

RATES OF CHRONOMETER WATCHES
ON TRIAL
FOR PURCHASE BY THE BOARD OF ADMIRALTY,
AT THE
ROYAL OBSERVATORY, GREENWICH,
FROM 1910 JULY 30 TO 1910 NOVEMBER 19.

RATES OF CHRONOMETER WATCHES ON TRIAL FOR PURCHASE BY THE ADMIRALTY AT THE

(1) WEEKLY RATES IN

				(1) WEEKLY RATES IN																
Order of Merit.	NAME OF MAKER.	No.	ADDRESS OF MAKER.	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. 17-21.	Sept. 21-24.	Sept. 24-27.	Sept. 27 to Oct. 1.						
				Watch Horizontal. Dial up.										Watch Vertical. Pendant up.	Watch Vertical. Pendant right.	Watch Vertical. Pendant left.	Watch Vertical. Pendant up.			
1	Kunzler.....	51906	31 St. George's Place, Birmingham.....	- 5.8	- 5.7	- 6.8	- 8.3	- 7.8	- 6.0	- 8.1	- 17.5	- 4.0	- 18.4	- 10.7						
2	J. Hewitt.....	1882	54 Holyhead Road, Coventry.....	- 10.4	- 12.9	- 14.9	- 12.8	- 11.7	- 12.1	- 7.4	- 20.8	- 13.7	- 0.9	- 13.0						
3	J. Hewitt.....	1879	54 Holyhead Road, Coventry.....	+ 3.9	+ 5.9	+ 8.5	+ 8.3	+ 6.1	+ 6.1	+ 4.4	- 5.4	+ 29.6	+ 0.9	- 0.5						
4	E. White.....	2316	32 Haymarket, London, S.W.....	- 0.7	- 2.5	- 1.8	+ 0.6	- 0.1	- 1.8	- 3.1	+ 8.4	+ 7.9	- 10.7	+ 9.8						
5	W. Betty & Sons.....	7249	7 and 9 Market Street, Manchester.....	+ 2.0	- 2.0	- 1.8	- 2.1	- 3.4	- 4.9	+ 1.6	- 4.0	- 2.1	+ 2.1	- 0.5						
6	Chandler.....	57076	4 Victoria Terrace, Leamington.....	- 5.9	- 8.5	- 5.6	- 7.2	- 7.7	- 9.2	- 13.7	- 7.0	- 2.8	+ 6.4	+ 1.6						
7	A. Johansen & Co.....	6832	149 Minories, London, E.....	- 6.4	- 9.0	- 6.5	- 5.5	- 5.9	- 5.5	+ 0.4	+ 4.9	+ 10.7	+ 8.4	+ 6.0						
8	Kunzler.....	51917	31 St. George's Place, Birmingham.....	- 6.1	- 5.2	- 5.8	- 7.8	- 8.8	- 9.9	- 3.8	+ 1.6	+ 4.2	+ 3.5	- 2.8						
9	W. Brown & Son.....	2137	65 Market Place, Sheffield.....	+ 11.3	+ 13.6	+ 13.0	+ 9.4	+ 8.5	+ 4.4	- 0.5	+ 2.8	- 15.4	- 26.4	- 4.9						
10	Lilley & Son.....	1734	10 London Street, Fenchurch Street, E.C.....	- 0.6	- 3.7	- 1.3	- 0.8	- 0.7	- 1.5	- 7.7	+ 3.2	+ 1.6	+ 1.9	+ 4.9						
11	Sheffield Goldsmiths Co.....	42242	11 Fargate and Chapel Walk, Sheffield.....	+ 10.1	+ 5.1	+ 7.9	+ 8.5	+ 9.4	+ 7.0	+ 7.5	- 4.9	+ 36.2	- 25.7	- 3.9						
12	Kunzler.....	51892	31 St. George's Place, Birmingham.....	+ 0.6	+ 10.1	+ 7.1	+ 7.4	+ 9.4	+ 7.1	+ 2.7	+ 7.9	- 9.8	+ 10.0	+ 4.6						
