

RATES OF CHRONOMETERS

ON TRIAL

FOR PURCHASE BY THE BOARD OF ADMIRALTY,

AT THE

ROYAL OBSERVATORY, GREENWICH.

1873.

(I.) WEEKLY SUMS OF DAILY RATES

NAME OF MAKER.	No.	Whether as a Day.	Construction of Escapement and Balance, and the Description furnished by the Maker.	Jan. 11-18-25 Feb. 1-8-15-22 Mar. 1-8-15-22 Apr. 5-12-19-26												No.
				Jan. 11-18-25	Jan. 18-25	Jan. 25 Feb. 1-8	Feb. 8-15	Feb. 15-22	Feb. 22-29 Mar. 1-8	March 8-15	March 15-22	March 22-29 Apr. 5-12	Mar. 29 Apr. 5-12			
Weichert.....	2300	2	Flat rim balance, without auxiliary.	- 9.2	- 6.3	- 7.7	- 7.9	- 8.6	- 9.5	- 6.8	- 7.4	- 4.4	- 5.1	- 4.6	- 4.5	2300
Usher and Cole.....	2177	2	Auxiliary to balance.	- 11.1	- 23.0	- 9.5	- 1.6	- 6.9	- 1.3	- 2.3	- 0.6	- 0.7	- 1.9	- 0.8	- 0.7	2177
Kullberg.....	1885	2	Kullberg's flat rim balance, without auxiliary.	- 10.1	- 11.0	- 14.5	- 14.4	- 13.9	- 14.0	- 11.0	- 11.0	- 11.0	- 11.0	- 9.9	- 9.9	1885
Weichert.....	2339	2	Auxiliary compensation. (liary).	- 9.2	- 6.3	- 7.7	- 7.9	- 8.6	- 9.5	- 6.8	- 7.4	- 4.4	- 5.1	- 4.6	- 4.5	2339
Davidson.....	4884	2	Auxiliary compensation.	+ 0.3	+ 2.5	- 5.4	- 3.8	- 2.7	- 2.5	+ 0.5	+ 1.3	+ 4.9	+ 4.0	+ 2.4	+ 0.1	4884
			Auxiliary compensation.	+ 0.3	+ 0.9	+ 4.6	+ 4.8	+ 6.0	+ 6.6	+ 9.8	+ 10.3	+ 5.7	+ 6.1	+ 7.3	+ 9.1	
Kullberg.....	1885	2	Improved ordinary balance.	- 6.8	- 3.0	- 3.6	- 4.2	- 4.7	- 4.5	- 3.3	- 2.7	+ 2.5	+ 1.5	+ 2.0	+ 0.5	1885
Marshall and Sons.....	2884	2	Kullberg's flat rim balance, without auxiliary.	+ 1.3	+ 3.0	- 0.1	- 1.9	- 2.4	- 2.8	- 3.2	- 2.6	- 0.6	- 0.7	- 1.9	- 0.8	2884
Seawell.....	2070	2	Auxiliary compensation. (liary).	- 4.6	- 1.2	- 1.0	- 1.2	- 1.8	- 2.0	- 0.3	- 0.9	- 7.1	- 4.8	- 6.7	- 5.0	2070
Shepherd and Son.....	1787	2	Auxiliary to balance.	+ 6.7	+ 6.7	+ 0.4	+ 3.0	0.0	- 6.2	- 2.7	- 5.4	- 11.1	- 13.5	- 12.6	- 13.8	1787
Glover.....	357	2	Auxiliary acting at all temperatures.	- 10.1	- 10.8	- 17.5	- 18.9	- 17.8	- 18.4	- 14.8	- 15.2	- 10.7	- 7.5	- 6.9	- 6.9	357
Parkinson & Bosts.....	1165	2	Auxiliary acting in extreme of temperature.	- 4.3	- 1.6	- 1.4	- 0.3	- 0.1	- 0.4	+ 2.8	+ 0.6	- 4.4	- 9.4	- 9.4	- 7.4	1165
Key.....	260	2	Ordinary construction with slight alteration.	- 2.8	- 3.8	- 7.3	- 9.2	- 5.0	+ 4.2	+ 5.5	+ 4.6	+ 5.2	+ 5.1	+ 10.0	+ 10.5	260
Chittenden.....	793	2	Auxiliary as in former years.	- 3.9	+ 4.3	+ 5.6	+ 8.9	+ 6.7	+ 6.2	+ 7.9	+ 2.0	+ 2.0	+ 2.7	- 0.7	- 1.9	793
J. B. Fletcher.....	3369	2	Auxiliary compensation.	- 20.3	- 18.8	- 17.5	- 18.9	- 17.8	- 18.4	- 14.8	- 15.2	- 10.7	- 7.5	- 6.9	- 6.9	3369
Gowland.....	2293	2	Auxiliary compensation.	+ 5.0	+ 5.0	+ 2.4	+ 1.5	+ 2.0	+ 2.3	+ 4.8	+ 6.0	- 3.5	- 1.5	- 1.0	+ 1.5	2293
Parkinson & Bosts.....	1138	2	Auxiliary acting in extreme of temperature.	- 1.5	+ 0.9	- 2.6	- 7.1	- 7.2	- 7.4	- 6.1	- 3.8	- 6.3	+ 2.3	+ 4.4	+ 4.6	1138
J. Fletcher.....	2679	2	Auxiliary compensation.	- 4.4	- 0.7	- 2.8	- 1.3	- 2.0	- 2.3	- 0.4	- 1.0	- 11.6	- 12.4	- 6.8	- 5.5	2679
Lovry.....	776	2	Auxiliary compensation.	+ 1.0	+ 0.9	- 0.8	- 1.0	- 0.9	- 0.7	+ 1.1	+ 0.4	+ 0.1	+ 0.1	+ 0.1	+ 0.1	776
Quailian.....	17917	2	Ordinary balance with continuous auxiliary.	+ 2.4	+ 1.7	- 1.5	- 1.8	- 0.4	+ 0.6	+ 2.8	+ 7.0	+ 10.5	+ 9.0	+ 5.6	+ 4.4	17917
