

Abstract
Hidden Interiors
by: Jennifer Wells
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Director: Linda Darty
DEPARTMENT OF METAL DESIGN

This written report supports the creative thesis entitled “Hidden Interiors: An Investigation of Containers and Their Hidden Compartments”. The body of work that I am presenting for exhibition consists of containers fabricated from precious metals and adorned with precious and semi-precious materials. The hidden elements within my work are based on my relationships with specific individuals, moments in my life and memories that I cherish.

Hidden Interiors

A Thesis

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Master of Fine Arts

by

Jennifer Wells

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HIDDEN INTERIORS

by

Jennifer Wells

APPROVED BY:

DIRECTOR OF THESIS: _____

Linda Darty, Professor

COMMITTEE MEMBER: _____

Bob Ebendorf, Professor

COMMITTEE MEMBER: _____

Tim Lazure, Associate Professor

COMMITTEE MEMBER: _____

Michael Ehlbeck, Professor

DIRECTOR OF THE SCHOOL OF ART AND DESIGN:

Michael Drought

DEAN OF THE GRADUATE SCHOOL:

Paul J. Gemperline, PhD

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INTRODUCTION

I have held a life long fascination with hidden spaces and secret compartments. Being one of four children, I learned early on that if you wanted to keep something safe, you hid it in a place no one else knew about. During my time in graduate school, my love for these secret spaces has begun to carry over into my art work. The playfulness of discovery and the secrecy of hiding are both strong considerations in my work, encouraging interaction with the individual. Within each piece the number of hidden compartments varies, making each discovery a new experience.

Inspired by traditional European silversmithing, I seek to achieve a high quality of craftsmanship in each piece. The use of valuable materials is a vital part of the work I create because my forms reference historical reliquaries made of precious materials, adorned with precious and semi-precious stones. The materials that I use are also representational of the sentimental value that is contained within each piece. All of my pieces reference moments in my life, many of which have been shared with individuals who have left a lasting impression. The value of these moments is transferred and represented through the materials that I use and the forms I create.

TECHNIQUE

Illustration

The complexity of each of my pieces and the amount of planning that is required has made me an avid drawer. I draw each piece in its entirety, including multiple views. After drawing the exterior of the piece, I begin to dissect the interior chamber, breaking it down into multiple compartments. At this stage in the planning, cross-section illustrations are extremely useful, allowing me to view how the piece will fit together. I also include in the cross-section illustration details on how the removable sections will fit and lock together. Resolving the mechanisms before I begin building the piece allows me to make any necessary adjustments.

Forming

After my drawings are complete, I begin forming the metal. When fabricating a piece I begin by taking sheet and wire metal and transforming it into the desired shapes. Before cutting the metal, I make all the necessary measurements. Once I know how much material will be used, I can mark and cut the metal accordingly. After using a bench shear or hand sawing the individual pieces needed, the forming begins.

In order to shape flat sheet metal, I first anneal it. Annealing is the process of softening metal by heating it until it glows red, then cooling it quickly by quenching it in water. Once annealed, the metal is much easier to manipulate and I am able to form and shape it using multiple mallets, hammers and steel stakes of various shapes and sizes. During forming, the metal will gradually become work hardened. This occurs after continuous blows from the hammer, causing the metal to become rigid and difficult to

shape. It is important to continually re-anneal the piece of metal so that it does not become overstressed and crack or fracture.

Raising

A specific branch of forming, “raising” refers to the manipulation of a flat sheet of metal, compressing it inwards on itself at the same time that you move the metal upwards. Beginning with a circular disc, the metal is braced against a steel stake so that when a hammer blow is delivered, it compresses space between the metal and stake. Continuing hammer blows in concentric circles gradually brings up the walls of the vessel. Working from the center of the piece to the outside edge allows the metal to be pushed upwards during the process. One round of raising is the completion of one cycle, starting hammer blows at the center and moving to the outside edge. During raising, thought is given to the final outcome, changing stakes, hammers and the position that I hold the metal, will all assist in the forming and shaping of the vessel. Once the desired shape is achieved, the piece is then planished.