13	Sheffield Goldsmiths Co.....	42312	11 Fargate and Chapel Walk, Sheffield.....	+ 35.7	+ 37.3	+ 33.0	+ 30.6	+ 31.4	+ 28.9	+ 31.8	+ 47.6	+ 21.9	+ 37.8	+ 51.5						
14	Kullberg.....	8229	105 Liverpool Road, London, N.....	+ 4.0	+ 3.7	- 1.7	+ 1.1	- 1.9	- 1.5	+ 5.3	+ 17.5	- 14.9	- 16.8	+ 12.3						
15	J. Hewitt.....	60448	54 Holyhead Road, Coventry.....	- 9.8	- 10.2	- 2.7	+ 1.5	- 0.6	- 2.2	+ 0.9	+ 5.8	+ 2.1	- 0.2	+ 14.9						
16	S. Yeomans.....	96607	48 Spon Street, Coventry.....	+ 5.9	+ 8.4	+ 11.1	+ 12.8	+ 12.0	+ 3.4	+ 7.4	+ 21.5	+ 38.3	+ 10.5	+ 21.0						
17	J. Hewitt.....	1887	54 Holyhead Road, Coventry.....	+ 19.2	+ 15.7	+ 12.7	+ 11.4	+ 11.0	+ 9.5	- 0.8	+ 1.2	- 0.5	- 8.9	+ 6.3						
18	Kunzler.....	51896	31 St. George's Place, Birmingham.....	- 10.8	- 10.1	- 13.2	- 14.4	- 13.6	- 12.0	- 8.3	+ 3.2	- 7.9	+ 14.0	- 2.1						
19	Wright & Craighad.....	8201	319 St. John Street, Clerkenwell, E.C.....	+ 0.1	+ 2.3	+ 3.7	+ 3.2	- 0.5	- 0.2	+ 1.8	- 1.4	+ 4.4	+ 2.8							
20	G. E. Sims.....	65356	2 Green Ter., Roebury Ave., Clerkenwell.....	- 0.2	+ 4.3	- 2.9	- 6.3	- 9.2	- 12.8	- 4.4	- 2.1	- 14.7	- 18.4	- 4.4						
21	Ollivant & Botsford.....	31178	12 and 14 St. Ann Street, Manchester.....	+ 2.8	+ 4.5	+ 7.8	+ 8.0	+ 5.7	+ 0.1	- 7.8	+ 16.6	- 15.6	- 8.4	+ 18.6						
22	W. Bryer & Son.....	1873	53 and 54 Barbican, London, E.C.....	+ 7.7	+ 6.9	+ 7.1	+ 8.7	+ 8.2	+ 10.4	+ 3.1	+ 8.1	+ 11.2	+ 11.7	+ 11.0						
23	J. J. Grant.....	34573	66 King Street, South Shields.....	- 2.7	- 3.7	+ 4.6	+ 4.1	+ 2.0	+ 1.0	+ 4.5	+ 10.1	- 3.7	- 4.0	+ 21.4						
24	Kunzler.....	51891	31 St. George's Place, Birmingham.....	+ 0.8	- 2.8	- 1.6	- 0.2	- 5.8	- 7.1	+ 2.5	+ 8.4	+ 5.1	- 9.8	+ 6.7						
25	Myers & Co.....	51615	135 Westminster Bridge Road, London, S.E.....	+ 16.1	+ 4.6	+ 5.8	+ 9.7	+ 14.0	+ 15.4	+ 3.0	+ 10.9	+ 12.6	+ 18.0	+ 14.4						
The sign + indicates a gaining rate.				66.4	65.8	67.1	67.2	65.0	62.0	88.3	91.9	89.5								
The quantities a, b, c, d, e, in the formula $a + 2b + \frac{1}{2}(c + \frac{d+e}{2})$, are taken numerically, without regard to sign.				65.0	63.1	66.1	66.3	62.9	60.4	85.0	89.6	80.0								
				67.4	67.7	69.0	69.1	66.5	65.1	89.4	98.6	91.7								

