is aimed a king no highther that hoult from heing to the

Examples from USP6481724

## Brief summary of the invention

- Precedes the Detailed Description
- Purpose is to apprise the public as well as more focused artisans of the nature of the invention
- The summary should be directed to the specific invention being claimed in one or more clear, concise sentences or paragraphs
- Should be consistent with the subject matter of the claims



## **Example brief summary of invention**

quickly and easily, and in a manner that is commensurate with the routine maintenance tasks skaters normally have to carry out, and in which, even after the changeover between the rollers and the ice-blade has been made many times, the routine act of making the changeover leaves both modes of the skate tight and secure, and safe.

#### Brief Summary of Invention

It is recognised, in the invention, that virtually all in-line roller skates use rollers that have substantially the same dimensions. In particular, even when the rollers differ as to quality of materials, or even differ slightly as to overall diameter, still the rollers all have the same overall thickness or width W at the axle. In nearly all of the rollers currently in use, this width W is 0.9 inches. It is also recognised that the diameter D of the spindle upon which the rollers are mounted is also standardised - to 1/4 inch diameter. Other standard sizes are sometimes encountered; for example, some brands of youth skate have a width of 0.75 inches, although the spindle remains the same, at 1/4 inch.

The standardisation of rollers also means that certain aspects of the boots, in turn, have been correspondingly standardised, at least as regards the dimensions of the mountings for the rollers. (Such aspects of boot performance as lateral support, ankle-hinges, manner of tightening the boot to the foot, etc, however, are within the domain of each

# Brief description of the drawings

- If drawings (e.g., figures or flow diagrams) are part of the application papers, this section needs to be provided before the application is considered complete and released from initial processing.
- This section must include a brief statement of what each figure depicts (e.g., a front view of the invention, an expanded view of the elements prior to assembly).



## **Drawings**

- Part of the disclosure of the invention; required if necessary to understand the invention
  - A drawing necessary to understand the invention cannot be introduced after the filing date
- Must show every feature of the invention claimed
- Must contain as many views as necessary to show the invention
- Drawings may be deemed "acceptable" or "unacceptable" on the basis of them being readable and reproducible



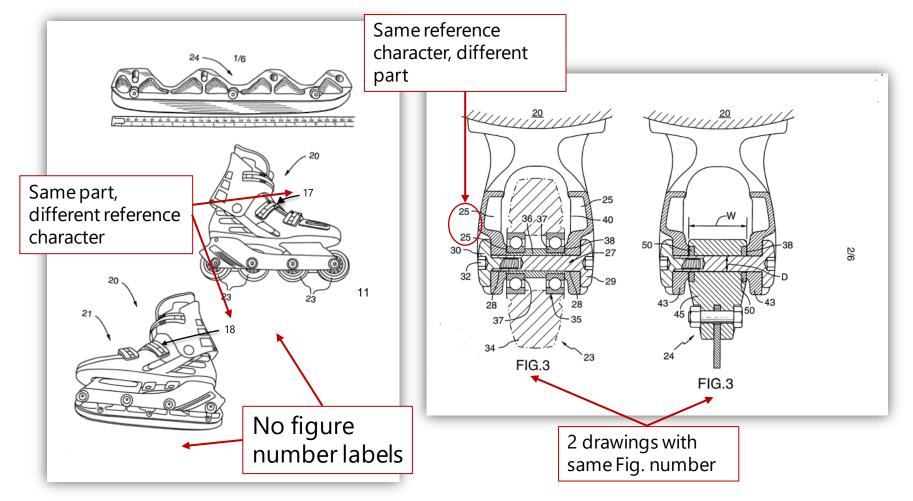
## **Drawing requirements**

- Black and white drawings; lines and numbers must be heavy enough to permit adequate reproduction
- Color drawings are permitted for all applications (petition required in utility applications)
- Photographs (B/W and color), while not normally permitted in utility and design applications, can be accepted
- Use reference characters (in specification and drawings; numerals preferred)
- Each figure must be labeled (e.g., FIG. 1)
- Avoid using descriptive words in the figures

