

KG  
11365  
153

G<sup>6</sup>

*Table of Penetulations  
and  
Chronometers.*

KG-11365,153











KG 11365, 153



185-7 Apr 27<sup>th</sup>

The two seconds pendulum having been in operation 7 or 8 months in an unfinished condition it is to day completed and is now in process of regulating - its motion is now  $\frac{1}{3}$  of a day each side,

One turn of the jar alters the rate by trial during one day before altering, & two turns after  $17. \frac{4}{10}$  Secs

Length of pendulum from the edge of brass cheeks where the spring begins to bend to the end of pointer at bottom  $14. \frac{5}{10}$  feet

Rock weights	lbs
	14.11 0 $\frac{1}{2}$
Hook & nut	3.8
Jar	22.12
Arbor & impulse	} 3.00
pin (estimated)	
	lbs 43.15 0 $\frac{1}{2}$

Quicksilver put in Apr 25<sup>L</sup> P.M. to the  
 depth in the jar of  $26\frac{8}{10}$  inches

the jar is  $\frac{165}{1000}$  inch thick = 33 in long outside  
 =  $32\frac{5}{10}$  inches deep inside. (deeper than necessary by 5 inches)

the Rod penetrates the mercury about  $6\frac{1}{2}$  inches

Apr 27<sup>L</sup> = 330 + 48.5 at 8.47  
 " + 48.5 at 10.27  
 " + 48.4 at 11.40  
 Apr 28 " 47.3 at 9.15 a.m.  
 46.3 at 10.53 P.M.

Put on cup to hold shot for regulating  
 Pendulum vibration,  $\frac{1}{3}$  of a day each side zero

28<sup>L</sup> P.M. 11.5-0. —  
 11.5-0.087

29<sup>L</sup> + 3.2  
 5.5

Let down Pendulum & put  
 abt 8 bullets in the cup

1857 Apr 29<sup>th</sup>

Oull

2252. —

2252.304

11.30 Pch

15.7

Pouch

+14.7

Took out all 5 bullets

Pch at 11.30 + 14.6 of Hutton No 330

30

22,12. —

22 12, 10.3

12.6

4.3

Took out 4 bullets

1230 Pch 9.2

lost + 1.1 in 14 hrs

May 1<sup>st</sup> + 75 at 9.12

+1.5 in 9 hrs

let down the pair 1/4 turn  
+ took out all but 1 bullet

next day

185-7 May 1<sup>st</sup>

$$\begin{array}{r} 21, 22, \text{---} \\ 370 \quad 21, 21, 23.5 \end{array}$$

$$\begin{array}{r} 12, 18 \text{---} \\ 12, 17, 25, 3 \\ 23 \text{---} 5 \\ 1.8 \\ 1.6 \\ 12, 18, \text{---} 3.4 \\ \# 38 \\ 13 \text{---} 56 \end{array}$$

Put in 2 bullets

$$\begin{array}{r} \text{May 2} \text{---} + 24.6 \\ \text{p.m. 1st} \quad 25.3 \\ 0.7 \end{array}$$

Took out 1 bullet

$$3 + 26.4$$

$$\begin{array}{r} \text{May 4} \quad 21, 09, \text{---} \\ 21, 08, 30.0 \\ \text{May 2} \text{---} + 24.6 \end{array}$$

2/5.4/2.7 put in a Minnie rifle bullet

Comparisons by G. Low with E.C.

Mag 2<sup>nd</sup> Sec 34.45 mean 34.37

34.50

34.5

alt

~~34.5~~

3<sup>rd</sup> moon

35.2 + .7

alt

4

"

36.8 + 1.6

alt?

5- A.M.

36.6 - 0.2

8 A.M.

37.8

8 P.M.

38.0

Pandanus now situated to  
this point by 185-7  
Mag 6 2/3<sup>rd</sup> of a deg in all.  
1/3<sup>rd</sup> of a deg from you

Scale for obs

inclination of Pandanus

1 deg

1

0

15

30 min

1 deg

May 8<sup>th</sup> 1857
$$\begin{array}{r} \Sigma \ell \quad 21.19. \text{---} \\ 330 \quad 21.19.01.4 \end{array}$$

$$\begin{array}{r} 21.29 \text{---} \\ 21.28.39.2 \\ 1.4 \end{array}$$

$$2.28.37.8$$

$$2.29. \text{---}$$

$$+ 22.2$$

$$+ 37.8$$

$$3/1.2$$

P.M.

00.0

2.3

$$40.2$$

2.3

1.4

$$0.9$$

40.3

$$39.2$$

1.6

$$0.9$$

$$0.2$$

2.0.3

2.3

38.0

$$\begin{array}{r} 2.4 \\ 34 \end{array}$$

A.P. gained on  $\Sigma \ell + 0.2$  in  $15\frac{1}{2}$  hrs

9<sup>th</sup> P.M.

A.P.

00.0

330

58.7

$$\begin{array}{r} \Sigma \ell \text{ A.P.} \\ 11 \quad + \end{array}$$

+ 0.0

+ 2.6

$$\begin{array}{r} \Sigma \ell \quad 00.0 \\ 330 \quad 5.2 \end{array}$$

1857 May 5<sup>th</sup>

L N.P. 6  
~~5~~ Adk fast 5<sup>th</sup> Adk + 23.4  
8 Adk + 22.2 - 0.40 - Battery renewed Adk  
15 ~~hrs~~ 8 Pdk + 22.0 - 0.34 nearly new out

$8^{\frac{1}{2}} = 9^{\frac{1}{2}}$   
Attended Magnet to care measure the Amplitude  
so it goes with only two battery jars instead of five  
before

1857  
May 12 Adk Examined Reibuter found  
a slight decrease of Arc Amounting to  
about 2 minutes of a degree Examined ~~weight~~  
impulse weight = lever & all contingencies but  
without its suggesting any other cause than  
Temperature or the Barometer (the latter  
after examining record gives no ~~more~~ to  
evidence of its being the cause) The Ther-  
mometer fell externally to 34° this morning  
but as there were no therm in the Pond  
when closet could not tell what change  
took place there

(over)

1857 Aug 12 continued

Pile Examined area of pendulum found it  
to lower returned its usual amount  
 $\frac{1}{3}$  of a day each side zero

Put 2 "Mercuries" in closet with sand  
- when one on the bracket where the sand  
hangs & the other let down by a string  
to the level of the ~~bottom~~ bottom of  
the jar = Used by Adie Liverpool =

13<sup>9</sup> Pile Vibrating  $\frac{2}{3}$  exactly " then below  $43^\circ$   
" above  $54^\circ$   
Pile "  $\frac{2}{3}$  exactly

Stopped pendulum to grease the cone of jar  
which was quite rusty

Painted some of the work above

Can't think of anything more necessary  
to be done to it

took out 2 bullets & put in small shot  
in this place as more convenient  
& set the clock

14<sup>th</sup> May 1857Ther 41.3 below  
" 54 aboveA.M. Examined and vibrating  $\frac{2}{3}$  degree exactlyP.M. Examined and "  $\frac{2}{3}$  deg exactly13<sup>th</sup> P.M. V.R. setP.M. 13<sup>th</sup>  $\begin{cases} AP = 00.0 \\ 330 = 00.2 \end{cases}$ P.M. 14<sup>th</sup>  $\begin{cases} AP = 00.0 \\ 330 = 00.3 \end{cases}$ 330 gird on  $\angle C = 1$  second = so the pend  
is gaining on  $\angle C$   $\frac{9}{10}$  daily

With the exception of the morning of the 12<sup>th</sup> I have at no time found it vibrating anything different from  $\frac{2}{3}$  of a deg as near as it could be observed by the pointer at the bottom.

On the 12<sup>th</sup> A.M. it was vibrating less by about this much (11) distance between the two straight lines by  $\frac{1}{8}$  of an inch = The thermometer was externally at  $34^{\circ}$ . I examined it carefully but without detecting the slightest cause unless the cold contracted the banking on stretching the handle spring the better pendulum.

May 15<sup>th</sup> 1857. Then above  $5-2\frac{1}{2}$   
A.M. below 44. Vibs  $\frac{2}{3}$  exactly

P.M. Then above  $5-1\frac{1}{2}$   
 below 44. Vibrating  $\frac{2}{3}$  as near as can be observed

May 16<sup>th</sup> A.M. Then above  $49\frac{1}{2}$

P.M. Then above 50.  
 below 43. Vibs  $\frac{2}{3}$  of a degree exactly

17<sup>th</sup> Vibs  $\frac{2}{3}$  exactly

18<sup>th</sup> A.M. Then above  $46\frac{1}{2}$  Vibs  $\frac{2}{3}$  exactly  
 below 43.

~~May~~ 19<sup>th</sup> A.M. Then 46. above  
 43 below Vibs  $\frac{2}{3}$  exactly

P.M. above  $48\frac{1}{2}$   
 below 43. Vibs  $\frac{2}{3}$  exactly

1857 May 20 A.M. "The above"

Pch above  $47\frac{1}{2}$  below 43 Vib  $\frac{2}{3}$  exactly

22<sup>0</sup> "The above 47. — A.M.  
below 43.

Pch "above 47. Vib  $\frac{2}{3}$  exactly

23<sup>0</sup> A.M. "The above 43. below 44. Vib  $\frac{2}{3}$  exactly

25 "The above 60. below 46. Vib  $\frac{2}{3}$  funny it is slightly more but cannot be certain

The moisture has condensed on the lower parts of the pendulum

26<sup>1</sup> A.M. "The above  $62\frac{1}{2}$  below could not get the door open











1857. Barrand. No 333.  
compared in Position with 210.

Janner Mc Cabe, no 68.  
Comp<sup>d</sup> in Position  
with No 198

Arnold 1676 comp  
with No 198

Month Day	Hour	Chro	Position	+	Str & hour	S.M.C.	Pos	+	1678 198	Pos	Ther
Dec	M.S.E.	333			15.9.45	11.5	hor. up				+67
15	8.5	27.0	hor.		10.5	12.0	hor. up		50.0	hor	
"	9.5	27.2	hor	+0.2	11.5	10.8	3 up		48.8	3 up	
"	10.5	27.2	hor	0.0	12.5	10.8	3 up		47.5	3 up	67
"	11.5	26.9	12 up	-0.3	PM 1.5	10.2	3 up		46.2	3 up	
"	12.5	26.8	12 up	-0.1	3.5	9.2	3 up		44.0	3 up	70
PM "	1.5	26.7	12 up	-0.1	4.15	7.0	9 up		43.0	9 up	
	3.0	25.0	6 up	-0.8	5.10	5.8	9 up		42.5	9 up	70
	4.15	24.2	6 up	-0.7	7.20	1.5	9 up		42.3	hor	
	5.10	23.2	16 up	-1.0	9.0	1.7	hor.		42.2	hor.	
	7.20	21.3	6 up	-0.9	Aug 8.5	2.5	hor		39.2	hor	
	9.0	21.0	hor.	-0.1	9.5	2.8	12 up		38.4	9 up	70
Am 16	8.5	19.8	hor	-0.1	10.5	3.0	12 up		38.2	9 up	
	9.5	19.5	9 up		12.0	3.0	12 up		37.7	9 up	73
	10.0	18.2	9 up				3 up			3 up	76
	12.0	16.7	9 up								
PM	2.0	16.4	3 up								

XII up Loney 0.2  
Dial 70.0

7-9, 16  
15-66  
43.50



157

1858.	at	$\pm$	up	Interval	Daily Rate.
May-					
4	<sup>hr</sup> 4 p.m.	+ 4.3	hor	4	<sup>s</sup> + 0.8
5	7 a.m.	+ 5.4	?	15	+
"	8 p.m.	+ 6.5	IX		
"	9 p.m.	+			
4	<sup>hr</sup> 4 p.m.	+ 4.3	hor ?		
5	6.45 a.m.	+ 5.4	" ..	10	
"	9 a.m.	+ 5.4	" ?	2 1/4	
"	3 p.m.	+ 6.1	IX	6	
"	9 p.m.	+ 6.5	III	6	
6	6 a.m.	+ 5.5	XII	18	



## Barraud N 157

1858	Mc	gimorlop	Interval	Daily rate	Pos.	
May 10 p.m. 4	+	4.3	5	hm	Hor.	Hor + 1.9
6.45 a.m. 5	-	5.4	+ 1.1	9	+ 2.9	" ?
9 a.m. "		5.4	+ 0.0	2	0.0	IX up + 2.8
3 p.m. "		6.1	+ 0.7	6	+ 2.8	III up + 1.6
9 p.m. "		6.5	+ 0.4	6	+ 1.6	XII up - 1.1
6 a.m. 6		5.5	- 1.0	21	- 1.1	
9 a.m. "		6.0	+ 0.5	3	+ 4.0	hor
3 p.m. "		6.2	+ 0.2	6	+ 0.8	hor
6 a.m. 7		5.8	- 0.4	15	- 0.6	IX up
9 a.m. "		6.0	+ 0.2	3	+ 1.8	hor
3 p.m. "		7.0	+ 1.0	6	+ 4.0	III up
6 a.m. 8		9.8	+ 2.8	21	+ 3.2	XII up
6 1/2 a.m. 12	Fast	1.1				
7 1/2 " "	"	0.5	- 0.6	1		XII up
8 1/2 " "	"	0.6	+ 0.1	1		IX
9 1/2 " "	"	0.3	- 0.3	1		Boat
11 " "	"	0.5	+ 0.2	1 1/2		"
1 p.m. "	"	0.6	+ 0.1	2		Carriage
2 " "	"	0.5	- 0.1	1		Carriage
4 1/2 " "	"	1.0	+ 0.5	2 1/2		Riding in Carriage
9 p.m. "	"	0.4	- 0.6	4 1/2		"
6 a.m. "	"	1.3	+ 0.9	9		hor.
7 a.m. "	"	1.3	+ 0.0	1		



No 4001  
New series.

