

Honey Bee Hoarding Cage Final Presentation

Team 109

BEEver BEElievers

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Customer Requirements & Engineering Specifications

Design Goal: Modifying modular hoarding cage to prevent lab bees from escaping

Cage needs to be:

- Lightweight
- Durable
- Safe to handle
- Affordable
- Limit bee escape

Specifications:

- Made of strong clear plastic, resistant to chipping
- Under \$70 per cage
- Fit 80 cages in bee incubator

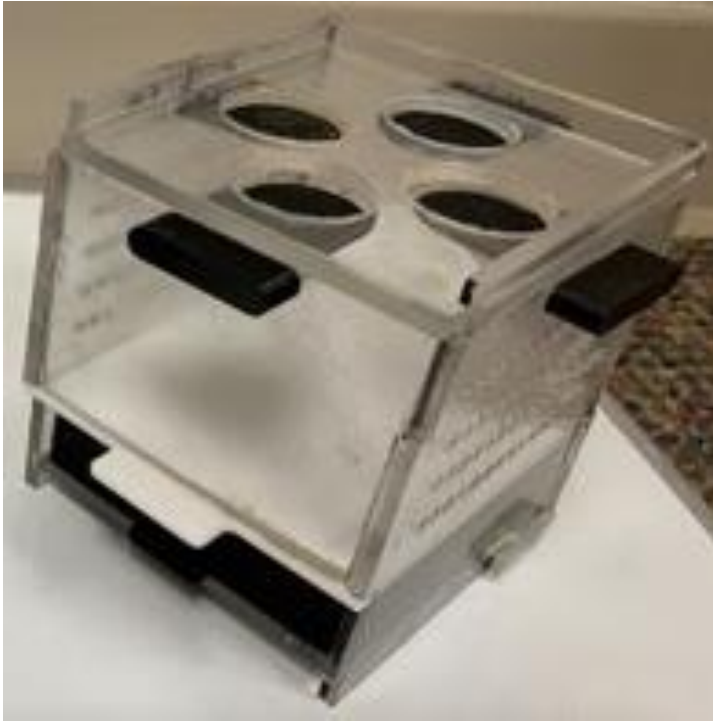
The Original Cages



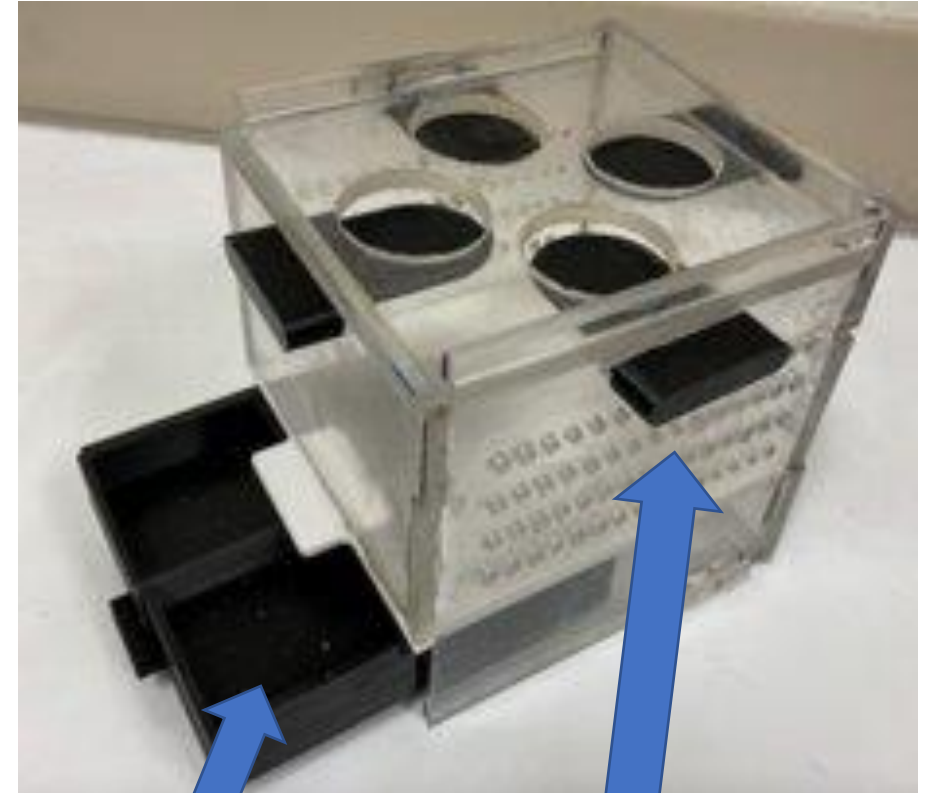
Previous capstone's final prototype

Current bee lab cages

Prototype 1



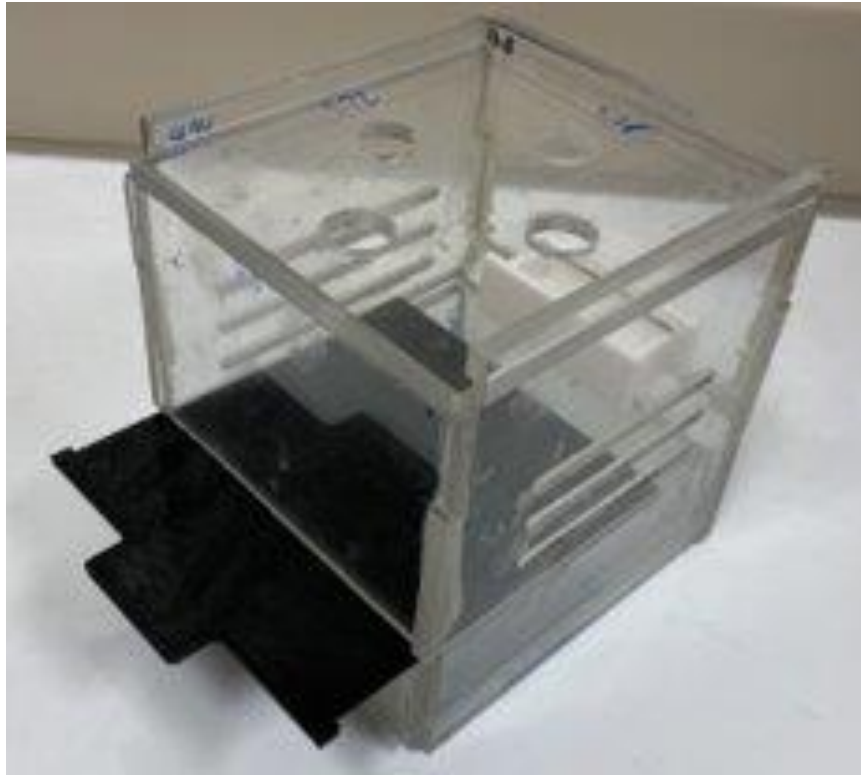
4 individual sliders that cover each roof hole