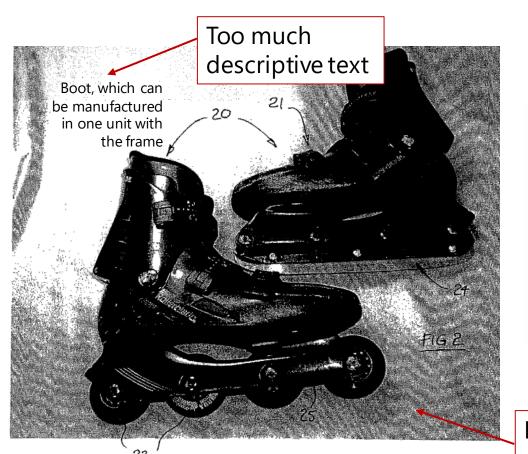


**Example drawings** Examples from USP6481724 Different views of the invention FIG.1 Reference character FIG.2A FIG.3 FIG.4 Shows cross sections FIG.2B Figure label (as necessary)

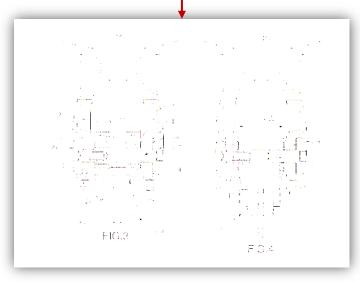
## Example of unacceptable drawings



## **Example of unacceptable drawings**



Too light weight for reproduction



Blurry photograph

# Detailed description of the invention

- Most important part of the application
- Explain the invention and the process of making and using it in full, clear, concise and exact terms
- Focus on explaining the structures, processes or compositions of the invention
- Refer to the figures, if applicable, and explain the different parts by use of reference numerals shown in the figures

See MPEP § 608.01(g) for more information

# Detailed description of the invention

- The detailed description should provide clear support or antecedent basis for all terms used in the claims so that the meaning of the claim terms in the claims may be ascertainable by reference to the description.
- It can be helpful to draft your claims first.
  - By drafting the claims first, you can decide on the terminology to use and make sure that terminology is consistent throughout the specification.
  - You can also figure out which terms need to be defined or explained in more detail in the specification.
  - The claims can be a checklist to make sure the detailed description provides clear support for the claims.

### **Specification DOs**

- ✓ Describe the invention clearly to allow any person skilled in the art to make and use the invention without undue experimentation
- ✓ When referencing the drawings, be sure that each reference numeral is used for only one part depicted in the drawings, and that each reference numeral shown in the drawings is mentioned in the specification
- ✓ Provide at least one specific embodiment, including the best one known to you at the time of filing
- ✓ Make sure there is a "Brief Description of the Drawings" section that includes each figure referenced by its full label (e.g., Figures labeled 1A, 1B, and 1C should be separately mentioned vs. collectively referred to as "Figure 1" in the brief description)
- ✓ Provide proper antecedent basis for all the terms in the claims
- ✓ Focus on the technical features of the invention.

#### **Specification Cautions**

- Should not use trademarks in the title or to describe structure (e.g., "VELCRO" to describe a hook and loop fastener), or using a mark (e.g., logo, brand) you intend to register for a commercialized product
- "Background of the Invention" section does not need to state how the inventor conceived the invention (e.g., "I came up with this idea while jogging")
- Avoid making claims of possible future success (e.g., "This invention will sell and make millions" or "This invention will revolutionize the field")
- Do not include a detailed discussion of the figures or refer to the reference characters in the "Brief Description of the Drawings" section
  - Do not forget to proof read your specification to look for grammatical errors

## Claim(s)

If it is in the claim, it **must** be in the specification:

- Defines the invention and what aspects are legally enforceable
- Must conform to the invention as set forth in the remainder of the specification
- Terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims are clearly understood by reference to the description

## Form of claim(s)

- Starts on a separate sheet with the heading "Claim Listing"
- 1.5 or double spaced
- <u>Each claim is a single sentence</u> (begins with a capital letter and ends with a period)
- 3 independent claims; 20 claims total before excess fees are due
- Numbered consecutively in ascending order; original numbering preserved throughout prosecution



