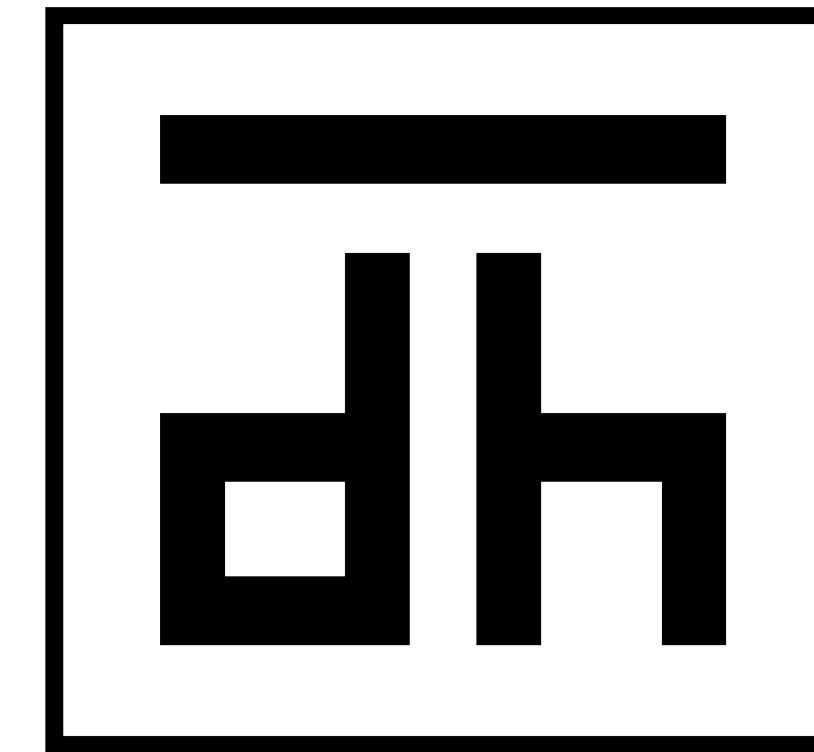


# D'VAN HOWARD

## INDUSTRIAL DESIGN



# TAAJWAR D'VAN HOWARD

## Address

7221 Meadow Ridge Drive  
Louisville, Kentucky 40218

## Website

dvanhoward.com

## Contact

dvanhoward@gmail.com  
502-298-4418

## Education

### University of Cincinnati, DAAP

BS in Industrial Design

Class of 2020

### University of Kentucky

BS in Mechanical Engineering

Class of 2014

## International

### Pamplona Learning: Spanish Institute

Renewable Energies Course (Summer 2013)  
Pamplona, Navarra, Spain

## Employment

### Nottingham Spirk

#### Design Intern (Spring 2017)

Sketching, ideating, prototyping concepts.  
Presenting ideas in small meetings. Working with  
shop workers to develop prototypes.

### NACCO Materials Handling Group

#### Design Engineer (2014-2015)

Constructing and modifying component models of  
forklift trucks for specialty batch orders. Provided  
engineering support to manufacturing line.

### Wagstaff

#### U of K: Capstone Project (Fall 2013-Spring 2014)

Worked with a team to design an automated device  
to prevent cut aluminum ingots from clamping onto  
the blade of the bandsaw.

### Toyota Motor Manufacturing Kentucky

#### Paint Specialist Co-op (Summer '12)

Redesigned a prototype moonroof installation  
component to improve productivity on the  
manufacturing line. Mapped out HVAC piping  
for manufacturing line. Designed and began  
development on new dolly to reduce strength  
required to push car frame.

## Software

Solidworks, Inventor, PTC Creo/Pro Engineer, Alias,  
AutoCad, Fusion 360, KeyShot, Microsoft Office (Word,  
PowerPoint, Excel), HTML, Photoshop, Illustrator,  
InDesign

## Skills

Analytical Thinking, Sketching, Rendering, Empathy,  
Human Centered Design, Prototyping, 3D Printing,  
Laser Cutting, Ideation, Woodshop

## Interests

Problem Solving, Futuristic Innovation, 3D Printing,  
Ultimate Frisbee, Learning, Podcasts, Food,  
Superheroes, Games, Bowling, Pizza Making

## Languages

English // Native  
Spanish // Beginner Proficiency  
Japanese // Beginner Proficiency

# ABOUT ME



My name is Taajwar D'Van Howard, but you can just call me D'Van. I graduated from the University of Kentucky in 2014 in **Mechanical Engineering**. I then decided one wasn't enough, so to pursue a passion in design I now attend the University of Cincinnati currently pursuing a degree in **Industrial Design** (2020). I'm often curious how things work and am frequently annoyed by poor design. I want to make things that positively impact the world and this is my journey.

# ACTION CHESS

A Unique Chess Set To Enhance The War  
Essence Of The Game



# MARKET RESEARCH



There are thousands of chess designs out there, but the majority merely change the appearance of the pieces.

# OBJECTIVE



FORM



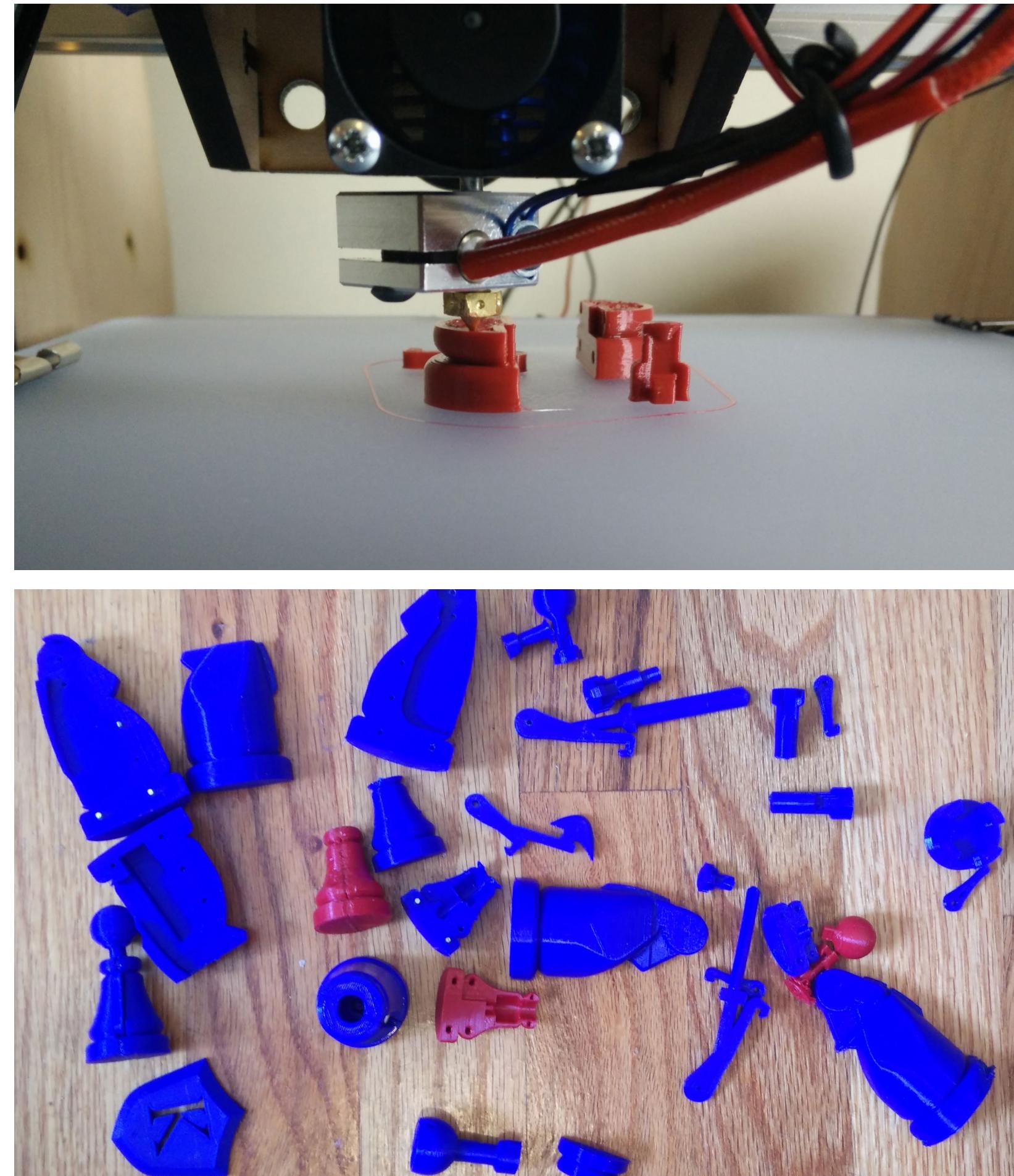
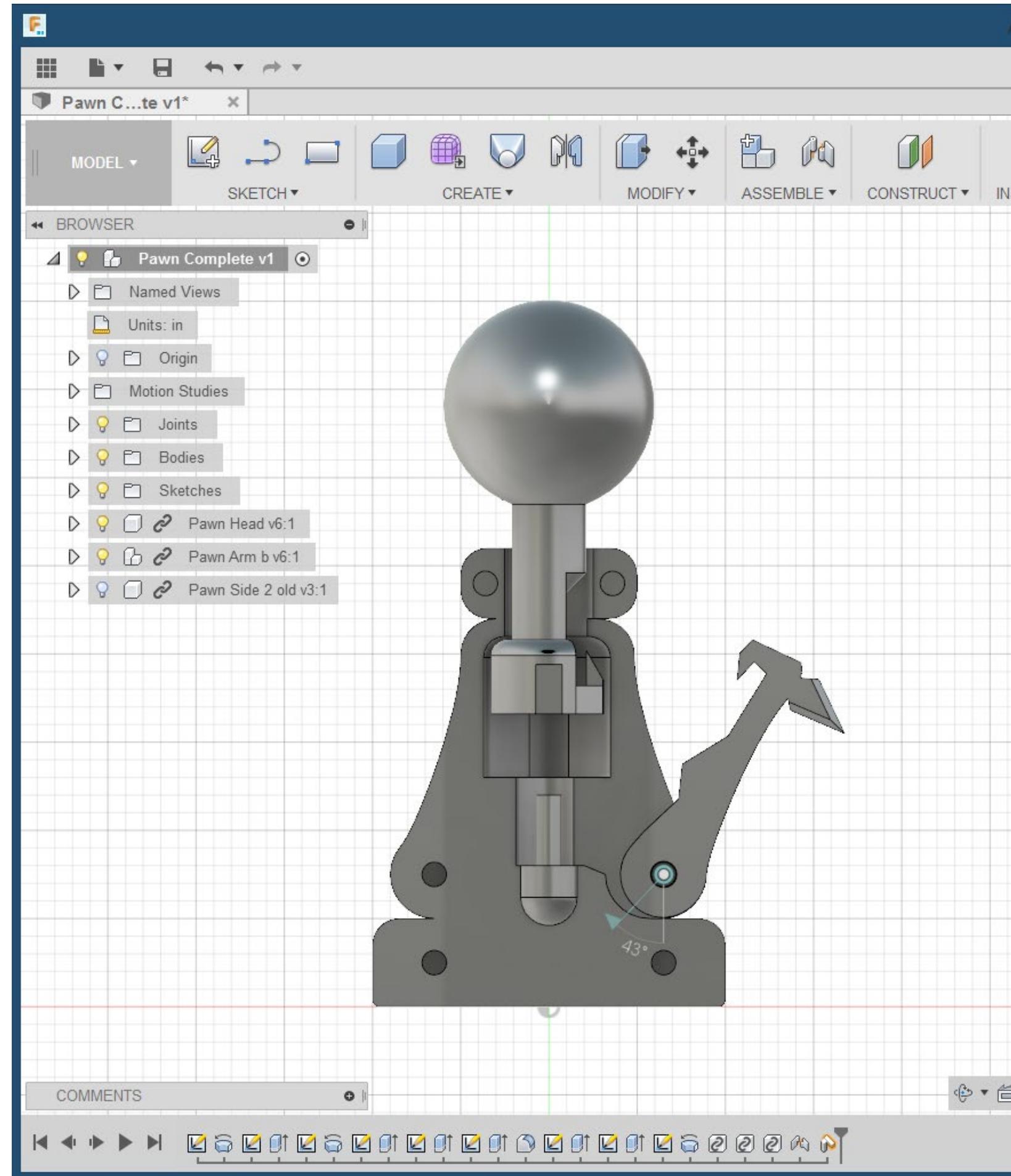
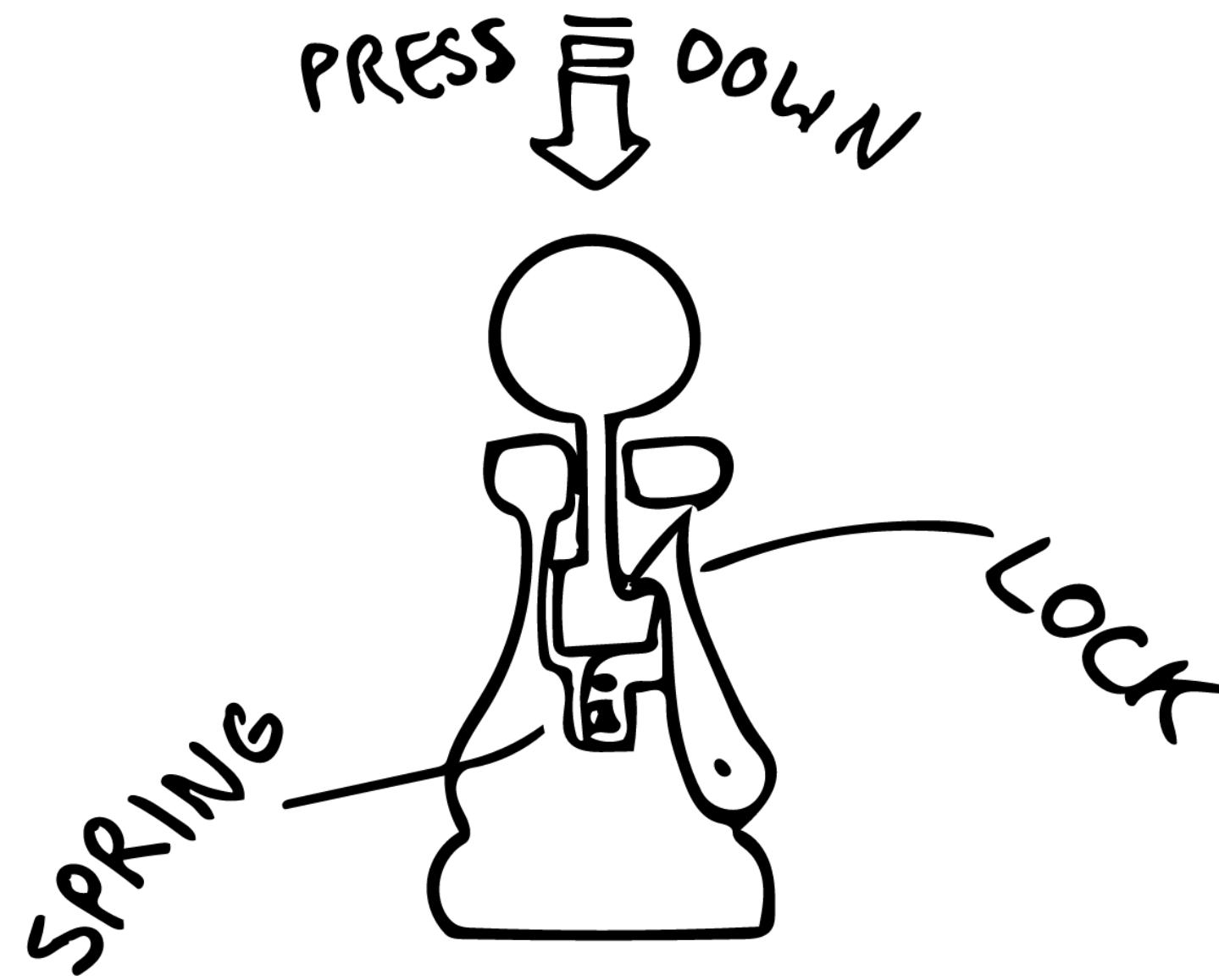
FUNCTION



INTERACTION

# PROCESS

Starting with a simple sketch, prototyping began immediately to achieve functionality

