



# ANNA PETROVA

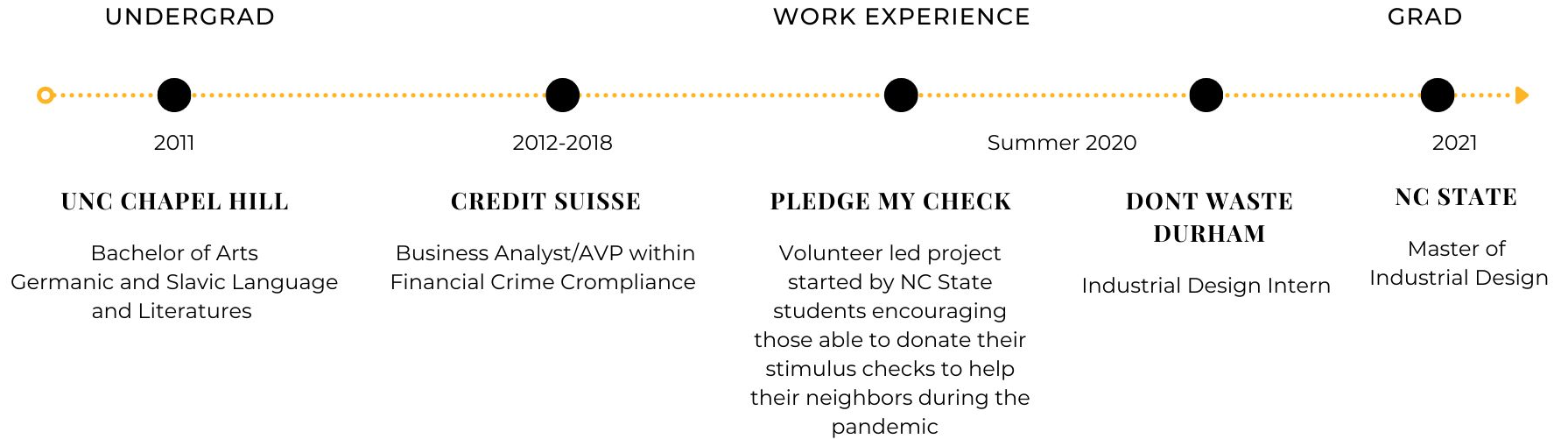
DESIGN PORTFOLIO

ABOUT ME

Hello.  
I'm Anna but I also  
go by Anya

(like Sam and Samatha)