1858			$\pm$	Natural	Daily rate	Pois.	means
May-			s	hrs			hor. - 17.6
9 a.m.	4	Low	3.26.0		5		XII up - 22.9
3 p.m.	"	"	3.30.0 - 4.0	6	- 16.0	hor.	III up - 66.8
9 a.m.	5	"	3.47.8 - 17.8	18	- 23.7	XII up	IX up - 48.8
3 p.m.	"	"	4.00.0 - 12.2	6	- 48.8	IX	
9 p.m.	"	"	4.16.7 - 16.7	6	- 66.8	III	XII up - 45.3
6 a.m.	6	"	4.36.0 - 19.3	21	- 22.1	XII	XII up - 40.7
9 a.m.	"	"	4.38.2 - 2.2	3	- 17.6	hor	III up - 60.5
3 p.m.	"	"	4.43.0 - 4.8	6	- 19.2	hor	IX up - 57.2
6 a.m.	7	"	5.18.5 - 35.5	15	-	IX	hor. - 35.8

taken to Port town.



N<sup>2</sup>  
6167.

1858	± M.C.	±	Interval	Daily rate	Pos.
April			hrs		
9 p.m. 30	Slow	m	1.53.0		
May 9 a.m. 1	"	"	2.07.7	14.7	12 hor.
1 p.m. "	"	"	2.14.0	6.3	4 IX up
5 p.m. "	"	"	2.18.0	4.0	4 III "
9 p.m. "	"	"	2.22.5	4.5	4 XII "
9 a.m. 2	"	"	2.42.5	20.0	12 hor.
8 a.m. 3	"	"	3.12.3	29.8	23 hor.
9 a.m. 4	"	"	3.34.7	22.4	

New Trial

May					
9 a.m. 4	Slow	"	3.34.7		hor.
3 p.m. "	"	"	3.43.3	8.6	6 hor.
9 a.m. 5	"	"	3.58.8	5.5	18 XVI up
3 p.m. "	"	"	4.03.7	4.9	6 IX "
9 p.m. "	"	"	4.09.0	5.3	6 III "
6 a.m. 6	"	"	4.17.8	8.8	21 XII "
9 a.m. "	"	"	4.22.4	4.6	3 hor.
3 p.m. "	"	"	4.32.0	9.6	6 hor.
6 a.m. 7	"	"	4.46.2	14.2	15 +X

Taken to Boston.



No 1678  
New Series.

1858	$\pm$ M E -	$\pm$	Interval	Daily rate	Pos.		
May			hor	s			hor
9 a.m. 4	Low $\sim$ 3.57.7						- 0.3
3 p.m. "	" $\sim$ 3.50.8	+ 0.9	6	+ 3.6	hor.		
9 a.m. 5	" $\sim$ 3.52.0	- 1.2	18	- 1.6	XII up		XII up
3 p.m. "	" $\sim$ 3.55.2	- 3.2	6	- 12.8	IX "		- 0.4
9 p.m. "	" $\sim$ 3.57.0	- 1.8	6	- 7.2	III "		
6 a.m. 6	" $\sim$ 3.56.3	+ 0.7	21	+ 0.8	XII "		IX up
9 a.m. "	" $\sim$ 3.56.8	- 0.5	3	- 4.0	hor.		- 1.3
3 p.m. "	" $\sim$ 3.55.8	+ 1.0	6	+ 4.0	hor		
6 a.m. 7	" $\sim$ 4.02.2	- 6.2	15	- 9.9	IX		III up
9 a.m. "	" $\sim$ 4.02.6	- 0.6	3	- 4.8	hor		- 3.8
3 p.m. "	" $\sim$ 4.02.7	- 0.1	6	- 0.4	III up		
6 a.m. 8	" $\sim$ 4.01.0	+ 1.7	21		XII "		

No 420.

1858

May

s hrs

9 a.m.	7	fast	20.5.0			
3 p.m.	"	"	20.1.5	3.5	6	III up
6 a.m.	8	"	20.2.3	0.8	9	XII up
8 a.m.	10	"	13.35.0			
11 a.m.	"	"	13.35.6	0.6	3	XII up
2 p.m.	"	"	13.35.0	0.6	3	III "
4 p.m.	"	"	13.34.8	0.2	2	IX up
8 a.m.	11	"	13.36.2	2.2	16	XII up

12

Run down - or stop'd. - was found not going after being wound up

# N<sup>o</sup> 660. Hutton Hunting Cone

1858	±	MC	±	Interval	Daily rate	Pos.	
May			s	hrs			<i>Hunting cone</i>
10 p.m. 5	Slow	19.0					
6 a.m. 6	"	46.0	- 27.0	8	- 81.0	III	
9 a.m. "	"	46.0	0.0	3	0.0	hor	
3 p.m. "	"	46.0	0.0	6	0.0	hor	
9 p.m. "	"	28.0	+ 18.0	6	+ 72.0	IX	
Drew out <u>lower</u> A new (IX)							
9.20 p.m. "	Set	00.0				Low	
6 a.m. 7	Slow	22	- 22.0	15	- 35.2	hor	
9 a.m. "	"	27.8	- 5.8	3	- 46.4	hor	
3 p.m. "	"	58.3	- 30.5	6	- 122.0	III up	
6 a.m. 8	"	3.04.0	- 125.7	21	-	XII	
9 a.m. "	"	3.10.5	6.5	3	-	hor	
Then regulation							
4 p.m. 8	Slow	07.4				hor	
8 a.m. 10	"	15.0	- 7.6	40	-	hor	
again adjusted.							
9 p.m. 11	Fast	19.38.0					
6 1/2 a.m. 12	"	9.50.6	+ 12.6	9 1/2	+ 1.4	hor.	
7 1/2	"	9.48.2	- 2.4	1	- 2.4	XII up	
8 1/2	"	9.53.8	+ 5.6	1	+ 5.6	VI up	
9 1/2	"	9.57.0	+ 3.2	1	+ 3.2	IX up	
11	"	9.54.5	- 2.5	1 1/2	- 1.7	III up	
1 p.m. "	"	9.50.0	- 4.5	2	- 2.2	XII up	
2 "	"	9.48.2	- 1.8	1	- 1.8	III up	
4 1/2 a.m. "	"	9.44.3	- 3.9	2 1/2	- 1.6	III up	
9 a.m. "	"	20.03.0	+ 18.7	4 1/2	+ 4.2	VI up	
6 a.m. 13	"	0.0 - 07.0					
7 a.m. "	"	8.7	+ 1.7	1	+ 1.7	hor	
9 a.m. "	"	11.7	+ 3.0	2	+ 1.5	hor	
11 a.m. "	"	18.7	+ 6.0	2	+ 3.0	VI up	
3 p.m. "	"	15.0	- 3.7	4	- 0.9	XII up	
7 p.m. "	"	21.6	+ 6.6	4	+ 1.6	IX up	
6 a.m. 14	"	17.5	- 4.1	11	- 0.4	III up	
9 a.m. "	"	22.0	+ 4.5	3	+ 1.5	hor	
0 noon "	"	25.8	+ 3.8	3	+ 1.3	hor	
4 p.m. "	"	36.0	+ 10.2	4	+ 2.6	VI up	

# Comparison of Obs. M.C. Therm. 2°

June 14<sup>th</sup>

$$\begin{array}{rcl} \text{MC} - 22..42..40 & \text{MC} - 22..46..0 \\ 418 - 3..20..50.5 & 426 - 3..36..15.3 \\ \hline & 38..10.5 & 50..15.3 \end{array}$$

$$\begin{array}{rcl} 15^{\text{th}} \text{MC} - 22..42..0.0 & \text{MC} - 22..43..0.0 \\ 418 - 3..20..12.5+2.0 & 426 - 3..33..32.6 \\ \hline & 38..12.5 & 50..32.6 \end{array} \quad -17.3$$

$$\begin{array}{rcl} 16^{\text{th}} \text{MC} - 21..04..0.0 & \text{MC} - 21..05..0.0 \\ 418 - 1..42..14.5+2.0 & 426 - 1..55..48.8 \\ \hline & 38..14.5 & 0..48.8 \end{array} \quad -33/16.5$$

Then placed in heating Bath.

17<sup>th</sup>

$$\begin{array}{rcl} \text{MC} - 20..31..0 & \text{MC} - 20..32..0 \\ 418 - 1..09..5-9.5 & 426 - 1..22..57 \\ \hline & 38..5 & 50..57 \end{array} \quad +8.2$$

$$\begin{array}{rcl} \text{MC} - 22..0..0 & \text{MC} - 22..2..0 \\ 418 - 2..38..48 & 426 - 20..52..57.8 \\ \hline & & 50..57.8 \end{array}$$

18<sup>th</sup> Set back MC. Two minutes

$$\begin{array}{rcl} \text{MC} - 4..8..0 & \text{all} & 239 - 10..55..6.3 \\ 207 - 4..13..57.7 & \text{rate} & 418 - 3..34..54 \\ \hline & & 39..54 \\ & & 39..52.7 \end{array} \quad \begin{array}{rcl} 239 - 10..56..0 \\ 426 - 3..49..6.2 \\ \hline & & 53..6.2 \end{array}$$

19<sup>th</sup> 239. part of MC - 1<sup>st</sup>

$$\begin{array}{rcl} 239 - 10..46..0 & 239 - 10..47..0 \\ 418 - 3..25..40 & 426 - 3..40..10.2 \\ \hline & 39..46 & 53..10.2 \end{array} \quad \begin{array}{rcl} 20^{\text{th}} \\ \text{MC} - 5..50..0 \\ 207 - 5..55..47.6 \end{array}$$

$$\begin{array}{rcl} 21^{\text{st}} \text{a.m.} & & \text{MC} - 19..56..0 \\ 239 - 5..57..0 & 239 - 5..58..0 & 239 - 19..56..13 \\ 418 - 14..37..2.7 & 426 - 12..34..2.5 & \hline & 5..57..47.5 & 37..2.7 \\ & 12..34..2.5 & 0.15.7 \end{array}$$

$$\begin{array}{rcl} 21^{\text{st}} \text{p.m.} & & \\ 207 - 2..03..50.6 & 22^{\text{nd}} \text{MC} - 2..3..0 \\ & 207 - 2..8..53.7 \end{array}$$

$$\begin{array}{rcl} 22^{\text{nd}} 239 - 0..2..0 & 0..3..0 & \text{MC} - 0..4..0 \\ 418 - 10..41..44 & 426 - 8..39..7.3 & 239 - 0..40..20.2 \\ \hline & 0..20..0 & \\ & 0..01..39.8 & \\ & 41..44.0 & \\ & 40..04.2 & \end{array} \quad \begin{array}{rcl} 22^{\text{nd}} \text{MC} - 2..3..0 \\ 207 - 2..8..53.7 \end{array}$$

1858. June 16. 10 Am. Put the therm. N-414 & 426 in  
trial Box - sent to  
at 10-10 - Therm 105

10-40 - 116

11.15 - 132

11.50 - 140 took off the blankets & flap, cool air down and

12.20 - 112 attended the lamp

2.50 - 123 -

4.40 - 131

6.00 - 140 - Refilled the Lamp. Th. red. the temp to 126-

6.30 - 133

17-am 6.00 - 90 - The Lamp had gone out, trimm'd.

8.10 - 141 - opened

8.30 - found the therm. broken.

8.50 - 120 -

10.00 - 136 -

23-10 - 130

11.30 - 133 -

3 - 130

2.00 pm - 130 -

3.30 - 127 -

5.00 - 131 -

6.00 - 127 -

18 - 6.30 - Lamp out

9.00 - 130

10.00 - 135

noon - 130

1.50 pm - 123 - covered

3.00 - 100 - Lamp trimm'd

4.00 - 125 -

6.00 - 142

19 - 5.30 am 130 -

10.00 - 110 trimm'd the Lamp

10.40 - 130

11.30 - 150 - opened top

0.10 - 145

6.00 - 130 -

20 - 8.30 am 136 -

noon - 137 -

21 - 6 am - Lamp gone out

9 am - 140 - all day above 130.

22 - 7 am - 65 - Lamp gone out

11 - 160 - opened

1858-

June 16<sup>th</sup>

9 p.m. 4001 and 660 set with Mb.

17<sup>th</sup> - Mb-18..23..0 hor def- 18..24..0 has been hor  
 4001-19..22..56 <sup>to</sup>XII 660-18..23..40 to III-

Mb-21..9..0 has been XII  
 4001-22..8..53.0 ch<sup>d</sup> to IX

Mb-21..8..0.0 has been III  
 660-21..7..21.5 ch<sup>d</sup> to XII

Mb-0..11..0.0 has been IX  
 4001-1..10..48.0 ch<sup>d</sup> to III

Mb-0..10..0-0 has been XII  
 660-0..8..6.2 to VI

Mb-3..5..0 - has been III  
 4001-4..7..46.5 to IX.

