

RATES OF DECK WATCHES

ON TRIAL

FOR PURCHASE BY THE BOARD OF ADMIRALTY,

AT THE

ROYAL OBSERVATORY, GREENWICH

FROM 1892 OCTOBER 22 TO 1893 FEBRUARY 11.

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. 22—29.	Oct. 29 to Nov. 5.	Nov. 5—12.	Nov. 12—19.	Nov. 19—26.	Nov. 26 to Dec. 3.	Dec. 3—10.	Dec. 10—14.	Dec. 14—17.	Dec. 17—20.	Dec. 20—24.	Dec. 24—31.
		Watch Horizontal. Dial up.							Watch Vertical. Pendant up. †	Watch Vertical. Pendant right. *	Watch Vertical. Pendant left. *	Watch Vertical. Pendant up. †	Watch Horizon- tal. Dial up.
Johannsen and Co.....	6455	+ 1.5	— 0.7	— 0.9	— 0.2	— 0.1	— 1.5	— 6.9	— 17.0	— 31.7	+ 7.5	— 14.2	0.0
Holland	3744	+ 13.7	+ 14.7	+ 16.4	+ 19.4	+ 17.9	+ 16.8	+ 11.4	— 5.3	— 34.8	+ 7.7	+ 9.3	+ 22.9
Hall	2663	+ 8.4	+ 6.6	+ 6.8	+ 6.9	+ 4.0	+ 3.1	+ 11.2	+ 24.3	+ 23.1	+ 16.8	+ 14.4	+ 25.7
Ollivant and Botsford	30695	— 10.0	— 13.5	— 14.6	— 17.5	— 17.0	— 14.4	— 11.2	— 10.5	— 80.3	— 78.2	— 0.4	— 5.4
Ollivant and Botsford	30693	+ 10.0	+ 10.2	+ 12.5	+ 14.6	+ 12.7	+ 14.2	+ 1.4	— 15.6	— 52.3	— 30.8	— 10.7	+ 8.0
Johannsen and Co.....	6454	+ 53.3	+ 43.8	+ 48.4	+ 44.8	+ 45.0	+ 42.2	+ 47.0	+ 81.9	— 2.8	+ 49.0	+ 81.9	+ 52.8
Brockbank, Atkins and Moore	74358	+ 8.5	+ 7.2	+ 5.8	+ 9.2	+ 6.4	+ 3.2	+ 0.4	+ 62.5	+ 14.0	— 50.9	+ 46.6	— 1.9
Ollivant and Botsford	30694	+ 5.4	+ 8.3	+ 9.7	+ 10.0	+ 10.0	+ 10.7	+ 20.3	+ 6.5	— 51.3	— 9.8	+ 20.5	+ 37.0
Ollivant and Botsford	30696	+ 6.9	+ 10.3	+ 14.9	+ 16.6	+ 21.6	+ 21.3	+ 28.1	— 16.8	+ 7.2	— 44.3	— 7.4	+ 32.0
C. Frodsham and Co....	08073	— 8.4	— 10.3	— 11.5	— 10.6	— 19.9	— 23.5	— 6.0	+ 28.9	— 4.4	— 25.4	+ 39.4	+ 4.5
Kendal and Dent	28862	+ 4.6	+ 7.7	+ 2.2	+ 6.4	— 4.4	— 4.5	+ 13.7	— 3.9	— 53.0	+ 55.3	+ 20.3	+ 14.7
Johannsen and Co.....	6456	— 9.9	— 30.6	— 27.5	— 36.8	— 23.1	— 26.9	— 33.1	— 1.9	— 25.7	— 7.9	+ 0.7	— 19.2
Usher and Cole	28968	+ 13.9	+ 6.8	+ 1.5	+ 1.0	— 15.0	— 13.3	+ 10.4	— 15.1	— 29.2	+ 39.0	— 7.9	+ 9.6
Keys	15876	— 14.7	— 14.1	— 15.0	— 13.3	— 18.5	— 19.8	+ 3.8	+ 15.4	— 3.5	+ 21.5	+ 20.0	+ 15.9
Kendal and Dent	28861	— 10.3	— 12.3	— 14.9	— 33.0	— 10.2	— 25.2	— 7.9	+ 27.8	+ 18.2	— 2.1	+ 25.2	+ 13.0
Ollivant and Botsford	30692	+ 11.0	+ 6.0	— 0.5	— 1.9	— 5.9	— 10.6	— 13.9	— 29.8	— 112.2	— 60.0	— 23.3	— 21.7
Hall	2661	+ 24.5	+ 31.6	+ 23.9	+ 25.5	+ 14.8	+ 12.4	+ 41.1	+ 30.8	— 17.3	— 18.7	+ 43.9	+ 46.8
