

# DOODLES OF DISCOVERY

Learn about inventors who solved problems  
and changed the world



Lonnie invent spaceships famous inventions



## Marie Van Brittan Brown

Marie's mom was an inventor and Marie learned from her mom how to solve a problem in her own home....keeping bad people out.

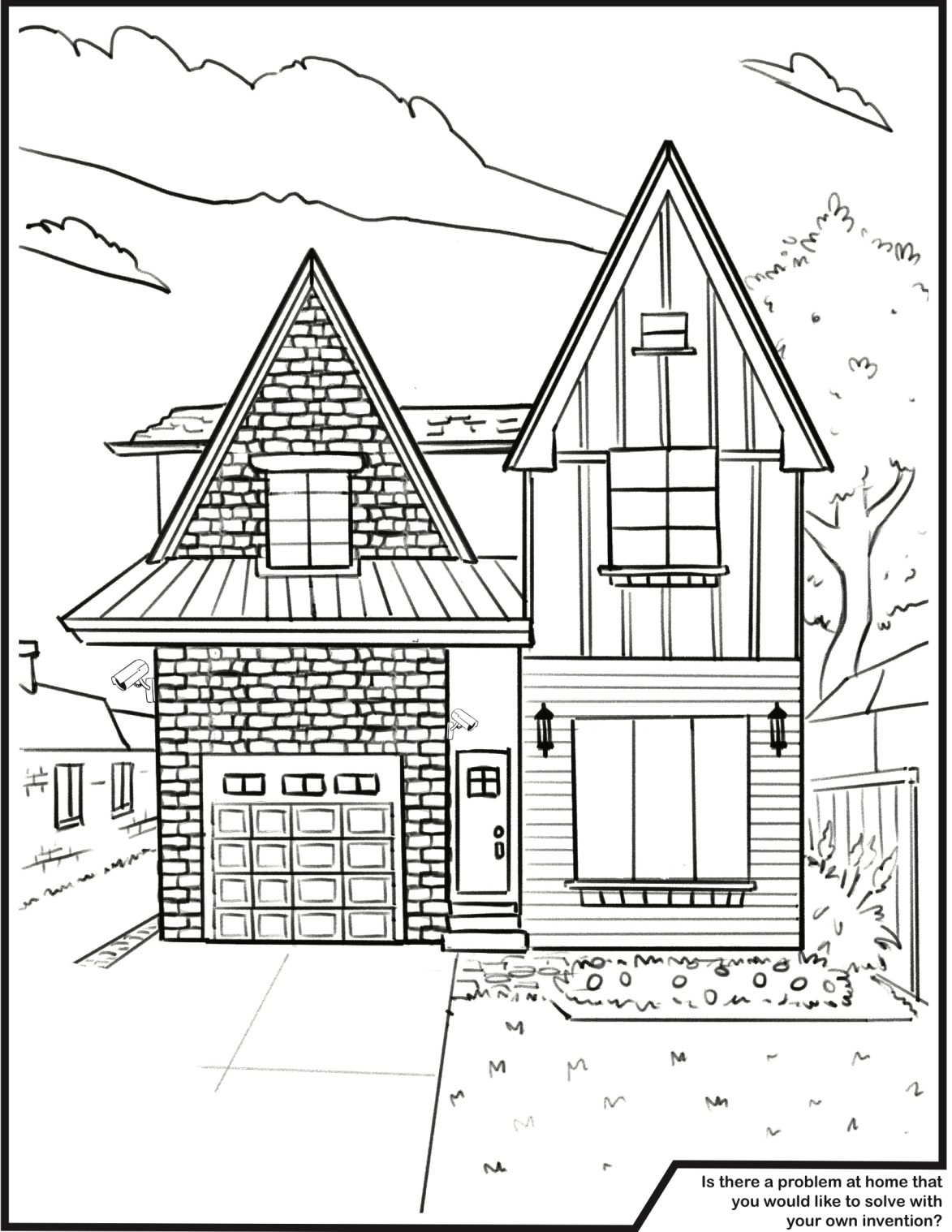


Marie realized that if someone broke into your house when you weren't home they were unlikely to be stopped in time or caught. She wanted to make people's homes a safer place.



Marie invented the security system over 50 years ago and it still looks a lot like today's security systems. Marie knew that good ideas solve problems.



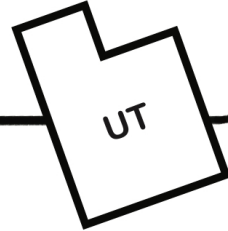


Is there a problem at home that you would like to solve with your own invention?

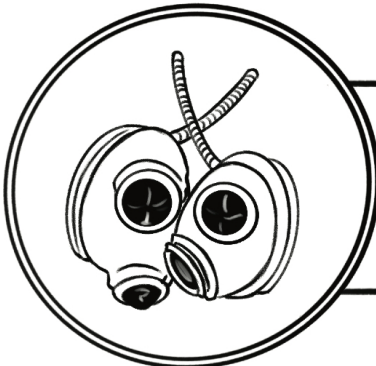
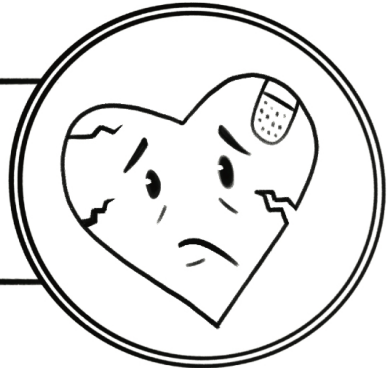