* The Weekly Rates have been computed from the rates for three days.

During the period Sept. 11 to Oct. 9, the watches were placed in an oven 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 Weekly Rates have been computed from the rates for four days.

During the period Sept. 11 to Oct. 9, the watches were placed in an oven 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.

ROYAL OBSERVATORY, GREENWICH, FROM 1910 JULY 30 TO 1910 NOVEMBER 19.

ORDER OF TIME.

(2) ABSTRACT OF THE PRINCIPAL CHANGES OF RATES.

(Continued from the Previous Columns of Rates)																
Oct. 1-8.	Oct. 8-15.	Oct. 15-22.	Oct. 22-29.	Oct. 29 to Nov. 5.	Nov. 5-12.	Nov. 12-19.	Difference between greatest and least Weekly Rates. Dial up. a.	Greatest difference between one week and the next. Dial up. b.	Difference of Weekly Rates.				Trial Number. $a + 2b + \frac{1}{2}(c + \frac{d+e}{2})$	NAME OF MAKER.	No.	Order of Merit.
Watch Horizontal. Dial up.									Pendant right. Dial up. c.	Pendant left. Dial up. d.	Pendant up. Dial up. e.					
- 10.0	- 9.1	- 10.5	- 10.7	- 9.7	- 8.6	- 7.6	5.0	2.1	- 5.0	+ 5.1	- 9.3	9.2	14.1	Kunzler.....	51906	1
- 11.0	- 12.0	- 13.9	- 13.0	- 9.9	- 9.1	- 10.2	7.5	4.7	- 7.0	- 4.0	+ 9.2	16.9	22.6	J. Hewitt.....	1882	2
+ 6.1	+ 3.5	+ 3.5	+ 4.0	+ 5.9	+ 4.3	+ 4.1	4.8	4.8	- 3.8	+ 24.8	- 4.4	14.4	23.4	J. Hewitt.....	1879	3
+ 5.8	+ 2.0	+ 1.2	+ 0.2	+ 2.9	+ 0.8	+ 1.0	8.9	3.8	+ 7.7	+ 6.5	- 12.1	16.5	23.5	E. White.....	2316	4
+ 4.9	+ 2.0	+ 0.2	+ 2.3	+ 0.4	- 5.1	- 4.8	10.0	6.5	- 5.6	- 5.4	- 1.2	23.0	26.9	W. Betty & Sons.....	7249	5
- 13.8	- 13.0	- 12.1	- 11.2	- 11.8	- 10.5	- 9.9	10.3	4.5	+ 11.1	+ 11.0	+ 20.3	19.3	30.1	Chandler.....	57076	6
+ 6.4	+ 6.0	+ 1.5	+ 0.8	+ 1.9	0.0	- 2.2	15.4	5.9	+ 2.1	+ 7.3	+ 5.0	27.2	30.4	A. Johansen & Co.....	6832	7
- 7.8	- 7.7	- 12.1	- 14.2	- 16.2	- 17.9	- 18.4	15.9	6.1	+ 5.2	+ 10.0	+ 2.3	28.1	32.8	Kunzler.....	51917	8
+ 4.6	+ 8.6	+ 7.4	+ 6.7	+ 1.9	- 2.2	- 2.1	15.8	4.9	- 3.2	- 17.5	- 28.5	25.6	34.9	W. Brown & Son.....	2137	9
+ 2.6	+ 7.2	+ 7.9	+ 10.8	+ 11.7	+ 10.4	+ 9.1	19.4	6.2	+ 6.7	+ 4.2	+ 4.5	31.8	36.7	Lilley & Son.....	1734	10
+ 6.4	+ 6.1	+ 3.5	+ 2.9	+ 3.2	+ 1.9	- 0.7	10.8	5.0	- 11.4	+ 29.2	- 32.7	29.8	36.8	Sheffield Goldsmiths Co.....	42242	11
- 0.7	+ 3.1	+ 1.4	+ 1.2	+ 2.8	+ 1.9	- 4.1	14.2	9.5	+ 5.8	- 10.8	- 9.0	33.2	39.2	Kunzler.....	51892	12
+ 38.0	+ 28.9	+ 28.0	+ 24.9	+ 21.2	+ 17.9	+ 18.1	19.4	4.9	+ 17.2	- 10.5	+ 5.4	29.2	40.5	Sheffield Goldsmiths Co.....	42212	13
+ 13.5	+ 13.0	+ 7.8	+ 5.3	+ 12.6	+ 13.2	+ 6.9	15.4	7.3	+ 5.5	- 24.3	- 26.2	30.0	41.2	Kullberg.....	8229	14
+ 8.1	+ 6.6	- 2.8	- 4.2	- 2.7	- 5.2	- 3.0	18.3	9.4	+ 5.9	- 2.4	- 4.7	31.1	41.3	J. Hewitt.....	60448	15
+ 21.3	+ 16.6	+ 15.5	+ 15.0	+ 10.0	+ 6.2	+ 5.4	17.9	8.6	+ 6.9	+ 23.9	+ 3.9	35.1	43.2	S. Yeomans.....	96607	16
+ 6.2	+ 10.0	+ 3.0	+ 1.8	+ 4.0	+ 0.1	+ 0.6	20.0	10.3	+ 1.1	- 3.2	- 11.6	40.6	43.7	J. Hewitt.....	1887	17
- 10.8	- 1.8	- 1.2	- 0.2	- 1.4	+ 1.6	+ 2.4	16.8	9.0	+ 10.1	+ 1.6	+ 23.5	34.8	44.1	Kunzler.....	51896	18
+ 4.5	+ 8.6	+ 11.0	- 11.0	- 7.0	- 12.3	- 12.5	17.0	13.1	0.0	- 3.7	+ 2.4	44.2	44.2	Wright & Craighad.....	8201	19
- 17.6	- 16.0	- 10.3	- 16.8	- 16.7	- 18.2	- 14.0	22.5	8.4	+ 7.7	- 3.7	- 7.4	39.3	45.1	G. E. Sims.....	65356	20
+ 2.1	+ 4.3	+ 1.7	+ 1.8	+ 8.2	+ 8.1	+ 8.8	16.6	7.9	+ 20.5	- 12.7	- 5.5	32.4	45.7	Ollivant & Botsford.....	31178	21
+ 23.1	+ 30.7	+ 23.7	+ 22.7	+ 24.9	+ 27.4	+ 32.0	23.9	7.6	- 3.5	- 1.9	- 1.4	44.1	46.5	W. Bryer & Son.....	1873	22
+ 13.1	+ 10.8	+ 4.2	- 5.0	+ 5.3	+ 12.0	- 12.1	18.1	10.3	+ 10.0	- 12.5	- 12.8	38.7	47.9	J. J. Grant.....	34573	23
+ 4.7	- 6.2	- 7.5	- 10.5	- 11.6	- 13.4	- 16.9	21.6	10.9	+ 4.0	+ 1.5	- 13.4	43.4	47.9	Kunzler.....	51891	24
+ 10.1	+ 3.6	- 0.9	- 1.1	+ 3.5	+ 0.7	- 1.9	18.0	12.4	+ 6.1	+ 6.0	+ 11.4	42.8	48.8	Myers & Co.....	51615	25
88.5	61.1	56.7	58.2	55.8	51.9	51.9	Mean Weekly Temperature.									
82.0	57.5	57.0	56.9	52.6	50.2	47.0	Extremes of Temperature as shown by the Self-Registering Thermometer.									
91.5	63.4	61.7	61.8	58.4	53.9	50.0										