Deep bottom drawer with food compartment

Ventilation holes

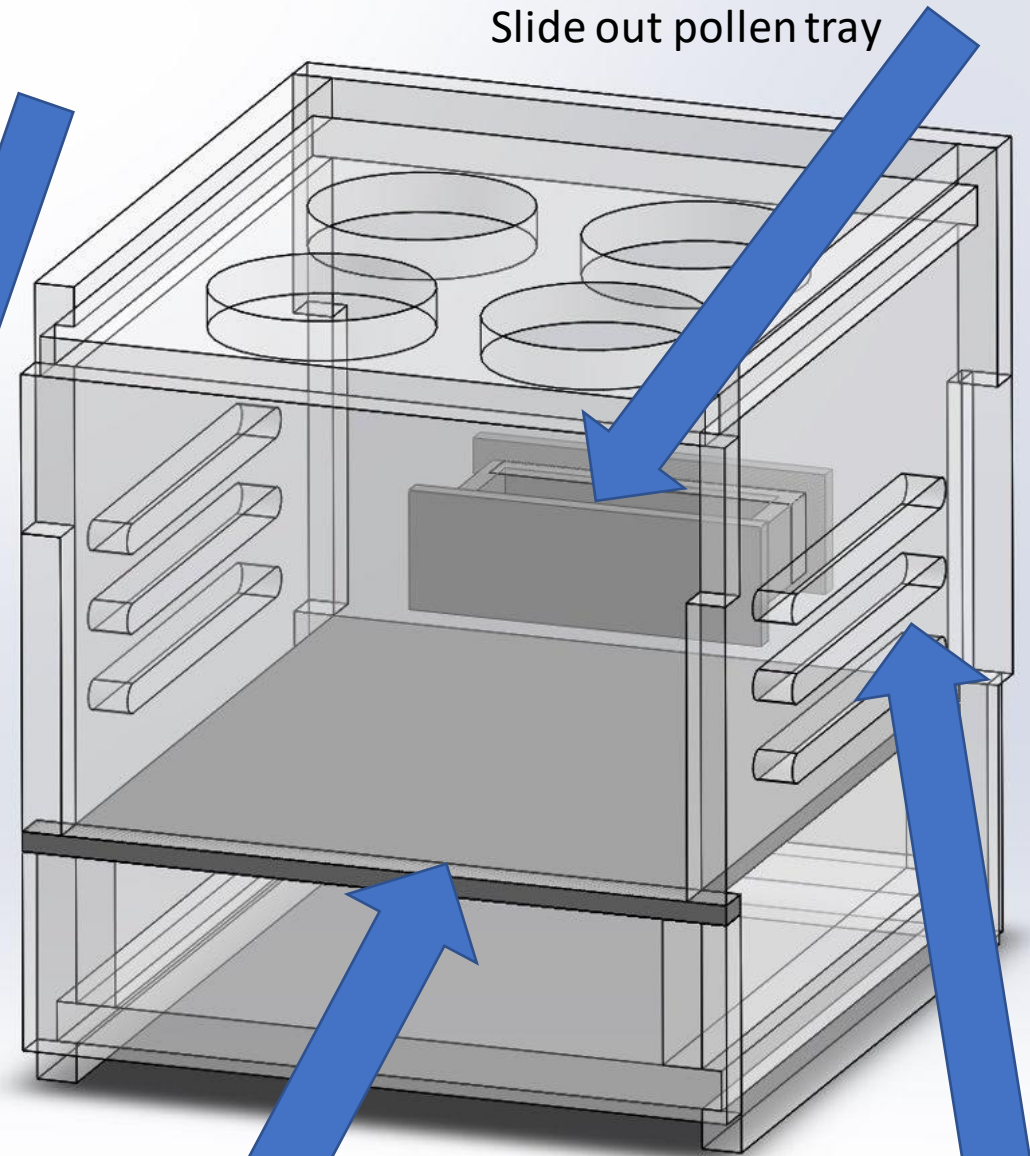
Prototype 2



3D printed trough feeder



Dual threaded feeder vial