## Robert Jarvik

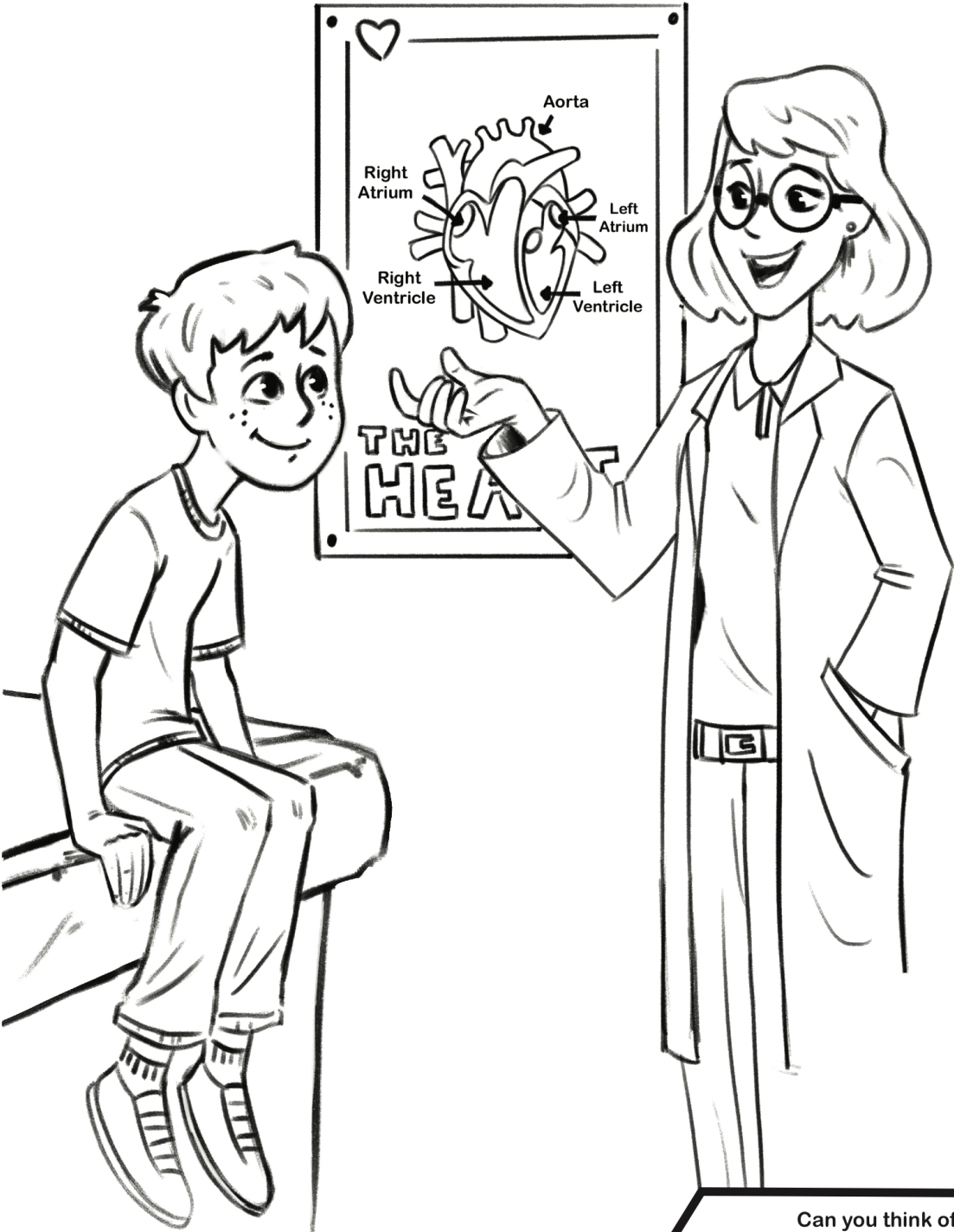
Robert found his love of invention through an early interest in taking things apart and putting them back together.



Sometimes important organs in our bodies like the heart become damaged due to injury or illness.



Robert worked in Dr. Willem Kolff's artificial organs laboratory, where he created an artificial heart design that was implanted in a sick man who then lived for another 112 days. The team's experiments led to important breakthroughs in medical science.



Can you think of a mentor in your life?





## Patricia Bath

Patricia discovered a way to keep millions of people from going blind.



Patricia realized that blindness affects people all over the world and that people in her own African American community were particularly at risk.



Patricia's love of science and math in school helped her to invent the use of lasers to prevent blindness in over 30 million people ever year! She invented laser cataract surgery.

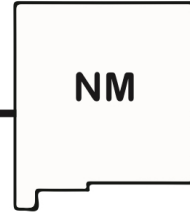


What's your superpower?

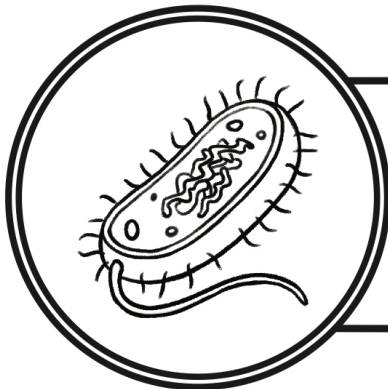
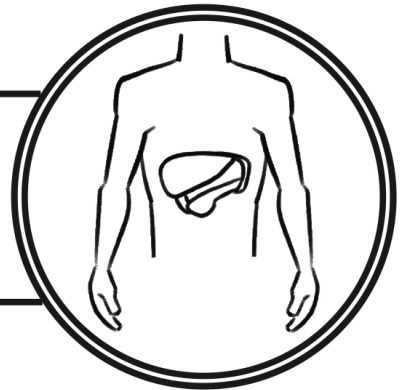


## Lydia Villa-Komaroff

Lydia helped to find a cool way to cure diseases like diabetes. She learned a lot in school - most of all that failing is not always bad.

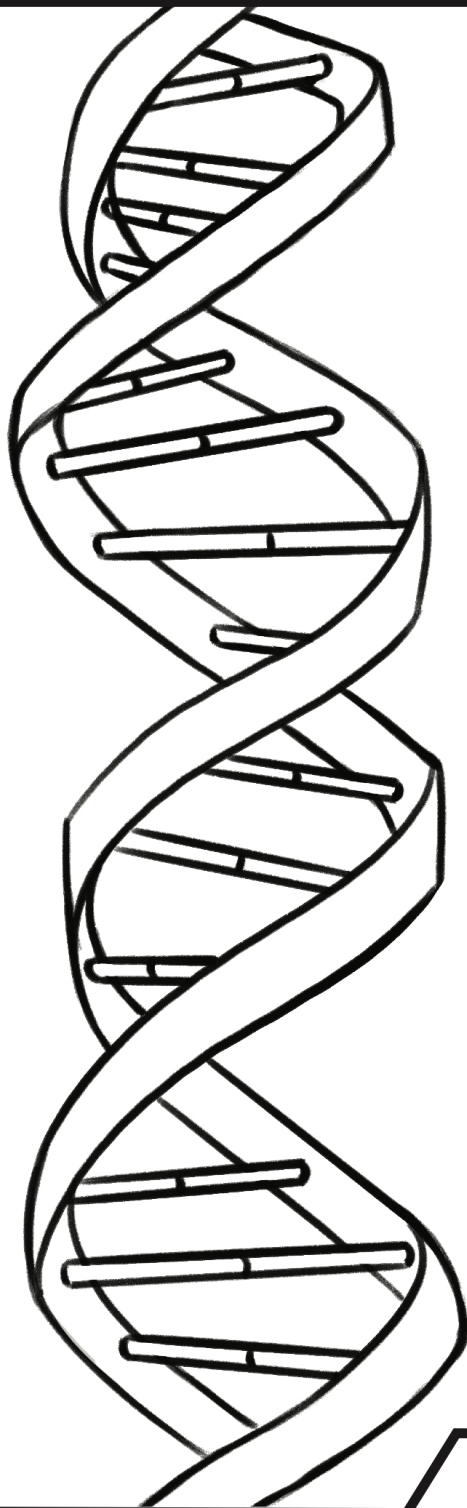


Lydia studied biology and medicine in school and decided to try and find a solution for people who have diabetes. Diabetes affects your pancreas' ability to make insulin.



Her biggest failures helped her to discover her huge success...how to use bacteria to make a medicine called insulin. Insulin is a medicine that helps to treat diabetes.





What discovery would you  
like to make?

