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BY

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AND

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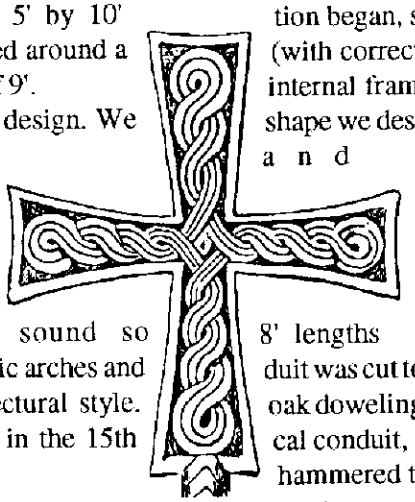
Build a 15th Century Pavillion

The original structure came from 15th Century German manuscript illustrations. We poured over every picture in our library of books for the that had a pavilion, and first agreed on a general shape—oval. This combined the extra space of a rectangular with the simplicity of lines in a round. We decided on a size: 10 foot diameter hem-circles with a 5' by 10' rectangular section in the middle, based around a wall height of 6' and the roof height of 9'.

The next month of arguing was over design. We wanted a pavilion that was obviously decorative, and which would stand out while not being overbearing. I favored white roofs, while my lady enjoyed stripes and flames on everything. We ended up (this makes is sound so simple) decorating the walls with Gothic arches and striping the roof to match the architectural style. This decoration is what finally set it in the 15th Century style of oval pavilion.



When:

The time to work on the pavilion was set to give us three months. This ended up leaving us rushing to get it finished for Lilies War VII. Who:

The job was completed by my lady and myself with little additional staff needed. A lone person *could* create the beast, although I wouldn't suggest it, and it definitely takes two to set it up. If the center poles are moved farther apart in future designs, it will take three to set up (I have a little over five-foot arm span).

how:

Always the biggest question. I'll break it down here into materials, amounts, and rationales for each.

The frame was designed before the construction began, so let me share the final result of this (with corrections from the maiden voyage). The internal frame (we opted to have one to keep the shape we desired) is made of .75" PVC water pipe and .75" electrical conduit. The PVC flexes to provide a nice continuous curve, although it can warp given time and continuous stress.

The pieces were cut to roughly 8' lengths for the PVC, and the electrical conduit was cut to 5'. The whole was connected by .75" oak doweling. After flaring the ends of the electrical conduit, and filing a little of the oak dowels, I hammered them in to great effect. No extra support was needed to keep them in place (although I had originally planned for it. In the split sections of PVC (we opted for 4 sections of 8' length instead of 2 sections of 16' length for ease of transport) I found that the dowels could be held in place by hand until pushed together, then tension kept it all well enough. I might suggest a pin to help hold the dowel in place, but it didn't seem necessary to me.

The warping on the internal frame provided some

manner of worry, so we decided to use ropes to hold everything in place by tension. They come down from two center poles, wrap around the PVC internal frame, and exit from grommets placed just above the valence. The ropes and center poles provide all the support for the cloth, so we staked them out reasonably far, although I would suggest staking them out as far as possible to anyone to maximize the tension and control. The walls are simply tied to the PVC internal frame about every 2.5' and the doors have a simple tie and an overlapping back piece (which we forgot the first time, much to our dismay) to keep out rain. We also slightly flared the walls, to help with run-off and general aesthetics.

The center poles were made of small oak trees (no kidding), that I felled by hand. The bases were roughly 4" and the tips 2" and both reasonably straight. I stripped the bark with a draw knife and they served admirably well. (The trees were 30 years old—I counted the rings). We also used ridgepoles as an addition to the design to keep the top straight and level. A section of electrical conduit 5' long served admirably.

The Process:

We started by buying a 50-yard bolt of heavy cotton duck from Cap Pal Fabrics in Lawrence, K.S. They do mail order, but they only sell by the bolt. The resulting cloth was approximately $2/yard. After washing and drying the cloth (we cut the cloth into 16 and 20 yard sections and then went to a laundromat with really big washers and dryers) we cut the sections required. The walls were cut in six foot lengths and then tapered to trapezoids. The bases were 5' across and the tops 4' across. The roof sections we cut into rectangles 6.5' long, then cut the triangle from the center and pieced together the "waste" to conserve fabric. We also cut a 12' by 5' section out to be the center part of the roof.

We then painted the wall sections while making roughly three million sleeves and grommet patches. We placed grommets roughly every two feet along the tops of the walls, plus three on the side to fasten the "doors" shut. The roof has a grommet patch overplays a rope comes out (the arrows in the design below) plus one between them on the hem-circles to provide some area to help tension the ring into it's proper form. The dashed lines which look like ropes are ropes we decided to add after the pavilion had it's trial run.

After painting all the walls with the desired pattern (we used silk-screening inks from Dick Buick, I think the brand name was Deja) from a stencil we made from a paper bag, we heat set the ink (a lot of ironing) and sewed on all the grommet patches. The roof was sewn into complete triangles (the half-pieces sewn together) and then the sleeves and grommet patches applied. The triangles were then sewn together and trimmed to the circular shape, and the roof painted. The last grommet patches to be applied were the points where the center poles poked through the roof. We finally set the whole thing up to make sure of the frame fitting the roof, and then pulled it apart again to water-proof it by dunking it in *Thompson's Water Seal*. The areas painted with silk screening ink took the waterproofing well, but not perfectly. The un-painted areas soaked it in completely. We painted over the walls with more *Thompson's* and it seems

Continued. . .

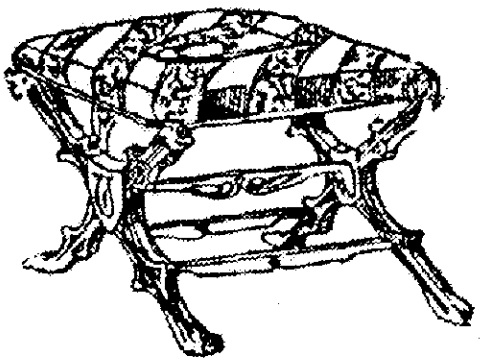
to hold up just fine.

Rationales:

The whole design was made to flex in the wind. The two center poles provide a pivot for the entire root given the rope's stretch, and in high winds, the roof billows and tilts to the most effective angle to shuck the wind. In the torrential downpour and 40 m.p.h. winds of Lilies VII, we had no troubles except water running under the walls and through the open doors (oppose). The walls billowed more than we expected from them, but I attribute that somewhat to the stakes not being far enough from the pavilion and the rather constant 10 to 15 m.p.h. wind we had for three to four days.

We also decided on the wall height to accommodate entertaining guests. Though pavilions with less side area to the wind seem to survive better in Calontir's rather famous gusts of wind, the desire to be able to have guests was judged "more important" to us, and the frame design was hoped to accommodate that while not trying to withstand the full force of the wind.

We decided to forego the side poles as well because it seemed through research that few pavilions actually used side poles. Most shaping was down with ropes and crows feet (a method of tying the ropes to provide a circular form), which would be sensibly easier to carry than lots of side poles. There is some documentation from an inference from the accounting sheets from the famous (for pavillions anyway) Field of Cloth and Gold. Apparently several wood staves of proper variety were used to create "ring supports" —the likes of which we approximated with PVC and electrical conduit— those being easier to transport.



French Gothic X-chair