

RATES OF CHRONOMETERS
ON TRIAL
FOR PURCHASE BY THE BOARD OF ADMIRALTY,
AT THE
ROYAL OBSERVATORY, GREENWICH,
FROM 1899 JULY 1 TO 1900 JANUARY 20.

NAME OF MAKER.			No. of Days.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(L) WEEKLY RATES																IN ORDER OF TIME.																NAME of MAKER.	
July 1-8	July 8-15	July 15-22			July 22-29	July 29 to Aug. 5	Aug. 5-12	Aug. 12-19	Aug. 19-26	Aug. 26 to Sept. 2	Sept. 2-9	Sept. 9-16	Sept. 16-23	Sept. 23-30	Oct. 7-14	Oct. 14-21	Oct. 21-28	Oct. 28 Nov. 4	Nov. 4-11	Nov. 11-18	Nov. 18-25	Nov. 25 Dec. 2	Dec. 2-9	Dec. 9-16	Dec. 16-23	Dec. 23- 30	Jan. 30 to Jan. 6	Jan. 6-13	Jan. 13-20									
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary spring; Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6520	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6520							
Kullberg.....	6581	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6581							
Kullberg.....	6578	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6578							
Kullberg.....	6577	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6577							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	Kullberg.....	6594							
Kullberg.....	6594	2	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+1.4	+1.1	+1.5	+1.0	+2.0	+1.2	+1.7	0.0	+0.4	+0.6	+0.9	+0.4	+0.3	+0.3	+0.3	+0.3	+0.3																		

The sign + indicates that the rate is gaining

† During these weeks the Chronometers were placed in the automatic governor which controls the supply of gas. 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.

The Chronometers are placed in order of merit, their respective positions being determined by consideration of the irregularities of rate exhibited in Table III.
Only those Chronometers have been included in this list for which δ did not exceed 12 seconds.

NAME OF MAKER.	No.	Whether on trial for 2 or 3 days.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(L) WEEKLY RATES											
				July 1-8	July 8-15	July 15-22	July 22-29	July 29 to Aug. 5	Aug. 5-12	Aug. 12-19	Aug. 19-26	Sept. 26 to Oct. 2	Oct. 2-9	Oct. 9-16	Sept. 16-23
				+	-	+	+	+	+	+	+	+	+	+	+
Usher & Cole.....	8242	2	Auxiliary to balance setting in heat and cold; palladium spring.	+ 2.0	- 0.3	+ 2.6	+ 1.5	+ 3.2	+ 2.4	+ 2.8	+ 2.0	+ 11.0	+ 3.9	+ 9.9	+ 12.4
Kullberg.....	6509	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	- 4.0	- 3.0	- 2.6	- 3.8	- 3.0	- 4.2	- 4.9	- 3.6	- 7.9	- 8.0	- 12.1	- 13.1
Johannesen & Co.....	4894	2	Auxiliary compensation setting in heat; palladium spring.	- 3.1	- 1.9	- 2.5	- 0.9	- 1.6	- 3.4	- 5.1	+ 0.2	+ 2.8	+ 5.7	+ 7.8	+ 5.3
Webb.....	5685	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	- 3.9	- 1.2	- 0.1	- 1.2	- 1.8	- 0.6	- 0.1	- 0.5	- 1.5	- 2.0	- 0.4	- 0.9
			Ordinary balance; palladium spring.	- 3.9	- 7.0	- 5.9	- 6.9	- 6.2	- 4.2	- 1.6	- 0.8	- 14.0	- 8.1	- 5.3	+ 8.9
Kullberg.....	6496	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+ 1.8	+ 1.0	- 1.5	- 3.9	- 4.3	- 5.6	- 5.7	- 3.7	- 2.7	- 8.2	- 6.3	- 6.7
Dimmer.....	5218	2	Auxiliary to balance setting in heat and cold; steel spring.	- 1.3	+ 6.2	+ 6.9	+ 6.4	+ 6.9	+ 6.1	+ 6.9	+ 10.6	+ 13.4	+ 17.0	+ 10.3	+ 11.3
Johannesen & Co.....	4894	2	Auxiliary compensation setting in heat; palladium spring.	- 5.2	- 6.2	- 0.6	- 4.6	- 3.2	- 3.2	- 2.8	- 2.9	- 0.6	- 1.3	+ 1.1	+ 5.9
Johannesen & Co.....	4875	2	Auxiliary compensation setting in heat; palladium spring.	- 11.6	- 10.0	- 10.1	- 9.9	- 7.7	- 6.6	- 7.0	- 10.1	- 13.8	- 11.8	- 6.0	+ 6.2
Johannesen & Co.....	4874	2	Auxiliary compensation setting in heat; palladium spring.	- 2.7	- 3.9	- 2.0	- 1.4	- 1.9	- 2.1	- 1.1	- 4.5	- 0.9	- 0.2	+ 1.8	- 4.7
Johannesen & Co.....	4888	2	Auxiliary compensation setting in heat; palladium spring.	- 1.0	+ 1.1	- 3.3	- 2.8	- 4.9	- 7.6	- 12.3	- 13.0	- 14.9	- 17.7	- 19.1	+ 23.1
C. Frohman & Co.....	0029	2	C. Frohman's three-arch compensating balance; steel spring.	- 3.9	- 11.9	- 11.6	- 16.1	- 16.9	- 18.2	- 17.9	- 15.9	- 18.6	- 19.6	- 18.0	- 17.1
C. Frohman & Co.....	0042	2	Ordinary balance with auxiliary for extremes; steel spring.	- 4.8	- 0.8	- 1.3	- 2.1	- 0.1	- 0.2	- 1.6	- 3.8	- 12.3	- 12.8	- 1.4	- 5.4
Usher & Cole.....	8246	2	Auxiliary to balance setting in heat and cold; palladium spring.	+ 9.0	+ 9.8	+ 8.3	+ 7.9	+ 14.7	+ 17.1	+ 15.1	+ 13.9	+ 16.9	+ 16.9	+ 16.9	+ 23.9
Gardner.....	1717	2	Auxiliary compensation; palladium spring.	- 13.2	- 12.0	- 7.8	- 8.7	- 10.7	- 18.3	- 18.7	- 18.7	- 18.7	- 18.7	- 18.7	- 18.7
Gardner's balance No. 1, steel spring.	1717	2		+ 6.8	+ 7.7	+ 9.5	+ 9.5	+ 12.1	+ 12.4	+ 13.7	+ 13.7	+ 13.7	+ 13.7	+ 13.7	+ 13.7
Webb.....	5677	2	Ordinary balance; palladium spring.	- 39.6	- 20.2	- 16.7	- 16.9	- 18.1	- 20.2	- 21.7	- 23.5	- 24.8	- 23.6	- 19.1	- 14.0
Kullberg.....	6509	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	- 3.1	- 0.8	- 0.2	- 3.8	- 4.5	- 5.5	- 6.0	- 4.0	- 1.9	+ 0.7	- 9.2	- 9.3
Hull.....	1705	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+ 6.4	+ 6.8	+ 10.6	+ 13.1	+ 14.2	+ 13.9	+ 15.5	+ 11.5	+ 10.9	+ 7.4	+ 18.0	+ 27.8
Usher & Cole.....	8245	2	Reversed detent. Kullberg's auxiliary balance; steel spring.	+ 12.0	+ 8.3	+ 9.8	+ 9.1	+ 10.7	+ 12.0	+ 13.4	+ 13.5	+ 13.9	+ 13.9	+ 13.9	+ 13.9
Usher & Cole.....	8207	2	Auxiliary to balance setting in heat and cold; steel spring.	+ 3.1	+ 1.5	+ 2.5	+ 2.0	+ 5.9	+ 6.9	+ 7.3	+ 8.9	+ 6.9	+ 9.0	+ 10.3	+ 12.5
Johannesen & Co.....	4897	2	Auxiliary compensation setting in heat; palladium spring.	- 13.8	- 8.2	- 2.8	- 2.0	- 2.4	- 4.3	- 9.9	- 12.2	- 8.2	- 9.5	- 8.3	- 6.6
Langlois.....	0104	2	Reversed detent. Kullberg's auxiliary balance; steel spring.	- 5.7	- 6.0	- 4.9	- 5.3	- 4.9	- 5.9	- 6.0	- 4.0	- 8.3	- 4.8	- 5.4	- 6.6
Kullberg.....	6494	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+ 1.0	+ 1.8	+ 0.8	+ 0.5	+ 0.5	- 0.9	- 0.2	+ 0.1	- 8.6	- 7.1	- 4.7	+ 0.2
Usher & Cole.....	8250	2	Auxiliary to balance setting in heat and cold; steel spring.	- 6.3	- 8.8	- 3.3	- 2.6	- 1.4	- 0.5	+ 0.1	+ 4.0	+ 13.9	+ 16.9	+ 14.1	+ 10.8
Gardner.....	1717	2	Gardner's balance No. 2; palladium spring.	- 0.4	- 0.6	- 1.1	- 3.7	- 4.2	- 6.9	- 4.0	- 0.6	- 1.4	+ 7.4	+ 7.3	- 6.7
Chronometrical monometer.....				+ 146.5	- 271.3	- 514.7	- 390.4	- 374.1	- 223.0	- 212.9	- 194.3	- 281.0	- 294.5	- 207.5	+ 301.9
Mean Weekly Temperature.....				66.5	71.1	72.6	72.1	72.3	69.0	70.9	87.6	88.1	89.2	89.9	62.1
Extremes of Temperature as shown by the Self-Registering Thermometers.....				61.1-70.1-80.6-74.7-84.2-76.0-75.5-71.0-73.8-66.1-71.5-68.6-73.9-79.9-81.3-80.4-103.2-82.1-105.6-77.3-58.6-58.4-41.9											

