

Erhard J. Alm, Inventor and Entrepreneur

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ABSTRACT: Little is known of the many accomplishments of Finland-Swedish inventor and entrepreneur Erhard J. Alm (1901-1984). This paper explores the life of this extraordinary immigrant to Canada, who revolutionized the automobile service industry by inventing the portable vulcanizing machine that is found in many service stations around the world. From numerous inventions to concerns in health and nutrition, Alms's legacy lives on through the businesses that still thrive in Southern Ontario.

RÉSUMÉ: Nous savons peu de choses sur les réalisations de l'inventeur et entrepreneur finno-suédois Erhard J. Alm (1901-1984). Cet article explore la vie de cet immigrant canadien extraordinaire qui révolutionna l'industrie du service automobile en inventant la machine de vulcanisation portative utilisée dans plusieurs stations service du monde. De ses nombreuses inventions jusqu'à ses préoccupations pour la santé et la nutrition, l'héritage de Alm se perpétue à travers les entreprises qui prospèrent encore au sud de l'Ontario.

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Most immigrants who arrived in North America came with one goal—to improve their economic circumstances. They expected that this would involve hard work and commitment, and they were right, whatever the occupation they chose or place they settled. Some were self-employed as entrepreneurs and artists; a number came to develop ideas and innovations that would change the way people live. Some examples of this include Levi Strauss—blue jeans; Roy Jacuzzi—the first whirlpool bath; and Italo Marcioni—the first ice cream cone. Among the many success stories is also the life and career of a Finland-Swede who has yet to receive much attention: Erhard Johannes Vilhelmsson Alm who invented, among other things, the portable tire vulcanizing machine that is common in most service stations today.¹

Born in Terjärv on April 24, 1901,² and raised on a farm in Kronoby, Finland, Erhard Alm was the second son of Anders Wilhelm and Alina Alm.³ He was a boy of seventeen when an itinerant evangelist visited their hometown in Swedish-speaking Finland. Along with other young people in the area, he underwent a personal conversion, which led to a strong, lifelong commitment and spiritual faith. Alm was well read, but achieved only an elementary education (Alm and Shaw 1). Throughout his life, he developed several distinctive careers—each of which complements the others. Beginning in the early 1920s, Alm bought a Fordson tractor that he used to plough fields in the farming area of Kronoby. Because of its efficiency and faster speed, the tractor soon supplanted the use of horses. During that first summer, Alm ploughed farms day and night. The harvests improved and the modern ploughman received recognition and fame (Myhrman 2).

Recognition and fame did not follow Alm when he moved on to another venture and possible career. In 1923 as a student at the Nykarleby Folk Academy, he participated in a class outing to the Keppo mansion farmstead in Jeppo, where Alm was introduced to chicken farming and incubators. In 1925, with the help of his brother, Alm established a chicken farm at Merjärv by obtaining 500 Leghorn and Plymouth Rock chicken eggs from Keppo as well as from Czechoslovakia (Myhrman 2). Everything went well at the beginning and on June 10, 1925, Alm was able to marry Hildur Sofia Mattsdotter Mattsson of Lepplax.⁴ But six weeks after the wedding, when the the chicken farm had been in operation for only six months, a dog broke into the farm and killed hundreds of baby chickens. With the loss of the chickens and after some “strong words from his father, he decided to leave for Canada” (Alm and Shaw 2).

In July, 1925, Erhard and Hildur Alm arrived in Windsor, Ontario, which was then suffering a shortage of construction workers.⁵ If one was able to saw wood or hammer a nail into wood in ten strokes, one was considered a carpenter. With a few hundred dollars, one could build a home. With a mere \$20 of his own money,

and with brother-in-law Ture Mattson's \$275 loan, he started a house construction business. In Windsor the first of his children were born: Ethel Grace on March 18, 1926, and Doris Evelyn on September 1, 1929. Within four years, Alm had invested some \$50,000 in lots and house construction. Then in 1931 the Great Depression struck, and in an instant Alm was left with two houses, a few worthless parcels of land, and some stocks. This brought to an end his construction career, and the family relocated to Toronto hoping to rebuild its fortunes.

The next stage in Alm's career began with a few pieces of equipment necessary for wallpapering. He earned a living for his family over the next several years as a paper hanger and painter. Son Douglas Bernard was born in Toronto on September 2, 1934. In 1938 when his brother Olof had begun working in the tire repair business, Alm saw the need for a reasonably priced tire vulcanizer.⁶ He established an aluminum foundry in the basement of his home in 1939, and with the coming of World War II, Alm turned out a number of conventional vulcanizers, a highly prized device during a period when rubber for tires was not easily available. This basement factory employed a total of eleven workers, and Alm sold over \$150,000 worth of equipment before the war ended.