Isaac.....	1139	2	Balance as in former years; no auxiliary.	+ 15.1	+ 17.9	+ 17.5	+ 18.2	+ 16.7	+ 16.9	+ 18.2	+ 16.0	+ 12.0	+ 12.0	+ 11.0	+ 12.0	1139
Whiffin.....	361	2	Auxiliary compensation.	- 12.3	- 11.0	- 9.8	- 5.4	- 10.7	- 12.3	- 10.7	- 19.0	- 9.0	- 12.5	- 14.6	- 13.8	361
Marshall and Sons.....	2064	2	Auxiliary compensation.	- 3.3	- 2.0	+ 4.1	+ 4.7	+ 4.8	+ 7.8	+ 6.0	+ 6.0	+ 6.0	+ 6.0	+ 6.0	+ 6.0	2064
J. B. Fletcher.....	2669	2	Auxiliary compensation.	+ 4.1	+ 4.0	- 0.1	- 6.2	- 3.1	- 3.6	- 1.0	+ 3.5	+ 4.9	+ 8.3	+ 9.9	+ 9.9	2669
Key.....	261	2	Ordinary construction with slight alteration.	- 2.1	- 2.4	- 2.5	- 3.6	- 3.4	- 3.9	+ 4.8	+ 3.0	+ 11.5	+ 10.7	+ 13.0	+ 14.0	261
Isaac.....	1125	2	Renovated Harrop balance.	+ 1.9	+ 4.6	+ 7.9	+ 11.3	+ 11.2	+ 10.1	+ 8.0	+ 2.9	+ 10.1	+ 13.4	+ 14.0	+ 15.1	1125
Hennessy.....	4869	2	Auxiliary compensation.	+ 5.8	+ 10.1	+ 9.9	+ 9.9	+ 9.7	+ 9.7	+ 11.4	+ 8.9	+ 3.4	- 5.1	- 1.0	- 0.3	4869
Williams.....	123	2	Auxiliary compensation.	- 14.7	- 14.8	- 18.1	- 19.2	- 17.9	- 17.7	- 14.9	- 12.1	- 21	- 27	- 25	- 4.0	123
Whiffin.....	361	2	Auxiliary compensation.	+ 1.4	+ 14.7	+ 17.4	+ 20.3	+ 18.8	+ 17.2	+ 18.4	+ 12.1	+ 17.3	+ 14.5	+ 14.5	+ 14.5	361
Highley.....	5435	2	Auxiliary acting in cold.	- 5.2	- 3.4	- 1.8	- 13.2	- 14.9	- 13.9	- 11.7	- 10.9	- 2.3	- 2.5	- 1.3	- 1.6	5435
Brotherton.....	5417	2	Construction as in former years.	- 10.6	- 13.2	- 12.8	- 9.9	- 12.7	- 14.6	- 10.9	- 14.0	+ 2.6	+ 0.7	+ 0.4	- 1.0	5417
Lowry.....	778	2	Auxiliary compensation.	+ 13.0	+ 17.0	+ 19.4	+ 22.8	+ 22.4	+ 27.1	+ 28.9	+ 21.9	+ 23.8	+ 24.5	+ 29.3	+ 29.6	778
J. Fletcher.....	2319	2	Auxiliary compensation.	+ 1.5	+ 9.4	+ 5.4	+ 7.7	+ 8.1	+ 5.1	+ 3.6	+ 1.0	+ 1.3	+ 2.0	+ 10.3	+ 13.2	2319
Seawell.....	2367	2	Auxiliary compensation.	- 8.5	+ 3.8	+ 10.0	+ 11.9	+ 9.1	+ 7.5	+ 9.3	+ 1.4	- 2.8	- 2.8	- 1.0	- 0.0	2367
Shepherd and Son.....	1789	2	Ordinary construction with slight alteration.	- 18.0	- 10.8	- 4.3	- 3.7	- 2.1	- 2.7	- 2.3	- 11.2	- 2.2	- 2.9	- 5.9	- 7.1	1789
			Auxiliary to balance.	- 14.8	- 16.8	- 21.1	- 23.1	- 23.3	- 24.2	- 19.5	- 1.0	- 3.1	- 2.4	- 4.5	- 4.5	
Davidson.....	4793	2	Auxiliary compensation.	- 6.0	- 10.8	- 14.8	- 17.6	- 14.6	- 13.5	- 12.1	- 8.9	+ 0.7	+ 9.5	+ 14.6	+ 15.9	4793
Webb.....	5608	2	Auxiliary as in former years.	+ 3.1	+ 10.5	+ 10.3	+ 11.1	+ 11.7	+ 10.7	+ 11.4	+ 9.1	+ 14	+ 17	+ 12.3	+ 19.5	5608
Marshall and Sons.....	4447	2	Poole's auxiliary.	- 1.7	- 1.8	- 1.8	- 2.2	- 2.2	- 2.2	- 2.2	- 2.2	- 2.2	- 2.2	- 2.2	- 2.2	4447
Seawell.....	2352	2	Auxiliary compensation.	+ 9.6	+ 14.0	+ 19.3	+ 20.3	+ 19.3	+ 20.3	+ 16.8	+ 7.6	+ 8.7	+ 9.3	+ 3.7	+ 6.1	2352
McGregor and Co.....	4360	2	Auxiliary to balance acting at low temperatures.	+ 24.0	- 2.0	- 13.3	- 14.3	- 16.7	- 14.8	- 15.1	- 17.0	- 6.5	- 6.4	- 5.2	- 2.6	4360
Russell and Son.....	2089	2	Auxiliary acting in cold.	- 14.9	- 8.1	- 9.8	- 12.5	- 14.8	- 11.4	- 16.3	- 8.9	- 8.9	- 2.3	- 2.4	+ 3.4	2089
Chronometrical Thermometer.....				+ 112.6	+ 138.4	+ 139.0	+ 139.7	+ 139.8	+ 139.8	+ 138.0	+ 143.0	+ 01.7	+ 66.1	+ 122.1	+ 127.0	
Extreme of Temperature as shown by the Self-Registering Thermometers.....				48-54	43-50	38-45	35-41	38-43	38-45	39-46	41-51	65-77	58-79	66-83	76-89	