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 temperature being regulated by Kullberg's automatic governor which controls the supply 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 rim being reversed. By this arrangement the effect of temperature is much magnified.

IN ORDER OF TIME.

NAME OF MAKER.	No.	Sept. 23-30	Sept. 30 to Oct. 7	Oct. 7-14	Oct. 14-21	Oct. 21-28	Oct. 28 to Nov. 4	Nov. 4-11	Nov. 11-18	Nov. 18-25	Nov. 25 to Dec. 2	Dec. 2-9	Dec. 9-16	Dec. 16-23	Dec. 23-30 to Jan. 6	Jan. 6-13	Jan. 13-20
		+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Usher & Cole.....	8242	+ 13.8	+ 13.8	+ 14.0	+ 13.9	+ 11.0	+ 11.8	+ 10.8	+ 10.9	+ 11.6	+ 14.8	+ 14.9	+ 13.5	+ 11.0	+ 11.1	+ 8.4	+ 10.8
Kullberg.....	6509	- 14.1	- 16.2	- 17.5	- 18.2	- 18.9	- 19.3	- 13.6	- 13.5	- 14.7	- 14.9	- 13.4	- 20.6	- 21.6	- 21.4	- 22.5	- 23.0
Johannesen & Co.....	4894	+ 5.2	+ 3.4	+ 1.6	+ 1.0	+ 0.9	+ 1.2	+ 8.2	+ 8.8	+ 13.1	+ 10.0	+ 3.7	+ 4.2	+ 1.3	- 3.0	- 4.2	- 5.3
Webb.....	5685	+ 1.7	- 0.5	- 2.7	- 0.9	- 0.9	- 4.1	0.0	- 1.7	- 0.9	- 5.3	- 9.9	- 0.9	- 9.4	- 12.9	- 12.8	- 10.3
Kullberg.....	6496	- 7.1	- 10.7	- 12.2	- 14.0	- 12.2	- 11.7	- 3.9	- 6.9	- 6.0	- 3.7	- 10.5	- 17.2	- 19.6	- 19.1	- 16.0	- 19.8
Dimmer.....	5218	+ 10.8	+ 10.8	+ 10.8	+ 10.0	+ 6.2	- 0.3	- 4.9	+ 11.2	+ 12.6	+ 8.9	+ 7.1	+ 10.3	+ 10.8	+ 8.2	+ 7.6	+ 8.0
Johannesen & Co.....	4894	+ 5.9	+ 5.9	+ 8.0	+ 8.1	+ 11.4	+ 8.9	- 7.4	+ 8.9	+ 10.8	+ 12.1	+ 11.9	+ 12.8	+ 12.9	+ 14.1	+ 14.9	+ 17.5
Johannesen & Co.....	4875	+ 1.9	+ 2.5	+ 1.3	+ 0.3	- 0.8	- 0.6	- 3.8	- 5.9	- 3.3	+ 0.1	+ 9.9	+ 11.9	+ 14.1	+ 10.0	+ 5.3	+ 1.9
Johannesen & Co.....	4874	- 3.0	- 12.0	- 14.9	- 14.0	- 11.1	- 11.0	- 5.1	- 3.2	- 2.4	- 6.2	- 5.8	- 8.7	- 3.6	- 1.4	- 2.3	- 15.0
Johannesen & Co.....	4888	+ 13.9	+ 17.8	+ 15.1	+ 17.9	+ 14.6	+ 17.9	+ 24.4	+ 24.4	+ 27.8	+ 28.2	+ 24.7	+ 22.4	+ 18.3	+ 12.7	+ 13.9	+ 13.9
C. Frohman & Co.....	0029	- 13.2	- 22.9	- 29.8	- 29.9	- 29.9	- 24.7	- 18.2	- 18.0	- 18.0	- 24.7	- 21.4	- 23.6	- 27.8	- 27.7	- 28.0	- 28.0
C. Frohman & Co.....	0042	- 7.9	- 5.9	- 5.7	- 5.3	- 3.8	- 1.1	+ 5.2	- 2.1	- 2.1	+ 4.9	- 2.9	- 1.4	- 0.2	+ 1.4	+ 2.0	+ 3.5
Usher & Cole.....	8246	+ 27.8	+ 29.0	+ 28.1	+ 28.9	+ 27.5	+ 23.7	+ 19.4	+ 18.6	+ 18.1	+ 19.1	+ 23.0	+ 23.9	+ 26.8	+ 27.0	+ 24.9	+ 24.9
Gardner.....	1717	- 26.9	- 25.0	- 24.8	- 24.2	- 25.9	- 30.0	- 22.1	- 13.8	- 17.0	- 25.8	- 30.5	- 30.4	- 30.4	- 32.5	- 29.4	- 30.4
Gardner's balance No. 1, steel spring.	1717	+ 6.2	+ 5.6	+ 1.3	+ 0.0	+ 1.3	+ 1.6	+ 6.5	- 5.5	- 1.6	+ 4.8	- 1.0	+ 1.8	- 0.8	- 0.8	+ 1.0	+ 2.0
Webb.....	5677	- 14.9	- 16.2	- 17.5	- 18.2	- 18.9	- 24.3	- 20.1	- 15.7	- 11.1	- 6.2	- 10.7	- 24.3	- 29.9	- 30.0	- 26.9	- 28.9
Kullberg.....	6509	- 11.3	- 14.9	- 15.1	- 14.6	- 13.5	- 15.6	- 9.1	- 6.4	- 5.3	- 6.3	- 17.3	- 19.1	- 15.2	- 19.4	- 20.9	- 21.2
Hull.....	1705	+ 4.2	+ 21.0	+ 22.9	+ 22.8	+ 27.0	+ 23.2	+ 24.4	+ 25.8	+ 25.3	+ 29.7	+ 24.1	+ 23.8	+ 23.0	+ 21.9	+ 20.6	+ 24.3
Usher & Cole.....	8245	+ 23.4	+ 25.6	+ 27.0	+ 23.2	+ 24.7	+ 19.0	+ 13.9	+ 13.9	+ 17.1	+ 21.1	+ 18.2	+ 23.7	+ 20.9	+ 22.9	+ 23.2	+ 27.1
Usher & Cole.....	8207	+ 10.4	+ 12.1	+ 12.8	+ 11.6	+ 11.8	+ 13.5	+ 15.5	+ 14.4	+ 12.5	+ 13.2	+ 12.7	+ 17.0	+ 14.9	+ 12.2	+ 12.7	+ 23.1
Johannesen & Co.....	4897	- 8.2	- 9.2	- 8.0	- 8.0	- 8.2	- 7.3	- 2.7	- 6.5	- 5.0	- 1.7	- 7.9	- 14.0	- 8.0	- 9.9	- 5.2	- 6.4
Langlois.....	0104	+ 11.4	+ 10.6	+ 10.1	+ 11.0	+ 9.2	+ 6.8	+ 9.2	+ 5.8	+ 6.0	+ 13.1	+ 10.7	+ 10.4	+ 17.1	+ 14.0	+ 13.1	+ 14.7
Kullberg.....	6494	- 2.4	- 5.7	- 8.7	- 8.0	- 8.1	- 5.8	- 2.0	- 5.3	- 6.6	- 4.3	- 12.9	- 20.0	- 23.6	- 23.6	- 18.0	- 21.0
Usher & Cole.....	8250	+ 14.1	+ 16.0	+ 14.6	+ 9.9	+ 15.6	+ 15.5	+ 11.2	+ 14.0	+ 19.5	+ 14.7	+ 21.9	+ 21.9	+ 24.7	+ 24.8	+ 23.4	+ 25.2
Gardner.....	1717	+ 4.9	+ 1.8	+ 4.1	+ 2.4	+ 2.6	+ 1.2	+ 6.9	+ 8.1	+ 12.1	+ 9.8	+ 8.4	+ 12.6	+ 6.2	+ 13.1	+ 13.7	+ 13.1
Chronometrical monometer.....		+ 578.1	+ 401.6	+ 1114.5	+ 1105.9	+ 1012.9	+ 636.1	+ 1493.6	+ 2487.7	+ 2467.1	+ 1007.6	+ 1111.1	+ 1744.5	+ 3052.7	+ 2094.2	+ 1692.5	+ 1494.5
Mean Weekly Temperature.....		58.8	56.2	56.8	56.6	67.4	60.0	82.5	91.5	92.6	77.9	83.1	49.0	45.1	45.9	49.7	49.8
Extremes of Temperature as shown by the Self-Registering Thermometers.....		53.6-61.0-60.2-58.9-59.4-67.7-64.5-56.9-58.0-61.8-56.9-58.9-78.0-87.7-77.7-110.9-83.6-102.4-59.5-87.5-49.9-56.0-44.7-53.6-45.5-50.4-42.8-42.6-47.9-51.6-58.0-51.0-43.8-50.0															

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

Only those Chronometers have been included in this list for which the daily rate did not exceed 12 seconds.

