



Autobiography



Introduction

My name is Zach O'Brien,

A native of Santa Barbara, California, I attended UCSB and graduated in History. Immediately thereafter I attended Flight School in Florida.

I have entertained many interests in my life; painting, sketching, rock climbing and songwriting.

Six years ago, I was inspired by a friend in the jewelry industry to take my creative energy a few steps further. I began to drawing my best ideas on paper and started to experiment with jewelers wax to create three-dimensional wax sculptures. I took my favorite sculptures, and via lost wax casting, turned my sculptures into wearable art.

The first flight school I attended had a hanger in the middle of a citrus grove. I would spend hours talking with the mechanic, who was often rebuilding engines and other systems. He would never hesitate to explain the function of those systems.

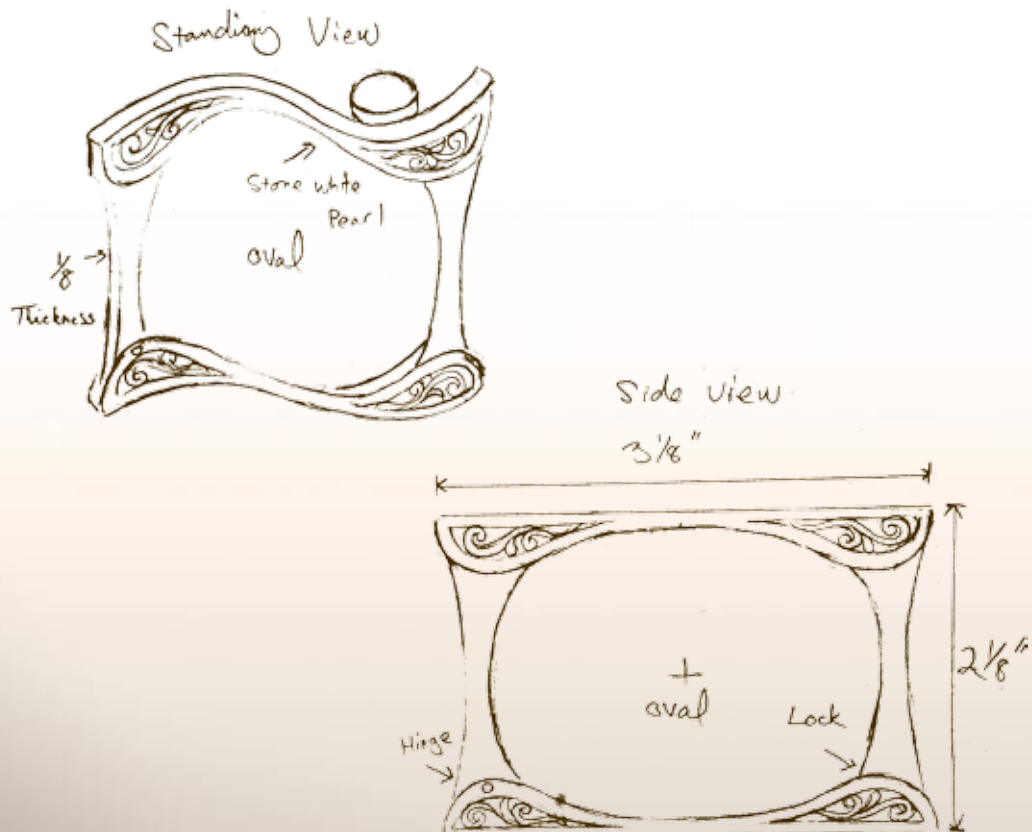
I saw an art in how those systems were designed. Many of my creations have moving parts. Hinges and other mechanical components now form the core my inspiration.



