1885GOAMM..45I...1C

RATES OF CHRONOMETERS

ON TRIAL

FOR PURCHASE BY THE BOARD OF ADMIRALTY,

AT THE

ROYAL OBSERVATORY, GREENWICH.

1884.

A 10953. 800.—8/84. Wt. 21790. E. & S.

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(I.)—WEEKLY SUMS OF DAILY RATES

NAME OF MAKER.	No.	Whether 2 or 4 Days.	Construction of Escapement and Balance, from the Description furnished by the Maker.	Jan. 12–19	Jan. 19–26	Jan. 26 to Feb. 2	Feb. 2–9	Feb. 9–16	Feb. 16–23	Feb. 23 to Mar. 1	Mar. 1–8 †	Mar. 8–15 †	Mar. 15–22 †	Mar. 22–29 †
				s	s	s	s	s	s	s	s	s	s	s
Brunner	3777	2	Airy's compensation arm. [balance.	+ 1·1	+ 2·5	+ 3·6	+ 3·6	+ 3·3	+ 4·0	+ 3·9	+ 0·7	− 1·4	− 4·0	− 2·4
C. Frodsham & Co.	0003	2	Charles Frodsham's three-bar compensation	− 24·2	− 23·9	− 22·0	− 21·0	− 17·9	− 18·9	− 18·7	− 19·0	− 16·5	− 19·0	− 18·7
Penlington	2211	2	Auxiliary compensation. Palladium spring.	− 5·1	− 1·4	− 0·7	− 2·5	− 3·8	− 4·1	− 2·7	− 5·4	− 7·0	− 9·6	− 11·7
Isaac	1669	2	Auxiliary construction acting upon jewels.	+ 0·5	+ 2·5	+ 0·2	+ 0·9	+ 1·9	+ 1·6	+ 2·1	+ 5·1	+ 7·2	+ 7·7	+ 6·6
Birchall	1382	2	Ordinary balance, with slight alterations.	− 1·1	+ 3·1	+ 5·0	+ 4·9	+ 5·6	+ 6·0	+ 6·5	+ 0·2	+ 3·2	+ 1·0	− 1·5
Williams	3690	2	Ordinary balance, with auxiliary compensation.	− 19·5	− 19·8	− 20·3	− 20·6	− 20·2	− 20·0	− 17·7	− 11·3	− 9·1	− 8·4	− 10·8
Moore	5756	2	Auxiliary to balance. Airy's compensation arm.	+ 4·6	+ 6·4	+ 8·0	+ 6·5	+ 6·9	+ 7·4	+ 6·4	+ 10·2	+ 11·4	+ 10·8	+ 11·6
Shepherd	1832	2	Auxiliary to balance.	+ 2·7	+ 3·6	+ 3·8	+ 1·7	+ 3·6	+ 2·7	+ 4·3	+ 1·4	− 2·0	− 2·6	+ 4·6
James Poole & Co.	5713	2	Poole's auxiliary.	− 9·9	− 10·3	− 8·3	− 12·4	− 13·5	− 13·2	− 14·3	− 10·9	− 8·2	− 15·0	− 9·1
Reid and Sons	5781	2	Auxiliary compensation. Palladium spring.	− 1·8	− 0·9	− 1·1	− 2·9	− 1·7	− 2·6	− 1·3	+ 5·3	+ 8·9	+ 9·7	+ 11·5
Heap	6480	2	Auxiliary for cold. Airy's compensation arm.	+ 5·6	+ 5·7	+ 5·4	+ 8·6	+ 9·4	+ 10·7	+ 11·8	+ 10·5	+ 11·4	+ 13·1	+ 16·2
Nelson	3876	2	Ordinary escapement. Auxiliary gaining in cold.	+ 9·6	+ 10·4	+ 11·6	+ 12·4	+ 10·1	+ 12·5	+ 13·9	+ 14·7	+ 20·4	+ 20·4	+ 17·5
Penlington	2210	2	Auxiliary compensation. Palladium spring.	− 28·2	− 29·3	− 26·4	− 28·2	− 26·8	− 27·2	− 27·4	− 29·7	− 27·0	− 23·9	− 17·2
Isaac	1670	2	Auxiliary balance without auxiliary.	− 15·6	− 14·2	− 14·0	− 15·9	− 17·1	− 15·0	− 17·9	− 7·0	− 3·5	− 6·0	− 6·3
McInnes	5791	2	Double auxiliary to balance.	− 18·5	− 12·6	− 10·8	− 16·9	− 14·8	− 13·5	− 11·2	− 17·2	− 19·0	− 21·5	− 15·5
Lawson	2358	8	Auxiliary, acting in heat and cold.	+ 15·7	+ 17·3	+ 17·7	+ 15·5	+ 12·7	+ 15·1	+ 16·1	+ 10·6	+ 13·5	+ 15·0	+ 16·7
Kullberg	4146	8	Reversed detent, with short spring.	+ 1·0	+ 0·9	+ 0·5	+ 1·3	+ 1·5	+ 1·4	+ 2·3	+ 0·6	+ 1·7	+ 2·3	+ 4·8
Sewill	4425	2	Auxiliary compensation.	− 13·9	− 12·0	− 12·1	− 11·3	− 11·6	− 10·7	− 9·8	− 7·3	− 2·0	− 4·3	− 7·7
Shepherd	1834	2	Auxiliary to balance.	− 9·8	− 9·7	− 10·1	− 10·7	− 7·9	− 9·5	− 7·4	− 14·3	− 20·9	− 27·6	− 19·2
Keys	450	2	Auxiliary compensation.	+ 18·0	+ 20·6	+ 19·2	+ 21·0	+ 19·6	+ 22·1	+ 22·7	+ 26·8	+ 29·6	+ 29·9	+ 35·0
Reid and Sons	5785	2	Auxiliary compensation. Palladium spring.	− 16·7	− 11·5	− 4·7	− 8·8	− 9·3	− 8·4	− 7·7	− 8·3	− 11·8	− 9·5	− 2·8
Pyott	818	2	Auxiliary compensation.	+ 3·7	+ 9·0	+ 8·9	+ 8·8	+ 7·8	+ 9·1	+ 9·4	+ 8·6	+ 8·6	+ 8·8	+ 14·7
Nelson	2901	2	Ordinary escapement. Double auxiliary.	− 1·1	− 0·9	+ 2·9	+ 3·0	+ 4·0	− 4·2	− 2·8	+ 0·8	+ 6·6	+ 6·6	− 2·1
Webster	731	2	Ordinary balance. Palladium spring.	− 4·7	− 2·2	− 1·0	+ 1·4	+ 4·3	+ 2·5	+ 8·8	+ 14·4	+ 20·0	+ 22·5	+ 25·9
Hennessy	3874	2	Auxiliary compensation to balance.	− 11·1	− 11·7	− 11·7	− 11·7	− 9·8	− 10·5	− 8·5	− 11·5	− 11·5	− 18·9	− 13·1
James Poole & Co.	5796	2	Poole's auxiliary.	− 5·7	− 6·3	− 4·5	− 8·1	− 5·6	− 9·1	− 9·6	− 4·1	+ 7·9	+ 7·6	+ 9·8
Oram and Son	19181	2	Ordinary balance.	− 7·2	− 10·8	− 12·2	− 8·2	− 4·1	− 3·4	− 1·2	+ 11·1	+ 12·6	+ 13·0	+ 19·5
Schoof	6044	2	Schoof's improved resilient lever escapement.	− 7·8	+ 0·1	+ 2·0	+ 0·8	+ 1·0	+ 2·9	+ 2·8	− 10·7	− 17·8	− 15·8	− 7·5
Hennessy	3784	2	Auxiliary compensation to balance.	− 7·2	− 6·0	− 3·5	− 3·4	− 4·8	− 3·7	− 3·6	+ 2·5	+ 5·6	+ 7·1	+ 5·3
Keys	880	2	Auxiliary to balance.	+ 9·8	+ 9·6	+ 11·7	+ 10·2	+ 11·0	+ 12·6	+ 14·4	+ 13·1	+ 8·6	+ 6·7	+ 9·7
Schoof	6050	2	Schoof's improved resilient lever escapement.	− 8·9	− 6·2	− 7·0	− 8·0	− 13·3	− 20·5	− 5·9	− 17·9	− 19·1	− 11·3	− 0·9
Oram and Son	18750	2	Auxiliary compensation.	− 2·8	− 2·5	− 3·0	− 2·8	− 0·1	− 1·2	+ 2·3	+ 37·8	+ 30·4	+ 31·0	+ 32·9
Kullberg	4075	2	Reversed detent, with short spring.	+ 3·2	+ 0·7	− 1·1	− 0·4	− 0·5	− 1·3	− 0·2	− 5·4	− 1·6	+ 8·6	+ 13·1
Edward and Sons	3688	2	Improved ordinary balance.	+ 14·8	+ 16·8	+ 18·9	+ 19·8	+ 16·8	+ 20·0	+ 20·9	+ 14·0	+ 16·0	+ 12·4	+ 16·6
Chronometrical Thermometer.			.....	+ 983·5	+ 1087·8	+ 1121·6	+ 1105·4	+ 997·0	+ 1120·5	+ 1020·2	− 2746·1	− 2784·9	− 3144·7	− 2727·4
Mean Weekly Temperature			.....	52·3	50·5	49·6	50·0	51·9	50·8	51·9	91·3	91·7	94·5	90·4
Extremes of Temperature as shown by the Self-Registering Thermometers			.....	48—60	47—53	44—54	48—52	48—57	47—55	47—56	82—100	85—99	86—105	83—96