Only those watches have been included in this list for which "b" did not exceed 18 seconds or for which a + 2b did not exceed 60.

* The Weekly Rates have been computed from the rates for three days. † The Weekly Rates have been computed from the rates for four days.

Only those watches have been included in this list for which "b" did not exceed 18 seconds or for which $a + 2b$ did not exceed 60

RATES OF CHRONOMETER WATCHES ON TRIAL FOR PURCHASE BY THE ADMIRALTY AT THE

				(1) WEEKLY RATES IN											
Order of Merit.	NAME OF MAKER.	No.	ADDRESS OF MAKER.	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. 17-21.	Sept. 21-24.	Sept. 24-27.	Sept. 27 to Oct. 1.	
				Watch Horizontal. Dial up.						Watch Vertical. Pendant up.	Watch Vertical. Pendant right.	Watch Vertical. Pendant left.	Watch Vertical. Pendant up.		
51	H. White.....	1892	63 Chesapeake, London, E.C.....	- 3.8 - 5.1	- 5.9 - 4.0	- 4.4 - 6.5	- 4.6 - 1.1	- 16.8 - 2.0	- 4.6 - 1.1	- 16.8 - 2.0	- 4.6 - 1.1	- 16.8 - 2.0	- 4.6 - 1.1	- 16.8 - 2.0	
52	J. Player & Son.....	36581	57 Alley Old Road, Coventry.....	- 4.2 - 3.0	- 2.9 - 8.9	- 12.1 - 18.2	- 2.0 - 11.7	- 1.2 - 12.6	- 6.1 - 4.4	- 4.9 - 7.2	- 4.3 - 2.5	- 3.9 - 3.8	- 20.7 - 10.0	- 31.7 - 28.4	
53	J. Player & Son.....	36579	57 Alley Old Road, Coventry.....	+ 4.4 - 4.9	+ 7.2 - 4.3	+ 2.5 - 3.9	+ 3.8 - 20.7	+ 1.0 - 31.7	+ 2.5 - 3.9	+ 3.8 - 20.7	+ 1.0 - 31.7	+ 2.5 - 3.9	+ 3.8 - 20.7	+ 1.0 - 31.7	
54	Halford & Son.....	5179	41 Pall Mall, London, S.W.....	+ 13.0 - 13.0	+ 13.6 - 14.5	+ 14.9 - 11.8	+ 0.1 - 0.4	- 82.4 - 57.4	- 8.4 - 13.0	+ 13.6 - 14.5	+ 14.9 - 11.8	+ 0.1 - 0.4	- 82.4 - 57.4	- 8.4 - 13.0	
55	E. White.....	2315	32 Haymarket, London, S.W.....	+ 3.9 - 1.9	- 7.8 - 16.9	- 20.4 - 23.8	- 6.9 - 7.2	- 19.6 - 16.1	- 3.3 - 3.9	+ 3.9 - 1.9	- 7.8 - 16.9	- 20.4 - 23.8	- 6.9 - 7.2	- 19.6 - 16.1	
56	S. Yeomans.....	80986	48 Spen Street, Coventry.....	+ 24.6 - 20.5	+ 20.7 - 16.0	+ 10.8 - 3.9	+ 14.6 - 20.1	+ 52.5 - 21.7	+ 24.2 - 9.1	+ 2.7 - 5.5	- 5.3 - 6.0	- 4.0 - 15.7	- 4.4 - 24.3	- 5.4 - 17.0	
57	Kunzler.....	51944	31 St George's Place, Birmingham.....	+ 9.1 - 2.7	- 5.5 - 5.3	- 6.0 - 4.0	- 15.7 - 4.4	- 24.3 - 5.4	+ 17.0 - 51.9	31 St George's Place, Birmingham.....	+ 9.1 - 2.7	- 5.5 - 5.3	- 6.0 - 4.0	- 15.7 - 4.4	
