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6-25-2014

Elastic Armchair

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Recommended Citation

RISD Museum; Valencia, Alicia; Pliessnig, Matthias; and Somerson, Rosanne, "Elastic Armchair" (2014). *Channel*. 28.
https://digitalcommons.risd.edu/risdmuseum_channel/28

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My name is Alicia Valencia and I am a Brown/RISD dual degree student studying Furniture Design and Psychology. And we are looking at the *Elastic Armchair* by Samuel Gragg, patented in 1808.

I think why I was so drawn to the Gragg chair in the beginning was the fact that as a Furniture Design student, bent lamination is a very large part of the curriculum. So when looking at this chair, after completing a class within that genre, I can see how difficult it actually is to complete such a thing, especially on the back of the chair, which includes five different joints to the back that then extend to the seat, and each of those appear to be at a differing angle. And creating such a back, which then stems into a different mold for the arms, the exaggerated curve of the arms, which then extends to a different curve of the back—altogether it seems like such a great accomplishment in terms of construction and in terms of joinery.

Matthias Pliessnig

My name is Matthias Pliessnig. I'm a furniture designer based in Providence. Graduated from RISD in 2003. And I build furniture utilizing steam bending and bent lamination of white oak.

This chair is an extraordinary example of that. Maybe the most interesting thing to me is that it's the earliest version I've ever seen where the chair becomes the back with a bent piece of wood, so utilizing the bent wood to actually bridge the seat to the back. That area where the seat meets the back, where there would normally be a complicated joint of some kind, is usually the weakest part of a chair. With this, the bend is acting as the joint. I'm assuming there is some kind of flexibility in this chair from the title of the chair, but also just looking at it, if somebody were to sit on this, I think it has a little bit of give.

Wood is composed of cellulose fibers that are basically held together by polymer resin, a natural resin inside the fibers of the wood, so it's like a plastic that holds the tissues of fibers together. And all these fibers are running straight next to each other, held together by this glue.

With the steam bending, you're softening those polymer resins that hold the fibers together, and you soften them enough to where the wood fibers can slip past one another, then you bend it, hold it in place. When the wood dries and cools, then those fibers are locked in their new orientation. So you're actually changing the whole relationship of the fibers.

My name is Rosanne Somerson and I'm the provost at RISD. I'm talking today about Samuel Gragg's *Elastic Chair*. I'm delighted to talk about this object because it's one of my favorite chairs. There are so many reasons why I respond to this piece, in part because it is one of the first chairs that really talks about the expectation of the human body sitting in it, and it's structured and designed to accommodate the body in a very innovative and comfortable way.

The name 'elastic' comes from the fact that it has steam-bent pieces that continue in very light-weight members throughout the chair, so that they can lightly adjust to the different body shapes and weights of the sitter. But the outside arms are strong enough to keep it as an inherently strong structure. In a way, if you think about chairs like the contemporary-task chairs designed for offices, they're all about flexibility for the back and for the seat. This chair precedes all of that highly-engineered thinking.

This chair never could've been designed without somebody who really knew about material properties and about making. That's so much at the core of what we teach at RISD, that good design comes from really understanding hands-on how we use materials, how structures are derived, what kind of results can come from aesthetically using materials well, and the principles that this chair emulates. So the chair still has incredible relevance.