

How Vermont Can Help Its Inventors

By Brian Dubie

Vermont has always been fertile ground for creativity and innovation.

John Copper of Windsor invented the rotary pump in 1817. Samuel Morey of Fairlee invented the first paddle wheel steamer, and the internal combustion engine. Gardner Blodgett of Burlington invented the cast iron cooking oven. Thomas Davenport of Brandon patented the first electric engine. Thaddeus Fairbanks of St. Johnsbury invented the platform scale.

Jake Burton Carpenter produced the first snowboards in Londonderry. Charles Orvis of Manchester invented fly-fishing. IBMers in Essex Junction were responsible for 362 patents last year alone, helping make IBM the only company in US history with more than 3,000 US patents in a single year.

Today, Vermont ranks 2nd in the nation and 1st in New England for the number of patents per million residents annually. Between 1996 and 2000, the number of patents issued annually in Vermont grew 49%.

John Deere was born in Rutland in 1804. He grew up in Middlebury and became a blacksmith. In the 1830s he traveled west, where he saw that the plows that worked well in sandy eastern soils didn't work in the heavier soils of the Midwest. In 1837, he invented a plow that did, and changed the face of American agriculture. Ten years later, he was producing 1,000 plows a year.

Besides being a great inventor, John Deere was also a creative manufacturer and marketer. Instead of making plows and delivering them to order, he produced plows first, and then took them out to sell to farmers – and it turbo-charged his growth.

It's in that stage in the life of a new idea -- when it moves from idea to marketplace -- that Vermont state government can help its modern-day inventors most.

Vermont's business incubators provide everything from space for research and development, to help with intellectual property issues. The new Vermont Center for Emerging Technologies at UVM, the Bennington Microelectronics Manufacturing Center, the Vermont Food Ventures program, the Vermont Technology Incubator in Randolph and the proposed Sustainable Technologies Incubator in Springfield are all geared to helping inventors move from concept, to production, to market.

Vermont is also home to organizations and institutions that provide inventors with networking, mentoring and learning opportunities, as well as grants, financial assistance, technical expertise and commercialization resources.

The Vermont Technology Council at UVM is a premier example. Champlain College is developing an entrepreneurial training curriculum, and UVM's business school is also active in

this arena. Leaders in higher education dovetail their entrepreneurial focus with Vermont's broad objective of supporting homegrown initiative. The Center for the Study of Counter-Terrorism and Cyber-Crime at Norwich University works on the cutting-edge of information technology.

The Green Valley Initiative I launched last year is now one of the Vermont's growth clusters. It's a creative collaborative of private enterprise, scientists and educators, environmental stewards and farmers, with a mission to develop, teach and market cutting-edge, real-world, Vermont-brand answers to the world's environmental challenges. The Vermont Environmental Consortium is closely allied, and dedicated to developing creative new technologies with the same goal.

Vermont's Department of Economic Development (www.thinkvermont.com) links inventors with funding sources, via the Vermont Technology Council, the Vermont Manufacturing Extension Center, the Vermont Small Business Development Center, the Vermont Experimental Program to Stimulate Experimental Research, and the Vermont Information Technology Center.

Today, Vermont's inventors and innovators come in all shapes and sizes.

Seldon Technologies of Windsor uses carbon nanotubes to cleanse fluids of microorganisms, without using heat, ultra-violet radiation or chemicals. Whitetail Manufacturing in Essex Junction makes a revolutionary stainless steel maple tap that increases yield and is healthier for trees. MicroStrain Inc. of Williston first invented a sensor to measure knee ligament strain, to help perfect ski boot bindings. Now they make tiny sensors that measure strain in everything from aircraft and automotive components to structures. Vermont Precision Tools in Swanton makes patented tools for orthopedic surgery. IDX and Vermont Systems design software used the world over. Middlebury's Foster Farm, Bridport's Audet Farm and the Whitcomb family's North Williston Cattle Company are all generating electricity from cow manure. The Whitcombs remove the nutrients from the manure to use on crops or sell, keeping them out of our lakes and streams. Now that's creativity!

The year 1790 saw the birth of America's patent system. Article 1, Section 8 of The U.S. Constitution states, "Congress shall have the power...to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

For the first time in history, it recognized the intrinsic right of an inventor to profit from his invention.

The University of Vermont recognizes that principle too, rewarding its inventors with a generous share of the royalties from inventions that make it to market. UVM has signed more license agreements, and generated more inventions in the last 4 years, than in all previous years combined. President Dan Fogel is a strong proponent of innovation.

UVM's royalty share goes to support more research, patenting and marketing assistance -- which in turn generates more inventions. All told, it's a powerful incentive for UVM's inventors -- not just to earn royalties, but also to see their ideas turned into products and procedures that make the

world a better place.

UVM's success reinforces our founders' vision, embodied in the patent system. They knew that inventiveness would bring prosperity, and keep our country independent and free. And they saw that the best way to encourage inventors to invent more was to guarantee them a share in the fruits of their creativity.

Recently, I addressed a group of Vermont inventors known as InventVermont. I challenged them to help me refine some proposals to encourage Vermont inventiveness. I extend that challenge to you, too.

I proposed to them that the State of Vermont adopt its own incentive program for inventors -- declaring their royalty income tax-exempt for an initial "grace period" from the date of licensing, with an added reward for inventions that create jobs here at home. What a great way to kick-start Vermont's creative economy. What do you think?

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