C. Frodsham and Co....	08093	— 10.4	— 10.5	— 9.6	— 9.3	— 17.0	— 22.7	+ 10.8	+ 8.6	— 3.3	+ 4.0	+ 7.9	+ 0.6
Isaac	10854	+ 32.1	+ 38.4	+ 32.7	+ 43.5	+ 27.7	+ 34.7	+ 37.1	+ 24.7	+ 33.4	+ 129.5	+ 35.4	+ 75.2
Isaac	10831	+ 19.0	— 4.5	— 2.8	— 4.4	+ 8.1	+ 9.5	+ 3.1	+ 14.2	— 13.1	— 43.4	+ 35.2	+ 17.2
Usher & Cole	28879	— 3.8	— 4.9	— 7.8	— 7.2	— 14.7	— 19.6	+ 11.4	— 12.8	— 24.0	— 13.8	— 9.1	+ 7.4
Hall	2662	— 4.8	+ 1.0	— 4.1	— 1.3	— 11.6	— 8.1	+ 9.5	— 18.9	— 35.7	— 10.0	— 1.4	+ 28.6
Keys	15874	+ 6.0	+ 9.1	+ 7.0	+ 10.7	+ 4.6	+ 2.5	+ 41.7	+ 64.2	+ 51.1	+ 46.2	+ 72.5	+ 58.9
Johannsen and Co.....	6451	+ 11.7	— 2.0	— 9.3	— 26.0	— 20.4	— 28.3	+ 14.5	— 24.5	— 25.0	+ 11.0	— 31.9	+ 12.3
E. Dent and Co.	45614	— 10.3	— 22.3	— 25.2	— 17.3	— 26.6	— 26.3	+ 24.0	— 32.2	+ 25.2	+ 36.9	+ 83.3	+ 40.2
E. Dent and Co.	45613	— 5.0	— 31.9	— 33.6	— 37.8	— 35.4	— 36.3	+ 4.7	— 61.3	— 6.1	— 33.8	— 14.9	+ 19.2
Webb	9263	— 20.4	— 17.2	— 22.2	— 18.1	— 7.0	— 22.7	+ 3.1	+ 62.0	+ 5.6	+ 84.7	+ 91.4	+ 49.9
Brockbank, Atkins and Moore	74450	+ 11.3	+ 18.4	+ 19.2	+ 26.0	+ 22.8	+ 20.7	+ 50.5	+ 38.2	+ 23.6	+ 32.7	+ 55.3	+ 49.5
Usher and Cole	28878	+ 19.0	+ 16.0	+ 14.7	+ 14.8	+ 9.8	+ 7.6	+ 31.2	+ 10.0	— 9.1	— 3.3	+ 14.9	+ 39.6
Keys	15875	— 23.2	— 17.6	— 19.7	— 17.6	— 17.6	— 24.6	+ 19.2	+ 24.9	+ 86.3	+ 88.2	+ 28.0	+ 34.9
Keys	15877	— 3.6	— 0.6	— 4.0	— 3.1	— 12.5	— 16.1	+ 40.4	+ 31.3	+ 31.7	+ 51.6	+ 39.6	+ 56.0
Webb.....	9262	+ 9.2	— 10.5	— 22.4	— 29.0	— 32.4	— 32.8	+ 1.7	+ 52.7	+ 60.0	+ 15.9	+ 71.8	+ 88.9
Webb.....	507	— 34.0	— 65.5	— 70.9	— 84.5	— 88.8	— 88.9	— 106.6	— 4.9	— 5.6	+ 62.3	+ 9.1	— 68.2
C. Frodsham & Co.....	07958	— 9.1	— 6.5	— 14.2	— 16.2	— 29.1	— 34.3	+ 12.7	— 20.0	— 13.3	— 28.0	— 15.2	+ 3.3
E. Dent and Co.	45618	+ 19.4	+ 16.3	+ 14.9	+ 22.7	+ 14.3	+ 16.1	+ 46.0	+ 28.7	+ 17.0	+ 10.3	+ 38.2	+ 57.5
S. Smith & Son	13751	+ 3.2	+ 1.8	— 3.4	+ 0.6	— 9.7	— 9.8	+ 60.2	+ 60.4	+ 46.2	+ 10.3	+ 77.7	+ 81.3
Holland	3747	+ 15.8	+ 11.9	+ 12.6	+ 12.6	+ 10.1	+ 13.0	+ 86.2	+ 13.5	— 11.2	— 8.6	+ 51.5	+ 134.6
Holland	3769	— 28.1	— 28.3	— 31.1	— 28.9	— 29.6	— 31.7	+ 36.7	+ 138.8	— 105.2	+ 286.8	+ 557.2	+ 72.9
Mean Weekly Temperature ...		50.6	54.7	53.5	55.0	49.9	49.1	81.0	84.2		81.1		78.7
Extremes of Temperature as shown by the Self-Regis- tering Thermometers.....		47.4—57.1	51.5—57.9	50.9—58.0	50.2—58.0	48.0—52.8	46.0—52.0	72.6—86.9	71.4—90.1		74.7—86.0		70.5—84.0

