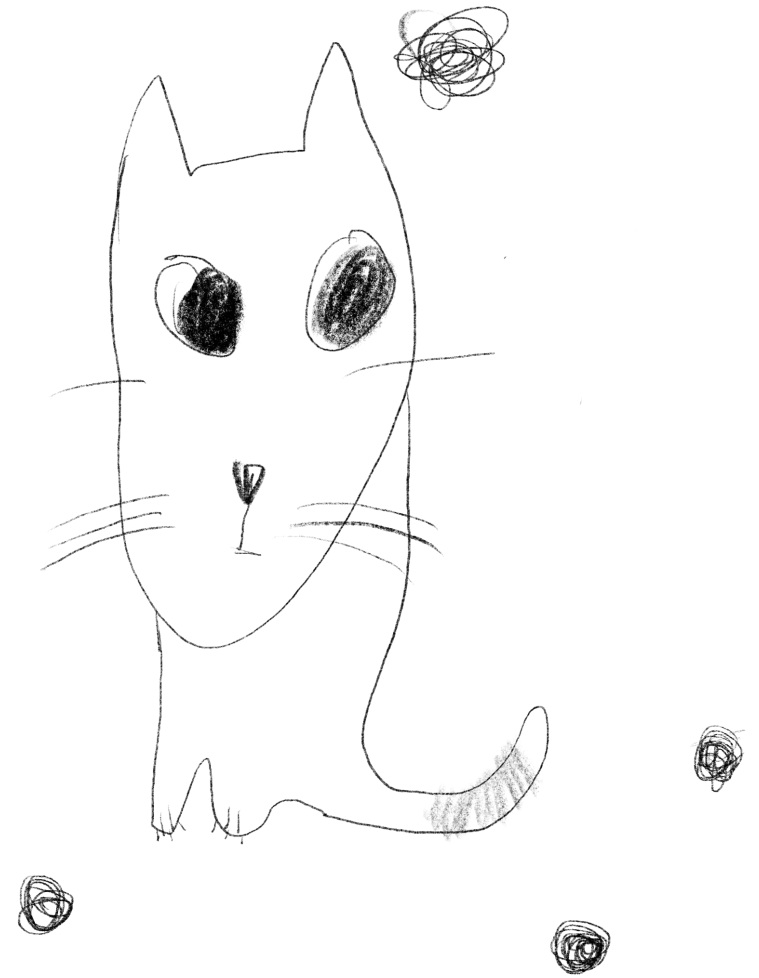


# Catcha: toy retriever designed for domestic cats

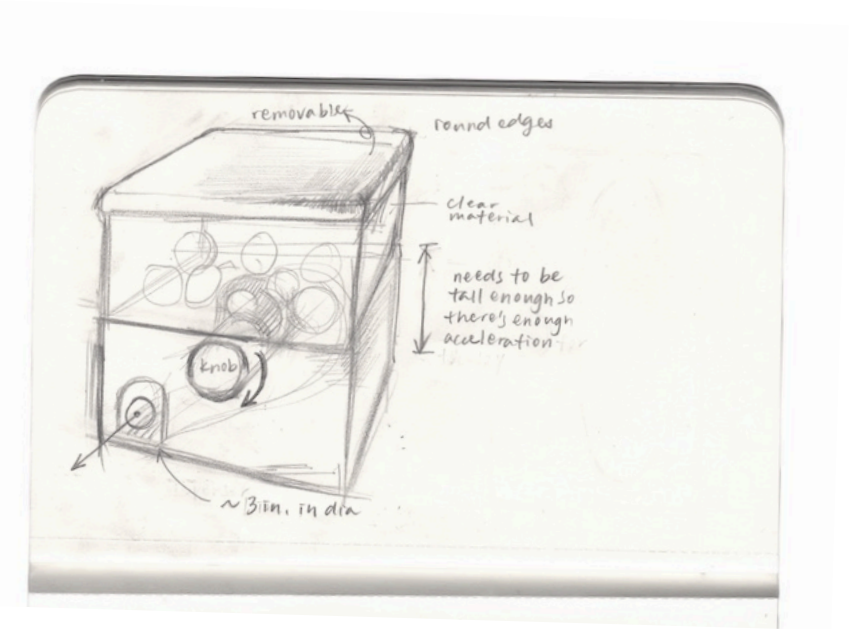
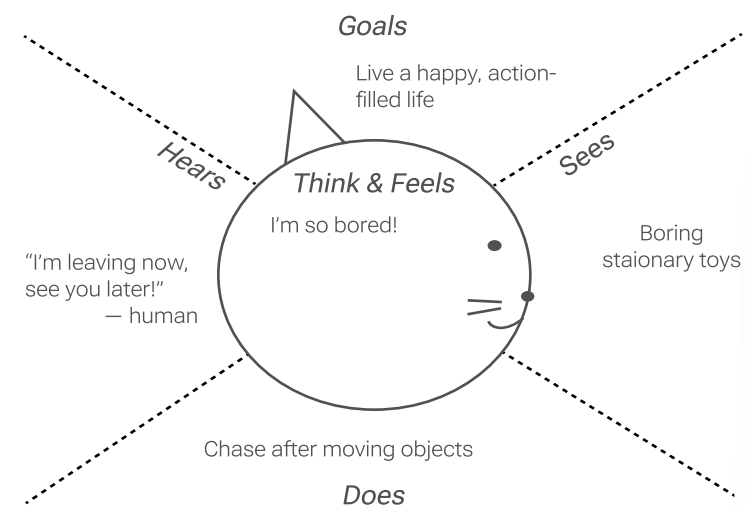
Inspired by gacha/gumball machines, Catcha is an automated toy retriever that can dispense toys for house cats upon request.