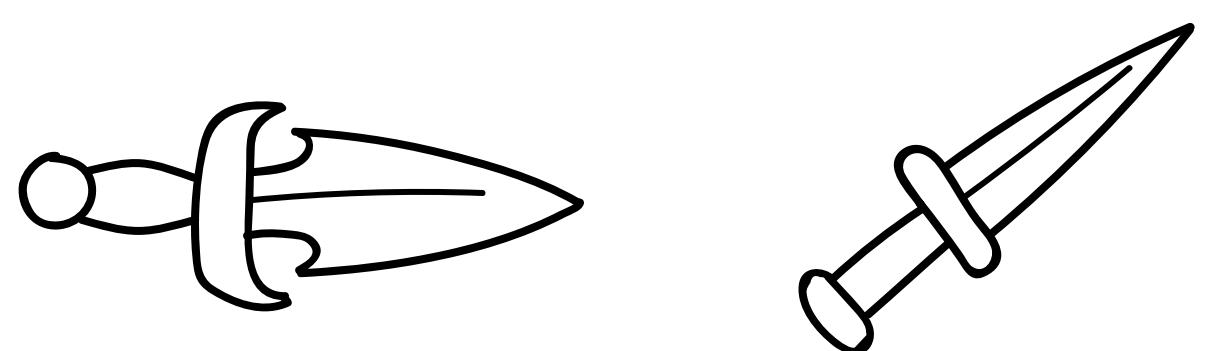


# PAWN

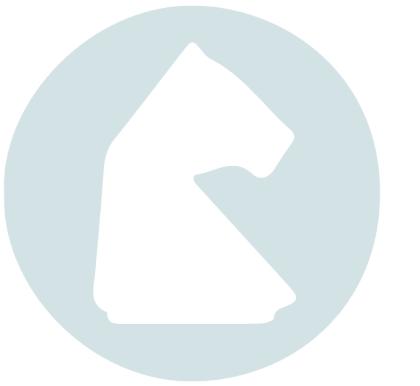


## WEAPON: DAGGER

As the weakest piece on the board, the pawn uses a simple dagger

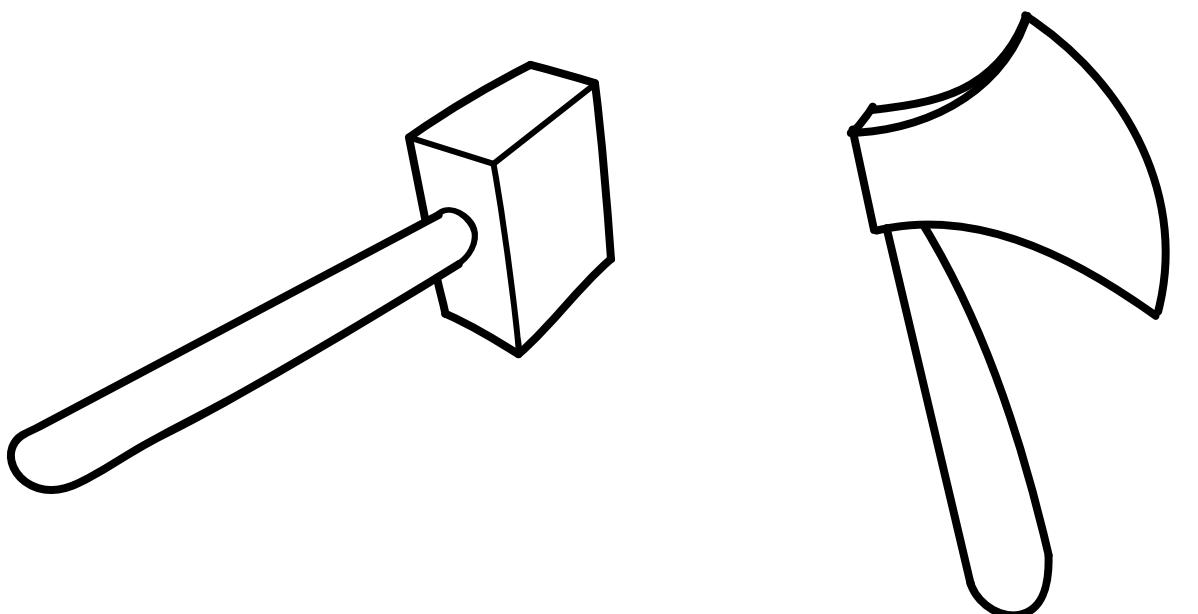


# ROOK

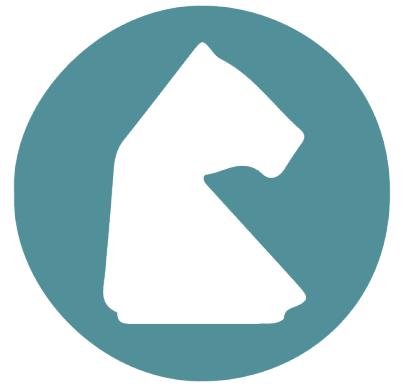


## WEAPON: AXE

The rook has such a solid structure that it needs a heavy solid weapon

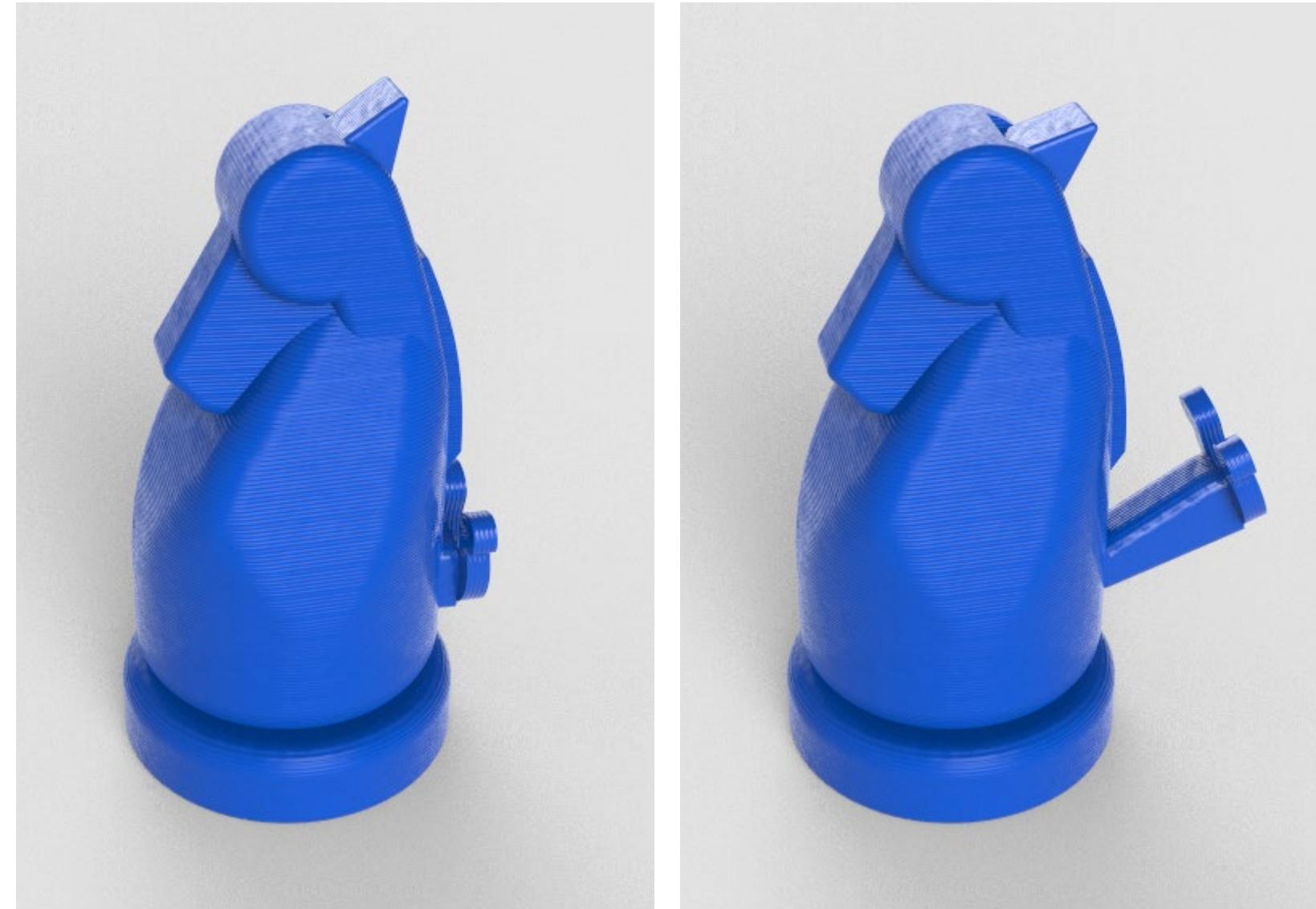
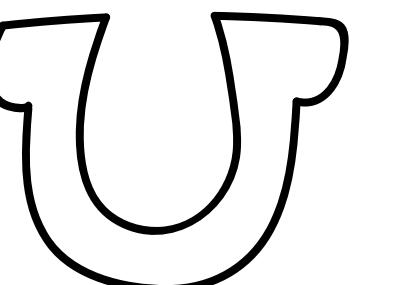
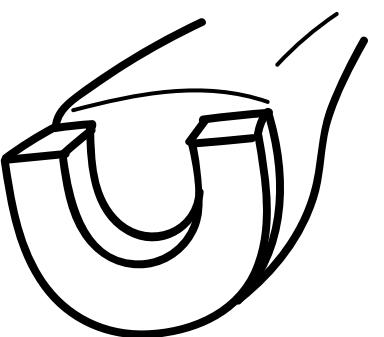


# KNIGHT

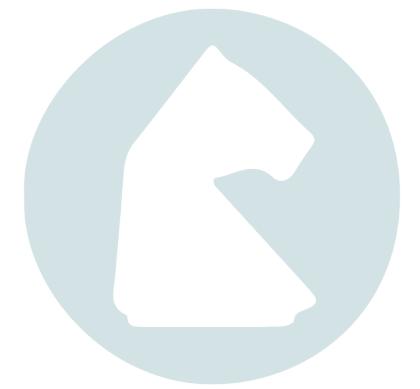


## WEAPON: HORSE HOVE

The knight resembles a horse, so its weapon should reflect that

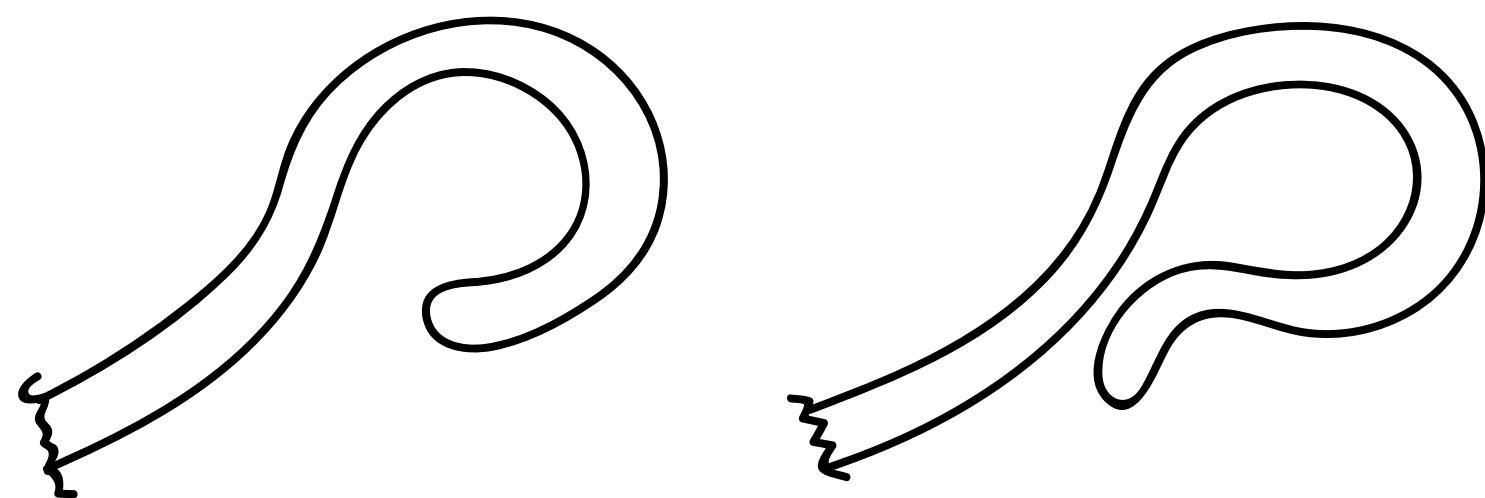


# BISHOP



## WEAPON: STAFF

The bishop is a religious figure and is known to have a staff

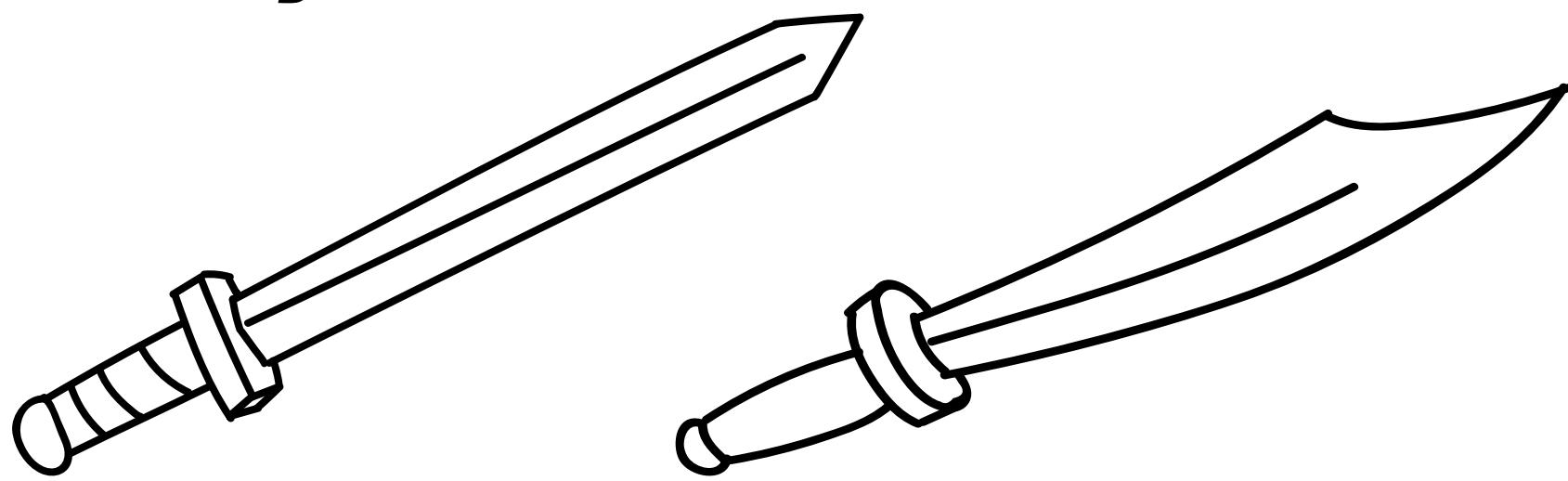


# QUEEN

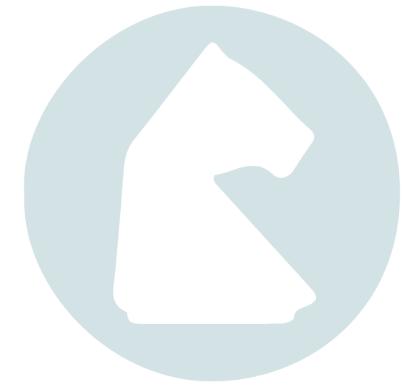


## WEAPON: SWORD

As the most powerful piece on the board, the Queen needs a weapon to reflect that strength

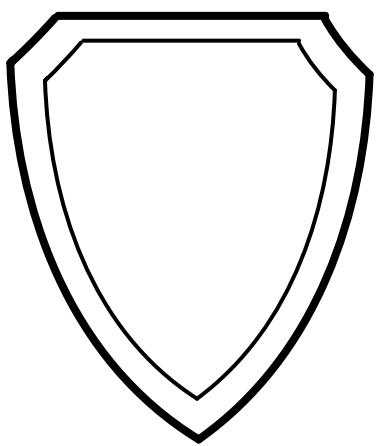
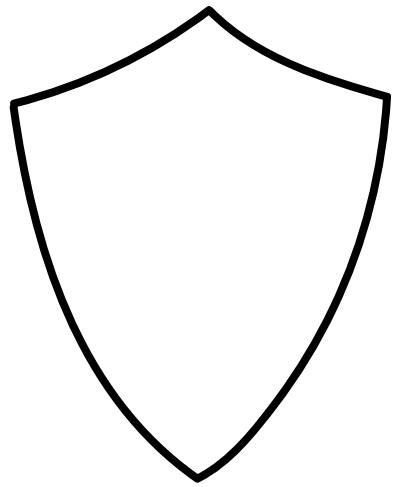
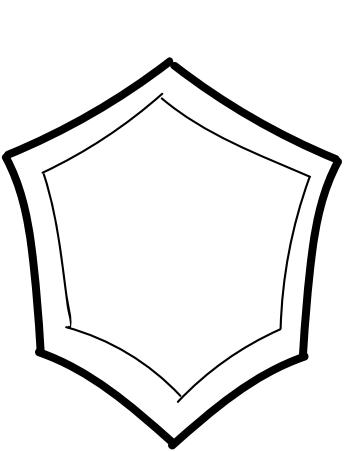


# KING

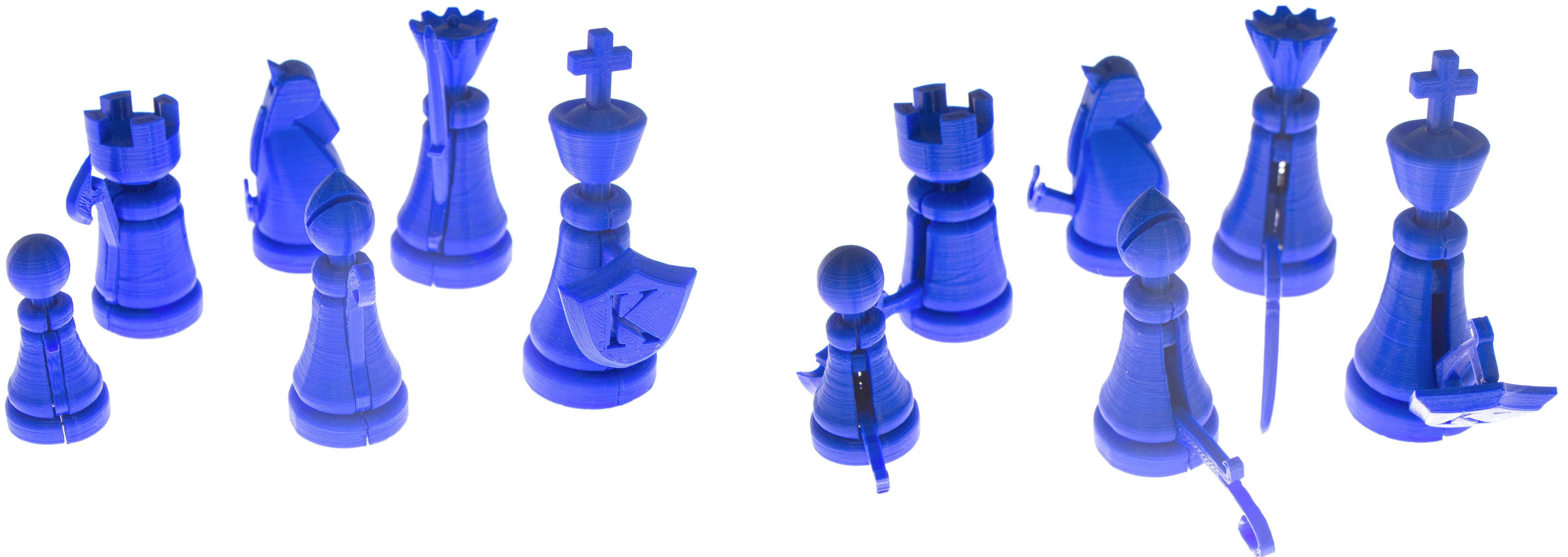


## WEAPON: SHIELD

To ensure victory you need to defend your king. What better defense is a shield?



