ASM | a portfolio

The designs of Adam Stern Meyer

an inverse product life

CAN WE EXTEND A PRODUCT'S LIFE THROUGH MATERIAL CHOICE?

Products, more and more, are becoming disposable, and those that are not are being thrown away before they are even broken. 20% of clothing dryers are thrown away before they stop working, and a staggering 90+% of computers see a trash can before they die. As designers, it is our job to design the things that become trash, but how can we combat this?

For this project, we were asked to redesign a common item and extend its life through the use of bronze. On the surface, this seems very simple. But a closer look reveals that a product's material defines it in so many ways. Simply redoing a product in bronze adds considerable cost and weight, without necessarily extending its life.

After looking at bronze's unique qualities, and thinking about the perception of bronze goods being precious or antique, I decided to redesign a garden cultivator.

Bronze is a heavy, non-sparking metal: useful qualities for such a tool. Because the piece was to be cast, it was important to me that the form be something that would require casting and could not be manufactured using any other process.

One of the reasons that bronze is often thought of as an antiqued material is its patina. This green coloring that comes with age was the key to making my product have a longer life. Because the cultivator will often be exposed to moisture during use, the more it is used, the more it will patina, and the better it will look. This gives the item a unique quality, which I call the "inverse product life." Whereas with most products, the longer they are owned, the closer they are to the trash; on the contrary, the older the cultivator is, and the more it is used, the more the user wants to keep it.


horticulture

never stop inventing

WHAT WOULD OUR PRODUCTS LOOK LIKE IF WE NEVER SETTLED?

In the early 20th century, the first electric toaster was invented. The toaster would go through numerous designs and reinventing until the 1940s when the two slot bow was settled upon. But what if we never settled?

For this project, we were asked to redesign a small appliance. I originally chose a toaster because of how dirty the inside gets over time. Originally, I saw this problem alone as reason for change. What I found is that for over 50 years the toaster has been exactly the same.

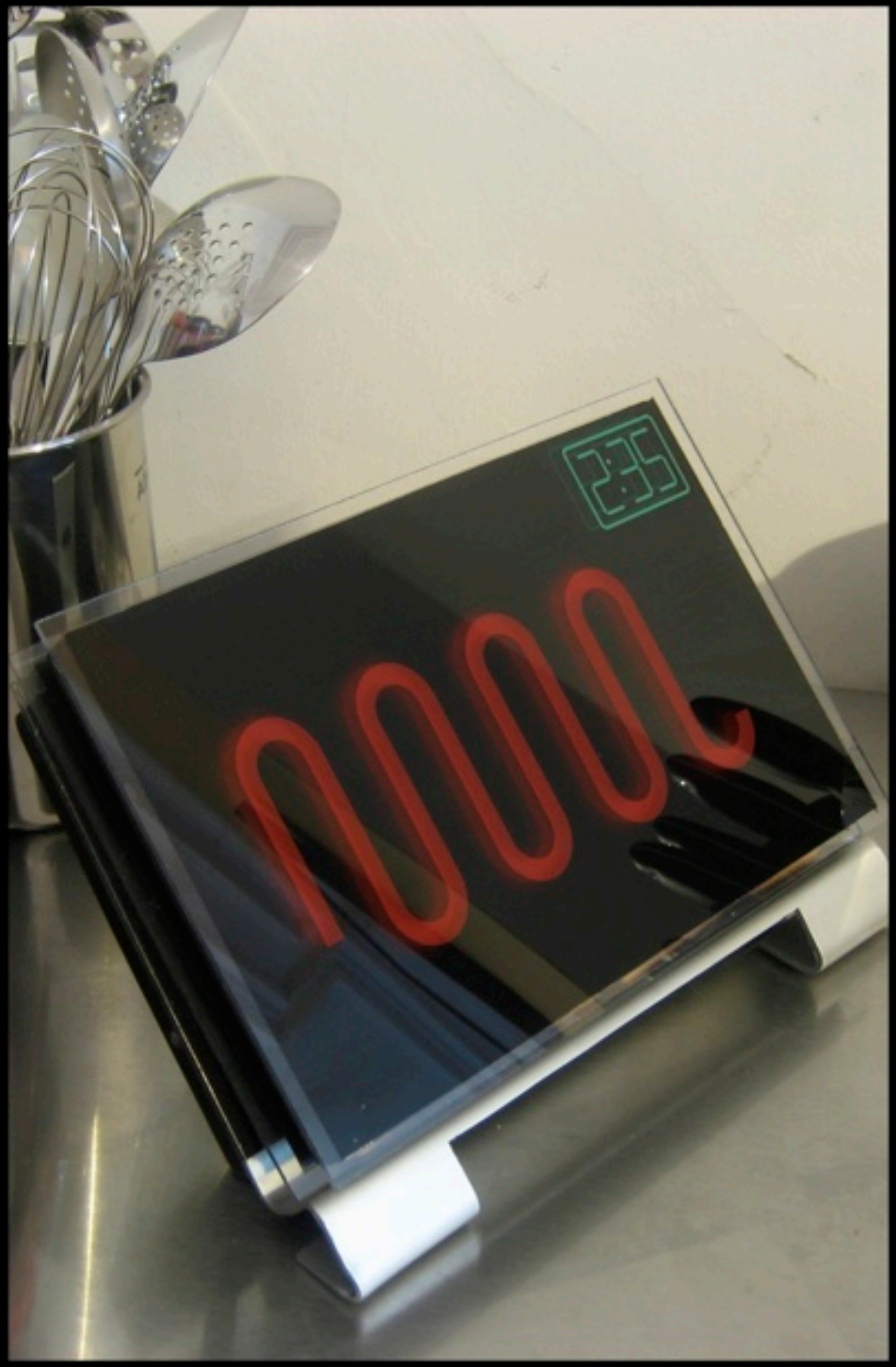
I redirected my focus; I was no longer trying to design a cleaner toaster, I was designing a mindset for design. It wasn't about the next logical step in appliance design, it was about not being afraid to scrap the entire system and start anew. It was about deliberately going against what a toaster looks like.

What came from the design was a toaster like no other. The bread is loaded into the toaster like a tape into a tape player, and because users don't want to stare at a toaster, wondering if it is even working, the toaster has two visual indicators that it is toasting. Like a microwave oven, from afar the overall glow informs the user that it is in use, and a digital timer lets the user know the exact time left.

So many of our electronic goods are moving to housing for LCD, with the interface of the item becoming the design itself. The interface of the toaster is unobtrusive, and only comes into view when the user engages it. As the user slides a finger across the panel to select the darkness of the toast, the toast icon darkens, and the toasting time shown increases. Simply removing the finger from the surface starts the process. When the toaster begins toasting, the interface is replaced with an icon of a glowing red coil, reminiscent of the way toast was previously made.


bodum
bodum



a simple twist

WHAT HAPPENS WHEN THE MATERIAL A PRODUCT DISPENSES BECOMES PART OF ITS DESIGN?

Sometimes a simple change in an existing design goes a long way.

For this project, we were asked to select a product from a list and simply redesign its form to reflect our own personal tastes without concern for market influence.

The list consisted of a knife, stapler, cell phone, and water bottle. I knew right away that I wanted to redesign the stapler, because I felt of all the products listed, it lacked the most style. After choosing our products, we were asked to choose any item to redesign alongside our choice from the list, with the understanding that the two products should clearly be from the same product family.

Initially, I started with redesigning the stapler, but after a few redesigns it was clear that I was influenced too much by existing products, so I moved to the tape dispenser.

After looking at what existed to get a feel of where to go, I found that most tape dispensers were upright mainly because it allowed for ease of dispensing. I wanted to keep this functionality, but I also wanted to allow for ease when changing the tape. What I came up with was just that. By twisting the tape, I could just pull the tape roll off to change it, but I could also get my finger under the tape for ease of dispensing. Best of all, the tape itself became the most important part of the design.

I decided upon the final design because I liked how it looked like a disposable tape dispenser on its side, but also had a great amount of elegance to it.

Having the direction I wanted for the tape dispenser, I went back to the stapler and tried again. I adopted the curve as the body of the stapler, but the shape took on a life of its own. Not only did it relate back to the dispenser, it also acted as the spring, allowed for an upright position, and made the stapler easy to pick up when lying on its side, simply by sliding a hand under it. The body of the stapler was painted black to bring out the staples as part of the design and to draw focus on the rest of the form, and was also pushed back through the frame to break the expected line and to remind us of its importance as the core of the stapler.

low impact lighting

IF WE WANT TO LOWER THE GLOBAL IMPACT OF PRODUCTS, WE NEED TO THINK DIFFERENTLY.

Strolling along the aisle of Target, a consumer will find many low-cost products. These products are often designed with no regard to materials or the global impact they bring with them. For this project, we were asked to purchase a popular low-cost consumer item and redesign it to have a lower life-cycle footprint.

After choosing our items we took them apart, then separated and weighed every material, even stripping the plastic insulation from the copper of the electrical cord. Using the OKALA system developed by the IDSA we performed a life-cycle analysis (LCA) on the products and resources used throughout the product's life. This LCA was then used as a number to beat with our redesign.

