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# RATES OF CHRONOMETERS

ON TRIAL

FOR PURCHASE BY THE BOARD OF ADMIRALTY,

AT THE

ROYAL OBSERVATORY, GREENWICH.

1882.

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## RATES OF CHRONOMETERS ON TRIAL FOR PURCHASE BY THE ADMIRALTY, AT THE ROYAL OBSERVATORY, GREENWICH, 1882.

### (I.)—WEEKLY SUMS OF DAILY RATES

| NAME OF MAKER. | No. | Whether 3 or 6 Days. | Construction of Escapement and Balance, from the Description furnished by the Maker. | Jan. 14—21 | Jan. 21—28 | Jan. 28 to Feb. 4 | Feb. 4—11 | Feb. 11—18 | Feb. 18—25 | Feb. 25 to Mar. 4 | Mar. 4—11 † | Mar. 11—18 † | Mar. 18—25 † | Mar. 25 to Apr. 1 † |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | s | s | s | s | s | s | s | s | s | s | s |
| Kullberg | 4066 | 2 | Reversed detent, with short spring. | − 0·5 | + 1·0 | + 2·7 | + 2·0 | + 2·2 | + 1·1 | + 2·0 | 0·0 | − 1·9 | − 2·4 | − 1·7 |
| C. Frodsham & Co. | 3593 | 8 | 3 Compensation bar balance. | − 1·5 | − 0·5 | + 1·0 | + 1·2 | + 1·3 | + 0·5 | + 3·5 | + 0·5 | 0·0 | − 0·2 | + 0·6 |
| Keys | 399 | 2 | Ordinary balance, with slight alterations. Airy's | − 0·1 | + 1·3 | − 0·5 | + 2·5 | − 1·0 | − 0·5 | − 1·8 | − 5·2 | − 4·0 | − 4·0 | − 4·0 |
| Poole and Co. | 5685 | 2 | Poole's auxiliary. [Compensation. | − 5·7 | − 4·0 | − 2·3 | − 1·7 | − 2·0 | − 3·0 | − 1·3 | − 6·8 | − 1·9 | + 0·5 | − 0·8 |
| Birchall | 1382 | 2 | Ordinary escapement, with slight alterations to [balance. | − 11·5 | − 9·3 | − 7·4 | − 8·3 | − 7·0 | − 7·5 | − 4·8 | − 8·6 | − 12·1 | − 10·5 | − 8·5 |
| Kullberg | 4070 | 2 | Reversed detent, with short spring. | + 12·0 | + 11·7 | + 13·0 | + 13·3 | + 12·0 | + 12·2 | + 13·5 | + 6·3 | + 8·0 | + 9·7 | + 10·8 |
| Nelson | 2836 | 2 | Auxiliary, gaining in cold. Airy's Compensation. | + 3·3 | + 4·0 | + 2·0 | + 2·7 | + 3·0 | + 2·3 | 0·0 | − 4·2 | + 0·2 | + 1·7 | + 5·3 |
| Birchall | 1381 | 2 | Ordinary escapement, with slight alterations to | − 18·6 | − 16·8 | − 14·2 | − 16·0 | − 13·0 | − 13·8 | − 11·5 | − 16·2 | − 18·5 | − 17·5 | − 15·5 |
| Parkinson & Frodsham | 4167 | 2 | Auxiliary, acting at low temperatures. [balance. | + 3·7 | + 5·8 | + 6·2 | + 5·8 | + 6·5 | + 6·5 | + 6·1 | + 3·1 | + 5·6 | + 8·4 | + 11·0 |
| Penlington | 2737 | 2 | Auxiliary Compensation. | 0·0 | + 4·5 | + 6·0 | + 8·5 | + 9·2 | + 9·0 | + 10·5 | + 3·7 | + 2·4 | + 9·0 | + 12·2 |
| Mercer | 2683 | 2 | Auxiliary Compensation. | + 10·1 | + 11·4 | + 13·5 | + 12·7 | + 14·3 | + 14·2 | + 16·3 | + 18·5 | + 18·6 | + 22·9 | + 24·8 |
| Penlington | 3616 | 2 | Auxiliary Compensation. | − 8·0 | − 7·3 | − 5·7 | − 6·0 | − 4·8 | − 4·0 | − 2·0 | − 7·9 | − 7·6 | − 6·7 | − 7·0 |
| Isaac | 1668 | 2 | Balance, without auxiliary. | − 10·5 | − 9·5 | − 9·3 | − 9·7 | − 9·5 | − 11·5 | − 10·8 | − 10·7 | − 2·5 | + 0·7 | + 1·0 |
| Uhrig | 387 | 2 | Ordinary balance, with slight alterations. | − 3·8 | − 2·2 | + 3·2 | + 1·3 | + 4·0 | + 2·2 | + 5·5 | + 6·3 | + 6·5 | + 8·4 | + 9·1 |
| Williams | 3599 | 2 | Ordinary balance, with slight alterations. | − 13·2 | − 11·8 | − 10·0 | − 10·6 | − 8·9 | − 11·2 | − 9·0 | − 8·9 | − 8·2 | − 6·3 | − 5·5 |
| Lister and Sons | 824 | 2 | Poole's auxiliary. Airy's Compensation. | + 19·0 | + 21·5 | + 18·5 | + 21·7 | + 18·6 | + 18·0 | + 18·5 | + 9·6 | + 10·6 | + 10·8 | + 9·2 |
| Parkinson & Frodsham | 4158 | 2 | Auxiliary, acting at low temperatures. | + 3·7 | + 7·5 | + 8·4 | + 9·9 | + 11·2 | + 13·0 | + 10·3 | − 0·6 | + 0·8 | + 3·9 | + 3·9 |
| Uhrig | 393 | 2 | Ordinary balance, with slight alterations. | + 4·5 | − 2·2 | − 1·5 | − 1·3 | + 0·5 | + 0·2 | + 1·3 | + 0·5 | + 1·6 | + 3·0 | + 3·4 |
| Moore | 5756 | 2 | Ordinary balance. Airy's Compensation. | + 5·7 | + 7·8 | + 5·0 | + 8·5 | + 5·5 | + 5·5 | + 6·5 | − 4·5 | − 5·2 | − 3·6 | − 2·3 |
| Poole and Co. | 5762 | 2 | Poole's auxiliary. | + 3·5 | + 4·5 | + 3·0 | + 3·0 | + 2·7 | + 3·8 | + 5·0 | − 4·3 | − 3·4 | − 2·7 | + 1·1 |
| Shepherd and Son | 1833 | 2 | Auxiliary to balance. Airy's Compensation. | + 11·9 | + 12·9 | + 11·5 | + 12·0 | + 11·5 | + 9·7 | + 12·0 | − 0·1 | + 1·5 | + 4·1 | + 6·7 |
| Mercer | 2543 | 2 | Auxiliary Compensation. | + 3·0 | − 2·2 | + 0·5 | + 2·8 | + 2·2 | + 3·1 | + 3·8 | + 12·0 | + 14·3 | + 15·1 | + 16·0 |
| Robinson | 3077 | 2 | Auxiliary to balance. Airy's Compensation. | − 7·7 | − 5·0 | − 5·0 | − 4·0 | + 3·3 | − 4·2 | − 0·0 | − 19·0 | − 16·8 | − 16·0 | − 14·4 |
| Lister and Sons | 825 | 2 | Poole's auxiliary. Airy's Compensation. | + 0·6 | + 3·0 | + 3·1 | + 4·5 | + 4·8 | + 4·5 | + 7·1 | − 4·7 | − 1·9 | − 1·5 | + 0·1 |
| Pyott | 488 | 2 | Ordinary balance, with slight alterations. Airy's [Compensation. | + 4·7 | + 0·8 | + 4·2 | + 7·3 | + 4·0 | + 4·0 | + 3·7 | − 9·6 | − 0·6 | − 5·3 | − 4·0 |
| Isaac | 1641 | 2 | Extra Compensation, and Airy's Compensation. | + 9·7 | + 11·9 | + 10·8 | + 12·8 | + 13·5 | + 12·3 | + 13·5 | + 4·9 | + 8·7 | + 11·4 | + 12·0 |
| Edward and Sons | 3688 | 2 | Improved ordinary balance. | + 8·0 | + 8·6 | + 7·5 | + 10·3 | + 8·7 | + 7·8 | + 8·7 | − 4·1 | − 1·0 | + 1·5 | + 2·6 |
| Williams | 3602 | 2 | Ordinary balance, with slight alterations. | − 3·0 | − 2·0 | − 2·0 | − 1·9 | + 1·9 | + 4·5 | + 3·4 | + 6·6 | + 9·2 | + 13·0 | + 17·3 |
| Keys | 380 | 2 | Ordinary balance, with slight alterations. Airy's | 0·0 | − 0·2 | + 3·4 | + 5·3 | + 4·2 | + 6·6 | + 7·0 | + 5·0 | + 9·7 | + 14·6 | + 18·2 |
| Sewill | 3611 | 2 | Auxiliary Compensation to balance. [Compensation. | + 16·0 | + 17·2 | + 19·0 | + 20·0 | + 20·8 | + 22·5 | + 23·7 | + 11·5 | + 16·0 | + 17·0 | + 17·3 |
| R. Webster | 15083 | 2 | Ordinary balance. | + 12·7 | + 13·0 | + 10·6 | + 13·2 | + 19·8 | + 17·7 | + 17·7 | + 2·1 | 0·0 | + 4·2 | + 0·3 |
| Hennessy | 3254 | 2 | Auxiliary Compensation to balance. | + 17·1 | + 19·6 | + 20·5 | + 22·8 | + 23·8 | + 24·2 | + 26·7 | + 16·3 | + 14·7 | + 20·4 | + 21·8 |
| Glover | 367 | 2 | Auxiliary Compensation. | − 0·2 | − 2·3 | − 0·7 | − 2·0 | − 2·0 | − 1·5 | + 3·0 | − 5·8 | − 8·2 | − 3·7 | − 0·3 |
| Ainsley | 4118 | 2 | Airy's Compensation. | − 37·2 | − 38·5 | − 31·5 | − 33·5 | − 26·5 | − 28·0 | − 24·5 | − 35·5 | − 28·8 | − 28·5 | − 27·5 |
| Sewill | 3605 | 2 | Auxiliary Compensation to balance. | + 6·7 | + 0·5 | + 8·0 | + 10·3 | + 9·9 | + 11·1 | + 11·7 | + 23·7 | + 25·1 | + 26·1 | + 26·6 |
| C. Frodsham & Co. | 3576 | 2 | 3 Compensation bar balance, with Salvonic [apparatus. | + 13·2 | + 12·3 | + 10·5 | + 13·5 | + 10·5 | + 12·5 | + 14·5 | + 29·5 | + 29·2 | + 29·2 | + 29·6 |
| Moore | 5754 | 2 | Ordinary balance. Airy's Compensation. | − 0·2 | + 3·0 | − 4·4 | + 2·9 | + 4·7 | + 6·8 | + 10·6 | − 5·0 | − 4·7 | − 0·9 | + 3·6 |
| Hennessy | 3241 | 2 | Auxiliary Compensation to balance. | + 1·2 | + 1·2 | + 5·1 | + 4·3 | + 8·0 | + 7·7 | + 11·8 | − 4·3 | + 3·5 | + 3·1 | + 3·0 |
| E. Webster | 631 | 2 | Ordinary balance and escapement. | − 15·0 | − 14·2 | + 8·3 | + 8·5 | − 2·7 | − 3·0 | + 1·2 | − 9·5 | − 7·7 | − 7·1 | − 4·4 |
| Glover | 366 | 2 | Auxiliary for heat. Airy's Compensation. | + 1·9 | + 6·0 | + 8·0 | + 12·7 | + 11·7 | + 14·5 | + 14·6 | − 8·4 | − 9·2 | − 7·2 | − 7·3 |
| Dell and Co. | 19368 | 2 | Ordinary balance, acting at low temperatures. | − 1·6 | − 1·5 | + 4·6 | + 2·6 | + 9·3 | + 10·2 | + 13·0 | + 19·8 | + 16·7 | + 19·3 | + 24·8 |
| Oram and Son | 18750 | 2 | Auxiliary Compensation. | − 12·0 | − 9·0 | − 8·8 | − 7·0 | − 5·5 | − 3·7 | − 4·8 | − 20·9 | − 24·2 | − 19·1 | − 11·0 |
| Heap | 6480 | 2 | Ordinary balance. Airy's Compensation. | + 1·0 | − 0·5 | + 7·2 | + 9·0 | + 14·5 | + 13·0 | + 17·4 | + 32·5 | + 37·3 | + 45·1 | + 51·3 |
| Lawson | 2336 | 2 | {Ordinary balance, with coated balance spring. Auxiliary for extremes.} | + 4·8 | − 0·7 | − 4·5 | − 1·0 | − 5·0 | − 6·5 | − 5·8 | + 21·4 | + 24·2 | + 34·2 | + 37·9 |
| Nelson | 2901 | 2 | Auxiliary, gaining in heat. Airy's Compensation. | + 47·5 | + 45·0 | + 42·7 | + 44·3 | + 41·2 | + 41·3 | + 45·0 | + 7·5 | + 11·0 | + 16·5 | + 13·3 |
| Riego | 3890 | 2 | Palladium spring. Airy's Compensation. | + 10·6 | + 21·9 | + 24·2 | + 33·3 | + 37·5 | + 46·0 | + 42·7 | + 61·8 | + 83·2 | + 97·0 | + 112·5 |
| Chronometrical Thermometer. | | | ..... | +1236·8 | +1342·0 | +1023·0 | +1293·0 | +919·0 | +922·0 | +812·5 | −2899·0 | −2947·5 | −2930·5 | −3075·5 |
| Mean Weekly Temperature | | | ..... | 48·3 | 46·8 | 50·9 | 47·7 | 51·4 | 51·9 | 53·1 | 95·1 | 93·6 | 93·1 | 95·1 |
| Extremes of Temperature as shown by the Self-Registering Thermometers | | | ..... | 45—52 | 45—50 | 49—54 | 46—50 | 46—55 | 49—54 | 50—55 | 85—107 | 85—105 | 85—98 | 85—102 |

