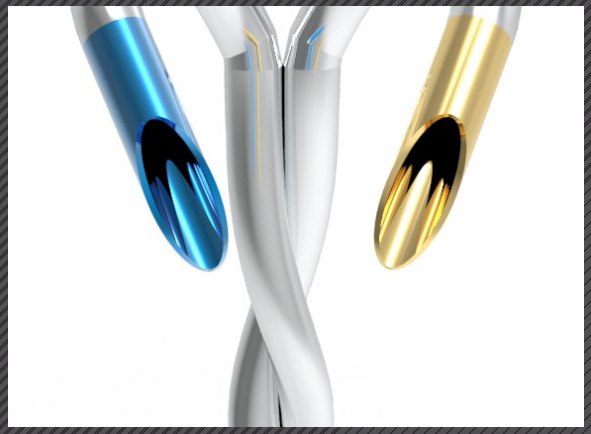
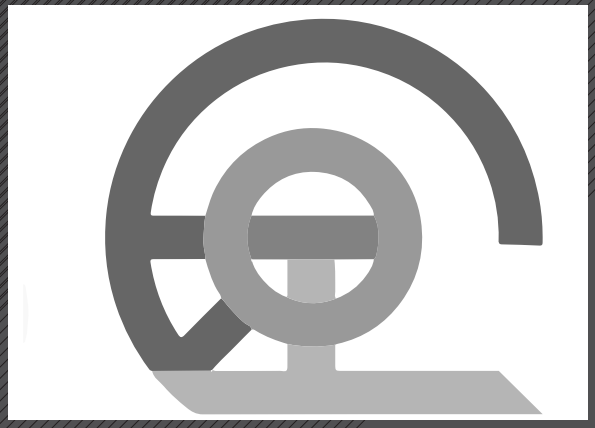
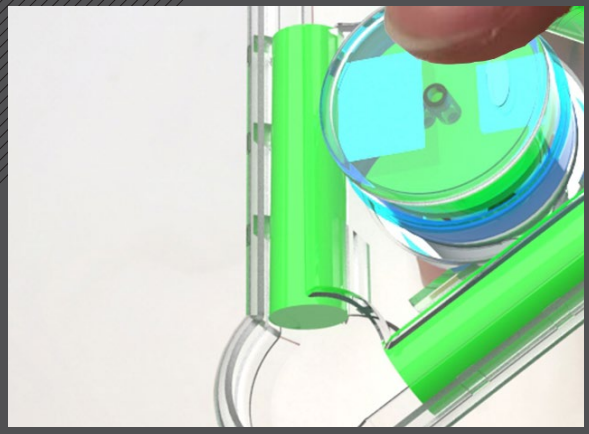
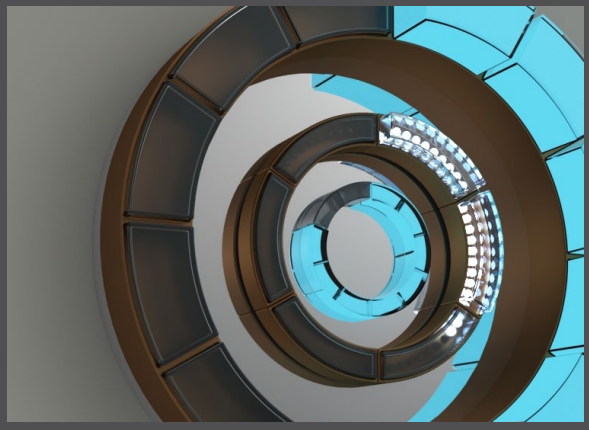
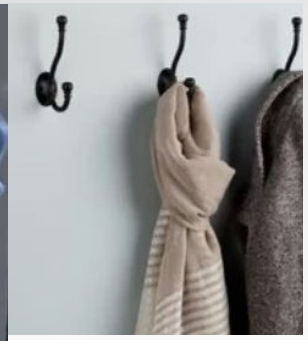
ROC ZHAO

Spikeit



Spikeit

Throw your clothes on it

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Spikeit

Hedgehog, Xanthium, mess

inspire

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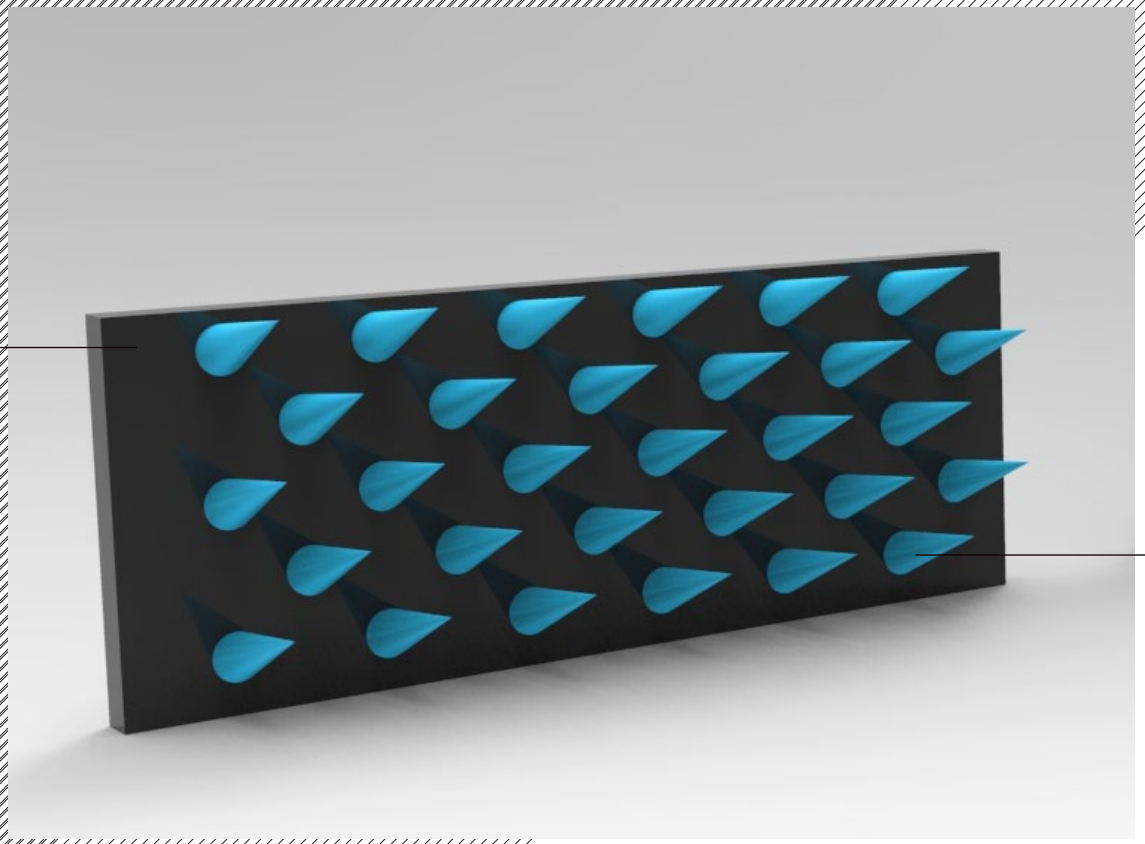

Spikeit

Materials

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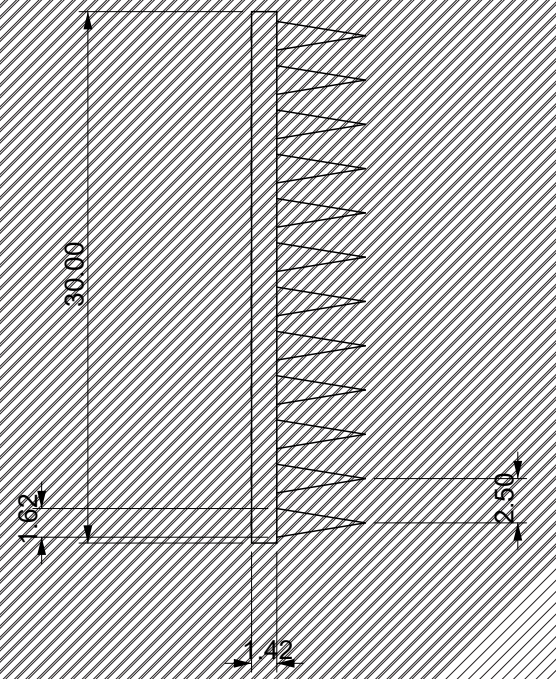

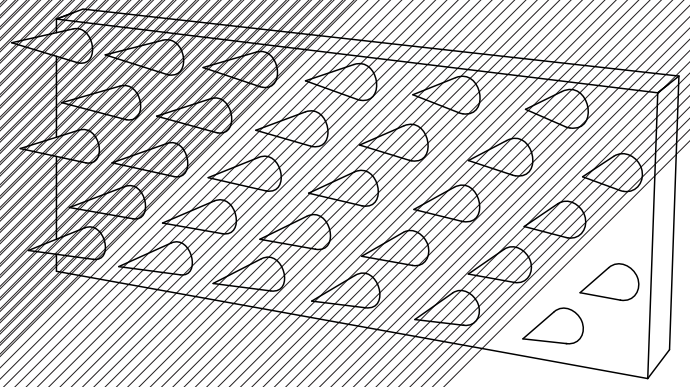

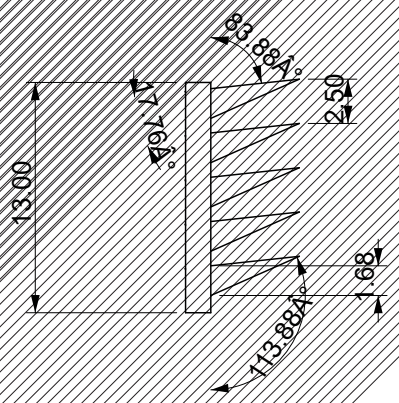

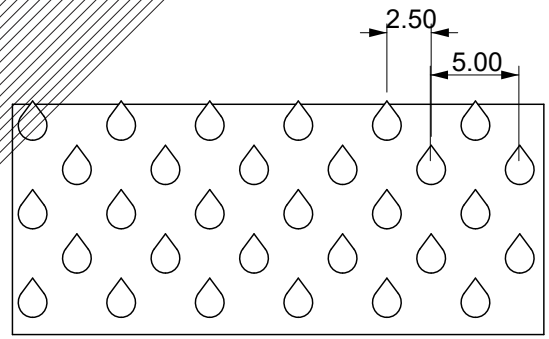

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Tech Pack

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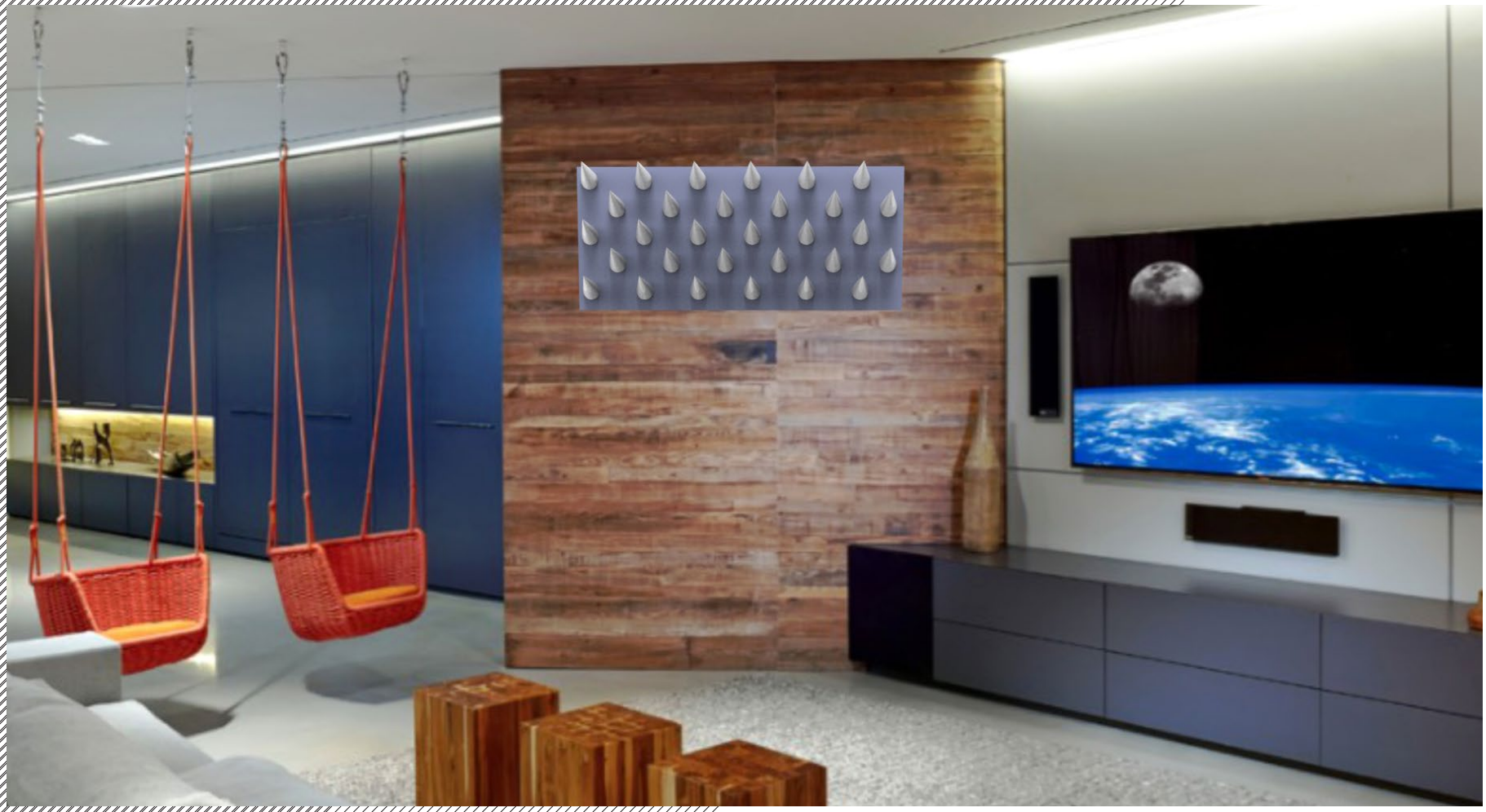

Spikeit

Livingroom

Context image

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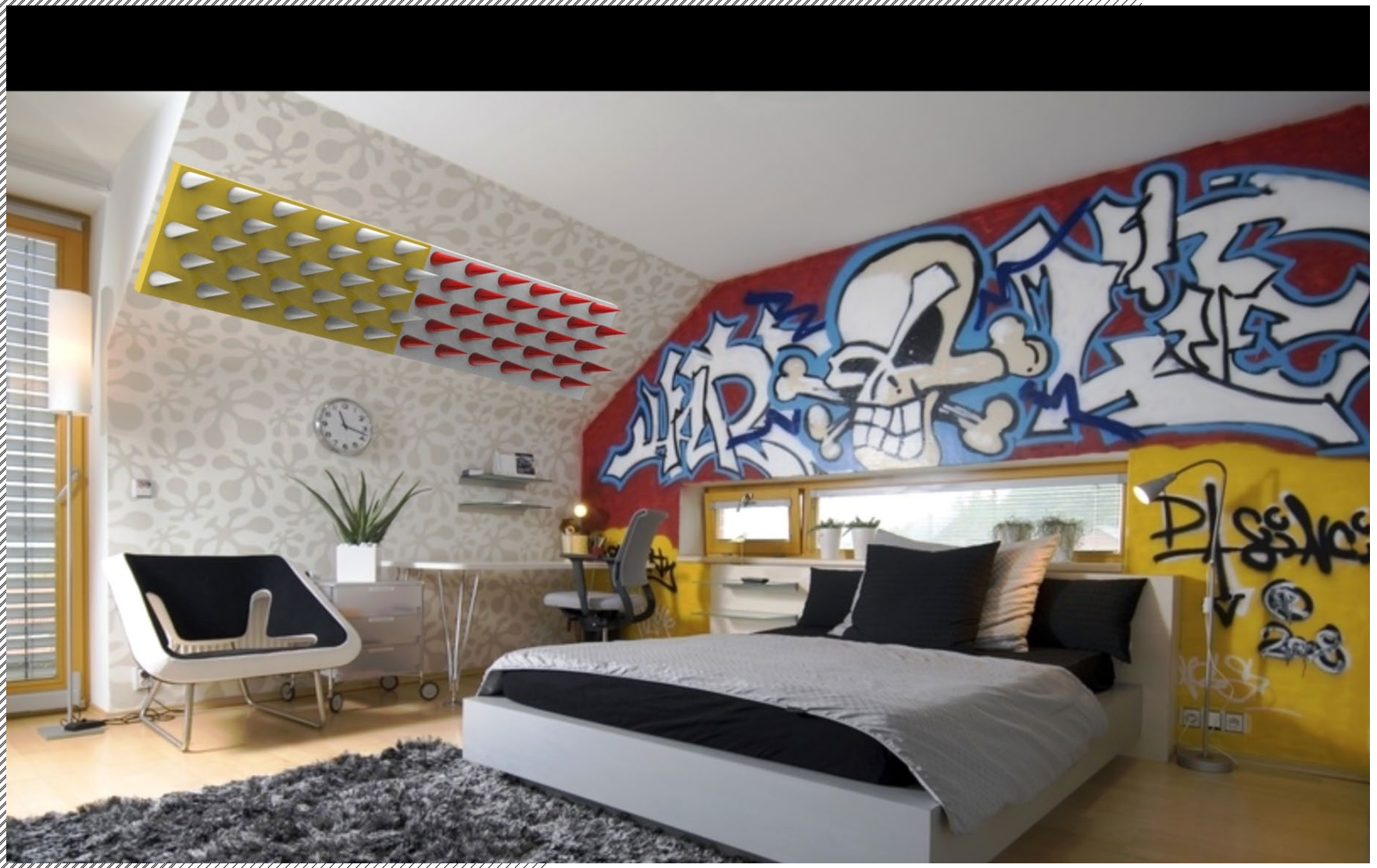

Spikeit

Bedroom

Context image

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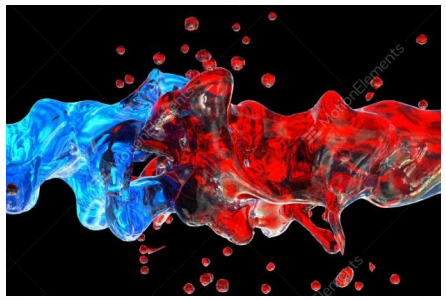
Aries



Aries

Steel

Material

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Aries

inspire

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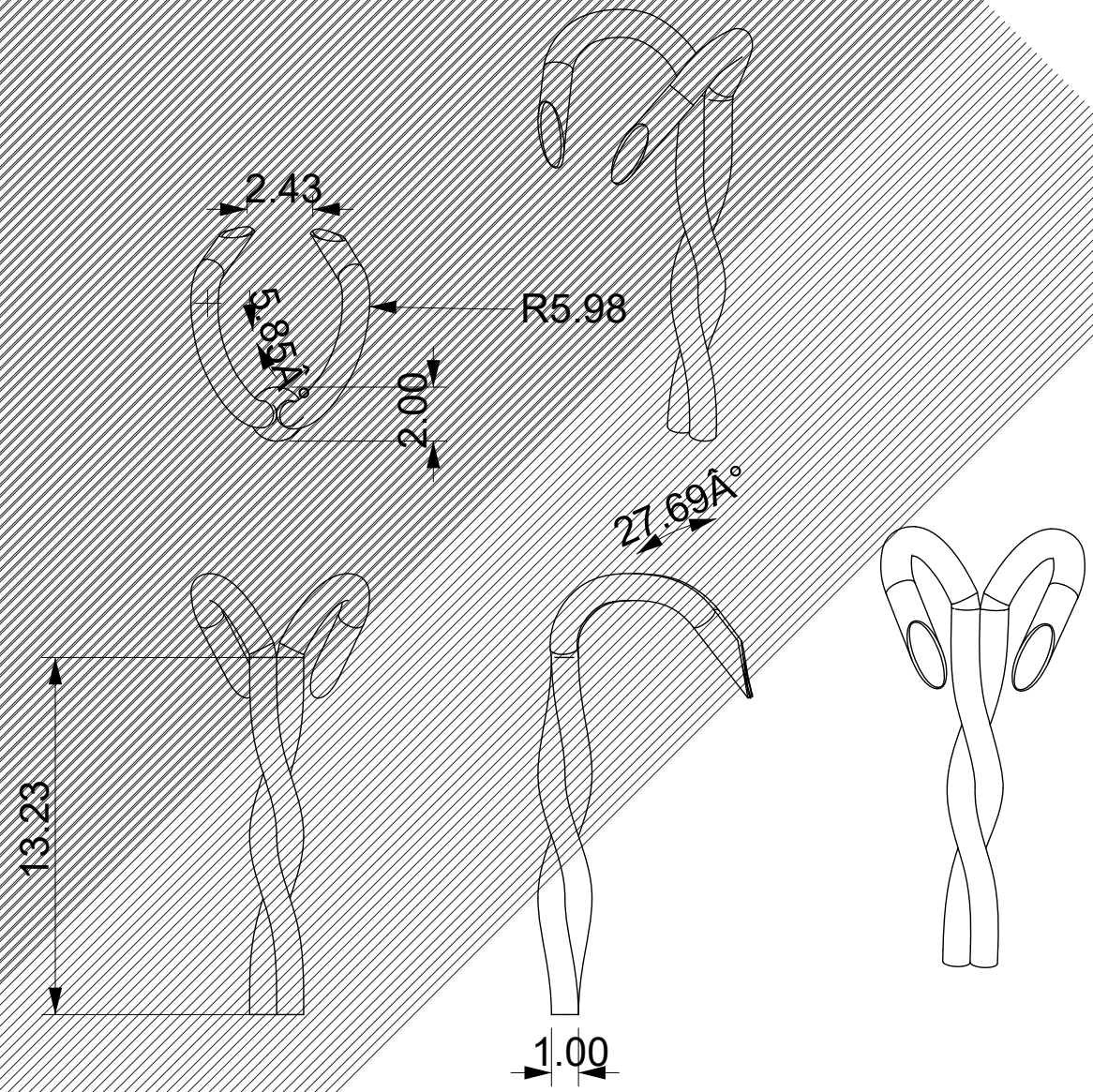

Aries

Teck Pack

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Aries

Hot and Cold water come from different pipe and mix outside.

