

RATES OF CHRONOMETERS
ON TRIAL
FOR PURCHASE BY THE BOARD OF ADMIRALTY,
AT THE
ROYAL OBSERVATORY, GREENWICH.

1861.

IN THE ORDER OF TIME.																	NAME OF MAKER.		No.
May 30 Apr. 6	Apr. 6 Apr. 13	Apr. 13 Apr. 20	Apr. 20 Apr. 27	Apr. 27 May 4	May 4 May 11	May 11 May 18	May 18 May 25	May 25 June 1	June 1 June 8	June 8 June 15	June 15 June 22	June 22 June 29	June 29 July 6	July 6 July 13	July 13 July 20	July 20 July 27	July 27 Aug. 3		
- 1.3	+ 1.8	+ 4.4	+ 1.6	+ 2.9	+ 1.9	+ 5.4	+ 1.3	+ 6.7	+ 8.1	+ 7.8	+ 8.9	+ 10.7	+ 10.9	+ 7.8	+ 9.9	+ 8.1	+ 6.9	McGregor and Co.	2776
- 1.3	- 0.8	- 2.3	- 0.7	- 1.8	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	- 2.1	Webb, Green & Co.	2778
- 3.8	- 3.4	- 3.9	- 0.7	+ 1.8	+ 2.7	- 0.4	+ 0.3	+ 2.6	+ 2.1	- 2.9	- 0.5	- 2.4	+ 0.5	+ 6.2	+ 6.2	+ 4.7	+ 7.6	Webb, Green & Co.	5491
- 2.3	- 3.5	- 0.9	+ 0.1	+ 2.6	+ 3.3	- 0.7	- 0.3	- 0.7	- 0.7	- 0.9	- 10.5	- 11.3	- 6.0	+ 0.5	+ 1.9	- 0.5	- 0.8	Morere	5495
+ 0.8	+ 0.2	+ 0.8	+ 0.8	+ 1.0	+ 1.6	+ 1.9	+ 0.6	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	W. B. Pierce, Ill., Jan.	5500
+ 1.9	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	+ 1.0	W. B. Pierce, Ill., Jan.	5503
+ 1.0	+ 0.2	+ 1.9	+ 1.6	+ 3.2	+ 3.3	+ 3.0	+ 3.4	+ 3.6	+ 3.6	+ 3.4	+ 2.9	+ 6.8	+ 8.2	+ 8.2	+ 11.8	+ 13.7	+ 13.5	W. B. Pierce, Ill., Jan.	5504
- 0.2	- 0.3	- 2.6	- 1.1	- 2.4	- 1.3	- 2.3	- 0.9	- 1.9	- 1.5	- 4.0	+ 6.8	+ 6.8	- 7.7	- 0.9	- 0.9	- 3.1	- 3.1	Goshaw	3197
+ 0.7	+ 0.6	+ 0.9	+ 8.5	+ 9.5	+ 10.5	+ 5.3	+ 4.8	+ 5.4	+ 2.9	+ 1.4	+ 2.3	+ 10.5	+ 11.1	+ 11.1	+ 11.1	+ 11.1	+ 11.1	Goodrich	3198
- 1.0	- 3.8	- 1.4	- 0.8	- 4.5	- 0.1	- 0.5	- 0.6	+ 0.6	+ 0.6	- 0.1	- 0.3	+ 2.6	+ 2.6	+ 2.6	+ 2.6	+ 2.6	+ 2.6	Clark and Son	3210
- 1.0	- 3.8	- 1.4	- 0.8	- 4.5	- 0.1	- 0.5	- 0.6	+ 0.6	+ 0.6	- 0.1	- 0.3	+ 2.6	+ 2.6	+ 2.6	+ 2.6	+ 2.6	+ 2.6	Poole	3214
+ 2.1	+ 1.7	+ 2.9	+ 4.5	+ 5.4	+ 3.3	- 0.0	+ 1.2	+ 0.8	+ 3.2	+ 2.2	- 0.7	+ 4.0	+ 7.2	+ 13.2	+ 13.8	+ 13.8	+ 13.8	Porteous	3219
+ 7.1	+ 8.5	+ 9.8	+ 8.8	+ 10.7	+ 13.7	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	W. J. Campbell	3224
+ 7.1	+ 8.5	+ 9.8	+ 8.8	+ 10.7	+ 13.7	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	+ 17.8	J. Wood	3228
+ 2.0	+ 2.6	+ 4.8	+ 3.1	+ 4.1	+ 6.5	+ 7.2	+ 8.0	+ 8.1	+ 8.8	- 1.1	- 8.8	- 2.7	+ 7.7	+ 9.3	+ 8.5	+ 7.0	+ 9.3	J. Campbell	3288
- 4.9	- 2.0	- 2.8	- 4.1	- 2.1	- 0.4	+ 5.5	+ 6.1	+ 5.5	+ 6.0	+ 7.0	+ 5.4	+ 8.6	+ 10.5	+ 13.3	+ 13.3	+ 13.3	+ 13.3	Stearns	1473
+ 2.5	+ 2.9	+ 3.4	+ 2.7	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	Stearns	1474
+ 2.5	+ 2.9	+ 3.4	+ 2.7	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	+ 1.6	Stearns	1475
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	Reid and Sons	1500
+ 1.3	+ 1.7	+ 4.7	+ 6.8	+ 1.9	+ 7.5	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.7	+ 1.3	+ 6.						

