

scrub



What's wrong with washing a few dishes?



It's been an annoying chore ever since the dawn of modern tableware and it still doesn't seem to be going anywhere. Even though dish-washing machines have been around for over a hundred years, people still wash a large amount of dishes in their homes by hand. Coming home and having to do a huge sink full of dishes is just the worst! It feels like it takes forever and it dries out most people's skin too.



Interviews and Information

People Interviewed: Symptoms Encountered:

- Caitlin
- Chris S.
- Chris K.
- Maribeth
- Patricia
- Ryan
- Sarah
- Tom

oily hands
takes too long
not enough leverage
dries out skin
touching dirty dishes
not enough grip
picking at food
splashing water
burned on food
painful wrist angle
water burns hands
has to push too hard
food stains
not very engaging
needing two brushes
touching dirty tool
physical ailments
pruney hands
caked on food
interruption

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The problems with dishwashing

- Not having the right abrasive surface
- Not being flexible enough to cover dish surfaces wholly
- Not utilizing a grip that provides sufficient leverage
- Not preventing undue contact with water



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Average Joe



Ryan
Ariel



- Doesn't enjoy washing dishes
- Always comes home to a full and dirty sink
- Has to divide workload between roommates
- Dreads washing because of the surplus of dirty dishes
- Wrists become sore when washing for extended periods
- Using sponges dries out his skin

Getting down and dirty

As we have found out, there are many issues with dishwashing. But, as a designer, I didn't feel I could properly cope with those issues for others without also encountering them myself.

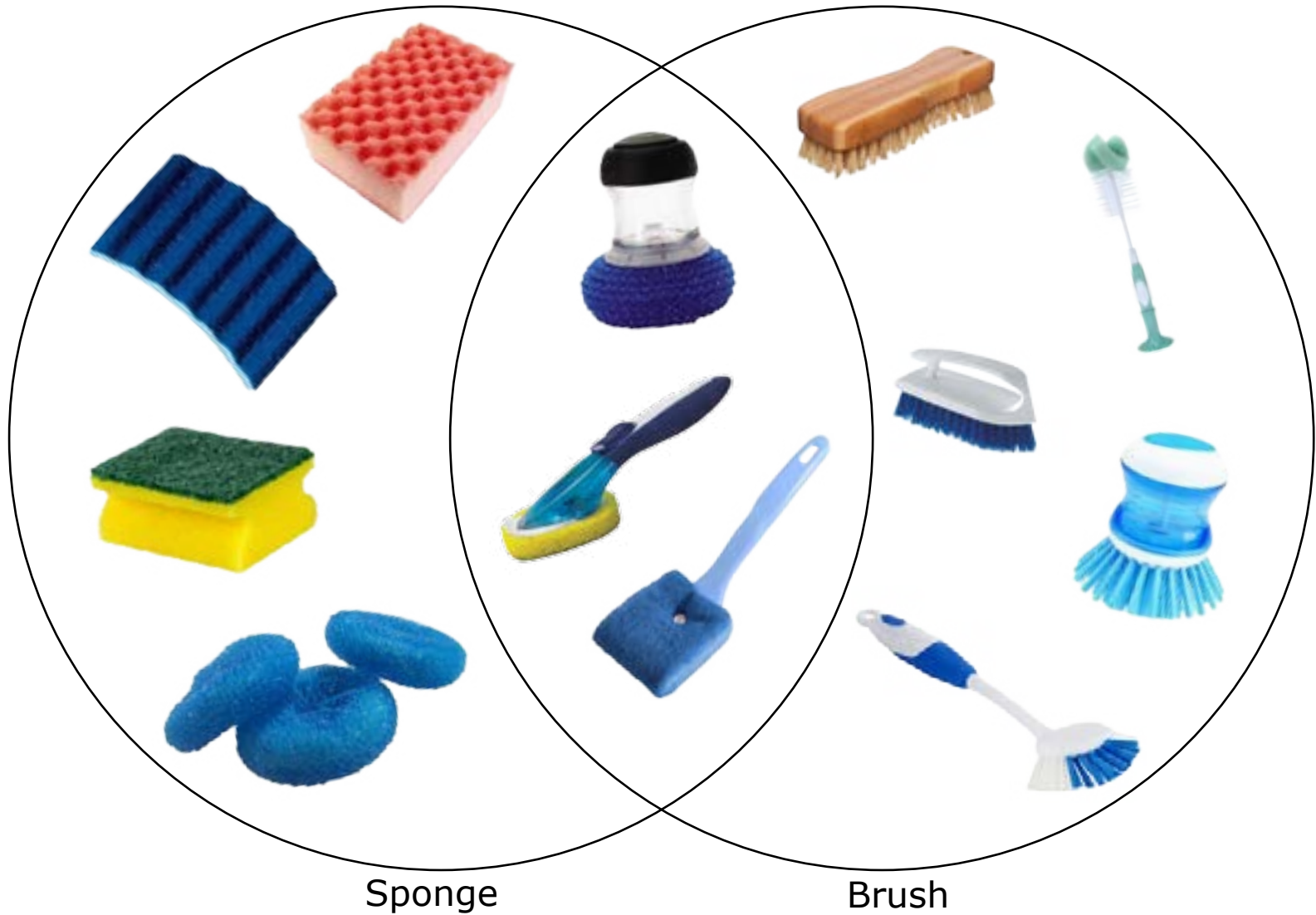
As expected, I had the same experience.