While planishing a raised vessel, I often use a planishing hammer designed specifically for the purpose of smoothing the surface of the metal. After raising the metal and forming it into a vessel the surface contains many marks and indentions left by the hammer blows. A planishing hammer has two faces, one face that is slightly domed and another that is flat. Beginning with the slightly domed face, I gradually strike the entire surface of the vessel with a hammer over a stake, making sure that each blow pinches the metal between the hammer and the stake. After I have planished the surface with the domed face, I switch to the flat face smoothing out the small indentions still left in the

surface. At this point, the surface of the piece is uniform with only small flat hammer marks (Plate 9).

If a completely polished surface is desired (Plates 3 and 4) I begin sanding and polishing the surface of the piece. It is important to be sure that as many indentions and marks as possible are smoothed during planishing, thus allowing for minimal material to be removed when sanding the surface completely smooth. Beginning with 400 or 600 grit sand paper wrapped around a flat handheld wooden board, I sand the entire surface. After the surface area has been sanded up to 1,000 grit, I take the piece to the buffing machine. Using cotton buffing wheels and polishing compounds, the surface of the vessel is buffed to a high polish finish.

Construction

Each piece is made in multiple parts and sections, which are then assembled to create the whole. Once the parts have been formed and shaped I begin soldering and riveting them together. Silver solder acts like a glue, bonding two or more sections of metal. There are multiple solders, each with different melting temperatures. This allows for construction to take place in stages, beginning with hard solder, which has the highest melting temperature, then moving to medium solder and next to easy solder with the lowest melting temperature. After the soldering and clean up is completed, I begin to add details and finishing elements that cannot be heated.

Enameling

Enameling is the fusing of finely ground glass to the metal surface at approximately 1450 degrees Farenheight. Enameling allows me to develop both imagery

and apply color. There are many techniques and application processes for enameling. I primarily apply the enamel by sifting or wet packing it onto the piece. Sifting enamel allows me to cover a large surface area. Dry enamel is placed into a cylinder with a screen in the bottom. An adhesive is then applied to the metal surface and the cylinder is held over the metal and lightly tapped so the enamel is deposited in an even layer. This technique is often used for applying counter enamel to the backs of pieces; the counter enamel evens out the expansion and contraction of the glass on the front and back of the metal. If the counter enamel is not applied, the metal will warp too much during additional firings and cause the front enamel to crack. Wet packing is achieved by keeping the enamel wet with distilled water. I am then able to pick up a small amount of enamel using my paintbrush and apply it to the metal surface. This application process can be used in combination with the techniques of cloisonné or champlevé, described below.

Cloisonné wire is an extremely thin flat wire wall that is easily shaped and then placed on the surface of enamel. It is important that a base coat of enamel be applied before positioning the cloisonné wire. The cloisonné wire is fired onto the base coat, allowing the wire to sink into the enamel just deep enough to hold it in place. After the wire has been fired, I begin wet packing enamels into the spaces created by the wires. I use opaque or transparent enamels, depending on the desired result. After several layers of wet packing and firing, the surface of the enamel begins to reach the height of the cloisonné wire. I use a diamond abrasive stick with water to sand the enamel, creating a surface that is level with the top of the cloisonné wire. If a glossy finish is desired, I re-fire the enamel one last time. This will re-flow the surface, giving the piece a high shine. If a matte finish is desired, I use several grits of sand paper, removing the scratches left in the enamel surface from each previous grit, up to 1,000 grit to achieve a semi-gloss finish.

Another technique that involves wet packing enamel is *champlevé*. One method to accomplish this begins with etching a piece of metal with acid to create recesses into which the glass is inlaid. A design or image is applied to the metal surface using a material that resists acid. The metal is then placed in an acid bath that eats away the areas left uncovered by the resist. The recesses created by etching are then filled with enamel and fired, until enough layers have been built up to create an enamel surface that is level with the metal. The enamel is then ground back and finished the same way as if done with *cloisonné* wire.