NAME OF MAKER	No.	Whether or 8 days.	Construction of Easement and Balance, from the Description furnished by the Maker.	(11) WEEKLY RATES IN											
				Dec. 23—	Dec. 30—	Jan. 6—	Jan. 13—	Dec. 30 to Jan. 5	Jan. 6—13	Oct. 7—14	Dec. 2—9	Oct. 14—21	Oct. 21—28	Sept. 30 to Oct. 7	Oct. 7 to Nov.
Kullberg.....	6504	2	[palladium spring.	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Kullberg.....	6500	2	Reversed detent, Kullberg's auxiliary balance ;	+ 1	+ 1	+ 1	+ 2	+ 1	+ 3	+ 2	+ 1	+ 5	+ 1	+ 5	+ 4
Johannsen & Co.	4881	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Johannsen & Co.	4876	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance ;	— 3	— 3	— 4	— 4	— 1	— 5	— 4	— 9	— 1	— 5	— 5	— 4
Gardner.....	4787	2	Reversed detent, Kullberg's auxiliary balance												

The sign $\pm$ indicates that the rate is variable.

† During these weeks the Chronometers were placed in the chamber of a stove heated by jets of gas, the temperature being regulated by Kullberg's automatic governor which controls the supply 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 on the balance is reversed, so that the balance is not affected by the expansion of the metals, but by the contraction of the same.

[illegible]

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

Table III.
Only those Chronometers have been included in this list for which λ did not exceed 12 seconds.