Mb-3..7..0 has been VI  
 660-3..7..59.2 to XII

Mb-6..9..0-0 has been IX  
 4001-7..10..43.0 to III

Mb-6..10..0 has been XII  
 660-6..10..37. to VI

18<sup>th</sup> - Mb-20..8..0 III wh  
 4001-21..9..34 to XII

Mb-20..9..0 VI wh  
 660-20..9..59 to XII

Mb-21..8..0 XII  
 4001-22..9..32.8 XII

Mb-21..9..0- XII  
 660-21..9..57 VI

18<sup>th</sup>

Mb-22..9..0- VI  
 660-22..9..15. XII

Mb-23..28..0- XII  
 4001-24..29..30 <sup>to</sup>IX

Mb-23..30..0 XII  
 660-23..30..41 to VI

Mb-0..10..0 IX  
 4001-1..11..28 III

Mb-0..8..0 VI  
 660-0..8..43.4 VI

Mb-1..09..0 III  
 4001-1..10..27 <sup>to</sup>III

Mb-1..10..0 VI  
 660-1..10..45 XII

Mb-3..8..0 III  
 4001-4..9..26 <sup>to</sup>IX

Mb-3..8..0 XII  
 660-3..8..30.5 <sup>to</sup>VI

Mb-6..8..0 IX  
 4001-7..9..21 <sup>to</sup>III

Mb-6..9..0 VI  
 660-6..9..35.2 <sup>to</sup>XII

19<sup>th</sup> Mb-18..17..0 III  
 4001-19..18..12.2 IX

Mb-18..19..0 XII  
 660-18..17..50 VI

Mb-21..11..0 IX  
 4001-22..12..8.3 <sup>to</sup>XII

Mb-21..12..0 VI  
 660-21..10..52 <sup>to</sup>III

No 4001

June 16<sup>th</sup> set with M.C. at 9 p.m. Int Daily  
 17<sup>th</sup> 6<sup>h</sup> a.m. - 0.4.0 ~ hor - 9 ~ 10.7  
 9 a.m. - 7.0 ~ XII ~ 3 ~ 24.0  
 0 Noon - 12.0 ~ IX ~ 3 ~ 40.0  
 3 p.m. - 13.5 ~ III ~ 3 ~ 12.0  
 6 - " - 17.0 ~ IX ~ 3 ~ 28.0  
 8 - " - 26.0 ~ III ~ 14 ~ 15.6  
 9 - " - 26.5 ~ XII ~ 1 ~ 12.0  
 11 - " - 30.0 ~ XII ~ 2 ~ 42.0  
 0 Noon - 32.0 ~ IX ~ 1 ~ 48.0  
 1 p.m. - 33.0 ~ III ~ 1 ~ 24.0  
 3 - " - 34.0 ~ III ~ 2 ~ 12.0  
 6 - " - 39.0 ~ IX ~ 3 ~ 40.0  
 19<sup>th</sup> 6 a.m. - 47.8 ~ III ~ 12 ~ 17.6  
 9 - " - 51.7 ~ IX ~ 3 ~ 31.2

No 660.

16<sup>th</sup> set with M.C. at 9 p.m. Int  
 17<sup>th</sup> 6 a.m. - 0.26.0 ~ hor - 9 ~ 20 ~ 55.0  
 9 - " - 0.38.5 ~ III ~ 3 ~ 18.5 ~ 148.0  
 0 Noon - 1.53.8 ~ XII ~ 3 ~ 75.3 ~ 602.4  
 3 p.m. - 1.00.8 ~ VI ~ 3 ~ 53.0 + 424.0  
 6 - " - 1.23.0 ~ XII ~ 3 ~ 22.2 ~ 177.6  
 18<sup>th</sup> 8 a.m. - 1.01.0 ~ VI ~ 14 ~ 22.0 + 46.0  
 9 - " - 1.09.0 ~ XII ~ 1 ~ 08.0 ~ 192.0  
 10 - " - 1.05.0 ~ VI ~ 1 ~ 4.0 + 96.0  
 11<sup>h</sup> - 1.19.0 ~ XII ~ 1 ~ 14.0 ~ 200.0  
 0 Noon - 1.17.0 ~ VI ~ 1 ~ 2.0 + 48.0  
 1 p.m. - 1.15.0 ~ VI ~ 1 ~ 2.0 + 48.0  
 3 - " - 1.29.5 ~ XII ~ 2 ~ 14.5 ~ 174.0  
 6 - " - 1.24.8 ~ VI ~ 3 ~ 4.7 + 37.6  
 19<sup>th</sup> 6 a.m. 2.10.0 ~ XII ~ 12 ~ 45.2  
 9 - " - 3.10.0 ~ VI ~ 3 ~

1858-  
June 23<sup>d</sup>

418 was taken to mark Telegraph signals.

239- 21. 35. 0  
 418- 20. 14. 33.2  
 21. 35. 31.4  
 21. 34. 28.6  
 14. 33. 2  
 40. 04. 6

239- 21. 36. 0  
 426- 18. 12. 11  
 21. 36. 0  
 31.4  
 21. 35. 28.6  
 14. 12. 11. 0  
 36. 42. 4

MC- 21. 39. 0  
 239- 21. 39. 31.4  
 Sub 239 to Boston.

24<sup>th</sup>

EC- 2. 40. 0  
 207- 2. 46. 1.2

239- 23. 13. 0  
 418- 23. 53. 1.8  
 23. 13. 0  
 1.2  
 23. 12. 58.8  
 418- 23. 53. 01.8  
 40. 03. 0

239- 23. 14. 0 MC- 23. 18. 0  
 426- 19. 50. 58 239- 23. 17. 58.8  
 23. 14. 0. 0  
 1.2  
 23. 13. 58.8  
 19. 50. 58  
 36. 59. 2

June 24<sup>th</sup>

418 taken from the Bath

MC- 21. 12. 0  
 418- 19. 52. 1.65  
 Sub to Boston

660 gained at home 6 to 9 up + 24<sup>h</sup> - 12 to 3 - 0July 22<sup>nd</sup>

660 adjusted this morning

MC- 8. 10. 0  
 660- 8. 10. 17.5 - III

MC- 20. 22. 0  
 418- 20. 21. 57.5

MC- 22. 55. 0.0 III  
 660- 22. 55. 23.0 XII

MC- 20. 23. 0  
 426- 20. 25. 22.5

MC- 1. 3. 0 XII

660- 1. 3. 17.2 VI  
 run down

MC- 3. 5. 0 VI

660- 3. 5. 0

MC- 6. 12. 0 VI to

660- 6. 10. 33.5 XII

MC- 9. 9. 0 XII to

660- 9. 7. 35 VI

13 MC- 18. 27. 0 - VI to

660 18. 26. 58 III to

MC- 19. 29. 0 III to

660- 19. 29. 0.7 IX

III - XII - VI

+ 44 - 66 + 24

adj<sup>o</sup> -

July 13

13 ME-20-0-0  $\times 11$   $\pm$  Inter Rate  
 656-20-1-17.5  $\times 11$   
 ME-21-0-0  $\times 11$   $-1.5-1 = -36.0$   
 656-21-0-16  $\times 11$   
 ME-22-2-0  $\times 11$   $+9-0-1 = +216.0$   
 656-22-2-25  $\times 11$   
 ME-23-1-0  $\times 11$   $-0.4-1 = -9.6$   
 656-23-1-24.6  $\times 11$   
 ME-0-1-0  $\times 11$   $+7.4-1 = +77.6$   
 656-0-1-32  $\times 11$   
 ME-1-0-0  $\times 11$   $+1.5-1 = +36.5$   
 656-1-0-33.5  $\times 11$   
 ME-2-1-0  $\times 11$   $+6.5-1 = +156.0$   
 656-2-1-40  $\times 11$   
 ME-3-0-0  $\times 11$   $+11.6-1 = +116.6$   
 656-3-0-40  $\times 11$   
 ME-4-29-0  $\times 11$   $+10-1 = +183.0$   
 656-4-18-50  $\times 11$   
 ME-5-0-0  $\times 11$   $= 0-0 = 0$   
 656-5-0-50  $\times 11$   
 ME-6-0-0  $\times 11$   $+8-1 = +192.0$   
 656-6-0-58  $\times 11$   
 ME-9-0-0  $\times 11$   $-3.8-1 = -41.2$   
 656-9-0-54.2  $\times 11$   
 -05.8

July 14

ME-18-0-0  $\times 11$   $+55.4-9 = +147.7$   
 656-18-0-49.6  $\times 11$   
 ME-19-0-0  $\times 11$   $+0.9-1 = +21.6$   
 656-19-0-50.5  $\times 11$   
 ME- adjusted  
 656-

14<sup>+</sup> 660-by mistake had been marked 656

ME-20-0-0  $\times 11$  *Only*  
 656-20-0-23  
 ME-21-0-0  $\times 11$   $-3.4-1 = -81.6$   
 656-21-0-19.6  
 ME-22-0-0  $\times 11$   $-3.6-1 = -86.4$   
 656-22-0-16  $\times 11$   
 ME-23-0-0  $\times 11$   $+9.5-1 = +228.0$   
 656-23-0-25.5  $\times 11$   
 ME-0-0-0  $\times 11$   $+7.7-1 = +184.8$   
 656-0-0-33.2  $\times 11$   
 ME-1-0-0  $\times 11$   $+0.8-1 = -19.2$   
 656-1-0-34  $\times 11$   
 ME-2-0-0  $\times 11$   $-1-1 = -24.0$   
 656-2-0-33  $\times 11$   
 ME-3-0-0  $\times 11$   $+7-1 = +168.0$   
 656-3-0-40  $\times 11$   
 ME-3-57-0  $\times 11$   $+5-1 = +12.0$   
 656-3-57-40.5  $\times 11$   
 ME-5-0-0  $\times 11$   $-1.5-1 = -36.0$   
 656-5-0-39  $\times 11$   
 ME-6-0-0  $\times 11$   $+7.5-1 = +180.0$   
 656-6-0-54.5  $\times 11$   
 ME-7-0-0  $\times 11$   $-1.2-1 = -28.8$   
 656-7-0-45.3  $\times 11$   
 ME-8-0-0  $\times 11$   $-0.3-1 = -94.2$   
 656-8-0-45  $\times 11$   
 15 ME-19-39-0  $\times 11$   $+8.3-1 = +73.0$   
 656-19-40-8.3  $\times 11$   
 ME-20-0-0  $\times 11$   $+8.6-1 = +173.0$   
 656-20-2-11.5

Taken to Boston and adjusted.

558 July

$\mu_6 - 8..41..0$   
 $660 - 8..41..19 \sim III$   
 $\mu_6 - 8..44..0$   
 $6305 - 8..44..14.2 \sim XII$

16<sup>th</sup> Res. both

$\mu_6 - 9..6..0$   
 $660 - 9..4..56.8 \sim III - 63.2 \sim$

$\mu_6 - 9..7..00$   
 $6305 - 9..7..01.8 \sim XII + 1.8$

$\mu_6 - 12..0..0 \sim XII$   
 $6305 - 12..0..3.8 \sim IX + 3.8 + 2.0 - 3 \sim + 16.0 \sim XII$

$\mu_6 - 12..1..0 \sim III - 69.7 - 6.5 - 3 \sim - 52.0 \sim III$   
 $660 - 11.59..50.3 \sim XII$

$\mu_6 - 1..2..0 \sim IX + 3.2 - 0.6 - 1 \sim - 14.4 \sim IX$   
 $6305 - 1..2..3.2$

$\mu_6 - 1..3..0 \sim XII - 72.0 - 2.3 - 1 \sim - 55.2 \sim XII$   
 $660 - 1..1..48$

$\mu_6 - 2..4..0 \sim IX$   
 $6305 - 2..4..2.3 \sim III + 2.3 - 0.9 - 1 \sim - 21.6 \sim IX$

$\mu_6 - 2..5..0 \sim XII$   
 $660 - 2..3..45.5 \sim VI - 74.5 - 2.5 - 1 \sim - 60.0 \sim XII$

$\mu_6 - 5..01..0 \sim III$   
 $6305 - 5..01..2.8 \sim IX + 2.8 + 0.5 - 3 \sim + 4.0 \sim III$

$\mu_6 - 5..2..0 \sim VI$   
 $660 - 5..0..35.8 \sim XII - 84.2 - 9.7 - 3 \sim - 77.6 \sim VI$

$\mu_6 - 8..0..0 \sim IX$   
 $6305 - 8..0..2.0 \sim III + 2.0 - 0.8 - 3 \sim - 6.4 \sim IX$

$\mu_6 - 8..00..00 \sim XII$   
 $660 - 8..00..00 \sim VI - 89.0 - 4.8 - 3 \sim - 38.4 \sim XII$

$\mu_6 - 9..58..31 \sim VI$   
 $6305 - 9..58..31 \sim VI + 3.5 + 1.5 - 10 \sim + 3.6 \sim III$

$\mu_6 - 18..16..0 \sim III$   
 $6305 - 18..16..3.5 \sim IX - 128.7 - 39.7 - 10 \sim - 95.3 \sim VI$

$\mu_6 - 18..17..0 \sim VI$   
 $660 - 18..14..57.3 \sim III$

$\mu_6 - 20..6..0 \sim IX + 2.2 - 1.3 - 2 + 15.6 \sim IX$   
 $6305 - 20..6..2.2 \sim III$

$\mu_6 - 20..7..0 \sim III - 132.0 - 3.3 - 2 - 39.6 \sim III$   
 $660 - 20..4..48 \sim XII$

