Developed in partnership with the United States Patent and Trademark Office and the Intellectual Property Owners Education Foundation

Inventive Products

The Girl Scout Junior Product Designer badge showed that inventions can improve lives. While earning the IP patch, you'll learn about basic concepts of intellectual property protection and how it protects owners and inspires others to improve and invent.

What does IP mean? It means Intellectual Property, but it also means Inventive Products.

Steps:

1. Product Innovation
2. Make-it-Yourself: Recreate an invention
3. Design a Trademark: Avoid the generic
4. Copyrights: Don't be a copycat

Purpose: When you've completed the Inventive Products patch you will know how to protect the products you made while earning the Product Designer badge.

juniors

Creative Thinkers

Inventors think of old things in new ways.

Sometimes inventors combine two well-known invention concepts to form a brand new invention!

Can you think of two things you use every day and a new way to combine them that makes them work even better or in a completely different way?

What is Intellectual Property?

Intellectual property (IP) refers to creations of the mind: inventions, books, art, and symbols used to promote products or services.

STEP 1: Product Innovation

How do inventors come up with ideas? As you saw in the Product Designer badge, inventors sometimes look at current products and find ways to improve them to solve a particular problem.

Read more below about one kind of innovation by kid inventor Becky Schroeder.

Becky Schroeder, age 10

Glo-Sheet

Have you tried to do your homework in the dark and found it too hard to see?

Becky invented a glow-in-the-dark paper after growing tired of not being able to work on her homework in the car while her mom ran errands when it was dark outside.

She went to the hardware store with her dad and tested many glow-in-the-dark paints, called phosphorescent paints. After shining light on these paints, they glow in the dark!

She found that painting lines with phosphorescent paint on a hard surface would let her put a blank piece of paper on top and let her write with the glowing lines to guide her. No more crooked lines while trying to write in the dark!

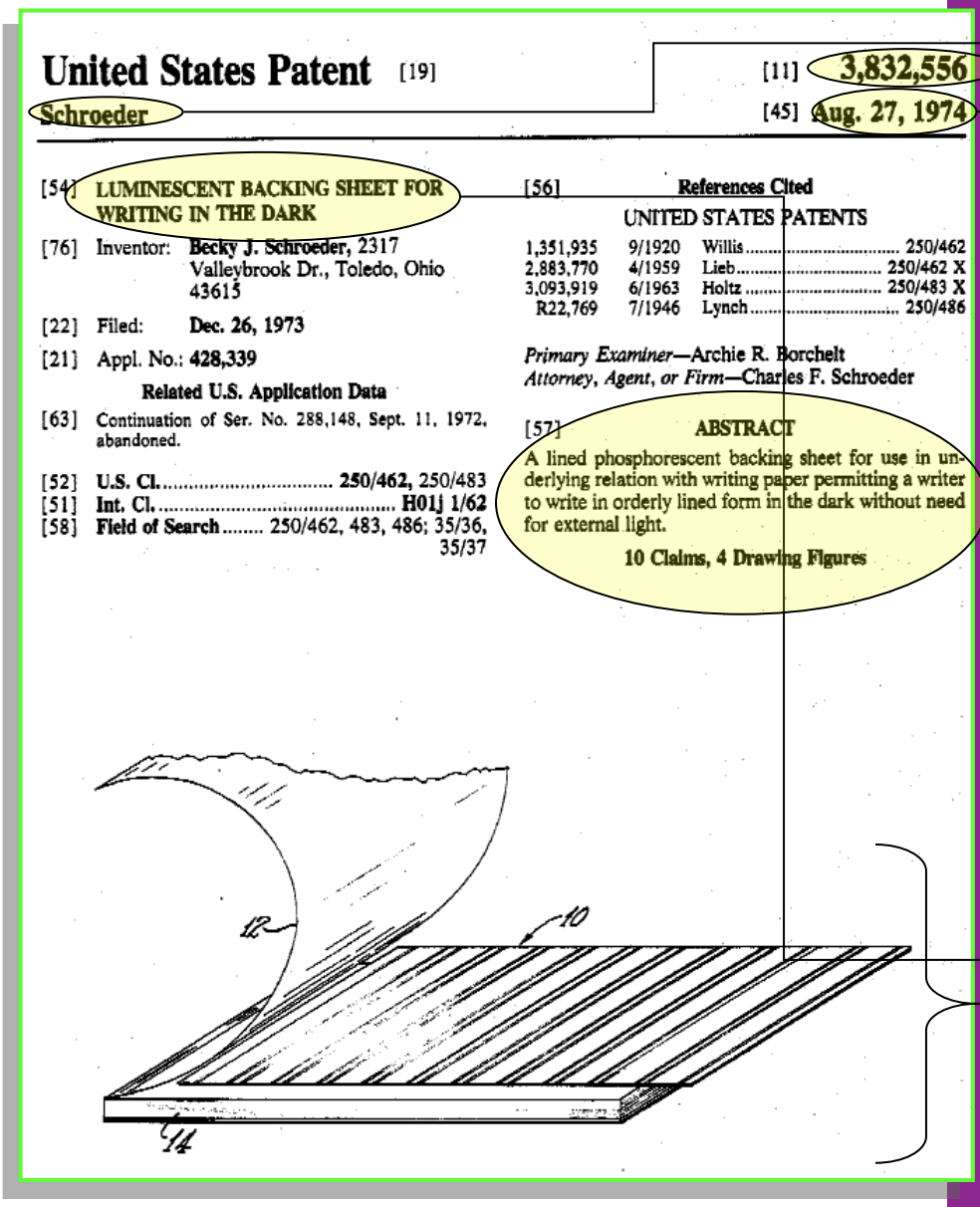
Becky applied for and received a patent on her invention. She was 12 when the patent was granted.