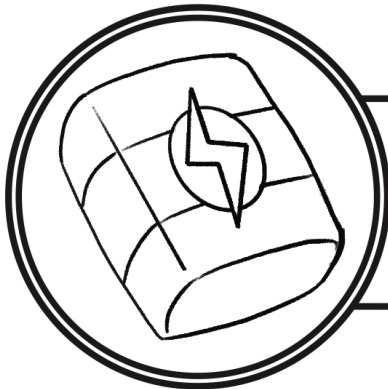
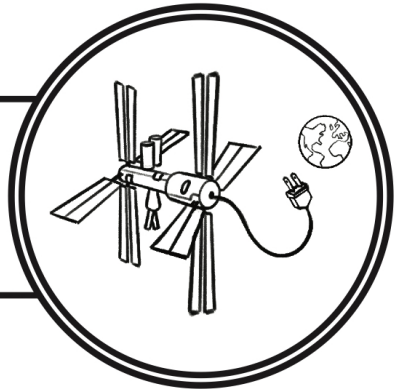


## Olga Gonzalez-Sanabria

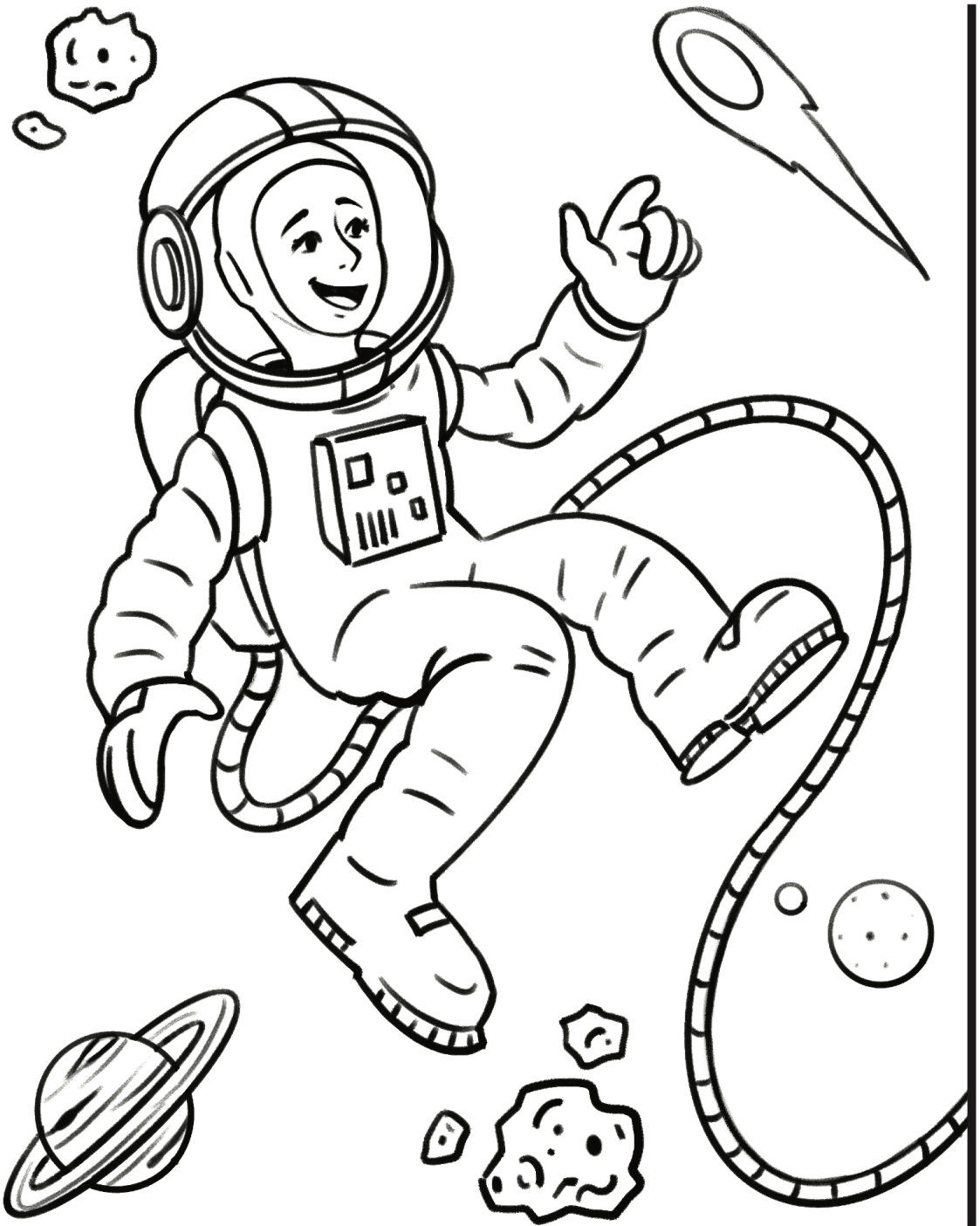
Olga was inspired to solve problems about energy when she went to her school career fair.

PUERTO RICO

The International Space Station is an important place where astronauts study aspects of space. Providing it with enough power was difficult.



Olga worked on a team with other scientists that created a battery system for the station.



Where do you like to explore and solve fun and exciting problems?



# CAN YOU SPOT THE INVENTIONS?

Every day we are surrounded by amazing inventions! Which ones can you spot?



Dishwasher  
-Josephine Cochran



Fry Sauce (UT)  
-Don Carlos Edwards



Jello  
-Pearle Bixb

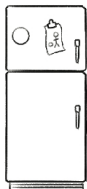
What can you find in the scene below?



What can you find in the scene below?



Peanut Butter  
-Marcellus Edson



Electric Refrigerator  
-Florence Parpart



Disposable Diaper  
-Marion Donovan



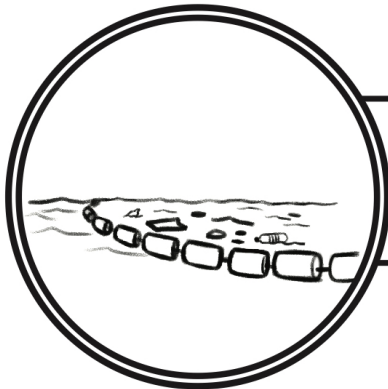
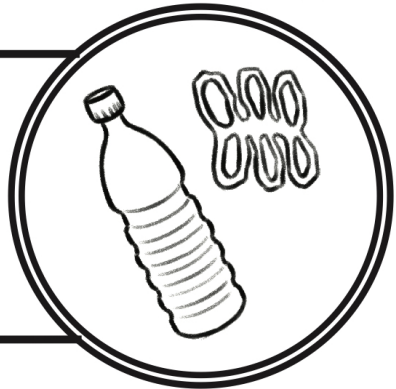
## Boyan Slat

Boyan realized that plastic in the oceans is a serious problem and was not satisfied with being told it was impossible to clean it up.

