



Industrial Design Portfolio

2022

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01.

pg.2



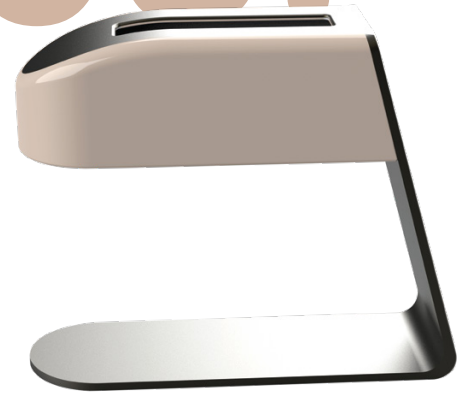
02.

pg.8



03.

pg.14



04.

pg.21



05.

pg.27



01. BoöZ

(Internship project)

Brief | To design an electric kick scooter suitable and convenient for public premises/usage.



Micro-Mobility:

or last mile transportation came in-to existence with an idea of using electric bikes, electric kick scooters etc. Micro-mobility is nothing but a transportation, if the travelling is less than 5 miles. So that this micro-mobility can reduce the carbon footprint by replacing the conventional vehicles with new age vehicles.

Models to be made:

- Standing
- With seat
- Standing with basket
- Seat with basket

Problem Identification:

- Only consumer quality parts are used
- There is no riding training period
- They have a high centre of gravity
- The small and solid wheels
- Weak headlights
- Batteries getting stolen
- Stem wobbling
- Exposed wirings
- Theft and damage

Goal:

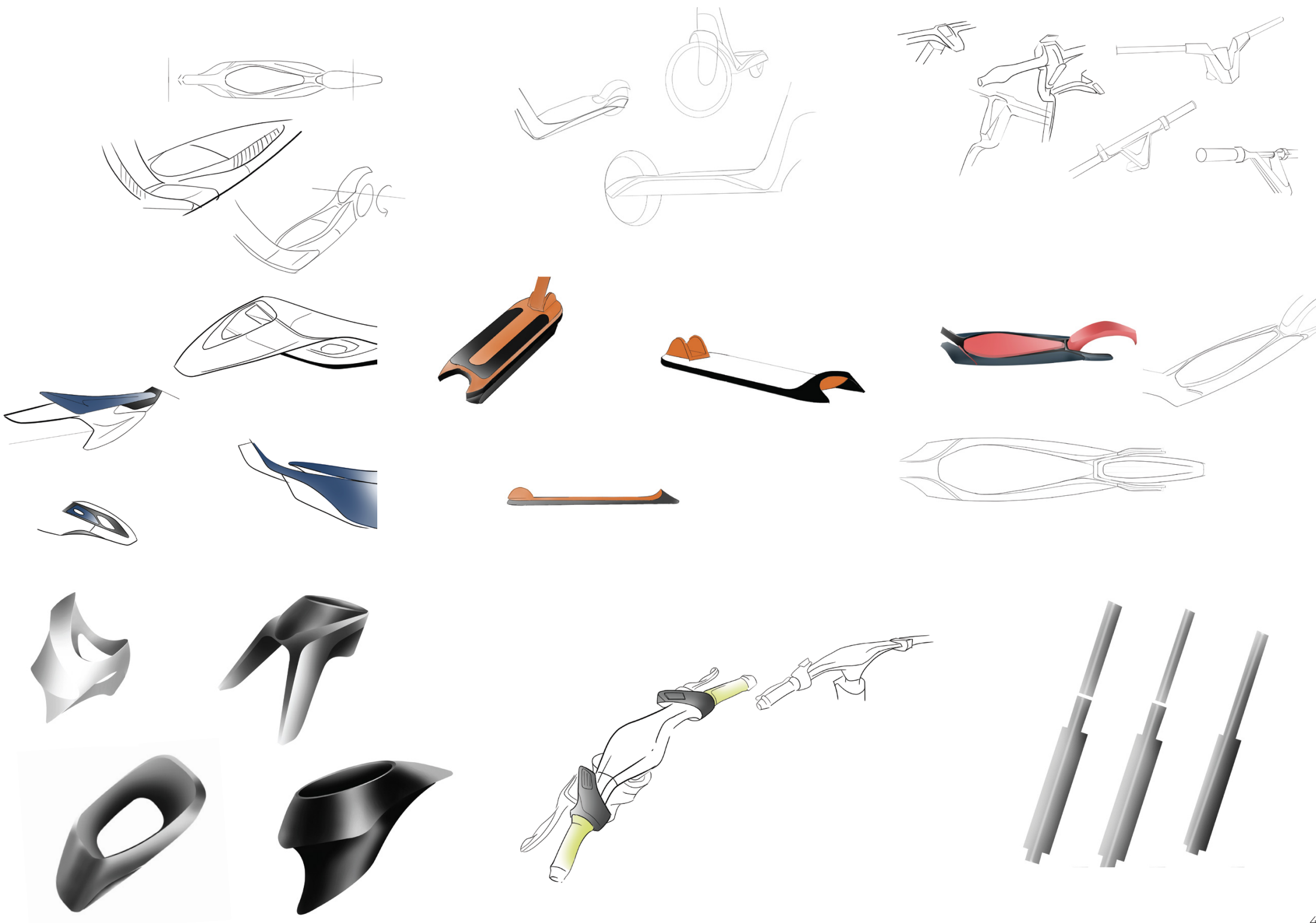
- Make the scooter out of mild steel only.
- Create with the lowest price feasible.
- Two feet can be put next to one another.
- Non foldable
- secret wiring
- Swappable battery system
- Adjusting according to the battery size
- Easy to service.
- Eliminating casting process.

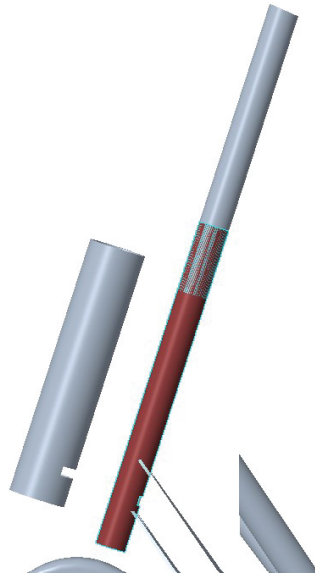
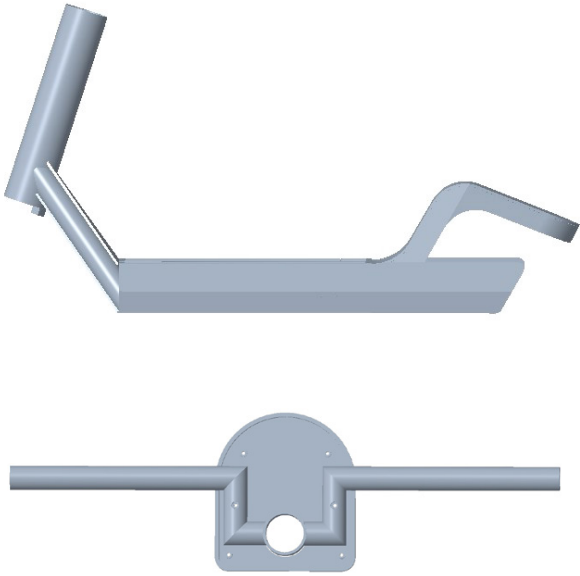
Previous design



