

PORTFOLIO

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WHO AM I?

I'm a curious problem solver with a degree in Industrial Design from James Madison University. While at college, I also become incredibly proficient with Graphic Design, Computer Science, and Illustration. I have a passion for helping people, gaining empathy, and designing products that to improve peoples' lives.

WHY I DESIGN



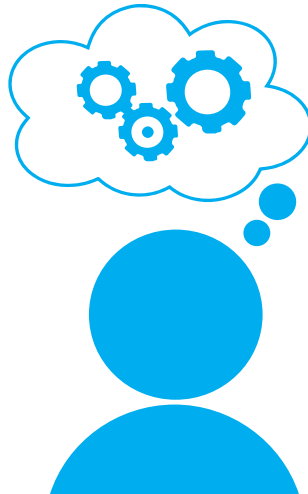
So I can help



So I can learn



So I can create



So I can think



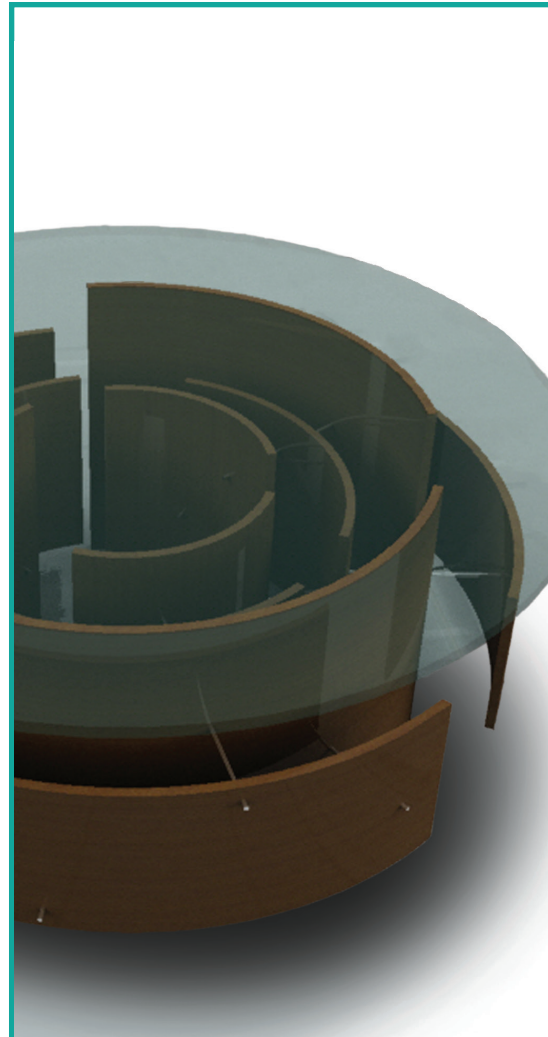
So I can empathize

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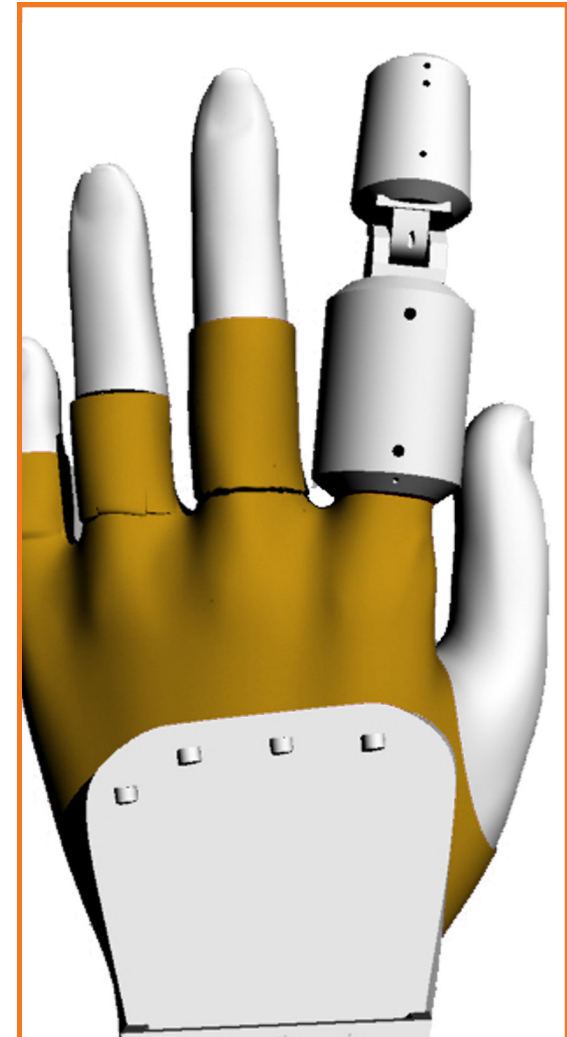
TOOLSPACE

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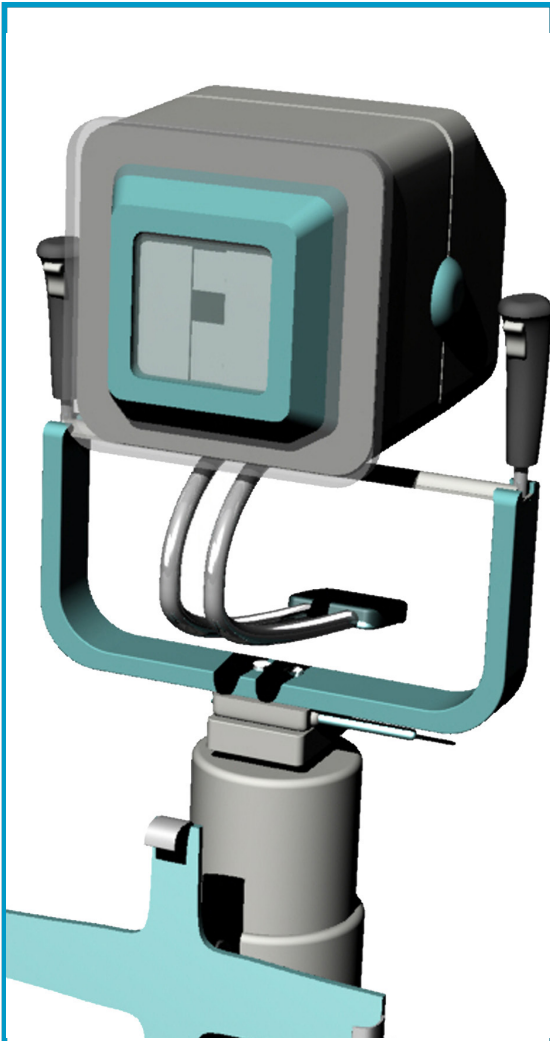
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PROBLEM STATEMENT:

Is there a way to change the shape of a toolbox that makes us rethink how we organize our tools?

TOOLSPACE

TOOLBOX

What?

