

GNG 1103: Deliverable F

Prototype I and Customer Feedback

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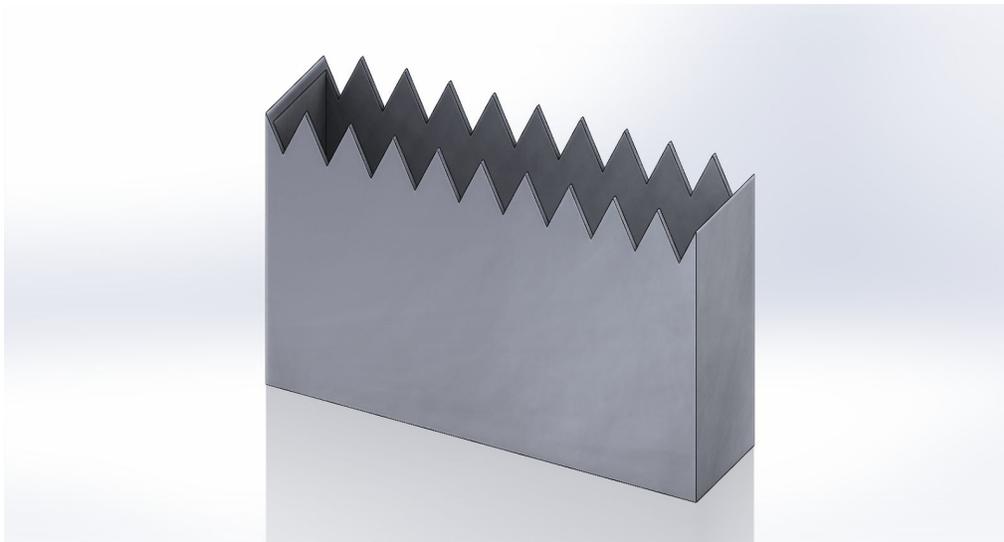
Prototype I: Bed Frame

Introduction

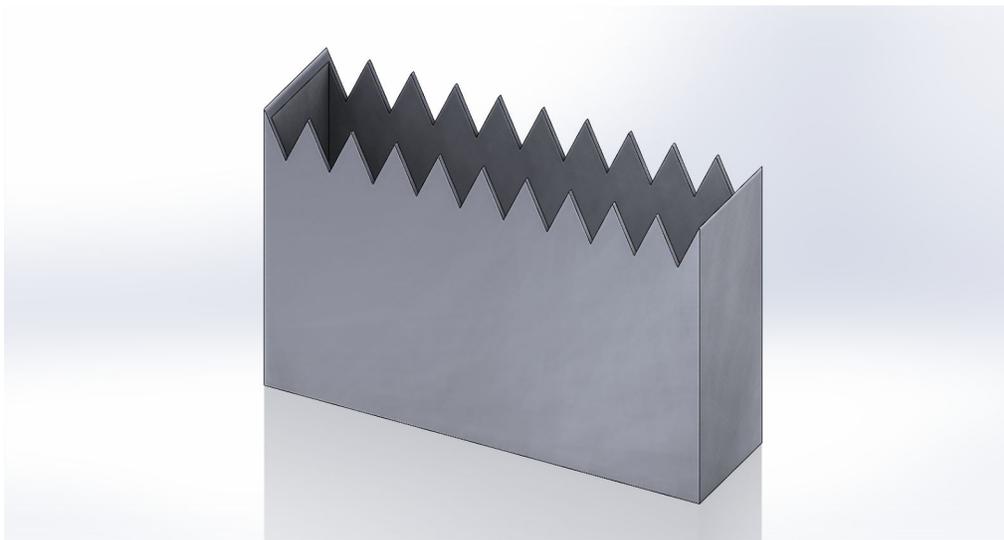
The objective of deliverable F is to receive constructive feedback from the client on the first prototype for our team's bed frame. The document goes over client feedback, goals that our team has set, testing methodology for the bed, prototype designs for the bed frame and a general outline of the project plan.