Ideation

A common frustration among cat owners is when cats lose interest over toys unless the toys are actively engaged in motion. This presents a common challenge for pet owners who struggle to find enough time to play with their pets, as it's a common issue for cats to feel bored, missing out on potential enrichment opportunities.

This inspired my concept: a cat-operated gacha machine that dispenses toys at high velocity, creating an exciting chase experience. This solution allows cats to initiate play independently while maintaining their natural hunting instincts.



User Interview

I wanted to know what kind of “bait” is the most attractive to cats. Based on my previous observations of my cat's behavior, I developed three prototypes:

- 1. A bite-sized furry toy with a tiny bell
- 2. An octopus-shaped design with dangling tentacles made out of paper
- 3. A colorful bite-sized toy

After a few rounds of testing, the paper octopus proved to be the most effective, with the highest rate of removal from its taped position.



The bait will be attached to the activation mechanism of the gacha machine.

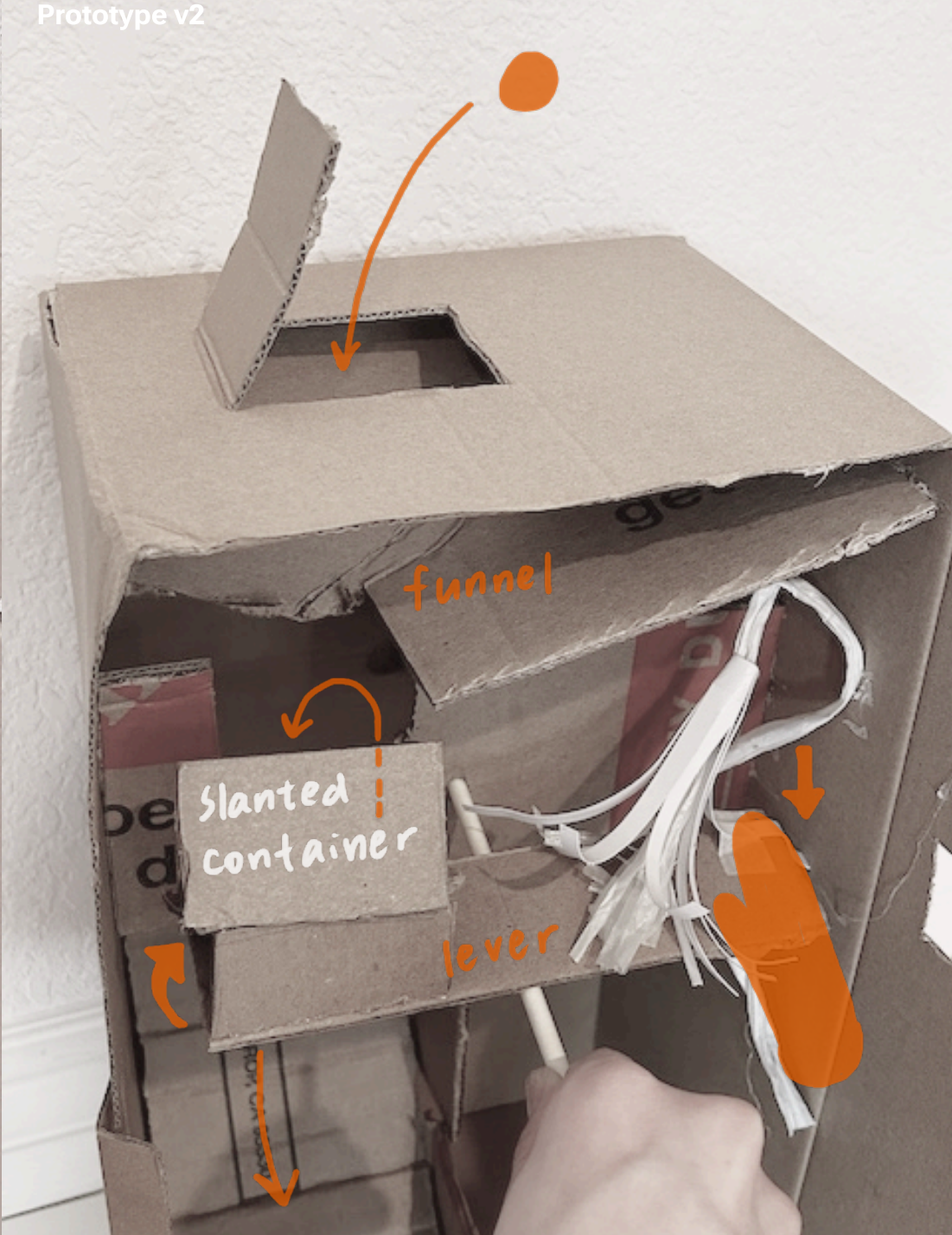
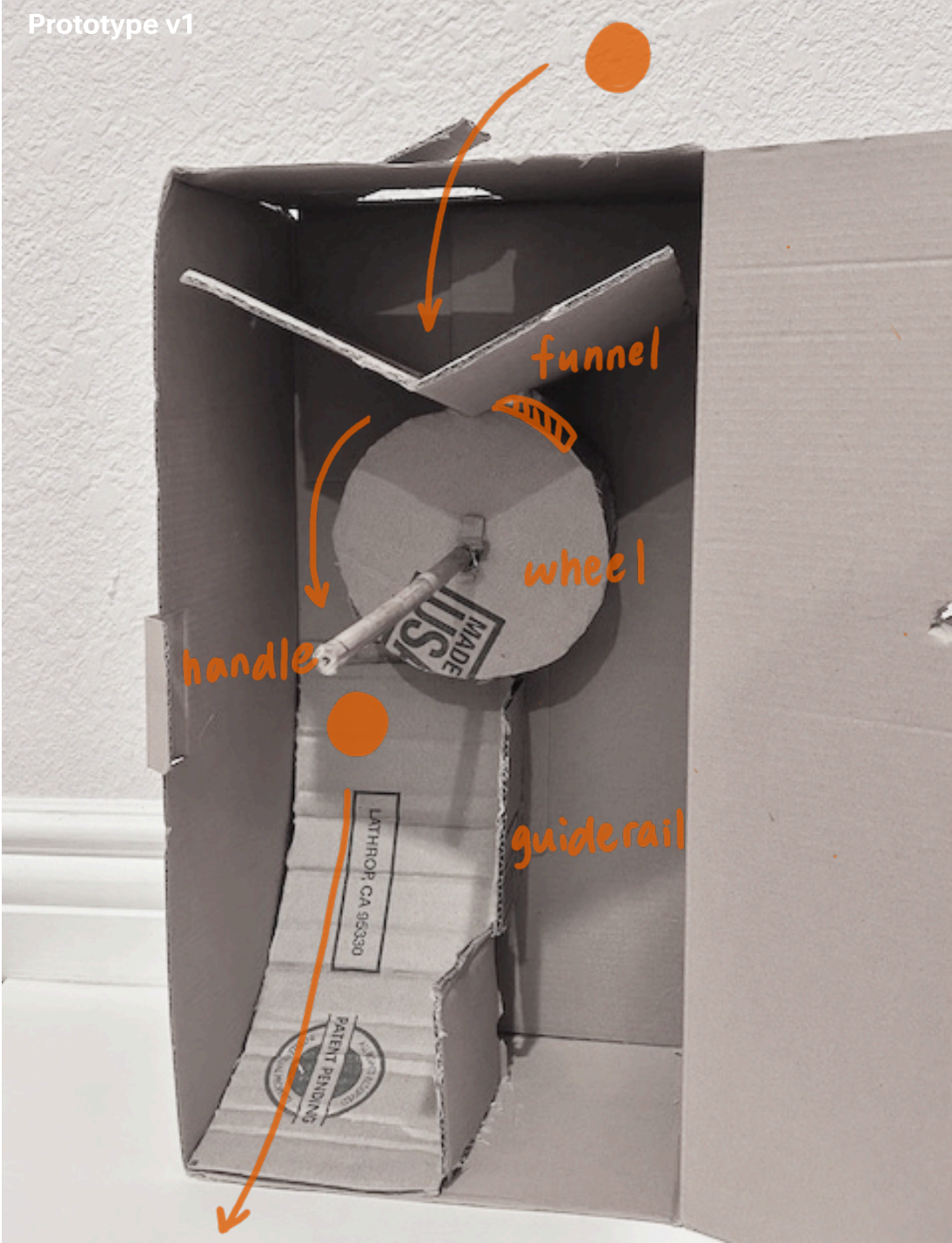