* The Weekly Rates have been computed from the Rates for three days. † The Weekly Rates have been computed from the Rates for four days.
During the period Dec. 3 to Dec. 31, 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.

1894GOMM...54J...1C

1894G04MM

						(2) ABSTRACT OF THE PRINCIPAL CHANGES OF RATE.							
Dec. 31 to Jan. 7.	Jan. 7—14.	Jan. 14—21.	Jan. 21—28.	Jan. 28 to Feb. 4.	Feb. 4—11.	Difference between greatest and least Weekly Rates. Dial up. <i>a.</i>	Greatest difference between one week and the next. Dial up. <i>b.</i>	Difference of Weekly Rates.			Trial Number.	N A M E OF M A K E R.	No.
Watch Horizontal. Dial up.								Pendant up —Dial up. <i>c.</i>	Pendant right —Dial up. <i>d.</i>	Pendant left —Dial up. <i>e.</i>	$a + 2b + \frac{1}{2}(c + \frac{d+e}{3})$		
— 6.1 + 18.0 + 10.6 + 0.1 + 7.9	— 6.1 + 16.0 + 2.8 — 1.9 — 4.1	— 4.1 + 17.8 + 7.7 — 3.8 + 2.3	— 0.6 + 19.0 + 8.1 0.0 + 7.0	+ 1.7 + 28.2 + 10.9 + 0.9 + 2.6	— 0.1 + 28.2 + 8.1 + 6.2 + 6.6	8.6 16.8 22.9 23.7 18.7	6.1 9.2 15.1 5.5 12.8	— 12.1 — 15.2 + 0.9 + 2.8 — 17.9	— 28.2 — 52.0 + 4.6 — 72.0 — 57.0	+ 11.0 — 9.5 — 1.7 — 69.9 — 35.5	33.4 53.1 54.7 59.8 68.7	Johannsen and Co. Holland Hall Ollivant and Botsford Ollivant and Botsford	6455 3744 2663 30695 30693
+ 39.5 — 3.0 + 41.7 + 27.7 — 6.1	+ 38.2 — 8.3 + 36.2 + 15.6 — 8.2	+ 40.3 — 4.0 + 39.3 + 16.1 — 3.5	+ 33.8 + 1.6 + 33.1 + 21.8 + 6.0	+ 35.5 + 5.7 + 41.4 + 31.1 + 12.3	+ 34.9 — 1.9 + 46.0 + 36.1 + 4.7	18.4 17.5 40.6 29.2 35.8	13.3 7.6 9.6 12.1 17.5	+ 32.0 + 55.4 — 15.2 — 42.2 + 35.0	— 52.7 + 14.8 — 80.0 — 22.9 — 3.6	— 0.9 — 50.1 — 38.5 — 74.4 — 24.6	69.9 71.2 87.2 90.7 93.0	Johannsen and Co. Brockbank, Atkins & Moore Ollivant and Botsford Ollivant and Botsford C. Frodsham and Co.	6454 74358 30694 30696 08073
— 6.3 — 1.8 + 18.1 — 15.1 — 8.4	— 19.3 — 1.2 + 14.4 — 16.8 — 7.7	— 18.0 — 3.5 + 12.4 — 12.1 — 9.0	— 8.8 — 1.2 — 1.2 — 9.7 — 5.5	+ 1.7 — 5.1 + 4.0 — 7.2 — 4.7	— 2.1 + 4.4 + 6.0 — 14.6 — 8.6	34.0 41.2 33.1 35.7 46.0	21.0 20.7 23.7 31.0 22.8	— 6.0 + 25.6 — 21.5 + 7.8 — 23.9	— 67.2 + 0.5 — 39.2 — 13.4 + 15.6	+ 41.1 + 18.3 + 29.0 + 11.6 — 4.7	97.1 93.5 102.7 105.8 107.0	Kendal and Dent. Johannsen and Co. Usher and Cole Keys Kendal and Dent.	28862 6456 28968 15876 28861