The user-experience problem

- People do not enjoy washing dishes.
- No matter how much improved the user-experience becomes during this activity it is none-the-less a chore.
- The best outcome would be to shorten the user experience as much as possible.

Other benchmark products...



Pros. & Cons.



\$1

Pros:

- Rough texture
- Malleable
- Holds Soap

Cons:

- No Handle
- Short life



\$3

Pros:

- Handle
- Holds Soap

Cons:

- Head shape
- Less abrasive



\$6

Pros:

- Flexible
- Skinny
- Multi-sized

Cons:

- No leverage



\$4

Pros:

- Rough texture
- Malleable
- Handle
- Holds Soap

Cons:

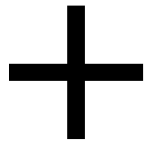
- Small Handle
- Large width

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What does my product need?

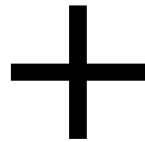
Pros:

- Rough texture
- Malleable



Pros:

- Handle



Pros:

- Rough texture
- Malleable
- Handle



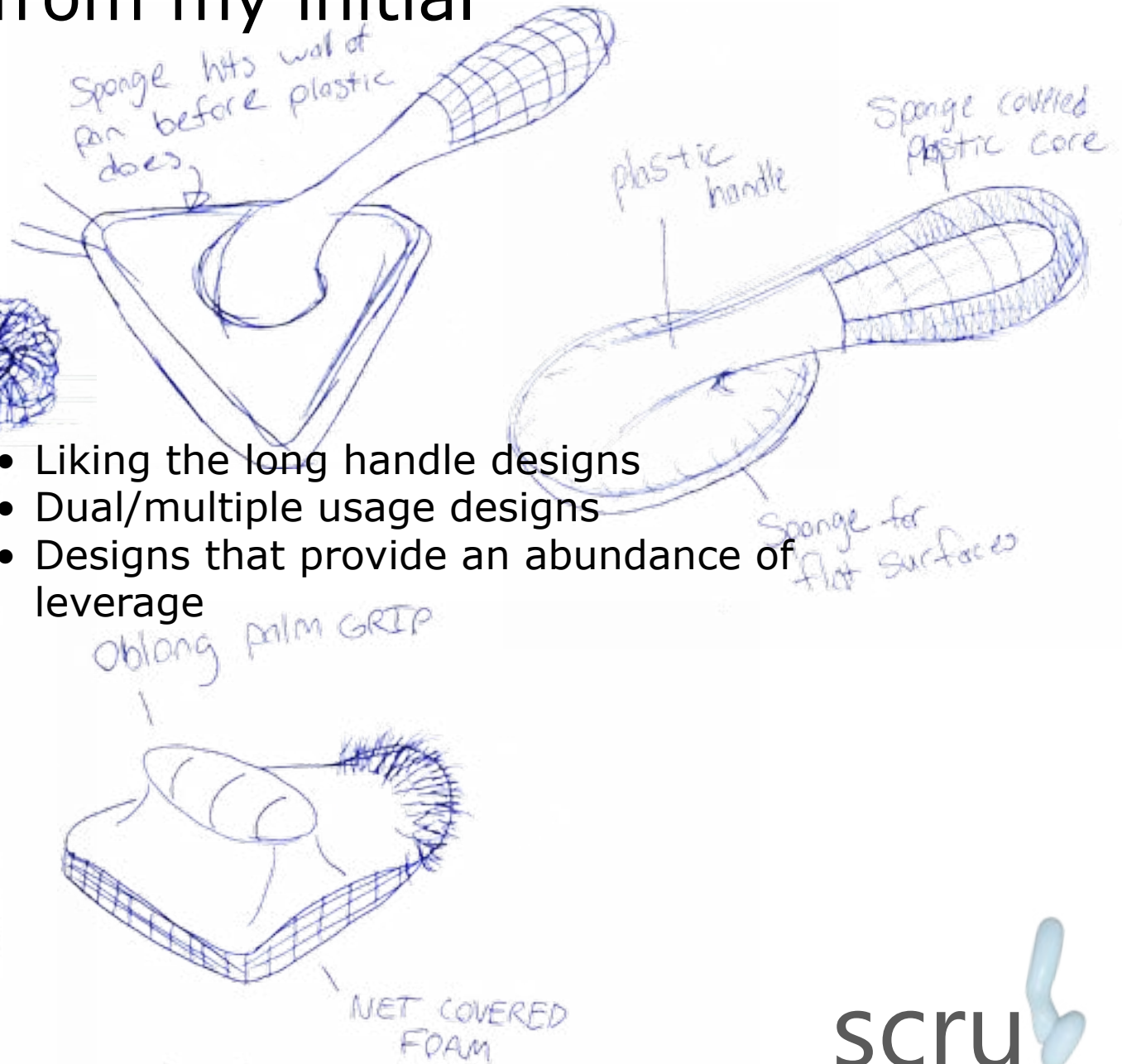
- Malleability, texture, and shape of head make cleaning a variety of dishware and food remains easy
- Emphasis on having enough grip and leverage
- Removes user from dirtiness of cleaning process
- Comfortable to hold for extended dishwashing periods