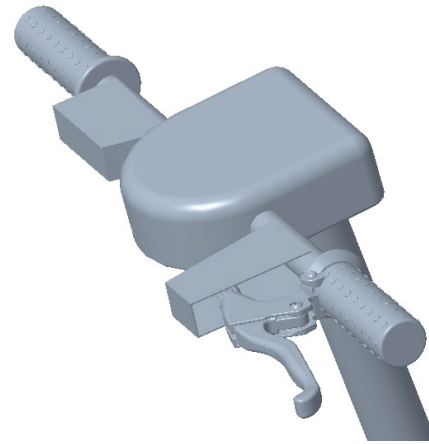
User study



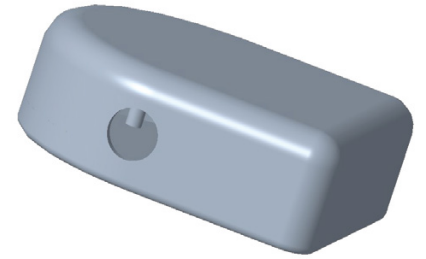




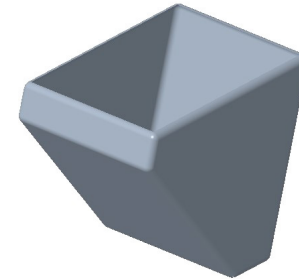
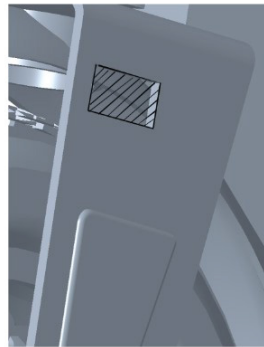
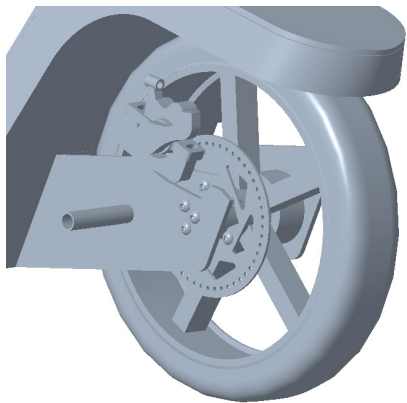
Stem design



Wire guards

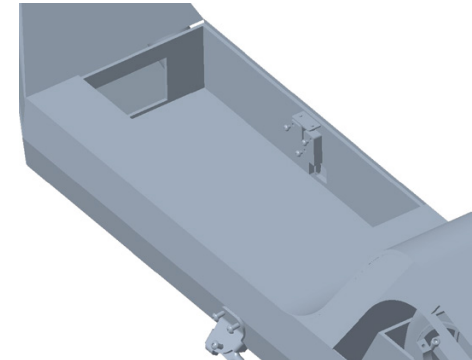
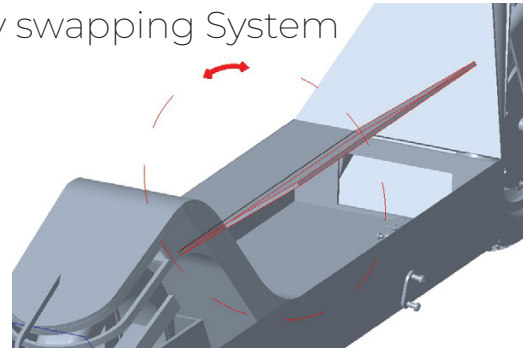
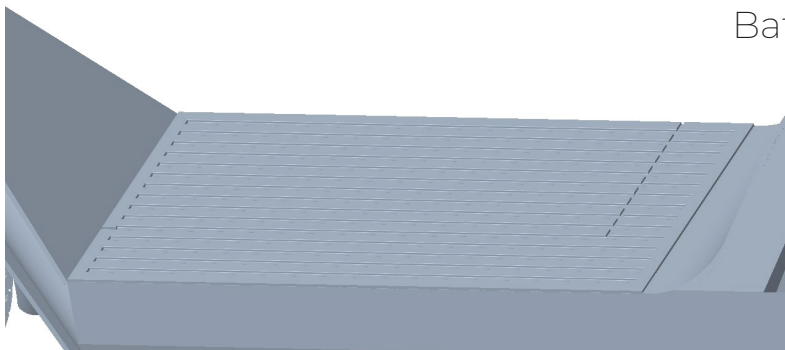


IOT box



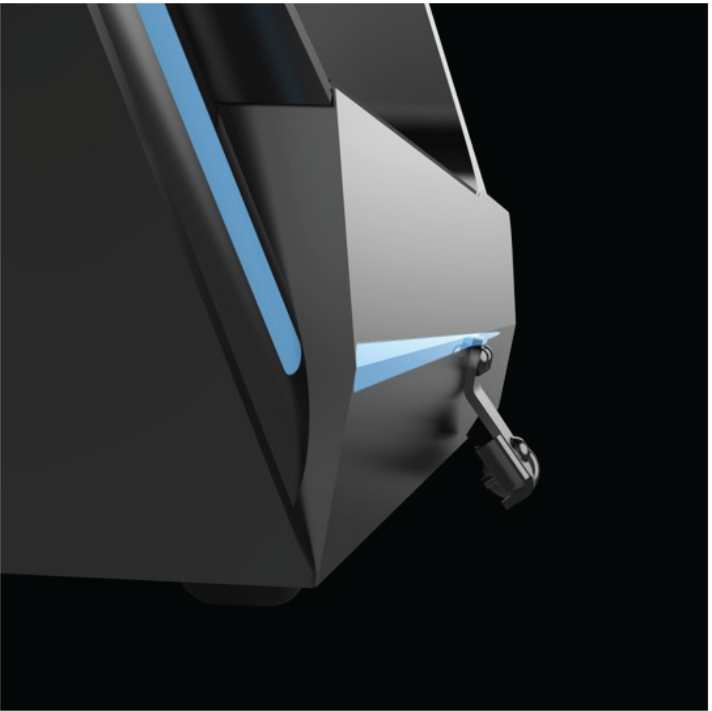
Basket

Battery swapping System





Premium Range



02. zhui

(College project)

Brief | To design a swing that occupies lesser space when not in use.



Environment observations

An Indian balcony used as a storage space



Activities done on and around





Neutral Posture: Taking Pressure Off Your Spine
 As NASA researchers have learned from astronauts, spending more time in neutral spine position can decrease chronic back and neck aches, muscle pain, stiffness and numbness as well as increase your work productivity.

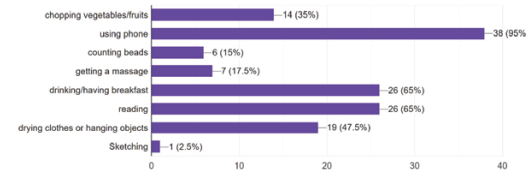
Relaxation

Spending time watching television or reading in a chair can keep you in neutral position when using the right recliner. A zero-gravity reclining chair removes tension from your spine. It elevates your feet to the same level as your heart, relieving strain on your spinal vertebrae from the pull of gravity.