— 0.3 + 16.8 — 37.3 + 68.4 + 48.3	— 2.4 + 10.5 — 38.7 + 77.5 + 23.8	+ 2.9 + 21.7 — 31.1 + 81.7 + 17.6	+ 10.8 + 44.1 — 23.3 + 87.4 + 7.3	+ 15.0 + 34.3 — 25.8 + 95.4 + 1.4	+ 17.0 + 35.6 — 30.4 + 89.1 + 3.4	38.7 36.3 49.5 67.7 52.8	21.4 30.0 37.9 15.8 31.1	— 8.8 — 6.6 + 2.6 — 26.1 + 14.5	— 94.4 — 61.3 — 9.0 — 22.8 — 23.3	— 42.2 — 62.7 — 1.7 + 73.3 — 53.6	108.7 120.3 128.4 128.5 135.1	Ollivant and Botsford Hall C. Frodsham and Co. Isaac Isaac	30692 2661 08093 10854 10831
— 34.0 — 13.7 + 10.1 — 22.3 + 5.2	— 35.4 — 18.1 + 4.7 — 39.4 — 1.3	— 33.0 — 16.0 + 9.4 — 35.2 + 5.2	— 26.2 — 9.5 + 14.9 — 30.5 + 7.8	— 22.3 — 13.5 + 17.7 — 29.1 + 9.8	— 25.4 — 18.2 + 13.7 — 30.9 — 4.6	46.8 46.8 56.4 53.9 66.8	41.4 42.3 48.8 42.8 50.3	— 20.4 — 29.3 + 18.1 — 41.6 — 6.5	— 33.4 — 54.8 + 0.8 — 38.4 — 6.9	— 23.2 — 29.1 — 4.1 — 2.4 + 4.8	149.2 160.1 163.9 167.1 172.7	Usher and Cole Hall Keys Johannsen and Co. E. Dent and Co.	28879 2662 15874 6451 45614
+ 11.3 + 16.7 — 7.6 — 12.5 — 22.3	— 8.8 + 1.4 — 18.2 — 16.9 — 16.9	— 11.2 + 0.1 — 17.5 — 14.1 — 13.9	— 12.7 + 2.2 — 10.0 — 10.5 — 7.5	— 15.1 + 5.4 — 3.4 — 6.5 — 2.9	— 6.8 + 5.4 — 9.1 — 8.5 — 8.4	57.0 72.6 68.7 56.5 59.5	41.0 33.2 57.1 52.1 57.2	— 50.1 + 50.2 — 3.2 — 22.9 — 0.6	— 18.1 — 20.9 — 26.4 — 44.5 + 59.2	— 45.8 + 58.2 — 17.3 — 38.7 + 61.1	174.8 177.3 181.8 186.1 194.3	E. Dent and Co. Webb Brockbank, Atkins & Moore Usher and Cole Keys	45613 2633 74450 28878 15875
+ 4.1 + 78.6 — 42.1 — 59.3 — 3.5	— 4.3 + 63.2 — 65.2 — 66.0 — 24.6	— 0.7 + 67.5 — 69.4 — 65.4 — 31.5	+ 6.1 + 67.4 — 79.1 — 61.7 — 20.1	+ 8.3 + 63.3 — 85.6 — 62.6 — 8.8	— 2.2 + 73.1 — 84.5 — 63.8 — 1.8	72.1 121.7 72.6 78.7 89.0	56.5 34.5 31.5 62.6 61.0	— 12.7 + 17.0 + 89.5 — 25.6 — 18.3	— 16.5 + 14.7 + 81.8 — 21.3 — 34.8	+ 3.4 — 29.4 — 149.7 — 36.0 — 41.5	194.8 206.6 219.0 226.3 232.9	Keys Webb Webb C. Frodsham and Co. E. Dent and Co.	15877 9262 507 07958 45613
+ 4.3 + 33.1 — 8.8	— 1.7 + 22.4 — 11.4	+ 2.6 + 26.5 — 4.7	+ 11.2 + 29.4 — 0.4	+ 14.8 + 36.7 — 7.4	+ 10.6 + 30.9 — 9.3	91.1 124.5 104.6	77.0 101.5 81.7	— 1.7 — 77.9 + 293.2	— 24.6 — 121.6 — 160.0	— 60.5 — 119.0 + 232.0	260.2 403.6 479.9	S. Smith and Son. Holland Holland	13751 3747 3769
42.2	42.2	44.9	48.2	50.8	48.1	The sign + indicates a gaining rate. The quantities <i>a</i> , <i>b</i> , <i>c</i> , <i>d</i> , <i>e</i> , in the formula $a + 2b + \frac{1}{2}(c + \frac{d+e}{3})$, are taken numerically, without regard to sign.							
37.5—48.1	39.9—48.4	39.1—50.6	45.0—50.7	48.1—53.0	48.9—52.0								