Context image

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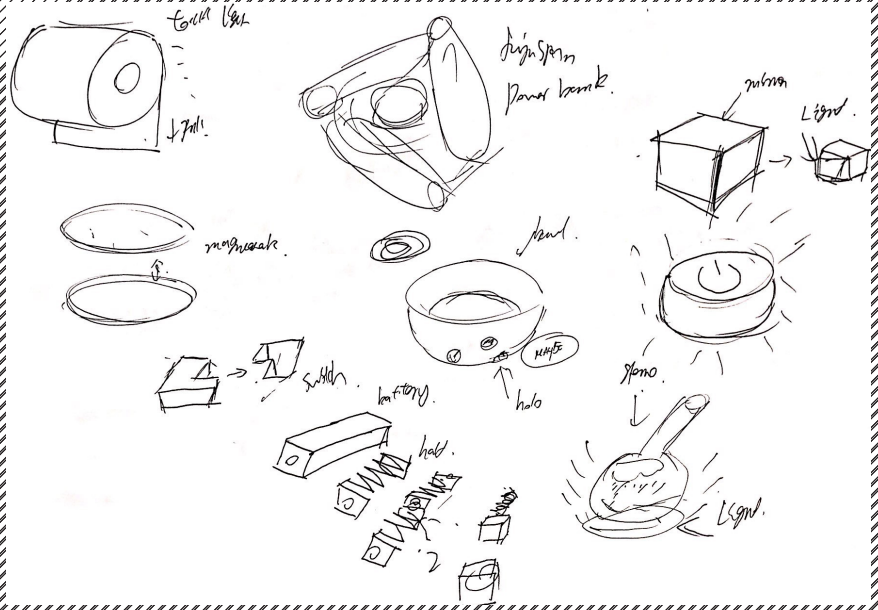

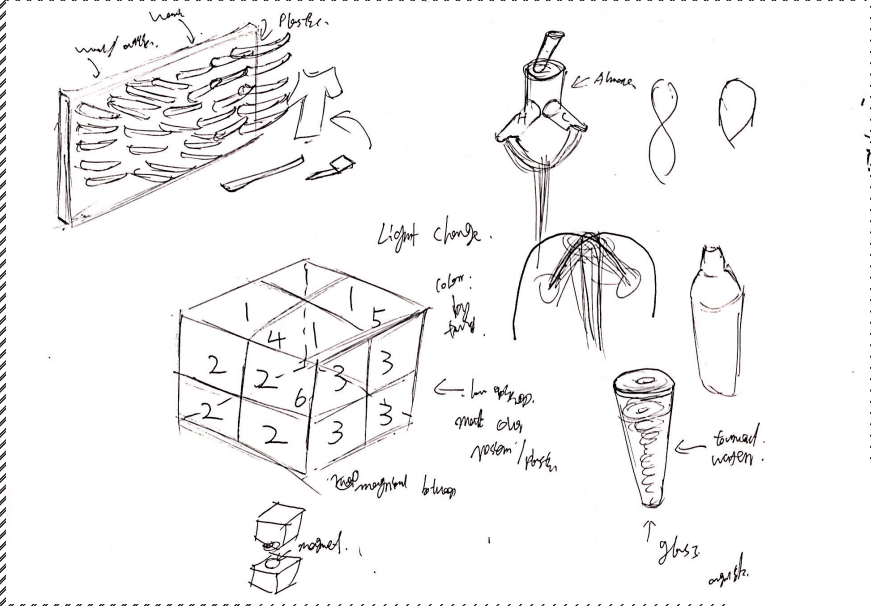

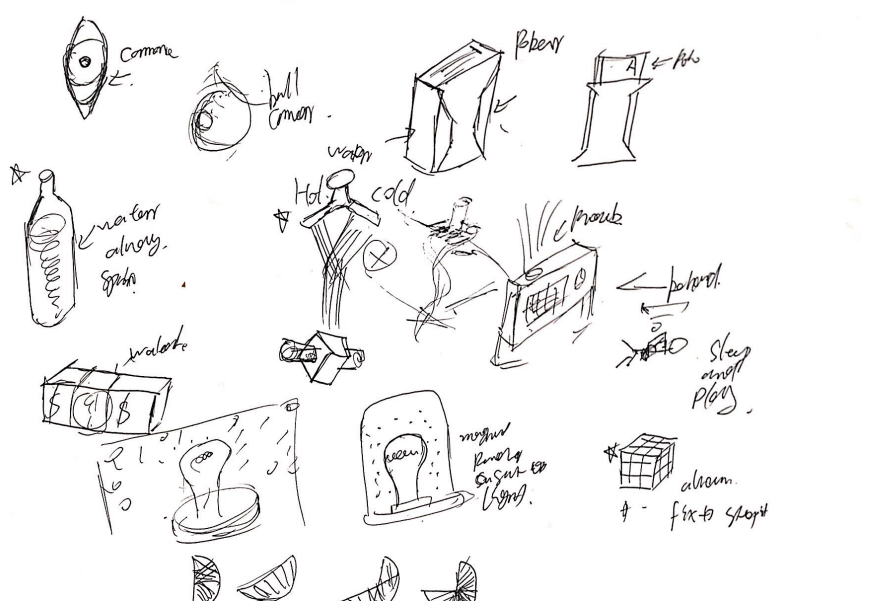

Unique Design

Ideation

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Good unfamiliarities are what make people curious, and feel satisfied and addicted

Unique Design

Hypothesis

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Dimond Jack

The name Jack is from (lifting jack)

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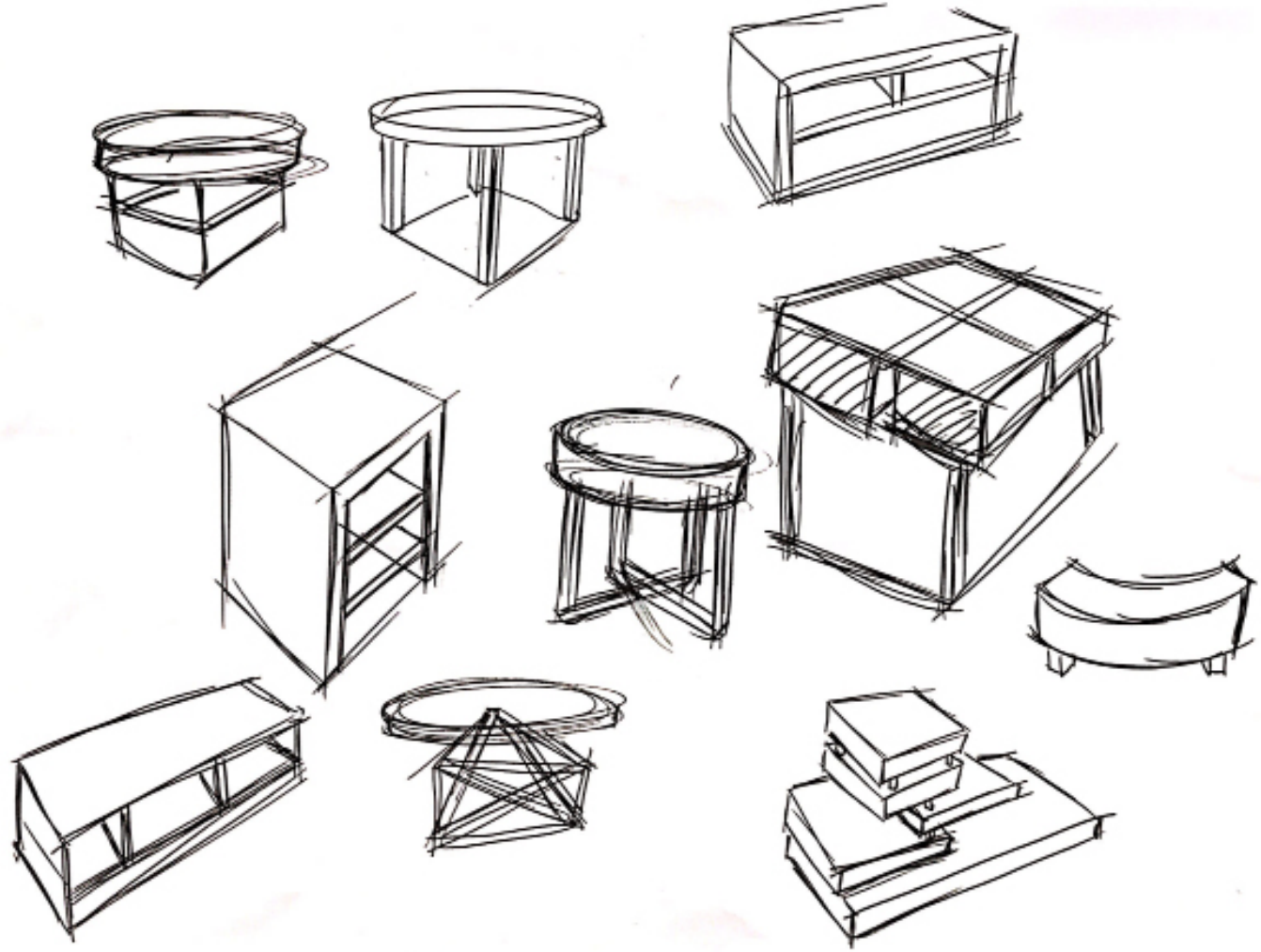

Dimond Jack

The design sketch

Sketch

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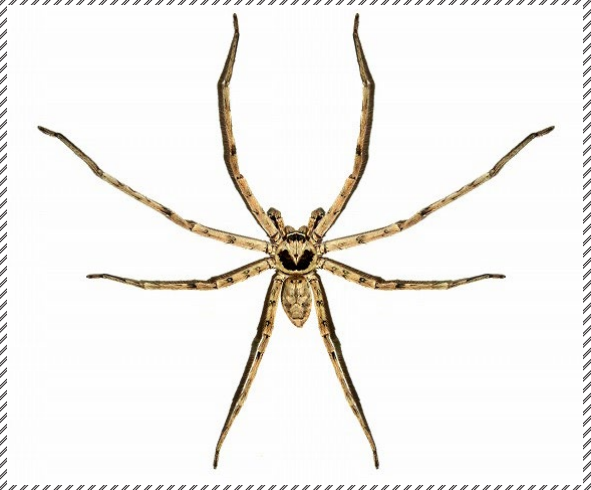

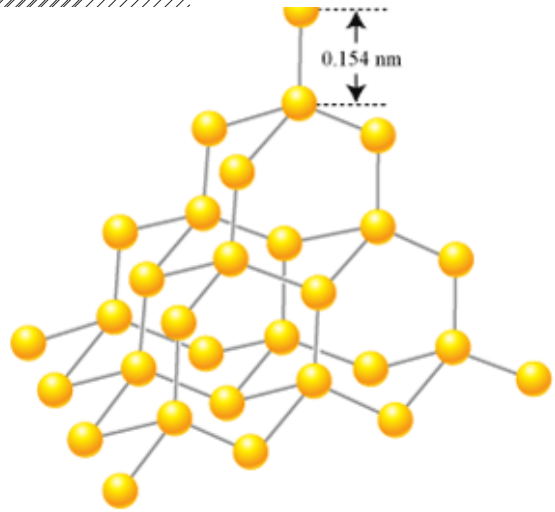

Dimond Jack

The element inspire me

Inspiration

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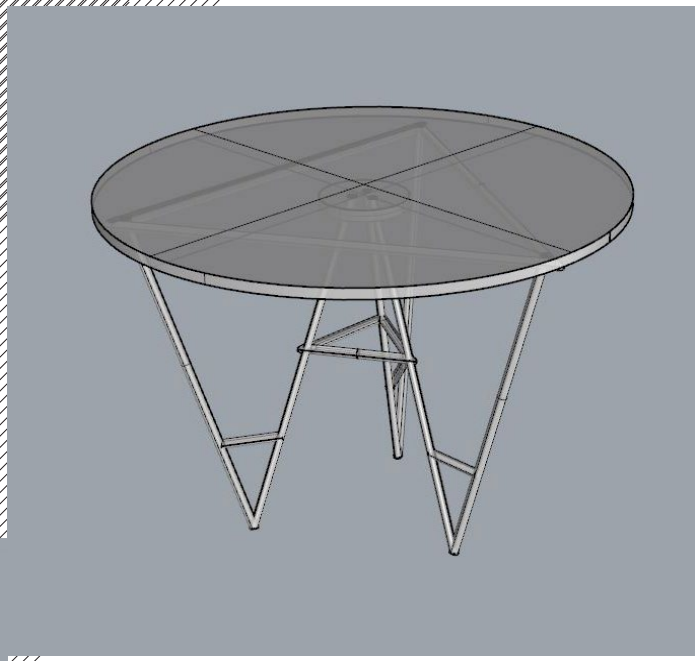
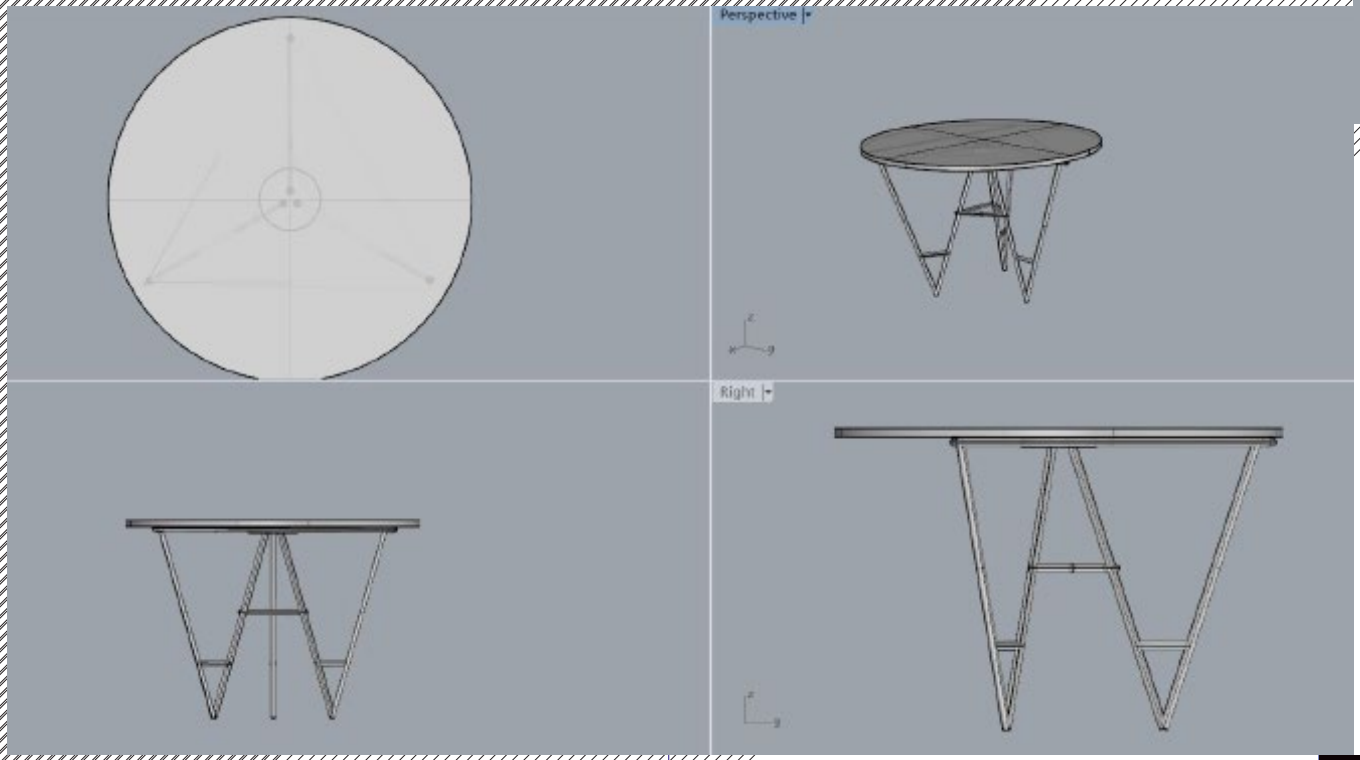
The final sketch





Dimond Jack

The final sketch

Final sketch

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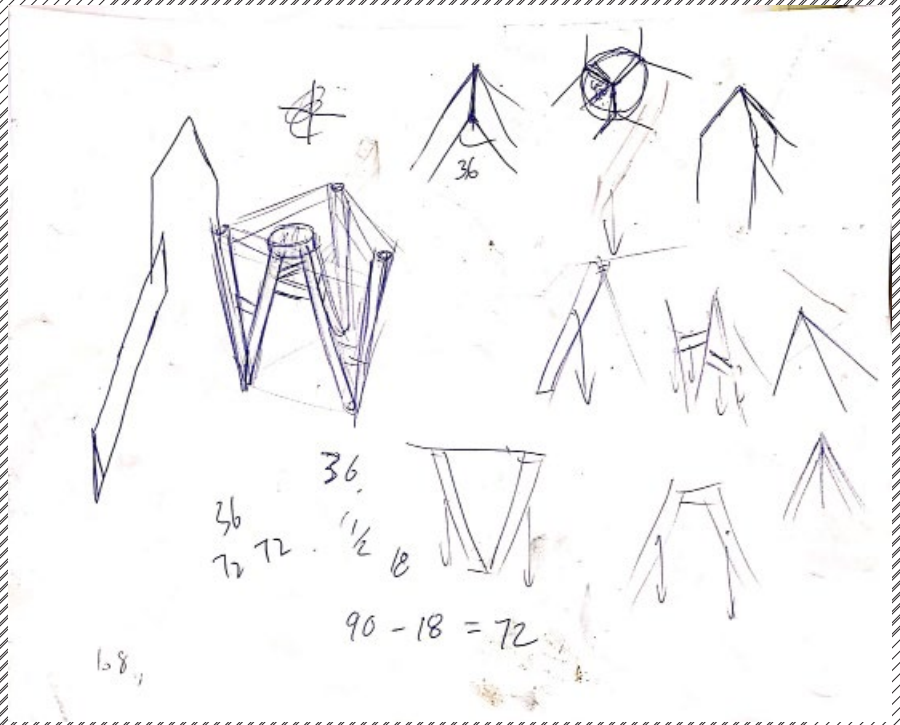

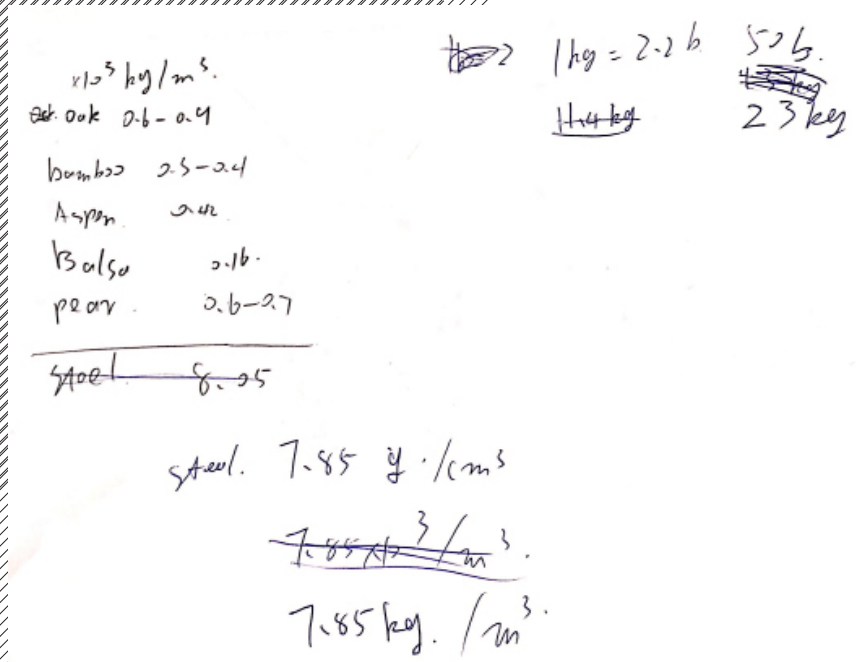

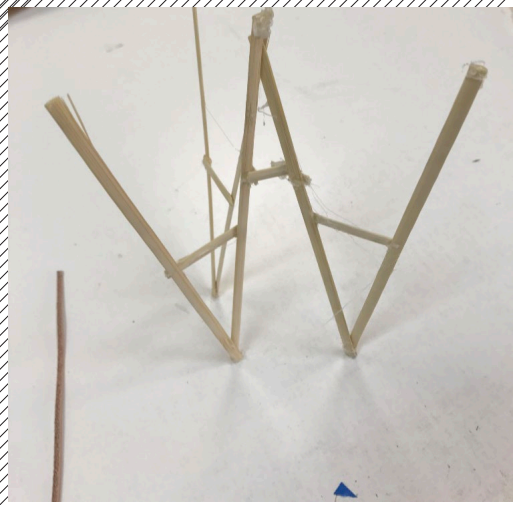

Dimond Jack

The math and the reacherch and the modle

Reacherch

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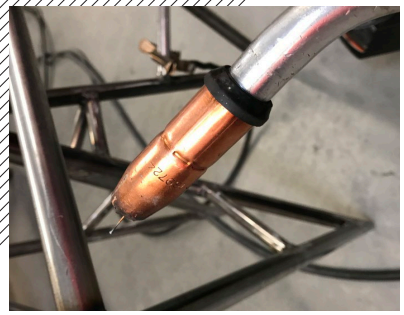

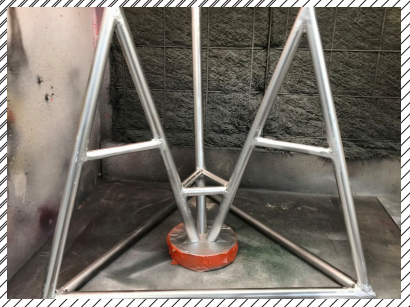

Dimond Jack

Tspend a lot of time to du the measure-
ment.dig the hole on the wood.Welding

Process

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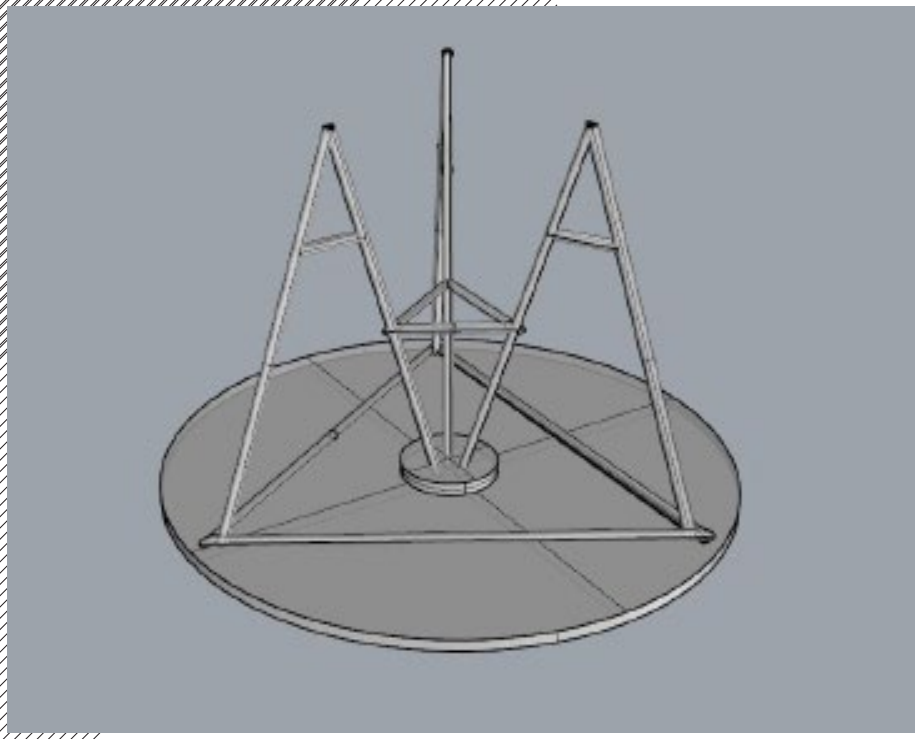

Dimond Jack

The 36,72,72 Trangle is be called gold trangle.every suport tube make it 3times stronger.

Design Idea

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Dimond Jack

The color ,the feeling of the glass.and the dimond shadow.For the outside of the

Design Idea

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Dimond Jack

The shape is unique.It can support more weight.

Compair with market

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5 Pc Patio Re
Dark Brown C
by Rattan Wicker Fu
$324.99 + $39.

Coffee Ta
Rustic De
by OL
$229.90
FREE Shippi

Cloud Mountain 32" Patio Tempe
Round Table Deck Garden Hom
by Cloud Mountain
$59.09 + $10.90 shipping

Dimond Jack

It cost 160 for mr matreial.I will put the price 500-600.

Price

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Fireman helmet

SEARCH AND RESCUE

Combine the thermalimaging and sonar systerm in to the helmt More convenience.Free one hand and easier to seewole area

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SEARCH AND RESCUE

Problem witch fireman face

Smork,too many stuffs

FIREMAN HELMET

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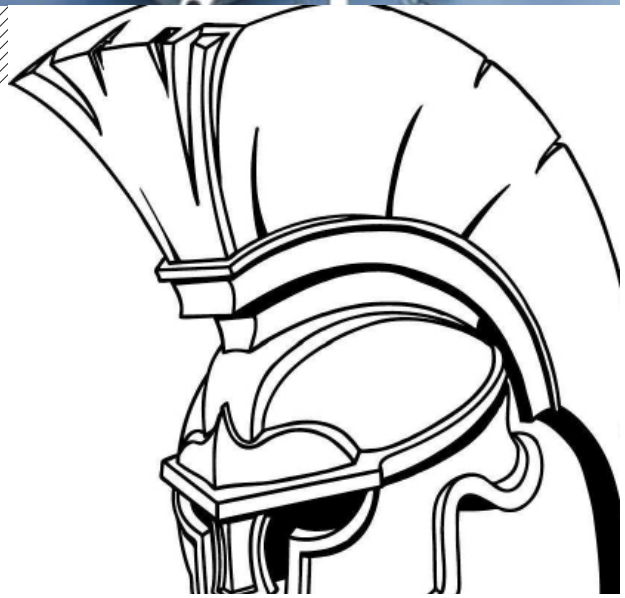

SEARCH AND RESCUE

Inspire

FIREMAN HELMET

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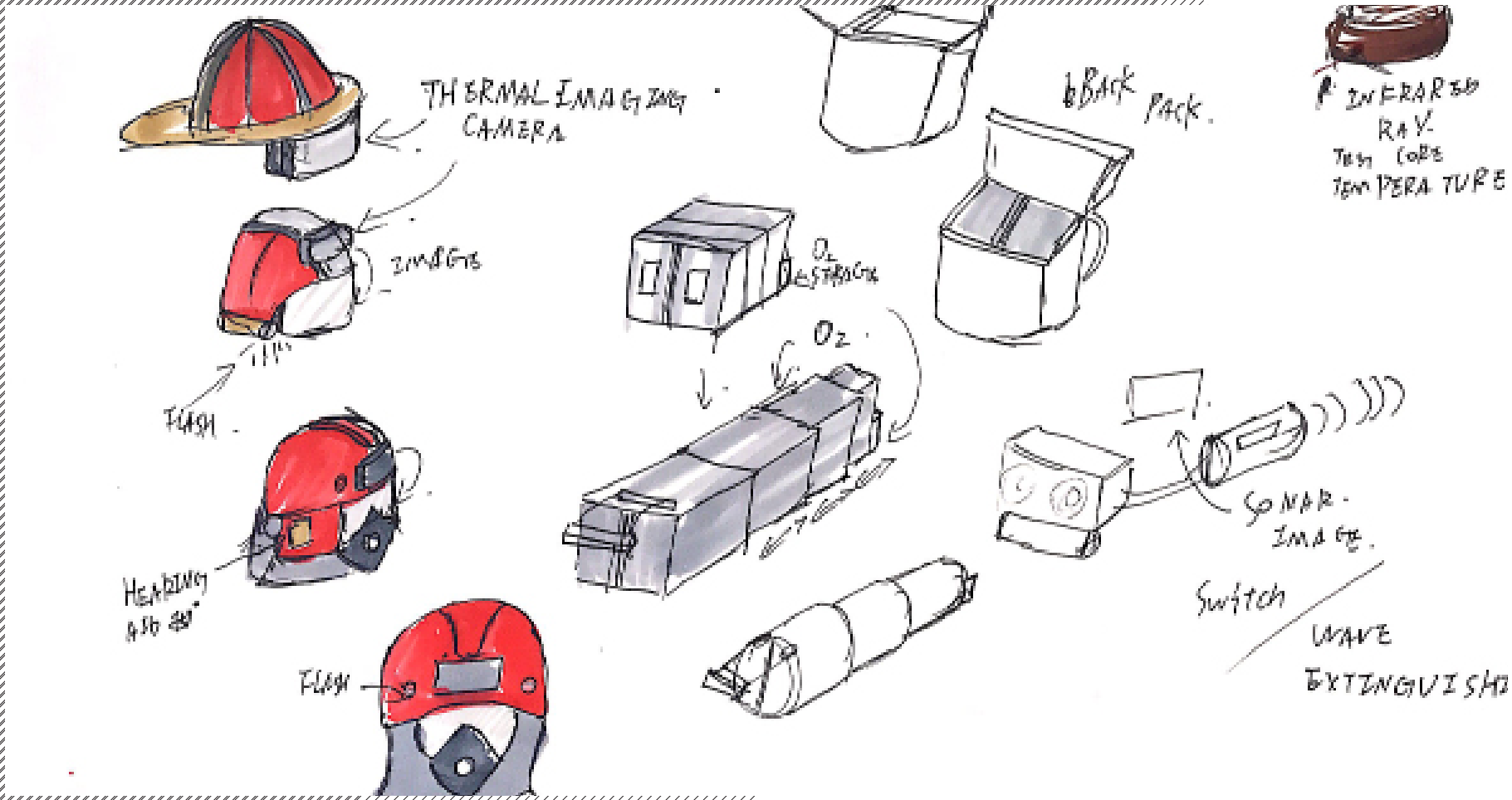

SEARCH AND RESCUE

Ideation

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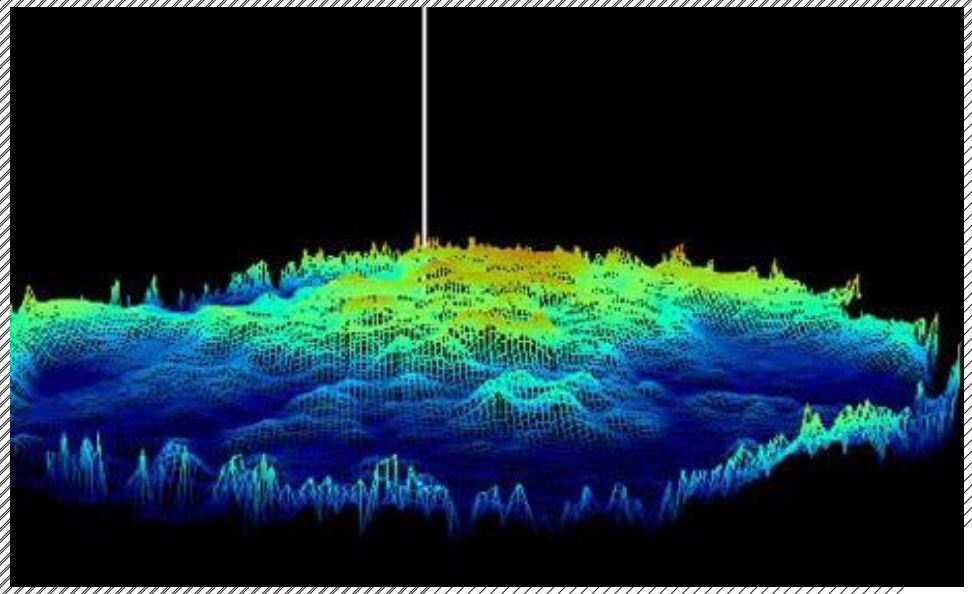

Active sonar uses a sound transmitter and a receiver. When the two are in the same place it is monostatic operation. When the transmitter and receiver are separated it is bistatic operation. When more transmitters (or more receivers) are used, again spatially separated, it is multistatic operation. Most sonars are used monostatically with the same array often being used for transmission and reception. Active sonobuoy fields may be operated multistatically.

