

Portfolio

Syung Denny Min

denny0489@berkeley.edu

Fidg.it

Fidg.it is my design project for Design Innovation 10. For the project, I had to perform different stages of product design, such as discovering design opportunities through immersion, performing user research to understand user needs, to concept ideation, and refinement through sketches and 3D modeling. As part of the final project, I presented my work during the class showcase.

Fidg.it



Worried about your upcoming tech interview?

Need something to occupy your mind without using your phone battery?

Want to carry more by carrying less?

Thanks to stronger processors, phones and their applications are becoming more integrated in our daily lives. At the same time, these phones are also growing in size increasing their physical presence. Yet, our phones serve little to no physical purpose.

There are functional phonecases available in the market. However, most address a single need and are often strictly divided between utility and fun.

Spectre: A lightweight phonecase



Loopy: A phone grip



Aesthetics: Accessory

- Any specific styling on the back of the phone case
- Very thin, does not add much to the volume of the phone.

Functional

- Proof cases
 - Provides protection for the phone either from water or dropping the phone.
- Arm band case
 - Can attach the phone to the limb to prevent it from moving too much during exercise.
- Phone stand
 - Can extend out an arm from the back of the case to make it free standing.
- Phone Wallet
 - Can attach credit/ cash on to the phone to negate the need for a wallet.
- Phone Cover
 - Covers the phone screen, but can also double as a wallet.

During the user research, I used fly-on-the-wall method to understand some phone habits of college students. Here are some of the findings that was crucial to the product design.

Sather Gate / Front of Sproul

Some students insert cards or dollar bills in to their flexible and thin phone cases.

While, waiting and not using the phone, some students tug on various extrusions of the phone case or scratch parts of it without conscious thought.




College Student P

"P" Attends school in east coast. She attached a phone pocket on top of a pre-existing phonecase to carry more.

Complained about breaking phone cases after tugging on them.

Insights




For the students with reddest hands, every part of yphone becomes a finger to which further emphasizes the physical presence of the phone to the user. Large population of students preferred accessibility and portability over the number of available functions. Students prefer to pack what they would normally need on a daily basis in to a as compact and minimal space as possible.