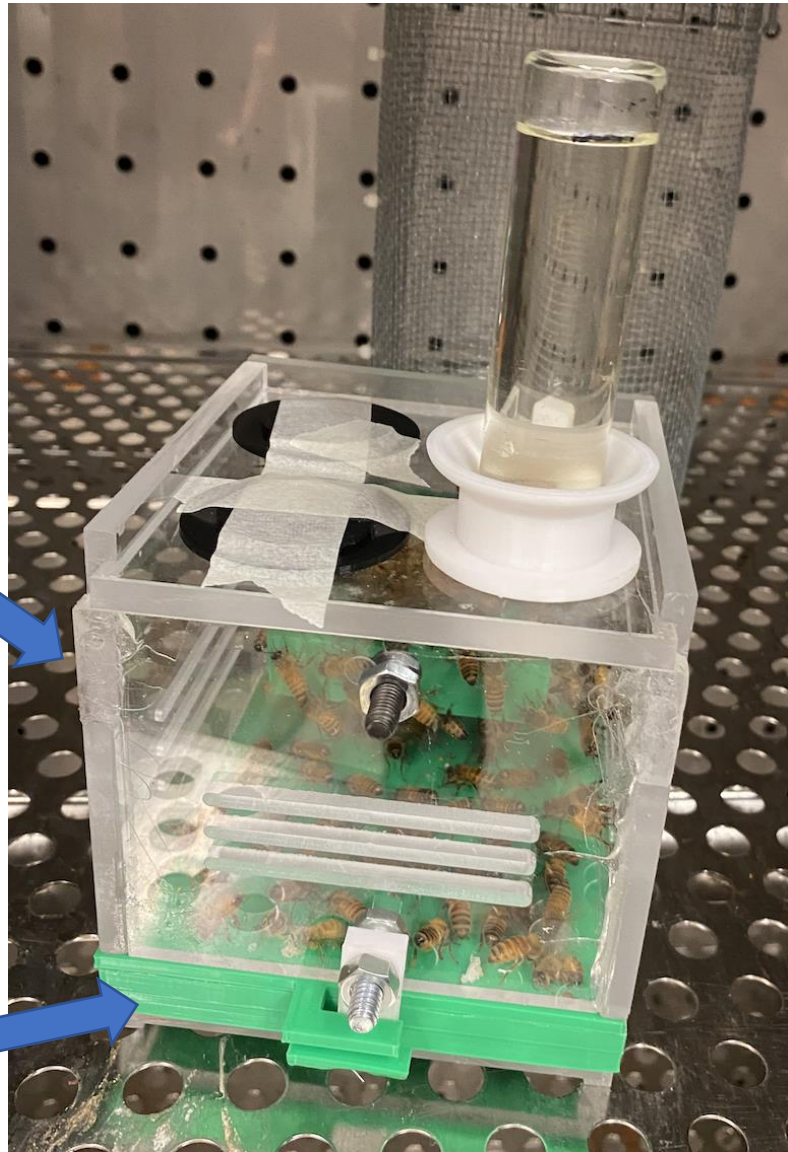


Slide out pollen tray

Slide out divider and acrylic bottom drawer

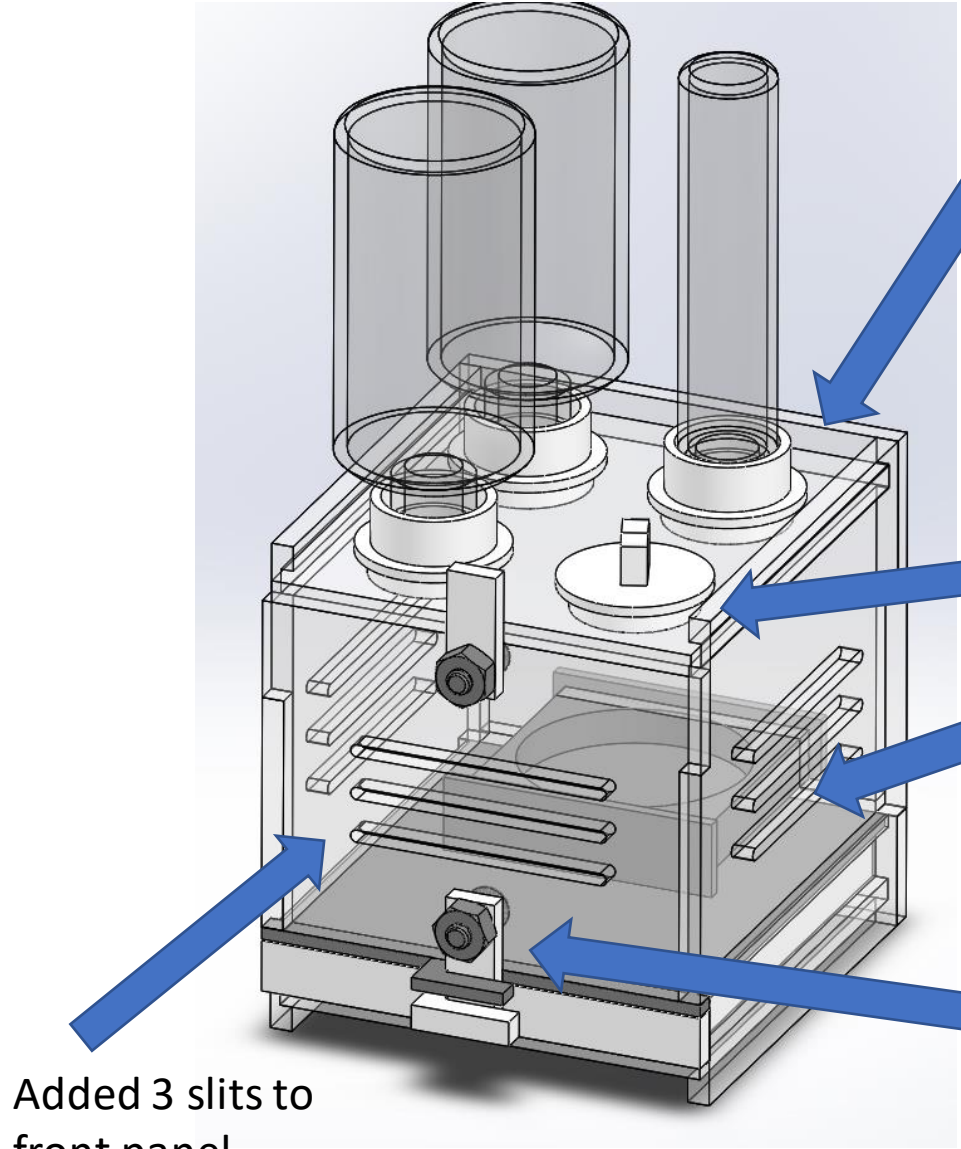
3 ventilation slits

Prototype 3