The product I chose was a typical halogen desk lamp found in many college dorm rooms. When dismantling the lamp, the first thing I noticed was a high number of different materials used in the product, including two lbs of concrete in the base used to weigh it down. Before I had even started the life-cycle analysis, I knew I needed to reduce the amount and variety of materials used.

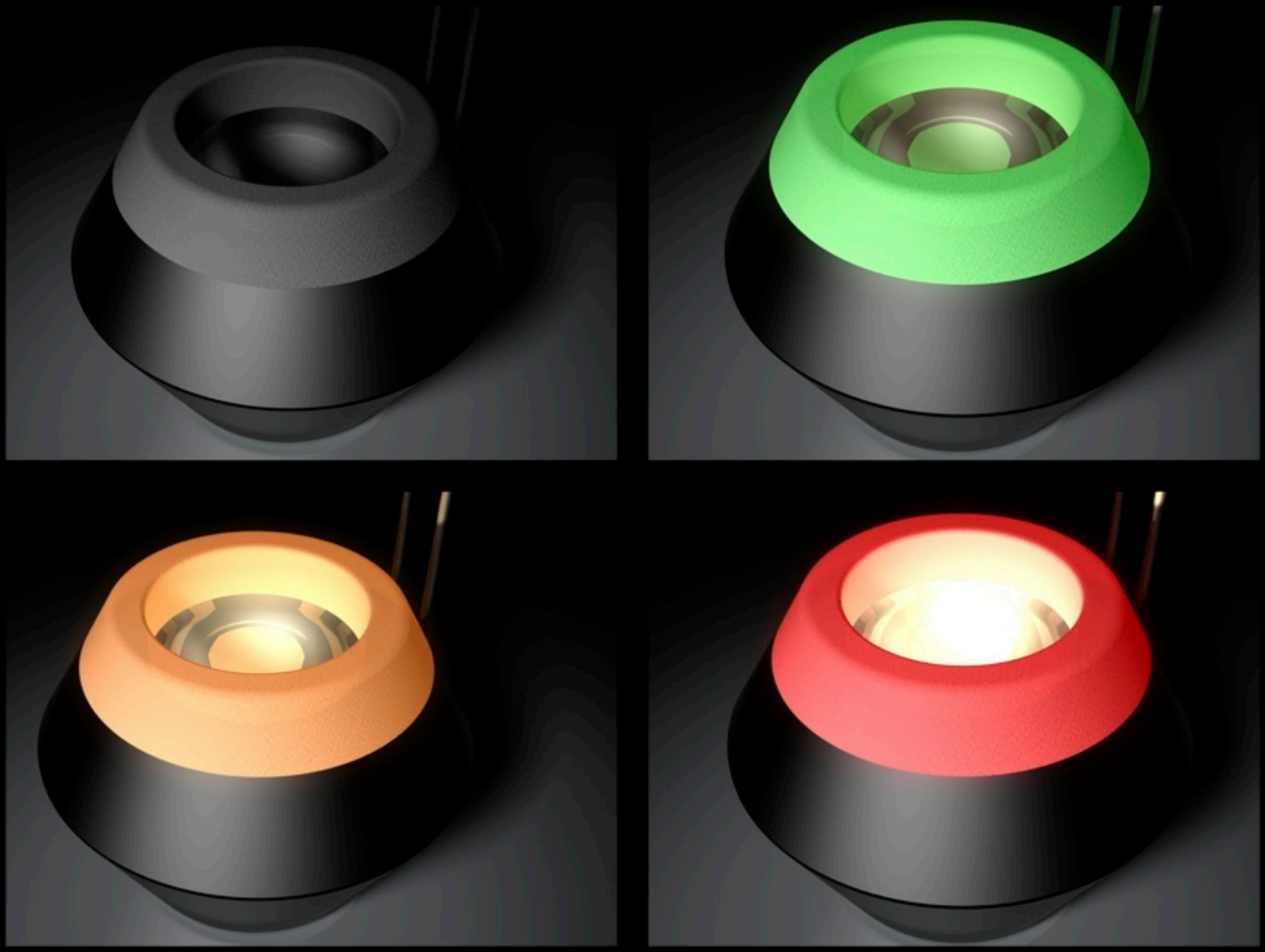
Upon completion of the LCA, I was shocked to find that the largest portion of the lamp's footprint was due to the 50 watt bulb being operated over the lamp's typical lifespan of three years. In fact, the electrical usage alone accounted for just over 75% of its environmental impact.

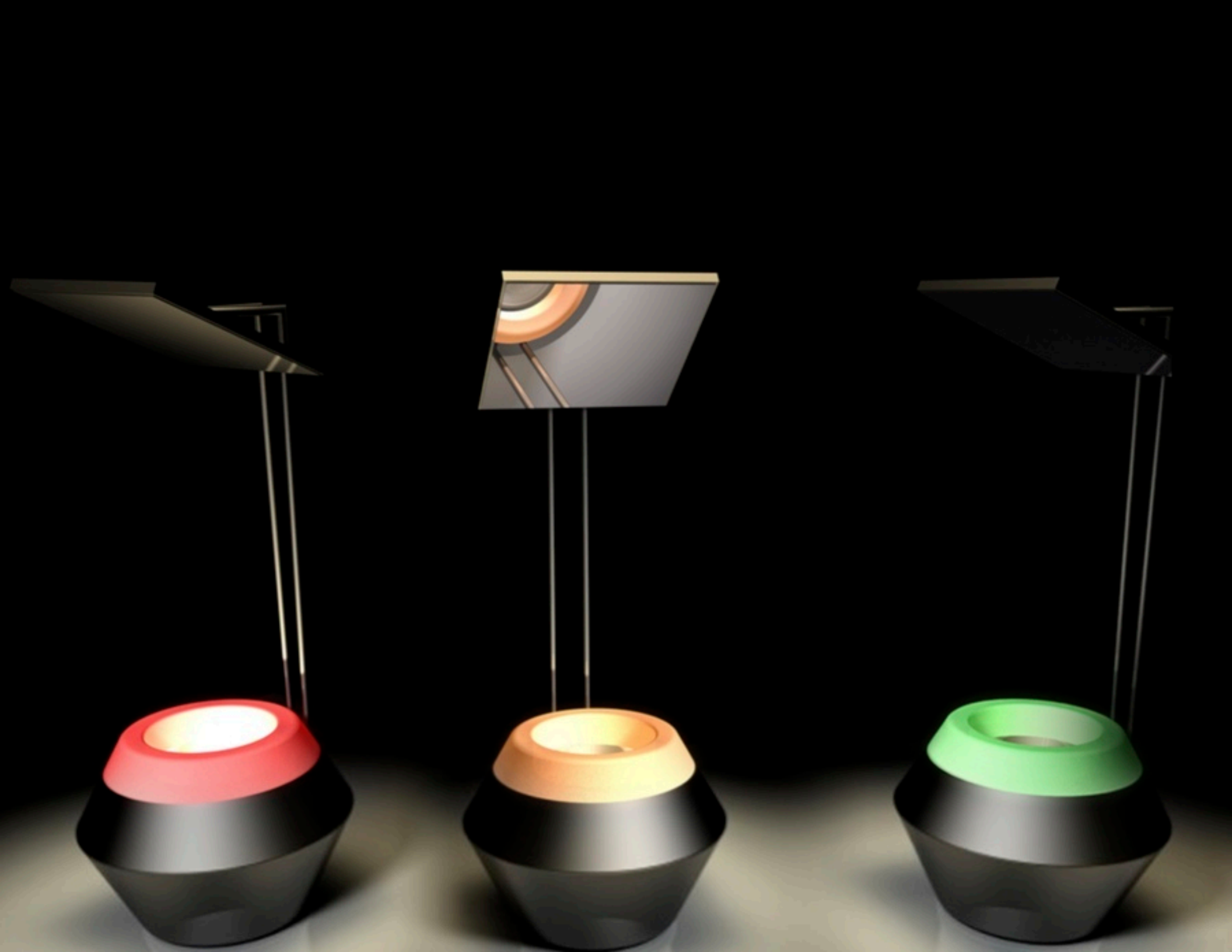
One initial reaction a designer might have would be to replace the 50 watt halogen bulb with a much more energy efficient light source, such as CFLs or LEDs. The compact fluorescents were too large of a replacement for this size of lamp, and the LEDs were more than 20 times as expensive. With my goal of keeping the final design in the same price range as the original, I felt it would be best if I could engage the user in a mindful interaction with the lamp that would be a constant reminder of energy consumption.

Ultimately, I achieved this goal by adding a dimmer to the lamp that would change from green to red as the lamp was brightened. This simple solution acts as the reminder, as well as forces the user into an interaction where they consciously choose the brightness of the lamp. Because the lamp allows for the user to choose a lower setting, average energy consumption was reduced by over 25%

After looking at ways to reduce material use and weight, I came up with the idea of placing all electronics in the base, and used a mirror to redirect the light back to the desk. The shape of the lamp was modeled after a votive candle that I felt it resembled. This reconstruction of the lamp allowed for a significant reduction in material and weight, as it no longer needed to hold the bulb and shade up in the air.

Final footprint analysis on the lamp redesign was over 54% lower than the original.





true collaboration

HOW CAN WE PRODUCE THE WORLD'S KNOWLEDGE WHEN ONLY THE ELITE CAN CONTRIBUTE?