Survey

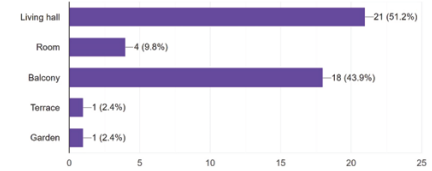
What activities do you perform on/around the swing?

40 responses



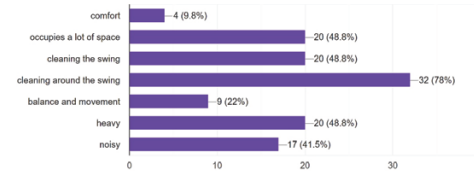
In which part of the house do you have the swing in?

41 responses



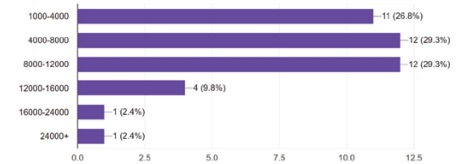
Do you have any problems with the swing?

41 responses



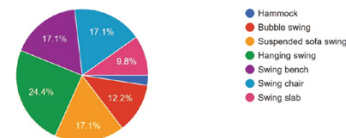
What is the cost of the swing?

41 responses



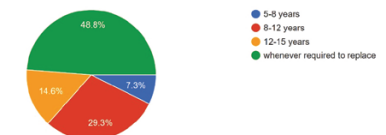
What type of a swing do you have

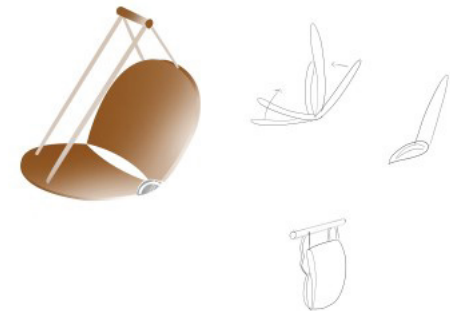
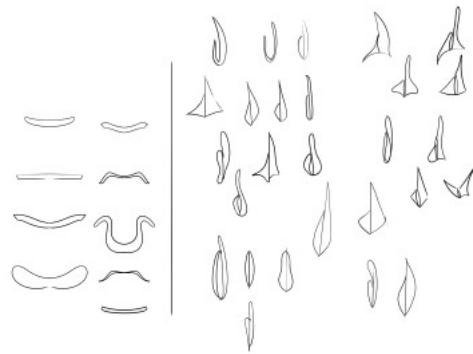
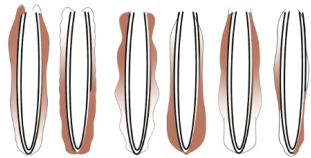
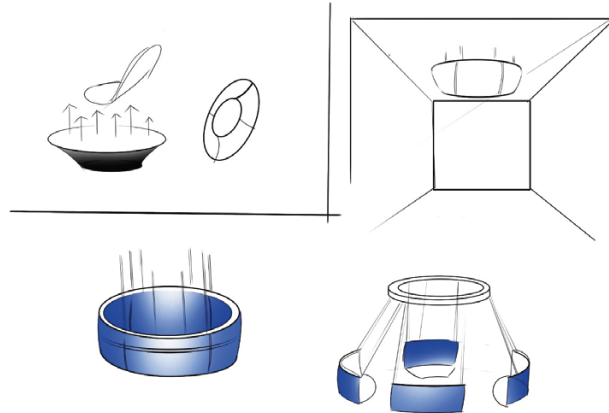
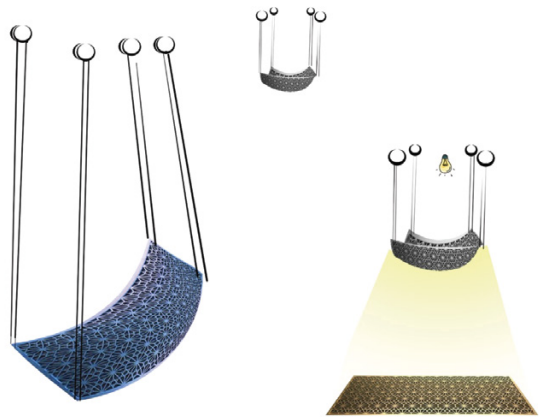
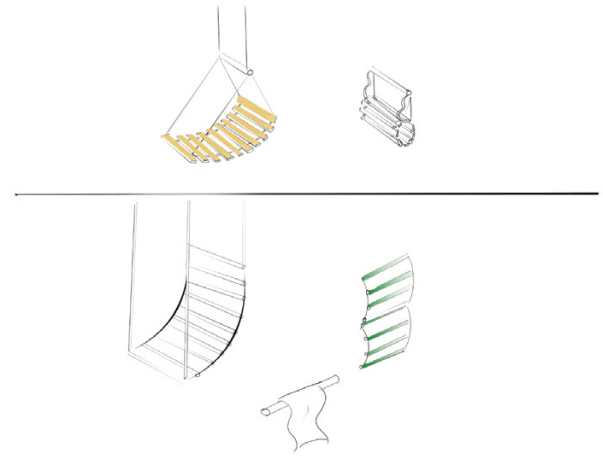
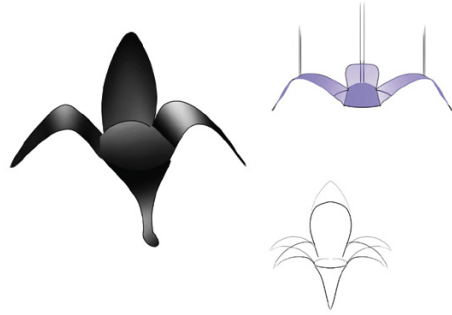
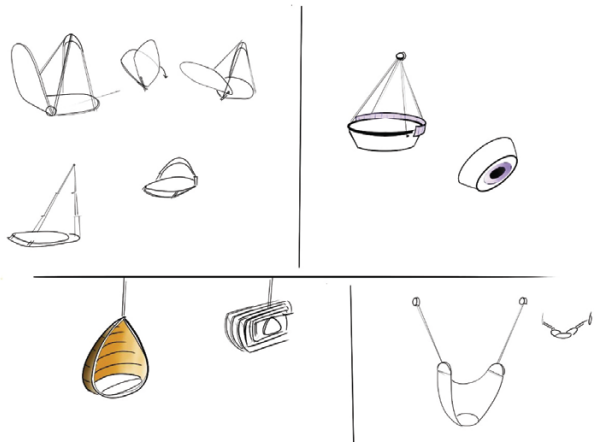
41 responses



How often do you purchase a swing?