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. 22—29.	Oct. 29 to Nov. 5.	Nov. 5—12.	Nov. 12—19.	Nov. 19—26.	Nov. 26 to Dec. 3.	Dec. 3—10.	Dec. 10—17.	Dec. 17—24.	Dec. 24—31.
		Watch Horizontal. Dial up.							Watch Vertical. Pendant up.	Watch Horizontal. Dial up.	
Kendal and Dent	36522	— 11 ^s ·1	— 15 ^s ·4	— 25 ^s ·4	— 30 ^s ·8	— 40 ^s ·6	— 47 ^s ·8	— 24 ^s ·7	— 23 ^s ·9	— 12 ^s ·5	— 29 ^s ·3
Brockbank, Atkins and Moore	74452	+ 34 ^s ·2	+ 28 ^s ·6	+ 35 ^s ·0	+ 24 ^s ·7	+ 27 ^s ·3	+ 25 ^s ·7	+ 12 ^s ·7	+ 12 ^s ·0	+ 20 ^s ·1	+ 42 ^s ·8
Kendal and Dent	36525	— 25 ^s ·7	— 18 ^s ·8	— 20 ^s ·3	— 15 ^s ·5	— 22 ^s ·4	— 26 ^s ·0	— 8 ^s ·6	— 9 ^s ·3	+ 3 ^s ·5	— 33 ^s ·7
Kendal and Dent	3943	— 31 ^s ·8	— 17 ^s ·1	— 28 ^s ·6	— 34 ^s ·0	— 41 ^s ·5	— 49 ^s ·4	— 10 ^s ·0	— 16 ^s ·9	— 4 ^s ·8	— 26 ^s ·3
Usher and Cole	3945	+ 2 ^s ·2	— 2 ^s ·8	— 31 ^s ·7	— 40 ^s ·7	— 38 ^s ·5	— 49 ^s ·9	— 16 ^s ·2	— 22 ^s ·0	— 8 ^s ·1	+ 10 ^s ·7
Usher and Cole	3941	+ 2 ^s ·9	— 10 ^s ·1	— 6 ^s ·4	— 4 ^s ·7	— 9 ^s ·3	— 17 ^s ·7	+ 9 ^s ·2	— 22 ^s ·3	+ 20 ^s ·5	— 23 ^s ·6
Usher and Cole	3946	+ 0 ^s ·2	+ 6 ^s ·3	+ 2 ^s ·7	+ 11 ^s ·1	— 4 ^s ·9	— 6 ^s ·8	+ 7 ^s ·7	— 66 ^s ·1	+ 4 ^s ·3	— 36 ^s ·3
Brockbank, Atkins and Moore	74447	— 29 ^s ·3	— 33 ^s ·1	— 34 ^s ·8	— 32 ^s ·8	— 37 ^s ·5	— 42 ^s ·1	+ 10 ^s ·0	+ 24 ^s ·9	+ 14 ^s ·5	— 28 ^s ·9
Usher and Cole	3942	— 8 ^s ·8	+ 18 ^s ·2	— 36 ^s ·1	— 72 ^s ·2	— 82 ^s ·8	— 92 ^s ·7	— 62 ^s ·7	+ 66 ^s ·7	— 43 ^s ·7	— 61 ^s ·0
Kendal and Dent	21572	— 24 ^s ·0	— 31 ^s ·4	— 25 ^s ·5	— 37 ^s ·1	— 34 ^s ·3	— 33 ^s ·0	+ 0 ^s ·8	+ 88 ^s ·9	+ 43 ^s ·1	+ 25 ^s ·5
Mean Weekly Temperature		50 ^o ·6	54 ^o ·7	53 ^o ·5	55 ^o ·0	49 ^o ·9	49 ^o ·1	81 ^o ·0	84 ^o ·2	81 ^o ·1	40 ^o ·6
Extremes of Temperature as shown by the Self- Registering Thermometers		47 ^o ·4—57 ^o ·1	51 ^o ·5—57 ^o ·9	50 ^o ·9—58 ^o ·0	50 ^o ·2—58 ^o ·0	48 ^o ·0—52 ^o ·8	46 ^o ·0—52 ^o ·0	72 ^o ·6—86 ^o ·9	71 ^o ·4—90 ^o ·1	74 ^o ·7—86 ^o ·0	36 ^o ·9—46 ^o ·1

