



Patent searching at the IPO

Matthew Hall – Patent Examiner and Search Tools Information Expert

1



Outline

- Introduction
- Why do we search?
- What do we search?
- How do we search?
 - general methodology
 - claim construction
 - deciding what, where, and how to search
- Summary

2

Introduction

- This is not a talk on
 - How to use specific search tools
 - What search tools are available
- This is a talk on
 - why examiners do what we do
 - our general methodology of patent searching
 - what you can expect to see from an examiner

3

Why do we search?

- Because the Act tells us to!
- Patents Act 1977, Section 17(4):

*...the examiner shall make such investigation as in his opinion is reasonably practicable and necessary for him to identify the **documents** which he thinks will be needed to decide, on a **substantive examination** under section 18 below, whether **the invention** for which a patent is sought is **new** and involves an **inventive step**.*

4

Who performs the search?

- Patents Act 1977, Section 17(4):

*...the **examiner** shall make such investigation...*

- Who are Patent Examiners?

- Scientists/Engineers
- Civil Servants

- 3 grades of Patent Examiner

What do we search?

- Examiners are concerned with the validity of a patent
- Perform a validity search (i.e. a novelty and inventive step search)
- Do not perform an infringement search or a freedom-to-operate search

What do we search?

- We search for any prior disclosure of the invention
 - mostly involves searching the patent literature
 - EPOQUENet (same document collection as the EPO)
 - can often involve searching non-patent literature (academic journals, books, catalogues)
 - STN, IEEEExplore
 - EPOQUENet (same document collection as the EPO)
- also can involve searching the internet (e.g. applicants' own websites)

What do we search?

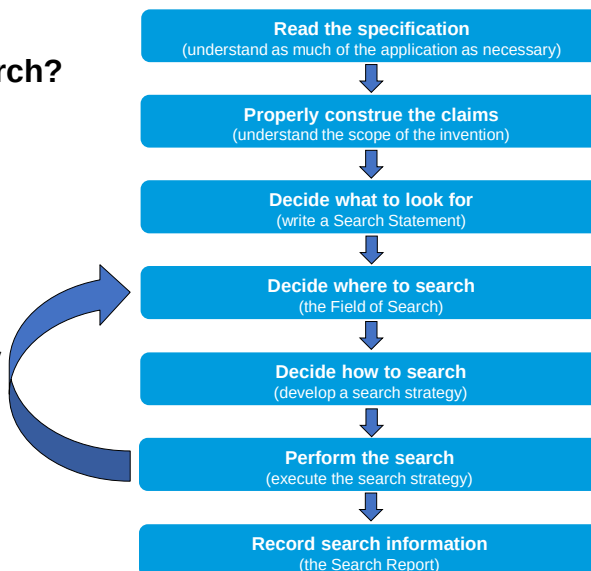
- However...
- We only search if we think the search serves a useful purpose
- If there are multiple claimed inventions, we will only search the first invention (unless you pay additional search fee(s))

How do we search?

- Our approach is to:
- Be comprehensive...
...yet pragmatic
- Focus on the actual invention
...but cover the claims
- Cite a range of documents (X, Y, non-patent literature)
...but only cite category A
documents when necessary

How do we search?

Optionally
refine the
search



Properly construe the claims

- purposive construction – not a purely literal interpretation of the patent language (*Catnic* [1982] RPC 183)
- variation of unessential features doesn't alter the scope of the invention
- words in the claims are given the meaning they normally have in the art...
- ... but what would the skilled reader understand the language of the claims to mean (*Kirin-Amgen* [2005] RPC 9)?
- the skilled reader is taken to suppose that the patentee knows some patent law (*Virgin* [2010] RPC 8)

Properly construe the claims

- “For”
 - apparatus claimed “for” a particular use is construed to be “suitable for” that use
 - “a hook for a crane” implies certain dimensions and strength, therefore hooks with the requisite features are considered to be relevant
 - we will therefore not restrict our search just to areas pertaining to the intended use
 - claims to materials or compositions for a particular purpose are construed to be claims to the material or composition per se
 - exception – medical use claims

Properly construe the claims

- “When used in”
 - claims to a compound or material when used in a particular method or process are construed as a claim to the use of that compound or material in that process
- Product-by-process
 - a claim to a product obtained by a particular process is construed as a claim to the product per se (*Kirin-Amgen*)
- Omnibus claims
 - construed to be as broad as the statement(s) of invention
 - However, in general are no longer allowed unless the invention cannot be described in any other way

13

Decide what to search for

- Write a search statement
 - A phrase, sentence, or paragraph outlining the **essential** elements that we will be searching for and broad enough to encompass non-essential features
 - A useful reminder for the searcher
 - Useful information for others (e.g. the substantive examiner)

