

RATES OF CHRONOMETERS
ON TRIAL
FOR PURCHASE BY THE BOARD OF ADMIRALTY,
AT THE
ROYAL OBSERVATORY, GREENWICH.
FROM 1887 JULY 2 TO 1888 JANUARY 21.

NAME OF MAKER.	No.	Days on Trial.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(1.) WEEKLY RATES												
				July 2-9	July 9-16	July 16-23	July 23-30	July 30 to Aug. 6	Aug. 6-13	Aug. 13-20	Aug. 20-27 ↑	Aug. 27 to Sept. 3	Sept. 3-10 ↑	Sept. 10-17 ↑	Sept. 17-24	Sept. 24 to Oct. 1
Uhlig	452	2	Uhlig's continually acting auxiliary.	- 5.7	- 5.7	- 6.0	- 2.9	- 3.8	- 4.5	- 4.1	- 1.7	- 2.1	- 1.9	- 1.1	- 2.3	- 3.4
Mercer	4513	2	Auxiliary compensation.	+ 2.5	+ 3.3	+ 5.2	+ 0.0	+ 5.3	+ 3.6	+ 8.6	+ 7.0	+ 4.6	+ 4.6	+ 3.1	+ 6.8	
Kullberg	2517	2	Kullberg's flat rim balance.	+ 2.4	+ 3.9	+ 3.9	+ 5.8	+ 4.8	+ 5.5	+ 6.0	+ 3.8	+ 3.0	+ 2.5	+ 3.4	+ 5.3	+ 4.4
Uhlig	452	2	Uhlig's continually acting auxiliary.	+ 2.5	+ 3.8	+ 3.5	+ 6.2	+ 4.1	+ 6.0	+ 7.1	+ 5.3	+ 6.8	+ 4.6	+ 9.0	+ 5.0	+ 0.0
Kullberg	2759	2	Kullberg's flat rim balance.	- 2.1	- 1.1	- 1.7	+ 1.0	- 1.8	- 2.1	+ 0.6	- 2.2	- 1.6	- 2.3	- 1.7	- 2.9	- 0.2
James Poole and Co.	5518	2	Poole's auxiliary.	+ 3.0	+ 2.8	+ 3.3	+ 4.7	+ 3.2	+ 1.5	+ 2.8	- 0.7	+ 0.6	+ 0.8	+ 1.7	+ 5.4	+ 5.6
Edward and Sons	4756	2	Auxiliary compensation.	- 0.1	- 7.3	- 5.9	- 3.9	- 2.8	- 2.1	- 5.4	- 8.7	- 11.1	- 14.0	- 13.0	- 15.2	- 13.3
Blair	1887	2	Auxiliary compensation.	- 11.7	- 11.6	- 11.6	- 11.4	- 11.9	- 14.1	- 13.1	- 23.6	- 30.0	- 18.3	- 15.4	- 15.6	
Blair	1888	2	Auxiliary compensation.	- 3.3	+ 1.0	+ 2.0	+ 5.1	+ 4.7	+ 4.8	+ 4.8	- 2.7	- 1.2	- 3.1	- 0.9	+ 3.6	+ 4.4
Isaac	1789	2	Solid auxiliary balance.	+ 6.7	+ 10.0	+ 9.8	+ 13.1	+ 11.7	+ 11.0	+ 11.1	+ 4.7	+ 3.6	- 0.6	- 1.0	+ 6.1	+ 5.0
Mercer	4524	2	Auxiliary compensation.	- 3.8	- 2.6	+ 2.0	+ 0.7	- 0.5	+ 0.5	+ 1.3	- 5.3	- 4.3	- 7.0	- 6.0	+ 2.7	+ 4.2
Pyott	886	2	Ordinary balance, with auxiliary.	+ 2.9	+ 5.7	+ 9.0	+ 10.6	+ 7.7	+ 10.5	+ 11.8	+ 0.6	+ 1.4	+ 0.7	+ 1.9	+ 6.1	+ 8.9
Penlington	2515	2	Auxiliary compensation.	- 2.8	- 1.3	- 2.7	- 1.2	- 4.0	- 5.1	- 7.7	- 0.5	- 0.8	- 4.9	- 1.5	- 3.2	+ 1.4
Penlington	2517	2	Auxiliary compensation.	- 6.5	- 2.8	- 1.5	+ 1.2	+ 2.6	+ 5.1	+ 7.1	+ 11.5	+ 10.7	+ 7.7	+ 8.3	0.0	- 1.6