# BACKGROUND



PROJECTS

01 Honeycomb.e



02 Rolo



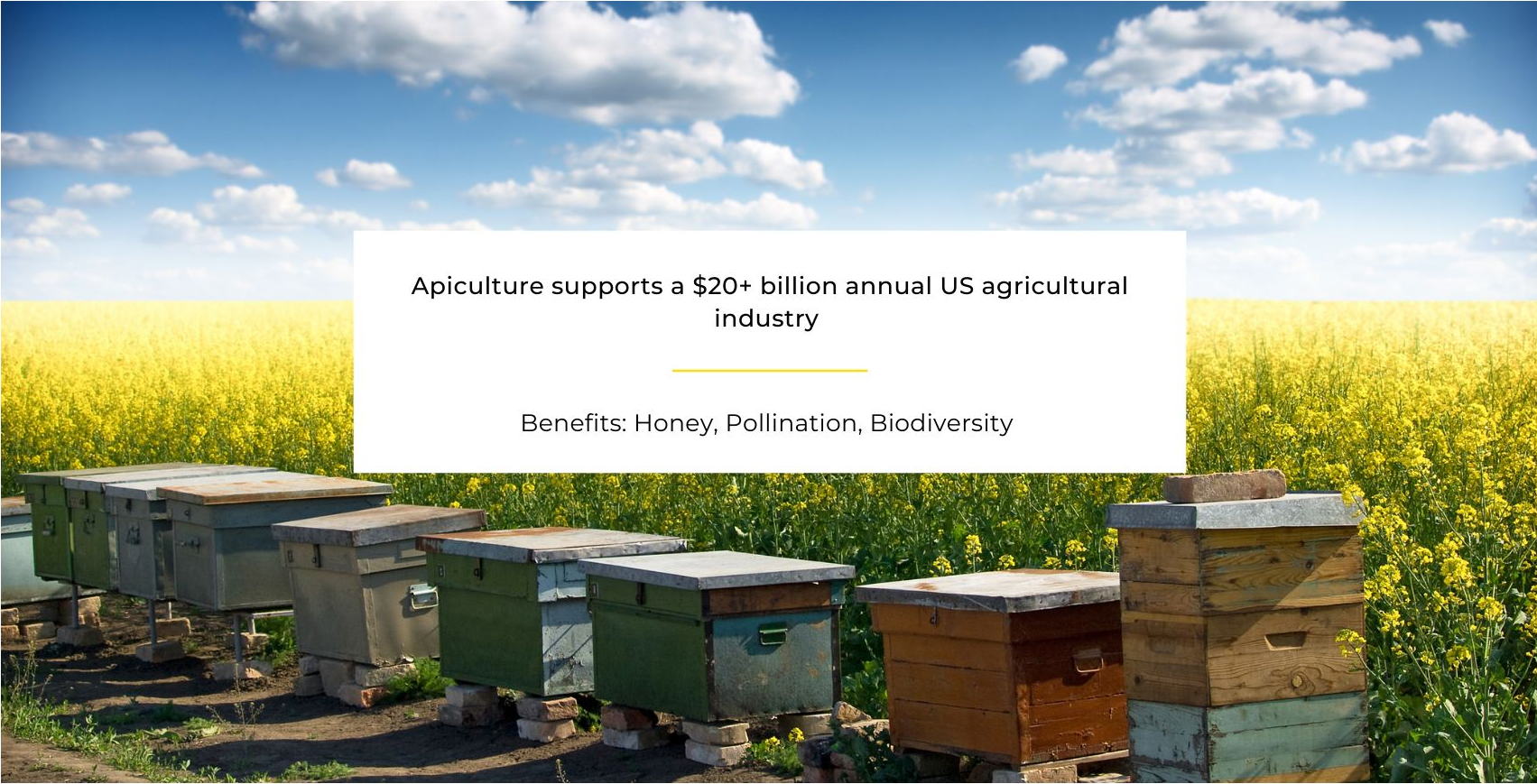
01 Honeycomb.e





# Apiculture

the keeping of bees especially on a large scale



Apiculture supports a \$20+ billion annual US agricultural industry

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Benefits: Honey, Pollination, Biodiversity

# High Risk Industry

Apiculture industry is recognized as one of the most dangerous and high risk industries to human health.  
(OSHA, 2013)





## RISKS



Stings



Smoke



Fire



Heavy  
Lifting



Semler-Collery, A., Hayek, G., Ramadler, S., & Perone, J. M. (2019). A Case of Conjunctival Bee Sting Injury with Review of the Literature on Ocular Bee Stings. *The American journal of case reports*, 20, 1284–1289. <https://doi.org/10.12659/AJCR.917592>

Jessica Stanhope, Scott Carver, Philip Weinstein. (2017). Health outcomes of beekeeping: a systematic review. *Journal of Apicultural Research* 56:2, pages 100-111.



# Design Opportunity

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How to decrease health hazard risks for beekeepers to increase healthy apiculture activities?

# PRIMARY RESEARCH

47

Survey  
Participants

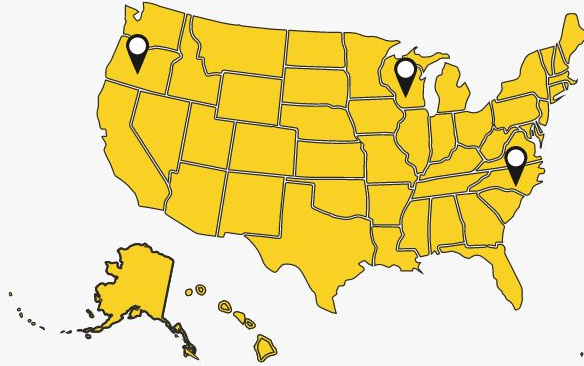
13

Zoom Interviews  
45 min - 1 hr long



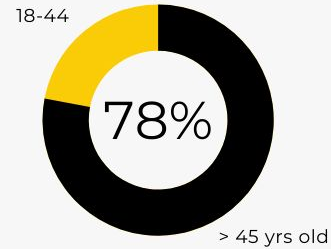
22 Women 23 Men  
\*2 declined to answer

Where Beekeepers Came From



Most Useful Beekeeping Tool  
Hive Tool

Age of Beekeepers

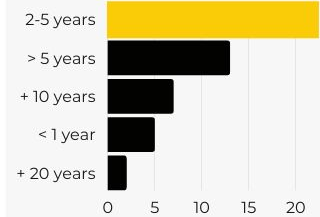


Average Time of  
Hive Inspection

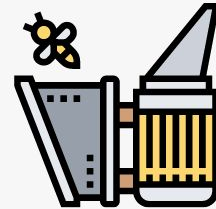


30 min - 1 hr

Years of Experience



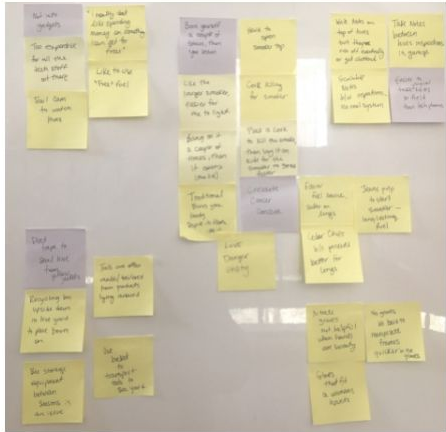
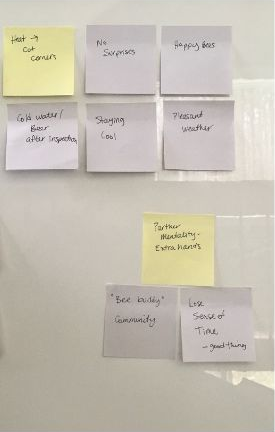
Main Issue with Smoker



Starting & Making It  
Last

# THEMES

Beekeepers improvise tools to make their process easier.



