



ARLENE Campbell of Argyle, Manitoba, got a new fishing reel out of it.

Her inventor son, Kyle, bought it to replace the one he took apart to extract the gearing mechanism.

He needed it for the fourth of his nine or so prototypes of an externally tunable bagpipe chanter. That was about eight years ago. "At that time, I was looking at everything I could think of," he said.

Now, his design, no longer calling for fishing reel components, is a new product from McCallum Bagpipes in Scotland.

Kyle is a piper with the Winnipeg Police Pipe Band, a performance and Grade 3 competing band who have appeared widely around North America. He also plays for weddings, funerals and other events, and has taught young learners.

He is a second generation Canadian. His family emigrated from Paisley, Scotland, and settled in the rural village of Argyle, about half an hour north of Winnipeg, Manitoba: a province that has one of the highest concentrations of Scottish descendants in western Canada. "When I started piping, there were 20 pipe bands in the province," he said.

"As a child, I was taught piano and didn't enjoy it," he said. So he was fascinated when his maternal grandfather, Don Carter, one day pulled a dusty old box from the closet and opened it up. "Inside was this amazing set of bagpipes. They hadn't been played in years, but we put them together and gave them a try. They didn't work but it was exciting nonetheless. I got my own set of pipes shortly afterwards."

In 1985, when he was 12, Kyle began taking weekly chanter lessons with Fraser Sime, a piper with the Grade 1 Stirling Centennial Pipe Band, who lived nearby. Two years later, he began taking lessons from Tommy Thompson and Bill MacLeod, both well-remembered figures in Manitoba's piping circles.

Tommy Thompson had moved from Scotland in the 1970s.

"He'd played with the military, then with Shotts and Dykehead Caledonian Pipe Band for a number of years," said Kyle. "He'd been with them for five World Pipe Band Championship wins. When he came to Canada, he played with the Grade 1 Stirling Centennial Pipe Band with pipe major Bill MacLeod, a former Queen's



Own Cameron Highlander who'd had tuition with Pipe Major Willie Ross at the British Army School of Piping.

"Tommy and Bill both taught at many of the piping camps throughout the Prairies region. At the end of one of the camps I attended, Tommy and Bill invited me to join their Grade 4 Stirling Centennial Pipe Band in Winnipeg."

When that band separated in 1994, Kyle went with the band's younger members to form the Glenaura Pipes and Drums. The new band worked their way into Grade 3 and, in quartets and mini-bands contests, occasionally placed in Grade 2.

"In 1998, I was invited to play with the Winnipeg Police Pipe Band," said Kyle. "The timing was perfect, I'd already decided it was time for new challenges and a new direction. I enjoy piping and travelling around the US and Canada with the band."

But the concept of a tunable chanter has been a relentless preoccupation. It goes back a decade

or so, and several bands, to some practice nights where tune-ups were excruciatingly long and the drummers stood around in restless huddles.

Like more than a few great ideas in modern history, the solution that suggested itself was worked out on the back of a dinner napkin. Kyle said: "My brother, Shayne, also plays the pipes and we were playing in the same band at that time. After practice one night we were out with the family for dinner and got talking about the tuning issue. I said, 'Hey, what if you could move the reed up and down a bit without having to take your chanter out? What if you used something like the tuning peg from a guitar and set it up in the chanter so you could move the reed while you were playing?' I sketched it out and that's where the idea began to take shape."

"My late father, Bill Campbell jr, had a lathe and milling machine at home and I grew up with them... so, when this idea came to me, I had this equipment on hand to do some partmaking. The first prototype I made was simple, but it worked; it could move the reed up and down but, if you knocked it, it'd go it out of tune."

"I went through prototype after prototype, and various parts, finally trying guitar pegs. "I went to a music shop and bought a package of replacement guitar tuners but once I built them into a prototype, I found that they were all too aggressive. After scouring around looking for something better, I found gears in my mother's fishing reel that I thought might work."

The resulting chanter was a success but bulky and the real complexities of the challenge were being revealed.

"My first concern at that point was size," said Kyle. "It had to be very small to fit inside the chanter while keeping a traditional chanter profile.