1858 July.

by daily rate - Pos

17-Mc-21.1.0 11/16 + 3.0 + 0.5 - 1 - + 19.2 11/16

$146 - 21 = 125$   $X11^{1/2} = 134.0 - 2.2 - 1 = -48.0$   $X11$   
 $660 - 20 = 640$   $X1$

$$M_6 = 22.2 \cdot 0.1 \times 6 + 3.0 \cdot 0.1 \cdot 1 = \pm 0.0 - 1X$$

6305-22.213 XII

6305-22.121.5 X11  
16-22.13.0 V16  
660.22.0.42 X11

$$\begin{array}{r} 660. \quad 22. \quad 0 \quad \text{XII} \\ \underline{116} \quad \underline{24. \quad 04. \quad 0} \\ 6305 \quad 24 \quad 04. \quad 05 \quad \text{XII} \end{array} + 5.0 + 2-2 + 24 - \text{XII}$$

$116 - 24 \cdot 5 = 0 \times 11_6$   
 $660 - 24 \cdot 2 \cdot 39 = 141 - 3 - 2 - 36 \sim 11$

$$M_6 - 3 \cdot 0 \cdot 0 + 7.5 + 2.5 \cdot 3 + 20 \sim XII$$

$116 - 3, 1.0 \quad III, \quad 147.8 - 6.8 - 3 \quad - 54.4 - III$   
 $660 - 2, 58, 32.2 \quad III$

$$665 - 6210 \cdot 0 \times 11 + 11 \cdot 0 + 3 \cdot 5 - 3 + 28 \cdot 0 - 11$$

$660 - 6.08 \times 25.3 \sqrt{1} = 154.7 - 6.9 - 3 - 55.2 = 111$

$$Mo - 9.1 \cdot 0.2 \cdot 0.011 + 12.3 - 0.3 - 3 + 12.4 - 111$$

$116 - 9 \times 0.4 - 0.0 \times 1/10 = 167.0 - 12.3 - 3 - 98.4 = 52.3$   
 $660 - 9 \times 0.1 - 13 \times 11$

$$\frac{18}{6305} - \frac{19}{7 \cdot 32 \cdot 11} = -170 + 9 \cdot 3 \cdot 10 + 7 \cdot 0 - 11$$

$116 - 17.39.6 \text{ XII} - 184.0 = 17.0.10 - \text{XII}$   
 $660 - 7.29.56 \text{ VI}$

$$\begin{array}{l} 19 \text{ Mg} - 10 \cdot 7 - 0 \text{ IX} \\ 6365 - 18 \cdot 7 \cdot 4.6 \text{ III} \end{array} + 4.6 - 12.4 - 23 \text{ IX}$$

$u_6 - 18.8 \cdot d \cdot V_1$  -  $282.0 - 98 - 23$  VI  
 $660 - 18.3 \cdot 18 \times 11$

1858

July 17<sup>th</sup>

## Trial of Thermometers

Standard No. 4

R-40

F-41

1 <sup>st</sup> am	77°	77°	77°
noon	85.1	86.2	86.2
4 pm	90	90.5	91.0
18 <sup>th</sup> am	67	67.3	68.0
19-6 am	59.2	59.5	59.7
8 am	54.0	54.0	53.8
26 noon	40.5	40.5	40.7
Any <sup>o</sup>			
2-9 am	32.5	32.2	32.0
	19.0	17.5	18.0
	19.0	17	18.0
	19.5	18.2	18

13  
12  
26  
13

20  
5  
19.2

24  
19  
24  
43.2

15.5  
24  
62  
310  
5

July 19<sup>th</sup>

Me - 20.46.0 f.mph  
 6305 - 20.45.52.5  
 660 taken in tower for 20<sup>th</sup> m

Me - 20.57.0  
 426 - 20.55.55.3

Me - 23.40.0 f.mph  
 6305 - 23.39.52 XII

Me - 1.45.0 XII  
 6305 1.44.53 IX

Me - 5.21.0 IX  
 6305 5.20.52.8 III

Me - 7.52.0 III  
 6305 7.51.52 III

20<sup>th</sup> Me - 18.16.0.11<sub>6</sub>  
 6305 - 18.15.52 IX

Me - 20.07.0 IX  
 6305 - 20.06.51.7 XII

26<sup>th</sup> a.m. Me fast 22.26

Me - see time 1000

418

660 has been in tower  
 under adjustment

July 27<sup>th</sup> Me - 19.57.0 III mph  
 660 - 19.57.0

Me - 22.41.0 III  
 660 - 22.40.55

Me - 0.0.0 III

660 - 11.59.52.7 + 1.3 - 2 = +15.6 - III

Me - 2.15.0 III

660 - 2.14.54.0 XII

Me - 3.17.0 XII + 1.8 - 1 = +43.2 - XII

660 - 3.16.53.8 VI

Me - 4.16.50.0 VI - 0.8 - 1 = -19.2 - VI

660 - 4.15.55.0 VI

Me - 5.17.00 VI - 1.2 - 1 = -24.2 - VI

660 - 5.16.54 XII

July 27<sup>th</sup>

Me - 6.15.0 XII<sub>6</sub> + 1 - 1 = +24 - XII  
 660 - 6.14.55 XII

28<sup>th</sup> Me - 18.39.0 XII<sub>6</sub> + 15 - 12 = +37.2 - XII

660 - 18.39.10.7 VI  
 admitted

29<sup>th</sup> p.m.

Me - 9.53.0 f.mph  
 660 - 9.52.41.5

Me - 9.55.0 f  
 15559 - 9.54.57.3 mph

Daily

30 a.m.

Me - 18.20.0 f.mph  
 660 - 18.29.45 XII + 3.5 - 9 - + 9.0 - hor

Me - 18.31.0 hor  
 15559 - 18.36.56 XII + 4.7 - 9 + 12.5 - hor

Me - 20.45.0 XII - 2.3 - 2 - 15.6 - XII  
 660 - 20.44.43.7 VI

Me - 20.44.0 XII + 0.5 - 2 + 6.0 - XII  
 15559 - 20.43.56.5 VI

Me - 0.3.0 VI - 5.7 - 4 - 34.2 - VI  
 660 - 0.2.38 XII

Me - 0.2.0 XII<sub>6</sub> - 1.8 - 4 - 10.8 - XII  
 15559 - 0.1.54.7 III

Me - 2.25.0 XII<sub>6</sub> - 0.8 - 2 - 9.6 - XII  
 660 - 2.24.37.2 VI

Me - 2.24.0 III ± 0.0 - 2 ± 0.0 - III  
 15559 - 2.23.54.7 IX

No. 15559

Me - XII - VI - III - IX  
 + 12.5 + 6.0 - 10.8 ± 0.0 - 1.2

660

f.m - XII - VI - III  
 + 9.3 - 15.6 - 34.2 - 14.4  
 - 9.6 - 28.8 - 6.0

858

July 30<sup>th</sup>

Daily

Me - 4. 37.0 VI - 2.4 - 2 - 28.8 - VI

660 - 4. 36. 34.8 XII

Me - 4. 36.0 IX - 0.1 - 2 - 1.2 - IX

15559 - 4. 35. 54.6 XII

Me - 6. 42.0 VI - 0.8 - 2 - 9.6 - VI

660 - 6. 41. 34.1 III

Me - 6. 41.0 ~~IX~~ + 1.2 - 2 - 14.0 - XII

15559 - 6. 40. 55.8 XII III

31 Me - 18. 17.0 III - 3.0 - 12 - 6.0 - III

660 - 18. 16. 31 VI

Me - 18. 16.0 III - 3.2 - 12 - 6.4 - III

15559 - 18. 15. 52.6 IX

Me - 21. 56.0 VI

660 - 21. 55. 27 XII - 4.0 - 4 - 24.0 - VI

Me - 21. 55.0 IX

15559 - 21. 54. 53.2 III + 0.6 - 4 + 3.6 - IX

Me - 0. 11.0 XII - 1.2 - 2 - 14.4 - XII

660 - 0. 10. 25.8 III

Me - 0. 12.0 III - 0.9 - 2 - 10.8 - III

15559 - 0. 11. 52.3 XII

Me - 3. 32.0 III - 0.5 - 3 - 4.0 - III

660 - 3. 31. 25.3 IX

Me - 3. 31.0 XII + 1.2 - 3 + 9.6 - XII

15559 - 3. 30. 53.5 IX

Me - 6. 20.0 IX - 3.3 - 3 - 26.4 - IX

660 - 6. 19. 22 III

Me - 6. 19.0 IX + 0.5 - 3 + 4.0 - IX

15559 - 6. 18. 54. - III

August 1<sup>st</sup>

Daily

Me - 19. 10.0 III - 3.5 - 13 - 19.0 - III

660 - 19. 9. 18.5 VI

Me - 19. 9.0 III - 1.0 - 13 - 2.0 - III

15559 - 19. 8. 53.1 IX

Me - 21. 0.0 XII

15559 - 21. 0. 15.2

Me - 21. 1.0 VI - 1.5 - 2 - 18.0 - VI

660 - 21. 0. 17.4

Me - 21. 2.0 IX

15559 - 21. 1. 54.8 III - 1.2 - 2 - 14.4 - IX

2 Me - 18. 36.0 XII - 0.2 - 21 - 0.3 - XII

15559 - 18. 36. 15.1 IX

Me - 18. 37.0 XII - 13.0 - 21 - 15 - XII

660 - 18. 36. 24 VI

Me - 18. 39.0 III - 5.8 - 21 - 7 - III

15559 - 18. 38. 46.1 IX

Me - 21. 6.0 IX + 1.0 - 3 + 8 - IX

15559 - 21. 6. 16. III

Me - 21. 9.0 VI - 2.5 - 3 - 20 - VI

660 - 21. 8. 15.1 IX

Me - 21. 7.0 IX + 0.8 - 3 + 6.4 - IX

15559 - 21. 6. 46.8 XII

Me - 0. 5.0 III

15559 - 0. 5. 15.1 IX - 1.0 - 3 - 8.0 - III

Me - 0. 3.0 IX

660 - 0. 1. 56. XII - 5.5 - 3 - 44.0 - XII

Me - 0. 2.0 XII + 0.5 - 3 + 4.0 - XII

15559 - 0. 1. 47.3 VI

Me - 4. 25.0 IX + 0.0 - 4 - 0.0 - IX

15559 - 4. 25. 75. III

Me - 4. 24.0 XII - 3.0 - 4 - 18.0 - XII

660 - 4. 22. 53.1 IX

Me - 4. 23.0 VI - 3.0 - 4 - 18.0 - VI

15559 - 4. 22. 44.3 XII

1858

Aug. 3

Daily  
sath.
 $MC - 18.11.0 \text{ III} - 6.0 - 14 - 10.0 - \text{III}$ 
 $1553 - 18.11.9 - \text{XII}$ 
 $MC - 18.10.0 \text{ IX} - 21.0 - 14 - 36.0 - \text{IX}$   
 $660 - 18.08.32 \text{ hor}$ 
 $MC - 18.9.0 \text{ XII} + 9.0 - 14 + 15.4 - \text{XII}$   
 $1559 - 18.8.53.3 \text{ hor}$ 
 $MC - 0.40.0 \text{ XII} + 3.5 - 6 + 14.0 - \text{XII}$   
 $1553 - 0.40.12.5 \text{ IX}$ 
 $MC - 0.41.0 \text{ hor} + 0.5 - 6 + 2.0 \text{ hor}$   
 $660 - 0.39.32.5 \text{ III}$ 
 $MC - 0.42.0 \text{ hor} - 10.8 \text{ m } 6 - 43.2 \text{ hor}$   
 $1559 - 0.41.42.5 \text{ IX}$ 
 $MC - 9.3.0 \text{ IX} - 1.5 \text{ m } 9 - 4.0 \text{ IX}$   
 $1553 - 9.3.11 \text{ III}$ 
 $MC - 9.4.0 \text{ III} - 2.8 \text{ m } 9 - 7.5 - \text{III}$   
 $660 - 9.2.29.7 \text{ IX}$ 
 $MC - 9.6.0 \text{ IX} + 0.5 - 9 + 1.5 - \text{IX}$   
 $1559 - 9.5.43 \text{ III}$ 
 $MC - 18.17.0 \text{ III} - 4.0 \text{ m } 9 - 10.7 - \text{III}$   
 $1553 - 18.17.07 \text{ IX}$ 
 $MC - 18.18.0 \text{ IX} - 15.5 - 9 - 41.4 - \text{IX}$   
 $660 - 18.16.14.2 \text{ III}$ 
 $MC - 18.19.0 \text{ III} - 1.5 \text{ m } 9 - 4.0 - \text{III}$   
 $1559 - 18.18.24.5 \text{ IX}$ 
 $MC - 3.34.0 \text{ IX} + 1.0 - 9 + 2.7 - \text{IX}$   
 $1553 - 3.34.8 - \text{XII}$ 
 $MC - 3.35.0 \text{ III} - 3.7 - 9 - 9.9 - \text{III}$   
 $660 - 3.33.10.5 \text{ XII}$ 
 $MC - 3.36.0 \text{ IX} - 9.3 \text{ m } 9 - 24.8 - \text{IX}$   
 $1559 - 3.35.32.2 \text{ XII}$ 