Stone Setting

Several of my pieces contain multiple stone settings. The most common types of settings in my work are tube and bezel settings. To set a stone in tubing, I take a piece of sterling silver tubing and, using a cutting bur, carefully remove a small amount of material from the interior wall. This creates a seat for the edge of the stone to sit on. Enough of the wall must remain and the seat must be burred deeply enough to allow the stone to sit securely. The setting for the stone is cut and then soldered onto the piece. Once the soldering is finished and the stone placed in the setting, the wall of the tubing is pushed over the edge of the stone using a polished steel tool.

A bezel setting is used when setting a stone that has a flat back and will lay smooth against the surface of the metal. Bezel wire is a thin flat wire of varying heights that is completely wrapped around the edge of the stone, with the top edge pushed over onto the stone, holding it securely in place. The bezel wire is measured to fit snugly to the circumference of the stone and the two ends are soldered together. The wire wall is sanded

level and soldered down in the appropriate location. After fabrication is finished, the stone is secured into the bezel setting.

Work Hardening

During the soldering process, the metal is softened. In this stage it is easily dented or bent if mishandled. Work hardening a piece causes the metal to become rigid. If a piece is completed and has stones set into it, the most efficient way to work harden the piece is to tumble it. Tumbling is achieved by placing the piece into a cylinder containing small pebbles of rounded steel called shot. Water and soap are added and the cylinder is placed on a motor operated device that causes it to continually rotate. The action of the small steel shot continually rubbing against the piece is the same as hundreds of tiny hammers striking it. The end result is a piece that is work hardened and polished.

Reliquary (Plate 1)

Reliquary, was created after returning from a trip to Italy and Switzerland. In both countries I was exposed to amazing architecture and masterful pieces of artwork and metalsmithing. The two collections of work that left the most lasting impression were the Basel Cathedral Museum and the Bargello Gallery in Florence. The Basel Museum contained an awe-inspiring collection of medieval reliquaries and antique silverware. The collection in Florence demonstrated such attention to detail and precise craftsmanship that I left wanting to achieve that level of skill in my own work.

After my return from Europe I began work on *Reliquary*. The form of the piece references the many Christian cathedrals I visited. The interior of the dome is a color reverse of the many cathedral domes that are painted a dark blue with golden stars radiating out from the central point. In every cathedral I visited the ceilings were one of the most amazing aspects of the entire building to me. Their beauty, attention to detail and ability to make you feel as though you are standing below a heavenly form are all qualities of the cathedral ceilings that inspire me. Also included within the piece are hidden compartments, making reference to the many reliquaries in Switzerland that I found to be so inspiring.



“Reliquary” : Sterling Silver, Gold Leaf, Garnets, Sapphires

Size: 4 ½” x 2 ¾” x 2 ¾”

Arrows and Bubbles (Plate 2)

Arrows and Bubbles is my way of playfully expressing the tug of war that can go on within a romantic relationship. The enamels that make up the exterior wall and lid of the container are held in place so that the backside is not visible on either of the enamels. I intentionally set them in this fashion because the backsides of both enamels contain writings expressing my emotions about the romantic relationship I was involved in at the time. There is also a hidden compartment within the base of the piece, acting as another hiding place for the details of the relationship.

It is through these hidden elements that I conceal certain aspects of the relationship. The entire piece is on display, but at the same time you are unable to read my writings and unless told about the hidden compartment, would not know of it. They are both hidden in plain sight, drawing parallels to many aspects of a relationship that one is unable to see.



“ Arrows and Bubbles” : Sterling Silver, Copper, Enamel, Cloisonne Wire, Steel Wire

Size: 2” x 2 ¼” x 2 ¼”

Rusty Cup (Plate 3)

Rusty Cup was made specifically for and about my older brother Rusty. He has always been a major influence in my life, but also a source of anxiety. Being a critical individual, I have often feared his judgment and disapproval. The design of the cup was influenced by my brother's clean and simple taste. Forging the cup from a sheet ingot was an important aspect of the process for me. I had never before taken scrap metal and melted it down to make a thick sheet ingot. Once the ingot was poured I hand forged the silver to the desired thickness before raising the cup. The nails, which act as the feet of the cup, were contributed by my brother, who is a professional farrier. The contrast of the rusted nails against the polished silver creates a visual tension within the piece. Above the nails is a small compartment from which the cup can be unlocked and removed.