Moore	5736	2	Poole's auxiliary.	+ 6.0	+ 6.5	+ 7.7	+ 8.7	+ 7.6	+ 7.1	+ 9.0	- 0.3	...	...	- 11.3	+ 4.1	+ 6.1
Brookbank Atkins & Co.	2653	2	Auxiliary compensation.	- 5.7	- 4.7	- 3.1	- 1.9	- 2.3	- 2.1	- 1.5	- 11.5	- 13.7	- 16.9	- 15.4	+ 0.4	+ 1.6
Whyte & Co.	2523	2	Auxiliary compensation.	- 2.2	+ 1.4	+ 1.6	+ 3.0	- 0.4	- 0.2	- 1.0	- 11.4	- 9.8	- 11.3	- 8.5	+ 6.4	+ 7.6
Sewill	4516	2	Auxiliary compensation.	- 20.7	- 19.4	- 19.9	- 19.9	- 19.2	- 18.7	- 20.9	- 9.1	- 8.0	- 5.1	- 4.1	- 23.1	- 19.7
Isaac	1789	2	Ordinary balance.	- 0.8	- 2.3	- 3.9	- 3.7	- 5.8	- 5.0	+ 4.0	+ 1.1	+ 1.1	+ 2.6	+ 4.8	+ 13.5	+ 5.9
Moore	5734	2	Poole's auxiliary.	- 0.7	+ 0.0	+ 3.6	+ 0.4	+ 3.8	+ 6.8	+ 5.4	- 13.8	- 15.6	- 14.4	- 15.3	- 11.8	- 2.2
Pyott	902	2	Ordinary balance, with auxiliary.	+ 2.8	+ 5.2	+ 3.6	+ 7.3	+ 4.2	+ 6.3	+ 5.9	+ 14.5	+ 13.8	+ 10.5	+ 19.0	+ 9.1	+ 11.5
Sewill	4518	2	Auxiliary compensation.	- 5.5	- 3.4	- 1.8	- 2.0	- 1.6	+ 1.3	+ 1.2	+ 7.0	+ 3.3	+ 3.9	+ 8.5	- 13.2	- 13.2
M. F. Dent	29564	2	Auxiliary acting in cold.	+ 5.0	+ 6.8	+ 6.3	+ 7.6	+ 6.5	+ 9.5	+ 9.7	+ 20.0	+ 30.1	+ 13.5	+ 5.5	- 7.4	- 4.1
Whyte and Co.	2525	2	Auxiliary compensation.	- 2.5	- 0.7	+ 2.0	+ 3.5	+ 3.0	+ 6.0	+ 12.0	- 3.7	- 0.9	- 2.5	+ 2.9	+ 14.9	+ 13.2
Gardner	3737	2	Auxiliary gaining in cold.	- 13.5	- 9.8	- 10.2	- 9.5	- 8.0	- 6.1	- 1.1	+ 1.5	+ 3.1	+ 2.5	+ 9.0	+ 8.4	+ 10.6
Orran and Son	15431	2	Auxiliary compensation.	- 2.2	- 9.2	+ 0.8	- 0.8	+ 3.3	- 2.0	+ 0.5	+ 2.8	+ 10.9	+ 4.0	+ 20.7	+ 26.3	
Klean and Co.	1007	2	Poole's Auxiliary.	+ 0.6	+ 3.3	+ 3.7	+ 3.8	+ 3.0	+ 5.2	+ 3.3	+ 9.1	+ 8.9	+ 8.6	+ 13.2	0.0	- 10.6
Schoof	6059	2	Schoof's resilient lever escapement.	- 53.9	- 52.3	- 49.7	- 51.7	- 49.4	- 37.3	- 47.7	- 22.5	- 25.6	- 21.4	- 21.6	- 79.1	- 64.3
Chronometrical Thermometer				- 652.4	- 699.4	- 374.8	- 650.5	- 304.7	- 513.0	- 7.8	- 244.9	- 244.9	- 281.3	- 285.1	+ 278.7	+ 512.5
Mean Weekly Temperature				71.2	71.2	68.6	66.6	67.3	70.6	65.6	91.6	92.2	96.6	96.5	96.7	96.8
Extremes of Temperature as shown by the Self-Registering Thermometers				65.0-78.4	60.0-74.8	64.8-76.1	67.7-73.0	61.8-80.2	65.6-74.5	62.0-80.0	90.0-93.0	91.3-92.8	95.9-97.2	95.5-97.0	95.0-97.1	95.0-96.0