5th

 $MC - 18.15.0 \text{ XII} + 4.15 +$ 
 $1553 - 6.15.12 \text{ VI taken in town}$ 
 $MC - 18.13.0 \text{ XII} - 9.5 \text{ m } 25 - 15.2 \text{ XII}$   
 $660 - 6.11.1 \text{ VI?}$ 
 $MC - 18.12.0 \text{ XII} + 7.8 \text{ m } 15 + 12.5 \text{ XII}$   
 $1559 - 6.11.40 \text{ VI}$ 
 $MC - 21.28.0 \text{ VI} - 6.7 - 3 - 53.6 \text{ VI}$   
 $1559 - 21.27.33.3 \text{ VI}$ 
 $MC - 21.29.0 \text{ XII} - 0.3 - 0.0 \text{ XII}$   
 $660 - 21.27.1 \text{ VI}$ 
 $MC - 2.0.0 \text{ VI} - 3.3 - 5 - 16.0 \text{ VI}$   
 $1559 - 1.59.30.1 \text{ IX}$ 
 $MC - 2.1.0 \text{ VI} - 4.5 - 5 - 20.0 \text{ VI}$   
 $660 - 1.58.56.5 \text{ XII}$ 
 $MC - 9.1.0 \text{ hor}$   
 $1553 - 9.0.48.5 \text{ returned from Boston.}$ 
 $MC - 18.24.0 \text{ hor} + 5.5 \text{ m } 9 + 15 \text{ hor}$   
 $1553 - 18.23.54 \text{ XII}$ 
 $MC - 18.25.0 \text{ hor} + 3.5 \text{ m } 9 + \text{run down}$   
 $660 - 18.25.0 \text{ XII}$ 
 $MC - 18.28.0 \text{ IX} + 2.5 - 16 + 3.8 \text{ IX}$   
 $1559 - 18.27.32.5 \text{ XII}$ 
 $MC - 21.17.0 \text{ XII} + 1.5 - 3 + 12.0 \text{ XII}$   
 $1553 - 21.16.55.5 \text{ IX}$ 
 $MC - 21.18.0 \text{ XII} - 1.3 - 3 - 10.4 \text{ XII}$   
 $660 - 21.17.58.7 \text{ VI}$ 
 $MC - 21.19.0 \text{ XII} + 2.5 - 3 + 20.0 \text{ XII}$   
 $1559 - 21.18.35 \text{ III}$ 
 $MC - 2.4.0 \text{ IX} - 1.0 - 5 - 5.0 \text{ IX}$   
 $1553 - 2.3.54.5 \text{ III}$ 
 $MC - 2.5.0 \text{ VI} - 9.5 - 5 - 46.0 \text{ VI}$   
 $660 - 2.4.49.3 \text{ III}$ 
 $MC - 2.7.0 \text{ III} - 3.0 - 5 - 14.0 \text{ III}$   
 $1559 - 2.6.32 \text{ IX}$

Aug.  
 6<sup>th</sup>  $ML - 6.34.0$  III + 0.5 ~ 4 + 3.0 III  
 1553-6 33.55 IX  
 $ML - 6.35.0$  III - 0.3 ~ 4 - 1.8 III  
 660-6.34.49 VI  
 $ML - 6.36.0$  IX + 0.1 - 4 + 0.6 IX  
 15559-6.35.33 III  
 7<sup>th</sup>  $ML - 18.47.0$  IX - 0.2 ~ 12 - 0.4 IX  
 1553-18.46.58 III  
 $ML - 18.49.0$  VI - 15.3 ~ 12 - 30.6 VI  
 660-18.48.33.7 XII  
 $ML - 18.57.0$  III - 3.0 ~ 12 - 6.0 III  
 15559-18.50.30 IX  
 $ML - 22.50.0$  III - 0.3 - 4 - 1.8 III  
 1553-22.49.54.5 XII  
 $ML - 22.52.00$  XII - 2.9 ~ 4 - 17.4 XII  
 660-22.51.30.8 VI  
 $ML - 22.53.0$  IX + 1.2 ~ 4 + 7.2 IX  
 15559-22.52.31.2 III  
 $ML - 5.31.0$  XII  
 1553-5.30.56.3 IX + 1.8 ~ 6 + 7.2 XII  
 $ML - 5.32.0$  VI - 7.8 - 6 - 31.2 VI  
 660-5.31.23.0 XII  
 $ML - 5.34.0$  IX - 1.2 ~ 6 - 4.8 IX  
 15559-5.33.30 III  
 8<sup>th</sup>  $ML - 18.53.0$  - IX + 1.7 ~ 13 + 3.2 IX  
 1553-18.52.58 III  
 $ML - 18.54.00$  XII - 7.8 - 13 - 15.0 XII  
 660-18.53.15.2 VI  
 $ML - 18.55.0$  - III - 0.2 ~ 13 - 0.4 III  
 15559-18.54.29.8 IX

Dials

9<sup>th</sup>  $ML - 20.29.0$  III  
 1553-20.28.45 IX  
 $ML - 20.30.0$  VI  
 660-20.28.38  
 $ML - 20.31.0$  IX from back  
 15559-20.30.16.5 XII - white winding?  
 $ML - 20.38.0$   
 15559-2.36.48  
 $ML - 3.27.0$  IX + 1.0 - 7 + 3.0 IX  
 1553-3.26.46 III  
 $ML - 3.28.0$  III  
 660-3.26.36 XII  
 $ML - 3.29.0$  XII  
 15559-3.27.49 IX  
 Set  $ML$  to Boston back  
 $ML - 5.30.0$  III  
 1553-5.31.23.7 III  
 $ML - 5.31.0$  XII  
 660-5.30.13.7 XII  
 $ML - 5.32.0$  IX  
 15559-5.31.28 IX  
 10<sup>th</sup>  $ML - 18.32.0$  III - 1.2 ~ 13 - 2.3  
 1553-18.32.22.5 IX  
 $ML - 18.34.0$  XII - 5.7 - 13  
 660-18.32.8 VI  
 $ML - 18.36.0$  IX + 2.2 ~ 13  
 15559-18.35.30.2 III  
 660 and 15559 taken in town for adj.  
 $ML - 1.49.0$  IX + 0.5 ~ 5.0 IX  
 1553-1.49.23. III  
 11<sup>th</sup>  $ML - 18.55.0$  III - 4.0 ~ 6.0  
 1553-18.55.19 IX  
 660 and 15559 returned  
 synchro.

1353 in

Daily

Aug-11	Me	19. 5. 0.0	hor			Aug 12	Me	21. 15. 0.0	XII	+52.0	XII
1553	Me	19. 5. 19.0	hor			1553	Me	21. 15. 20.0	hor		
Me	19. 6. 0.0	hor				Me	21. 16. 0.0	XII	-8.8	XII	
660	19. 4. 11.5	hor				660	21. 14. 25.2	hor			
Me	19. 7. 0.0	hor				Me	21. 17. 0.0	XII	+6.4	XII	
1555g	19. 6. 12.6	hor				1555g	21. 16. 3.3	hor	-28.6	hor	
Me	22. 8. 0.0	hor	+8.0	hor		Me	1. 5. 0.0	IX			
1553	22. 8. 20.0	XII				1553	1. 5. 15.2	hor	+6.0	hor	
Me	22. 9. 0.0	hor	+13.6	hor		Me	1. 6. 0.0	IX			
660	22. 7. 43.2	XII				660	1. 4. 26.5	hor	-1.8	hor	
Me	22. 10. 0.0	hor	+4.0	hor		Me	1. 7. 0.0	hor			
1559	22. 19. 12.5	XII				1555g	1. 6. 3.0	IX			
Me	2. 7. 0.0	XII	+10.2	XII		Me	4. 5. 0.0	IX	+6.4	IX	
1553	2. 7. 21.7	IX				1553	4. 5. 12.4	III			
Me	2. 8. 0.0	XII	-21.0	XII		Me	4. 6. 0.0	IX	-20.0	IX	
660	2. 6. 39.7	IX				660	4. 4. 24.0	III			
Me	2. 9. 6	XII	+3.0	XII		Me	4. 7. 0.0	IX	+2.4	IX	
1555g	2. 8. 13	IX				1555g	4. 6. 3.3	III			
Me	4. 7. 0.0	IX	-8.4	IX		Me	9. 8. 0.0	III	-6.7	III	
1553	4. 7. 21.0	III				1553	9. 8. 13.0	XII			
Me	4. 8. 0.0	IX	-26.4	IX		Me	9. 9. 0.0	III	-8.6	III	
660	4. 6. 37.5	III				660	9. 7. 22.2	XII			
Me	4. 9. 0.0	IX	-2.4	IX		Me	9. 10. 0.0	III			
1555g	4. 8. 12.8	III				1555g	9. 9. 3.5	XII	+4.8	III	
Me	7. 5. 8	III	-4.0	IX		Me	18. 21. 0.5	XII	+2.7	XII	
1553	7. 5. 20.5	VI				1553	18. 21. 14	idem			
Me	7. 6. 0.0	III	-10.4	IX		Me	18. 22. 0	XII	-18.5	XII	
660	7. 4. 36.2	VI				660	18. 20. 15.7	III			
Me	7. 7. 0	III	+1.6	IX		1555g	18. 23. 0	XII			
1555g	7. 6. 13	VI				1555g	18. 22. 8	idem	+12.0	XII	
Me	18. 14. 10.5	VI	-15.3	VI		Me	21. 46. 0	XII	±0.0		
1553	18. 14. 13.5	XII				1553	21. 46. 14	III			
Me	18. 15. 0	VI	-20.0	VI		Me	21. 47. 0	XII			
660	18. 13. 26.3	XII				660	21. 45. 13.5	VI			
Me	18. 16. 0.0	VI	-20.6	VI		Me	21. 49. 6	XII			
1555g	18. 15. 2.5	XII				1555g	21. 48. 10.3	III			
Me	19. 10. 0	hor				1553	5	10.0	III hor		
660	19. 15. 0	hor				660		7.5	VI hor		
1555g	19. 13. 0	hor				1555g		10.7	III hor		

5<sup>th</sup> Aug. 14 am.

Me - 19.57.0 hor

660 - 19.55.15.4 VI

Me - 3.52.0 VI - 8.7-8

660 - 3.50.6.7 XII

15<sup>th</sup>

Me - 19.19.0 XII - 14.7-15

660 - 19.16.52 VI

Me - 22.14.8 XII

Wat - 22.14.7.2

16<sup>th</sup>

Me - 19.30.0 ? - 9.5

660 - 19.27.42.5 VI

Me - 19.31.0 XII - 15.2-21

Wat - 19.30.52 III

Me - 1.2.0 VI - 5.3-6

660 - 0.59.37.2 III

Me - 1.2.0 III + 12.0-6

Wat - 1.3.4 IX

Me - 6.55.0 - III - 1.2-6

660 - 6.52.36 hor

Me - 6.57.0 IX - 7.5-6

Wat - 6.56.56.5 hor

17<sup>th</sup> Me - 18.30.0 - hor + 6.8-12

660 - 18.27.42.8 XI

Me - 18.32.0 hor + 1.5-12

Wat - 18.31.57.5 XII

Me - 21.28.0 III - 0.8-3

660 - 21.25.42. XII

Me - 21.29.00 XII - 2.9-3

Wat - 21.28.54.6 VI

Me - 1.22.0 XII - 5.5-4

660 - 1.29.36.5 VI

Me - 1.33.0 VI + 12.1-4

Wat - 1.33.6.7 XII

Aug. 17

Me - 6.34.0 VI - 4.5-5

660 - 6.31.32. IX

Me - 6.35.0 XII - 0.7-5

Wat - 6.35.6. IX

118<sup>th</sup> Me - 18.19.0 IX - 15.2-12

660 - 18.16.16.8 III

Me - 18.20.6 IX - 17.5-12

Wat - 18.19.48.5 III

660 taken away, adjusted.

Watson taken into Boston for adjustment

Aug. 22-

Me - 21.6.0

Wat - 20.5.58 XII

23 -

Me - 18.49.0 XII + 14-21 + 16.0

Wat - 18.49.12 hor

Me - 22.49.0 hor + 2.5-4 + 15.0

Wat - 21.49.14.5 III

Me - 3.44.0.0 III + 8-5 + 38.4

Wat 3.44.22.5 IX

Me - 7.46.0 IX - 0.5-4 - 3.0

Wat - 7.46.22.11

24 -

Me - 19.48.0 III + 20.5-12 + 40.0

Wat - 19.48.42.5 IX

Me - 2.42.0 IX - 2.5-7 - 8.6

Wat 2.42.40 XII

Me - 7.56.0 XII + 3.3-5 + 15.5

Wat - 6.56.43.3 hor

1858 Aug 26<sup>th</sup>

Mb - 19.35.0.0 XII

Wrat - 19.34.46.0

Mb - 1.10.0 XII - 10.6% - 38.0

Wrat - 1.9.36.0 III

Mb - 6.3.0 III - 21.5 - 100.0

Wrat - 6.2.15.4 IX

Mb - 18.34.0.0 IX - 26.5.12 - 52.0

Wrat - 18.32.48.5 hor.