NAME OF MAKER.	No.	Days.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(II). WEEKLY RATES IN												ORDER OF TEMPERATURE AS DETERMINED GENERALLY BY THE CHRONOMETRICAL THERMOMETER.												NAME OF MAKER.	No.			
				Dec. 16-23	Dec. 23-30	Jan. 13-20	Dec. 30-6	Jan. 6-13	Oct. 7-14	Dec. 14-21	Oct. 21-28	Sept. 28-Oct. 5	Oct. 5-12	Sept. 12-19	Aug. 19-26	Aug. 26-Sept. 2	July 2-9	July 9-16	July 16-23	Nov. 23-Dec. 30	Nov. 30-Dec. 6	Nov. 6-13	Sept. 13-20	Nov. 20-27	Sept. 27-Oct. 4							
Usher & Co.	8242	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+12.5	+11.0	+10.8	+14.9	+11.1	+8.4	+10.4	+16.8	+10.9	+11.0	+13.8	+12.4	+3.8	+2.4	+0.3	+2.2	+1.5	+2.6	+14.8	+10.8	+2.8	+9.9	+10.9	+11.0	+13.9	Usher & Co.	8242		
Kullberg.	6592	2	Auxiliary to balance acting in heat and cold; Reversed detent. Kullberg's auxiliary balance; palladium spring.	+20.6	+18.1	+23.0	+20.0	+21.9	+26.2	+17.0	+18.4	+18.2	+19.8	+16.2	+11.8	+14.1	+12.1	+4.0	+4.9	+3.2	+3.5	+3.6	+14.6	+13.6	+5.0	+8.0	+15.5	+14.7	+7.9	Kullberg.	6592	
Johannesen & Co.	4683	2	Auxiliary compensation acting in heat; palladium spring.	+1.3	+1.0	+0.8	+1.0	+4.3	+1.1	+1.8	+1.7	+1.8	+1.9	+1.3	+1.2	+6.5	+7.6	+6.6	+1.0	+0.9	+0.9	+0.9	+0.9	+0.9	+0.9	+0.9	+0.9	+0.9	+0.9	Johannesen & Co.	4683	
Webb.	5683	2	Ordinary balance; palladium spring.	+15.3	+16.9	+14.7	+15.0	+16.1	+9.0	+12.7	+9.4	+9.4	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	+8.6	Webb.	5683	
Kullberg.	6496	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+19.9	+19.1	+19.4	+17.2	+16.0	+19.8	+12.2	+10.5	+14.0	+12.2	+10.7	+7.1	+6.7	+1.8	+5.7	+5.6	+1.0	+4.3	+3.9	+1.5	+3.7	+3.7	+3.7	+3.7	+3.7	+3.7	Kullberg.	6496	
Dimmer.	8218	2	Auxiliary to balance acting in cold; steel spring.	+10.8	+8.2	+8.0	+10.5	+7.6	+8.0	+12.0	+9.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	Dimmer.	8218	
Johannesen & Co.	4681	2	Auxiliary compensation acting in heat; palladium spring.	+12.8	+12.6	+17.5	+11.5	+14.9	+8.0	+12.1	+9.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	+10.8	Johannesen & Co.	4681	
Johannesen & Co.	4670	2	Auxiliary compensation acting in heat and cold; palladium spring.	+10.0	+5.3	+2.1	+14.1	+1.9	+0.8	+6.7	+11.9	+3.7	+2.8	+6.3	+6.2	+3.5	+0.4	+1.2	+2.8	+3.2	+6.2	+4.0	+4.6	+0.6	+7.0	+7.7	+7.7	+7.7	Johannesen & Co.	4670		
Johannesen & Co.	4674	2	Auxiliary compensation acting in heat; palladium spring.	+7.7	+4.6	+2.9	+10.3	+3.8	+0.9	+1.3	+9.9	+0.8	+2.8	+6.3	+6.2	+3.5	+0.4	+1.2	+2.8	+3.2	+6.2	+4.0	+4.6	+0.6	+7.0	+7.7	+7.7	+7.7	Johannesen & Co.	4674		
Johannesen & Co.	4688	2	Auxiliary compensation acting in heat; palladium spring.	+3.6	+1.4	+1.2	+8.7	+2.3	+13.0	+14.9	+5.8	+14.0	+11.1	+12.0	+11.0	+9.0	+4.7	+2.7	+1.1	+2.1	+3.9	+1.9	+1.4	+3.0	+0.2	+5.1	+4.6	+1.8	+3.2	Johannesen & Co.	4688	
C. Frøhdam & Co.	0029	2	C. Frøhdam's three-bar compensating balance; steel spring.	+18.3	+12.7	+14.2	+22.4	+13.9	+13.0	+15.1	+24.7	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	+17.9	C. Frøhdam & Co.	0029	
C. Frøhdam & Co.	0042	2	Ordinary balance with auxiliary for extreme; steel spring.	+0.2	+1.4	+1.9	+1.4	+2.0	+1.0	+6.7	+2.9	+5.9	+3.8	+5.9	+1.1	+7.3	+5.4	+4.8	+1.5	+0.2	+0.8	+0.1	+2.1	+1.9	+4.9	+0.2	+9.8	+1.4	+2.1	C. Frøhdam & Co.	0042	
Usher & Co.	8246	2	Auxiliary to balance acting in heat and cold; palladium spring.	+28.6	+27.0	+24.9	+29.3	+24.9	+28.1	+20.8	+28.9	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	+17.5	Usher & Co.	8246	