1.0 Prototype drawings

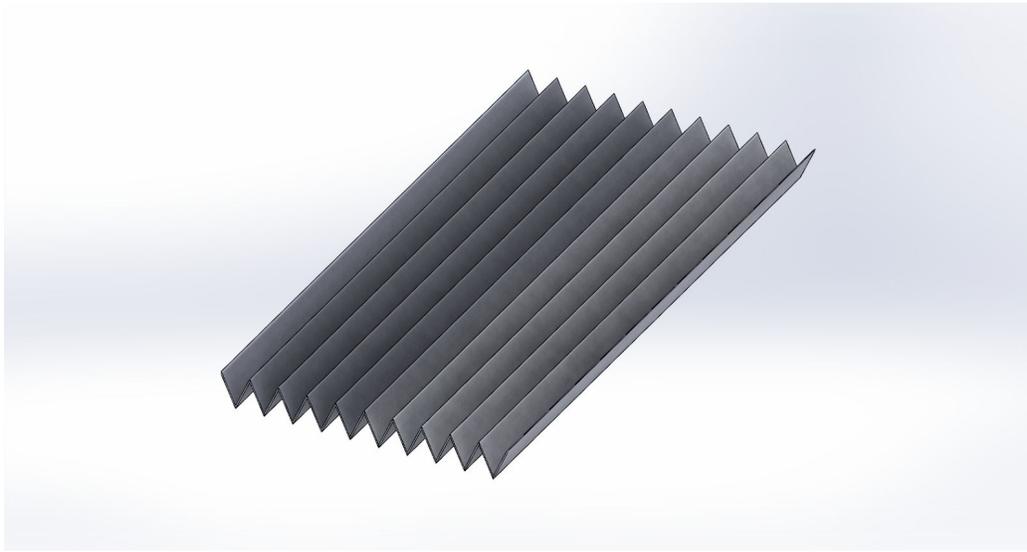
Inside Leg:



Outside Leg:



Top Sheet:



2.0 Testing Goals

Our team has designed a prototype to test design feasibility and functionality. The secondary focus of our prototype will be to ascertain an idea of the full-scale solution's weight-bearing capability.

Our test would include:

- Functionality Test
- Strength Test

2.1 Testing Methodology

We will evaluate our simple prototype for functionality based on subjective ratings — as the materials used are not indicative of the final design. We will test the stability of the complete frame when a load is applied, both vertically and from an angle, to the top of the frame. The legs will be rated on their ability to maintain their shape under torsional loads.

3.0 Outline

Our team intends to present a prototype made of cardboard that satisfies the tests above. The cardboard bed frame will have a total of 4 legs and a foldable top sheet. This prototype is clean, simple and fully demonstrates the function of solution.

3.1 Design Criteria

- The user will be able to have a safe place to sleep
- The bed frame has enough strength to hold the minimum weight requirement of 250 pounds

- The bed frame is lightweight, can be compacted and is easy and quick to operate

3.2 Client Presentation

- Inform the client on how the bed frame functions
- Demonstrate how the bed frame will be operated by assembling and disassembling the bed frame in less than 5 minutes
- Ask client feedback: whether she is satisfied with the test and how they are completed

4.0 Client Feedback

The client seemed to agree with our solution design. She clarified some factors that could be ignored, and assumption that can be made which we thought were important to the design. After clarifying with her, we decided our solution would be more efficient if we added something to prevent the mattress from sliding off the top of the frame. Aswell, she clarified that making the base of the frame water-resistant was a priority for product longevity. Though in regards to the prototype, for the sake of allowing us to stay within the budget she told us to choose whichever option to make the bed frame water-resistant that would allow us to stay within budget, even if it did not provide as great of protection, as long we addressed the alternatives for real-life application. The client confirmed that our updated design solution is more than satisfactory for her needs and gave us the go ahead to proceed with implementation.

Conclusion

To conclude, we were successful in communicating our ideas and the design to the client, through the prototype. Though there was an overall general satisfaction with the design, the client did give constructive feedback for us to consider to improve on the design. Based on the feedback we received from our client, we reassessed how we could improve and formed a solution. A question the client asked was how the design would keep the mattress from sliding off. This was an aspect to the design that we had not fully considered. Upon receiving this feedback and assessing our options to fix this problem, to prevent the mattress from sliding off of the bed frame, we decided that some form of raised walls should be added along the boarder of the frame to fence in the mattress.