Wikipedia's mediawiki software promised to bring all of the world's knowledge into one place. But how can we achieve this goal when the system is too complex for common computer user to contribute?

This was the exact problem I ran into when I started a collaborative site of my own called RISDpedia using this same software.

RISDpedia, a collaborative instruction manual for artists and designers, is a place for artists and designers to share information on the products and materials they use, and how to use them.

The problem was, although the software was designed for this use, it was not designed for these users. The software was simply too confusing to be worked by average users.

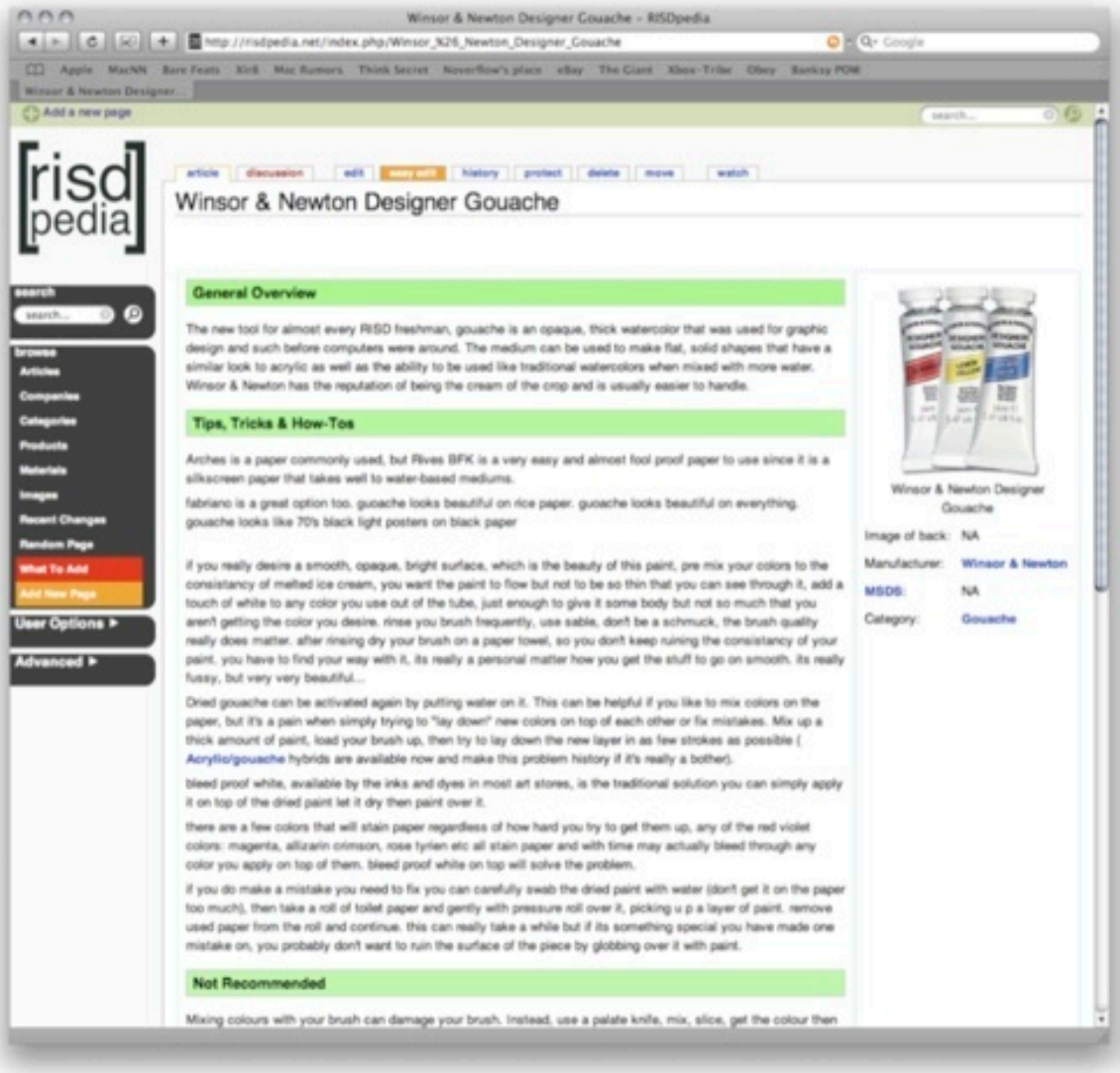
I felt the idea was simply too good to let it die for this reason, so in order to combat this, I took the issue into my own hands and redesigned the way the software was used. What was a seven step process to add an image to an article is now as simple as point and click.

Editing and adding to the software is done using an interface that completely mimics the original outcome and no longer requires the knowledge of complex syntax code to format the page. This new user interface is a completely custom system that helps the user do what they want. Every step greets the user with help menus and tips that appear when the user wants.

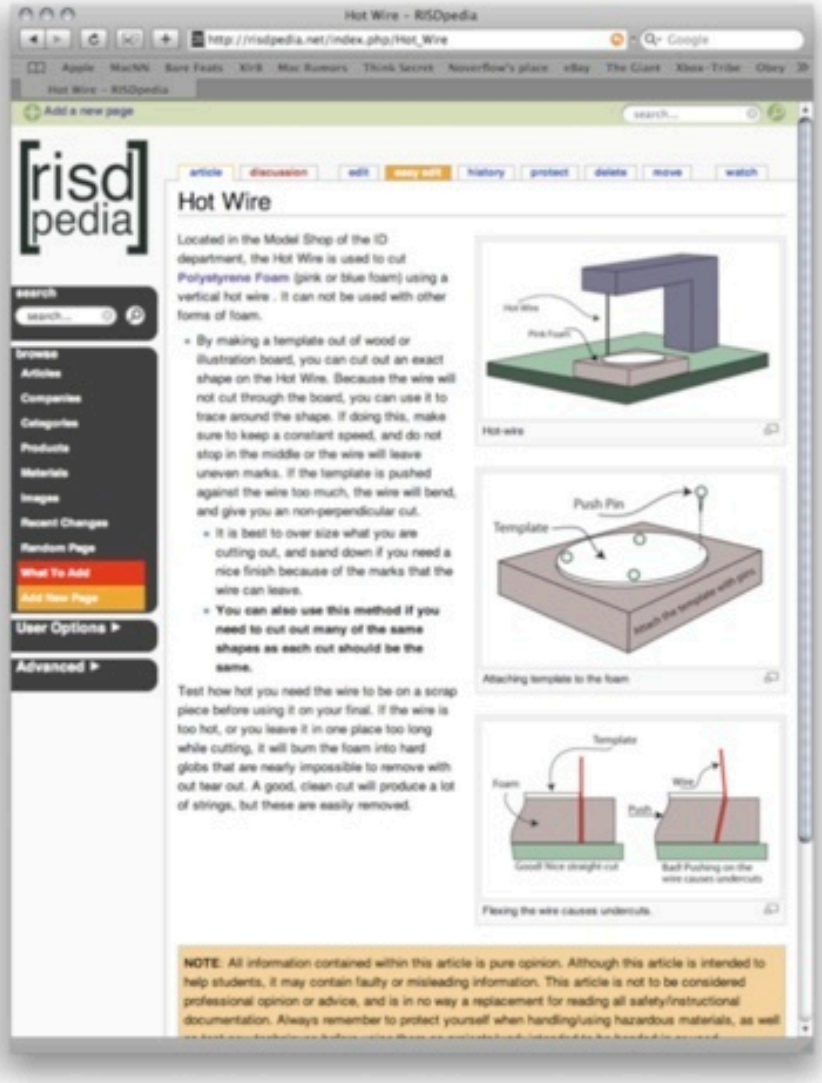
At first glance it may seem that this would be the job for a programmer, and is considered out of the realm of industrial design. The way I saw it was that the problems I was trying to fix were originally caused because a programmer caused them. The understanding of a designer was needed to make something truly user friendly. I approached this project as I do every other design I work on; it just so happened that I had to learn to use a new material to make it happen.

Interface Overview

RISDpedia's material and product pages were designed to be to-the-point and allow the end user to quickly find the information the user needs at that moment. Articles and how-tos are concise and often offer diagrams to better deliver the information as quickly as possible.



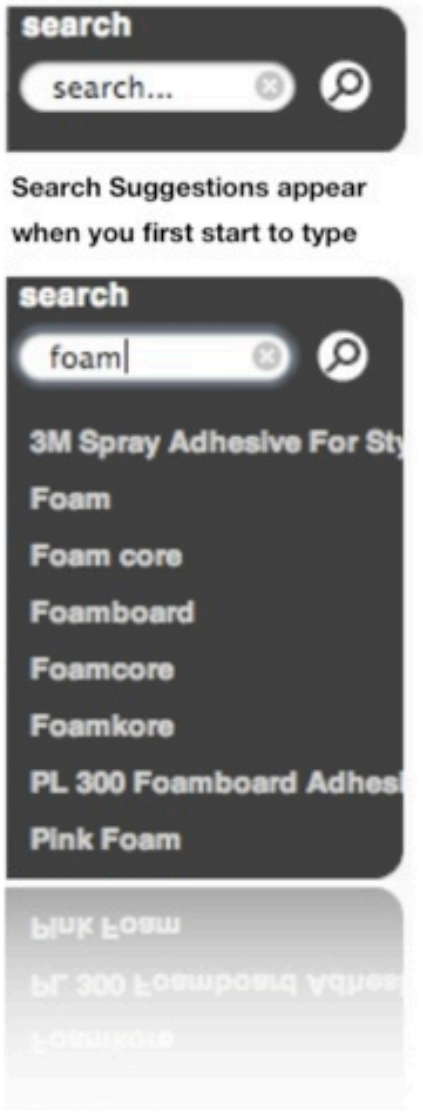
Sample Product or Material Page



Sample Article

Help is on the way

RISDpedia understands that its users are real people. We don't all know silly syntax code, nor should we. When developing the interface, great care was taken to make it as simple as possible, and to make sure no computer knowledge was necessary. But there are times where some things are not always the clearest, or times when people just need a helping hand. For these times, popup help menus and floating tips are available on every screen during your creation of new pages, as well as your edits. Even the search bar offers helpful suggestions.