Gardner.	1714	2	Auxiliary compensation; palladium spring.	+30.4	+32.6	+30.4	+30.5	+29.4	+30.0	+24.8	+30.5	+24.2	+25.9	+25.0	+30.0	+26.9	+17.9	+13.2	+18.7	+18.3	+12.0	+10.7	+8.7	+7.8	+25.8	+22.1	+18.7	+12.2	+18.8	Gardner.	1714	
Webb.	5677	2	Ordinary balance; palladium spring.	+0.8	+0.8	+2.0	+1.8	+1.0	+0.8	+1.3	+1.0	+0.0	+1.3	+5.6	+1.6	+6.5	+1.4	+6.8	+13.7	+12.4	+7.7	+12.1	+9.5	+9.5	+6.1	+5.6	+5.5	+1.6	+3.8	Webb.	5677	
Kullberg.	6556	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+15.2	+19.6	+21.0	+13.1	+20.9	+21.5	+15.7	+17.3	+14.0	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	+15.5	Kullberg.	6556	
Hall.	1700	2	Gardner's continuous acting watch; in balance; blue steel; longest spring.	+23.0	+21.9	+24.2	+23.8	+20.6	+24.3	+22.9	+24.1	+22.8	+27.0	+21.0	+23.2	+24.2	+27.8	+6.4	+15.5	+13.9	+6.8	+14.2	+13.1	+10.6	+29.7	+24.4	+11.5	+18.0	+25.8	+25.3	Hall.	1700
Usher & Co.	8249	2	Auxiliary to balance acting in heat and cold; steel spring.	+29.4	+27.2	+26.1	+30.9	+28.2	+27.1	+27.0	+29.7	+26.2	+24.7	+26.6	+19.0	+23.8	+19.1	+12.0	+12.0	+11.9	+8.8	+10.0	+9.1	+9.8	+13.2	+13.3	+16.4	+12.0	+19.7	+21.1	Usher & Co.	8249
Usher & Co.	8207	2	Auxiliary to balance acting in heat and cold; steel spring.	+13.5	+22.2	+23.9	+17.0	+28.7	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	+27.6	Usher & Co.	8207	
Johannesen & Co.	4687	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+8.0	+9.9	+6.4	+14.0	+12.2	+9.8	+9.0	+7.8	+0.6	+2.2	+9.3	+8.8	+4.0	+6.6	+5.7	+5.0	+5.9	+6.0	+4.9	+5.3	+4.9	+5.3	+4.9	+5.3	+4.9	+5.3	Johannesen & Co.	4687	
Lindqvist.	0104	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+17.1	+14.0	+14.7	+13.4	+13.1	+13.6	+10.1	+15.7	+11.0	+8.2	+10.6	+6.6	+2.4	+6.6	+5.7	+5.0	+5.9	+6.0	+4.9	+5.3	+4.9	+5.3	+4.9	+5.3	+4.9	+5.3	Lindqvist.	0104	
Kullberg.	6694	2	Reversed detent. Kullberg's auxiliary balance; palladium spring.	+23.6	+24.8	+21.0	+30.6	+18.0	+21.9	+8.7	+19.9	+11.0	+8.1	+5.7	+5.8	+2.4	+6.6	+5.7	+5.0	+5.9	+6.0	+4.9	+5.3	+4.9	+5.3	+4.9	+5.3	+4.9	+5.3	Kullberg.	6694	
Usher & Co.	8250	2	Auxiliary to balance acting in heat and cold; Gardner's balance No. 2; palladium spring.	+24.7	+22.8	+26.1	+21.9	+26.4	+25.2	+14.6	+21.9	+9.9	+15.6	+16.0	+15.6	+14.1	+10.9	+6.8	+0.1	+0.5	+0.6	+8.8	+1.4	+2.6	+2.3	+14.7	+11.2	+4.0	+14.1	Usher & Co.	8250	
Gardner.	1715	2	Gardner's balance No. 2; palladium spring.	+6.2	+18.1	+12.6	+19.7	+10.1	+4.1	+8.4	+2.4	+2.6	+1.8	+1.2	+14.1	+10.9	+6.8	+0.1	+0.5	+0.6	+8.8	+1.4	+2.6	+2.3	+14.7	+11.2	+4.0	+14.1	+14.0	Gardner.	1715	
Chronometrical monomer.	Ther.			+3032.7	+2094.2	+1944.5	+1744.3	+1662.5	+1655.1	+1114.5	+1111.1	+1105.9	+1012.9	+901.6	+638.1	+578.1	+801.9	+146.6	+212.9	+223.0	+271.3	+374.1	+390.4	+514.7	+1097.6	+1498.6	+1943.3	+2087.6	+2487.7	+2467.1	+2815.0	+2945.3
Mean Weekly Temperature.				45.1	45.0	47.5	49.0	49.7	49.3	50.8	53.1	56.6	57.4	56.2	60.0	58.8	62.1	66.5	70.9	69.0	71.1	72.8	72.1	72.6	77.9	82.5	87.6	89.9	91.5	92.6	98.1	99.2
Extremes of Temperature as shown by the Self-Registering Thermometers.				42.6-50.4	42.8-48.8	48.8-50.0	44.7-53.8	47.8-51.6	45.0-54.0	51.0-64.4	54.9-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	
Extremes of Temperature as shown by the Self-Registering Thermometers.				42.6-50.4	42.8-48.8	48.8-50.0	44.7-53.8	47.8-51.6	45.0-54.0	51.0-64.4	54.9-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	54.5-60.0	

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 temperature being regulated by Kullberg's automatic governor which controls the supply 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.

