






Biography:

Jeffrey L. Downs is a recent graduate of Appalachian State's Industrial Design Program. During his studies he ran the machine shop and oversaw the rapid prototyping lab. Jeff re-entered school after gaining experience in fields including protective product packaging, fabrication, and prototyping. He is a Midwesterner by birth, Colorado native at heart and recent transplant to the South.

Design Philosophy:

Instilled in me by my Father, the idea of the truth being held above all others has helped guide both my personal life and my designs. In all levels of the design process it is necessary to be honest with yourself and the client, especially when problems arise. Without an honest and accurate assessment of a situation, it is impossible to make well justified decisions that will lead to quality products.

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77S - BBQ PIT DESIGN AND RESEARCH

Research and design a BBQ pit with unique styling and the ability to feed forty plus guests

RESEARCH

HEAD TO HEAD FEATURE COMPARISON.

KEEPING
YOUR HANDS
UNBURNED

BBO SMOKERS

Name: Single Lid Smoker
 PN: TG2X60
 Manufacturer: Old Country BBQ
 Address: 1919 E. Saunders, Suite 31,
 Laredo TX, 78043
 Phone: (956) 286-6389
 E-mail: smokers@oldcountrybbqpts.com

Name: Smokey Mountain
 PN: 22.5
 Manufacturer: Weber
 Address: 200 East Daniels Road
 Palatine, IL 60067
 Phone: 1-800-446-1071
 Email: support@weberstephen.com

Name: Medina River Backyard Smoker
 PN: 2545012
 Manufacturer: Medina River

Name: Zurich
 PN: N.A.
 Manufacturer: Impetfire
 Address: London, England
 Phone: (+44) 02036081382
 Email: info@my-barbecue.com

Name: Smokin Tex Electric Smoker
 PN: 1530808
 Manufacturer: Smokin Tex
 Address: P.O. Box 250243
 Plano, TX 75025
 Phone: 1-(888)-922-1511
 Email: Sales@SmokinTex.com

Name: Viking Gravity Feed Charcoal Smoker
 PN: 2814204
 Manufacturer: Viking
 Address: 111 Front Street
 Greenwood, Mississippi 38930
 Phone: (662) 455-1200

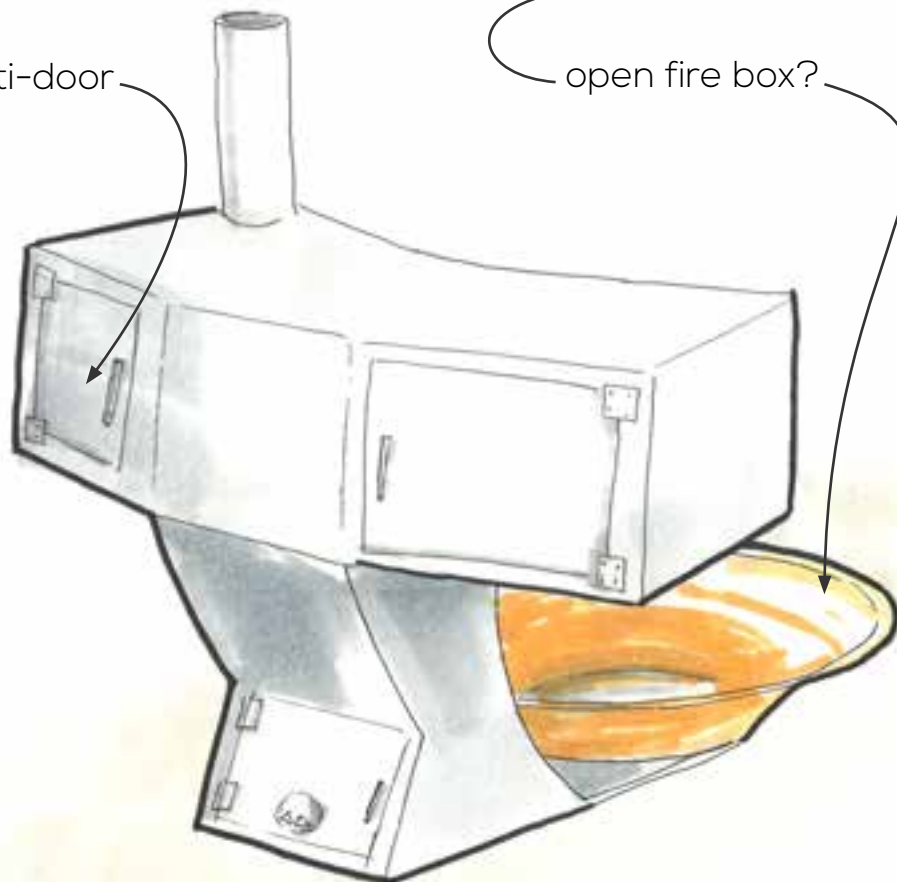
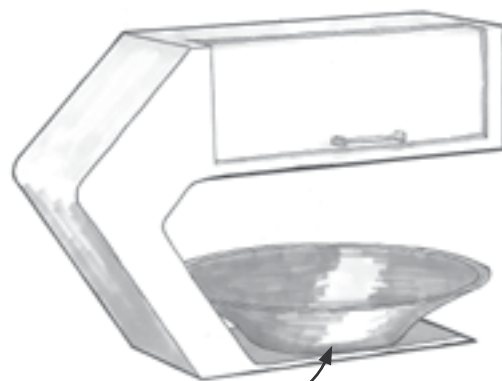
Name: Maxi Med-Big Green Egg
 PN: Med
 Manufacturer: Big Green Egg
 Address: Big Green Egg, Inc.
 3417 Lawrenceville Highway
 Atlanta, GA 30084
 Phone: (770)-938-9394

PRODUCTION							
Major Material	Steel	Steel	Steel	Concrete aggregate mix	Stainless Steel	Stainless Steel	Ceramic
Minor Material	Expanded Steel	Aluminum	Steel	Stainless Steel	Steel	Steel	Steel
Wheels	Road Tires	Aluminum Stand	Steel Casters	Non-movable	Steel/plastic caster	Steel/plastic caster	Steel/plastic caster
Weight	810 LBS	52 LBS	144 LBS	1984 LBS	93 LBS	375 LBS	227 LBS
TECHNICAL							
Features	Towable / Moveable	Quality Parts	Moveable	Stone Construction	Electric Smoker	Automatic Smoker	Insulated Ceramic Shell
Rack Space in^2	720	726	612	457	588	1323	177
Fuel	Wood	Wood	Wood	Charcoal	Electric / Wood chips	Wood Pellets	Wood / Charcoal
HUMAN							
PRICE US\$	2800	450	569	1248	609	2799	550 w/out stand
DEMOGRAPHIC	Home Owners	Home Owners	Home Owners	Home Owners	Home Owners	Commercial	Home Owners
AVAILABILITY	Custom Order	Widespread	bbguys.com	Custom Order	bbguys.com	Commercial re-sellers	Widespread
						YES	

BBQ PIT INTERACTION MATRIX

NEVER SOMETIMES ALWAYS

[illegible]



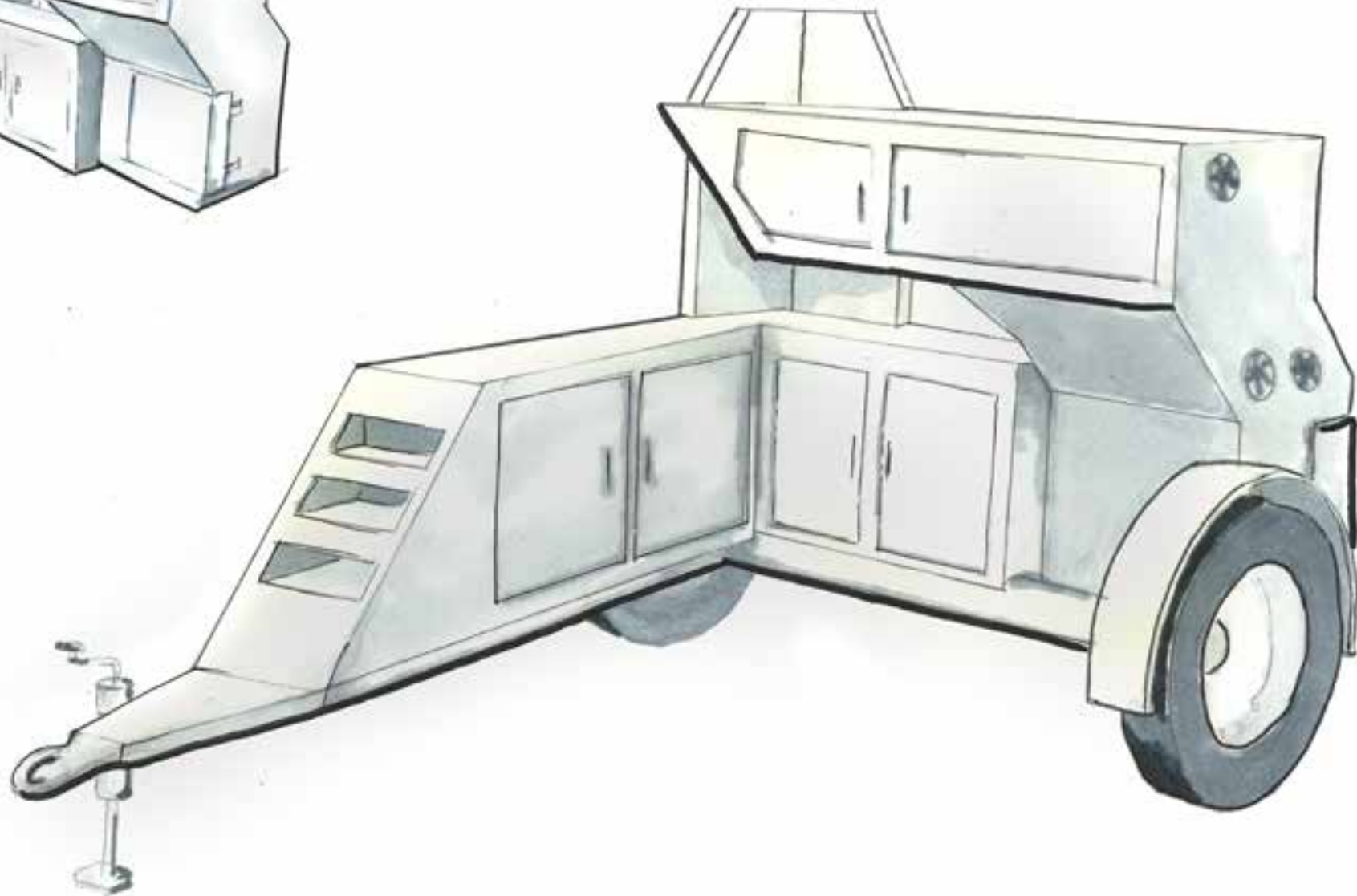
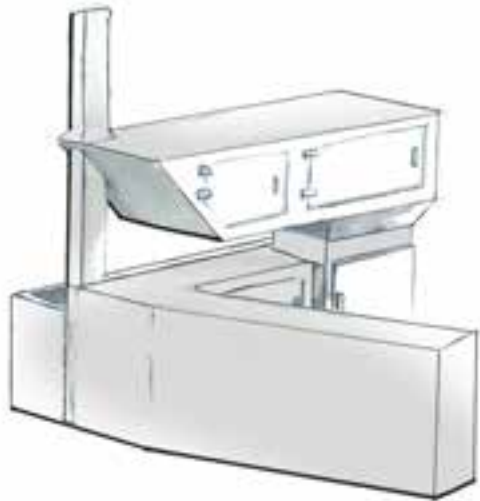
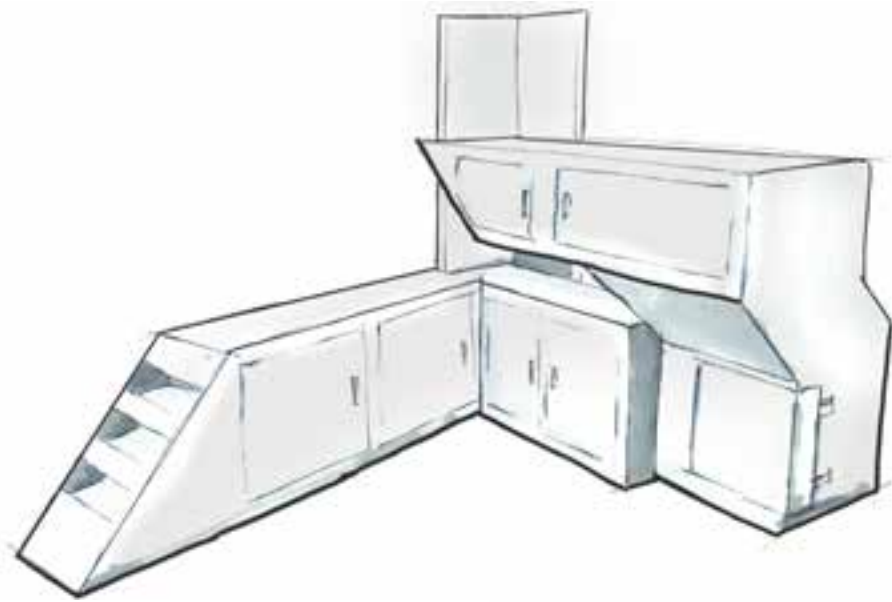
cantilevered design