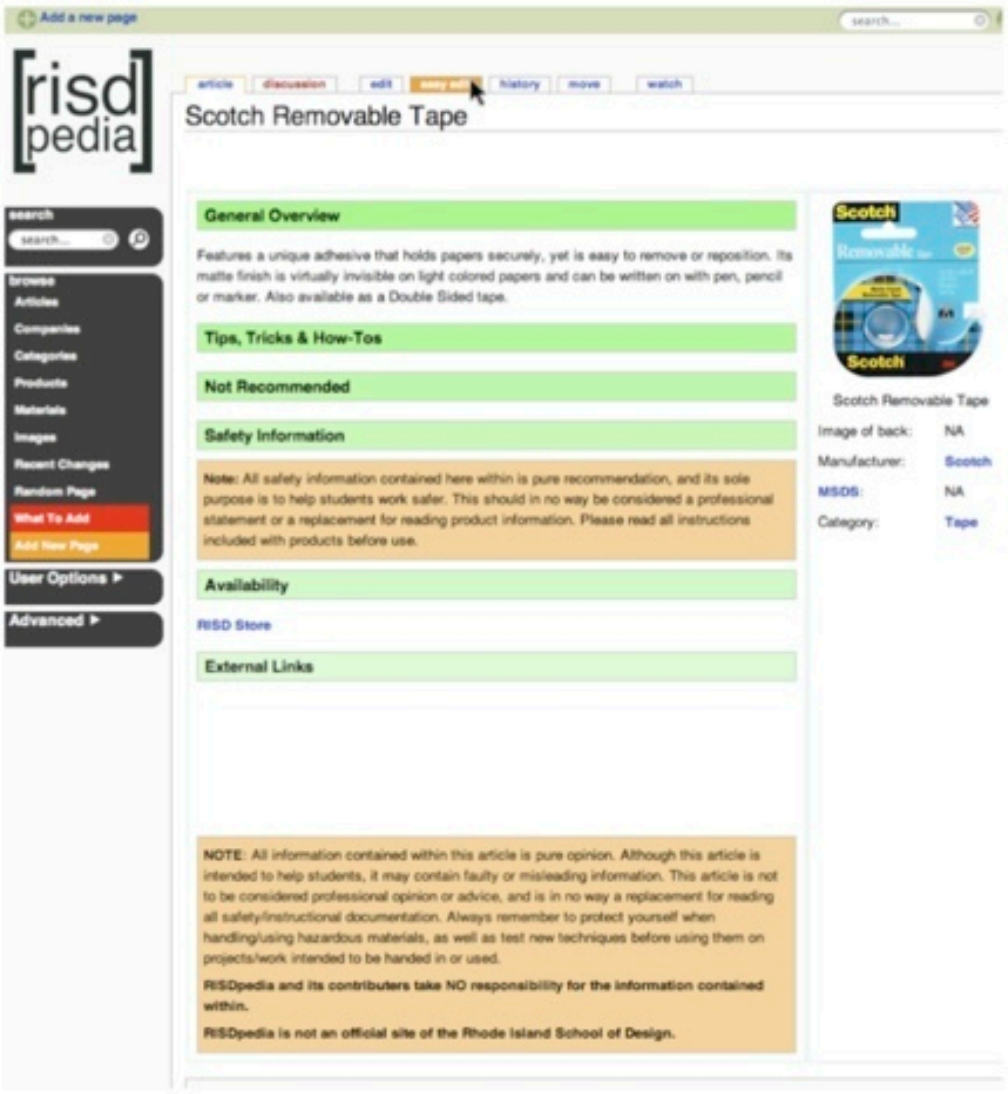


Popup Help Window

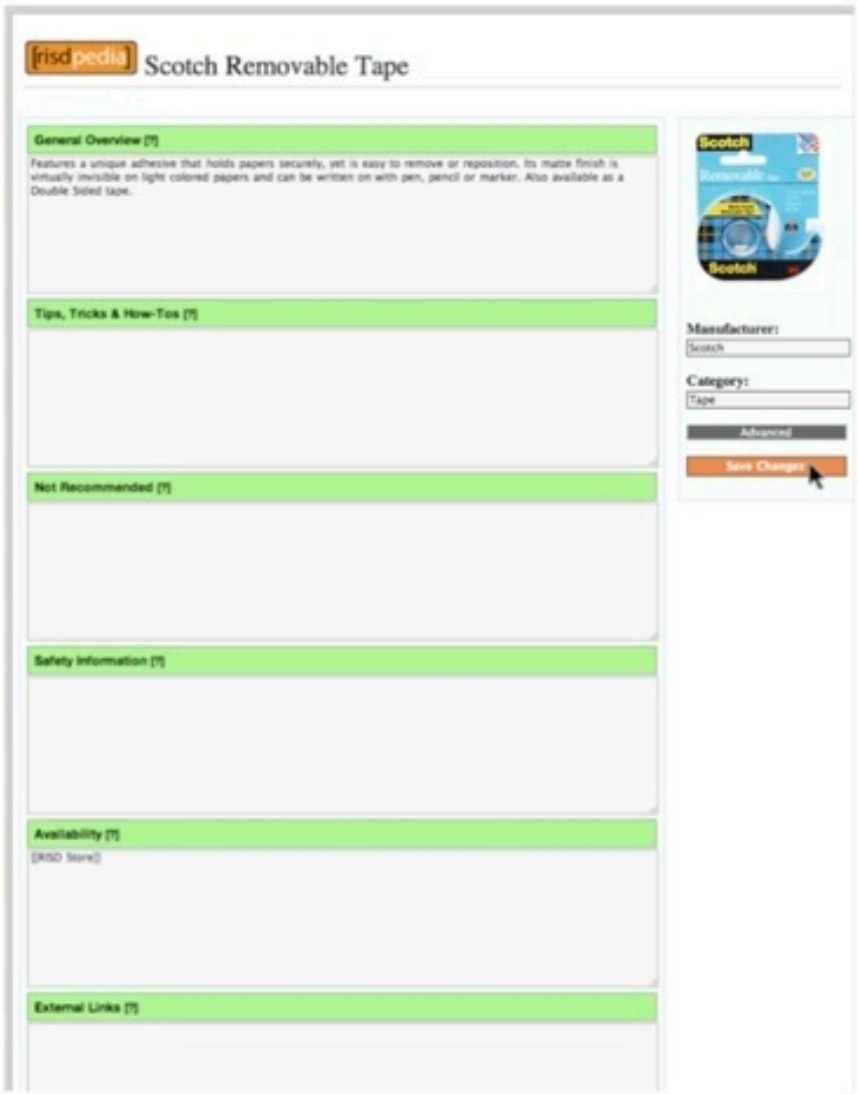
Mouse-over Tips

Contributing couldn't be simpler

Contributing to RISDpedia couldn't be simpler. With the completely custom designed interface you can edit a page in the same format you view it. There's no need to know anything but the information you want to add. And, believe it or not, new ways to make it even simpler are on the horizon.



