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"1847 – A Memoir"

by Andrew H. Wilson

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THE CEDARGROVE SERIES OF

DISCOURSES, MEMOIRS AND ESSAYS

#75/2024

1847: A MEMOIR

by Andrew H. Wilson

September 2024

Abstract

The oldest family souvenir that I still have is a 2-volume, large-print Bible presented to my great-grandparents, William and Isabella Wilson, by their Minister, the Rev. W. Scott Moncrieff, to commemorate their marriage by him on 16 November 1847. The thought occurred to me that I should perhaps commemorate this event and its date by preparing an engineering history paper with '1847' in its title. This is it!

The paper effectively lists engineering and other events that took place during that year, or before or after it, and mostly in Canada.

About the Series

Principally, the Cedargrove Series is intended to preserve some of the research, writings and oral presentations that the Author has completed over the past half-century or so, but has not yet published.

About the Author

Now in his nineties, he is a graduate in mechanical engineering (1949) and the liberal arts (1954) and has held technical and administrative positions in industry in the United Kingdom and technical, administrative, research and management positions in the Public Service of Canada. He became active in the history of engineering on his appointment to chair the first History Committee of the Canadian Society for Mechanical Engineering (CSME), and was later president of the Society and of its 'parent,' the Engineering Institute of Canada (EIC).

Essentially…

…this paper suggests what someone with an enquiring mind might experience for the first time in the mid-19th century, what they may have learned before then, and what they might have anticipated learning after then.

Before 1847…

…there was the first Industrial Revolution, which effectively changed the ways that people were living, working, consuming and, mostly, welcoming. It lasted for about a century, and was succeeded by a second one, with a different set of achievements (and problems) and, again about another century later by a third, the consequences of which we are currently living through.

One of the principal achievements of this first Revolution was to give birth to the steam engine, assisted by the likes of Thomas Newcomen and James Watt, who improved these engines, and Robert Stephenson and Richard Trevithick, who applied steam propulsion to their railways. In the United States, Robert Fulton was a noted pioneer of steam and steamships. Canada's 'baptism' came in 1809 when John Molson's steamer *Accommodation* began a St. Lawrence River service between Montreal and Quebec. And steam also came to other North American rivers. These boats, powered mostly by paddles, served to open up the two countries, both of which were generously endowed with lakes and rivers. And while ships from Europe crossed the Atlantic Ocean to explore North America, the first steamer to travel the 'long way round' to Canada, arrived in Vancouver in 1835, having made the trip from England as a sailing ship, and only becoming a steamer when she reached her destination.

But even earlier than this steam 'revolution' - in the 17th century in Canada - tide gates, or *aboiteaux,* were developed on Canada's east coast to help drain flooded maritime areas for farming.

In Europe, printing presses that served to stimulate people to invent and innovate in so many ways arrived during the Renaissance, although such presses took longer to cross the Atlantic.

In 1720, coal mining began in the Canadian Maritimes. In 1759, the crucial Battle of the Plains of Abraham between the French and the English took place. In 1763, regular mail service began in Canada. The sacking of the French fortress at Lunenburg took place in 1782. The first steamship sailed on Lake Ontario in 1816. The Rideau, Ottawa River and Welland Canals were completed in the 1830s. The fishing industry on the West Coast began in the 1830s. A railway company in Canada was first formed in 1832, and the coming of the railways, the telegraph and the agricultural machinery industry served to establish economic growth in Eastern Canada. The West had to wait for the 19th century to begin its growth. The early-mid 19th century also saw the establishment of a rag-based paper industry. Not long after, paper was also being made from wood pulp, and kerosene had been made and manufactured.

English engineer I.K. Brunel was noted for his work in establishing the Great Western Railway, which connected, for example, London with Bristol…and the Atlantic steamship lines. He also built three notable steamships, two of them before 1847, and one after. The first, the *Great Western,* was launched in 1837, and was a side-paddler. It first crossed the Atlantic (in 15 days) the following year, and made 70 crossings during its lifetime. The second, the *Great Britain,* was launched in 1843. It had an iron hull and a screw propeller, and was the first 'screw' to cross the Atlantic.

Classes began at Queen's University, at Kingston, Ontario, in 1842. Their initial object was the education of future Presbyterian Ministers.

1847…

…a review of what happened during this year, worldwide, reveals little or nothing of great importance. In Canada, the St. Lawrence Canal system was completed, as was the telegraph line between Quebec City to London, in Canada West, and there was a typhus epidemic.

Alexander Graham Bell was born, as was Alexander Davie, who was later the seventh premier of British Columbia, and Thomas Edison and the first Marquis of Aberdeen, later Governor General of Canada, while the Arctic explorer Sir John Franklin and the composer Felix Mendelsohn died.

The 30th U.S. Congress was sworn into office, and the Mexican-American War was in progress. Samuel Colt sold his first revolver to the American government, the American Medical Association was founded, and the U.S. issued its first postage stamps. Yale University established the first graduate school in the U.S.. The German company, Siemens, began the development of the electric telegraph, and James Simpson discovered the anaesthetic properties of chloroform. Carlsberg beer was brewed in Copenhagen. The great Irish famine continued.

After 1847…

Specific Canadian experience would include its initial Confederation, its flag, its anthem, and its social safety net, the opening up of the North, its eastern farms and papermills across the country, the establishment of the Western Provinces, their farms and their extraction industries, the Confederation of 1867 and the breaking of the bond with Britain with Dominion status in the 1930s, the Trans-Canada highway, the cities of Toronto, Montreal, Vancouver and Ottawa, and the country's performance during the two World Wars.

Back to Brunel…his ship the *Great Eastern,* was launched in 1858 and was the largest ship of its time. It had a double skin, 10 watertight compartments, carried both passengers and freight, had both paddles and screws, and was 700 feet long. it was a commercial failure on the Atlantic run, but a success later as the ship that laid Atlantic telegraph cables.

The 1850s also saw the building of the first Canadian locomotive, in Toronto, followed by the first North American railway tunnel, at Brockville, Ontario.

Formal education in engineering at the university level began at the University of New Brunswick in 1854 and continued shortly thereafter at McGill University in Montreal. A Geological Survey was established in Canada in 1863, the Northwest Mounted Police was formed in Canada in 1873, and the National Research Council and other federal research establishments at later times during the period.

A permanent transatlantic telegraph cable was finally laid (by the *Great Eastern*) in the late 1860s, its Canadian terminal being at Heart's Content in Newfoundland. In 1902, a wireless message was successfully sent from England (to Marconi) at St. John's, Newfoundland. That year, also, the first telegraph cable was laid across the Pacific. And we should not forget the launching of Canadian satellites in space, beginning with the *Alouette I* in 1961.

Perhaps the most influential changes that have taken place world-wide during this later period included: the expansion of steam (and later electric and diesel-electric) prime movers, the advent and mass production of automobiles, buses and trucks and the development of national and local highway systems to accommodate them, the development of different types of aircraft and the airfields to accommodate them, the installation of electrical equipment and central heating and the large-scale production of electricity to drive them, the invention and spread of short- and long-distance telephones and telephone exchanges, two World Wars, plus - most recently - the introduction of atomic/nuclear energy, television, computers, cell phones, the Internet, and artificial intelligence.

To conclude…

The year 1847, therefore, appears to have been one during which little that was new or innovative happened, and not only in Canada…, elsewhere as well.

But my great-grandparents were married!

Sources…

Wikipedia, 1847

Wikipedia, 1847 in Canada

Andrew H. Wilson, *Canadian Engineering History: A Thumbnail Sketch,* Canadian Academy of Engineering, 2020