Becky called her invention “Glo-Sheet” and started her own company. Doctors and even NASA came to her asking to use her invention!

Check out her patent on the next page .

A US patent is a property right granted by the United States Patent and Trademark Office (USPTO) to an individual or individuals for their invention. A patent gives the owner the right to stop others from making, using, or selling their invention without their permission for a certain period of time.

Parts of a Patent



United States Patent [19]

Schroeder

[11] 3,832,556

[45] Aug. 27, 1974

[54] LUMINESCENT BACKING SHEET FOR WRITING IN THE DARK

[76] Inventor: Becky J. Schroeder, 2317 Valleybrook Dr., Toledo, Ohio 43615

[22] Filed: Dec. 26, 1973

[21] Appl. No.: 428,339

Related U.S. Application Data

[63] Continuation of Ser. No. 288,148, Sept. 11, 1972, abandoned.

[52] U.S. Cl. 250/462, 250/483

[51] Int. Cl. H01j 1/62

[58] Field of Search 250/462, 483, 486; 35/36, 35/37

[56] References Cited

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Primary Examiner—Archie R. Borchelt
Attorney, Agent, or Firm—Charles F. Schroeder

[57] ABSTRACT

A lined phosphorescent backing sheet for use in underlying relation with writing paper permitting a writer to write in orderly lined form in the dark without need for external light.

10 Claims, 4 Drawing Figures

Inventor
Name of person or people who came up with invention

Patent Number
Each patent gets its own number

Patent Date
Date when invention becomes patented

Abstract
Paragraph that explains briefly what the invention is and how it works

Title
Name of invention

Drawings
Pictures that help show how the invention works

Becky got a patent on her invention which means that she had a tool to stop others from making her invention without her permission. This gave Becky time to start her own company and sell her invention.

Can you find the parts of this patent?

- Who is the Inventor? _____
- What is the Invention? _____

What federal agency issues patents?
The United States Patent and Trademark Office , an agency of the U.S. Department of Commerce

The Science Behind Glow-in-the-Dark

Do you know what makes things glow-in-the-dark?

Paint that glows in the dark contains **phosphors** [pronounced fos-fers].

Phosphors are special materials. When you shine light on them, like from a flashlight or an overhead lamp, they will store that light and then release it later as the glow that is fun to see in the dark!

Things that have phosphors are called **phosphorescent.**

The paint that Becky used contains **phosphors.**

Can you think of other things that glow in the dark? They have phosphors in them too!

STEP 2:
Make-it-Yourself: Recreate an invention*

*Recreating or "making" a patented invention without permission is called "patent infringement." Becky's patent has expired so there is no infringement. The knowledge of her invention now belongs to the world so we can all learn from it and improve upon it.

Can you figure out how Becky made her invention?