The order of arrangement of the Chronometers in these Tables is determined solely by consideration of their irregularities of rate, as expressed in the column "Difference between the Greatest and Least" and "Greatest Difference between one Week and the next," without reference to the duration of the trial. The chronometer Hennessy 3213 was found stopped on July 25; its rates are therefore wanting during the last two weeks of trial. The rates of three Chronometers which became deranged very soon after the commencement of the trial are entirely omitted.

Construction of Remount and Balance.			(11)—WEEKLY SUMS OF DAILY RATES IN THE ORDER OF TEMPERATURE.															
NAME of MAKER.	No.	Description furnished by the Maker.	Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.															
			Jan. 1-12	Feb. 1-10	Mar. 1-10	Apr. 1-10	May 1-10	June 1-10	July 1-10	Aug. 1-10	Sept. 1-10	Oct. 1-10	Nov. 1-10	Dec. 1-10	Jan. 1-10	Feb. 1-10	Mar. 1-10	Apr. 1-10
McGregor and Co.	2776	Pole's auxiliary compensation.	+ 32	+ 11	+ 08	- 25	- 72	- 17	- 17	+ 70	+ 15	- 14	- 06	- 13	+ 19	+ 44	+ 15	+ 54
Webb.	2846	Auxiliary compensation to the balance.	- 04	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03
Webb.	5401	Auxiliary compensation to the balance.	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03	- 03
Merced	548	Auxiliary compensation.	+ 49	+ 07	+ 39	- 15	- 14	- 23	- 27	+ 56	+ 01	- 49	- 23	- 23	+ 53	- 09	- 35	- 07
Crisp	480	Auxiliary compensation.	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29
Dem.	2943	Don't patent balance; see pamphlet "On the Errors of Chronometers." p. 23.	- 28	- 10	- 08	- 43	- 29	- 79	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29	+ 29
W. P. Birehall, jun.	9	Ordinary construction of balance, with a slight alteration.	- 54	- 85	- 70	- 121	- 75	- 91	- 29	- 32	- 14	- 14	- 24	- 10	- 52	- 19	- 47	- 08
Gowland.	3107	Pole's auxiliary compensation.	+ 61	+ 25	- 85	- 71	- 09	- 103	- 94	- 23	- 11	- 91	- 30	- 02	- 14	- 23	- 10	- 02
Parkinson and Boute.	3706	Auxiliary to ordinary construction of balance.	+ 71	+ 59	+ 57	+ 76	+ 49	+ 09	+ 65	+ 59	+ 59	+ 59	+ 59	+ 59	+ 59	+ 59	+ 59	+ 59
Probleman.	3234	Pole's auxiliary compensation.	- 181	- 85	- 49	- 24	- 08	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59
Probleman.	3234	Pole's auxiliary compensation.	- 181	- 85	- 49	- 24	- 08	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59
Porthouse	7220	Auxiliary compensation to the balance.	- 100	- 160	- 164	- 190	- 172	- 170	- 164	+ 25	+ 45	- 134	- 63	+ 21	+ 05	+ 29	+ 17	+ 02
Fennington	1473	Ordinary balance.	- 100	- 160	- 164	- 190	- 172	- 170	- 164	+ 25	+ 45	- 134	- 63	+ 21	+ 05	+ 29	+ 17	+ 02
Probleman.	3234	Ordinary construction of balance, with a slight alteration.	- 100	- 160	- 164	- 190	- 172	- 170	- 164	+ 25	+ 45	- 134	- 63	+ 21	+ 05	+ 29	+ 17	+ 02
Wood.	3300	Ordinary balance.	- 100	- 160	- 164	- 190	- 172	- 170	- 164	+ 25	+ 45	- 134	- 63	+ 21	+ 05	+ 29	+ 17	+ 02
Sevill.	1472	Auxiliary acting at low temperatures.	+ 119	+ 119	+ 09	- 43	- 130	- 101	- 21	- 41	- 69	- 69	- 69	- 69	+ 19	+ 19	+ 19	+ 19