Design Process





Min, Syung Denny
Des Inv 10
11 / 26 / 16

Poster created for design showcase



Fidg.it breakdown



Top view

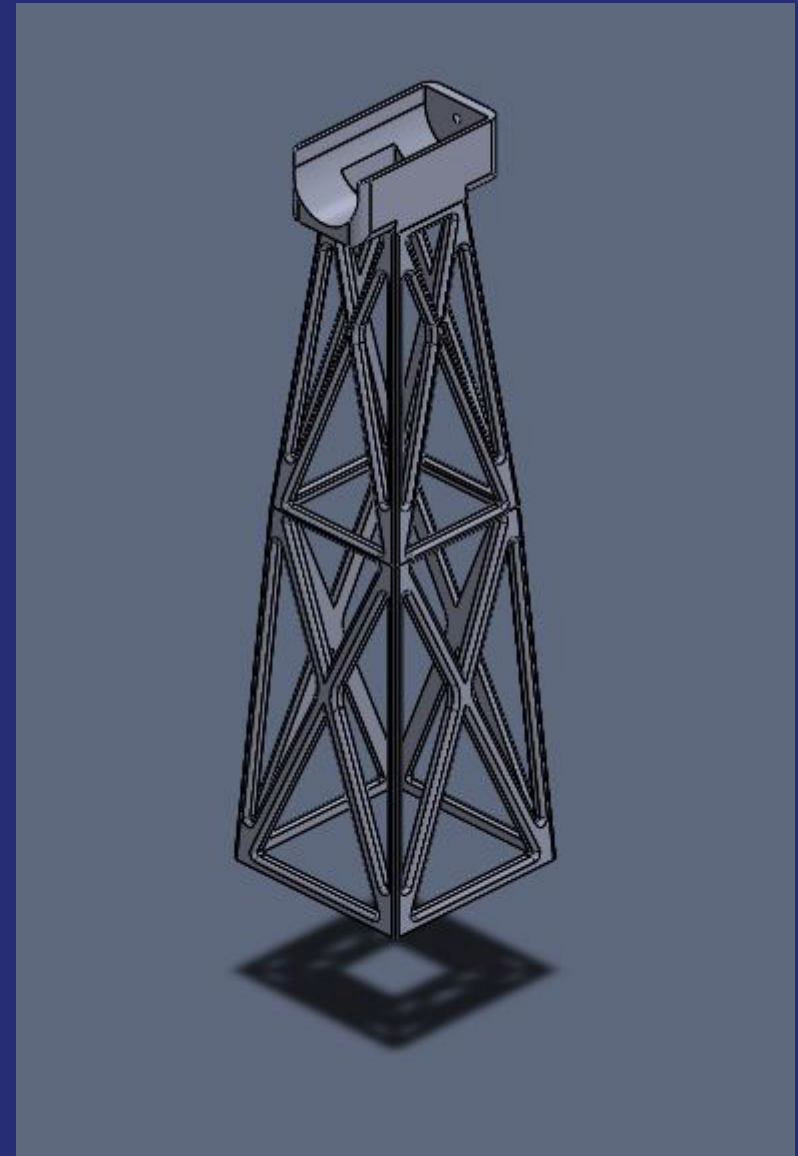


Isometric View

Modern phones are growing in size, increasing their physical presence. Yet, our phones serve little to no physical purpose. With recent public interest in fidget toys, I designed Fidg.it as a way to convert phones as a toy for users. Furthermore, I've added card / key holders which are commonly used by college students.

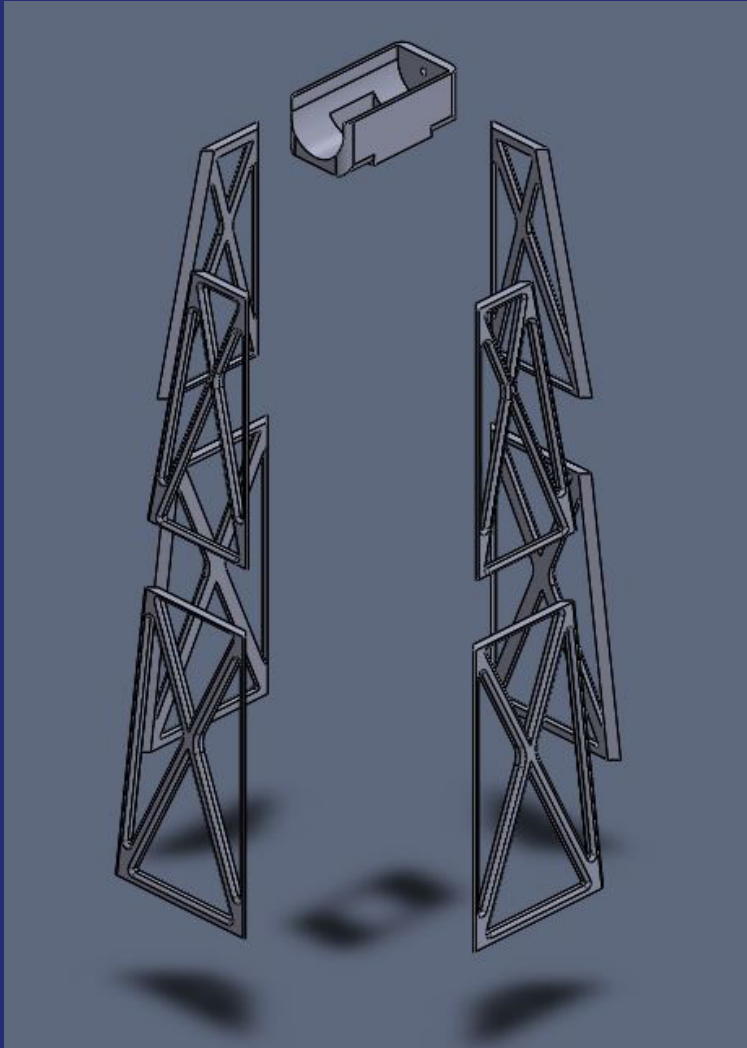
Wind Tower & Motor Hub

As the final project for E26, our group had to design, build, and test a wind turbine with our design. I was tasked with designing the tower, and the motor hub. (shown to the right) The tower had to meet certain specifications such as max volume and min/max height while trying to achieve as much stiffness as possible.



3D model of the tower and the motor hub.