## **Example claims**

Claims CLAIM 1. Apparatus for converting an in-line-roller skate-boot for use as an ice-skate boot, wherein the skate-boot has the following characteristics: the skate-boot has left and right support-rails, integrated into the structure of the skateboot: the left and right support-rails extend from front to rear of the skate-boot, and have opposed left and right inwards-facing surfaces, disposed in a spaced-apart parallel relationship; the support-rails are so structured as to carry a number N of rollers, in-line: in respect of each of the N rollers: - the roller is provided with a spindle-rod of diameter D inches; - the spindle-rod straddles between the left and right support-rails, and passes through spindle-through-holes in the support-rails; - the roller has a bearing, which includes a non-rotating inner-race-structure; - the non-rotating inner-race-structure fits over the spindle-rod, and has left and right end-faces, which are spaced an axial width W inches apart, overall; the left and right support-rails each have N spindle-through-holes, which carry the spindles that support the N rollers; in respect of the pindle through clessin the

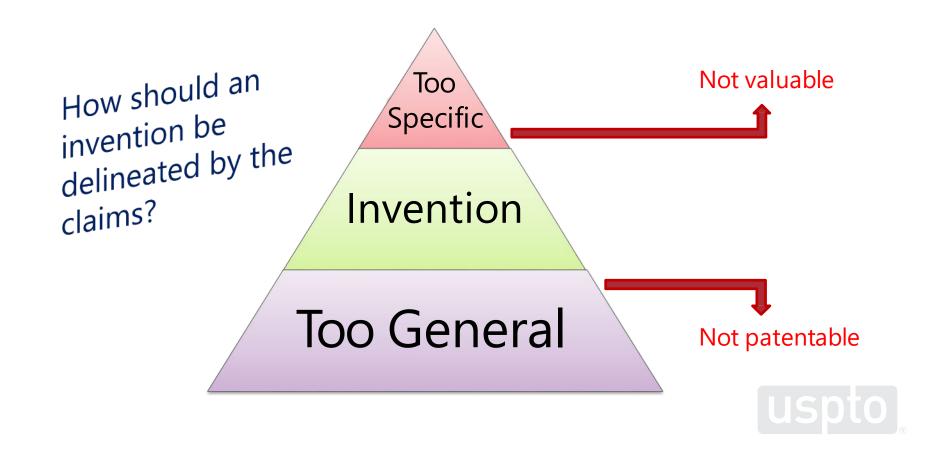
Path to a Patent Part V will discuss claim drafting in more detail



## **U.S.** patent law requirements

- A nonprovisional patent application must
  - Have at least one claim particularly pointing out and distinctly defining the invention
- A claim may be written in independent or dependent form
- A dependent claim refers to a claim previously set forth and then further limits the claimed invention
- A claim in dependent form incorporates by reference all the limitations of the claim to which it refers

## **Claims**



## Before drafting claims

#### Prior to writing claim answer these questions:

- What is the invention?
- What are the pieces and parts that make up the invention?
- How do the pieces and parts relate to one another?
- Do you have more than one invention?
  - Tangible: Apparatus, machine, composition
  - Method: Making or Using
- Are there multiple versions of each invention?



# Thinking strategically

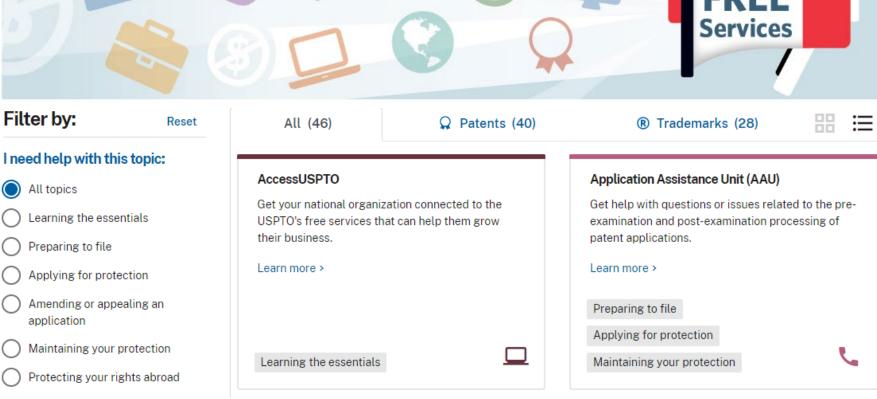
- What is it that you are hoping to accomplish
  - Obtain the broadest, valid claim possible
  - Obtain claims with a variety of claim scope
  - Not just at time of filing, but during prosecution
- Are at least some claims you filed likely to be patentable without amendment?
  - 35 USC § 154(d) provisional rights