41 responses

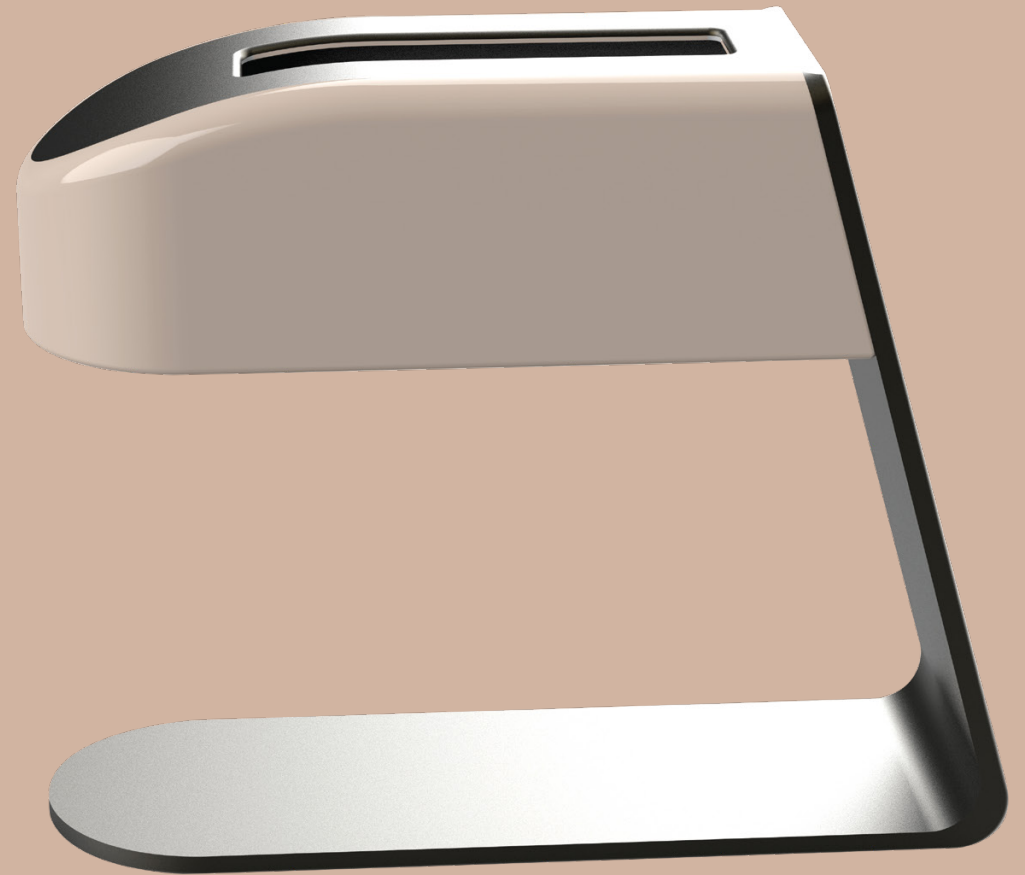








03. two.st



(Self initiated project)

Brief | To design a toaster that is sustainable and reduces the amount of bread wastage.

Product Disassembly

Polypropylene



Plastic casing

Toaster base

Regulator knob

Control knob ring

Cancel button

Press handle

Crumb tray handle

Base plate

Radiation shield

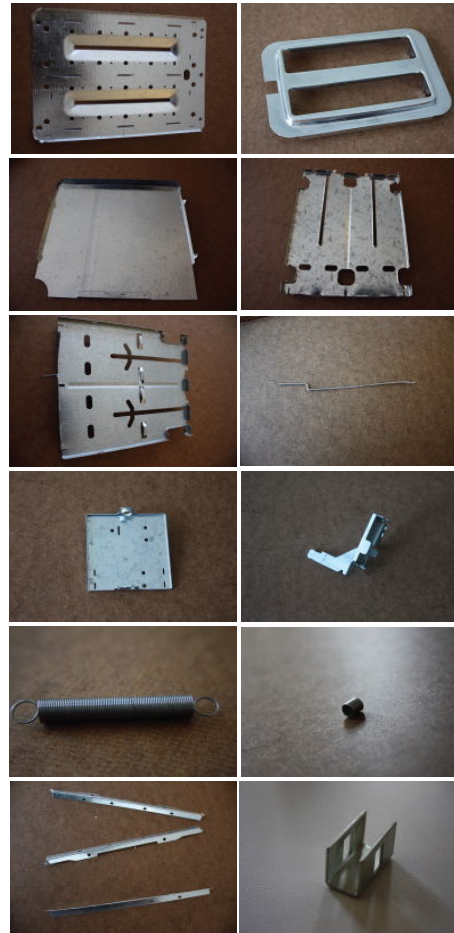
Toaster wall

Handle and locking

Restoring spring

Mica sheet support beams

Steel



Toaster loader top

Toaster wall

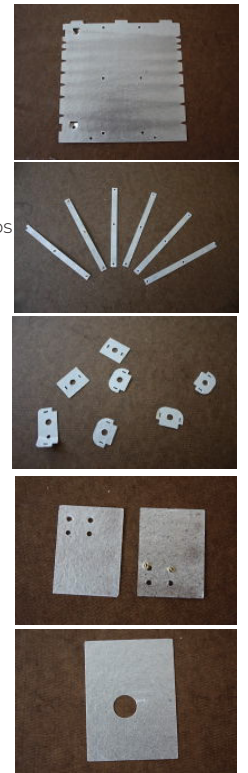
Heater leads

Handle and locking

Mystery spring

Magnetic lock piece

Mica



Insulating sheet

Aligning strips

Small tabs

Smaller mica insulator

Circuit board insulator

Abs

Insulating caps

Shaft spacer

Trigger switch

Aluminium

Toast shelf

Crumb tray

Bread holder support wire



Plastic is prone to UV ray damage, the fading of color and degradation of the plastic is bad.

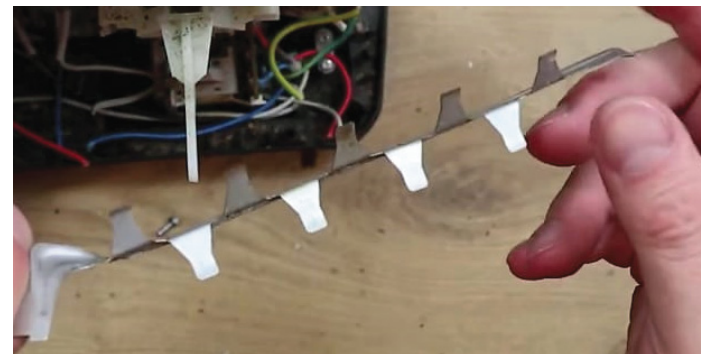


Ceramics have low thermal conductivity. This insulation is great as main body of toaster will stay cool.