Blackie.	3122	Auxiliary compensation to the balance (unpublished).	+ 119	+ 119	+ 09	- 43	- 130	- 101	- 21	- 41	- 69	- 69	- 69	- 69	+ 19	+ 19	+ 19	+ 19
Redd and Sons.	1220	Auxiliary compensation to the balance.	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134	- 134
Pole.	3105	Auxiliary compensation to the balance.	+ 119	+ 119	+ 09	- 43	- 130	- 101	- 21	- 41	- 69	- 69	- 69	- 69	+ 19	+ 19	+ 19	+ 19
Simmon & Roberts.	3125	Auxiliary compensation to the balance.	+ 119	+ 119	+ 09	- 43	- 130	- 101	- 21	- 41	- 69	- 69	- 69	- 69	+ 19	+ 19	+ 19	+ 19
Parkinson & Boute.	1414	Kullberg's balance, consisting of a bar and two rings without auxiliary.	- 173	- 110	- 09	- 38	- 38	- 24	- 26	- 12	- 07	+ 06	+ 06	+ 07	+ 07	+ 07	+ 07	+ 07
Redd and Sons.	1218	Ordinary construction, with a slight alteration.	- 173	- 110	- 09	- 38	- 38	- 24	- 26	- 12	- 07	+ 06	+ 06	+ 07	+ 07	+ 07	+ 07	+ 07
Hemond.	3533	Auxiliary compensation to the balance, acting at low temperatures.	- 184	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182	- 182
Moore.	3064	Pole's auxiliary compensation.	- 70	- 91	- 110	- 144	- 115	- 106	- 104	- 124	- 132	- 70	- 79	- 79	- 79	- 79	- 79	- 79
Moore.	2022	Don't patent balance; see pamphlet "On the Errors of Chronometers."	- 70	- 91	- 110	- 144	- 115	- 106	- 104	- 124	- 132	- 70	- 79	- 79	- 79	- 79	- 79	- 79
Marshall and Son.	3129	Auxiliary compensation.	- 259	- 331	- 224	- 191	- 135	- 124	- 235	- 125	- 235	- 264	- 264	- 264	- 264	- 264	- 264	- 264
J. Murray.	379	Murray's auxiliary compensation, with a slight alteration.	- 74	- 43	- 77	- 70	- 47	+ 17	+ 109	+ 102	- 07	+ 123	+ 131	+ 131	+ 131	+ 131	+ 131	+ 131
Lester and Sons.	1220	Murray's auxiliary compensation.	- 74	- 43	- 77	- 70	- 47	+ 17	+ 109	+ 102	- 07	+ 123	+ 131	+ 131	+ 131	+ 131	+ 131	+ 131
Timewell.	1236	New gradient balance.	- 42	- 13	- 22	- 49	- 43	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55
J. French.	2286	Auxiliary compensation to the balance.	- 223	- 220	- 165	- 181	- 143	- 140	- 140	+ 30	+ 40	- 76	- 10	- 10	- 10	- 10	- 10	- 10
Timewell.	1235	New gradient balance.	- 12	- 19	- 120	- 63	- 115	- 99	+ 14	+ 164	- 60	- 09	+ 189	+ 189	+ 189	+ 189	+ 189	+ 189
Blackie.	3122	Auxiliary compensation to the balance (unpublished).	- 12	- 19	- 120	- 63	- 115	- 99	+ 14	+ 164	- 60	- 09	+ 189	+ 189	+ 189	+ 189	+ 189	+ 189
Hewitt and Son.	253	Ordinary balance.	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283
Kullberg.	75	Ordinary balance, consisting of a bar and two rings without auxiliary.	- 140	- 107	- 82	- 103	- 115	- 82	- 47	+ 76	+ 74	- 23	- 58	+ 64	+ 64	+ 64	+ 64	+ 64
Crisp.	487	Redd's balance.	- 74	- 43	- 77	- 70	- 47	+ 17	+ 109	+ 102	- 07	+ 123	+ 131	+ 131	+ 131	+ 131	+ 131	+ 131
Probleman and Baker.	3104	New auxiliary compensation.	- 181	- 85	- 49	- 24	- 08	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59
Probleman and Baker.	3104	Auxiliary compensation to the balance.	- 181	- 85	- 49	- 24	- 08	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59	- 59
Middle and Son.	507	Redd's balance.	- 74	- 43	- 77	- 70	- 47	+ 17	+ 109	+ 102	- 07	+ 123	+ 131	+ 131	+ 131	+ 131	+ 131	+ 131