HAZARDS

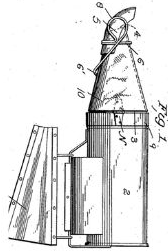


# PATENTS

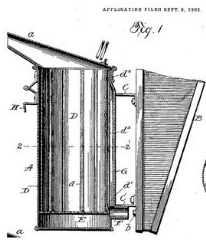
Manual

Electric

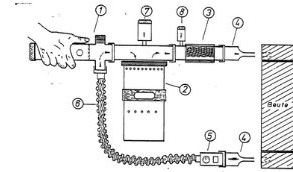
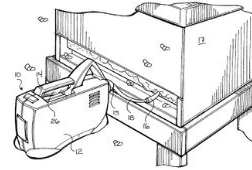
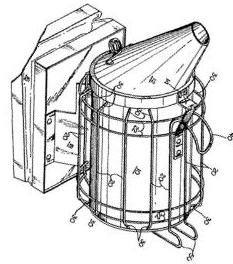
1903



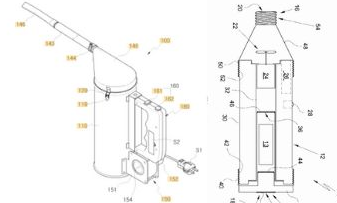
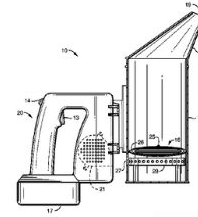
1905



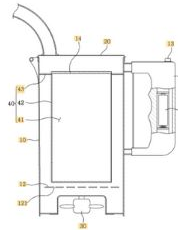
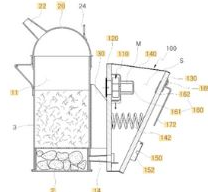
1980