The Netherlands

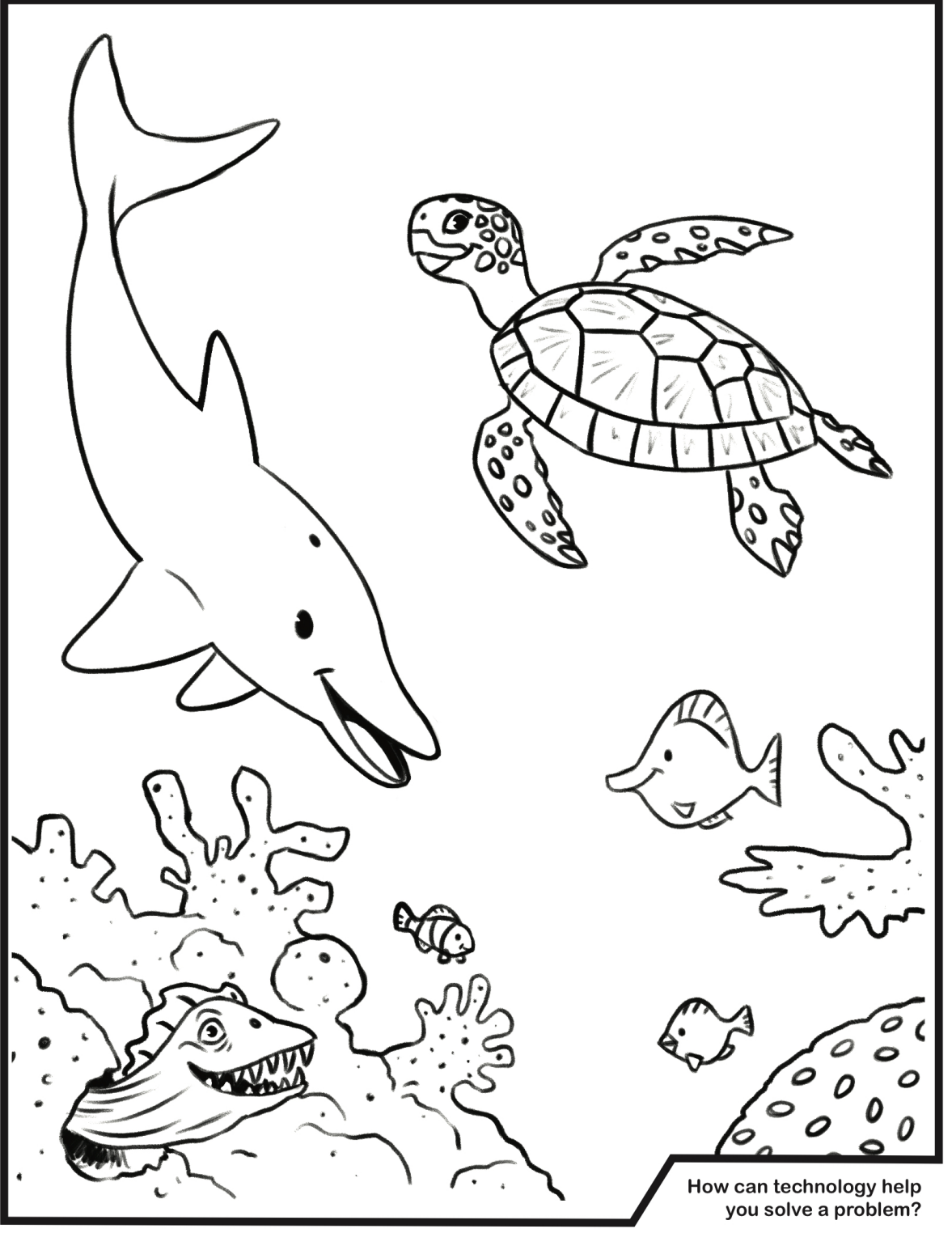


He did a class project trying to figure out why people thought that it was impossible to clean up all of the plastic. He knew that technology could help to create new solution.



He designed a floating machine to pick up plastic and started his own company called The Ocean Cleanup at 19 years old.





How can technology help you solve a problem?

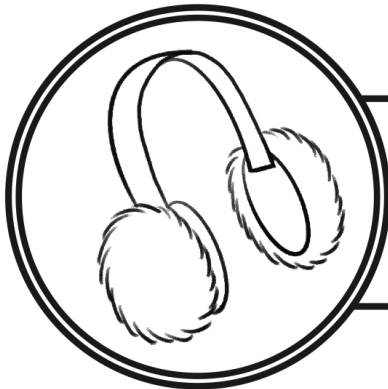


## Chester Greenwood

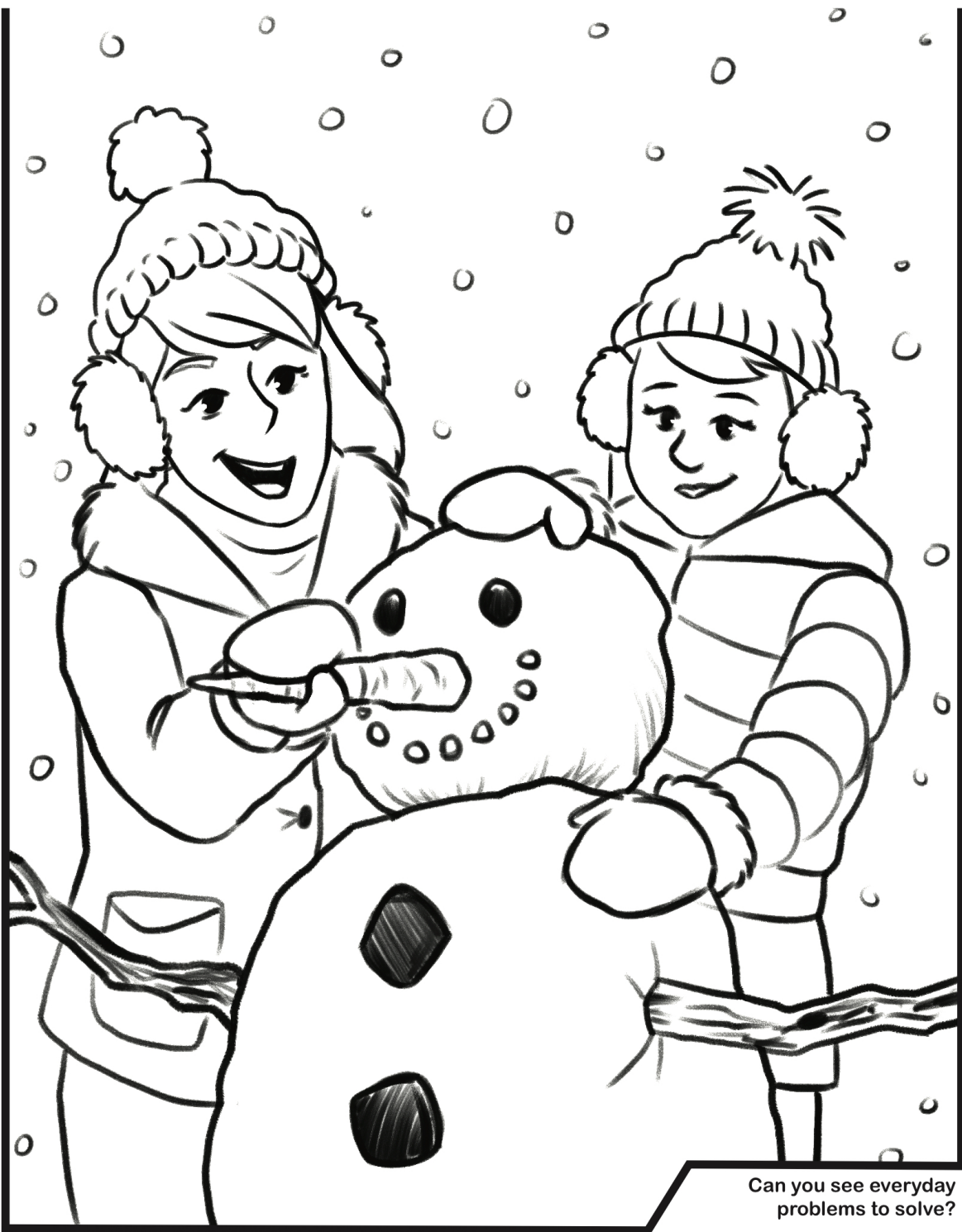
Chester had a problem we all have during the winter...cold ears. He invented the earmuffs to solve his problem.