C. M. French.	2286	Ordinary construction, with defective proportions and other slight alterations.	- 223	- 220	- 165	- 181	- 143	- 140	- 140	+ 30	+ 40	- 76	- 10	- 10	- 10	- 10	- 10	- 10
Redd and Sons.	1220	Redd's balance.	- 74	- 43	- 77	- 70	- 47	+ 17	+ 109	+ 102	- 07	+ 123	+ 131	+ 131	+ 131	+ 131	+ 131	+ 131
Lester and Sons.	1220	Pole's auxiliary compensation.	- 38	- 44	+ 67	- 33	+ 114	+ 117	+ 109	+ 129	+ 128	+ 21	+ 4	+ 4	+ 4	+ 4	+ 4	+ 4
Blackie.	3122	Ordinary balance.	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283	- 283
Russell and Son.	636	Ordinary balance, somewhat different from Moyle's.	- 40	- 22	- 49	- 43	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55	- 55
Russell and Son.	636	Impressed balance, not used at the centre with double action.	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120	- 120
T. Campbell.	800	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Parkinson and Boute.	1414	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15	- 102	- 79	- 56	- 56	- 56	- 56	- 56
Probleman.	3234	Ordinary construction.	+ 49	+ 87	+ 98	+ 87	+ 128	+ 131	+ 103	- 02	- 15							

NAME of MAKER.	No.	ADDRESS of MAKER.	Construction of Receptment and Balance, from the Description furnished by the Maker.	(III).—ABSTRACT OF THE			
				First Day of First Week of Rating.	Last Day of Last Week of Rating.	Number of Weeks.	Least Weekly Sum.
McGregor and Co.	2776	2, 28, Clyde Place, Glasgow, and S. William Street, Greenwich.	Poole's auxiliary compensation.	January 5	August 3	30	- 9.2
Webb.....	2746	2, Pall Mall East, London.	Auxiliary compensation to the balance.	January 12	August 3	29	- 11.2
Webb.....	2401	4, Pall Mall, London.	Auxiliary compensation to the balance.	January 12	August 3	29	- 8.7
Morser.....	243	41, Spenser Street, Gower Road, London.	Auxiliary compensation.	January 9	August 3	30	- 11.5
Crisp.....	436	15, St. John's Street, London.	Auxiliary compensation.	January 12	August 3	29	- 10.5
.....	2943	6, Strand, London.	Dup't patent balance; see paragraph "On the Ordinary construction of balance, with a slight alteration."	January 12	August 3	29	- 7.9
W. P. Birchall, Junr.	9	2, Anwell Terrace, Portenville, London.	Ordinary construction of balance, with a slight alteration.	January 5	August 3	30	- 18.1
Gowland.....	3197	2, Bunderland.	Poole's auxiliary compensation.	January 5	August 3	30	- 10.5
Parkinson & Prodhom	3198	4, Change Alley, Cornhill, London.	Auxiliary to ordinary construction of balance.	January 5	August 3	30	- 4.0
Clark and Son.....	3204	6, Greenock.	Poole's auxiliary compensation.	January 5	August 3	30	- 6.0
.....	3204	10, Finchburgh Street, London.	Poole's auxiliary compensation.	January 5	August 3	30	- 18.1
.....	7239	16, Northampton Square, Gower Road, London.	Auxiliary compensation to the balance.	January 5	August 3	30	- 20.0
Pennington.....	1473	12, Orchard Street, Portman Square, London.	Ordinary balance.	January 12	August 3	29	- 8.2
.....	358	17, South Castle Street, Liverpool.	Ordinary construction of balance, with a slight alteration.	January 5	August 3	30	- 8.2
