

7-Step U.S. Patent Search Strategy Guide

U.S. Patent Search Assistance

Patent and Trademark Depository Library (PTDL) staff are available to provide training on U.S. patent search processes and research tools including **Cassis***, **PubWEST***, and the **USPTO website***. Additional information is available through the USPTO website at www.uspto.gov, by phone at 1-800-786-9199, or by e-mail at usptoinfo@uspto.gov. For legal matters, contact an attorney or agent registered to practice before the USPTO at <http://des.uspto.gov/OEDCI/>

***Cassis**, **PubWEST** and the **USPTO Website** are available at Patent and Trademark Depository Libraries: <http://www.uspto.gov/go/ptdl/>

Preliminary U.S. Patent Search vs. Comprehensive Prior Art Search

This guide provides a 7-step strategy for searching U.S. patents to locate and evaluate relevant prior art (earlier patents and published patent applications). A comprehensive search would also include foreign patents and non-patent literature (newspapers, magazines, dissertations, conference proceedings, and websites). PTDL staff can provide training on how to locate these additional resources.

Search Preparation and Documentation

Plan on spending a few hours learning the search process and additional hours for searching and evaluating results. The length of search time depends on the complexity of the invention. Careful recording of the search process including the databases used, date and time of search, classes searched, and patent and application numbers retrieved is an important part of effective searching.

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STEP 1: Keywords Describing the Invention

Begin by writing down a brief, accurate description of the invention. Avoid overly broad and generic terms such as "device," "process" and "system." Note important keywords and technical terms. Use the following questions to help identify keywords and concepts.

- What is the purpose of the invention? Is it a utilitarian device or an ornamental design?
- Is the invention a process – a way of making something or performing a function – or is it a product?
- What is the invention made of? What is the physical composition of the invention?
- How is the invention used?
- What are keywords and technical terms that describe the nature of the invention? Consult a technical dictionary or thesaurus to help find the appropriate terms.

It may be helpful to order terms according to decreasing scope. For example:

Vehicle → Automobile → Internal Combustion Engine → Fuel Injection → Injection Nozzle





STEP 2: Index to the U.S. Patent Classification

Look up the relevant keywords and technical terms in the Index to the U.S. Patent Classification (USPC) System. The Index is an alphabetical listing of common keywords and terms. See the “automobile” example at right. Note the class and subclass numbers, also known as “classifications.”

The Index is available on the **Cassis Patents ASSIST DVD**, the **PubWEST** database, and the **USPTO website**:

<http://www.uspto.gov/go/classification/uspcindex/indextouspc.htm>

Land Vehicle See Specific Types	280
Air bags	280 / 728.1+
Seat belts	280 / 801.1+
Spare tire compartment	296 / 37.2
Stub axles	280 / 124.125+
Tires and wheels resilient	152
Toilets	4 / 458+
Vertically adjustable wheels	280 / 43+
Wheel substitutes	305
Wheels and axles	301

If keywords are not found in the Index:

- Scan or search the class titles and descriptions in the Manual of Classification to determine where the invention might fit in the classification system.
- Run a keyword search in the patent database and scan the retrieved patents and published applications for relevant classifications.

STEP 3: Class Schedule in the Manual of Classification

Class 301 LAND VEHICLES: WHEELS AND AXLES	
Click here for a printable version of this file	
1	COMBINED WHEEL AND AXLE MODIFICATION
2	• Cushion lateral thrust
2.5	• With pedal crank
5.1	WHEEL
5.21	• Balancing device
5.22	• Self-operating
5.23	• With peripheral roller
5.24	• Having housing for tire inflation means
5.301	• Skate wheel
5.7	• With antifriction bearing
5.302	• Traction increasing
5.303	• Shape

Locate the classifications found in Step 2 in the Class Schedule of the Manual of Classification to verify their relevancy (see example at left). The Class Schedules are on the **Patents ASSIST DVD**, the **PubWEST** database, and the **USPTO website**:
<http://www.uspto.gov/web/patents/classification/>

Scan the entire class schedule, starting with the initial classification and paying attention to the mainline sub-classes and indented subclasses, which are called “dot-indent.”