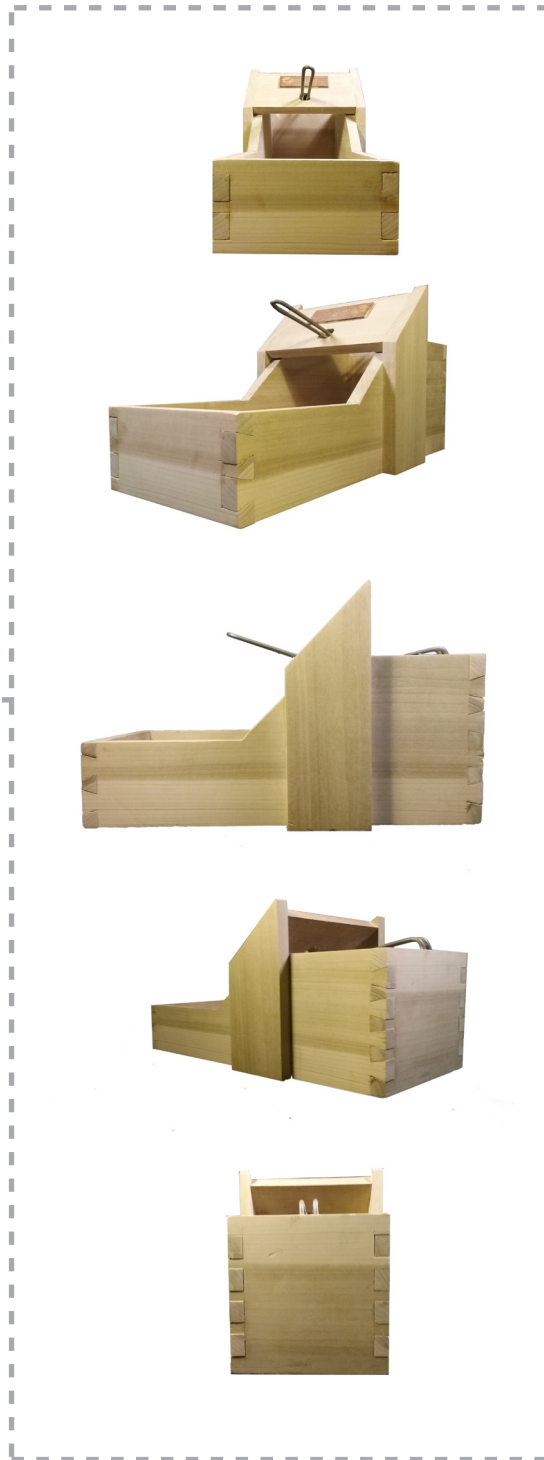
Toolspace is a unique toolbox designed for makers of all trades. It is meant to provide users with easy open access, simple organization, and a nonconventional, interactable form.



The toolbox was a project where the parameters were simple: the dimensions should be at least 20"x 6"x 6", it has to be made of wood, it can't have a lid, and it must include dovetails. As you can see, the final product ended up with a lot of architectural elements to it. This is owing to the fact that I wanted the final product to contain a lot of eye-flowing angles.

Some of the elements of this box carry a lot of purpose, for example, the piece of wood that goes across the top, or "the bridge," holds several. It acts as a brace to keep the handle from getting too wobbly and loose, it provides a small amount of shelter and protection for the tools inside, and, finally, any tools currently in use but not in hand can simply lean on it. Besides that, I had complete creative freedom.

I wanted to make something different and innovative. Something smarter or more interesting than what you normally think of when you think of toolbox. As you can see, I ended up implementing a lot of architectural elements into the final design.



ARCHITECTURAL

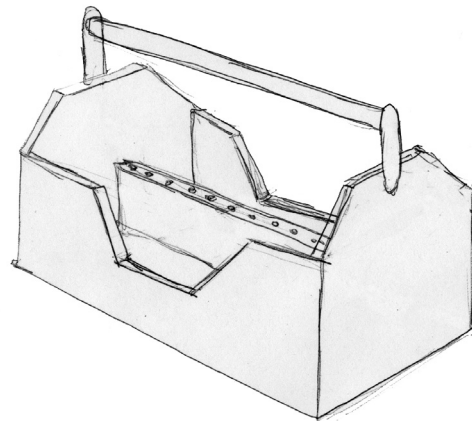
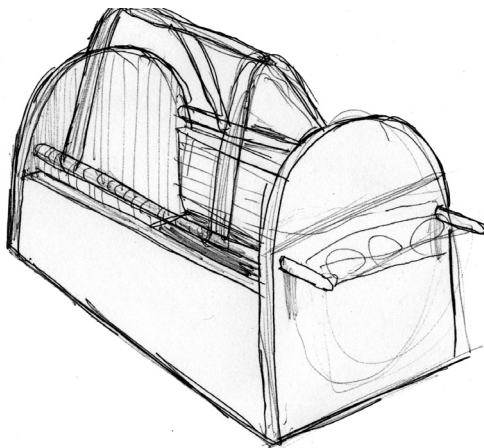
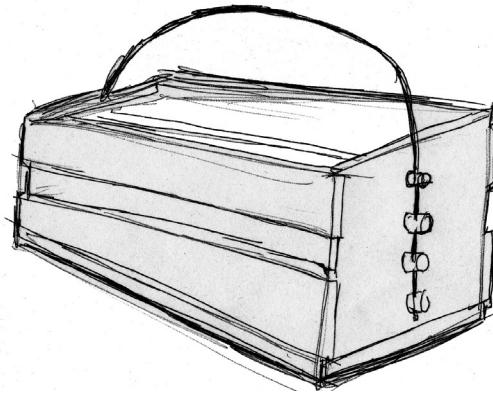
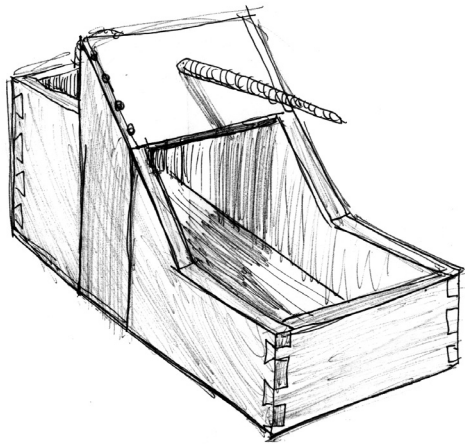
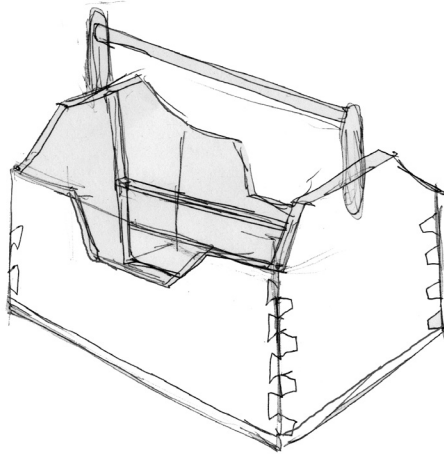
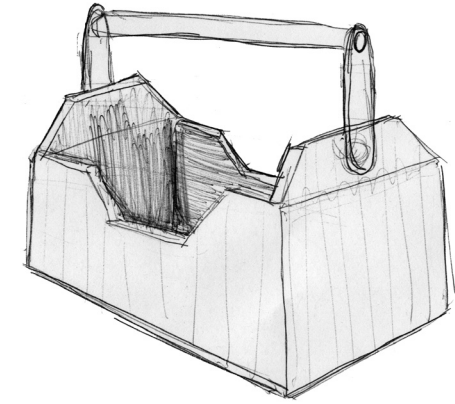


ORGANIZED



DIFFERENT

PROCESS

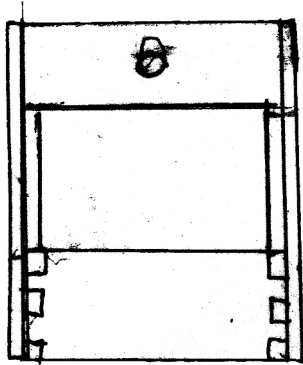


Why?

