

Exercise session



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Examiner (ICT)

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Contents

§ Sugru

§ Hövding airbag cycle helmet

Sugru (I)

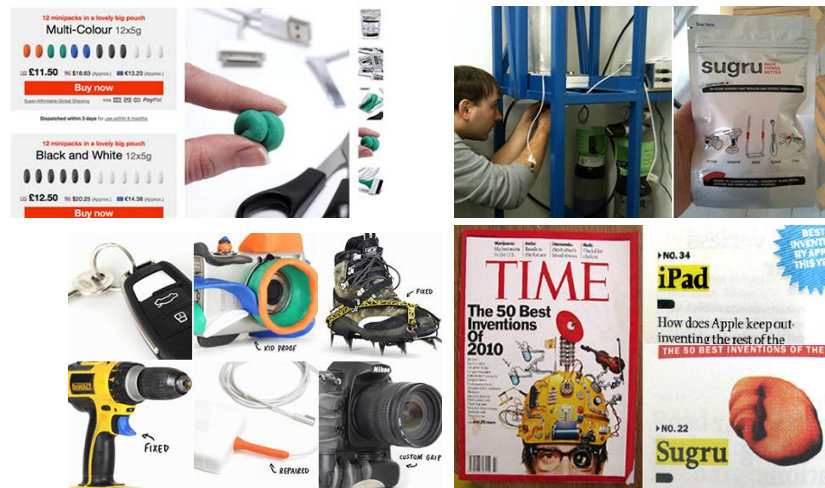
- § Original idea from student Jane Delehanty for her master's degree in product design from the Royal College of Art.
- § Problem: So many products have a limited lifetime and physical parts seem to break all the time.
- § Solution: A silicone rubber which is hand-formable, sticks to almost anything, air cures at room temperature, becomes strong and durable even in extreme weather conditions and has a soft touch, but is "grippy".
- § Called sugru, from the Irish "sugradh" meaning "play".

Sugru (II)

Advantages

- § It is a pliable substance which quickly sets to form a firm repair, mount or grip.
- § It has the mouldability of a high-temperature curing silicone but retains the adhesive properties and room-temperature curing of glues and sealants.

What does sugru look like?



European Patent Office

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History of the sugru patent

- § Priority application filed on 30 November 2006
- § PCT application filed on 29 November 2007
- § PCT application published on 5 June 2008
- § Entered regional phase in Europe, national phases in the US, UK and China
- § European patent already granted

European Patent Office

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Exercise 1

Discussion

1. What do you think the inventive concept is?
2. What do you think the applicants claimed in their application?
 - a product
 - a process
 - a composition
 - all of the above

Claims at the PCT stage

There are ten claims in total.

- § Claim 1: Independent claim directed to a composition
- § Claims 2-10: Dependent claims
- § Claim 9: Product claim of the composition of claims 1 to 6
- § Claim 10: Process claim for producing a product according to claims 1 to 6

Claim 1 of the PCT application

“A one part room temperature curable silicone elastomer composition where the uncured composition has a Williams plasticity from 80 mm to 900 mm.”

Is it novel?

§ Priority date: 30 November 2006

§ Test for novelty: Did any document/publication exist before 30 November 2006 which, when taken alone, discloses the invention claimed in the sugru application?

§ First published search report states claims 1 to 10 may not be novel and/or inventive. Why?

§ The examiner cited seven prior art documents:

- EP0575863A dated **29 December 1993**
- US5171773A dated **15 December 1992**
- US4476155A dated **9 October 1984**
- GB2288406A dated **18 October 1995**
- EP0905195A dated **31 March 1999**
- US2006/142472A1 dated **29 June 2006**
- WO03/072267A dated **4 September 2003**

What did the applicants do next?

§ Options

- Abandon the patent application **or**
- Request a preliminary examination (optional) **and/or**
- Enter the national/regional phase

§ Decision

- To continue prosecution by entering the national/regional phase in Europe, the USA, the UK and China

§ The claims had to be amended to ensure they were novel and inventive

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Comparison between original PCT claim 1 and the amended EP version

International patent application	Amended granted EP claim
<p>A: A one part room temperature curable silicone elastomer composition</p> <p>B: where the uncured composition has a Williams plasticity from 80 mm to 900 mm.</p>	<p>A: A one part room temperature curable silicone elastomer composition</p> <p>B: where the uncured composition has a Williams plasticity from 80 mm to 900 mm, and</p> <p>C: where the composition is a non-adhesive composition, the composition comprising:</p> <p>D: 20 to 60% by weight of a hydroxy-terminated poly(dimethylsiloxane) of viscosity greater than 350 000 mPA s (25° C);</p> <p>E: 3 to 66% by weight of a reinforcing filler;</p> <p>D: 10 to 60% by weight of a non-reinforcing filler;</p> <p>F: 2 to 6% by weight of a crosslinker and</p> <p>G: a suitable quantity of a curing catalyst.</p>