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.

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

IN THE ORDER OF TIME.

Mar. 29 to Apr. 5	April 5–12	April 12–19	Apr. 19–26	Apr. 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	NAME OF MAKER.	No.
s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s		
− 1·1	− 1·6	+ 0·8	+ 0·8	+ 0·8	+ 0·5	− 1·1	− 1·6	− 1·6	− 1·3	− 0·9	− 1·6	− 0·3	+ 1·3	+ 2·7	+ 2·5	+ 1·0	Brunner	3777
− 23·5	− 23·5	− 22·3	− 20·5	− 21·5	− 22·6	− 23·2	− 24·3	− 24·4	− 24·3	− 23·1	− 19·6	− 19·1	− 20·4	− 20·5	− 20·8	− 20·3	C. Frodsham & Co.	0003
− 10·6	− 8·3	− 4·3	− 0·2	− 1·2	− 4·2	− 8·3	− 6·9	− 8·5	− 8·7	− 8·8	− 12·8	− 10·4	− 10·4	− 8·7	− 9·8	− 9·5	Penlington	2211
+ 2·5	+ 11·6	+ 12·1	+ 10·3	+ 9·3	+ 8·5	+ 10·0	+ 7·4	+ 7·1	+ 7·4	+ 6·3	+ 11·5	+ 10·4	+ 10·0	+ 9·6	+ 9·2	+ 8·1	Isaac	1669
+ 2·5	+ 4·6	+ 5·3	+ 6·6	+ 7·0	+ 8·4	+ 7·8	+ 4·1	+ 5·2	+ 5·3	+ 4·1	+ 1·1	+ 5·3	+ 3·8	+ 4·4	+ 7·2	+ 8·7	Birchall	1382
− 18·2	− 18·7	− 19·7	− 20·9	− 20·8	− 19·8	− 18·0	− 12·7	− 13·1	− 11·3	− 11·5	− 15·9	− 15·8	− 13·4	− 12·9	− 13·1	− 14·1	Williams	3690
+ 6·6	+ 8·2	+ 9·3	+ 9·6	+ 11·4	+ 11·1	+ 10·6	+ 14·4	+ 14·5	+ 13·8	+ 15·0	+ 6·6	+ 8·6	+ 13·0	+ 15·6	+ 14·4	+ 11·9	Moore	5756
+ 6·9	+ 6·7	+ 3·5	+ 3·4	+ 3·8	+ 4·3	+ 5·9	+ 2·9	+ 3·2	+ 4·7	+ 4·6	+ 10·2	+ 11·3	+ 11·4	+ 10·4	+ 8·2	+ 7·9	Shepherd	1832
− 16·9	− 16·5	− 19·0	− 15·8	− 16·1	− 13·4	− 7·2	− 7·9	− 9·0	− 8·3	− 7·2	− 11·5	− 6·5	− 4·6	− 4·6	− 6·0	− 5·5	James Poole & Co.	5713
+ 8·4	+ 7·5	+ 8·3	+ 5·1	+ 2·9	+ 4·7	+ 6·9	+ 10·7	+ 11·1	+ 12·8	+ 13·2	+ 11·8	+ 11·7	+ 12·7	+ 13·1	+ 12·0	+ 12·0	Reid and Sons	5781
+ 9·3	+ 11·5	+ 13·5	+ 14·0	+ 16·2	+ 16·6	+ 18·2	+ 20·6	+ 19·1	+ 19·9	+ 20·1	+ 20·1	+ 20·2	+ 21·5	+ 20·5	+ 23·0	+ 26·5	Heap	6480
+ 23·5	+ 22·2	+ 24·9	+ 28·8	+ 28·1	+ 24·7	+ 16·8	+ 21·7	+ 24·4	+ 27·5	+ 26·1	+ 26·6	+ 20·7	+ 17·6	+ 17·3	+ 18·8	+ 20·4	Nelson	3876
− 13·3	− 9·2	− 11·2	− 10·3	− 10·3	− 10·1	− 8·6	− 10·5	− 11·8	− 10·7	− 9·4	− 7·9	− 5·8	− 6·8	− 6·3	− 6·9	− 7·1	Penlington	2210
− 17·7	− 19·8	− 20·3	− 18·9	− 19·5	− 19·5	− 20·4	− 17·7	− 17·5	− 16·6	− 16·9	− 19·1	− 16·9	− 13·9	− 14·7	− 11·8	− 18·0	Isaac	1670
− 11·3	− 12·9	− 11·8	− 9·6	− 12·9	− 13·1	− 11·4	− 10·0	− 11·6	− 9·7	− 7·8	− 1·9	+ 0·5	+ 3·3	+ 4·3	+ 4·2	+ 3·5	McInnes	5791
+ 25·2	+ 20·8	+ 19·2	+ 21·0	+ 19·6	+ 19·9	+ 21·8	+ 19·1	+ 20·0	+ 23·9	+ 25·6	+ 30·1	+ 28·9	+ 30·2	+ 30·5	+ 31·7	+ 31·2	Lawson	2358
+ 8·9	+ 7·5	+ 6·8	+ 7·4	+ 7·2	+ 7·9	+ 6·9	+ 3·1	+ 5·1	+ 6·4	+ 12·0	+ 13·2	+ 10·5	− 0·1	− 2·5	− 2·4	− 4·0	Kullberg	4146
− 1·5	− 5·4	− 6·9	− 8·3	− 6·9	− 6·7	− 4·6	+ 3·9	+ 6·5	+ 10·0	+ 10·9	+ 3·1	− 2·0	− 0·1	+ 0·0	− 3·0	− 5·0	Sewill	4425