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 ORDER OF TIME.

NAME OF MAKER.																	No.
Oct. 1-8	Oct. 8-15	Oct. 15-22	Oct. 22-29	Oct. 29 to Nov. 3	Nov. 3-5 †	Nov. 5-12 12-19	Nov. 19-25 †	Nov. 25 to Dec. 3 †	Dec. 3-10	Dec. 10-17	Dec. 17-21	Dec. 21-31	Dec. 31 to Jan. 7	Jan. 7-14	Jan. 14-21		No.
- 4.6	- 4.0	- 3.4	- 3.6	- 3.5	- 3.7	- 2.6	- 2.8	- 2.9	- 4.6	- 1.4	+ 0.1	- 0.4	- 1.6	- 1.8	Uhlig	452	
+ 0.7	+ 7.0	+ 7.3	+ 7.7	+ 8.6	+ 10.1	+ 10.4	+ 12.3	+ 9.4	+ 6.0	+ 6.9	+ 7.6	+ 8.9	+ 8.6	+ 5.1	+ 6.5	Mercer	4513
+ 2.2	+ 2.6	+ 1.8	+ 2.5	+ 2.9	+ 2.6	+ 4.8	+ 5.5	+ 2.4	+ 4.3	+ 2.3	+ 4.6	+ 0.8	- 0.6	- 3.3	- 2.8	Kullberg	2517
+ 4.1	+ 4.9	+ 5.2	+ 6.0	+ 5.6	+ 3.0	+ 2.8	+ 5.3	+ 4.5	+ 8.5	+ 10.9	+ 13.0	+ 13.5	+ 14.4	+ 7.6	+ 10.3	Uhlig	452
+ 0.8	+ 1.7	+ 2.6	+ 2.7	+ 5.2	+ 3.6	+ 2.9	+ 5.3	+ 4.9	+ 2.9	+ 5.9	+ 6.2	+ 6.1	+ 10.0	+ 10.1	+ 9.2	Kullberg	2759
+ 5.3	+ 4.6	+ 6.1	+ 4.0	+ 4.4	- 2.3	+ 0.2	+ 1.7	- 1.4	+ 3.6	+ 3.4	- 0.9	- 4.0	- 3.3	- 1.0	- 0.7	James Poole and Co.	5518
- 13.5	- 8.6	- 6.5	- 6.8	- 6.7	- 9.3	- 6.7	- 4.5	- 11.7	- 7.3	- 5.1	- 2.3	- 0.8	- 3.1	- 7.3	- 4.1	Edward and Sons	4756
- 16.1	- 17.7	- 18.9	- 18.4	- 10.7	- 19.2	- 22.0	- 20.3	- 30.3	- 18.9	- 30.9	- 19.6	- 21.3	- 20.8	- 22.3	- 23.7	Blair	1887
+ 5.8	+ 3.7	+ 3.6	+ 3.7	+ 5.7	+ 1.0	+ 3.6	+ 8.1	+ 2.3	- 0.1	- 0.6	- 5.7	- 11.1	- 5.9	- 0.3	- 6.3	Blair	1888
+ 6.4	+ 6.5	+ 4.9	+ 5.3	+ 7.8	- 1.2	+ 1.7	+ 4.0	- 3.2	+ 3.9	+ 5.5	+ 12.4	+ 9.6	+ 7.1	- 0.9	+ 3.1	Isaac	1789
+ 4.8	+ 5.6	+ 5.8	+ 6.5	+ 7.9	- 0.2	+ 3.8	+ 6.7	+ 1.8	+ 6.8	+ 7.4	+ 12.2	+ 13.3	+ 14.6	+ 11.5	+ 12.7	Mercer	4524
+ 7.7	+ 5.2	+ 6.0	+ 5.9	+ 6.8	+ 2.3	+ 6.6	+ 8.6	+ 4.2	+ 5.1	+ 5.6	- 3.3	- 5.8	+ 1.4	+ 2.6	+ 0.6	Pyott	886
- 0.1	+ 4.5	+ 6.3	+ 8.1	+ 0.5	- 1.9	+ 3.3	+ 3.6	+ 3.9	+ 13.4	+ 13.1	+ 20.5	+ 22.2	+ 20.4	+ 15.3	+ 21.1	Penlington	2515
- 0.3	+ 0.8	+ 3.8	+ 5.8	+ 2.9	+ 13.7	+ 14.4	+ 13.0	+ 23.1	+ 24.5	+ 19.3	+ 15.3	+ 17.6	+ 14.7	+ 14.9	+ 13.1	Penlington	2517
+ 7.2	+ 6.5	+ 5.5	+ 4.6	+ 6.6	- 8.9	- 4.6	- 3.9	- 13.1	0.0	+ 1.6	- 1.6	- 2.7	- 0.4	- 1.6	- 1.7	Moore	5736