The sign + indicates that the rate is gaining.

† During these weeks the Chronometers were placed in the chamber of a stove heated by jets of gas. The gas flames are exterior to the chamber, into which none of the injurious products of combustion can enter.

The Chronometrical Thermometer differs from an ordinary Chronometer only in the construction of the balance, the positions of the metals forming the compensating rims being reversed. By this arrangement the effect of temperature is much magnified.

### IN THE ORDER OF TIME.

| NAME OF MAKER. | No. | April 1—8 | April 8—15 | April 15—22 | Apr. 22—29 | Apr. 29 to May 6 | May 6—13 | May 13—20 | May 20—27 † | May 27 to June 3 † | June 3—10 † | June 10—17 † | June 17—24 | June 24 to July 1 | July 1—8 | July 8—15 | July 15—22 | July 22—29 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s |
| Kullberg | 4066 | − 0·4 | − 1·1 | − 1·0 | − 0·5 | − 1·0 | − 1·5 | − 0·5 | + 0·1 | + 0·6 | + 1·3 | + 0·1 | + 0·6 | + 0·9 | + 0·7 | + 0·4 | + 1·2 | + 1·8 |
| C. Frodsham & Co. | 3593 | − 2·9 | − 2·1 | + 1·1 | + 4·8 | + 3·7 | + 3·9 | + 3·6 | + 3·2 | + 1·9 | + 4·9 | + 3·1 | + 4·1 | + 3·8 | + 5·2 | + 5·6 | + 4·8 | + 4·1 |
| Keys | 399 | − 0·5 | + 3·0 | + 5·0 | + 5·5 | + 2·9 | + 0·6 | + 3·4 | + 3·6 | + 2·5 | + 5·5 | + 5·2 | + 0·6 | + 0·8 | + 1·3 | + 1·3 | + 0·2 | − 0·8 |
| Poole and Co. | 5685 | − 1·5 | − 1·2 | − 1·5 | − 1·0 | − 0·9 | − 1·6 | − 1·4 | − 3·3 | − 4·1 | − 2·3 | − 2·1 | − 3·9 | − 1·2 | + 1·7 | + 3·3 | + 3·2 | + 1·9 |
| Birchall | 1382 | − 13·1 | − 11·9 | − 8·5 | − 7·0 | − 5·5 | − 7·3 | − 6·8 | − 5·9 | − 5·5 | − 4·2 | − 6·3 | − 12·8 | − 9·2 | − 8·0 | − 4·9 | − 5·4 | − 7·7 |
| Kullberg | 4070 | + 12·7 | + 12·8 | + 12·5 | + 13·5 | + 13·0 | + 12·2 | + 13·3 | + 9·0 | + 8·1 | + 9·5 | + 8·6 | + 15·5 | + 14·8 | + 14·7 | + 15·6 | + 15·2 | + 15·7 |
| Nelson | 2836 | + 8·6 | + 7·6 | + 7·8 | + 10·0 | + 7·5 | + 4·1 | + 5·1 | + 4·7 | + 7·3 | + 6·3 | + 5·9 | + 5·7 | + 2·0 | + 2·1 | + 1·3 | − 3·7 | − 3·2 |
| Birchall | 1381 | − 10·5 | − 9·5 | − 8·0 | − 8·5 | − 9·5 | − 9·0 | − 7·8 | + 14·5 | − 14·8 | − 12·0 | − 15·0 | − 7·3 | − 11·6 | − 11·5 | − 7·0 | − 6·7 | − 7·8 |
| Parkinson & Frodsham | 4167 | + 3·8 | + 5·7 | + 5·8 | + 6·5 | + 6·5 | + 6·9 | + 7·3 | + 14·5 | + 14·3 | + 15·0 | + 16·0 | + 10·0 | + 8·8 | + 10·7 | + 13·5 | + 12·6 | + 11·4 |
| Penlington | 2737 | + 9·8 | + 10·2 | + 10·5 | + 12·5 | + 13·5 | + 12·0 | + 15·0 | + 8·7 | + 6·0 | + 9·9 | + 9·6 | + 13·8 | + 12·0 | + 11·1 | + 13·8 | + 8·9 | + 7·3 |
| Mercer | 2683 | + 18·2 | + 19·0 | + 20·2 | + 20·5 | + 20·5 | + 19·3 | + 20·9 | + 22·7 | + 21·6 | + 22·8 | + 23·0 | + 21·7 | + 22·7 | + 22·9 | + 25·6 | + 23·7 | + 23·4 |
| Penlington | 3616 | − 3·4 | − 2·4 | + 1·5 | + 4·3 | + 3·0 | + 1·0 | + 3·7 | − 0·1 | − 2·2 | − 1·5 | − 1·2 | + 3·9 | + 5·6 | + 7·5 | + 10·3 | + 8·3 | + 9·0 |
| Isaac | 1668 | − 8·7 | − 9·7 | − 9·3 | − 9·5 | − 10·6 | − 10·6 | − 9·4 | − 9·2 | − 5·5 | − 2·0 | − 0·6 | − 1·3 | − 7·2 | − 3·2 | − 5·3 | − 7·3 | − 6·0 |
| Uhrig | 387 | + 12·1 | + 14·0 | + 14·0 | + 17·4 | + 18·5 | + 17·5 | − 16·4 | + 10·1 | + 13·5 | + 10·5 | + 14·9 | + 14·8 | + 17·9 | + 17·9 | + 17·2 | + 18·3 | + 18·7 |
| Williams | 3599 | − 11·6 | − 9·8 | − 10·0 | − 10·6 | − 8·9 | − 11·2 | − 9·0 | − 8·9 | − 8·2 | − 6·3 | − 1·2 | − 1·2 | − 3·1 | + 1·6 | + 3·0 | + 5·7 | + 7·1 |
| Lister and Sons | 824 | + 5·5 | + 8·7 | + 9·1 | + 8·7 | + 8·0 | + 6·5 | + 8·4 | + 12·1 | + 10·8 | + 12·2 | + 11·9 | + 7·6 | + 8·2 | + 7·9 | + 10·3 | + 9·4 | + 9·6 |
| Parkinson & Frodsham | 4158 | + 8·5 | + 8·0 | + 10·0 | + 12·5 | + 12·5 | + 10·5 | + 10·1 | + 4·6 | + 4·9 | + 6·8 | + 8·8 | + 9·0 | + 9·2 | + 10·1 | + 12·1 | + 12·7 | + 11·7 |
| Uhrig | 393 | + 2·7 | + 3·8 | + 5·0 | + 6·0 | + 4·7 | + 10·5 | + 12·2 | + 18·3 | + 19·6 | + 19·8 | + 15·8 | + 13·0 | + 14·9 | + 15·0 | + 16·8 | + 17·0 | + 17·9 |
| Moore | 5756 | + 5·1 | + 7·2 | + 8·8 | + 9·7 | + 9·0 | + 4·8 | + 6·7 | − 0·2 | − 0·3 | + 1·9 | − 0·9 | + 5·9 | + 3·9 | + 4·5 | + 7·2 | + 6·4 | + 6·4 |
| Poole and Co. | 5762 | + 3·3 | + 10·9 | + 11·1 | + 13·0 | + 12·5 | + 9·7 | + 12·4 | + 7·6 | + 9·8 | + 13·1 | + 13·4 | + 11·2 | + 11·5 | + 11·9 | + 14·3 | + 13·5 | + 14·0 |
| Shepherd and Son | 1833 | + 9·1 | + 11·9 | + 14·1 | + 14·9 | + 13·0 | + 11·1 | + 13·4 | + 8·1 | + 6·0 | + 8·6 | + 8·9 | + 8·6 | + 6·6 | + 6·9 | + 9·6 | + 6·7 | + 6·6 |
| Mercer | 2543 | + 18·3 | + 15·6 | + 18·6 | + 15·0 | + 12·7 | + 11·3 | + 11·7 | + 8·7 | + 9·1 | + 11·9 | + 12·5 | + 18·1 | + 17·5 | + 18·0 | + 21·0 | + 23·7 | + 24·6 |
