Constructing Furniture: From Design to Stage

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Abstract

The construction of stage furniture requires clearly drafted designs and a dedicated building schedule to ensure a well-crafted result in a timely manner. This poster details the presenter’s process of drafting, constructing and painting two furniture pieces for use in the School of Stage and Screen’s production of Shakespeare’s Twelfth Night.


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The School of Stage and Screen recently performed Shakespeare’s Twelfth Night. As assistant scenic designer for the show, I was tasked to create two furniture pieces, an exterior bench and a small fountain, that I would draft, construct, and paint, before the show opened. The assigning of projects such as mine exemplifies the extra hands-on experience some Theatre Entertainment, Design, and Technology students, like myself, need to prepare themselves for their future careers as set designers, props masters, and scenic carpenters. Throughout the combined 4-week process of creating drafts of my designs, constructing them piece by piece in the scene shop, and finally painting them to match the set, my knowledge of scenic and furniture drafting, tool usage, wood and foam carving, and painting techniques all improved exponentially. After developing and refining these skills through working on this project, I am now better prepared to begin my professional theatre career this summer after graduation.

Design Process
I began to draft potential designs for the fountain and bench during the last week of classes this past December. Since the set of Twelfth Night incorporated classical Greek architecture, I decided to use similar elements in my designs to tie the set and furniture pieces together. After receiving approval from my Scenic Designer and Director for the two designs they liked best, I spent part of my winter break resketching the drawings proportionally and with dimensional measurements. Upon returning to school, I met with the scene shop supervisor to discuss the building processes as well as redrafted my bench design to a three quarter view, so that the front side could both be clearly understood, after doing so, it was time to build. Overall, I drafted these designs three to four times, trying to improve the clarity of the drawings as well as changing some aspects of the designs to improve their look.

Building Process
Week 1 – Marked and cut out the front shape of the bench seat and arms using lauan, traced and cut out two plywood copies, sanded them to match each other, and built the bench seat box.
Week 2 – Cut interior arm supports with the band saw, secured them to the box with side braces, then attached the front and back facing pieces and the bench legs to the seat box. The bench seat was cut and placed into the box using three pieces of plywood, and spacers were inserted between the arm supports to reinforce the arms.
Week 3 – Used pre-soaked bender board to wrap around the arm pieces, attached the board with pneumatic staples and wood glue, filled in holes with joint compound then sanded the arms to be smooth, and took the bench to the Hoey Auditorium to rehearse with. The fountain base box was made, the stem was attached to the box at a 7 degree angle to taper in to the right size, the stem’s interior and trim pieces were added on, then the fountain was sent over to the theater for rehearsals.
Week 4 – The decorative pediment for the bench was cut out of lauan, and scrap pieces were cut to fit onto the board to give the shape depth; once completed, the pediment was attached to the underside of the bench. The volutes for the fountain bowl were carved out of foam and attached to a triangular plywood piece that the bowl sat in, then the fountain was reattached to the fountain in the theater.

Painting Process
The Monday before the show opened, the painting process began with priming the bench and fountain and foam coating the carved volutes on the fountain. Afterwards, I worked with my Scenic Designer to paint a marble test swatch to ensure we both agreed on the color and look. The following day I sponge painted the fountain with three colors to make it look like it was carved from marble. In the afternoon, Victoria “Tory” Depew, my scenic designer painted the marble base for the bench. On Wednesday I darkened the marble color on the bench then added veins and some shadows to make the bench look more realistic. Finally, on Thursday morning, I added some veins and shadows onto the fountain and with some help from Tory, decorated it with fake vines and leaves to match the overgrown look of the set.

Final Notes
Projects like these are commonly completed in the Entertainment and Design Technology major, these builds are the hands-on assignments students use to prepare themselves for technician positions in professional theaters. While we strive to create art, there is a great deal of physics, mathematics, engineering, and technological skills incorporated into theatrical work. Though most will never see the process, there are numerous steps to bringing furniture and set pieces from a design to the stage.