

RATES OF CHRONOMETERS

ON TRIAL

FOR PURCHASE BY THE BOARD OF ADMIRALTY,

AT THE

ROYAL OBSERVATORY, GREENWICH.

1864.

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NAME OF MAKER.	No.	ADDRESS or MAKER.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(III).—ABSTRACT OF THE				PRINCIPAL CHANGES OF RATE.						NAME OF MAKER.	No.
				First Day of First Week of Rating.	Last Day of Last Week of Rating.	Number of Weeks.	Least Weekly Sum.	In what Week.	Greatest Weekly Sum.	In what Week.	Difference between the Greatest and Least.	Greatest Difference between the Greatest and Least.	Before and after what day.		
Kulberg	760	8, 15, Clondyle Terrace, Edlington, London.	Kulberg's flat rim balance without auxiliary.	January 9	July 23	28	-5.6	January 30 to Feb. 6*	+7.6	May 28 to June 4†	11.2	3.7	† June 25	Kulberg	760
McGregor and Co.	3335	32, Clyde Place, Glasgow.	Poole's auxiliary.	January 9	July 23	28	-2.2	March 10 to Feb. 26†	+8.2	January 9 to 16†	10.4	3.9	† June 25	McGregor and Co.	3335
Millican and Son	307	28, Friern Street, Edinburgh.	Auxiliary compensation.	January 9	July 23	28	-18.6	March 10 to Feb. 26†	+7.3	January 23 to 30*	11.0	3.6	March 19†	Millican and Son	307
C. M. Prodhann, jun.	3347	84, Strand, London.	New auxiliary acting at all temperatures.	January 9	July 23	28	-4.0	January 9 to 16†	+5.4	July 2 to 9	9.4	6.9	April 30	C. M. Prodhann, jun.	3347
Hemsey	3265	5, Wind Street, Swansea.	Poole's auxiliary.	January 9	July 23	28	-0.8	Feb. 27 to March 5*	+12.6	July 2 to 9	13.4	3.0	† June 25	Hemsey	3265
Calms	786	13, Waterloo Road, Liverpool.	Poole's auxiliary.	January 9	July 23	28	+6.7	April 2 to 9†	+15.4	July 16 to 23	9.7	7.6	† June 25	Calms	786
Mathison and Son	3677	90, Buchanan Street, Glasgow.	Poole's auxiliary.	January 9	July 23	28	-3.6	March 10 to Feb. 26†	+12.4	July 16 to 23	16.0	4.4	† June 25	Mathison and Son	3677
Webb	5443	4, Pallion's Row, Edlington, London.	Auxiliary as in former years.	January 9	July 23	28	-2.5	April 2 to 9†	+9.4	June 11 to 18†	12.9	7.3	May 28†	Webb	5443
Lister and Sons	398	28, Newcastle-upon-Tyne.	Poole's auxiliary.	January 9	July 23	28	-1.3	March 10 to Feb. 26†	+13.4	May 7 to 14	6.6	1.6	May 14	Lister and Sons	398
McGregor and Co.	2846	36, Clyde Place, Glasgow.	Auxiliary compensation.	January 9	July 23	28	-8.7	March 10 to Feb. 26†	+13.4	May 7 to 14	17.5	5.6	February 27*	McGregor and Co.	2846
P. Birchall	841	63, Great Percy Street, London.	Ordinary balance, with slight alteration.	January 9	July 23	28	+1.0	March 10 to Feb. 26†	+14.5	June 18 to 25†	13.5	8.4	† June 25	P. Birchall	841
Held and Sons	1343	41, Grey Street, Newcastle-upon-Tyne.	Auxiliary to balance.	January 9	July 23	28	-1.1	January 30 to Feb. 6*	+10.7	July 16 to 23	19.8	7.3	May 28†	Held and Sons	1343
Hemsey	3264	5, Wind Street, Swansea.	Poole's auxiliary.	January 9	July 23	28	-9.5	June 18 to 25†	+3.9	February 6 to 13*	14.9	10.3	† June 25	Hemsey	3264
Lister and Sons	398	28, Newcastle-upon-Tyne.	Auxiliary compensation.	January 9	July 23	28	-1.3	January 30 to Feb. 6*	+15.7	June 18 to 25†	14.9	10.3	† June 25	Lister and Sons	398
Glover	330	4, Swinton Street, Gray's Inn Road, London.	Auxiliary compensation acting in cold.	January 9	July 23	28	-15.1	January 9 to 16†	+34.6	July 16 to 23	19.5	7.7	March 19†	Glover	330
Poole	3337	67, Fenchurch Street, London.	Poole's auxiliary.	January 9	July 23	28	+1.1	January 23 to April 2†	+15.8	April 23 to 30	14.7	10.1	† June 25	Poole	3337
Dent	3009	61, Strand, London.	Dent's patent balance.	January 9	July 23	28	-25.8	March 26 to April 2†	-8.1	April 23 to 30	17.7	9.1	† April 16	Dent	3009
Dent	3153	33, Cockspur Street, London.	Auxiliary compensation.	January 9	July 23	28	-14.7	March 26 to April 2†	+1.0	March 26 to April 2†	15.7	11.2	† June 4†	Dent	3153
