Intellectual Property and Patent Information
Search Strategies

Topic 11: Patentability Search; Practical Exercise
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Contents

- Meaning of patentability search
- Meaning of patentability as defined in law
- Meaning of novelty, prior art and inventive step

- Case studies and practical exercises
Patentability Search

- Synonym for *novelty search*. A patentability search is made to identify patents and non-patent literature which may affect the patentability of an invention. This search is recommended to applicants to be done before writing and filing the patent specification, and as such is sometimes called a pre-application search. The scope of a patentability search is narrower than a State-of-the-Art search.
Patentability – as defined in law

Republic Act No. 8293 June 6, 1997

Chapter II

Patentable Inventions

21. Any technical solution of a problem in any field of human activity which is new, involves an inventive step and is industrially applicable shall be patentable. It may be, or may relate to, a product, or process, or an improvement of any of the foregoing.
Novelty

23. An invention shall not be considered new if it forms part of a prior art.
Prior Art

24. Prior art shall consist of:

1. Everything which has been made available to the public anywhere in the world, before the filing date or the priority date of the application claiming the invention; and

2. The whole contents of an application for a patent, utility model, or industrial design registration, published in accordance with this Act, filed or effective in the Philippines, with a filing or priority date that is earlier than the filing or priority date of the application: Provided, That the application which has validly claimed the filing date of an earlier application under Section 31 of this Act, shall be prior art with effect as of the filing date of such earlier application: Provided further, That the applicant or the inventor identified in both applications are not one and the same.
Inventive Step

26. An invention involves an inventive step if, having regard to prior art, it is not obvious to a person skilled in the art at the time of the filing date or priority date of the application claiming the invention.
Case study 1

- The client is a bicycle manufacturer who has been developing improved bicycle frames. The invention might be:
  - the construction of the frame
  - the material the frame is made of
  - the shape of the frame.
  - you need to understand which features are well known (=common knowledge) and which are potentially patentable

- From discussion, it transpires that her main interest is in the patentability of using magnesium alloys in bicycle frames.
Search in *Patentscope* using IPC and words

**IPC:**

B62K CYCLES; CYCLE FRAMES; ........

- **B62K 3/02** · Frames (tandem frames **B62K 3/14**)

- Results ....104 for **Criteria:**IC:"B62K 3/02" or IC:"B62K3/14"

- Results .. 2 for **Criteria:**(IC:"B62K 3/02" or IC:"B62K3/14") (magnesium or Mg) alloy
## Results

<table>
<thead>
<tr>
<th></th>
<th>Ctr</th>
<th>Title</th>
<th>PubDate</th>
<th>Int.Class</th>
<th>Appl.No</th>
<th>Applicant</th>
<th>Inventor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EP</td>
<td><strong>0635582 - Article having a decorative metal layer</strong></td>
<td>25.01.1995</td>
<td>A01K 87/00</td>
<td>94111316</td>
<td>DAIWA SEIKO INC</td>
<td>TAKADA NOBUHIRO</td>
</tr>
</tbody>
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An article such as fishing tackle or the like, is provided with an exterior surface which has high strength so that any cracking or separation hardly occurs, has high durability, is light in weight and is decorated to have an aesthetically pleasing appearance. The exterior surface is formed with synthetic resin coating layer, a thin decorative layer formed through physical vapor deposition with metal, and a transparent or semi-transparent protective layer.

| 2 | EP  | **0252704 - BICYCLE CHANGE SPEED ARRANGEMENT** | 13.01.1988 | B62M 9/12 | 87305946 | KIRK, FRANCIS GEORGE | KIRK, FRANCIS GEORGE |

There is provided a bicycle frame, particularly one cast in a lightweight alloy or metal such as magnesium, characterised in that a mounting for a chain guide sprocket for a rear derailleur comprises a bracket 22 adapted to receive the guide sprocket mechanism in a threaded hole 28, and pivotally mounted on the frame so as to pivot rearwards as indicated in dashed lines from its normal position of use to create a clearance for the removal of a rear wheel mounted by means of a spindle in a slot 13. Preferably the bracket 22 is made of a plastics material which is less structurally strong than the metal of the frame, so that the bracket 22 will snap preferentially or sacrificially in the event of an impact, so that the frame itself will not be damaged, and the bracket 22 merely needs to be replaced. The bracket 22 may be somewhat yielding so as to absorb light impacts prior to fracture. The bracket 22 may be pivoted onto the frame by means of a snap-in pin 23.
Patentscope – Words