Wood.....	358	29, Lord Street, Liverpool.	Hartung's balance.	January 19	August 3	29	- 8.2
Sevill.....	1472	21, South Castle Street, Liverpool.	Auxiliary acting at low temperatures.	January 12	August 3	29	- 10.1
Blackie.....	311	44, Anwell Street, Clerkenwell, London.	Auxiliary compensation to the balance (unpub- lished).	January 12	August 3	29	+ 2.9
Reid and Son.....	1259	41, Grey Street, Newcastle-on-Tyne.	Auxiliary compensation to the balance, acting at low temperatures.	January 5	August 3	30	- 13.6
.....	3254	10, Finchburgh Street, London.	Poole's auxiliary compensation.	January 5	August 3	30	+ 9.8
Stimpson and Roberts.....	11	44, Strand Street, Liverpool.	Kilburg's balance, consisting of a bar and two pins, without auxiliary.	January 12	August 3	29	- 20.0
Parkinson and Bouts.....	1064	25, Gracechurch Street, London.	Ordinary construction, with a slight alteration.	January 5	August 3	30	- 18.2
Reid and Son.....	1218	41, Grey Street, Newcastle-on-Tyne.	Auxiliary compensation to the balance, acting at low temperatures.	January 5	August 3	30	- 19.3
Hemmesey.....	3313	21, Wind Street, Swansea.	Poole's auxiliary compensation.	January 5	July 29	28	- 18.4
Moore.....	3064	114, High Street, Belfast.	Poole's auxiliary compensation.	January 5	August 3	30	- 20.5
.....	3022	41, Strand, London.	Dup't patent balance; see paragraph "On the Ordinary construction of balance, with a slight alteration."	January 12	August 3	29	- 27.9
Muirhead and Son.....	3120	39, Buchanan Street, Glasgow.	Poole's auxiliary compensation.	January 5	August 3	30	- 27.1
J. Murray.....	379	8, Wood Street, North King Square, London.	Molven's auxiliary compensation, with a slight alteration for extreme cold.	January 12	August 3	29	- 7.7
Lister and Son.....	389	2, Newcastle-on-Tyne.	Poole's auxiliary compensation.	January 5	August 3	30	- 14.5
Timewell.....	1256	22, Stanley Road, Ball's Pond Road, London.	New gradient balance.	January 5	August 3	30	- 4.9
J. French.....	3056	248, Strand, London.	Auxiliary compensation to the balance.	January 5	August 3	30	- 22.5
Timewell.....	1256	22, Stanley Road, Ball's Pond Road, London.	New gradient balance.	January 5	August 3	30	- 13.0
.....	319	44, Anwell Street, Clerkenwell, London.	Auxiliary compensation to the balance (unpub- lished).	January 12	August 3	29	- 12.0
Hewitt and Son.....	2554	15, John Street, Millney Park, Kingsland, London.	Hartung's balance.	January 5	August 3	30	- 14.2
Kilburg.....	375	3, Denmark Grove, Islington, London.	Ordinary balance, consisting of a bar and flat rim, without auxiliary.	January 5	August 3	30	- 14.7
Orisp.....	417	81, St. John's Street, London.	Hartung's balance.	January 12	August 3	29	- 8.9
Brenton.....	353	5, America Square, John Street, Minster, London.	New auxiliary compensation.	January 12	August 3	29	- 13.4
Prodhom and Baker.....	6177	125, Orchard Street, London.	Auxiliary compensation to the balance.	January 12	August 3	29	+ 7.0
Milidge and Son.....	507	25, Prince Street, Edinburgh.	Hartung's balance.	January 12	August 3	29	+ 1.0