2009



2013



## DESIGN CRITERIA

Familiar



Safe

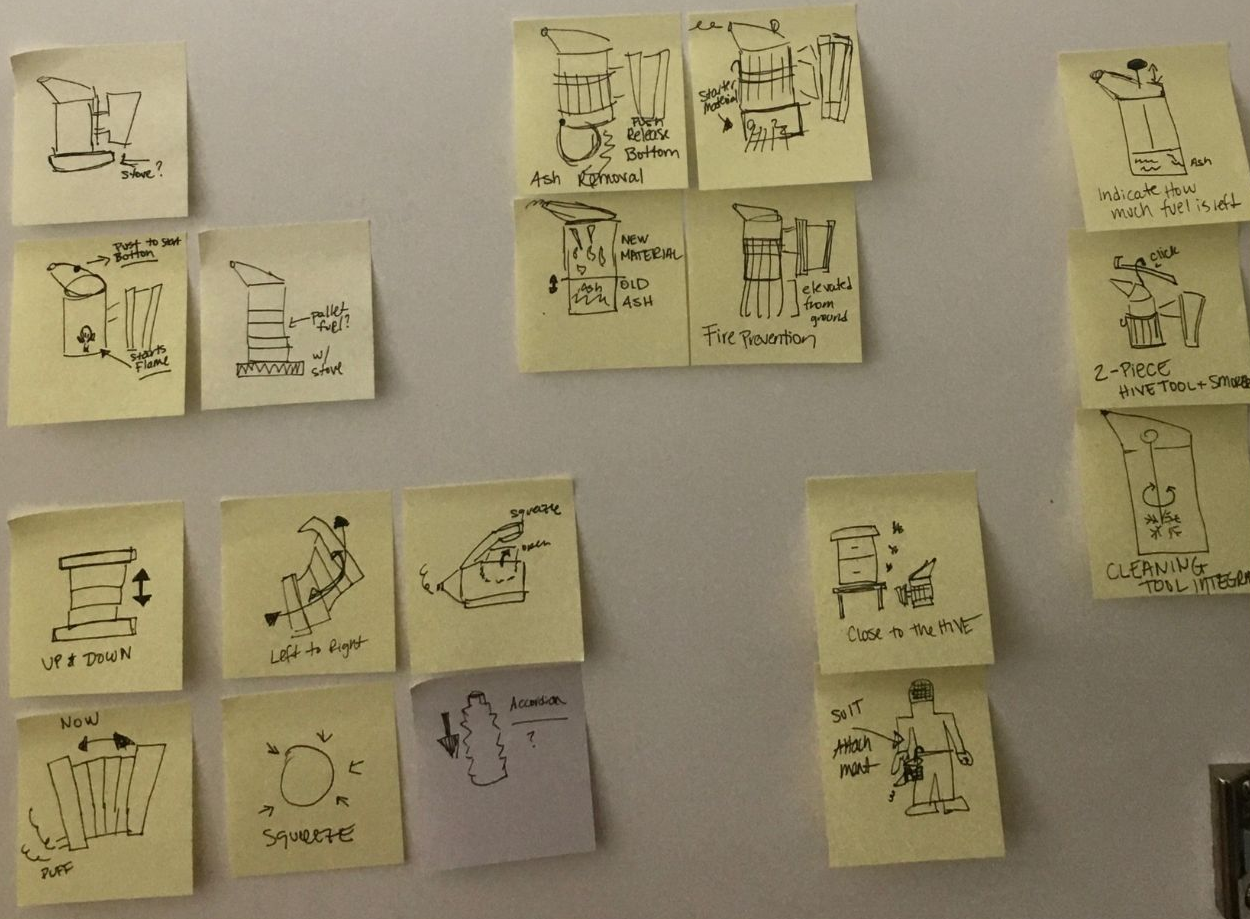


Utility

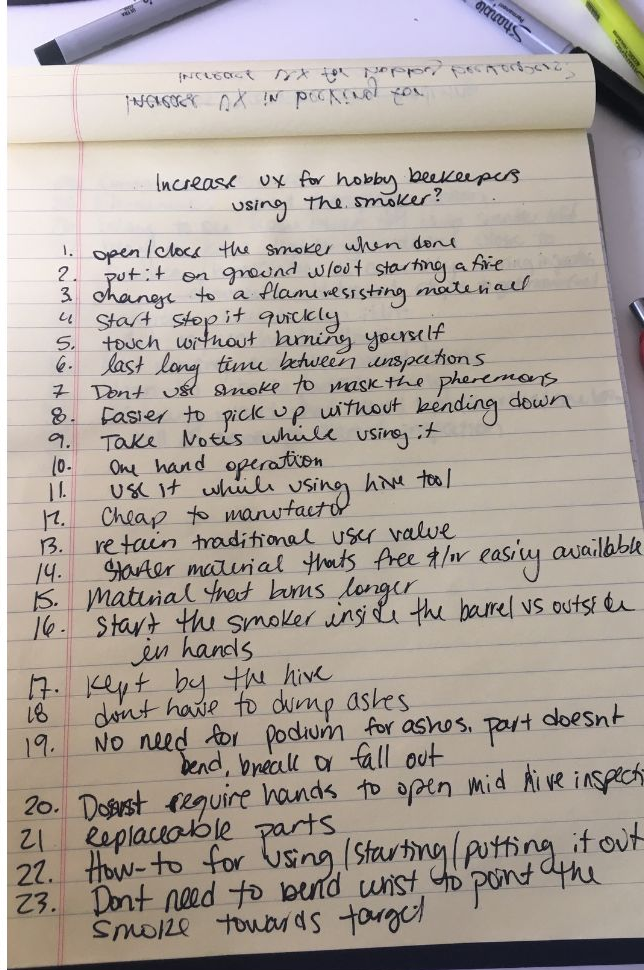


Calm

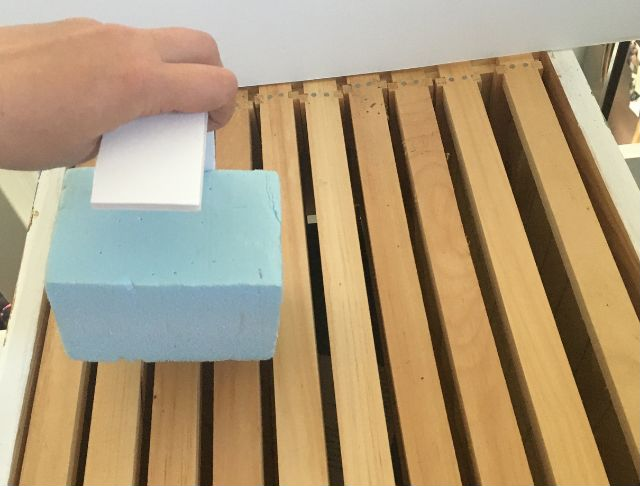




IDEATION