− 15·9	− 9·7	− 12·9	− 13·8	− 12·1	− 8·6	− 3·6	− 10·9	− 11·8	− 10·7	− 8·4	− 7·5	− 2·5	− 0·6	− 1·3	− 1·5	− 1·5	Shepherd	1834
+ 22·3	+ 23·0	+ 25·9	+ 26·5	+ 26·6	+ 23·9	+ 27·5	+ 31·8	+ 32·6	+ 34·9	+ 34·8	+ 30·0	+ 33·5	+ 39·1	+ 37·4	+ 37·1	+ 36·5	Keys	450
− 10·2	− 12·2	− 6·8	− 3·2	− 8·3	− 8·9	− 3·1	+ 7·0	+ 6·4	+ 5·1	+ 3·2	− 3·2	+ 2·0	+ 8·0	+ 8·6	+ 6·1	+ 5·7	Reid and Sons	5785
+ 13·0	+ 21·1	+ 18·6	+ 18·3	+ 19·4	+ 21·5	+ 24·9	+ 22·2	+ 18·4	+ 18·9	+ 19·6	+ 21·5	+ 32·5	+ 30·5	+ 31·7	+ 34·9	+ 34·3	Pyott	818
+ 3·0	− 0·9	+ 0·2	+ 0·7	+ 1·6	+ 0·5	− 3·5	+ 4·1	− 7·2	+ 7·8	+ 2·9	− 6·9	+ 10·0	− 10·5	− 13·8	− 10·0	− 9·0	Nelson	2901
+ 15·5	+ 14·8	+ 12·9	+ 13·3	+ 14·4	+ 17·3	+ 19·0	+ 23·4	+ 23·6	+ 25·4	+ 24·7	+ 23·9	+ 23·3	+ 24·0	+ 25·7	+ 27·1	+ 27·3	Webster	731
− 1·4	+ 2·4	+ 0·4	− 0·4	+ 2·1	+ 4·0	+ 6·5	− 6·9	− 9·5	− 7·6	+ 3·1	+ 4·9	+ 6·1	+ 6·3	+ 7·2	+ 7·3	+ 6·3	Hennessy	3874
+ 2·9	+ 0·0	− 1·5	− 1·0	+ 1·1	+ 1·0	+ 1·2	+ 9·8	+ 12·4	+ 16·0	+ 12·3	+ 2·3	+ 4·0	+ 8·5	+ 6·8	+ 5·5	+ 4·1	James Poole & Co.	5796
+ 12·1	+ 10·6	+ 5·8	+ 6·2	+ 5·7	+ 7·9	+ 12·3	+ 13·2	+ 16·1	+ 18·5	+ 15·8	+ 10·8	+ 6·7	+ 9·0	+ 10·2	+ 11·4	+ 10·1	Oram and Son	19181
− 1·6	− 1·1	− 0·2	− 4·4	− 4·4	− 3·2	+ 4·4	+ 0·9	+ 3·5	+ 3·0	− 4·1	+ 0·9	+ 12·8	+ 8·2	+ 1·8	+ 1·8	+ 10·3	Schoof	6044
− 4·0	− 4·0	− 2·0	− 5·6	− 8·2	− 14·7	− 8·1	− 4·1	− 4·3	− 1·3	− 2·6	− 20·8	− 18·0	− 14·7	− 11·9	− 10·9	− 13·1	Hennessy	3784
+ 13·3	+ 23·2	+ 31·9	+ 32·5	+ 28·5	+ 29·0	+ 25·5	+ 24·6	+ 22·1	+ 23·3	+ 24·5	+ 22·1	+ 22·4	+ 24·1	+ 19·1	+ 2·2	+ 0·8	Keys	880
+ 14·4	+ 15·2	+ 12·5	+ 12·0	+ 8·3	+ 7·6	+ 8·3	+ 0·7	+ 3·1	+ 6·9	+ 6·6	+ 4·9	+ 18·5	+ 19·5	+ 16·5	+ 12·8	+ 10·2	Schoof	6050
+ 14·4	+ 7·5	− 2·2	− 3·4	+ 2·8	+ 6·0	+ 19·5	+ 28·0	+ 23·4	+ 21·8	+ 19·4	+ 10·6	+ 18·3	+ 23·1	+ 24·0	+ 30·6	+ 19·5	Oram and Son	18750
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Kullberg	4075
+ 30·3	+ 26·6	+ 30·7	+ 34·2	+ 29·8	+ 23·9	+ 21·1	+ 20·3	+ 22·6	+ 25·0	+ 23·9	...	+ 29·6	+ 26·5	+ 25·5	...	...	Edward and Sons	3688
+ 631·4	+ 534·5	+ 944·9	+ 1056·9	+ 856·7	+ 572·8	− 77·4	− 2515·9	− 2538·0	− 2570·5	− 2392·5	− 25·5	− 365·5	− 824·8	− 808·9	− 543·8	− 296·2	Chronometrical Thermometer.	
° 55·0	° 56·9	° 52·6	° 50·9	° 52·3	° 55·8	° 63·6	° 90·4	° 90·0	° 90·4	° 89·7	° 63·4	° 67·2	° 72·0	° 72·8	° 70·1	° 66·9	Mean Weekly Temperature.	
° ° 48—61	° ° 53—60	° ° 48—55	° ° 48—56	° ° 49—56	° ° 53—61	° ° 60—69	° ° 86—95	° ° 74—95	° ° 86—94	° ° 77—97	° ° 61—67	° ° 65—72	° ° 68—76	° ° 70—76	° ° 67—73	° ° 64—69	Extremes of Temperature as shown by the Self-Registering Thermometers.	