Reid and Sons	1228	41, Grey Street, Newcastle-upon-Tyne.	Auxiliary to balance.	January 9	July 23	28	-6.6	March 12 to 19	+13.8	June 11 to 18†	20.4	9.0	† February 20*	Reid and Sons	1228
Dobble	3715	24, Clyde Place, Glasgow.	Poole's auxiliary.	January 9	July 23	28	-0.5	February 20 to 27†	+26.7	July 16 to 23	27.2	4.4	† February 20*	Dobble	3715
Calms	789	13, Waterloo Road, Liverpool.	Poole's auxiliary.	January 9	July 23	28	+1.0	January 23 to 30*	+29.8	July 16 to 23	28.8	6.9	May 28†	Calms	789
Pickford	5990	49, Liverpool.	Auxiliary compensation.	January 9	July 23	28	-18.9	March 19 to 26†	+6.5	July 16 to 23	24.4	8.2	March 19†	Pickford	5990
Forbes and French.	723	16, Northampton St., Gower Rd., London.	Ordinary balance, with slight alteration.	January 9	July 23	28	-13.2	June 18 to 25†	+7.0	February 30 to 27†	20.2	11.1	† June 4†	Forbes and French.	723
T. Campbell	946	7, South Castle Street, Liverpool.	Ordinary balance, with slight alteration.	January 9	July 23	28	+8.9	March 19 to 26†	+30.1	June 11 to 18†	31.2	11.1	† April 2†	T. Campbell	946
J. B. Fletcher	2972	145, Lendalhill Street, London.	Auxiliary compensation.	January 9	July 23	28	-3.7	February 20 to 27†	+23.3	June 11 to 18†	27.0	8.3	July 9	J. B. Fletcher	2972
W. P. Birchall	11	63, Great Percy Street, London.	Ordinary balance, with slight alteration.	January 9	July 23	28	-30.1	March 19 to 26†	-6.7	June 25 to July 2	23.4	10.4	† March 26†	W. P. Birchall	11
Clark and Son	3398	Greenock.	Poole's auxiliary.	January 9	July 23	28	-0.1	Feb. 27 to March 5*	+14.7	July 9 to 16; July 16 to 23	18.8	12.2	† March 5	Clark and Son	3398
Riff	362	2, Orange Street, Red Lion Square, London.	Auxiliary compensation to pendulum spring.	January 9	July 23	28	-43.1	January 23 to April 2†	+5.0	June 25 to July 2	18.6	16.4	† June 25	Riff	362
Parkinson and Bosts	1127	19, Greenchurch Street, London.	[No information received.]	January 9	July 23	28	-13.0	February 20 to 27†	+29.6	February 20 to 27†	19.6	15.7	† February 27	Parkinson and Bosts	1127
Blackie	655	24, Annell Street, Clerkenwell, London.	[No information received.]	January 9	July 23	28	+10.0	March 26 to April 2†	+2.4	March 26 to April 2†	18.3	16.4	† April 16	Blackie	655
C. Prodhann	3153	84, Strand, London.	Auxiliary for mean and extremes of cold.	January 9	July 23	28	-15.9	February 20 to 27†	+13.2	March 26 to April 2†	10.3	10.3	† April 16	C. Prodhann	3153
F. Fletcher	2913	145, Leadhill Street, London.	Auxiliary compensation.	January 9	July 23	28	-14.0	Feb. 20 to 27†	+13.2	March 26 to April 2†	15.7	15.7	† April 16	F. Fletcher	2913
J. Campbell	945	7, South Castle Street, Liverpool.	Ordinary balance, with slight alteration.	January 9	July 23	28	-7.0	Feb. 20 to 27†	+43.3	July 16 to 23	37.6	8.0	† April 16	J. Campbell	945
Carter	708	61, Cornhill, London.	Ordinary construction.	January 9	July 23	28	+4.7	Feb. 27 to March 5*	+43.3	July 16 to 23	35.3	9.9	† April 2†	Carter	708
Parkinson and Prodhann	3474	4, Change Alley, Cornhill, London.	Auxiliary to ordinary balance.	January 9	July 23	28	-11.6	February 20 to 27†	+1.0	May 28 to June 4†	26.3	12.8	† April 2†	Parkinson and Prodhann	3474
Gowland	2693	2, Sunderland.	Auxiliary compensation.	January 9	July 23	28	-26.5	March 19 to 26†	-0.7	June 18 to 25†	35.8	14.9	† June 25	Gowland	2693
Parkinson and Bosts	1094	19, Greenchurch Street, London.	Ordinary balance, with slight alteration.	January 9	July 23	28	-6.0	May 14 to 21	+27.1	May 14 to 21	34.0	17.3	† June 4†	Parkinson and Bosts	1094
Parkinson and Prodhann	3701	4, Change Alley, Cornhill, London.	Auxiliary to ordinary balance.	January 9	July 23	28	+6.0	May 14 to 21	+27.1	May 14 to 21	34.0	17.3	† June 4†	Parkinson and Prodhann	3701
Jørgensen	657	2, Copenhagen.	[No information received.]	January 9	July 23	28	-8.1	May 14 to 21	+43.1	May 14 to 21	34.0	17.3	† June 4†	Jørgensen	657