# FULL SET



# ACTION CHESS



# MULTI-TOOL

ERGONOMIC SHEARS FOR SMALL  
HANDS AND TOUGH PROJECTS

# THIS IS HARLEY



Like his idol Tony Stark, he likes to make mechanical contraptions in his garage. Since he's always inside working, he not only needs tools with a comfortable grip, but the protection from electrical shock. His multi-tool is always his go to for all his wiring needs.

# CURRENT TOOL: Multi-tool Wire Cutters



## USES

- Stripping
- Cutting
- Crimping
- Pliers

## PROBLEMS

- Neutral grip position too wide
- Handle doesn't provide protection
- Uncomfortable for extended use

# DESIGN GOALS



ERGONOMIC TILTED  
HANDLE

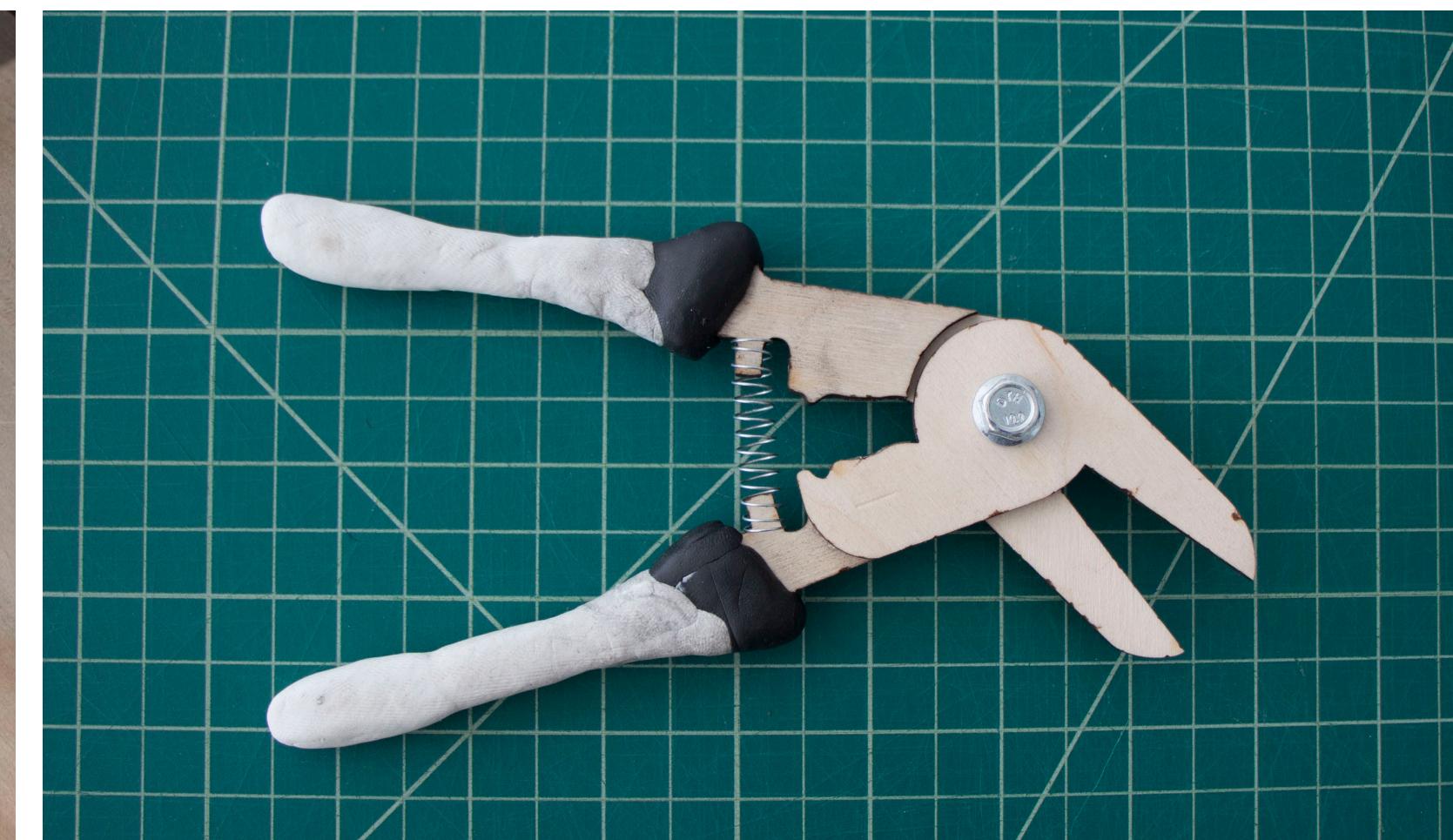
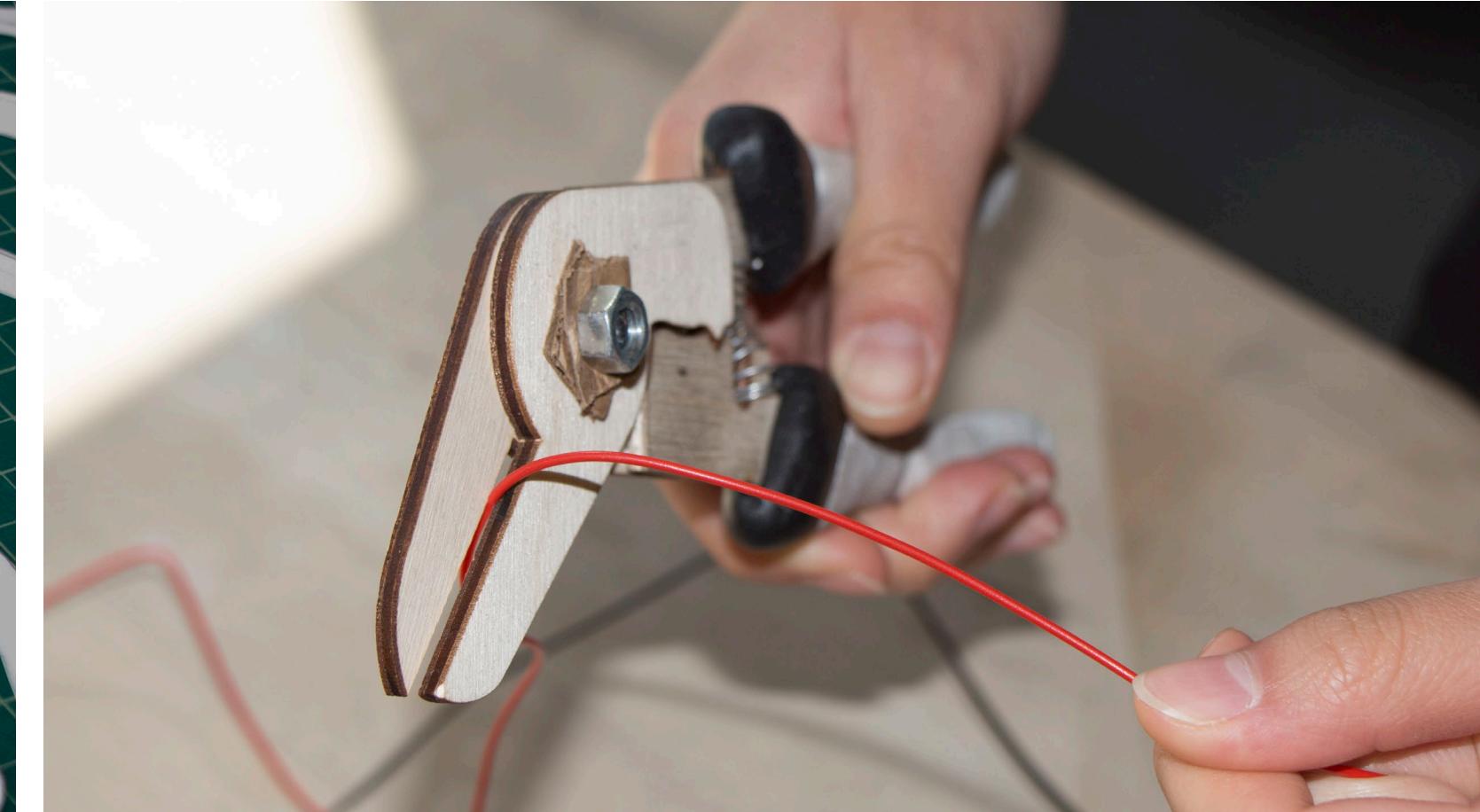
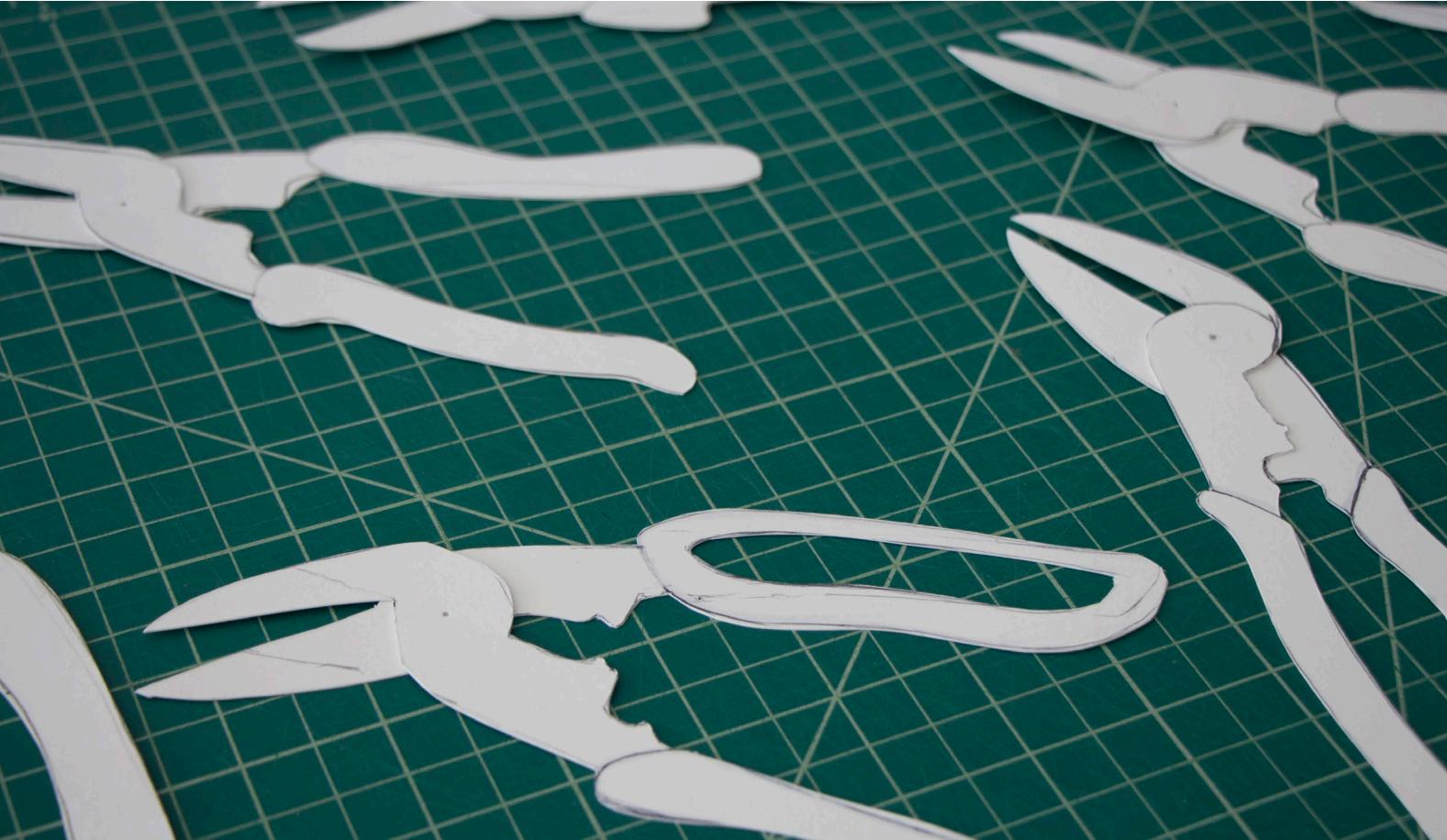
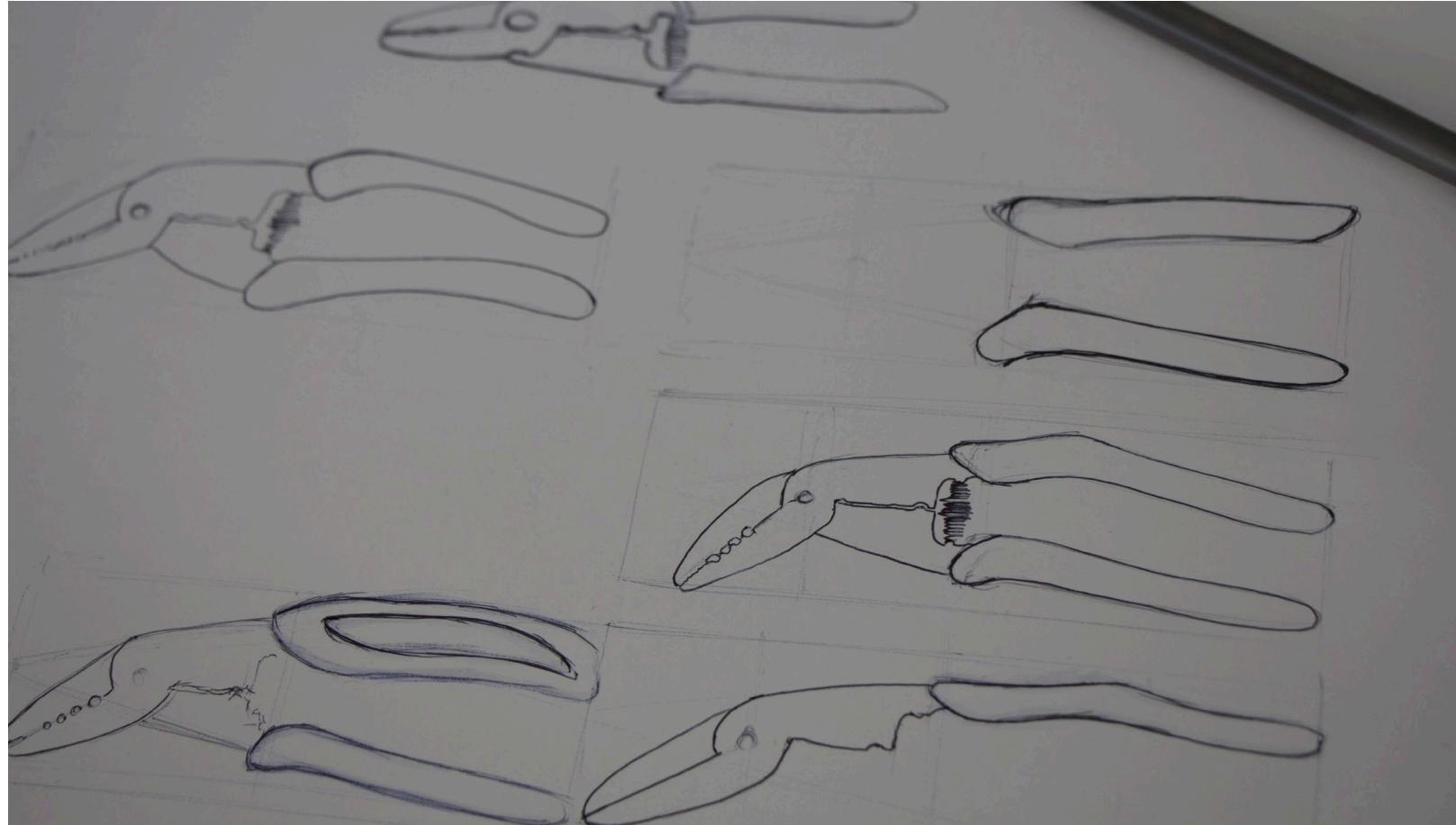