The Chronometers are placed in order of merit, their respective positions being determined by consideration of the irregularities of rate exhibited in Table III.

Kullberg 4075. This Chronometer was withdrawn by the maker by permission of the Astronomer Royal on April 3.

Edward & Sons 3688. The mainspring of this Chronometer was found broken in the twenty-sixth week of the trial. It was removed by the maker on July 14.

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(II.)—WEEKLY SUMS OF DAILY RATES

NAME OF MAKER.	No.	Whether 2 or 8 Days.	Construction of Escapement and Balance, from the Description furnished by the Maker.	Feb. 2—9	Jan. 26 to Feb. 2	Feb. 16—23	Jan. 19—26	April 19—26	Feb. 23 to Mar. 1	Feb. 9—16	Jan. 12—19	April 12—19	April 26 to May 3	Mar. 29 to April 5
				s	s	s	s	s	s	s	s	s	s	s
Brunner	3777	2	Airy's compensation arm.	+ 3·6	+ 3·6	+ 4·0	+ 2·5	+ 0·8	+ 3·9	+ 3·3	+ 1·1	+ 0·8	+ 0·8	− 1·1
C. Frodsham & Co.	0003	2	Charles Frodsham's three-bar compensation [balance.	− 21·0	− 22·0	− 18·9	− 23·9	− 20·5	− 18·7	− 17·9	− 24·2	− 22·3	− 21·5	− 23·5
Penlington	2211	2	Auxiliary compensation. Palladium spring.	− 2·5	− 0·7	− 4·1	− 1·4	− 0·2	− 2·7	− 3·8	− 5·1	− 4·3	− 1·2	− 10·6
Isaac	1669	2	Auxiliary construction, acting upon jewels.	+ 0·9	+ 0·2	+ 1·6	+ 2·5	+ 10·3	+ 2·1	+ 1·9	+ 0·5	+ 12·1	+ 9·5	+ 8·5
Birchall	1382	2	Ordinary balance, with slight alterations.	+ 4·9	+ 5·0	+ 6·0	+ 3·1	+ 6·6	+ 6·5	+ 5·6	− 1·1	+ 5·3	+ 7·0	+ 2·5
Williams	3690	2	Ordinary balance, with auxiliary compensation.	− 20·6	− 20·3	− 20·0	− 19·8	− 20·9	− 17·7	− 20·2	− 19·5	− 19·7	− 20·8	− 18·2
Moore	5756	2	Auxiliary to balance. Airy's compensation arm.	+ 6·5	+ 8·0	+ 7·4	+ 6·4	+ 9·6	+ 6·4	+ 6·9	+ 4·6	+ 9·2	+ 11·4	+ 6·6
Shepherd	1832	2	Auxiliary to balance.	+ 1·7	+ 3·8	+ 2·7	+ 3·6	+ 3·4	+ 4·3	+ 3·6	+ 2·7	+ 3·5	+ 3·8	+ 6·9
James Poole & Co.	5713	2	Poole's auxiliary.	− 12·4	− 8·3	− 12·2	− 10·3	− 15·8	− 14·3	− 13·5	− 9·9	− 18·0	− 16·1	− 16·9
Reid and Sons	5781	2	Auxiliary compensation. Palladium spring.	− 2·9	− 1·1	− 2·6	− 0·9	+ 5·1	− 1·3	− 1·7	− 1·8	+ 5·3	+ 2·9	+ 8·4
Heap	6480	2	Auxiliary for cold. Airy's compensation arm.	+ 8·6	+ 5·4	+ 10·7	+ 5·7	+ 14·0	+ 11·8	+ 9·4	+ 5·6	+ 13·5	+ 16·2	+ 9·3
Nelson	2876	2	Ordinary escapement. Auxiliary gaining in cold.	+ 12·4	+ 11·6	+ 12·5	+ 10·4	+ 28·8	+ 13·9	+ 10·1	+ 9·6	+ 24·9	+ 28·1	+ 23·5
Penlington	2210	2	Auxiliary compensation. Palladium spring.	− 28·2	− 26·4	− 27·2	− 29·3	− 10·3	− 27·4	− 26·8	− 28·2	− 11·2	− 10·8	− 12·3
Isaac	1670	2	Ordinary balance without Auxiliary.	− 15·9	− 14·0	− 19·0	− 14·2	− 18·9	− 17·9	− 17·1	− 15·6	− 20·3	− 19·5	− 17·7
McInnes	5791	2	Double auxiliary to balance.	− 16·9	− 10·8	− 13·5	− 12·6	− 9·6	− 11·2	− 14·8	− 18·5	− 11·8	− 12·9	− 11·3
Lawson	2358	8	Auxiliary, acting in heat and cold.	+ 15·5	+ 17·7	+ 15·1	+ 17·3	+ 21·0	+ 16·1	+ 12·7	+ 15·7	+ 19·2	+ 19·6	+ 25·2
Kullberg	4146	2	Reversed detent, with short spring.	+ 1·1	+ 0·5	+ 1·4	+ 0·9	+ 7·4	+ 2·3	+ 1·5	+ 1·0	+ 6·8	+ 7·2	+ 8·9
Sewill	4425	2	Auxiliary compensation.	− 11·3	− 12·1	− 10·7	− 12·0	− 8·3	− 9·8	− 11·6	− 13·9	− 6·9	− 6·9	− 1·5
Shepherd	1834	2	Auxiliary to balance.	− 10·7	− 10·1	− 9·5	− 9·7	− 13·8	− 7·4	− 7·9	− 9·8	− 12·9	− 12·1	− 15·9
Keys	450	2	Auxiliary compensation.	+ 21·0	+ 19·2	+ 22·1	+ 20·6	+ 26·5	+ 22·7	+ 19·6	+ 18·0	+ 25·9	+ 26·6	+ 22·5
Reid and Sons	5785	2	Auxiliary compensation. Palladium spring.	− 8·8	− 4·7	− 8·4	− 11·5	− 3·2	− 7·7	− 9·3	− 16·7	− 6·8	− 8·3	− 10·2
Pyott	818	2	Auxiliary compensation.	+ 8·8	+ 8·9	+ 9·1	+ 9·0	+ 18·3	+ 9·4	+ 7·8	+ 3·7	+ 18·6	+ 19·4	+ 13·0
Nelson	2901	2	Ordinary escapement. Double auxiliary.	− 2·0	− 2·9	− 4·2	0·0	+ 0·7	− 2·8	− 4·0	− 1·1	+ 0·2	+ 1·6	+ 3·0
Webster	731	2	Ordinary balance. Palladium spring.	+ 1·4	− 1·0	+ 5·5	− 2·2	+ 12·3	+ 8·8	+ 4·3	− 4·7	+ 12·9	+ 14·4	+ 15·5
Hennessy	3874	2	Auxiliary compensation to balance.	− 11·7	− 11·7	− 10·5	− 11·7	− 0·4	− 8·5	− 9·8	− 11·1	+ 0·4	+ 2·1	− 1·4
James Poole & Co.	5796	2	Poole's auxiliary.	− 8·1	− 4·5	− 9·1	− 6·3	− 1·0	− 9·6	− 5·6	− 5·7	− 1·5	+ 1·1	+ 2·8
Oram and Son	19181	2	Ordinary balance.	− 8·3	− 12·2	− 3·4	− 10·8	+ 6·2	− 1·2	− 4·1	− 7·2	+ 5·8	+ 5·7	+ 12·1
Schoof	6044	2	Schoof's improved resilient lever escapement.	+ 0·8	+ 2·0	− 2·9	+ 0·1	− 4·4	− 2·8	− 1·0	− 7·8	− 9·2	− 4·4	− 1·6
Hennessy	3784	2	Auxiliary compensation to balance.	− 3·4	− 3·5	− 3·7	− 6·0	− 1·4	− 3·6	− 4·8	− 7·2	− 0·2	− 5·6	− 4·0
Keys	880	2	Auxiliary to balance.	+ 10·2	+ 11·7	+ 12·6	+ 9·6	+ 32·5	+ 14·4	+ 11·0	+ 9·8	+ 31·9	+ 28·5	+ 15·3
Schoof	6050	2	Schoof's improved resilient lever escapement.	− 8·9	− 7·0	− 20·5	− 6·2	+ 12·0	− 5·9	− 13·3	− 8·9	+ 12·5	+ 8·3	+ 14·4
Oram and Son	18750	2	Auxiliary compensation.	− 2·8	− 3·0	− 1·2	− 2·5	− 3·4	+ 2·3	− 0·1	− 2·8	− 2·2	+ 2·8	+ 14·4
Kullberg	4075	2	Reversed detent, with short spring.	− 0·4	− 1·1	− 1·3	+ 0·7	...	− 0·2	− 0·5	+ 3·2	...	...	...
Edward and Sons	3688	2	Improved ordinary balance.	+ 15·8	+ 18·9	+ 20·0	+ 16·8	+ 34·2	+ 20·9	+ 16·8	+ 14·8	+ 30·7	+ 29·8	+ 30·3
Chronometrical Thermometer			......	s +1195·4	s +1121·6	s +1120·5	s +1087·8	s +1056·9	s +1020·2	s + 997·0	s + 983·5	s + 944·9	s + 856·7	s + 621·4
Mean Weekly Temperature			......	° 50·0	° 49·6	° 50·8	° 50·5	° 50·9	° 51·9	° 51·9	° 52·3	° 52·6	° 52·3	° 55·0
Extremes of Temperature as shown by the Self-Registering Thermometers			......	° ° 48—52	° ° 44—54	° ° 47—55	° ° 47—53	° ° 48—56	° ° 47—56	° ° 48—57	° ° 48—60	° ° 48—55	° ° 49—56	° ° 48—61