Chester tried to wrap a scarf around his cold ears, but it was itchy and kept falling off.



Chester used wire to make two loops and asked his grandma to sew fur into them. Chester applied for a patent for his "Champion Ear Protectors" and saved kids' ears from freezing around the world!



Can you see everyday problems to solve?



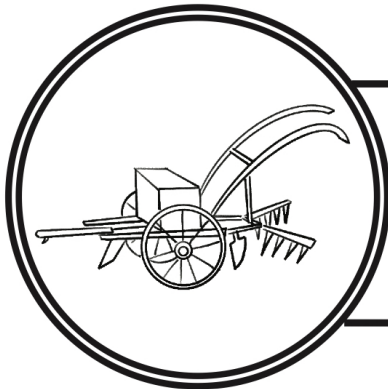
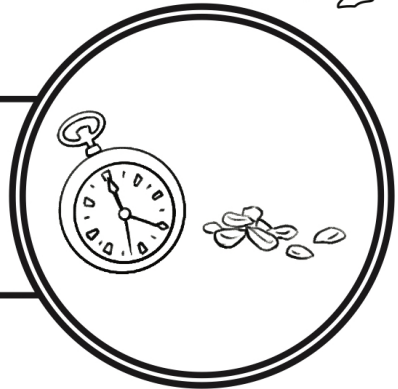
## Henry Blair

Henry was a farmer and knew that planting seeds took a lot of his time. He invented two machines that would help save time to plant corn and cotton seeds.

Maryland



He figured out that if a farmer saved time planting seeds then they could grow more food for hungry people.



Henry's invention used a wheel barrow and a rake to make a planting machine. He showed how every day things can be used for new ideas.





There are a lot of cool inventions around growing and making food. Can you think of one?

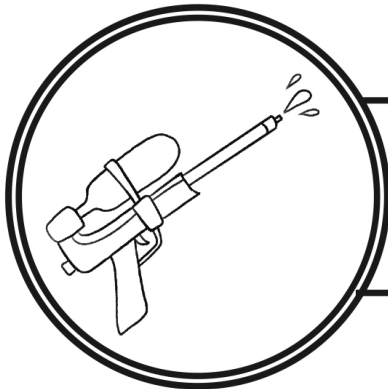
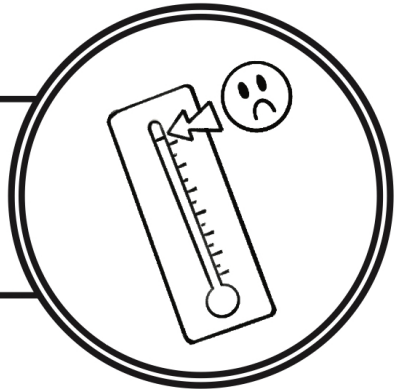


## Lonnie Johnson

Lonnie likes to dream big, but it all started with tinkering on things when he was young.



Lonnie invented lots of things for planes, spaceships, and rockets. But his most famous invention helps people have fun and cool down on hot days!



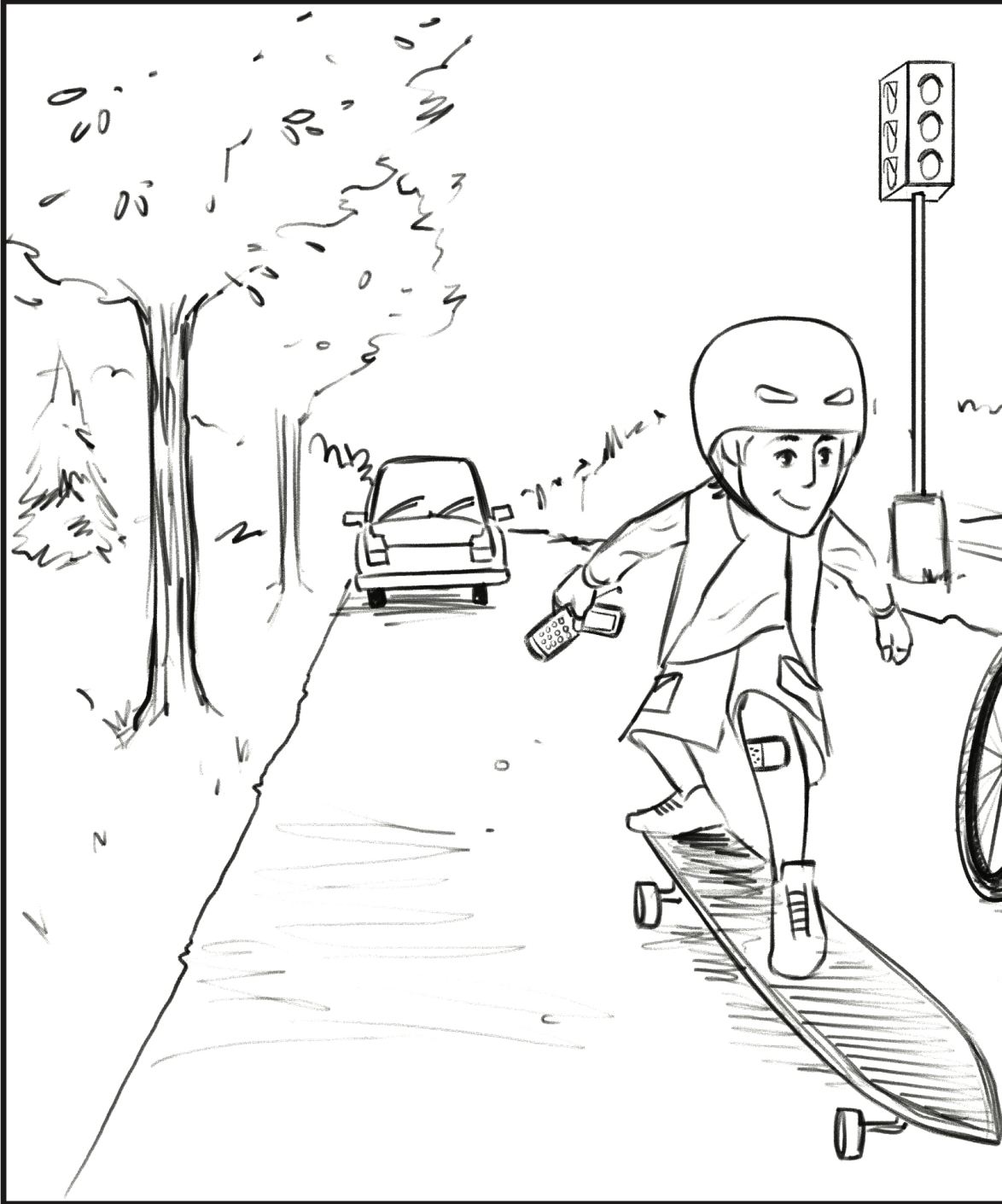
Did you guess his invention? The Super Soaker! This invention earned him over 73 million dollars and has made lots of kids happy!