During the period Dec. 3 to 24, 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.

					(2) ABSTRACT OF THE PRINCIPAL CHANGES OF RATE.					
Dec: 31 to Jan 7.	Jan. 7—14.	Jan. 14—21.	Jan. 21—28.	Jan. 28 to Feb. 4.	Difference between greatest and least Weekly Rates. Pendant up. <i>a.</i>	Greatest difference between one week and the next. Dial up. <i>b.</i>	Difference of Weekly Rates. Pendant up. —Dial up. <i>c.</i>	Trial Number. $a + 2b + \frac{c}{2}$	N A M E O F M A K E R.	No.
Watch Horizontal. Dial up.										
—17 ^s ·9	—21 ^s ·2	—18 ^s ·2	—32 ^s ·5	—33 ^s ·9	36 ^s ·7	23 ^s ·1	—5 ^s ·3	85·6	Kendal and Dent	36522
+31·1	+21·1	+15·3	—2·2	—6·8	49·6	22·7	—4·4	97·2	Brockbank, Atkins and Moore	74452
—34·1	—42·2	—46·0	—43·9	—38·0	49·5	37·2	—6·7	127·3	Kendal and Dent	36525
—30·8	—19·2	—17·8	—28·0	—40·9	44·6	39·4	—9·5	128·2	Kendal and Dent	3943
—10·1	—39·5	—25·2	—36·2	—61·0	71·7	33·7	—9·8	144·0	Usher and Cole	3945
—28·7	—32·2	—29·5	—24·1	—27·1	52·7	44·1	—37·2	159·5	Usher and Cole	3941
—46·1	—46·4	—43·3	—34·2	—24·3	57·5	40·6	—72·1	174·8	Usher and Cole	3946
—35·7	—49·5	—52·0	—52·1	—46·7	66·6	52·1	+12·6	177·1	Brockbank, Atkins and Moore	74447
—62·4	—70·7	—67·6	—74·8	—71·4	110·9	54·3	+119·9	279·5	Usher and Cole	3942
—65·5	—107·1	—86·1	—84·2	—76·9	150·2	91·0	+66·9	365·7	Kendal and Dent	21572
° 42·2	° 42·2	° 44·9	° 48·2	° 50·8	The sign + indicates a gaining rate. The quantities <i>a</i> , <i>b</i> , <i>c</i> , in the formula $a + 2b + \frac{c}{2}$, are taken numerically, without regard to sign.					
° 37·5—48·1	° 39·9—48·4	° 39·1—50·6	° 45·0—50·7	° 48·1—53·0						