SMALLER HANDLE  
FOR SMALLER HANDS



SHOCK PROTECTION

# PROCESS

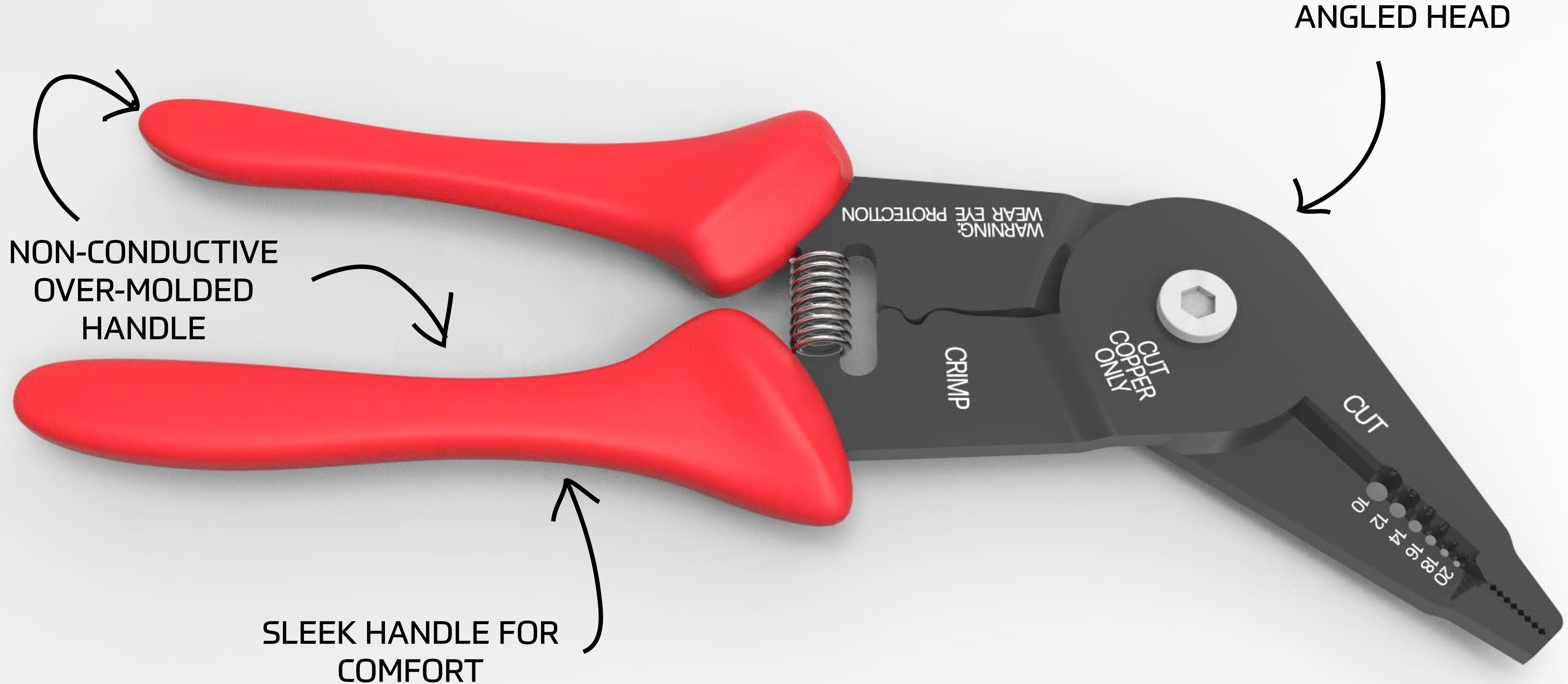


SKETCHES

MODEL ITERATION

“FEELS LIKE” MODEL

# RENDER

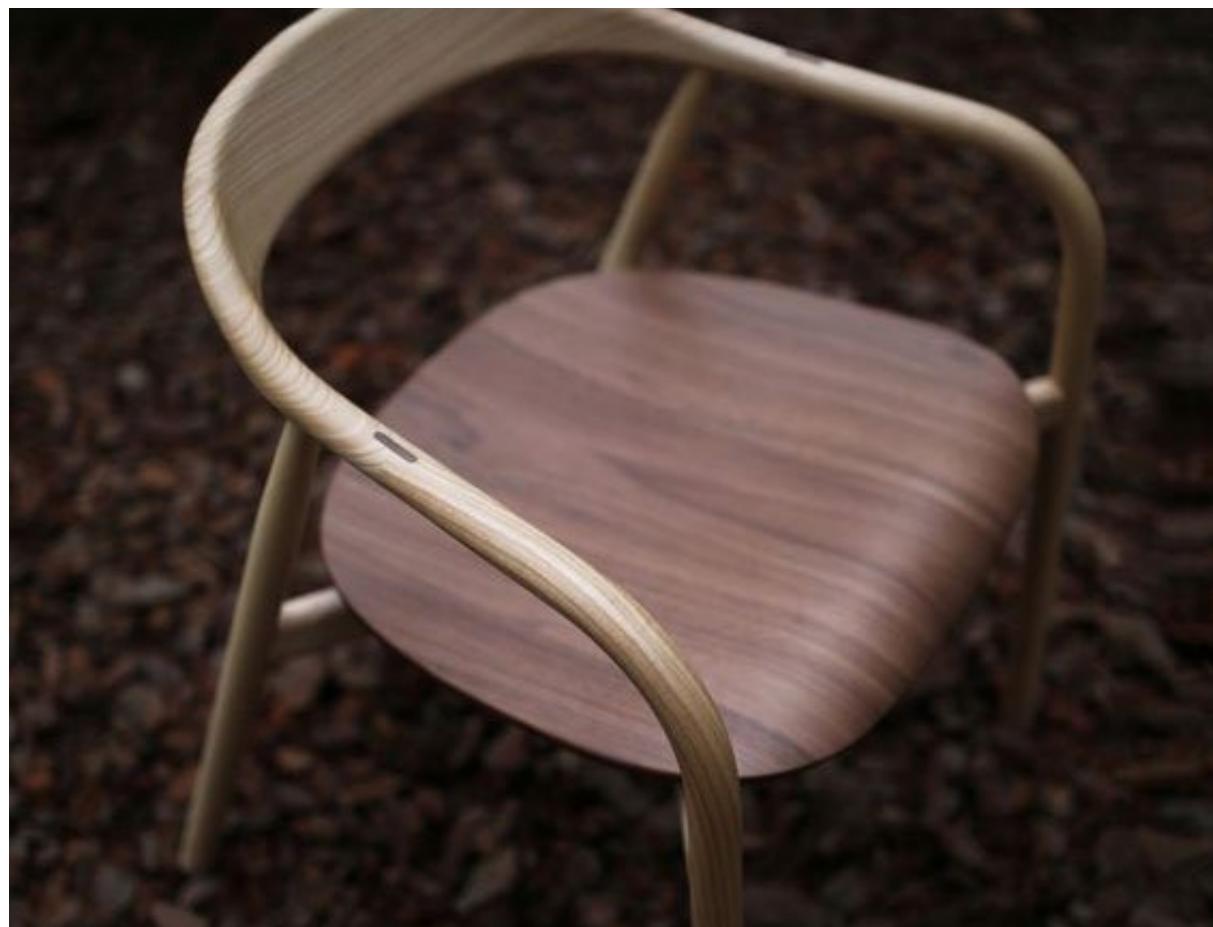
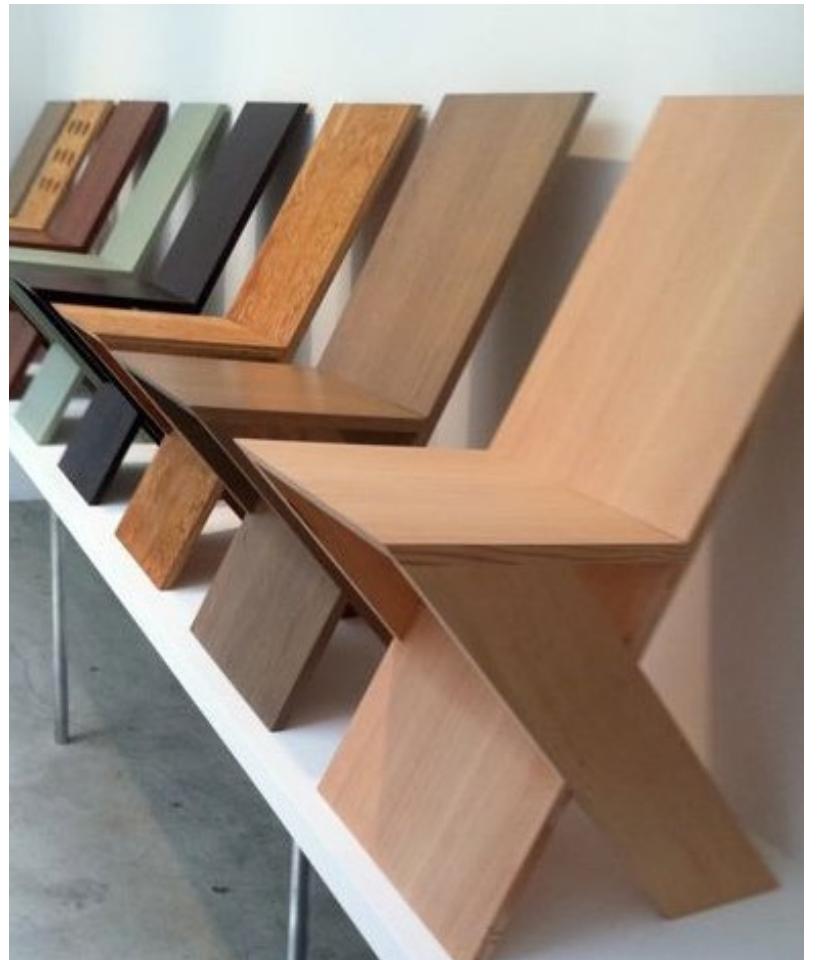


# DELTA STOOL

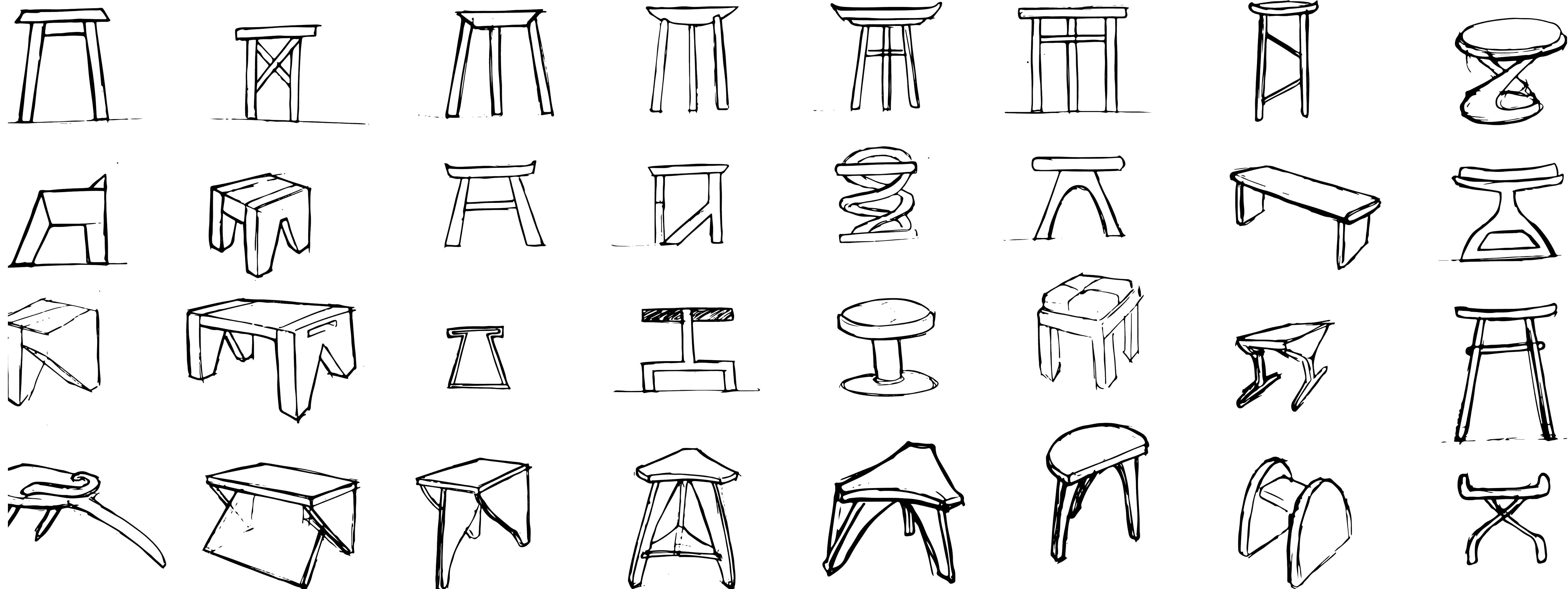
WINDSOR STOOL REMIX



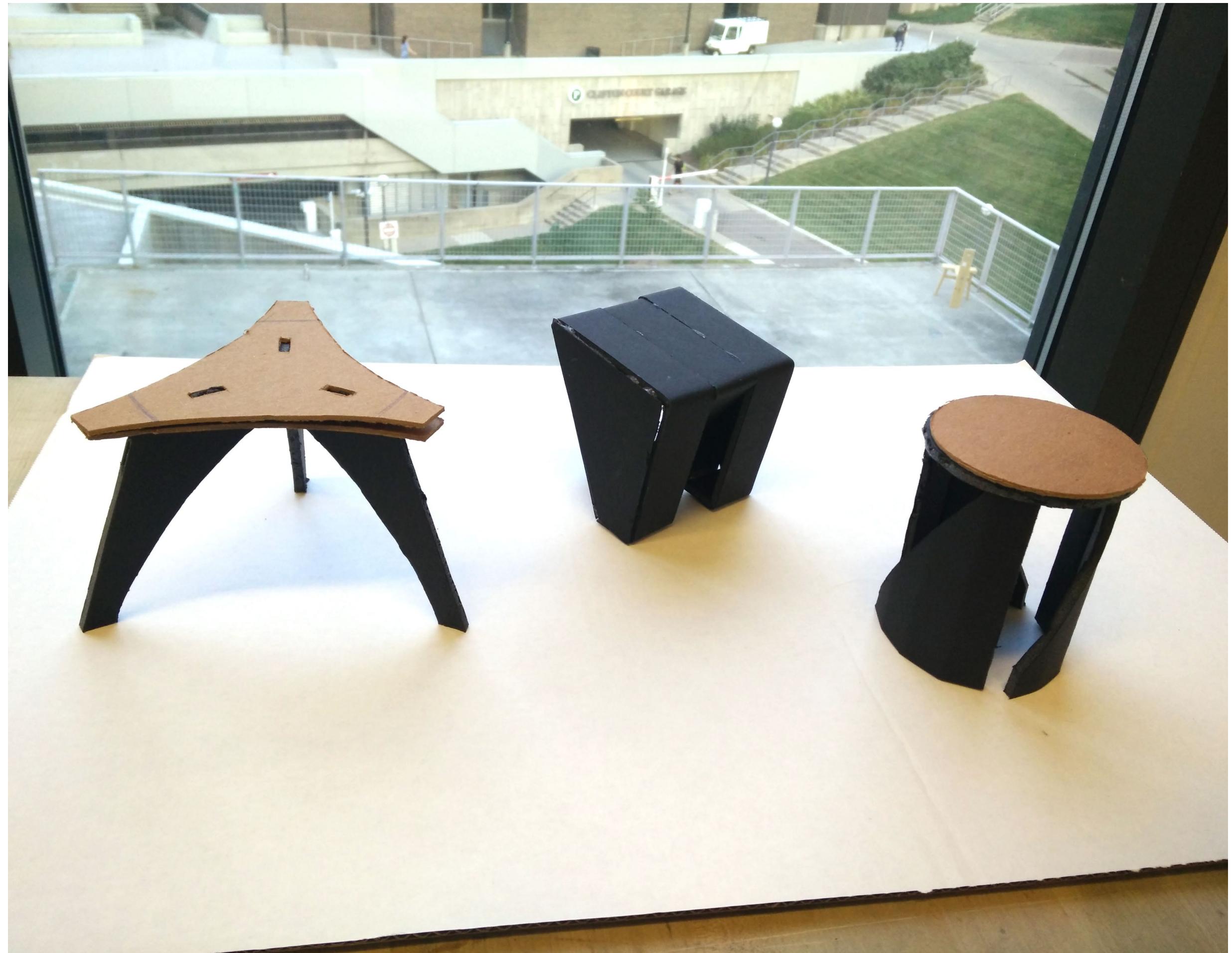
# INSPIRATION



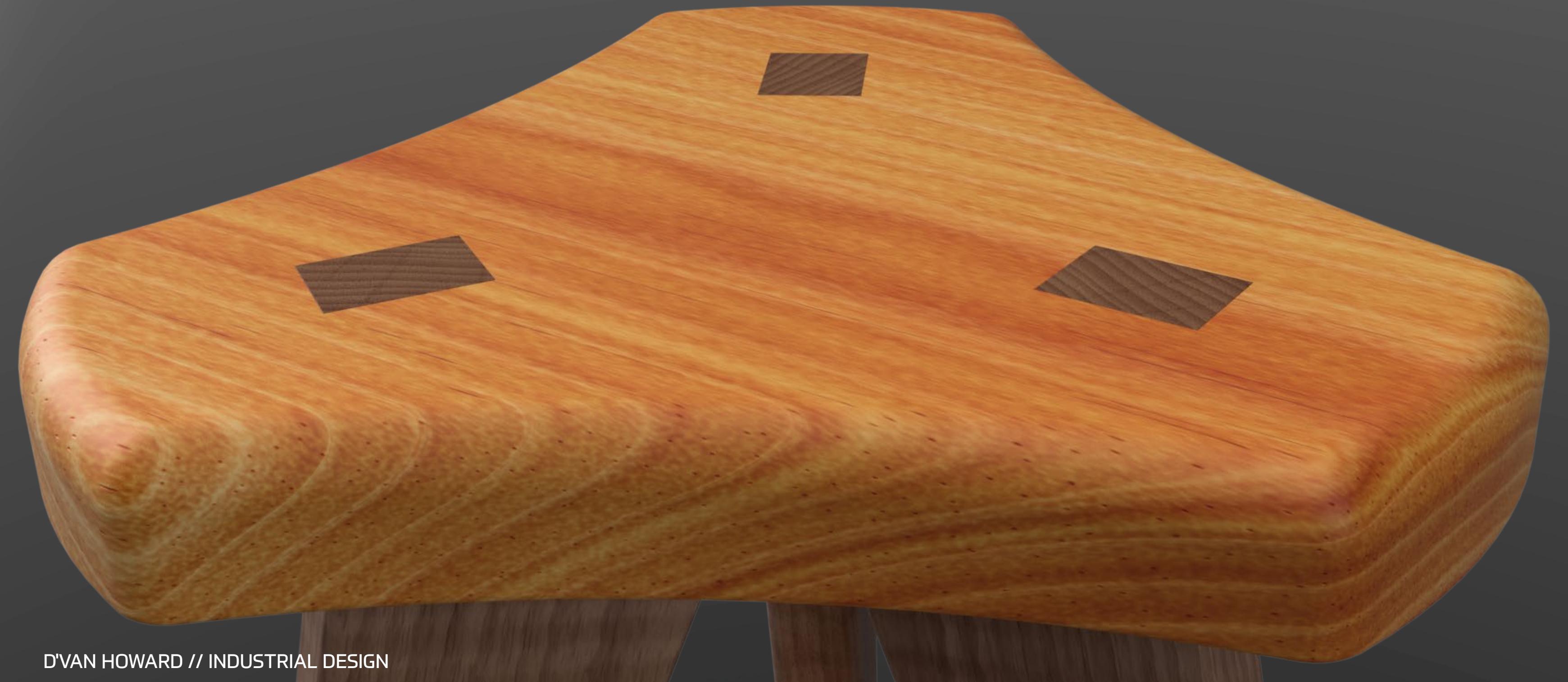
# SKETCHES



# SCALE MODELS



Legs characterizes true windsor by piercing seat with mortise and tenon joint





Domino joins legs  
with foot rest



# DELTA STOOL

WINSOR REMIX



# LUMBER

Mahogany

(1x) 33"x30"x1.5"

Oak

(1x) 19"x19"x2"

(1x) 17"x17"x1.75"

(1x) 9"x0.75" rod

PARTS LIST			
ITEM	QTY	PART NUMBER	MATERIAL
1	3	STOOL LEG REAL	MAHOGANY
2	1	STOOL REST	WOOD (OAK)
3	1	STOOL SEAT	WOOD (OAK)
4	3	DOMINO	WOOD (OAK)