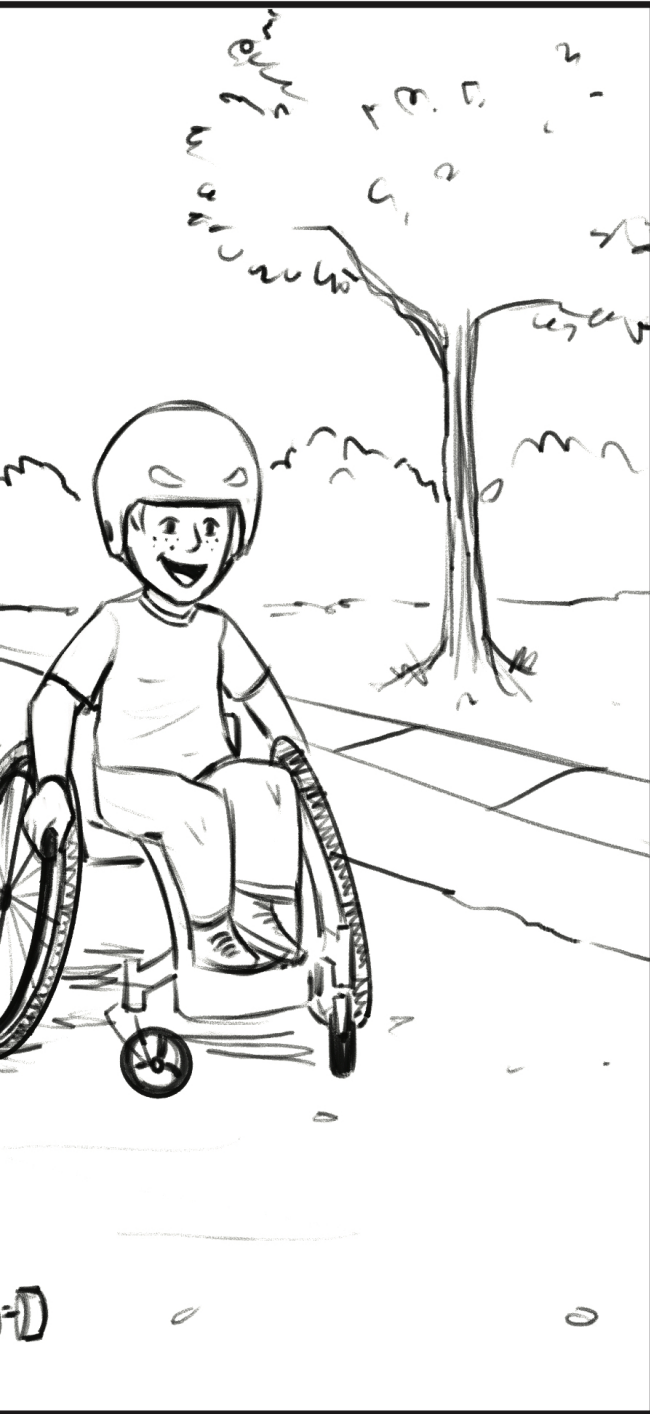
What kind of toy can you think up?

# CAN YOU SPOT THE INVENTIONS?

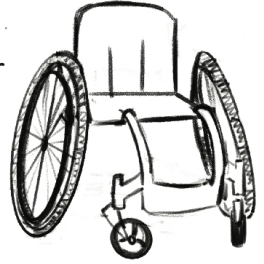
Every day we are surrounded by amazing inventions! Which ones can you find?



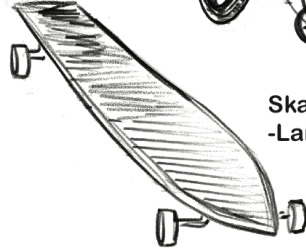
What is in the scene below?



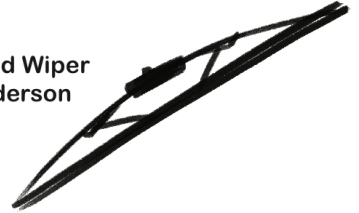
Sports Wheelchair  
-Marilyn Hamilton



Skateboard  
-Larry Stevenson



Windshield Wiper  
-Mary Anderson



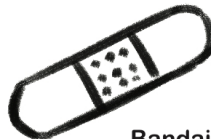
Mobile Phone  
-Martin Cooper



Electric Streetlight (UT)  
-Lester Wire



Bandaid  
-Earle Dickson





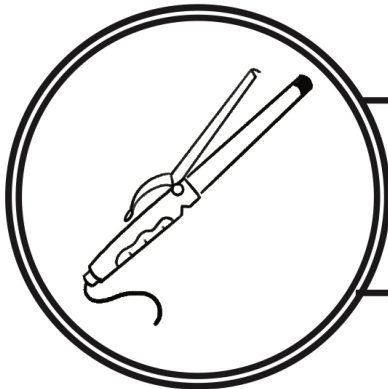
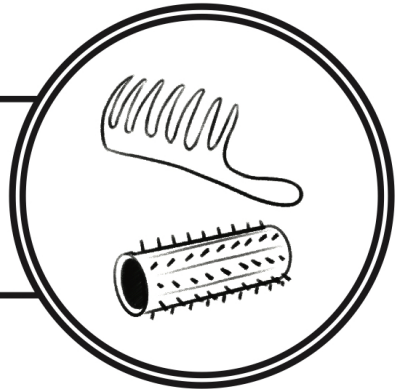


## Marjorie Stewart Joyner

Marjorie saw that women were busy and always trying to find the time to take care of their hair. Roasting a turkey gave her the idea for her permanent hair wave machine.



Curling hair could take a long time and usually involves a lot of preparation. Marjorie wanted to create a more permanent, and easier, solution.



Marjorie's invention used heat to cause permanent curls in hair. The curling iron has saved many people a lot of time!

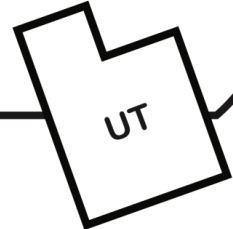


Can you come up with a new design for an existing product?