+ 1.6	+ 2.3	+ 2.4	+ 2.8	+ 4.7	- 0.7	- 4.8	- 2.9	- 11.3	+ 2.3	+ 4.5	+ 3.7	+ 1.6	+ 3.5	+ 4.1	+ 2.0	Brookbank, Atkins & Co.	2653
+ 6.0	+ 7.2	+ 8.2	+ 8.1	+ 8.5	+ 0.1	+ 4.6	- 0.0	- 1.7	+ 10.2	+ 12.3	+ 6.9	+ 6.9	+ 9.6	+ 10.6	+ 6.7	Whyte & Co.	2523
- 19.4	- 13.8	- 14.3	- 13.7	- 14.6	- 3.6	- 4.6	- 4.5	- 2.9	- 11.1	- 8.6	- 6.2	- 3.6	- 8.2	- 12.0	- 11.8	Sewill	4516
+ 3.2	+ 1.2	+ 2.0	+ 2.7	- 1.1	- 2.3	+ 3.3	+ 4.5	+ 2.2	+ 13.4	+ 11.5	+ 8.7	+ 5.6	+ 3.7	- 0.1	- 1.8	Isaac	1789
+ 3.2	+ 4.8	+ 5.2	+ 2.7	+ 3.4	- 6.9	- 12.4	- 8.7	- 8.2	- 8.1	- 4.5	- 1.0	- 3.2	- 0.3	- 12.4	- 8.0	Moore	5734
+ 10.2	+ 22.0	+ 8.1	+ 11.6	+ 8.8	+ 13.9	+ 23.7	+ 23.0	+ 24.0	+ 13.3	+ 8.4	- 3.5	- 6.1	+ 0.9	+ 10.2	+ 3.1	Pyott	902
- 2.9	- 0.7	+ 2.1	- 0.9	- 3.5	+ 5.0	- 2.1	- 0.1	+ 1.6	- 14.1	- 14.0	- 11.0	- 10.7	- 11.0	- 15.7	- 10.1	Sewill	4518
- 6.3	- 1.1	+ 0.1	+ 1.4	+ 1.4	+ 13.5	+ 14.2	+ 11.3	+ 10.9	- 1.8	+ 0.6	+ 4.6	+ 3.2	- 0.2	- 3.3	- 1.0	M. F. Dent	29564
+ 10.1	+ 20.0	+ 20.9	+ 22.3	+ 21.0	+ 0.5	+ 14.3	+ 17.0	+ 11.5	+ 23.2	+ 23.4	+ 25.6	+ 23.6	+ 23.9	+ 23.5	+ 23.0	Whyte and Co.	2525
+ 11.0	+ 13.5	+ 13.0	+ 17.7	+ 13.0	+ 1.7	+ 0.9	+ 9.6	+ 8.7	+ 23.0	+ 23.5	+ 23.5	+ 23.5	+ 23.2	+ 23.2	+ 23.4	Gardner	3737
+ 30.3	+ 35.1	+ 35.5	+ 37.1	+ 38.5	+ 34.2	+ 13.2	+ 15.6	+ 13.3	+ 33.3	+ 33.1	+ 31.7	+ 33.1	+ 33.5	+ 33.6	+ 33.8	Orran and Son	15431
- 14.6	- 15.6	- 6.3	- 5.7	- 3.9	+ 10.5	+ 3.1	+ 11.5	- 13.7	- 23.5	- 40.4	- 33.3	- 35.5	- 35.3	- 35.1	- 35.9	Klean and Co.	1007
- 63.0	- 72.2	- 72.8	- 70.9	- 72.7	- 37.2	- 61.5	- 33.0	- 33.5	- 30.7	- 74.9	- 81.6	- 67.8	- 71.9	- 63.3	- 82.3	Schoof	6059
+ 530.1	+ 774.5	+ 824.5	+ 591.7	+ 785.5	- 2845.0	- 3444.5	- 2434.0	- 3094.5	+ 869.2	+ 985.3	+ 1401.8	+ 1873.1	+ 1400.1	+ 900.5	+ 1272.2	Chronometrical Thermometer.	
58.6	57.4	58.8	57.0	58.5	55.1	50.9	50.6	56.9	55.5	53.3	47.1	44.3	47.6	50.8	46.2	Mean Weekly Temperature.	
55.2-65.2	52.5-61.0	55.2-69.8	54.0-62.2	55.7-61.4	55.0-69.0	91.3-92.8	92.0-98.0	90.9-95.9	94.0-96.0	95.0-98.0	94.5-96.0	95.2-98.0	94.2-96.0	95.2-98.0	94.2-96.0	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.