# FABRICATION PLAN

Seat and foot rest

CNC mill

Drill holes for dominos in foot rest

**Domino**

Purchase rod

Cut into three equal lengths



## Legs

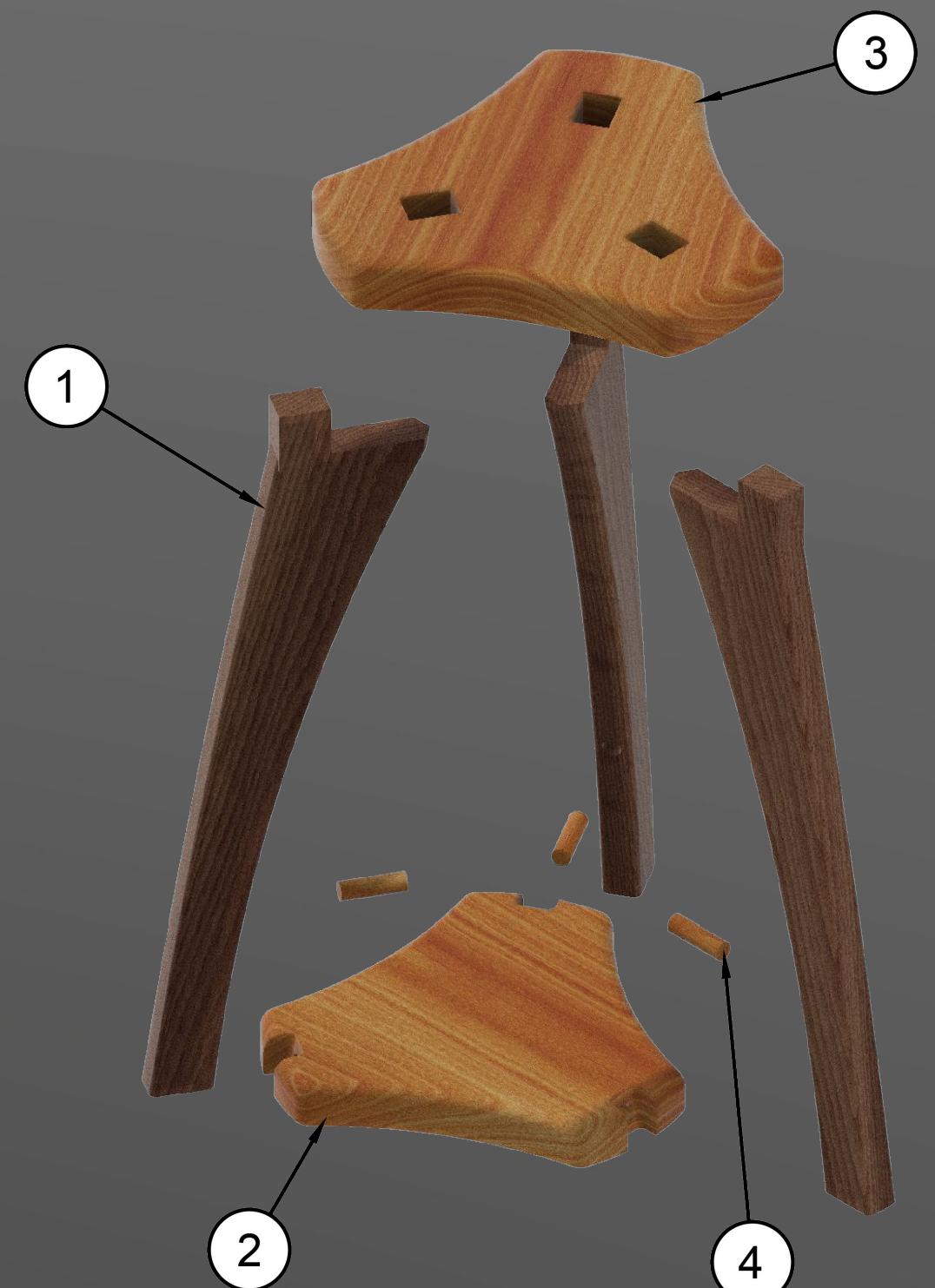
Cut profile with bandsaw

Drill domino holes

**Sand fillets and surfaces**

**Glue all joints**

**Finish with urethane sealer**

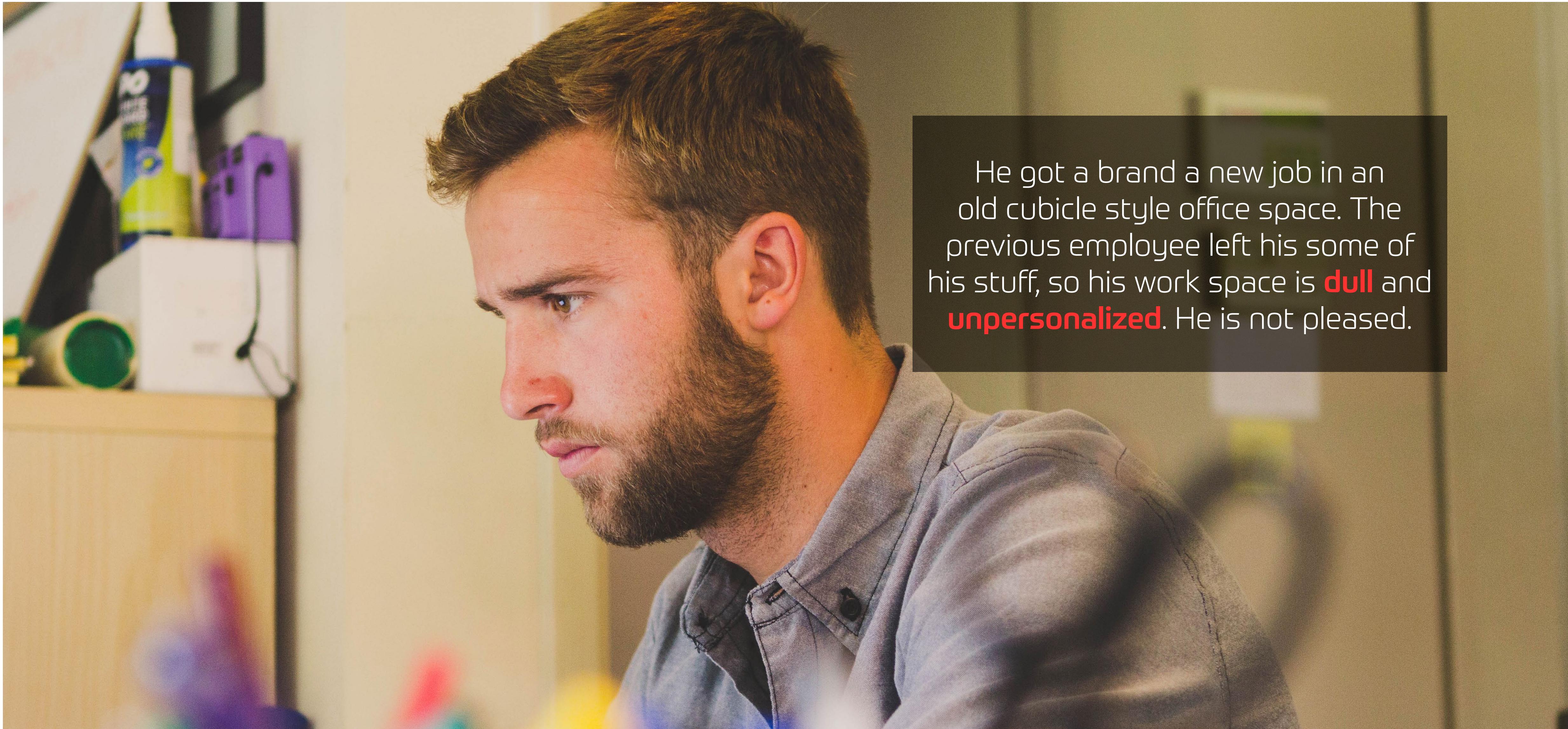


# HELIX HOLDERS

SPICING UP YOUR BORING DESK  
WITH THESE SPIRALING CONTAINERS

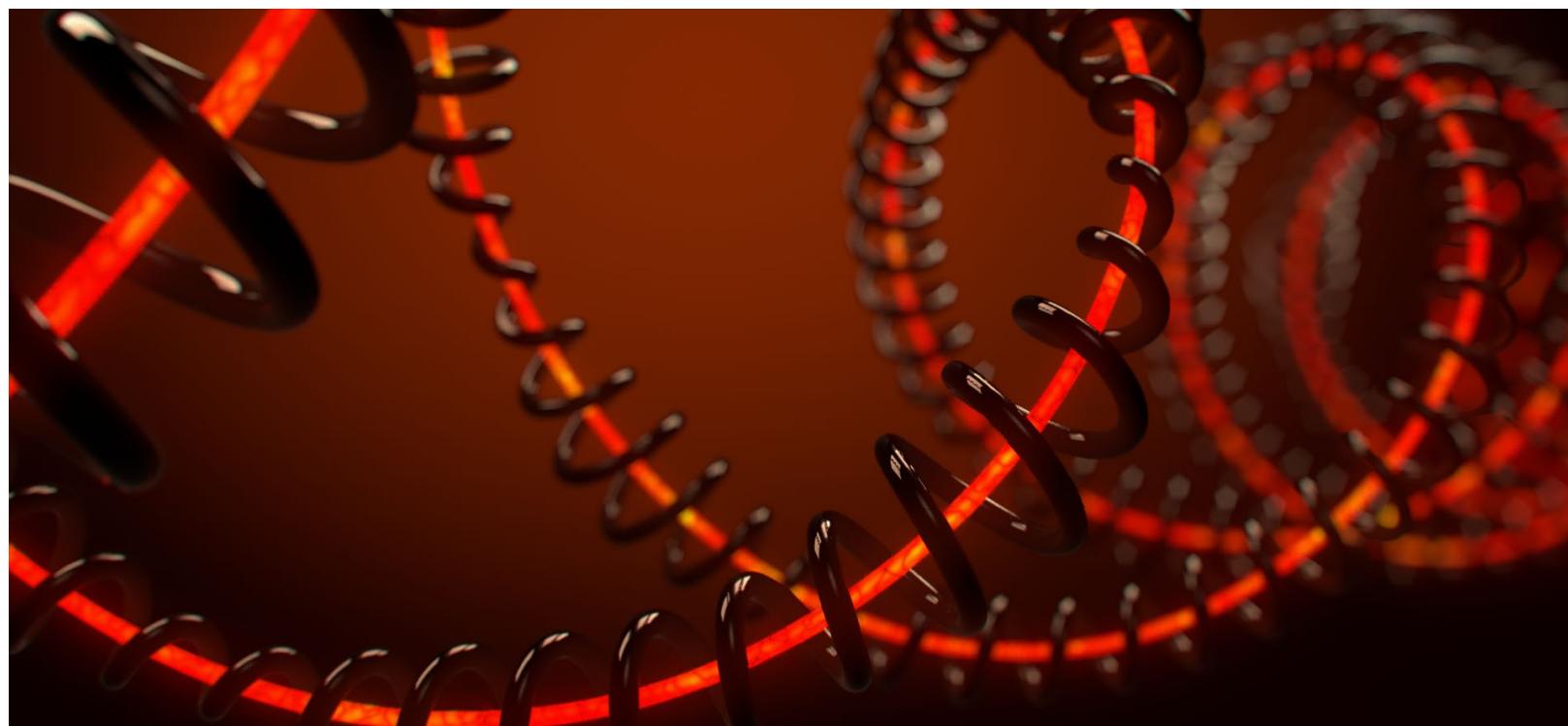


# Meet Peter



He got a brand a new job in an old cubicle style office space. The previous employee left his some of his stuff, so his work space is **dull** and **unpersonalized**. He is not pleased.

