WILLIAM CAWTHORNE
UNWIN
F. R. S.

List of correspondence and papers in the
IMPERIAL COLLEGE ARCHIVES
List of the papers and correspondence of

WILLIAM CAWTHORNE UNWIN, F. R. S.

preserved in the Imperial College Archives.
W. C. Unwin was Professor of Engineering from 1884 to 1909 at the Central Technical College, (later the City and Guilds College), which was founded by the City and Guilds of London Institute. In 1907 it became a constituent college of the Imperial College.

Miss Dorothy Unwin, cousin of the Professor, presented his papers to the College in 1936. They were used by E.G. Walker for his biography 'The Life and Work of William Cawthorne Unwin', which was published by the Unwin Memorial Committee in 1938. Letters printed or referred to in this book are noted in the list.

The letters are, unless otherwise described, all holograph or signed typewritten letters.
CONTENTS

1. General correspondence.
30. Research reports and other papers.
31. Speeches and addresses.
   Drawings and Portraits.

ABREVIATIONS

A.S.C.E. - American Society of Civil Engineers.
C.T.C. - Central Technical College.
INST. C.E. - Institute of Civil Engineering.
PROC. INSTN. CIV. ENGRS. - Proceedings of the Institute of Civil Engineers.
R.S. - Royal Society.
ADAMS, Edward Dean. b. 1845 c. d. 1931.

All letters except those marked * are typewritten.

1. December 12, 1890.
   17, Nassau Street.
   New York.

   Sends greetings for Christmas and some object representative of America.

2. February 4, 1893.
   Cataract Construction Co., 35, Wall Street.
   New York.

   Comments on book of W. C. U.'s and his plans for Canadian power house.

3. April 21, 1893.

   Details of progress on electric system for Niagara Falls.

   New York.

4. November 1, 1893.
   The same.

   Details of contract awarded to Westinghouse Electric Co.

5. October 1, 1904.

   Electrical World, p. 584.


*7. October 9, 1904.

   Rohallion, Rumson Hills.


   71, Broadway, New York.

   Sends copy of his son's book.

   The same.
   Life, p. 155.

   Gives details of life; is writing book on Niagara scheme, would like suggestions from W. C. U., and his signed photograph.

10. December, 1918 ?


1-4. December 16, 1918.
   29, Palace Gate.


   Account of visit to Niagara; meeting of new company.

1-2. 71, Broadway, New York.


ADAMS, Edward Dean. [continued].

14. April 1, 1925. The same. Thanks for gift of Kelvin's life by Thompson.

15. May 7, 1925. The same. Thanks for W. C. U.'s response to Adams' Dinner Committee's announcement of testimonial dinner.


17. October 3, 1925. The same. Thanks for reply to above; progress on 'Niagara Power'.

18. October 19, 1925. The same. Enquiry about inscription on bust of Newton. (Made of Wedgwood Basalt).


* 23. August 7, 1926. The same. See Life, p. 166. Arrangements for W. C. U. to visit E. D. A. and dedicate the 'Niagara Room' at the hotel.


25. February 3, 1927. The same. Thanks for list of names and societies etc.

ADAMS, Edward Dean. [continued].

1-4. 29, Palace Gate. See Life, p. 167.

598, Madison Ave., New York.

See also SELLERS, Coleman.


Newcastle on Tyne.

BAKER, Sir Benjamin. 1840 -1907.

30. October 30, 1882. Comments on controversy between Airy and Siemens over submarine cable.
2, Queen Square Place, Westminster.

31. October 25, 1887. Has been investigating fracture of iron links of bridge.
The same.
Forth Bridge Railway Engineers Office.

32. October 28, 1887. Further testing; details of wind pressure on bridge.
The same.

33. Forth Bridge Railway, Engineer's Office, South Queensferry.
Effects of wind pressure; sending steel for testing; sketch of test pieces.
See Life, p. 80.

34. January 19, 1888. Sending more links for testing; sketch.
2, Queen's Square.

The same.

36. November 30, 1893. Comments on education of engineers; teaching what must be unlearnt in later practice, refers to Rankine on arches.
The same.
See Life, p. 112.

The same.
See Life, p. 115.
BAKER, Sir Benjamin. [continued].

38. January 1, 1897. Description of reservoir dam; with sketch.
   The same.
   The same.
40. October 26, 1898. Outlines method of blocking channels at Aswan dam; sketch.
   The same.

BASSET, Alfred Barnard. 1854 - 1930.