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

Only those Chronometers have been included in this list for which it did not exceed 12 seconds.

NAME OF MAKER.	No.	Whether on Days	ADDRESS OF MAKER.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(III) ABSTRACT OF	
					Least Weekly Sum.	Extremes of Temperature.
Kullberg	6564	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 6-0	56-0 — 63-4
Kullberg	6520	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	+ 0-2	48-0 — 51-0
Johannsen & Co.	4878	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 2-6	54-0 — 61-0
Gardner	4877	2	20, Lloyd Square, London, W.C.	Auxiliary compensation acting in heat; palladium spring.	— 10-8	77-1 — 100-3
				Auxiliary compensation; palladium spring.	— 12-0	63-0 — 74-7
Kullberg	6619	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 19-4	42-8 — 50-0
Kullberg	6517	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 15-5	48-0 — 51-0
Johannsen & Co.	4879	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 3-1	48-0 — 51-0
Johannsen & Co.	4880	2	149, Minories, London, E.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 16-1	48-0 — 51-0
Johannsen & Co.	4845	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 7-0	56-9 — 63-4
Kullberg	6590	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 12-6	48-0 — 51-0
Kullberg	6545	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 11-7	48-0 — 51-0
Kullberg	6513	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 12-3	56-9 — 63-4
Johannsen & Co.	4885	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 4-1	48-0 — 51-0
Kullberg	6594	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 13-4	48-0 — 51-0
Johannsen & Co.	4857	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 3-1	48-0 — 51-0
Johannsen & Co.	4897	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 8-5	48-0 — 51-0
Kullberg	6512	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 10-2	48-0 — 51-0
Usher & Cole	8247	2	105, St. John Street Road, Clerkenwell, E.C.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 10-5	48-8 — 50-0
				Auxiliary to balance acting in heat and cold; steel spring.	— 4-3	58-4 — 64-9
Johannsen & Co.	4877	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 20-1	48-8 — 50-0
Parkinson & Frodham	4284	2	156, Royal Exchange, London, E.C.	Auxiliary compensation acting in heat; palladium spring.	— 3-1	54-0 — 61-8
Johannsen & Co.	4901	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 3-1	56-9 — 63-4
Martin & Co.	8239	2	The Promenade, Cheltenham.	Auxiliary to balance acting in extremes; palladium spring.	— 4-6	54-2 — 78-5
Kullberg	6518	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 16-5	42-8 — 50-4
Gardner	4877	2	20, Lloyd Square, London, W.C.	Auxiliary compensation; palladium spring.	— 12-4	82-2 — 105-0
Kullberg	6510	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 12-7	42-8 — 49-3
Johannsen & Co.	4906	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 6-4	61-1 — 70-1
Johannsen & Co.	4865	2	105, Liverpool Road, London, N.	Auxiliary compensation acting in heat; palladium spring.	— 8-4	56-9 — 63-4
Kullberg	6517	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 17-1	48-8 — 50-0
Johannsen & Co.	4871	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 11-5	48-0 — 51-0
Usher & Cole	8241	2	156, Royal Exchange, London, E.C.	Auxiliary to balance acting in heat and cold; steel spring.	— 20-1	61-1 — 70-1
Parkinson & Frodham	4283	2	156, Royal Exchange, London, E.C.	Auxiliary compensation acting in heat; palladium spring.	— 14-4	61-1 — 70-1
Johannsen & Co.	4872	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 1-4	90-8 — 103-4
Kullberg	6541	2	105, Liverpool Road, London, N.	Reversed detent, Kullberg's auxiliary balance; palladium spring.	— 15-7	48-8 — 50-4

The sign + indicates that the rate is gaining.

THE PRINCIPAL CHANGES OF RATE DURING THE 29 WEEKS.