SEARCH AND RESCUE

Reserch

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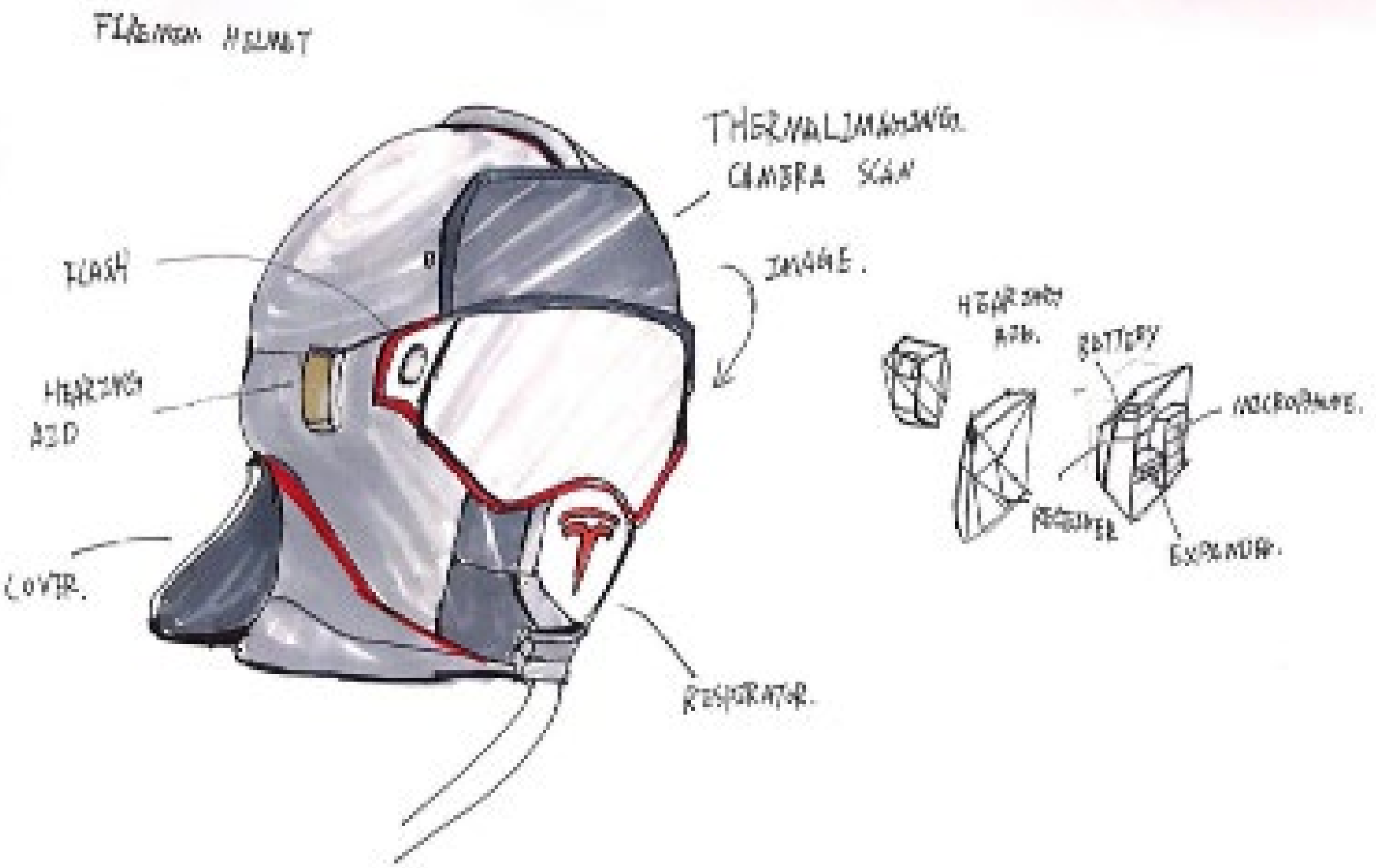

SEARCH AND RESCUE

First mold Draw

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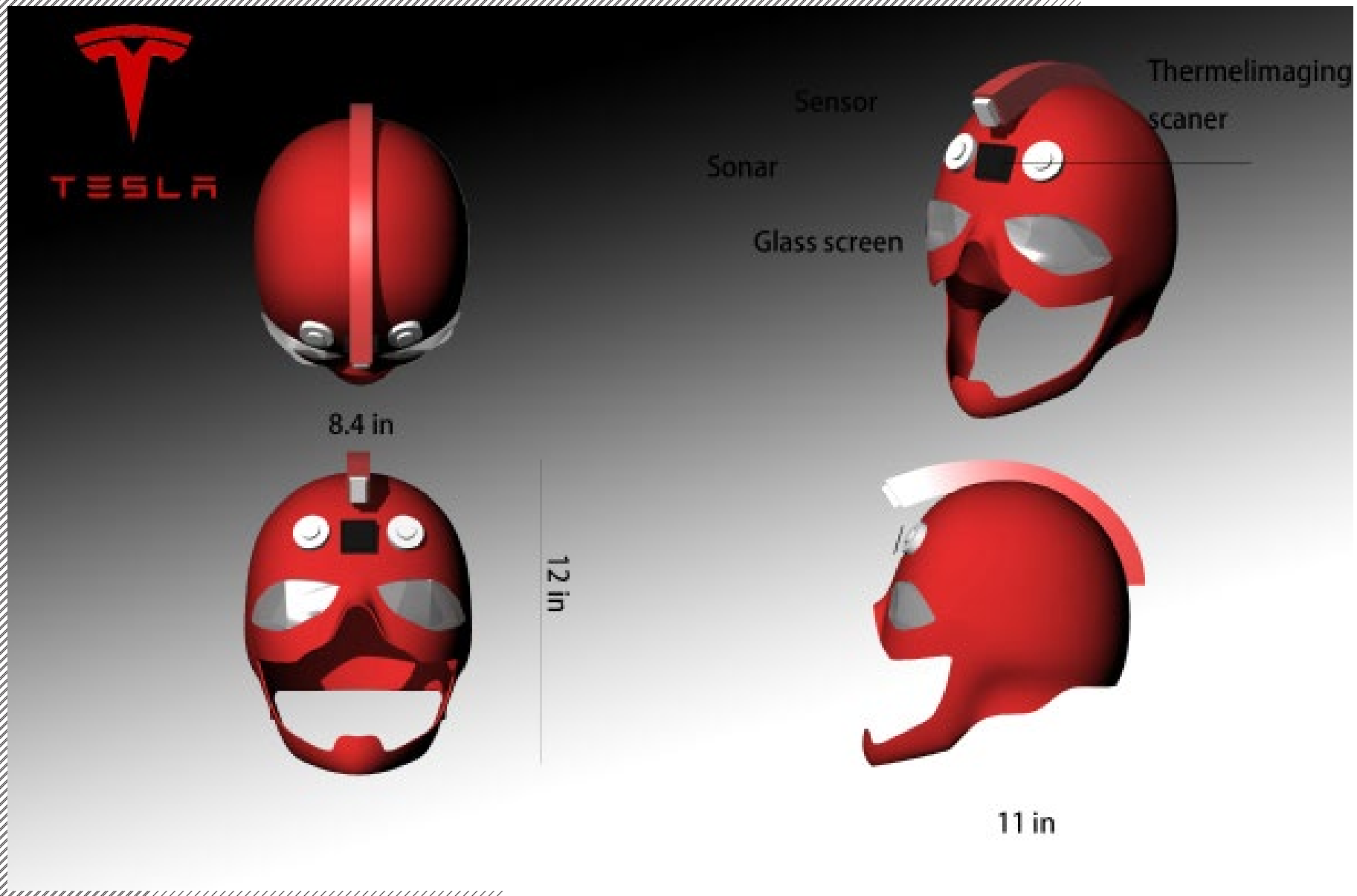

SEARCH AND RESCUE

Orthographic

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SEARCH AND RESCUE

With human and out side

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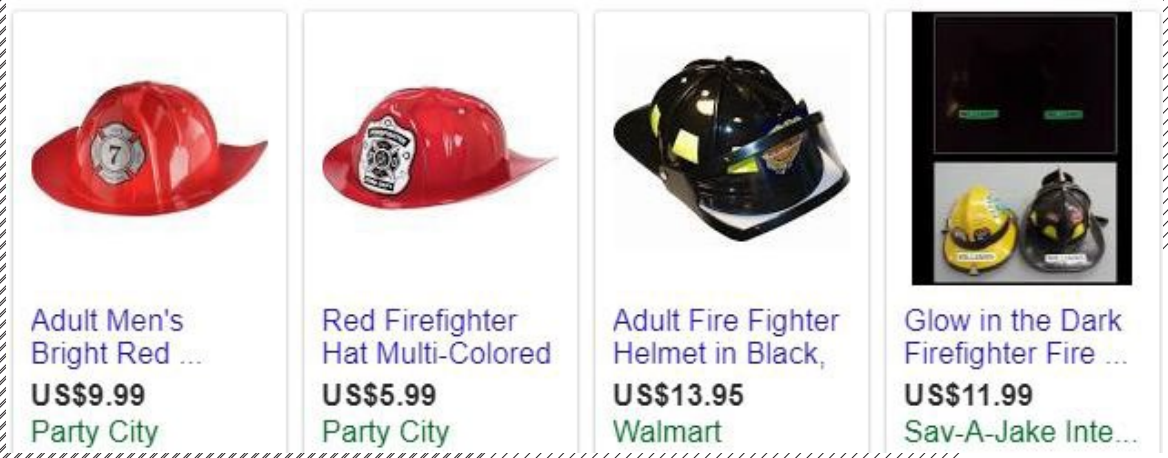

SEARCH AND RESCUE

Market

FIREMAN HELMET

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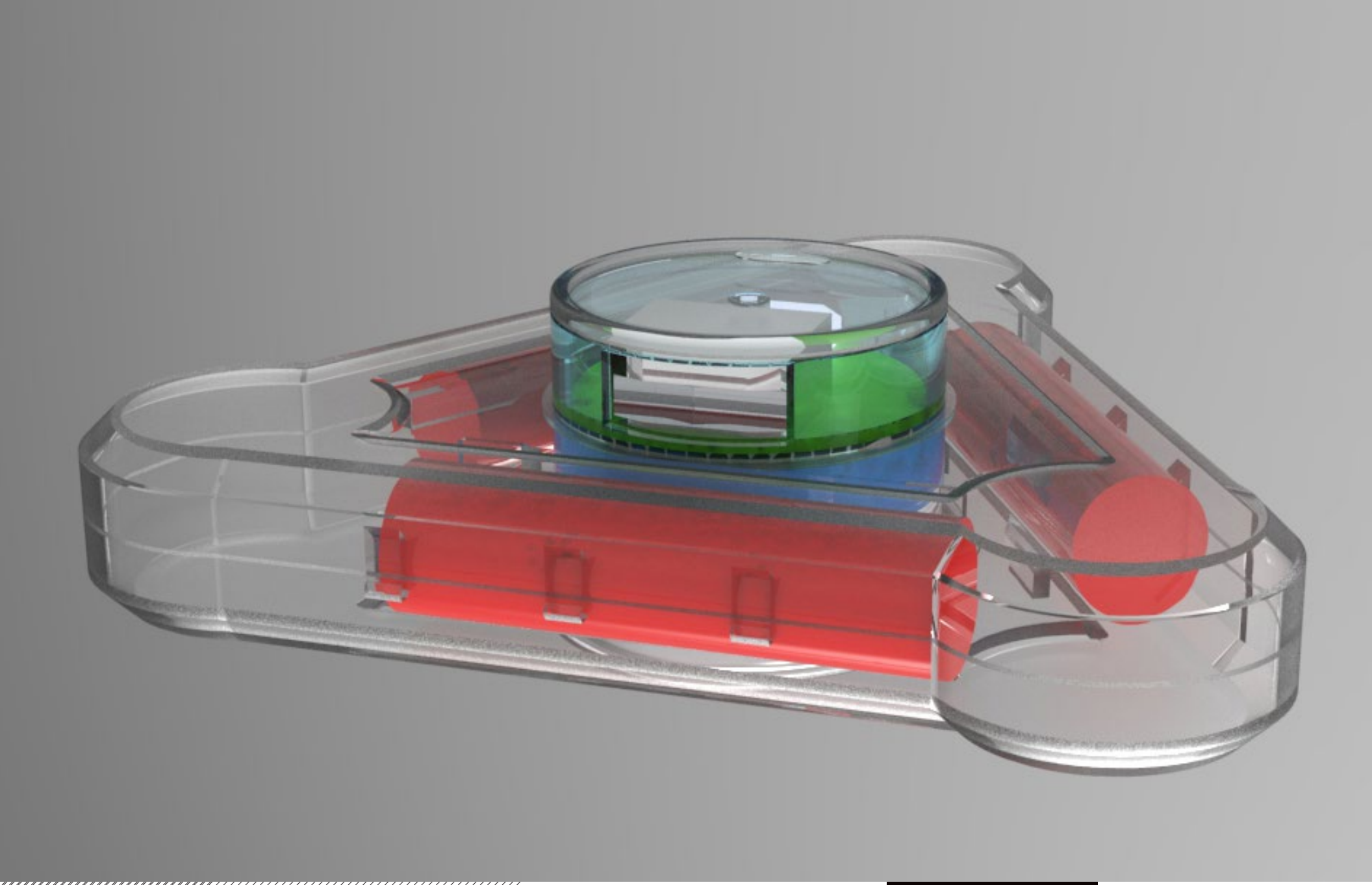
Power Spinner



Power spinner

Power bank can charge it self when you playing it.

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Break down

The original

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Life Cycle Assessment

	Material	Weight	Okala Factor	per	Impact	Processing	Okala Factor	per	Impact
Cover back	ABS,Primary	0.046	2.4	lb	0.1104	Injection Molded	0.72	lb	0.03312
Cover frount	ABS,Primary	0.033	2.4	lb	0.0792	Injection Molded	0.72	lb	0.02376
Cover side	polystyrene HIPS Primary	0.0154	1.8	lb	0.02772	Injection Molded	0.72	lb	0.011088
screen	Acrylic polyacrylonitrile	0.00123	1	lb	0.00123	reacting a monomer	1.4	lb	0.011088
Foam sticker	EVA primary	0.000573	1.3	lb	0.0007449	Compression		lb	
Wire	steel low alloy	0.000463	7.6	lb	0.0035188	Extruded	1.1	lb	0.0005093
Battery Group	battery Li-ion	0.293 x 2	13	lb	6.178	H2SO4 Mix	0.54	lb	0.316
Wire	rubber	0.0003086	1.6	lb	0.000494	Extruded	0.35	lb	0.00010801
Circuitboard	Copper-clad phenolic ,Al	0.0176	85	lb	1.496			lb	
Packaging	ABS,Primary	0.075	2.4	lb	0.18	Thermoforming	1.4	lb	0.105
Packaging	PET,am,primary	0.013	2.7	lb	0.0351	blow molding	0.68	lb	0.0084
Environmental Impact					7.9324077				0.50907331

LCA of original

Factory impact 7.93

process impact 0.51

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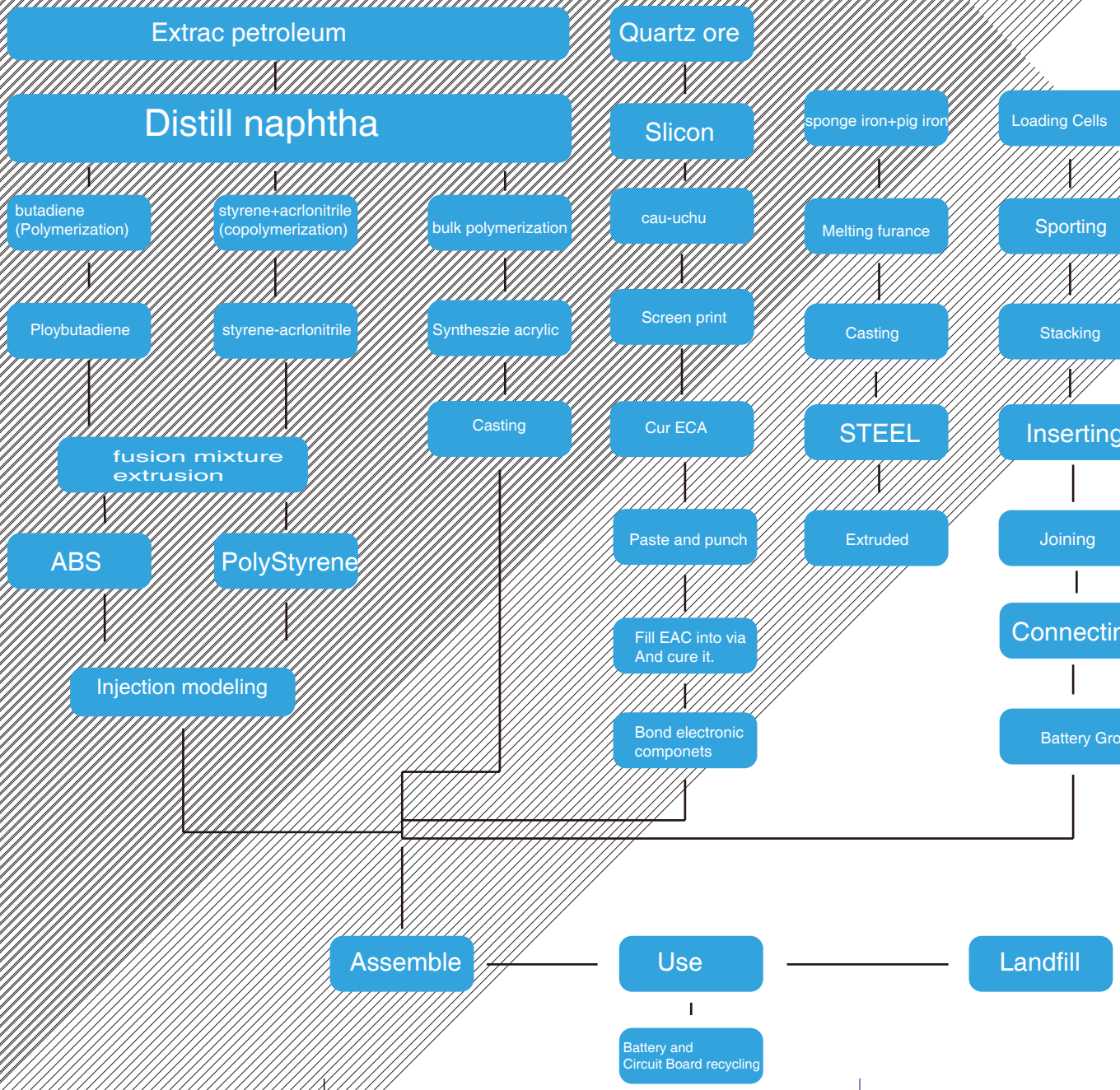

Process Tree of orignial

Material of differet parts

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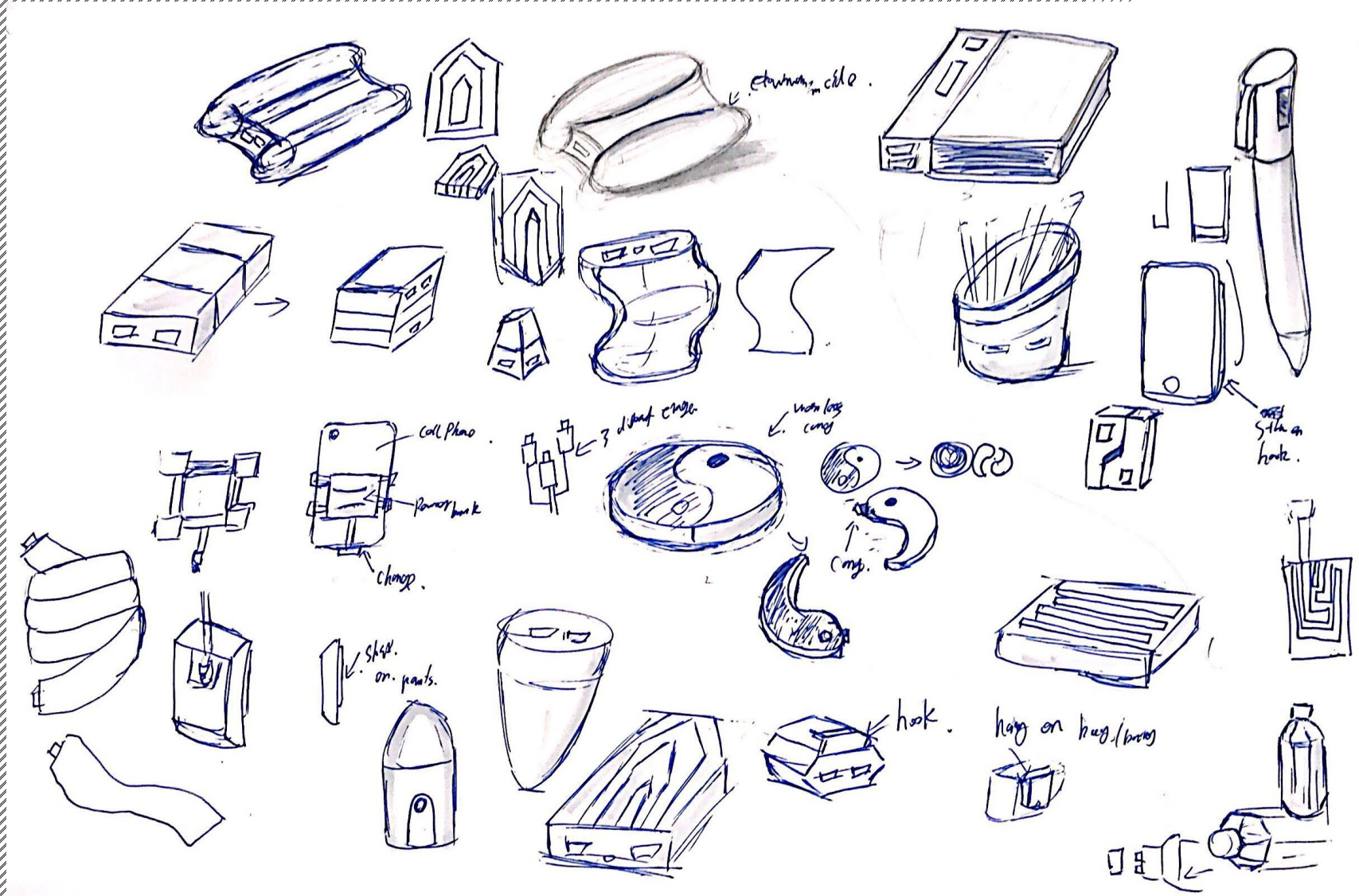