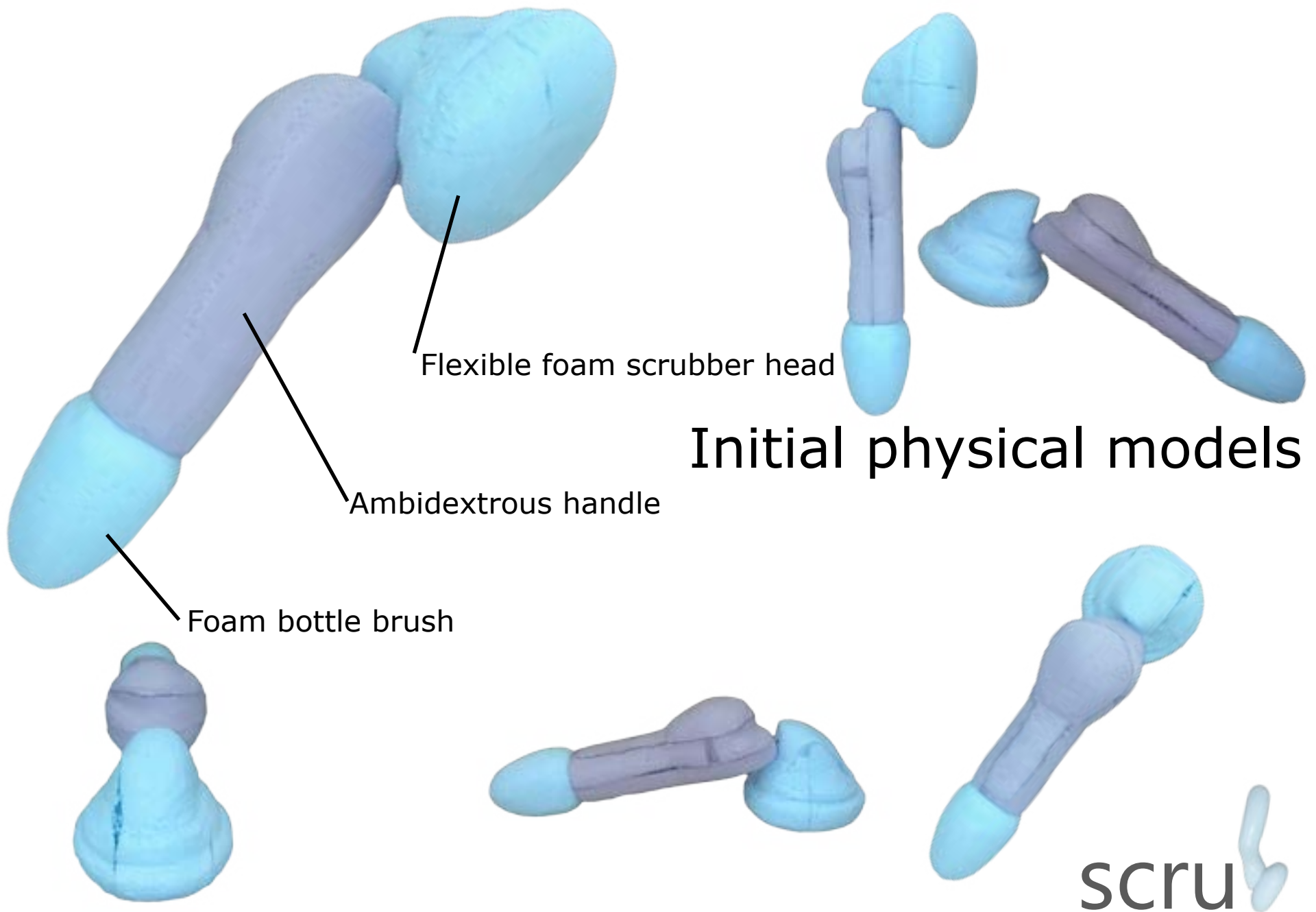
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What to take from my initial sketches

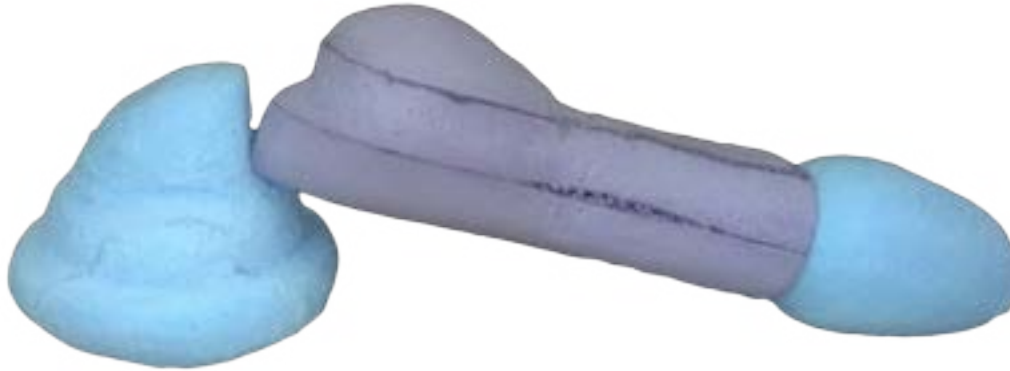
- Liking the long handle designs
- Dual/multiple usage designs
- Designs that provide an abundance of leverage