The sign + indicates that the rate is gaining.

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

The Chronometer Thermometer differs from an ordinary Chronometer only in the construction of the balance, the positions of the metals forming the compensating ring being reversed. By this arrangement the effect of temperature is almost nullified.

IN THE ORDER OF TIME.

NAME OF MAKER.																				No.
April 5-13	April 19-19	'April 19-26	April 26 to May 3	May 3-10	May 10-17	May 17-24	May 24-31	May 31 to June 7	June 7-14	June 14-21	June 21-28	June 28 to July 5	July 5-12	July 12-19	July 19-26	July 26 to Aug. 2	Aug. 2-9			No.
- 5.0	- 6.0	- 6.3	- 6.3	- 5.8	- 6.9	- 6.5	- 5.0	- 4.7	- 4.6	- 6.1	- 7.3	- 8.4	- 7.0	- 6.8	- 7.7	- 8.1	- 8.1	Weichert	2300	
+ 1.0	+ 0.3	+ 0.3	+ 2.8	+ 2.0	+ 1.4	+ 3.1	- 0.6	+ 1.6	+ 1.3	- 0.6	- 0.6	- 2.0	- 1.4	- 0.3	- 0.2	- 1.8	- 0.7	Usher and Cole	2317	
- 11.1	- 9.5	- 9.7	- 9.7	- 7.7	- 8.3	- 8.4	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	- 8.9	Kullberg	1885	
- 4.2	- 3.2	- 3.4	- 4.2	- 1.5	- 0.4	- 1.7	- 2.6	- 3.1	- 3.0	- 2.8	- 0.5	- 2.5	- 4.0	- 2.3	- 2.3	- 2.0	- 2.0	Weichert	2339	
+ 13.6	+ 15.4	+ 15.7	+ 16.9	+ 17.1	+ 15.5	+ 17.0	+ 12.8	+ 14.7	+ 15.7	+ 13.0	+ 14.3	+ 15.1	+ 15.9	+ 15.5	+ 13.9	+ 15.5	+ 15.4	Davidson	4884	
- 1.6	+ 1.4	+ 2.4	+ 2.8	+ 3.3	+ 3.6	+ 3.8	+ 2.0	- 0.9	- 2.7	- 0.3	+ 1.6	+ 3.6	+ 4.0	+ 5.0	+ 3.0	+ 4.8	+ 4.5	Kullberg	1885	
+ 0.9	+ 0.3	+ 0.3	+ 2.0	+ 0.4	+ 0.3	+ 0.4	+ 0.5	+ 0.3	+ 2.3	+ 2.8	+ 4.7	+ 8.0	+ 8.1	+ 9.9	+ 12.2	+ 11.3	+ 11.5	Marshall and Sons	2884	
- 2.5	- 0.9	- 0.4	- 1.2	- 1.1	- 1.4	- 2.5	- 5.5	- 0.7	- 3.3	- 4.5	- 4.1	- 3.9	- 3.5	- 2.6	- 2.4	- 1.6	- 1.6	Seawell	2070	
+ 5.8	+ 6.5	+ 6.9	+ 5.5	+ 8.0	+ 8.7	+ 8.9	+ 8.3	+ 2.9	+ 0.8	- 3.2	+ 7.2	+ 6.9	+ 6.2	+ 6.5	+ 9.1	+ 3.0	+ 2.4	Shepherd and Son	1787	
- 13.7	- 11.9	- 12.5	- 9.7	- 8.8	- 9.1	- 8.4	- 9.6	- 9.1	- 10.3	- 11.3	- 10.3	- 8.4	- 6.5	- 5.5	- 4.9	- 5.7	- 3.9	Glover	357	
- 11.6	- 8.1	- 7.1	- 3.2	- 4.5	+ 4.9	- 4.6	- 1.2	- 5.8	- 11.3	- 10.9	- 10.2	- 7.8	- 5.9	- 0.7	- 0.0	- 2.0	- 0.2	Parkinson & Bosts	1165	
+ 6.1	+ 5.4	+ 4.2	+ 6.7	+ 5.9	+ 5.1	+ 7.7	+ 13.5	+ 13.1	+ 13.7	+ 12.6	+ 9.8	+ 9.7	+ 11.4	+ 11.0	+ 14.4	+ 10.0	+ 15.0	Key	260	
- 4.8	- 6.6	- 6.3	- 7.6	- 7.5	- 7.1	- 8.7	- 0.1	- 1.3	- 1.5	- 0.0	- 3.6	- 7.0	- 7.5	- 9.7	- 8.4	- 7.4	- 8.0	Chittenden	793	
- 4.7	- 3.5	- 2.4	- 2.4	- 4.0	- 2.6	- 2.9	- 9.7	- 9.5	- 10.6	- 6.7	- 3.5	- 3.6	- 6.5	- 4.5	- 4.0	- 0.1	- 0.1	J. B. Fletcher	3369	
+ 5.9	+ 8.5	+ 7.2	+ 9.4	+ 11.3	+ 9.8	+ 11.4	+ 2.0	+ 4.6	+ 6.6	+ 5.0	+ 3.9	+ 3.6	+ 5.5	+ 6.3	+ 4.3	+ 4.0	+ 5.1	Gowland	2293	
+ 5.4	+ 1.4	- 0.6	+ 0.3	+ 0.5	- 1.0	- 0.3	- 1.6	+ 0.5	+ 0.9	+ 2.0	+ 0.9	+ 2.0	+ 3.4	+ 2.3	+ 4.4	+ 4.1	+ 5.1	Parkinson & Bosts	1138	
+ 11.9	+ 12.1	+ 14.1	- 12.9	- 17.9	- 14.9	- 15.6	- 14.8	- 12.6	- 12.6	- 12.0	- 12.3	- 13.9	- 14.5	- 15.5	- 13.2	- 12.4	- 12.5	J. Fletcher	2679	
+ 4.1	+ 2.1	+ 1.4	- 0.6	+ 4.7	+ 8.1	+ 8.9	+ 9.2	+ 7.4	+ 0.4	+ 1.9	+ 8.1	+ 11.3	+ 13.2	+ 13.5	+ 14.1	+ 14.0	+ 14.3	Quilliam	1291	