# **Support and resources**

### Access our free services





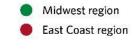
https://www.uspto.gov/FreeServices

## Resources in your area



#### USPTO office location USPTO headquarters





# **USPTO offices:** Headquarters

- Alexandria, VA

#### **Regional offices**

- Detroit
- Denver
- Silicon Valley
- Dallas

#### **Additional resources:**

- Inventors Assistance Center
- Patent Pro Bono Program
- Law school clinics
- Patent and Trademark
   Resource Centers





## **Inventors Assistance Center (IAC)**

The Inventors Assistance Center (IAC) provides patent information and services to the public. The IAC is staffed by former supervisory patent examiners and experienced former primary examiners who answer general questions concerning patent examining policy and procedure.

Monday – Friday, 8:30 a.m. – 8 p.m. ET, except federal holidays

- 800-PTO-9199 (800-786-9199)
- 571-272-1000

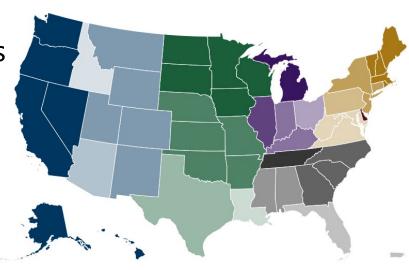
TTY customers can dial 800-877-8339 for customer assistance



## **USPTO Patent Pro Bono Program**

#### File and prosecute patent applications

- The nationwide program matches financially under-resourced inventors and small businesses with registered patent attorneys
- In general, there are three basic eligibility requirements:
  - household income below a certain threshold;
  - knowledge of the patent system; and
  - you must have an invention not just an idea!



# Patent and Trademark Resource Centers (PTRC)

Nationwide network of public, state, and academic libraries designated by the USPTO to disseminate patent and trademark information and support the intellectual property needs of the public.

www.uspto.gov/ptrc





The USPTO's Law School Clinic Certification Program allows law students enrolled in a participating law school's clinic program to practice before the USPTO under the guidance of a law school faculty clinic supervisor.

For more information, visit <a href="https://www.uspto.gov/lawschoolclinic">www.uspto.gov/lawschoolclinic</a>.

USPTO Law School Clinic Certification Program





### Online educational resources

- Nonprovisional (Utility) Patent Application Guide <u>www.uspto.gov/NonProvisionalPatent</u>
- Important Information for Completing an ADS www.uspto.gov/patent/forms/important-information-completingapplication-data-sheet-ads
- ADS Instructions Document www.uspto.gov/sites/default/files/ebc/portal/efs/ads\_form\_inst.doc
- Article on Common Pitfalls on USPTO Forms
   <a href="https://www.uspto.gov/learning-and-resources/newsletter/inventors-eye/common-pitfalls-uspto-forms">www.uspto.gov/learning-and-resources/newsletter/inventors-eye/common-pitfalls-uspto-forms</a>

### Resources

#### Helpline: 1-800-786-9199

Utility patent application guide	www.uspto.gov/patents/resources/types/utility.jsp
Patent process	www.uspto.gov/patents/process
Patent search guide	www.uspto.gov/patents/process/search
IP Identifier	https://ipidentifier.uspto.gov
Inventor and entrepreneur resources	www.uspto.gov/inventors
Pro se assistance	www.uspto.gov/ProSePatents
Micro entity limit	www.uspto.gov/PatentMicroentity
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First inventor to file	www.uspto.gov/aia implementation/patents.jsp#heading-10
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