

MS 36 Campbell Collection

About the collection:

A small collection of papers relating to Irish born physicist Albert Campbell (1862-1953). Campbell was a pioneer in electrical science, especially in the fields of alternating current measurements and standards.

Campbell was born at Ballynagard House, near Derry. He was educated at Londonderry Academical Institution, Magee College, University of Edinburgh, Queen's College Belfast and Corpus Christi College, University of Cambridge where he read mathematics, physics and chemistry. At Cambridge, he was a pupil of Dr (later Sir Richard) Glazebrook.

After leaving Cambridge, Campbell served on the staff of the Faraday House Standardising, Testing and Training Institution. Soon after the foundation of the National Physical Laboratory in 1901, he was appointed to the position of principal assistant, under the leadership of Richard Glazebrook. He established the department concerned with measurements of inductance and capacitance and related quantities. The main body of Campbell's work, including his primary standard of mutual inductance (1907), was carried out at the NPL until he retired from its research laboratory in 1918. After his resignation, he continued his work in his own small laboratory with homemade instruments. It was from here that he devised the absolute method of determination of the ohm, which was subsequently elaborated at the NPL.

Campbell was awarded the Duddell Medal of the Physical Society in 1925.

MS 36 Outline

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MS 36/1 Book of Mathematical Tables

Bottomley, J. T. *Four figure mathematical tables: comprising logarithmic and trigonometrical tables, and tables of squares, square roots, and reciprocals.* 2nd ed., enlarged. Macmillan, 1890.

Signature of Albert Campbell on first page. MS letter attached to paste down endpaper, from Howard Campbell to Dr Hidden, dated 07/12/1989.

MS 36/2 Correspondence

Miscellaneous correspondence

MS 36/2/1

Bundled together:

- 27/08/1987 Arnold C. Lynch to Alan E. Hidden. 1p.
27/08/1987 Arnold C. Lynch to Alan E. Hidden. 1p.
14/08/1987 Alan E. Hidden to Arnold C. Lynch. 1p.
18/03/1987 Alan E. Hidden to P.M. Linder. 1p.
03/03/1987 Alan E. Hidden to The Librarian, National Physical Laboratory. 1p.

MS 36/2/2

Bundled together:

- 01/08/YYYY Agnes Finnegan to Alun [sic] and Jane. 2pp.
22/06/YYYY Agnes Finnegan to Alun [sic] and Jane. 2pp.
22/01/YYYY Agnes Finnegan to Alun [sic] and Jane. 2pp.

MS 36/2/3

Bundled together with one A4 page of MS notes

- 12/04/1990 John B Walsh pp B Trainor (Ulster Historical Foundation) to Alan E. Hidden. 2pp.
07/10/1990 J.C.E Campbell to Alan E. Hidden. 2pp.
25/09/1991 J.C.E. Campbell to Alan E. Hidden. 1p.
20/07/1992 Alan E. Hidden to J.C.E. Campbell. Photocopy. 1p.
01/09/1992 Susan Grant to Alan E. Hidden. 2pp.

MS 36/2/4

1. 12/03/1987 P.M. Pinder (National Physical Laboratory) to Alan E. Hidden. 1p. Enclosed information on Albert Campbell, 4pp.
2. 15/09/1987 P.M Pinder to Alan E. Hidden. 1p.
3. 07/01/1988 Paul Vigoureux to Alan E. Hidden. 2pp.
4. 02/1988 Handwritten note addressed to Mr Hidden giving details of telephone call received from Mr Bigger. 1p.
5. 29/04/1988 Alan E. Hidden to Eddie McIlwaine (Belfast Telegraph). Photocopy. 1p.

6. 19/05/[1988] Agnes Finnegan to Alan E. Hidden. 2pp.
7. 19/05/[1988] Agnes Finnegan to the Editor, *Belfast Telegraph*. Marked 'rough copy'. 1p.
8. 03/06/1988 Alan E. Hidden to Agnes Finnegan. Photocopy. 1p.
9. 04/06/1988 Agnes Finnegan to Alan E. Hidden. 2pp.
10. 02/10/1988 Agnes Finnegan to Alan E. Hidden. 2pp.
11. 21/11/1988 Rosemary Woodburn to Alan E. Hidden. 1p.
12. 09/12/1988 Agnes Finnegan to Alan E Hidden. 2pp. Enclosed handwritten note.
13. 20/12/1988 T.G. Woodburn to Alan E. Hidden. 1p.
14. 05/01/1989 Agnes Finnegan to Alan E. Hidden. 2pp.
15. 22/01/1989 Agnes Finnegan to Alan E. Hidden. 1p.
16. 23/02/1989 Agnes Finnegan to Alan E. Hidden. 2pp.
17. 03/05/1989 Agnes Finnegan to Jane and Alun [sic]. 1p.
18. 16/07/1989 Agnes Finnegan to Jane and Alan. 1p.
19. 28/08/[1989] Agnes Finnegan to Jane and Alan. 2pp.
20. 28/10/[YYYY] Agnes Finnegan to Jane and Alan. 2pp.