Tower & Hub



Exploded View of the tower



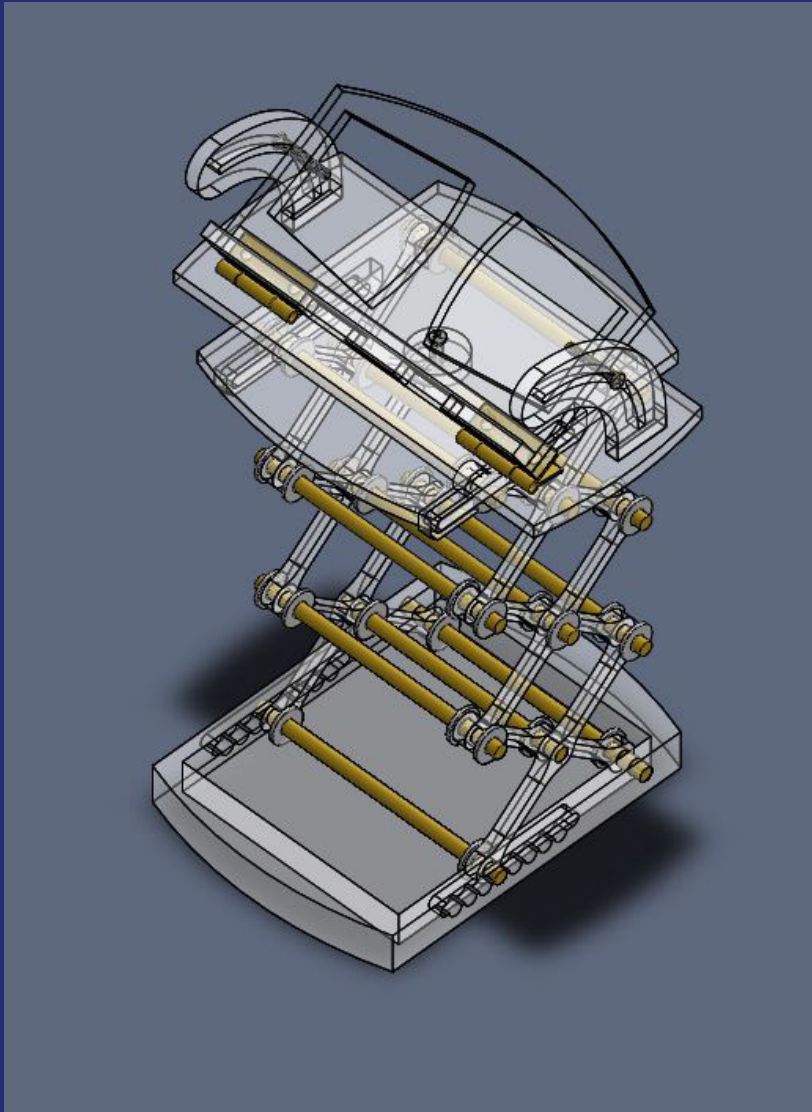
Assembly of the tower printed by the Mechanical Engineering Machine shop with FDM printer.

Phonevator

For E27, our group had created a table top scissor lift for cellphones which the user can raise the phone to an eye level. For this project, I was tasked with preparing the 3D model for laser cutting, assembling the parts and creating some of the technical drawings using GD&T.



Phonevator



Isometric 3D Model View

The parts are made from lasercut quarter inch thick acrylic sheet, brass tubings, hinges, and aluminum screws and washers. The parts are either held together by super glue or by screws into threaded holes.