+ 20.4	+ 21.1	- 22.7	- 24.3	- 24.0	- 21.5	- 15.8	- 19.0	- 18.7	- 21.6	- 29.9	- 32.4	- 26.6	- 26.0	- 24.4	- 27.1	- 29.3	- 29.3	Isaac	1139	
- 14.8	- 17.8	- 17.7	- 16.0	- 21.0	- 22.3	- 21.0	- 15.9	- 14.9	- 16.7	- 11.0	- 12.0	- 11.7	- 9.8	- 9.5	- 8.6	- 8.4	- 8.0	Whiffin	361	
- 0.8	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	+ 1.1	Seawell	3005	
+ 7.7	+ 12.8	+ 14.3	+ 13.2	+ 17.4	+ 17.9	+ 17.9	+ 13.6	+ 14.5	+ 12.5	+ 12.0	+ 13.2	+ 15.0	+ 17.5	+ 17.0	+ 9.6	+ 14.0	+ 14.0	J. B. Fletcher	3369	
+ 9.1	+ 9.1	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	+ 9.2	Whiffin	361	
+ 9.5	+ 7.0	+ 4.6	+ 4.3	+ 3.2	+ 2.7	+ 2.2	+ 11.6	+ 11.6	+ 23.1	+ 19.2	+ 13.6	+ 9.3	+ 7.6	+ 9.0	+ 4.4	+ 8.2	+ 9.4	Isaac	1139	
+ 3.3	+ 6.1	+ 8.1	+ 12.3	+ 10.4	+ 8.1	+ 10.6	+ 9.7	+ 11.0	+ 10.6	+ 12.3	+ 6.2	+ 5.2	+ 7.5	+ 9.4	+ 7.4	+ 7.8	+ 8.3	Hennessey	486	
- 9.7	- 17	- 13	- 0.6	- 3.3	- 2.1	- 2.5	- 13	- 10.9	- 6.0	- 15	- 12	- 19	- 27	- 25	- 19	- 27	- 3	Williams	12	
- 2.5	- 0.9	- 0.4	- 1.2	- 1.1	- 1.4	- 2.5	- 5.5	- 0.7	- 3.3	- 4.5	- 4.1	- 3.9	- 3.5	- 2.6	- 2.4	- 1.6	- 1.6	Whiffin	361	
- 0.4	- 0.9	- 1.3	- 2.6	- 1.1	- 1.4	- 0.1	- 1.3	- 3.2	- 4.9	- 1.8	- 0.7	- 1.5	- 1.0	- 1.8	- 0.8	- 0.9	- 0.7	Highley	434	
+ 0.5	+ 0.9	- 0.1	+ 2.3	+ 3.3	+ 1.1	+ 3.0	- 1.2	- 3.7	- 4.7	- 2.4	- 0.1	- 0.0	- 2.1	+ 1.5	+ 2.5	+ 2.5	+ 3.9	Brotherton	541	
+ 10.4	+ 12.6	+ 12.9	+ 14.7	+ 12.4	+ 9.4	+ 12.3	+ 10.9	+ 9.1	+ 13	- 1.6	- 12	- 16.7	- 10.0	- 3.9	- 2.4	- 2.4	- 2.4	J. Fletcher	2679	
+ 3.6	+ 0.8	+ 4.1	+ 4.4	+ 4.7	+ 4.8	+ 4.7	+ 3.9	+ 3.6	+ 3.6	+ 3.9	+ 4.4	+ 4.3	+ 4.6	+ 4.7	+ 4.6	+ 4.6	+ 4.6	Lovry	776	
+ 2.5	- 0.9	- 0.4	- 1.2	- 1.1	- 1.4	- 2.5	- 5.5	- 0.7	- 3.3	- 4.5	- 4.1	- 3.9	- 3.5	- 2.6	- 2.4	- 1.6	- 1.6	Seawell	2070	
- 4.6	- 6.9	- 11	- 4.3	- 2.0	- 2.1	- 2.1	- 10.5	- 9.7	+ 10.7	+ 9.6	+ 4.9	+ 3.6	+ 5.2	+ 10.6	+ 12.4	+ 11.4	+ 11.4	Shepherd and Son	1787	
- 13.1	- 9.4	- 9.2	- 11.8	- 8.3	- 8.4	- 9.5	- 5.0	- 5.3	- 9.7	- 6.0	- 10.2	- 9.4	- 9.8	- 9.7	- 10.0	- 10.2	- 10.2	Glover	357	
+ 5.4	- 0.4	+ 3.3	+ 0.1	+ 2.4	+ 3.0	+ 3.5	+ 9.7	+ 15.3	+ 15.5	+ 16.7	+ 16.3	+ 14.1	+ 14.9	+ 11.0	+ 7.0	+ 8.8	+ 7.3	Davidson	479	
+ 14.3	+ 13.5	+ 13.4	+ 15.4	+ 12.8	+ 10.6	+ 12.5	+ 11.2	+ 30.3	+ 22.7	+ 29.1	+ 11.0	+ 11.0	+ 11.0	+ 12.0	+ 12.1	+ 8.7	+ 11.6	Marshall and Sons	2884	
+ 21.2	+ 22.7	+ 26.7	+ 30.4	+ 34.0	+ 33.9	+ 35.9	+ 46.2	+ 46.2	+ 28.0	+ 18.0	+ 18.0	+ 18.0	+ 18.0	+ 18.0	+ 18.0	+ 18.0	+ 18.0	Seawell	2070	
+ 11.4	+ 8.7	+ 5.6	+ 3.2	+ 1.6	- 6.2	- 5.8	- 13.1	+ 13.4	+ 9.5	+ 9.2	+ 7.8	+ 8.0	+ 2.5	+ 3.0	+ 2.5	+ 10.0	+ 10.0	McGregor and Co	458	
- 5.9	- 2.5	- 6.9	- 4.9	- 12.1	- 7.4	- 9.0	- 4.8	- 4.0	- 3.6	- 3.6	- 1.1	- 5.5	+ 7.1	+ 6.7	+ 3.9	+ 10.4	+ 1.4	Russell and Son	2081	
+ 1189.9	+ 890.1	+ 888.0	+ 1150.0	+ 867.5	+ 611.0	+ 825.0	- 1531.0	- 2044.5	- 2311.0	- 1826.0	- 273.5	- 241.5	- 291.5	- 84.3	- 633.0	- 491.0	- 443.5	Chromometer Thermometer		
48-56	48-63	48-60	48-56	52-56	54-63	53-61	75-85	81-86	83-85	82-80	64-72	55-70	55-73	63-69	78-97	73-77	67-74	{Exposure of Temperature shown by the Self-Registering Thermometer.		