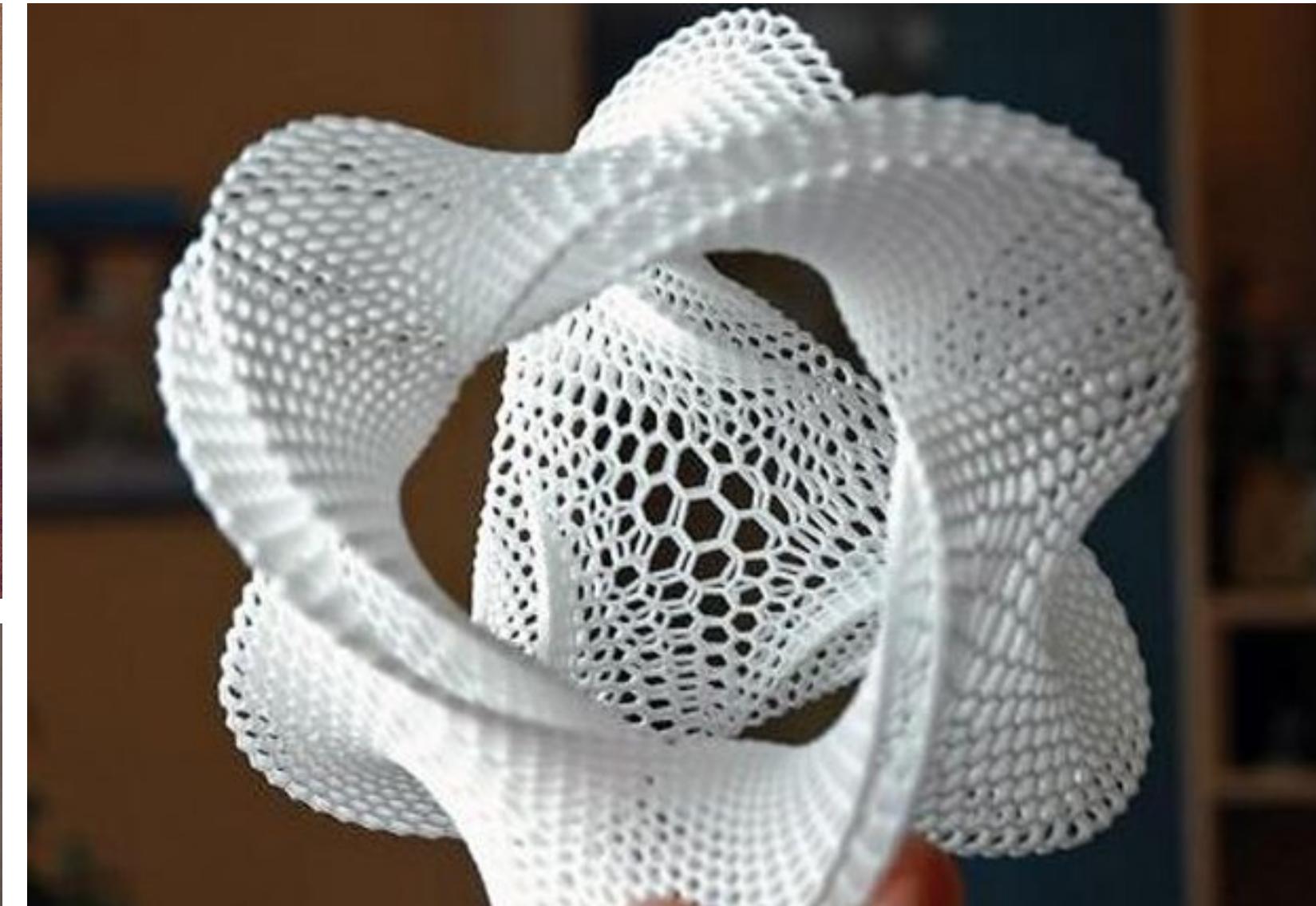
# DESIGN GOALS



INSPIRATION

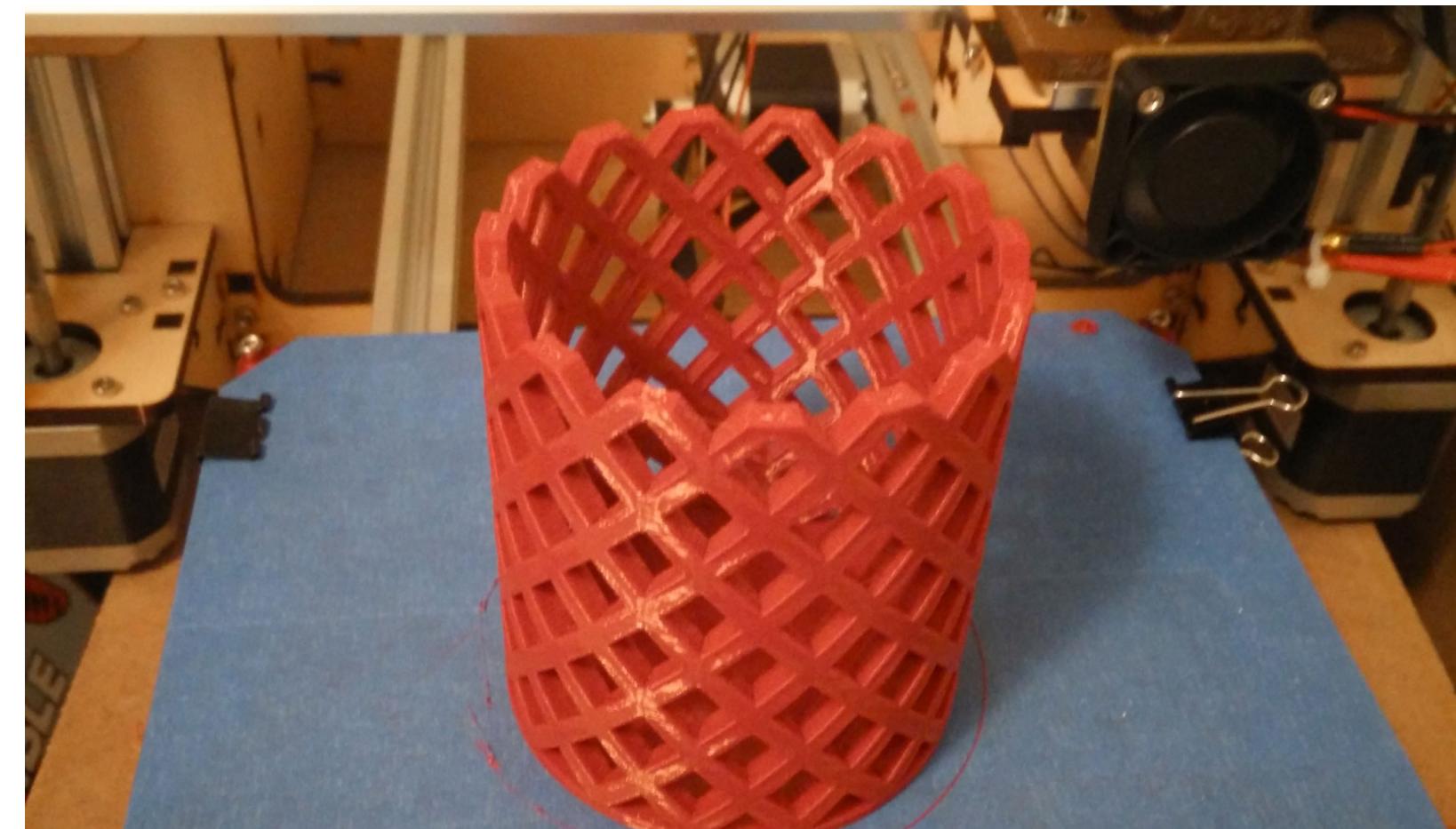
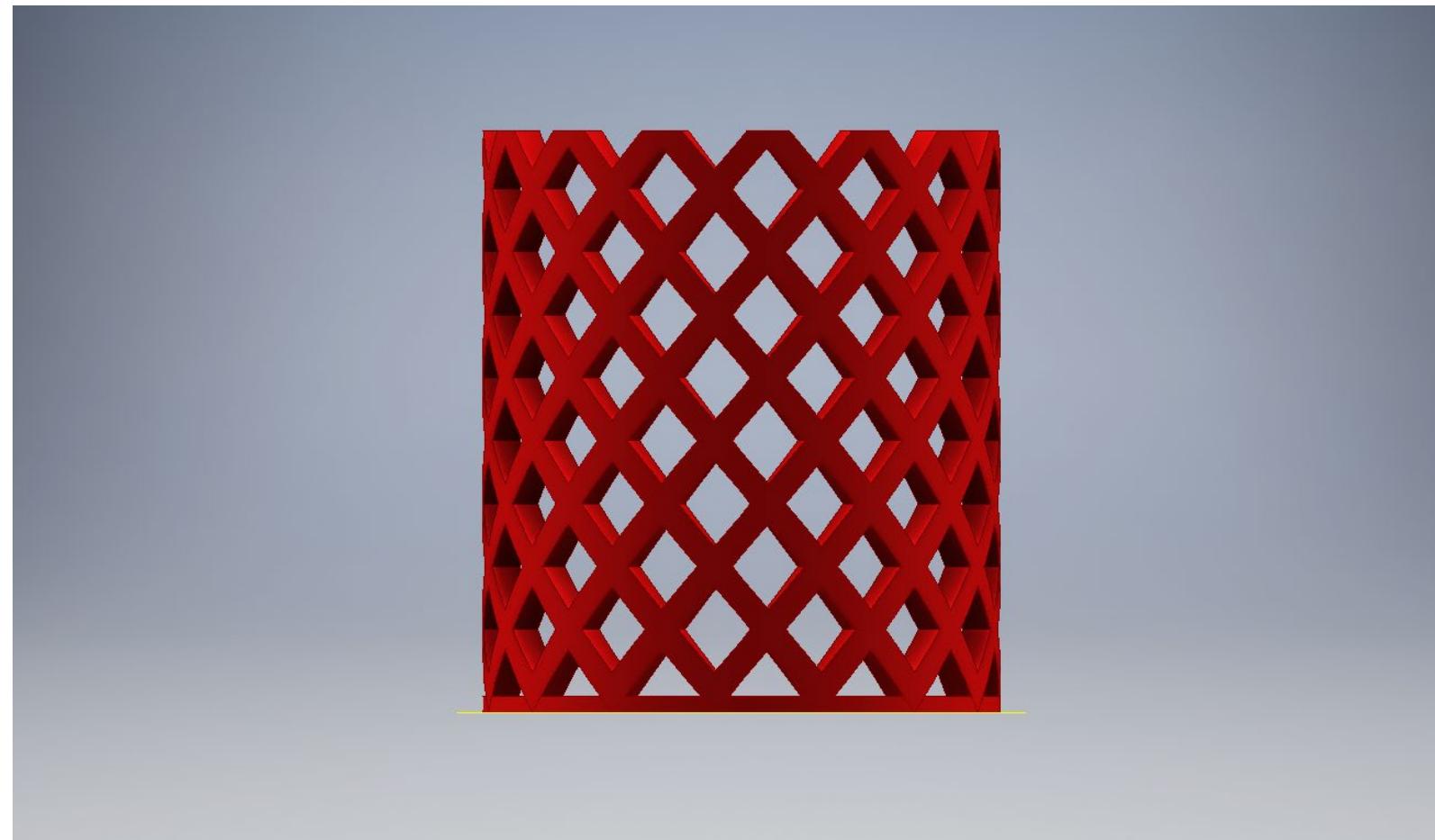
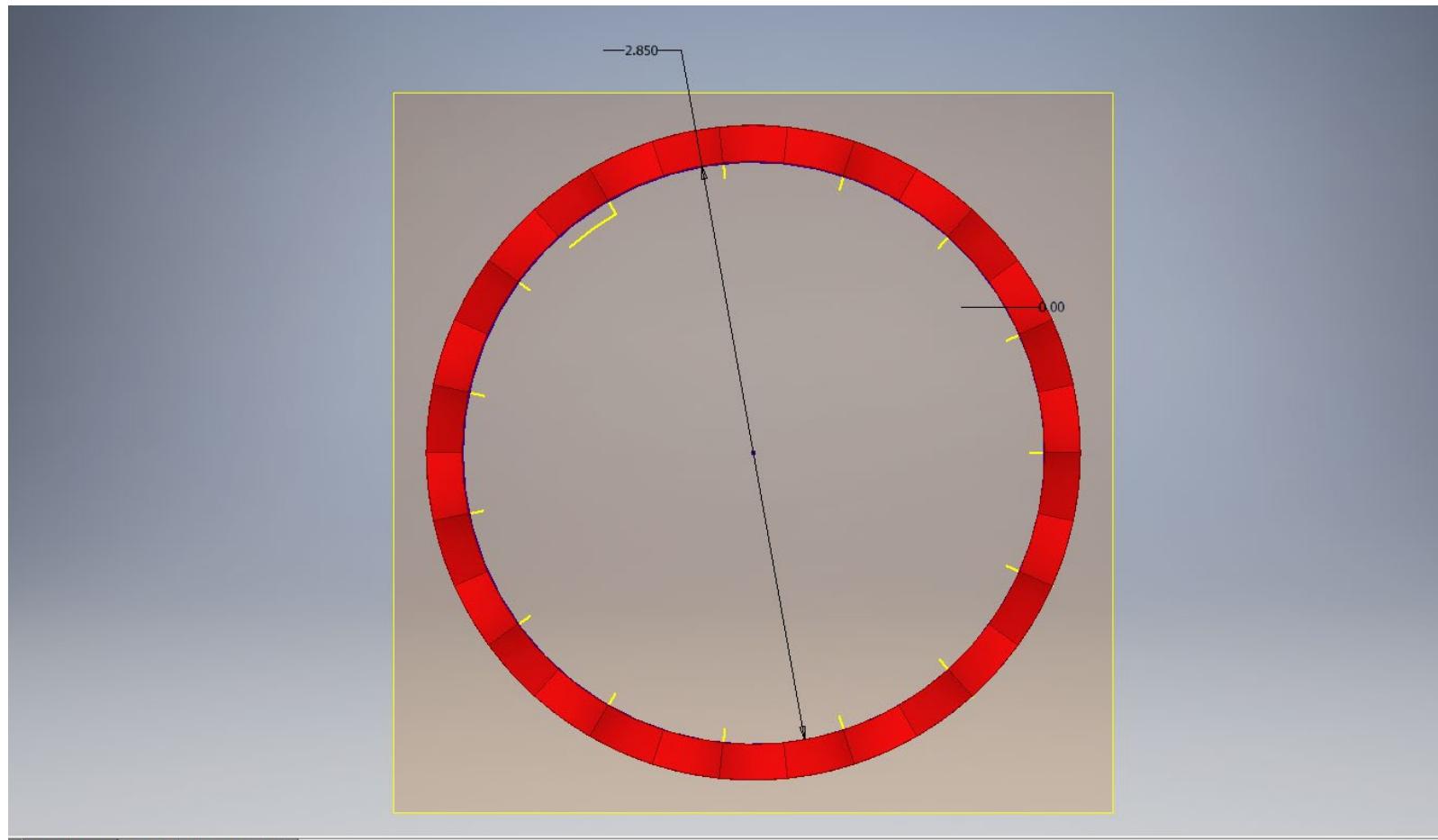
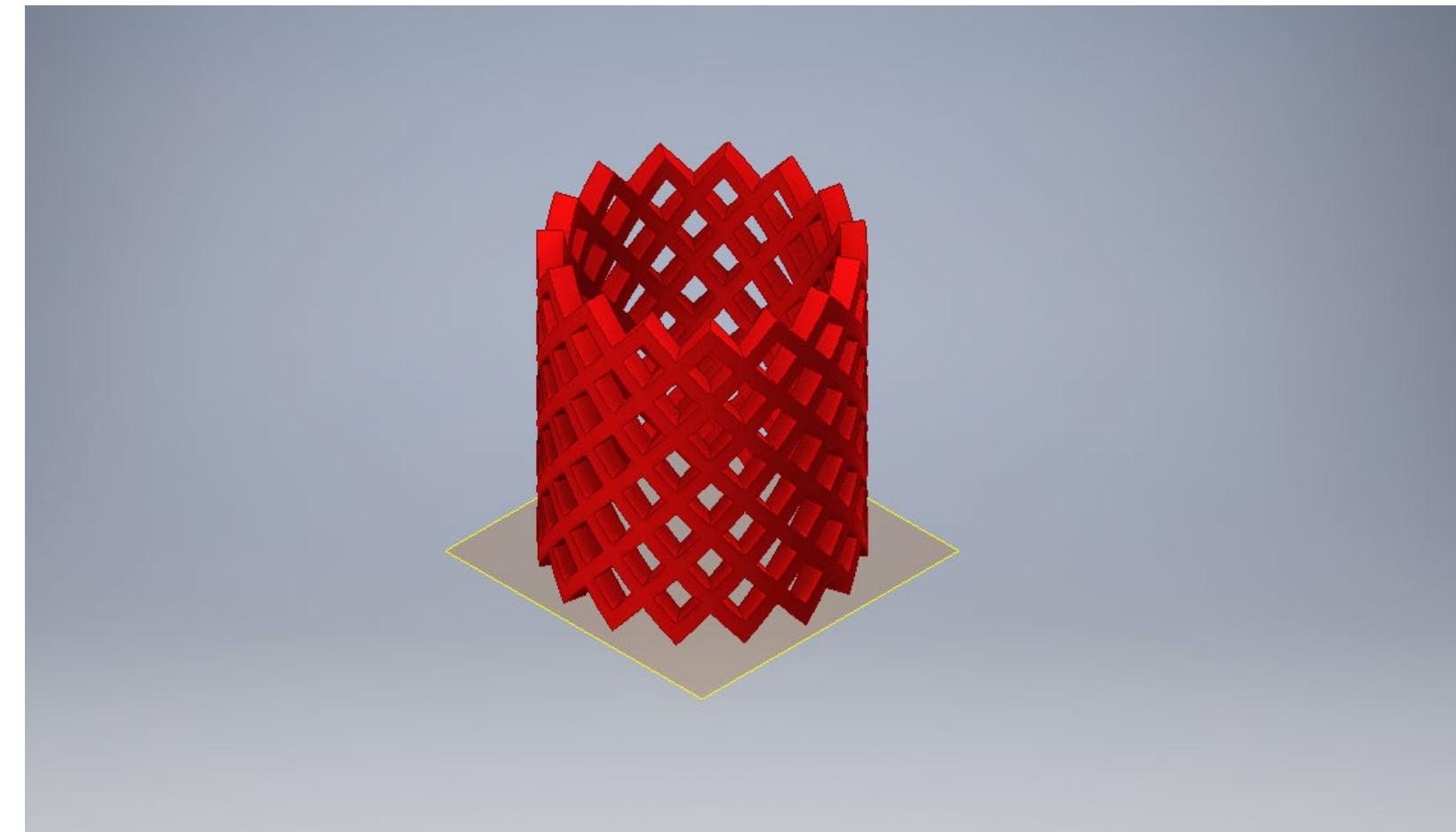
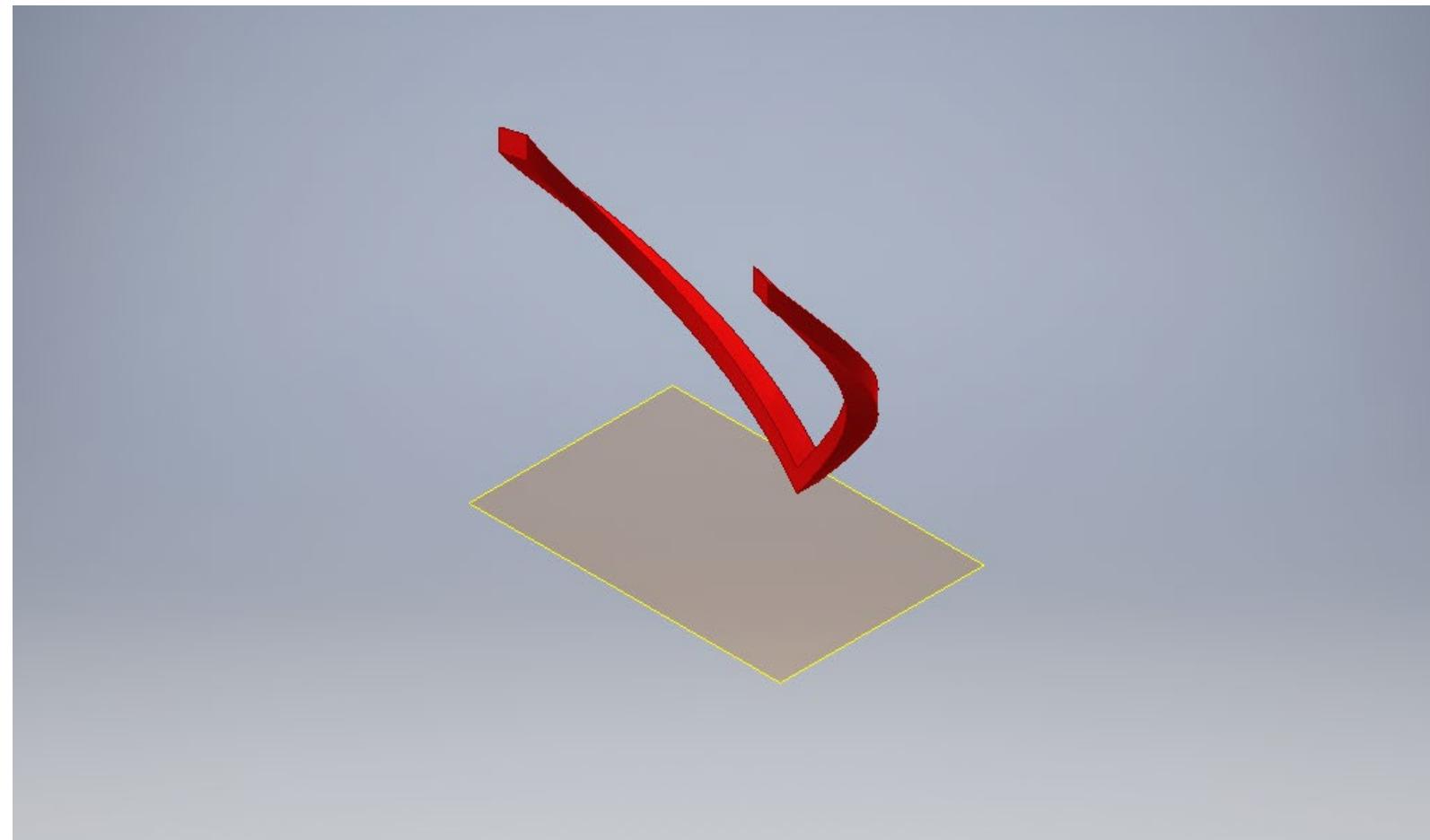
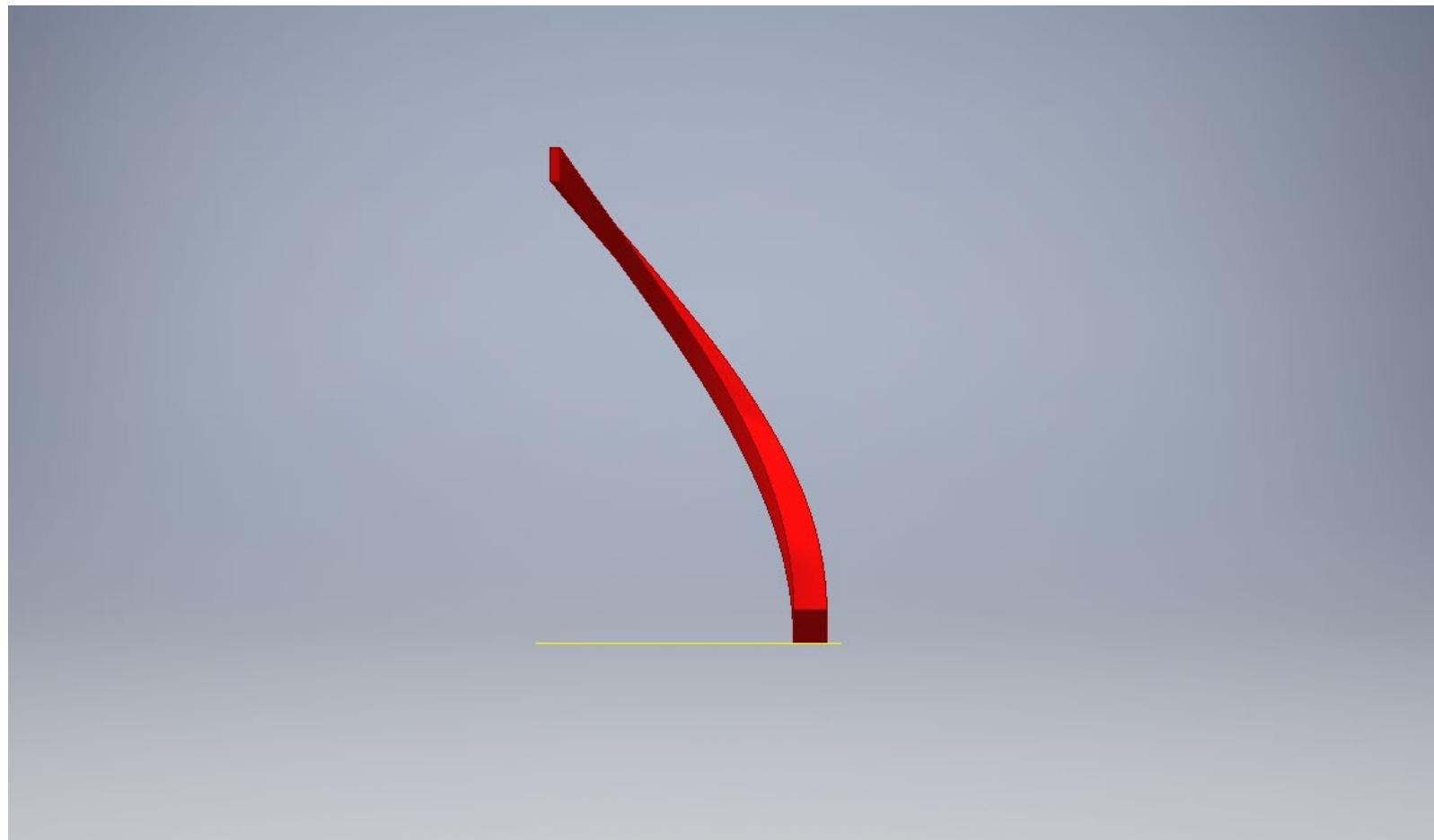