Process & Technical Procedures

Step1: The Design Procedure

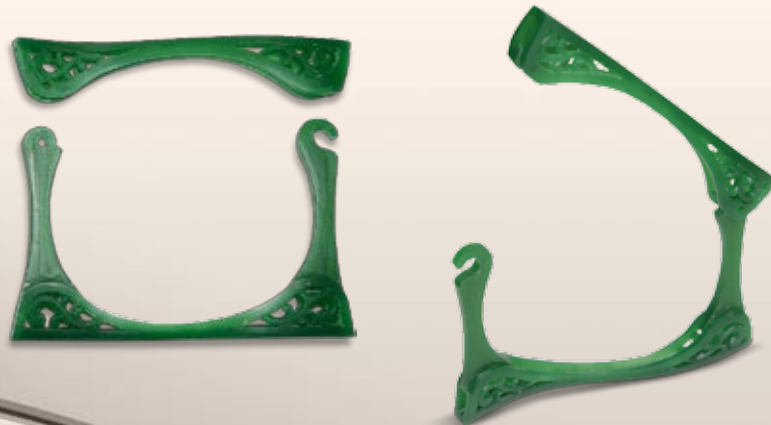
My design process always begins on paper, where numerous variations are experimented with. I approach each design from many angles, and try to see how an idea with great visual appeal from one direction, will appear from all other directions. Important questions arise from this process. Will the design be too heavy? Will it be comfortable? If not, can I design it to be more comfortable?





Step 2: Production

Making my designs come to life is quite rewarding. Conversely, spending hours on something that lacks the intended look, is very difficult. I create nearly all my pieces via "lost wax casting." Wax, unlike stone, antler, bone, etc. is less volatile to use, as I can add back to the piece if I subtract too much. An inherent trick to lost-wax casting is shrinkage. The finished silver piece will be roughly 7% smaller than the original wax carving due to shrinkage in the mold. So it is rare that any piece will be exactly the intended size. Sizing up or down is usually necessary to some degree. After sculpting my original wax models, these are then casted into Bronze or Brass and called "Masters". Through the heat process of vulcanization, I will make a rubber molds and cut Bronze masters out of the rubber mold. The finish result of this step is to have a Wax Injection Mold. From this mold I can re-make my original wax Model without sculpting them from scratch.





Step 3: Metalsmithing

After I have all my silver and brass components cast, there is a lot of work left to be done. All the castings must first be grinded and cleaned. Be it hinge joints, back plates, or brooch pins, stone bezel cups, all must be soldered into place with a jewelers torch.



Step 4: Stone Setting,

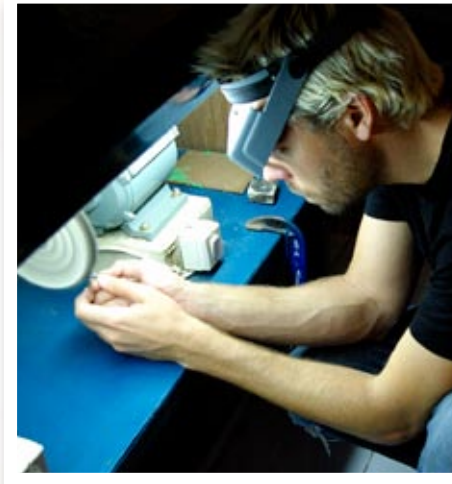
When all heat processes are finished, I'm able to start stone setting. This can sometimes be a long and frustrating process. Because I am forced to purchase stones that are not all cut to the same quality or calibration. So when setting them, I must hand make each bezel from 99.9 % Silver or Fine Silver so it is easier to bend the bezel rim around the stone.



Step 5: Polishing and Plating

When all stones are perfectly set and I make sure all my joints work well, and then its time to polish. I use four different polishing compounds to complete my desired surface finish. Then once again I must clean the metal and prepare what areas I want to be gold plated and mask off areas where I don't want gold. After dipping the design for five minutes in a small 18kt gold cyanide electrolyte solution and the brightening solution, I can strip the masking paint with an acetone base solution. From here I can apply my liver of sulfur oxidizing solution to specific areas to achieve an antique finish.

This completes my technical procedures



Step 6: Art Shows/ Sales

Aside from traveling, setting up and breaking down my booth, the art shows are perhaps the most exciting part of the process. Hearing feedback from clients is truly inspiring. I hope to be selling my pieces at shows in the Southwest for years to come, and hope to see all of you at some point in my travels.

Zachary John O'Brien

A handwritten signature in gold ink, appearing to read 'ZJO'Brien'.