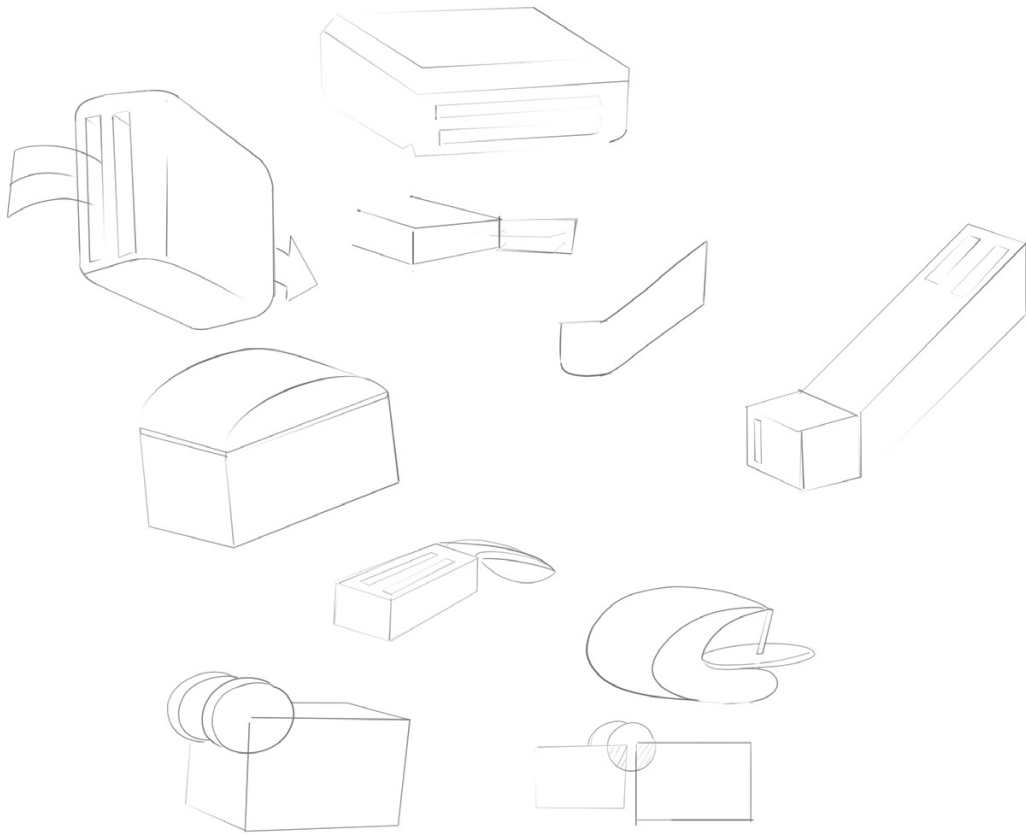
Ceramic can also be used for rolling pins the part that will be in contact of bread slice. Main body can be made of porcelain.



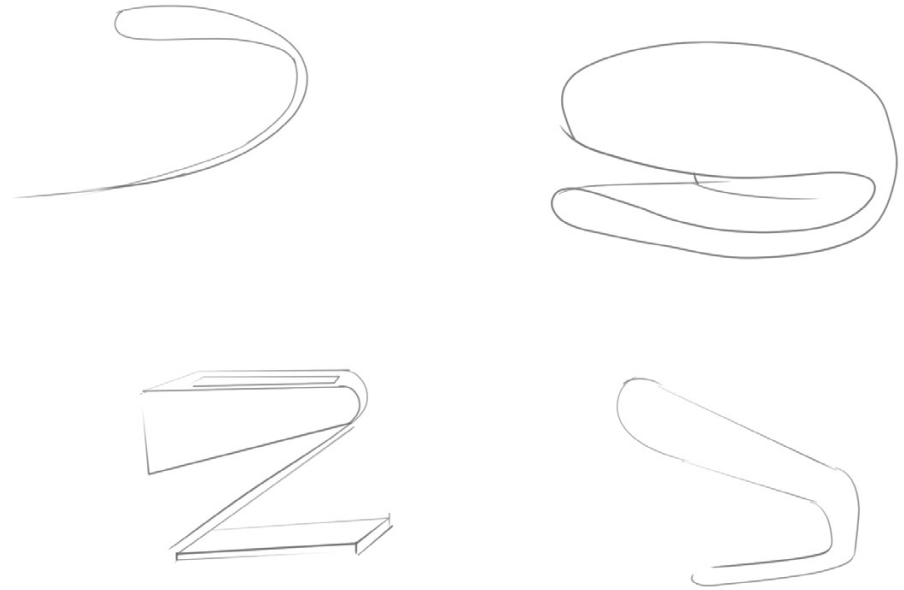
Toast shelf are very thin and they hold the bread and result in breakage