41. November 18, 1892. Enquires about Unwin's law of slipping which he has adopted but which is questioned by Rayleigh and Lamb; explains difficulties.
   United University Club.
1-2. Enquiries about Unwin's law of slipping which he has adopted but which is questioned by Rayleigh and Lamb; explains difficulties.

BELGIUM. Liege: Association des Ingénieurs.

42. February 28, 1922. Typewritten. In French. From the President, M.O. Leper-sonne. Award of Honorary Membership.
   16, Quai des États Unis, Liege.

BOCQUET, J A

43. December 1, 1879. Expresses pleasure at W. C. U. 's permission for him to translate his book; asks for any additions etc.
   Ecole Municipale des Apprentis, Ville de Paris, 60, Boul. de la Villette, 60.

BRAMWELL, Sir Frederick Joseph. 1818 - 1903.

44. November 8, 1893. Had no hand in Unwin's election to Council of Royal Society; technical comments on his Cantor lectures.
   5, Great George St., Westminster.

BUTLER, Henry Montagu. 1833 - 1918.

45. October 15, 1890. Sends copy of statute on position of professors.
   Trinity Lodge, Cambridge.
CATARACT CONSTRUCTION COMPANY.

See ADAMS, Edward Dean.
ROWLAND, Henry.
SELLERS, Coleman.

CHESNEY, Sir George Tomkyns. 1830 - 1895. President of Coopers' Hill College.

46. January 21, 1875. Indian Civil Eng. College, Coopers' Hill. Unwin's salary is to be raised; appreciation of his services.

47. November 3, 1880. 33, Malvern Road, Kensington. Letter of appreciation of Unwin's work, when he retired from Presidency.


CITY AND GUILDS OF LONDON INSTITUTE. Central Institution. (Later Central Technical College).


51. Memorandum by W. C. U.; Minutes of Central Technical College adopted by Executive Committee, July 30, 1903: appreciation of Unwin's services on his resignation from the Professorship.

CITY AND GUILDS OF LONDON INSTITUTE. Old Centralians.

52. August 3, 1921. 29, Palace Gate. To the New York Association of Old Centralians. Thanks for congratulations on award of the Kelvin medal. From W. C. U.

Accompanying correspondence:

July 11, 1952. A. M. S. Holbein to Librarian, City and Guilds College: Mr. S. S. A. Watkins of New York has sent above letter and after discussion think Unwin Library is best place for it.
CITY AND GUILDS OF LONDON INSTITUTE. Old Centralians.

Accompanying correspondence (continued).

August 18, 1952. J.W. Voelcker, editor of the
Central, to Librarian. Enquires
about letter.

August 20, 1952. S.S.A. Watkins to Librarian -
thanks for letter.

CLARKE, George Sydenham. 1st Baron Sydenham of Combe.
1848 – 1933.

53. October 6, 1880. Thanks for gift of camera from
3, Medway Villas, Cooper's Hill staff on his resig-
New Brompton.
nation.

54. May 5, 1884. Chatty letter on Unwin's appoint-
War Office. ment to Central Institution -
calls him 'ruffian' for not letting
him know plans for leaving Coo-
per's Hill.


55. November 28, 1888. Defends American principles of
1-2. 35, Broadway, bridge building, attacks theories
New York. of a Mr. Thompson who has
been supported by Baker.

56. January 27, 1873. Has been given Professorship of
Royal School of Applied Mechanics at the School.
Naval Architecture.

57. February 18, 1877. Thanks for copy of Unwin's book;
18, Gloucester Place, hopes his own work on Steam
Greenwich. will soon be completed.

58. April 9, 1884. Congratulations on Central Insti-
Belair Cottage, tute appointment; weariness
Landon Road, with book he is writing; alarmed
Tunbridge Wells. at absence of W.C.U.'s names
in list of candidates for R.S.

59. July 29, 1884. Arrangements for visit to
1-2. 18, Gloucester Place. Canada; hopes to see more of
finished.
December 22.
St. Leonards'.


October 24, 1890.
18, Gloucester Place, Greenwich.

Discusses advantages of Cambridge professorship for W.C.U.; urges his application for post.

July 22, 1892.
Villa Hollandia, Bad Gastein.

Holiday plans; hopes W.C.U. will not be tempted by American offers; views on action of tides.

October 16, 1892.
18, Gloucester Place, Greenwich.

Discusses MacFarlane Gray's Paris paper; comments on him personally.

November 5, 1893.
The same.

Glad that W.C.U. is on R.S. Council; business of a joint Trusteeship.

April 19, 1919.
Hill Crest, Parkstone, Dorset.

Reminiscences of the past.