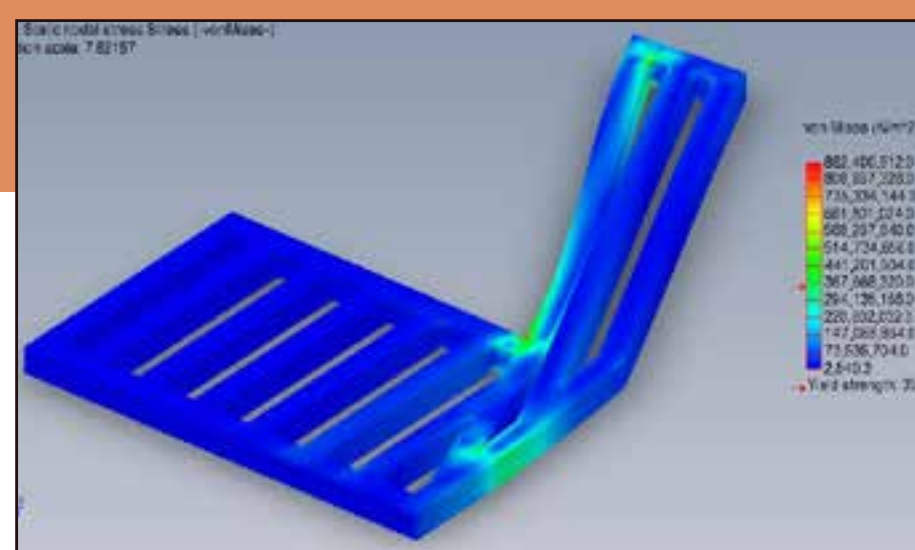
~~propane tank style~~

tire maybe?

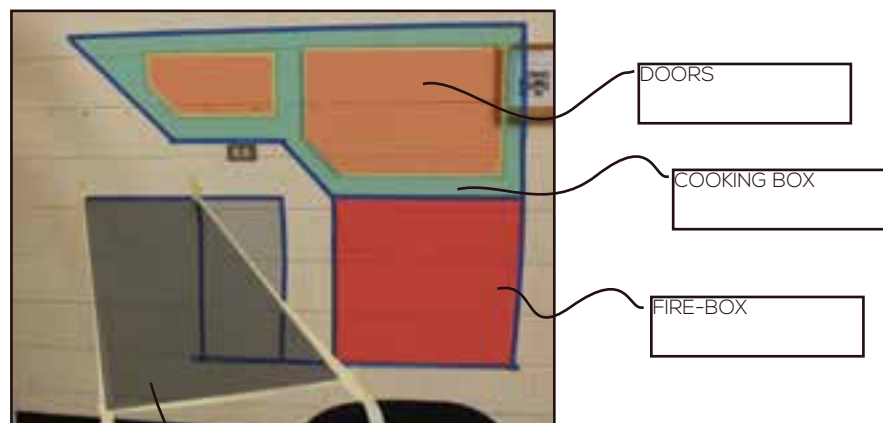
large work surface

INITIAL CONCEPTS





full scale tape layout of prep and cooking area



COUNTER / CABINETS

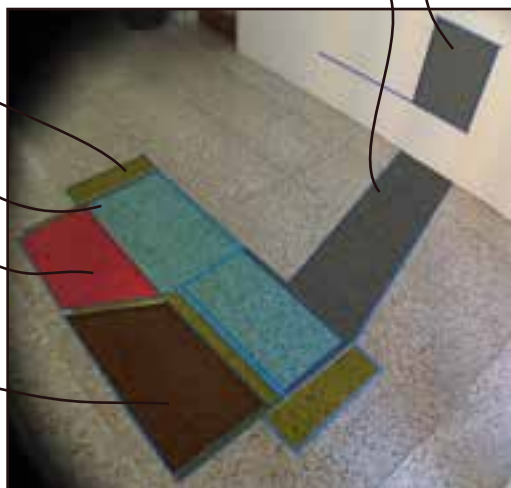
GROUND

TRAILER DECK /
WHEEL WELLS

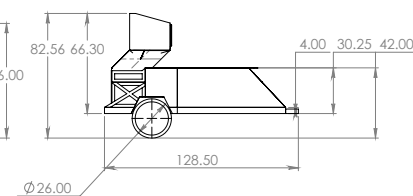
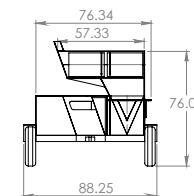
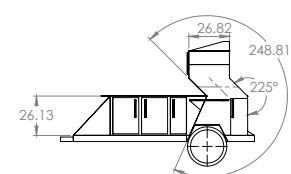
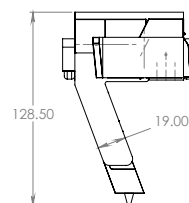
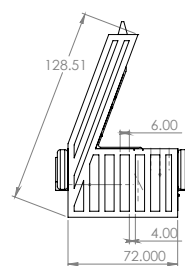
COOKING BOX