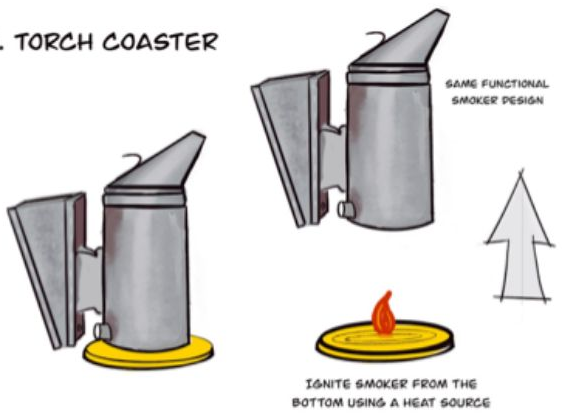




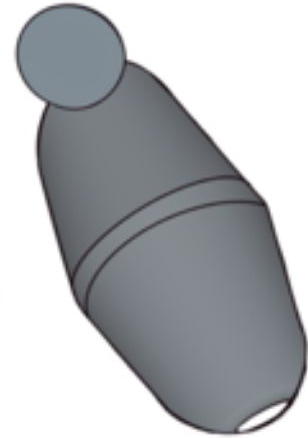
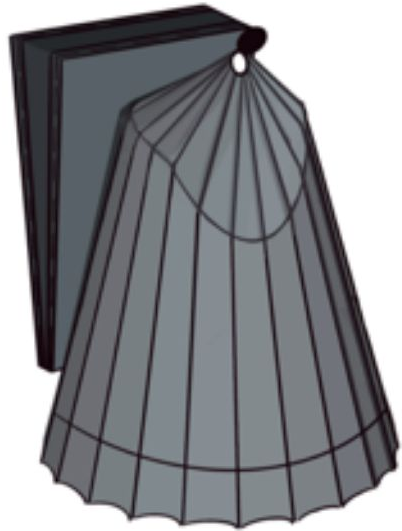
## 2. EASY ASH REMOVAL

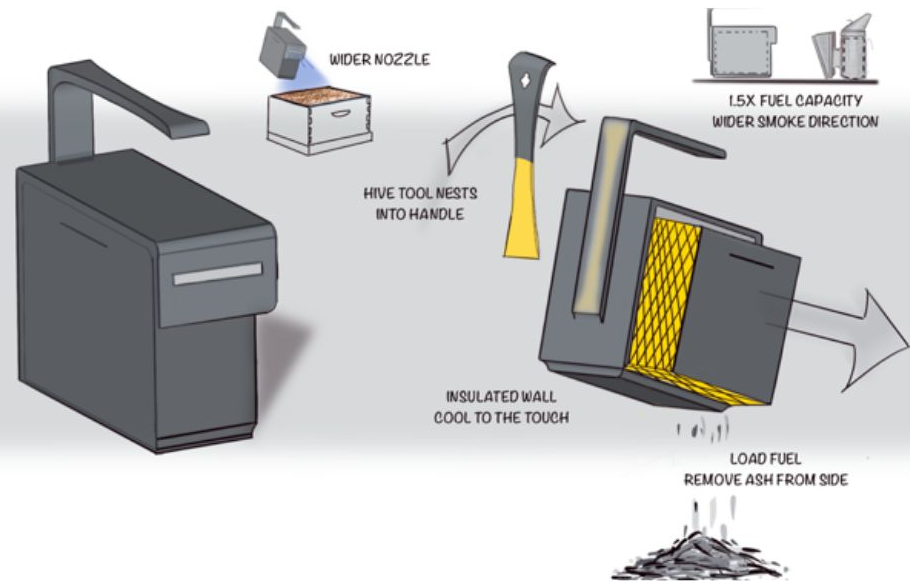
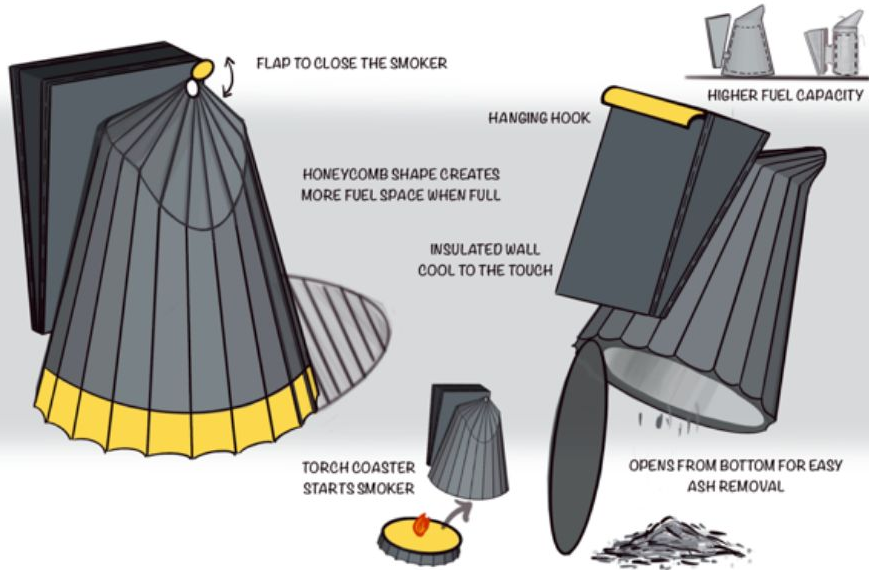