Mean Temperature.	Greatest Weekly Sum.	Extremes of Temperature.	Mean Temperature.	Difference between the Greatest and Least.	Greatest Difference between one Week and the next.	Mean Temperature for these two Weeks.	Trial No. a + 25.	NAME OF MAKER.	No.
60-0	+ 2-0	71-0 — 73-8	72-3	8-0	3-2	91-5 — 92-6	14-4	Kullberg	6564
49-3	+ 8-2	58-4 — 64-9	62-1	8-0	3-8	91-5 — 92-6	14-6	Kullberg	6520
57-4	+ 6-7	68-6 — 65-7	77-9	8-2	3-9	82-0 — 82-5	17-0	Johannsen & Co.	4881
91-5	— 2-6	49-9 — 66-0	58-1	8-2	4-8	70-9 — 87-6	17-8	Johannsen & Co.	4878
71-1	— 0-9	86-7 — 35-8	89-9	11-1	4-5	99-2 — 98-9	19-7	Gardner	4877
47-5	— 5-2	64-2 — 73-6	72-3	14-2	2-9	72-3 — 69-0	20-0	Kullberg	6619
49-3	— 2-6	65-0 — 74-7	71-1	12-9	3-6	77-9 — 53-1	20-1	Kullberg	6517
49-3	+ 5-5	58-4 — 64-9	62-1	8-6	5-8	53-1 — 49-0	20-2	Johannsen & Co.	4879
49-3	0-4	71-0 — 73-8	72-3	15-7	2-4	87-6 — 98-1	20-4	Kullberg	6590
60-0	+ 0-5	68-6 — 73-6	70-9	7-5	6-0	60-0 — 82-5	20-7	Johannsen & Co.	4845
49-3	+ 0-1	79-9 — 91-3	87-6	13-7	3-7	60-0 — 82-5	21-1	Kullberg	6590
49-3	+ 0-7	86-0 — 74-7	71-1	12-4	5-7	60-0 — 82-5	23-8	Kullberg	6545
60-0	+ 3-0	64-2 — 73-6	72-6	15-3	4-5	98-1 — 99-2	24-3	Kullberg	6513
49-3	+ 7-4	58-4 — 64-9	62-1	11-5	6-6	60-0 — 82-5	24-7	Johannsen & Co.	4885
49-3	0-0	86-7 — 35-8	89-9	13-4	5-9	77-9 — 53-1	25-2	Kullberg	6594
49-3	+ 10-8	71-0 — 73-8	72-3	13-9	5-8	70-9 — 87-6	25-5	Johannsen & Co.	4857
49-3	+ 8-6	86-7 — 35-8	89-9	17-1	4-8	56-6 — 57-4	25-7	Johannsen & Co.	4897
49-3	— 0-4	86-7 — 35-8	89-9	12-8	6-6	77-9 — 53-1	26-0	Kullberg	6512
47-5	+ 3-9	71-0 — 73-8	72-3	14-4	6-0	56-6 — 57-4	26-4	Kullberg	6522
62-1	+ 7-7	56-9 — 63-4	60-0	12-0	7-8	92-6 — 77-9	26-6	Usher & Cole	8247
47-5	— 1-0	65-0 — 74-7	71-1	19-1	3-8	77-9 — 53-1	26-7	Johannsen & Co.	4877
57-4	+ 14-2	90-4 — 103-4	98-1	17-2	4-8	68-8 — 56-2	26-8	Parkinson & Frodham	4284
60-0	+ 13-4	42-6 — 50-4	45-1	15-5	5-7	45-1 — 45-9	26-9	Johannsen & Co.	4901
72-6	+ 15-7	47-8 — 61-6	47-8	14-3	6-0	70-9 — 87-6	26-9	Martin & Co.	8239
71-1	— 1-4	64-2 — 73-6	72-6	15-1	6-0	77-9 — 53-1	27-1	Kullberg	6518
45-1	— 0-0	53-6 — 61-9	58-8	12-4	7-6	89-9 — 69-1	27-6	Gardner	4877
49-3	+ 4-0	64-2 — 73-6	72-6	16-7	5-9	77-9 — 53-1	28-5	Kullberg	6510
49-3	+ 9-1	86-0 — 102-4	92-6	15-5	6-0	60-0 — 82-5	28-5	Johannsen & Co.	4906
60-0	+ 7-7	92-6 — 105-0	99-2	17-1	6-1	77-9 — 53-1	28-9	Johannsen & Co.	4865
47-5	0-0	92-2 — 105-0	99-2	17-1	6-1	60-0 — 82-5	29-3	Kullberg	6517
49-3	+ 1-2	69-6 — 95-7	77-9	23-0	8-3	77-9 — 53-1	29-3	Johannsen & Co.	4871
49-3	+ 4-1	69-6 — 95-7	77-9	17-1	4-7	77-9 — 53-1	29-4	Usher & Cole	8241
68-5	+ 8-6	69-6 — 95-7	77-9	18-0	6-2	77-9 — 53-1	29-4	Parkinson & Frodham	4283
98-1	+ 15-3	44-7 — 89-8	49-0	16-7	7-1	77-9 — 53-1	29-9	Johannsen & Co.	4872
45-1	+ 2-2	86-7 — 35-8	89-9	17-9	7-8	77-9 — 53-1	32-5	Kullberg	6541

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 Trial No. a + 25 is taken as a measure of the irregularities of rate.

Only those Chronometers have been included in this list for which it did not exceed 12 seconds.

NAME OF MAKER.	No.	Watch No. & Days.	ADDRESS OF MAKER.	Construction of Escapement and Balance, from the Description furnished by the Maker.	(III). ABSTRACT OF	
					Last Weekly Sum.	Extremes of Temperature.
Usher & Cole	8242	2	105, St. John Street Road, Clerkenwell, E.C.	Auxiliary to balance acting in heat and cold; palladium spring.	— 0-8	65-0 — 74-7
Kullberg	6529	2	105, Liverpool Road, London, N.	Reversed detent; Kullberg's auxiliary balance; palladium spring.	— 23-0	48-8 — 50-0
Johannesen & Co.	4883	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 7-8	65-0 — 74-7
Kullberg	6530	2	105, Liverpool Road, London, N.	Reversed detent; Kullberg's auxiliary balance; palladium spring.	— 16-9	49-8 — 50-0
Webb	5883	2	25, Anwell Street, London, E.C.	Ordinary balance; palladium spring.	— 14-0	50-4 — 108-4
Kullberg	6496	2	105, Liverpool Road, London, N.	Reversed detent; Kullberg's auxiliary balance; palladium spring.	— 19-8	48-0 — 51-0
Dimmer	8218	2	44, Palmerston Road, Southsea.	Auxiliary to balance acting in cold; steel spring.	— 0-3	56-9 — 68-4
Johannesen & Co.	4861	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 5-2	65-0 — 74-7
Johannesen & Co.	4884	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 6-2	65-0 — 74-7
Johannesen & Co.	4875	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 13-0	60-9 — 68-4
Johannesen & Co.	4874	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 14-9	54-3 — 64-7
Johannesen & Co.	4888	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 1-0	51-1 — 70-1
C. Frodham & Co.	0029	2	115, New Bond Street, London, W.	C. Frodham's three-bar compensation balance; steel spring.	— 28-7	48-0 — 51-0
C. Frodham & Co.	0042	2	115, New Bond Street, London, W.	Ordinary balance with auxiliary for extreme; steel spring.	— 12-8	92-2 — 102-0
Usher & Cole	8216	2	105, St. John Street Road, Clerkenwell, E.C.	Auxiliary to balance acting in heat and cold; palladium spring.	+ 7-9	70-2 — 75-5
Gardner	1774	2	20, Lloyd Square, London, W.C.	Auxiliary compensation; palladium spring.	— 32-5	42-8 — 49-3
Gardner	1775	2	20, Lloyd Square, London, W.C.	Gardner's balance No. 1; steel spring.	— 5-5	77-1 — 100-8
Webb	5677	2	25, Anwell Street, London, E.C.	Ordinary balance; palladium spring.	— 31-2	48-8 — 60-0
Kullberg	6528	2	105, Liverpool Road, London, N.	Reversed detent; Kullberg's auxiliary balance; palladium spring.	— 21-2	48-0 — 51-0
Hall	1705	2	17, Mercer Row, Leath, Lincoln.	Gardner's continuously acting auxiliary to balance; this steel tangent spring.	+ 6-4	61-1 — 70-1
Usher & Cole	8249	2	105, St. John Street Road, Clerkenwell, E.C.	Auxiliary to balance acting in heat and cold; steel spring.	+ 8-3	65-0 — 74-7
Usher & Cole	8207	2	105, St. John Street Road, Clerkenwell, E.C.	Auxiliary to balance acting in heat and cold; steel spring.	+ 1-5	65-0 — 74-7
Johannesen & Co.	4867	2	149, Minories, London, E.	Auxiliary compensation acting in heat; palladium spring.	— 14-0	44-7 — 58-4
Lindqvist	6104	2	13, Aldersley Street, Pimlico, S.W.	Reversed detent; Kullberg's auxiliary balance; steel spring.	— 8-3	50-4 — 108-4
Kullberg	6494	2	105, Liverpool Road, London, N.	Reversed detent; Kullberg's auxiliary balance; palladium spring.	— 23-6	42-6 — 50-4
Usher & Cole	8250	2	105, St. John Street Road, Clerkenwell, E.C.	Auxiliary to balance acting in heat and cold; palladium spring.	— 6-3	61-1 — 70-1
Gardner	1776	2	20, Lloyd Square, London, W.C.	Gardner's balance No. 2; palladium spring.	— 6-9	66-0 — 71-5