FIRE-BOX

WOOD STORAGE

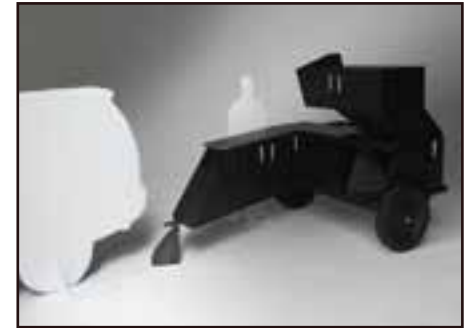


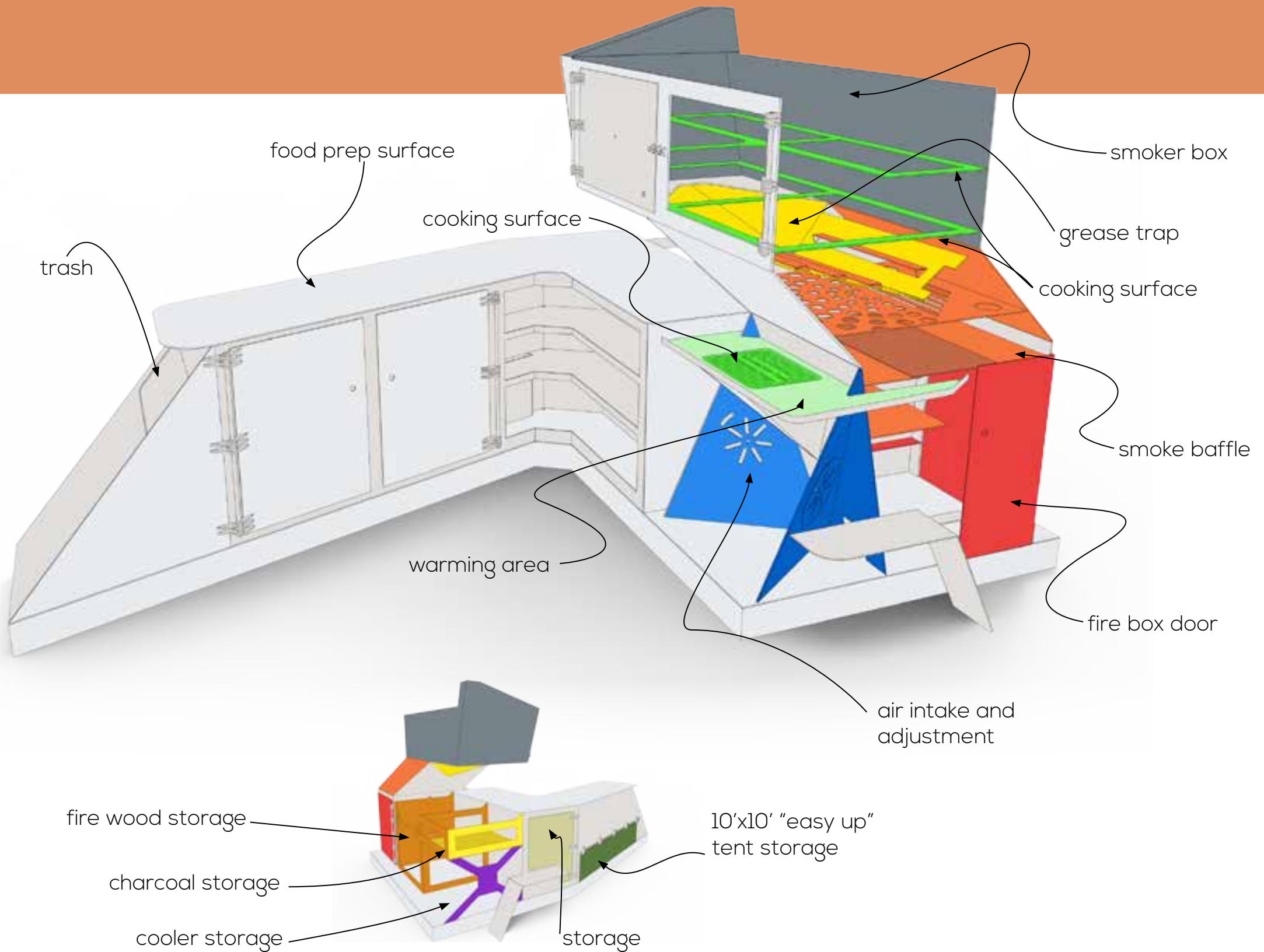
frame stresses, were simulated to ensure safety and longevity of underlying structure the smoker



CADD & PROTOTYPE DEVELOPMENT

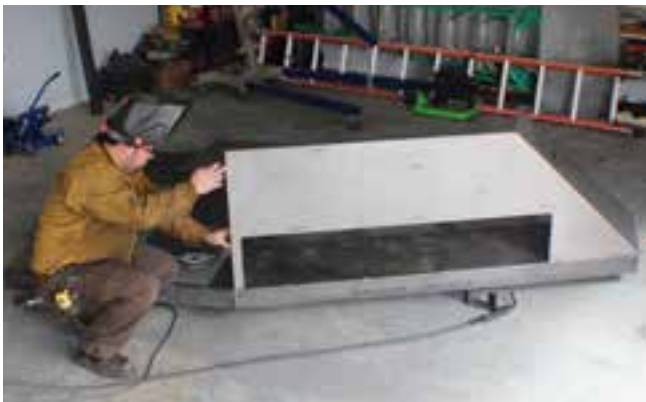
1/4 scale model - laser cut
polystyrene





*SOME PARTS MISSING FOR VISIBILITY

CADD & PROTOTYPE DEVELOPMENT





FULL SCALE PROTOTYPE





MODERN SWEEP

**Design a broom that inspires the
user as much as the space they are
cleaning does.**

MARKET RESEARCH



Name: Precision Angle Broom
PN: 00206
Manufacturer: Libman
Address: 220 North Sheldon
Arcola, IL 61910
Phone: (800) 646-6262
Fax: (217) 268-4168
E-mail: info@libman.com



Name: Traditional Corn Broom
PN: 00301
Manufacturer: Libman
Address: 220 North Sheldon
Arcola, IL 61910
Phone: (800) 646-6262
Fax: (217) 268-4168
E-mail: info@libman.com



Name: Way Clean
PN: 13204580
Manufacturer: CasaBella
Address: 225 North Route 303,
Unit 106 Congers, NY 10920
Telephone: 800-841-4140 x 184
E-mail: info@casabella.com
Fax: 845-348-0017



Name: Lodder
PN: 798.777.47
Manufacturer: IKEA
Address: Almhult, Sweden
Phone: 1-888-434-4532



Name: Maxi Angler Broom
PN: DRK 91351
Manufacturer: O-Cedar
Address: Attention: 2188 Diehl
Road Aurora, IL 60502
Phone: 1.800.543.8105

HANDLE	Steel	SPF Wooden	Steel	Steel	Steel
BODY	Injection Molded	Injection Molded	Injection Molded	Injection Molded	Injection Molded
BRISTLES	Extruded	Corn	Extruded	Extruded PET	Extruded Polystyrene
DUSTPAN	Injection molded / Thermo Formed		Injection molded / Thermo Formed	Thermo Formed polypropylene	Injection molded
PRICE	Price : \$33.93	Price: \$19.21	Price: \$15.59	Price: \$8.98	Price: \$74.71
DEMOGRAPHIC	Home Owners	Home Owners / industrial	Home Owners	Home Owners	Contractors
AVAILABILITY	Walmart / widespread	Buy.com / widespread	Target	IKEA / widespread	Home Depot / widespread
DIMINISHED CAPACITY	NO	NO	YES	YES	NO

TARGET GROUP

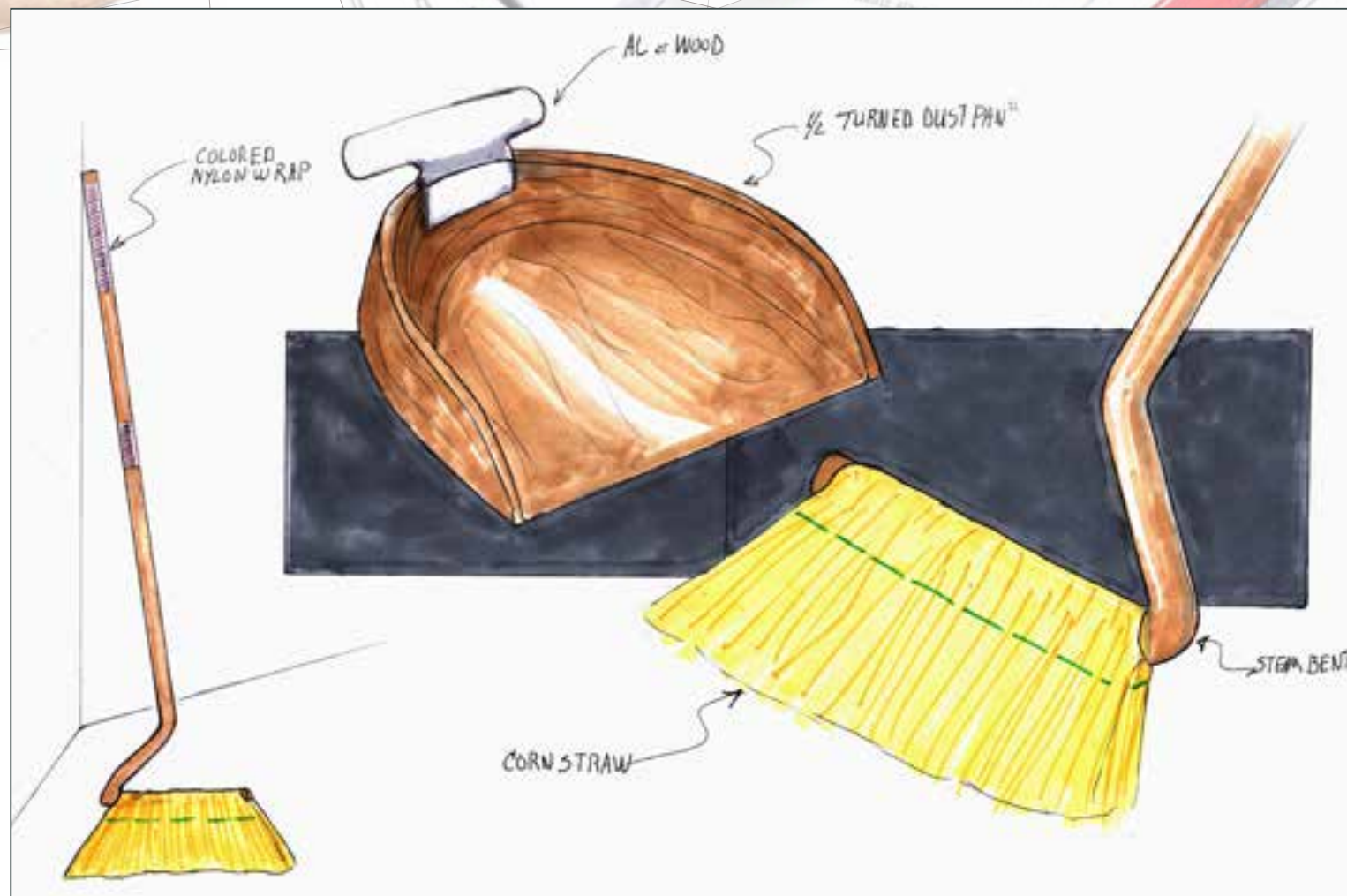
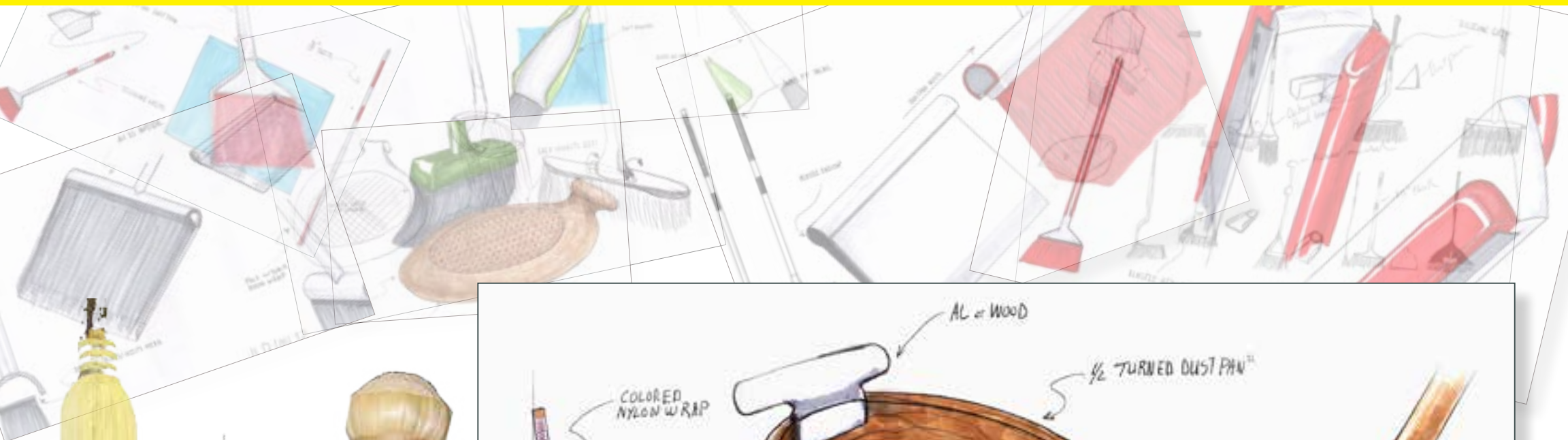
- 93% of all house holds make less than \$97,000
- People with less income aspire to own "dwell" like goods, then shop at Walmart
- Must work to find a balance between brand dilution and sales
- Make use of multiple levels of design and quality