| Robinson | 3077 | − 14·8 | − 11·0 | − 10·5 | − 9·5 | − 8·0 | − 8·9 | − 7·4 | − 6·4 | − 6·6 | − 5·1 | − 6·7 | − 5·9 | − 4·0 | − 2·7 | − 2·7 | − 3·2 | − 3·4 |
| Lister and Sons | 825 | − 0·0 | − 1·6 | + 3·8 | + 6·2 | + 6·0 | + 5·3 | + 5·9 | + 5·6 | + 4·0 | + 7·7 | + 7·3 | + 9·5 | + 12·8 | + 12·4 | + 14·8 | + 14·4 | + 15·0 |
| Pyott | 488 | − 6·1 | − 3·8 | − 2·8 | − 1·6 | − 1·5 | − 3·9 | − 2·6 | + 0·1 | − 0·2 | + 1·0 | + 0·7 | − 4·3 | − 3·4 | − 2·4 | − 2·2 | − 2·7 | − 2·6 |
| Isaac | 1641 | + 18·2 | + 19·6 | + 20·5 | + 21·4 | + 21·5 | + 23·6 | + 23·4 | + 16·4 | + 14·7 | + 16·9 | + 17·6 | + 24·4 | + 28·6 | + 28·2 | + 30·2 | + 30·0 | + 29·0 |
| Edward and Sons | 3688 | + 10·6 | + 10·4 | − 10·8 | + 13·0 | + 13·5 | + 13·0 | + 16·4 | − 0·3 | + 8·7 | + 11·8 | + 9·3 | + 15·5 | + 14·8 | + 14·1 | + 14·7 | + 16·2 | + 17·0 |
| Williams | 3602 | + 19·5 | + 19·0 | + 26·2 | + 26·3 | + 25·0 | + 25·0 | + 27·1 | + 28·5 | + 26·1 | + 29·0 | + 29·7 | + 28·9 | + 25·6 | + 24·1 | + 24·9 | + 24·3 | + 25·0 |
| Keys | 380 | + 16·7 | + 18·8 | + 21·2 | + 23·8 | + 23·6 | + 22·4 | + 25·1 | + 27·4 | + 29·6 | + 31·6 | + 34·0 | + 27·5 | + 29·8 | + 30·2 | + 32·3 | + 34·0 | + 33·5 |
| Sewill | 3611 | + 20·0 | + 21·0 | + 23·0 | + 25·9 | + 27·1 | + 30·7 | + 33·3 | + 23·7 | + 24·7 | + 25·6 | + 26·4 | + 29·6 | + 33·1 | + 34·9 | + 35·0 | + 35·0 | + 24·9 |
| R. Webster | 15083 | + 4·7 | + 5·5 | + 5·3 | + 8·2 | + 6·6 | + 5·0 | + 8·8 | + 5·1 | + 3·6 | + 3·4 | + 4·3 | + 4·8 | + 3·0 | + 3·4 | + 5·2 | + 3·4 | + 3·5 |
| Hennessy | 3254 | + 27·6 | + 29·9 | + 32·6 | + 33·0 | + 32·7 | + 35·9 | + 38·1 | + 29·6 | + 28·6 | + 29·0 | + 29·2 | + 37·9 | + 41·9 | + 41·3 | + 44·7 | + 45·3 | + 43·9 |
| Glover | 367 | + 0·0 | + 4·5 | + 9·5 | + 13·8 | + 17·7 | + 16·5 | + 14·4 | + 22·1 | + 22·5 | + 26·2 | + 24·6 | + 21·2 | + 21·5 | + 23·5 | + 24·5 | + 24·4 | + 24·7 |
| Ainsley | 4118 | − 25·0 | − 23·0 | − 22·0 | − 21·7 | − 21·3 | − 19·8 | − 19·4 | − 24·5 | − 29·8 | − 26·1 | − 26·8 | − 14·3 | − 14·0 | − 12·1 | − 11·4 | − 11·0 | − 11·4 |
| Sewill | 3605 | + 16·3 | + 20·2 | + 25·3 | + 26·5 | + 24·3 | + 26·9 | + 26·6 | + 36·4 | + 35·5 | + 37·4 | + 38·4 | + 34·5 | + 33·0 | + 35·7 | + 38·3 | + 37·5 | + 37·0 |
| C. Frodsham & Co. | 3576 | + 24·5 | + 25·5 | + 26·2 | + 25·3 | + 24·4 | + 21·3 | + 23·9 | + 31·6 | + 31·3 | + 32·6 | + 32·4 | + 28·5 | + 27·6 | + 27·1 | + 32·0 | + 37·6 | + 36·7 |
| Moore | 5754 | + 10·5 | + 13·0 | + 18·7 | + 16·2 | + 16·6 | + 15·1 | + 17·9 | + 10·2 | + 10·8 | + 14·3 | + 13·8 | + 22·0 | + 21·0 | + 21·5 | + 23·8 | + 23·7 | + 23·4 |
| Hennessy | 3241 | + 9·7 | + 11·5 | + 13·5 | + 15·0 | + 14·6 | + 16·4 | + 16·7 | + 10·3 | + 9·2 | + 14·5 | + 12·3 | + 19·7 | + 21·7 | + 19·0 | + 21·5 | + 21·1 | + 23·0 |
| E. Webster | 631 | 0·0 | + 4·5 | + 7·0 | + 7·2 | + 7·5 | + 8·8 | + 10·7 | − 3·5 | − 3·7 | + 0·1 | + 0·8 | + 10·5 | + 13·5 | + 15·3 | + 19·2 | + 20·1 | + 21·9 |
| Glover | 366 | + 2·7 | + 5·9 | + 8·5 | + 13·0 | + 13·5 | + 14·9 | + 14·9 | + 0·3 | + 0·6 | + 1·9 | + 1·2 | + 3·6 | + 0·6 | + 0·5 | + 2·9 | + 1·5 | + 4·1 |
| Dell and Co. | 19368 | + 15·9 | + 19·8 | + 19·0 | + 17·0 | + 11·0 | + 1·5 | + 5·9 | + 25·8 | + 26·3 | + 26·9 | + 25·7 | + 1·4 | + 9·0 | + 10·9 | + 8·6 | + 10·6 | + 10·6 |
| Oram and Son | 18750 | − 2·0 | + 8·1 | + 12·9 | + 14·0 | + 13·5 | + 14·5 | + 17·0 | + 2·2 | − 2·8 | − 2·1 | + 1·7 | + 8·6 | + 19·1 | + 25·9 | + 29·1 | + 28·3 | + 30·0 |
| Heap | 6480 | + 43·5 | + 39·6 | + 36·2 | + 40·7 | + 46·3 | + 45·3 | + 47·0 | + 55·4 | + 61·1 | + 63·0 | + 70·0 | + 59·5 | + 58·7 | + 61·3 | + 61·5 | + 63·0 | + 68·0 |
| Lawson | 2336 | + 15·6 | + 20·0 | + 19·0 | + 20·1 | + 19·9 | + 18·0 | + 19·6 | + 41·1 | + 44·0 | + 47·3 | + 51·0 | + 30·5 | + 30·5 | + 29·7 | + 30·2 | + 29·7 | + 30·6 |
| Nelson | 2901 | + 56·4 | + 56·0 | + 56·3 | + 53·5 | + 52·5 | + 48·1 | + 51·5 | + 26·4 | + 25·0 | + 30·0 | + 32·7 | + 55·5 | + 53·0 | + 52·0 | + 52·3 | + 50·6 | + 51·7 |
| Riego | 3890 | + 133·3 | + 117·0 | + 116·7 | + 111·8 | + 110·7 | + 110·3 | + 114·6 | + 127·1 | + 135·1 | + 136·1 | + 140·6 | + 135·5 | + 130·0 | + 129·0 | + 130·0 | + 131·7 | + 133·0 |
| Chronometrical Thermometer. | | +464·2 | +479·6 | +496·2 | +518·0 | +431·5 | +110·0 | +142·5 | −3003·5 | −3883·5 | −3810·8 | −2839·4 | −126·3 | −354·5 | −413·0 | −267·0 | −472·8 | −379·2 |
| Mean Weekly Temperature. | | 55·9 | 56·0 | 55·8 | 55·7 | 56·3 | 60·5 | 60·8 | 95·1 | 92·9 | 92·4 | 92·8 | 63·6 | 66·3 | 67·5 | 65·9 | 67·9 | 67·0 |
| Extremes of Temperature as shown by the Self-Registering Thermometers. | | 54—58 | 54—59 | 53—60 | 52—60 | 51—60 | 58—64 | 57—64 | 88—102 | 88—97 | 88—97 | 88—97 | 60—70 | 64—69 | 64—73 | 63—72 | 66—72 | 65—71 |