Early sketch

ideation and draft sketch

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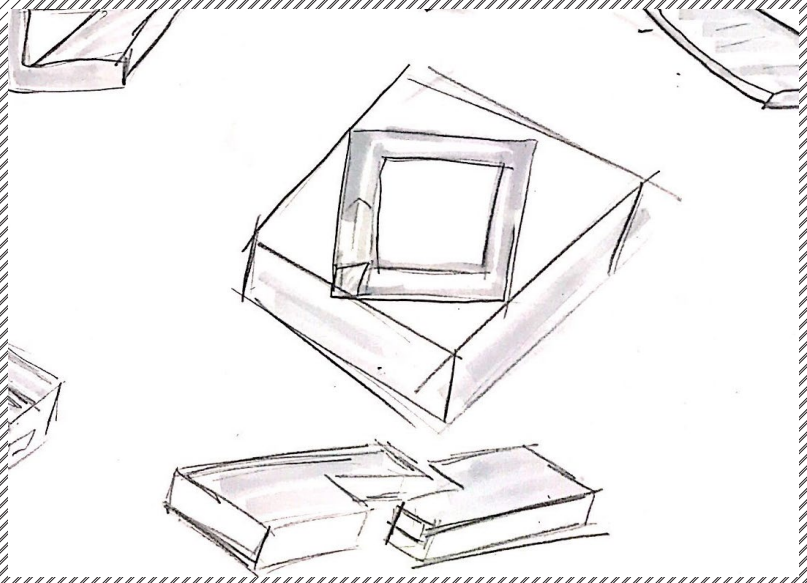

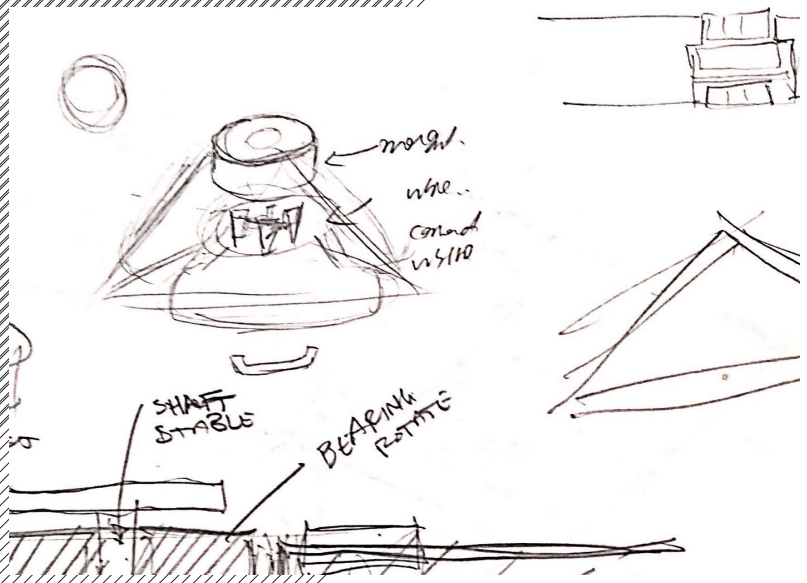

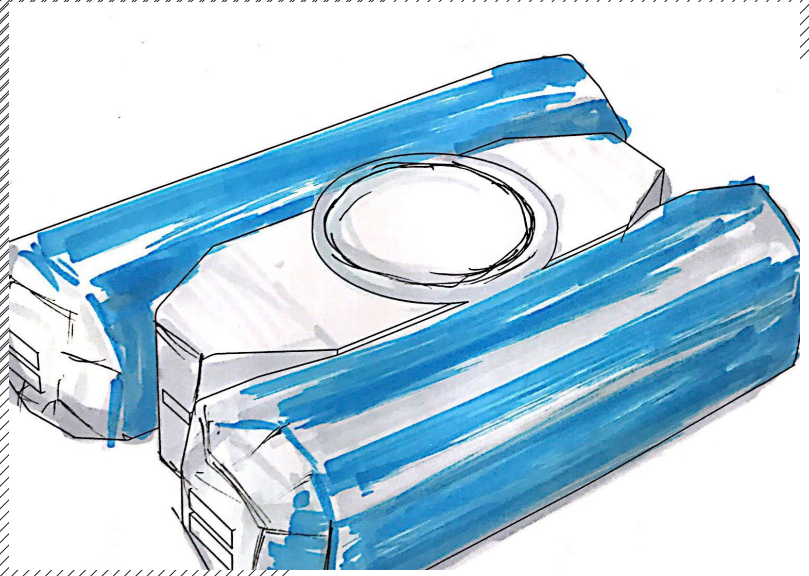

Main idea

combine with the fidget spinner

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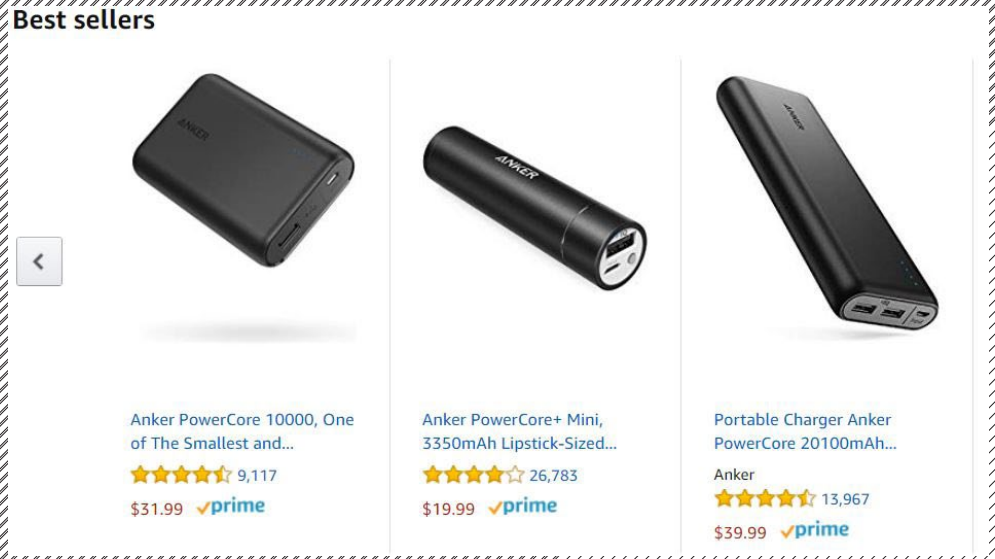

Reach

powerbank on the market

Bearing function

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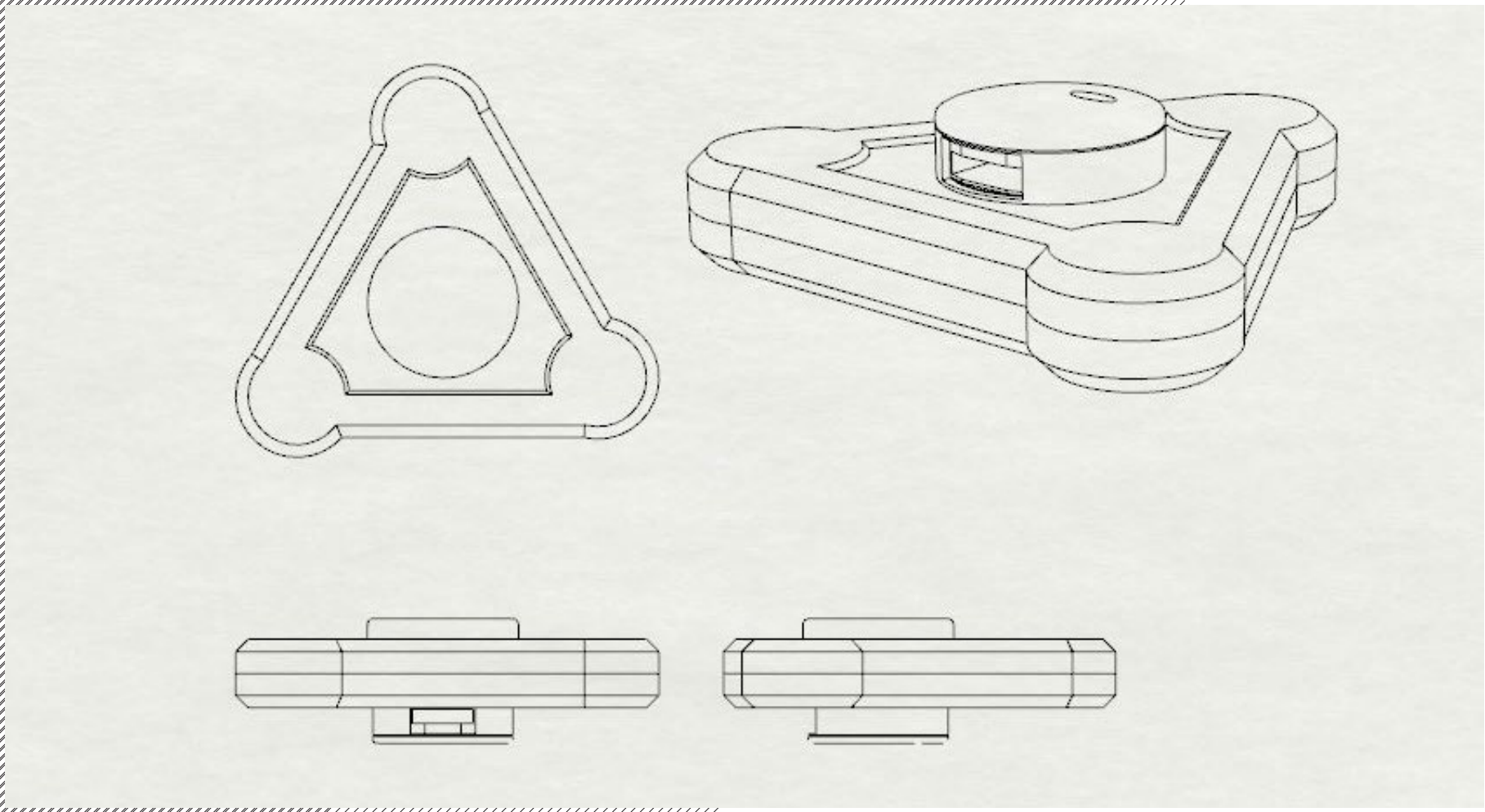

Final concept

3 battery spinner

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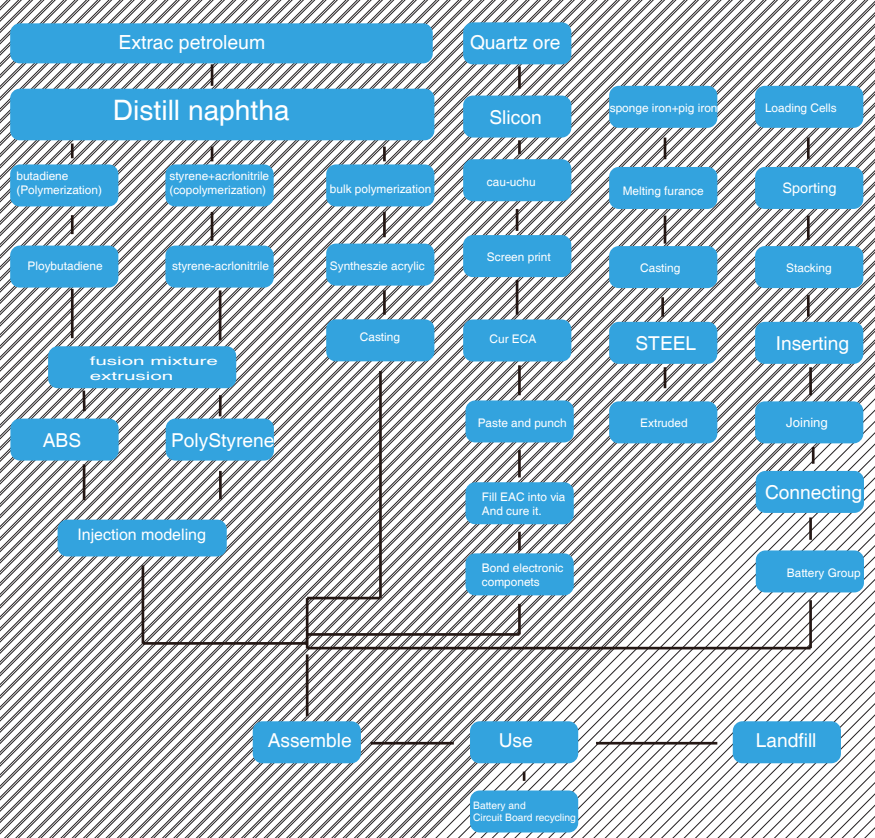

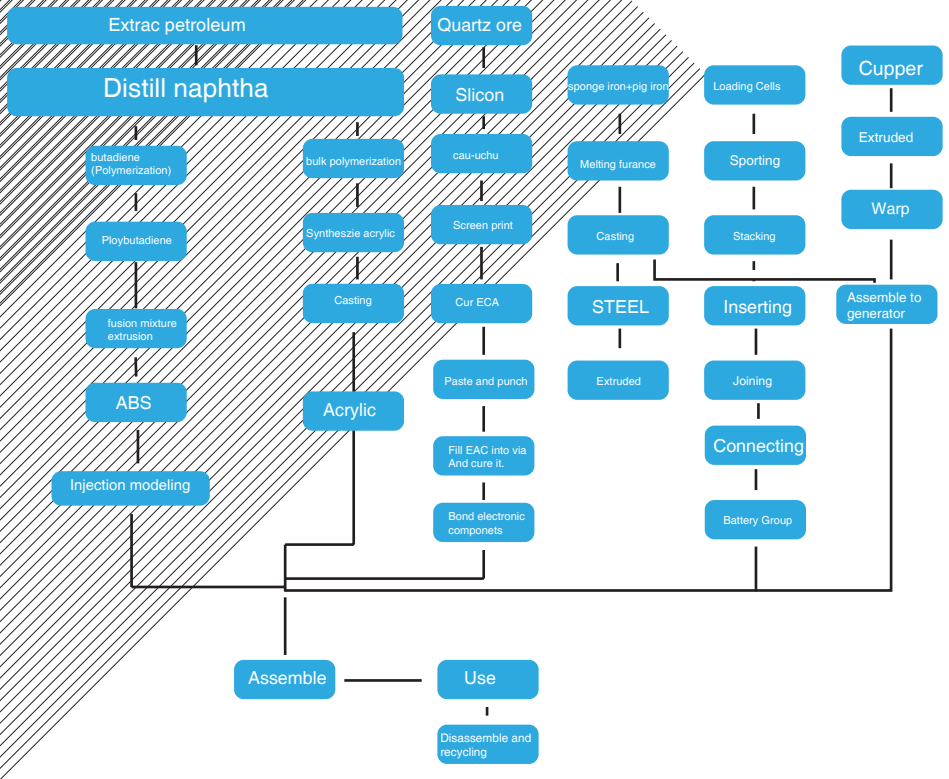

Process Tree compare

old one at left.new one at right

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Life Cycle Assessment

	Material	Weight	Okala Factor	per	Impact	Processing	Okala Factor	per	Impact
Cover back	ABS,Primary	0.046	2.4	lb	0.1104	Injection Molded	0.72	lb	0.03312
Cover frount	ABS,Primary	0.033	2.4	lb	0.0792	Injection Molded	0.72	lb	0.02376
Cover side	polystyrene HIPS Primary	0.0154	1.8	lb	0.02772	Injection Molded	0.72	lb	0.011088
screen	Acrylic polyacrylonitrile	0.00123	1	lb	0.00123	reacting a monomer	1.4	lb	0.011088
Foam sticker	EVA primary	0.000573	1.3	lb	0.0007449	Compression		lb	
Wire	steel low alloy	0.000463	7.6	lb	0.0035188	Extruded	1.1	lb	0.0005093
Battery Group	battery Li-ion	0.293 x 2	13	lb	6.178	H2SO4 Mix	0.54	lb	0.316
Wire	rubber	0.0003086	1.6	lb	0.000494	Extruded	0.35	lb	0.00010801
Circuitboard	Copper-clad phenolic ,AI	0.0176	85	lb	1.496			lb	
Packaging	ABS,Primary	0.075	2.4	lb	0.18	Thermoforming	1.4	lb	0.105
Packaging	PET,am,primary	0.013	2.7	lb	0.0351	blow molding	0.68	lb	0.0084
Environmental Impact					7.9324077				0.50907331

Life Cycle Assessment

	Material	Weight	Okala Factor	per	Impact	Processing	Okala Factor	per	Impact
Cover back	Acrylic polyacrylonitrile	0.0145	1	lb	0.0145	Injection Molded	0.72	lb	0.01044
Cover frount	Acrylic polyacrylonitrile	0.0147	1	lb	0.0147	Injection Molded	0.72	lb	0.010584
Cap front	Acrylic polyacrylonitrile	0.00131	1	lb	0.00131	Injection Molded	0.72	lb	0.0009432
Cap back	Acrylic polyacrylonitrile	0.000735	1	lb	0.000735	Injection Molded	0.72	lb	0.0005292
Charge cover	ABS,Primary	0.003535	2.4	lb	0.008484	Injection Molded	0.72	lb	0.00025452
Wire	steel low alloy	0.000263	7.6	lb	0.0019988	Extruded	1.1	lb	0.0002893
Battery Group	battery Li-ion	0.19	13	lb	2.47	H2SO4 Mix	0.54	lb	0.1026
Wire	rubber	0.0001286	1.6	lb	0.00020576	Extruded	0.35	lb	0.00004501
Circuitboard	Copper-clad phenolic ,AI	0.0076	85	lb	0.646			lb	
bearing	ABS,Primary	0.00455	2.4	lb	0.01092	Thermoforming	1.4	lb	0.00637
Centre bar	ABS,Primary	0.00023862	2.4	lb	0.000572688	blow molding	0.68	lb	0.000162262
generator	Steel,Average	0.412	5.3	lb	2.1836	Steel draw single	0.19	lb	0.07828
generator	Copper,Sec	0.412	0.04		0.01648	Wire extrusion	0.47	lb	0.19364
Environmental Impact					5.355006248				0.404137492

LCA compare

Factory impact 7.93 to 5.36

process impact 0.51to 0.404

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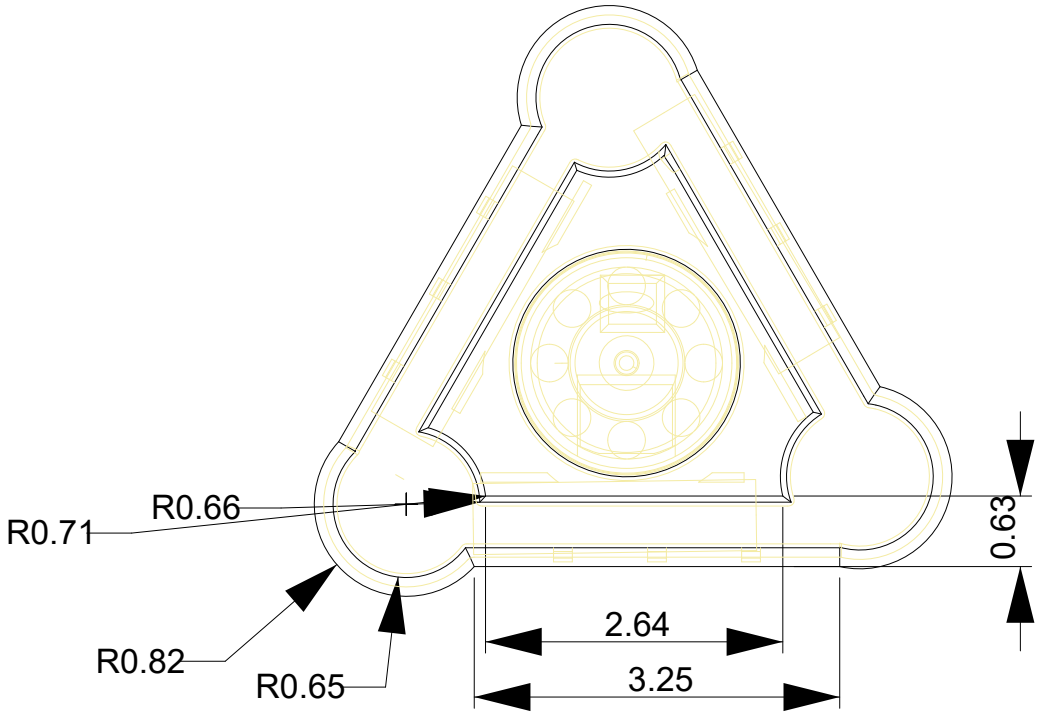

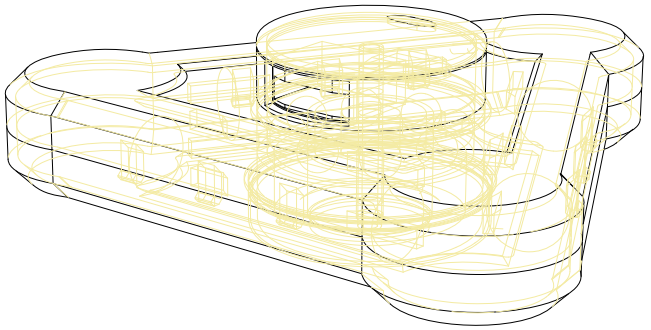

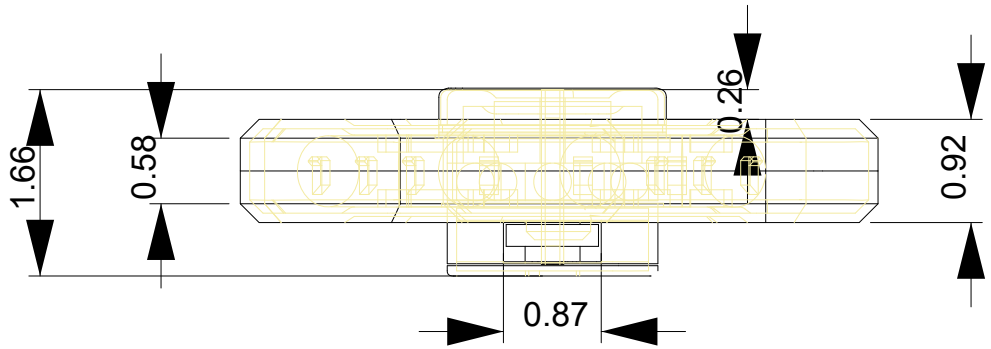

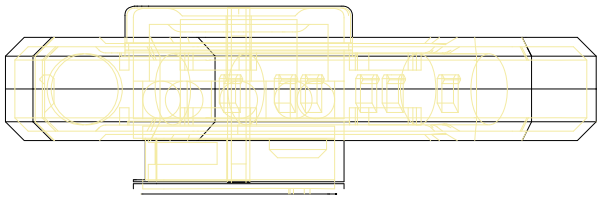

Teck Pack

outshape

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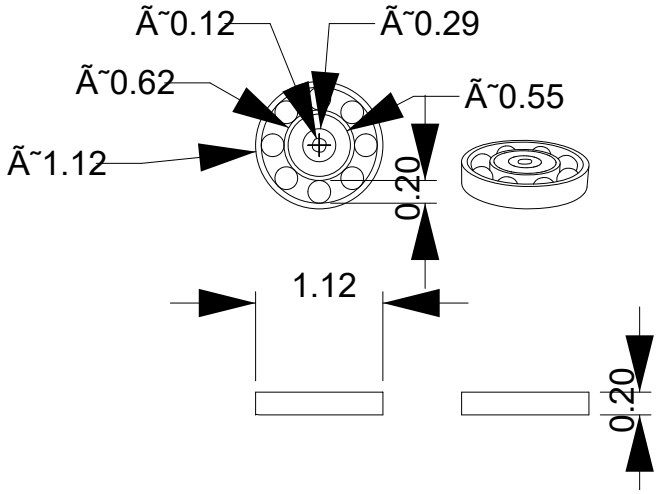