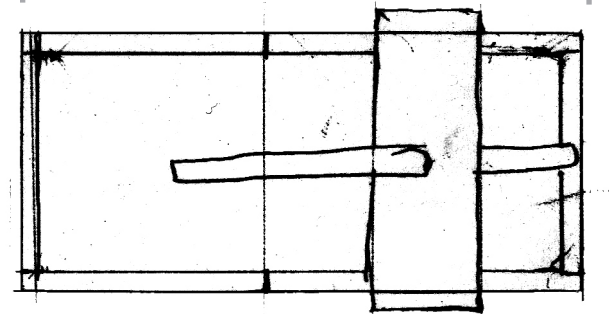
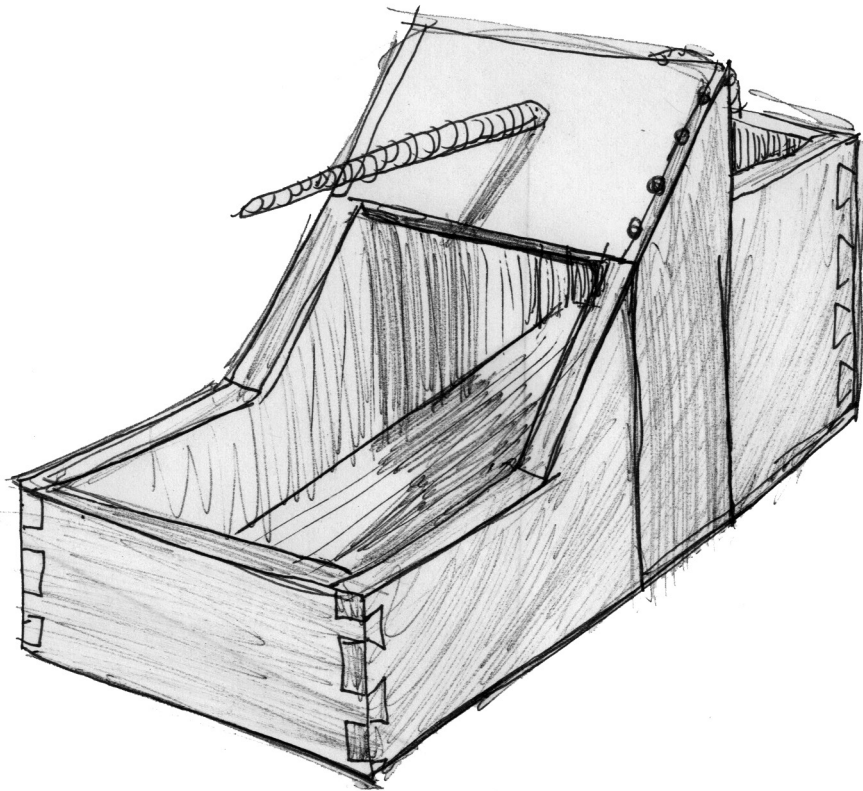
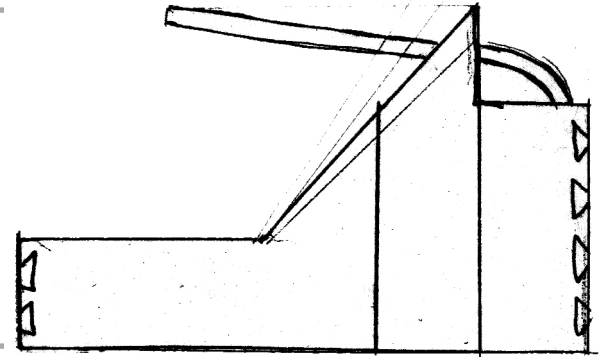
As you can see, the design for this toolbox went through several iterations, most of which were based off your traditional toolbox shape with varying handles and materials.

A toolbox is simply meant to be a way to get your tools from point A to point B safely. However, I see no reason as why it can't provide a nontraditional method of organization.





8"



20"

CONSTRUCTION



How?

Construction of the toolbox involved the use of dovetail joinery, one of the strongest known wooden joints known to man! Once the joints were cut, they were simply glued together using wood glue. It is then sanded and oiled for the purpose of looks and protection.

As for the handle, it's made by bending an iron bar in half and fit through the "bridge" and is inserted and glue into two holes drilled onto the back end of the toolbox. Thanks to these three points of locked movement, the handle remains still with little chance of warping



MATERIALS



POPLAR WOOD



IRON BARS



WOOD GLUE



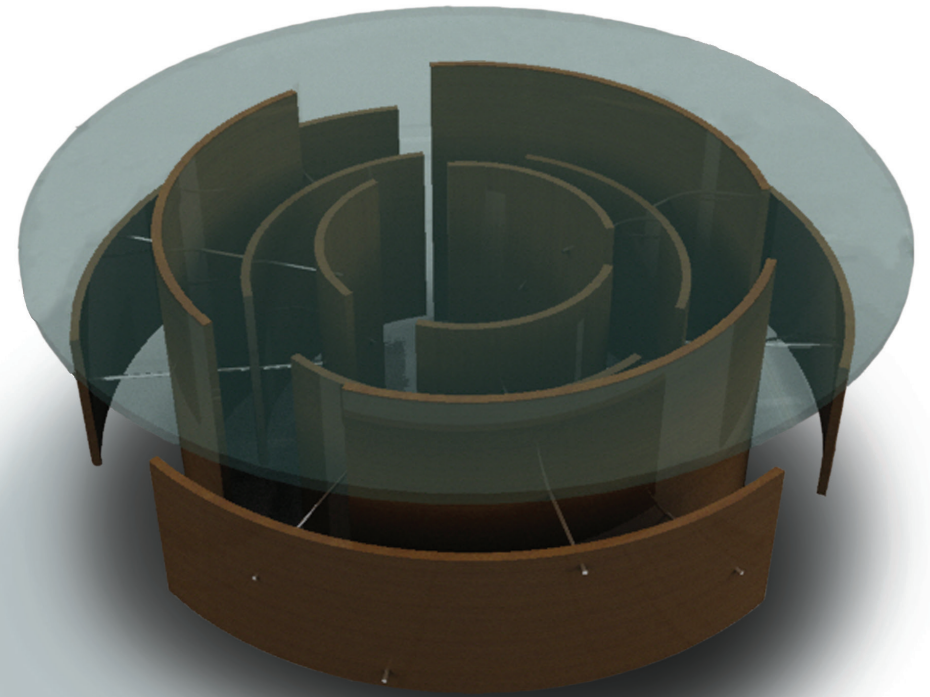
PROBLEM STATEMENT:

Designing furniture pieces with inspiration drawn from books, movies, and music.

RIPPLE TABLE

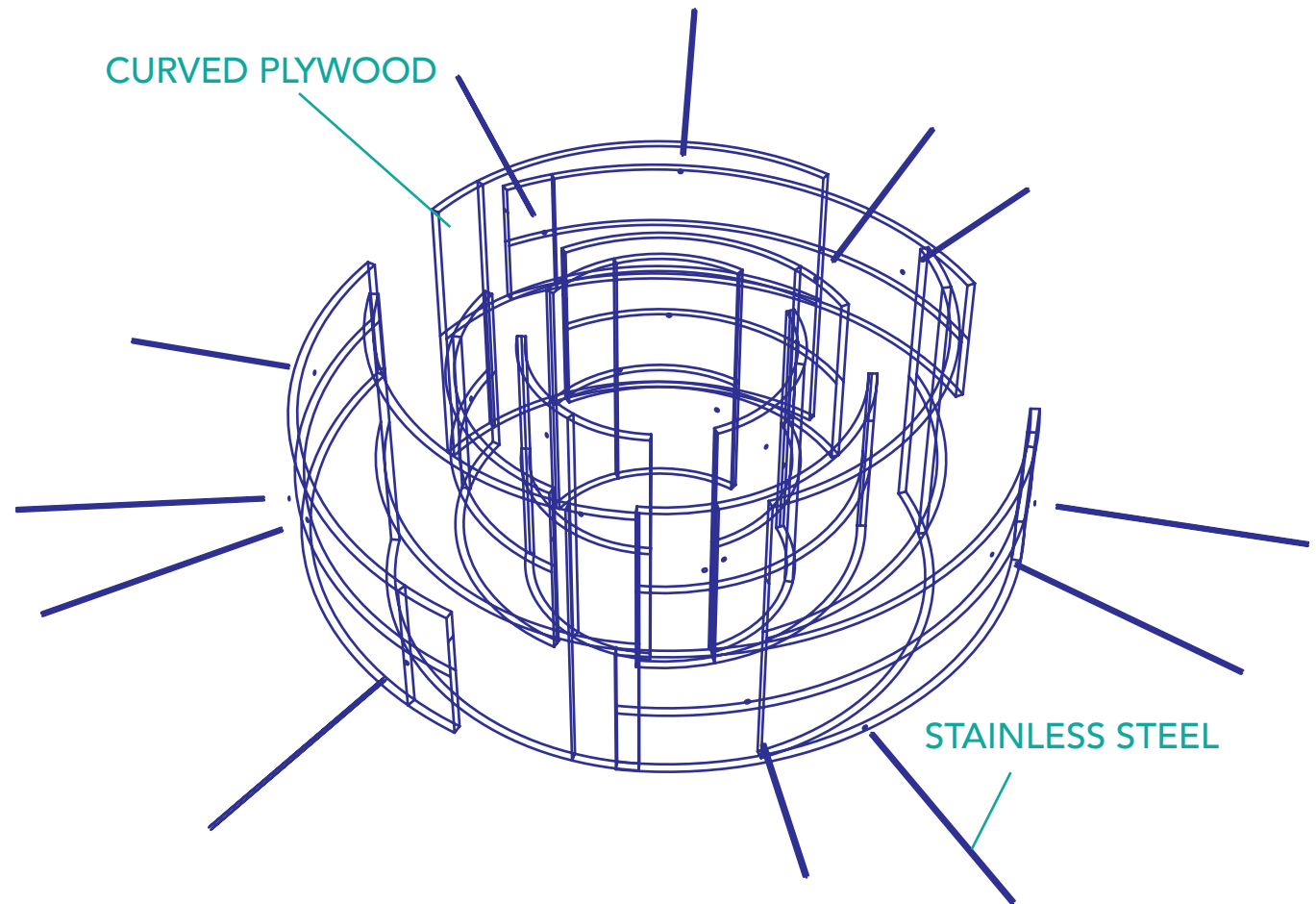
What?