“Rusty Cup”: Sterling Silver, Horseshoe Nails

Size: 3 ¾” x 3” x 3”

Sister Cup (Plate 4)

Sister Cup was made as a companion piece to *Rusty Cup*. Technically both pieces are made using the same processes and materials. Both cups began as scrap metal, which was melted into an ingot and forged into a sheet before being raised into a cup. A smooth finish was also given to each cup, with only a slight variation in the level of shine. Both use horseshoe nails for feet, but the arrangement of the feet is unique to each cup. The placement of the hidden compartments is the same on both, but the locking mechanisms differ. The many similarities and differences between *Sister Cup* and *Rusty Cup* are intended to represent those between my brother and I. Coming from the same parents and home we are similar, but each of us have our own unique qualities.



“Sister Cup” : Sterling Silver, Horseshoe Nails, 14kt gold, diamond

Size: 4 ½” x 3 1/8” x 3 1/8”

Ruby Ladies (Plate 5)

Making reference to historical nude paintings, the female figure in this piece has long, sensuous flowing hair. Her pose is seductive and inviting. She is standing in a relaxed manner, looking off into the distance, allowing the viewer to gaze comfortably at her body. Rubies placed in the locations of her nipples and a diamond placed on her genital region, draw attention to the sexual areas that the gaze might travel to. The woman in *Ruby Ladies* is playing the role of the seductress, luring the viewer in, but at the same time the viewer is objectifying her, allowing for an interchange of the lead role.

To open the container, the domes on either end of the cylinder are removed. In doing so, the viewer is essentially fondling her. The domed caps, with rubies that spin set in the pinnacle, reference the breast form and can be unscrewed from their flat base to reveal another compartment completely covered in gold leaf. Upon removing the domes and opening the main compartment, the center of the piece is revealed. The interior wall is flocked red, creating a soft, luscious and inviting space, another sexual reference.



“Ruby Ladies” : Copper, Sterling Silver, Enamel, Gold Leaf, 14kt gold, Rubies, Diamond

Size: 1 $\frac{3}{4}$ ” x 3 $\frac{3}{4}$ ” x 1 $\frac{3}{4}$ ”

Magic Red Dust (Plate 6)

One day my best friend, after working on one of his own pieces, had built up a nice little pile of pink ivory sawdust. He piled it all onto a piece of paper and then folded the paper around it, creating an envelope. He came over to my workspace and in a voice filled with mystical awe, asked if I wanted some “magic red dust”. My reply: “YES”! This moment and so many others are dear to me beyond words.

I created *Magic Red Dust* to house all the amazing and fleeting precious moments that I have shared with an irreplaceable individual in my life. The pink ivory sawdust housed behind the watch crystal is only a small reminder of moments shared with this person. At a time in my life when there is constant change, and a great deal of uncertainty, friendships have become vital and fleeting at the same time. Appreciating and preserving these friendships is a very important part of my life.



“Magic Red Dust” : Sterling Silver, Copper, Pink Ivory Dust

Size: 2 ¾” x 3” x 3”

Klepto (Plate 7)

For a long time I have had the desire to make a belt buckle that would open and allow the wearer to easily hide objects within. This piece began to take form after a friend and I stole drinking glasses, complete with a pink elephant. The elephant imagery became the focal point for the front of this piece and the doorway to a hidden compartment on the back. The top of the piece has a sliding drawer so that items may be placed inside. The title “Klepto” is a slang term for kleptomaniac, a person with an impulsive urge to steal regardless of an economic motive. This piece holds the potential to aid and assist an individual with kleptomaniac tendencies. At the same time it also hinders the kleptomaniac by calling attention to itself as well as the individual wearing it. The multiple set stones on the front of the piece sparkle and strings of pearls create a rattling noise as the wearer walks, making it difficult to go unnoticed.