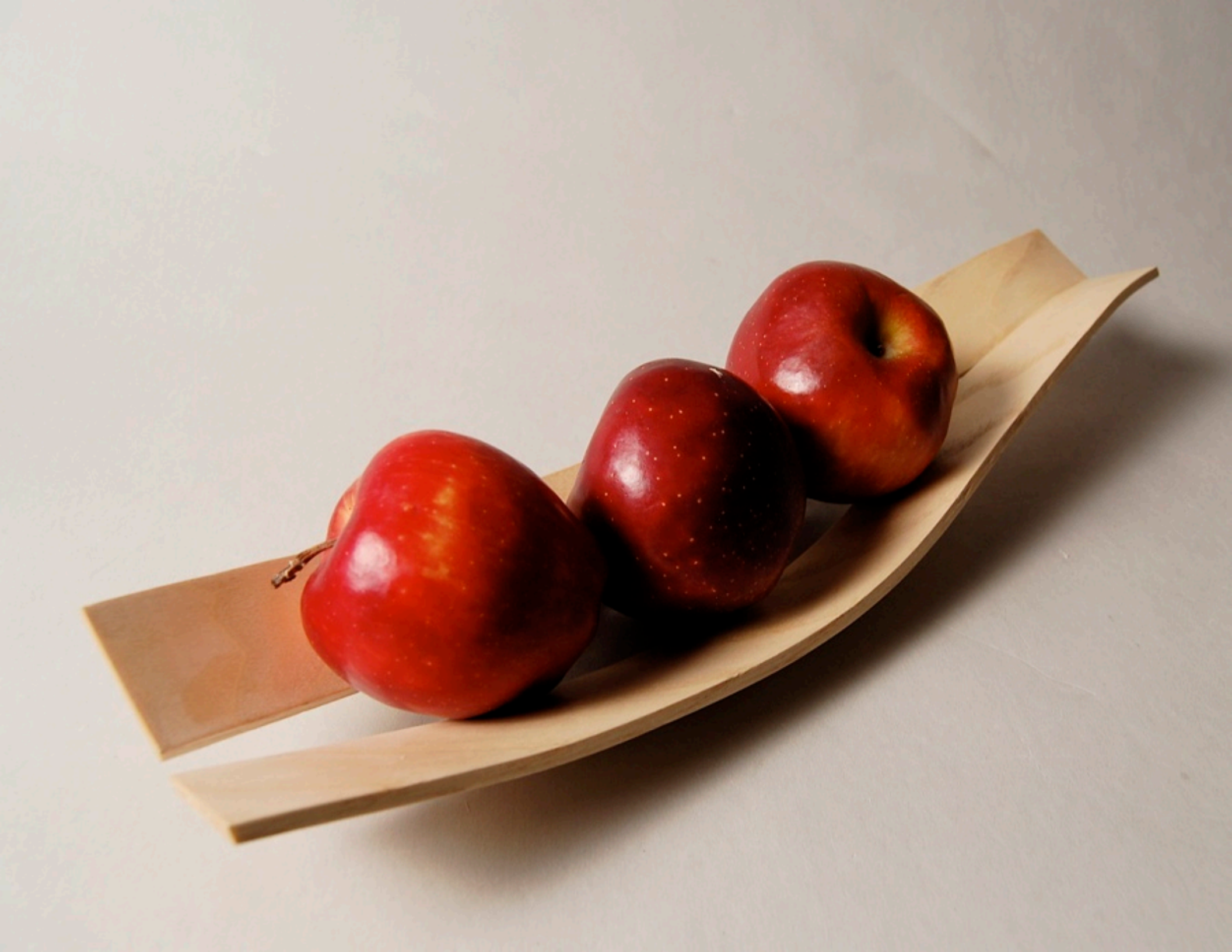
Typical Product Page (just click "easy edit" to edit)

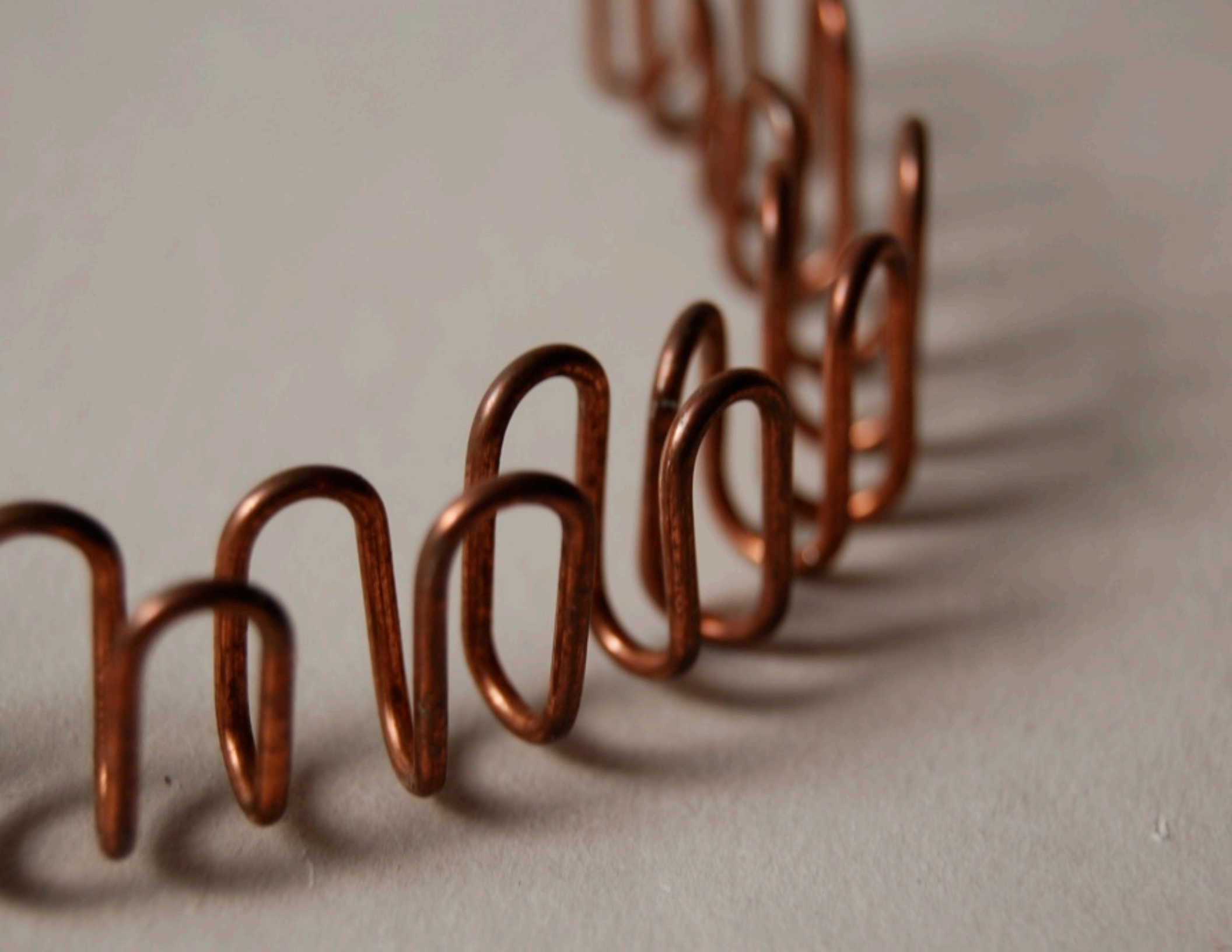


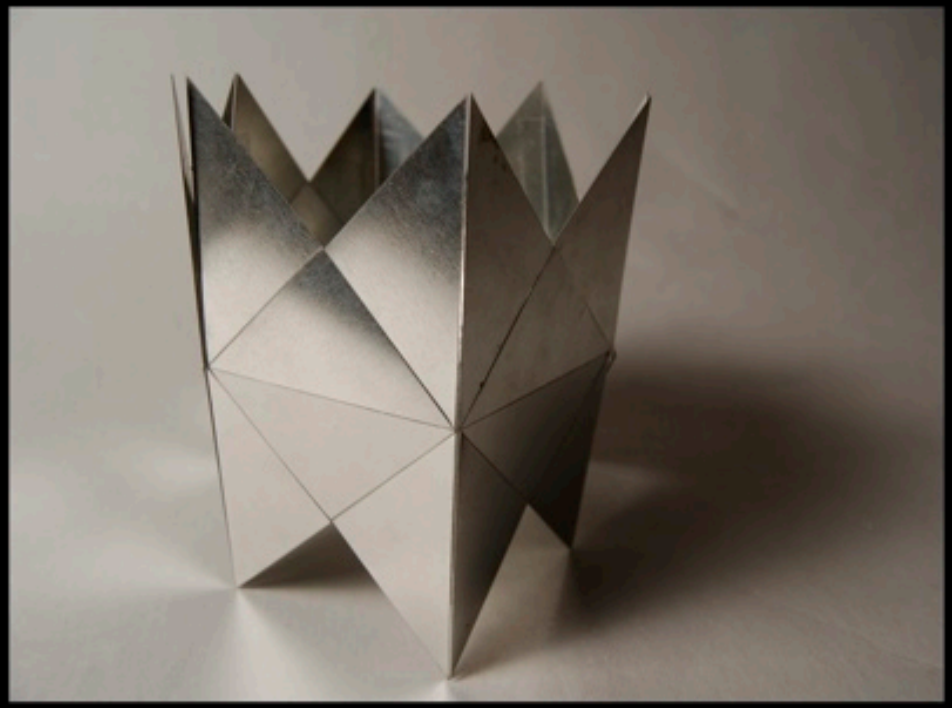
Editing that page (Just click "Save Changes" when finished)

