

RATES OF DECK WATCHES
ON TRIAL
FOR PURCHASE BY THE BOARD OF ADMIRALTY,
AT THE
ROYAL OBSERVATORY, GREENWICH.
FROM 1896 OCTOBER 24 TO 1897 FEBRUARY 13.

(2) ABSTRACT OF THE PRINCIPAL CHANGES OF RATE

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

(1) WEEKLY RATES IN ORDER OF TIME.

NAME OF MAKER.	No.	Oct. 24-31.	Oct. 31 to Nov. 7.	Nov. 7-14.	Nov. 14-21.	Nov. 21-28.	Nov. 28 to Dec. 5.	Dec. 5-12.	Dec. 12-19.	Dec. 19-26.	Dec. 26-31.	Dec. 31 to Jan. 2.
		Watch Horizontal. Dial up.						Watch Vertical. Pendant up.	Watch Vertical. Pendant right.	Watch Vertical. Pendant left.	Watch Vertical. Pendant up.	Watch Horizontal. Dial up.
Isaac	10876	+ 6.5	+ 7.3	+ 7.9	+ 8.8	+ 9.6	+ 10.5	+ 11.4	+ 12.3	+ 13.2	+ 14.1	+ 15.0
Johannesen and Co.	6517	+ 26.1	+ 24.5	+ 30.3	+ 21.9	+ 15.4	+ 8.4	+ 0.4	+ 15.3	+ 8.0	+ 0.7	+ 25.9
J. Player and Sons	29314	+ 40.6	+ 42.5	+ 53.8	+ 65.6	+ 50.1	+ 55.8	+ 72.4	+ 87.3	+ 93.1	+ 95.0	+ 81.8
Wales and McCulloch	2420	+ 35.8	+ 23.6	+ 30.4	+ 22.7	+ 22.9	+ 26.7	+ 28.0	+ 1.0	+ 1.9	+ 7.0	+ 1.5
J. White and Sons	35294	+ 4.5	+ 12.2	+ 14.2	+ 9.9	+ 13.1	+ 18.7	+ 19.9	+ 25.0	+ 113.9	+ 76.7	+ 39.6
Keys	16079	+ 12.6	+ 10.9	+ 8.2	+ 9.0	+ 7.2	+ 5.2	+ 2.6	+ 17.7	+ 41.1	+ 16.1	+ 5.3
Bookey	30960	+ 10.1	+ 14.0	+ 4.8	+ 6.5	+ 6.8	+ 7.8	+ 9.2	+ 15.1	+ 44.3	+ 4.0	+ 13.1
Johannesen and Co.	6523	+ 20.5	+ 23.5	+ 26.8	+ 27.4	+ 24.4	+ 24.6	+ 27.4	+ 48.3	+ 60.7	+ 33.4	+ 47.6
Barton	2128	+ 18.2	+ 17.5	+ 17.5	+ 12.3	+ 17.0	+ 10.9	+ 3.5	+ 4.7	+ 23.1	+ 94.9	+ 5.8
J. White and Sons	35102	+ 11.7	+ 12.8	+ 7.9	+ 8.6	+ 7.9	+ 8.3	+ 12.5	+ 2.3	+ 21.0	+ 14.7	+ 28.0
B. Smith	220	+ 37.8	+ 53.8	+ 53.3	+ 60.7	+ 57.3	+ 50.0	+ 40.6	+ 18.4	+ 19.1	+ 22.9	+ 17.7
Walker	21516	+ 0.0	+ 0.8	+ 2.1	+ 5.5	+ 3.3	+ 1.8	+ 10.5	+ 18.7	+ 20.5	+ 90.5	+ 45.0
Brookbank, Atkins and Moore	21559	+ 15.3	+ 10.8	+ 8.1	+ 4.2	+ 5.9	+ 9.0	+ 9.7	+ 30.8	+ 52.0	+ 9.8	+ 20.6
B. Smith	216	+ 9.7	+ 14.1	+ 19.5	+ 20.8	+ 24.5	+ 28.6	+ 8.1	+ 4.4	+ 1.4	+ 6.7	+ 10.9
Thornele	71613	+ 8.0	+ 1.5	+ 10.1	+ 10.5	+ 20.9	+ 9.5	+ 28.3	+ 29.9	+ 23.8	+ 27.3	+ 26.4
Usher and Cole	28634	+ 4.5	+ 6.3	+ 8.1	+ 9.7	+ 7.5	+ 8.3	+ 13.5	+ 46.4	+ 36.6	+ 23.8	+ 48.5
Webb	9282	+ 4.1	+ 58.7	+ 68.7	+ 67.0	+ 69.3	+ 68.4	+ 73.7	+ 115.5	+ 110.6	+ 37.5	+ 108.5
Matthews	24584	+ 0.4	+ 0.1	+ 1.0	+ 1.3	+ 0.1	+ 1.1	+ 21.4	+ 42.3	+ 41.1	+ 43.6	+ 45.0
Walker	21515	+ 72.2	+ 74.3	+ 67.8	+ 65.0	+ 63.3	+ 68.3	+ 68.5	+ 31.7	+ 2.8	+ 20.4	+ 24.3
Mean Weekly Temperature		56.7	56.7	56.1	55.2	55.2	55.3	57.0	58.1		76.6	58.4
Extremes of Temperature as shown by the Self-Registering Thermometer		48.7-58.3	48.0-52.1	48.5-61.2	50.0-60.5	50.0-60.6	48.3-60.1	75.3-58.4	72.2-38.8		61.3-38.3	71.3-52.2

* The Weekly Rates have been computed from the rates for three days.
During the period Dec. 5 to Jan. 2, the watches were placed in an oven heated by Kallberg'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 Dec. 5 to Jan. 2, the watches were placed in an oven heated by Kallberg'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 1896 OCTOBER 24 TO 1897 FEBRUARY 13—(concluded).