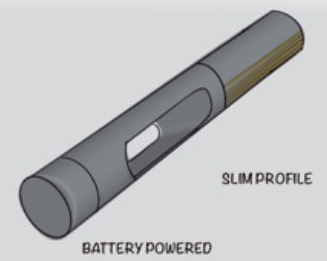
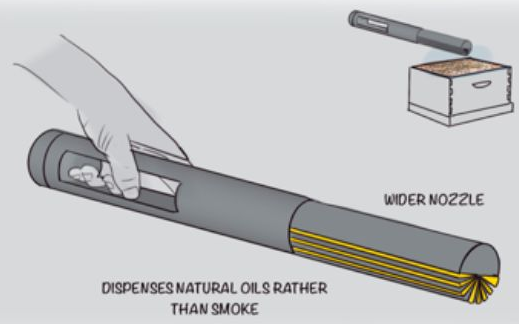
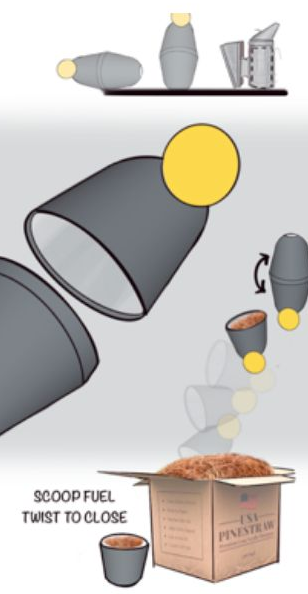
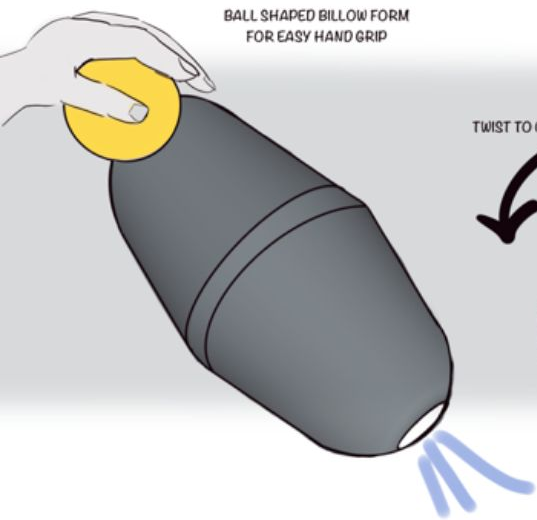
## 1. TORCH COASTER



CONCEPTS

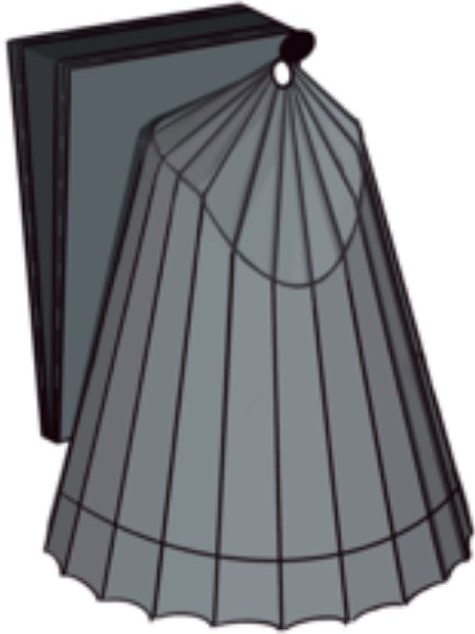




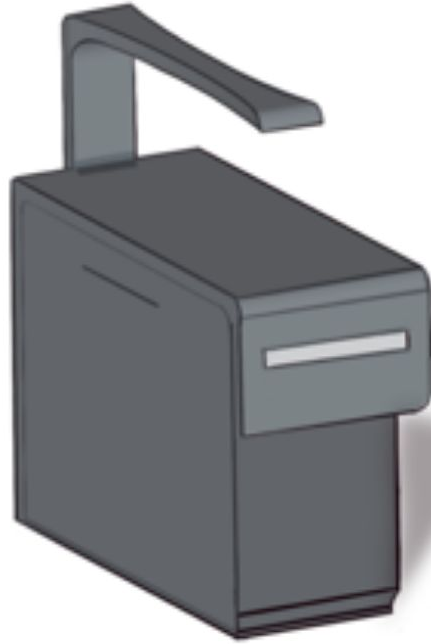


HANDHELD

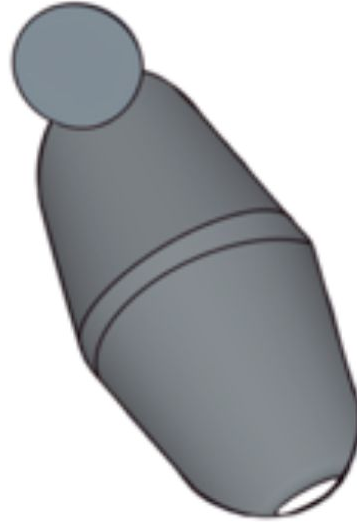
## CONCEPT USER EVALUATION



"I love the ability to charge and start the smoker faster"



