Thomas Pastor
Anthony Garcia
Franza Darby
Timikeyi Egbuson

Project 1: Bike to Shelf

Problem Statement

- Problem: There has been no part made to use as a shelf that the Kenyans have greatly benefited from before. It is unknown how well the design prototype will perform during actual use.
- Goal: To build a universal part to work as a shelf on the bike that is able to hold a sufficient amount of weight.
- Constraints: The design should be low cost and easy to build due to lack of fabrication methods. The materials used to build this must be available in Kenya. It should also be simple to use.

Customer Needs

- Easily maneuverable and lightweight stand
- Very affordable for those that may not have much money.

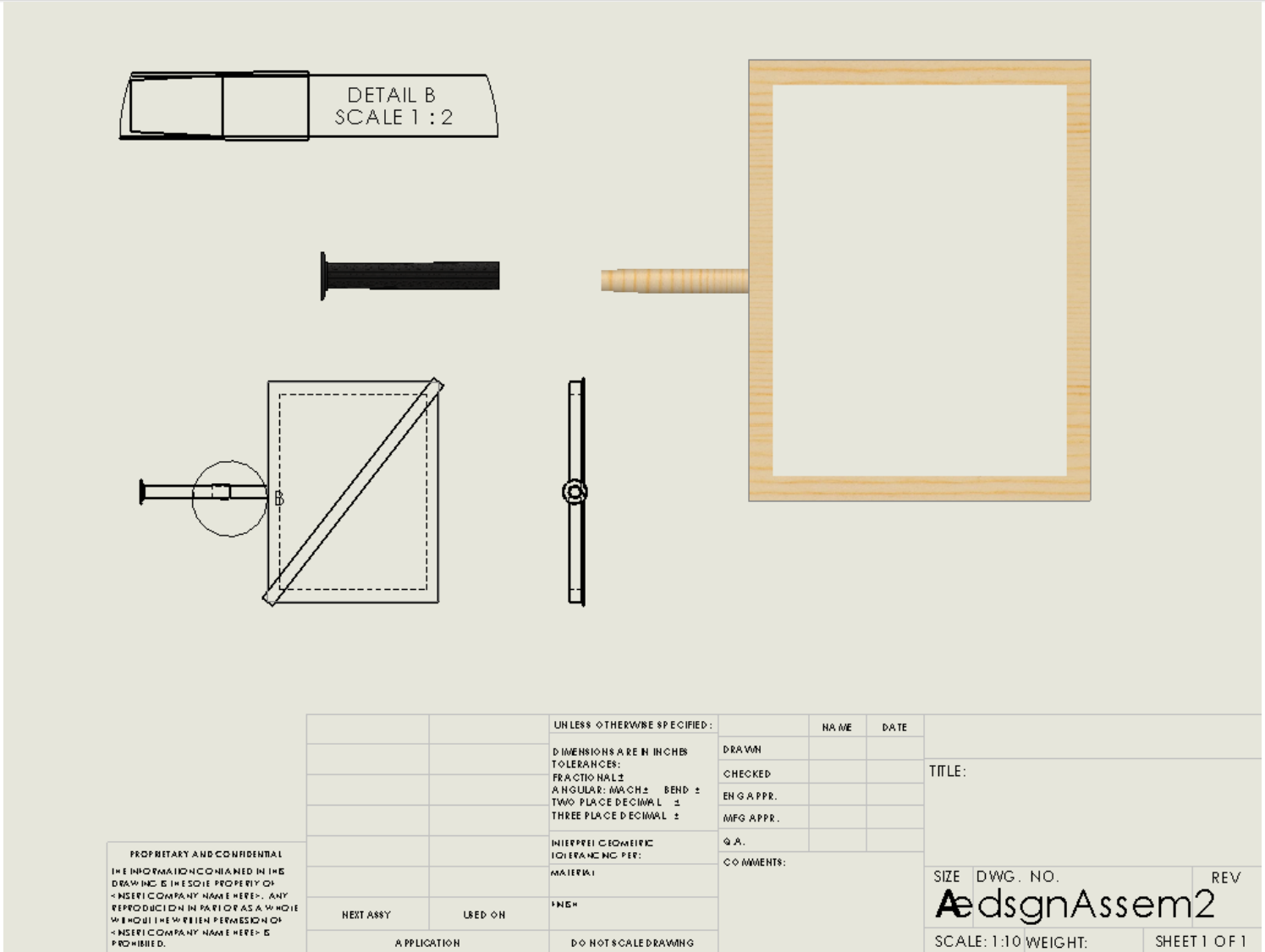
Generated Concepts

- Shelf via handlebars
- Platform elevated behind rear tire – attached to wheel's bolts
- Laid out table under the motorist

Selected Concept

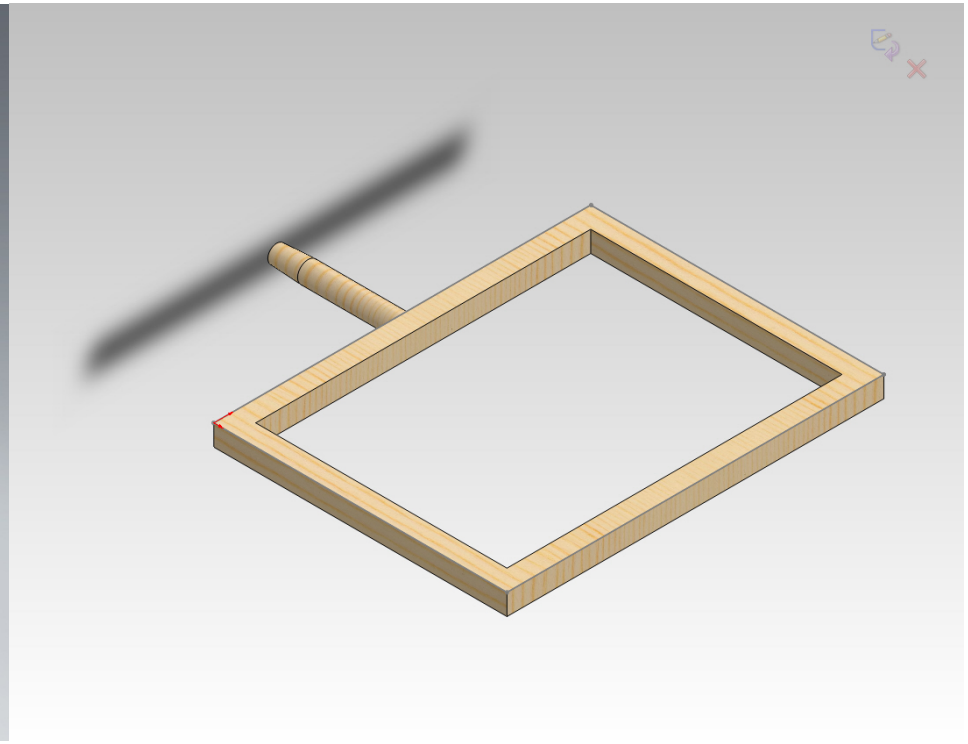
- Shelf via handlebars
  - Rectangular shaped platform
  - Lined with 1" high sides
  - Diagonally attached support beam on bottom side
  - Attached to a circular post on one long end
  - Post tapers off on free side
  - Tapered end enters handlebar

CAD Drawings



Prototypes (continued)

- Solid Works:



Photos