FUNCTION



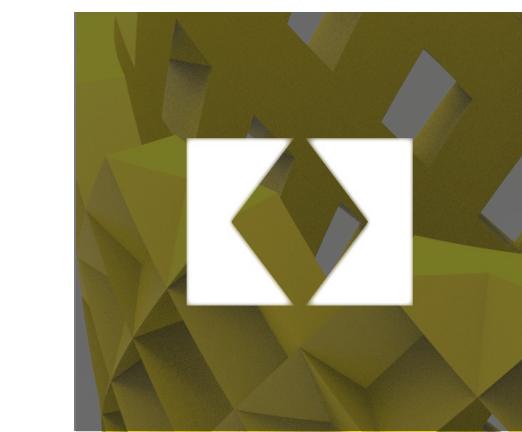
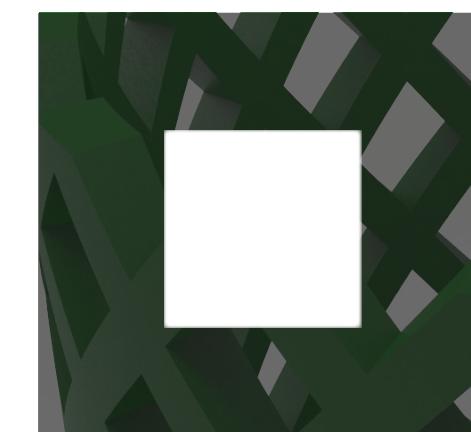
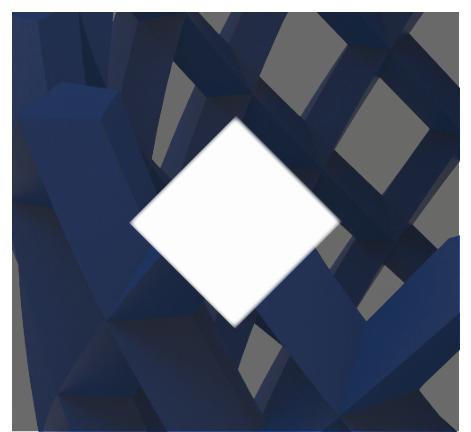
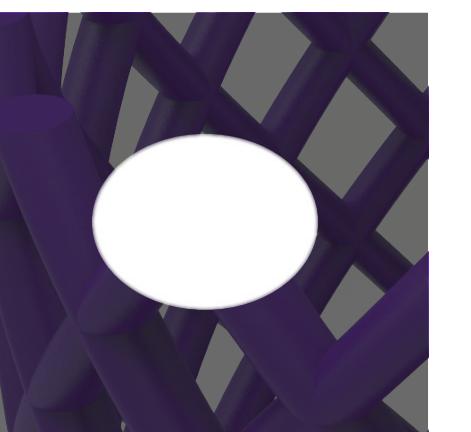
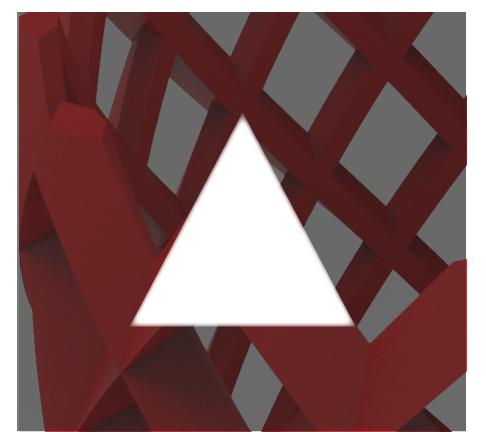
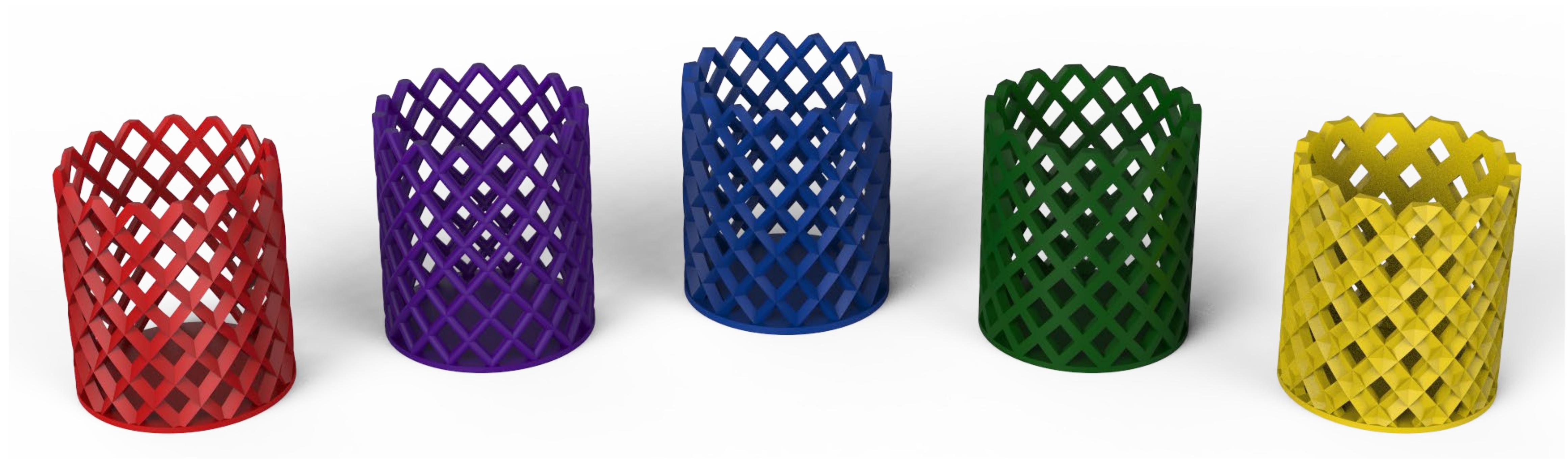
3D PRINTED

# CAD+3D PRINTING



With CAD the concept was quickly modeled and sent directly to the 3D printer.

# FINAL MODELS



# DUO-LUX

A LAMP FOR ALL OCCASIONS

# DESIGN GOALS

## COOL WHITE LIGHT

- Promotes focusing
- Helps you stay awake
- Colors appear closer to true color



## WARM WHITE LIGHT

- Promotes relaxation
- Less strain on eyes
- Better transition to sleep

# BENCKMARKING

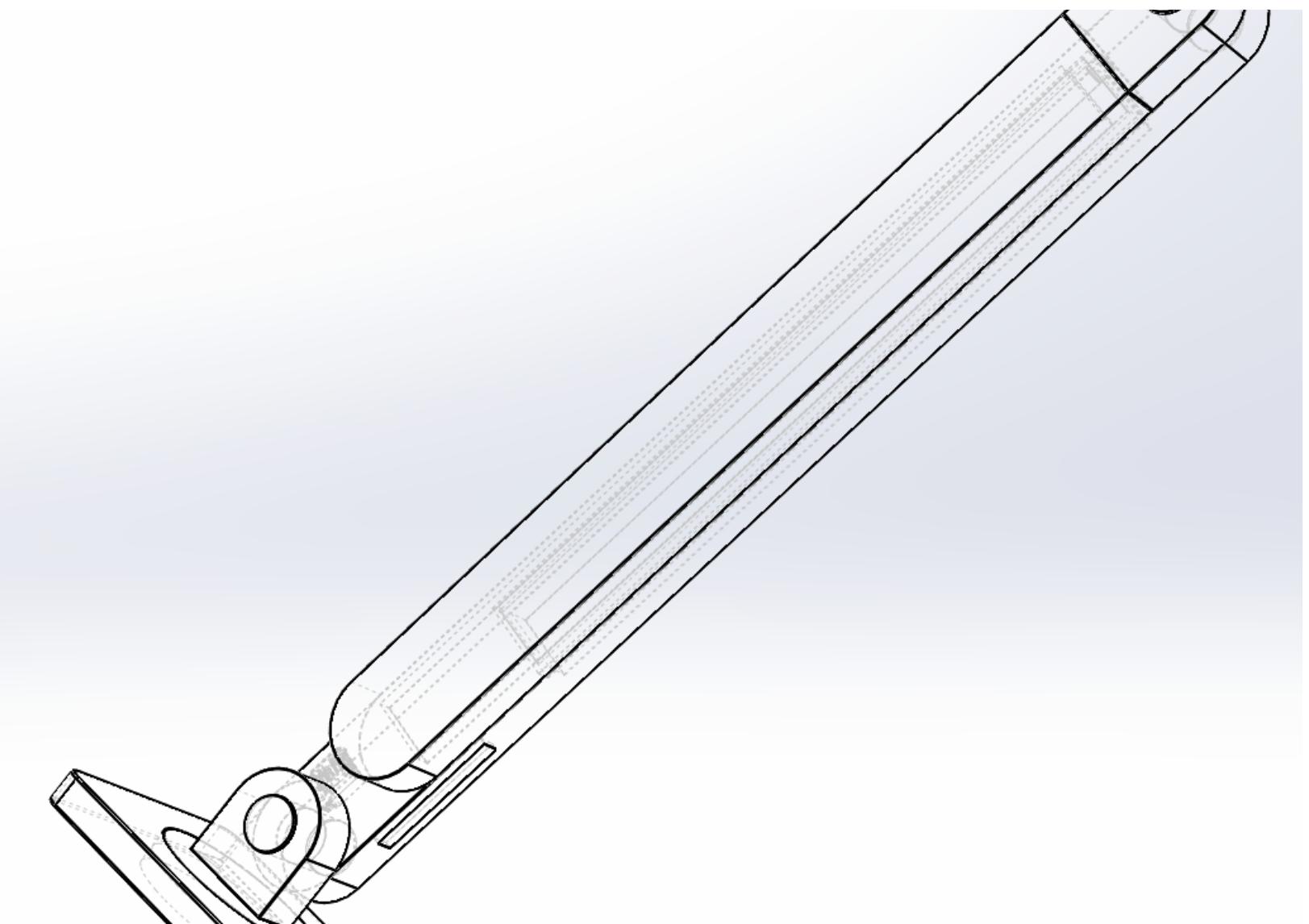
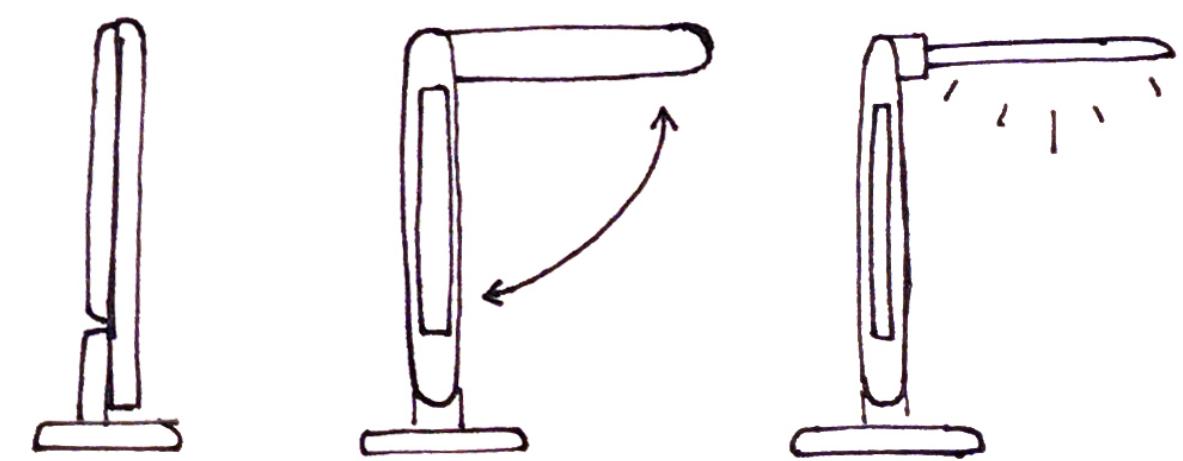
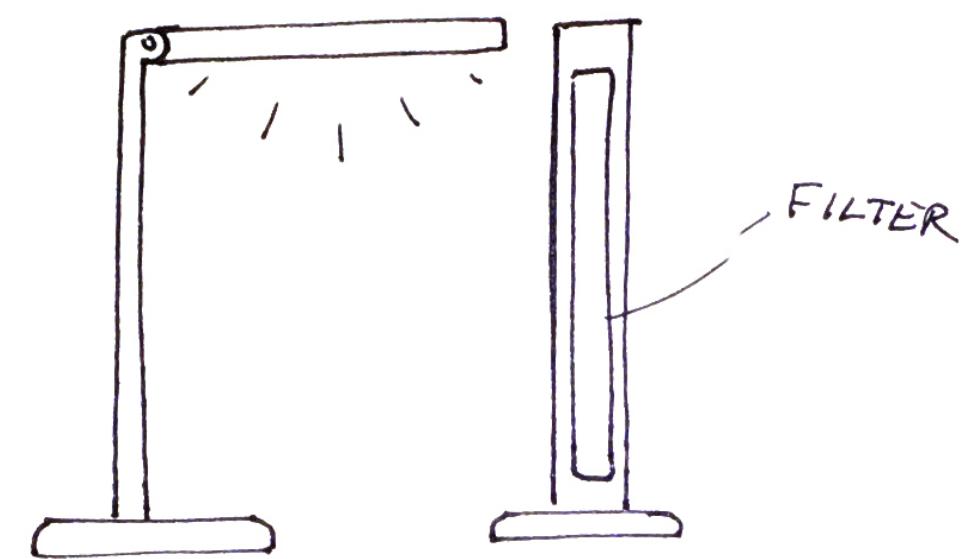
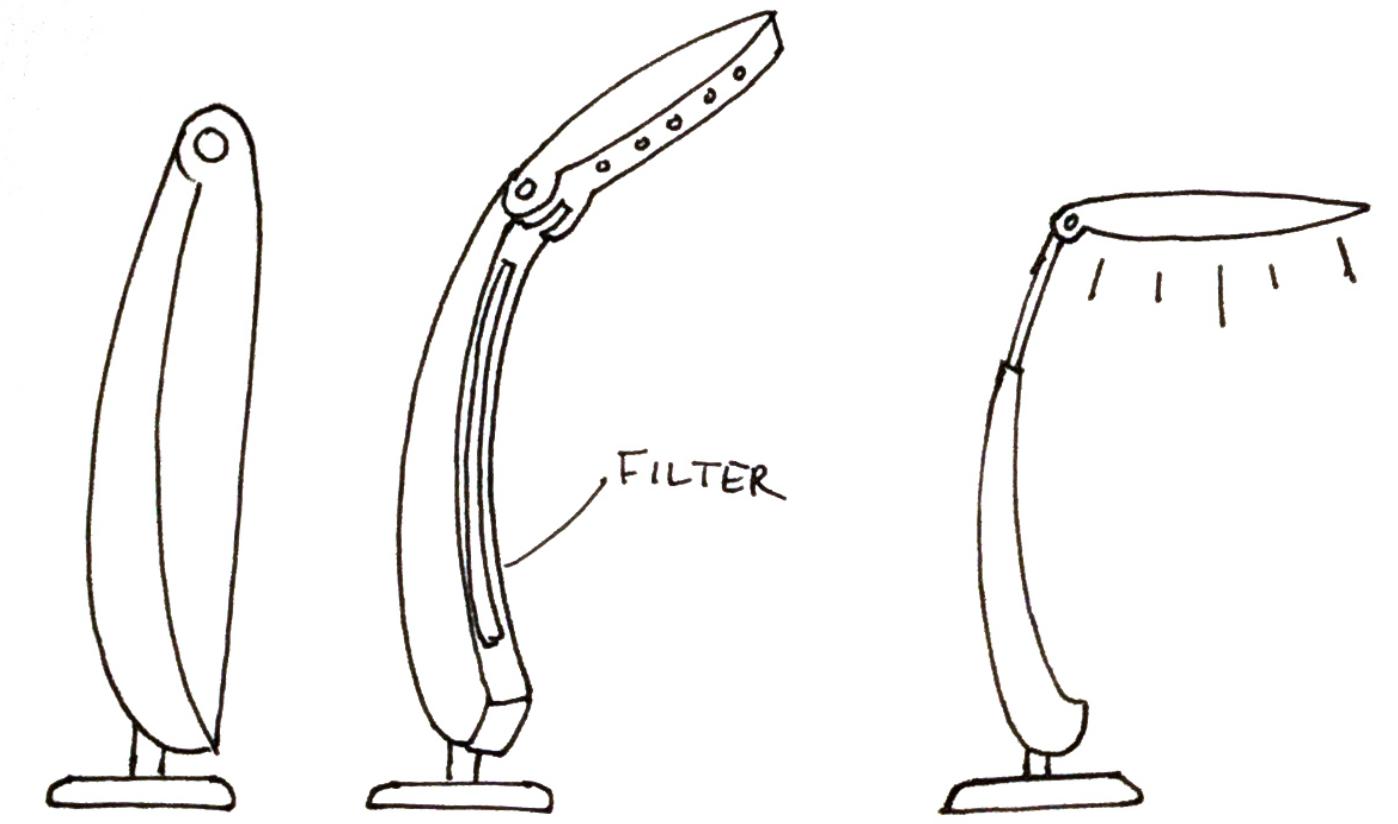
## Best Desk Lamps 2017 - BestReviews.com