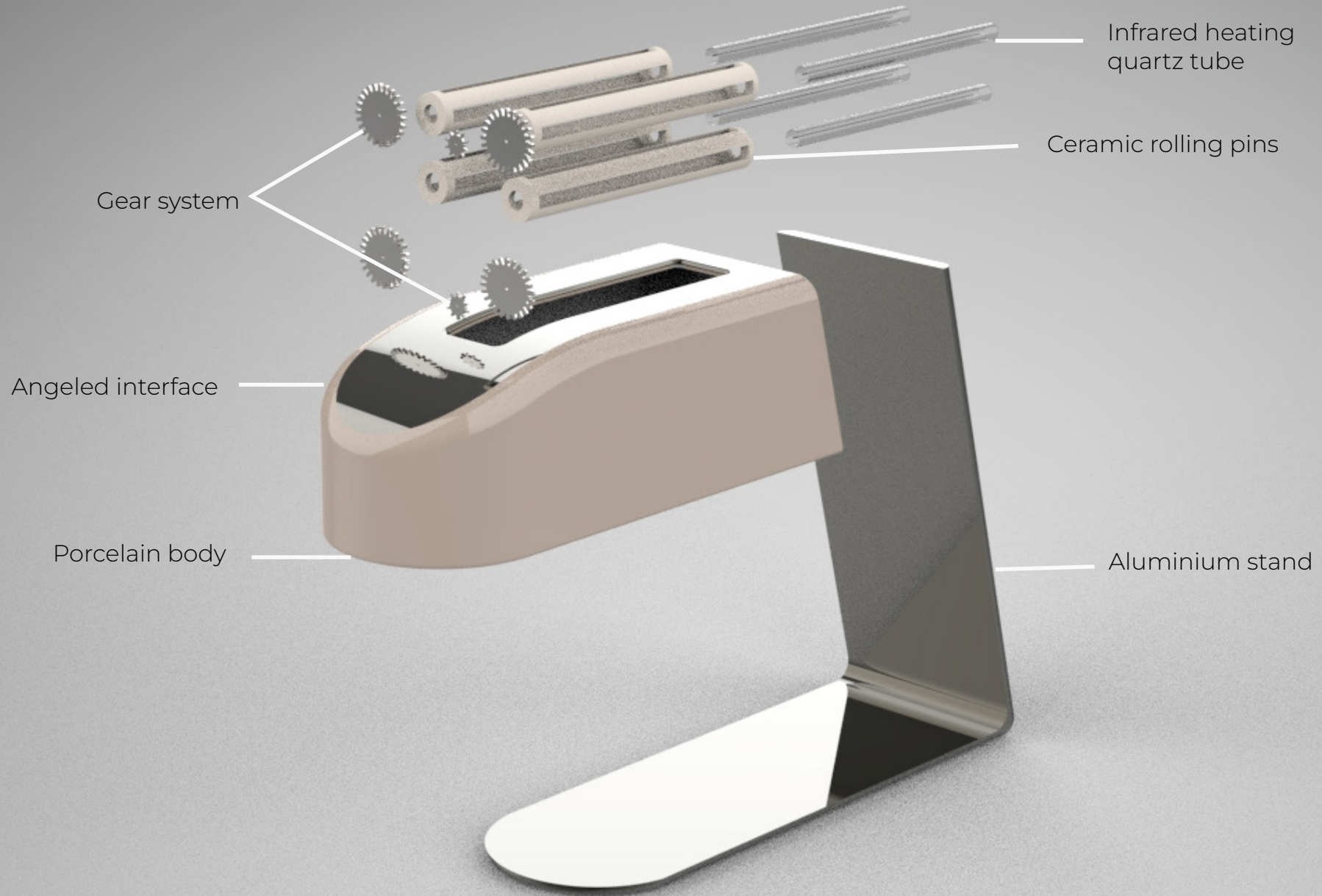


Concepts

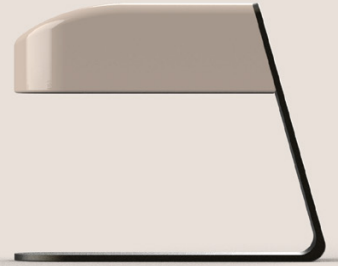
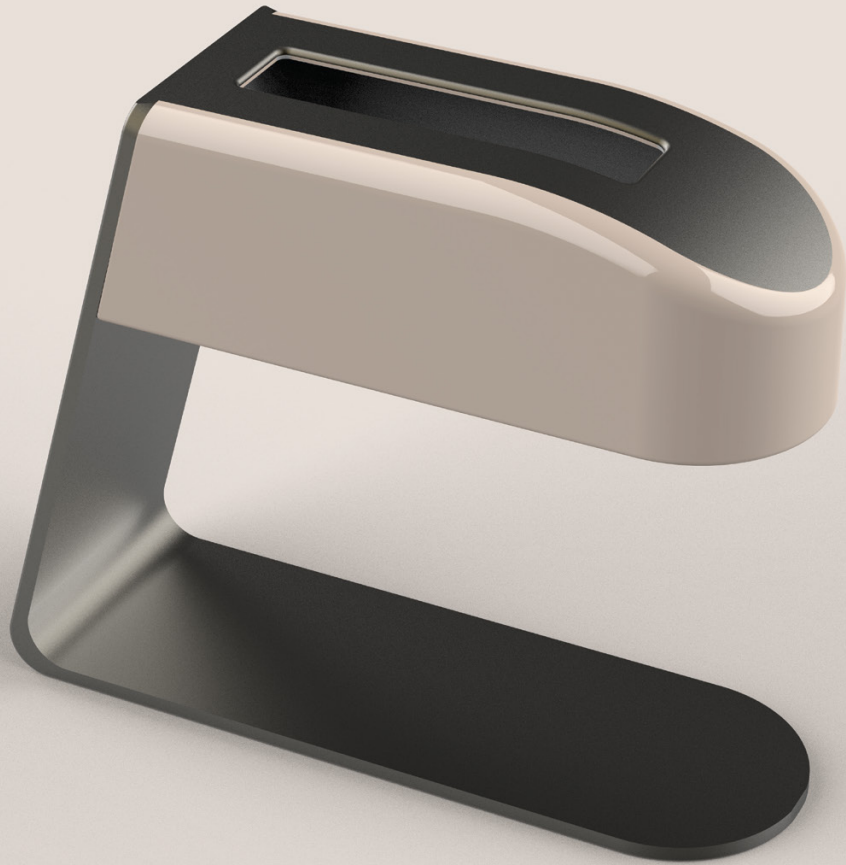


Ideation

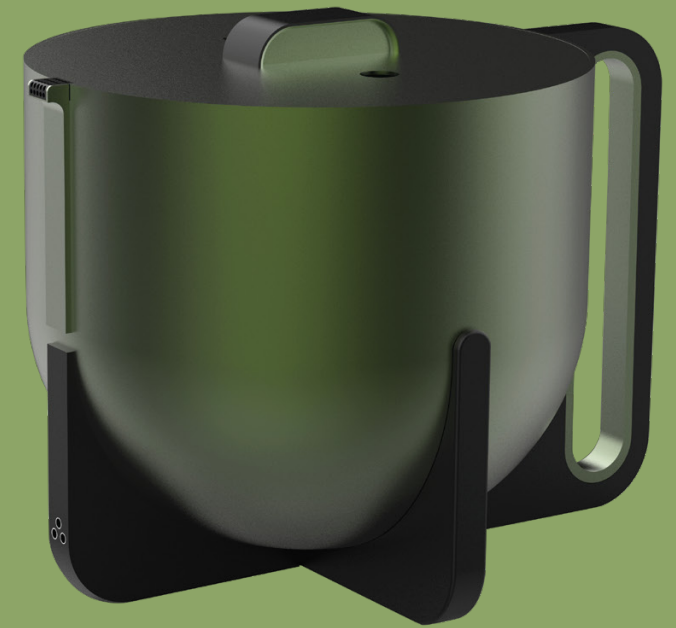








04. teakettle



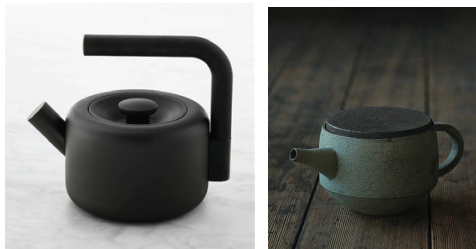
(Self initiated project)

Brief | To blur the line between kettle and teapot.

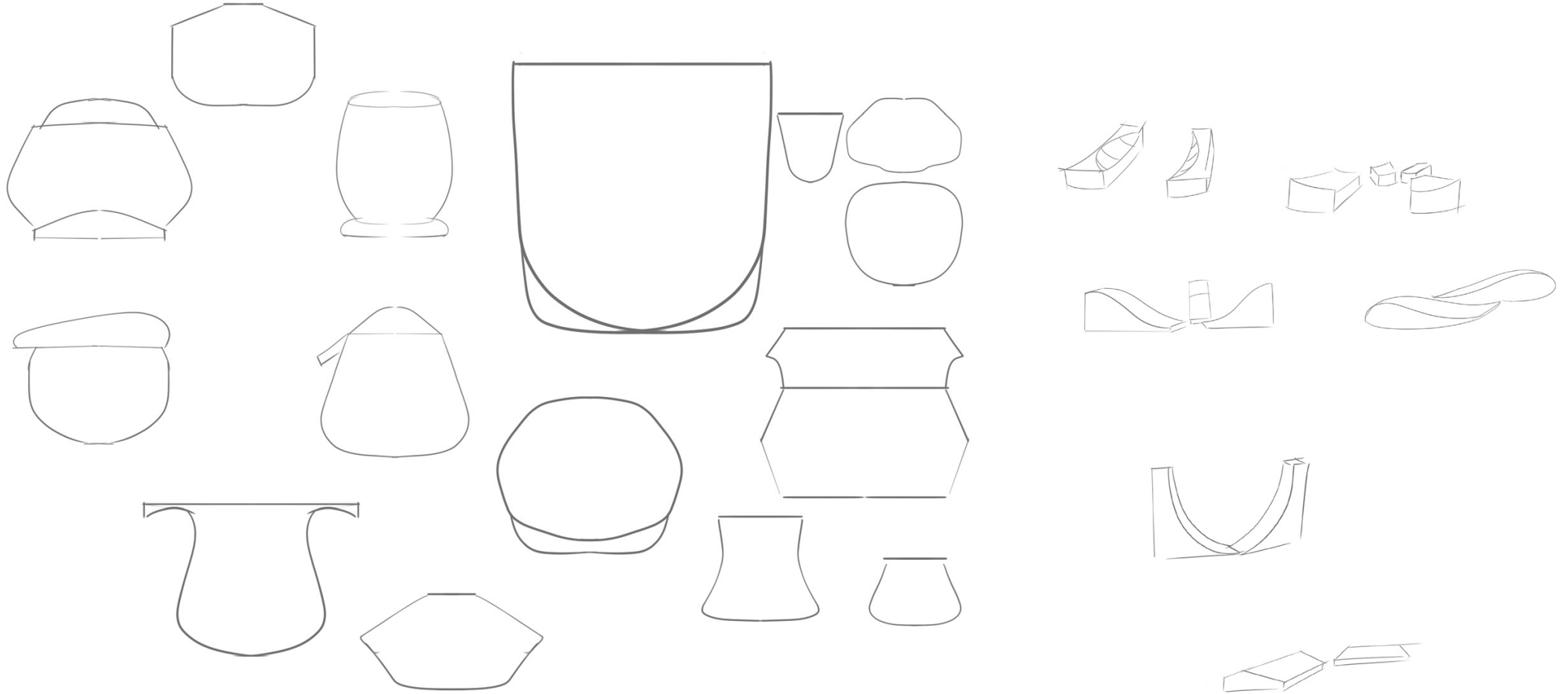
Bring the best form of both products and simultaneously achieve a minimalistic look