AVERAGE READER OF DWELL

- Age: 39
- Female: 59%
- Male: 41%
- Married: 50%
- Home Ownership: 68%
- College Graduates 74%
- Professional / Management: 51%
- Mean Household size 3.3 persons
- Total Household Income: \$97,201

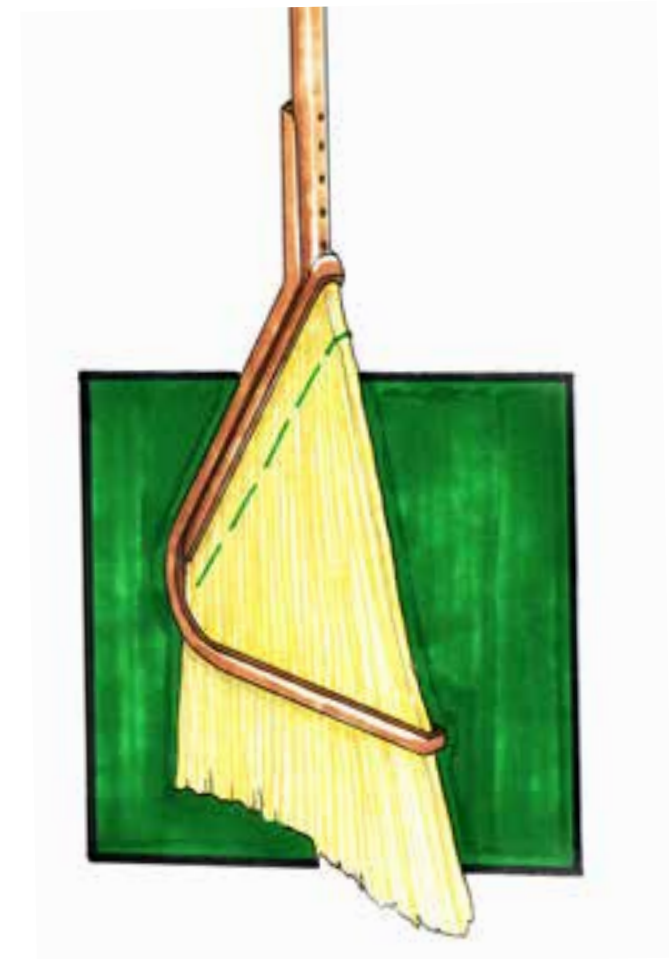
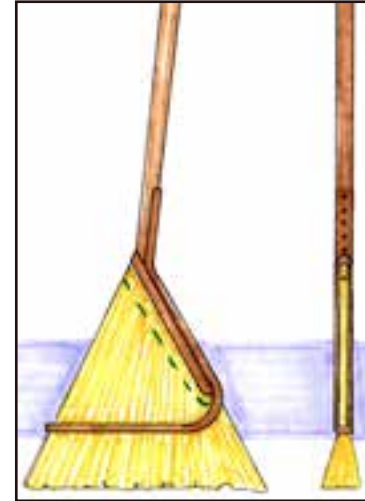
TARGET RETAIL RESELLERS

