



Clement Osborne Bartrum

1867 - 1939

Photograph 1938

CLEMENT OSBORN BARTRUM

1867 Oct. 6 Clement Osborn Bartrum born at 21 Elaremont, Bradford, Yorkshire, to Arthur Clement Bartrum and Mary Bacon Bartrum (née Osborn).

1876 Oct. 19 The family moved to Hampstead, London.

Years? Went to Mercer's School, London, as a scholar.

1883 or 4 At the age of 16 or 17 was apprenticed to Armitage (?), a worsted manufacturer.

He devoted his evenings to the study of Science at Birkbeck College, London.

1884 Passed University of London Matriculation - First Division.

1887-1895 Sat and passed many examinations. (see separate list).

1890 April Took examination in Watch and Clock making under City & Guilds of London Institute. Won first prize of £2 (Goldsmiths' Company's Prize) and Silver Medal.

1891 Obtained B Sc. First Division, University of London, with Honours in Experimental Physics.

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Years? He went into partnership with his father (A. C. Bartrum & Son), being London agents for the firm of Wainhouse, Worsted Manufacturers.

1896 June 9 On the death of his father, he continued the business without change of name. Office at 10 Lower James Street, Golden Square, London, W.

1898 Elected a fellow of the Physical Society of London.

1899 Cofounder of the Hampstead Scientific Society.

Years? Went into Partnership with Arthur N. Woodruff, Worsted Manufacturer, of Halifax, Yorkshire. (A. N. Woodruff & Co.) borrowing £500 from his

uncle Sam Osborn for the purpose. He was London agent with office at 10 Lower James Street. Later moved to 5 Golden Square, W.

- c.1903 Became Honorary Secretary of the Hampstead Scientific Society.
- 1906 Sept. 1 Married Kate Isabel Shattock at the Hampstead Parish Church. They went to live at 12 Heath Mansions, Hampstead, N. W. 3.
- 1907 - 9 Took a leading part in ~~the~~ establishing the Astronomical and Meteorological Observatory, for the Hampstead Scientific Society, near the White Stone Pond.
- 1907 Dec. 4 Peter Clement Bartrum born.
- 1909 March 12 Elizabeth Mary Bartrum born.
- 1910 Nov. 10 Helen Bartrum born.
- 1911 Feb. 11 The family moved to 32 Willoughby Road, Hampstead, N.W.3.
- 1912 Joined the British Astronomical Association.
- 1913 Patented a Free Pendulum Clock, with 'Master' and 'Slave' pendulums. Patent No. 12432/13 dated 28 May 1913 accepted by the Patent Office 28 August 1914. - "Improved method of synchronising Clocks". This clock was described in a paper read before the Physical Society of London in 1916 under the title "A Clock of Precision". See the Proceedings of the Society Vol. 29 part 2, 15 Feb. 1917. The clock was superseded in 1921-4 by the Shortt Free Pendulum Clock. After his death Bartrum's clock, the only model made, was given by his widow to the Science Museum, South Kensington, where it is on exhibit as No. 330 in the Time Measurement Section (1950).
- 1920 Feb. 13 Elected a Fellow of the Royal Astronomical Society.
- 1929 Relinquished the Hon. Secretaryship of the Hampstead Scientific Society, and became Hon. Treasurer, which post he retained till his death.

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his death.
- c.1934 Retired from business and sold his interest in
the firm of A. N. Woodruff & Co. Ltd.
- c.1934 Invented a Barometric Compensator for Clock
Pendulums. See description in the Journal of the
British Astronomical Association, Vol.44, No. 6,
1934.

1939 Apr. 28 Died at Hampstead of Angina Pectoris.

CLEMENT OSBORN BARTRUM

Examinations

1882		University of Cambridge Junior Local - 2nd Class Honours.
1884		University of London Matriculation - First Division.
1887		<u>City of London College.</u> Theoretical Inorganic Chemistry, Elementary Stage - Proficiency. Inorganic Chemistry, Elementary, Practical- First Class, with the Saddler's Guild Prize of Five Guineas. Botany - First Class. <u>Department of Science and Art.</u>
1887	May 21-28	Inorganic Chemistry, Practical, Elementary Stage - 2nd Class.
	May 19	Inorganic Chemistry - Elementary Stage - First Class.
	May 25	Botany - Elementary Stage - 1st Class.
1889	May 29	Botany, Advanced Stage - 2nd Class.
	May 22	General Biology, Elementary Stage - 1st Class
		<u>University of London.</u>
1889		B.Sc. Intermediate - 1st Division.
		<u>City & Guilds of London Institute for the Advancement of Technical Education</u>
1890	April	Watch and Clockmaking - First Class in the ordinary grade and First Prize of £2 (Goldsmiths' Company's Prize) and Silver Medal.
		<u>Department of Science and Art.</u>
1890	May 7	Theoretical Mechanics, Advanced Stage - 1st Class
	May 8	Applied Maths. Elementary " 1st "
	May 9	Animal Physiology, Advanced " 2nd "
	May 12	Physiography " " 2nd "
	May 14	Mathematics Third " 2nd "
	May 15	Magnetism & Electricity, Advanced " 1st "
	May 16	Sound, Light & Heat " " 1st "
	May 17	Practical Geometry, Elementary " 1st "
	May 21	General Biology, Advanced " 2nd "
	May 22	Inorganic Chemistry, Theoretical, Advanced " 2nd "
	June 6	Steam " " 2nd "
	May 13	Principles of Agriculture, " " 1st "