The Ripple Table is a light, transparent, and attractive piece of furniture perfect for almost any domestic or office setting. It's concentric design and innovative construction are the selling points for this beautiful tablepiece.



The Ripple Table is constructed using the simplest of materials. The panels used in the base of the table are constructed using curved and cut plywood overlaid with a thin layer of polished wood. Linking the panels of plywood would be a series of rods. The rods would be made out of stainless steel, each cut at a particular length. Finally, the tabletop will simply be made out of cut and polished glass.

In terms of assembly, Ripple has a very simple method of being put together. You simply slide each rod into the appropriate holes of each layer, then cap the ends with a small brace as to prevent any further sliding. Because of the piece's curved nature, it manages to hold its form without wobbling or collapsing.



EASY ASSEMBLY



EASY TO MAKE



ATTRACTIVE

INSPIRATION

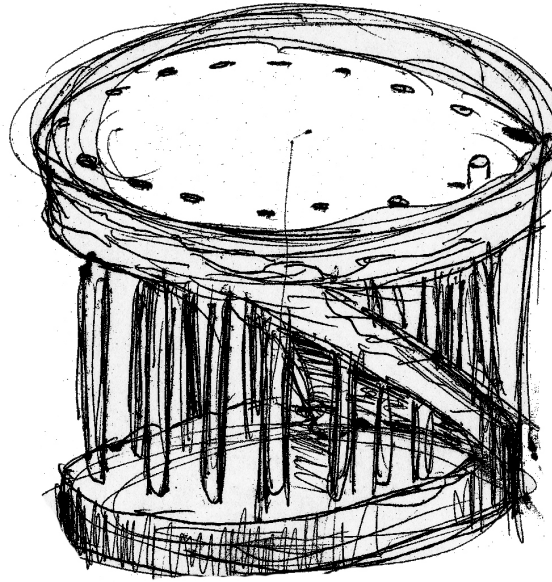
Where?

For this project, I was asked to design a piece of furniture inspired by a piece of music. The form take any form from shelves and tables to chairs and coaches, as long as it was somehow tied to it's relative song

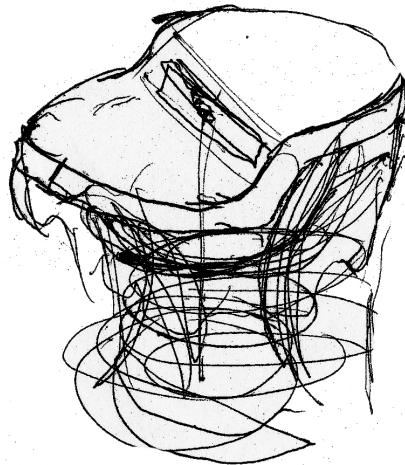


SKETCHES

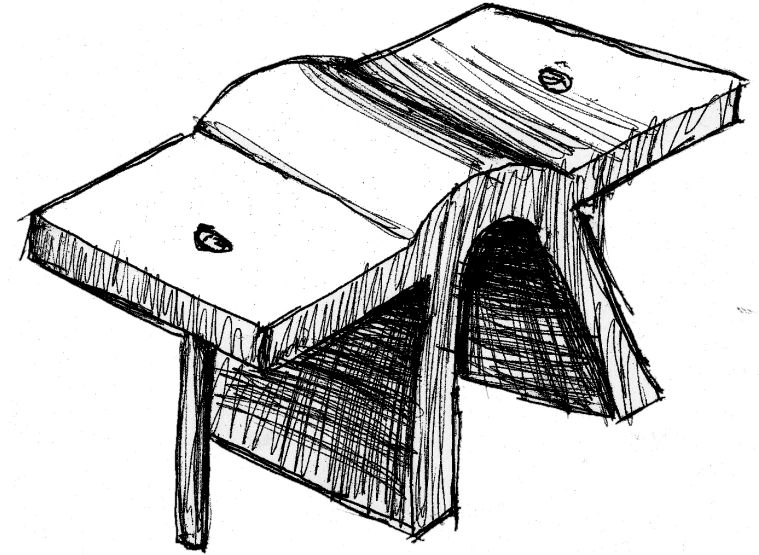
"DEATH OF THE COG" -THE COG IS DEAD



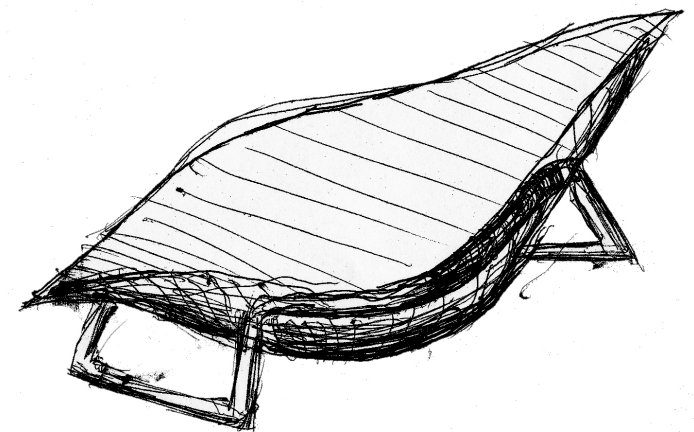
"RUST WITH YOU" -STEAM POWERED GIRAFFE



"&" -TALLY HALL



"THE TRAP" -TALLY HALL



Here are a few of the old sketches I had before I ultimately decided which direction I wanted to take. Many of them were from very obscure surrealist bands, each with a song they held something very dichotomous and symbolic in their lyrics.

