

A Chairmaker's Design Lessons

The Windsor form survives trial by fire.

The blaze started sometime after midnight. A weak spot in the chimney broke and glowing embers spilled out onto dry timbers. By the time the fire crew arrived and strung hoses from a nearby stream, it was all they could do to keep the adjoining barns and outbuildings from burning. A complete loss. The late Nancy Kalin's circa 1810 farmhouse, stuffed with splendid antiques and Americana, was now a pile of charred rubble.

Every piece of furniture in the house was an original period antique with one exception. Ten years earlier Nancy had acquired a graceful 18th-century Rhode Island bowback Windsor chair and had commissioned Richard Grell, an accomplished Windsor chairmaker, to use that example as a model for a set of eight to grace her dining room.

Richard heard about the tragic fire and came by to find the remains of his chairs strewn in the wreckage. They were Windsor-like things, knocked about by the blast of fire hoses, their blackened spindles peeking up through smoldering timbers. Yellow plastic tape cordoned off the site, but a determined Nancy assured Richard she would rebuild as soon as the insurance settlement came through.

It took three years. Those burned Windsor skeletons sat as a bleak reminder of the fire, left naked to the elements in northern Ohio for three frigid winters and three hot summers. They endured a total of 121" of rain, snow and ice.

Surprising Discovery

The call finally came, and with it a plea to build a new set of chairs just like the old. Richard dropped by to retrieve what was left, in hopes that there were enough clues to bring Nancy's dream



Trial by fire. The Windsor chair epitomizes timeless function, beauty and strength; it can hold up to even the harshest of tests, as did this graceful bowback that endured a house fire and three years of exposure to weather.

back to life. To his astonishment, the undercarriage of one chair remained intact. Curious, he tilted it up on one leg and pushed hard diagonally on the opposite leg, forcing it to rack. It was solid – not a creak, pop or squeak.

The durability of Windsor chairs is legendary, but few people would predict a chair could endure all this and remain solid – unless, that is, they happen to

know what Richard Grell knows about Windsor chair design.

Perfecting his Craft

Richard became a full-time chairmaker in 1973 and has spent his adult life building and studying Windsors. This is foreign to our typical modern approach. Today, there is emphasis on creating new forms and novel ideas.

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In contrast, Richard is a great example of a craftsman who has given himself to the study of an iconic form and, in the process of building thousands of chairs, has evolved his own signature Windsors. In this way, he's added another page to a rich legacy of chairmaking.

Although he's often sought after by collectors who desire museum-quality reproductions, he's also perfected Windsors that reflect his own voice and sensitive eye. Richard's attention to detail goes beyond his incredible knowledge of painted finishes and extends to a deep understanding of the best historic joinery practices. This mindset of building on the legacy of our furniture heritage offers great benefits for the modern builder.



Old school. Richard Grell is a Windsor chairmaker who epitomizes the artisan tradition.



Painted perfection. Authentic-looking period painted finishes reflect Richard's attention to detail.



Uncovered. A pair of child-sized writing arm chairs "in the white" reveal some details of the joinery.

Strength & Beauty Combined

Richard combines an engineer's grasp of the technical side of building, and a musician's feel for harmony. He explains that the Windsor chair form derives its strength much like a suspension bridge.

The legs and braces under the seat are designed to bring the whole assembly into tension, forming strong mechanical joints that don't rely on glue for holding power as the legs are driven home into the seat. The assembly is so robust that there's no turning back after the final step, when wedges are driven to pin the legs into the seat. Those wedges act like the rivets that hold together the steel beams in a bridge, and create a sturdy platform.

When pressed to explain what sets a chair design apart, Richard shared a few nuggets. Be aware of sight lines. Just picture imaginary lines extending into space from the ends of elements such as back spindles and legs. It makes a subtle difference when the back spindles seem to flow to a single point below the seat as though they sprout organically. Curves are shaped to harmonize with other curved parts nearby.

That's easy to say, but not easy to accomplish. Start by realizing that a curve never stands by itself, but instead plays off neighboring curves. As you walk

around a chair and view it from different angles, the curve on the top rail should interplay and complement the flowing lines of the seat as well as the turnings on the legs. Richard's current version of a continuous-arm Windsor is the result of hundreds of minor tweaks to achieve just such a harmony.

Solid joinery is a quiet bulwark behind function and beauty, and sometimes it's called upon to support beauty and function that's tried by fire. **PWM**

George is the author of two design DVDs (Lie-Nielsen Toolworks) and co-author (with Jim Tolpin) of "By Hand & By Eye" (Lost Art Press).



Making tradition his own. Richard's version of a continuous-arm Windsor embodies both tradition and his own practiced eye. While it's clearly a traditional Windsor beginning with the crisp turnings on the legs, each curve is thoughtfully composed to create layers of visual music. It's the result of decades of refinement that stamp it as the maker's own.

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About This Column



Design Matters dives into the basics of proportions, forms, contrast and composition to give you the skill to tackle furniture design challenges with confidence.