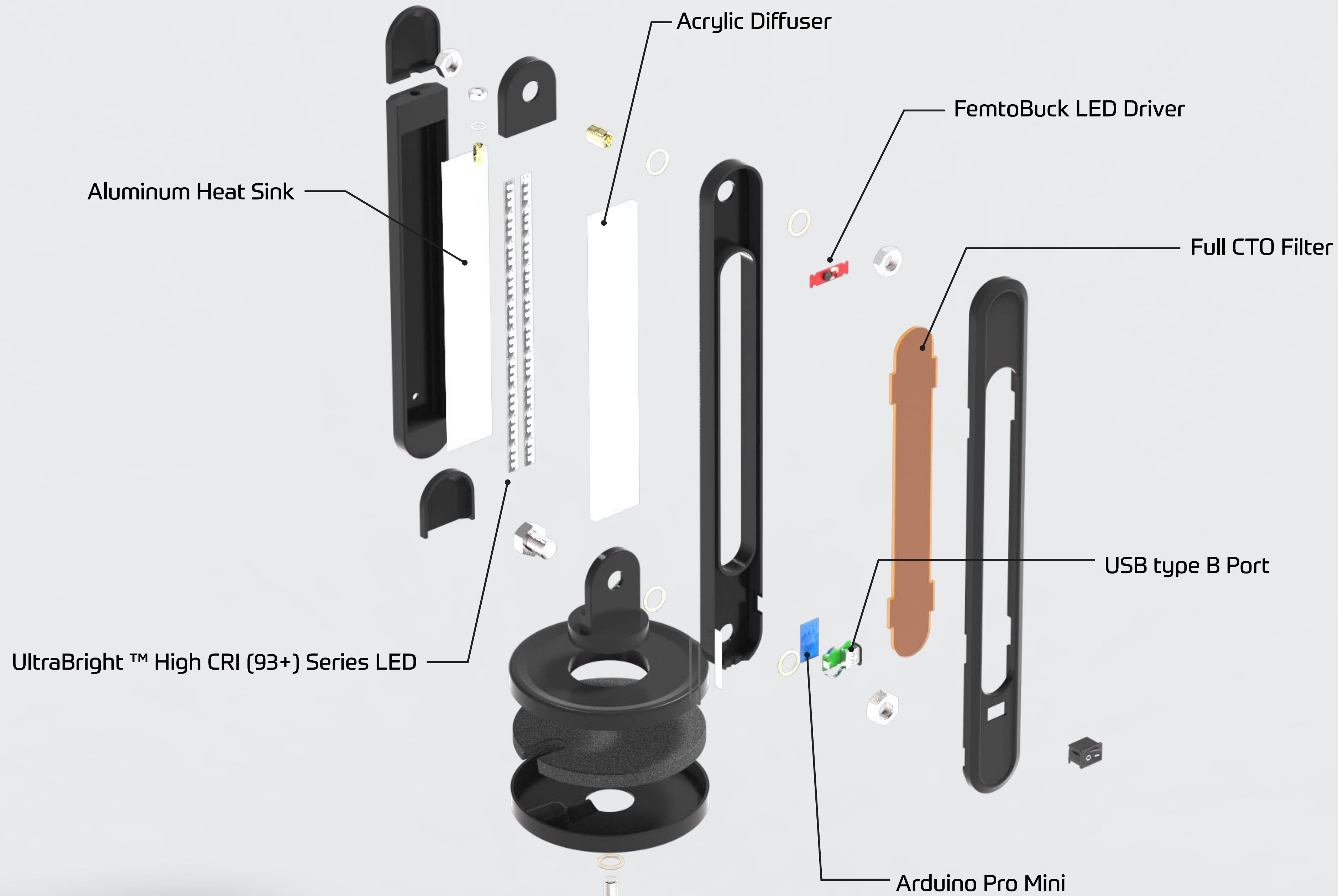


### Feature Requirements

- Dimmable
- Adjustable
- USB charging port
- Multiple light temperatures

# SKETCHING/CAD IDEATION







USB



Dual color temperatures

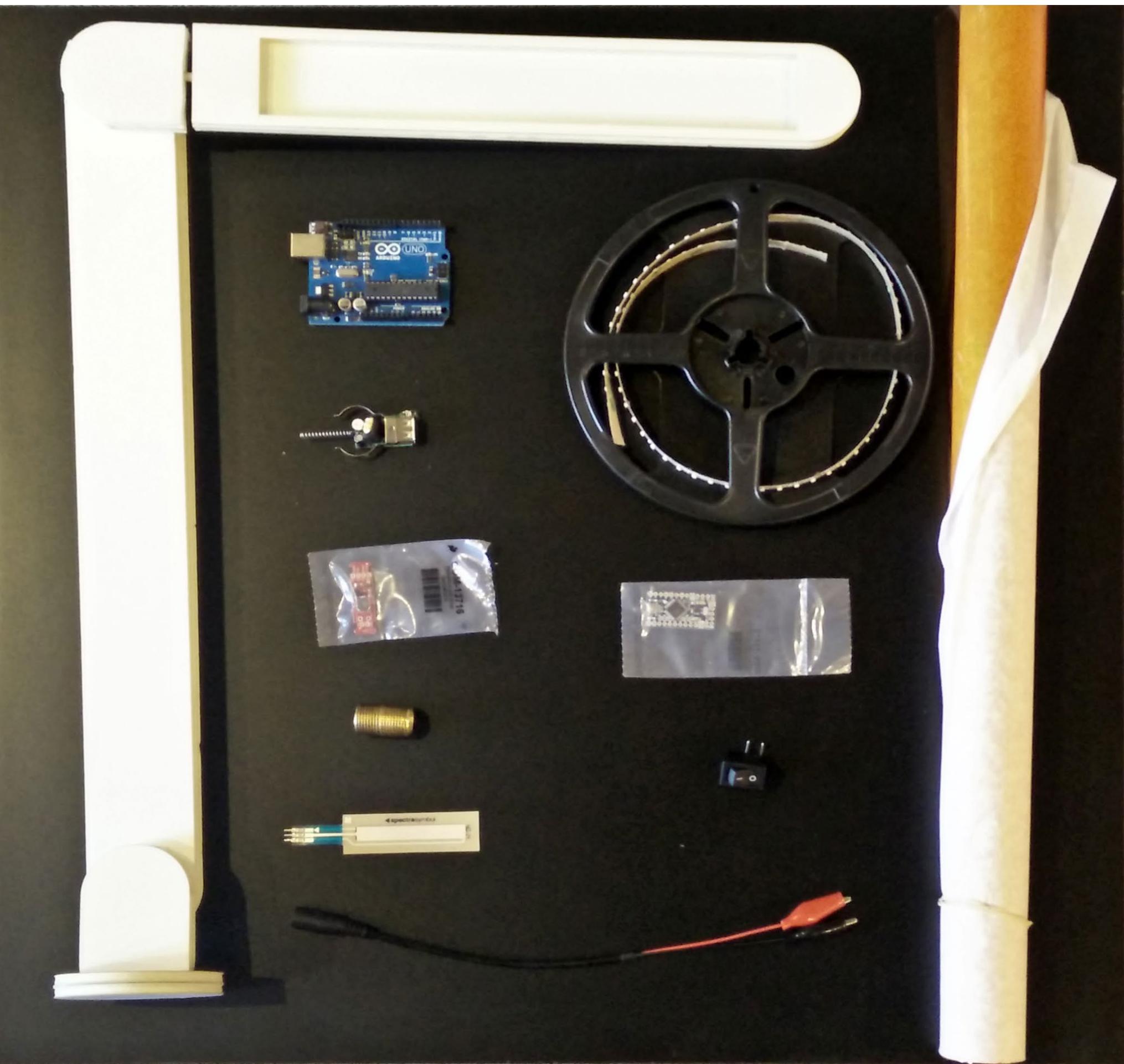


360° movement

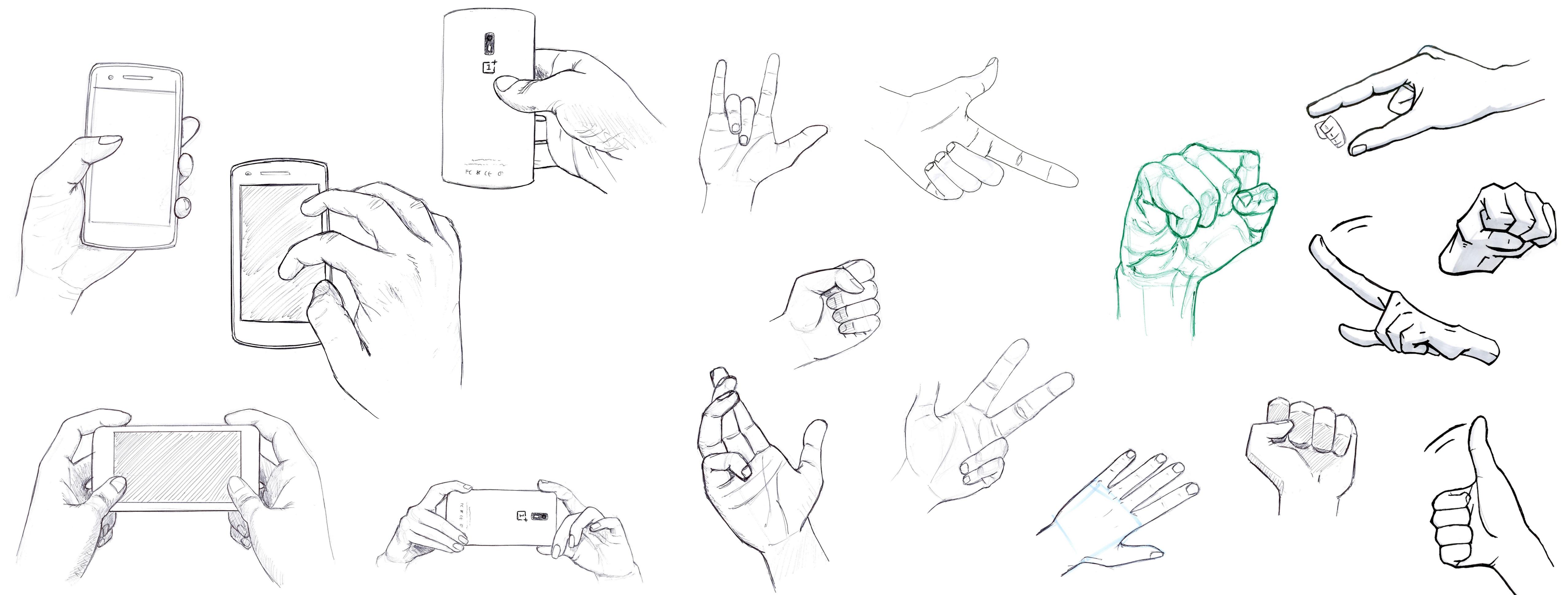


Touch sensor dimming

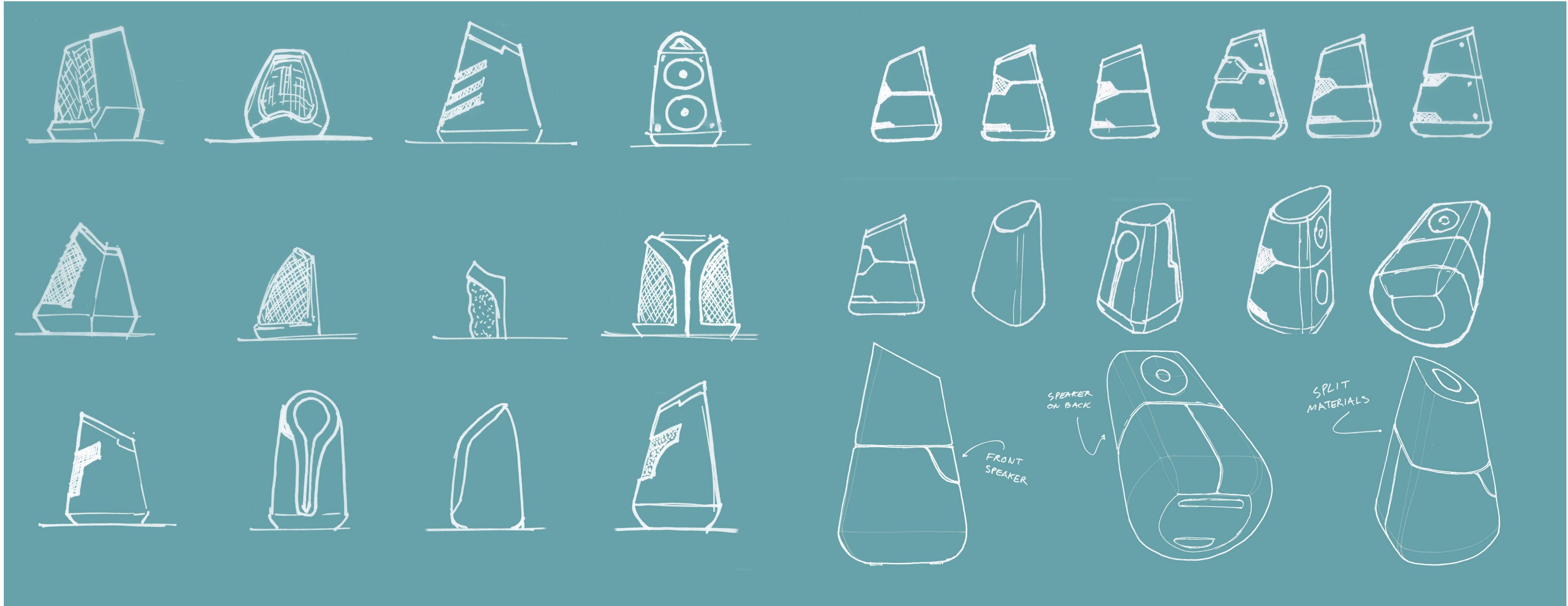
**Too be continued...**



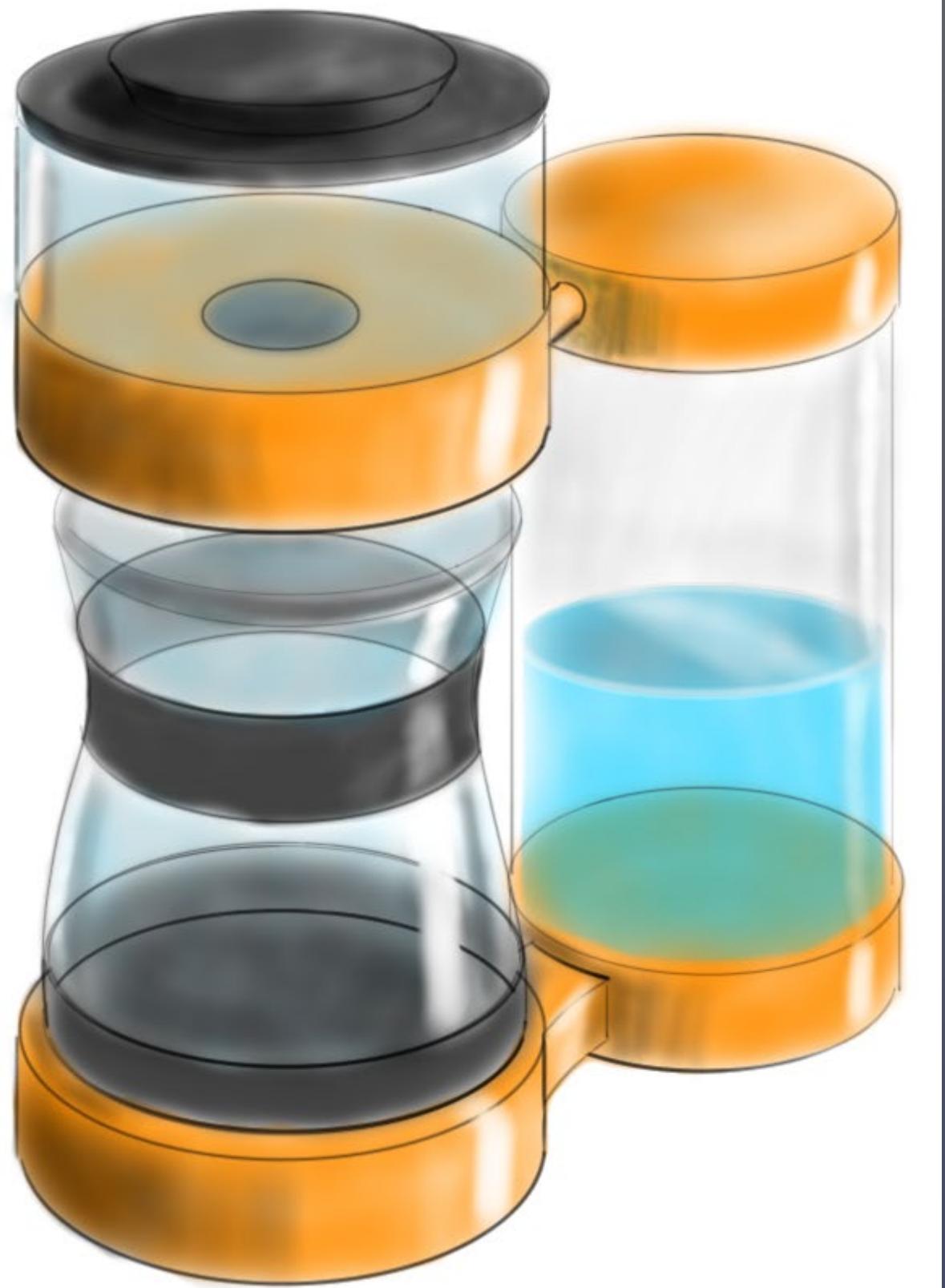
# Additional Work



# Hand Sketches



# Bluetooth Speaker



## Digital Renders

# THANKS

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502-298-4418