C. M. Prodhom, Junr.....	111	84, Strand, London.	Ordinary compensation, with definite proportions May's centripetal balance.	January 19	August 3	28	- 5.4
Davis and Son.....	471	4, King William Street, City, London.	Ordinary compensation, with definite proportions May's centripetal balance.	January 12	August 3	29	- 79.9
.....	482	22, Newcastle-on-Tyne.	Hartung's balance.	January 12	August 3	29	- 2.3
Roskell.....	471	21 and 23, Church Street, Liverpool.	Hartung's balance.	January 19	August 3	28	- 10.3
Russell and Son.....	6235	30 and 32, Slater Street, Liverpool.	Auxiliary compensation, somewhat different from Molven's.	January 12	August 3	29	- 19.2
T. Campbell.....	809	7, South Castle Street, Liverpool.	Improved balance, cut open at the centre, with Molven's.	January 5	August 3	30	- 21.8
Parkinson & Prodhom	3474	4, Change Alley, Cornhill, London.	Auxiliary to ordinary construction of balance.	January 5	August 3	30	- 28.1
Birch.....	400	175, Finchburgh Street, London.	Ordinary construction.	January 5	August 3	30	- 28.1
Marshall.....	1373	5, King Street, London.	Original auxiliary, acting at high and low tem- peratures.	January 12	August 3	29	- 15.4
Porthouse.....	7228	16, Northampton Square, Gower Road, London.	Auxiliary compensation to the balance.	January 5	August 3	30	- 30.0
Roskell.....	471	21 and 23, Church Street, Liverpool.	Ordinary balance.	January 19	August 3	28	+ 4.0
Hiffs.....	442	8, Ormeau Street, Red Lion Square, London.	Ellie's original application to the pendulum spring.	January 19	August 3	29	- 6.7
Prodhom and Baker.....	6163	15, Gracechurch Street, London.	Auxiliary compensation to the balance.	January 12	August 3	29	- 10.3
Hewitt and Son.....	3583	15, John Street, Millney Park, Kingsland, London.	Hewitt's auxiliary compensation.	January 5	August 3	30	- 72.0
Sevill.....	1156	29, South Castle Street, Liverpool.	Auxiliary compensation, acting at extremes of temperature.	January 12	August 3	29	- 42.0
Wood.....	320	29, Lord Street, Liverpool.	Hartung's balance.	January 19	August 3	28	- 18.8
Hiffs.....	442	7, Ormeau Street, Red Lion Square, London.	Ellie's patent balance.	January 19	August 3	28	- 52.9
Dell, Brothers.....	1061	1, Broad Street, Bristol.	Original auxiliary, acting at extreme cold.	January 12	August 3	29	- 8.5
Russell and Son.....	6246	30 and 32, Slater Street, Liverpool.	Hartung's balance.	January 12	August 3	29	- 79.4
Armstrong.....	597	16, South Castle Street, Liverpool.	Balance of ordinary construction, with slight alteration.	January 5	August 3	30	- 61.2

* During those weeks the Chronometers were exposed to the external air outside a North window.
† During those weeks the Chronometers were placed in the chamber of a stove, heated by gas.
The rate given by the rate of days providing the first battery of trial is in every case omitted.

PRINCIPAL CHANGES OF RATE.									
NAME of MAKER.	No.	In what Week.	Greatest Weekly Sum.	In what Week.	Difference between the Greatest and Least.	Difference between the Greatest and the next.	Before and after what Day.*	NAME of MAKER.	No.