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



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## (II.)—WEEKLY SUMS OF DAILY RATES IN THE ORDER OF TEMPERATURE, AS DETERMINED GENERALLY BY THE CHRONOMETRICAL THERMOMETER.

| NAME OF MAKER. | No. | Whether 2 or 8 Days. | Construction of Escapement and Balance, from the Description furnished by the Maker. | Jan. 21—28 | Feb. 4—11 | Jan. 14—21 | Jan. 28 to Feb. 4. | Feb. 18—25 | Feb. 11—18 | Feb. 25 to Mar. 4 | April 22—29 | April 15—22 | April 8—15 | April 1—8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | s | s | s | s | s | s | s | s | s | s | s |
| Kullberg | 4066 | 2 | Reversed detent, with short spring. | + 1·0 | + 2·0 | − 0·5 | + 2·7 | + 1·1 | + 2·2 | + 2·0 | − 0·5 | − 1·0 | − 1·1 | − 0·4 |
| C. Frodsham & Co. | 3593 | 8 | 3 Compensation bar balance. | − 0·5 | + 1·2 | − 1·5 | + 1·0 | + 0·5 | + 1·3 | + 3·5 | + 4·8 | + 1·1 | − 2·1 | − 2·9 |
| Keys | 399 | 2 | Ordinary balance, with slight alterations. Airy's [Compensation. | + 1·3 | + 2·5 | − 0·1 | − 0·5 | − 0·5 | − 1·0 | − 1·8 | + 5·5 | + 5·0 | + 3·0 | − 0·5 |
| Poole and Co. | 5685 | 2 | Poole's auxiliary. | − 4·0 | − 1·7 | − 5·7 | − 2·3 | − 3·0 | − 2·0 | − 1·3 | − 1·0 | − 1·5 | − 1·2 | − 1·5 |
| Birchall | 1382 | 2 | Ordinary escapement, with slight alterations to [balance. | − 9·3 | − 8·3 | − 11·5 | − 7·4 | − 7·5 | − 7·0 | − 4·8 | − 7·0 | − 8·5 | − 11·9 | − 13·1 |
| Kullberg | 4070 | 2 | Reversed detent, with short spring. | + 11·7 | + 13·3 | + 12·0 | + 13·0 | + 12·2 | + 12·0 | + 13·5 | + 13·5 | + 12·5 | + 12·8 | + 12·7 |
| Nelson | 2836 | 2 | Auxiliary, gaining in cold. Airy's Compensation. | + 4·0 | + 2·7 | + 3·3 | + 2·0 | + 2·3 | + 3·0 | 0·0 | + 10·0 | + 7·8 | + 7·6 | + 8·6 |
| Birchall | 1381 | 2 | Ordinary escapement, with slight alterations to [balance. | − 16·8 | − 16·0 | − 18·6 | − 14·2 | − 13·8 | − 13·0 | − 11·5 | − 8·5 | − 8·0 | − 9·5 | − 10·5 |
| Parkinson & Frodsham | 4167 | 2 | Auxiliary, acting at low temperatures. | + 5·8 | + 5·8 | + 3·7 | + 6·2 | + 6·5 | + 6·5 | + 6·1 | + 6·5 | + 5·8 | + 5·7 | + 3·8 |
| Penlington | 2737 | 2 | Auxiliary Compensation. | + 4·5 | + 8·5 | 0·0 | + 6·0 | + 9·0 | + 9·2 | + 10·5 | + 12·5 | + 10·5 | + 10·2 | + 9·8 |
| Mercer | 2683 | 2 | Auxiliary Compensation. | + 11·4 | + 12·7 | + 10·1 | + 13·5 | + 14·2 | + 14·3 | + 16·3 | + 20·5 | + 20·2 | + 19·0 | + 18·2 |
| Penlington | 3616 | 2 | Auxiliary Compensation. | − 7·3 | − 6·0 | − 8·0 | − 5·7 | − 4·0 | − 4·8 | − 2·0 | + 4·3 | + 1·5 | − 2·4 | − 3·4 |
| Isaac | 1668 | 2 | Balance, without auxiliary. | − 9·5 | − 9·7 | − 10·5 | − 9·3 | − 11·5 | − 9·5 | − 10·8 | − 9·5 | − 9·3 | − 9·7 | − 8·7 |
| Uhrig | 387 | 2 | Ordinary balance, with slight alterations. | − 2·2 | + 1·3 | − 3·8 | + 3·2 | + 2·2 | + 4·0 | + 5·5 | + 18·5 | + 17·4 | + 14·0 | + 13·1 |
| Williams | 3599 | 2 | Ordinary balance, with slight alterations. | − 11·8 | − 10·6 | − 13·2 | − 10·0 | − 11·2 | − 8·9 | − 9·0 | − 4·4 | − 5·0 | − 9·8 | − 11·6 |
| Lister and Sons | 824 | 2 | Poole's auxiliary. Airy's Compensation. | + 21·5 | + 21·7 | + 19·0 | + 18·5 | + 18·0 | + 18·8 | + 18·5 | + 8·7 | + 9·1 | + 8·7 | + 5·5 |
| Parkinson & Frodsham | 4158 | 2 | Auxiliary, acting at low temperatures. | + 7·5 | + 9·9 | + 3·7 | + 8·4 | + 12·0 | + 11·2 | + 10·3 | + 12·5 | + 10·0 | + 8·0 | + 8·5 |
| Uhrig | 393 | 2 | Ordinary balance, with slight alterations. | − 3·2 | − 1·3 | − 4·5 | − 1·5 | + 0·2 | + 0·5 | + 1·3 | + 6·0 | + 5·0 | + 3·8 | + 2·7 |
| Moore | 5756 | 2 | Ordinary balance. Airy's Compensation. | + 7·8 | + 8·5 | + 5·7 | + 5·0 | + 5·5 | + 5·5 | + 6·5 | + 9·7 | + 8·8 | + 7·2 | + 5·1 |
| Poole and Co. | 5762 | 2 | Poole's auxiliary. | + 4·5 | + 3·0 | + 3·5 | + 3·0 | + 3·8 | + 2·7 | + 5·0 | + 13·0 | + 11·1 | + 10·9 | + 3·3 |
| Shepherd and Son | 1833 | 2 | Auxiliary to balance. Airy's Compensation. | + 12·9 | + 12·0 | + 11·9 | + 11·5 | + 9·7 | + 11·5 | + 12·0 | + 14·9 | + 14·1 | + 11·9 | + 9·1 |
| Mercer | 3543 | 2 | Auxiliary Compensation. | + 3·2 | + 2·8 | + 3·0 | + 0·5 | + 3·1 | + 2·3 | + 3·8 | + 15·0 | + 15·6 | + 15·6 | + 18·3 |
| Robinson | 3077 | 2 | Auxiliary to balance. Airy's Compensation. | − 5·0 | − 4·0 | − 7·7 | − 5·0 | − 4·2 | − 3·3 | − 6·0 | − 9·5 | − 10·5 | − 11·0 | − 14·3 |
| Lister and Sons | 825 | 2 | Poole's auxiliary. Airy's Compensation. | + 3·0 | + 4·5 | + 0·6 | + 3·1 | + 4·5 | + 4·8 | + 7·1 | + 6·2 | + 3·8 | + 1·6 | 0·0 |
| Pyott | 488 | 2 | Ordinary balance, with slight alterations. Airy's [Compensation. | + 6·8 | + 7·3 | + 4·7 | + 4·2 | + 4·0 | + 4·0 | + 3·7 | − 1·6 | − 2·8 | − 3·8 | − 6·1 |
| Isaac | 1641 | 2 | Extra Compensation, and Airy's Compensation. | + 11·9 | + 12·8 | + 9·7 | + 10·8 | + 12·3 | + 13·5 | + 15·5 | + 21·4 | + 20·5 | + 19·8 | + 18·2 |
| Edward and Sons | 3688 | 2 | Improved ordinary balance. | + 8·5 | + 10·2 | + 8·0 | + 7·5 | + 7·6 | + 8·7 | + 8·7 | + 13·0 | + 10·8 | + 10·4 | + 10·6 |
| Williams | 3602 | 2 | Ordinary balance, with slight alterations. | − 2·0 | + 1·9 | − 3·0 | − 2·0 | + 4·5 | + 1·9 | + 3·4 | + 26·3 | + 26·2 | + 19·0 | + 19·5 |
| Keys | 380 | 2 | Ordinary balance, with slight alterations. Airy's [Compensation. | − 0·2 | + 5·3 | 0·0 | + 3·4 | + 6·6 | + 4·2 | + 7·0 | + 23·8 | + 21·2 | + 18·8 | + 16·7 |
| Sewill | 3611 | 2 | Auxiliary Compensation to balance. | + 17·2 | + 20·0 | + 16·0 | + 19·0 | + 22·5 | + 20·8 | + 23·7 | + 25·9 | + 23·0 | + 21·0 | + 20·0 |
| R. Webster | 15083 | 2 | Ordinary balance. | + 13·0 | + 13·2 | + 12·7 | + 10·8 | + 17·7 | + 19·8 | + 17·7 | + 6·2 | + 5·3 | + 5·5 | + 4·7 |
| Hennessy | 3254 | 2 | Auxiliary Compensation to balance. | + 19·6 | + 22·8 | + 17·1 | + 20·5 | + 24·2 | + 23·8 | + 26·7 | + 33·0 | + 33·6 | + 29·9 | + 27·6 |
| Glover | 367 | 2 | Auxiliary for cold. Airy's Compensation. | − 2·3 | − 2·0 | − 0·2 | − 0·7 | − 1·5 | − 2·0 | + 3·0 | + 13·8 | + 9·5 | + 4·5 | 0·0 |
| Ainsley | 4118 | 2 | Airy's Compensation. | − 38·5 | − 33·5 | − 37·2 | − 31·5 | − 28·0 | − 26·5 | − 24·5 | − 21·7 | − 22·0 | − 23·0 | − 25·0 |
| Sewill | 3605 | 2 | Auxiliary Compensation to balance. | + 6·5 | + 10·3 | + 6·7 | + 8·0 | + 11·1 | + 9·9 | + 11·7 | + 26·5 | + 25·3 | + 20·2 | + 16·3 |
| C. Frodsham & Co. | 3576 | 2 | 3 Compensation bar balance, with Salvonic [apparatus. | + 12·3 | + 13·5 | + 13·2 | + 10·5 | + 12·5 | + 10·5 | + 14·5 | + 25·3 | + 26·2 | + 25·5 | + 24·5 |
| Moore | 5754 | 2 | Ordinary balance. Airy's Compensation. | + 3·0 | + 2·9 | − 0·2 | − 4·4 | + 6·8 | + 4·7 | + 10·0 | + 16·2 | + 18·7 | + 13·0 | + 10·5 |
| Hennessy | 3241 | 2 | Auxiliary Compensation to balance. | + 1·2 | + 4·3 | + 1·2 | + 5·1 | + 7·7 | + 8·0 | + 11·8 | + 15·0 | + 13·5 | + 11·5 | + 9·7 |
| E. Webster | 631 | 2 | Ordinary balance and escapement. | − 14·0 | − 8·5 | − 15·0 | − 8·3 | − 3·0 | − 2·7 | + 1·2 | + 7·2 | + 7·0 | + 4·5 | 0·0 |
| Glover | 366 | 2 | Auxiliary for heat. Airy's Compensation. | + 6·0 | + 12·7 | + 1·9 | + 8·0 | + 14·5 | + 11·7 | + 14·6 | + 13·0 | + 8·5 | + 5·9 | + 2·7 |
| Dell and Co. | 19368 | 2 | Auxiliary, acting at low temperatures. | − 1·5 | + 2·6 | − 1·6 | + 4·6 | + 10·2 | + 9·3 | + 15·0 | + 17·0 | + 19·0 | + 19·8 | + 15·9 |
| Oram and Son | 18750 | 2 | Auxiliary Compensation. | − 9·0 | − 7·0 | − 12·0 | − 8·8 | − 3·7 | − 5·5 | − 4·8 | + 14·0 | + 12·9 | + 8·1 | − 2·0 |
| Heap | 6480 | 2 | Ordinary balance. Airy's Compensation. | − 0·5 | + 9·0 | + 1·0 | + 7·2 | + 15·0 | + 14·5 | + 17·4 | + 40·7 | + 36·2 | + 39·6 | + 43·5 |
| Lawson | 2336 | 2 | {Ordinary balance, with coated balance spring. Auxiliary for extremes.} | − 0·7 | − 1·0 | − 4·8 | − 4·5 | − 6·5 | − 5·0 | − 5·8 | + 20·1 | + 19·0 | + 20·0 | + 15·6 |
| Nelson | 2901 | 2 | Auxiliary, gaining in heat. Airy's Compensation. | + 45·0 | + 44·3 | + 47·5 | + 42·7 | + 41·3 | + 41·2 | + 45·0 | + 53·5 | + 56·3 | + 56·0 | + 56·4 |
| Riego | 3890 | 2 | Palladium spring. Airy's Compensation. | + 21·9 | + 33·3 | + 10·6 | + 24·2 | + 46·0 | + 37·5 | + 42·7 | + 111·8 | + 116·7 | + 117·0 | + 123·3 |
| Chronometrical Thermometer. | | | ...... | s +1342·0 | s +1293·0 | s +1236·8 | s +1023·0 | s +922·0 | s +919·0 | s +812·5 | s +518·0 | s +496·2 | s +479·6 | s +464·2 |
| Mean Weekly Temperature... | | | ...... | ° 46·8 | ° 47·7 | ° 48·3 | ° 50 9 | ° 51·9 | ° 51·4 | ° 53·1 | ° 55·7 | ° 55·8 | ° 56·0 | ° 55·9 |
| Extremes of Temperature as shown by the Self-Registering Thermometers...... | | | ...... | ° ° 45—50 | ° ° 46—50 | ° ° 45—52 | ° ° 49—54 | ° ° 49—54 | ° ° 46—55 | ° ° 50—55 | ° ° 52—60 | ° ° 53—60 | ° ° 54—59 | ° ° 54—58 |