July 31, 1904.
45, Clifton Road, Crouch End, N.

 Honour of succeeding W.C.U. at the College; debt to his writings.

November 8, 1889.
Lake Vyrnwy, Oswestry.

Thanks for copy of W.C.U.'s article in Encyclopaedia Britannica on Hydraulics; holiday abroad cut short owing to difficulties with aqueduct tunnel under the Mersey; asks W.C.U. to test some Argen- tinian bricks for resistance to compression.

November 17, 1889.
G.W.R. train, Oswestry to Paddington.

Arrangements for meeting; reports rise of Lake to level of overflow sill with fine effects of foam.
DENNY, Sir Archibald. 1860 - 1936.

69. June 17, 1915. Thanks for copy of Presidential address [to Institution of Mechanical Engineers] with comments.

1-2. Seven Ship Yard, Dumbarton.

[See also 174].

DWELSHAUVERS-DERY, Victor August Ernest. 1836 - 1913.

70. July 5, 1888. In French. Thanks for attentions during stay in London; account of experiments with metal with enclosed graph [missing]; glad to hear W. C. U. teaches his method to his pupils. (Method of heat exchange?).

71. December 18, 1888. Liege. Thanks for W. C. U.'s 'Address on the use of theory', need for 'physiology of steam engine' in Belgium; asks if W. C. U. could look over his paper on Willan's experiments on velocity.

72. May 7, 1890. Liege. In French. Thanks for copy of W. C. U.'s 'Elements of machine design.'

73. October 17, 1890. Liege. Letter written on form for questionnaire enquiring about experimental laboratories for steam engines attached to Technical Colleges. In French. Asks W. C. U. about some points connected with this survey on which he is about to publish the results.

74. November 29, 1893. Liege. In French. Importance of laboratory teaching for mechanical engineers; in confidence describes experiences with own pupils who cannot put theory into practice; is commenting on letter about education of engineers from W. C. U.

75. April 2, 1901. Universite de Liege, Cabinet du Recteur. Thanks for letter; comments on Rankine.
ELECTRIC TRACTION COMPANY LIMITED.

76. February 1, 1897.
   16, Great George St.,
   Westminster.

EMERY, A H

77. December 24, 1888.
   1-2.
   Stamford,
   Connecticut.
   Typewritten. Describes construction of pressure gauge in 1867; 1870, with details; declares his designs were not influenced, as W.C.U. had stated, by Thomasset machine.

EWING, Sir James Alfred. 1855 - 1935.

78. October 20, 1890.
   University College,
   Dundee.
   Thanks for testimonial; has no one suitable for the place W.C.U. mentions.

FAIRBAIRN, Sir Thomas. 2nd Bart. 1823 - 1891.

79. September 25, 1876.
   Brambridge House,
   Bishopstoke,
   Southampton.
   Asks for W.C.U.'s considered opinion of his father, Sir W. Fairbairn, as man and scientist, to be used as material for forthcoming life by Dr. W. Pole.

80. September 29, 1876.
   The same.
   Thanks for reply, hopes W.C.U. will take the time he requires to consider his statement.

81. November 4, 1876.
   The same.
   Thanks for his very interesting communication.

FAIRBAIRN, Sir William. 1789 - 1874.

82. February 6, 1856.
   Manchester.
   See Life of Unwin,
   p. 31.
   To Rev. W.J. Unwin. W.C.U. has been recommended to him; asks for further information about him for possible appointment as clerk to W.F.

83. February 9, 1856.
   The same.
   See Life, p.31.
   To the same. Youth, lack of experience W.C.U.'s only defects; asks when he may see him.
FAIRBAIRN, Sir William. (continued).

84. March 10, 1856. The same. See Life, p. 32. To the same. W. C. U. giving satisfaction; appointed at £6 per month. Note added on blank sheet from W. C. U. to his father. [Life, p. 33].

85. June 22, 1858. Inverness. Glad to hear of successful experiments on density of steam, which he will follow up on his return, asks W. C. U. to get apparatus ready.


87. December 26, 1859. Manchester. Sends £10 as reward for services; asks him to keep account of expenses for experiments, on his visit to consult Tate; the importance of this joint investigation; [on superheated steam; Life, p. 37].

88. February 18, 1862. 2, Victoria Street, See Life, p. 49. Instructions about rewriting Report (of Special Committee on Iron; Life, p. 48). Signature cut away.

89. March 19, 1862. The Polygon, Manchester. See Life, p. 50. Regret at parting with Unwin; testimonial to his services; encloses cheque for £20.