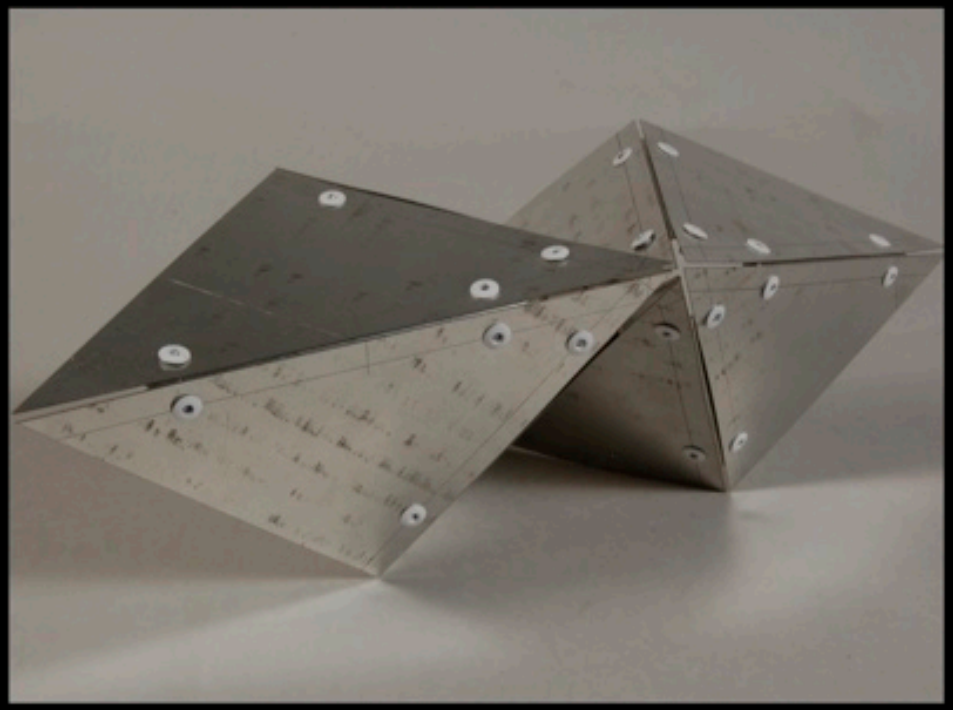
various

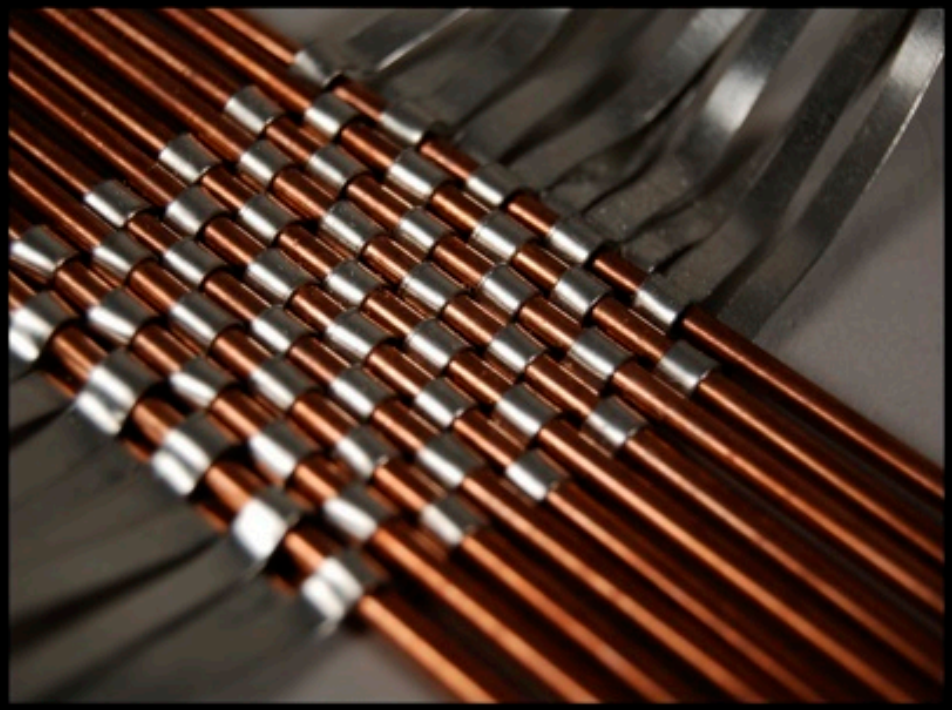
OTHER DESIGNS DONE JUST BECAUSE





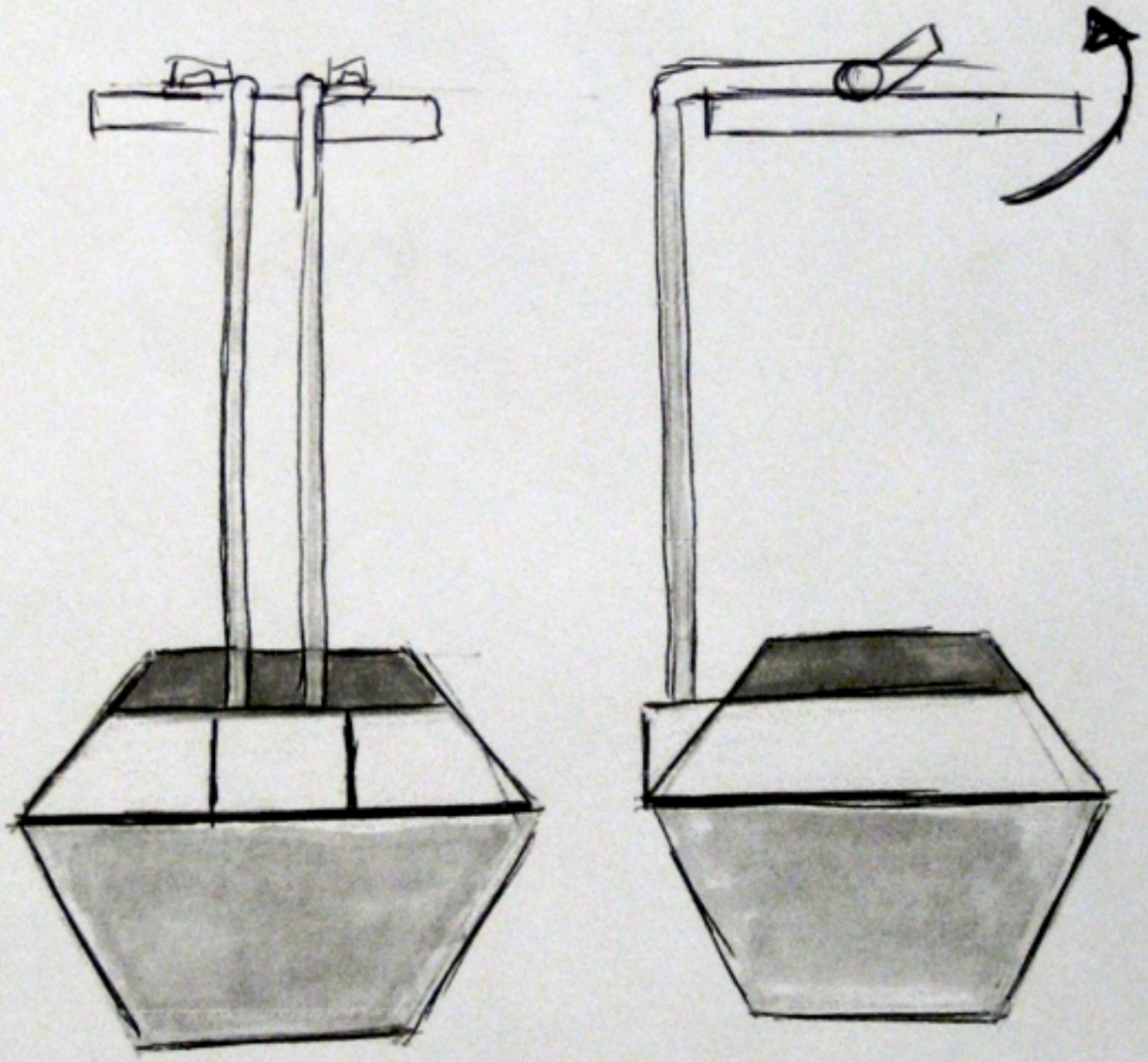


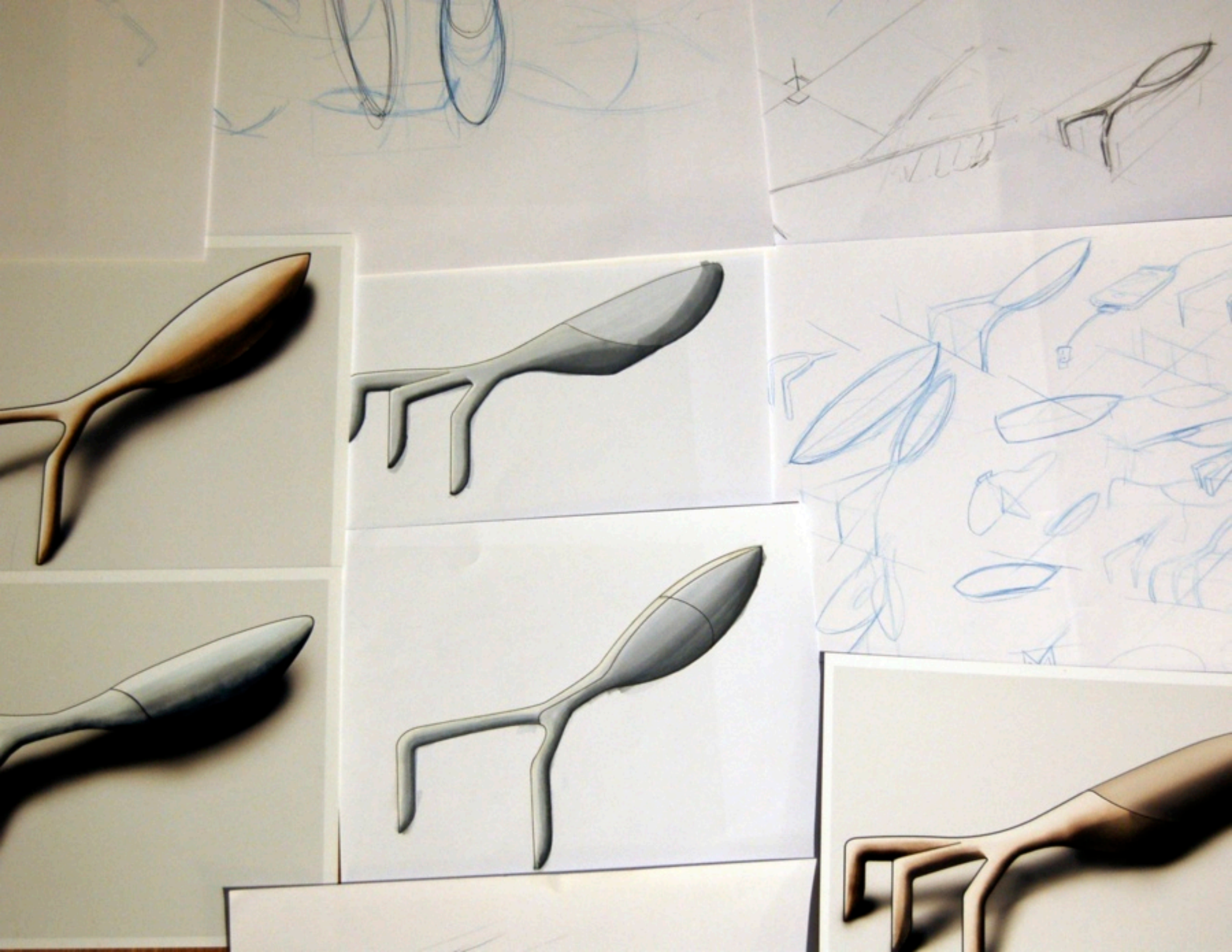


