

Bruce's Studio News

Process • Concept • Evolution • Solution

Vol. III No. 2 Feb. 2013

A Labor of Love

The essence of being a creative person doesn't always limit the artist to his regular studio work. I know this is true because I have pursued an interest in architectural and industrial design numerous times for different personal reasons. Finding unique solutions to problems by re-engineering for better design takes advantage of my "structural" thinking. Over the years I have found myself reworking the living space in my homes and studios, and that has always been fun. In the long run it's also been cheaper than hiring an architect. One problem I remember pondering over was the hanging hardware for a swing up garage door that my father was trying to install in a space under his porch that was only seven feet high. The track was too high for the space, so using a little geometry and some outside of the box thinking, I found a relatively simple solution for his problem by mounting long parts of the hardware on angled supports. It worked great!

Recently, I got a call about a project from my younger brother, Tim. Some of you may know him from the years of fund raising I used to do on his behalf. Tim has Multiple Sclerosis. He wanted to know if I could design a portable ramp for his wheelchair, that he could use at his son's house to get into a living room that was one step below the rest of the house. It had to be six feet long and light. It also needed to be stable enough to remain in place when being used, not mar the floor, and be portable enough to store easily when he wasn't around. The nearly completed solution can be seen below.

Using a lightweight tortion box construction I built this 36" X 36" X 6.625" high ramp. The interior structure is comprised of 3/8" pine compartments reinforced with corrugated cardboard and glued to the thin 1/4" luan plywood for rigidity and strength without excessive weight. The original 36" box frame was constructed first using kiln dried 3/4" pine, after which I simply separated the two sections by sawing a diagonal cut through each side.

Using lightweight plywood and a hollow core, the overall weight was minimized to less than fifty pounds total, it is capable of supporting Tim in his wheelchair.

When finished I will add a thin layer of carpeting to the top of the ramp as well as a piano hinge and latches that will allow it to fold neatly in half for storage. A non-slip rubber matting will go on the bottom of each section to prevent it from marring the finished floor or accidentally sliding. It will be stained and finished, as well, to look more like a piece of "furniture" when folded for storage.

Tim, who lives in Maine, recently drove down to check out the progress... so I put him to work in the studio glueing the cardboard pieces into place as we listened appropriately to the Rolling Stones "Sticky Fingers" album...

(I made that last part up!)