90. July 2, 1862. Manchester. W. C. U. has been awarded £100 for services to Admiralty Committee [see Life, p. 50].

91. May 28, 1863. The Athenaeum. See Life, p. 51. Thanks him for defending his reputation against Kirkcaldy; asks him to check over Mills and Mill work.


93. July 8, 1864. Manchester. See Life, p. 51. Offers him possibility of partnership in Irish engineering works; retiring partner being one of his old pupils.

94. December 30, 1864. Manchester. Unfavourable comments on Pole's 'Life of Stephenson'; sorry he did not succeed with the Dublin firm; will keep look out for him.


98. August 9, 1867. Manchester. See Life, p. 53. Asks W. C. U. if he can work out a summary of results of experiments on relative values of steel and iron in their mechanical properties and structural values.

99. October 24, 1867. Manchester. Has been canvassing Professors of Owen's College on W. C. U.'s behalf (for Chair of Engineering) suggests he acquires as many testimonials as possible for this competitive post.


102. July 7, 1869. The Polygon, Ardwick, Manchester. See Life, p. 56. Pleasure at W. C. U.'s success; is looking out for suitable appointment for him; offers his services.


109. February 26, 1873. Manchester. Enquires about progress with paper [alluded to in 107 above].

110. March 5, 1873. Manchester. Did not mean W. C. U. to rewrite the paper; would like to receive calculations.

111. April 1, 1873. Manchester. Will send W. C. U. the paper when it is returned by Stokes. P. S. reads: You are quite right in supposing that Sir John Lubbock, Huxley and Dr. Hooker, the new President, will have the Royal Society entirely in their own hands.

112. April 4, 1873. Manchester. Sends paper from Royal Society; cannot trust himself to write abstract so is therefore asking W. C. U. to do this.

113. April 10, 1873. The Polygon, Manchester. Thanks for writing abstract which is a little too long; encloses £10 in recognition of W. C. U.’s help.


FITZMAURICE, Sir Maurice. 1861 – 1924.

115. September 3, 1917. 29, Palace Gate. W. C. U. to Sir F. M. Gives list of war committees on which he has been working.

FORREST, James. 1825 - 1917. Secretary of the Inst. C.E.

117. April 15, 1893. Discussion of affairs of Institution Marine Hotel, of Civil Engineers; designations Hastings. in list of members, display at [I. C. E. writing paper]. Institute, reception etc.
See also 142.

FOSS, William E

118. December 12, 1894. Long letter about the flow of water 1-5. Boston Water Works, through pipes, with numerous Western Division, designations of Brighton, Mass. U.S.A. references, description of current experiments etc.

FREEMAN, John Ripley. 1855 - 1932. President; Am. Soc. C.E. 1922.

119. May 7, 1894. Typewritten. Sends sample sheets of logarithmic cross section paper 31, Milk Street, made under his management by Boston. lithographic process. Is working on his observations on experi-


121. February 21, 1923. From John Dunlop, Secretary. Typewritten. Describes ceremony Am. Soc. C.E., of presentation of W. C. U.'s 33, West 39th Street, diploma of membership which New York. was by proxy. Enclosure, 121a below.

121a. A typewritten carbon copy of remarks by Dr. George F. Swain, Past Pres. Am. Soc. C.E., Professor of Civil Engineering, Harvard, when presenting Professor Unwin to the President. See also 224. American Society of Civil Engineers. See also 210. SWAIN, George F.

FROUDE, Robert Edmund. 1846 - 1924.

122. February 7, 1881. Comments on W. C. U.'s R.S. 1-2. Admiralty Experiment paper on water friction, describes Works, Torquay. experiments on effect of tempera-
ture on flow of water through various sizes of pipe, asks for figures of W. C. U.'s results.
GERMANY. BERLIN. Charlottenburg, Technische Hochschule.


GLAZEBROOK, Sir Richard Tetley. 1854 - 1935.


National Physical Laboratory, Bushy House, Teddington, Middlesex.

125. December 15 [1923]. Thanks for kind references to work of laboratory in W. C. U.'s report to the C. I. W. on gauge testing of [word illegible].

Bushy House.

GREAT BRITAIN. Admiralty.

126. June 28, 1862. Copy. To the Chairman of the Committee on Iron plates [Sir J. D. Hay]. Expresses satisfaction of Government with services of Committee; award of £200 to Fairbairn, Pole, etc., £100 to Mr. Unwin 'in accordance with your recommendation'.

Admiralty.

See Life, p. 50.

GREAT BRITAIN. Board of Trade.

