



Intellectual
Property
Office

Patent searching at the IPO

Bryce D'Souza – Patent Examiner and Search Tools Information Expert

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

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

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**.*

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, IEEEXplore
 - EPOQUENet (same document collection as the EPO)
- also can involve searching the internet (e.g. applicants' own websites)

What do we search?

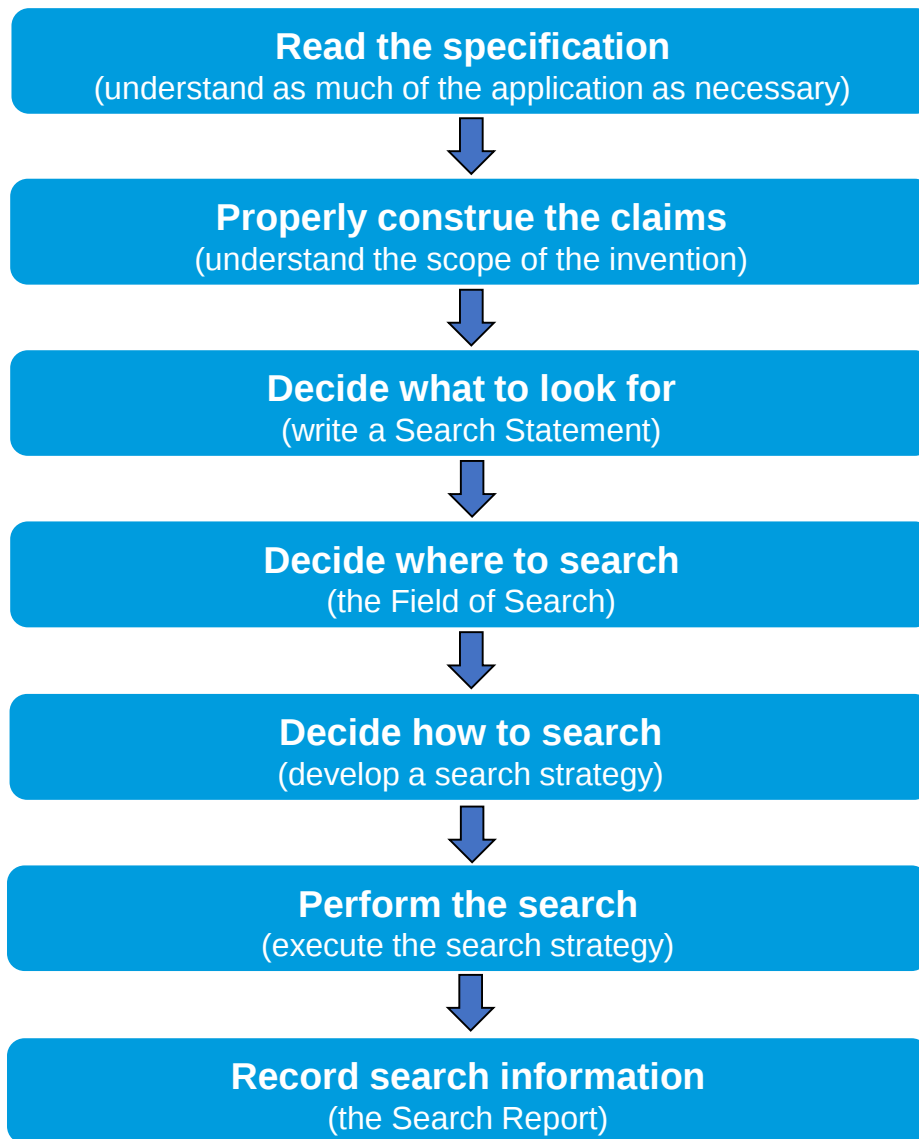
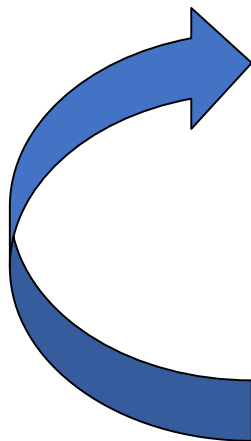
- However...
- We only search if we think the search serves a useful purpose
- If there are multiple claimed inventions, we will only search the first invention (unless you pay additional search fee(s))