The sign + indicates that the rate is gaining.

THE PRINCIPAL CHANGES OF RATE DURING THE 29 WEEKS.

Mean Temperature.	Greatest Weekly Sum.	Extremes of Temperature.	Mean Temperature.	Difference between the Greatest and Least. (a)	Greatest Difference between one Week and the next. (b)	Mean Temperature for these two Weeks.	Trial No. a + 2b.	NAME OF MAKER.	No.
71-1	+ 16-8	49-9 — 66-0	53-1	16-8	8-2	87-6 — 88-1	33-0	Usher & Cole	8242
47-5	— 2-5	64-2 — 78-6	72-6	20-5	6-3	60-0 — 82-5	33-1	Kullberg	6529
71-1	+ 18-1	35-6 — 102-4	32-6	20-8	7-0	60-0 — 82-5	34-9	Johannesen & Co.	4883
47-5	— 0-1	73-9 — 81-8	87-6	17-0	9-4	77-9 — 53-1	35-8	Kullberg	6530
98-1	+ 3-8	58-4 — 64-9	62-1	17-8	9-1	89-9 — 62-1	36-0	Webb	5883
49-3	+ 1-0	65-0 — 74-7	71-1	20-8	7-6	60-0 — 82-5	36-4	Kullberg	6496
60-0	+ 17-0	86-7 — 98-8	89-9	17-3	9-7	60-0 — 82-5	36-7	Dimmer	8218
71-1	+ 17-5	48-8 — 60-0	47-5	22-7	7-5	66-5 — 71-1	37-7	Johannesen & Co.	4861
(71-1)	+ 14-1	44-7 — 53-8	49-0	20-3	8-9	60-0 — 82-5	38-1	Johannesen & Co.	4884
98-1	+ 10-3	44-7 — 58-8	49-0	23-3	8-4	82-6 — 77-9	40-1	Johannesen & Co.	4875
58-9	+ 1-8	86-7 — 98-8	89-9	16-7	11-8	49-3 — 47-5	40-3	Johannesen & Co.	4874
66-5	+ 28-2	69-6 — 96-7	77-9	29-2	5-6	45-1 — 45-9	40-4	Johannesen & Co.	4888
49-3	— 3-9	61-1 — 70-1	66-5	24-8	8-0	66-5 — 71-1	40-8	C. Frodham & Co.	0029
89-2	+ 3-2	75-0 — 87-0	83-5	18-0	11-4	99-2 — 89-9	40-8	C. Frodham & Co.	0042
72-1	+ 29-3	44-7 — 58-8	49-0	21-4	9-9	77-9 — 53-1	41-2	Usher & Cole	8216
45-9	— 7-8	64-2 — 78-6	72-6	24-7	9-0	62-1 — 58-8	42-7	Gardner	1774
91-5	+ 13-7	68-6 — 73-3	70-9	19-2	12-0	82-5 — 91-5	43-2	Gardner	1775
47-5	— 6-2	69-6 — 85-7	77-9	25-0	9-5	77-9 — 53-1	44-0	Webb	5677
49-3	— 0-8	65-0 — 74-7	71-1	22-0	11-0	77-9 — 53-1	44-0	Kullberg	6528
66-5	+ 29-7	69-6 — 95-7	77-9	23-3	10-6	99-2 — 89-9	44-5	Hall	1705
71-1	+ 30-9	44-7 — 53-8	49-0	22-6	11-5	77-9 — 53-1	45-6	Usher & Cole	8249
71-1	+ 28-7	47-3 — 51-6	49-7	27-2	9-5	77-9 — 53-1	45-9	Usher & Cole	8207
49-0	+ 13-8	61-1 — 70-1	66-5	27-8	9-8	56-6 — 57-4	47-4	Johannesen & Co.	4867
98-1	+ 19-4	44-7 — 53-8	49-0	27-7	10-2	99-2 — 89-9	48-1	Lindqvist	6104
45-1	+ 1-8	65-0 — 74-7	71-1	23-4	11-6	77-9 — 53-1	48-6	Kullberg	6494
66-5	+ 20-4	47-3 — 51-6	49-7	32-7	9-9	87-6 — 98-1	52-5	Usher & Cole	8250
69-0	+ 23-1	43-8 — 50-0	47-5	30-0	11-9	45-1 — 45-9	58-8	Gardner	1776

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 Trial No. a + 2b is taken as a measure of the irregularities of rate.

Only those Chronometers have been included in this list for which b did not exceed 12 seconds.