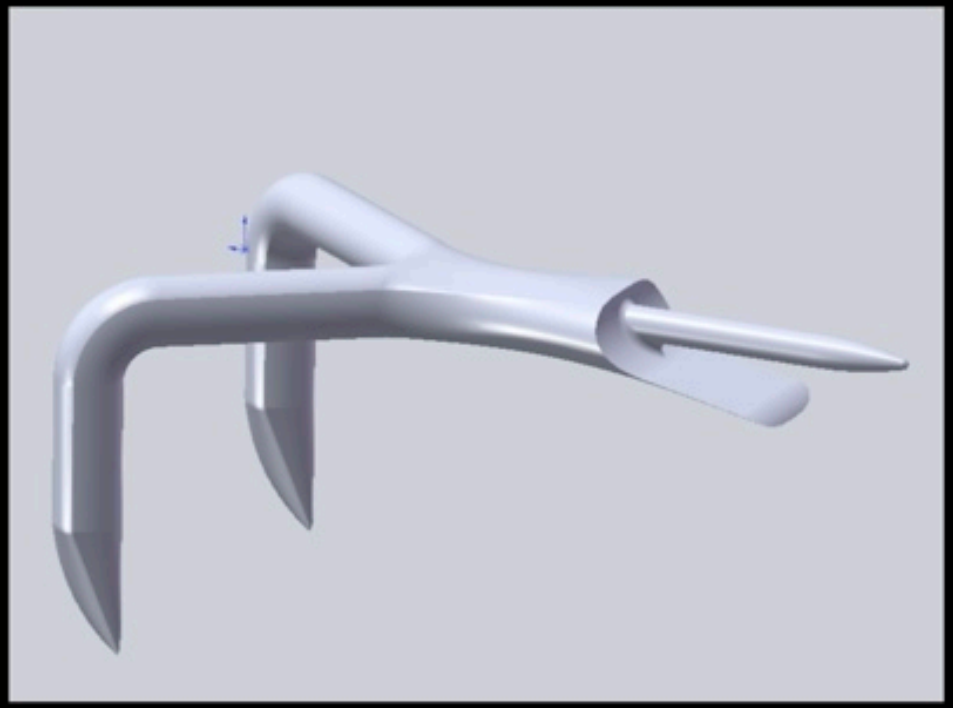


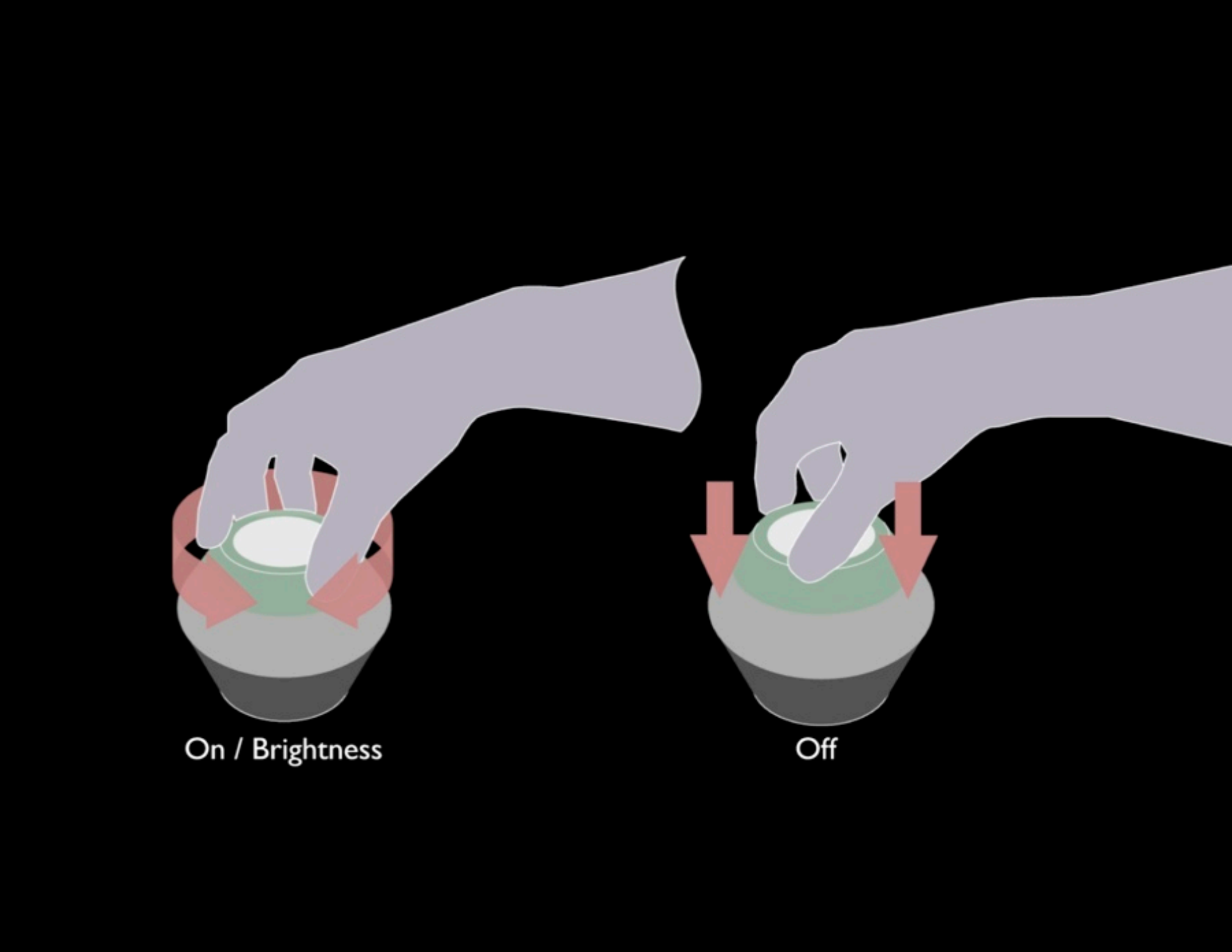
process

EVERY IDEA STARTS SOMEWHERE





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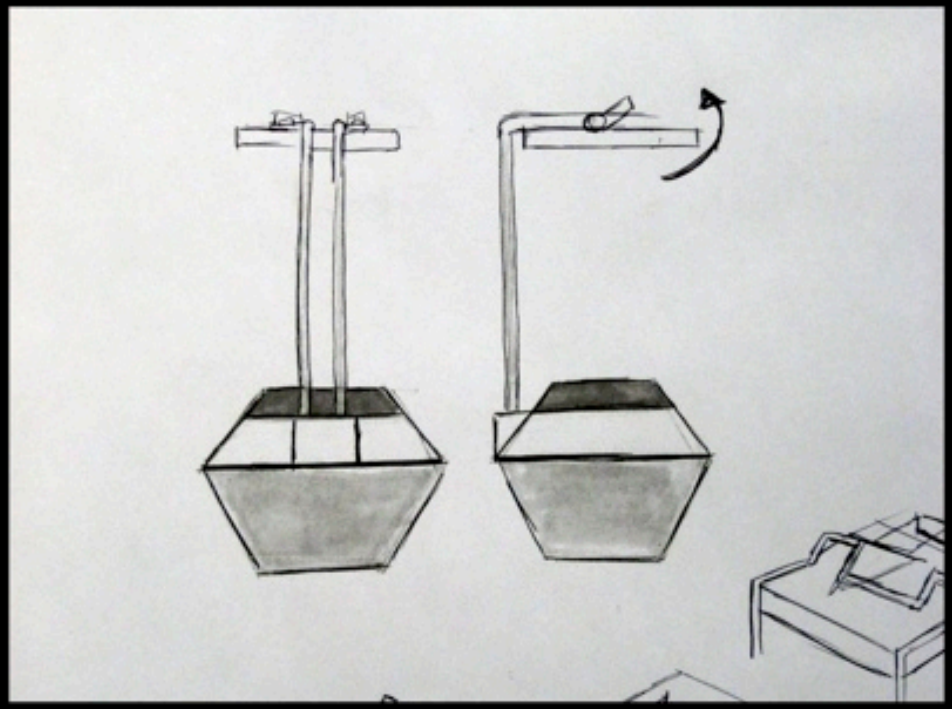