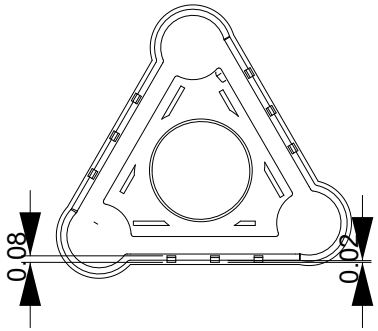

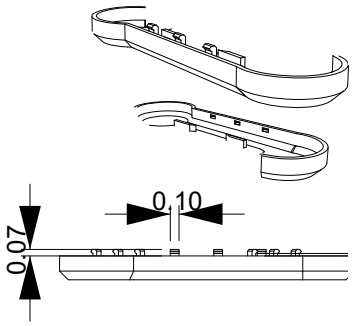

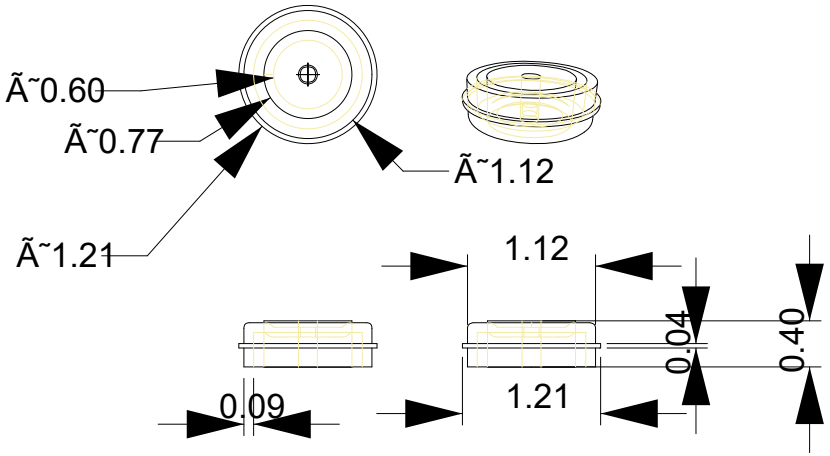

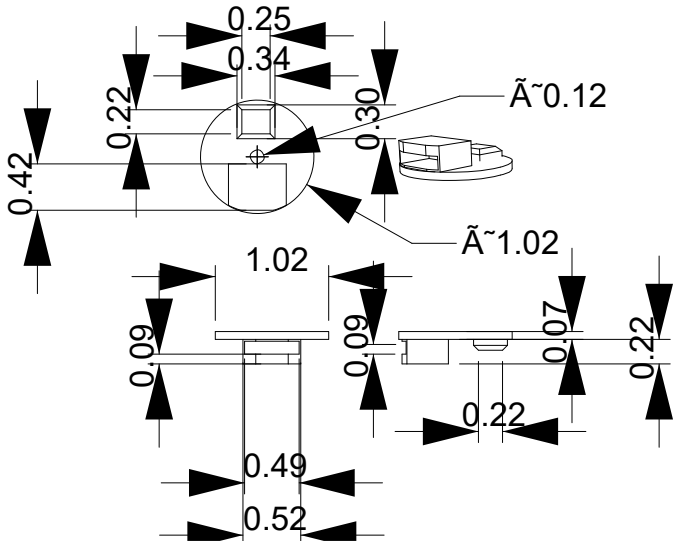

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Detail

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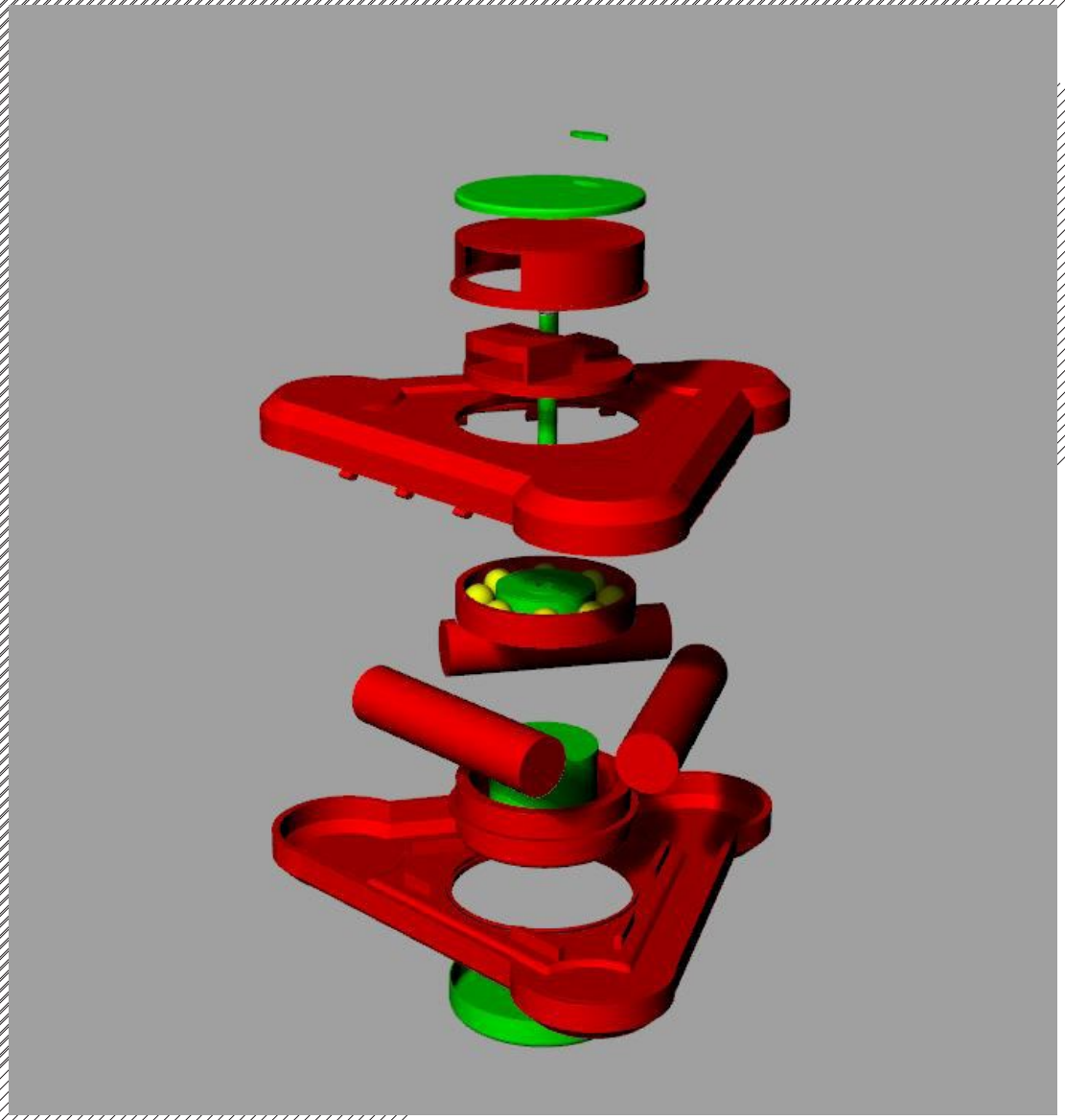

Working

working detial

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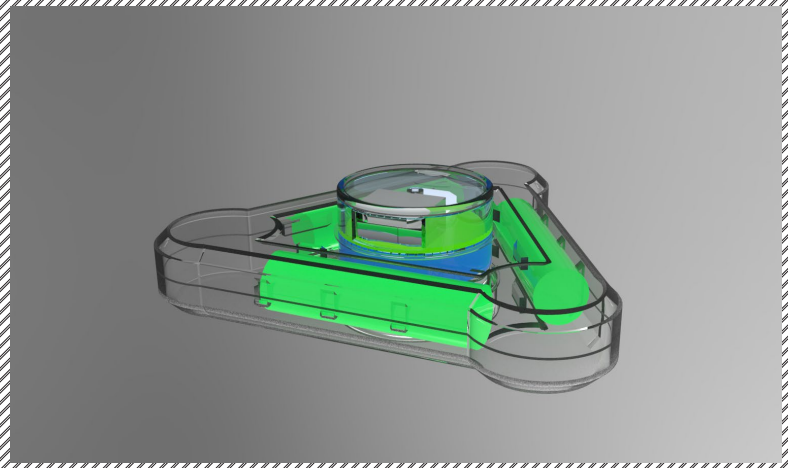

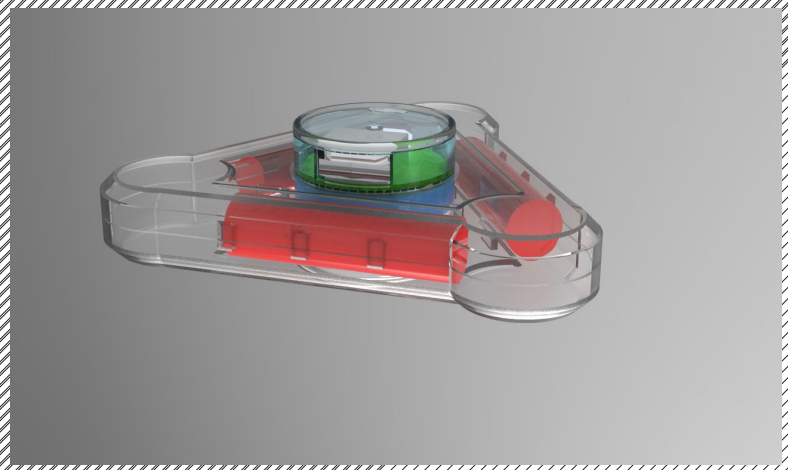

Final rendering

Spain to charge the power bank.

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Model

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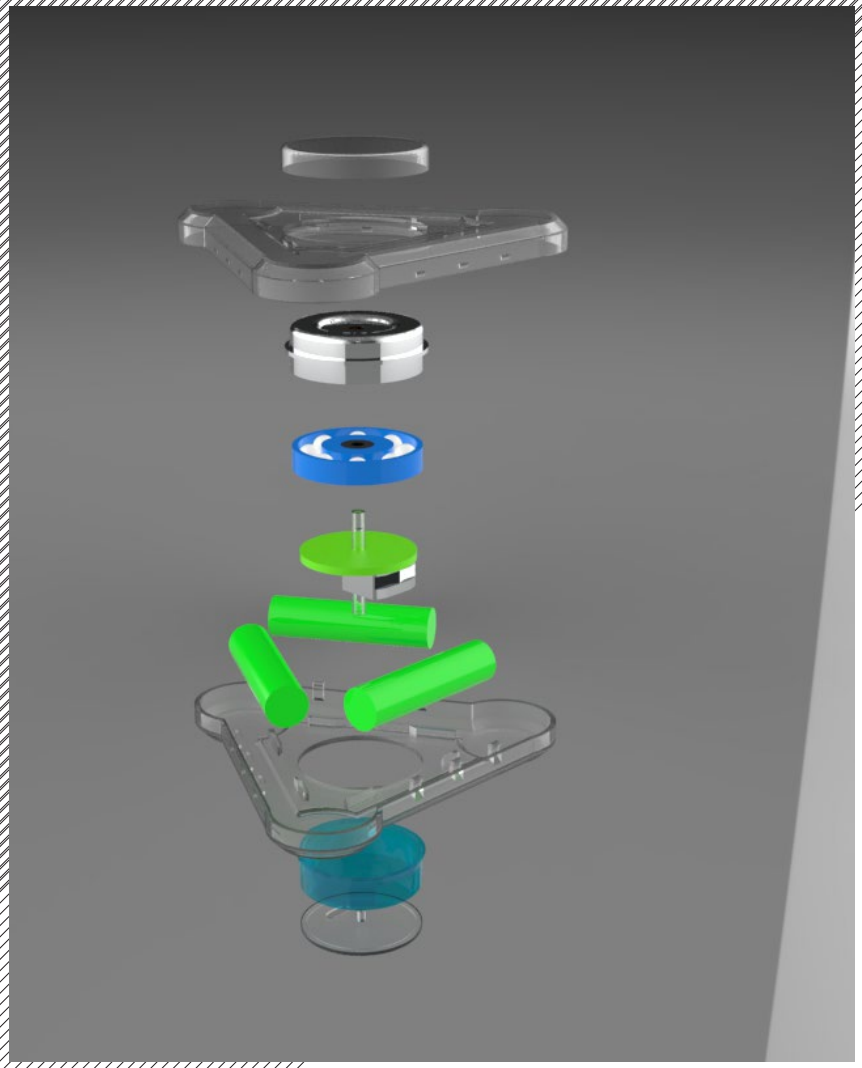

Explod view

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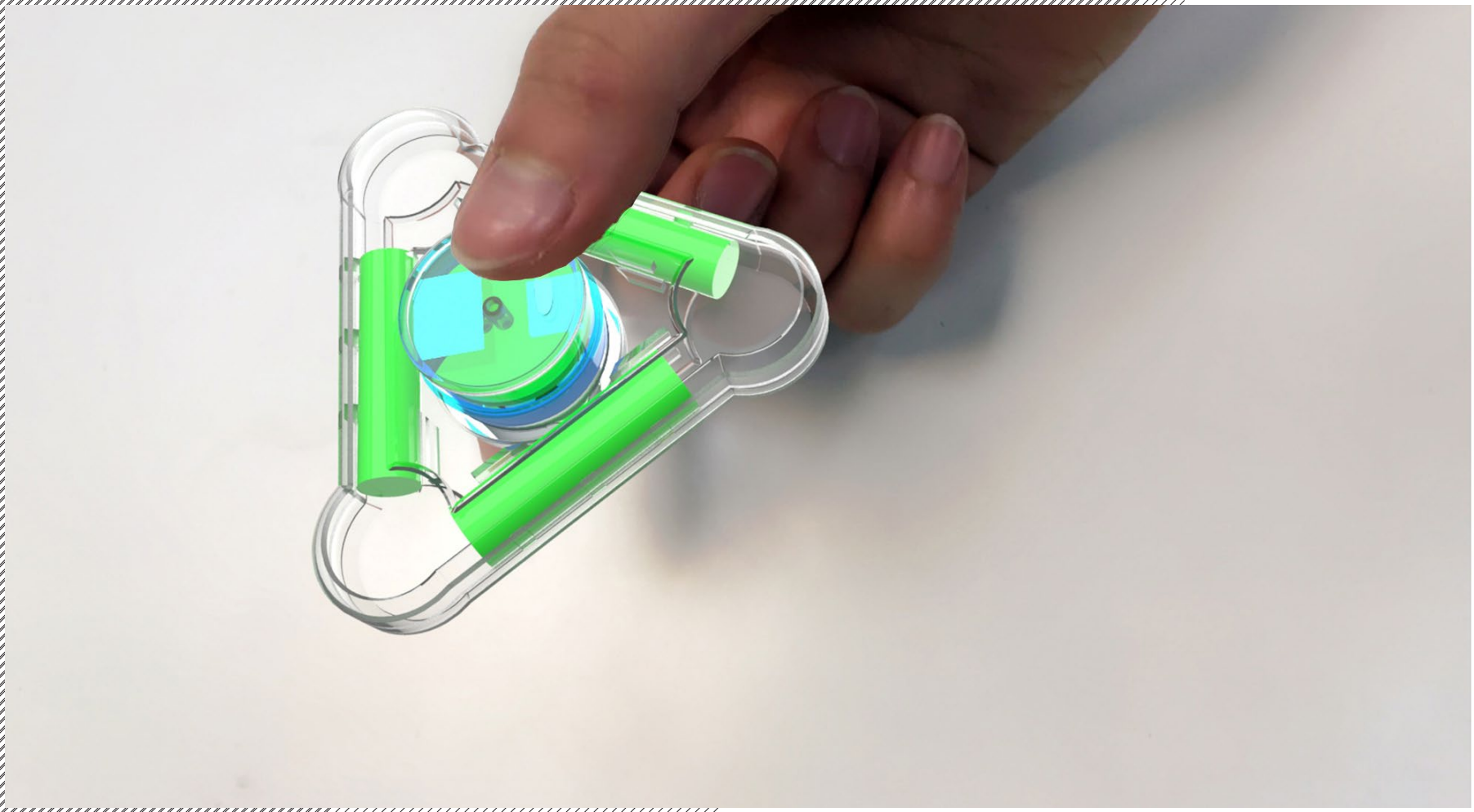

Context image

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FYU

FYU

A bot can follow people around and

elp people carying heavey items.

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Key findings

Most people perfer use hand to carry

Most people like walk less than 10 minutes

Too heavy and Bay is eazy to break is the main pain people have.

Opptunity

Use the electronic device can follow you to carry the heavy item rather than hand.Free the limited of people's hand.Make the life more convenient.

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1. Only 10% people have a wagon.In this 10% around 50% people almost never use it .
2.More than 70%people perfer use hand to carry
3. Most people like walk less than 10 minutes or less than half mile.
4 .88.5% people willing to get help for carry.
5. Too heavy and Bay is eazy to break is the main pain people have.
6 .47% people go to groceries story more than once a week.
7.Most people buy 2 bags groceries.But It depends on what they buying.

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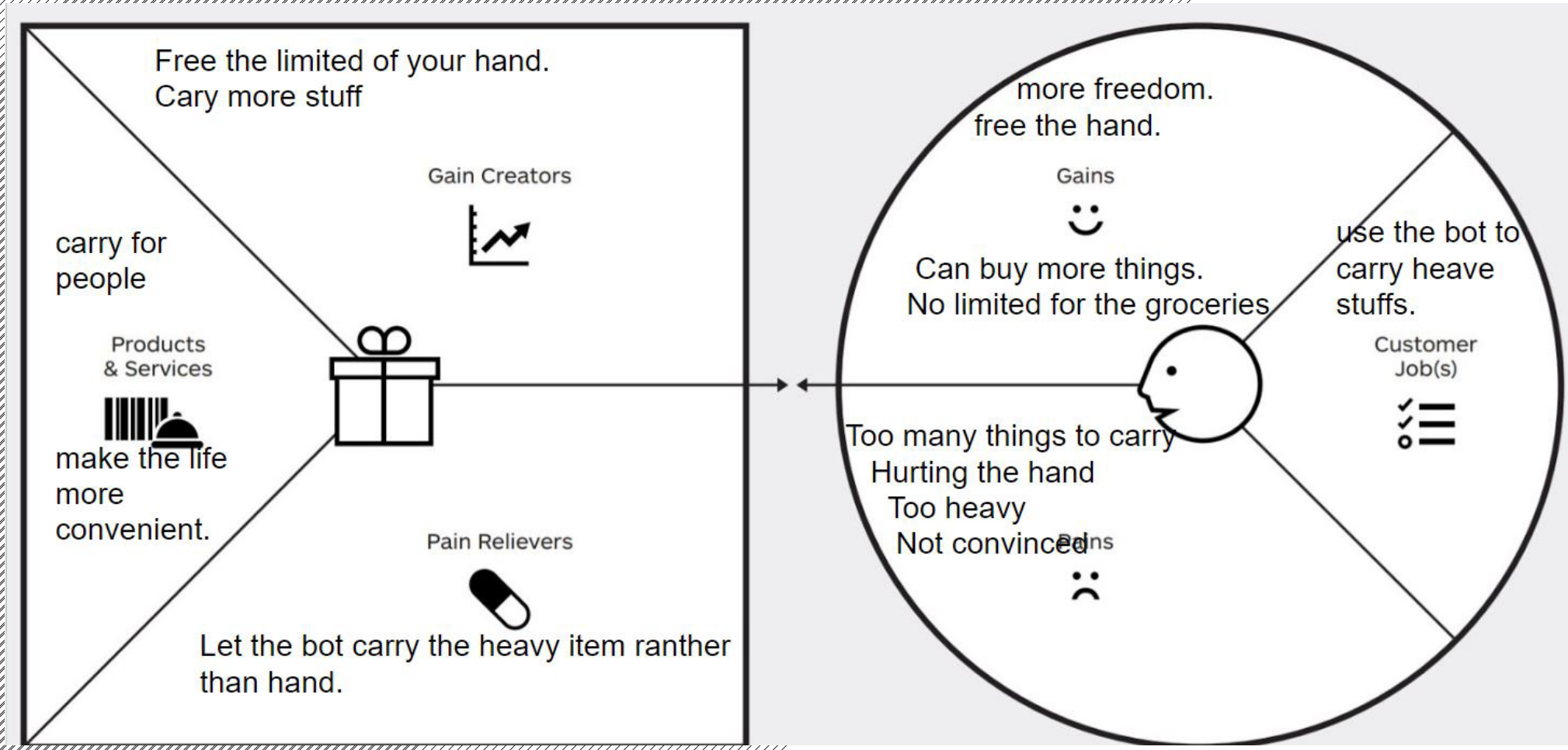

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Value Propostition

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Key Partners

Engineer

Groceries store

Robot expert

Key Activities

Factories
Instergram
commercial

Key Resources

Materials
manufacturer
The fllowing technic

Value Propositions

Help people carry the heavy items.

Let their moblity notbe limited.

make the life more convenient

Customer Relationships

Put the heavy stuff on the bot

Channels

Online,
Technology show

Customer Segments

People like technology

people who need help of carry.

Cost Structure

Production. Commercial.Shipping

Revenue Streams

Selling product. Fixing. Rent.

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The Business Model Canvas

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TAM

Thereis 42494780 people at the age 55-70 in USA.Whitch take 15.1% of the whole population.

SAM

Form 2010 to 2060.the population of prople more than age 60 in Califonia will rise withe the 171.3%

SOM

There is more than 600000+ seniors in

FYU

Data from 2018

TAM, SAM, SOM

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What are you selling?

A electonic deveice can following you and carry the heavy items.

Who are you selling it to?

People who willing to get help to carry the heavy items rather than using their hand.

How will you reach your target market?

Strrage, groceries story, car

Where will you promote your product?

Social media, Online shop.Tecnology show.

Market Strategy.

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Francis Fick

49 years old man.Living in donwtown LA. single

Full time job.Department manager at a bank. Make 89k$ / year

He's tired of keep doing the same jwork over and over again planning retire next year.

Super fan of the techlooking product.

He don't want be outmoded and always wantss to try the new things.

He always complaning about the plastic bag huring his hand when he go to shoping at grocey store but never admit the stuff he try to carry is to heave for him ,and he wish he can be younger.

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Persona

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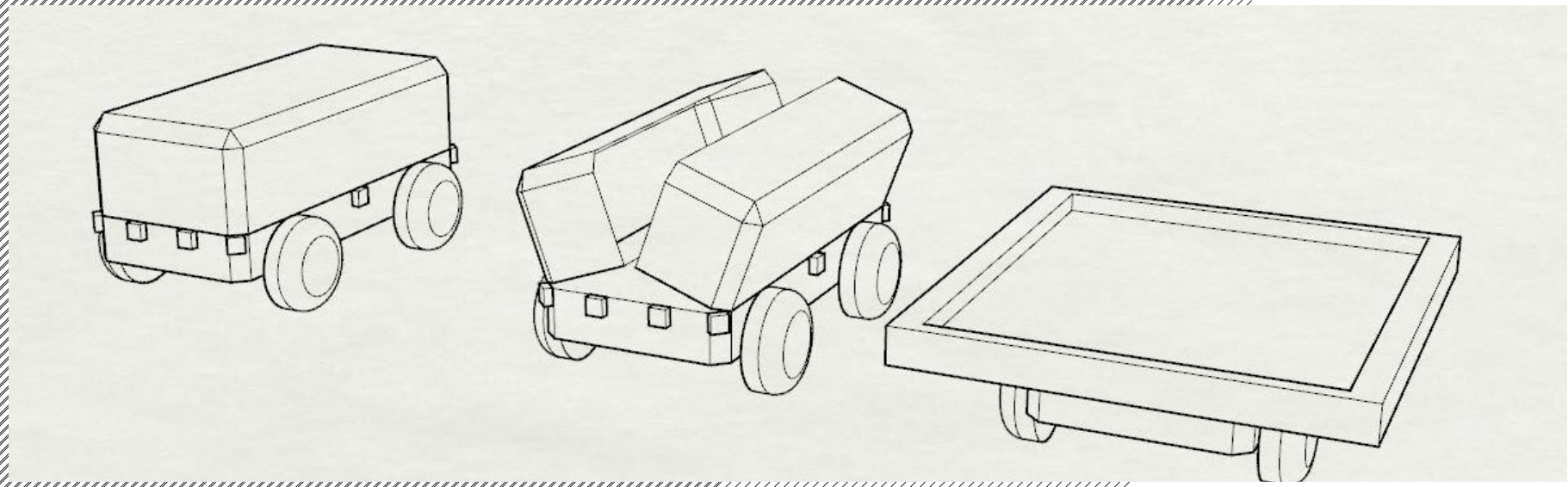

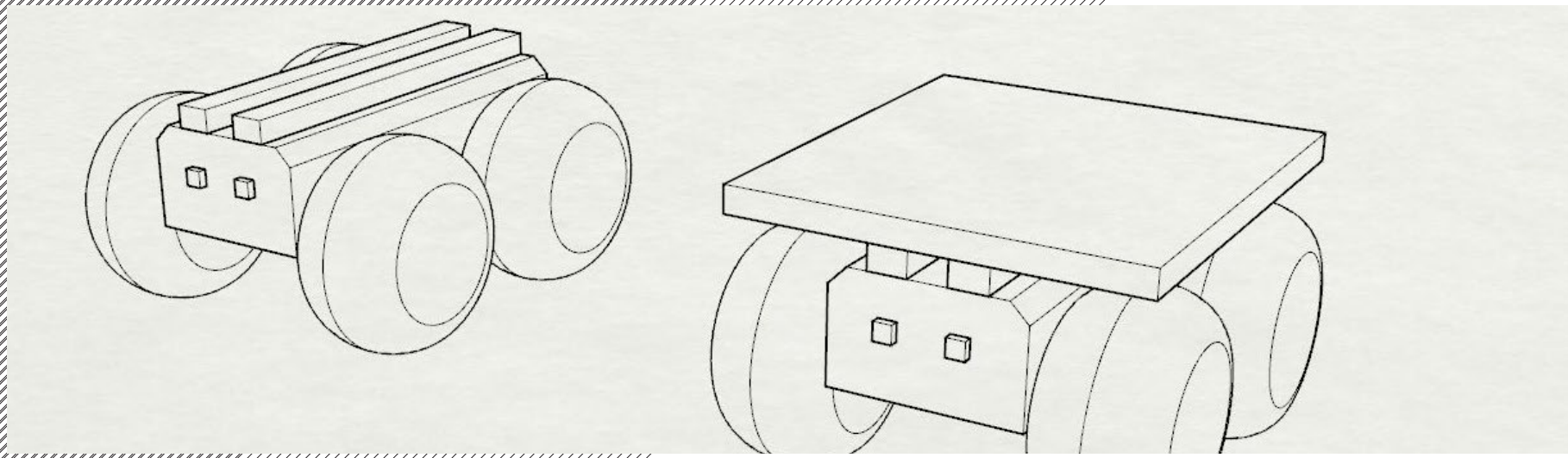

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Ideation

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People wat be able to change the top.So they can use it for different events.

People need it can chage size fit to what they buying.