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.

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

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

May 3—10	April 5—12	June 14—21	May 10—17	July 19—26	June 21—28	July 12—19	July 5—12	June 28 to July 5	June 7—14 †	May 17—24 †	May 24—31 †	May 31 to June 7 †	March 22—29 †	March 1—8 †	March 8—15 †	March 15—22 †	NAME OF MAKER.	No.
s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s		
+ 0·5	− 1·6	− 1·6	− 1·1	+ 1·0	− 0·3	+ 2·5	+ 2·7	+ 1·3	− 0·9	− 1·6	− 1·6	− 1·3	− 2·4	+ 0·7	− 1·4	− 4·0	Brunner	3777
− 22·6	− 23·5	− 19·6	− 23·2	− 20·3	− 19·1	− 20·8	− 20·5	− 20·4	− 23·1	− 24·3	− 24·4	− 24·3	− 18·7	− 19·0	− 16·5	− 19·0	C. Frodsham & Co.	0003
− 4·2	− 8·3	− 12·8	− 8·3	− 9·5	− 10·3	− 9·8	− 8·7	− 10·4	− 8·8	− 6·9	− 8·5	− 8·7	− 11·7	− 5·4	− 7·0	− 9·6	Penlington	2211
+ 8·5	+ 11·6	+ 11·5	+ 10·0	+ 8·1	+ 10·4	+ 9·2	+ 9·6	+ 10·0	+ 6·2	+ 7·4	+ 7·1	+ 7·4	+ 6·8	+ 5·1	+ 7·2	+ 7·7	Isaac	1669
+ 8·4	+ 4·6	+ 1·1	+ 7·8	+ 8·7	+ 5·3	+ 7·2	+ 4·4	+ 3·8	+ 4·1	+ 4·1	+ 5·2	+ 5·3	− 1·5	− 0·2	+ 3·2	+ 1·0	Birchall	1382
− 19·8	− 18·7	− 15·9	− 18·0	− 14·1	− 15·8	− 13·1	− 12·9	− 13·4	− 11·5	− 12·7	− 13·1	− 11·3	− 10·8	− 11·3	− 9·1	− 8·4	Williams	3690
+ 11·1	+ 8·2	+ 6·6	+ 10·6	+ 11·9	+ 8·6	+ 14·4	+ 15·6	+ 13·0	+ 15·0	+ 14·4	+ 14·5	+ 15·8	+ 11·6	+ 10·2	+ 11·4	+ 10·5	Moore	5756
+ 4·3	+ 6·7	+ 10·2	+ 5·9	+ 7·9	+ 11·3	+ 8·2	+ 10·4	+ 11·4	+ 4·6	+ 2·9	+ 3·2	+ 4·7	+ 4·6	+ 1·4	− 2·0	− 2·6	Shepherd	1832
− 13·4	− 16·5	− 11·5	− 7·2	− 5·5	− 6·5	− 6·0	− 4·6	− 4·8	− 7·2	− 7·9	− 9·0	− 8·3	− 9·1	− 10·9	− 8·2	− 15·0	James Poole & Co.	5713
+ 4·7	+ 7·5	+ 11·8	+ 6·9	+ 12·0	+ 11·7	+ 12·0	+ 13·1	+ 12·7	+ 13·2	+ 10·7	+ 11·1	+ 12·8	+ 11·5	+ 5·3	+ 8·9	+ 9·7	Reid and Sons	5781
+ 16·6	+ 11·5	+ 20·1	+ 18·2	+ 26·5	+ 20·2	+ 23·0	+ 20·5	+ 21·5	+ 20·1	+ 20·6	+ 19·1	+ 19·9	+ 16·2	+ 10·5	+ 11·4	+ 13·1	Heap	6480
+ 24·7	+ 22·2	+ 26·6	+ 16·8	+ 20·4	+ 20·7	+ 18·8	+ 17·2	+ 17·6	+ 26·1	+ 21·7	+ 24·4	+ 27·5	+ 17·5	+ 14·7	+ 20·4	+ 20·4	Nelson	2876
− 10·1	− 9·2	− 7·9	− 8·6	− 8·0	− 5·8	− 7·1	− 6·5	− 6·8	− 9·4	− 10·8	− 11·8	− 10·7	− 17·2	− 29·7	− 27·0	− 23·9	Penlington	2210
− 19·5	− 19·8	− 19·1	− 20·4	− 18·0	− 16·9	− 11·8	− 14·7	− 13·9	− 16·9	− 17·7	− 17·5	− 16·6	− 6·3	− 7·0	− 5·5	− 6·0	Isaac	1670
− 13·1	− 12·9	− 1·9	− 11·4	+ 3·5	+ 0·5	+ 4·2	+ 4·3	+ 3·3	− 7·8	− 10·0	− 11·6	− 9·7	− 15·5	− 17·2	− 19·0	− 21·5	McInnes	5791
+ 19·9	+ 20·8	+ 30·1	+ 21·8	+ 31·2	+ 28·9	+ 31·7	+ 30·5	+ 30·2	+ 25·6	+ 19·1	+ 20·0	+ 23·9	+ 16·7	+ 10·6	+ 13·5	+ 15·0	Lawson	2358
+ 7·9	+ 7·5	+ 13·2	+ 6·9	− 4·0	+ 10·5	− 2·4	− 2·5	− 0·1	+ 12·0	+ 3·1	+ 5·1	+ 6·4	+ 4·8	+ 0·6	+ 1·7	+ 2·3	Kullberg	4146