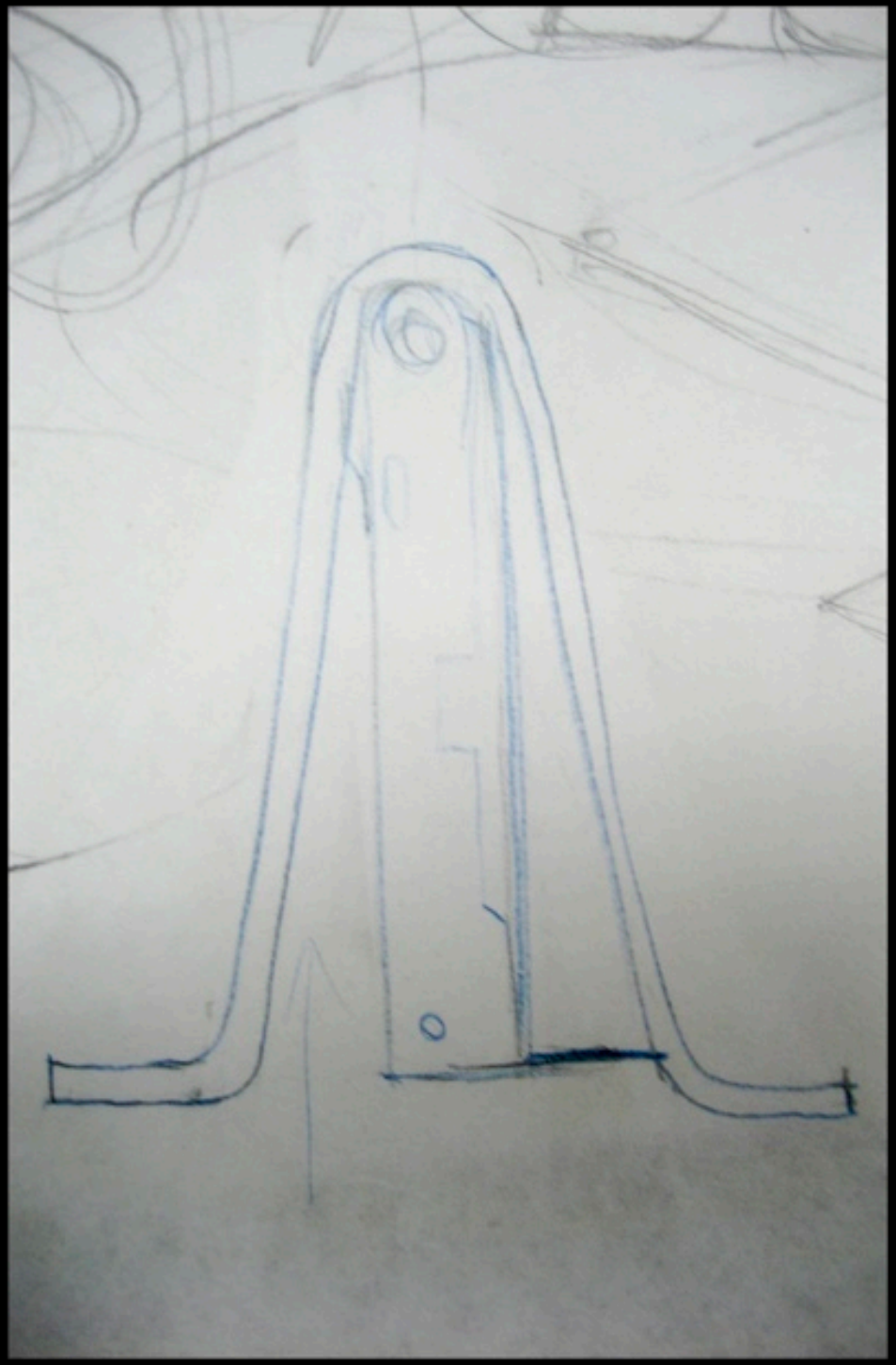

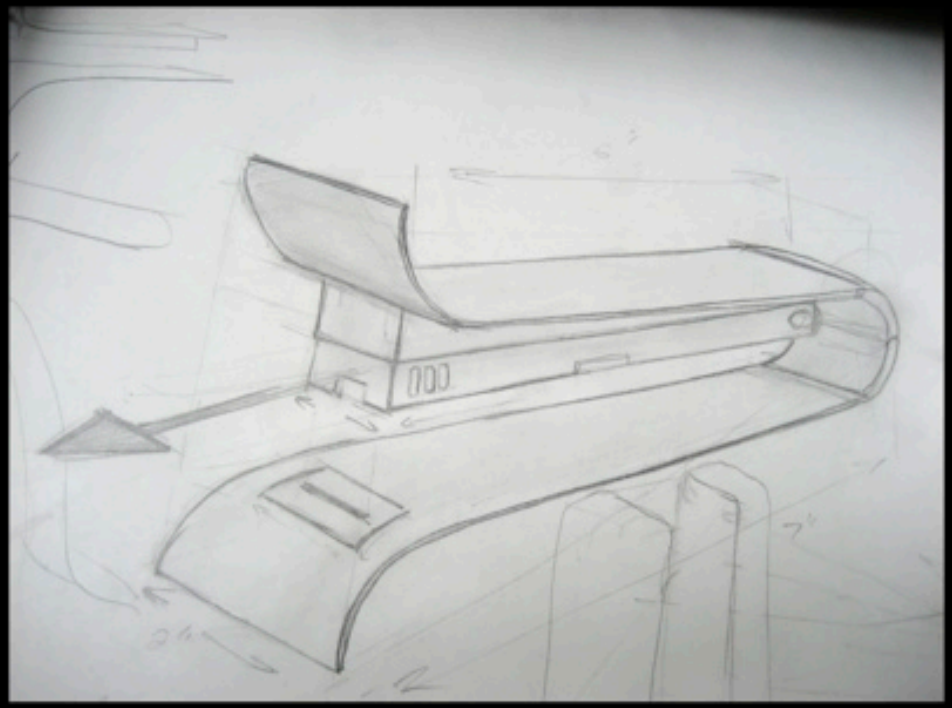

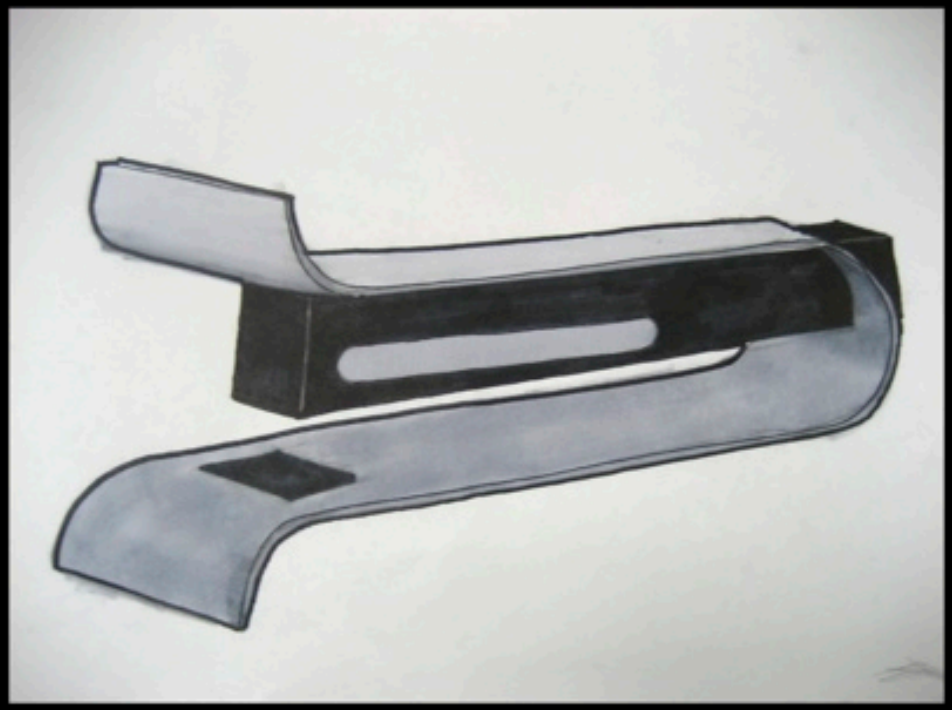

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