| NAME OF MAKER. | No. | Apr. 29 to May 6 | May 13—20 | May 6—13 | June 17—24 | July 8—15 | June 24 to July 1 | July 22—29 | July 1—8 | July 15—22 | June 3—10 † | June 10—17 † | May 27 to June 3 † | March 4—11 † | March 18—25 † | March 11—18 † | May 20—27 † | Mar. 25 to April 1 † |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s |
| Kullberg | 4066 | − 1·0 | − 0·5 | − 1·5 | + 0·6 | + 0·4 | + 0·9 | + 1·8 | + 0·7 | + 1·2 | + 1·3 | + 0·1 | + 0·6 | 0·0 | − 2·4 | − 1·9 | + 0·1 | − 1·7 |
| C. Frodsham & Co. | 3593 | + 3·7 | + 3·6 | + 3·9 | + 4·1 | + 5·6 | + 3·8 | + 4·1 | + 5·2 | + 4·8 | + 4·9 | + 3·1 | + 1·9 | + 0·5 | − 0·2 | 0·0 | + 3·2 | + 0·6 |
| Keys | 399 | + 2·9 | + 3·4 | + 0·6 | + 0·6 | + 1·3 | + 0·8 | − 0·8 | + 1·3 | + 0·2 | + 5·5 | + 5·2 | + 2·5 | − 5·2 | − 4·0 | − 4·0 | + 3·6 | − 4·0 |
| Poole and Co. | 5685 | − 0·9 | − 1·4 | − 1·8 | − 3·9 | + 3·3 | − 1·2 | + 1·9 | + 1·7 | + 3·2 | − 2·3 | − 2·1 | − 4·1 | − 6·8 | + 0·5 | − 1·9 | − 3·3 | − 0·8 |
| Birchall | 1382 | − 5·5 | − 6·8 | − 7·3 | − 12·8 | − 4·9 | − 9·2 | − 7·7 | − 8·0 | − 5·4 | − 4·2 | − 6·3 | − 5·5 | − 8·6 | − 10·5 | − 12·1 | − 5·9 | − 8·5 |
| Kullberg | 4070 | + 13·0 | + 13·3 | + 12·2 | + 15·5 | + 15·6 | + 14·8 | + 15·7 | + 14·7 | + 15·2 | + 9·5 | + 8·6 | + 8·1 | + 6·3 | + 9·7 | + 8·0 | + 9·0 | + 10·8 |
| Nelson | 2836 | + 7·5 | + 5·1 | + 4·1 | + 5·7 | + 1·3 | + 2·0 | − 3·2 | + 2·1 | − 3·7 | + 6·3 | + 5·9 | + 7·3 | − 4·2 | + 1·7 | + 0·2 | + 4·7 | + 5·3 |
| Birchall | 1381 | − 9·5 | − 7·8 | − 9·0 | − 7·3 | − 7·0 | − 11·6 | − 7·8 | − 11·5 | − 6·7 | − 12·0 | − 15·0 | − 14·8 | − 16·2 | − 17·5 | − 18·5 | − 14·5 | − 15·5 |
| Parkinson & Frodsham | 4167 | + 6·5 | + 7·3 | + 6·9 | + 10·0 | + 13·5 | + 8·8 | + 11·4 | + 10·7 | + 12·6 | + 15·0 | + 16·0 | + 14·3 | + 3·1 | + 8·4 | + 5·6 | + 14·5 | + 11·0 |
| Penlington | 2737 | + 13·5 | + 15·0 | + 12·0 | + 13·8 | + 13·8 | + 12·0 | + 7·3 | + 11·1 | + 8·9 | + 9·9 | + 9·6 | + 6·0 | + 3·7 | + 9·0 | + 2·4 | + 8·7 | + 12·2 |
| Mercer | 2683 | + 20·5 | + 20·9 | + 19·3 | + 21·7 | + 25·6 | + 22·7 | + 23·4 | + 22·9 | + 23·7 | + 22·8 | + 23·0 | + 21·6 | + 18·5 | + 22·9 | + 18·6 | + 22·7 | + 24·8 |
| Penlington | 3616 | + 3·0 | + 2·7 | + 1·0 | + 3·9 | + 10·3 | + 5·6 | + 9·0 | + 7·5 | + 8·3 | − 1·5 | − 1·2 | − 2·2 | − 7·9 | − 6·7 | − 7·6 | − 0·1 | − 7·0 |
| Isaac | 1668 | − 10·6 | − 9·3 | − 9·4 | − 7·2 | − 7·3 | − 3·2 | − 7·6 | − 5·3 | − 6·0 | − 0·8 | − 1·3 | − 3·9 | − 10·7 | + 0·7 | − 2·5 | − 5·5 | + 1·0 |
| Uhrig | 387 | + 17·5 | + 16·1 | + 16·4 | + 17·9 | + 18·3 | + 17·9 | + 17·3 | + 17·2 | + 18·7 | + 14·9 | + 14·8 | + 10·5 | + 6·3 | + 8·4 | + 6·5 | + 13·5 | + 9·1 |
| Williams | 3599 | − 2·6 | 0·0 | − 2·7 | − 3·1 | + 5·7 | + 1·6 | + 8·0 | + 3·0 | + 7·1 | − 1·2 | − 1·2 | − 4·1 | − 8·9 | − 6·3 | − 8·2 | − 3·0 | − 5·5 |
| Lister and Sons | 824 | + 8·0 | + 8·4 | + 6·5 | + 7·6 | + 10·3 | + 8·2 | + 9·6 | + 7·9 | + 9·4 | + 12·2 | + 11·9 | + 10·8 | + 9·6 | + 10·8 | + 10·6 | + 12·1 | + 9·2 |
| Parkinson & Frodsham | 4158 | + 12·5 | + 10·1 | + 10·5 | + 9·0 | + 12·1 | + 9·2 | + 11·7 | + 10·1 | + 12·7 | + 6·8 | + 8·8 | + 4·9 | − 0·6 | + 3·9 | + 0·8 | + 4·6 | + 3·9 |
| Uhrig | 393 | + 4·7 | + 12·2 | + 10·5 | + 13·0 | + 16·8 | + 14·6 | + 17·9 | + 15·0 | + 17·0 | + 18·8 | + 15·8 | + 16·8 | + 0·5 | + 3·0 | + 1·6 | + 18·3 | + 5·4 |
| Moore | 5756 | + 9·0 | + 6·7 | + 4·8 | + 5·9 | + 7·2 | + 3·9 | + 6·4 | + 4·5 | + 6·4 | + 1·9 | − 0·9 | − 0·3 | − 4·5 | − 3·6 | − 5·2 | − 0·2 | − 2·3 |
| Poole and Co. | 5762 | + 12·5 | + 12·4 | + 9·7 | + 11·2 | + 14·3 | + 11·5 | + 14·0 | + 11·9 | + 13·5 | + 13·1 | + 13·4 | + 9·8 | − 4·3 | − 2·7 | − 3·4 | + 7·6 | + 1·1 |
| Shepherd and Son | 1833 | + 13·0 | + 13·4 | + 11·1 | + 8·6 | + 8·6 | + 6·6 | + 6·6 | + 6·9 | + 6·7 | + 8·6 | + 8·9 | + 6·0 | − 0·1 | + 4·1 | + 1·5 | + 8·1 | + 6·7 |
| Mercer | 3543 | + 12·7 | + 11·7 | + 11·3 | + 18·1 | + 21·0 | + 17·5 | + 24·6 | + 18·0 | + 23·7 | + 11·9 | + 12·5 | + 9·1 | + 12·9 | + 15·1 | + 14·3 | + 8·7 | + 16·0 |
| Robinson | 3077 | − 8·0 | − 7·4 | − 8·9 | − 5·9 | − 2·7 | − 4·0 | − 3·4 | − 2·7 | − 3·2 | − 5·1 | − 6·7 | − 6·6 | − 19·0 | − 16·0 | − 16·8 | − 6·4 | − 14·4 |
| Lister and Sons | 825 | + 6·0 | + 5·9 | + 5·3 | + 9·5 | + 14·8 | + 12·8 | + 15·0 | + 12·4 | + 14·4 | + 7·7 | + 7·3 | + 4·0 | − 4·7 | − 1·5 | − 1·9 | + 5·6 | + 0·1 |
| Pyott | 488 | − 1·5 | − 2·6 | − 3·9 | − 4·3 | − 2·2 | − 3·4 | − 2·6 | − 2·4 | − 2·7 | + 1·0 | + 0·7 | − 0·2 | − 9·6 | − 5·3 | − 6·6 | + 0·1 | − 4·0 |
