Search Matters 2017
Examiner vs applicant search: optimised search in mechanical fields
Speaker

András Szaip (HU)
aszaip@epo.org

- Examiner at the EPO since 2003 in V&G Technology
- Involved in Opposition, efficiency coaching and in recruiting matters, Asian documentation expert
- Academic background is in automotive engineering / MBS systems
Outline

- Double Approach
  - Examiner
  - Applicant
- Purpose of the Search
  - Examiner
  - Applicant
- Hints for the Examiner
- Hints for the Representative
- Establish Search report / ESOP
- Drafting the ideal Application
- Search Example Examiner
- Search Example Applicant
Double Approach

Examiner

Applicant

Understanding/identifying the invention

Finding the broadest possible interpretation

Defining the possible fields of the Search

Defining technical feature groups and hierarchy

Defining possible inventive features

Search targeted feature group

Search targeted features

Establish the SR

Go to next hierarchy level of technical features

Draft the claims

Revise possible inventive features and fields

Neg

Pos

Neg

Pos

Interpret claims

Understand the SR

Redraft claims
Double Approach / Examiner

Stage
- Understanding
- Interpreting
- Defining fields
- Defining core features
- Search
- Search Report
- ESOP

Time
- 15% Understanding
- 5% Interpreting
- 70% Defining fields
- 10% Defining core features

Effectivity Measure
- Claims vs Description
- Core f. vs f. table
- Crossing fields etc

Total 1,6 days
Double Approach / Applicant (Attorney)

Stage
- Understanding
- Interpreting
- Defining fields
- Defining single inv. feature
- Search
- Draft claims
- Draft description

Time
- 7,5%
- 15%
- 75%

Total 2,5 days

Effectivity Measure
- Personal interview vs written contact
- Invention feature
- Broad claim vs narrow claim
- Detailed description
Double Approach / Applicant (Industry)

Stage
- Understanding
- Interpreting
- Defining fields
- Defining single inv. feature
- Search
- Draft claims
- Draft description

Time
- Personal interview vs written contact
- Invention feature
- Broad claim vs narrow claim
- Detailed description

Effectivity Measure

Total 5-10 days

10%
80%
7.5%
Participants

What about you?
Examiner

- Time
  - 15% 70%
  - 5% 10%

Total 1,66 days

Applicant

- Time
  - 7,5% 80%
  - 10% 15%

Total 5-10 days

- Time
  - 7,5% 75%
  - 15% 75%

Total 2,5 days
Purpose of the Search / Examiner

- Inform the applicant about available prior art in order to help them decide about the future of their application i.e. patentability

- Providing information to the public / competitors in order to help them decide on their strategy

Benefit

- Early certainty on strategic directions
- Costs
Purpose of the Search / Applicant

- Comprehensive information on available prior art in order to advise the client about the existence / non-existence of an invention

- Comprehensive information to be able to effectively draft an application / claim / opposition / infringement proc.

Benefit

- Representative / Applicant well prepared to draft a good application
# Hints for the Examiner

<table>
<thead>
<tr>
<th>Where?</th>
<th>What?</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the description</td>
<td>Possible prior art cited by the Applicant / Problem posed</td>
</tr>
<tr>
<td>In the 1st claim</td>
<td>Characterising portion</td>
</tr>
<tr>
<td>In dependent claims</td>
<td>Claim tree</td>
</tr>
</tbody>
</table>
Hints for the Examiner

Claim tree types:

- Claim 5 according to Claim 3
- Claim 5 according to any of Claims 1-4
- Claim 5 according to Claim 1
Hints for the Representative

Where?
- Interview / written communication with the Applicant

What?
- Well prepared interview
- Problem solved
- Capability to transform result to be achieved into technical features
- Possible fallback positions
Establish Search Report / ESOP

Search Report
- Limiting the search report optimally to 3-4 documents covering the closest prior art and expected fall back positions as far as possible.

ESOP
- Should be clear and concise, well structured
  - Novelty/Inventive step (independent claim/s)
  - Novelty/Inventive step (dependent claims)
  - Possible formal and clarity issues
  - Proposal to overcome above issues
Drafting the ideal application

- 1\textsuperscript{st} claim should be new and inventive (depending on strategy) over your own PA, still broad and generalized as much as possible
- Expected fallback positions, limitations in dependent claims
- Build a smart claim tree
- Description should cover details and embodiments of the invention as much as possible to cover further fall back positions.
Search Example Applicant

Applicant

Understanding/identifying the invention

Finding the broadest possible interpretation

Defining the possible fields of the Search

Defining possible inventive features

Search targeted features

Draft the claims

Revise possible inventive features and fields

Invention
Interview with the Applicant

Applicant:

“We sell maturing devices integrated in closures for beverage containers and special bottles with the same closures. Our invention has the advantage that a single closure can generate sound waves at different frequencies. Therefore different specific flavours can be selectively developed in an alcoholic beverage using a single closure. The closures according to a second embodiment of our invention, having vibrator units comprising parabolic plates, are particularly efficient at directing sound waves in a beverage container.”
Interview with the Applicant

Applicant additional info:

- The body is made of wood, cork or synthetic polymer
- The body having a cylindrical shape comprising a socket terminal arranged asymmetrically
- There is an air channel in the body
- The vibrator unit comprises a piezoelectric vibrator for generating the sound waves at different frequencies
- Vibrator unit comprises a vibrator plate having a parabolic surface
Search Example Applicant

- Maturing/Ageing by vibration
- Device doing so
- Device being a closure of a container
Using Espacenet the following groups are identified:
- C12H1/16, C12H1/165, C12H1/22

It is a “Closure” !!!