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)
- Note: for the purposes of assessing validity, claim construction is unaffected by the decision in *Actavis v Eli Lilly*
 - See MoPP 2.03 and e.g. *Generics v Yeda* [2017] EWHC 2629 (Pat)

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

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)

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”)

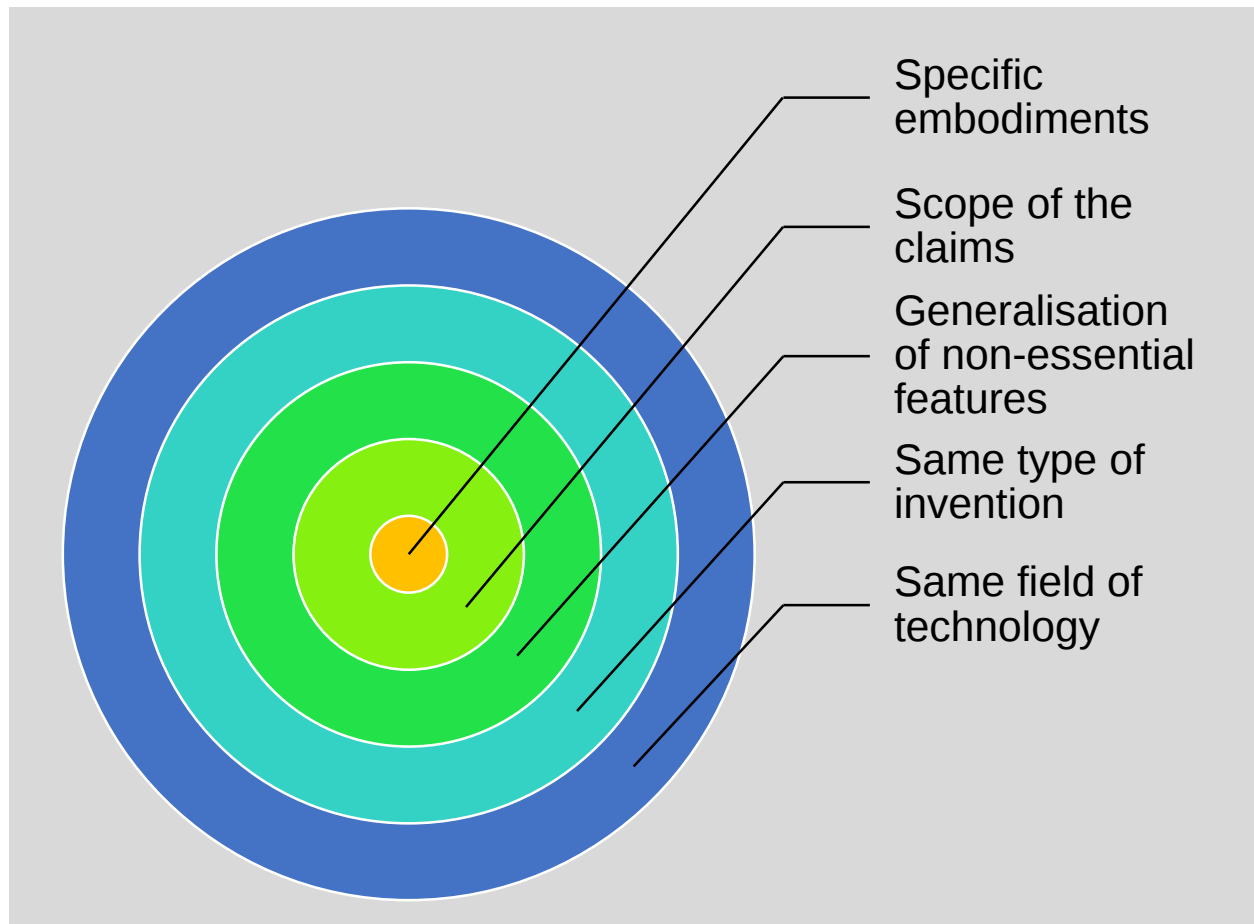
Refine the search

- 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

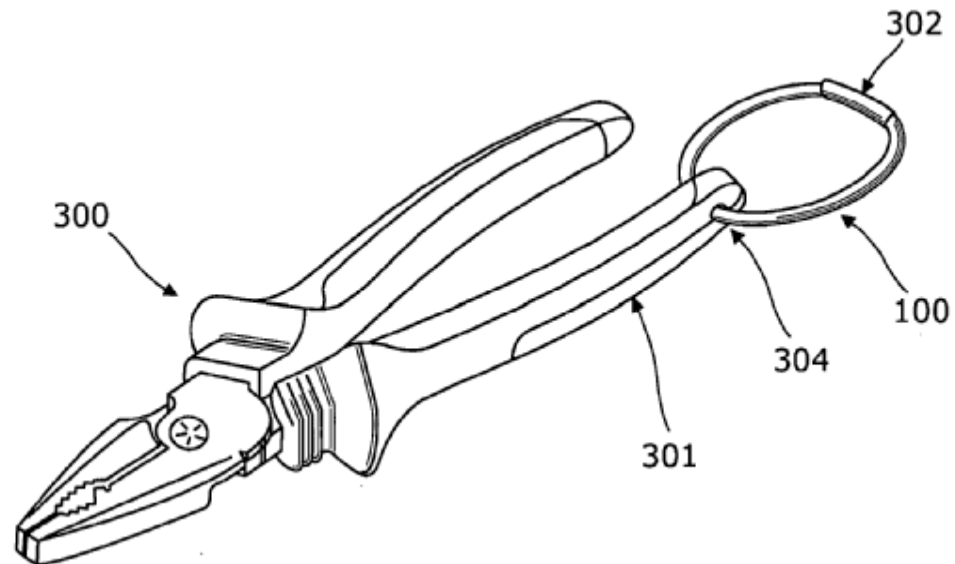
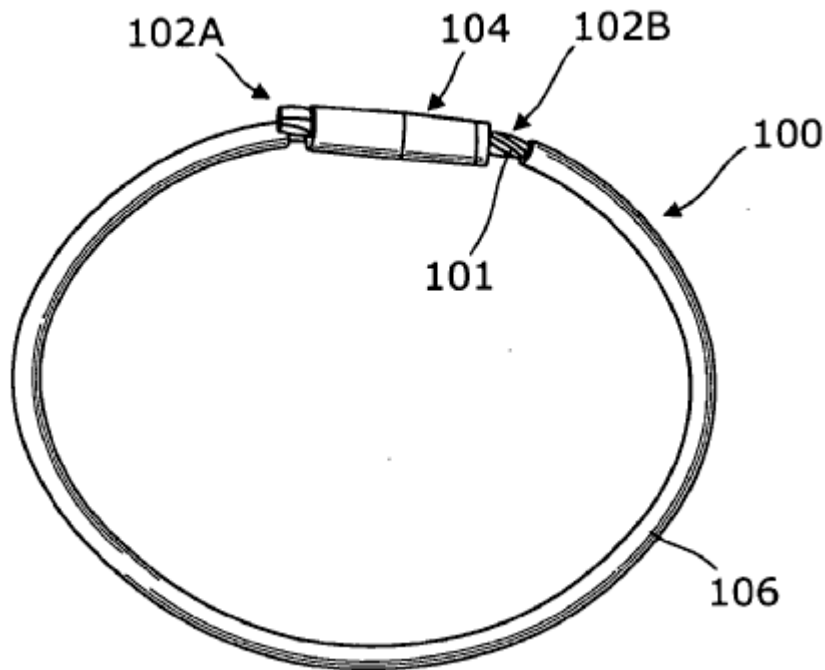
- When do we stop a search?
 - No search is ever complete
 - Use our judgment
 - If we have already identified several citations that are relevant to most of the claims, we can probably stop
 - However, if there are a small number of claims remaining that we haven't knocked out, we may search specifically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

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.



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”?

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”

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))	

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 83/00 ; {nail dispensers B25C 3/00 })	

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

Application No:
Examiner: Dr Richard Wood

Claims searched: 1-37

Date of search: 26 July 2012

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)

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

A45D; A45F; B25B; B25H

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

WPI, EPODOC

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:

bryce.dsouza@ipo.gov.uk