14

Decide where to search

- Find the most relevant classification areas in the patent classification schemes
 - IPC: WIPO scheme
 - moderate detail but covers **everything**
 - CPC: EPO and USPTO shared scheme
 - Good detail
 - covers “significant publications” (EP, WO, US, GB, DE etc)
 - but not JP, KR, CN
 - FI/FT: JP scheme
 - Good detail but ONLY JP

Decide where to search

- EPO Espacenet website for CPC
- WIPO website for IPC
- Search for similar applications and check classifications
- Look at applicant cited prior art and check classifications
- Examiner expertise

Decide how to search

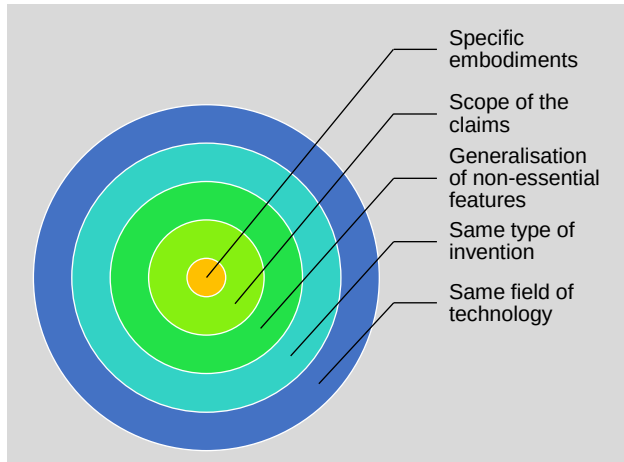
- Choose the most appropriate words to search with
- How? - know the art
 - there's no trick to this – knowing the art and knowing the most commonly used keywords is extremely valuable
- Use appropriate synonyms
 - e.g. “surfactant” – 279,763 hits
 - using the keywords “surface active agent” “detergent” “dispersant” and “emulsifier” generates 289,023 hits
 - of those 289,023 hits, 245,482 are unique (i.e. do not contain the term “surfactant”)

Refine the search

- In light of the documents found, may need to refine the search
 - additional search areas
 - additional words/synonyms
- If you find no documents
 - may need to broaden or shift the scope of the search
 - but it may be that the invention is genuinely new and inventive!

Refine the search

- Usual methodology is to start narrow and gradually broaden out



Refine the search

- When do we stop a search?
 - No search is ever complete
 - Use our judgment
 - If we have already identified several citations that are relevant to most of the claims, we can probably stop
 - However, if there are a small number of claims remaining that we haven't knocked out, we may search specifically for the features of those claims
 - it may be that those features are the true inventive concept!

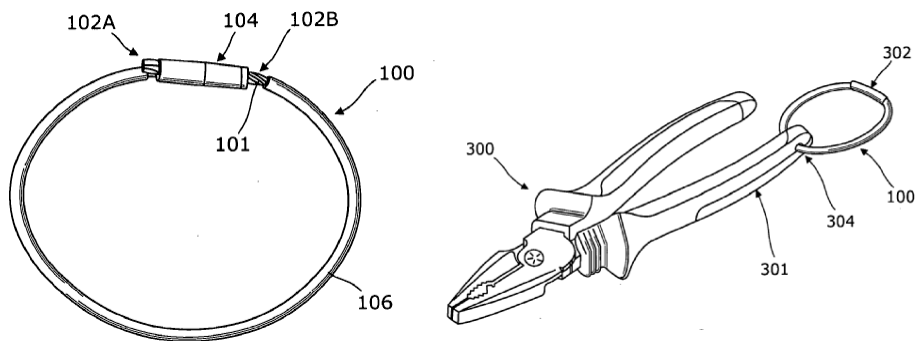
Record search information

- We will cite any and all relevant documents
 - if there are a large number of relevant documents, we will cite the most relevant examples
- We will sometimes cite background art in addition to category X and Y documents
 - useful information for supporting, for example, what is common general knowledge
 - may also be useful for the applicant – may cut off an avenue of potential amendment
- We don't cite documents just for fun or just to annoy the applicant!
 - we want to grant patents
 - we want to grant patents with a high presumed degree of validity

21

Example

1. A tool tether (100) including:
a plurality of strands (101) of flexible material, and
a securing arrangement (104) for securing the plurality of strands in a loop.



22

Example

- any issues with claim construction?

for securing the plurality of strands

- “suitable for securing the plurality of strands”

A **tool tether** (100) including:

a plurality of **strands** (101) of **flexible material**

- what would the skilled reader understand these terms to mean?

A tool tether (100) **including:**

- what is the scope of “including”?

a securing **arrangement**

- what is an “arrangement”?

23

Example

- Write a search statement

1. A **tool tether** (100) including:

a plurality of strands (101) of **flexible material** and

a **securing arrangement** (104) for securing the plurality of strands in a

loop.