2 A4 pages of MS notes with addresses and notes on Albert Campbell.

3 A4 pages of typescript prose - possibly from *Reaching for the Fruit*

MS 36/3

Biographical

MS 36/3/1

Assorted notes, mostly biographical information on Albert Campbell. 77pp.

MS 36/3/2 ESTP1845

1. 'Albert resisted the pursuit of a career'. *Belfast Telegraph*, 30/05/1988. 1p.
2. 'Campbell – a bright spark from the Maiden City'. *Belfast Telegraph*, 13/05/1988. 1p.
3. 'Campbell plans return in search of family', *Belfast Telegraph*, 1990. 1p.
4. 'The 'Big Wind; of 150 years ago', *South Belfast Herald and Post*, 24/08/1989. 1p.
5. 'Aussie Campbell looking for Derry 'roots'' *Derry Journal* and 'Looking for the Callendar Campbells' *Derry Sentinel*. 1p. Photocopies.
6. 'Campbell family re-unite', *Derry Sentinel*, 25/07/1990. 1p. Photocopy.
7. 'Obituary notices: Albert Campbell' *Proceedings of the Physical Society*, 67 A, 1954. pp. 119-1122.
8. 'Obituaries: Mr Albert Campbell' *Nature*, vol 173, 1954. pp. 471-472.
9. 'Obituary: Mr A. Campbell: a pioneer of electrical measurements' *Engineering*, 1954. 1p.
10. Photocopy of obituaries for Campbell from *The Times* 08/ 02/1954 and *Belfast Telegraph* 09/02/1954. 1p.
11. Obituary for Albert Campbell in National Physical Laboratory staff magazine 1954, attached to a letter from P. M. Pinder to Alan Hidden dated 12/03/1987; also enclosed is an extract from National Physical Laboratory Report for the Year 1919, and an obituary from *Biographisch-literarisches Handwörterbuch der exakten Naturwissenschaften* (1967). 5 pp.

MS 36/4 Photographs

MS 36/4/1

Cream photograph album containing 17 pages of black and white images of the Campbell family. Photocopies.

MS 36/4/2

Selection of black and white photographs, all of which appear as photocopies in the album at MS 36/4/1:

1. group photo of five men including Albert Campbell.
2. portrait black and white photograph labelled "Uncle Albert. Photo: Mary Care." 3 copies.
3. portrait black and white photograph labelled "Albert Campbell 1862- By Kidd & Baker, Cambridge. Photo: Agnes Finnegan". 3 copies.
4. black and white photograph labelled "Albert Campbell. Culmora, 1940, Cambridge. Photo: Agnes Finnegan". 3 copies.
5. portrait black and white photograph labelled "Thomas Callender Campbell. Photo: Mary Care". 3 copies.
6. packet containing negatives for photographs in the album.

MS 36/5 Reaching for the Fruit

MS 36/5/1

Typescript draft of material eventually published as part one of:

Finnegan, Agnes *Reaching for the fruit: growing up in Ulster* Birmingham: Callender, 1991

92 pp. Photocopy.

MS 36/5/2

Typescript draft of material eventually published as parts two and three of:

Finnegan, Agnes *Reaching for the fruit: growing up in Ulster* Birmingham: Callender, 1991

105 pp. Photocopy.

1. 'Publications by Albert Campbell'. Incomplete bibliography of publications by Albert Campbell. 4pp. Typescript on lined paper. 4 pp.
2. Campbell, A. 'On a method of comparing mutual inductance and resistance by the help of two-phase alternating currents.' *Proceedings of the Royal Society of London*. A 81, 1908, pp. 450–452.
3. Campbell, A. 'On the determination of the absolute unit of resistance by alternating current methods.' *Proceedings of the Royal Society of London A* 87, 1912, pp. 391–414. Fragment of the article. 2 pp. only.
4. Campbell, A. 'Capacity, electrical, and its measurement.' in Glazebrook, R. (1922) *A Dictionary of Applied Physics: Vol II, electricity*. London: Macmillan, pp.103-144.
5. Campbell, A. 'Inductance, the measurement of' in Glazebrook, R. (1922) *A Dictionary of Applied Physics: Vol II, electricity*. London: Macmillan, pp. 392-447.
6. Campbell, A. 'Vibration galvanometers' in Glazebrook, R. (1922) *A Dictionary of Applied Physics: Vol II, electricity*. London: Macmillan, pp. 960-981.
7. Campbell A. 'On the determination of resistance in terms of mutual inductance'. *Proceedings of the Royal Society London A* 107, 1925, pp. 310–312.
8. 'Obituary: Sir Richard Glazebrook, K.C.B., K.C.V.O., F.R.S.' *Nature* vol. 137, 1936, pp.138–140.
9. Campbell, A. 'Alexander Russell. 1861-1943.' *Obituary Notices of Fellows of the Royal Society*, vol. 4, no. 12, 1943. pp. 427–28.
10. 'Fifty years of scientific instrument manufacture.' *Engineering*, vol. 159, 1945, pp.361-311.
11. Lynch, A.C. 'History of the electrical units and early standards' *IEE Proceedings*, Vol. 132 Pt. A, No. 8, 1985, pp. 564-572.
12. Fragment of unidentified article titled 'Inductance and capacity'. 2 pp.