- Full text search
  - Results .... 2,466 for Criteria:"bicycle frame"
  - Results ....86 for Criteria:"bicycle frame"(magnesium or Mg) alloy

- Abstract search
  - Results .... 10 for Criteria: AB:("bicycle frame" alloy (magnesium or Mg))
Results 1

1. EP0960806 - Bicycle frame

01.12.1999
B62K 19/12
98308604
VELA INTERNATIONAL LIMITED
RUDOY IGOR GEORGIJEVICH

Increasing the reliability and decreasing the weight of a bicycle frame or support and construction members but also increasing its dynamic characteristics by constructing a bicycle frame or support and construction members by welding extruded tubes and/or profiles which are made from a deformed magnesium-based alloy; the composition of the deformed magnesium-based alloy includes at least one element from the following group: aluminium, manganese, zinc, and the aluminium content of the alloy must be less than, or equal to 5%; the tubes and/or profiles are treated by stress and/or heat and/or chemical treatment; the welded bicycle frame or support and construction members or their parts are then additionally treated by stress and/or heat and/or chemical treatment.
A bicycle frame includes a saddle stem and a head interconnected by upper and lower bars and integrally cast in a lightweight metal or alloy, particularly magnesium. At least the lower bar and preferably also the saddle stem is cast in an open section which is subsequently closed by means of a second casting secured in the open section by adhesive and preferably also mechanically interlocked therewith. The mechanical interlocking is provided by interengaging elements arranged at an angle oblique to the length of the castings.
Results 3 (and 4 etc etc)

3.EP0177646 -BICYCLE AND FRAME THEREFOR
16.04.1986
B62K 19/02
84306319
KIRK, FRANCIS GEORGE
KIRK, FRANCIS GEORGE

Conventionally, a bicycle frame is made from steel or alloy tubing. In bicycles, particularly for leisure or sports purposes, weight is a significant factor and to keep the weight of a bicycle frame down to about 4 pounds (c. 2 kg), very high quality and expensive materials need to be used. It is now proposed to provide a bicycle frame having open section, e.g. I section, parts cast in a light weight metal or alloy, preferably a magnesium alloy. As illustrated in figure 15, a frame consists of an upper bar (101), a lower bar (102), a saddle stem (103), a head (104), and rear forks (111 and 112). The bars (101 and 102) are of I section and the saddle stem (103) is of U section merging into or taking a tubular section (116) receiving a saddle support tube (108). A structural bridge (131) of I section interconnects the bars (101 and 102). The lower bar (102) joins the saddle stem (103) at a point intermediate thereof and above the bearing for a crank wheel (114).
Search in *PhilPat*

- “Bicycle” in ab/biblio -91
- Bicycle frame alloy – 1 .. alloy clamp for seat
- Bicycle magnesium -0
- **B62K 3/14** and magnesium – 0
- etc
Meeting the Client To Discuss Results

- **Results**: There are ample results showing that it is well known to use magnesium alloys in bicycle frames.

- **Limitations**: All is not lost
  - % composition of magnesium in the alloy?
  - ranges of %-compositions (5-10% or 1-2%)
  - tensile strengths?
  - Coatings? Structure?
Case study 1 - practical

- *Can then narrow search and extend to other databases if necessary* eg the client now wishes you to restrict the search to frames where *the alloy is coated on a polymeric substrate*
Case study 2 – practical exercise

An inventor has developed the idea of providing a pair of cutting shears with detachable blades, for instance to facilitate transport and to enable the blades to be easily replaced.

The blades may be clipped on or screwed on. He wishes to know if his idea is patentable.

Search PhilPat and Patentscope
Case study 3 - Practical exercise

Background

- Your client manufactures solar panels for electric vehicles. However, the panels are large and cumbersome and it is a problem to obtain a sufficient area to get the required charging rate. He has therefore developed an arrangement having panels which are foldable between a storage position and an operative position.

- Search in Patentscope and PhilPat – and USPTO if time.
What we’ve discussed

- The legal definitions of patentability, novelty, inventive step and prior art

- Case studies
  - The need to get back to the client
  - Some practical searching techniques