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Reinventing the Wheelchair

So charged is she with energy and activity that during a 70-minute conversation with a visitor, Susan Farricielli not only doesn't sit still — she doesn't even sit down.

Which is odd, because she's something of an expert on seating. Indeed, Farricielli's firm, a.k.a. prototype of Branford, was just awarded \$25,000 from the National Endowment for the Arts to reinvent the wheelchair for older adults.

A product designer and sculptor, Farricielli came upon the idea of a better wheelchair from weekly visits to her grandmother in a convalescent home. But her interest in seating, particularly kinetic seating, dates back to her days at the Rhode Island School of Design. Her master's thesis there was the development of a kinetic automobile seat that allowed subtle, articulated body movements.

Farricielli never met a power tool she didn't like. She began soldering as a toddler, later graduating to a job as a welder while attending college in Kentucky. (A 1980 *Kentucky Post* story on Farricielli begins, ingenuously, "Although there are few women in welding...") As a graduate student she interned for Black & Decker in Shelton. She is a member of that rare species that sees a machine and *must* learn, immediately, how it works. Indeed, she says, her friends are afraid to lend her products of any kind. "They're afraid I'll take them apart," she says.

She began her business in 1989 with help from the Service Corps of Retired Executives (SCORE), which she describes as "tremendous. I followed the steps that



SCORE told me, and within three months I was contracted by American Standard to design

Designing woman: a.k.a. prototype's Farricielli.

because, she says, self-propulsion is sometimes the only exercise wheelchair-bound people get. Yet most existing wheelchairs require their occupants to reach *behind* their bodies to begin rotating the wheels *forward*. Farricielli would like to devise an ergonomically friendly method, one which would also strengthen the user's muscles.

The NEA's \$25,000 will pay for materials (and, of course, the designer's time) to construct a

NewCo. No. 12 Vital Statistics

Company: a.k.a. prototype, 26 North Main Street, Branford.

Principal: Susan Farricielli

Year started: 1985

Startup costs: \$1,000

Patents: 7

Clients: Reseal Limited, American Standard, Electrix, United Plumbing Technologies, Stride Rite Shoes

bathroom fixtures." Which is also funny, because at the time, Farricielli was living in rural Maine where, she says with a laugh, "I didn't even have a toilet."

Farricielli is a designer who actually understands manufacturing. "I want to solve people's problems," she says. "That's how the idea for the wheelchair project came about."

During her visits to the convalescent home, "I saw [wheelchair-bound] people become less and less able to do anything for themselves in that chair," Farricielli says. One principle of the chair she's developing is ease of propulsion. Her design is not motorized,

first-generation product that, after modifications, can be patented and then commercially manufactured. She intends to construct the prototype from "found" parts, and is actively seeking unneeded wheelchairs that she can (naturally) dismantle.

She would also like to form a separate business to concentrate solely on seating designs, under the name K.I.S.S. (Kinetic Innovative Seating Systems).

"Good design isn't market-driven; it's market *driving*," Farricielli says. "It doesn't happen by accident."

— Michael C. Bingham