As early as 1941, Alm conceived the idea of a portable vulcanizing machine that would be light and cheap, and could be used in service stations. However, over the next ten years, some other business ventures of his did not become commercial successes. These included inventions such as the water level—an instrument to show the level by means of the surface of water in a trough or in a U-shaped tube—and a new type of residential furnace and radiant heating system, as well as a car and truck sander.

In due course Alm's attention returned to the portable vulcanizing machine. A prototype was built in 1956, and was promoted among industry leaders. Within two years, the Vulcan Equipment Company succeeded in breaking into the market. The new invention revolutionized the vulcanizing industry in North America and Europe, and Alm's company became the largest manufacturer of vulcanizing machinery in the world (Myhrman 3, and Alm and Shaw 3). The VULCAN MPB Passenger Section Repair Mold cut curing time from 90 to 30 minutes and required the minimum electricity; furthermore it was mass produced at a price that inspired the creation of tire repair and retread shops around the world.⁷ In a few years, there were over 10,000 machines sold in forty different countries.

By 1963 some seventy employees worked at Vulcan Equipment, twenty of whom were of Scandinavian extraction. About 90% of the total production was exported outside Canada. In 1961 the business had been passed on to his son Bernie Alm (who died in 1992). Although the business is no longer within the Alm family, it is still in operation in Scarborough, Ontario. Known today as Vulcan-Vulcap Industries Inc., under the leadership of Heinz Haischt, the plant manufactures tire retreading and tire repair equipment, offers hands-on training and turnkey operation programs designed to help start up or upgrade tire repair

and retreading businesses with top quality, affordable equipment (see <http://www.vulcanvulcap.com>).

Over time, the company diversified and branched out into truck and large earthmover machines and tire spreaders, as well as equipment for conveyor belt repair, a revolutionary idea that Alm developed in 1962 (Myhrman 4). In fact, the invention of a vulcanizing machine that renewed the worn surfaces of conveyor belts led to an enterprise that was to become an industry leader in North America and the greatest success of Alm's career. In time it passed under the control of his daughter Doris and son-in-law Jim Shaw of Parry Sound, Ontario. The company is called Shaw-Almex today, and it has offices on five continents and customers in over 95 countries.⁸ During the 1970s and 1980s, the Parry Sound plant produced jacks and hoists, and a tire changer, not to mention a dredge pump and block-laying machines. Today, the industrial products division designs equipment systems for the rubber and carpet industries, for composite and aerospace applications, and for specialty vinyl-clad cabinets and furniture. The overall success of these two major businesses that continue in operation today is remarkable.

Erhard J. Alm was a genius, always thinking of unusual and practical solutions to basic problems in several different fields. A post-retirement career developed from his keen interest in and awareness of health and medicine, and Alm began to study health issues, especially the area of nutrition. He concluded that many illnesses would be avoidable if people had proper nutrition. Indeed, some illnesses could be cured simply by a diet that includes many vegetables, fruits, natural juices, and especially wheat germ. In other words, a healthy meal. Erhard published his findings and opinions in the weekly Finland-Swedish newspaper *Norden* in Brooklyn, New York. His discoveries also received media coverage in Finland and Canada. These articles created much interest in and awareness of his ideas and led to the publication in 1973 of the 286 page book *Nitricacid[er] B [sup 17]: Bot för Kancer och Leukemi* [Cure for Cancer and Leukemia]. The subtitle of the book is misleading, because the text discusses several other illnesses that can be cured by healthy food combined with vitamins. The book also explains how people can regain their health by following these dietary regimens (Myhrman 4). Building on the success of this book, Alm revised and reprinted it a number of times during the next eight years, during which time it was also twice translated into Finnish.⁹ The Finnish and Finland-Swedish press in Finland and the United States followed his health initiatives with great interest.¹⁰

Alm was a man of faith throughout his life. He was very active in several Toronto area congregations, including the Swedish church and the Baptist churches in the region. His strong religious commitment is evident among his descendants as well, and can be symbolically noted on one of the business websites.¹¹ Erhard J. Alm passed away in July 15, 1984. He was an unusual man whom many people did not fully understand. His achievements deserve to be

remembered. He is an example of the hopes and desires many immigrants had as they arrived in this land of promise and opportunity. Seldom do we hear of success stories such as this, and it is an honour to recognize his contributions in the fields of entrepreneurship and industry.