58	Kunzler.....	51920	31 St George's Place, Birmingham.....	+ 25.2 - 33.3	+ 40.8 - 41.9	+ 49.1 - 36.0	+ 33.5 - 27.8	- 8.9 - 80.0	+ 29.6 - 5.8	+ 1.1 - 1.1	+ 4.1 - 4.9	+ 4.1 - 20.3	+ 2.6 - 0.7	+ 5.4 - 4.0	
59	Gaydon & Sons.....	51781	20 Whitefargate, Hull.....	+ 5.8 - 1.1	+ 1.1 - 4.1	+ 4.9 - 4.1	+ 20.3 - 2.6	+ 0.7 - 5.4	+ 4.0 - 5.1	+ 1.1 - 4.1	+ 4.9 - 4.1	+ 20.3 - 2.6	+ 0.7 - 5.4	+ 4.0 - 5.1	
60	Sheffield Goldsmiths Co.	42513	11 Fargate and Chapel Walk, Sheffield.....	- 5.1 - 3.1	+ 0.8 - 0.1	- 3.9 - 4.7	- 8.5 - 41.7	- 54.6 - 31.0	- 38.9 - 5.1	- 3.1 - 0.8	- 0.1 - 3.9	- 4.7 - 8.5	- 41.7 - 54.6	- 31.0 - 38.9	
61	Phillips.....	1884	4 Finsbury Pavement, London, E.C.....	+ 8.1 - 4.5	+ 4.6 - 5.6	+ 2.9 - 0.1	+ 13.8 - 6.1	- 12.8 - 6.1	+ 10.5 - 27.1	+ 4.5 - 4.6	+ 5.6 - 2.9	- 0.1 - 13.8	- 6.1 - 12.8	- 6.1 - 10.5	
62	Johannes.....	6628	149 Minories, London, E.....	+ 27.1 - 26.9	+ 25.0 - 24.7	+ 28.2 - 28.7	+ 41.7 - 2.6	+ 19.1 - 13.5	+ 64.9 - 2.4	+ 4.6 - 4.5	+ 5.6 - 2.9	- 0.1 - 13.8	- 6.1 - 12.8	- 6.1 - 10.5	
63	W. Ehrhardt.....	190304	17 Hatton Garden, London, W.C.....	- 2.4 - 4.2	- 4.4 - 4.0	- 5.3 - 8.4	- 0.5 - 8.2	- 8.1 - 16.6	- 8.6 - 2.9	+ 4.0 - 3.0	+ 2.1 - 1.4	- 0.4 - 9.2	- 11.0 - 12.2	- 6.3 - 8.5	
64	Reid & Sons.....	52024	Blackett Street, Newcastle-on-Tyne.....	+ 2.9 - 4.0	+ 3.0 - 2.1	+ 1.4 - 0.4	+ 9.2 - 11.0	- 12.2 - 6.3	- 8.5 - 14.6	+ 10.2 - 11.3	+ 12.7 - 10.9	+ 13.8 - 18.8	- 12.3 - 11.9	- 8.6 - 11.0	
65	Collingwood & Son.....	51779	66 Linthorpe Road, Middlesbrough.....	+ 14.6 - 10.2	+ 11.3 - 12.7	+ 10.9 - 13.8	+ 18.8 - 12.3	- 11.9 - 8.6	- 11.0 - 39.0	+ 10.2 - 11.3	+ 12.7 - 10.9	+ 13.8 - 18.8	- 12.3 - 11.9	- 8.6 - 11.0	
66	G. E. Sims.....	05181	2 Green Ter., Rosebery Ave., Clerkenwell.....	+ 39.0 - 34.0	+ 34.0 - 36.9	+ 34.0 - 33.5	+ 33.8 - 28.7	- 34.8 - 22.4	- 17.7 - 19.3	+ 34.0 - 36.9	+ 34.0 - 33.5	+ 33.8 - 28.7	- 34.8 - 22.4	- 17.7 - 19.3	
67	Wales & McCulloch.....	9430	20 Lodge Hill, London, E.C.....	- 21.1 - 17.9	- 20.2 - 19.3	- 18.3 - 15.8	- 29.3 - 4.6	+ 35.8 - 32.0	+ 3.2 - 3.5	+ 17.9 - 20.2	+ 19.3 - 18.3	- 15.8 - 29.3	- 4.6 - 35.8	- 32.0 - 3.2	
68	W. Ehrhardt.....	190307	17 Hatton Garden, London, E.....	+ 3.1 - 2.4	- 2.1 - 6.4	- 5.8 - 8.1	- 18.0 - 64.4	- 67.0 - 23.0	- 84.0 - 2.5	+ 2.4 - 2.1	- 6.4 - 5.8	- 8.1 - 18.0	- 64.4 - 67.0	- 23.0 - 84.0	