Cardboard Prototyping

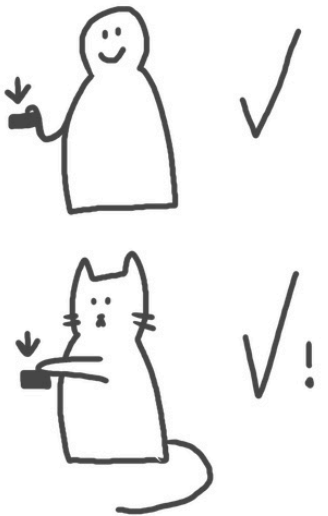
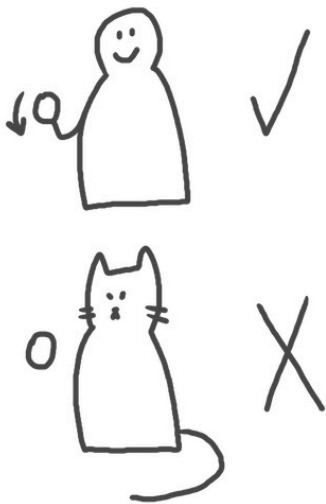
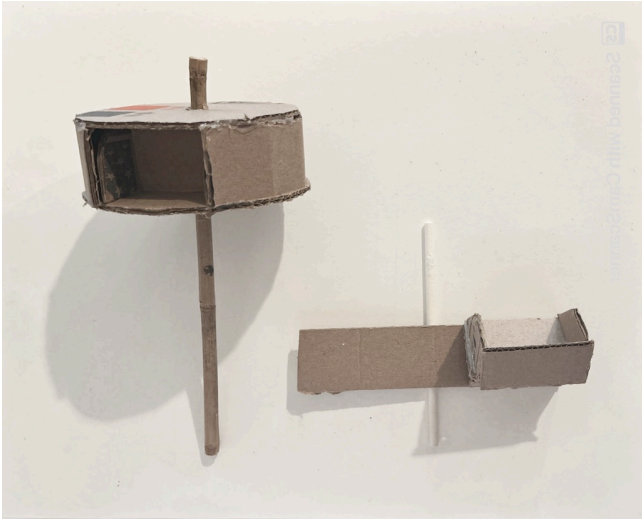
Prototype v1 is designed similar to traditional gacha machines. While it functioned perfectly when operated by humans, the compartment wheel was too heavy to be rotated by cats. This mechanical resistance became the key focus for improvement.

Despite this central challenge, the rest of the mechanical elements performed as designed.

Prototype v2 is designed with another activation mechanism: a pull down system that is more achievable by cats. This proved to be successful as my cat was able to independently operate the machine.