Supplies:
- Cardboard stock
- Glow-in-the-dark paint pen
- Blank paper
- Ruler

Steps:

1. Lay cardboard on table.
2. Measure out six lines to draw across your cardboard with a ruler.
3. Draw the lines in pencil across the cardboard.
4. Go over your pencil lines with the glow-in-the-dark paint pen.
5. Let dry.
6. Shine light on your cardboard stock.
7. Take it to a dark place and see if it glows (if not, you may need to go over it again with your paint pen).
8. Lay your blank piece of paper over your cardboard stock, sit in the dark, and try to write in straight lines.

Congratulations! You made your own version of Becky's invention.

Time to Innovate!
Think about how you made your glow-in-the-dark sheets. Can you think of other ways to use glow-in-the-dark paint that can help you in every day life?

Write some of these ideas below:

STEP 3:
Design a Trademark – Avoid the generic

What is a trademark? Trademarks help you tell the difference between the source of one person's product or service and someone else's product or service. Most trademarks are words, designs, or a combination of words and designs. But, trademarks can take many other forms. Sounds, scents, and colors can also function as trademarks.

Trademarks cannot be generic.

But what does that mean?

Generic terms do not help you associate a product or service with the maker of that product or service. They are the actual name or mere description of the goods, not a source identifier.

For example, you can't use the word "Phone" as a trademark for your newly invented awesome cell phone, since that only tells people what the product is and doesn't identify that particular phone or distinguish it from anyone else's phone.

Can you name some trademarks for the items listed by their generic names below?

Generic Name	Brand Name
Fast-food Restaurant	
Chocolate bar or Candy	
Cereal	
Car	
Cosmetics/ Makeup	
Shoes	
Car Insurance	
Soda	
Airline	

Identifying Trademarks

You know them as brand names. They may have an R in a circle or a TM like this: ® or ™. An ® symbol tells you that the trademark has been registered with the USPTO.

How long do trademarks last?

The trademark is valid as long as it is being properly used and the registration is maintained , which is why trademarks on some of your favorite products have been around for over a hundred years!

Complete all of the steps in this booklet to earn your patch. Inspired? Do more!

Similar Trademarks

How similar were other trademarks to yours?

Did they use the same words?

Did they use the same design?

Did they use the same color?

Was the similar trademark also for a glow-in-the-dark products?

Designing Your Trademark

Can you come up with a unique trademark for your version of the glow-in-the-dark sheet that will help people distinguish your product from some other maker of glow-in-the-dark sheets?

Draw a word, design or both as your trademark below.

How do you know if your trademark is unique?

When you come up with a trademark for your product or service, you have to make sure no one else is using it.

Put on your detective hat, we are going to do some research!

How do you find out if someone else has already come up with your trademark? One place to start is to search the trademark database at the USPTO.

- Go to www.uspto.gov.
- Click on "Trademarks" in the menu bar.
- Click on "Tools/TESS."
- Click on Basic Word Mark Search under "Select a Search Option."
- Type in the words that are in your trademark and click "Submit Query." Note that designs can also be searched on the USPTO site.

Has anyone come up with a trademark similar to yours? **Please note, your search may not pull up all trademarks** that are similar to yours, but it will give you a very general idea of how to start a search.

STEP 4:
Copyrights: Don't be a copycat

Copyrights are a type of legal protection for "original works of authorship," including literary, dramatic, musical, artistic, and certain other works. Yes, look at the words again –"copy" and "right." A copyright gives the creator the right to control if, when, and how others may copy their original wok.

Did you know that you automatically have a copyright anytime you write, draw, or record an original work? By putting your work in a fixed form, you automatically have a copyright in your original work.

If you want to put others on notice of your copyright, and gain some other advantages, you can register it at the United States Copyright Office.

How long do copyrights last?

Copyright protection lasts the lifetime of the author or artist plus 70 years. That's a long time!

© Learn more at the US Copyright Office's website: www.copyright.gov

Things protected by copyright:

Songs

Sculptures

Films

Books

Your Copyrighted Work!

Remember Becky's Glo-Sheet invention? Additionally, she had a copyright in her website, wording on the packaging, and many other aspects of her product. If she wanted, she could have registered these copyrights. Now it's your turn to develop a copyright! Write a short poem or song or create a drawing in the space below and place the copyright symbol © next to it. Share your new copyrighted material with a friend and explain to them why it is protected.

Thank you to our partners

UNITED STATES PATENT AND TRADEMARK OFFICE
DEPARTMENT OF COMMERCE

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