McGregor and Co.	2776	January 5 to 12 th	+ 10.9	June 29 to July 6 th	+ 14.1	0.3	May 25	McGregor and Co.	2776
Webb.....	2746	January 12 to 19 th	+ 5.9	June 29 to July 6 th	+ 17.1	0.4	June 21 st	Webb.....	2746
Webb.....	2401	January 12 to 19 th	+ 7.6	July 27 to Aug. 3	+ 10.3	0.7	July 6	Webb.....	2401
Morser.....	243	June 22 to 29 th	+ 5.7	January 12 to 19 th	+ 17.2	7.4	March 2 nd	Morser.....	243
Crisp.....	436	March 2 to 9 th	+ 12.0	May 4 to 11	+ 16.0	8.8	May 11	Crisp.....	436
.....	2943	Feb. 25 to March 5	+ 10.7	June 29 to July 6 th	+ 20.9	6.7	June 29 th		2943
W. P. Birchall, Junr.	9	January 15 to 22 nd	+ 13.5	July 27 to Aug. 3	+ 25.6	5.0	* February 16	W. P. Birchall, Junr.	9
Gowland.....	3197	January 22 to Feb. 5 th	+ 7.7	June 29 to July 6 th	+ 17.2	9.7	* January 10	Gowland.....	3197
Parkinson & Prodhom	3198	March 2 to 9 th	+ 13.0	June 29 to July 6 th	+ 18.0	10.5	March 2 nd	Parkinson & Prodhom	3198
Clark and Son.....	3204	January 19 to 26 th	+ 8.9	July 29 to 30 th	+ 19.4	12.4	March 25	Clark and Son.....	3204
.....	7239	January 5 to 12 th	+ 10.2	July 13 to 20	+ 14.9	0.4	* January 12		7239
Pennington.....	1473	January 12 to 19 th	+ 15.2	July 27 to Aug. 3	+ 27.4	8.6	July 6	Pennington.....	1473
.....	358	March 9 to 16 th	+ 9.5	June 29 to July 6 th	+ 17.0	2.9	March 16 th		358
Wood.....	358	June 22 to 29 th	+ 10.1	March 16 to 23 rd	+ 18.3	10.3	July 6	Wood.....	358
Sevill.....	1472	July 4 to 11	+ 10.3	March 16 to 23 rd	+ 18.3	10.3	March 23	Sevill.....	1472
Blackie.....	311	April 6 to 13	+ 30.6	March 16 to 23 rd	+ 17.7	14.6	March 23	Blackie.....	311
Reid and Son.....	1259	January 5 to 12 th	+ 17.6	June 29 to July 6 th	+ 31.0	9.9	June 8	Reid and Son.....	1259
.....	3254	February 5 to 9 th	+ 24.8	June 29 to July 6 th	+ 31.0	12.9	July 6		3254
Stimpson and Roberts.....	11	January 12 to 19 th	+ 6.2	March 23 to 30 th	+ 10.3	10.3	March 23	Stimpson and Roberts.....	11
Parkinson and Bouts.....	1064	June 22 to 29 th	+ 1.0	May 18 to 25	+ 14.7	18.7	July 6	Parkinson and Bouts.....	1064
Reid and Son.....	1218	January 5 to 12 th	+ 13.0	June 8 to 15 th	+ 19.1	9.3	June 21 st	Reid and Son.....	1218
Hemmesey.....	3313	July 13 to 20	+ 11.5	July 13 to 20	+ 20.0	10.0	* February 16	Hemmesey.....	3313
Moore.....	3064	January 5 to 12 th	+ 6.9	May 4 to 11	+ 19.4	11.4	January 12	Moore.....	3064
.....	3022	June 22 to 29 th	+ 7.0	July 13 to 20	+ 20.0	10.0	July 6		3022
Muirhead and Son.....	3120	January 12 to 19 th	+ 10.3	July 13 to 20	+ 20.0	10.0	March 23	Muirhead and Son.....	3120
J. Murray.....	379	June 22 to 29 th	+ 30.3	June 22 to 29 th	+ 25.0	7.6	March 23	J. Murray.....	379
Lister and Son.....	389	January 12 to 19 th	+ 33.3	July 6 to 13	+ 27.8	10.1	March 29	Lister and Son.....	389
Timewell.....	1256	January 12 to 19 th	+ 32.9	July 27 to Aug. 3	+ 49.8	9.9	June 22	Timewell.....	1256
J. French.....	3056	January 5 to 12 th	+ 18.4	July 13 to 20	+ 20.0	10.0	* February 16	J. French.....	3056
Timewell.....	1256	February 9 to 16 th	+ 10.0	May 4 to 11	+ 20.0	10.0	July 6	Timewell.....	1256
.....	319	March 16 to 23 rd	+ 14.4	March 16 to 23 rd	+ 14.4	14.4	March 23		319