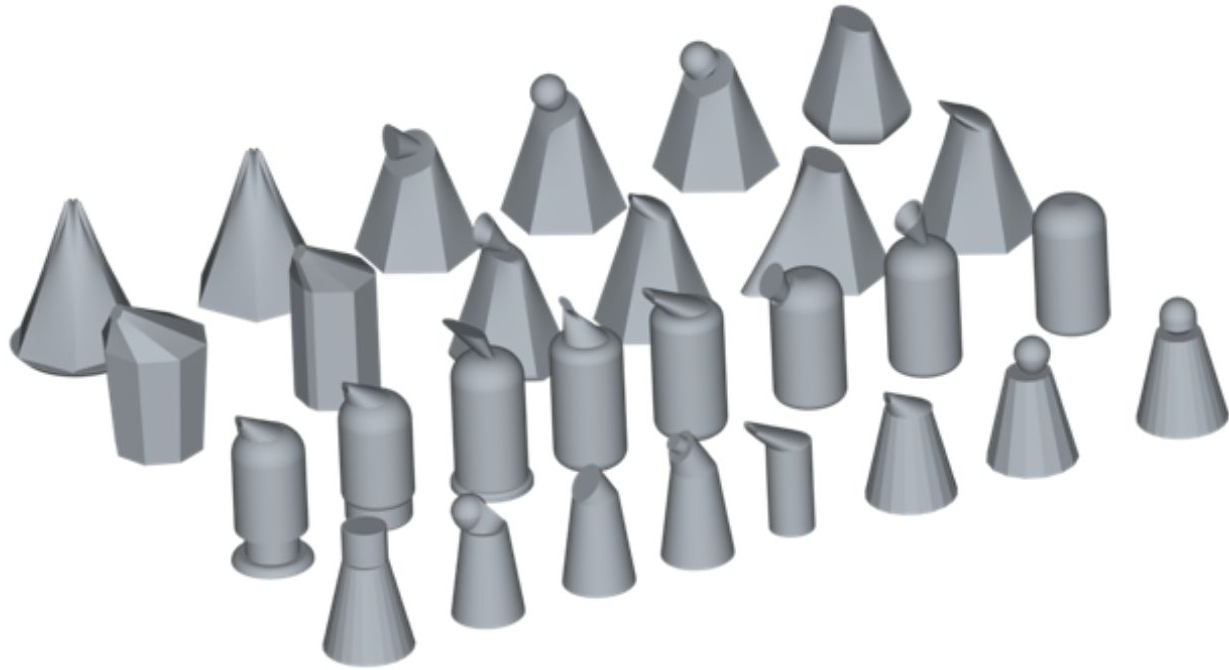
"Why is the shape so different? I wouldn't know how to use these new forms"



"I am not a commercial beekeeper, there's no need to apply oils as I have a few hives to maintain."