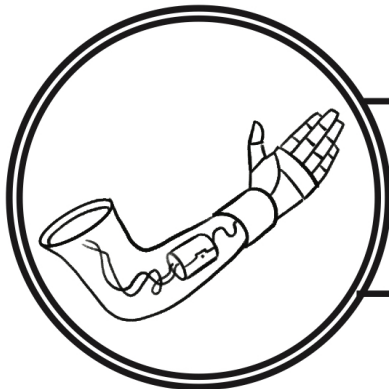
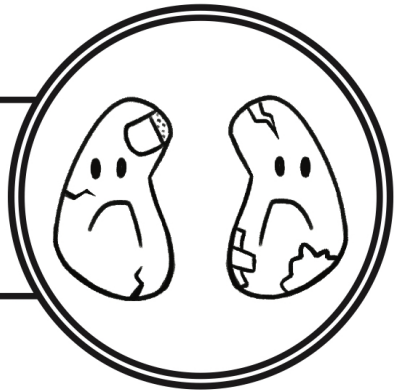


## Steve Jacobsen

Steve liked to know how things worked and spent a lot of time taking things apart, like cars, and putting them back together.



Steve looked around and saw many ways that an invention could help solve a problem. When he created the first artificial kidney machine, it helped a lot of people whose kidneys were sick or damaged.

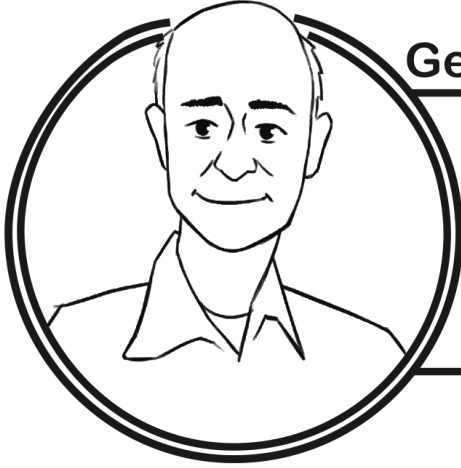


Steve used his imagination with robotics to invent lots of cool things like robots for amusement parks (think pirates and dinosaurs!) and the first electromechanical artificial limbs for lower-limb amputees.



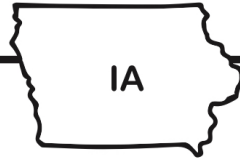
What's the craziest invention you can think of?



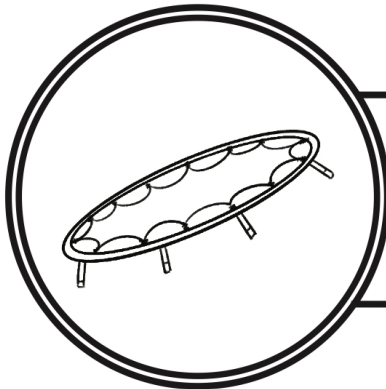
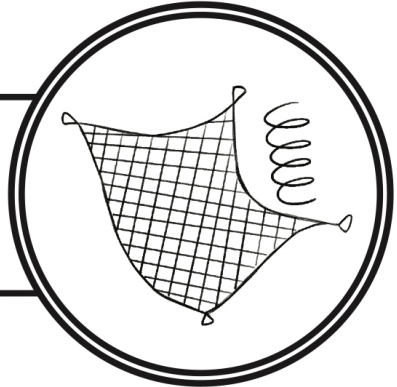


## George Nissen

George was a gymnast, always looking for better ways to train. He saw the safety net that trapeze artists used at the circus and got a crazy idea.



He called it the Trampoline after the Spanish word, trampolin, which means springboard. He designed a similar net with iron bars and canvas.

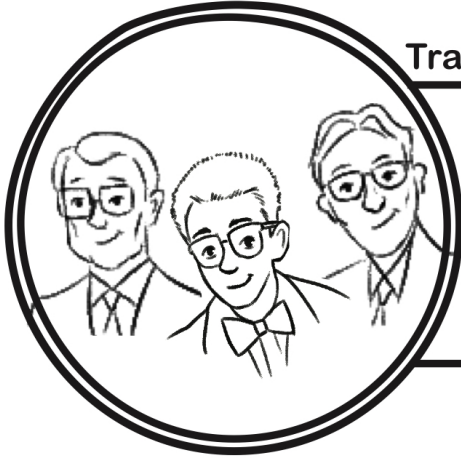


George from graduated college and traveled the world showing off his invention. The trampoline is so popular that over half of a million are sold in the United States each year!

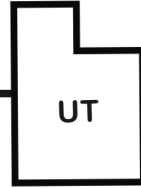


Can you think of inventions that you have used for sports or when you are out camping?

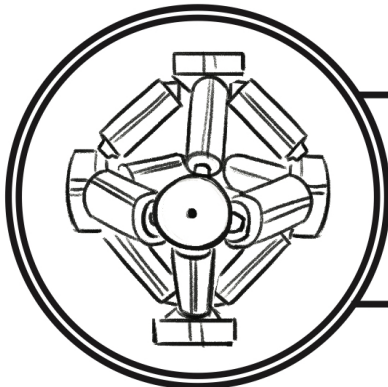
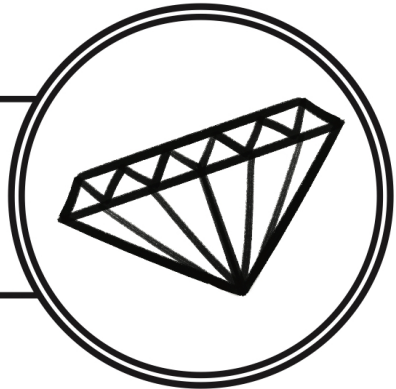
## Tracy Hall, Bill Pope & Duane Horton