Note: Class schedules are arranged in outline format. Subclass numbers do not always appear in sequential order.

5.1	WHEEL: This subclass is indented under the class definition. Structure comprising that part of a running-gear commonly known as a wheel, i.e., a member having a round periphery, adapted to turn about its center and to supportingly carry a vehicle over the land (1) by rolling engagement of the periphery with the land or (2) by rolling engagement of a tire on the periphery with the land. SEE OR SEARCH CLASS: 16, Miscellaneous Hardware, subclasses 18+ for a caster including a wheel.
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STEP 4: Classification Definitions

Read the class and subclass definitions to establish the scope of the relevant classifications (see example at right). The definitions include important search notes and suggestions for further searching. The Definitions are available on the **Cassis Patents ASSIST DVD**, the **PubWEST** database, and the **USPTO website**:
<http://www.uspto.gov/web/patents/classification/>



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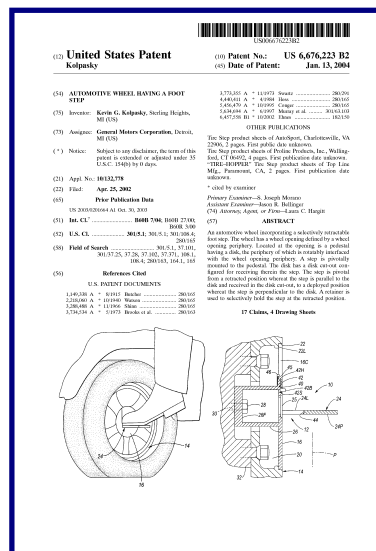
Access Full-Text

STEP 5: Search Issued Patents and Published Applications

Once the relevant subclass classifications have been identified, retrieve and review all the patents from 1790 to the present and all published applications from 2001 to the present for every classification to be searched (see example at right).

Issued patents and published applications can be searched and viewed using:

- **Cassis:** Patents BIB, USAPat and USAApp DVD-ROMs
- **PubWEST:** US Patents Full-Text and US Pre-Grant Publication databases (Patent and application search can be combined and entire documents can be printed easily)
- **USPTO website:** Issued Patents (PatFT) and Published Applications (AppFT) at <http://www.uspto.gov/patft/>



Review & References

STEP 6: Review Patent and Application Documents

20 What is claimed is:
 1. A retractable foot step for placement at a wheel of a motor vehicle, comprising:
 an axle having a hub;
 a pedestal rotatably connected to said hub; and
 25 a step pivotally connected to said pedestal;
 wherein said pedestal comprises:
 a disk having a disk periphery; and
 a drum connected to said disk, said drum being connected to said hub; and
 30 wherein said disk has a disk cut-out shaped for receiving said step, wherein said step is pivotable from a retracted position, in which said step is parallel to said disk and is received in said disk cut-out, to a deployed position, in which said step is oriented perpendicular to said disk.
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Review the complete claims, specifications and drawings of closely related patents and published applications.

Remember the claims constitute the boundaries of legal property rights given to the patent holder (see example at left).

