



Smithsonian
National Museum of American History
Kenneth E. Behring Center

Guide to the James Forgie Papers

NMAH.AC.0986

Alison Oswald

2017

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Collection Overview

Repository:	Archives Center, National Museum of American History
Title:	James Forgie Papers
Identifier:	NMAH.AC.0986
Date:	1890 - 1949 (bulk 1900-1935)
Extent:	38.8 Cubic feet (85 boxes; 33 map-folders; 18 volumes)
Creator:	Forgie, James
Language:	English Collection is in English. Some materials in French and Spanish.

Administrative Information

Acquisition Information

Collection donated by Mrs. James Forgie.

Provenance

In a 2005 reorganization of the National Museum of American History, the engineering collections were transferred to the newly configured Division of Work and Industry. Subsequently they were transferred to the Archives Center.

Separated Materials

The Division of Work and Industry holds a model of a Ram for driving tunnel shields (1933). It was used in driving the Union Tunnel for the Pennsylvania Railroad, 1933-1934 by James Forgie. See accession #MC.329243.

Related Materials in the Archives Center, National Museum of American History

The Foundation Company Records (AC0974)

Warshaw Collection of Business Americana, Series: Tunnels (AC0060)

Herbert S. Grassman Papers (AC0955)

Penn Station, New York Photographs (AC1048)

Lawrence Talma Smith Papers (AC0988)

Silas H. Woodward Papers (AC1038)

Alfred Maevis Collection (AC0954)

William R. Hutton Papers (AC0987)

Montgomery C. Meigs Papers (AC0984)

Henry Grattan Tyrrell and Mary Maude Knox Tyrrell Papers (AC0948)

Parsons, Brinckerhoff, Quade and Douglas Records Collection (AC0969)

Chicago Surface Lines Drawings (AC0212)

Grand Central Terminal Collection (AC1071)

Modjeski and Masters Company Records (AC0976)

Thomas Norrell Railroad Photographs Collection (AC1174)

Processing Information

Collection is processed by Alison Oswald, archivist, 2017.

Preferred Citation

Archives Center, James Forgie Papers, 1890-1949, National Museum of American History.

Restrictions

Collection is open for research.

Conditions Governing Use

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Biographical / Historical

James Forgie (1868-1958) was born in Longside, Aberdeenshire, Scotland. Forgie graduated from Gordon's Technical College, Aberdeen, Scotland (1881-1885) and apprenticed in the office of civil engineer George Gordon Jenkins from 1885-1889. Forgie came to the United States in 1902 to work as a chief assistant engineer to the Pennsylvania Railroad on tunnels in New York City. He joined the private engineering practice with partners Charles M. Jacobs and J. Vipond Davies of Jacobs and Davies, Inc. from 1909-1923. Forgie was awarded the Tedlford Gold Medal from the Institute of Civil Engineering (British) in 1915 in recognition of his paper "The Laxaxalpam Aqueduct Tunnels in Mexico." He authored numerous articles about tunneling and consulted as an expert witness and arbitrator in many legal cases involving tunneling. Forgie was a member of the American Society of Civil Engineers, Institute of Civil Engineers of Canada, and New York Section of the American Society of Civil Engineers.

Forgie married Martha Maitland Thom (1868-1936) in 1895. They had four children: Martha (b. 1900), Wilhelmina (b. 1902), James (b. 1904), and Christina (b. 1906). Forgie later married Anne McDougall (b. 1872) in 1937.

Scope and Contents

The papers contain correspondence, reports, drawings, blueprints, cost estimates, contracts, specifications, regulations, legal documents, photographs, profiles, diagrams, clippings, and publications concerning projects which Forgie worked on, especially the Holland and Lincoln Tunnels, the Midtown Hudson Tunnels in New York City. Also included are publications and patents on subaqueous tunneling, subway stations, and bridges, and material on the Forgie submarine.

Arrangement

The collection is arranged into four series.

Series 1: Professional Papers, 1892-1945

Series 2: Projects, 1914-1957

Series 3: Publications, 1856-1952

Series 4: Drawings, 1888-1951

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

Bridges -- 1890-1940
Civil engineering -- 1890-1940 -- U.S.
Civil engineers
Subways -- New York (N.Y.)
Tunnels

Types of Materials:

Blueprints -- 20th century
Business records
Clippings -- 1890-1960
Contracts -- 1890-1940
Correspondence
Drawings
Legal documents
Patents
Photographs -- 1890-1900
Photographs -- 1900-1950
Reports

Names:

Pennsylvania Railroad.