127. May 19, 1896. From Assistant Secretary, Railway Department. Inst. of Civil Engineers has suggested W. C. U. as its representative on Committee enquiring into loss of strength in steel rails owing to long wear by railways; hopes he will act on Committee.

Railway Dept., 7, Whitehall Gdns., R 4174.

128. May 25, 1900. Thanks W. C. U. for his work on Committee on steel rails.

7, Whitehall Gdns., E 14353.

129. December 10, 1912. Thanks of Board for work as Senior Delegate to 6th Congress of International Association for Testing Materials.

The same.
GREAT BRITAIN. Department of Scientific and Industrial Research.

130. August 23, 1924. From Frank Heath. Thanks for services as member of Committee on Gauging Rivers.

GREAT BRITAIN. Ministry of Munitions. (Metropolitan Munitions Committee; Board of Management).

131. March 11, 1920. From A. J. Claxton, Liquidator. All members of Committee given full discharge from any liability for contracts etc; appreciation of services rendered to Committee.

See also 209. STEVENSON, Sir James.

GREAT BRITAIN. Privy Council Clerk of the Council, Almeric Fitzroy.

132. February 6, 1923. Typewritten. W. C. U.'s term of office as Member of Senate of University of London due to expire in May; Lord President thinks he will probably wish to be relieved of duty, expresses thanks for services.

133. February 27, 1923. Typewritten. Owing to prospect of early legislation to deal with reform of Senate asks if W. C. U. would consent to be renominated as member.


GREAT BRITAIN. Department of Scientific and Industrial Research.

136. October 23, 1880. Very mathematical letter on Cotterill's theorem on 'Distribution of energy.'
HARDY, Thomas. 1840 - 1928.

137. December 13, 1881.
The Avenue, Wimborne.
See Life, p. 72.

Thanks for book on astronomy; reference to W. C. U.'s work on machines.

HAWKESLEY, Thomas. 1807 - 1893.

138. March 11, 1885.
30, Great George St., Westminster.
See Life, p. 79.

Comments on W. C. U.'s lecture on water motors.

139. January 7, 1886.
The same.
See Life, p. 79.

Does not wish to involve Unwin in controversy.

HERSCHEL, Clemens. 1842 - 1930.

140. June 5, 1888.
1-2.

This letter is reproduced in full in facsimile [facing p. 80 of Life] and printed on p. 81; deals with application of Venturi principle.

IMPERIAL COLLEGE.

File of letters, 1910 - 1926, between the College and Professor Unwin, as representative of the Institution of Civil Engineers on the Governing Body of the College [Filing Office No. 66].

IMPERIAL COLLEGE. From the Chairman of the Governing Body, the 1st Marquess of Crewe.

141. March 14, 1922.
Crewe House, Curzon Street.

Conveys congratulations of Governors on award of Kelvin Gold Medal to W. C. U.

INSTITUTION OF CIVIL ENGINEERS.

142. February 6, 1867.
25, Great George St.

From James Forrest. Secretary. Printed letter, announcing election as Associate Member.

Great George St.

From J. H. T. Tudsbery. Secretary. Award of Howard Prize. Typewritten.
INSTITUTION OF CIVIL ENGINEERS. (continued).


147. November 4, 1920. The same. From J.H.T. Tudsbery. Thanks for kind letter (on retirement from Secretaryship?).


149. January 27, 1921. 29, Palace Gate. From W.C.U. to President. Acknowledgement of award.


151. December 3, 1924. The same. From the Assistant Secretary W.F. Spear. Typewritten. Election as Honorary Member of the Institution, with list of signatures.

152. December 15, 1926. The same. From the Secretary. Typewritten. Congratulations from President and Council at his entry into his 89th year.

INSTITUTION OF MECHANICAL ENGINEERS.

JACOBUS, D
154. June 15, 1901. Department of Ex-
perimetal Mechanics
and Engineering Phy-
sics, Stevens Institute
of Technology, Hoboken,
New Jersey.

JAMES, T
155. January 29, 1926. Park Cottage,
Ruislip, Mddx.
156. February 6, 1926. The same.

KIRK, Alexander Carnegie. 1830 - 1892.
157. April 27, 1880. Lancefield House,
Glasgow.

LEAVITT, Erasmus Darwin. 1836 - 1916.
158. June 18 (1894?). Cambridgeport,
Mass., U.S.A.

LONDON. The University. H. Cloughtoil, Secretary.
159. May 9, 1927. South Kensington.
161. May 11, 1927. 29, Palace Gate.

Typewritten. Thanks for copy of 'Elements of Machine Design'
which he uses with his classes.