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Examinations (continued)

University of London

1891

B. Sc. Finals First Division. Honours in
Experimental Physics & placed in 3rd class.

Department of Science and Art

1891	May	5	Mathematics, 6th ^A Stage - 2nd Class
1895	May	22	Light - First Class Honours with medal.
	May	24	Heat - First Class Honours with medal.

Publications, Papers, etc.

BRITISH ASTRONOMICAL ASSOCIATION JOURNAL

PHYSICAL SOCIETY OF LONDON, PROCEEDINGS

HUTCHINSON'S "SPLENDOUR OF THE HEAVENS", A popular authoritative astronomy, edited by T.E.R. Phillips, Secretary of the Royal Astronomical Society.
Chapter XIX - Time: Its Determination, Measurement and Distribution by C. O. Bartrum.

1932 International Trade

PAPERS READ BY C.O.BARTRUM

~~1900. BICYCLES~~

1901. FORM OF THE EARTH ✓

1904. ARTIFICIAL STAR FIELDS (B.A.A.) ?

1906. VARIATION AND HEREDITY (H.S.S.) ✓

1910. SATURN'S RINGS ✓

~~1915. GUNS~~

1923. FACTORS DETERMINING BEHAVIOUR (GWYNANT) ✓

1926. IS THERE ANTAGONISM BETWEEN PHILOSOPHY & SCIENCE ? (GWYNANT) ✓

1927. NEWTON (H.S.S.) ✓

1931. BEAUTY IN THE EYE OF THE BEHOLDER (GWYNANT) ✓

1932. INTERNATIONAL TRADE (Letter to TIMES) ✓

1932. ANDEAN ERUPTION & DRIFT OF VOLCANIC DUST (B.A.A.JOURNAL) ✓

1932. STELLAR ASTRONOMY (MARIA GREY SCHOOL)

1929. CAN CHRISTIAN ETHICS BE APPLIED ? (GWYNANT) ✓

1938. WHAT IS SCIENTIFIC TRUTH ? (GRECIAN CLUB) ✓

1938. DEGREES OF FREEDOM (GWYNANT) ✓

THOUGHT AS A PHYSICAL AGENT

1901 OPTICAL ILLUSION (LETTER TO 'NATURE')

CLEMENT OSBORNE BARTRUM

Curriculum Vitae

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May 14	Mathematics	Third Stage - 2nd Class
May 15	Magnetism & Electricity,	Advanced Stage - 1st Class
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May 17	Practical Geometry,	Elementary Stage - 1st Class
May 21	General Biology,	Advanced Stage - 2nd Class
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June 6	Steam	Advanced Stage - 2nd Class
May 13	Principles of Agriculture,	Advanced Stage - 1st Class

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May 24 Heat - First Class Honours with medal.

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Publications, Papers, etc.

NATURE		1901	Letter: Optical Illusion
NATURE	Vol. 107,	10 March 1921	Letter: Relativity and the Velocity of Light
		31 March 1921	Letter: Ditto.
	108	1 Dec. 1921	Letter: Reflection from cylindrical surfaces.
	115	3 Jan. 1925	Letter: Double Rainbows.
	127	10 Jan. 1931	Letter: Embryology and Evolution.

BRITISH ASTRONOMICAL ASSOCIATION JOURNAL

Vol. 24 No. 5	(1914)	Star Chains in the Milky Way.
24	7 (1914)	Appearance of Saturn at Opposition
26	1 (1915)	Inertia Escapement of the Synchronome Astronomical Regulator.
30	6 (1920)	Lunar Eclipse, 1920 May 2.
43	1 (1932)	Aurorea
44	6 (1934)	A Barometric Compensation for Clock Platforms.
43	1 (1932)	The Andean Eruption and Drift of Volcanic Dust.

Also many reviews of books.

PHYSICAL SOCIETY OF LONDON, PROCEEDINGS

Vol 29 part 2, 13 Feb. 1917 A Clock of Precision.

HUTCHINSON'S "SPLENDOR OF THE HEAVENS", A popular authoritative astronomy, edited by T.E.R.Phillips, Secretary of the Royal Astronomical Society.

Chapter XIX - Time: Its Determination, Measurement and Distribution by C. O. Bartrum.

Letters to THE TIMES.

1929 Nov. 20	A Moonlight Mystery.
1932	International Trade.

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