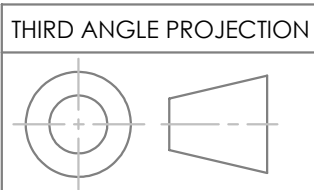
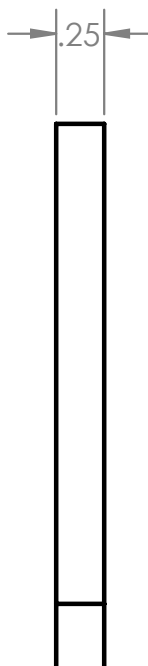
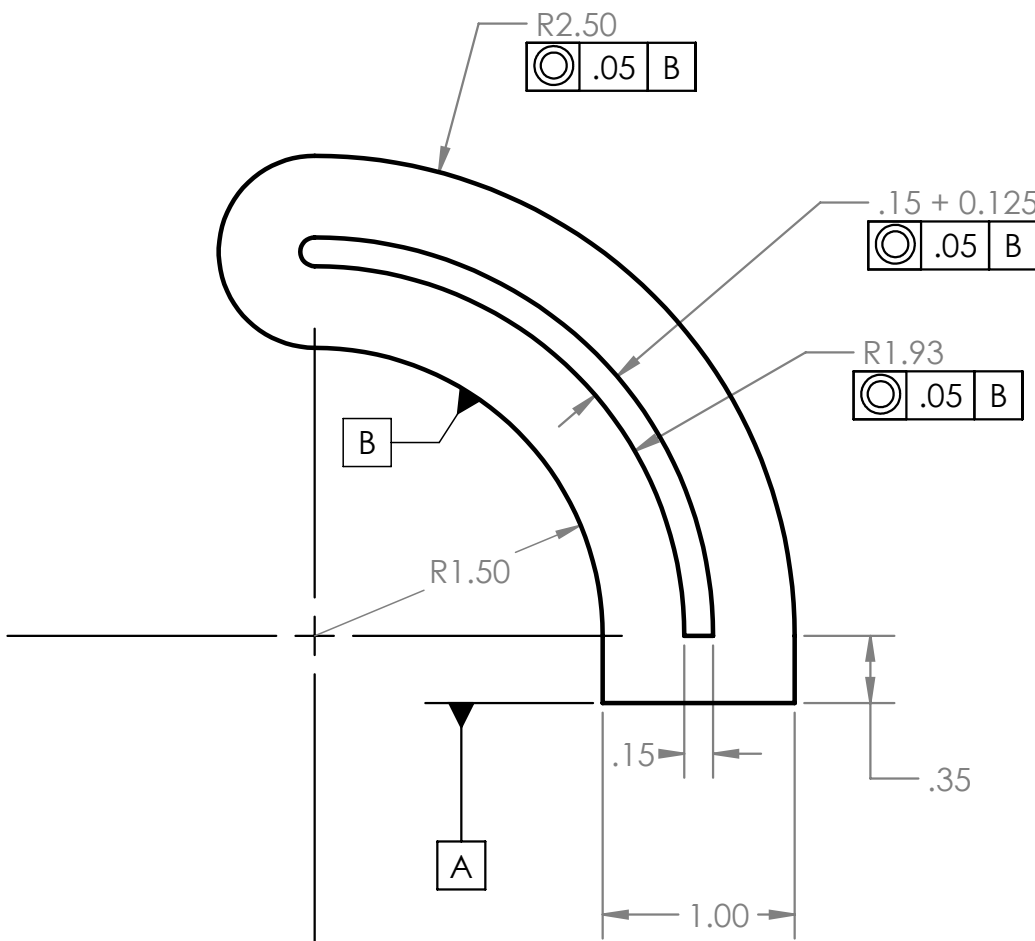
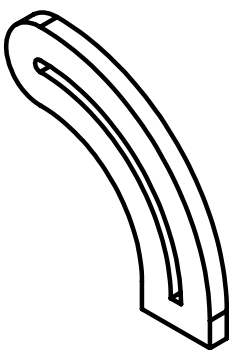
4

3

2

1

Isometric Pictorial for Clarity



THIRD ANGLE PROJECTION

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF E27 GROUP #9. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF E27 GROUP #9 IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	GROUP NUMBER 9	
DIMENSIONS ARE IN INCHES		DRAWN	S.M	12/7/2016	TITLE: Mount Pivot Guide
TOLERANCES: TWO PLACE DECIMAL ± 0.05 THREE PLACE DECIMAL ± 0.005		CHECKED	B.C	12/7/2016	
		ENG APPR.	E.L.	12/7/2016	
		COMMENTS:			SIZE Part NO. REV B 206.3 1
MATERIAL Acrylonitrile Butadiene Styrene					
FINISH None					
DO NOT SCALE DRAWING					SCALE: 1:1 SHEET 1 OF 1