Mb - 21.45.0.0 hor - 11 - 3 - 88.0

Wrat - 21.43.37.5 hor

Regulated  
1.22.5

Mb - 21.50.0.0 XII

Wrat - 21.50.0

Mb - 24.53.0 XII - 0.0 - 3 ± 0.0

Wrat - 24.53.0 III

Mb - 3.43.0 III - 6.8 - 3 - 54.0

Wrat - 3.42.53.2 IX

Mb - 6.2.0 IX - 0.2 - 2% - 3.0

Wrat - 6.1.53 hor

Mb - 9.11.6 hor - 3.5 - 3 - 28.0

Wrat - 9.10.49.5 XII

28

Mb - 18.56.0 XII - 1.0 - 9 - 2.7

Wrat - 18.55.48.5 III

Mb - 22.10.0 III - 10.3 - 3% -

Wrat - 22.9.38.2 IX

Mb - 2.57.0 IX - 0.7 - 5 -

Wrat - 2.56.37.5 III

Mb - 8.27.0 III - 13 - 5 1/2 -

Wrat - 8.26.24.5

adjusted

Aug 28 - pm

Mb - 8.35.0 XII

Wrat - 8.34.53. wanduh but

29<sup>th</sup> 19.24.0 XII + 6 - 11 + 13

Wrat - 19.23.59 III

Mb - 21.13.0 III - 1 - 2 - 12

Wrat - 21.12.58 III

Mb - 23.36.0 III + 1 + 2 + 12

Wrat - 23.35.59 IX

Mb - 2.35.0 IX + 1 + 3 + 8

Wrat - 2.35.0 hor

30<sup>th</sup> 18.52.0 hor + 1.016 + 2

Wrat - 18.52.1 XII

Mb - 20.57.0 XII + 0.3 - 2 + 3.6

Wrat - 20.51.1.3 IX

Mb - 23.47.0 IX + 1.5 - 3 + 12.0

Wrat - 23.47.2.8 III

Mb - 3.43.0 III + 1.2 - 4 + 7.2

Wrat - 3.43.4 IX

Mb - 9.14.0 IX + 1.5 - 5% + 6.0

Wrat - 9.14.5.5 III

31<sup>st</sup> 18.27.0 III + 0.5 - 9 + 1.5

Wrat - 18.27.6 hor

1858 Sept 11<sup>+</sup>

pm

MC - 9.10.0 hor  
 Path 1915 - 9.9.29.8

MC - 9.11.0 hor  
 Path 7986 - 9.11.30.5

12<sup>+</sup> am

MC - 19.7.0 hor  
 1915 - 19.6.32 XII + 2.2 - 10 + 4.8

MC - 19.8.0 hor  
 7986 - 19.8.29 XII - 1.5 - 10 - 3.2

13<sup>+</sup> MC - 19.15.0 XII  
 1915 - 19.14.41 III + 9.0 - 24 + 9.0

MC - 19.16.0 XII + 4.0 - 24 + 4.  
 7986 - 19.16.33 III

MC - 6.20.0 III + 1.3 - 11.0 + 2.7  
 1915 - 6.19.42.3 IX

MC - 6.21.0 III - 0.5 - 11.0 - 1.1  
 7986 6.21.32.5 IX

14<sup>+</sup> MC - 18.20.0 IX + 2.7 - 12 + 5.4  
 1915 - 18.19.45 VI

MC - 18.21.0 IX - 5.5 - 12 - 11.0  
 7986 - 18.21.27 VI

MC - 7.2.0 VI + 3.0 - 13 + 5.8  
 1915 - 7.1.48 hor

MC - 7.3.0 VI - 10.4 - 13 - 19.2  
 7986 - 7.3.16.6 hor

15 MC - 18.44.0 hor + 2.3 - 11 + 4.8  
 1915 - 18.43.50.3 XII

MC - 18.45.0 hor - 1.1 - 11 + 2.3  
 7986 18.45.15.5 XII

16<sup>+</sup> MC - 18.33.0 XII + 8.5 - 24  
 1915 - 18.32.58.8 III  
 MC - 18.34.0 XII + 5.6 - 24  
 7986 18.34.21.11

17 MC - 19.54.0 III + 6.7  
 1915 - 19.54.5.5 IX

MC - 19.55.0 III - 8.8  
 7986 - 19.55.12.2 IX

MC 6.17.0 IX + 5.5  
 1915 6.17.10 VI

MC 6.18.0 IX - 4.2  
 7986 6.18.8 VI

18<sup>+</sup> MC - 18.19.0 VI + 1.0  
 1915 - 6.19.11. hor  
 - 18.20.0 VI  
 7986 - 18.19.58.3 hor  
 Path adj<sup>d</sup>

hor	- 2.3	9 hrs
VI	3.0	13 hrs
IX	2.7	12 hrs
III	1.3	11 hrs
XII	9.0	24 hrs

1858. Sept.  
18<sup>th</sup>

M6-19.14.0 hor

1915-19.13.56.3

M6-19.15.0 hor

7689-19.13.59.7

$$\frac{7689-19.13.0 \text{ hor}}{1915-19.11.01 \text{ IX}} + 1.3 - 6 + 5.2$$

M6-19.12.0 hor

7689-19.11.57 IX + 0.7 - 6 + 2.8

M6-7.44.0 IX + 1.2 - 6 + 4.8

1915-7.43.58.2 III

M6-7.46.0 IX + 0.2 - 6 + 0.8

7689-7.44.12.111

$$1915-19.27.0 \text{ III} + 1.8 - 12 + 3.6$$

1915-19.27.0 XII

M6-19.28.0 III + 2.8 - 12 + 5.6

7689-19.27.4 XII

M6-19.19.0 XII - 0.5 - 6 - 2.0

1915-19.18.59.5 VI

M6-19.20.0 XII + 3.0 - 6 + 12.0

7689-19.19.7 VI

$$20 \text{ M6-20.47.0 VI} + 0.7 - 19 + 1.0$$

1915-20.47.0.2 XII

M6-20.48.0 VI - 7.0 - 19 + 8.0

7689-20.47.0 XII

M6-8.47.0 XII - 0.7 - 12 - 1.4

1915-8.46.59.5 VI

M6-8.48.0 XII + 7.5 - 12 + 14.0

7689-8.47.7.5 VII

Sept. 21

Daily

M6-20.25.0 VI + 0.2 - 12 + 0.2

1915-20.24.59.6 IX

M6-20.26.0 VI - 4.8 - 12 - 9.6

7689-20.25.2.7 IX

M6-20.31.0 IX + 1.9 - 6 + 7.6

1915-20.31.1.5 III

M6-20.32.0 IX + 1.0 - 6 + 4.0

7689-20.31.3.7 III

22-

M6-19.53.0 III + 2.2 - 18 + 3.3

1915-19.53.3.7 hor

M6-19.54.0 III + 5.8 - 18 + 8.7

7689-19.53.9.5 hor

M6-9.1.0 hor + 1.8 - 13 + 3.5

1915-9.1.5.5

M6-9.2.0 hor + 3.2 - 13 + 6.2

7689-9.1.12.7 adjusted 7689.

M6-9.19.0 hor

1915-9.19.5.5 + 3.2 - 13 + 6.0 - hor

M6-9.20.0 hor

7689-9.19.59.4

23 M6-18.44.0 hor + 0.5 - 9 + 1.5 hor

1915-18.44.6 XII

M6-18.45.0 hor + 0.6 - 9 + 1.6 hor

7689-18.45.0 XII

M6-7.17.0 XII + 0.2 - 13 + 0.4 XII

1915-7.17.6.2 VI

M6-7.18.0 XII + 2.0 - 13 - 4.0 XII

7689-7.18.4 VI

24 M6-18.50.0 VI - 1.2 - 12 - 2.4 VI

1915-18.50.5 XX

M6-18.52.0 VI - 7.5 - 12 - 15.0 VI

7689-18.51.56.5 IX

25 M6-19.19.0 IX + 2.0 - 26 + 1.9 IX

1915-19.18.7.0 III

M6-19.20.0 IX - 6.0 - 26 - 5.8 - 18

1858. Sept

16<sup>th</sup> Me - 18.48.0 RD

1915-18.48.15.5XII

Me - 18.47.0 III + 0.8 - 24

7689-18.46.57.3XII

27<sup>th</sup> Me - 18.32.0 XII + 3.7 - 24

1915-18.32.19.2VI made up

Me - 18.33.0 XII + 7.7 - 24

7689-18.32.59.0VI made up

28<sup>th</sup> Me - 18.27.0 XI + 3.8 - 24

1915-18.27.23XII

Me - 18.28.0 VI - 13.0 - 24

7689-18.27.46XII

29<sup>th</sup> Me - 18.34.0 XII + 1.5 - 24

1915-18.34.24.5IX

Me - 18.35.0 XII + 8.7 - 24

7689-18.34.57.7IX

30<sup>th</sup> Me - 19.39.0 IX - 6.5 - 24

7689-19.38.48.2III

Me - 19.41.0 IX + 4.5 - 24

1915-19.41.29III

Oct 1<sup>st</sup> Me - 18.44.0 III + 0.2

1915-18.44.29.2hor

Me - 18.45.0 III - 0.3

7689-18.44.48hor

2<sup>nd</sup> Me - 18.50.0 hor

1915-18.50.37III + 7.8

Me - 18.57.0 hor + 2.5

7689-18.50.50.5XII

3<sup>rd</sup> Me - 19.20.0 III + 2.5

1915-19.20.39.5IX

Me - 19.21.0 III + 0.2

7689-19.20.50.7IX

4<sup>th</sup>

Me - 18.36.0 IX + 3.0

1915-18.36.42.5XII

Me - 18.37.0 IX - 6.5

7689-18.36.44.2XII

5<sup>th</sup> Me - 19.39.0 XII + 2.3

1915-19.39.44.8hor

Me - 19.40.0 XII + 9.3

7689-19.39.53.5hor

6<sup>th</sup> Me - 18.48.0 hor

1915-18.48.46.8VI

Me - 18.49.0 hor

7689-18.48.55.7VI 24

7<sup>th</sup> Me - 19.45.0 VI

1915-19.43.48XII

Me - 19.47.0 VI

7689-19.46.42.3XII

Me - 19.48.0 VI

3437-19.48.6.8XII

8<sup>th</sup> Me - 18.54.0 XII

1915-18.54.49.7III

Me - 18.55.0 XII

7689-18.54.50.3III

Me - 18.56.0 XII

3437-18.56.0.5III

9<sup>th</sup> Me - 19.54.0 III

1915-19.54.52IX

Me - 19.56.0 III

7689-19.55.49.7IX

Me - 19.57.0 III

3437-19.56.57IX

10<sup>th</sup> Me - 19.26.0 IX

1915-19.26.55hor

Me - 19.27.0 IX

7689-19.26.43.7hor

Me - 19.28.0 IX

3437-19.27.59hor

1858

Oct.

10.16 - 18.29.0 hr

1915 - 18.29.56.6

11.6 - 18.30.0 hr

7689 - 18.29.43.5

11.6 - 18.31.0 hr

3437 - 18.30.59.7

858. Oct-11-<sup>10</sup>a.m. 11Mf fast of Camb. 38.08  
Boston. 22.08

MC-20..56.0 — 20..57.0 Mc-20..58.0 Mc-21..0.0  
 418-20..55.46.3 426-21..35.3.7 1915-20..58.56.6 7986-20..59.43.5