NAME OF MAKER.	No.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(1.) WEEKLY SUMS OF DAILY RATES											
			Feb. 1-8	Feb. 8-15	Jan. 25 to Feb. 1	Feb. 15-22	Feb. 22 to Mar. 1	Jan. 18-25	March 1-8	Apr. 30 to May 3	April 5-12	Jan. 11-18	April 19-26	May 3-10
Weichert.....	2300	2 Flat rim balance, without auxiliary.	- 79	- 84	- 77	- 93	- 68	- 63	- 74	- 63	- 50	- 92	- 93	- 55
Usher and Cole.....	2317	2 Auxiliary to balance.	- 164	- 02	- 03	- 04	+ 32	+ 33	+ 28	+ 28	+ 12	- 11	+ 02	+ 30
Kullberg.....	1885	2 Kullberg's flat rim balance, without auxiliary.	- 148	- 159	- 14	- 14	- 119	- 77	- 104	- 119	- 77	- 104	- 119	- 77
Weichert.....	2330	2 Auxiliary compensation.	- 98	- 97	- 93	- 93	- 93	- 93	- 93	- 93	- 93	- 93	- 93	- 93
Davison.....	4884	2 Auxiliary compensation.	+ 48	+ 66	+ 46	+ 66	+ 66	+ 69	+ 103	+ 109	+ 134	+ 63	+ 157	+ 171
Kullberg.....	1885	2 Improved ordinary balance.	- 42	- 47	- 36	- 45	- 23	- 20	- 27	+ 28	- 16	- 68	+ 24	+ 33
Marshall and Sons.....	2854	2 Kullberg's flat rim balance, without auxiliary.	- 19	- 24	- 03	- 28	- 00	+ 30	+ 19	+ 40	- 09	- 13	+ 21	+ 63
Shepherd and Son.....	1787	2 Auxiliary compensation.	- 12	- 18	- 16	- 26	- 09	+ 13	+ 23	- 06	- 24	- 03	- 24	- 03
Glover.....	387	2 Auxiliary to balance.	+ 04	+ 04	+ 17	+ 16	+ 23	+ 04	+ 59	+ 56	+ 56	+ 80	+ 69	+ 80
Shepherd and Son.....	1787	2 Auxiliary acting at all temperatures.	- 98	- 97	+ 04	- 92	- 97	- 07	- 94	- 97	- 137	- 97	- 139	- 88
Parkinson & Bouts.....	1165	2 Auxiliary acting in extremes of temperature.	- 03	+ 04	- 14	+ 04	+ 28	- 16	+ 06	- 22	- 116	- 43	- 71	+ 45
Key.....	260	2 Ordinary construction with slight alteration.	+ 82	+ 36	+ 79	+ 42	+ 50	+ 38	+ 46	+ 67	- 01	- 38	+ 42	+ 59
Chittenden.....	793	2 Auxiliary as in former years.	+ 89	+ 07	+ 58	+ 62	+ 79	+ 43	+ 20	+ 76	+ 48	- 39	+ 63	+ 75
J. B. Fletcher.....	2330	2 Auxiliary compensation.	- 189	- 178	- 179	- 184	- 169	- 183	- 168	- 24	- 47	- 26	- 34	- 40
Quilliam.....	559	2 Auxiliary compensation.	- 18	- 04	- 15	- 06	- 26	- 17	- 70	- 06	- 41	- 34	- 14	- 47
Gowland.....	2293	2 Auxiliary compensation.	+ 15	+ 20	+ 24	+ 23	+ 48	- 90	+ 60	+ 84	+ 59	+ 50	+ 72	+ 113
Parkinson & Bouts.....	1165	2 Auxiliary acting in extremes of temperature.	- 71	- 72	- 36	- 74	- 61	+ 09	- 38	+ 03	- 04	- 15	- 06	+ 05
J. Fletcher.....	2679	2 Auxiliary compensation.	- 13	- 20	- 28	- 23	- 04	- 07	- 10	- 23	- 51	- 44	- 93	- 93
Lowry.....	778	2 Auxiliary compensation.	+ 109	+ 98	+ 89	+ 97	+ 116	+ 63	+ 54	+ 104	+ 119	- 10	+ 141	+ 179
Quilliam.....	17917	2 Ordinary balance with continuous auxiliary.	- 18	- 04	- 15	- 06	- 26	- 17	- 70	- 06	- 41	- 34	- 14	- 47
Isaac.....	1139	2 Balance as in former years; no auxiliary.	+ 182	+ 167	+ 175	+ 169	+ 182	+ 179	+ 180	+ 243	+ 204	+ 151	+ 237	+ 240
Whiffin.....	361	2 Auxiliary compensation.	+ 64	- 107	- 98	- 123	- 107	- 110	- 100	- 160	- 148	- 132	- 177	- 210
Seewill.....	3064	2 Auxiliary compensation.	+ 48	+ 47	+ 42	+ 48	+ 78	+ 36	+ 60	+ 66	- 08	- 33	+ 38	+ 57
J. B. Fletcher.....	2330	2 Auxiliary compensation.	- 62	- 31	- 01	- 36	- 10	+ 40	+ 10	+ 152	- 77	- 41	+ 143	+ 174
Key.....	261	2 Ordinary construction with slight alteration.	+ 118	+ 24	+ 27	+ 29	+ 46	+ 24	+ 30	+ 92	- 64	- 21	+ 92	+ 101
Isaac.....	1135	2 Tensoidal Hartung balance.	+ 113	+ 112	+ 79	+ 101	+ 60	+ 48	+ 29	+ 48	- 95	- 19	+ 46	+ 92
Hemsey.....	4869	2 Auxiliary compensation.	+ 99	+ 97	+ 99	+ 97	+ 114	+ 101	+ 89	+ 123	+ 39	+ 58	+ 81	+ 104
Williams.....	123	2 Auxiliary compensation.	- 129	- 179	- 181	- 177	- 149	- 148	- 121	- 107	- 97	- 147	- 11	- 13
Whiffin.....	352	2 Auxiliary compensation.	+ 304	+ 185	+ 174	+ 173	+ 184	+ 147	+ 159	+ 289	+ 260	+ 59	+ 346	+ 250
Highley.....	5413	2 Auxiliary compensation.	- 123	- 149	- 186	- 189	- 117	- 24	- 102	- 26	- 04	- 22	- 13	- 11
Brotherton.....	5417	2 Construction as in former years.	- 98	- 127	- 128	- 146	- 109	- 132	- 140	+ 23	+ 05	- 106	- 01	+ 34
Lowry.....	778	2 Auxiliary compensation.	+ 823	+ 224	+ 194	+ 271	+ 258	+ 176	+ 219	+ 484	+ 386	+ 120	+ 441	+ 476
Seewill.....	3064	2 Auxiliary compensation.	+ 87	+ 81	+ 34	+ 51	+ 36	+ 9	+ 13	+ 147	+ 104	- 15	+ 103	+ 134
Gowland.....	1285	2 Ordinary construction with slight alteration.	+ 37	+ 21	+ 43	+ 27	+ 35	+ 108	+ 112	+ 47	+ 49	- 189	- 11	- 20
Shepherd and Son.....	1789	2 Auxiliary to balance.	- 93	- 93	- 211	- 242	- 222	- 168	- 123	- 114	- 131	- 148	- 92	- 93
Davison.....	4793	2 Auxiliary compensation.	- 174	- 148	- 146	- 135	- 121	- 108	- 85	- 01	- 54	- 60	+ 33	- 24
Webb.....	5608	2 Auxiliary as in former years.	- 131	+ 117	+ 102	+ 107	+ 114	+ 105	+ 91	+ 154	+ 143	+ 21	+ 124	+ 128
Marshall and Sons.....	2854	2 Poole's auxiliary.	- 95	- 83	- 85	- 99	- 18	- 33	+ 16	+ 23	- 12	- 17	- 41	- 34
Seewill.....	3064	2 Auxiliary compensation.	- 95	- 83	- 85	- 99	- 18	- 33	+ 16	+ 23	- 12	- 17	- 41	- 34
McGregor and Co.....	4580	2 Auxiliary to balance acting at low temperatures.	- 143	- 167	- 133	- 184	- 161	+ 20	- 170	+ 32	+ 114	+ 24	+ 56	+ 16
Russell and Son.....	2089	2 Auxiliary acting in cold.	- 92	- 135	- 98	- 148	- 114	- 81	- 163	- 49	- 59	- 149	- 66	- 121
Chronometrical Thermometer.....			+ 2175	+ 2068	+ 1930	+ 1928	+ 1885	+ 1864	+ 1435	+ 1166	+ 1139	+ 1125	+ 888	+ 873
Extremes of Temperature as shown by the Self-Registering Thermometers.....			35-41	38-40	38-45	38-45	39-46	43-52	41-51	46-56	48-56	48-54	48-56	43-56