Geographic Names:

Hudson River

New York (N.Y.) -- Transportation

Container Listing

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Box 1, Folder 4	Survey notebook, Upline Tunnel, under and surface survey, 1896
Box 1, Folder 5	Survey notebook, Up Bank [Moorgate Station], London Underground, 1897
Box 1, Folder 6	Survey notebook, book of railway lines, angles and gradients for London Underground, 1898
Box 1, Folder 7	Skeleton Diary, history of great tunneling (compiled by Forgie), 1895
Box 1, Folder 8	Newspaper clippings, 1894 - 1897
Box 1, Folder 8A	Newspaper clippings (foundations, geophysics, highways, roads, harbors and drydocks), 1917-01-01-1941-01-01
Box 1, Folder 8B	Newspaper clippings, 1923-01-01-1941-01-01
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- Box 4, Folder 6 Tunnel shield for concrete lining (patent drawings), 1911 - 1912
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- Box 5, Folder 5 Pennsylvania Railroad New York Extension, pocket index to plans as constructed, 1910
- Box 5, Folder 6 Economic Necessity for the Pennsylvania Railroad Tunnel Extension into New York City, 1907
- Box 5, Folder 7 Pennsylvania Tunnel and Terminal Railroad Company, general description of New York Terminal, 1908
- Box 5, Folder 8 Pennsylvania Tunnel and Terminal Railroad Company, standard specifications for steel railroad bridges, 1908
- Box 5, Folder 9 Pennsylvania Railroad Tunnels and Terminals in New York City, 1908
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- Box 5, Folder 10 The Manhattan Crosstown Tunnels of Pennsylvania Railroad, 1908
- Box 5, Folder 11 Proceedings of the American Civil Engineers, 1909 October, 1909 November
- Box 6, Folder 1 New York Tunnel Extension of the Pennsylvania Railroad, introductory paper and East River Extension, 1909
- Box 6, Folder 2 Pennsylvania Railroad System's Exhibit at the Alaska Yukon-Pacific Exposition, 1909
- Box 6, Folder 3 New York Tunnel Extension, 1909
- Box 6, Folder 4 New York Tunnel Extension of Pennsylvania Railroad, North River Division, 1910
- Box 6, Folder 5 New York Improvement and Tunnel Extension of Pennsylvania Railroad, 1910
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Box 6, Folder 9	The East New York Tunnel, 1916
Box 6, Folder 10	Pennsylvania Railroad, general information for New York tunnels and terminal, undated

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Series 2: Projects, 1914-1957

This series contains correspondence, handwritten and typescript notes, reports, drawings, blueprints, cost estimates, contracts, specifications, regulations, legal documents, photographs, profiles, diagrams, clippings, and publications concerning projects with which Forgie was associated as the project engineer or in expert testimony for legal actions. Series also includes information about a topic/subject related to Forgie's engineering work such as concrete or compressed air. These entries are listed with the notation "subject file." The materials are arranged alphabetically by title.

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Box 8, Folder 3 Criticism and comments, 1940 - 1941

Box 8, Folder 4 Basis of the legal suit, 1941 - 1941

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The Holland Tunnel under the Hudson River between Manhattan in New York City and Jersey City, New Jersey opened in 1927 as the first of two vehicular tunnels under the Hudson River. The Lincoln Tunnel opened in 1937. Originally known as the Hudson River Vehicular Tunnel or the Canal Street Tunnel, it was renamed the Holland Tunnel in memory of Clifford Milburn Holland, the chief engineer.

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- Box 68, Item 1 Volume 7, Number 16, Pennsylvania Railroad New York Tunnel Extension, North River Division, Construction of Bergen Hills tunnels, undated
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- Box 68, Item 3 Volume 8, Number 18, Pennsylvania Railroad New York Tunnel Extension, North River Division, Triangulation and tunnel surveys
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- Box 68, Item 5 Volume 9, Number 20, Pennsylvania Railroad New York Tunnel Extension, North River Division, Question of foundations for North River tunnels, experimental and exploratory work, undated
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- Box 69, Item 3 Index to Pennsylvania Railroad Report, undated
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- Volume 6 Volume 4, Number 25 (Copy 1), Pennsylvania Railroad New York Tunnel Extension, North River Division, Chief Engineers Report to Management, Plans, Miscellaneous Drawings Including Studies and Original Contract Drawings, 1903
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This series contains printed materials, the majority of which were published and relate to engineering projects, specifically tunneling, and concern Forgie's work. Other publications were clearly maintained as reference and used by Forgie during the course of his professional career. Forgie wrote about tunneling developments for the *Encyclopedia of Britannica Yearbook*. Some of those entries are represented here.

The publications include articles, lectures, speeches, addresses before professional societies such as the American Society of Civil Engineers, papers, especially about materials reports, and legal documents such as briefs or testimony. In some instances, Forgie annotated the publications, presumably in connection with his own consulting and expert testimony in several legal actions. Many of the publications relate to specific projects worked on such as the Hudson River Tunnel, and similar publications can be found in Series 2: Projects. The materials are arranged alphabetically.

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Series 4: Drawings, 1888-1951

This series consists primarily of blueprints, working drawings, and tracings. Also included are bidding information, studies of approaches to bridges and tunnels, contract information, construction costs, track layouts, longitudinal and elevation sections, and topographical data for projects Forgie worked directly on or consulted for. Some of the materials are annotated. Materials are arranged alphabetically by project.

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