69	J. Player & Son.....	36578	57 Alley Old Road, Coventry.....	- 0.1 - 21.2	- 16.9 - 16.8	- 20.2 - 23.9	- 20.7 - 15.9	+ 11.0 - 9.5	+ 8.8 - 12.8	- 16.9 - 16.8	- 20.2 - 23.9	- 20.7 - 15.9	+ 11.0 - 9.5	+ 8.8 - 12.8	
70	Kunzler.....	51922	31 St George's Place, Birmingham.....	+ 12.8 - 13.1	+ 16.1 - 26.2	+ 28.1 - 26.0	+ 23.7 - 9.5	+ 61.1 - 44.1	+ 50.8 - 16.9	+ 16.1 - 26.2	+ 28.1 - 26.0	+ 23.7 - 9.5	+ 61.1 - 44.1	+ 50.8 - 16.9	
71	S. Yeomans.....	89429	48 Spen Street, Coventry.....	- 16.9 - 15.1	- 13.6 - 12.2	- 10.7 - 11.5	- 26.1 - 17.3	+ 12.8 - 17.7	+ 16.3 - 7.9	- 15.1 - 13.6	- 12.2 - 10.7	- 11.5 - 26.1	- 17.3 - 12.8	- 17.7 - 16.3	
72	Goddard & Co.....	1878	107 Bishopsgate, London, E.C.....	- 7.9 - 6.8	- 4.9 - 6.8	- 7.4 - 13.5	- 8.5 - 1.9	- 28.5 - 62.1	- 54.6 - 8.8	+ 6.8 - 4.9	- 6.8 - 7.4	- 13.5 - 8.5	- 1.9 - 28.5	- 62.1 - 54.6	
73	Kunzler.....	51909	31 St George's Place, Birmingham.....	+ 7.9 - 6.2	+ 7.9 - 9.2	+ 8.4 - 3.2	- 0.3 - 32.0	- 53.9 - 12.6	- 53.0 - 31.1	+ 6.2 - 7.9	+ 9.2 - 8.4	+ 3.2 - 0.3	- 32.0 - 53.9	- 12.6 - 53.0	
74	Kunzler.....	51909	31 St George's Place, Birmingham.....	+ 31.1 - 40.9	+ 39.2 - 50.8	+ 56.0 - 54.5	+ 39.6 - 75.0	+ 73.2 - 116.7	+ 92.5 - 21.1	+ 40.9 - 39.2	+ 50.8 - 56.0	+ 54.5 - 39.6	+ 75.0 - 73.2	+ 116.7 - 92.5	
75	Kunzler.....	51905	31 St George's Place, Birmingham.....	+ 21.4 - 25.9	+ 24.9 - 21.4	+ 22.6 - 20.8	+ 30.8 - 32.4	+ 2.3 - 15.2	+ 15.2 - 21.4	+ 25.9 - 21.4	+ 24.9 - 21.4	+ 22.6 - 20.8	+ 30.8 - 32.4	+ 2.3 - 15.2	
76	Kunzler.....	51876	31 St George's Place, Birmingham.....	- 5.5 - 7.6	- 7.6 - 5.5	- 6.3 - 24.2	- 21.7 - 23.8	- 20.3 - 11.9	- 11.9 - 5.5	- 7.6 - 5.5	- 5.5 - 6.3	- 24.2 - 21.7	- 23.8 - 20.3	- 20.3 - 11.9	
77	J. Hewitt.....	60452	54 Holyhead Road, Coventry.....	+ 11.9 - 12.4	+ 11.0 - 13.5	+ 14.2 - 1.7	+ 57.1 - 23.7	+ 9.1 - 47.6	+ 47.6 - 11.9	+ 12.4 - 11.0	+ 13.5 - 14.2	+ 1.7 - 57.1	+ 23.7 - 9.1	+ 47.6 - 47.6	
The sign + indicates a gaining rate.				66.4	65.3	67.1	67.2	65.0	62.0	88.3	91.9	89.5			
The quantities a, b, c, d, e , in the formula $a + 2b + \frac{1}{2}(c + \frac{d+e}{3})$, are taken numerically, without regard to sign.				65.0	63.1	66.1	66.3	62.9	60.4	85.0	89.6	80.0			
				67.4	67.7	69.0	69.1	66.5	65.1	89.4	93.6	91.7			

