

Father of Invention | Jim Simon '64

When Jim Simon '64 was in third grade, Helen Keller visited his classroom in Brooklyn, N.Y. The blind and deaf woman intrigued him, and he was miffed when his classmates laughed at her. Around the same time, a blind cat caught Simon's attention. Six years later, he recalled these early experiences and sketched out an idea—to invent a device to stimulate the back of the brain and help the blind see.

His mother encouraged him to start with something simpler.

He did. Eager to leave New York, Simon followed his brother, a Bates graduate, north to New England. As a Colby biology student, Simon designed an electronic stethoscope for a hard-of-hearing doctor in Waterville. And before graduating, he used a compressor and some spare parts to build Colby a refrigeration microtome, a device that freezes tissue to make it easier to slice and study.

Simon continued on to medical school at the University of Chicago with the goal not to practice medicine, he says, but rather to design medical instruments.

During medical school he designed four devices, including a thyroid clamp and a rubber board used to teach suturing. He gave the board design to Johnson & Johnson in hopes the company would manufacture it. They did, but credited another person with the concept, Simon said. After a second unsuccessful attempt to have an invention manufactured, Simon understood that transforming an idea to a commercial product was not for the faint of heart.

To protect their intellectual property, inventors need to obtain a patent, which typically requires the assistance of a patent attorney and an ability to prove that your invention is unique enough to qualify—a costly and time-consuming process.

Simon, who settled in Tiburon, Calif., had done his homework and knew the challenges of devoting himself to inventing, so he prioritized. He and his wife, Hilde, first raised their three children while he worked in emergency medicine for 11 years, was a family doctor for 17, and practiced occupational health. "I got a little sidetracked with housing and the cost of family," he said.

Simon got serious about inventing in 1999 after two of his kids were through college. While working full time giving physicals to flight instructors, Simon began applying for patents. He currently holds three.

Two are for intubation tubes, which provide oxygen to the lungs during surgery or other procedures. His tubes provide illumination to help medical personnel more accurately insert the tubes in emergency settings. Simon's then 17-year-old son, Robert, helped him develop the first tube using



Jim Simon '64 with one of his inventions, an illuminated intubation tube that provides oxygen to the lungs during surgery and other procedures.

luminescent chemicals similar to glow sticks. The second patented tube uses LEDs. Simon also holds a patent for a wall-mounted bath brush that would help handicap people wash their arms or legs.

After a patent is issued, it lasts for 20 years. If, after 20 years, the inventor hasn't found a manufacturer, the design can be produced by anyone without any royalties for the inventor.

"If you want to be an inventor you have to be very patient—and persistent," said Simon, who has approached several companies and medical schools about producing his LED intubation tube. He's come up empty-handed and financially drained. Attorney fees have cost him over \$200,000.

His only hope is to find a venture capitalist willing to invest in his product. If that fails he will publish his designs, which puts them in the public domain. Having his products in use and saving lives is important, he says.

"You want to leave the world better than the way you found it," he said. "That's the core of where I'm coming from."

Simon has run out of money to apply for more patents. Yet his glass is more than half full, admits Simon, who lives in a beautiful area and commutes to his job at the Oakland Air Traffic Control Center in his Cessna 152. And still he persists—more than 50 years since his curiosity was piqued by Helen Keller, he's started early conversations with physicists at Stanford about artificial vision.

—Laura Meader