Mc-21..1.0 MC-21..14.0 MC-21..17.0 MC-21..39.0  
 3437-21..0.59.8 418-21..14.46.3 426-21..55.4.2 418-21..58.46.2

MC-21..44.0 MC-21.54.0 MC-21..58.0 MC-22.2.0  
 426-22..22.4.2 418-21..53.46.2 426-22.36.4.8 418-22.1.46.2

MC-22.4.0 MC-22.8.0 MC-22.14.0 — MC-22.22.0  
 3437-22.4.0 7986-22.7.48.8 1915-22.15.56.6 — 200-22.22.28.4

MC-22.26.0 MC-22.33.0 MC-22.36.0 MC-22.42.0  
 426-23.4.4.2 418-22.32.46.5 7986-22.35.43.8 3437-22.41.59.8

MC-22-47.0 — MC-23-35.0 MC-23-52.0 MC-23-56.0  
 1915-22-47-56.8 200-23-35-24.6 426-0-30.6.5 418-23-56.46.5

MC-23-59.0 — MC-0.5.0 MC-0.9.0 MC-0.12.0  
 1915-0.0.56.8 3437-0.4.59.4 7986-0-8.43.4 200-0-12-24.8

MC-0.14.0 MC-4.4.0 MC-4.6.0 MC-4.14.0  
 426-0-52.7 418-4-3-46.5 3437-4-5-59.8 1915-4-54-57.4

MC-4-17.0 MC-4-22.0 MC-4.23.0 MC-4-27.0  
 7986-4-16-44 200-4-22-12.6 418-4-22-47.4 426-5-5-11.2

MC-4-33.0 — MC-4-35.0 MC-4-39.0 MC-4-41.0  
 418-4-32-47. 426-5-13-11.2 3437-4-39-0.2 1915-4-41-57.8

M.C. - 20.56.0

38.08

20.55.21.92

418 - 20.55.46.30

24.38

M.C. - 20.56.0.00

38.08

20.55.21.92

4.44.30.77

25.39.52.65

20.55.46.3Slow G<sup>nd</sup> 4.44.06.39

M.C. - 20.56.0

22.08

20.55.37.92

4.44.16

25.39.53.92

418 - 20.55.46.3

Slow G<sup>nd</sup> 4.44.07.6

M.C. - 21.0.0

38.08

20.59.21.92

4.44.30.77

25.44.02.69

7986 - 20.59.43.8

Slow G<sup>nd</sup> 4.44.18.89

M.C. 20.57.0

38.08

20.56.21.92

4.44.30.77

25.40.52.69

426 - 21.35.37.70

Slow G<sup>nd</sup> 4.05.48.99

M.C. - 21.01.0

38.08

21.0.21.92

4.44.30.77

25.44.52.69

3437 - 21.0.59.8

Slow G<sup>nd</sup> 4.43.52.89

M.C. 20.58.0

38.08

20.57.22.92

4.44.30.77

25.41.53.69

1915 - 20.58.58.60

Slow G<sup>nd</sup> 4.42.57.09

M.C. - 21.0.0

22.08

20.59.37.92

4.44.16

25.43.58.92

20.59.43.8

4.44.10.12

$$488 = \frac{8.37.1}{8.36.47.2} \quad \frac{8.38.1}{418 = 8.37.47.2}$$

M.C. 8-42-0

426. 9-20 15.2

8-42-0

8-42-0

1857. Oct. 12 - 1858 8 A.M.

M.C. part of Camb. 38.59

M.C. - 20..47..0

M.C. - 20..50..0

M.C. - 20..57..0

Boston 22.59

418 - 20..46..32.5

426 - 21..28..27.7

7986 - 20..50..45

M.C. - 20..55..0

M.C. - 21..14..0

M.C. - 21..16..0

3437 - 20..53..0.6

426 - 21..52..27.7

418 - 21..15..32.5

M.C. - 21..18..0

M.C. - 21..21..0

M.C. - 21..25..0

7986 - 21..17..48

3437 - 21..21..0.8

418 - 21..24..32.5

M.C. - 21..27..0

426 - 22..5..27.8

M.C. 20.47.0

M.C. 20..50..0

M.C. - 20.57.0

38.59

38.59

22.59

20..46..21.41

20..49..21.41

20..50..37.41

418 - 20..46..32.5

426 - 4..44..30.77

4..44..16

Fast of C. 11.19

25..33..52.18

25..54..53.41

426 - 21..28..27.7

7986 - 20..50..45

Slow of Earth 4..04..24.48

Slow of Earth 4..44..08.41

M.C. - 20..55..0

M.C. - 22-57-0

M.C. - 23-6-0

22.59

418 - 22-58-57

3437 - 23-6-0.6

20..54..37.41

M.C. - 22-59-0

M.C. - 23-8-0

4..44..16

25..38..53.41

426 - 23-48-29.5

7986 - 23-7-45

3437 - 20..53..0.6

Slow of Earth 4..43..52.81

M.C. - 23-13-0

M.C. - 23..16..0

426 - 23-51-30

418 - 23..15..57

M.C. - 23..19..0

M.C. - 23-22-0

M.C. - 23-25-0

426 - 23..57..30

418 - 22-21-57

7986 - 23..24..45.2

M.C. - 23..26..0

M.C. - 23-28-0

M.C. - 23-29-0

3437 - 23..26..0.4

418 - 23-27.57

426 - 0-12-30

M.C. - 23-57.0

M.C. - 23-59.0

M.C. - 0.36.0

418 - 23-56..57

426 - 0-37.30.6

1678 - 0.55.59.2

2) 4.2  
2.1

Oct 13<sup>th</sup> 1838 A.M.M.C. part of Comb.  $\frac{39.10}{23.10}$   
Boston

$$\begin{array}{r} \text{M.C.} - 20..45..0 \\ 418 - \underline{20..44..18.8} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..49..0 \\ 426 - \underline{21..27..51.4} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..51..0 \\ 7986 - \underline{20..51..47.2} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..54..0 \\ 1915 - \underline{20..55..0.8} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..56..0 \\ 3437 - \underline{20..56..2.6} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..58..0 \\ 1678 - \underline{20..57..1.6} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21..0..0 \\ 418 - \underline{20..59..18.7} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21..9..0 \\ 7986 - \underline{21..8..47.2} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21..13..0 \\ 426 - \underline{21..52..6} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21..19..0 \\ 418 - \underline{21..18..19.2} \end{array}$$

1838 - Oct. 14<sup>th</sup> - a.m. -

$$\begin{array}{r} \text{M.C.} - 8..33..0 \\ 418 - \underline{8..31..6.0} \\ 1.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 8..34..0 \\ 426 - \underline{9..13..15.2} \\ .448 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 8..39..0 \\ 7986 - \underline{8..38..49.6} \end{array}$$

38.37

$$\begin{array}{r} \text{M.C.} - 8..45..0 \\ 1915 - \underline{8..46..2.6} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 8..50..0 \\ 3437 - \underline{8..50..4.6} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 8..52..0 \\ 1678 - \underline{8..51..4.6} \\ 554 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 8..58..0 \\ 418 - \underline{8..56..6} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 9..2..0 \\ 426 - \underline{9..41..15.5} \\ + 39..15..5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 9..4..0 \\ 7986 - \underline{9..3..49.6} \\ 10.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 9..6..0 \\ 1915 - \underline{9..7..2.6} \\ + 1.02.6 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 9..8..0 \\ 3437 - \underline{9..8..4.2} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 9..9..0 \\ 1678 - \underline{9..8..4.6} \\ - 55.4 \end{array}$$

1838 - Oct. 15<sup>th</sup> a.m.

$$\begin{array}{r} \text{M.C.} - 20..42..0 \\ 418 - \underline{20..41..6.9} \\ - 53.1 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..44..0 \\ 426 - \underline{21..24..40} \\ + 40..40 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..47..0 \\ 7986 - \underline{20..46..57.6} \\ - 8.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..48..0 \\ 3437 - \underline{20..48..5.2} \\ + 5.2 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..49..0 \\ 1915 - \underline{20..50..5.6} \\ + 1..5.6 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..51..0 \\ 1678 - \underline{20..50..6.2} \\ - 53.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20..58..0 \\ 418 - \underline{20..56..68} \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21..1..0 \\ 426 - \underline{21..40..40.2} \end{array}$$

835 - Oct. 16 - a.m.

M.C. fast Boston 23.07

$$\begin{array}{r} \text{M.C.} - 20.31.0 \\ 426 - 21.11.4 \\ + 40.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.38.0 \\ 418 - 20.33.46.2 \\ - 2.13.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.38.0 \\ 1915 - 20.39.7.8 \\ + 1.7.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.39.0 \\ 7988 - 20.38.2.6 \\ + 7.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.41.0 \\ 3437 - 20.41.6.6 \\ + 6.6 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.43.0 \\ 1678 - 20.42.7.2 \\ - .52.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.55.0 \\ 1915 - 20.56.7.9 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.59.0 \\ 426 - 21.09.4.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.1.0 \\ 418 - 20.58.46.3 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.6.0 \\ 7988 - 21.5.52.0 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.9.0 \\ 3437 - 21.9.6.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.13.0 \\ 1915 - 21.14.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.55.0 \\ 426 - 22.35.5.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.57.0 \\ 418 - 21.56.45.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.06.0 \\ 3437 - 22.06.6.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.08.0 \\ 7988 - 22.07.53. \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.11.0 \\ 1915 - 22.12.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.57.0 \\ 426 - 23. \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.39.0 \\ 426 - 23.19.6.2 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.42.0 \\ 418 - 22.41.45.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 22.48.0 \\ 426 - 23.28.6.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.03.0 \\ 7988 - 23.02.53.3 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.05.0 \\ 3437 - 23.05.6.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.11.0 \\ 426 - 23.51.6.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.15.0 \\ 418 - 23.14.45.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.17.0 \\ 1915 - 23.18.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.19.0 \\ 426 - 23.59.6.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.27.0 \\ 418 - 23.26.45.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.49.0 \\ 7988 - 23.29.53.2 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 23.57.0 \\ 426 - 24.17.7 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 0.05.0 \\ 426 - 0.45.7.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 0.07.0 \\ 418 - 0. \end{array}$$

1658 Oct. 18<sup>th</sup> amM.C. fast of Camb.  
Boston38<sup>5</sup>.94  
22<sup>5</sup>.94

M6 - 20.47.0 M6 - 20.48.0  
1915 - 20.48.12.3 418 - 20.47.38.4

19<sup>th</sup> M6 - 20.27.0 — 20.28.0  
1915. 20.28.14.8 418 20.27.39.5

21<sup>st</sup> M6 - 21.22.0 — 20.23.0  
1915 - 21.23.20 418 - 21.22.38.4

23 M6 - 20.12.0 — 20.13.0  
1915 - 20.13.27 418 - 20.12.40.9

1858 - Oct. 25. am

M.C. fast of Camb.  
Boston39<sup>5</sup>.89  
23.89

M.C. - 4.17.0 M.C. - 4.19.0 M.C. - 4.22.0  
418 - 4.16.48.5 426 - 4.12.55.2 1915 - 4.23.32.8  
- .16.5 + 43.55.2 + 1.32.8

M.C. - 4.24.0 M.C. - 4.26.0 M.C. - 4.30.0  
3437 - 4.24.18.8 7986 - 4.26.23.2 418 - 4.35.43.5  
+ 18.8 + 23.2

M.C. - 4.38.0 M.C. - 4.42.0 M.C. - 4.46.0  
426 - 5.21.55.4 7986 - 4.42.23.6 1915 - 4.47.28.3

1858 - Oct. 26 -

M6C - 20.41.0 M.C. - 20.46.0 M.C. - 20.49.0  
418 - 20.40.45.8 426 - 20.30.11.7 3437 - 20.49.19.2  
- .16.2 + 44.18.7 + 19.2  
M.C. - 20.50.0 M.C. - 20.52.0 M6C 21.04.0  
1915 - 20.51.33.83 7986 - 20.52.24.66 418 - 21.03.44.2  
+ 1.33.83 + 24.66

M.C. 3.45.0 M.C. - 4.03.0 M.C. - 4.36.0  
426 4.29.18.8 418 - 4.02.35.8 426 - 5.21.19.5

M.C. - 4.38.0 M.C. - 4.58.0 M.C. - 5.0.0  
418 - 4.37.35.8 426 - 5.42.20 418 - 4.59.35.

7) 20.512.9

Oct. 27-

$$\begin{array}{r} \text{M.C.} - 20.51.0 \\ 26 - 20.35.35.5 \\ + 44.35.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.58.0 \\ 7986 - 20.58.26.2 \\ + 26.2 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.06.0 \\ 418 - 21.05.08.8 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.12.0 \\ 1915 - 21.13.35.5 \end{array}$$

$$\begin{array}{r} 20 \\ 8.51.0 \\ \hline 23.96 \\ 8.50.36.02 \\ 4.44.16 \\ \hline 13.34.52.02 \\ 426 - 9.35.35.5 \\ \hline \text{Slow of } 3.59.16.52 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.28.0 \\ 7986 - 21.28.27.5 \end{array}$$

Oct. 29-

$$\begin{array}{r} \text{M.C.} - 20.41.0 \\ 426 - 21.26.23.5 \\ + 45.23.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.47.0 \\ 7986 - 20.47.28.0 \\ + 28.0 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.53.0 \\ 418 - 20.52.08.8 \\ - 51.2 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.01.0 \\ 1915 - 21.02.35.5 \\ + 1.35.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.10.0 \\ 3437 - 21.09.19.6 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.03.0 \\ 426 - 21.48.0 \\ + 45.0 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.10.0 \\ 3437 - 21.10.20.5 \\ + 20.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.21.0 \\ 426 - 22.06.0 \\ 45.0 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.30.0 \\ 1915 - 21.31.37.3 \end{array}$$

Oct 26. M.C. fact of Camb.

$$\begin{array}{r} \text{M.C.} - 20.56.0 \\ 3437 - 20.56.19.6 \\ + 19.6 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.03.0 \\ 426 - 21.47.35.7 \\ 44.35.7 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.11.0 \\ 7986 - 21.11.26.2 \end{array}$$

Oct. 28 am.

$$\begin{array}{r} \text{M.C. fact of Camb } 45.07 \\ \text{Beats } 24.07 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.06.0 \\ 418 - 21.05.9.8 \\ - 50.2 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.12.0 \\ 7986 - 21.12.27.3 \\ + 27.3 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.24.0 \\ 418 - 21.23.9.7 \\ 21.26.20.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 21.26.0 \\ 3437 - 21.26.20.4 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.41.0 \\ 426 - 21.26.23.5 \\ + 45.23.5 \end{array}$$

$$\begin{array}{r} \text{M.C.} - 20.47.0 \\ 7986 - 20.47.28.0 \\ + 28.0 \end{array}$$

Nov. 70. M.C. fact of B. 28.5

$$\begin{array}{r} \text{M.C.} - 21.41.0 \\ 418 - 21.40.33.7 \\ 21.41.0 \\ 28.5 \\ \hline 21.40.31.5 \\ 21.40.33.7 \\ \hline 2.2 \end{array}$$

1858  $\frac{28}{98}$ 

Oct. 29

$Mb - 21..01..45 - 21..04..45$   
 $236 - 11..35..05 \quad 236 - 11..38..05.8$   
 $\quad \quad \quad 3 \quad 37.67$   
 $\quad \quad \quad 11 \quad 34 \quad 27.83$   
 $\quad \quad \quad 14 \quad 26 \quad 56.38$   
 $\quad \quad \quad 21 \quad 7 \quad 31.45$   
 $\quad \quad \quad 3 \quad 27.65$   
 $\quad \quad \quad 21 \quad 4 \quad 3.80$   
 $\quad \quad \quad 21 \quad 4 \quad 45.00$   
 $\quad \quad \quad 41.20$   
 $\quad \quad \quad 16.00$   
 $Mb \text{ for } f B \quad 25.20$

E b flow 57.43

$E b \quad 14 \quad 8 \quad 00$   
 $236 \quad 14 \quad 12 \quad 35.1$   
 $\quad \quad \quad 4 \quad 35.1$   
 $\quad \quad \quad 57.43$   
 $\quad \quad \quad 3 \quad 37.67$   
 $\quad \quad \quad 14 \quad 26 \quad 9.64$   
 $\quad \quad \quad 46.74$   
 $\quad \quad \quad 14 \quad 26 \quad 56.38$

$66/22 \quad 82/27 \quad 97$   
 $3)77/26 \quad 3)10.9/3.1$

Oct. 30 - 1838.

