

A Glimpse from the Past – Relevance

The Salvation Army and its personnel have been committed to the pursuit of innovation and effectiveness throughout our history. This article from the October 2010 issue of Salvationist highlights three innovators of note.

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Contemporary life would be vastly different without the bewildering array of inventions that sustain, amuse and interest us. And for a relatively small organization, The Salvation Army has had its share of inventors.

Maxwell Hand Loom

At the turn of the last century, The Salvation Army appointed an English officer named Captain Frank Maxwell to serve in India. Gifted with inventiveness, he soon realized that many of India's poorest residents spent their lives weaving on clumsy and inefficient looms. Before long, he had designed and built out of scraps of lumber a light and efficient hand loom that could produce up to five times more cloth than the old style. Several factories were established to build the looms that were exhibited in various Indian cities. The loom won first prize in three competitions. Gandhi also adopted the hand loom during his campaign for India's independence.

The Maxwell hand loom — as it became known — was the most popular machine of its kind, able to work with silk as well as cotton. In 1908, a weaving school was opened in India under the direction of the Army, with a similar school in Sri Lanka.

For Captain Maxwell, the loom was more than just a great economic and social benefit. He used it as a platform to spread the gospel.

Tippy Tap

Major (Dr.) Jim Watt, a retired Salvation Army officer living in Calgary, has a history of inventions, starting with simple Sunday school "magic." During his university studies, he created inexpensive teaching devices, which were used in the first science curriculum of newly independent Tanzania.

In 1970, Major Watt was appointed chief medical officer at the Army's Howard Hospital in Rhodesia (now Zimbabwe), where he designed teaching aids for nutrition, hygiene and HIV prevention, as well as for communicating the gospel.

Major Watt is well-known in Zimbabwe as the inventor of the tippy tap, a suspended water-filled calabash (bottle gourd) with a loose-fitting plug in its neck. Tipping the gourd fills the curved neck with water, which remains in the neck as the gourd is released, providing a flow of water for hand washing, stopping on its own until the device is tipped again. This met hygiene standards and conserved precious water.



The "tippy tap" won third prize in an international appropriate technology exhibition and attracted the attention of Zimbabwe's first president.

When he returned to Canada, Major Watt developed a similar device from a discarded plastic bottle by heating and sealing the bottom of the handle. It has been used around the world to improve hygiene and prevent disease.

None of Major Watts' inventions were patented, allowing them to be copied widely. "Good ideas, like great melodies and stories, come by inspiration from God," he says. "To him is due the glory."

Aussie Mozzie Tube

Rodney and Elaine Foster are Salvationists in the Australia Eastern Territory who, during a mission trip with the Army to Papua New Guinea in September 2004, saw a need and then invented a solution.

The Fosters discovered that short-term missions to inhospitable climates require self-supporting, enclosed, yet airy, mosquito nets, able to fit in a lower bunk or bed. They also need to be lightweight for backpacking, have a moisture-proof base and be sturdy enough for creatures to walk on without touching the occupant. Nothing like this was available, so the Fosters invented the Aussie Mozzie Tube, a self-supporting, free-standing, sleeping tube designed for areas with disease-carrying mosquitoes and dangerous snakes.

The Aussie Mozzie Tube can be used indoors or outdoors and is designed to accommodate most kinds of inflatable camp mattresses. It requires no pegs or tie downs to secure it or strings to attach it to any other supports.

The Aussie Mozzie Tube has been featured in several magazines and has won a number of awards for best invention. The worldwide interest in their invention has enabled the Fosters — who live a simple lifestyle — to support a number of overseas projects. As people of deep faith, they are convinced that God guided them with their invention.

Lt-Colonel Maxwell Ryan is retired in Burlington, Ont, where he serves as a part-time hospital chaplain and amateur Army historian.