Hewitt and Son.....	2554	January 19 to 26 th	+ 6.3	June 22 to Aug. 3	+ 34.9	13.0	* January 26	Hewitt and Son.....	2554
Kilburg.....	375	January 12 to 19 th	+ 22.5	June 22 to 29 th	+ 30.2	10.7	March 2 nd	Kilburg.....	375
Orisp.....	417	January 19 to 26 th	+ 11.3	March 16 to 23 rd	+ 20.2	15.3	March 2 nd	Orisp.....	417
Brenton.....	353	January 12 to 19 th	+ 11.0	February 9 to 16 th	+ 18.4	17.1	* February 16	Brenton.....	353
Prodhom and Baker.....	6177	February 9 to 16 th	+ 1.0	June 9 to 16 th	+ 20.3	10.4	March 2 nd	Prodhom and Baker.....	6177
Milidge and Son.....	507	July 6 to 13	+ 14.3	July 27 to Aug. 3	+ 40.7	10.0	July 6	Milidge and Son.....	507
C. M. Prodhom, Junr.....	111	February 2 to 9 th	+ 30.9	July 29 to 30 th	+ 42.3	10.8	March 2 nd	C. M. Prodhom, Junr.....	111
Davis and Son.....	471	July 20 to 27 th	+ 27.1	January 12 to 19 th	+ 22.4	10.5	* February 16	Davis and Son.....	471
.....	482	January 12 to 19 th	+ 30.9	July 13 to 20	+ 31.3	14.5	July 6		482
Roskell.....	471	March 2 to 9 th	+ 32.0	July 27 to Aug. 3	+ 44.1	10.0	July 6	Roskell.....	471
Russell and Son.....	6235	January 12 to 19 th	+ 34.7	June 29 to July 6 th	+ 44.0	10.0	March 23	Russell and Son.....	6235
T. Campbell.....	809	January 19 to 26 th	+ 18.4	July 27 to Aug. 3	+ 40.2	17.0	* February 16	T. Campbell.....	809
Parkinson & Prodhom	3474	June 29 to July 6 th	+ 19.2	February 16 to 23 rd	+ 47.3	16.0	July 6	Parkinson & Prodhom	3474
Birch.....	400	January 12 to 19 th	+ 1.0	July 13 to 20	+ 37.7	10.7	* February 16	Birch.....	400
Marshall.....	1373	January 19 to 26 th	+ 40.2	July 6 to 13	+ 37.0	14.7	March 2 nd	Marshall.....	1373
Porthouse.....	7228	January 12 to 19 th	+ 27.7	July 13 to 20	+ 86.0	10.0	March 25	Porthouse.....	7228
Roskell.....	471	March 2 to 9 th	+ 42.3	May 4 to 11	+ 38.3	39.7	July 6	Roskell.....	471
Hiffs.....	442	Jan. 25 to Feb. 2 nd	+ 40.7	June 15 to 22 nd	+ 39.7	40.0	June 21 st	Hiffs.....	442
Prodhom and Baker.....	6163	January 12 to 19 th	+ 9.1	March 9 to 16 th	+ 44.1	39.0	* January 10	Prodhom and Baker.....	6163
Hewitt and Son.....	3583	January 5 to 12 th	+ 9.0	July 13 to 20	+ 63.0	10.0	July 6	Hewitt and Son.....	3583
Sevill.....	1156	March 9 to 16 th	+ 1.0	June 22 to 29 th	+ 40.7	31.0	July 6	Sevill.....	1156
Wood.....	320	January 19 to 26 th	+ 15.4	July 27 to Aug. 3	+ 74.0	10.7	* February 16	Wood.....	320
Hiffs.....	442	March 25 to 30 th	+ 2.1	June 22 to 29 th	+ 39.0	37.8	July 6	Hiffs.....	442
Dell, Brothers.....	1061	January 12 to 19 th	+ 25.0	June 22 to 29 th	+ 75.3	39.0	March 2 nd	Dell, Brothers.....	1061
Russell and Son.....	6246	July 20 to 27 th	+ 34.4	January 18 to 25	+ 106.8	47.8	March 2 nd	Russell and Son.....	6246
Armstrong.....	597	July 6 to 13	+ 123.7	July 6 to 13	+ 140.9	115.7	July 6	Armstrong.....	597

* The order of arrangement of the Chronometers in these Tables is determined solely by consideration of their irregularities of rate as expressed in the column "Difference between the Greatest and Least" and "Difference between the Greatest and the next," without reference to the