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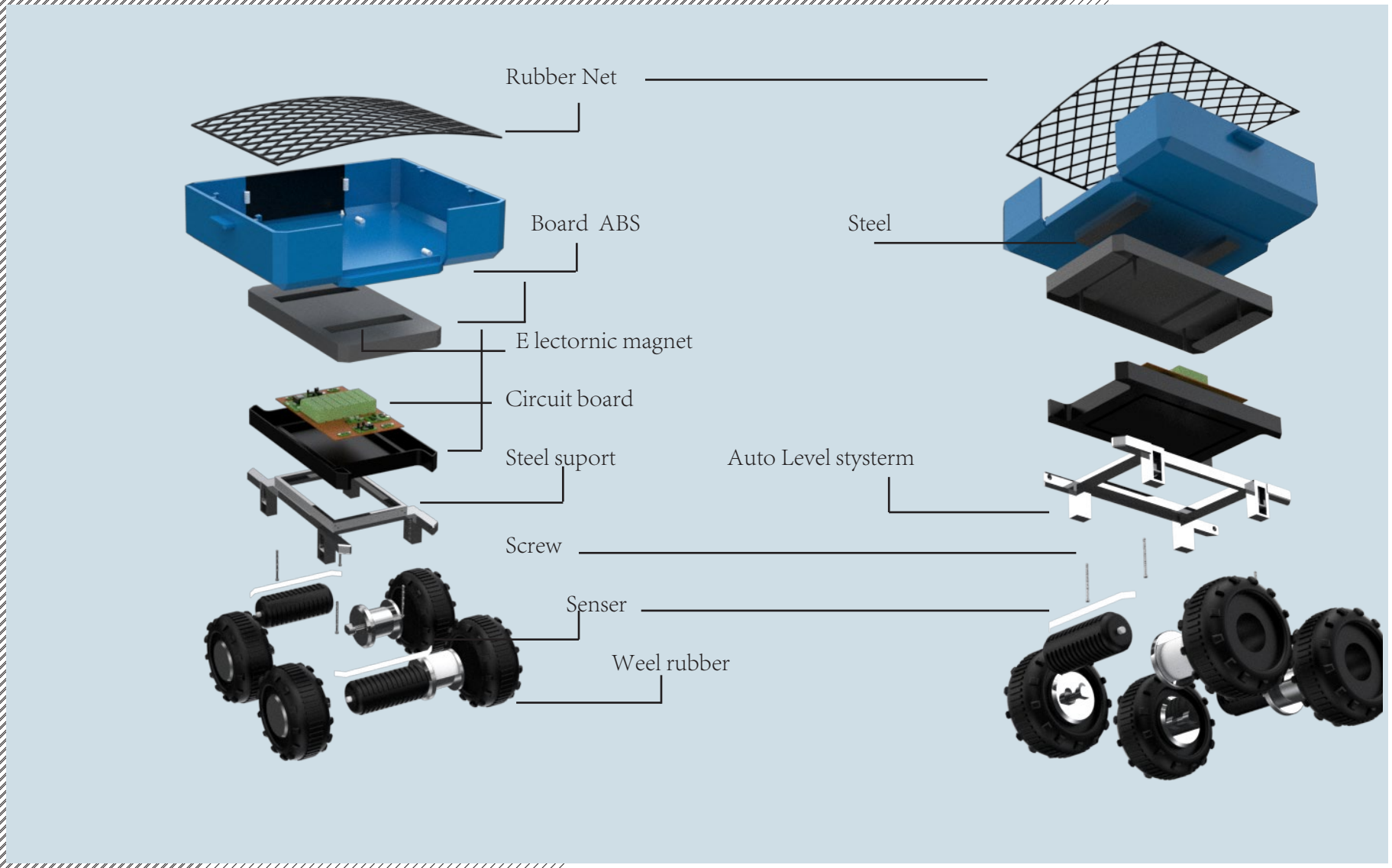

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Explode view

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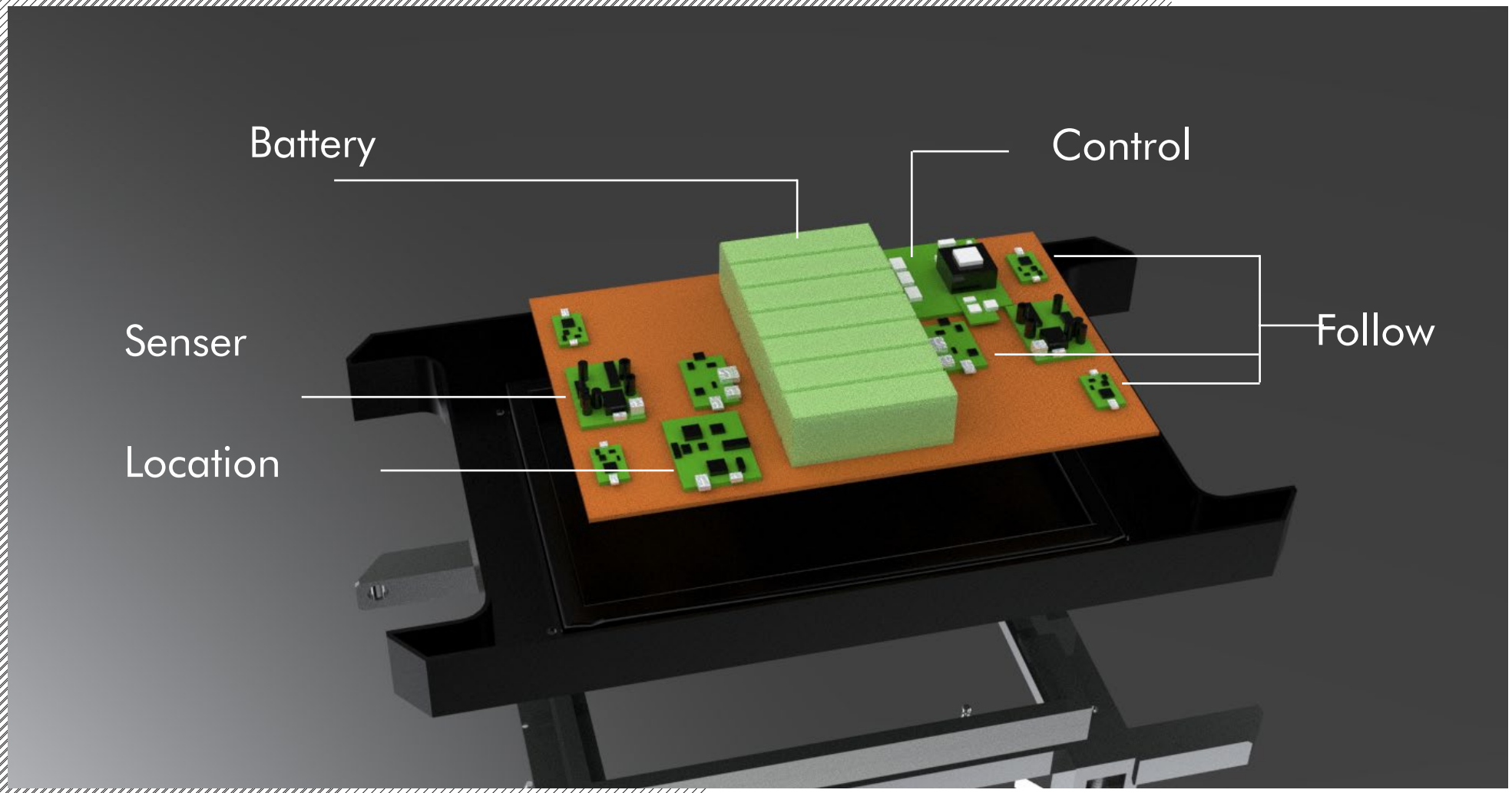

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Circuit board

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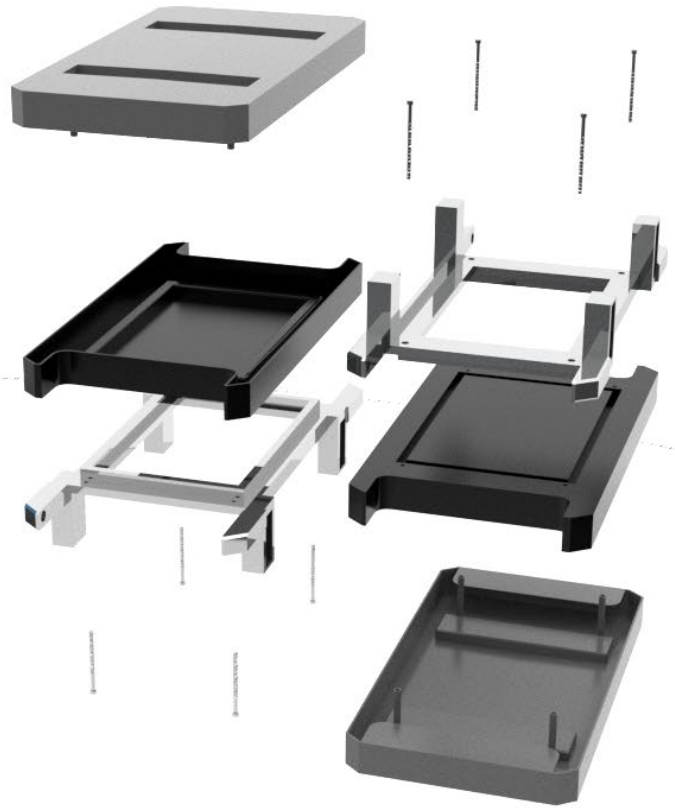

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Assembly

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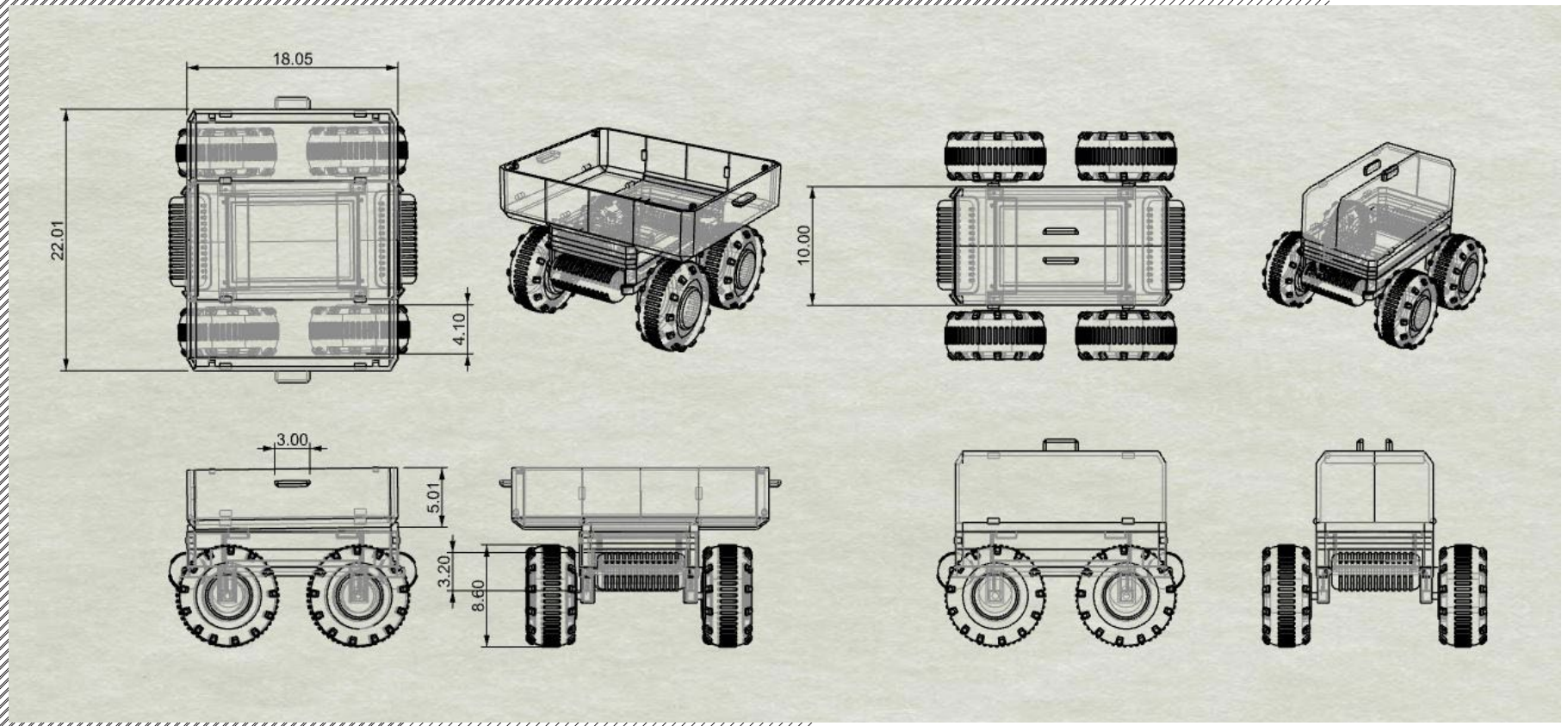

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Tec pack

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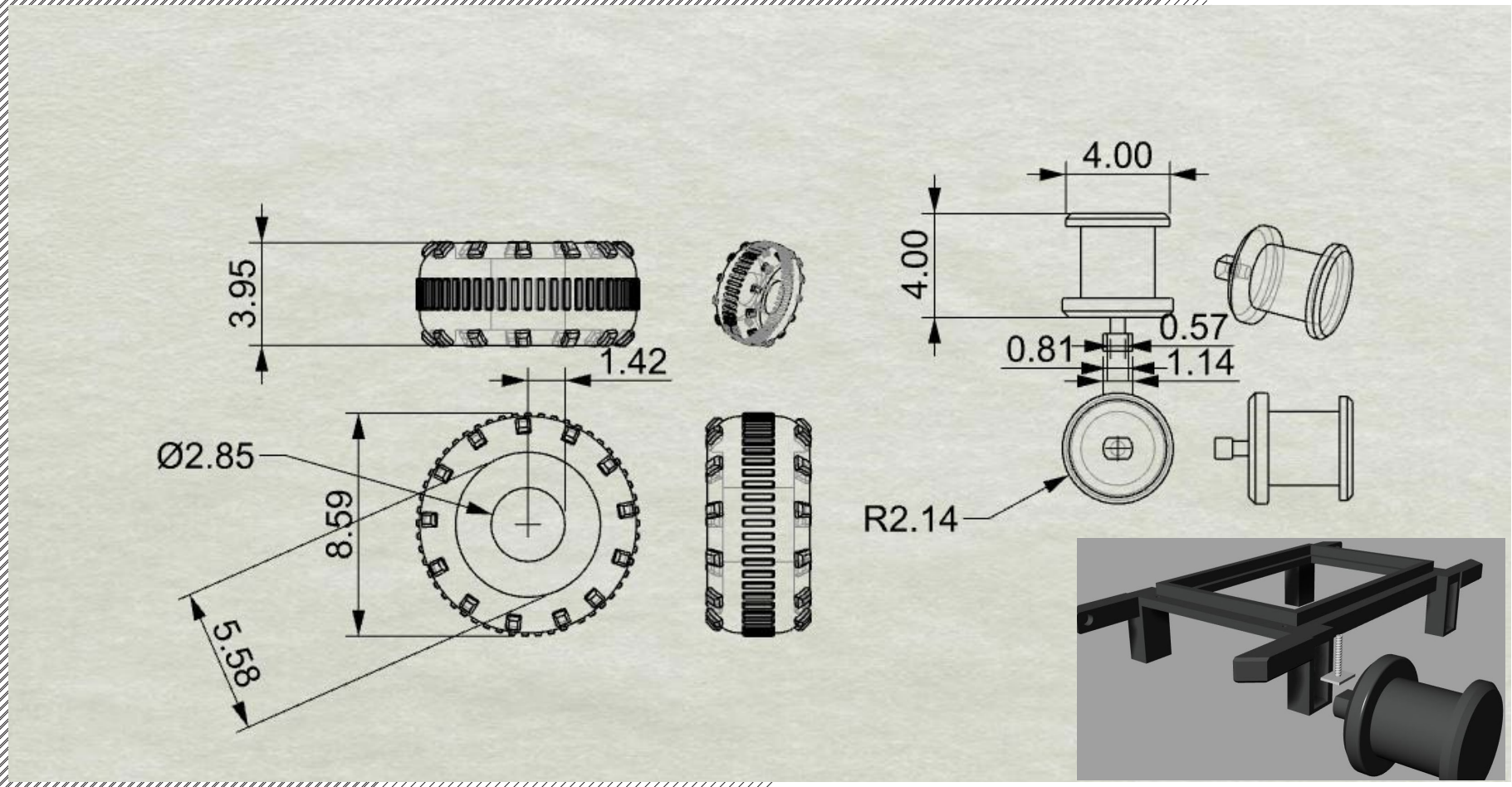

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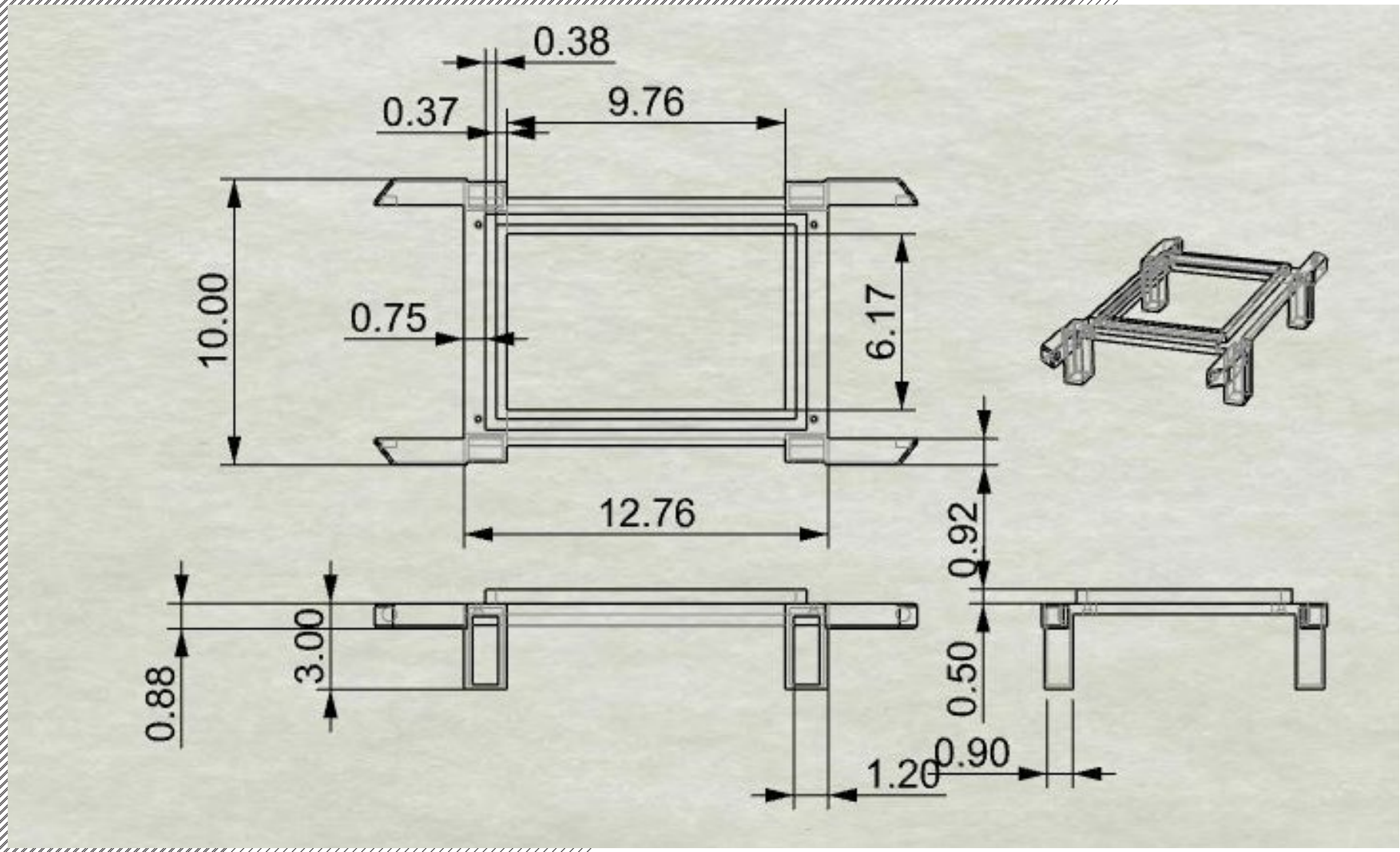

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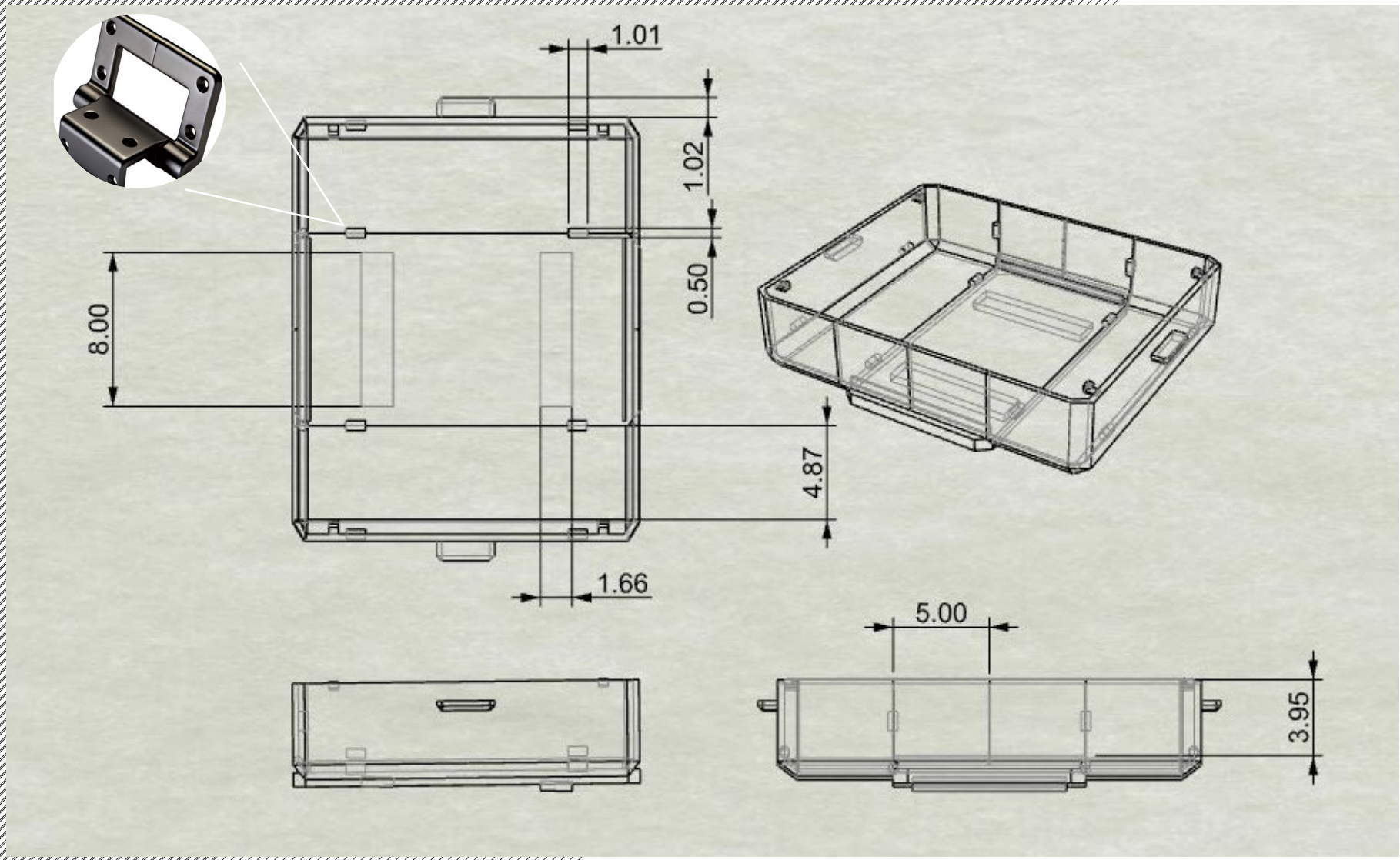

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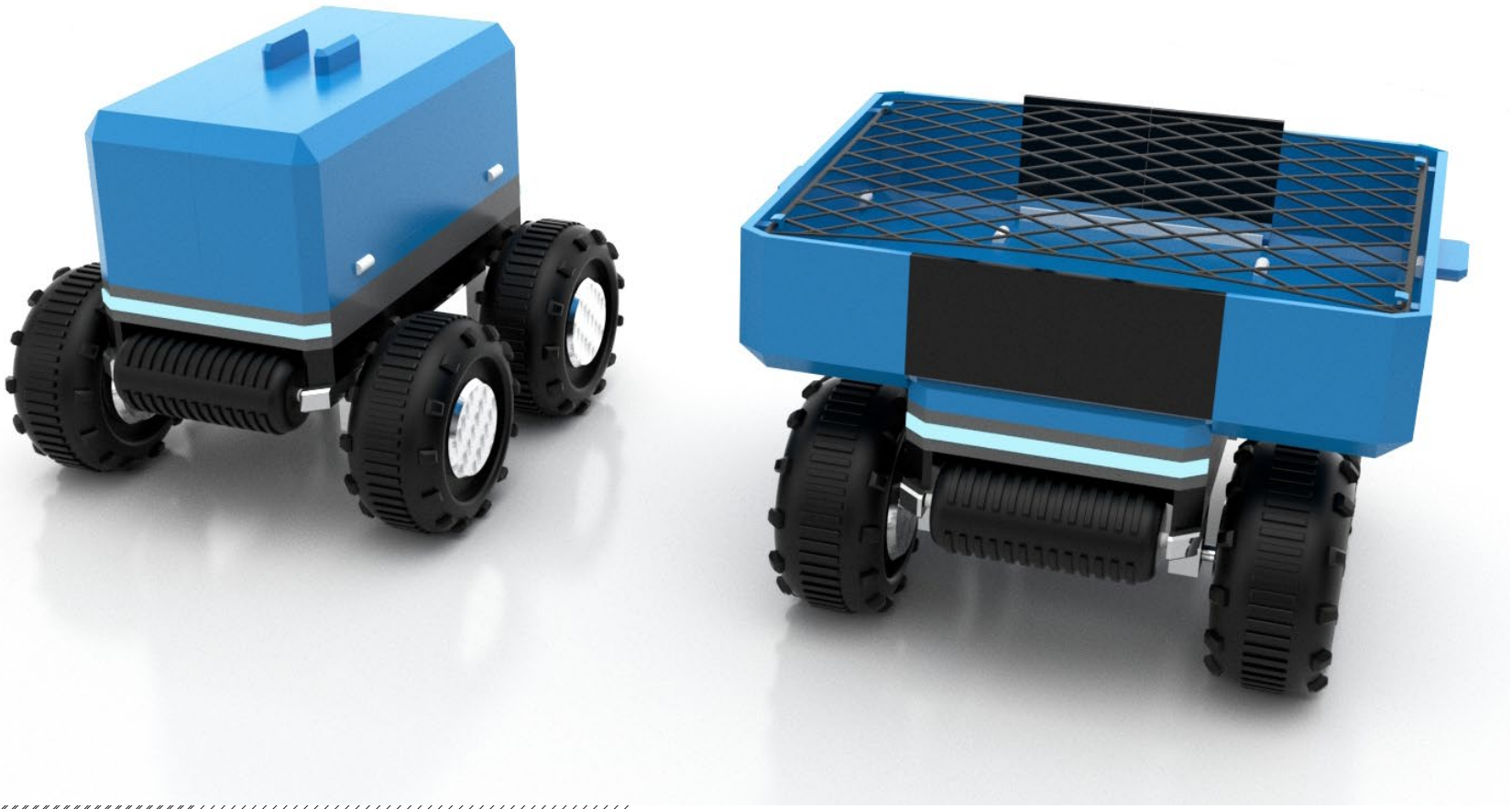