Moore 5735. The misapprehension of this Chronometer was found broken in the ninth week of the trial. It was removed by the maker on September 5 and deposited again on September 12.

NAME OF MAKER.	No.	Days of Trial.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(II.) WEEKLY RATES IN THE													
				Dec. 24-31	Dec. 31 to Jan. 7	Dec. 17-24	Jan. 14-21	Dec. 10-17	Jan. 7-14	Oct. 22-29	Dec. 3-10	Oct. 15-22	Oct. 29 Nov. 5	Oct. 5-15	Oct. 1-8	Sept. 24 Oct. 1	
Uhlig	452	2	Uhlig's continually acting auxiliary.	+ 0.1	- 0.4	- 1.4	- 1.8	- 4.0	- 1.6	- 8.5	- 2.9	- 3.4	- 8.5	- 4.0	- 4.0	- 2.4	
Mercer	4513	2	Auxiliary compensation.	+ 0.9	+ 8.0	+ 7.6	+ 6.5	+ 0.9	+ 5.1	+ 7.7	+ 6.0	+ 7.3	+ 8.8	+ 7.0	+ 6.7	+ 6.8	
Kullberg	2517	2	Kullberg's flat rim balance.	+ 0.5	- 0.6	+ 2.4	- 2.8	+ 2.8	- 3.3	+ 2.5	+ 4.3	+ 1.8	+ 2.9	+ 3.6	+ 2.8	+ 4.4	
Uhlig	482	2	Uhlig's continually acting auxiliary.	+13.5	+13.4	+13.0	+10.3	+10.9	+7.6	+ 0.0	+ 8.5	+ 5.2	+ 5.0	+ 4.9	+ 4.1	+ 0.0	
Kullberg	2759	2	Kullberg's flat rim balance.	+ 6.1	+10.0	+ 6.2	+ 9.2	+ 5.0	+ 1.0	+ 2.7	+ 2.9	+ 2.0	+ 5.0	+ 1.7	+ 0.8	- 0.2	
James Poole and Co.	5818	2	Poole's auxiliary.	- 4.0	- 3.3	- 0.9	- 0.7	+ 3.4	- 1.0	+ 4.0	+ 3.6	+ 0.1	+ 4.4	+ 4.6	+ 5.3	+ 5.6	
Edward and Sons	4766	2	Auxiliary compensation.	- 0.8	- 3.1	- 2.3	- 4.1	- 5.1	- 7.3	- 6.8	- 7.3	- 0.5	- 6.7	- 8.8	-13.5	-13.3	
Blair	1887	2	Auxiliary compensation.	-21.3	-20.8	-19.6	-22.7	-20.9	-22.2	-18.4	-18.9	-18.0	-16.7	-17.7	-16.1	-16.6	
Blair	1888	2	Auxiliary compensation.	-11.1	- 5.9	- 5.7	- 6.3	- 0.6	- 0.3	+ 3.7	- 0.1	+ 3.6	+ 5.7	+ 3.7	+ 5.8	+ 4.4	
Isaac	1780	2	Solid auxiliary balance.	+ 9.6	+ 7.1	+12.4	+ 3.1	+ 5.5	- 0.9	+ 5.3	+ 3.9	+ 4.9	+ 7.8	+ 6.5	+ 6.4	+ 5.0	
Mercer	4894	2	Auxiliary compensation.	+13.3	+14.4	+12.2	+12.7	+ 7.4	+11.5	+ 6.5	+ 0.8	+ 5.8	+ 7.9	+ 5.6	+ 4.8	+ 4.2	
Fryott	886	2	Ordinary balance with auxiliary.	- 5.8	+ 1.4	- 2.0	- 0.8	+ 5.5	+ 5.0	+ 5.1	+ 6.0	+ 6.8	+ 5.2	+ 7.7	+ 8.9	+ 8.6	
Pennington	2515	2	Auxiliary compensation.	+22.2	+20.4	+20.4	+21.1	+13.1	+13.3	+ 8.1	+13.4	+ 6.3	+ 6.5	+ 4.3	- 0.1	+ 1.4	
Pennington	2517	2	Auxiliary compensation.	+17.6	+14.7	+15.3	+18.1	+13.9	+14.9	+ 5.8	+24.5	+ 3.3	+ 2.9	+ 0.8	- 0.3	- 1.6	
Moore	5736	2	Poole's auxiliary.	- 2.7	+ 0.4	- 1.6	- 1.7	+ 1.6	- 1.5	+ 4.6	0.0	+ 5.6	+ 6.6	+ 6.8	+ 7.2	+ 6.1	
Brookbank, Atkins & Co.	2053	2	Auxiliary compensation.	+ 1.6	+ 3.5	+ 3.7	+ 2.6	+ 4.5	+ 4.1	+ 2.8	+ 2.3	+ 2.4	+ 4.7	+ 2.3	+ 1.6	+ 1.6	
Whyte and Co.	2828	2	Auxiliary compensation.	+ 0.9	+ 0.6	+ 4.4	+ 0.7	+12.3	+10.6	+ 8.1	+10.2	+ 8.2	+ 8.5	+ 7.3	+ 8.0	+ 7.6	
Sewill	4516	2	Auxiliary compensation.	- 0.6	- 0.8	- 0.9	-11.8	- 8.6	-12.9	-12.7	-11.1	-14.3	-14.6	-13.8	-19.4	-19.7	
Isaac	1789	2	Ordinary balance.	+ 5.6	+ 3.7	+ 8.7	- 1.8	+11.6	- 0.1	+ 2.7	+10.4	+ 0.3	- 1.1	+ 1.2	+ 2.6	+ 2.9	
Moore	5754	2	Poole's auxiliary.	- 3.2	- 0.8	- 1.9	- 8.9	- 4.5	-12.4	+ 2.7	- 8.1	+ 5.3	+ 3.4	+ 5.8	+ 5.2	- 2.8	
Fryott	902	2	Ordinary balance with auxiliary.	- 6.1	+ 0.9	- 3.5	+ 3.1	+ 4.4	+10.2	+11.6	+13.3	+ 8.1	+ 8.8	+22.6	+16.2	+11.5	
Sewill	4518	2	Auxiliary compensation.	-10.7	-11.0	-11.6	-10.1	-14.0	-13.7	- 0.0	-14.1	+ 2.1	- 3.5	- 0.7	- 2.9	-13.2	
M. F. Dent	29564	2	Auxiliary acting in cold.	+ 3.2	- 0.3	+ 4.6	- 1.0	+ 0.6	- 3.3	+ 1.4	- 1.8	+ 0.1	+ 1.4	- 1.1	- 6.3	- 4.1	
Whyte and Co.	2823	2	Auxiliary compensation.	+25.5	+30.0	+28.4	+30.0	+10.4	+33.2	+32.3	+30.9	+21.9	+30.0	+19.1	+18.2	+18.2	
Gardner	2517	2	Auxiliary gaining in cold.	+28.9	+30.2	+33.4	+30.4	+23.5	+22.2	+17.7	+33.0	+16.0	+10.0	+13.3	+11.0	+10.6	
Oram and Son	18431	2	Auxiliary compensation.	+33.1	+35.6	+31.7	+35.8	+30.1	+33.5	+37.1	+32.9	+36.6	+38.5	+30.1	+30.2	+30.3	
Klean and Co.	1007	2	Poole's Auxiliary.	-40.4	-33.0	-33.8	-33.9	-33.1	-33.1	- 5.9	-18.7	- 5.8	- 3.9	-13.4	-14.6	-16.6	
Schoof	6059	2	Schoof's resilient lever escapement.	-60.8	-71.9	-82.6	-82.3	-71.9	-63.3	-76.9	-85.7	-72.8	-73.8	-75.2	-66.0	-64.3	
Chronometrical Thermometer				+1673.1	+1469.1	+1461.6	+1272.2	+865.3	+900.5	+891.7	+880.2	+824.5	+785.5	+774.5	+820.1	+512.2	
Mean Weekly Temperature				44.5	47.6	47.1	45.2	52.8	50.8	52.5	53.5	53.8	56.8	57.4	58.6	56.8	
Extremes of Temperature as shown by the Self-Registering Thermometers				37.6-50.0	40.5-53.2	36.5-55.8	42.8-54.2	50.9-59.2	46.0-55.2	54.6-62.2	48.0-55.4	53.4-60.8	55.7-64.4	62.0-61.0	55.2-62.5	55.0-60.0	

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.

ORDER OF TEMPERATURE AS DETERMINED GENERALLY BY THE CHRONOMETRICAL THERMOMETER.

