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[Delta Libraries](#)
[Delta Chamber of Commerce](#)
[Tsawwassen First Nation](#)
[MLA, Delta South](#)

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BACK SEND TO A FRIEND FEEDBACK

Breaking down the walls

By Philip Raphael
Staff Reporter
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Jay Drew's inventions might look makeshift and offbeat, but for a person



TINKERER—Jay Drew tinkers in his workshop, where you'll find an assortment of odds and ends—everything from spare wheelchair and bicycle parts to old power tools and metal tubing. Tyler Garnham photo

with a unique challenge, they can change life for the better

All Rachel Schwartz wanted was to feel the wind blow through her hair and capture the warmth of sunshine on her cheeks again.

Not much to ask.

For many years, the Ladner girl had enjoyed riding on the rear tandem seat of her mom Karen's bicycle. But at 10, Rachel—who is developmentally disabled—had grown too big to fit in the seat.

Suddenly, the carefree, sunny-day excursions were over.

Enter Jay Drew.

Thanks to the Tsawwassen inventor's idea, and an expert twist of some metal tubing, Rachel and Karen are riding together again

"I usually try to take on the more difficult projects," says Drew, an engineer and president of Richmond-based United Lock-Block Ltd., makers of the Lego-like, concrete retaining wall blocks you see along nearly every major road building project in B.C.

"But they are all equally as important to me."



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That's why he has volunteered thousands of hours over the past 16 years to work on more than 300 projects through the Vancouver-based Tetra Society which—with solutions from technically gifted people like Drew—help remove barriers for disabled people.

Drew's sometimes offbeat inventions—which expose his knack as childhood tinkerer—have earned him a variety of awards. The latest came in January when he was presented with the Governor General's Caring Canadian Award.

But he doesn't get involved for the accolades.

The workshop

Drew's ideas take shape in what he calls his "Tetra Room" a small, dedicated space in his Mitchell Island offices where dust-laden old wheelchair frames and wheels rest up against a work bench. And lawn chair seats worn with use and scavenged, small electric motors lie scattered across the tables.

Amid the garage-sale jumble are some finished products that are sometimes hard to pick out from the clutter. One involves an old baseball cap tethered to an odd-shaped bracket with a power drill at its base.

The individual Drew was helping suffered from ALS—amyotrophic lateral sclerosis—a disease which affects motor skills.

"He had got to a point where he was unable to move his head back and forth and was literally drowning on his own saliva with his head bowed forward," Drew says.

That's where his off-beat invention came in.

Mounted to the rear of his wheelchair, the user repositioned his head upright by activating the drill that wound in string attached to the hat.

While the concept was relatively simple, the fine details—how a person with limited motor function controls the drill—were not so easy.

A "sip and blow" tube that translates changes in air pressure to activate switches was Drew's first thought. But his subject couldn't seal his lips around the tube well enough to trigger it.

He then tried attaching small balloons to the tubes, but his subject couldn't exert enough pressure using his fingers.

So Drew adapted the trigger to be activated by the user twitching his toe—the only extremity he had significant control over.

The device is now back in the "Tetra Room" because its owner passed away shortly after receiving it and serves as a reminder of the impact his inventions have.

"I try and work on those kind of projects as fast as I can because the people I'm helping don't always have a lot of time," says Drew, who grew up on a farm in the Interior town of Quesnel and remembers being a tinkerer from an early age.



Can-do guy

"My dad was all thumbs and didn't have very good business sense, which is not very good for a farmer," Drew recalls, adding his mother was a nurse and added a more practical side to the family.

Living on modest means meant that if the young Drew wanted something, he had to make it happen for himself.

And one of the things he desired was a go-kart.

So, at age 11 he pieced one together from a collection of engine parts and rolling gear.

"I remember, I was so jealous of one of my friends whose dad had bought them a go-kart," he says. "I can't remember how well mine worked, but it went faster than we could run.

"It wasn't pretty, but it ran."

His inventions all bear the same rough-around-the-edges, high school science fair look—but they all work to help break down barriers of disability.

Olympic effort

Presentation took on a higher value with Drew's most well-known invention—one that was seen by millions of TV viewers around the globe.

The item was a flag holder attached to the wheelchair of Vancouver Mayor Sam Sullivan, and was part of the 2006 Torino Winter Olympic Games closing ceremonies. As mayor of the host city for the next games in 2010, Sullivan was there for the traditional ceremony of receiving the Olympic flag from the previous host city's mayor.

Since Sullivan is a quadriplegic, the challenge was how to perform the ritual of waving the flag.

Drew had a solution.

He designed a stainless steel holster which held the flag at just the right angle that when Sullivan drove his wheelchair it fluttered perfectly in the breeze.

"He's a very ingenious and generous person," says Sullivan, who helped found the Tetra Society and feels Drew is different from most of its volunteers who are retired and can lend more time to projects.

"He has his children, an active lifestyle and a successful business to run," Sullivan says. "Yet he finds the time to get involved and volunteer to help others. He's pretty special."

Pat Tweedie, program co-ordinator for the Tetra Society's Vancouver chapter, says she considers Drew a genius with an extremely generous heart and tireless nature.

"I like to call him my 'Energizer Bunny' because he just goes and gives, goes and gives without stopping," Tweedie says. "He's just so

accommodating. And he does that without any bother.”

Tweedie says Drew is easily the society’s most prolific volunteer who when not working on his own Tetra projects is opening up his workshop for other volunteers to use.

“He’s an extremely exceptional individual and totally non-assuming.”

As for Drew, he said he gets satisfaction helping someone overcome a problem they can’t conquer alone.

“It gives me a good feeling to have helped someone out who can’t help themselves,” Drew says.

“And it’s just the right thing to do, because wouldn’t you want someone to help you if you were in need?”

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