

WILLIAM GEORGE SWAN, 1885 — 1970
An inventory of his fonds

In
The Library of the University of British Columbia
Rare Books and Special Collections

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Prepared by George Brandak, 1983.
Revised by Mike McNulty, 2007.

William George Swan fonds, -1910-1950

1.3 m of textual records
485 photographs

Biographical Sketch: Engineer W.G. Swan played a significant role in the design and construction of bridges, railways and harbour works in British Columbia for more than six decades. He was born in Kincardine, Ontario and graduated from the University of Toronto in 1906. He joined Canadian National Railways as an engineer and came to British Columbia. After serving overseas during World War I, Swan returned to B.C. and established his own consulting firm. His firm was retained to work on the Pattullo Bridge (1938) and the Lion's Gate Bridge (1939). In 1945 Swan entered into partnership with H.A. Rhodes and Hiram Wooster.

The fonds were received as a gift from the Swan and Wooster Engineering Firm, November, 1983. Additional gifts were received from Mr. Hugh Welch of Sandwell Engineering, Inc., in August 2007.

Scope and Content: The fonds consists of seven boxes of mixed items of material relating to Swan's career and achievements, to the construction of light railways overseas during World War I, and to the construction of bridges, grain elevators, railway branch lines and other engineering projects in British Columbia.

Box contents

Box 1: Diaries
Box 2: Diaries
Box 3: Photo albums, plaque
Box 4: Certificates and single photos.
Box 5: Handbooks, magazines
Box 6: Framed certificates, (added August, 2007)
Box 7: Binder, magazines (added August, 2007)

Descriptions

Diaries (11)

- (8) 1927-33, 1939, Box 1
- (3) 1945-47, Box 2

Photograph Albums (7)

1. Railway in France near Ypres during W.W.I (111 prints) Box 4
2. Folder containing photocopies of prints from 1. Box 4
3. Railway construction in Canada prior to W.W.I on Canadian National as well as general prints unidentified (small snapshots) (196 prints), Box 3
4. Vancouver Grain Elevators, Vancouver Harbour Commissioners Elevator #1 (66 prints) Elevator addition #1, 1923-24, Box 3
5. Lions Gate Bridge, 1938, (48) re: building of bridge, Box 3
6. Colby cranes and elevators, Seattle (52), Box 3
7. "A Memento of His Year in Office". Photos, letters, clippings, etc., documenting Swan's activities as President of the Vancouver Board of Trade, including his President's reports, 1950. (14 prints), Box 3

Other Photographs

- 1 print of Phil Galardi and W .G . Swan, Box 5
- 1 framed photo of "No.4 Company, B.C. Universities 196 Overseas Battalion, C.E.F." , circa W.W. I. Box 4.

Certificates (7)

1. Association of Consulting Engineers, membership, 1946. Box 4
2. Engineering Institute of Canada, life membership, 1947. Box 4
3. Association of Consulting Engineers, life membership, 1968. Box 4
4. UBC Honorary Doctorate of Science, 1956. Box 4
5. University of Toronto, Civil Engineering degree, June, 1911 Box 4.
6. Bachelor of Applied Science Degree, University of Toronto, June, 1906. Framed. (added August, 2007. Box 6
7. Association of Professional Engineers, membership, November, 1920. Framed. (added August, 2007. Box 6
8. Hiram Wooster's Bachelor's from Stanford University, 1922. (Wooster was Swan's business partner). Framed. Box 6 (added, August 2007)

Handbooks (7)

1. Handbook: Light Railways, Second Army (2 copies) (W.G . Swan was one of the authors). Box 5
2. Handbook: By-laws of Harbour Commissioners, 1922, Box 5
3. Handbook: Canadian National Railways Construction Dept . Progress Profile from mile 0 .0 to mile 15 .08, Lumby branch, Box 5.
4. Handbook: Locomotive handbook, 1918, Box 5
5. Handbook: Steel information, 1903, Box 5
6. Handbook: Specifications regarding steel superstructures, 1908, Box 5

Other

1. A framed gift to Swan from Pacific Command, Box 5
2. 1 folder of newspaper clippings related to Swan's career, Box 5
3. Plaque presented to Swan, 1921, Box 3
4. Magazine: Nature's Fury, 1948 flood pamphlet and letter to him regarding his help in the disaster, Box 5.
5. Magazine Article On Lions Gate Re-decking. January 2002. Missing – not received.
6. Lions Gate Bridge booklet, 1939, Box 7, Folder 1.
7. Lions Gate Bridge Abstracts/"Engineering Journal" April - July 1942, Box 7, folder 2.
8. 1 binder containing technical papers, blueprints, plans. (see details below). Box 7

Contents of Binder – Box 7

1. "Kelowna Floating Bridge" Article Engineering Journal - April 1957. Missing – not received.
2. Calculation Of Lateral Truss In Suspension Bridge, 9 Pages - Publication 1943
3. Loadings For Maximum Effects 2 Pages - Calculation Sheets
4. Sample Load/Stress Calculation Standard A-600, 6 Pages - Original vellum & 1 copy
5. Suspension Bridges Calculation Samples, 5 Pages
6. Suspension Bridges Shears & Moments Graphs, 4 Pages - A Size Blue Prints
7. Orleans Suspension Bridge Pre-stressing Cables, 1 page - Graph
8. Dominion Bridge Cable Crosssections 1 Page - Blueprint
9. Lions Gate Tower Moments, During Erection 1 Page - Graph
10. Lions Gate Sinking Progress Chart, North Caisson, 1 Page - "linen", & 1 copy
11. Washington Toll Bridge Authority – Specification, 11 Pages
12. Lions Gate Bridge, Loads and Dimensions 1 Page "linen".
13. Patullo Bridge General Elevation 1 Page Whiteprint Dec 12, 1935
14. Patullo Bridge Approach Span Elevation, 1 Page, Whiteprint, Jan 24, 1935
15. Design of Main Foundations of Port Mann Bridge, 4 Page Paper, H.Q. Golder, 1964
16. Second Narrows-Lane loading for highways bridges, 1 Page - March 1956

17. Super-elevation (Vehicle clearances), 1 Page

Concrete

18. Concrete Proportioning, 1 Page - "Linen"

19. Effect of Flange On Moment of Inertia of T Sections, 1 Page - Blueprint

20. Concrete Beams and Columns Variable Moments, 4 Page Paper, January 1938

21. Modern Developments In Reinforced Concrete, 10 Page Paper, Portland Cement Assn.

Curves

22. Depreciated Value Calculations, 2 Pages - 1 calc, 1 graph

23. Functions of Circular Curves, Arcs, and Parabolas, 45 Pages

24. Saddle Offset For Setting Cable, 2 Pages

Earth Pressure

25. Passive Pressure Slope at Toe, 1 Page – Graph

26. Active Pressure With Surcharge, 1 Page - Graph

27. Effect of Partial Surcharge, 1 Page – Table

28. Dry Material - Angle Of Repose, 1 Page - Table

29. Submerged Material - Angle Of Repose, 1 Page - Table

30. Coefficients and Angles of Static Friction, 1 Page - Table

31. Coefficients of Friction - Soils On Various Rocks, 1 Page – Table

32. Coefficients of Friction - Various Material on Wood, etc., 1 Page - Table

33. Cofferdam Piling - Spacing of Wales, 1 Page - Graph

34. Active/Passive Pressure Graphs, 7 Pages - Graphs

35. Vertical Pressure on Culverts, Under Wheel Loads 4 Pages – 1953

Miscellaneous

36. Percolation Under Structures, 2 Pages

37. Compressed Air - Volumes and Consumption, 3 Pages