

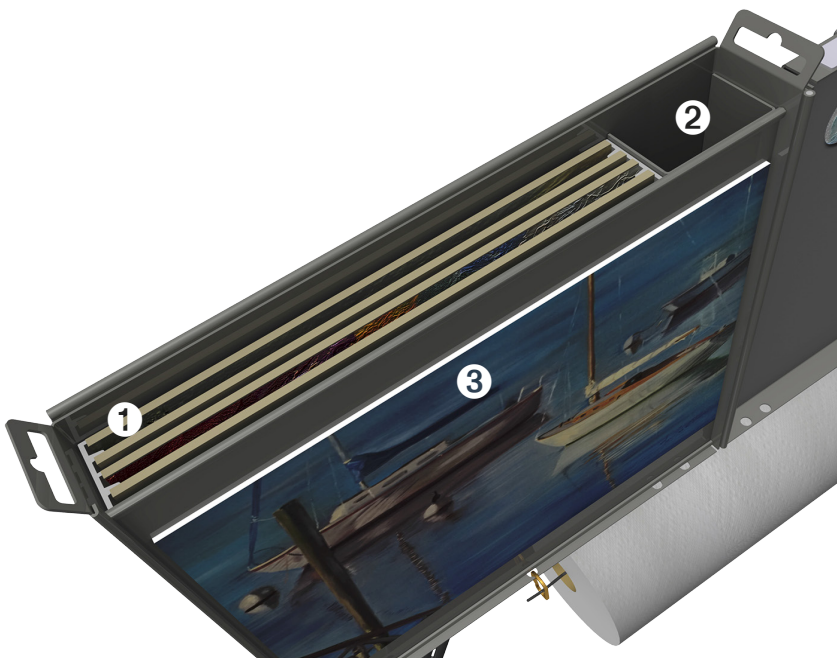
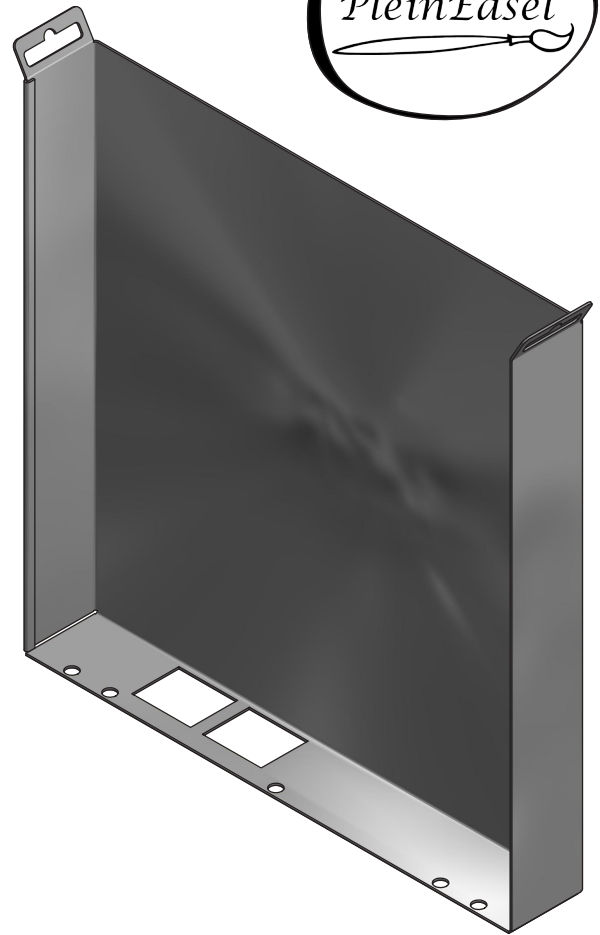
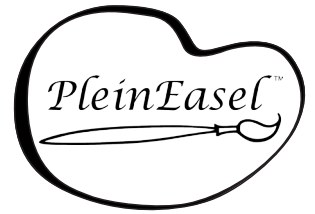
Developing a New Product Line for Outdoor Artists:

Improving on a great original idea from concept through presentation

My client, Jennifer deWeber of deWeber Studios, is a painter and an entrepreneur. She is also a “plein-air” artist. The dictionary describes one as “in the manner of a 19th-century style of painting outdoors, or with a strong sense of the open air, that became a central feature of French impressionism.”

Her challenge: With this style of painting, an artist needs to pack everything up in a hurry if wind or rain interfere suddenly. Jennifer saw a way to build a better portable easel that could carry a group of an artist’s paintings and their supplies, and easily attach to a tripod. After numerous experiments and rough models, she developed a workable concept, had drawings made, and got a patent on the design.

Product Development: She contracted with me to pull the concept together, do some value analysis, simplify the design for market and produce the CAD parts for her fabricators. The original concept had a brush storage box; an extra canvas storage box; and a painting area for the current work, built as three separate boxes. I realized that a pair of custom five-fingered aluminum channel extrusions could form the structure for a single box instead of three, and simplify the whole design and fabrication process. I built a digital 3D model of my design, and the concept worked perfectly. The only extruder I could find that had a stock extrusion die that fit my concept was in South Carolina, had no samples, and a 30 day lead time for the parts ... too long of a delay to test our concept.



My Solution: I had just decided to get my first 3D printer, so I ordered it, got it in 48 hours and by the next day, had printed out a half dozen samples of the 10” extruded parts needed to build a few prototypes for proof of concept. Jennifer was thrilled. So I created CAD files of all the sheetmetal parts and reviewed them with the local metal fabricators, who then created the two main boxes that form the clamshell design, as well as all the other parts for the lid and inner divider and door, and attached all the hinged parts using industrial strength tapes and magnets to form a beautiful carrying case that becomes an easel and palette in seconds. We have tweaked the first prototypes and the first production run is about to begin.

This photo at left shows: ❶ four stored paintings, separated and suspended between the two vertical extrusions; ❷ a channel for holding the removable paintbox; ❸ the painting panel with a painting mounted, all contained in a single unit, shown in the CAD model above.



After building the actual CAD model parts in Autodesk Inventor which were converted to various formats for the fabricators, I imported the parts to Autodesk Maya to my digital studio for texturing, rendering and animation.

The picture at left is a 3D model showing the full PleinEasel™ product on a tripod in its open position with paint on the palette surface in the right box; and a canvas in the left box on the paint panel, which houses the canvas storage and paintbox storage areas behind it. Holes on the bottom edges of both boxes allow for carabiners and hooks for solvent can, paper towel roll, the paintbox, etc. And the wing tabs on the top edges of the left-hand box will handle various types of loops, straps and carrying choices.

Once the models were rendered, the entire scene was animated, showing it opening to full functional position, the canvas and paintbox storage capabilities, and the paintbox and tool hanging features.

So, as the first production run is being finalized, preliminary advertising can proceed, and sales materials for the first public unveiling can be produced in advance of actual first products, using models that are CAD accurate.

And those models now sit in virtual photo studio sets, lit and ready to go again, when ever needed. The models can be updated as the product changes, endless color, material and feature options can be explored and rendered with no extra prototyping costs involved.

DeWeber Studios is a great example of the type of unique, personal one-to-one client-designer relationships I can offer new product entrepreneurs. My services are a blend of product and graphic design.

I tell visual stories. **And make magic!**
Let me present your vision for you every step of the way, from concept through production, sales & marketing.



Here's a rear view showing the tripod quick release mount.