- Clean anything/everything
- large open surfaces
- Small hard to reach crevasses
- easily removed burnt on shit





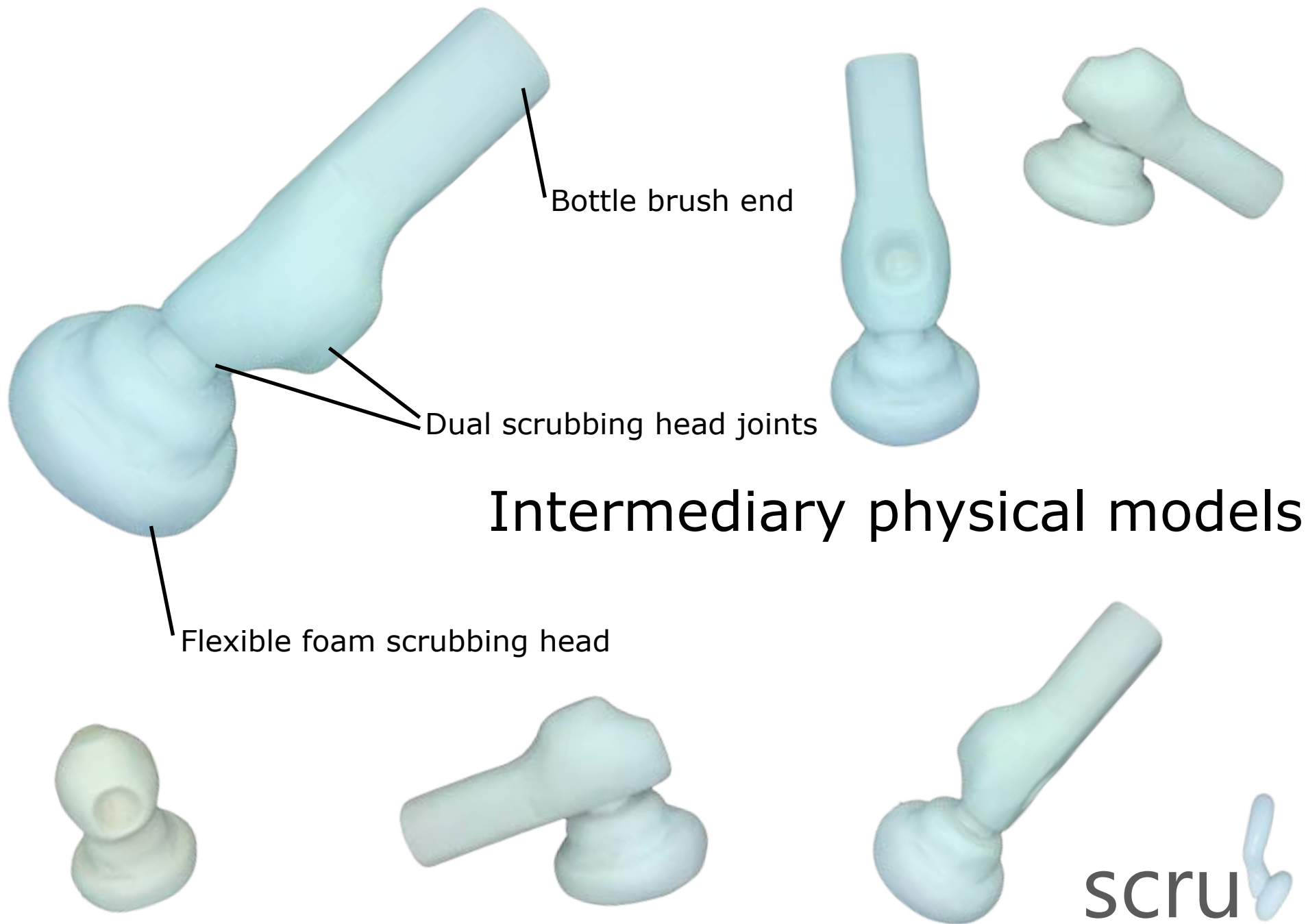
Refining the idea

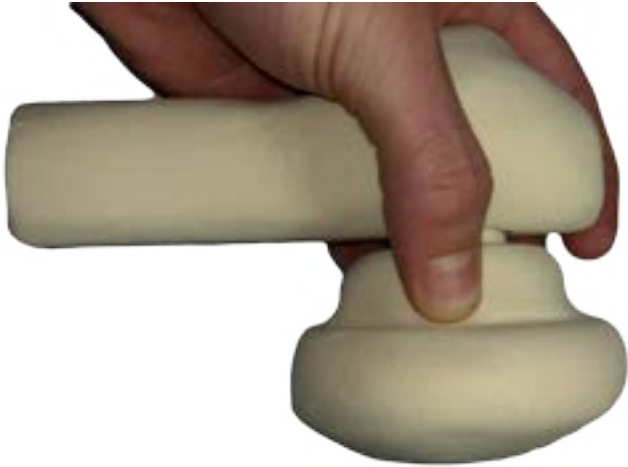


- Need to reposition hand grip over the scrubbing head for better leverage and pressure
- Need to still maintain flexibility while improving the integrity and strength
- Need to improve multiple grip positions to accommodate different users and their different needs