ORDER OF TEMPERATURE AS DETERMINED GENERALLY BY THE CHRONOMETRICAL THERMOMETER.																NAME OF MAKER.	No.
Sept. 17-24	Aug. 15-20	July 16-23	July 30 to Aug. 6	Aug. 6-13	July 23-30	July 2-9	July 9-16	Nov. 19-25	Nov. 12-19	Aug. 20-27	Aug. 27 to Sept. 3	Sept. 3-10	Nov. 5-12	Sept. 10-17	Nov. 26 to Dec. 3		
- 2.3	- 4.1	- 6.0	- 2.8	- 4.5	- 2.9	- 6.7	- 5.7	- 2.6	- 3.7	- 1.7	- 2.1	- 1.9	- 3.5	- 1.1	- 2.8	Uhlig	452
+ 3.1	+ 8.6	+ 6.2	+ 5.3	+ 5.3	+ 6.0	+ 2.5	+ 3.3	+12.3	+10.4	+ 8.8	+ 7.0	+ 5.4	+10.1	+ 4.6	+ 0.4	Mercer	4513
+ 5.3	+ 6.0	+ 3.9	+ 4.8	+ 5.6	+ 5.8	+ 3.4	+ 3.9	+ 6.5	+ 4.8	+ 3.8	+ 3.0	+ 2.5	+ 2.6	+ 3.4	+ 3.4	Kullberg	2517
+ 5.0	+ 7.1	+ 3.5	+ 4.1	+ 6.0	+ 6.2	+ 5.2	+ 3.8	+ 3.3	+ 2.8	+ 5.3	+ 6.5	+ 6.4	+ 3.0	+ 6.0	+ 4.5	Uhlig	482
- 2.9	+ 0.6	- 1.7	- 1.8	- 2.1	+ 1.0	- 3.1	- 1.1	+ 3.8	+ 2.9	- 2.2	- 1.5	+ 3.8	+ 3.6	- 1.7	+ 4.0	Kullberg	2759
+ 5.4	+ 2.8	+ 3.3	+ 3.2	+ 1.5	+ 4.7	+ 3.0	+ 2.8	+ 1.7	+ 0.8	- 0.7	+ 0.6	+ 0.8	- 2.8	+ 1.7	- 1.4	James Poole and Co.	5818
-15.2	- 5.4	- 5.9	- 2.8	- 2.1	- 2.9	- 9.1	- 7.3	- 4.5	- 6.7	- 8.7	-11.1	-14.0	- 9.3	-13.0	-11.7	Edward and Sons	4766
-15.4	-13.1	-11.6	-11.9	-14.1	-11.4	-11.7	-11.6	-20.3	-22.0	-23.6	-23.9	-20.0	-19.3	-18.3	-20.3	Blair	1887
+ 3.6	+ 4.8	+ 2.0	+ 4.7	+ 4.9	+ 5.1	- 3.3	+ 1.0	+ 3.1	+ 6.2	- 2.7	- 1.3	+ 3.1	+ 1.0	- 0.2	+ 3.2	Blair	1888
+ 6.1	+11.1	+ 9.8	+11.7	+11.9	+13.1	+ 3.7	+10.0	+ 4.0	+ 1.7	+ 4.7	+ 3.5	- 0.5	- 1.2	- 0.1	- 3.2	Isaac	1780
+ 2.7	+ 1.3	- 2.0	- 0.5	+ 0.5	+ 0.7	- 2.8	- 2.6	+ 0.7	+ 3.8	- 0.3	- 4.3	- 7.0	- 0.2	- 6.0	+ 1.8	Mercer	4894
+ 6.1	+11.8	+ 9.0	+ 7.7	+10.5	+10.6	+ 2.9	+ 5.7	+ 8.6	+ 6.6	+ 0.6	+ 1.4	+ 0.7	+ 2.3	+ 1.9	+ 4.2	Fryott	886
- 3.9	- 7.7	- 2.7	- 4.6	- 4.5	- 1.2	- 3.8	- 1.3	+ 3.6	+ 3.3	- 0.5	- 5.6	- 4.9	- 1.9	- 1.6	+ 3.9	Pennington	2515
0.0	+ 5.7	- 1.5	+ 2.0	+ 6.1	+ 1.2	- 6.5	- 2.6	+13.9	+14.4	+11.5	+10.3	+ 7.7	+ 3.8	+20.1	+ 3.6	Pennington	2517
+ 4.1	+ 9.0	+ 7.7	+ 7.6	+ 7.1	+ 8.7	+ 6.0	+ 6.5	- 3.9	- 4.6	- 6.3	...	...	- 3.9	-11.3	-13.1	Moore	5736
+ 0.4	- 1.5	- 3.1	- 2.8	- 2.1	- 1.9	- 5.7	- 4.7	- 2.9	- 4.8	-11.5	-13.7	-10.9	- 9.7	-15.4	-11.3	Brookbank, Atkins & Co.	2053
+ 6.4	+ 1.0	+ 1.5	+ 0.4	- 0.2	+ 3.0	- 2.2	+ 1.4	+ 6.0	+ 4.6	-13.4	- 9.5	-11.3	+ 0.1	- 8.5	- 1.7	Whyte and Co.	2828
-22.1	-20.9	-19.9	-19.2	-17.3	-19.0	-20.7	-19.4	- 4.5	- 4.6	- 9.1	- 6.0	- 5.1	- 3.6	- 4.1	- 2.9	Sewill	4516
+13.5	+ 4.0	- 3.9	- 5.8	- 5.0	- 3.7	- 0.8	- 2.3	+ 4.5	+ 3.3	- 1.1	+ 1.1	+ 3.6	- 2.5	+ 0.8	+ 3.2	Isaac	1789
-11.8	+ 5.4	+ 3.6	+ 3.8	+ 0.8	+ 6.4	- 0.7	+ 0.9	- 7.7	-10.4	-13.6	-15.6	-14.4	- 6.9	-16.3	- 9.8	Moore	5754
+ 9.1	+ 5.9	+ 3.6	+ 4.3	+ 0.3	+ 7.3	+ 2.8	+ 5.2	+20.0	+23.7	+14.5	+13.3	+14.5	+18.9	+10.0	+24.0	Fryott	902
-13.2	+ 1.2	- 1.8	- 1.8	+ 1.3	- 2.0	- 5.5	- 3.4	- 0.1	- 2.1	+ 7.0	+ 3.3	+ 3.9	+ 5.0	+ 8.5	+ 1.6	Sewill	4518
- 7.4	+ 5.7	+ 6.3	+ 6.5	+ 9.5	+ 7.6	+ 5.0	+ 6.8	+14.3	+14.2	+20.0	+13.6	+13.5	+15.5	+10.9	+ 1.1	M. F. Dent	29564
+14.9	+12.0	+ 2.0	+ 3.9	+ 0.6	+ 2.5	- 3.5	- 0.7	+17.0	+14.3	- 3.7	- 0.9	+ 2.5	+ 6.5	+ 3.9	+11.5	Whyte and Co.	2823
+ 8.4	- 1.1	-10.2	- 8.0	- 0.1	- 9.5	-13.5	- 9.8	+ 9.6	+ 6.9	+ 1.5	+ 3.1	+ 2.5	+ 1.7	+ 5.0	+ 8.7	Gardner	2517
+20.7	+ 9.5	+ 0.8	+ 3.3	- 2.0	- 0.8	- 2.2	- 9.2	+16.5	+18.2	+ 2.8	+10.9	+20.2	+24.2	+20.9	+18.3	Oram and Son	18431
0.0	+ 3.3	+ 2.7	+ 3.0	+ 0.2	+ 3.3	+ 0.6	+ 3.3	+11.5	+ 6.1	+ 9.1	+ 8.9	+ 3.6	+10.5	+13.8	+11.5	Klean and Co.	1007
-79.1	-47.7	-69.4	-37.3	-51.7	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3	-32.3	Schoof	6059
+278.8	-7.8	-374.8	-394.7	-543.0	-550.5	-582.4	-620.4	-243.6	-244.4	-244.5	-245.0	-231.2	-235.5	-235.1	-300.5	Chronometrical Thermometer.	
56.7	53.6	55.5	57.3	76.6	56.6	71.2	71.2	56.6	50.9	51.6	52.2	52.6	56.1	56.5	56.9	Mean Weekly Temperature.	
58.0-61.1	52.0-61.8	57.1-61.8	52.3-62.6	54.5-67.7	53.0-68.0	58.4-67.6	56.0-67.6	52.3-62.6	52.0-60.0	57.9-60.0	58.0-61.1	52.5-61.8	57.2-60.0	57.3-60.5	57.0-60.0	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.

