

Clement Osborne Bartrum 1867 - 1939 Photograph 1938

1890 April

1891

1892

760/2

Year !

1:67 Oct. 6 Clement Osborn Bartrum born at 21 Elaremont, Bredford, Yorkshire, to Arthur Clement Bartrum and Mary Bacon Bartrum (Mée Osborn).

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

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

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 Set and passed many examinations. (see separate list).

Took examination in Watch and Clock making under City & Guilds of London Institute. Won first prize of 22 (Goldsmiths' Company's Prize) and Silver Medal.

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

Patented the Bartrum Open Scale Barometer.
Letters Patent No. 12092 dated 29 June 1892,
"An improvement in Barometers". The barometer
was manufactured for the market by James J. Hicks
of 8 - 10 Hatton Garden, London, E.C. It is
mentioned in the article on Barometers in the
Encyclopaedia Britannica (774 Ed. 1447). His
own instrument, which was provided with an
ornamental case by his friend Lawrence Acton,
was given after his death to the Science Museum,
South Kensington, by his widow.

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

1996 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.

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

unwle 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 19 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 52 Willoughby Road, Hampstead, N.W.S.

1912 Joined the British Astronomical Association.

Patented a Free Pendulum Clock, with 'Master' and 'Slave' pendulums. Patent No. 12452/15 dated 28 May 1915 accepte 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 Schence Museum, South Kensington, where it is on exhibiting No. 530 in the Time Measurement Section (1950).

1920 Feb. 13 Riected a Fellow of the Rogal Astronomical Society.

1929 Relinquished the Hon. Secretaryship of the Hampstead Scientific Society, and became Hon.. Treasurer, which post he retained till his death.

- 1930 Became Honorary Secretary of the British
 Astronomical Association, which post he held till
 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. 23 Died at Hampstead of Angina Pectoris.

Examinations

1882			University of Cambridge Junior Local	1 -		
			2nd Class Honours.			
1384			University of London Matriculation - Division.	- Fire	t	
1887			City of London College.	100		
da (7 1 7 1			Theoretical Inorganic Chemistry.	27 emor	TONY	
			Stage - Proficiency.	al CalGa	rour's	
			Inorganic Chemistry, Elementary, I	Practi	cal-	
			First Class, with the Saddler	n'a Gr	118	
			Prize of Pive Ouineas.			
			Botany - Pirst Class.			
			Department of Science and Art.			
1887	May .	11+28	Inorganic Chemistry, Practical, El Stage - End Class.	lement	ary	
	May :	1.9	Inorganic Chemistry - Elementary 8	Stere	_	
	47		First Class.	0 0000		
	May	25	Botany - Elementary Stage - 1st C	lass.		
1920	May .		Batana Advanced Oters Ond Office			
7009	lay		Botany, Advanced Stage - 2nd Class		03	
	a ez y	66	General Biology, Elementary Stage	- 181	CIES	8
			University of London.			
1889			B.Sc. Intermediate - Lat Division.			
			City & Guilds of London Institute fo	or the		
distanta in			Advancement of Technical Educa	tion		
1890	Apri:	1	Watch and Clockmaking - First Clas	se in	the	
			ordinary grade and First Pris	ze of	£2	
			(Golsmiths' Company's Prize)	and		
			Silver Medal.			
			Department of Science and Art.			
1890	May		Theoretical Mechanics, Advanced St	tage -	1st	
	May		Applied Matha. Elementary	10	lst	11
	May !		Animal Physiology, Advanced	17	2nd	49
	"ey	12	Animal Physiology, Advanced Physiography	18	2nd	2) 2)
	Way	12				
	"ey	12	Physiography " Mathematics Third	H	2nd	21
	Way	12 14 15	Physiography "	17	2nd 2nd	38
	Way May	12 14 16	Physiography Mathematics Third Magnetism & Electricity, Advanced Sound, Light & Heat Practical Coometry, Elementary	17 17	and and lat	12 12
	May May May	12 14 15 16	Physiography Mathematics Third Magnetism & Electricity, Advanced Sound, Light & Heat Practical Coometry, Elementary	17 17 18	and and let let	98 98 98
	Way Way May May	12 14 15 16 17	Physiography Mathematics Third Magnetism & Electricity, Advanced Sound, Light & Heat Practical Coometry, Elementary General Biology, Advanced	12 12 12 12 17	and let let let	12 12 14 15
	May May May May	12 14 15 16 17	Physiography Mathematics Third Magnetism & Electricity, Advanced Sound, Light & Heat Practical Coometry, Elementary	12 12 12 12 17	and let let let	12 12 14 15
	May May May May	12 14 15 16 17 81	Physiography Mathematics Third Magnetism & Electricity, Advanced Sound, Light & Heat Practical Geometry, Elementary General Biology, Advanced Inorganic Chemistry, Theoretical,	18 18 18 27 27 27	and let let let	24 24 25 24 25

Examinations (continued)

University of London

1891

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

Department of Science and Art

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

Publications, Papers, etc.

NATURE	Vol.	107,	10	nar ch	1901	Letter:	Optical Illusion Relativity and the Velocity of Light.
		41	31	Warch	1981	Letter	
		108	1	Dec.	1921	Letter:	Reflection from cylindrical surfaces.
		23.5	苏	Jan.	1905	Letter:	Double Rainbows.
		197	10	Jan.	1931	Letter	Proryology and

BRITISH ASTRONOMICAL ASSOCIATION JOURNAL

YTCA.	CA NO"	5	(TATE)	degr. Correct ru cut with well
	24	7	(1914)	Argentance of Saturn at Opposition
	26	1	(1918)	Inertic Escapement of the Synchronous Astronomical Regulator.
	30	23	(1.980)	Luner Belipse, 1920 May 2.
	4.3	1	(1958)	Aurorec
	44	ö	(1934)	A Barometric Compensation for Clock Pandalums.
	4.72	7	(2020)	Mha Andrea Prometten and Duick of Walance

43 1 (1932) The Andean Eruption and Drift of Volcanic Also many reviews of books. Dust.