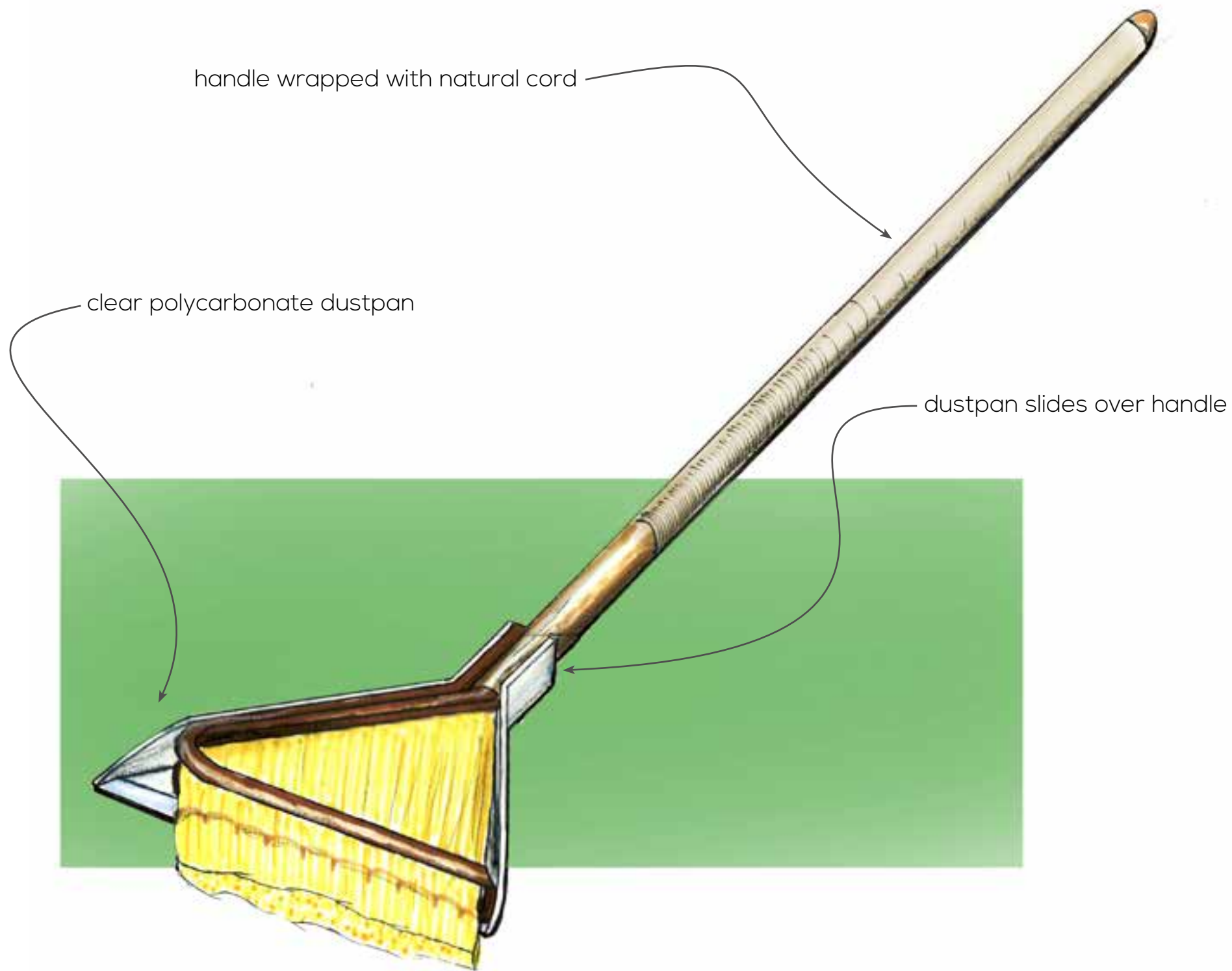




CONCEPT DEVELOPMENT

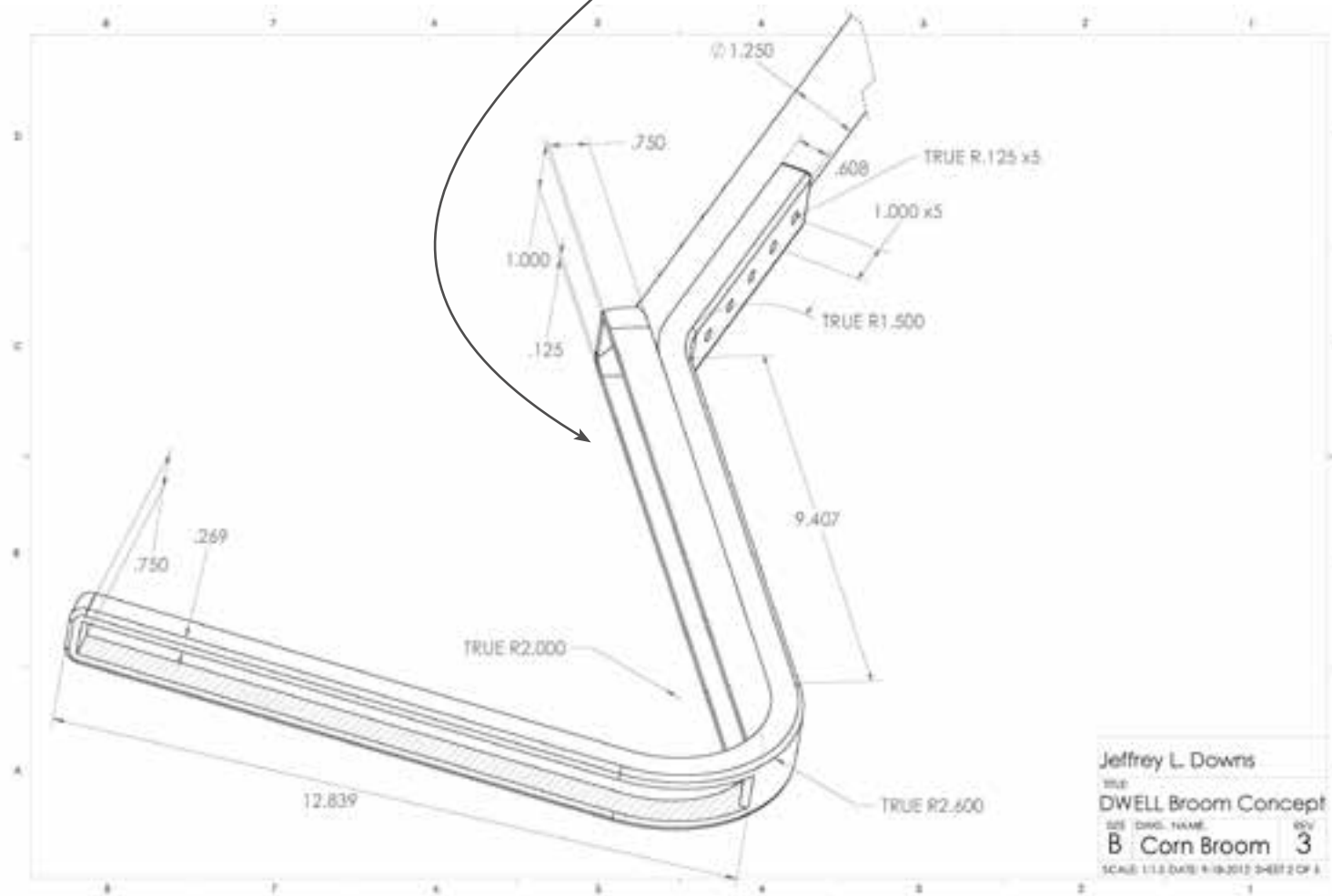
oak and natural corn straw





FINAL DIRECTION

CADD model was used to create
mold for laminated bent oak support



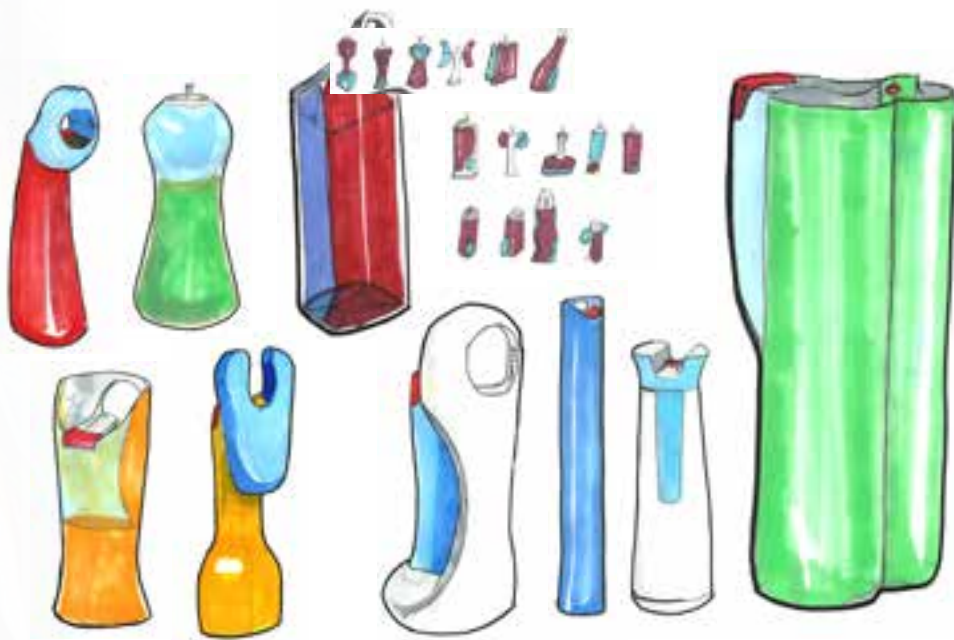


PROTOTYPE DEVELOPMENT





PROpel
spraypaint



ROTATING DIALS TO ADJUST
FLOW OF DIFFERENT PAINTS



BLACK PAINT

WHITE PAINT

COLORLED PAINT

ALL THE TINTS, TONES, AND SHADES OF YOUR FAVORITE COLOR IN ONE CAN



CONCEPTUAL RENDER



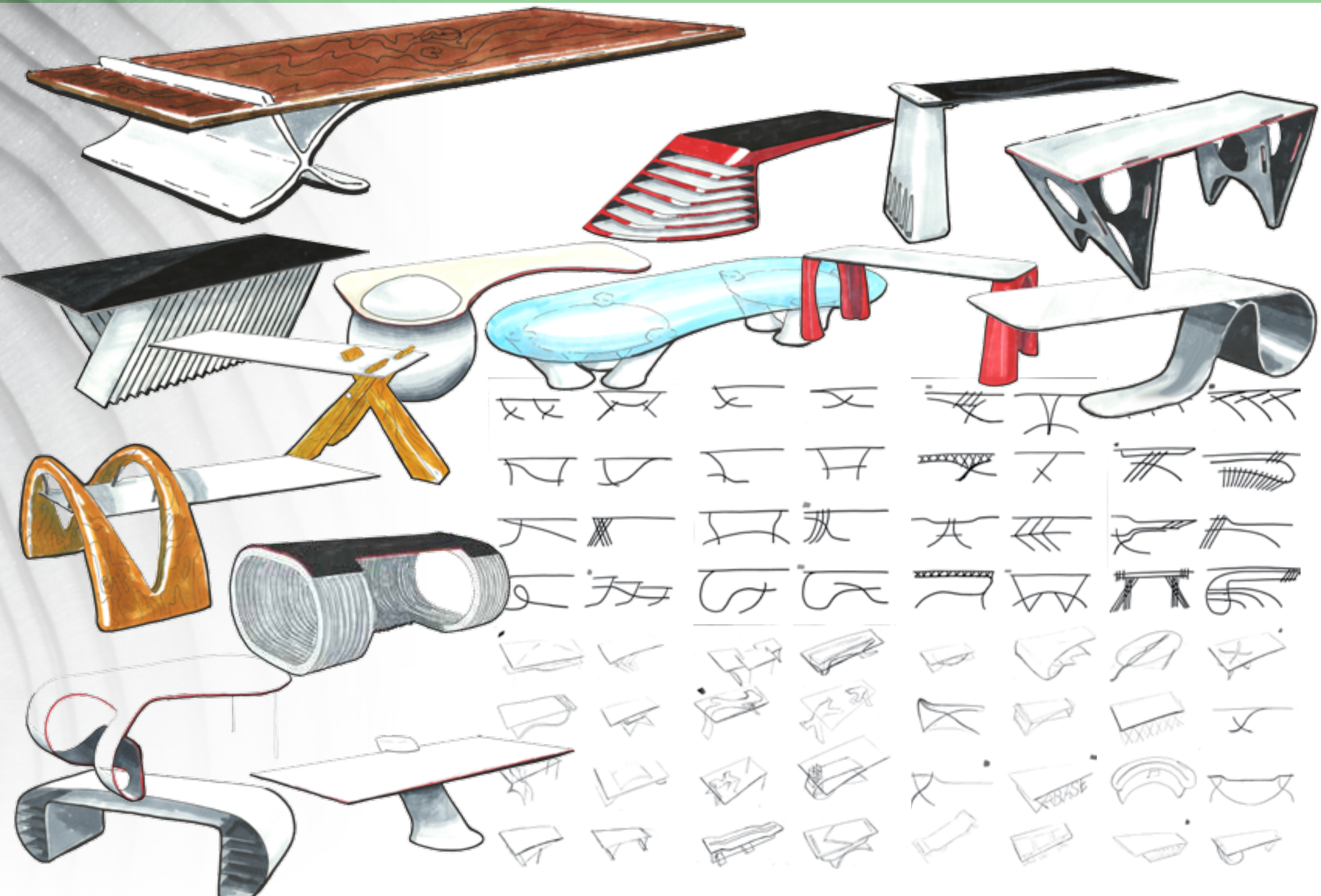
GROWTH

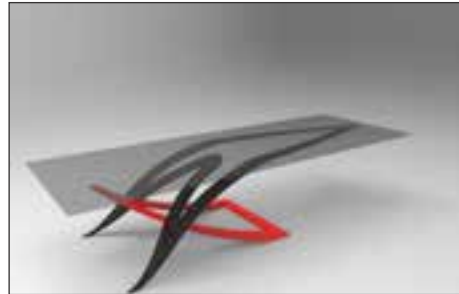
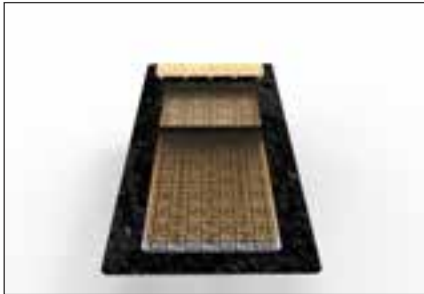
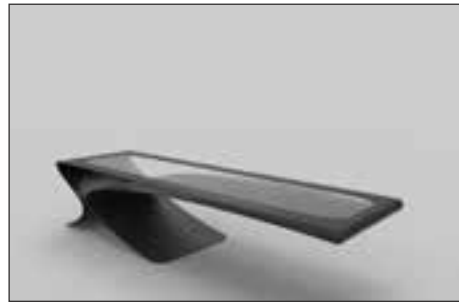
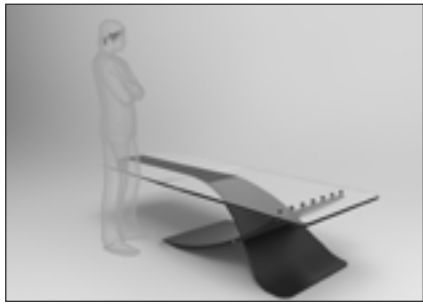
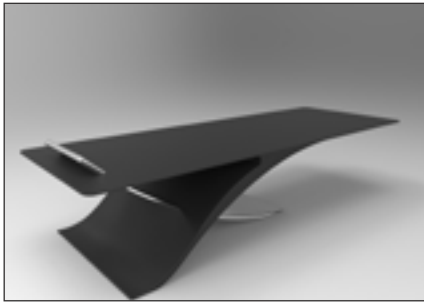
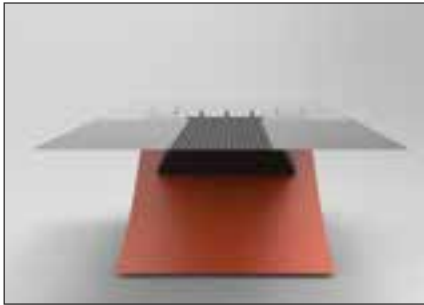
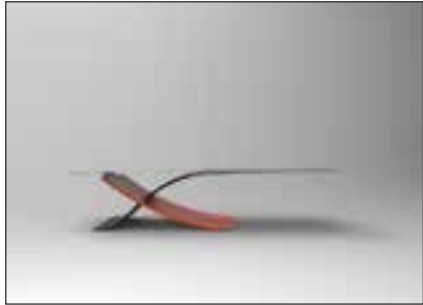


