Understanding patent claims
(a) Toy ball
The invention

A ball that is fun to use, easy to catch and looks nice.

How can you protect it from imitation?

- "Fun to use" → cannot be protected
- "Looks nice" → registered design
- "Easy to catch" = technical function → patent
How to patent this invention: claim it!

Patent Claim: "A ball that is easy to catch."

Making a ball "easy to catch" is a technical problem. Problems cannot be patented – but specific solutions can! What is the technical feature that makes the ball easy to catch?

Patent Claim: "A ball comprising a core region and plural elastomeric filaments radiating from the core region."

You don’t want anyone circumventing the patent by replacing the ball shape with something else!

Patent Claim: "An amusement device comprising a core region and plural elastomeric filaments radiating from the core region."

A prior art search will show whether the invention – as claimed – is actually new.
Result of the prior art search

Your patent attorney found US 3,759,518, "Foot impellent toy", which discloses a similar invention.

"... said toy having a plurality of flexible strands ..."
Comparison of the two inventions

Your invention as claimed

"An amusement device comprising a core region and plural elastomeric filaments radiating from the core region."

"... radiating in plural angularly offset planes from the core region."

US 3759518

"A toy of a disc-like body ... including ... a plurality of flexible strands radiating outwardly from said ... center ... having sufficient inherent rigidity to retain the pattern of a circular plane."

• New!
• Inventive step (modification yields new function of making it easier to catch)!
Claim to protect the invention

Claim to be filed:

"An amusement device comprising a core region and plural elastomeric filaments radiating in plural angularly offset planes from the core region."
Patent claims

Inventor wants broadest possible protection

Legal requirements limit the scope of the patent

Claims:
1. A wheel
2. The device of claim 1, comprising an annular winding of fibre in a groove

Independent claim ("a wheel")

"comprising an annular winding of fibre in a groove"

Dependent claim

Prior art identified by patent examiner or competitor
**Application filed with the EPO**

**Claim 1:** "An amusement device comprising a **core region** and plural **elastomeric filaments** radiating in **plural angularly offset planes** from the core region."

**Claim 2:** "A device according to claim 1, characterised in that it has a substantially **spherical** configuration."

**Claim 3:** "A device according to claim 1, characterised in that the outer ends of at least some of the filaments include **enlargements**."

**The EPO will perform its own prior art search and then consider whether the invention AS CLAIMED is new and non-obvious.**
Additional prior art found by the EPO

"Self-adhesive mould elements"

DE 3121758 A1

Self-adhesive mould elements that are equipped with spike-like rods or bristles ... characterised by rods that are attached on a core and that are made of an elastomeric material ..."
The opinion of the EPO

Your claim:

"An amusement device comprising a core region and plural elastomeric filaments radiating in plural angularly offset planes from the core region."

This is already shown and claimed in DE 3121758

EPO response:

Please amend your claims if you want your invention protected!
Further analysis

Did the EPO overlook any important features of the invention?

Applicant's reply:
Amendments to the application, explanation of the relationship between the invention and the prior art

**How can the claims be amended** to reflect the invention in such a way that it is new (considering all the prior art)?
### Comparison of the invention with the prior art

<table>
<thead>
<tr>
<th>Technical features of the invention</th>
<th>US 3759518</th>
<th>DE 31211758</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core + flexible filaments</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Plurality of angular planes</td>
<td>No</td>
<td>✓</td>
</tr>
<tr>
<td>Floppy filaments</td>
<td>✓</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advantages/technical result</th>
<th>(floating movement)</th>
<th>(self-adhesive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easier to catch</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Flies less far + doesn’t break things</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Result of the analysis

Although the individual elements of the invention are known, the **combination is not** and it produces a **new, unique benefit**.

Given our knowledge of the prior art, it is not obvious to combine the elements to achieve these new effects → the inventive step requirement is fulfilled.

The claim must be amended to distinguish it from DE 31211758:

"An amusement device comprising a core region and plural **elongate**,** floppy**, elastomeric filaments, each having **cross-sectional dimensions which are significantly smaller than its length**, radiating in plural angularly offset planes from the core region."

The original description filed with the EPO supports the amendments to the claims

This invention pertains to an amusement device, and more particularly, to a throwing/catching device which is especially easy to catch.

One of the problems with many conventional throwing/catching devices is that ... they ... tend to bounce and ... sometimes hurt to catch.

A general object of the present invention ... avoiding any tendency to bounce ... grasping ... prevents ... throwing or hitting it very far ... break anything on contact.

According to a preferred embodiment of the invention, ...

Detailed description
Device 10 is formed with a large plurality of elongate, floppy, elastomeric filaments 12, each of which, as is clearly evident in Fig. 1, has cross-sectional dimensions which are extremely small in relation to the length of the filament. As will be more fully explained shortly, these filaments are joined in a central core region in such a manner that they radiate outwardly in a fairly uniform, dense and bushy fashion, in multiple angularly offset planes, to form a substantially spherical configuration.
The patent is finally granted

Response from EPO: granted!

**EUROPEAN PATENT SPECIFICATION**

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