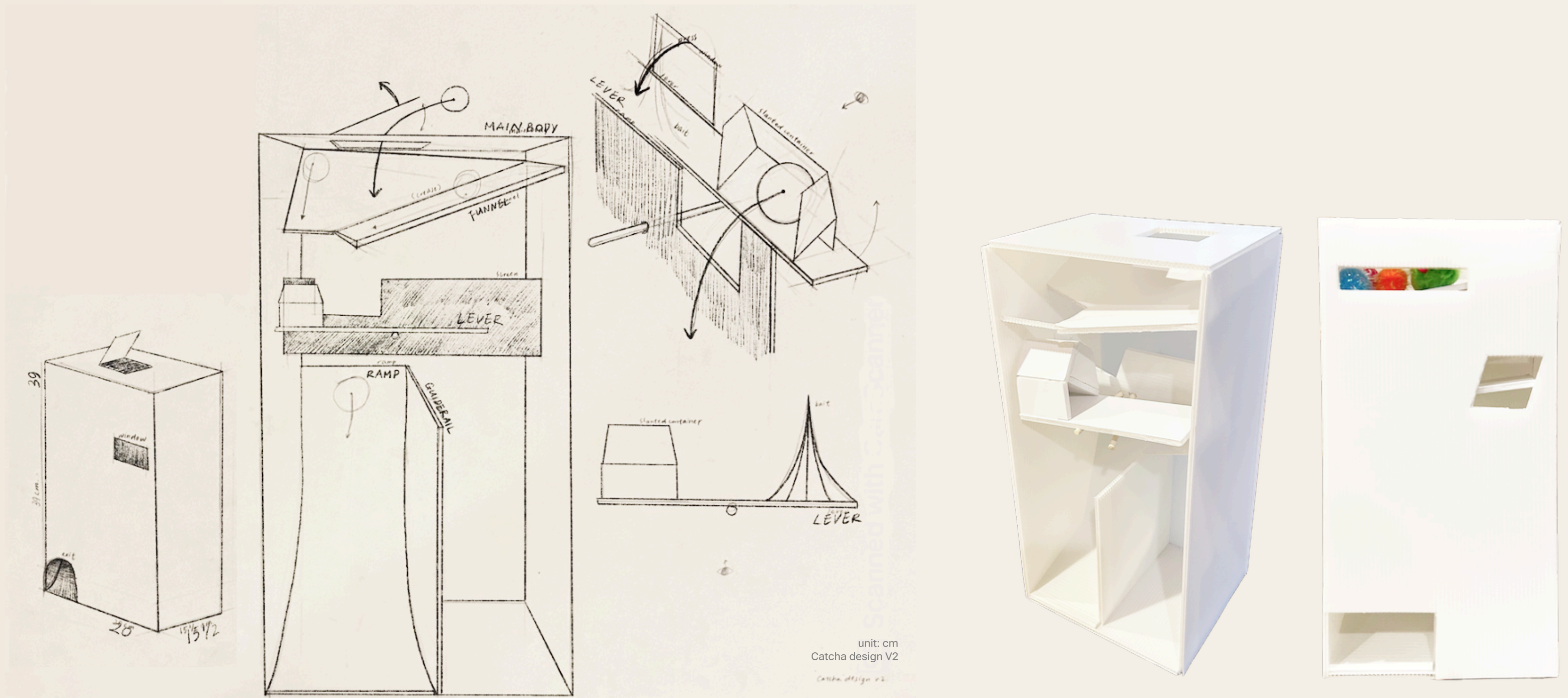
activation mechanism, v1 vs. v2





## The Deliverable

With the Prototype V2 design spec, I created the final product with coroplast, PVC board, and foam board.





## User Testing & Reflection

The user testing session proved that cats can lose interest over frequently played toys. During the initial phase, customers may need to regularly rotate the activation bait in order to maintain the cats' interest. As cats begin to understand the cause-and-effect relationship between their actions and toy dispensing, they would be able to conduct conscious activations of the machine without attention-tempting baits.

I placed Catcha near where he usually goes for drinks of water. I placed my phone at a distance with the video recording, and maintained a distance so there's no interference with his exploration.

Initially, the bait was the paper octopus that I've already let him play with for a few times. He quickly lost interest and walked away.

I attached a new bait: a feather attached to an elastic string. He came around again and this time, he successfully operated Catcha!

*toy dispensed!*

This learning process demonstrated an encouraging progression in feline interaction with Catcha. As cats developed an understanding that their actions directly led to play rewards, their engagement shifted from being stimulus-driven to showing purposeful interaction. This observation aligns with established research on feline cognitive development, where cats learn to perform specific actions to achieve desired outcomes.

The final prototype demonstrates that effective pet enrichment don't require complex electronics or expensive manufacturing processes. By focusing on mechanical design and animal behavior, this solution offers an accessible way to enhance cats' play experiences.