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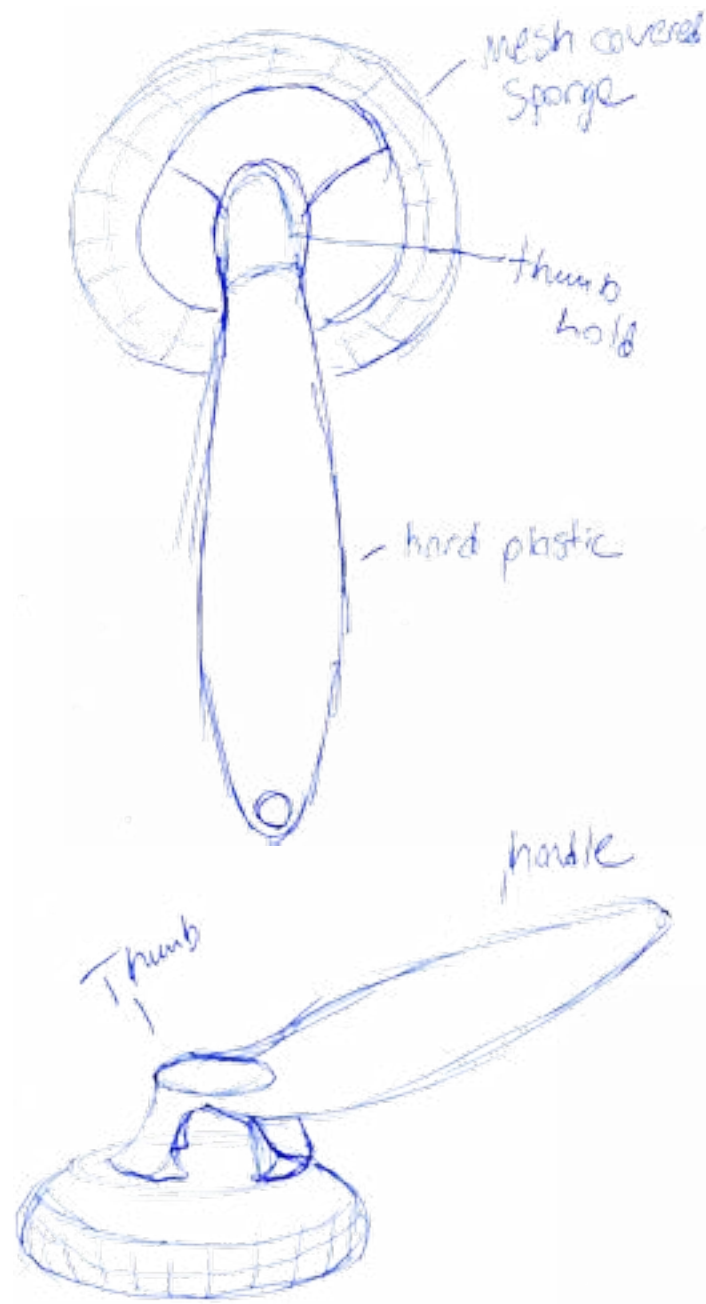


Refining the idea

- Needs to accommodate more hand sizes
- Needs to channel leverage from user into the scrubbing head more directly
- Completely parted with the idea of having a 'bottle brush' on the end of the handle