THE CHOSEN SONG: NAVRAS

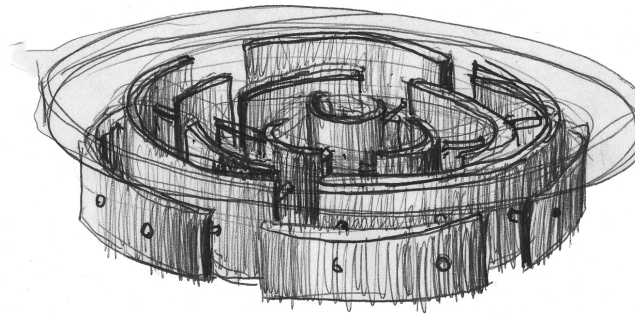
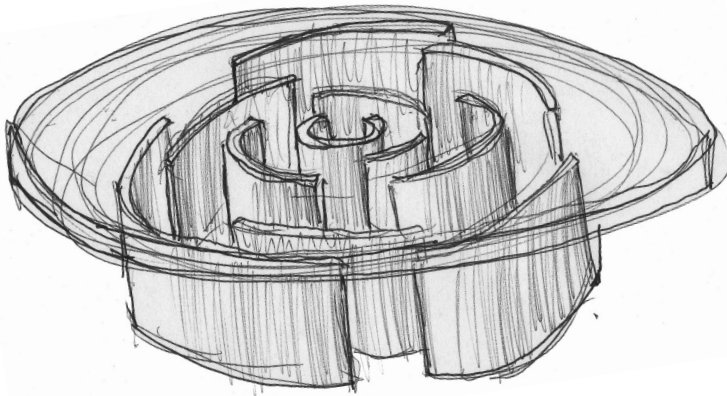
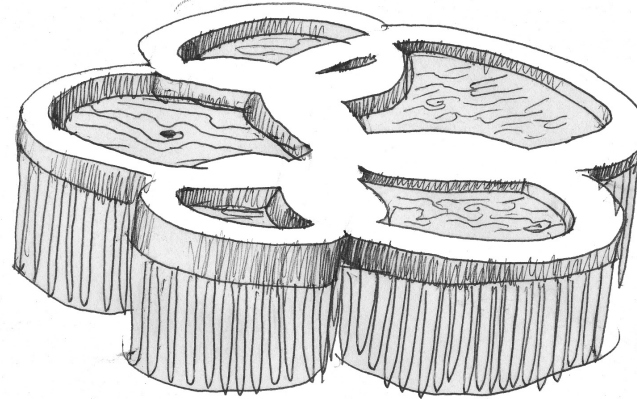
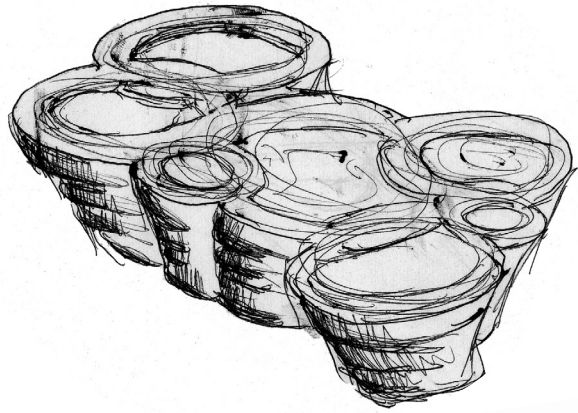


Why?

The song I decided to go with was "Navras," a song from "The Matrix: Reloaded" soundtrack. The song is very powerful and dramatic, with a lot of build up and bass. The song reminds of lot of a storm, with waves of roaring thunder and high tension. Each note hits the ear like a raindrop hitting a puddle of water, hence the inspiration of form behind the table.



ITERATIONS

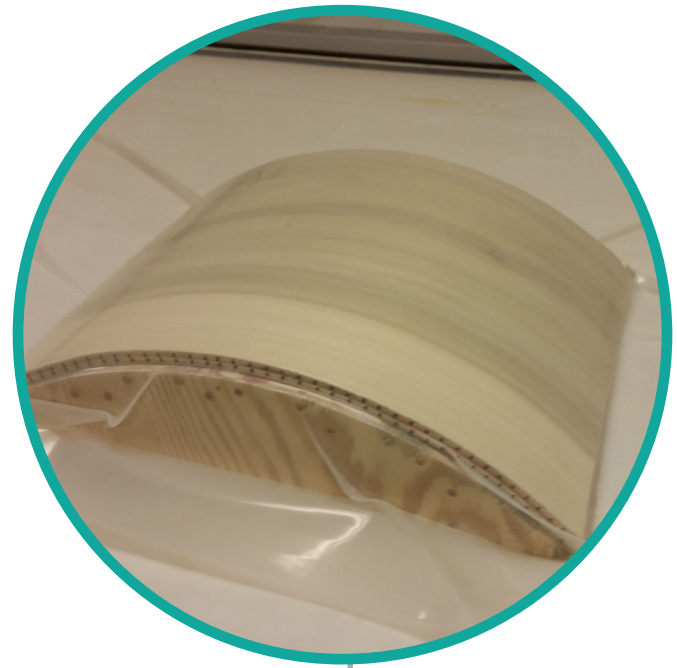
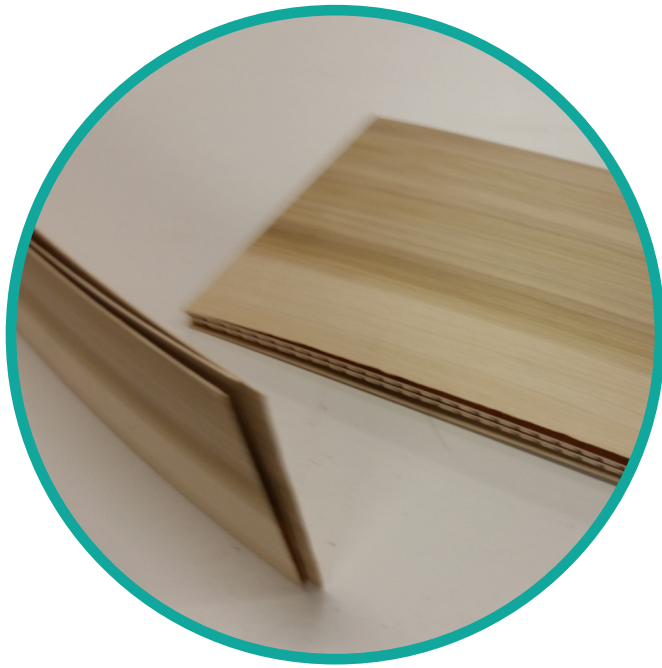


Initially, as you can see, my focus was on capturing the imagery of a bunch of different drops of water at once, each hitting the water at a different time. However, over the course of a month I slowly began to narrow my focus towards studying and mimicking the properties of just a singular drop of water.

I became very familiar with the physical properties of the ripple effect of water, and how the wavelength decreases as the radius increases. The difference from this property and my table is that as the radius increases, the wavelength increases.