Moore 5736. The mainpring of this chronometer was found broken in the ninth week of the trial. It was removed by the maker on September 5 and deposited again on September 12.

NAME OF MAKER.	No.	Whether a or b days.	ADDRESS OF MAKER.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(III.) ABSTRACT OF	
					Least Weekly Rate.	Extremes of Temperature.
Uhlig	452	2	8, Quadrant Road, Essex Road, N.	Uhlig's continually acting auxiliary.	- 6.7	58.0-75.4
Mercer	4513	2	Prospect Road, St. Albans, Herts.	Auxiliary compensation.	+ 2.5	58.0-75.4
Kullberg	2517	2	105, Liverpool Road, N.	Kullberg's flat rim balance.	- 3.3	44.0-55.2
Uhlig	452	2	8, Quadrant Road, Essex Road, N.	Uhlig's continually acting auxiliary.	+ 2.8	50.0-61.1
Kullberg	2759	2	105, Liverpool Road, N.	Kullberg's flat rim balance.	- 2.9	58.0-61.1
James Poole and Co.	5818	2	33, Spencer Street, Clerkenwell, E.C.	Poole's auxiliary.	- 4.0	57.6-59.0
Edward and Sons	4756	2	92, Buchanan Street, Glasgow.	Auxiliary compensation.	- 15.2	58.0-61.1
Blair	1887	2	45, Prince Street, Bristol.	Auxiliary compensation.	- 23.9	51.3-52.8
Blair	1888	2	45, Prince Street, Bristol.	Auxiliary compensation.	- 11.1	57.6-59.0
Isaac	1780	2	10, Spencer Street, Clerkenwell, E.C.	Solid auxiliary balance.	- 3.2	58.0-59.0
Mercer	4524	2	Prospect Road, St. Albans, Herts.	Auxiliary compensation.	- 7.0	56.9-57.2
Fyott	880	2	74, West India Dock Road, E.	Ordinary balance with auxiliary.	- 5.9	57.6-59.0
Penlington	2515	2	2 & 3, St. George's Crescent, Liverpool.	Auxiliary compensation.	- 7.7	52.0-59.0
Penlington	2517	2	2 & 3, St. George's Crescent, Liverpool.	Auxiliary compensation.	- 6.5	58.0-75.4
Moore	5735	2	102, High Street, Belfast.	Poole's auxiliary.	- 13.1	58.0-59.0
Brookbank, Atkins & Co.	2003	2	6, Cowper's Court, Cornhill, E.C.	Auxiliary compensation.	- 16.9	55.9-57.2
Whyte and Co.	2528	2	114, Broadmead, Glasgow.	Auxiliary compensation.	- 11.4	59.0-59.0
Sewill	4516	2	30, Cornhill, E.C.	Auxiliary compensation.	- 22.1	58.0-61.1
Isaac	1789	2	10, Spencer Street, Clerkenwell, E.C.	Ordinary balance.	- 5.8	51.8-59.0
Moore	5754	2	102, High Street, Belfast.	Poole's auxiliary.	- 15.6	51.8-52.8
Fyott	922	2	74, West India Dock Road, E.	Ordinary balance, with auxiliary.	- 6.1	57.6-59.0
Sewill	4518	2	30, Cornhill, E.C.	Auxiliary compensation.	- 15.7	46.0-55.2
M. F. Dent	23564	2	33 & 34, Cockspur Street, Charing Cross, S.W.	Auxiliary acting in cold.	- 7.4	58.0-61.1
Whyte and Co.	2525	2	114, Broadmead, Glasgow.	Auxiliary compensation.	- 3.7	50.0-58.0
Gardner	5757	2	20, Lloyd's Square, W.C.	Auxiliary gaining in cold.	- 13.5	58.0-75.4
Oram and Son	15431	2	15, Wilmington Square, W.C.	Auxiliary compensation.	- 9.2	59.0-74.8
Klean and Co.	1007	2	70, Myddleton Street, Clerkenwell, E.C.	Poole's auxiliary.	- 40.4	57.6-59.0
Schoof	6059	2	99, St. John's Street Road, E.C.	Schoof's resilient lever escapement.	- 85.7	48.0-59.0