The sign + indicates that the rate is gaining.

† 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.

Chronometrical Thermometer differs from an ordinary Chronometer only in the construction of the balance, the positions of the metals forming the compensating ring being reversed. By this arrangement the effect of temperature is much mitigated.

IN THE ORDER OF TEMPERATURE, AS DETERMINED BY THE CHRONOMETRICAL THERMOMETER.

																				NAME OF MAKER.	No.
April 12-19	May 17-24	May 31-7	July 10-17	June 12-19	June 24-31	July 2-9	Aug. 12-19	July 26-31 to Aug. 2	March 19-26	March 31-5	March 8-15	March 22-29	March 31-1	May 29-31 to Apr. 3	June 14-21	May 31 to June 7	June 7-14				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
- 60	- 63	- 69	- 68	- 84	- 73	- 70	- 81	- 81	- 77	- 51	- 44	- 46	- 50	- 43	- 61	- 47	- 46	Wickert	2300		
+ 03	+ 31	+ 14	+ 03	+ 26	+ 14	- 07	- 18	- 02	- 07	- 00	- 19	- 04	- 08	- 02	- 13	- 13	- 13	Usher and Cole	2317		
- 95	- 84	- 82	- 87	- 78	- 78	- 88	- 78	- 80	- 89	- 115	- 110	- 110	- 116	- 98	- 99	- 86	- 89	Kullberg	1885		
- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	- 97	Wickert	2330		
+ 154	+ 170	+ 162	+ 22	+ 25	+ 05	+ 40	+ 26	+ 34	+ 14	+ 14	+ 61	+ 57	+ 73	+ 128	+ 91	+ 130	+ 147	Davison	4884		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
+ 14	+ 28	+ 26	+ 50	+ 36	+ 16	+ 40	+ 43	+ 48	+ 30	+ 15	+ 25	+ 20	+ 20	+ 05	- 03	- 09	- 27	Kullberg	1885		
+ 33	+ 05	+ 04	+ 12	+ 81	+ 80	+ 99	+ 124	+ 115	+ 113	+ 09	+ 09	+ 09	+ 09	+ 09	+ 09	+ 09	+ 09	Marshall and Sons	2854		
+ 09	- 23	- 44	- 35	- 41	- 49	- 39	- 14	- 24	- 26	- 48	- 71	- 62	- 53	- 50	- 33	- 60	- 57	Seewill	3507		
- 87	- 69	- 67	- 68	- 69	- 73	- 69	- 24	- 20	- 31	- 114	- 126	- 111	- 93	- 77	- 32	- 29	- 08	Shepherd and Son	1787		
- 84	- 91	- 55	- 84	- 103	- 63	- 39	- 57	- 49	- 135	- 111	- 126	- 96	- 138	- 113	- 91	- 109	- 109	Glover	387		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
- 81	+ 46	+ 49	- 07	- 78	- 102	- 58	- 03	- 20	- 00	- 94	- 64	- 94	- 12	- 74	- 102	- 58	- 113	Parkinson & Bouts	1165		
+ 44	+ 77	+ 31	+ 110	+ 97	+ 98	+ 114	+ 100	+ 144	+ 81	+ 83	+ 100	+ 103	+ 103	+ 103	+ 103	+ 103	+ 103	Keys	260		
+ 66	+ 87	+ 71	+ 97	+ 70	+ 81	+ 73	+ 86	+ 74	+ 64	+ 27	+ 20	- 07	- 01	- 19	- 00	- 18	- 13	Chittenden	793		
+ 55	+ 29	+ 26	+ 45	+ 36	+ 36	+ 65	+ 87	+ 61	- 40	+ 107	+ 152	+ 79	+ 79	+ 69	+ 67	+ 85	+ 100	Lowry	778		
- 83	- 114	- 98	- 02	- 30	+ 39	+ 59	+ 21	+ 40	+ 43	- 15	- 18	- 20	- 10	- 10	- 10	- 10	- 10	Quilliam	559		
- 83	- 114	- 98	- 02	- 30	+ 39	+ 59	+ 21	+ 40	+ 43	- 15	- 18	- 20	- 10	- 10	- 10	- 10	- 10	Gowland	2293		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
+ 14	- 03	- 10	+ 25	+ 20	+ 09	+ 34	+ 31	+ 41	+ 44	+ 23	+ 03	+ 48	+ 16	+ 40	+ 30	+ 05	+ 03	Parkinson & Bouts	1165		
- 92	- 14	- 42	- 78	- 100	- 95	- 110	- 83	- 84	- 58	- 134	- 118	- 08	- 23	- 95	- 57	- 00	- 33	J. Fletcher	2679		
+ 131	+ 166	+ 149	+ 155	+ 139	+ 126	+ 143	+ 135	+ 134	+ 120	+ 63	+ 41	+ 73	+ 148	+ 73	+ 130	+ 136	+ 126	Lowry	778		
+ 21	+ 99	+ 99	+ 135	+ 113	+ 81	+ 132	+ 140	+ 141	+ 150	+ 140	+ 141	+ 150	+ 140	+ 141	+ 150	+ 140	+ 141	Quilliam	17917		
+ 211	+ 225	+ 215	+ 260	+ 204	+ 290	+ 266	+ 293	+ 271	+ 244	+ 120	+ 120	+ 110	+ 159	+ 120	+ 216	+ 190	+ 187	Isaac	1139		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
- 172	- 201	- 223	- 95	- 117	- 120	- 99	- 58	- 64	- 86	- 123	- 90	- 164	- 159	- 128	- 110	- 146	- 167	Whiffin	361		
+ 15	+ 52	+ 24	+ 25	+ 00	+ 31	+ 15	+ 26	+ 24	- 63	- 60	- 63	- 60	- 63	- 60	- 63	- 60	- 63	J. B. Fletcher	2330		
- 128	- 179	- 169	- 170	- 150	- 132	- 175	- 140	- 140	- 96	- 49	- 35	- 82	- 138	- 95	- 120	- 145	- 129	Seewill	3064		
+ 61	+ 115	+ 110	+ 185	+ 175	+ 176	+ 185	+ 201	+ 195	+ 195	+ 107	+ 115	+ 133	+ 164	+ 140	+ 184	+ 109	+ 187	Key	261		
+ 70	+ 32	- 27	- 90	- 93	+ 136	+ 76	+ 84	+ 83	+ 94	+ 134	+ 110	+ 140	+ 116	+ 191	+ 192	+ 176	+ 201	Isaac	1135		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
+ 61	+ 106	- 81	- 70	- 52	+ 62	+ 75	+ 83	+ 76	- 94	- 51	- 34	- 10	+ 97	+ 03	+ 123	+ 110	+ 60	Hemsey	4869		
- 17	- 32	- 01	- 29	- 10	- 13	- 26	- 08	- 17	- 27	- 31	- 33	- 13	- 40	- 15	- 10	- 60	- 60	Williams	123		
- 252	- 266	- 225	- 257	- 241	- 230	- 245	- 231	- 228	- 220	- 173	- 141	- 143	- 143	- 143	- 143	- 143	- 143	Whiffin	352		
+ 89	+ 20	+ 11	+ 15	+ 00	+ 01	+ 21	+ 39	+ 25	+ 25	+ 07	+ 23	+ 04	- 12	- 10	- 24	- 27	- 47	Brotherton	5417		
+ 09	- 30	- 11	+ 15	+ 00	+ 01	+ 21	+ 39	+ 25	+ 25	+ 07	+ 23	+ 04	- 12	- 10	- 24	- 27	- 47				
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
+ 408	+ 473	+ 448	+ 497	+ 463	+ 442	+ 491	+ 466	+ 446	+ 448	+ 245	+ 238	+ 263	+ 285	+ 296	+ 311	+ 358	+ 368	Lowry	778		
+ 116	+ 152	+ 94	+ 125	+ 126	+ 136	+ 156	- 91	- 25	- 39	- 20	+ 15	+ 103	+ 102	+ 122	+ 133	+ 49	+ 51	J. Fletcher	2921		
+ 09	- 49	- 215	- 198	- 150	+ 213	+ 193	+ 154	+ 124	+ 106	+ 25	+ 23	+ 59	+ 105	+ 71	+ 96	+ 97	+ 107	Gowland	1285		
- 94	- 95	- 84	- 94	- 103	- 99	- 102	- 108	- 100	- 31	- 10	- 24	- 50	- 45	- 90	- 83	- 97	- 107	Shepherd and Son	1789		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
- 04	+ 55	+ 30	+ 110	+ 141	+ 193	+ 149	+ 73	+ 89	+ 70	+ 95	+ 67	+ 146	+ 197	+ 159	+ 107	+ 153	+ 159	Davison	4793		
- 118	- 155	- 150	- 120	- 110	- 113	- 110	- 116	- 110	- 116	- 110	- 110	- 110	- 110	- 110	- 110	- 110	- 110	Webb	327		
- 19	- 42	- 38	- 26	- 26	- 48	- 67	- 86	- 76	- 48	- 15	- 102	- 126	- 185	- 192	- 227	- 281	- 281	Marshall and Sons	4442		
+ 227	+ 309	+ 326	+ 495	+ 326	+ 262	+ 404	+ 416	+ 399	+ 389	- 92	- 87	- 37	- 245	- 61	- 97	- 120	- 87	Seewill	3537		
- 87	- 56	- 62	- 30	- 80	- 78	- 23	- 100	- 100	- 25	- 84	- 62	- 33	- 183	- 26	- 124	- 95	- 95	McGrigor and Co	2080		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
- 25	- 90	- 74	- 67	- 55	- 11	- 71	...	+ 104	+ 39	- 83	- 89	- 22	- 48	+ 34	- 26	- 40	- 36	Russell and Son	5080		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
+ 884	+ 825	+ 810	+ 845	+ 815	+ 773	+ 795	+ 765	+ 801	+ 630	- 611	- 619	- 1215	- 1321	- 1321	- 1277	- 1580	- 2045	- 2311	Chronometrical Thermometer		
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
48-62	52-51	54-60	53-50	55-52	54-23	56-33	57-24	60-73	64-73	64-78	58-79	65-79	66-85	76-85	76-89	82-90	81-95	83-95	(Extremes of Temperature shown by the Chronometrical Thermometer)		