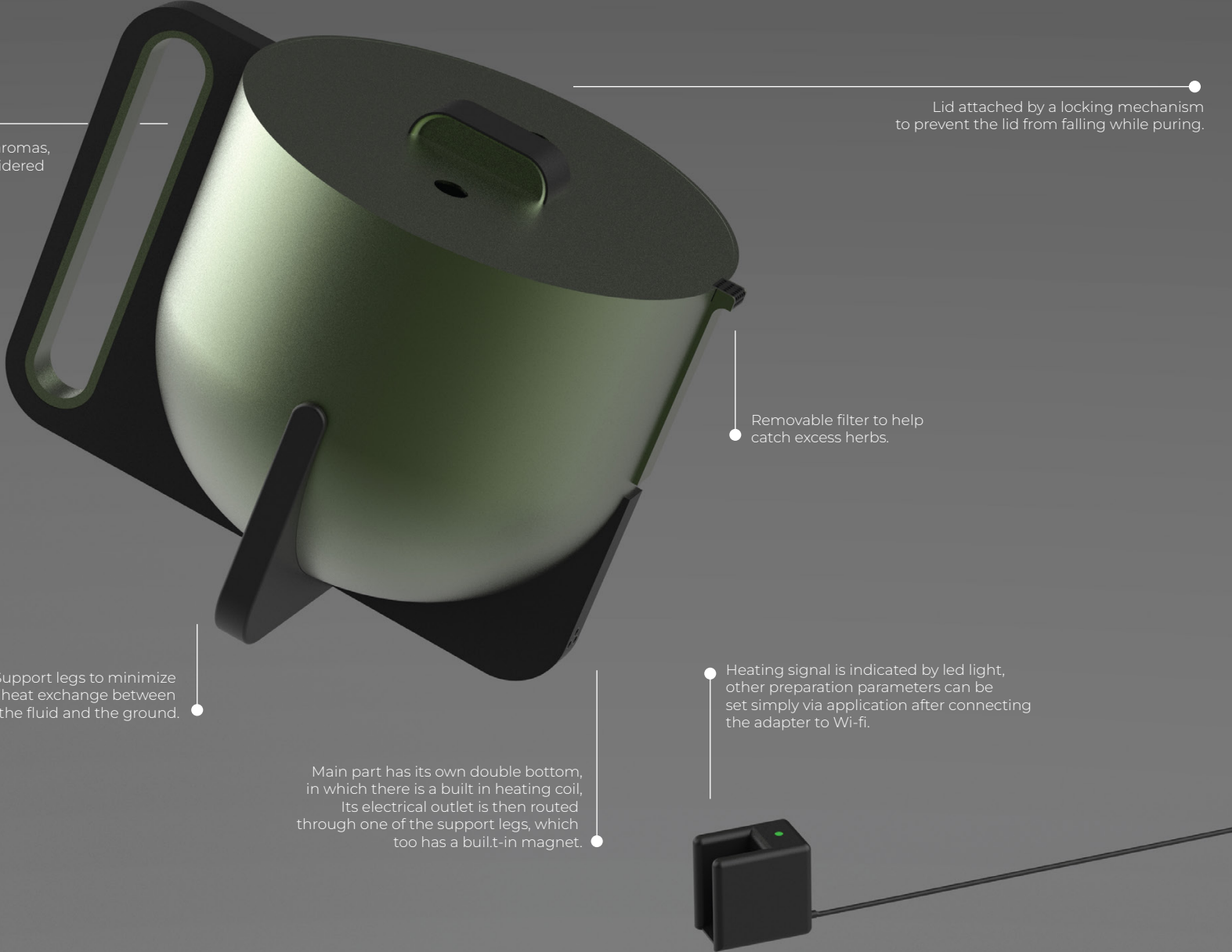


Goal



Ideation





Parameters such as mixing, releasing aromas, capillarity and sustainability were considered when shaping the main part.

Lid attached by a locking mechanism to prevent the lid from falling while pouring.

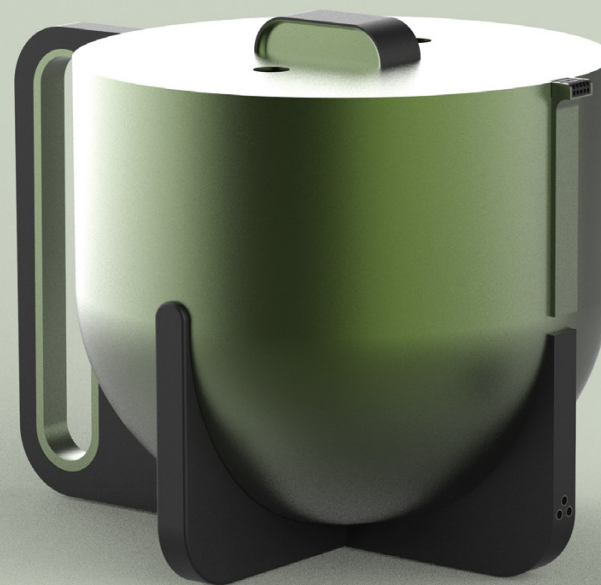
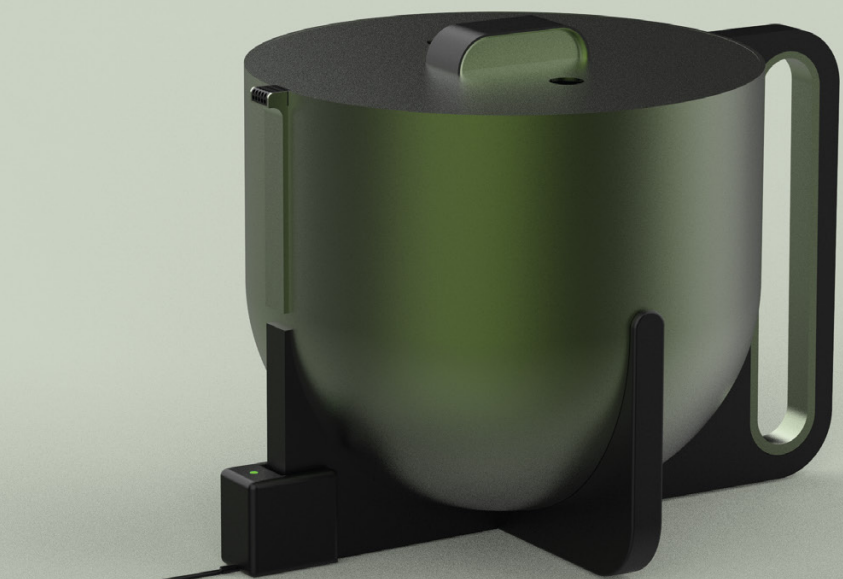
Removable filter to help catch excess herbs.