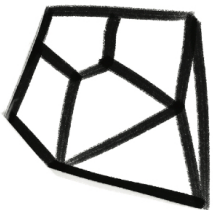
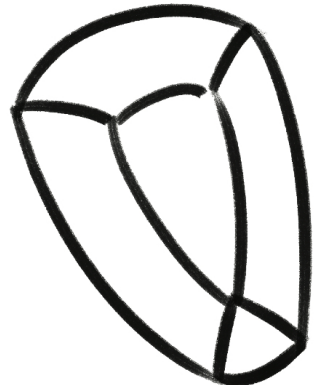
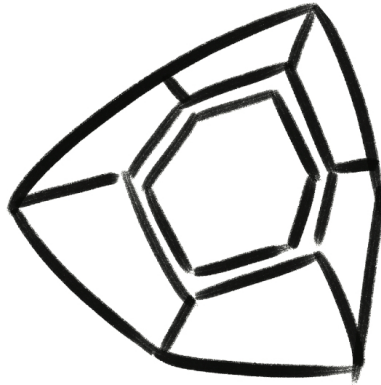
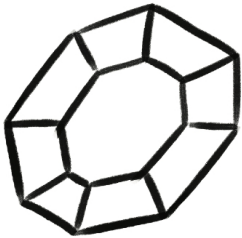
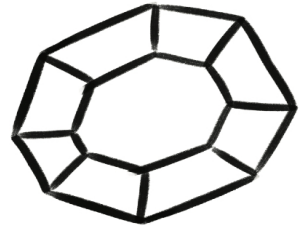
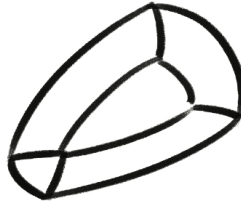
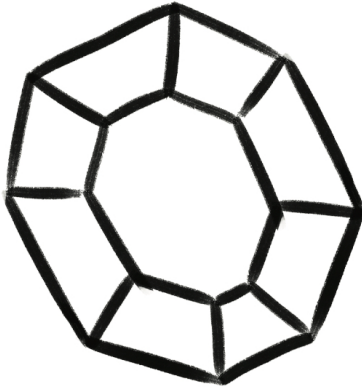
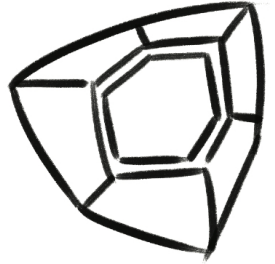
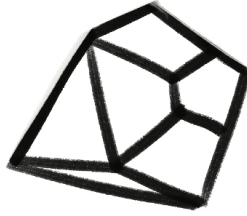
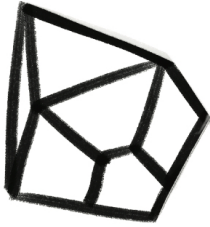
A good invention sometimes requires people who are good at different things. Bill Pope, Tracy Hall and Duane Horton, as a team of inventors, came up with a way to grow fake diamonds in a lab and ways to use them.



They found out that fake diamonds were a great way to make drilling and cutting rock and metals easier. The synthetic diamonds were also used to make better hips when people needed to replace worn out hip bones.



Today the diamond-coated drill bits are being used by one of Bill's companies to drill for water for communities in Kenya where they need fresh drinking water. Team work is really important in having good ideas that make great inventions!



What kind of skills do you have that would be helpful to a team?



# CAN YOU SPOT THE INVENTIONS?

Every day we are surrounded by amazing inventions! Which ones can you spot?



Barbie doll  
-Ruth Handler

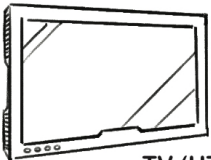
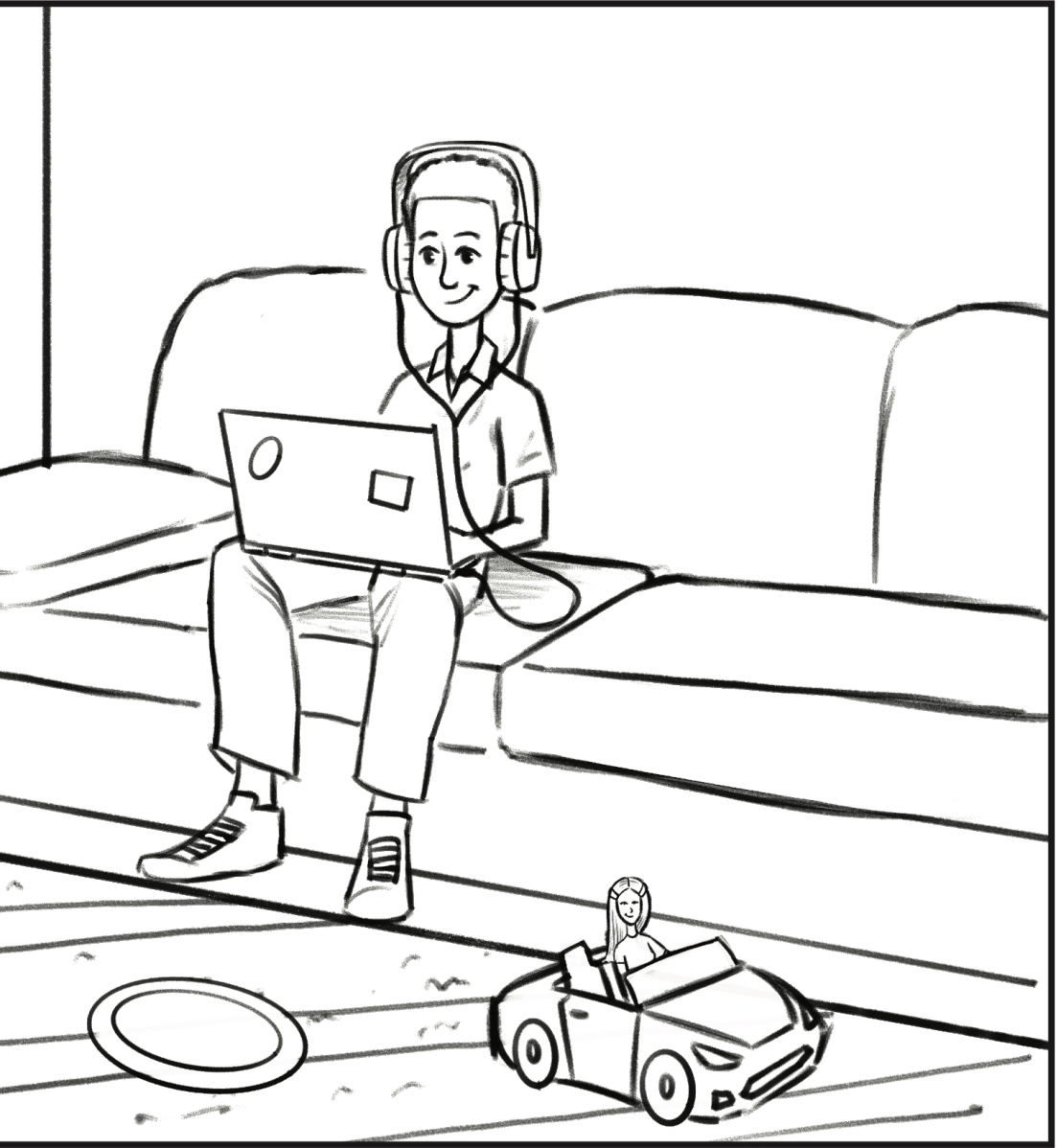


Frisbee (UT)  
-Walter Morrison



Atari (UT)  
-Nolan Bushnell

What can you find in the scene below?



TV (UT)  
-Philo T. Farnsworth



Headphones (UT)  
-Nathaniel Baldwin



First Monopoly Game  
-Elizabeth Magie



Olga Gon

Olga was  
energy v  
career

The internation  
importnat place wh  
aspects of space. Uny  
with eno

Marjorie

Marjorie  
always  
of the  
the id  
mach

Curling hair could ta  
usually involves a  
Marjorie want  
permanent.

Want to learn more about inventors?  
Visit [stem.utah.gov/invent](http://stem.utah.gov/invent)

**About the Utah STEM Action Center:**

The STEM Action Center is Utah's partner in promoting Science, Technology, Engineering and Math education through the identification and support of best practices and leveraging of resources across education, industry, government and community partners to support economic prosperity.