NOTES

1. This paper relies on information provided by Alm 2006 and Alm and Shaw 1984, among other sources.
2. The date of birth is incorrectly noted in Roinila 1997. While the initial paragraph of the Alm and Shaw document indicates that Erhard Alm was born in 1904, the actual year of his birth was 1901, a fact which is corroborated by several other sources including Pelo, Myhrman, and media reports.
3. Anders Wilhelm (1868-1951) and Alina Alm (1875-1949) had seven children. They included Väinö (1898-1984), Erhard (1901-1984), Martha (1903-1923), Eliel (1904-1939), Olof (1908-1962), Rurar (1910-1923), and Viking (1912-1915).
4. Hildur Mattson was born May 6, 1896, and died December 18, 1989, in Toronto. Genealogical information comes from Pelo and the Hildur Alm obituary of December 20, 1989.
5. Different dates are given in various sources for the arrival in Canada. According to Alm and Shaw, they arrived in June, 1925. According to Pelo, the arrival in Canada took place on July 17, 1925.
6. Vulcanization refers to a specific curing process of rubber involving high heat and the addition of sulfur. The vulcanization of rubber was invented by Charles Goodyear in 1839.
7. For more information on Vulcan-Vulcap Inc, see <http://www.vulcanvulcap.com/about/>. Accessed 28 January 2008.
8. For more information on Shaw-Almex, see <http://www.almex.com/A55755/almex.nsf/Pages/Company+History>. Accessed 28 January 2008.
9. WorldCat includes nine different entries under Erhard Alm's name; the three principal editions of these texts appear in the REFERENCES.
10. See, for example, the articles by Fält and Fried.
11. Alm and Shaw 4. The Christian symbol of the fish is evident on the Shaw-Almex website. See <http://www.almex.com>. Accessed 28 January 2008.

REFERENCES

- Alm, Doris. 2 May 2006. No Subject. Private E-mail.
- Alm, Bernard, and James Shaw. 15 July 1984. Eulogy for Erhard J. Alm. Photocopy of co-authored document by Alm and Shaw obtained from Ethel Racinsky, Scarborough, Ontario, in an interview on May 18, 1996.

- Alm, Erhard. 1973. *Nitriloid[er] B [sup 17]: Bot för Kancer och Leukemi*. Jakobstad: Författarens förlag.
- . 1978. *Nitrilosider B17: "laetril-amygdalin" : mäktigt vapen mot cancer, hjärt- och kärlsjukdomar, diabetes m.m.* Jakobstad: Författarens förlag.
- . 1981. *Nitrilosider: mot cancer, hjärt- och kärlsjukdomar*. Vantaa: Reformi Keskus.
- Fält, Uno. 1972. "Från bottnisk byrg." *Hufvudstadsbladet* January (n.d.) 1972.
- Fried, Kerstin. 1972. "Vetegroddens hemliga liv exploderar av vitaminer." *Hufvudstadsbladet* 6 January 1972.
- . 1975. "Du är vad du äter' säger canadensisk 'hälsoprofet'." *Österbottningen* 24 September 1975: 1, 5.
- . 1980. "Metabolisk terapi kan göra dig frisk även om du är dödsdömd av läkarna." *Norden* 24 April 1980.
1989. "Hildur Alm Obituary." *The Toronto Star* 20 December 1989: E7.
- Myhrman, Anders. 1974. "Emigrantbibliografier: En samling skildringar rörande finlandssvenskar i Amerika." *Åbo Akademi Bibliotek Stencilserie* 6 5: 2-6.
<http://sydaby.eget.net/swe/emigrants.htm>. <http://sydaby.eget.net/swe/emigrants.htm> (Accessed July 27, 2003)
- Roinila, Mika. 1997. "Finland-Swedes in Canada: Discovering Some Unknown Finnish Facts." *Siirtolaisuus-Migration* 24: 1-9.

WEBSITES

- www.almex.com. <http://www.almex.com> (Accessed May 8, 2008)
- [www.almex.com](http://www.almex.com/A55755/almex.nsf/Pages/Company+History). <http://www.almex.com/A55755/almex.nsf/Pages/Company+History> (Accessed May 8, 2008)
- www.vulcanvulcap.com. <http://www.vulcanvulcap.com/about/> (Accessed May 8, 2008)
- sydaby.eget.net. <http://sydaby.eget.net/swe/emigrants.htm> (Accessed May 8, 2008)