4

3

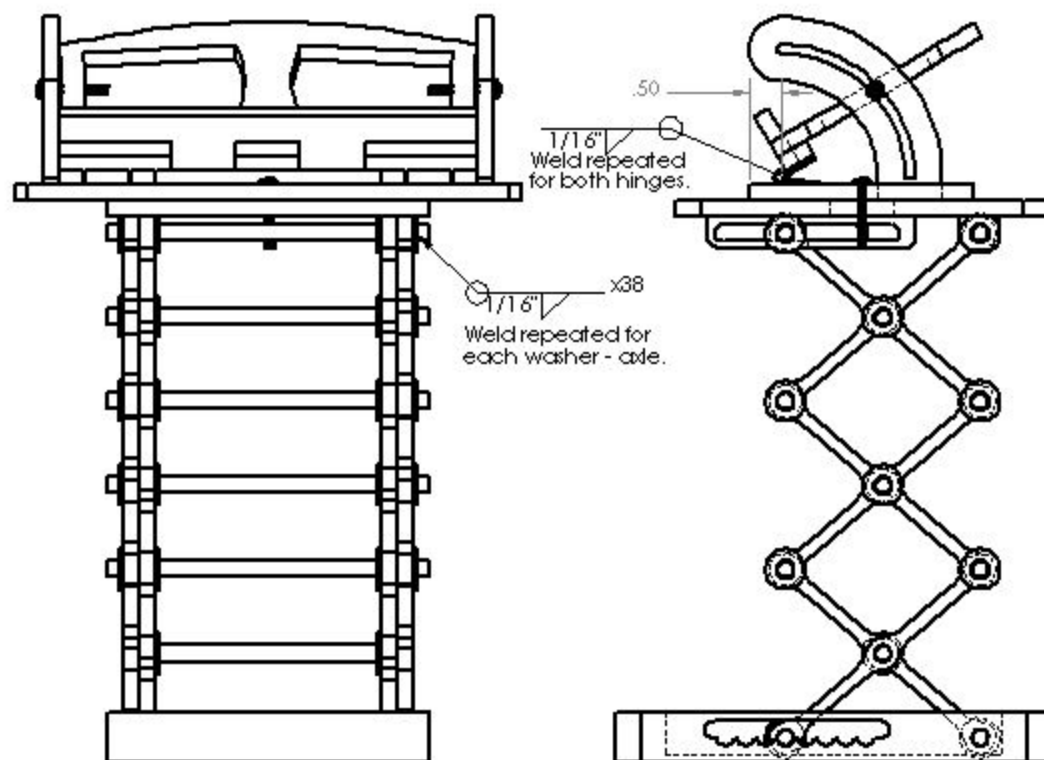
2

1

Isometric Pictorial for Clarity

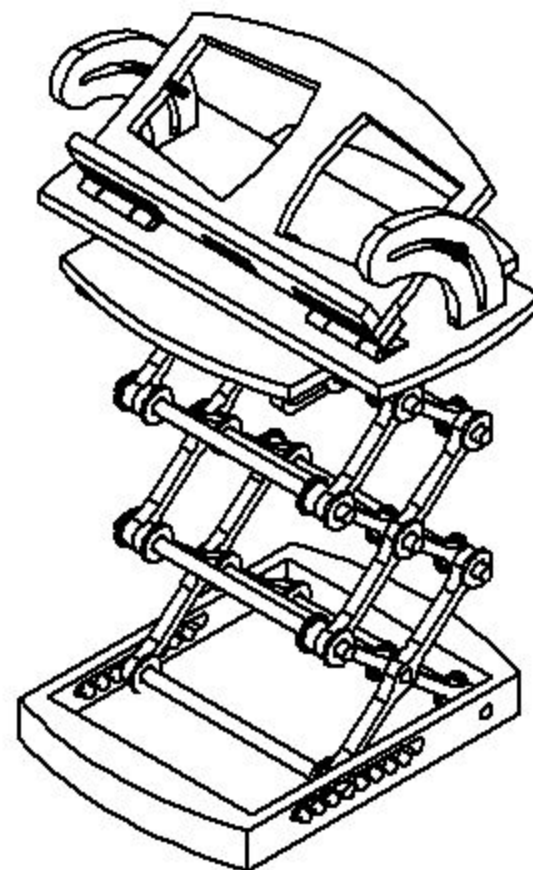
B

B



A

A



THIRD ANGLE PROJECTION



PROPERTY AND CONFIDENTIALITY
 THIS DRAWING IS THE PROPERTY OF
 THE COMPANY AND IS NOT TO BE
 REPRODUCED OR USED IN ANY MANNER
 WITHOUT THE WRITTEN PERMISSION OF
 THE COMPANY.

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 TWO PLACE DECIMAL ± .005
 THREE PLACE DECIMAL ± .0005

MATERIAL
 NONE
 NO PARTS IN DRAWING

DRAWN S.M. 10/7/2010
 CHECKED E.C. 10/7/2010
 ENG. APPRO. F.I. 10/7/2010

COMMENTS:

GROUP NUMBER 9

TITLE:

Outline Assembly

SIZE Part No.

B

Assem 3

REV

1

SCALE: 1:4

SHEET 1 OF 1

4

3

2

1