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Rendering

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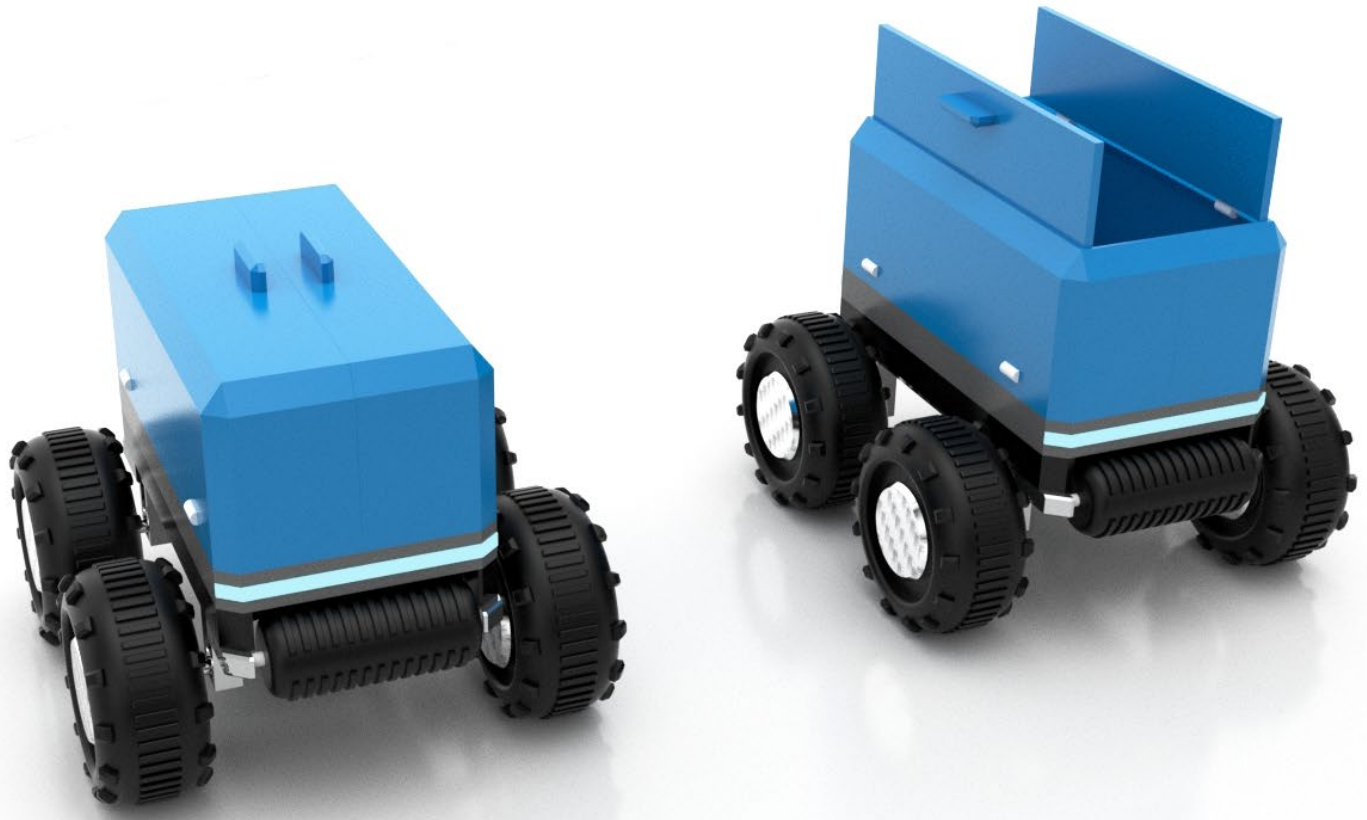

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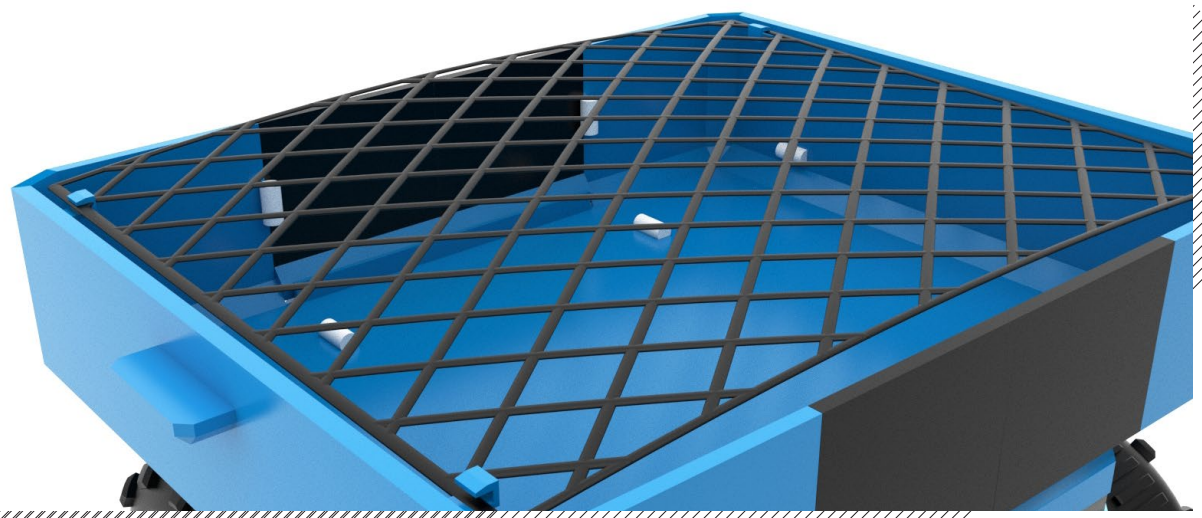

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Rubber net

Rendering

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Up stAirs

Rendering

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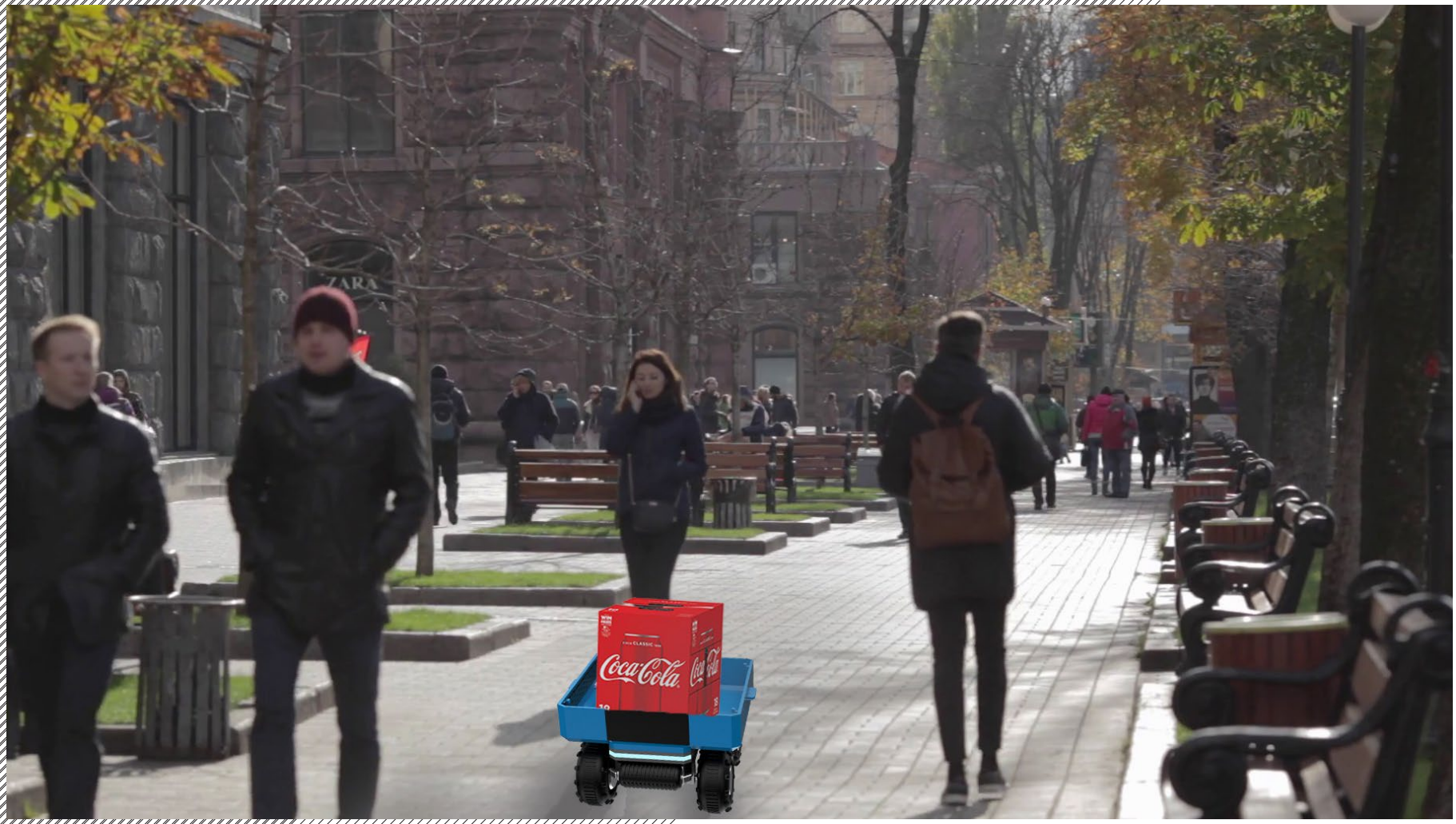

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Context Image

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Context Image

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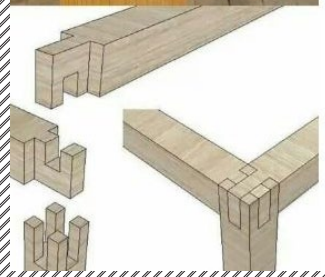
Salty Elbow
2019 Spring



Salty Elbow

Idation

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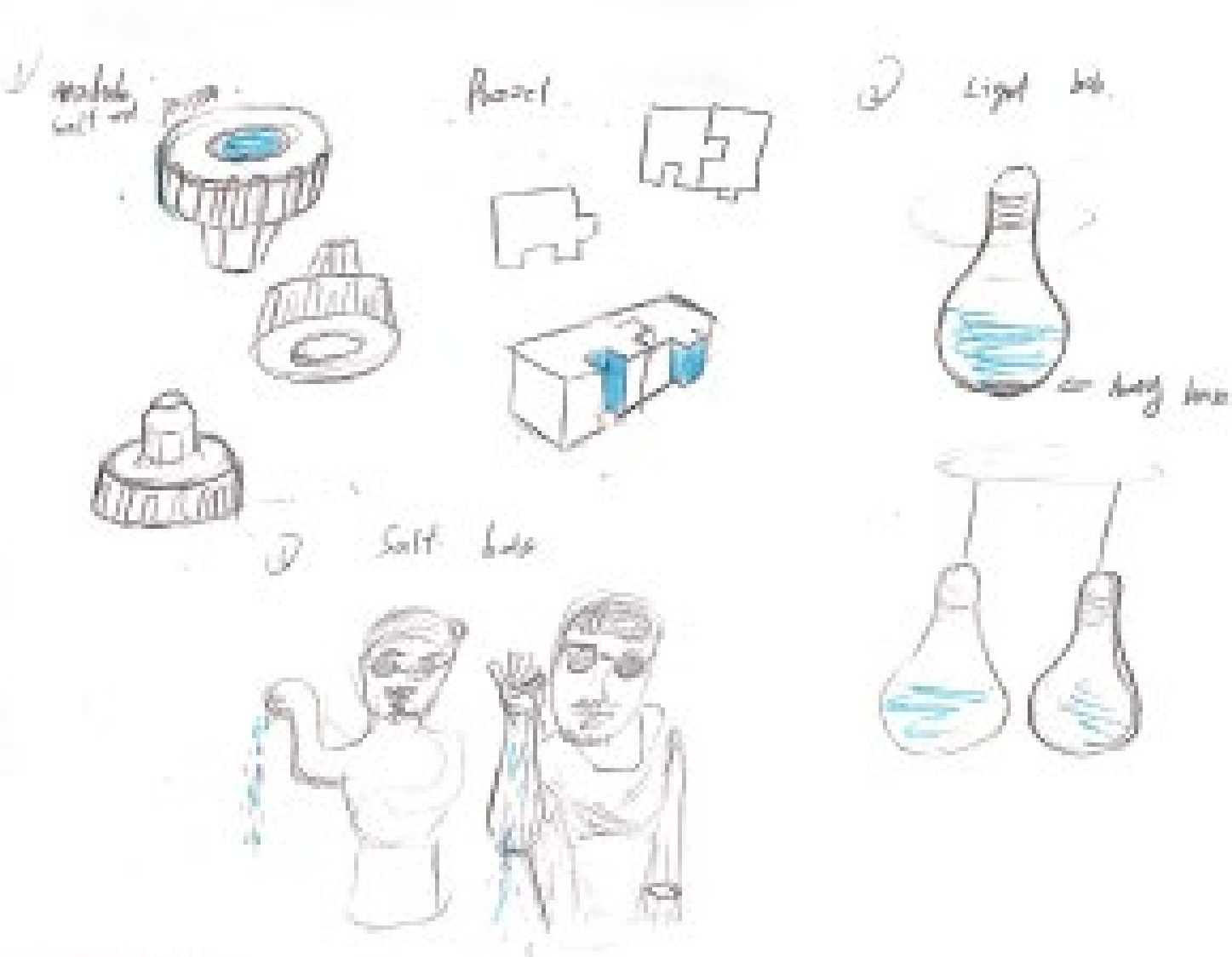

Salty Elbow

Sketch

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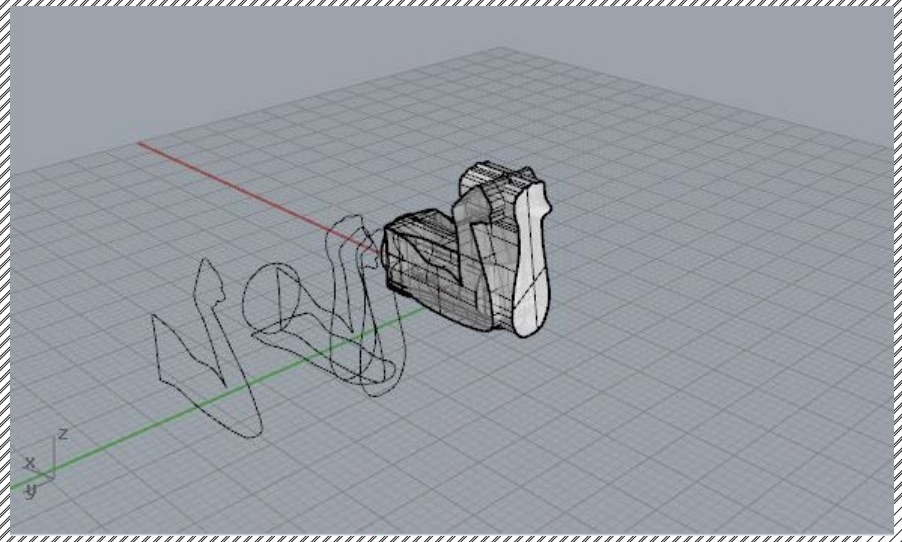

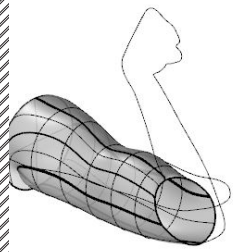

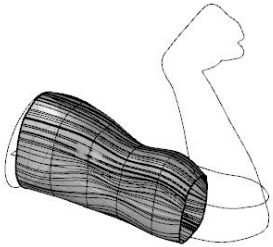

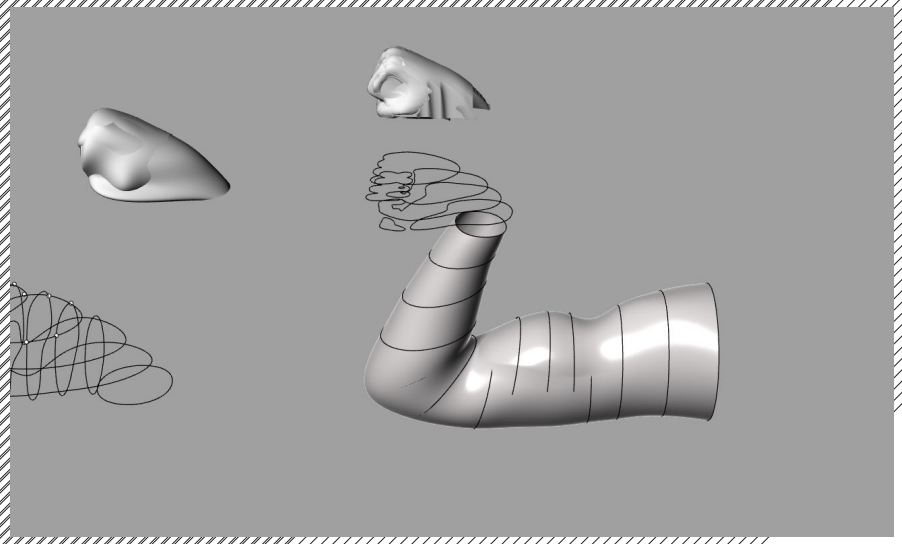

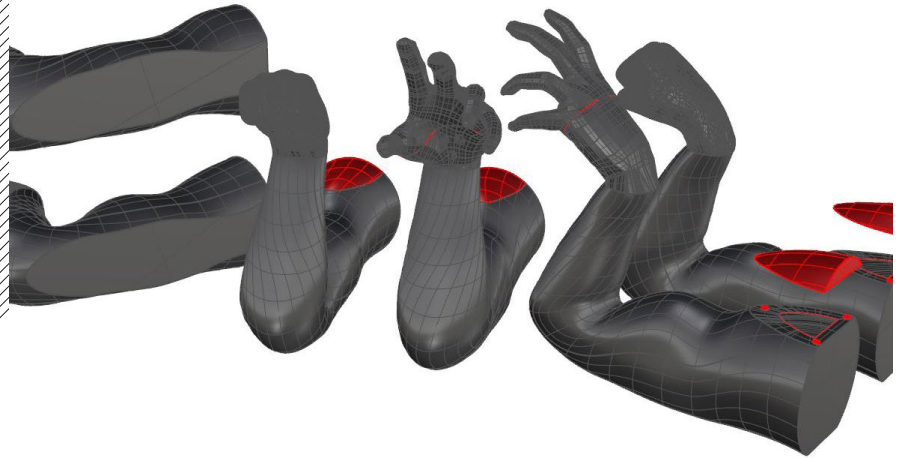

Salty Elbow

Drow the line.

Loft is the key commend

Building

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Salty Elbow

Color choose

Render

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Cap

Render

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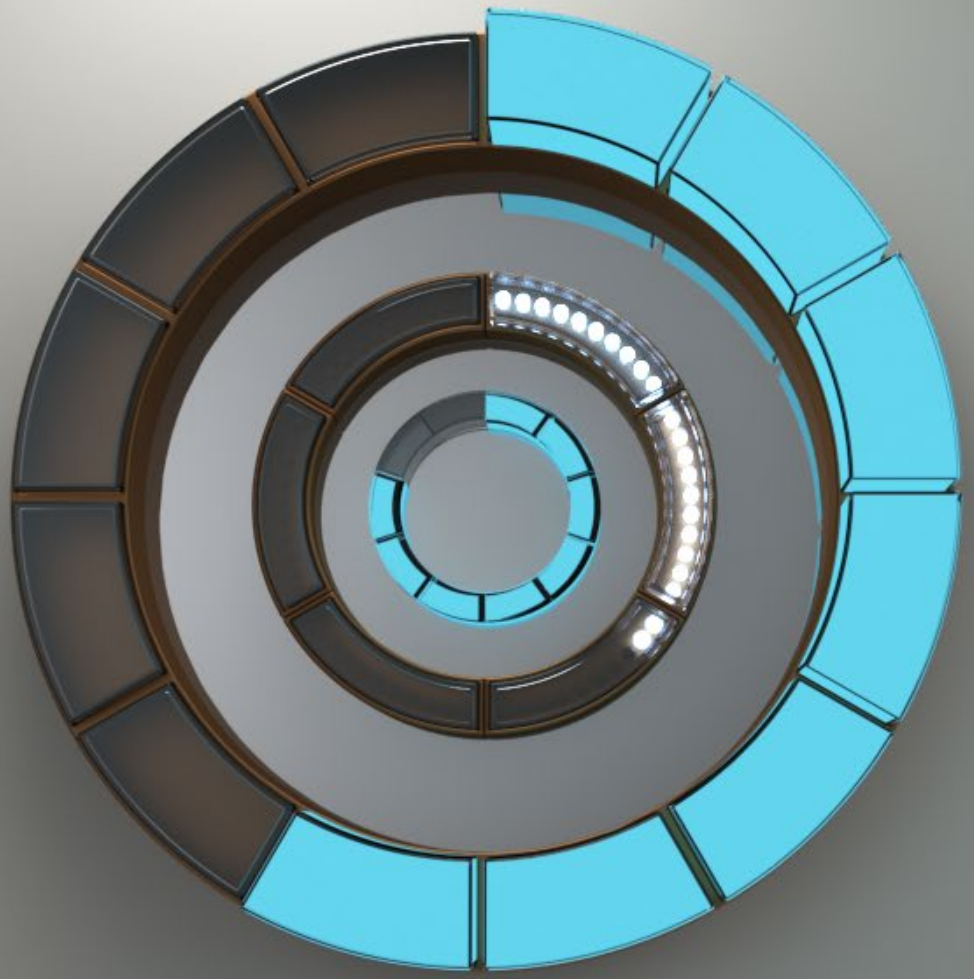
Inch second

7:22:50



Inch Second

A second of thime just worth more than inch of gold.