"But also it couldn't corrode, and it couldn't affect the sound of the chanter. It couldn't move under the pressure of blowing, or if it was accidentally bumped. And it had to be very finely controlled — the adjustments you need are very slight.

"It had to work in so many ways. One of my prototypes has a big tuning dial on the side. It was something I'd thought I needed to allow fine tuning but I realised along the way that I had to make it look cleaner and tidier, so now I have a much more discreet dial."

As he initially envisioned the opportunity, Kyle planned to manufacture, promote, market and distribute a finished product. He added: "But I quickly realised that manufacturing a chanter is more difficult than I'd thought. I could make the chanters, but I could only make one at a time and it just wasn't feasible. And it would have been difficult for me to market a new product like that... I'm the first to admit that I'm a widely unknown piper from a small town in Manitoba, Canada.

"I'd jumped the gun, thinking about making my own chanters and doing it on my own."

With the help of a piping friend, engineering graduate Frank Talbot, proper engineering drawings for the chanters were produced. This led to very sophisticated rapid prototyping. Two separate versions of the chanter were produced and showed positive results.

At the end of 2008, Kyle travelled to Australia, with his rapid prototype in hand. "I found Australians inspiring because of the many piping innovations that have come from there," he said. "My personal highlight of the trip was getting to a pipe band competition in a small town called Daylesford.

"There I met with Mark Saul, a champion

piper and innovator. Mark gave me some positive suggestions and encouraged me to keep working on my chanter and this renewed my drive.

"Then, back home shortly afterwards, we had a big competition in Winnipeg. Ken Eller and Bob Worrall were there. I showed them my chanter and they were intrigued, further reinforcing my enthusiasm."

Kyle called McCallum Bagpipes and asked to meet.

At McCallum's offices in Kilmarnock, Kyle showed Kenny MacLeod and Stuart McCallum his various prototypes and explained that he'd been granted American, British and Canadian patents for his design. "We agreed to move forward together to bring the new chanter to market," he said.

"Without question, going with McCallum's has turned the innovation into a successful venture.

"They will manufacture, market and distribute the chanters and already have the production technology, the skilled staff, a worldwide market and a good reputation. It took McCallum's a lot of work to build their brand to where it is today... it's the right time to be providing durable, affordable, reliable instruments and they've done a lot to bring that about."

The tuning mechanism he designed is built into the chanter: it cannot be fitted into an existing chanter. "I certainly considered that," said Kyle. "But it would mean some very serious reconstruction and wouldn't be practicable.

"So this will be for people who are happy to try something new. I love old pipes and antique chanters and I'm a bit of a collector. The old chanters and pipes have a mystique but they are more difficult to play and set up and there's merit in the new products. The McCallum-made chanter is all about quality and consistency. And the externally tunable chanter's an adaptation of the company's Mark 3 model.

"I don't expect that everyone will immediately accept it but there will be believers once people try it, I know. I played my ninth prototype for about a year with the competition band and at solo events to make sure everything was fine, and several solo players were using the chanters by early 2010.

"Last year, with the support of Iain MacDonald, director of the University of Regina's Continuing Education Department Conservatory of Performing Arts Pipe Band, the Conservatory's Grade 4 pipe band began playing my new chanter with consistent success in competitions. The band enjoy the benefits of quicker tuning and they're delighted with them."

Kyle praised the help he had from Iain who has played with the Babcock-Renfrew Pipe Band in Scotland, the Simon Fraser University Pipe Band and the ScottishPower Pipe Band. He founded the Grade 2 City of Regina Pipe Band in 1992, as well as the Conservatory of Performing Arts band.

"I've personally found the chanter showing its merit when I'm playing solo at functions," said Kyle. "I pull my pipes out of the case, blow up and tune the chanter to the drones by sinking the reed and immediately have a balanced sound. It's just that quick.

"The same can be said of playing in a band. Even if I'm playing a little sharp or flat, it's super-easy to match the other pipers by twisting the dial while I play.

"I'm thrilled to finally see it in the hands of other pipers."

The chanters will be on show at McCallum Bagpipes tent at this year's World Pipe Band Championships, following a launch at The National Piping Centre during *Piping Live!*.

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