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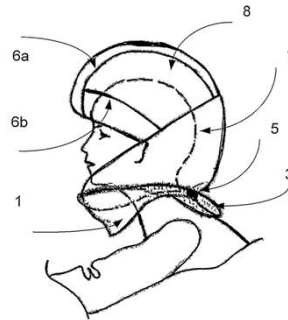
Patent status of sugru as of March 2013

- § Granted EP patent: validation in the designated contracting states is in progress
- § Examination has been requested in the other countries

Example 2: Hövding airbag cycle helmet

- § Swedish inventors Anna Haupt and Terese Alstin from Lund University
- § Problem: Regardless of safety, people do not like to wear helmets while riding their bike as it ruins their hair-do and does not look cool
- § Solution: Airbag helmet
- § What is it? A collar containing an airbag with helium as the inflating agent and sensors including gyroscopes and accelerometers

What does the airbag helmet look like?



www.youtube.com/watch?v=WCd8qQv6Htw&feature=plcp

Exercise 2

- § What do you think the inventive concept is in this case?
- § What do you think the applicants claimed?
- § How would you have structured a suitable claim?

What did Hövding claim in their PCT application?

- § A system for protecting a portion of the body of a user in case of an abnormal movement, such as a fall or a collision (product claims 1 to 9)

- § A method for protecting a head of a user in case of an abnormal movement, such as a fall or a collision (method claims 10 to 12)

Claim 1 of Hövding's PCT application

- (A) A system for protecting a portion of the body of a user in case of an abnormal movement, such as a fall or a collision, wherein said system comprises
- (B) an apparel and
- (C) an airbag arranged therein: characterised in that said airbag comprises:
- (D) a first part suitable for surrounding a neck portion and back head portion of a user after inflation; AND
- (E) a second part suitable for forming a hood surrounding a skull of a user after inflation,
- (F) said first part and second part being folded and arranged in said apparel before inflation.

Is it novel?

§ Priority date: 26 October 2005

§ Test for novelty: Did any document/publication exist before 26 October 2005 that, when taken alone, discloses the invention claimed in the patent application?

§ International search report states claims 1 to 9 may not be novel and/or inventive. Why?

§ The examiner cited three prior art documents:

- DE1975451A1 dated 10 June 1999
- DE3616890A1 dated 26 November 1987
- WO0154523 dated 2 August 2001

What did the applicants do next?

§ Options

- Abandon the patent application **or**
- Request a preliminary examination **and/or**
- Enter the national/regional phase in various countries

§ Decision

- To continue prosecution by requesting optional international preliminary examination report (IPER issued)

§ The claims had to be amended to ensure they were novel and inventive

Comparison between original PCT claim 1 and the amended claim

Original claim 1	Amended claim 1
<p>A: A system for protecting a portion of the body of a user in case of an abnormal movement, such as a fall or a collision, wherein said system comprises</p> <p>B: an apparel and</p> <p>C: an airbag arranged therein: characterized in that said airbag comprises:</p> <p>D: a first part suitable for surrounding a neck portion an back head portion of a user after inflation; AND</p> <p>E: a second part suitable for forming a hood surrounding a skull of a user after inflation,</p> <p>F: said first part and second part being folded and arranged in said apparel before inflation.</p>	<p>A: A system for protecting a portion of the body of a user in case of an abnormal movement, such as a fall or a collision, wherein said system comprises</p> <p>B: an apparel and</p> <p>C: an airbag arranged therein: characterized in that said airbag comprises:</p> <p>D: a first part suitable for surrounding a neck portion an back head portion of a user after inflation; AND</p> <p>E: a second part suitable for forming a hood surrounding a skull of a user after inflation,</p> <p>F: said first part and second part being folded and arranged in said apparel before inflation, <i>and</i></p> <p>G: <i>said first part being adapted for inflation prior to inflation of the second part.</i></p>

What did the examination report say and what happened next?

§ Examination report: claims 1 to 12 are new and inventive.

§ Consequences: entry into national/regional phase in various countries and regions, including China, Europe, Japan, Russia, Sweden and the United States.

Thank you for your attention!