PHYSICAL SOCIETY OF LONDON, PROCEEDINGS

Vol. 29 part 2, 15 Feb. 1917 A Clock of Precision.

HUTCHINSON'S "SPLENDOUR OF THE HEAVENS", A popular authoritative astronomy, edited by T.E.R.Phillips, Secretary of the Poyal 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

PAPERS READ BY C.O. BARTRUM

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-I900 BICYCLES
1901. FORM OF THE EARTH
1904. ARTIFICIAL STAR FIELDS ( 3.A.A.)
1906. VARIATION AND HEREDITY ( H.S.S. )
1910. SATURN'S RINGS V
ISIS GUNS
1923. FACTORSEDETERMINING BEHAVIOUR ( GWYNAMT )
1926. IS THERE ANTAGONISM BETWEEN PHILOSOPHY & SCIENCE ? (GWENANT.
1927. NETTON ( H.S.S. )
1931. BEAUTY IN THE EYE OF THE BEHOLDER ( GWYNANT )
1932. INTERNATIONAL TRADE (Letter to TIMES ) J
1932. ANDEAN ERUPTION & DRIFT OF VOLUMNIC DUST ( P.A.A. JOURNAL) √
1932. STELLAR ASTRONOMY ( MARIA GREY SCHOOL )
1929. CAN CHRISTIAN ETHICS BE APPLIED & ( GWYNANT )
1938. WHAT IS SCIENTIFIC TRUTH ? ( GRECIAN CLUB ) L
1938. DEGREES OF FREEDOM ( GHYNANT }
      THOUGHT AS A PHYS-ICAL AGENT
1901 OPTICAL ILLUSION (LETTER TO 'NATURE')
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Curriculum Vitae

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- 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 Patent Office 28 August 1914.— "Improved method of synchronising Clocks". This clock was described in a paper read 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.
- 1930 Became Honorary Secretary of the British Astronomical Association, which post he held until his death.
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Examinations

1882	University of Cambridge Junior Local - 2nd Class Honours.
1884	University of London Matriculation - First Division.
1887	City of London College
Saddler's Gu	Theoretical Inorganic Chemistry, Elementary Stage - Proficiency. Inorganic Chemistry, Elementary, Practical - First Class, with the ild Prize of Five Guineas. Botany - First Class.
	Department of Science and Art
1887 May 21- May 19 May 25	28 Inorganic Chemistry, Practical. Elementary Stage - 2nd Class. Inorganic Chemistry - Elementary Stage - First Class. Botany - Elementary Stage - 1st Class.
1889 May 29 May 22	Botany, Advanced Stage - 2nd Class. General Biology, Elementary Stage -1st Class.
	University of London
1889	B. Sc. Intermediate - 1st Division.
С	ity and Guilds of London Institute for the Advancement of Education
1890 April of £2 (Golds	Watch and Clockmaking - First Class in the ordinary grade and First Prize miths' Company's Prize) and Silver Medal.
	Department of Science and Art
1890 May 7 May 8 May 9 May 12 May 14 May 15 May 16 May 17 May 21 May 22 June 6 May 13	Theoretical Mechanics, Advanced Stage - 1st Class Applied Maths. Elementary Stage - 1st Class Animal Physiology Advanced Stage - 2nd Class Physiography Advanced Stage - 2nd Class Mathematics Third Stage - 2nd Class Magnetism & Electricity, Advanced Stage - 1st Class Sound, Light and Heat, Advanced Stage - 1st Class Practical Geometry, Elementary Stage - 1st Class General Biology, Advanced Stage - 2nd Class Inorganic Chemistry, Theoretical, Advanced Stage - 2nd Class Steam Advanced Stage - 2nd Class Principles of Agriculture, Advanced Stage - 1st Class
	University of London
1891 3rd class.	B. Sc. Finals First Division. Honours in Experimental Physics & placed in
	Department of Science and Art
1891 May 5 1895 May 22 May 24	Light - First Class Honours with medal.

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		Letter: Double Rainbows.
	127	10 Jan. 1931	Letter: Embryology and Evolution.

BRITISH ASTRONOMICAL ASSOCIATION JOURNAL

Vol. 24 No. 5	(1914) St	ar Chains in the Milky Way.
24	7 (191	.4) Appearance of Saturn at Opposition
26	1 (193	.5) Inertia Escapement of the Synchronome Astronomical
Regulator.		
30	6 (192	20) Lunar Eclipse, 1920 May 2.
43	1 (193	32) Aurorea
44	6 (193	34) A Barometric Compensation for Clock Platforms.
43	1 (193	32) The Andean Eruption and Drift of Volcanic Dust.
Also	many review	s of books.

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- 1901. FORM OF THE EARTH
- 1904. ARTIFICIAL START FIELDS (B.A.A.)
- 1906. VARIATION AND HEREDITY (H.S.S.)
- 1910. SATURN'S RINGS
- 1923. FACTORS DETERMINING BEHAVIOUR (GWYNANT)
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- 1932. ANDEAN ERUPTION & DRIFT OF VOLCANIC DUST (B.A.A. JOURNAL)
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- 1929. CAN CHRISTIAN ETHICS BE APPLIED? (GWYNANT)
- 1938. WHAT IS SCIENTIFIC TRUTH? (GRECIAN CLUB)
- 1938. DEGREES OF FREEDOM (GWYNANT)
- 1901. OPTICAL ILLUSION (LETTER to 'NATURE')