− 6·7	− 5·4	+ 3·1	− 4·6	− 5·0	− 2·0	− 3·0	0·0	− 0·1	+ 10·9	+ 3·9	+ 6·5	+ 10·0	− 7·7	− 7·5	− 2·0	− 4·3	Sewill	4425
− 8·6	− 9·7	− 5·1	− 3·0	− 1·5	− 2·5	− 1·6	− 1·2	− 0·6	− 7·5	− 10·1	− 10·9	− 8·4	− 19·2	− 14·5	− 20·9	− 27·6	Shepherd	1834
+ 23·9	+ 23·0	+ 30·0	+ 27·5	+ 36·5	+ 33·5	+ 37·1	+ 37·4	+ 36·1	+ 34·8	+ 31·8	+ 32·6	+ 34·8	+ 35·0	+ 26·8	+ 29·6	+ 29·9	Keys	450
− 8·9	− 12·2	− 3·2	− 3·1	+ 5·7	+ 2·0	+ 6·1	+ 8·6	+ 8·0	+ 3·2	+ 7·0	+ 6·4	+ 5·1	− 2·8	− 8·3	− 11·8	− 9·5	Reid and Sons	5785
+ 21·5	+ 21·1	+ 21·5	+ 24·9	+ 34·3	+ 28·5	+ 34·9	+ 31·7	+ 30·5	+ 19·6	+ 22·2	+ 18·4	+ 18·9	+ 14·7	+ 8·6	+ 8·6	+ 8·8	Pyott	818
+ 0·5	− 0·9	− 6·9	− 3·5	− 9·0	− 10·0	− 10·0	− 13·8	− 10·5	+ 2·9	+ 8·9	+ 7·2	+ 7·8	− 2·1	+ 0·8	+ 6·6	+ 6·6	Nelson	2901
+ 17·3	+ 14·8	+ 23·9	+ 19·0	+ 27·3	+ 23·3	+ 27·1	+ 25·7	+ 24·0	+ 24·7	+ 23·4	+ 23·6	+ 25·4	+ 25·9	+ 14·4	+ 20·0	+ 22·5	Webster	731
+ 4·0	+ 2·4	+ 3·1	+ 6·5	+ 7·3	+ 4·9	+ 7·2	+ 6·3	+ 6·1	− 7·6	− 6·9	− 9·5	− 9·5	− 13·1	− 11·5	− 11·5	− 18·9	Hennessy	3874
+ 1·0	0·0	+ 2·3	+ 1·2	+ 4·1	+ 4·0	+ 5·5	+ 6·8	+ 8·5	+ 12·3	+ 9·8	+ 12·4	+ 16·0	+ 9·8	+ 4·1	+ 7·9	+ 7·6	James Poole & Co.	5796
+ 7·9	+ 10·6	+ 10·8	+ 12·3	+ 10·1	+ 6·7	+ 11·4	+ 10·2	+ 9·0	+ 15·8	+ 15·2	+ 16·1	+ 18·5	+ 19·5	+ 11·1	+ 13·6	+ 13·0	Oram and Son	19181
− 3·2	− 1·1	+ 9·9	+ 4·4	+ 13·3	+ 12·8	+ 1·6	+ 1·8	+ 8·2	− 4·1	+ 0·9	+ 3·5	+ 3·0	− 7·5	− 16·7	− 17·8	− 15·8	Schoof	6044
− 8·2	− 4·0	− 20·8	− 14·7	− 12·1	− 18·0	− 10·9	− 11·9	− 12·5	− 2·6	+ 4·1	− 4·3	− 1·3	+ 5·3	+ 2·5	+ 5·6	+ 7·1	Hennessy	3784
+ 29·0	+ 23·2	+ 22·1	+ 25·5	+ 0·8	+ 22·4	+ 2·2	+ 19·1	+ 24·1	+ 24·5	+ 24·6	+ 22·1	+ 23·3	+ 9·7	+ 12·1	+ 8·6	+ 6·7	Keys	880
+ 7·6	+ 15·2	+ 4·9	+ 8·3	+ 10·2	+ 18·5	+ 12·8	+ 16·5	+ 19·5	+ 6·6	+ 0·7	+ 3·1	+ 6·9	− 0·9	− 17·9	− 19·1	− 11·3	Schoof	6050
+ 6·0	+ 7·5	+ 10·6	+ 19·5	+ 19·5	+ 18·3	+ 20·6	+ 24·0	+ 23·1	+ 19·4	+ 28·0	+ 23·4	+ 21·8	+ 32·9	+ 27·8	+ 30·4	+ 31·0	Oram and Son	18750
...	...	...	...	...	...	...	...	...	...	...	...	...	+ 13·1	− 5·4	− 1·6	+ 8·6	Kullberg	4075
+ 25·9	+ 26·6	+ 29·6	+ 21·1	...	+ 26·5	...	...	+ 26·5	+ 23·9	+ 20·3	+ 22·6	+ 25·0	+ 16·6	+ 14·0	+ 16·0	+ 12·4	Edward and Sons	3688
s + 572·8	s + 534·5	s − 25·5	s − 77·4	s − 296·2	s − 365·5	s − 543·8	s − 808·9	s − 824·8	s − 2392·5	s − 2515·9	s − 2538·0	s − 2570·5	s − 2727·4	s − 2746·1	s − 2784·9	s − 3144·7	Chronometrical Thermometer.	
° 55·8	° 56·9	° 63·4	° 63·6	° 66·9	° 67·2	° 70·1	° 72·8	° 72·0	° 89·7	° 90·4	° 90·0	° 90·4	° 90·4	° 91·3	° 91·7	° 94·5	Mean Weekly Temperature.	
° ° 53—61	° ° 53—60	° ° 61—67	° ° 60—69	° ° 64—69	° ° 65—72	° ° 67—73	° ° 70—76	° ° 68—76	° ° 77—97	° ° 86—95	° ° 74—95	° ° 86—94	° ° 83—96	° ° 82—100	° ° 85—99	° ° 86—105	Extremes of Temperature as shown by the Self-Registering Thermometers.	