NAME OF MAKER.	No.	ADDRESS OF MAKER.	Construction of Escapement 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 Days of Rating.	Least Weekly Sum.
Waichert	3300	2 119, Rothay Terrace, Bute Docks, Cardiff.	Flat rim balance, without auxiliary.	January 11	August 9	30	- 9
Usher and Cole	2177	2 46, St. John's Square, Clerkenwell, London.	Auxiliary to balance.	January 11	August 9	30	- 8
Kulberg	2177	2 105, Liverpool Road, London.	Kulberg's flat rim balance, without auxiliary.	January 11	August 9	30	-14-6
Waichert	2329	2 119, Rothay Terrace, Bute Docks, Cardiff.	Auxiliary compensation.	January 11	August 9	30	- 4
Davison	4684	2 6, Side, Newcastle-on-Tyne.	Auxiliary compensation.	January 11	August 9	30	+ 4-6
Kulberg	1885	2 105, Liverpool Road, London.	Improved ordinary balance.	January 11	August 9	30	- 6-8
Muirhead and Sons	2854	2 30, Buchanan Street, Glasgow.	Kulberg's flat rim balance, without auxiliary.	January 11	August 9	30	- 2-8
Seville	3070	2 20, Cornhill, London.	Auxiliary compensation.	January 11	August 9	30	- 7-1
Shepherd and Son	1787	2 53, Lendeshall Street, London.	Auxiliary to balance.	January 11	August 9	30	- 0-4
Glover	357	2 3, Wrotham Road, Camden New Town,	Auxiliary acting at all temperatures.	January 11	August 9	30	-13-8
Parkinson and Bouts	1165	2 59, Gracechurch Street, London.	Auxiliary acting in extremes of temperature.	January 11	August 9	30	-11-6
Keys	360	2 15, Craven Street, Strand, London.	Ordinary construction with slight alteration.	January 11	August 9	30	- 2-6
Chittenden	793	2 10, Wilton Road, Hackney, London.	Auxiliary as in former years.	January 11	August 9	30	- 3-9
J. B. Fletcher	3369	2 148, Lendeshall Street, London.	Auxiliary compensation.	January 11	August 9	30	-20-5
Gowland	2393	2 178, High Street West, Sunderland.	Auxiliary compensation.	January 11	August 9	30	- 3-5
Parkinson and Bouts	1138	2 59, Gracechurch Street, London.	Auxiliary acting in extremes of temperature.	January 11	August 9	30	- 7-4
J. Fletcher	3079	2 148, Lendeshall Street, London.	Auxiliary compensation.	January 11	August 9	30	-13-4
Lowry	776	2 66, High Street, Belfast.	Auxiliary compensation.	January 11	August 9	30	- 1-0
Quilliam	1707	2 32, Elizabeth Street, Liverpool.	Ordinary balance with continuous auxiliary.	January 11	August 9	30	- 4-1
Issue	1139	2 147, Liverpool Road, London.	Balance as in former years, no auxiliary.	January 11	August 9	30	+11-0
Whiffin	361	2 10, Cloudesty Square, Islington, London.	Auxiliary compensation.	January 11	August 9	30	-22-3
Seville	3064	2 30, Cornhill, London.	Auxiliary compensation.	January 11	August 9	30	- 6-8
J. B. Fletcher	2969	2 148, Lendeshall Street, London.	Auxiliary compensation.	January 11	August 9	30	- 6-2
Keys	361	2 15, Craven Street, Strand, London.	Ordinary construction with slight alteration.	January 11	August 9	30	- 2-1
Issue	1135	2 147, Liverpool Road, London.	Remodelled Hartup balance.	January 11	August 9	30	+ 1-9
Hennessy	4869	2 5, Wind Street, Swansea.	Auxiliary compensation.	January 11	August 9	30	- 5-1
Williams	123	2 2, Bute Docks, Cardiff.	Auxiliary compensation.	January 11	August 9	30	-10-2
Whiffin	352	2 10, Cloudesty Square, Islington, London.	Auxiliary compensation.	January 11	August 9	30	+ 3-9
Highley	5435	2 45, High Street, Shrewsbury.	Auxiliary acting in cold.	January 11	August 9	30	-16-9
Brotherton	5417	2 11, Spencer Street, Goswell Road, London.	Construction as in former years.	January 11	August 9	30	-14-6
Lowry	778	2 66, High Street, Belfast.	Auxiliary compensation.	January 11	August 9	30	+12-0
J. Fletcher	2921	2 148, Lendeshall Street, London.	Auxiliary compensation.	January 11	August 9	30	-16-7
Seville	3067	2 31, South Castle Street, Liverpool.	Auxiliary compensation.	January 11	August 9	30	- 6-5
Gowland	1285	2 178, High Street West, Sunderland.	Ordinary construction with slight alteration.	January 11	August 9	30	-18-9
Shepherd and Son	1789	2 53, Lendeshall Street, London.	Auxiliary to balance.	January 11	August 9	30	-24-2
Davison	4793	2 6, Side, Newcastle-on-Tyne.	Auxiliary compensation.	January 11	August 9	30	-17-6
Webb	4066	2 4, Tuller's Row, Upper Street, Islington.	Construction as in former years.	January 11	August 9	30	- 1-7
Muirhead and Sons	4447	2 30, Buchanan Street, Glasgow.	Pool's auxiliary.	January 11	August 9	30	-28-1
Seville	3052	2 21, South Castle Street, Liverpool.	Auxiliary compensation.	January 11	August 9	30	+ 3-7
McGregor and Co.	4380	2 10, Clyde Place, Glasgow.	Auxiliary to balance acting at low temperatures.	January 11	August 9	30	-18-4
Russell and Son	2089	2 30 & 32, Slater Street, Liverpool.	Auxiliary acting in cold.	January 11	August 2	29	-13-6