Support legs to minimize the heat exchange between the fluid and the ground.

Main part has its own double bottom, in which there is a built in heating coil. Its electrical outlet is then routed through one of the support legs, which too has a built-in magnet.

Heating signal is indicated by led light, other preparation parameters can be set simply via application after connecting the adapter to Wi-fi.

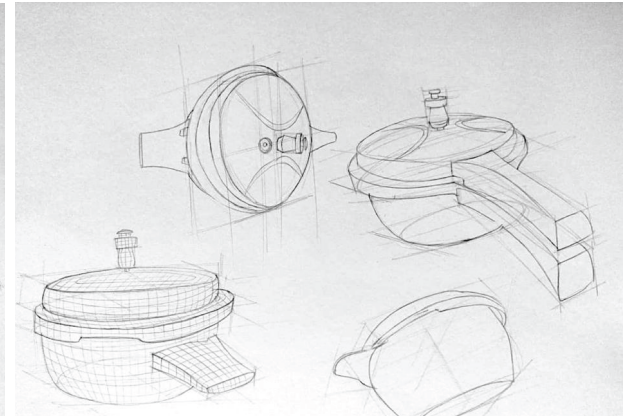
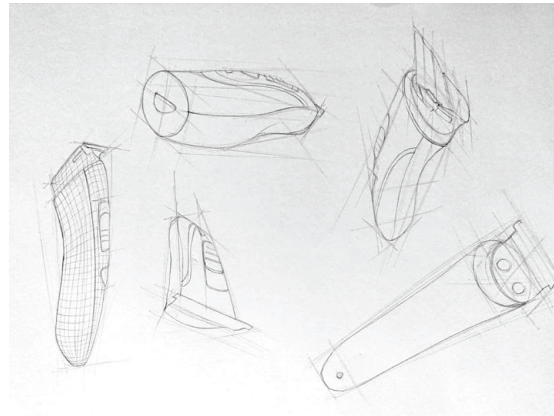
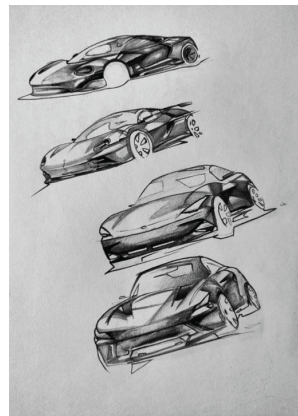
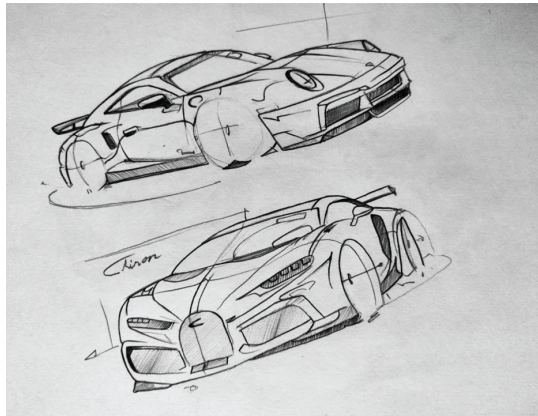
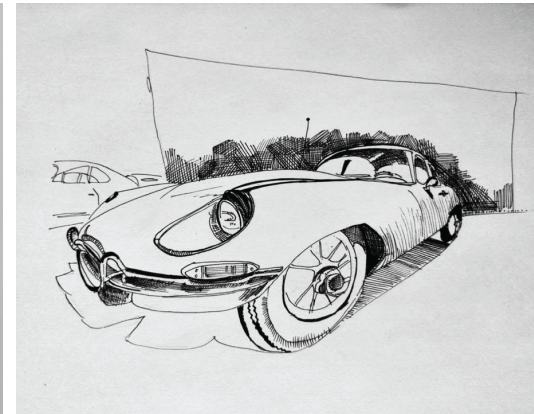
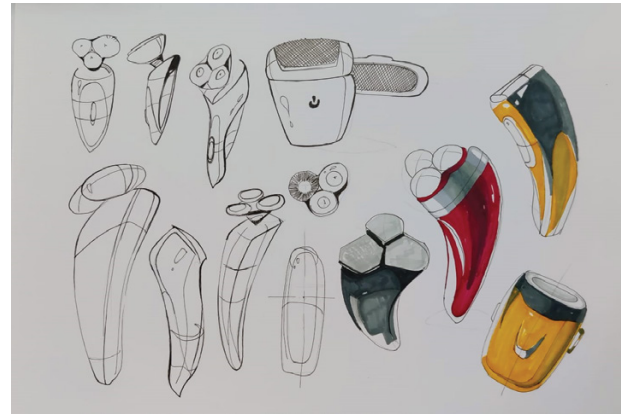
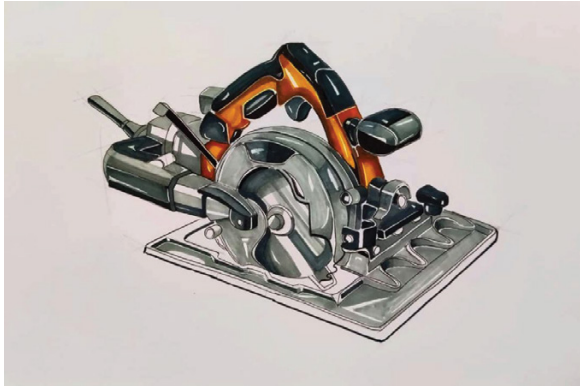




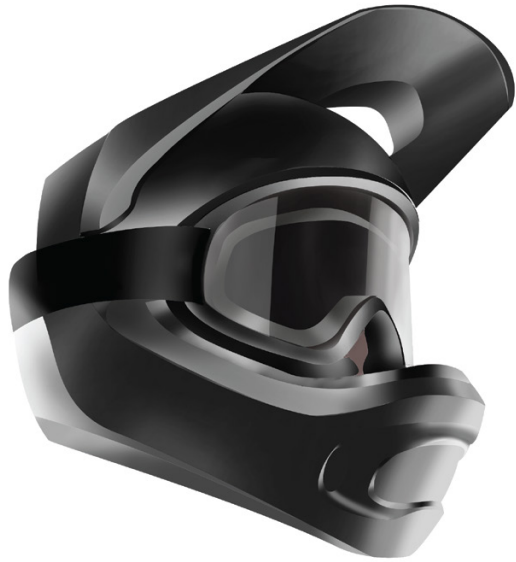
05. hands on skills

Brief | Sketches, digital renders and material explorations

Sketches



Digital renders



Material





Thank You.