CONSTRUCTION

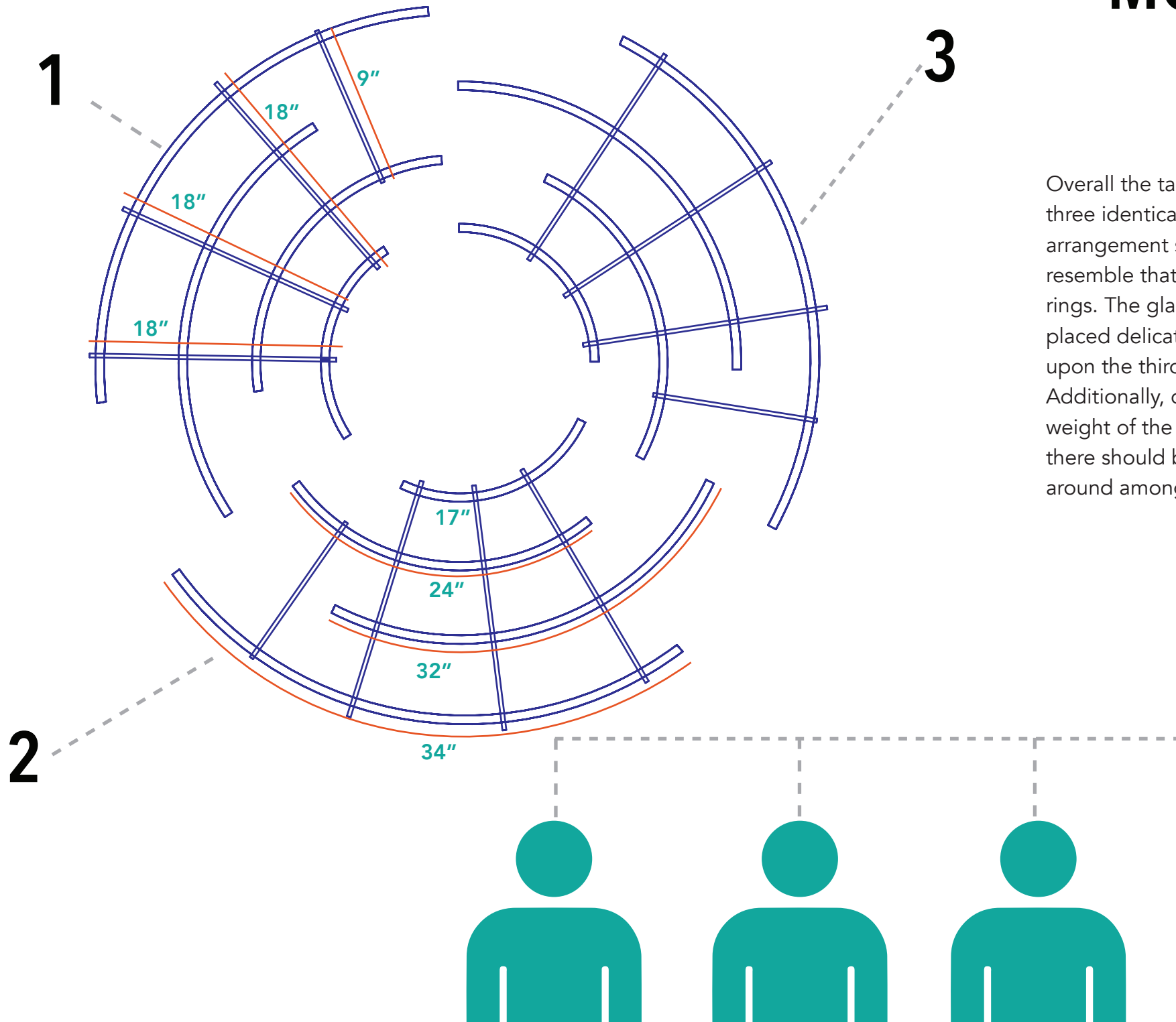


How?

The biggest hurdle I had to go through with constructing this table was finding curved plywood that met the specification I was looking for. I called many companies, but nothing turned up. So instead, I decided to curve my own.

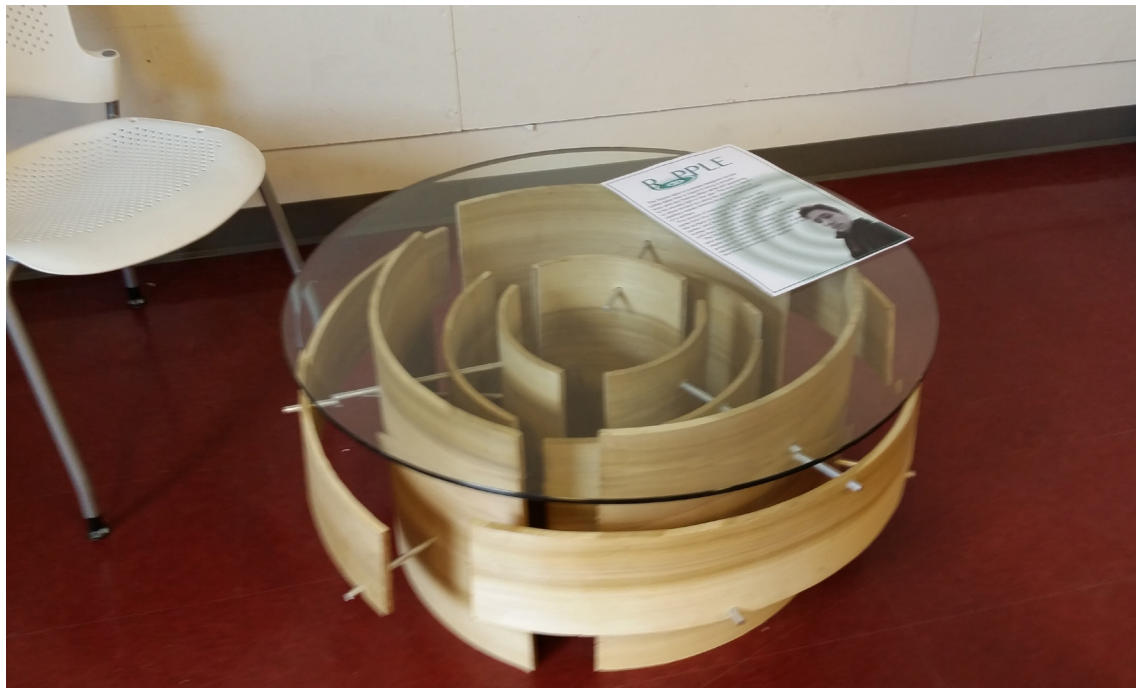
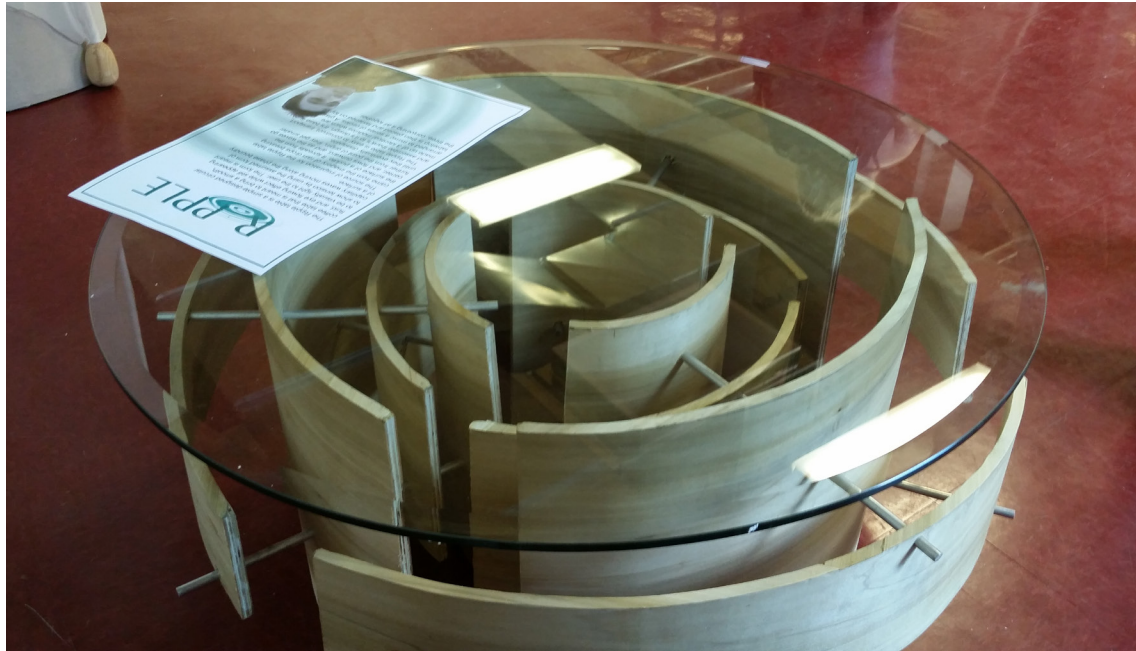
I ended up making 4 different molds using plywood, bondo, and sawdust. Then, I took a bunch of luan plywood and scored it to make it more flexible. Finally, I glued the sheets of luan between two sheets of poplar veneer and put them inside a vacuum table.

MODULES



Overall the table consists of three identical model. Their arrangement should almost resemble that of 4 concentric rings. The glass tabletop is placed delicately on top, resting upon the third outermost ring. Additionally, owing to the weight of the glass tabletop, there should be minimal shifting around among the modules.