| Isaac | 1641 | + 21·5 | + 23·4 | + 23·6 | + 24·4 | + 30·2 | + 28·6 | + 29·0 | + 28·2 | + 30·0 | + 16·9 | + 17·6 | + 14·7 | + 4·9 | + 11·4 | + 8·7 | + 16·4 | + 12·0 |
| Edward and Sons | 3688 | + 13·5 | + 16·4 | + 13·0 | + 15·5 | + 14·7 | + 14·8 | + 17·0 | + 14·1 | + 16·3 | + 11·8 | + 9·3 | + 8·7 | − 4·1 | + 1·5 | − 1·0 | + 9·3 | + 2·6 |
| Williams | 3602 | + 25·0 | + 27·1 | + 25·0 | + 28·9 | + 24·9 | + 25·6 | + 25·0 | + 24·1 | + 24·3 | + 29·0 | + 29·7 | + 26·1 | + 6·6 | + 13·0 | + 9·2 | + 28·5 | + 17·3 |
| Keys | 380 | + 23·6 | + 25·1 | + 22·4 | + 27·5 | + 32·3 | + 29·8 | + 33·5 | + 30·2 | + 34·0 | + 31·6 | + 34·0 | + 29·6 | + 5·0 | + 14·6 | + 9·7 | + 27·4 | + 18·2 |
| Sewill | 3611 | + 27·1 | + 33·3 | + 30·7 | + 29·6 | + 35·0 | + 33·1 | + 34·9 | + 34·9 | + 35·0 | + 25·6 | + 26·4 | + 24·7 | + 11·5 | + 17·0 | + 16·0 | + 23·7 | + 17·3 |
| R. Webster | 15083 | + 6·8 | + 8·8 | + 5·0 | + 4·8 | + 5·2 | + 3·0 | + 3·5 | + 3·4 | + 3·4 | + 3·4 | + 4·3 | + 3·6 | + 2·1 | + 4·2 | 0·0 | + 5·1 | + 0·3 |
| Hennessy | 3254 | + 33·0 | + 38·1 | + 35·9 | + 37·9 | + 44·7 | + 41·9 | + 43·9 | + 41·3 | + 45·3 | + 29·0 | + 29·9 | + 28·6 | + 16·3 | + 20·4 | + 14·7 | + 29·6 | + 21·8 |
| Glover | 367 | + 17·7 | + 14·4 | + 16·5 | + 21·2 | + 24·5 | + 21·5 | + 24·7 | + 23·5 | + 24·4 | + 26·2 | + 24·6 | + 22·5 | − 5·8 | − 3·7 | − 8·2 | + 22·1 | − 0·3 |
| Ainsley | 4118 | − 21·3 | − 19·4 | − 19·8 | − 14·3 | − 11·4 | − 14·0 | − 11·4 | − 12·1 | − 11·0 | − 26·1 | − 26·8 | − 29·8 | − 35·5 | − 28·5 | − 28·8 | − 24·5 | − 27·5 |
| Sewill | 3605 | + 24·3 | + 26·6 | + 26·9 | + 34·5 | + 38·3 | + 33·0 | + 37·0 | + 35·7 | + 37·5 | + 37·4 | + 38·4 | + 35·5 | + 23·7 | + 26·1 | + 25·1 | + 36·4 | + 26·6 |
| C. Frodsham & Co. | 3576 | + 24·4 | + 23·9 | + 21·3 | + 28·5 | + 32·0 | + 27·6 | + 36·7 | + 27·1 | + 37·6 | + 32·6 | + 32·4 | + 31·3 | + 29·5 | + 29·2 | + 28·2 | + 31·6 | + 29·6 |
| Moore | 5754 | + 16·6 | + 17·9 | + 15·1 | + 22·0 | + 23·8 | + 21·0 | + 23·4 | + 21·5 | + 23·7 | + 14·2 | + 13·8 | + 10·8 | − 5·0 | − 0·9 | − 4·7 | + 10·2 | + 3·6 |
| Hennessy | 3241 | + 14·6 | + 16·7 | + 16·4 | + 19·7 | + 21·5 | + 21·7 | + 23·0 | + 19·0 | + 21·1 | + 14·5 | + 12·3 | + 9·2 | − 4·3 | + 3·1 | + 3·5 | + 10·3 | + 3·0 |
| E. Webster | 631 | + 8·5 | + 10·7 | + 8·8 | + 10·5 | + 19·2 | + 13·5 | + 21·9 | + 15·3 | + 20·1 | + 0·1 | + 0·8 | − 3·7 | − 9·5 | − 7·1 | − 7·7 | − 3·5 | − 4·4 |
| Glover | 366 | + 13·5 | + 14·9 | + 14·9 | + 3·6 | + 2·9 | + 0·6 | + 4·1 | + 0·5 | + 1·5 | + 1·9 | + 1·2 | + 0·6 | − 8·4 | − 7·2 | − 9·2 | + 0·3 | − 7·3 |
| Dell and Co. | 19368 | + 11·0 | + 5·9 | + 1·5 | + 1·4 | + 8·6 | + 9·0 | + 10·9 | + 10·9 | + 10·6 | + 26·9 | + 25·7 | + 26·3 | + 19·8 | + 19·3 | + 16·7 | + 25·8 | + 24·8 |
| Oram and Son | 18750 | + 13·5 | + 17·0 | + 14·5 | + 8·6 | + 29·1 | + 19·1 | + 30·0 | + 25·9 | + 28·3 | − 2·1 | + 1·7 | − 2·8 | − 20·9 | − 19·1 | − 24·2 | + 2·2 | − 11·0 |
| Heap | 6480 | + 46·3 | + 47·0 | + 45·3 | + 59·5 | + 61·5 | + 58·7 | + 68·0 | + 61·3 | + 63·0 | + 63·0 | + 70·0 | + 61·1 | + 32·5 | + 45·1 | + 37·9 | + 55·4 | + 51·3 |
| Lawson | 2336 | + 19·9 | + 19·6 | + 18·0 | + 30·5 | + 30·2 | + 30·5 | + 30·6 | + 29·7 | + 29·7 | + 47·3 | + 51·0 | + 44·0 | + 21·4 | + 34·2 | + 24·2 | + 41·1 | + 37·9 |
| Nelson | 2901 | + 52·5 | + 51·5 | + 48·1 | + 55·5 | + 52·3 | + 53·0 | + 51·7 | + 50·2 | + 50·6 | + 30·0 | + 32·7 | + 25·0 | + 7·5 | + 16·5 | + 11·0 | + 26·4 | + 13·3 |
| Riego | 3890 | + 110·7 | + 114·6 | + 110·3 | + 135·5 | + 130·0 | + 130·0 | + 133.0 | + 129·0 | + 131·7 | + 136·1 | + 140·6 | + 135·1 | + 61·8 | + 97·0 | + 83·2 | + 127·1 | + 112·5 |
| Chronometrical Thermometer | | s +431·5 | s +142·5 | s +110·0 | s −126·3 | s −267·0 | s −354·5 | s −379·2 | s −413·0 | s −472·8 | s −2819·8 | s −2829·4 | s −2883·5 | s −2899·0 | s −2930·5 | s −2947·5 | s −3003·5 | s −3075·5 |
| Mean Weekly Temperature. | | ° 56·3 | ° 60·8 | ° 60·5 | ° 63·6 | ° 65·9 | ° 66·3 | ° 67·0 | ° 67·5 | ° 67·9 | ° 92·4 | ° 92·8 | ° 92·9 | ° 95·1 | ° 93·1 | ° 93·6 | ° 95·1 | ° 95·1 |
| {Extremes of Temperature as shown by the Self-Registering Thermometers. | | ° ° 51—60 | ° ° 57—64 | ° ° 58—64 | ° ° 60—70 | ° ° 63—72 | ° ° 64—69 | ° ° 65—71 | ° ° 64—73 | ° ° 66—72 | ° ° 88—97 | ° ° 88—97 | ° ° 88—97 | ° ° 85—107 | ° ° 85—98 | ° ° 85—105 | ° ° 88—102 | ° ° 85—102 |