* The Weekly Rates have been computed from the rates for three days.

During the period Sept. 11 to Oct. 9, the watches were placed in an oven 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 Weekly Rates have been computed from the rates for four days.

During the period Sept. 11 to Oct. 9, the watches were placed in an oven 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.

ROYAL OBSERVATORY, GREENWICH, FROM 1910 JULY 30 TO 1910 NOVEMBER 19.

ORDER OF TIME.							(2) ABSTRACT OF THE PRINCIPAL CHANGES OF RATES.										NAME OF MAKER.		No.	Order of Merit.
Oct. 1-8.	Oct. 8-15.	Oct. 15-22.	Oct. 22-29.	Oct 29 to Nov. 5	Nov. 5-12.	Nov. 12-19.	Difference between greatest and least Weekly Rates.		Difference of Weekly Rates.				Trial Number.	a + 2 + b $\pm \left(\frac{c+d}{2} \right)$						
Watch Horizontal. Dial up.							Pendant Dial up. e.	Pendant Dial up. h.	Pendant right Dial up. c.	Pendant left Dial up. d.	Pendant Dial up. e.									
Watch Horizontal. Dial up.							Pendant Dial up. e.	Pendant Dial up. h.	Pendant right Dial up. c.	Pendant left Dial up. d.	Pendant Dial up. e.	a + 2 + b	NAME OF MAKER.		No.	Order of Merit.				
+ 12-0	- 1-2	- 7-1	- 9-0	- 8-4	- 16-5	- 17-7	25-7	13-2	- 1-3	-20-5	+21-7	56-1	63-8	H. White	1892	51				
- 2-7	- 16-6	- 19-3	- 23-0	- 23-4	- 27-8	- 23-9	23-8	16-2	- 6-5	+ 3-6	-10-2	58-2	63-8	J. Player & Son	36561	52				
+ 1-1	- 4-6	- 12-2	- 14-3	- 16-3	- 22-0	- 23-7	30-9	- 7-6	+22-1	-13-5	+29-2	46-1	64-1	J. Player & Son	38579	53				
- 2-6	+ 8-5	+ 4-0	+ 4-3	+ 2-2	+ 6-2	+ 7-7	17-5	11-7	- 2-7	-21-1	-56-1	49-9	65-2	Halford & Son	5179	54				
+ 2-2	- 14-1	- 14-9	- 14-7	- 8-1	- 11-4	- 11-4	27-2	16-4	+ 0-4	-17-2	-13-7	60-0	65-4	E. White	2315	55				
+ 5-7	0-0	3-2	- 4-5	+ 0-7	- 1-0	+ 1-1	23-1	10-7	+12-0	+42-3	+11-5	50-5	65-5	S. Yeomans	80896	56				
- 14-2	- 0-8	+ 0-3	+ 4-6	+ 3-0	+ 7-4	+ 4-8	24-8	13-4	+21-3	- 9-3	+ 9-6	51-6	65-5	Kunzier	51914	57				
+ 27-1	+ 29-1	+ 34-1	+ 35-7	+ 31-0	+ 27-9	+ 26-5	23-9	13-1	- 1-6	-39-2	+49-7	50-1	65-7	Kunzier	51920	58				
+ 20-3	+ 20-7	+ 14-1	+ 3-7	+ 14-4	+ 10-6	+ 6-3	19-6	16-2	-17-0	-13-6	-14-9	52-0	66-3	Gaydon & Sons	51781	59				