Technical features to search for:
- vibration, mechanic vibration, electromechanic vibration etc in combination with closure
Result of the Search

Description
Method of maturing alcoholic beverages, by using electromagnetic waves. The quality improvement of alcoholic beverages is achieved by vibrated emissions towards the beverage.
Search Example Applicant

- Using espacenet the following groups are identified
  - B65D39/0052, B65D51/00

- Technical features to search for:
  - vibration, mechanic vibration, electromechanic vibration in combination with maturing

“Maturing / Ageing”
Result of the Search

Description

A beverage container, comprising an electro mechanical vibration device for accelerating the maturing process of a beverage, installed on the outer wall of the container
Search Example Applicant

- Applicant
  - Understanding/identifying the invention
  - Finding the broadest possible interpretation
  - Defining the possible fields of the Search
    - Defining possible inventive features
      - Search targeted features
        - Draft the claims
        - Revise possible inventive features and fields

- Claim features
Drafting the claim

Claims

1. Maturing device for accelerating the maturing process of a beverage (2), the device comprising a body (3, 13, 23), a vibrator unit (4) for generating sound waves (5) in the beverage (2), and means (8, 9) for conducting electrical signals to the vibrator unit (4) characterised in that, the device is integrated in a closure of a container.

2. Maturing device according to claim 1, wherein the body (3, 13, 23) is made of wood, cork or a synthetic polymer.

3. Maturing device to any previous claim, wherein the vibrator unit (4) comprises a piezoelectric vibrator (41) for generating the sound waves at different frequencies.

4. Maturing device according to any claim, wherein the vibrator unit comprises a vibrator plate (43) having a parabolic surface.
Search Example Examiner

- Reading the claims only and trying to make drawing of the invention.

Examiner

Understanding/identifying the invention

Finding the broadest possible interpretation

Defining the possible fields of the Search

Defining technical feature groups and hierarchy

Search targeted feature group

Establish the SR

Go to next hierarchy level of technical features
**Claims**

1. Maturing device for accelerating the maturing process of a beverage(2), the device comprising a body (3, 13, 23), a vibrator unit(4) for generating sound waves (5) in the beverage (2), and means (8, 9) for conducting electrical signals to the vibrator unit (4) characterised in that, the device is integrated in a closure of a container.
Search Example Examiner

1st attempt
- Crossing specific classes B65D39/0052 and C12H1/165

2nd attempt
- Fulltext and other tools of Headgroup /
  (C12H1/00 /LOW) and (B65D39/00 /LOW or B65D51/00 /LOW)

3rd attempt
- Combi on relevant docs

4th attempt
- Looking at the whole group B65D39/0052, C12H1/165
**Search Example Examiner**

1. Understanding/identifying the invention
2. Finding the broadest possible interpretation
3. Defining the possible fields of the Search
   - Defining technical feature groups and hierarchy
     - Search targeted feature group
       - Establish the SR
       - Go to next hierarchy level of technical features

---

**Feature table vs Feature groups**
## Search Example Examiner

<table>
<thead>
<tr>
<th></th>
<th>Feature</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Claim 1</strong></td>
<td>Maturing device</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Means for</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vibrator</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Integrated in a closure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Claim 2</strong></td>
<td>Material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Claim 3</strong></td>
<td>Piezoelectric</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Different frequencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Claim 4</strong></td>
<td>Vibrator plate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parabolic surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1st feature group
- Maturing device in a closure

2nd feature group
- Different frequencies
- Parabolic surface
Focus on
1st feature group
- Maturing device in a closure

1st attempt
- Crossing specific classes B65D39/0052 and C12H1/165
Description
Whisky maturing device comprising an electro-mechanical vibrator, such as an electromagnetic coil vibrator cooperating with a closure of a beverage container, wherein said device comprising a tuning fork.

1st feature group
Maturing device in a closure
Understanding/identifying the invention

Finding the broadest possible interpretation

Defining the possible fields of the Search

Defining technical feature groups and hierarchy

Search targeted feature group

Establish the SR

Go to next hierarchy level of technical features

2nd feature group
- Different frequencies
- Parabolic surface

1st attempt
- Crossing specific classes B65D39/0052 and C12H1/165

2nd attempt
- Fulltext and other tools of Headgroup / (C12H1/00 /LOW) and (B65D39/00 /LOW or B65D51/00 /LOW)
Result of the Search

Description
A device to collect sediments in a bottle neck, comprising a piezoelectric vibrator shaking the bottle at 0.1Khz.

BONUS Feature
Piezo
Search Example Examiner

- Understanding/identifying the invention
- Finding the broadest possible interpretation
- Defining the possible fields of the Search
- Defining technical feature groups and hierarchy
- Search targeted feature group

Establish the SR

Go to next hierarchy level of technical features

2nd feature group
- Different frequencies
- Parabolic surface

3rd attempt (P=70%)
Combining relevant docs

4th attempt (P=90%)
Looking at the whole group
B65D39/0052, C12H1/165
Search Example Examiner

Examiner

Understanding/identifying the invention

Finding the broadest possible interpretation

Defining the possible fields of the Search

Defining technical feature groups and hierarchy

Search targeted feature group

Establish the SR

Go to next hierarchy level of technical features

Search report

<table>
<thead>
<tr>
<th>Category</th>
<th>A</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>D3</td>
<td>3</td>
<td>1,2</td>
<td>4</td>
</tr>
<tr>
<td>D4</td>
<td>3</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>D1</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ESOP
Claims 1-2 not new
Claim 4 not inventive
Claim 3 not known from prior art
Conclusions

Examiner

Defining technical feature groups and hierarchy

Defining „CORE“ feature groups

„SINGLE“ inventive features

Espacenet VS EPO Tools
Complex S VS One way S

Applicant

Defining possible inventive features

Search targeted features