Collab - of Philadelphia Museum
of Art, Design Competition

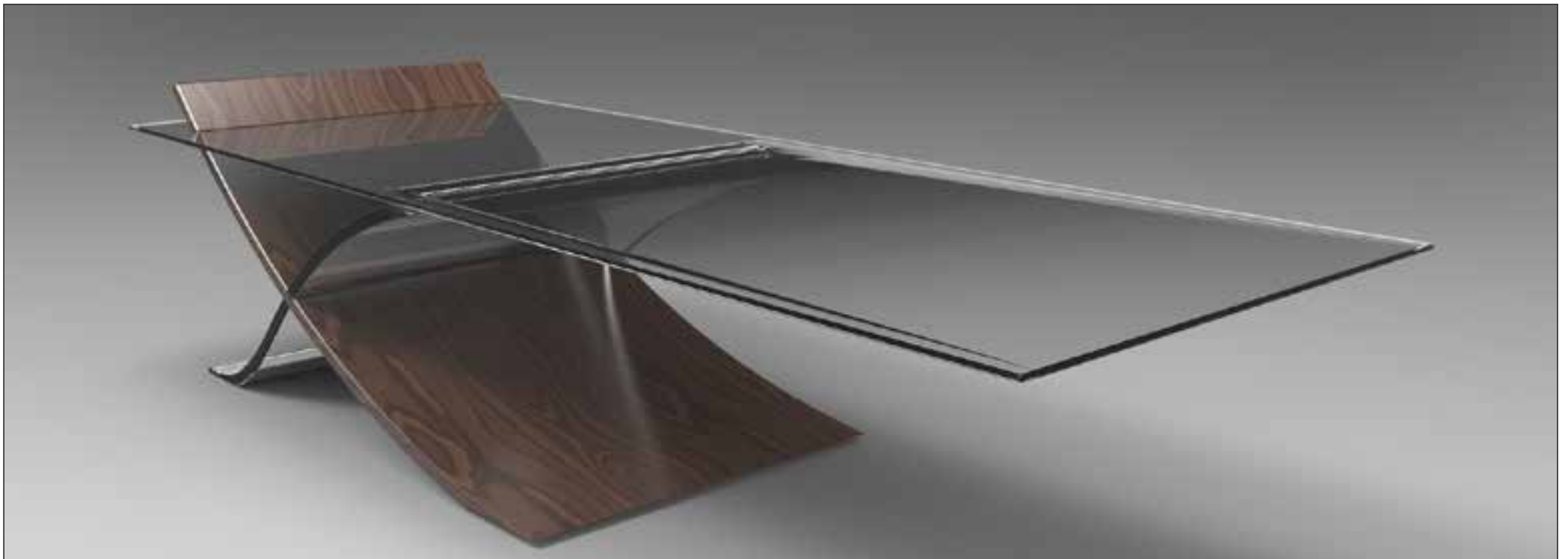
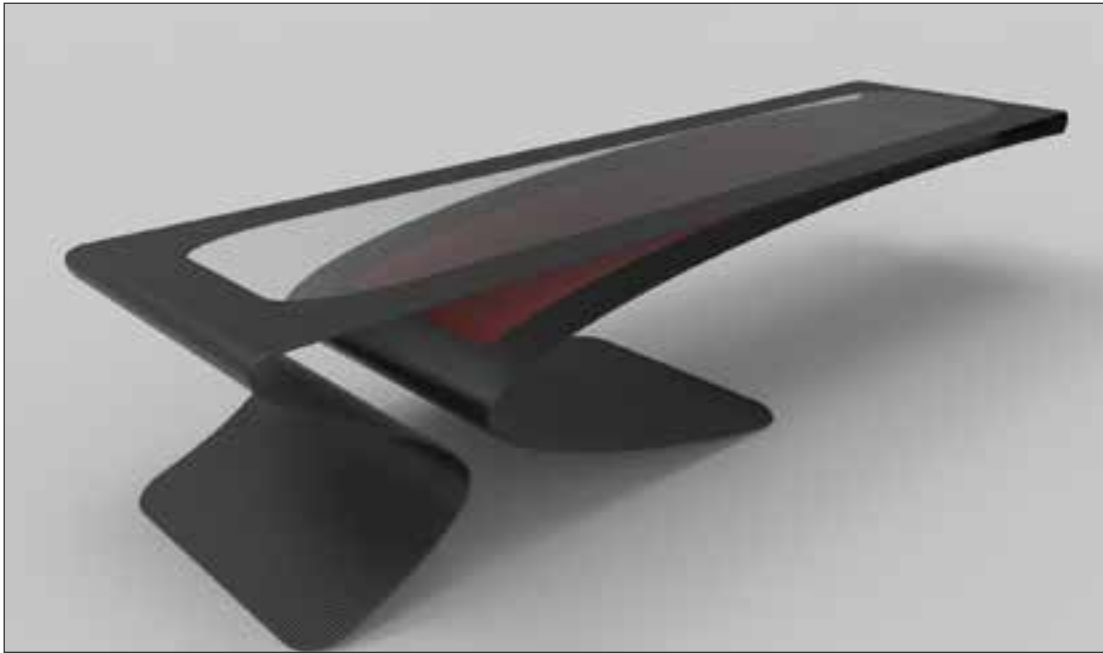
Design a table that will grow
with the user by mimicking
the rings of a tree.