- Pick out the essential features

- “A tool tether comprising a flexible material and a securing means for securing the flexible material in a loop”
 - Remember obviousness!
- But could be just as simple as “a loop of material that is suitable for use as a tool tether”

24

Intellectual Property Office

Example

Symbol	Classification and description	
☒ A	HUMAN NECESSITIES	
PERSONAL OR DOMESTIC ARTICLES		
☐ A45	HAND OR TRAVELLING ARTICLES	
☐ A45F	TRAVELLING OR CAMP EQUIPMENT; SACKS OR PACKS CARRIED ON THE BODY (hand carried bags or luggage A45C)	  
☐ A45F 5/00	Holders or carriers for hand articles; Holders or carriers for use while travelling or camping	
☐ A45F 5/004	• {with an automatic spring reel}	
☐ A45F 5/02	• Fastening articles to the garment	
☐ A45F 5/021	• • {to the belt}	
☐ A45F 5/022	• • {within pockets}	
☐ A45F 5/04	• • Holding handkerchiefs, napkins, or the like	
☐ A45F 5/06	• • Holding hats or other garments	
☐ A45F 5/08	• • Holding flowers	
☐ A45F 5/10	• Handles for carrying purposes (handles for suitcases or {travelling} bags A45C 13/26 , {handles of sacks or bags B65D 33/06 , straps provided with handles for bundling or supporting articles B65D 63/18 , for carrying heavy loads B65G 7/12)	

IPO | Making life better through IP
Intellectual Property Office is an operating name of the Patent Office

25

Intellectual Property Office

Example

▪ Could also be classified as:

Symbol	Classification and description	
☐ B	PERFORMING OPERATIONS; TRANSPORTING	 
SHAPING		
☐ B25	HAND TOOLS; PORTABLE POWER-DRIVEN TOOLS; MANIPULATORS	
☐ B25B	TOOLS OR BENCH DEVICES NOT OTHERWISE PROVIDED FOR, FOR FASTENING, CONNECTING, DISENGAGING OR HOLDING	   
☐ B25B 23/00	Details of, or accessories for, spanners, wrenches, screwdrivers (bolt tensioners B25B 29/02)	

▪ Or:

Symbol	Classification and description	
☐ B	PERFORMING OPERATIONS; TRANSPORTING	 
SHAPING		
☐ B25	HAND TOOLS; PORTABLE POWER-DRIVEN TOOLS; MANIPULATORS	
☐ B25H	WORKSHOP EQUIPMENT, e.g. FOR MARKING-OUT WORK; STORAGE MEANS FOR WORKSHOPS (storing or packaging B65)	 
☐ B25H 3/00	Storage means or arrangements for workshops facilitating access to, or handling of, work tools or instruments (containers or packages with special means for dispensing contents B65D 63/00 ; (mail dispensers B25C 3/00))	

IPO | Making life better through IP
Intellectual Property Office is an operating name of the Patent Office

26

Intellectual Property Office

Example

- Choose appropriate words/synonyms

a tool tether	tether tie lanyard safety* retain* drop*
a loop	loop hoop ring annulus circle
a plurality of strands	strand fibre wire thread cord
a securing arrangement	clamp crimp pinch grommet collar ferrule

IPO Making life better through IP
Intellectual Property Office is an operating name of the Patent Office

27

Intellectual Property Office

Example

- Record search information
 - (After looking at 1631 documents...)
 - List of citations and the relevant parts of the documents
 - Category of citations and which claims they are relevant to
 - Field of search
 - Classifications (not shown here)

Application No: Examiner: Dr Richard Wood
Claims searched: 1-37 Date of search: 26 July 2012

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1-12, 18-25, 27-36	US 2004/231101 A1 (ALANIS) - Figs. 2, 3.
X	1, 3, 18, 20-25, 35	US 6776317 B1 (PARKER) - Fig. 2.
X	1, 3, 4, 8, 9, 18-25, 35	US 5082156 A (BRAUN) - Figs. 1-3.
X	1, 3-6, 9, 18-25, 35	US 2005/283952 A1 (TALBOT et al.) - Fig. 1.
X	1, 3-6, 8-12, 19-25, 33, 35, 37	JP 2007053835 A (CHUGOKU ELECTRIC POWER) - see EPODOC abstract, WPI abstract accession no. 2007-182095 [18].

Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:
Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X :

Worldwide search of patent documents classified in the following areas of the IPC^X :

A45D; A45F; B25B; B25H

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC

IPO Making life better through IP
Intellectual Property Office is an operating name of the Patent Office

28

Summary

- Examiners search applications to ensure that they are novel and inventive
- In order to search we
 - properly construe the claims
 - write a search statement
 - choose appropriate classification areas
 - choose appropriate words/synonyms
- We cite any and all relevant documents

Feedback, comments, questions:
matthew.hall@ipo.gov.uk