Water-resistant
PC-Clear epoxy

Shallower
bottom
drawer



Added 3 slits to
front panel

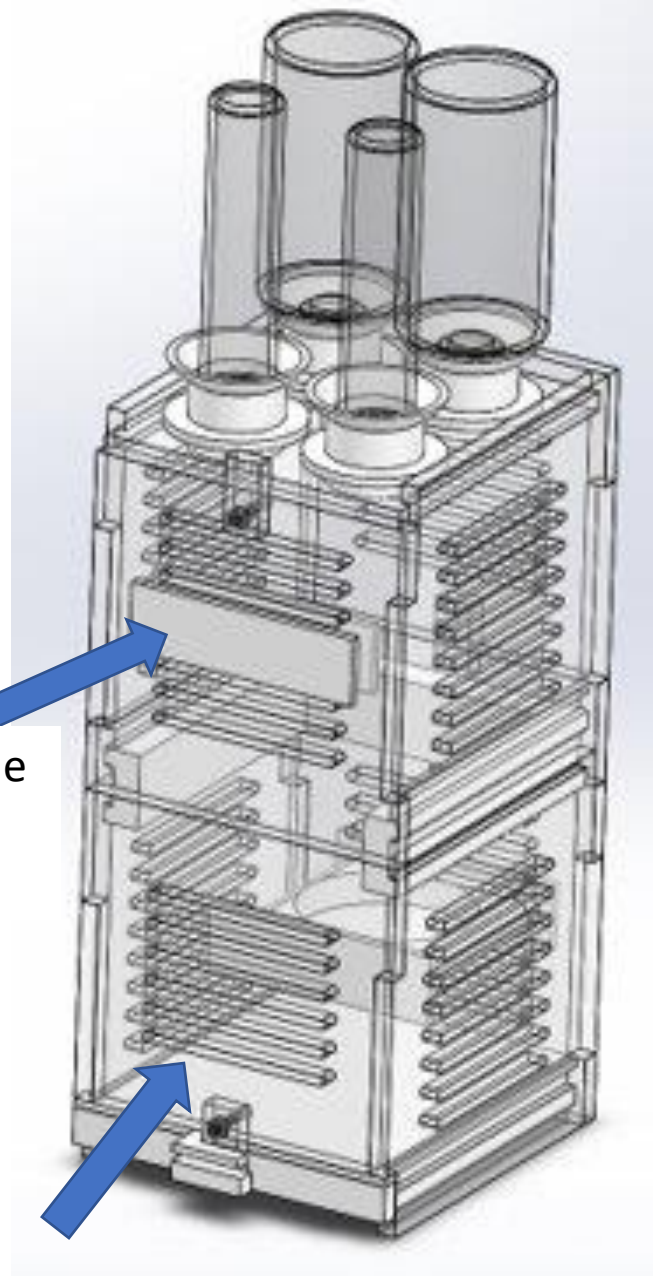
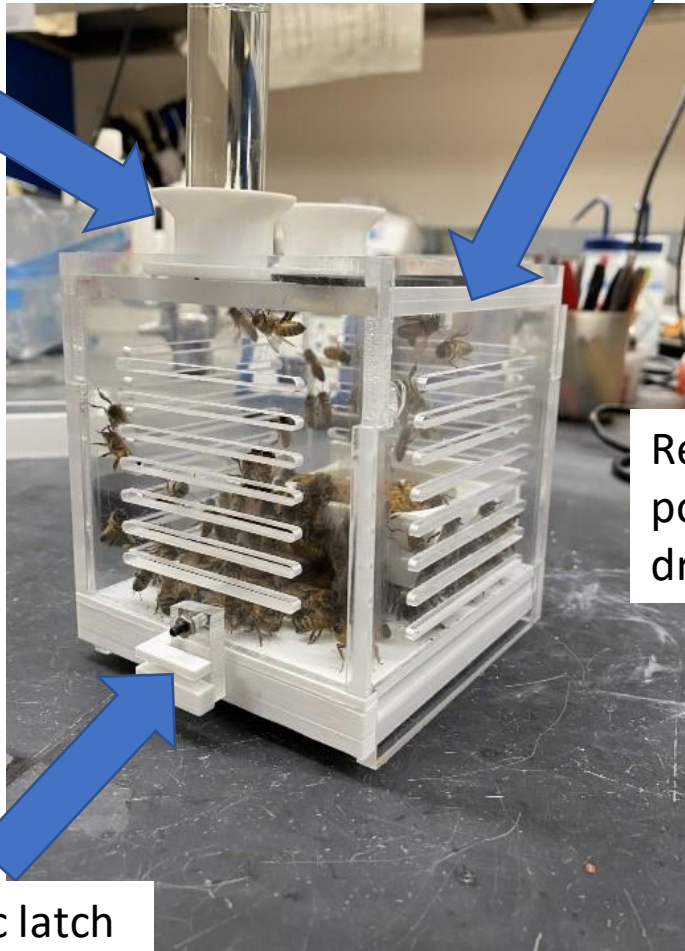