† Sign + indicates that the rate is gaining.

† During these weeks the Chronometers were placed in the chamber of a stove heated by jets of gas. The gas flames are reported to the chamber, into which some of the injurious products of combustion can enter. In the column "Before and after the date" the positions of the symbol (†), before or after the date, indicate respectively exposure to heat in the week immediately preceding, or in the week immediately following.

PRINCIPAL CHANGES OF RATE.							
In what Week.		In what Week.		Difference between the Greatest and Least.		Before and after what Day.	
Greatest Weekly Sum.		Least Weekly Sum.		Difference between the Greatest and Least.		NAME OF MAKER.	
February 15 to 22	- 4	March 8 to 15†	5-1	9-0	March 8†	Waichert	2300
June 21 to 28	+ 3-1	May 17 to 24	6-7	3-5	May 24†	Usher and Cole	2177
January 25 to Feb. 1	- 7-1	May 3 to 10	6-9	3-5	May 25	Kulberg	2177
January 25 to Feb. 1	+ 2-5	March 8 to 15	4-3	4-3	† April 5	Waichert	2329
January 25 to Feb. 1	+ 17-1	May 3 to 10	12-5	4-6	March 8†	Davison	4684
January 11 to 18	+ 5-0	July 12 to 19	11-8	5-2	March 8†	Kulberg	1885
February 15 to 22	+ 13-4	August 2 to 9	15-5	4-2	May 24†	Muirhead and Sons	2854
March 8 to 15†	12-6	March 8 to 15	12-6	7-6	† April 5	Seville	3070
February 1 to 8	+ 12-6	March 8 to 15	10-0	6-7	March 8†	Shepherd and Son	1787
March 29 to April 5†	+ 3-0	February 1 to 8	13-8	6-7	February 15	Glover	357
April 5 to 12	+ 4-9	May 10 to 17	16-5	7-0	March 8†	Parkinson and Bouts	1165
January 11 to 18	+ 15-0	August 2 to 9	17-8	6-8	January 18	Keys	360
January 11 to 18	9-7	July 12 to 19	12-6	6-8	Chittenden	793	
January 11 to 18	- 2-4	April 26 to May 3	1-1	6-8	May 24†	J. B. Fletcher	3369
March 8 to 15†	+ 11-4	May 17 to 24	14-9	9-5	March 8†	Gowland	2393
February 15 to 22	+ 6-3	March 8 to 15†	13-4	10-1	March 8†	Parkinson and Bouts	1138
March 15 to 22†	+ 10-0	May 31 to June 7†	10-8	10-8	March 8†	J. Fletcher	3079
January 11 to 18	+ 19-4	April 26 to May 3	2-7	7-7	January 18	Lowry	776
April 5 to 12	+ 14-3	August 2 to 9	18-4	8-5	Quilliam	1707	
March 22 to 29†	+ 29-9	August 2 to 9	18-9	8-4	† April 5	Issue	1139
May 10 to 17	- 5-4	February 1 to 8	14-9	10-0	March 8†	Whiffin	361
March 29 to April 5†	+ 7-8	Feb. 22 to March 1	18-4	12-0	March 8†	Seville	3064
February 1 to 8	+ 17-9	May 17 to 24	24-1	7-4	July 19	J. B. Fletcher	2969
January 11 to 18	+ 20-1	August 2 to 9	22-2	8-5	March 8†	Keys	361
January 11 to 18	+ 23-1	June 7 to 14†	21-2	9-4	May 24†	Issue	1135
March 15 to 22†	+ 12-3	Apr. 26 to May 3; June 14 to 21†	17-4	12-3	March 8†	Hennessy	4869
February 1 to 8	+ 3-3	May 8 to 10; August 2 to 9	28-5	10-0	March 8†	Williams	123
January 11 to 18	+ 24-3	July 26 to August 2	32-8	12-3	† April 5	Whiffin	352
January 25 to Feb. 1	- 0-1	May 17 to 24	18-5	15-2	January 25	Highley	5435
February 15 to 22	+ 3-9	August 2 to 9	18-5	16-3	March 8†	Brotherton	5417
January 11 to 18	+ 49-7	July 12 to 19	37-7	9-0	† April 5	Lowry	778
June 28 to July 5	+ 15-2	July 17 to 24	31-9	12-1	July 19	J. Fletcher	2921
January 11 to 18	34-3	July 26 to August 2	32-8	12-3	January 18	Seville	3067
January 11 to 18	+ 1-0	July 26 to August 2	31-8	13-7	March 1	Gowland	1285
February 15 to 22	- 12-4	March 8 to 15†	23-3	18-5	March 8†	Shepherd and Son	1789
February 1 to 8	+ 16-7	June 14 to 21†	34-3	14-9	March 8†	Davison	4793
March 15 to 22†	+ 30-7	July 7 to 14†	30-7	12-9	† June 21	Webb	4066
June 7 to 14†	+ 2-4	April 5 to 12	30-5	20-2	† April 5	Muirhead and Sons	4447
March 15 to 22	+ 48-5	July 12 to 19	38-8	18-9	† June 21	Seville	3052
February 15 to 22	+ 13-4	May 31 to June 7†	31-8	20-2	March 8†	McGregor and Co.	4380
March 1 to 8	+ 10-4	July 26 to August 2	26-7	9-3	† April 5	Russell and Son	2089

The Chronometers are placed in order of merit, their respective positions being determined by consideration of the irregularities of rate exhibited in the Table above. The Chronometer Russell and Son 2089 was found stopped on August 7. On examination by the maker it appeared that the main-spring had broken. On account of the shorter duration of trial the rates of this Chronometer are placed in a separate division at the foot of the general list.