INITIAL CONCEPT DEVELOPMENT





NEAT, BUT START OVER



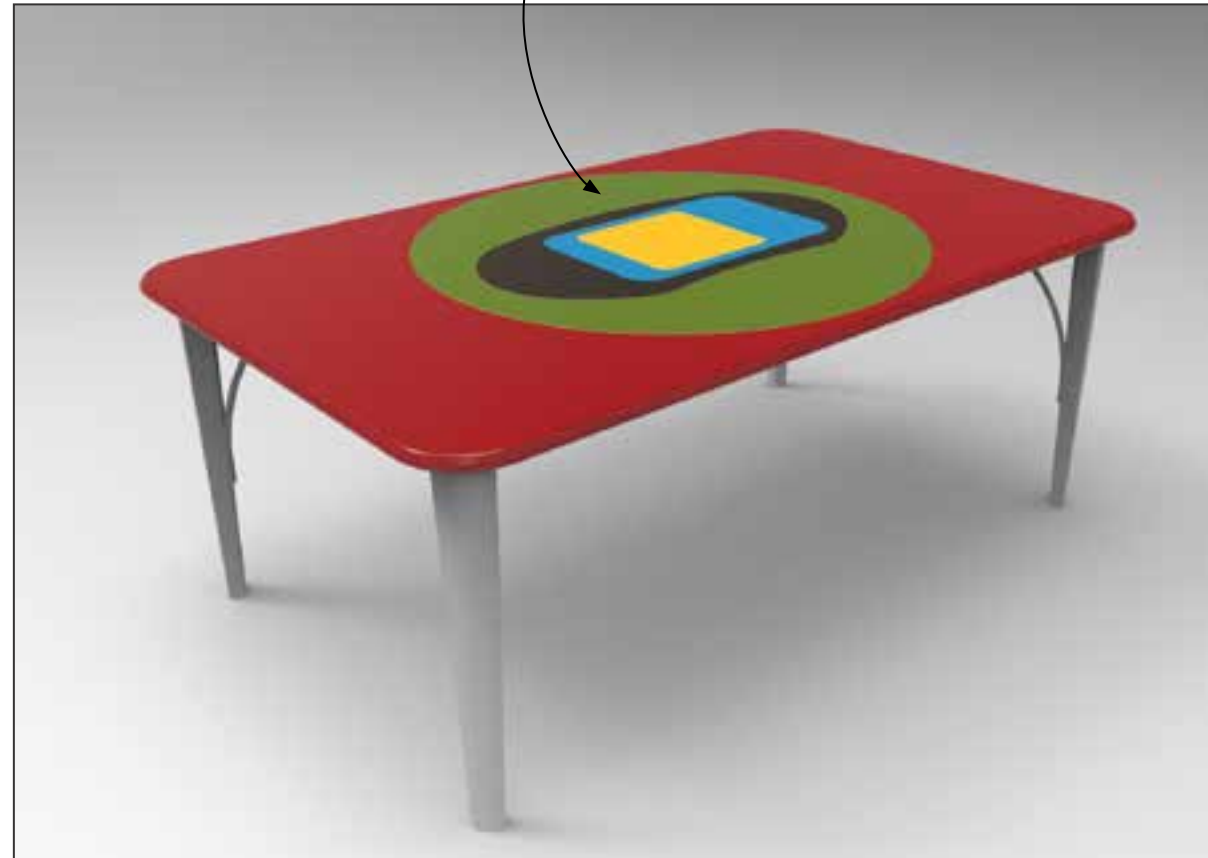
TREE RINGS

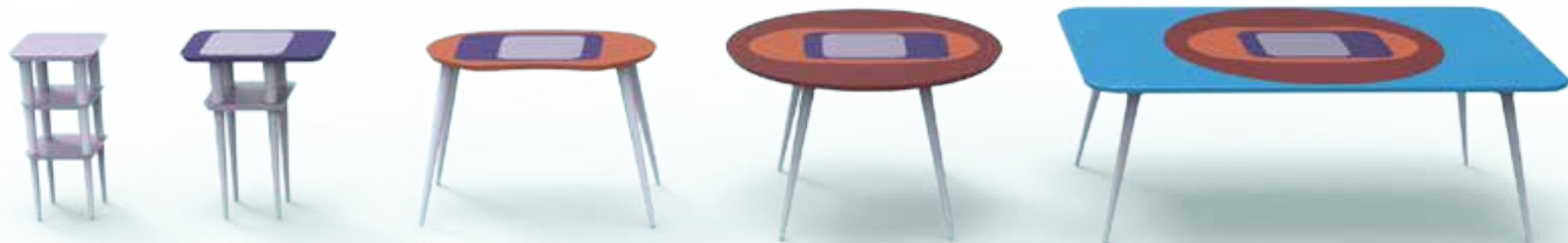


INDIVIDUAL Beveled Rings, Removable

Concentric Rings, Act As Table
Leaves, mimic tree Growth

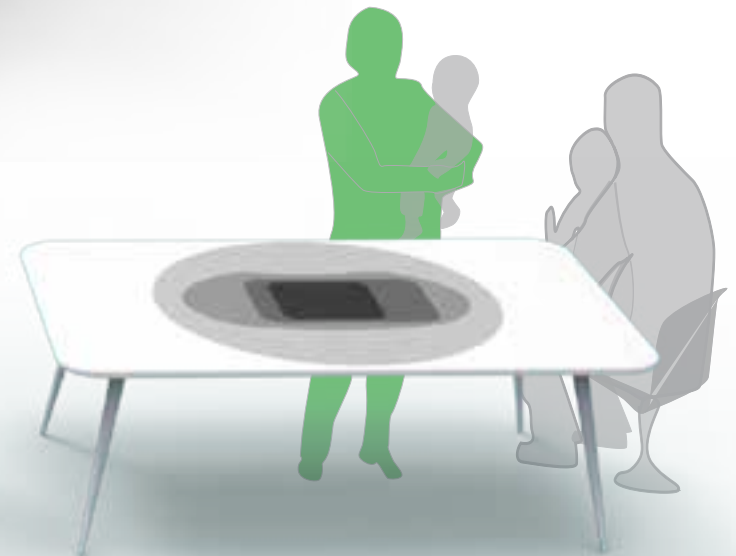
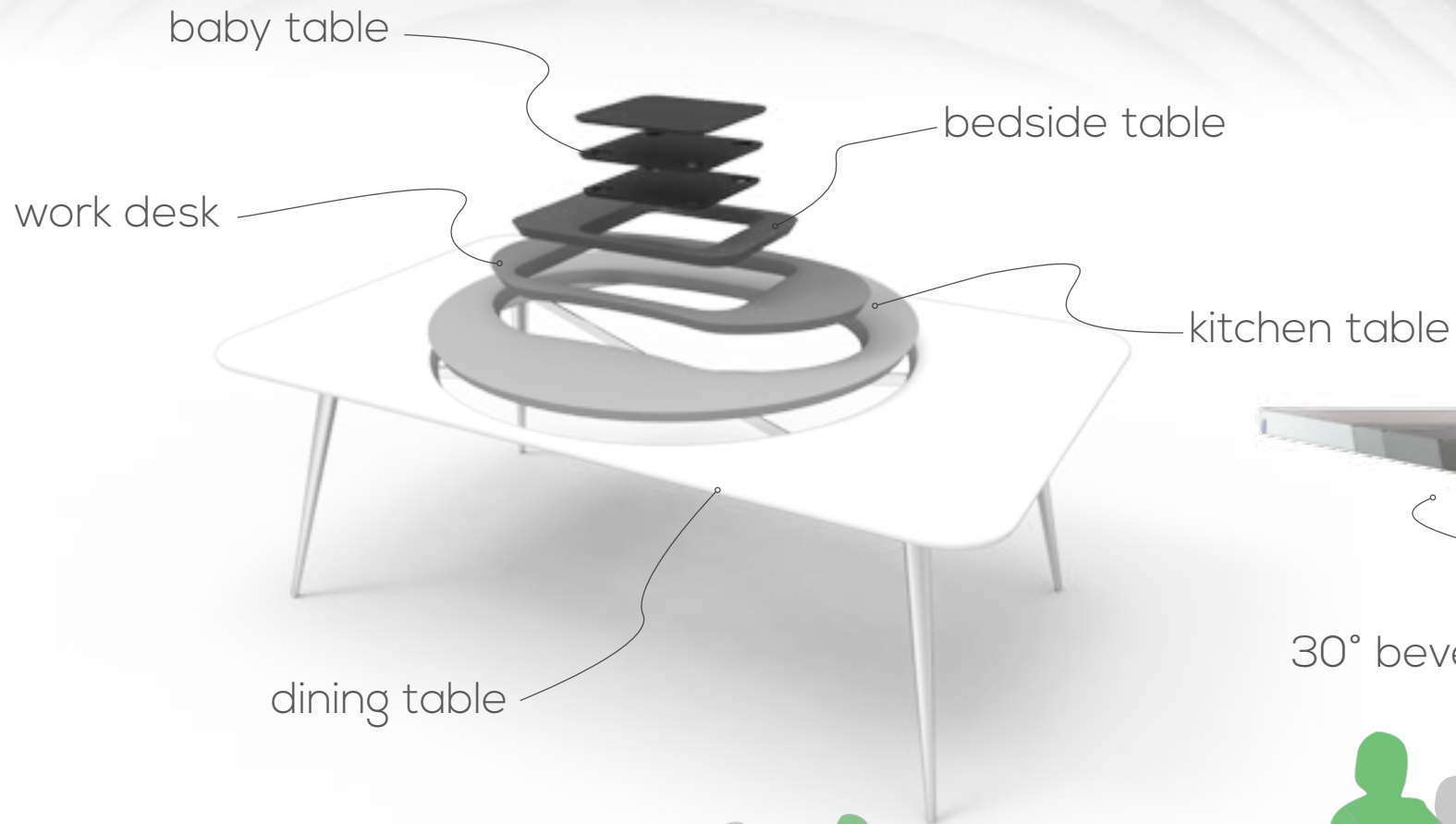
STYLIZED TREE RINGS





GROWTH

-Inspired by the rings of a tree, this table grows with you, as you progress from a child, to having your own-



Brush Axe

Research and design a sustainable tool to help fire fighters clear brush and roots up to 2" diameter.

SUSTAINABLE

COMPOSTABLE

REAL NEED

EFFICIENT PACKAGING

LONG LASTING

EASE OF BREAKDOWN FOR REPAIR OR RECYCLING

VERNACULAR DESIGN

EFFICIENT PRODUCTION

PRODUCT RESEARCH



Info

Product	8" Hatchet	Brush Hook	Clearing Axe 3022	Brush Axe
Company	Fiskars	Bully Tools	Bahco	Fiskars
Location	Finland	USA	Sweden	Finland

Production

Material	Low friction coated steel	Steel	Steel, high carbon blade	Low friction coated steel
Material	Fiber-Composite	Hickory	Hickory	Fiber Composite
Process	Stamped / Injection	Laser Cut & bent	Stamped, bent & welded	Stamped / Injection

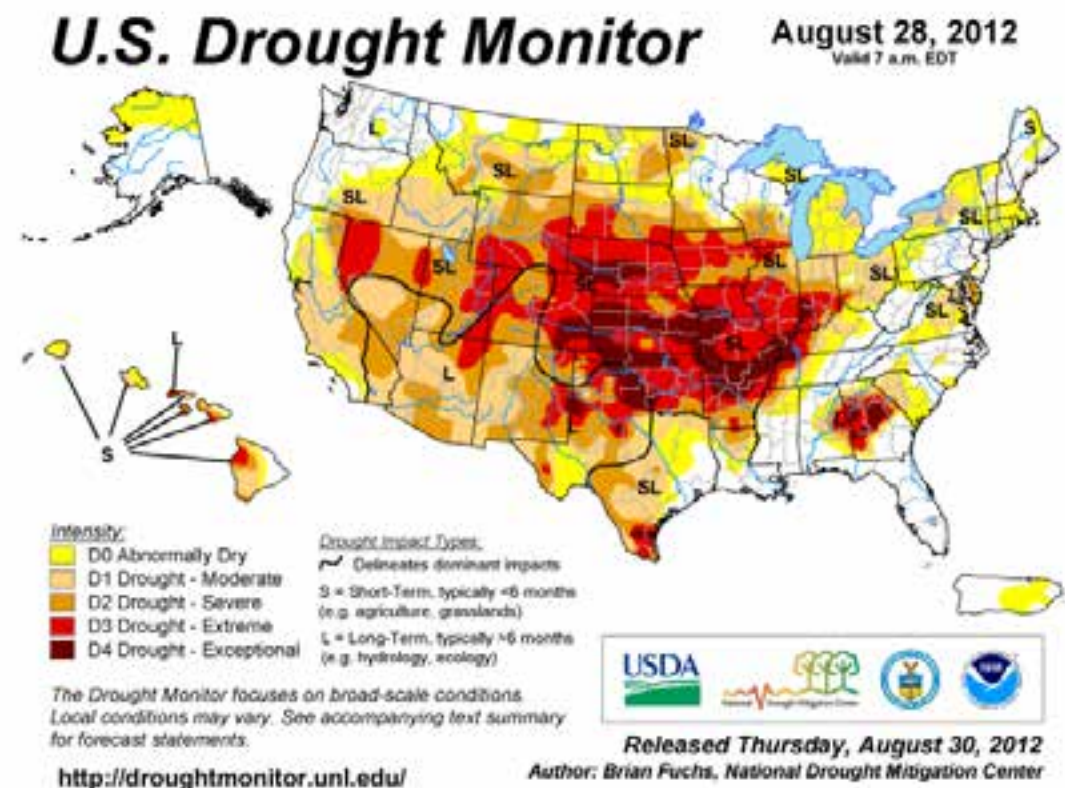
Technical

Blade	Razor Sharp	Dull	Razor Sharp	Dull
Weight	2LBS	5LBS	3LBS	2LBS
Length	8"	48"	27"	22"