Is writing an article on Vic-
torian octogenarian engineers;
asks for photograph of W. C. U.

Thanks for letter; repeats request
for photograph.

Describes origin of dispute
with Kirkcaldy's (?) over steel
testing affair connected with the
Board of Trade.

Typewritten. Encloses copy
of letter from Privy Council
about W. C. U.'s member-
ship of Senate.

Carbon typewritten copy.
P. C. does not propose to
recommend any replacements
for representatives on Senate
whose term of office is ended.

From W. C. U. Draft acknow-
ledgement of above; refers to
interest in work on Senate.

See also 189. RÜCKER, Sir Arthur.
McLEOD, Herbert. 1841 - 1923.


163. May 11, 1928. 57-59, Victoria Street. Typewritten. Sends copy of his lecture to Structural Engineers on Earth Pressure theories.

NICHOLAS, J S

164. November 10, 1928. 52, Ebury Road, Rickmansworth. See Life, pp. 43 - 44.

OSMOND, F

Note: Ecrouissage has three meanings in metalworking - cold rolling, hard hammering, etc.,


168. May 5, 1900.
    7, Well Road, Hampstead.
    Discusses how changes in constitution of University will affect means of livelihood of King's and University College staff who depend solely on students' fees; discrimination in faculty lists; difficulties of situation.

169. January 12, 1889.
    90, Lower Thames Street.
    Perkins, James
    Apologises for not acknowledging a Report of W. C. U.'s with explanations about delay in printing it; expresses admiration and its support of Sterne's (?) application.

170. July 15, 1890.
    Walsingham House, Piccadilly.
    Pidgeon, W
    Thanks for copy of a report.

171. May 27, 1876.
    See Life, p. 65.
    Pole, William 1814 - 1900.
    Asks with what particular works of Fairbairn W. C. U. would like to be associated (for Life of Fairbairn).

172. June 19, 1876.
    Will put in a special paragraph describing the association of Unwin and Fairbairn.

173. September 11, 1931.
    Priestman, William D
    Typewritten. Refers to invaluable encouragement from W. C. U. when endeavouring to create power from use of petroleum oils.
PURVIS, Frank Prior. 1850 -1940.

174. September 26, 1884. Seven ship Yard, Dumbarton. Encloses diagrams; the results of tank work showing effect of temperature on resistance, with explanations.

175. September 27, 1884. Tables showing effect of temperature on model results.

176. September 27, 1884. Diagram tables. Model 14 1/19th of S.S. Pau Tah; details of experiments.

RAWLINSON, Sir Robert. 1831 -1898.

177. April 17, 1895. Invitation to dinner before James Forrest Lecture at Inst. C. E. to be given by W.C.U., R.R. presiding.

REULEAUX, Franz. 1829 -1905.


REILLY, Calcott. 1829 -1900.

179. April 4, 1871. Explanation of his appointment as Professor of Construction at the Cooper's Hill College, a post for which W.C.U. had also applied.

180. January 9, 1874. Amusing letter about new chaplain and the inauguration of the new chapel by the Bishop of Winchester in the so far hypothetical new pulpit.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>REILLY, Calcott</td>
<td>April 15, 1894</td>
<td>Acknowledgement of letter of condolence on death of his wife.</td>
</tr>
<tr>
<td>RIEDLER, Alois</td>
<td>November 22, 1912</td>
<td>Asks where a rotating crane for measuring resistance of aeroplanes is to be erected by Vickers.</td>
</tr>
<tr>
<td>ROBERTS, Sir Owen</td>
<td>June 15, 1894</td>
<td>Thanks for copy of book on 'Development of power from Central stations'.</td>
</tr>
<tr>
<td>ROBINSON, Mark H</td>
<td>May 6, 1897</td>
<td>Typewritten. Discusses results of 'triple expansion non condensing trials' etc.</td>
</tr>
<tr>
<td>ROWLAND, Henry Augustus</td>
<td>September 8, 1893</td>
<td>Asks if W. C. U. can support in writing his claim for fees against the Cataract Company.</td>
</tr>
<tr>
<td>LONDON, Royal Society</td>
<td>January 7, 1912</td>
<td>In Latin. Printed, signed by the President, Sir Archibald Geikie. Invitation to celebrations of 250th anniversary of Society's foundation.</td>
</tr>
</tbody>
</table>
RÜCKER, Sir Arthur. Principal of the University of London. 1848 - 1915.


RUTH, William.


SCHWOERER, Emile. 1861 - 1927.


192. April 18, 1893. In French. Thanks for papers about membership of Inst. C.E.; personal information - date of birth, etc.