- 15-1	- 1-4	- 6-5	- 9-0	- 7-8	- 6-9	- 8-1	15-9	13-7	-28-5	-42-8	-19-2	43-8	67-9	Sheffield Goldsmith Co.	42313	60				
+ 18-0	+ 5-8	+ 0-9	+ 0-1	- 3-6	- 11-4	- 11-2	29-4	13-4	- 7-4	-28-5	-21-8	56-2	68-3	Phillips	1884	61				
+ 45-6	+ 45-4	+ 47-9	+ 45-7	+ 46-6	+ 45-9	+ 47-4	23-2	15-0	-12-5	-24-6	-30-0	53-2	68-6	Johannsen	6628	62				
+ 1-0	- 10-4	- 13-6	- 15-0	- 21-7	- 28-1	- 22-7	27-1	11-4	- 8-7	-31-7	-16-9	49-9	70-7	W. Ehrhardt	193094	63				
+ 7-0	- 3-3	+ 7-8	+ 22-8	+ 20-2	+ 21-7	+ 6-4	25-8	15-3	-18-0	-20-2	-14-4	56-4	71-2	Reid & Sons	52024	64				
+ 23-7	+ 9-3	+ 9-9	+ 13-0	+ 8-2	+ 13-3	+ 13-5	15-5	14-4	-33-0	-35-3	-44-3	71-3	Collingwood & Son	51779	65					
+ 26-2	+ 35-8	+ 38-5	+ 40-0	+ 43-5	+ 36-9	+ 33-2	21-3	6-6	-56-2	-69-8	-64-4	23-5	75-0	G. E. Sims	55181	66				
- 25-9	- 30-0	- 31-1	- 27-7	- 31-6	- 35-6	- 35-9	21-6	12-5	+31-0	+42-6	-14-9	46-6	75-0	Wales & M'Callachan ..	8430	67				
- 33-9	- 22-9	- 32-2	- 31-6	- 32-1	- 38-1	- 23-4	37-4	11-0	-18-2	-41-0	- 2-0	59-4	75-7	W. Ehrhardt	190637	68				
- 21-9	- 17-4	- 17-8	- 18-8	- 18-4	- 22-6	- 26-3	19-9	15-1	+33-7	+32-3	+30-0	50-1	77-5	J. Player & Son	36978	69				
+ 27-0	+ 20-6	+ 20-0	+ 19-3	+ 15-2	+ 15-3	+ 14-3	13-6	14-2	+37-7	+25-8	+47-0	47-0	78-0	Kunzier	51922	70				
- 18-6	- 9-2	- 12-5	- 10-9	- 12-5	- 18-0	- 17-2	19-6	14-6	+39-2	+25-2	+40-1	46-1	78-3	S. Yeomans	93423	71				
+ 5-5	- 7-7	- 9-8	- 9-9	- 10-7	- 21-7	- 15-0	27-2	12-2	-24-9	-27-0	-60-6	53-6	80-7	Goddard & Co.	1878	72				
+ 24-8	+ 16-1	+ 6-4	+ 5-5	+ 15-0	+ 8-0	+ 2-0	28-9	12-0	-54-8	-66-3	+ 0-3	52-0	90-5	Kunzier	51890	73				
+ 54-6	+ 40-8	+ 45-7	+ 47-5	+ 46-2	+ 32-0	+ 47-1	33-9	14-9	+36-8	+31-1	+49-6	56-7	91-9	Kunzier	51907	74				
+ 9-1	+ 16-0	+ 24-4	+ 23-7	+ 22-0	+ 24-2	+ 20-9	17-8	7-9	+ 7-6	+17-0	-13-8	42-4	84-6	Kunzier	51905					
+ 0-1	- 13-1	- 12-1	- 9-6	- 7-5	- 5-4	- 5-4	13-2	12-2	-19-2	-18-6	-20-2	39-6	55-7	Kunzier	51876					
+ 9-0	+ 20-6	+ 21-0	+ 16-1	+ 13-0	+ 12-7	+ 10-0	22-7	15-9	+43-7	+25-0	+ 5-4	54-5	84-0	J. Hewitt	60452					
88 ⁵	61 ¹	58 ⁷	56 ²	55 ⁶	51 ⁹	51 ⁹	Mean Weekly Temperature.													
82-0	57-5	57-0	56-9	52-6	50-2	47-1	Extremes of Temperature as shown by the Self-Registering Thermometer.													
91-5	69-4	61-7	61-8	58-4	53-9	55-0														