Human

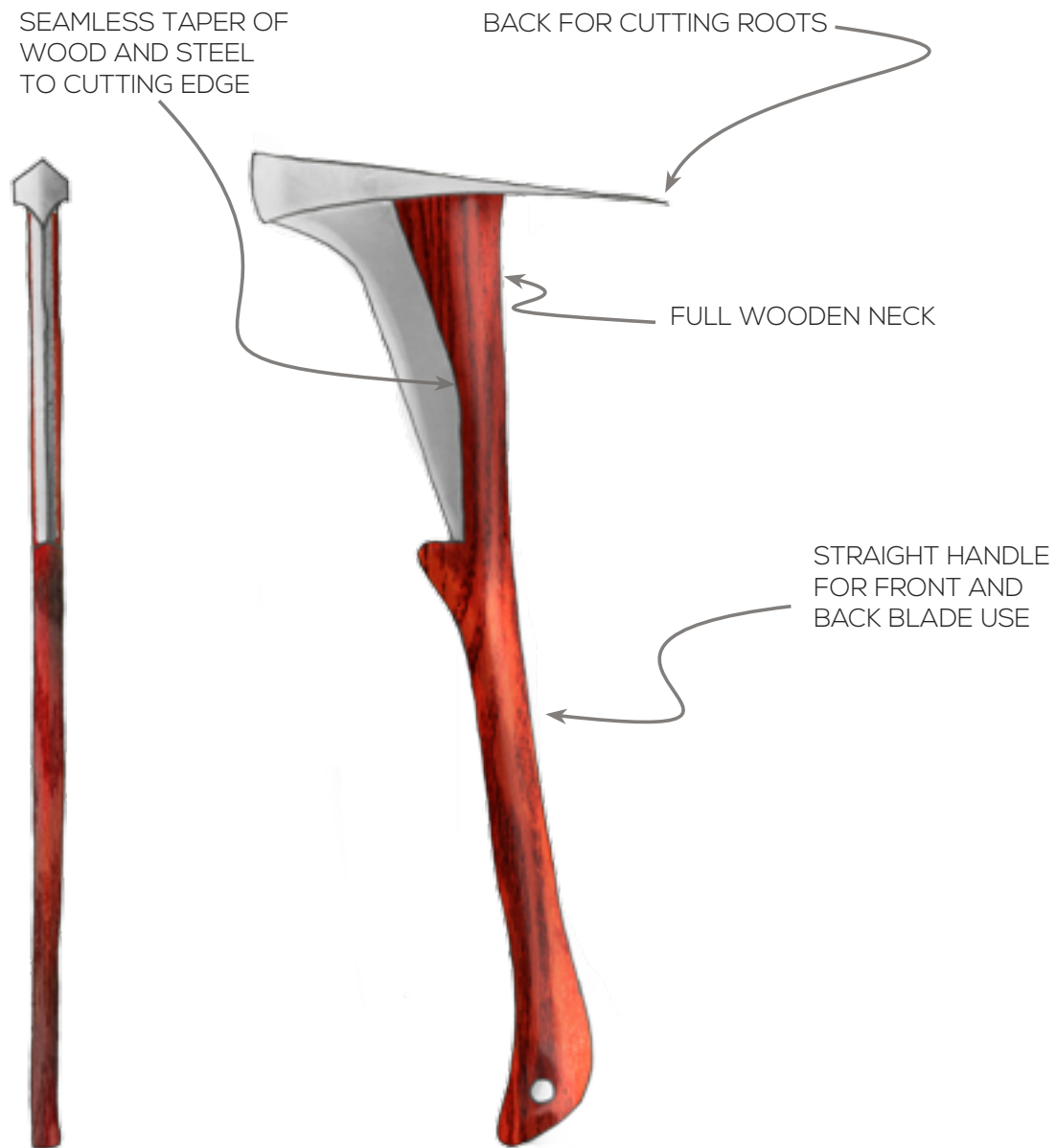
Price	\$29.99	\$39.99	\$65.49	\$23.99
Demographic	Hobbyist	Serious User	Serious User	Serious User
Availability	Amazon.com	Amazon.com	Amazon.com	Amazon.com

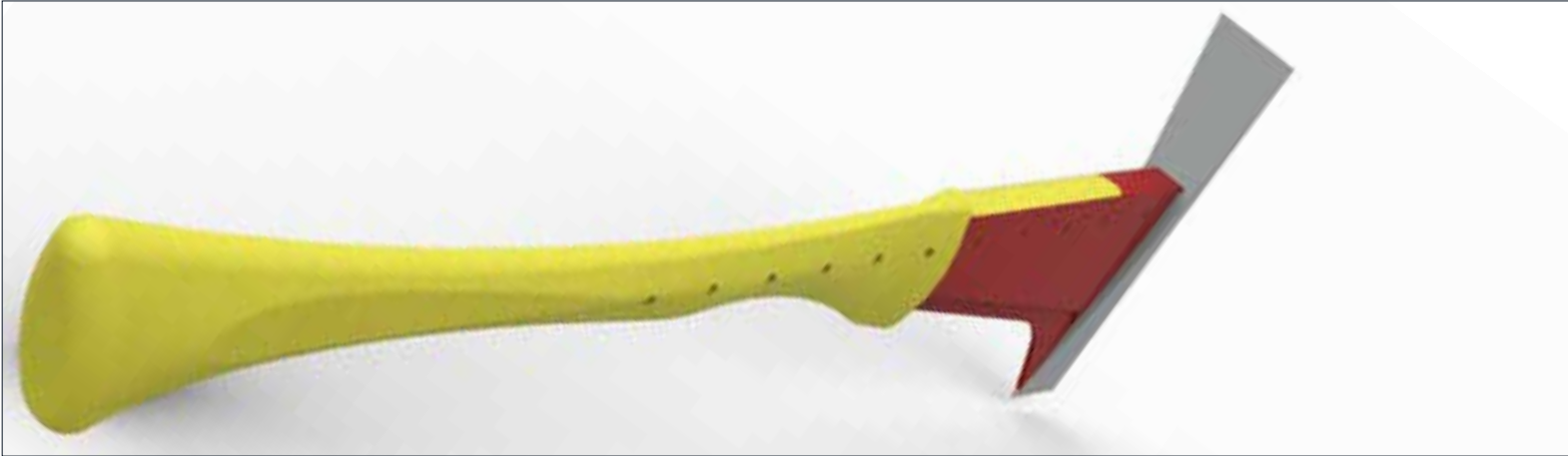
FOUR MAIN STYLES OF BRUSH CLEARING HAND TOOLS



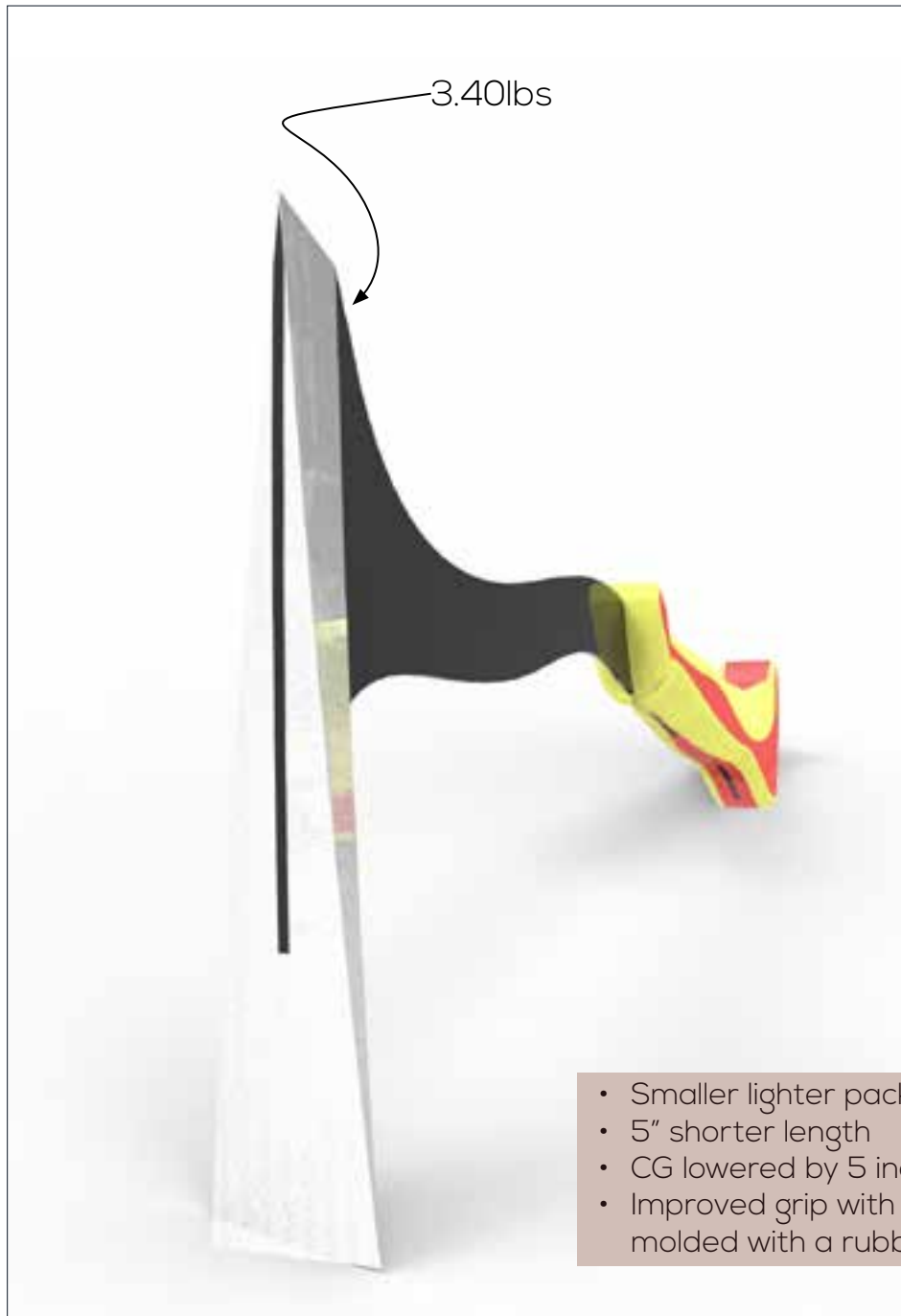


CONCEPT DEVELOPMENT





CONCEPT RE-DEVELOPMENT



- Smaller lighter package
- 5" shorter length
- CG lowered by 5 inches improving balance
- Improved grip with composite handle over molded with a rubber material