SELLERS, Coleman. 1827 - 1907.

194. December 23, 1892. Typewritten. Account of his lecture on Priestman engine, details of experiments; progress of works at Niagara, for which he was consulting engineer.

1-4. 3301, Baring St., Philadelphia. 1-3. The same. 1-2. The same.

195. January 23, 1893. Typewritten. Thanks for portrait of Forrest; visit to Westinghouse plant, etc.

196. May 4, 1893. Enquiry about a poem by Cowper addressed to Rev. W.C. Unwin; ill health; progress of graphite business etc.

1-2. The same.

See also ADAMS, Edward Dean.
SHIBA, Baron Chuzaburo. 1873 - 1934.


Thanks for letter; details of future movements and addresses.

SIMMONS, Sir John Lintorn Arabin. 1821 - 1903.

198. February 17, 1868. Chatham.

To Sir W. Fairbairn. Thanks for recommending Unwin as lecturer; expresses great satisfaction with him.

SMEATONIAN SOCIETY OF CIVIL ENGINEERS.

199. July 8, 1912. 1, Elvaston Place, Queen's Gate.

From John A. Rennie, Hon. Treasurer. Asks if he will take up his election as President of the Society.

SMITH, Hamilton. 1840 - 1900.

200. March 22, 1886. 1, Pembridge Crescent, Bayswater.

Comments on a formula; inaccuracy of Darcy's work.


Illness of daughter at Homburg; present of fishing rod.

202. February 18, 1893. Exploration Co., Ltd., 30, St. Swithin Lane, E.C.

Has bought Unwin some shares.

SMITH, Mrs. Hamilton.

203. May 17, 1887. Hotel Metropole.

Acceptance of dinner invitation.

204. February 8, 1897. Oakleigh, Chislehurst.

Family news; invitation to dinner; future plans.
STEARNs, Frederic Pike. 1851 -1919.

205. August 16, 1892.
13, Beacon St.,
Boston, Mass.
Typewritten. Thanks for docu-
ments on tidal waters of
Thames.

STEIGER, Alph.

206. February 24, 1904.
28, Victoria St.
Thanks for help at reading of
his paper at the Inst. C.E., will
prepare diagrams suggested by
Unwin; encloses blueprint on
speed of turbine.

206/2. Blueprint: Electricity works,
Switzerland; experiment made
with the automatic governor.

207. June 17, 1926.
44, Scarsdale Villas,
Kensington.
Typewritten. Sends articles on
turbines.

STRUTT, John William. 3rd Baron Rayleigh. 1842 -1919.

208. April 16, 1879.
Terling Place,
Witham, Essex.
Thanks for tracing showing
results of Hagen's observations;
comments on results of Froude
at Torquay.

STEVENSON, Sir James. 1st Baron Stevenson of Holmbury.
1873 - 1926.

209. March 31, 1919.
War Office.
Acknowledgement of services
to the Metropolitan Board of
Management, Munitions
Committee.

SWAIN, George Fillmore. 1857 -1931.

210. April 2, 1923.
Harvard Engineering
School.
Had great pleasure in pre-
senting Unwin's name for Hon.
membership of the A.S.C.E.

See also 121, carbon copy of remarks made by G.F.S. when
presenting Professor Unwin to President as Hon. Member, 1923.
In French. Asks him to forward letter to a Mr. Stoney, for technical literature to help with 'barrages' on Rhone.

In French. Thanks for copy of book.

Congratulations on appointment as manager in Fairbairn works; desires to correspond; comments on Fairbairn's book on 'Iron ships'.

Thanks for gift of cheque as Mechanical Laboratory prize.

Thanks for papers on Niagara he found on his return from Madeira; comments on water-flow in Madeira.

Dictated. Thanks for copy of 'Hydrodynamics'.

Typewritten circular, asking for information about application of steam jacket to steam engine.

Typewritten. Thanks for copy of book on machine design.

Typewritten. Asks for suggestions for persons to be nominated to fill appointments in projected school of Marine Engineering.
THURSTON, Robert Henry. 1839 - 1903.

220. November 25, 1891. The same. Regrets for printer's errors in some work of Unwin's he was putting through press.

UNWIN FAMILY.

221. March 26, 1856. From Unwin's grandfather. Reflections on Unwin's departure and good fortune in securing present position, etc. Signature missing.


UNITED STATES OF AMERICA. American Society of Civil Engineers.

224. June 26, 1922. From Elbert M. Chandler, Acting Secretary. Election as Honorary Member of the Society.

WALKER, Edward George. 1885 - 1957.


