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“An International Timeline of Inventions, Innovations, Products and Constructions in Engineering”

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Abstract

The research for this paper was done to provide background information for the author's sesquicentennial project on *150 Years of Canadian Engineering*. It is one of several intended for this purpose.

The paper lists, by year, some of the non-Canadian inventions, innovations, products and constructions associated with engineering that have affected technical, economic and social progress, world-wide, since 1867. It has been highly selective rather than definitive, and has drawn no conclusions of its own.

About the Series

Principally, the Cedargrove Series is intended to preserve some of the research, writings and oral presentations that the author has made over the past half-century but has not yet published. It is, therefore, the modern-day variant of the privately-published books and pamphlets written by his forebears, such as his paternal grandfather and grandmother and his grandfather's brother John.

About the Author

He is a graduate in mechanical engineering and the liberal arts and has held technical, administrative, research and management positions in industry in the United Kingdom and the public service of Canada, from which he retired over 30 years ago.

He became actively interested in the history of engineering on his appointment in 1975 to chair the first history committee of the Canadian Society for Mechanical Engineering, and served both CSME and the Engineering Institute of Canada in this capacity for varying periods until 2003. He has researched, written and edited historical material for both organizations and for the Canadian Society of Senior Engineers. He is also a past president of CSME and EIC.

Introduction

Canada did not play a part in the inventions, innovations, products and constructions - or in the odd disaster - listed in what follows. Other background papers in the author's sesquicentennial project series have the corresponding Canadian information.

The list is selective and limited to a very few entries for each year since 1867...ones that have some importance for the progress of engineering and of society. They have been grouped in accordance with the time periods used in the author's sesquicentennial project. Some, especially those originating in the United States, have influenced engineering activities in this country.

If some well-known inventions/innovations are missing from the list, they may have originated in Canada, or have appeared before 1867.

1867-1918:

1867: Invention of dynamite by Alfred Nobel; Babcock & Wilcox received a U.S. Patent for their first fire-tube boiler

1868: Mendeleev's periodic table of the (then 66) elements published

1869: George Westinghouse granted a U.S. patent for his air brake; on May 10, the last spike was driven on the first U.S. trans-continental railroad, at Promontary Summit, Utah

1870: American William Lyman patented the first rotating wheel can opener

1871: A great fire destroyed Chicago

1872: The overland telegraph linking Australia with England completed; the first stainless steel developed by Woods and Clark in the U.K.; asphalt used in the construction of 5th Avenue, New York

1873: Americans Levi Strauss and Jacob Davis patented blue jeans

1874: The first Remington typewriter manufactured; Eads Bridge, the first major one of steel, built over the Mississippi at St. Louis; French inventor Louis Janin's barbed wire invention patented in the U.S. by Joseph Glidden

1875: Completion of Bazalgette's network of sewers in London, England

1876: Otto's four-stroke, gas-driven, internal combustion engine developed; Alexander Graham Bell and Elisha Gray invented the telephone, for which Bell received the U.S. patent; Emile Berliner patented the microphone; a 150 hp water tube boiler was displayed by Babcock & Wilcox (B&W) at the Centennial Exhibition in Philadelphia