The sign + indicates that the rate is gaining.

† During these weeks the Chronometers were placed in the chamber of a stove heated by jets of gas. The gas flames are exterior to the chamber, into which none of the injurious products of combustion can enter.

The Chronometrical Thermometer differs from an ordinary Chronometer only in the construction of the balance, the positions of the metals forming the compensating rims being reversed. By this arrangement the effect of temperature is much magnified.

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

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## (III.)—ABSTRACT OF THE PRINCIPAL CHANGES OF RATE.

| NAME OF MAKER. | No. | Whether 3 or 8 Days. | ADDRESS OF MAKER. | Construction of Escapement and Balance, from the Description furnished by the Maker. | First Day of Rating. | Last Day of Rating. | Number of Weeks. | Least Weekly Sum. | In what Week. | Greatest Weekly Sum. | In what Week. | Difference between the Greatest and Least. | Greatest Difference between one Week and the next. | Before and after what Day. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | s | | s | | s | s | |
| Kullberg | 4066 | 2 | 105, Liverpool Road, N. | Reversed detent, with short spring. | January 14 | July 29 | 28 | − 2·4 | March 18 to 25† | + 2·7 | January 28 to Feb. 4 | 5·1 | 2·0 | March 4† |
| C. Frodsham & Co. | 3593 | 8 | 377, Strand, W.C. | 3 Compensation bar balance. | January 14 | July 29 | 28 | − 2·9 | April 1 to 8 | + 5·6 | July 8 to 15 | 8·5 | 3·7 | April 22 |
| Keys | 399 | 2 | 15, Craven Street, Strand, W.C. | Ordinary balance, with slight alternations. Airy's [Compensation. | January 14 | July 29 | 28 | − 5·2 | March 4 to 11† | + 5·5 | April 22 to 29; June 3 to 10† | 10·7 | 4·6 | † June 17 |
| Poole and Co. | 5685 | 2 | 33, Spencer Street, Clerkenwell, E.C. | Poole's auxiliary. | January 14 | July 29 | 28 | − 6·8 | March 4 to 11† | + 3·3 | July 8 to 15 | 10·1 | 5·5 | March 4† |
| Birchall | 1382 | 2 | 12A, Stonefield Street, Islington, N. | Ordinary escapement, with slight alterations to [balance. | January 14 | July 29 | 28 | − 13·1 | April 1 to 8 | − 4·2 | June 3 to 10† | 8·9 | 6·5 | † June 17 |
| Kullberg | 4070 | 2 | 105, Liverpool Road, N. | Reversed detent, with short spring. | January 14 | July 29 | 28 | + 6·3 | March 4 to 11† | + 15·7 | July 22 to 29 | 9·4 | 7·2 | March 4† |
| Nelson | 2836 | 2 | 31, Halton Road, Canonbury, N. | Auxiliary, gaining in cold. Airy's Compensation. | January 14 | July 29 | 28 | − 4·2 | March 4 to 11† | + 10·0 | April 22 to 29 | 14·2 | 5·0 | July 15 |
| Birchall | 1381 | 2 | 12A, Stonefield Street, Islington, N. | Ordinary escapement, with slight alterations to [balance. | January 14 | July 29 | 28 | − 18·6 | January 14 to 21 | − 6·7 | July 15 to 22 | 11·9 | 7·7 | † June 17 |
| Parkinson & Frodsham | 4167 | 2 | 4, Change Alley, Cornhill, E.C. | Auxiliary, acting at low temperatures. | January 14 | July 29 | 28 | + 3·1 | March 4 to 11† | + 16·0 | June 10 to 17† | 12·9 | 7·2 | † April 1; May 20† |
| Penlington | 2737 | 2 | 2, St. George's Crescent, Liverpool. | Auxiliary Compensation. | January 14 | July 29 | 28 | 0·0 | January 14 to 21 | + 15·0 | May 13 to 20 | 15·0 | 6·8 | March 4† |
| Mercer | 2683 | 2 | 161, Goswell Road, E.C. | Auxiliary Compensation. | January 14 | July 29 | 28 | + 10·1 | January 14 to 21 | + 25·6 | July 8 to 15 | 15·5 | 6·6 | † April 1 |
| Penlington | 3616 | 2 | 2, St. George's Crescent, Liverpool. | Auxiliary Compensation. | January 14 | July 29 | 28 | − 8·0 | January 14 to 21 | + 10·3 | July 8 to 15 | 18·3 | 5·9 | March 4† |
| Isaac | 1668 | 2 | 10, Spencer Street, Clerkenwell, E.C. | Balance, without auxiliary. | January 14 | July 29 | 28 | − 11·5 | February 18 to 25 | + 1·0 | March 25 to April 1† | 12·5 | 9·7 | † April 1 |
| Uhrig | 387 | 2 | 8, Quadrant Road, Essex Road, N. | Ordinary balance, with slight alterations. | January 14 | July 29 | 28 | − 3·8 | January 14 to 21 | + 18·7 | July 15 to 22 | 22·5 | 5·4 | Jan. 28 |
| Williams | 3599 | 2 | 3, Bute Docks, Cardiff. | Ordinary balance, with slight alterations. | January 14 | July 29 | 28 | − 13·2 | January 14 to 21 | + 8·0 | July 22 to 29 | 21·2 | 6·1 | † April 1 |
| Lister and Sons | 824 | 2 | 12, Mosley Street, Newcastle-on-Tyne. | Poole's auxiliary. Airy's Compensation. | January 14 | July 29 | 28 | + 5·5 | April 1 to 8 | + 21·7 | February 4 to 11 | 16·2 | 8·9 | March 4† |
| Parkinson & Frodsham | 4158 | 2 | 4, Change Alley, Cornhill, E.C. | Auxiliary, acting at low temperatures. | January 14 | July 29 | 28 | − 0·6 | March 4 to 11† | + 12·7 | July 15 to 22 | 13·3 | 10·9 | March 4† |
| Uhrig | 393 | 2 | 8, Quadrant Road, Essex Road, N. | Ordinary balance, with slight alterations. | January 14 | July 29 | 28 | − 4·5 | January 14 to 21 | + 18·8 | June 3 to 10† | 23·3 | 6·1 | May 20† |
| Moore | 5756 | 2 | 23, Eden Quay, Dublin. | Ordinary balance. Airy's Compensation. | January 14 | July 29 | 28 | − 5·2 | March 11 to 18† | + 9·7 | April 22 to 29 | 14·9 | 11·0 | March 4† |
| Poole and Co. | 5762 | 2 | 33, Spencer Street, Clerkenwell, E.C. | Poole's auxiliary. | January 14 | July 29 | 28 | − 4·3 | March 4 to 11† | + 14·3 | July 8 to 15 | 18·6 | 9·3 | March 4† |
| Shepherd and Son | 1833 | 2 | 53, Leadenhall Street, E.C. | Auxiliary to balance. Airy's Compensation. | January 14 | July 29 | 28 | − 0·1 | March 4 to 11† | + 14·9 | April 22 to 29 | 15·0 | 12·1 | March 4† |
| Mercer | 3543 | 2 | 161, Goswell Road, E.C. | Auxiliary Compensation. | January 14 | July 29 | 28 | + 0·5 | January 28 to Feb. 4 | + 24·6 | July 22 to 29 | 24·1 | 9·1 | March 4† |