(2) ABSTRACT OF THE PRINCIPAL CHANGES OF RATE.

Jan. 2-9.	Jan. 9-16.	Jan. 16-23.	Jan. 23-30.	Jan. 30 to Feb. 6.	Feb. 6-13.	Difference between greatest and least Weekly Rates.	Greatest difference between one week and the next.	Difference of Weekly Rates.			Trial Number.	NAME OF MAKER.	No.
Watch Horizontal. Dial up.						Pendant Dial up. a.	Pendant Dial up. b.	Pendant left Dial up. c.	Pendant right Dial up. d.	Pendant left Dial up. e.			
+ 5.1	+ 8.8	+ 0.3	+ 1.8	+ 5.3	+ 8.7	27.7	20.8	+ 21.4	+ 19.1	+ 17.0	86.0	Isaac	10876
+ 21.0	+ 4.0	+ 4.6	+ 2.0	+ 1.6	+ 0.7	33.0	23.7	+ 5.9	+ 13.8	+ 1.4	86.4	Johannesen and Co.	6517
+ 40.6	+ 55.0	+ 54.9	+ 50.4	+ 75.6	+ 50.7	45.1	15.6	+ 12.2	+ 10.1	+ 10.0	38.1	J. Player and Sons	29314
+ 35.1	+ 23.7	+ 22.5	+ 23.3	+ 24.2	+ 24.7	29.0	28.6	+ 6.1	+ 4.1	+ 4.3	90.7	Wales & McCulloch	2420
+ 45.7	+ 37.2	+ 31.1	+ 33.8	+ 37.6	+ 42.3	41.9	8.5	+ 0.6	+ 28.2	+ 108.4	91.0	J. White and Sons	35294
+ 12.6	+ 10.9	+ 8.2	+ 9.0	+ 7.2	+ 5.2	30.8	19.8	+ 8.5	+ 19.0	+ 42.4	91.4	Keys	16079
+ 10.1	+ 14.0	+ 4.8	+ 6.5	+ 6.8	+ 7.8	44.2	17.0	+ 19.9	+ 43.1	+ 2.8	98.3	Buckley	30960
+ 20.5	+ 23.5	+ 26.8	+ 27.4	+ 24.4	+ 24.6	30.7	33.6	+ 1.0	+ 13.7	+ 13.6	93.0	Johannesen and Co.	6523
+ 18.2	+ 17.5	+ 17.5	+ 12.3	+ 17.0	+ 10.9	30.1	17.9	+ 9.5	+ 27.3	+ 99.1	93.4	Barton	2128
+ 11.7	+ 12.8	+ 7.9	+ 8.6	+ 7.9	+ 8.3	30.3	20.7	+ 30.3	+ 22.3	+ 22.9	93.6	J. White and Sons	35102
+ 37.8	+ 53.8	+ 53.3	+ 60.7	+ 57.3	+ 50.0	46.0	10.0	+ 21.9	+ 17.9	+ 14.1	94.3	B. Smith	220
+ 0.0	+ 0.8	+ 2.1	+ 5.5	+ 3.3	+ 1.8	19.5	14.3	+ 40.3	+ 33.4	+ 105.4	95.0	Walker	21516
+ 15.3	+ 10.8	+ 8.1	+ 4.2	+ 5.9	+ 9.0	33.0	24.4	+ 5.3	+ 28.5	+ 35.0	95.0	Brookbank, Atkins and Moore.	21559
+ 9.7	+ 14.1	+ 19.5	+ 20.8	+ 24.5	+ 28.6	42.4	22.4	+ 11.3	+ 13.9	+ 2.7	95.7	B. Smith	216
+ 8.0	+ 1.5	+ 10.1	+ 10.5	+ 20.9	+ 9.5	55.1	18.8	+ 2.9	+ 7.3	+ 3.8	96.0	Thornele	71613
+ 4.5	+ 6.3	+ 8.1	+ 9.7	+ 7.5	+ 8.3	33.5	21.8	+ 39.3	+ 33.4	+ 32.0	96.8	Usher and Cole	28634
+ 4.1	+ 58.7	+ 68.7	+ 67.0	+ 69.3	+ 68.4	61.0	37.4	+ 24.3	+ 34.5	+ 11.4	97.6	Webb	9282
+ 0.4	+ 0.1	+ 1.0	+ 1.3	+ 0.1	+ 1.1	34.6	32.3	+ 14.7	+ 13.7	+ 16.9	97.6	Matthews	24584
+ 72.2	+ 74.3	+ 67.8	+ 65.0	+ 63.3	+ 68.3	31.8	25.7	+ 9.8	+ 45.6	+ 10.4	98.4	Walker	21515
51.9	55.6	47.6	46.8	56.6	58.7	The sign + indicates a gaining rate.							
The quantities a, b, c, d, e, in the formula $a + 2b + 1(c + \frac{d}{e} + \frac{e}{b})$, are taken numerically, without regard to sign.													
47.2-51.9	47.8-51.9	41.3-55.4	39.8-56.7	43.5-58.9	46.1-50.1								

Only those watches have been included in this list for which the trial number did not exceed 100.
Thornele, 71613. The mainspring of this watch broke in the 14th week of the trial.