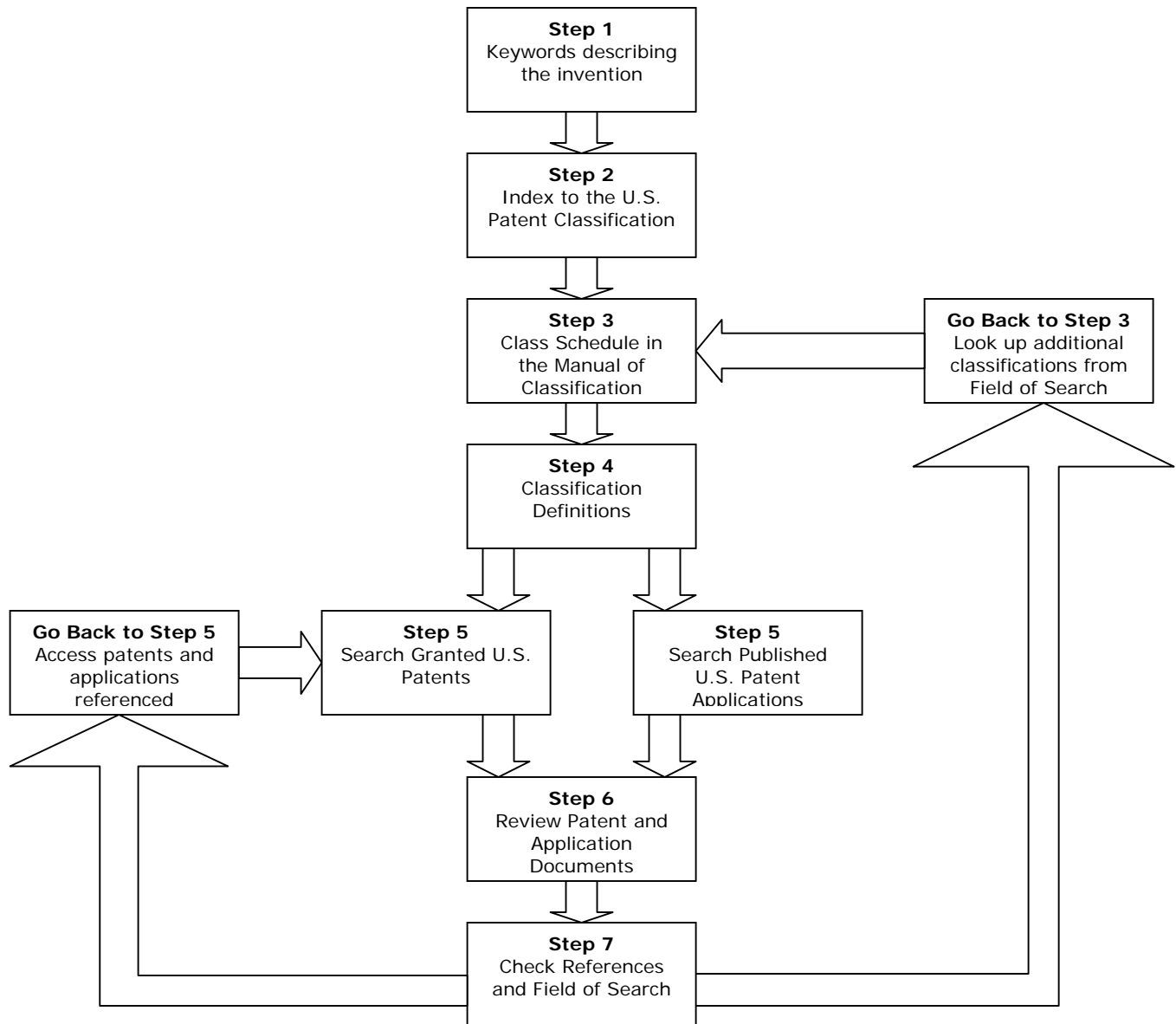
STEP 7: References & Field of Search

Check each reference cited in the patent documents (see example at right). Also make sure to check "forward" references, i.e. more current documents citing the relevant document in hand. Note additional classifications that can be searched in the "U.S. Cl." and "Field of Search" sections of the full-text documents too.

(52)	U.S. Cl.	301/5.1; 301/5.1; 301/108.4; 280/165
(58)	Field of Search	301/5.1, 37.101, 301/37.25, 37.28, 37.102, 37.371, 108.1, 108.4; 280/163, 164.1, 165
(56)	References Cited	
	U.S. PATENT DOCUMENTS	
	1,149,338 A	* 8/1915 Butcher 280/165
	2,218,060 A	* 10/1940 Watson 280/165
	3,288,488 A	* 11/1966 Shinn 280/165
	3,734,534 A	* 5/1973 Brooks et al. 280/163



Preliminary U.S. Patent Search Summary



Business Planning & Marketing

PTDL libraries can provide additional resources detailing the business planning process, licensing, and marketing of inventions. Also beware of fraudulent invention promotion firms – see <http://www.uspto.gov/web/offices/com/iip/complaints.htm>

Disclaimer: The information contained in this guide is not intended as a substitute for professional legal advice. Use it as a general guide for conducting a preliminary patent search. The USPTO recommends that inventors consult a registered patent agent or attorney prior to filing an application.