| Robinson | 3077 | 2 | 106, Howard Street, North Shields. | Auxiliary to balance. Airy's Compensation. | January 14 | July 29 | 28 | −19·0 | March 4 to 11† | − 2·7 | July 1 to 8; July 8 to 15 | 16·3 | 13·0 | March 4† |
| Lister and Sons | 825 | 2 | 12, Mosley Street, Newcastle-on-Tyne. | Poole's auxiliary. Airy's Compensation. | January 14 | July 29 | 28 | − 4·7 | March 4 to 11† | + 15·0 | July 22 to 29 | 19·7 | 11·8 | March 4† |
| Pyott | 488 | 2 | 74, West India Dock Road, E. | Ordinary balance, with slight alterations. Airy's [Compensation. | January 14 | July 29 | 28 | − 9·6 | March 4 to 11† | + 7·3 | February 4 to 11 | 16·9 | 13·3 | March 4† |
| Isaac | 1641 | 2 | 10, Spencer Street, Clerkenwell, E.C. | Extra Compensation, and Airy's Compensation. | January 14 | July 29 | 28 | + 4·9 | March 4 to 11† | + 30·2 | July 8 to 15 | 25·3 | 10·6 | March 4† |
| Edward and Sons | 3688 | 2 | 1, Poultry, E.C. | Improved ordinary balance. | January 14 | July 29 | 28 | − 4·1 | March 4 to 11† | + 17·0 | July 22 to 29 | 21·1 | 12·8 | March 4† |
| Williams | 3602 | 2 | 3, Bute Docks, Cardiff. | Ordinary balance, with slight alterations. | January 14 | July 29 | 28 | − 3·0 | January 14 to 21 | + 29·7 | June 10 to 17† | 32·7 | 7·2 | April 15 |
| Keys | 380 | 2 | 15, Craven Street, Strand, W.C. | Ordinary balance, with slight alterations. Airy's [Compensation. | January 14 | July 29 | 28 | − 0·2 | January 21 to 28 | + 34·0 | June 10 to 17†; July 15 to 22 | 34·2 | 6·5 | † June 17 |
| Sewill | 3611 | 2 | 61, South Castle Street, Liverpool. | Auxiliary Compensation to balance. | January 14 | July 29 | 28 | + 11·5 | March 4 to 11† | + 35·0 | July 8 to 15; July 15 to 22 | 23·5 | 12·2 | March 4† |
| R. Webster | 15083 | 2 | 5, Queen Victoria Street, E.C. | Ordinary balance. | January 14 | July 29 | 28 | 0·0 | March 11 to 18† | + 19·8 | February 11 to 18 | 19·8 | 15·6 | March 4† |
| Hennessy | 3254 | 2 | 5, Wind Street, Swansea. | Auxiliary Compensation to balance. | January 14 | July 29 | 28 | + 14·7 | March 11 to 18† | + 45·3 | July 15 to 22 | 30·6 | 10·4 | March 4† |
| Glover | 367 | 2 | 8, Wrotham Road, Camden New Town, | Auxiliary for cold. Airy's Compensation. | January 14 | July 29 | 28 | − 8·2 | March 11 to 18† | + 26·2 | June 3 to 10† | 34·4 | 8·8 | March 4† |
| Ainsley | 4118 | 2 | 86, Bute Street, Cardiff. [N.W. | Airy's Compensation. | January 14 | July 29 | 28 | −38·5 | January 21 to 28 | − 11·0 | July 15 to 22 | 27·5 | 12·5 | † June 17 |
| Sewill | 3605 | 2 | 61, South Castle Street, Liverpool. | Auxiliary Compensation to balance. | January 14 | July 29 | 28 | + 6·5 | January 21 to 28 | + 38·4 | June 10 to 17† | 31·9 | 12·0 | March 4† |
| C. Frodsham & Co. | 3576 | 2 | 377, Strand, W.C. | 3 Compensation bar balance, with Salvonic apparatus. | January 14 | July 29 | 28 | + 10·5 | January 28 to Feb. 4; February 11 to 18 | + 37·6 | July 15 to 22 | 27·1 | 15·0 | March 4† |
| Moore | 5754 | 2 | 23, Eden Quay, Dublin. | Ordinary balance. Airy's Compensation. | January 14 | July 29 | 28 | − 5·0 | March 4 to 11† | + 23·8 | July 8 to 15 | 28·8 | 15·0 | March 4† |
| Hennessy | 3241 | 2 | 5, Wind Street, Swansea. | Auxiliary Compensation to balance. | January 14 | July 29 | 28 | − 4·3 | March 4 to 11† | + 23·0 | July 22 to 29 | 27·3 | 16·1 | March 4† |
| E. Webster | 631 | 2 | 57, Gillespie Road, Highbury Vale, N. | Ordinary balance and escapement. | January 14 | July 29 | 28 | − 15·0 | January 14 to 21 | + 21·9 | July 22 to 29 | 36·9 | 14·2 | May 20† |
| Glover | 366 | 2 | 8, Wrotham Road, Camden New Town, [N.W. | Auxiliary for heat. Airy's Compensation. | January 14 | July 29 | 28 | − 9·2 | March 11 to 18† | + 14·9 | May 6 to 13; May 13 to 20 | 24·1 | 23·0 | March 4† |
| Dell and Co. | 19368 | 2 | Broad Street, Bristol. | Auxiliary, acting at low temperatures. | January 14 | July 29 | 28 | − 1·6 | January 14 to 21 | + 26·9 | June 3 to 10† | 28·5 | 24·3 | † June 17 |
| Oram and Son | 18750 | 2 | 19, Wilmington Square, W.C. | Auxiliary Compensation. | January 14 | July 29 | 28 | −24·2 | March 11 to 18† | + 30·0 | July 22 to 29 | 54·2 | 16·1 | March 4† |
| Heap | 6480 | 2 | 124, New North Road, Hoxton, N. | Ordinary balance. Airy's Compensation. | January 14 | July 29 | 28 | − 0·5 | January 21 to 28 | + 70·0 | June 10 to 17† | 70·5 | 15·1 | March 4† |
| Lawson | 2336 | 2 | 241, Liverpool Buildings, Liverpool Road, | Ordinary balance, with coated balance spring. Auxiliary for extremes. | January 14 | July 29 | 28 | − 6·5 | February 18 to 25 | + 51·0 | June 10 to 17† | 57·5 | 27·2 | March 4† |
| Nelson | 2901 | 2 | 31, Halton Road, Canonbury, N. [N. | Auxiliary, gaining in heat. Airy's Compensation. | January 14 | July 29 | 28 | + 7·5 | March 4 to 11† | + 56·4 | April 1 to 8 | 48·9 | 43·1 | † April 1 |
| Riego | 3890 | 2 | 284, Regent Street, W. | Palladium spring. Airy's Compensation. | January 14 | July 29 | 28 | + 10·6 | January 14 to 21 | + 140·6 | June 10 to 17† | 130·0 | 21·4 | † March 11† |

The sign + indicates that the rate is gaining.

† During these weeks the Chronometers were placed in the chamber of a stove heated by jets of gas. The gas flames are exterior to the chamber, into which none of the injurious products of combustion can enter. In the column "Before and after what Day" the positions of the symbol (†), before or after the date, indicate respectively exposure to heat in the week immediately preceding, or in the week immediately following.

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

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