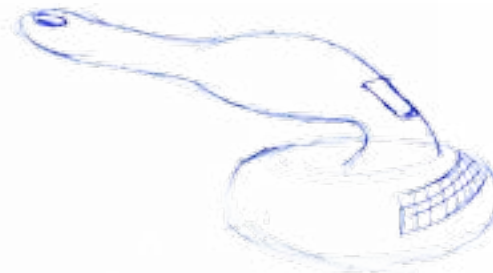


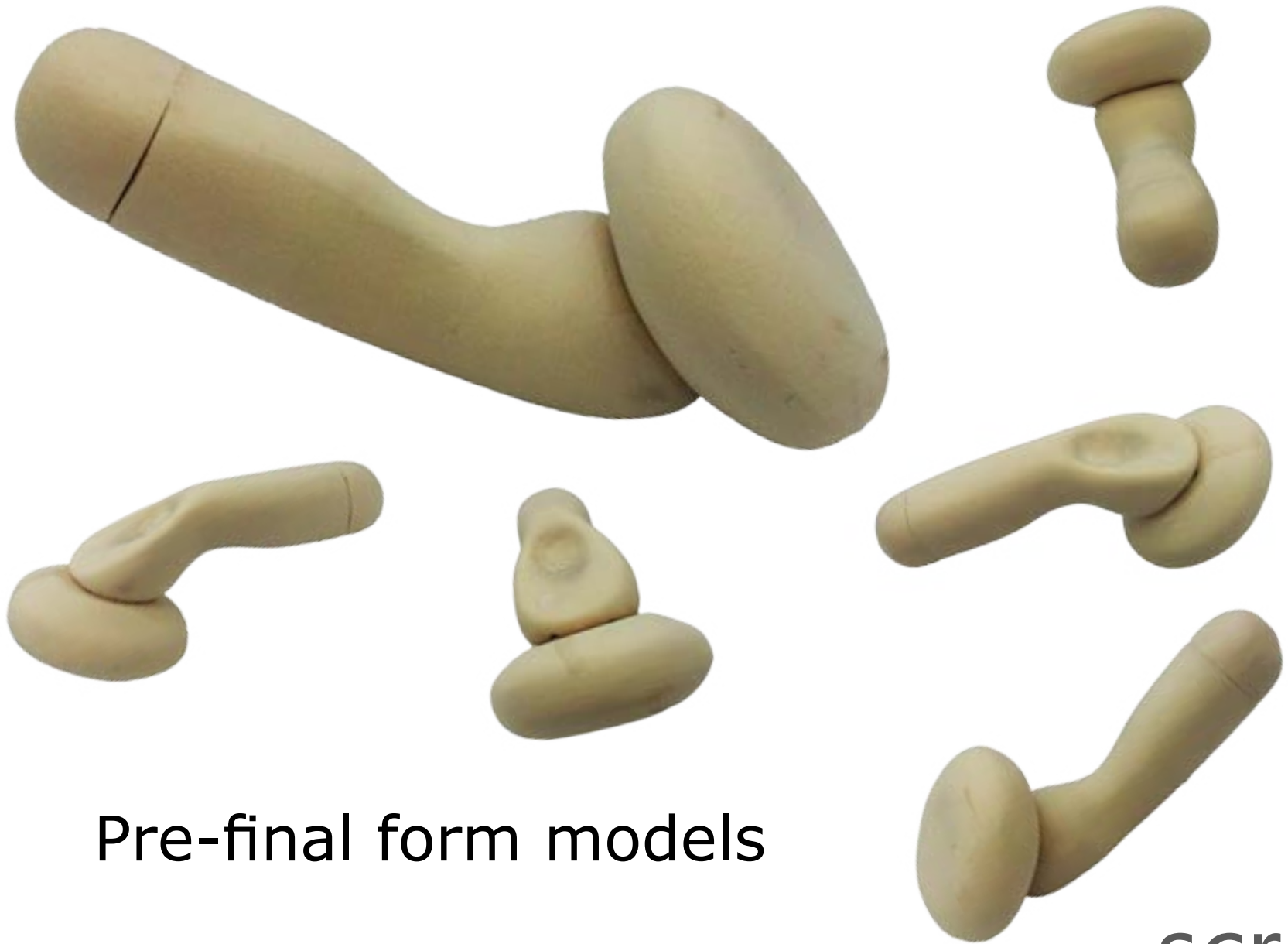
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Form refinement sketches

- Thumb rest allows pressure to be placed over scrubbing surface ergonomically
- Simplified design without bottle brush component
- Still has extra large handle for increased comfort and ease of use





Pre-final form models

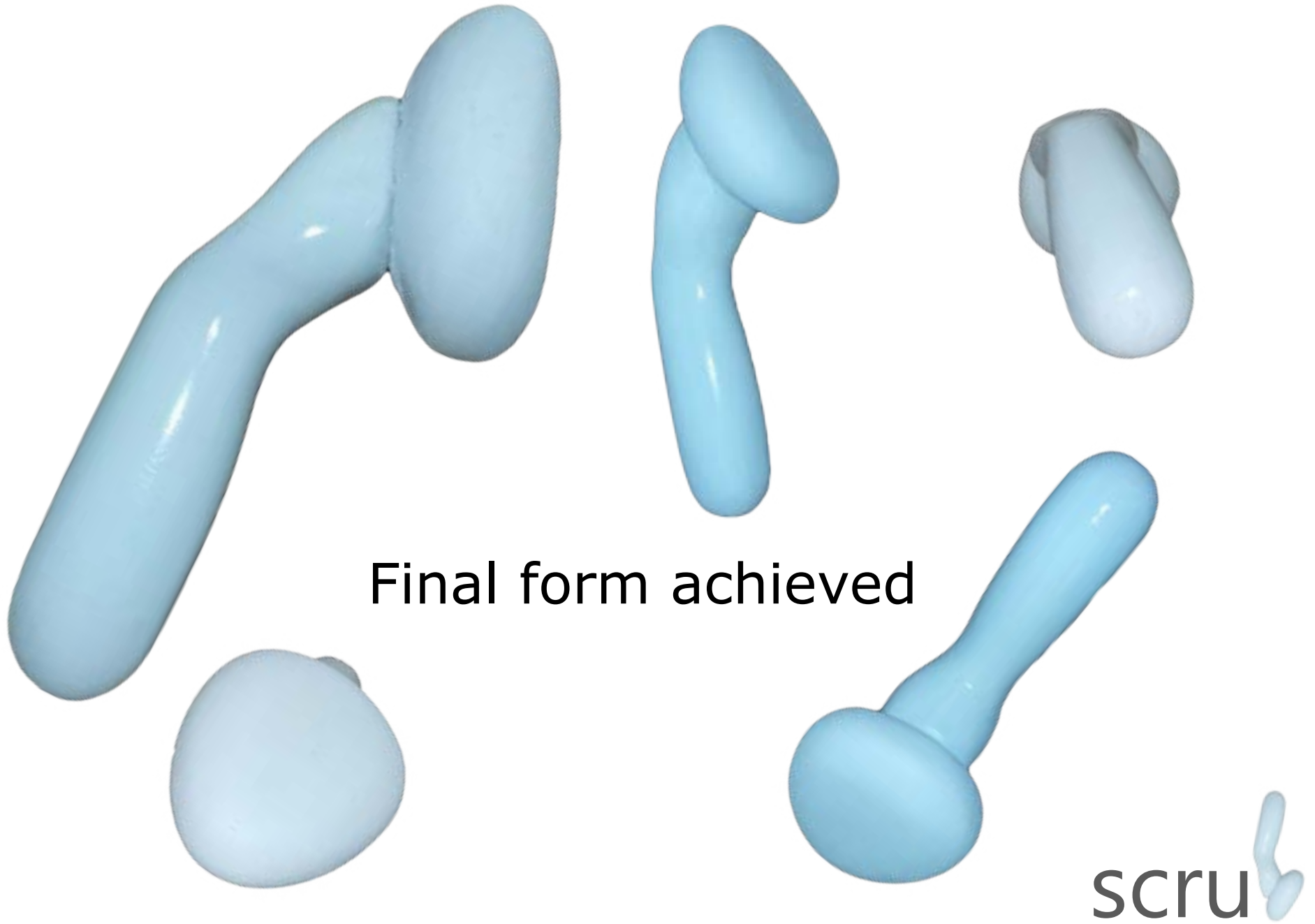
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Refining the idea