The sign + indicates that the rate is gaining.

THE PRINCIPAL CHANGES OF RATE DURING THE 29 WEEKS.

Mean Temperature.	Greatest Weekly Rate.	Extremes of Temperature.	Mean Temperature.	Difference between the Greatest and Least. (a)	Greatest Difference between one Week and the next. (b)	Mean Temperatures for these two Weeks.	a + 2 b.	NAME OF MAKER.	No.
71.2	+ 0.1	37.6 - 59.0	44.5	6.8	3.2	52.5 - 47.1	13.2	Uhlig	452
71.2	+ 12.3	59.2 - 92.0	50.6	10.2	3.7	59.7 - 50.8	17.6	Mercer	4513
50.8	+ 6.5	50.2 - 92.0	50.6	9.8	4.1	50.6 - 98.9	18.0	Kullberg	2517
50.9	+ 15.8	50.6 - 92.0	44.5	10.7	4.8	47.6 - 50.8	20.3	Uhlig	452
59.7	+ 10.1	46.0 - 55.2	50.8	13.0	3.9	44.5 - 47.6	20.8	Kullberg	2759
44.5	+ 6.1	53.2 - 60.8	58.8	10.1	7.3	58.5 - 50.1	24.5	James Poole and Co.	5818
59.7	- 0.8	37.6 - 59.0	44.5	14.4	7.2	50.6 - 98.9	28.8	Edward and Sons	4756
92.2	- 11.4	67.7 - 73.0	69.6	13.5	10.5	63.6 - 91.6	33.5	Blair	1887
44.5	+ 8.1	59.2 - 92.0	50.6	19.2	7.5	63.6 - 91.6	34.2	Blair	1888
58.9	+ 13.1	67.7 - 73.0	69.6	16.3	9.0	58.5 - 50.1	34.3	Isaac	1780
58.6	+ 14.6	40.2 - 53.2	47.6	21.6	8.7	56.5 - 59.7	39.0	Mercer	4524
44.5	+ 11.8	52.0 - 60.0	63.0	17.6	11.2	63.6 - 91.6	40.0	Fyott	880
63.6	+ 22.2	37.6 - 59.0	44.5	29.9	9.5	58.9 - 53.5	48.9	Penlington	2515
71.2	+ 24.5	48.0 - 59.0	53.5	31.0	10.8	58.5 - 50.1	52.6	Penlington	2517
58.9	+ 9.0	63.0 - 60.0	63.6	22.1	15.6	58.5 - 50.1	53.1	Moore	5735
58.6	+ 4.7	55.7 - 54.6	58.5	21.6	15.8	58.5 - 59.7	53.2	Brookbank, Atkins & Co.	2003
91.6	+ 12.3	49.9 - 59.2	52.5	32.7	14.9	58.5 - 59.7	53.5	Whyte & Co.	2528
59.7	- 2.9	59.0 - 59.0	59.9	19.2	18.0	59.5 - 59.7	55.2	Sewill	4516
57.8	+ 15.4	48.0 - 59.0	53.5	24.2	16.2	58.9 - 53.5	56.6	Isaac	1789
92.2	+ 6.8	55.6 - 74.5	70.6	22.4	19.0	63.6 - 91.6	60.4	Moore	5754
44.5	+ 20.0	50.2 - 92.0	50.6	32.1	14.5	57.4 - 58.8	61.1	Fyott	922
50.8	+ 8.9	50.0 - 97.2	50.6	27.6	31.7	59.5 - 59.7	71.0	Sewill	4518
59.7	+ 20.1	51.3 - 92.8	52.2	27.5	28.9	59.5 - 59.7	73.3	M. F. Dent	23564
91.6	+ 39.6	40.2 - 53.2	47.6	45.3	15.7	63.6 - 91.6	74.7	Whyte & Co.	2525
71.2	+ 33.4	36.6 - 50.5	47.1	45.9	14.3	58.9 - 53.5	75.5	Gardner	5757
71.2	+ 33.5	55.7 - 54.6	58.5	47.7	14.3	58.5 - 50.1	76.3	Oram and Son	15431
44.5	+ 12.8	55.5 - 97.0	50.5	53.2	39.2	59.5 - 53.5	113.6	Klean and Co.	1007
53.5	- 21.4	55.9 - 97.2	59.6	66.3	37.5	59.5 - 59.7	181.3	Schoof	6059

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.

Moore 5756. The maladjustment of this Chronometer was found broken in the ninth week of the trial. It was removed by the maker on September 5 and deposited again on September 12.