The Chronometers are placed in order of merit, their respective positions being determined by consideration of the irregularities of rate exhibited in Table III.

Kullberg 4075. This Chronometer was withdrawn by the maker by permission of the Astronomer Royal on April 3.

Edward and Sons 3688. The main spring of this Chronometer was found broken in the twenty-sixth week of the trial. It was removed by the maker on July 14.

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(III.)—ABSTRACT OF THE

NAME OF MAKER.	No.	Whether 7 or 8 Days.	ADDRESS OF MAKER.	Construction of Escapement and Balance, from the Description furnished by the Maker.	First Day of Rating.	Last Day of Rating.	Number of Weeks.	Least Weekly Sum.
								s
Brunner	3777	2	92, Smallbrook Street, Birmingham.	Airy's compensation arm.	January 12	July 26	28	— 4·0
C. Frodsham & Co.	0003	2	84, Strand, W.C.	Charles Frodsham's three-bar compensation balance.	January 12	July 26	28	— 24·4
Penlington	2211	2	2 and 3, St. George's Crescent, Liverpool.	Auxiliary compensation. Palladium spring.	January 12	July 26	28	— 12·8
Isaac	1669	2	10, Spencer Street, Clerkenwell, E.C.	Auxiliary construction acting upon jewels.	January 12	July 26	28	+ 0·2
Birchall	1382	2	12A, Stonefield Street, Islington, N.	Ordinary balance, with slight alterations.	January 12	July 26	28	— 1·5
Williams	3690	2	3, Bute Docks, Cardiff.	Ordinary balance, with auxiliary compensation.	January 12	July 26	28	— 20·9
Moore	5756	2	102, High Street, Belfast.	Auxiliary to balance. Airy's compensation arm.	January 12	July 26	28	+ 4·6
Shepherd	1832	2	14, Talbot Court, London, E.C.	Auxiliary to balance.	January 12	July 26	28	— 2·6
James Poole & Co.	5713	2	33, Spencer Street, Clerkenwell, E.C.	Poole's auxiliary.	January 12	July 26	28	—18·0
Reid and Sons	5781	2	41, Grey Street, Newcastle-on-Tyne.	Auxiliary compensation. Palladium spring.	January 12	July 26	28	— 2·9
Hesp	6480	2	124, New North Road, London.	Auxiliary for cold. Airy's compensation arm.	January 12	July 26	28	+ 5·4
Nelson	3876	2	453, New Cross Road, S.E.	Ordinary escapement. Auxiliary gaining in cold.	January 12	July 26	28	+ 9·6
Penlington	2210	2	2 and 3, St. George's Crescent, Liverpool.	Auxiliary compensation. Palladium spring.	January 12	July 26	28	— 29·7
Isaac	1670	2	10, Spencer Street, Clerkenwell, E.C.	Ordinary balance without auxiliary.	January 12	July 26	28	—20·4
McInnes	5791	2	24, Grainger Street West, Newcastle-on-[Tyne.	Double auxiliary to balance.	January 12	July 26	28	—21·5
Lawson	2358	8	241, Liverpool Buildings, Liverpool Road,	Auxiliary, acting in heat and cold.	January 12	July 26	28	+10·6
Kullberg	4146	2	105, Liverpool Road, N. [N.	Reversed detent, with short spring.	January 12	July 26	28	— 4·0
Sewill	4425	2	61, South Castle Street, Liverpool.	Auxiliary compensation.	January 12	July 26	28	—13·9
Shepherd	1834	2	14, Talbot Court, London, E.C.	Auxiliary to balance.	January 12	July 26	28	—27·6
Keys	450	2	15, Craven Street, Strand, W.C.	Auxiliary compensation.	January 12	July 26	28	+18·0
Reid and Sons	5785	2	41, Grey Street, Newcastle-on-Tyne.	Auxiliary compensation. Palladium spring.	January 12	July 26	28	—16·7
Pyott	818	2	74, West India Dock Road, E.	Auxiliary compensation.	January 12	July 26	28	+ 3·7
Nelson	2901	2	453, New Cross Road, S.E.	Ordinary escapement. Double auxiliary.	January 12	July 26	28	—13·8
Webster	731	2	35, Herrick Road, Highbury, N.	Ordinary balance. Palladium spring.	January 12	July 26	28	— 4·7
Hennessy	3874	2	5, Wind Street, Swansea.	Auxiliary compensation to balance.	January 13	July 26	28	—18·9
James Poole & Co.	5796	2	33, Spencer Street, Clerkenwell, E.C.	Poole's auxiliary.	January 12	July 26	28	— 9·6
Oram and Son	19181	2	19, Wilmington Square, W.C.	Ordinary balance.	January 12	July 26	28	—12·2
Schoof	6044	2	99, St. John Street Road, E.C.	Schoof's improved resilient lever escapement.	January 12	July 26	28	—17·8
Hennessy	3784	2	5, Wind Street, Swansea.	Auxiliary compensation to balance.	January 12	July 26	28	—20·8
Keys	880	2	15, Craven Street, Strand, W.C.	Auxiliary to balance.	January 12	July 26	28	+ 0·8
Schoof	6050	2	99, St. John Street Road, E.C.	Schoof's improved resilient lever escapement.	January 12	July 26	28	—20·5
Oram and Son	18750	2	19, Wilmington Square, W.C.	Auxiliary compensation.	January 12	July 26	28	— 3·4
Kullberg	4075	2	105, Liverpool Road, N.	Reversed detent, with short spring.	January 12	March 29	11	— 5·4
Edward and Sons	3688	2	1, Poultry, E.C.	Improved ordinary balance.	January 12	July 5	25	+12·4