- Need to change shape of bush head to allow more detailed scrubbing
- Change shape of handle to allow wider range of users to grip comfortably
- Lessen depth of thumb grip to accomodate wider range of users

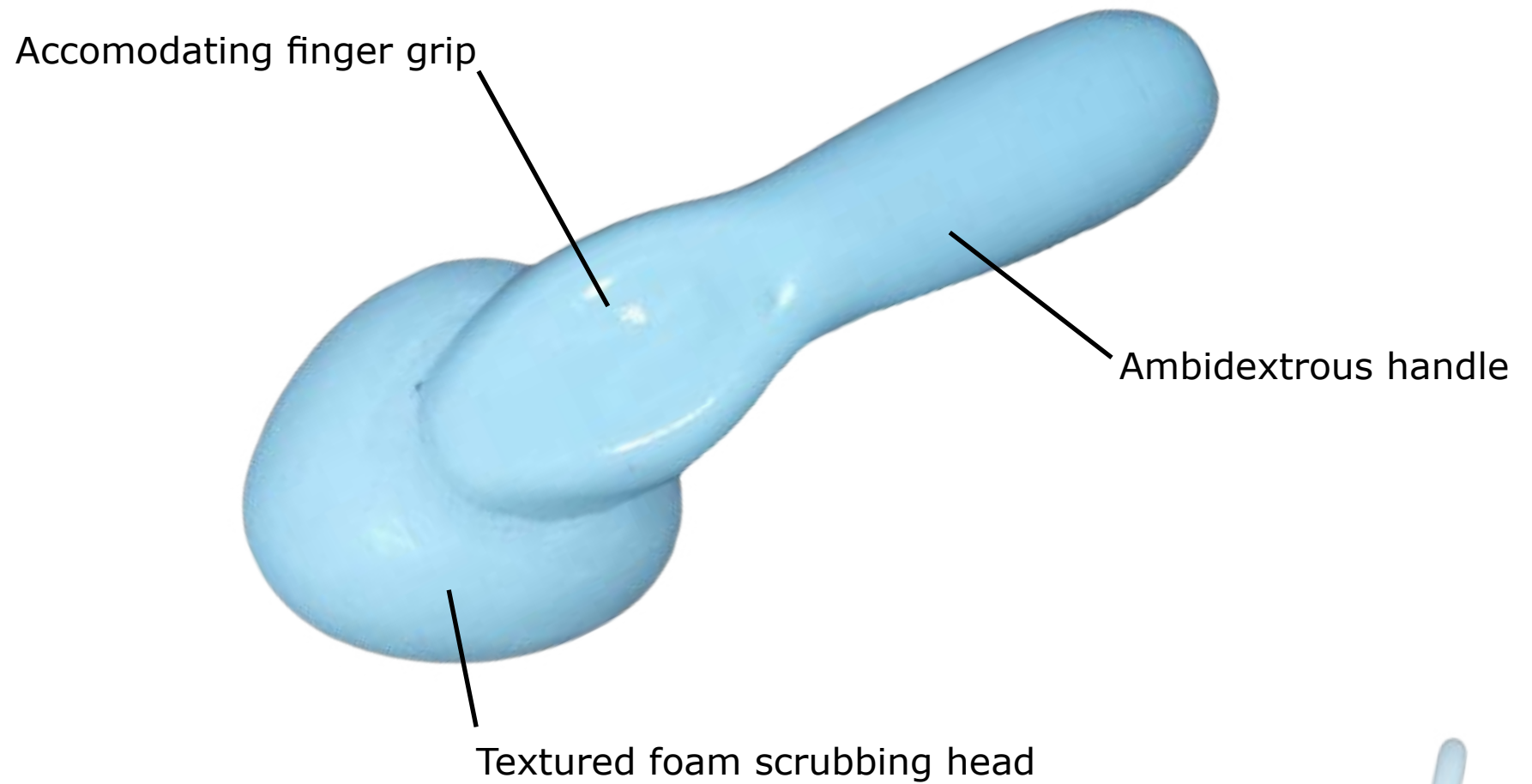




Final form achieved

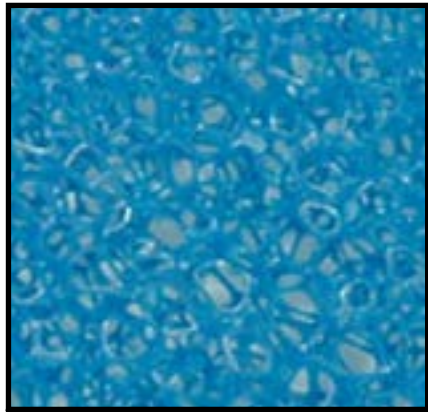
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Form details