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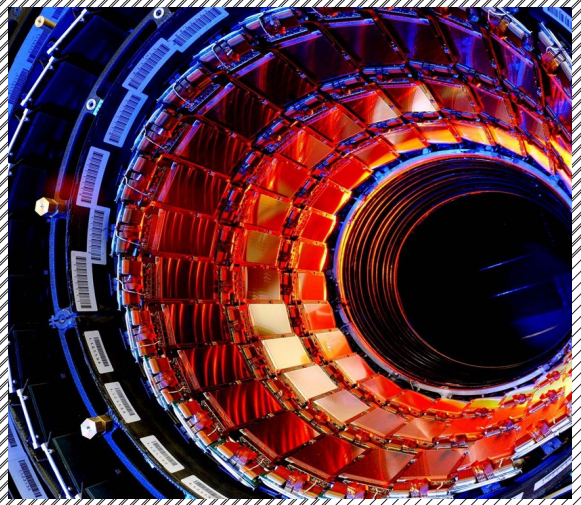

Inch Second

Ideation

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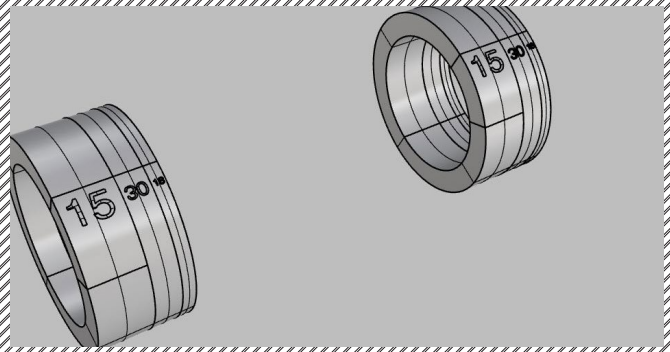

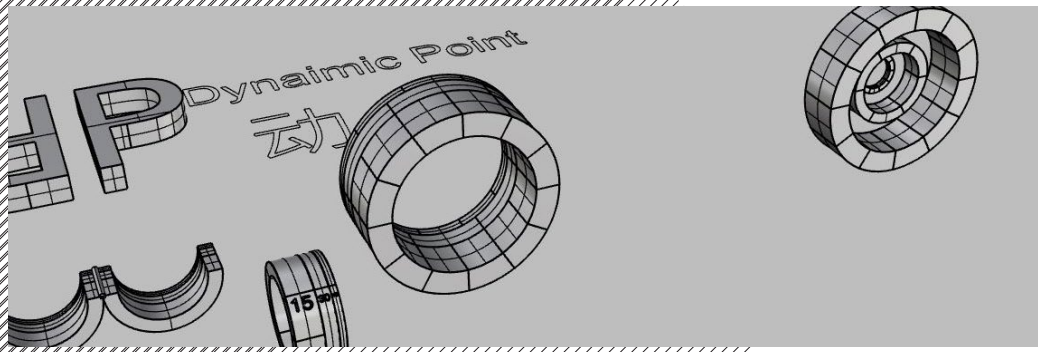

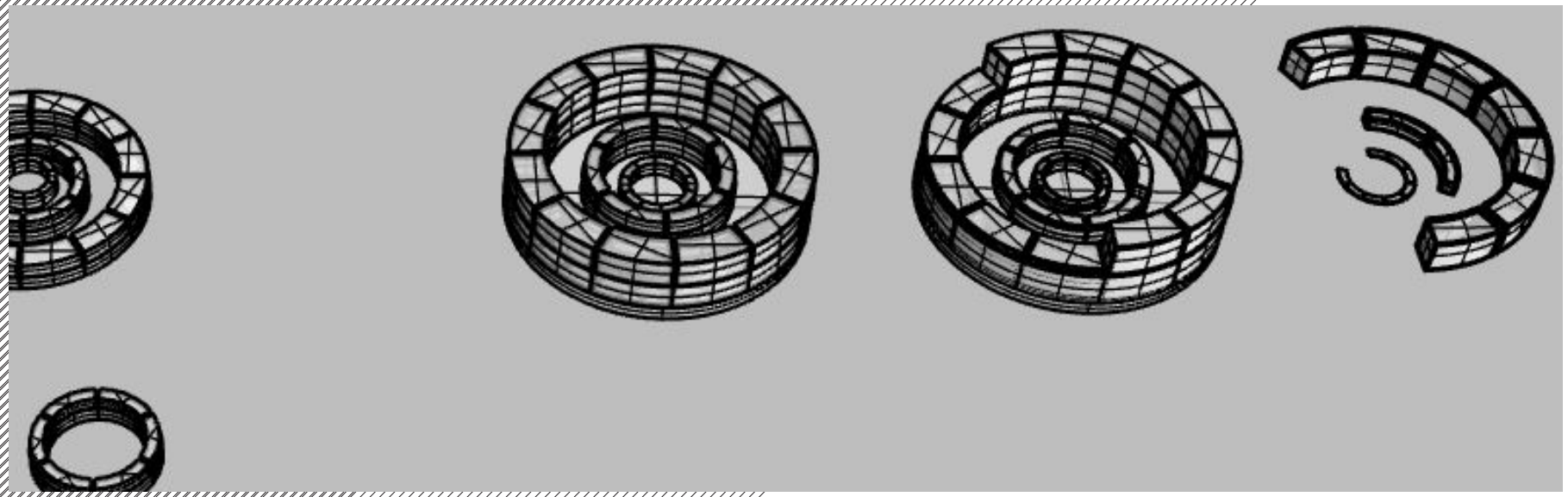

Inch Second

Process

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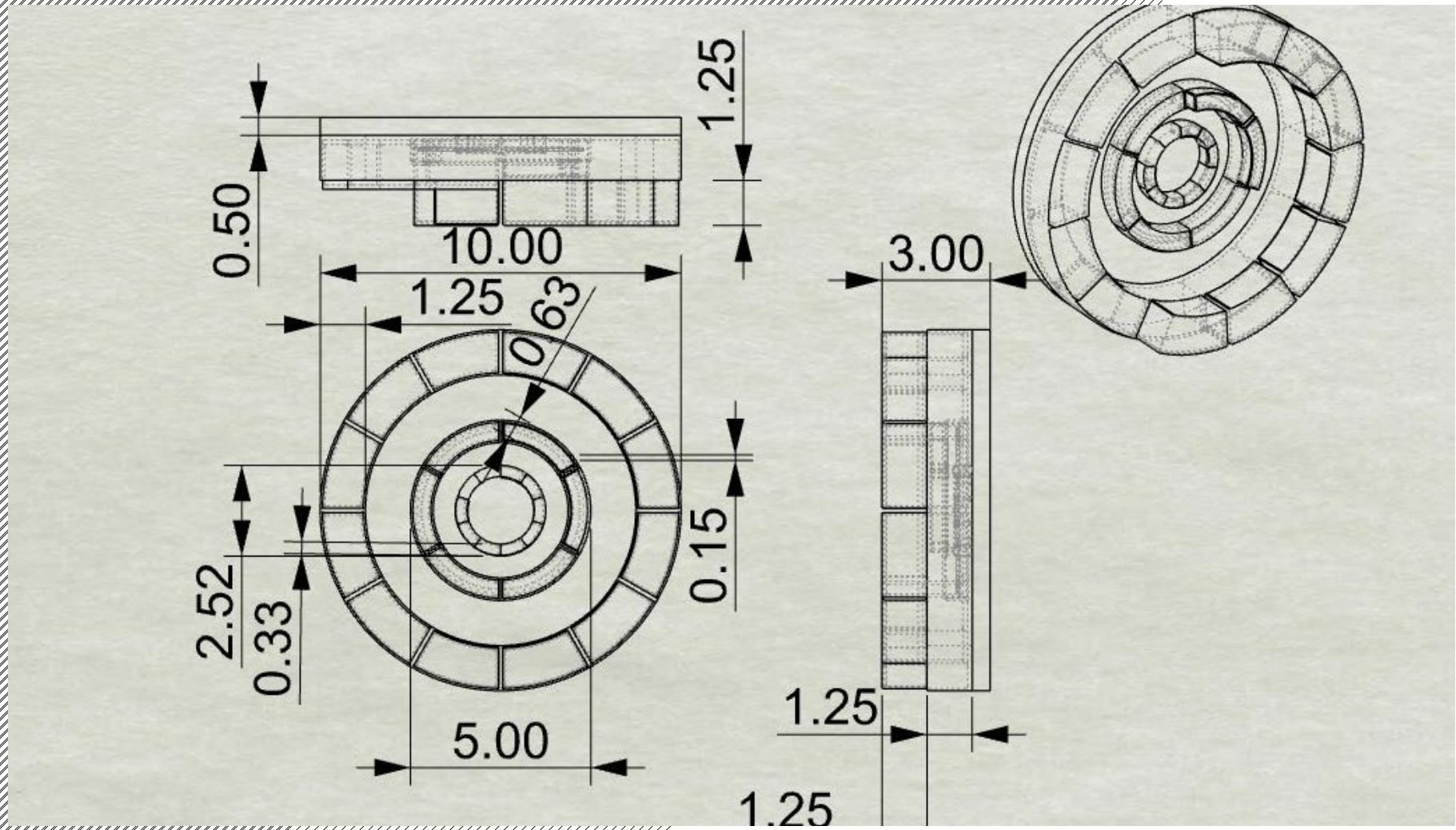

Inch Second

Tech pack

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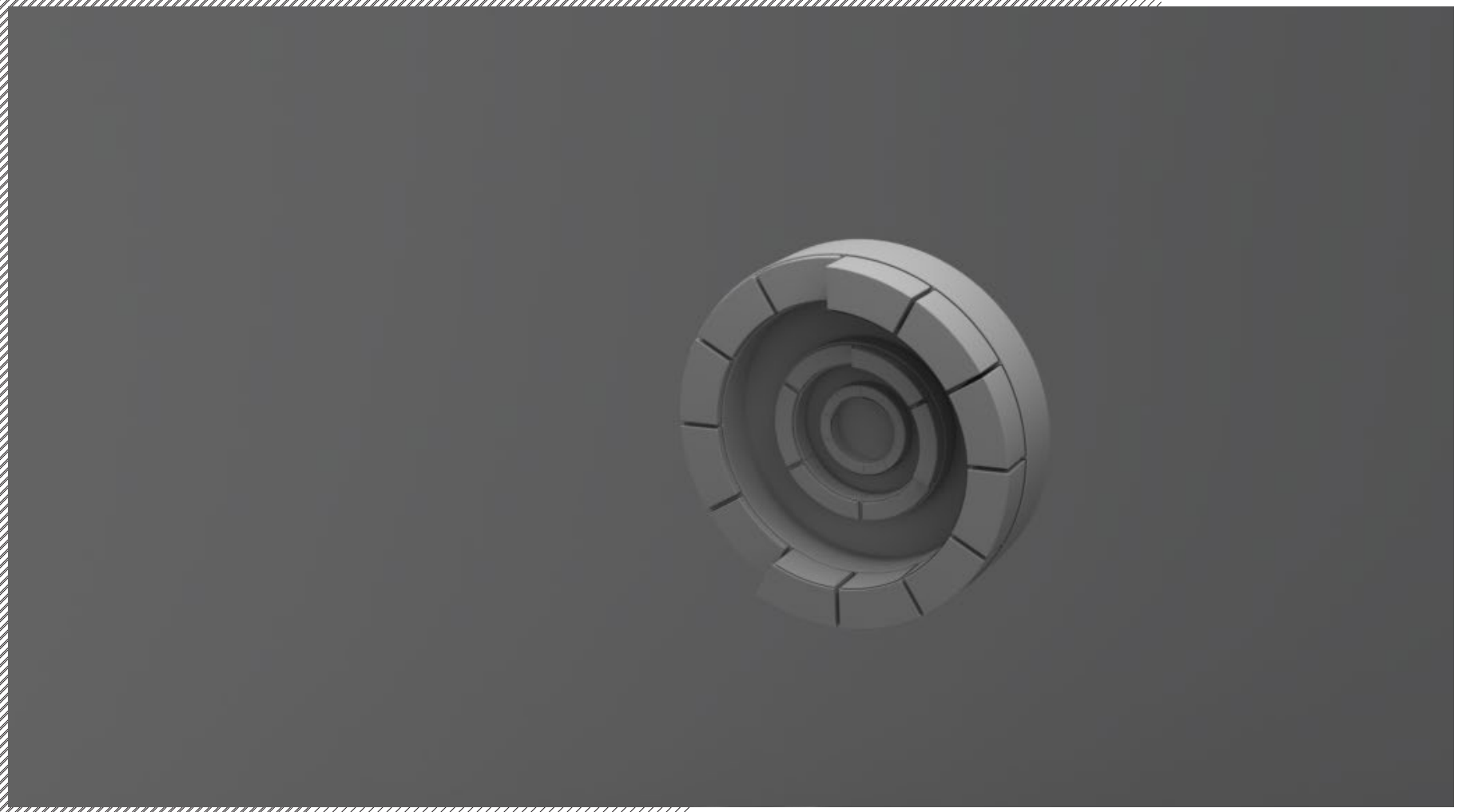

Inch Second

Nuetral form

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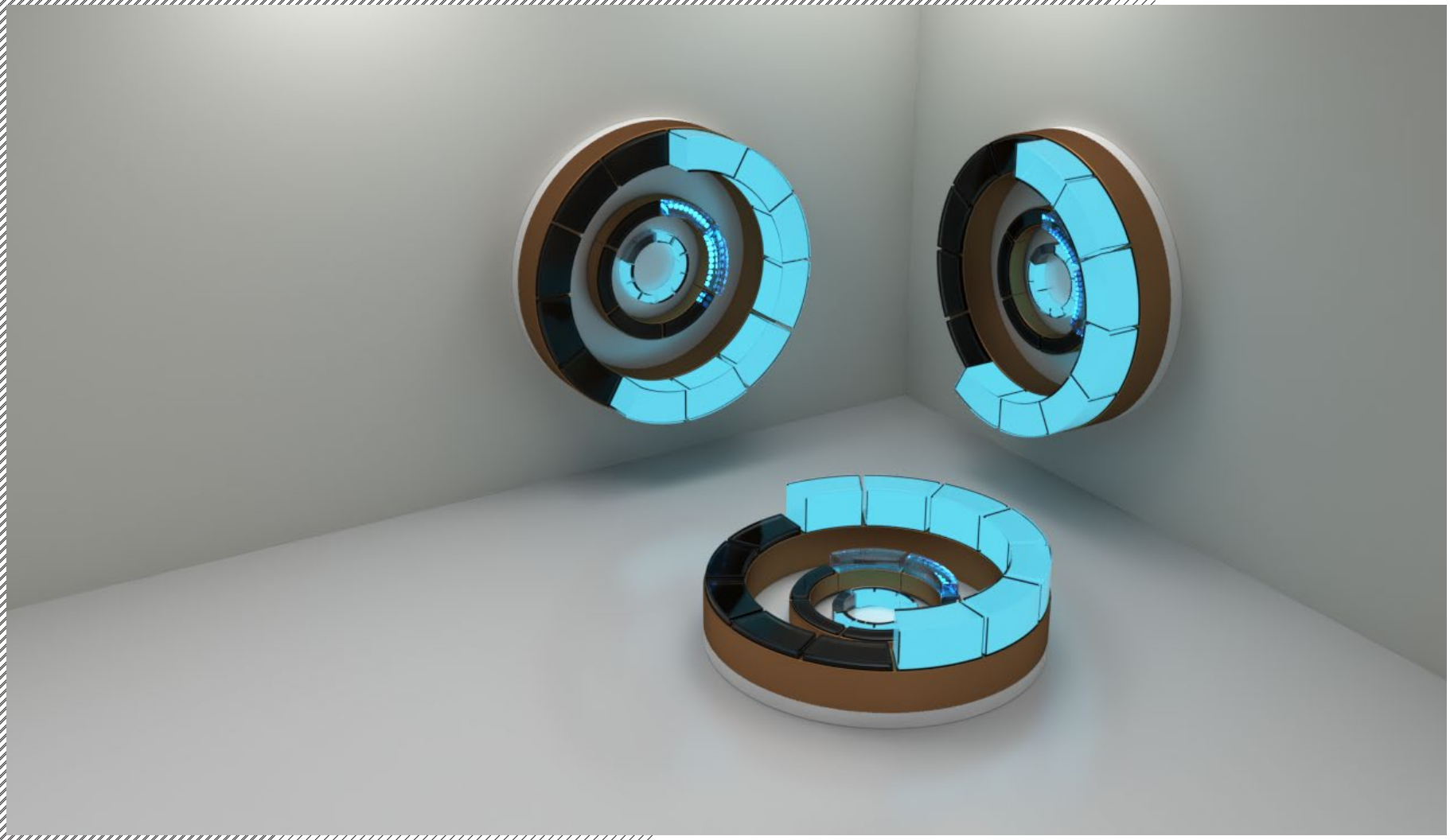

Inch Second

Render

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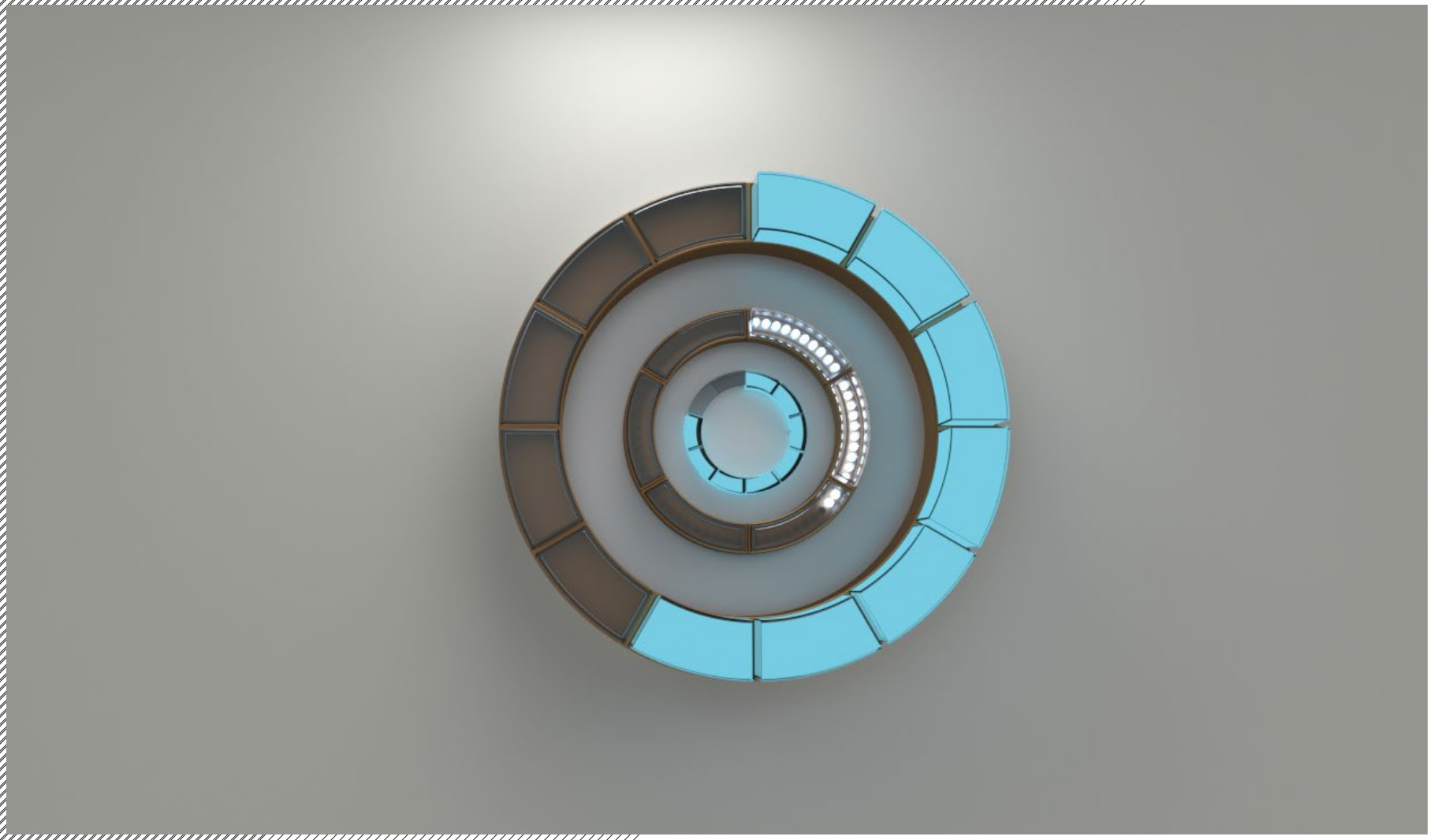

Inch Second

Render

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Inch Second

Context image

Render

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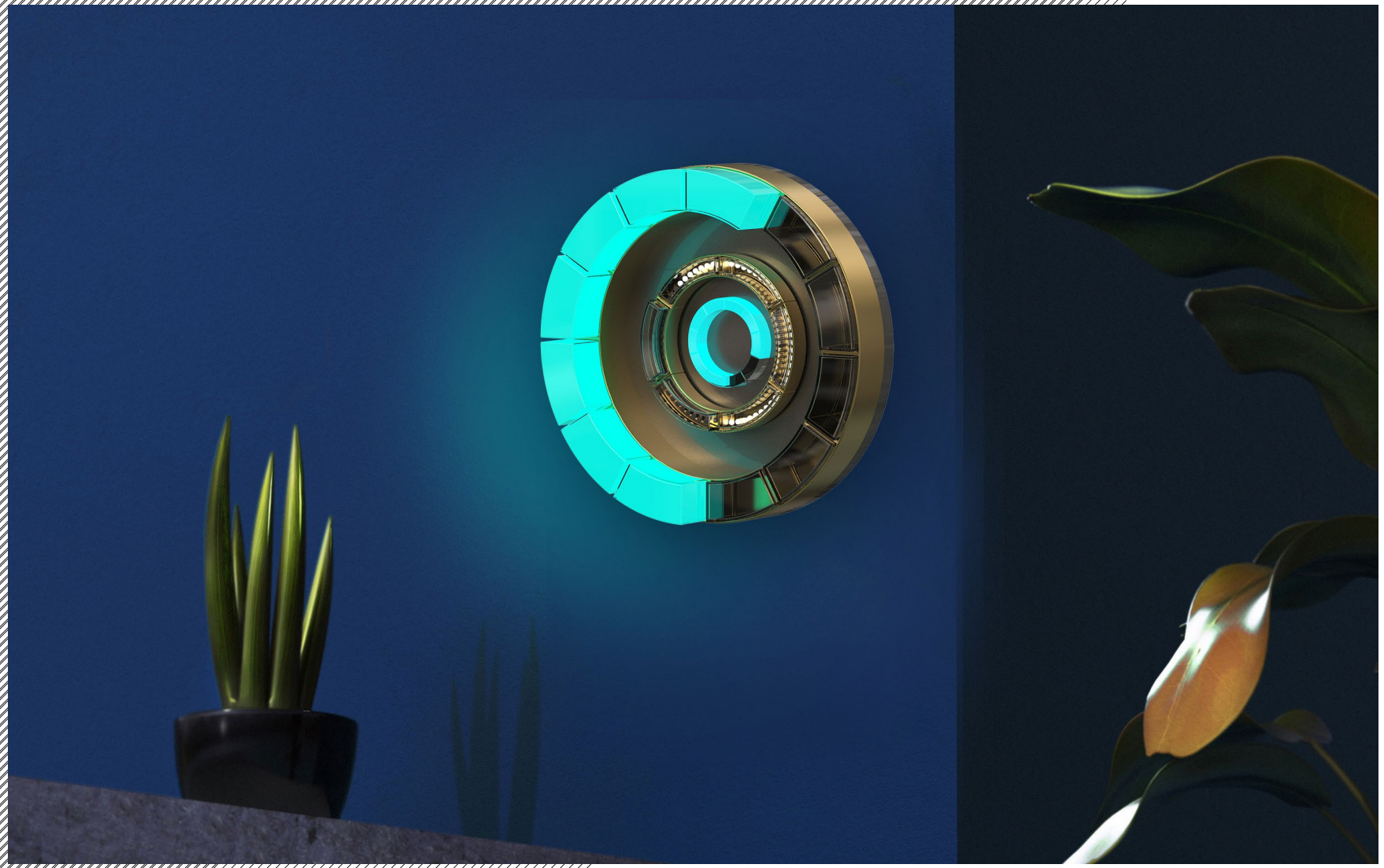

Inch Second

Context image

Render

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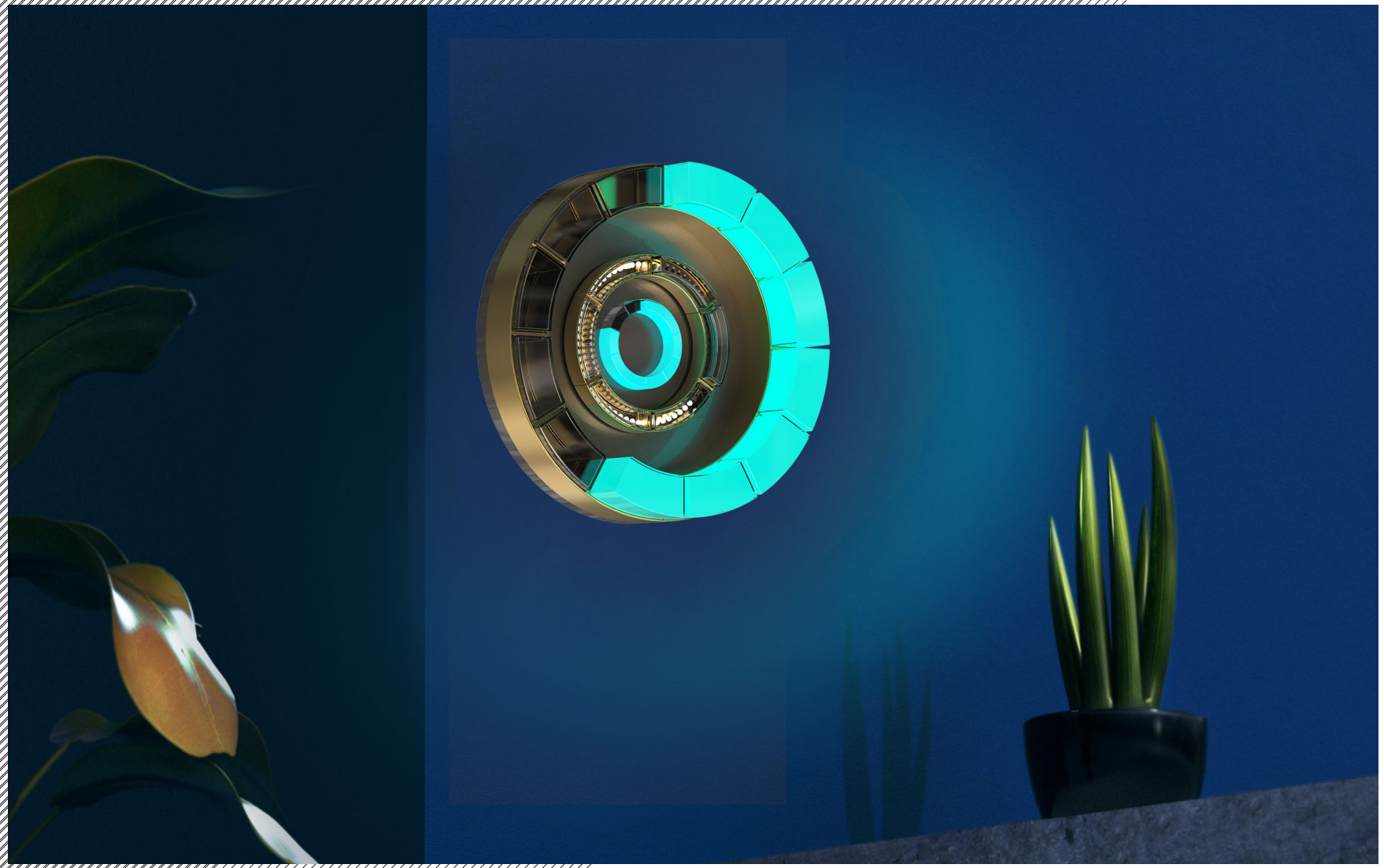

Inch Second

Context image

Render

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