“Klepto” : Copper, Sterling Silver, Pearls, Tin, White Topazes

Size: 3” x 3 ¼” x 5/8”

Gigi's Cufflinks (Plate 8)

I received the pair of cufflinks housed in this piece from my grandfather, who was nicknamed "Gigi". Knowing how much I adored tacky, sparkly things, my grandfather gave this pair of cufflinks to me and told me how he got all the ladies to go on dates with him because of his fancy cufflinks. I don't know if my recollection of this story is accurate, but since Gigi has passed away, I can remember the story as I want to. The cufflinks are among my most treasured items. I realize how tacky they are, but in my eyes that only makes them more amazing. For years I have felt the need to give them a permanent home.

The piece, *Gigi's Cufflinks* references my grandfather's garage and workshop, a place where I always remember him, and where I grew up familiar with the smells of motor oil and sawdust. By placing the piece on top of two steps I am hoping to convey a sense that this structure is a sacred place. Under the stand that holds the cufflinks is a small compartment that holds a gold-capped tooth of his, a direct reference to medieval reliquaries. In the attic space is a ring band into which the tooth can be screwed. Wrapped around the outside of the ring band is a braid made from the tail hair of the horse my grandfather purchased for me when I was in fifth grade. This piece is a dedication to my grandfather, the time I had with him and the stories that I will always remember and cherish.



“Gigi’s House” : Copper, Sterling Silver, Tooth, Horse Hair, Mica, Grandfather’s
Cufflinks

Size: 4 $\frac{3}{4}$ ” x 2 $\frac{3}{4}$ ” x 2 $\frac{1}{4}$ ”

Mom's House (Plate 9)

My mother has always been a pillar of strength, kindness and understanding in my life. Together we have had many adventures, taken road trips and been each other's confidants. This piece is an unconventional house form, created as a companion to *Gigi's Cufflinks*. Both pieces contain a ring with braided hair around the band, and while both make reference to a house structure, *Mom's House* is a more whimsical approach.

The top form in *Mom's House* is intended to be held in the hand. When separated from the base, this vessel fits securely and comfortably into one's hand. For me, being able to have a pleasing form nestled into the palm of my hand creates a very soothing and calming interaction with that form.

Once the dome lid is removed, there is a second container in the interior. Looking directly down at the piece, the center cylinder has a pierced design on the top that references ornate ceiling designs. Located in the center of this design is the top of a ring. The band of the ring is hidden below the pierced surface of the cylinder. The top of the ring can be turned to allow the band to be pulled up through the pierced surface of the cylinder. Around the band of the ring is a lock of my Mom's hair that has been braided and is carefully protected by the gold band wrapped around the edge.



“Mom’s House” : Fine Silver, Sterling Silver, 14 kt Gold, Garnets, Diamond, Mom’s Hair

Size: 3 ½” x 3” x 3”

My House

Each place I live and travel has a way of permanently affecting me. The moments I have experienced during my time in graduate school have helped to shape me as a person and a maker. As I prepare to leave a place that has been my home for the past three years, nostalgia begins to set in. The “good ole times” come flooding to my memories’ foreground and realization of how fleeting time is becomes more apparent.

This being the last major piece I will complete during my time in graduate school, I want it to be an accumulation of my skills and the techniques that I enjoy. Raising has become a favorite skill and my enjoyment of it influenced the designing of this piece. Already having raised two cups to a high polish I choose for this piece to have a texture and be more inviting to the touch. After finishing raising and planishing, I textured the surface using a rusty hammerhead. Holding a connection to “Rusty Cup” and “Sister Cup”, this piece continues the combination of sterling silver and horseshoe nails, but blends the two materials through the surface treatment of the silver.



“My House” : Sterling Silver, Horseshoe Nails, Garnets, White Topazes

Size: 7 ½” x 3 ½” x 3 ½”

CONCLUSION

In this paper I have shared both the technical and conceptual aspects of my thesis exhibition. I have expressed my interest in making containers that hold beautiful, precious moments from my life. I feel the material choice and the techniques I use are appropriate to convey my ideas about each piece. The memories and emotions I place into each piece are unseen. Through the materials, the viewer can comprehend the value of what I choose to contain. The process of making and the investment of time allows the viewer to see that each individual piece is made for a reason. Each piece also contains a certain amount of ambiguity allowing the viewer to wonder about the piece's story and giving them the ability to apply their own story to the piece. I am excited about the additional pieces I have yet to make as well as the moments in my life I yet to experience.