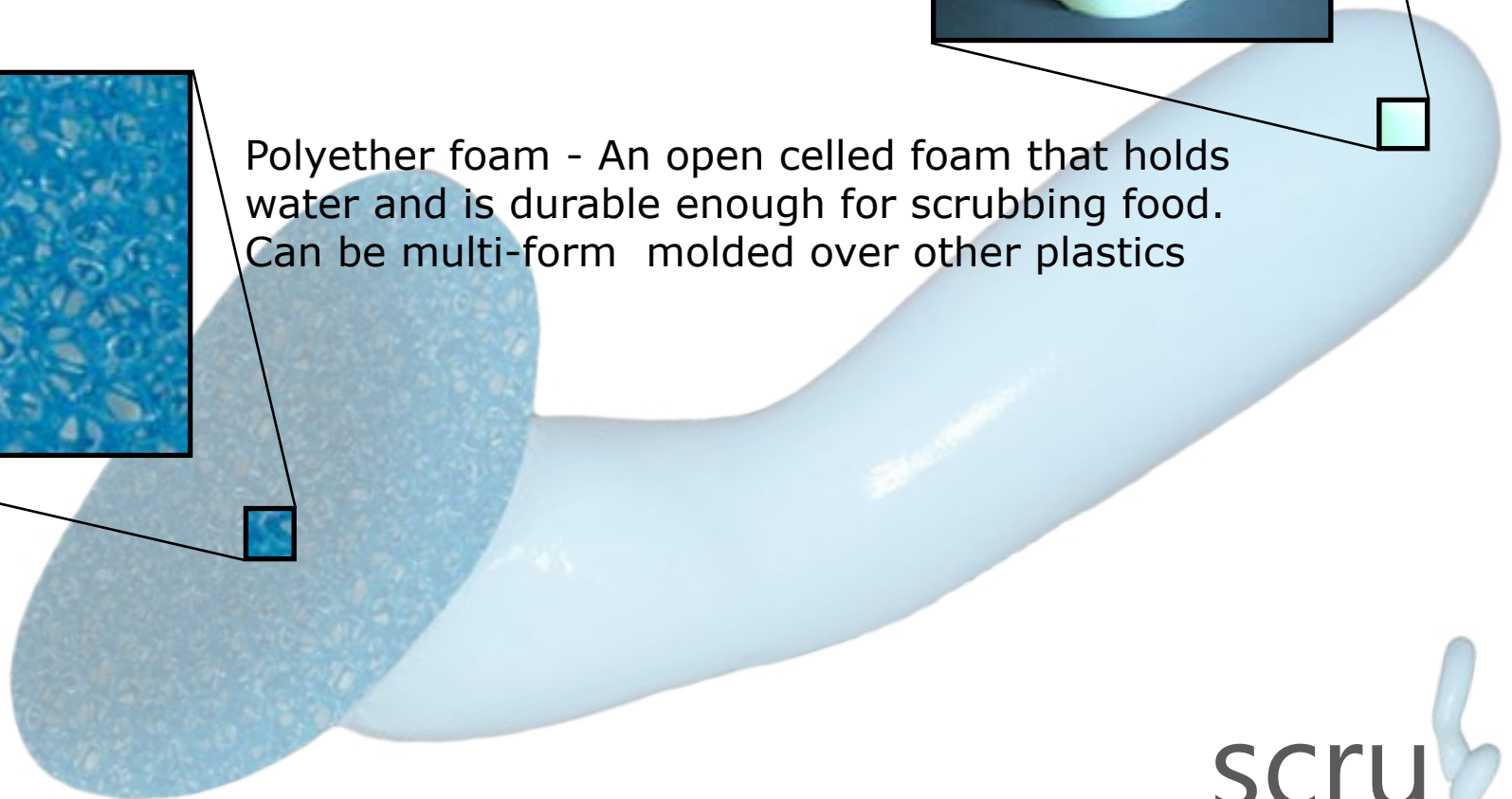


Materials and manufacturing

Acrylonitrile butadiene styrene - A tough, hard and inexpensive plastic used in many household and consumer products. Can be injection molded.



Polyether foam - An open celled foam that holds water and is durable enough for scrubbing food. Can be multi-form molded over other plastics



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Problems Solved!

- A new and improved scrub-brush that will expedite and improve the efficiency of dishwashers everywhere
- Utilizing the same inexpensive materials and a revolutionary new design, this product will save users from hours upon hours of dishwashing toil
- Can be used effectively by all users; strong or weak, big or small due to it's accomodating multiple grip design and roughly textured scrubbing head

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Thanks a bunch!

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