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. In the column "Before and after what Day" 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.	Greatest Weekly Sum.	In what Week.	Difference between the Greatest and Least.	Greatest Difference between one Week and the next.	Before and after what Day.	NAME OF MAKER.	No.
	′		″	″			
March 15 to 22†	+ 4·0	February 16 to 23	8·0	3·2	March 1†	Brunner	3777
May 24 to 31†	— 16·5	March 8 to 15†	7·9	4·8	† March 29	C. Frodsham and Co.	0003
June 14 to 21	— 0·2	April 19 to 26	12·6	4·1	April 19 / May 10	Penlington	2211
January 26 to Feb. 2	+ 12·1	April 12 to 19	11·9	5·3	† June 14	Isaac	1669
March 22 to 29†	+ 8·7	July 19 to 26	10·2	6·7	March 1†	Birchall	1382
April 19 to 26	— 8·4	March 15 to 22†	12·5	7·4	† March 29	Williams	3690
January 12 to 19	+ 15·8	May 31 to June 7†	11·2	8·4	† June 14	Moore	5756
March 15 to 22†	+ 11·4	June 28 to July 5	14·0	7·2	† March 22†	Shepherd	1832
April 12 to 19	— 4·6	July 5 to 12	13·4	7·8	† March 29	James Poole and Co.	5713
February 2 to 9	+ 13·2	June 7 to 14†	16·1	6·6	March 1†	Reid and Sons	5781
January 26 to Feb. 2	+ 26·5	July 19 to 26	21·1	6·9	† March 29	Hesp	6480
January 12 to 19	+ 28·8	April 19 to 26	19·2	7·9	May 10	Nelson	3876
March 1 to 8†	— 5·8	June 21 to 28	23·9	7·7	† March 22†	Penlington	2210
May 10 to 17	— 5·5	March 8 to 15†	14·9	11·4	† March 29	Isaac	1670
March 15 to 22†	+ 4·3	July 5 to 12	23·8	6·1	Feb. 2	McInnes	5791
March 1 to 8†	+ 31·7	July 12 to 19	21·1	8·5	† March 29	Lawson	2358
July 19 to 26	+ 13·2	June 14 to 21	17·2	10·6	June 28	Kullberg	4146
February 12 to 19	+ 10·9	June 7 to 14†	24·8	8·5	May 17†	Sewill	4425
March 15 to 22†	— 0·6	June 28 to July 5	27·0	8·4	† March 22†	Shepherd	1834
January 12 to 19	+ 37·4	July 5 to 12	19·4	12·5	† March 29	Keys	450
January 12 to 19	+ 8·6	July 5 to 12	25·3	10·1	May 17†	Reid and Sons	5785
January 12 to 19	+ 34·9	July 12 to 19	31·2	8·1	April 5	Pyott	818
July 5 to 12	+ 8·9	May 17 to 24†	23·7	12·4	May 17†	Nelson	2901
January 12 to 19	+ 27·3	July 19 to 26	32·0	10·4	† March 29	Webster	731
March 15 to 22†	+ 7·3	July 19 to 26	26·2	13·4	May 17†	Hennessy	3874
February 23 to March 1	+ 16·0	May 31 to June 7†	25·6	13·7	March 1†	James Poole and Co.	5796
January 26 to Feb. 2	+ 19·5	March 22 to 29†	31·7	12·3	March 1†	Oram and Son	19181
March 8 to 15†	+ 13·3	July 19 to 26	31·1	14·0	† June 14	Schoof	6044
June 14 to 21	+ 7·1	March 15 to 22†	27·9	18·8	March 1†	Hennessy	3784
July 19 to 26	+ 32·5	April 19 to 26	31·7	16·9	July 12	Keys	880
February 16 to 23	+ 19·5	June 28 to July 5	40·0	15·3	† March 29	Schoof	6050
April 19 to 26	+ 32·9	March 22 to 29†	36·3	25·5	March 1†	Oram and Son	18750
March 1 to 8†	+ 13·1	March 22 to 29†	18·5	10·2	† March 15†	Kullberg	4075
March 15 to 22†	+ 34·2	April 19 to 26	21·8	13·7	† March 29	Edward and Sons	3688

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.
Kullberg 4075. This Chronometer was withdrawn by the maker by permission of the Astronomer Royal on April 3.
Edward and Sons 3688. The main spring of this Chronometer was found broken in the twenty-sixth week of the trial. It was removed by the maker on July 14.

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