226. June 27, 1912. Enquiry about address of A. Chatterton so that he may congratulate him on birthday honour.

WALTER, Wilfrid.

227. March 7, 1914. Portrait is not ready; might be worth sending it to the Academy.
WALTER, Wilfrid (continued).

228. March 9, 1914.
The same. Will arrange for delivery of portrait; will have it sent for later to try its luck at the Exhibition.

This portrait now hangs in the Institution of Civil Engineers for which it was painted.

WARD, T

229. July 18, 1911.

The same. Further criticism, on treatment of ball bearings; regrets that Unwin has not replied to his previous letter.

WATNEY, Sir John. 1834 - 1923.

231. June 12, 1894.
Mercers' Hall. Thanks for copy of Howard lectures.

232. August 1, 1896.
Eastbourne. Appreciation of Unwin's work as Dean of the C. T. C.; will support his application for assistant professor.

233. October 14, 1903.
Mercers' Hall. Typewritten. Glad that Unwin has agreed to remain longer in his post owing to difficulties of appointing a successor.

The same. Very glad to have helped procure for Unwin the Emeritus Professorship and use of a laboratory as this was only his due after years of service.

WILLANS, Peter William. 1851 - 1892.


236. November 1, 1928. 49-50, Parliament Street. Typewritten. Asks if Unwin will write short article for 25th volume of the 'Central'.

237. November 12, 1928. The same. Thanks for letter and memorandum. Points out omissions (where Unwin had not done himself justice); encloses copy of letter. (See 164).

238. November 17, 1928. The same. Thanks for article; had been missed at Institution [of C. E.] Council dinner.

WINGFIELD, Charles Humphrey. 1855 - 1941.

239. February 6, 1922. Criticism of error in 1909 edition of 'Machine design'.

WOOD, Frederick John.


YARROW, Sir Alfred (Fernandez). 1842 - 1932.

RESEARCH REPORTS AND OTHER PAPERS.


2. M.S. Notebook with observations on the flow of the Thames between Fulham Bridge and Hammersmith Bridge, etc. 1882. 113 ff. 7" x 4¼".

3. Thames Pollution Commission: reduction of observations on the Thames, taken by Professor Way, Mr. Baldwin Latham, and Mr. Mansergh. n.d. 16" x 25". [1883]. Printed.

4. M.S. Notebook with notes on Leicester Corporation Conduit, 1899; - Canvey scheme, December, 1899; - Derwent Valley Water scheme, dam no. 2; - Recalculation, June 2, 1905; - Howden dam no. 2, Densu dam, calculation for Mr. Walter Hunter. 9⅞ ff.

5. Report on the equipment of a laboratory for testing materials. 7 ff. n.d. Duplicated typescript. This report 'was made at the suggestion of Dr. Ripper in view of the establishment of a laboratory at Sheffield University'.


Strength of brickwork in cement. 12 ff. n.d. Duplicated typescript. Also typescript reports of tests of concrete on brick, University of Liverpool, Walker Engineering Laboratories, August - October 1916. 8 ff.
Tests of material for Northern Outfall Sewer. Details of tests, with 5 photographs, April - May, 1915, one sheet. See 'Life', p. 154, for a reference to Unwin's Investigations on behalf of the Liverpool Corporation.


30.
SPEECHES AND ADDRESSES.

2. October 26, 1907. Address to students of Croydon Polytechnic. 10 p. Typescript.
4. May, 1912. Presidential address to the Institution of Civil Engineers. 22 p. M. S.
5. December 18, 1912. Speech, Merchant Venturers' College, Bristol; 17 p. typescript; also, press cutting of speech.
7. March 6, 1916. Presidential address to the Institution of Mechanical Engineers, 8 p. Typescript, also proof of printed speech.
8. 1921. Speech of thanks at presentation of Kelvin medal. 4 p. Typescript.

DRAWINGS.

1. 28 pen and ink drawings of apparatus and machinery. n. d.

PORTRAITS.

Etching by Alphonse Legros. Head in profile, facing left, size about 9" x 6".
Oil painting on canvas, by A. M. Martin. Full face, head and shoulders. Size about 26" x 23".

The archives collection includes a number of photographs of Unwin, and he also appears in group photographs of the staff and students of his department.
List compiled by Mrs. J. Pingree; typed on an IBM Executive typewriter, Bold Face no. 2, and reproduced in the Mathematics Department by courtesy of Professor H. Jones, F.R.S., on a Gestetner 200 Offset Machine.

Imperial College of Science and Technology, Autumn, 1966.