J. Fletcher	2818	145, Leadhill Street, London.	New component for diminishing friction; ord. bal.	January 9	July 23	28	-2.5	February 20 to 27†	+1.0	May 28 to June 4†	26.3	12.8	† April 2†	J. Fletcher	2818
Seill	2001	208, London.	Auxiliary compensation.	January 9	July 23	28	-25.0	February 20 to 27†	+11.6	July 16 to 23	35.3	14.9	† June 25	Seill	2001
Webb	5443	61, South Castle Street, Liverpool.	Auxiliary acting in extremes of temperature.	January 9	July 23	28	-21.6	June 4 to 11†	+34.5	June 25 to July 2	29.1	15.9	† June 25	Webb	5443
Dent	3009	4, Pallion's Row, Edlington, London.	Auxiliary as in former years.	January 9	July 23	28	-4.3	February 20 to 27†	+20.8	June 25 to July 2	42.1	17.6	† June 25	Dent	3009
Poole	331	67, Fenchurch Street, London.	Auxiliary compensation.	January 9	July 23	28	-3.6	March 26 to April 2†	+13.9	June 11 to 18†	41.5	17.9	† June 25	Poole	331
Poole	3337	4, Swinton Street, Gray's Inn Road, London.	Auxiliary compensation acting in cold.	January 9	July 23	28	+0.4	January 9 to 16†	+50.5	July 16 to 23	50.1	18.4	† June 25	Poole	3337
Poole	3343	67, Fenchurch Street, London.	Poole's auxiliary.	January 9	July 23	28	-5.0	June 11 to 18†	+23.4	July 2 to 9	29.2	25.8	† June 25	Poole	3343
J. Fletcher	2913	145, Leadhill Street, London.	Molyneux's auxiliary.	January 9	July 23	28	-4.7	June 11 to 18†	+34.5	July 2 to 9	39.4	25.8	† June 25	J. Fletcher	2913
Rodwell	9275	21 and 23, Church Street, Liverpool.	Auxiliary compensation.	January 9	July 23	28	-2.6	June 11 to 18†	+14.6	June 4 to 11†	54.7	28.8	† June 25	Rodwell	9275
Carter	692	61, Cornhill, London.	Auxiliary compensation.	January 9	July 23	28	-20.0	June 4 to 11†	+14.4	June 4 to 11†	54.7	28.8	† June 25	Carter	692
Crisp	380	81 St. John's Street Road, London.	Auxiliary acting in high temperatures.	January 9	July 23	28	-21.4	June 4 to 11†	+14.4	June 4 to 11†	54.7	28.8	† June 25	Crisp	380
Birch	512	175, Fenchurch Street, London.	Double auxiliary.	January 9	July 23	28	-8.5	January 30 to Feb. 6*	+78.6	July 16 to 23	87.1	38.4	† March 19†	Birch	512
Hutton	354	10, Mark Lane, London.	Auxiliary to spring, for extreme heat only.	January 9	July 23	28	-2.6	January 30 to Feb. 6*	+66.7	May 14 to 21	54.9	17.3	† April 16	Hutton	354
Highfield	3299	5, King Edward Ter., Liverpool Rd., London.	Ordinary balance.	January 9	July 23	28	+2.6	January 16 to 23†	+82.6	June 25 to July 2	36.9	17.9	† June 25	Highfield	3299
Jørgensen	657	2, Copenhagen.	New component for diminishing friction; ord. bal.	January 9	July 23	28	-83.6	March 12 to 19	+30.5	February 20 to 27†	66.1	60.5	† February 27*	Jørgensen	657
Birch	1350	175, Fenchurch Street, London.	Ordinary construction.	January 9	July 23	28	-84.4	June 4 to 11†	+71.9	March 12 to 19	144.3	96.4	† June 4†	Birch	1350
Marshall	2000	5, King Square, London.	Mercurial auxiliary to balance.	January 9	June 18	23	-1.2	February 20 to 27†	+22.2	May 28 to June 4†	30.4	7.1	† March 26†	Marshall	2000
Dent	3008	33, Cockspur Street, London.	Auxiliary compensation.	January 9	April 30	16	-11.0	February 20 to Feb. 6*	+7.0	February 20 to 27†	18.6	7.4	† February 6†	Dent	3008

* During these weeks the North windows of the Chronometer Room were left open.

† During these weeks the chronometers were placed in the chamber of a stove heated by jets of gas. The gas flames are exterior to the chamber, into which none of the injurious products of combustion can enter.

The order of arrangement of the Chronometers in this Table is determined solely by consideration of their irregularities of rate.

The Chronometer Marshall 2000 was found stopped on June 25, and was returned to the maker on July 11. Dent 32084 became damaged after May 4, and was returned to the maker on May 23. On account of the shorter duration of trial, the rates of these Chronometers are not comparable with those of the other Chronometers, and they are in consequence placed in a separate division at the end of the general Table.