RENDERINGS



Ripple

The logo for Ripple, featuring the word "Ripple" in a teal serif font. Below the text are three concentric, curved teal lines that resemble ripples in water, starting from the center and expanding outwards.

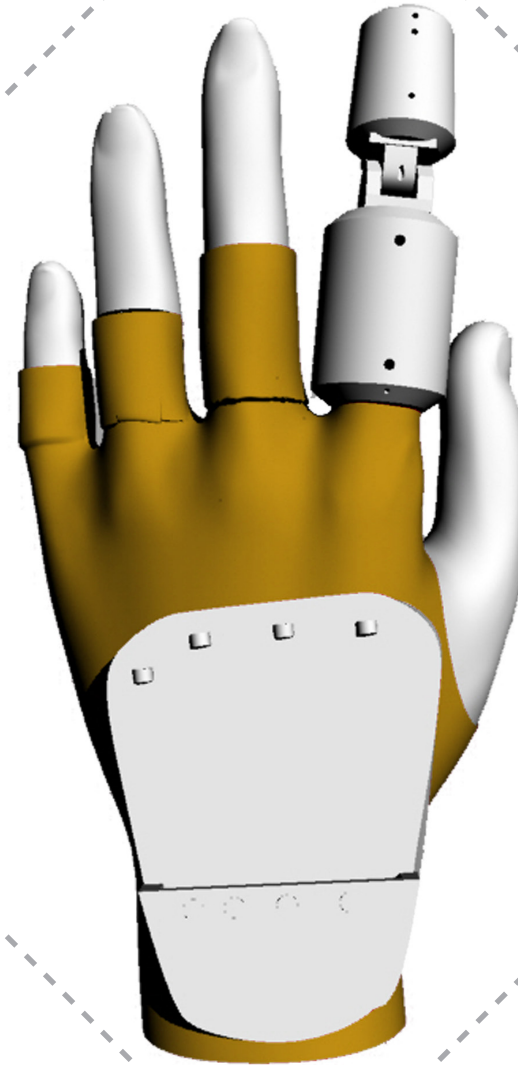
PROBLEM STATEMENT:

There needs to be a cheaper solution for those who cannot work without use of their fingers.

ARTIFIX FINGER

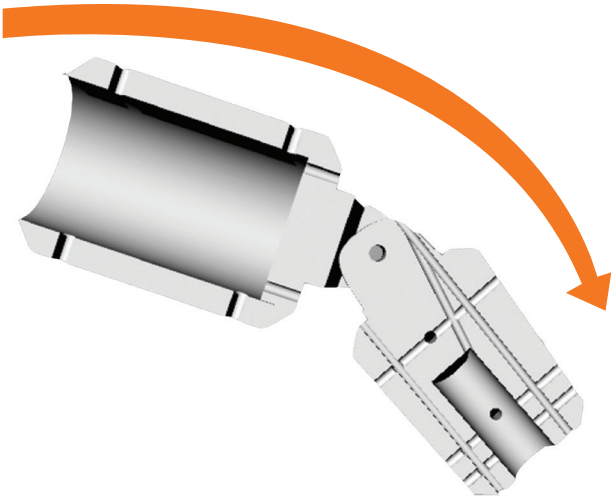
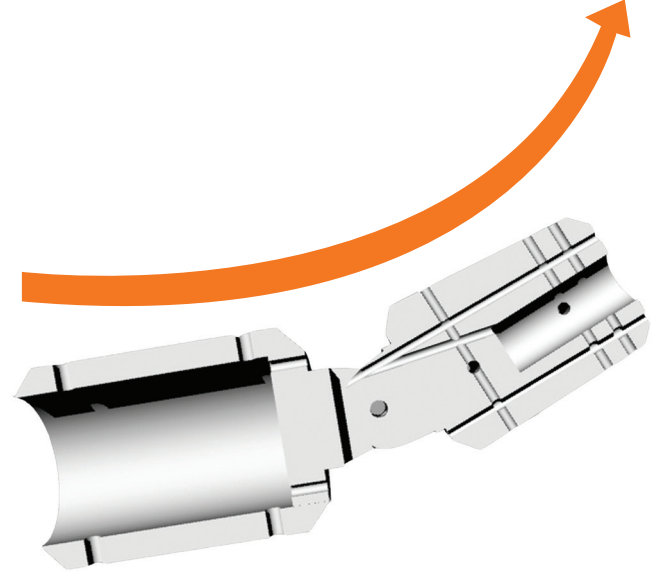
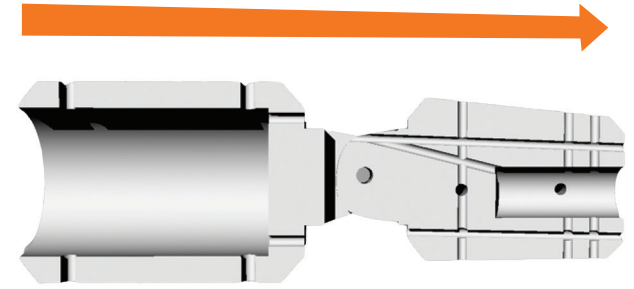
What?

Artifix is a design for a prosthetic finger that utilizes a simple high-tension wire system, returning the look and feel of the target patient's missing digit.



Nothing is more important than returning the use of one's fingers, especially if someone has a job that requires the use of all of their digits. Jobs such as construction, woodworking, cooking, butchering, and anything that involved heavy objects and sharp blades often involve the danger of losing a finger, and most of them will end up taking a toll on one's performance without all ten.

With the Artifix, you can conceivably replace any finger you might be missing. In addition, if the user is missing their index finger, then the Artifix should, over time, return the use of precision grip.



EASY TO MAKE



ADAPTABLE



HELPFUL

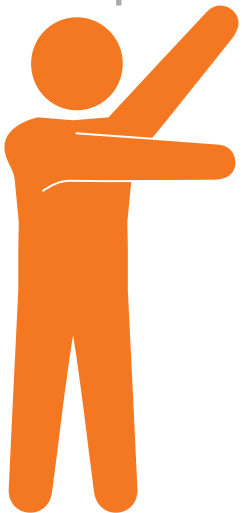
TARGET MARKET

Who?

According to Sixwise, a website that tracks yearly medical treatment statistics, about 30,000 people, both kids and adults, are rushed to U.S. emergency rooms each year because they've amputated a finger. The two most common causes are from things many of us come into contact with everyday: doors and power tools.

30,000 per year

LOSE A FINGER



CURRENT MARKET

STATIONARY



\$50 - 500

There are a lot of companies and individuals who make and sell stationary finger prosthetics. The main draw to these types of prosthetics is that they're relatively inexpensive and hide the fact that you're missing a digit. However, they are inefficient in that they don't return any utility the amputee had prior to losing their finger.

MOBILE



\$300 - 4,500

On the more advanced end of the finger prosthetic spectrum are the one's that return mobility to someone's missing digit (assuming there is still a nub for the device to attach to). The technology can range from being only capable of movement, to returning the use of precision grip and the ability to lift heavy objects.