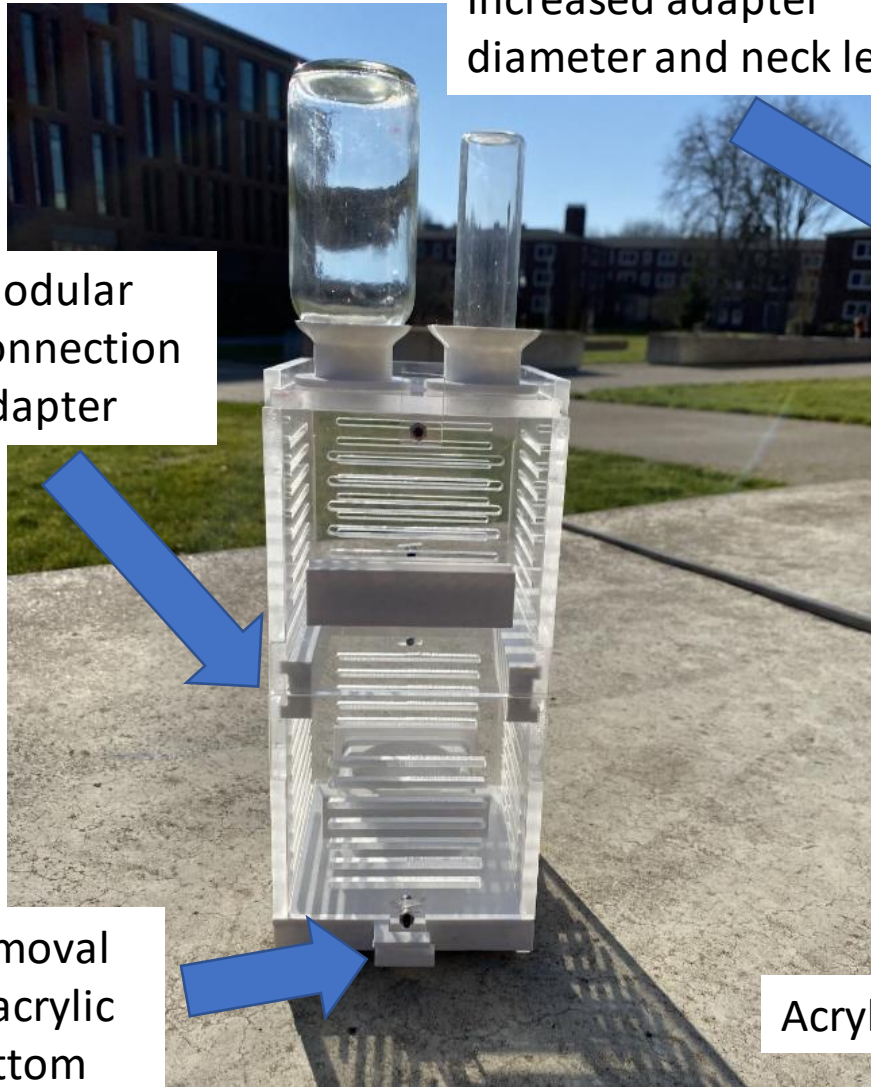
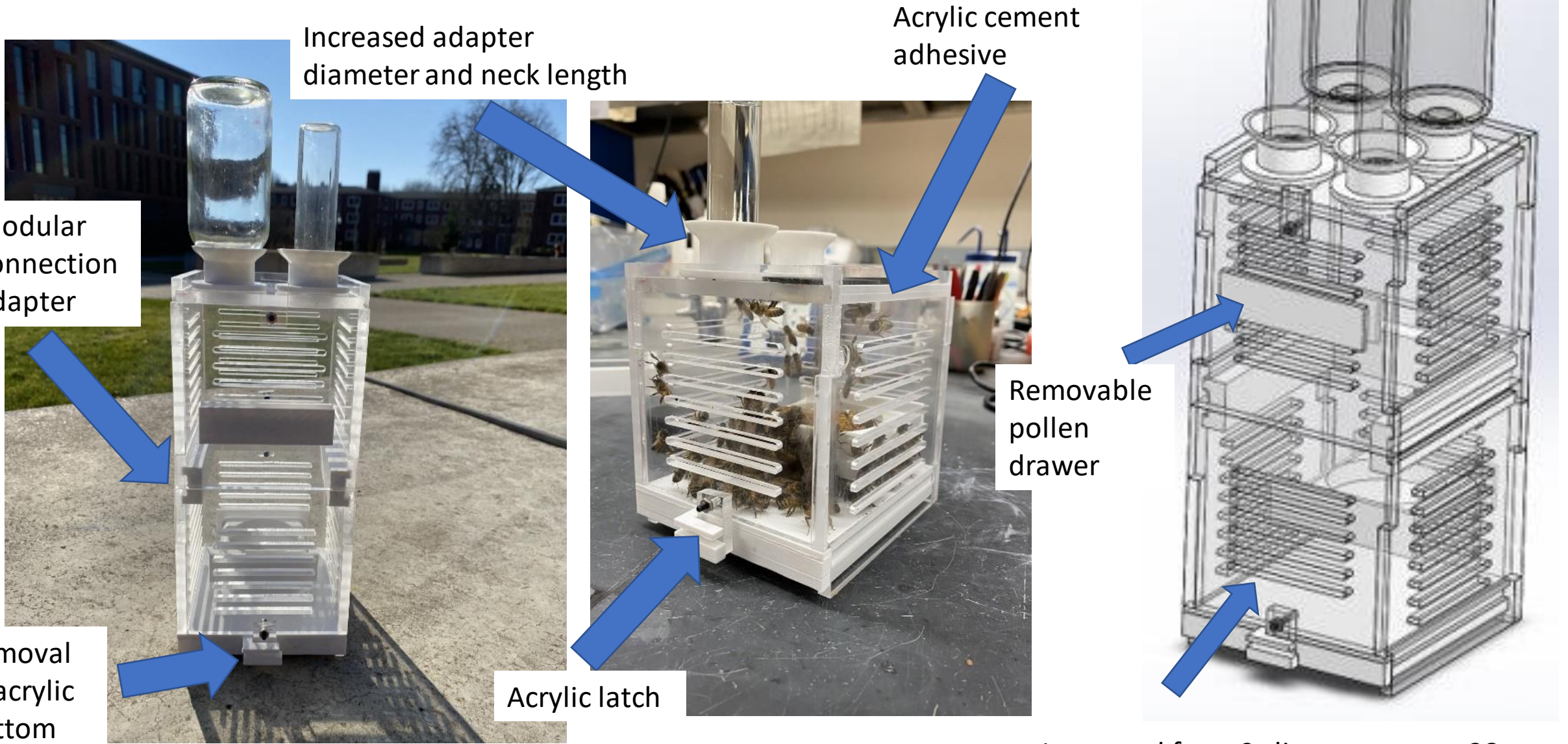
Feeder caps to
hold different
sized bottles

New roof hole
stoppers

Pollen drawer
sized to fit petri-
dish insert

New
latching
mechanism

Final Prototype



Thank You!

If you have any questions please reach out:

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