FORM EXPLORATION





**HONEY**

**COMB.E**





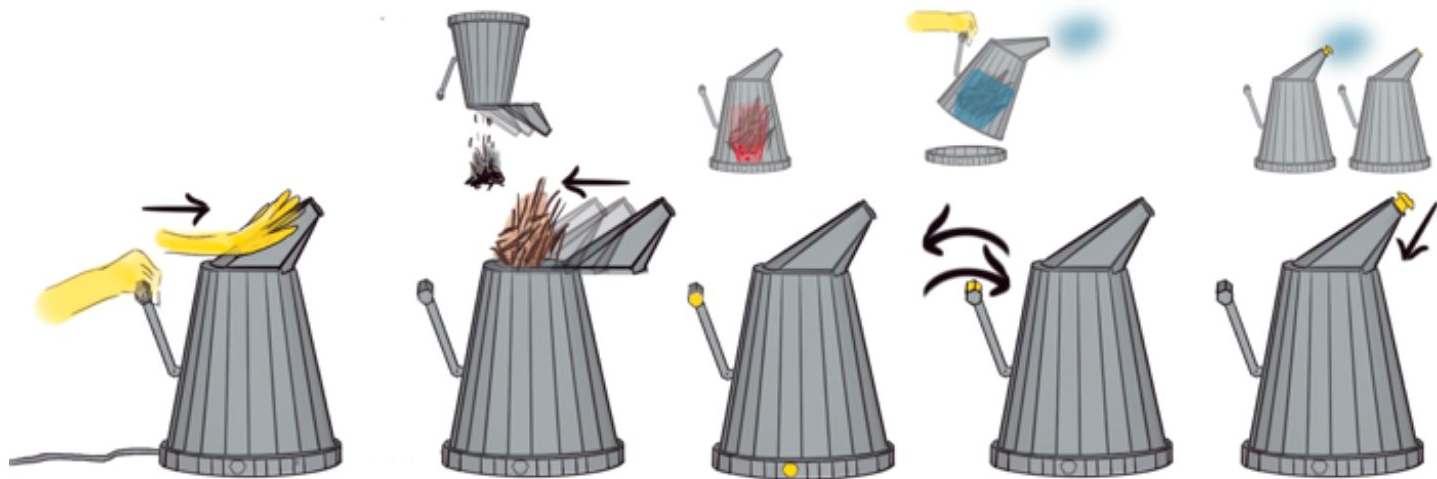




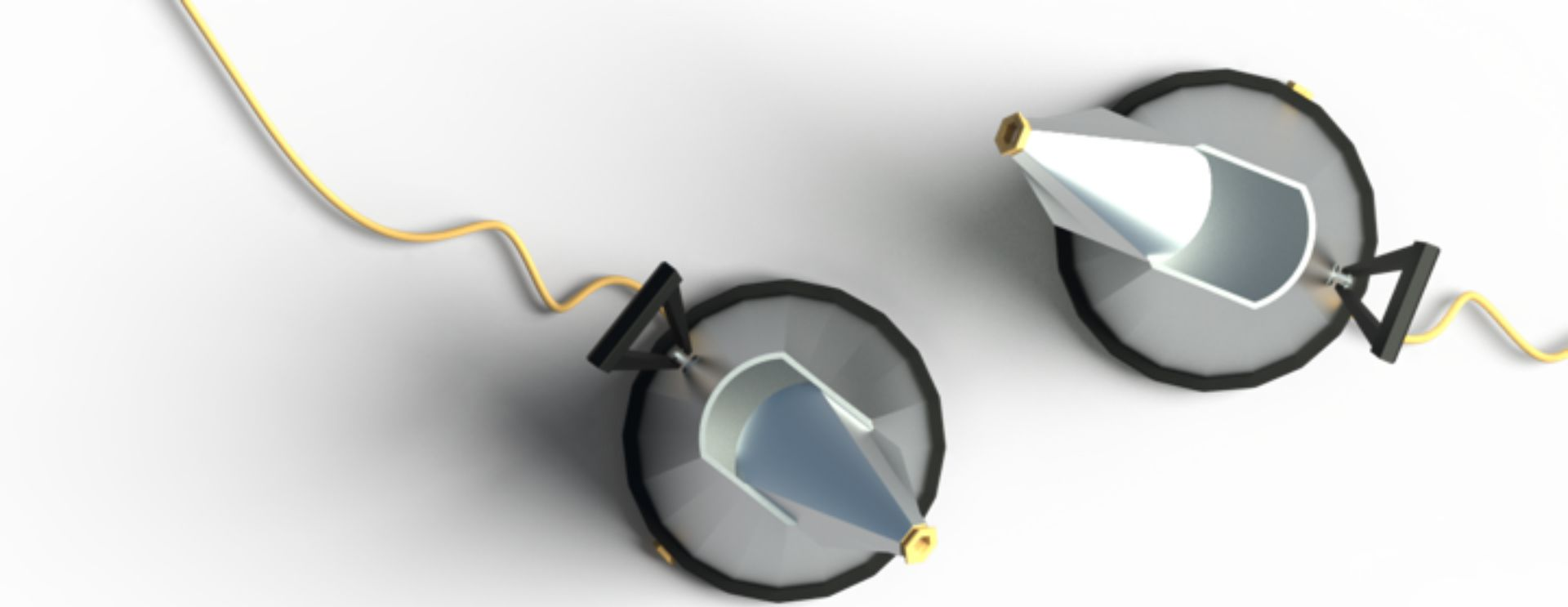
LOAD FUEL



PUSH TO IGNITE



CLOSE LID TO STOP



## 02 Rolo



TRAVEL WITH INTEGRITY  
Travel solution for CPAP individuals

# The Biggest Barriers to Travel for Baby Boomers



\*2018 AARP TRAVELERS SURVEY 714 PARTICIPANTS



# 25-30 Million Affected by Sleep Apnea



CPAP COMPONENTS





Pack



Fly



Use



Clean



Pack



Fly



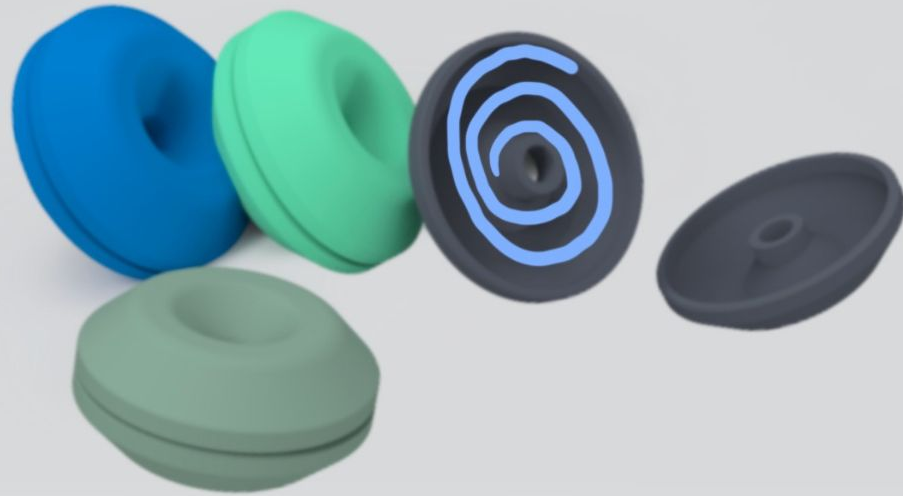
Use



Hang to Dry



How to best pack a CPAP hose during travel?



YOYO INSPIRED SOLUTION

# THANK YOU

FOR VIEWING MY WORK.

LOOK FORWARD TO HEARING FROM YOU

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[www.anya-petrova.com](http://www.anya-petrova.com)