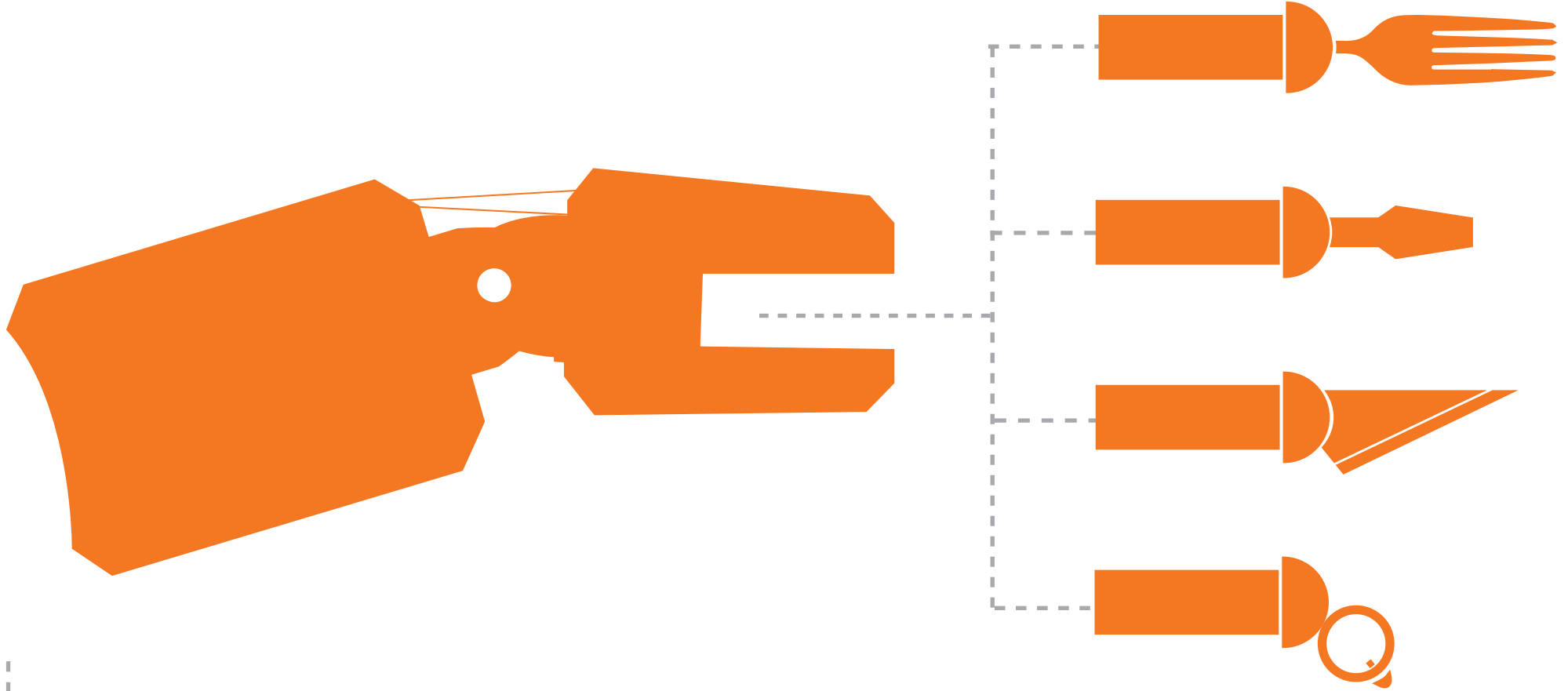
BIONIC



\$5000 - 20,000

Finally, on the most advanced end of the technology spectrum, we have bionics. Very few companies actually research and manufacture bionic fingers, however some are able to return the sensation of touch to the user. Unfortunately, they are incredibly expensive to purchase and require a small fortune to replace if damaged.

ATTACHMENTS



On the end of Artifix digit, there is an empty chamber that is meant to hold a series of attachments. Each attachment is meant to enhance the experience of the Artifix by providing tools and gadgets that would assist its user with

whatever task they're having trouble with. Be it eating, woodworking, drawing, or whatever need they would have, there'd be an accessory for it to improve their living style. It would allow the user to feel like a human swiss knife

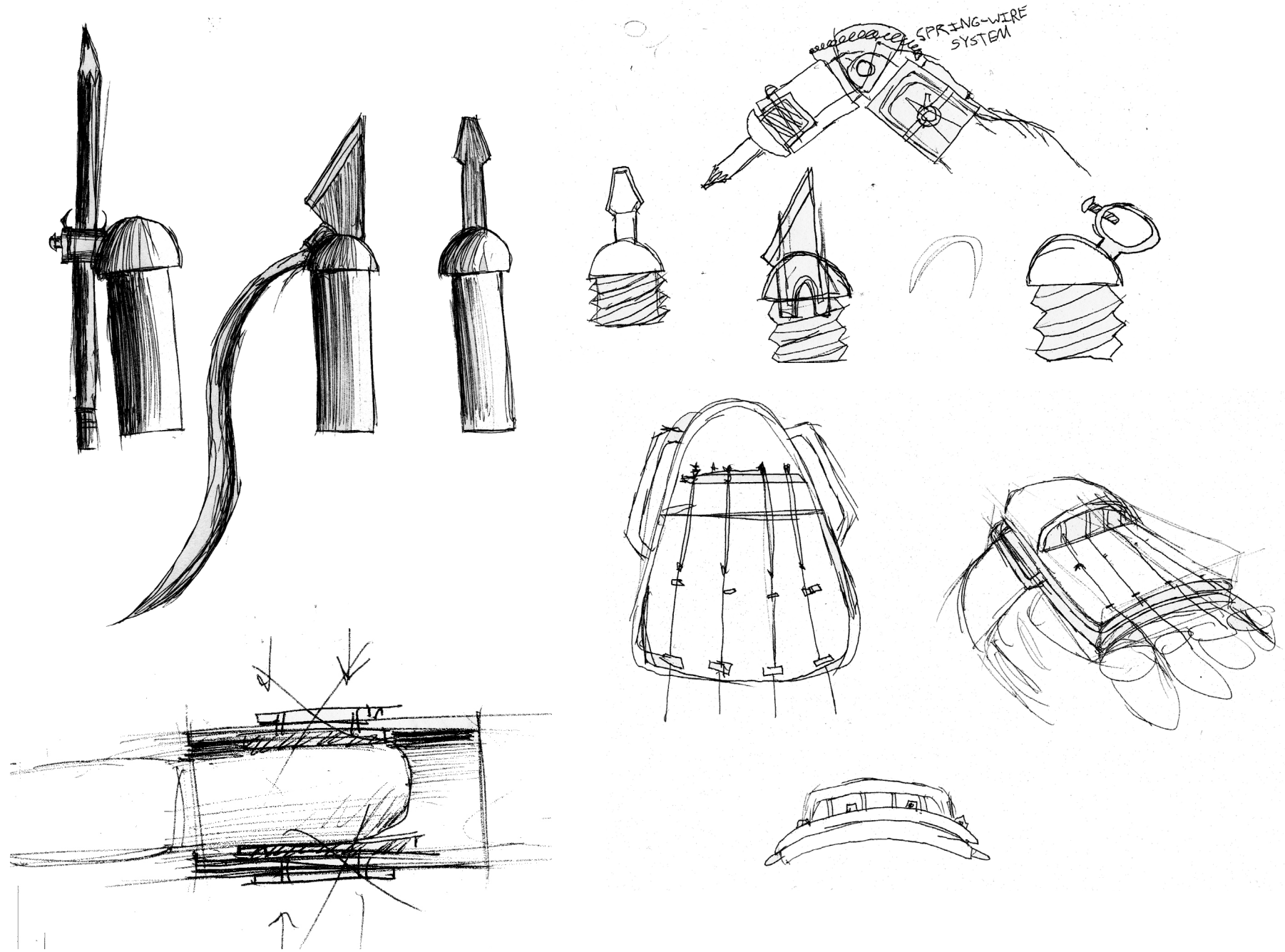
Where?

The inspiration for this project comes from the comedic and cartoon stylings of the inspector gadget show from the 1990s. An amateur policeman gets into a tragic accident, but with advanced technology he's able to become an unstoppable crime-snooping machine.

It's a very touching story if you reflect upon it. A man working a day to day job one day gets into an accident that would normally kill or permanently cripple a normal man. However, with the help of advanced bionics, he's able to become a human swiss army knife.



SKETCHES



ARTIFIX

The image features the word "ARTIFIX" in a bold, black, sans-serif font. To the right of the word is a large, thick gray circle. Three dashed gray circles are positioned around the letters: one around the 'A' at the bottom left, one around the 'I' at the top center, and one around the 'X' at the bottom right. Two solid orange lines connect the bottom of the 'A' to the top of the 'I', and the bottom of the 'I' to the top of the 'X', forming an 'X' shape that overlaps the word.