$M.C - 20..47..0$   
 $426 - 21..07..48$   
 $\quad \quad \quad + 45..48.0$

$M.C \text{ part of Boston} \quad 25.64$   
 $M.C - 20..48..0 \quad M.C - 20..50..0$   
 $418 - 20..47..36.2 \quad 1915 - 20..57..42.2$   
 $\quad \quad \quad - 23.8 \quad \quad \quad + 1..42.2$

$M.C - 20..57..0$   
 $3437 - 20..57..22.2$   
 $\quad \quad \quad + 22.2$

$M.C - 20..54..0$   
 $7986 - 20..54..29.6$   
 $\quad \quad \quad + 29.6$

$M.C - 20..59..0$   
 $426 - 21..44..48.2$   
 $\quad \quad \quad 45$

 $M.C - 21..09..0$  $M.C - 21..12..0$  $M.C - 21..15..0$  $M.C - 21..16..0$  $426 - 21..07..48.2$  $418 - 21..11..36.2$  $1915 - 21..16..42.2$  $3437 - 21..16..22.2$  $281.9$  $M.C - 21..20..0$  $M.C - 21..22..0$  $M.C - 22..25..0$  $M.C - 21..27..0$  $7986 - 21..20..29.8$  $426 - 22..07..48.5$  $418 - 22..24..36.2$  $3437 - 21..27..22.2$  $M.C - 21..30..0$  $M.C - 21..33..0$  $M.C - 21..34..0$ 

39

 $7986 - 21..30..29.8$  $1915 - 21..34..42.2$  $426 - 22..19..49.0$  $3437 - 21..27..22.2$ 

$\text{Daily rate} + 25.05$   
 $\text{Block of time } 3..58..01.36$

 $3)5.5/1.4$ 

Nov. 3

$Mb - 21..15..0 - 21..15..0 - 21..16..00 - 21..18..0 - 21..19..0$   
 $426 - 21..15..0 \quad 418 - 21..14..35.3 \quad 3437 - 21..16..26.8 \quad 1915 - 21..19..53 \quad 7986 - 21..19..42.2$   
 $\text{Pg. 100} \quad \text{has been not}$

 $Mb - 21..3..0$  $11^{\text{th}} Mb - 20..36..00 - 13^{\text{th}} - 21..39..0$  $3)77/2.6$  $418 - 21..2..38.3$  $426 - 20..35..40.4 \quad 426 - 21..38..38$  $4)10.8/27$  $6^{\text{th}} Mb - 20..40..0$  $Mb - 20..39..00$  $418 - 20..39..39.8$  $418 - 20..38..35.1$  $9^{\text{th}} Mb - 20..17..6$  $\text{has been not}$  $418 - 20..16..44.2$  $Mb - 20..57..0$  $418 - 20..50..31.2$

## Trial of Barand No 1904 and 1905- in position

558. hor

23<sup>h</sup> - 116 - 21.26.0 hor  
 1904 - 21.26.0 f. up

116 - 21.27.0 hor  
 1905 - 21.26.58 f. up

Daily

116 - 3.09.0 hor + 1.7 - 6 + 5.1  
 1904 - 3.09.17 XII

116 - 3.10.0 hor - 2.5 - 6 - 7.5  
 1905 - 3.09.55 XII

24<sup>h</sup> 116 - 21.28.0 XII + 13.8 - 18 + 20.7  
 1904 - 21.28.15.5 VI

116 - 21.29.0 XII + 4.8 - 18 + 7.2  
 1905 - 21.29.0.3 VI

25<sup>h</sup> 116 - 21.16.0 VI - 4.0 - 24 - 4.0  
 1904 - 21.16.11.5 III

116 - 21.18.0 VI - 9.3 - 24 - 9.3  
 1905 - 21.17.57 III

26<sup>h</sup> 116 - 20.44.0 III + 2.3 - 23.4 + 2.3  
 1904 - 20.44.13.8 IX

116 - 20.45.0 III - 4.0 - 23.4 - 4.0  
 1905 - 20.44.47 IX

27<sup>h</sup> 116 - 20.54.0 IX + 7.4 - 24 + 7.4  
 1904 - 20.54.21.2 hor

116 - 20.55.0 IX - 1.6 - 24 - 1.6  
 1905 - 20.54.45.4 hor

28<sup>h</sup> 116 - 21.23.0 hor + 6.5 - 24 + 6.6  
 1904 - 21.23.27.7

116 - 21.24.0 hor - 11.1 - 24.4 - 11.0  
 1905 - 21.23.34.3 D

29<sup>h</sup> 116 - 20.28.0 XD + 1.9 - 23 + 2.0  
 1904 - 20.28.29.6 XII

116 - 20.29.0 XD - 4.3 - 23 - 4.5  
 1905 - 20.28.30.2 XII

29<sup>h</sup> from 116 -  
 9<sup>h</sup> 1904 -

36. - adjusted for position XII &amp; VI

1904

Hor. f. up - +5.1  
 XII up - +20.7  
 VI - - - -4.0  
 III - - - +2.3  
 IX - - - +7.4  
 Hor. f. down - +2.0  
 Hor. f. up - +6.6

1905

Hor. f. up - -7.5  
 XII - - - +7.2  
 VI - - - -9.3  
 III - - - -4.0  
 IX - - - -1.6  
 Hor. down - -4.5  
 Hor. up - -7.2

4.6  
 13.2  
 6.9  
 13.8  
 20.7

1858-

Nov. 29  $ML - 8..47..0$  XIIpm 1904 =  $8..46..9.5$ 30<sup>th</sup>  $ML - 28..43..0$  XII +  $7.9 = 15.8$ 1904 -  $20..42..17.4$  VI $ML - 20..45..0$  XII +  $7.0 + 7.0$ 1905 -  $20..44..37.2$  VIDec. 1<sup>st</sup>  $ML - 20..46..0$  VI +  $2.3 + 7.3$ 1904 -  $20..45..19.7$  XII $ML - 20..48..00$  VI -  $8.1 - 8.1$ 1905 -  $20..47..29.1$  XII2<sup>nd</sup>  $ML - 21..2..0$  XII +  $10.0 + 10.0$ 1904 -  $21..1..29$  III $ML - 21..4..0$  XII +  $8.9 + 8.9$ 1905 -  $21..3..38$  III3<sup>rd</sup>  $ML - 20..17..0$  - III +  $2.9 + 2.9$ 1904 -  $20..16..31.9$  hor $ML - 20..20..0$  III -  $3.2 - 3.2$ 1905 -  $20..19..34.8$  hor4<sup>th</sup>  $ML - 20..31..0$  hor +  $6.1 + 6.1$ 1904 -  $20..30..38$  III $ML - 20..33..0$  hor -  $8.8 - 8.8$ 1905 -  $20..33..26$  III5<sup>th</sup>  $ML - 21..14..6$  - III +  $3.8 + 3.8$ 1904 -  $21..18..41.8$  hor $ML - 21..21..0..0$  III -  $4.6 - 4.6$ 1905 -  $21..20..22.0$  hor6<sup>th</sup>  $ML - 20..36..0$  hor +  $3.7 + 3.7$ 1904 -  $20..07..48.5$ 

1905 run down

10<sup>th</sup>  $ML - 20..56..0$  IX239 -  $20..56..28$  hor $ML - 20..58..0$  IX1904 -  $20..58..23$  hor $ML - 20..59..0$  IX1905 -  $20..58..35$  hor.

Daily

Dec. 6<sup>th</sup> $ML - 20..41..0$  hor1904 -  $20..40..48.6$  $ML - 20..42..0$  hor1905 -  $20..41..58.8$  $ML - 19..39..00$  hor +  $7.4$ 1904 -  $19..38..56$  hor $ML - 19..41..00$ 1905 -  $19..40..57$  -  $7.8$ 

1904

hor - +  $6.1 + 3.8 + 7.4$ XII - +  $15.8 + 10.0$ VI - +  $2.3$ III - +  $2.9 + 3.8$ 

IX -

1905

hor - =  $8.8 - 7.8$ XII - +  $7.0 + 8.9$ VI - =  $8.1$ III - =  $3.3 - 4.0$ 

IX -

Dec 7<sup>th</sup>  $ML - 20..27..0$  hor rainy +  $13.0$ 239 -  $20..27..30$  XII8<sup>th</sup>  $ML - 20..39..00$  XII -  $22.0$ 239 -  $20..39..08$  VI $ML - 20..41..00$  hor1904 -  $20..41..04.6$  VI $ML - 20..43..00$  hor1905 -  $20..42..43$  VI $ML - 20..48..00$  VI157 -  $20..46..36.2$ 9<sup>th</sup>  $ML - 20..38..0$  VI239 -  $20..38..13.8$  IX $ML - 20..40..00$  VI1904 -  $20..40..12.7$  IX $ML - 20..43..00$  VI1905 -  $20..42..35$  IX $ML - 20..45..0$  VI157 -  $20..42..20$  IX10<sup>th</sup>  $ML - 21..1..0$  IX157 -  $20..56..52.2$  hor

858

Dec. 11

MB-21.15.0 hor

239-21.15.29.7

MB-21.16.00. hor

157-21.10.38.8

MB-21.17.0 hor

1904-21.17.30.111

MB-21.18.0 hor

1905-21.17.27.111

12. MB-20.53.0 hor

239-20.52.25

MB-20.55.0 hor

157-20.47.28.3

MB-20.56.0 111

1904-20.55.33 hor

MB-20.56.0 111

1905-20.55.24 hor

13. MB-20.19.0 hor

1904-20.18.39.2

MB-20.59.0 hor

1905-20.58.17.2 111

MB-21.01.0 hor

157-20.53.11.5 XII

MB-21.07.0 hor

239-21.07.41.3

14. MB-20.41.0 hor

1904-20.41.21.3 hor

MB-20.43.0 hor

1905-20.42.14.111 hor

MB-20.45.0 XII

157-20.36.9.111

MB-20.48.00 hor

239-20.47.59.7 hor

16. MB-20.41.0 hor

1904-20.41.59

MB-20.42.0 hor

1905-20.41.0.5

239-20.44.36 hor

MB-20.45.0 hor

157-20.34.44.3

Dec. 18

MB-21.50.0 hor

1904-21.51.18.1

MB-21.51.0 hor

1905-21.49.48.2

MB-21.52.00 hor

239-21.53.13

MB-21.53.0 hor

151-21.39.13

MB-21.54.0 hor

6545-21.53.31.5

20 MB-19.57.0 MB-21.28.0 hor  
 157-19.34.55.5 157-21.27.57 XII  
 15 in lining 68° and screws hand up  
 well in Portin

20 MB-21.13.0 hor  
 1905-21.11.34.5 111

MB-21.55.0 hor  
 239-21.16.47

MB-21.20.0 hor  
 6545-21.13.40.7  
 6.19.3

reg. &amp; set

25 MB-20.11.0  
 1905-20.09.15.2

25 MB-21.40.0  
 1905-21.38.1.3

no MB-21.42.0  
 239-21.45.1.4

Dec. 25th

239-is reset with MB

1905 comp? not set

1904. Re set. has been in Portin

151-Set has been adjusted

6545 Set &amp; regulated

1915-7986-3437. not altered

1858. Dec.

25<sup>th</sup> Mb-22.6.0.0 hor.  
 $\frac{2}{6545}$ -22.6.22.0

Mb-22.07.0 hor  
 157-22.07.3.2 hor

Mb-22.9.0 hor  
 1904-22.8.59.3

Mb-22.10.0 hor  
 1905-22.08.15

26-

Mb-21.7.0 hor  
 1904-21.07.7.2

Mb-21.8.0 hor  
 1905-21.8.56.3

Mb-21.10.0 hor  
 157-21.10.9.3

Mb-21.11.0 hor  
 239-21.10.03

Mb-21.13.0 hor  
 $\frac{2}{6545}$ -21.13.33

27<sup>th</sup> Mb-20.4.0 hor  
 1904-20.4.16.11

Mb-20.6.0 hor  
 1905-20.03.52.11

Mb-20.7.0 hor  
 239-20.6.7.11

Mb-20.09.0 hor  
 157-20.09.17.8.11

Mb-20.10.0 hor  
 $\frac{2}{6545}$ -10.10.43.2.11

Mb-20.58.0 hor  
 3437-20.58.13.11

Mb-21.0.0 hor  
 1915-21.3.30.11

Mb-21.1.0 hor  
 7986-21.3.32.11

Dec. 28<sup>th</sup>

Mb-21.21.0.11

239-21.19.44.6 hor

Mb-21.22.0.11

157-21.22.31.3 hor

Mb-21.23.0.11

 $\frac{2}{6543}$ -21.23.36 hor

Mb-21.24.0.11

3437-21.25.6.8 hor.

Mb-21.25.0.11

1915-21.28.34 hor

Mb-21.29.0.11

7986-21.29.37 hor.

29<sup>th</sup>

Mb-21.32.0 hor

239-21.30.52.11

Mb-21.33.0 hor

 $\frac{2}{6543}$ -21.33.46.5.11

Mb-21.34.0 hor

157-21.34.37.2.11

Mb-21.35.0 hor

3437-21.36.7.3.11

Mb-21.36.0 hor

1915-21.39.36.11

Mb-21.37.0 hor

7986-21.39.40.2.11

31 Mb-21.11.0.11

239-21.9.20 hor

Mb-21.12.0.11

 $\frac{2}{6545}$ -21.12.35.2 hor

Mb-21.22.0.11

157-21.22.56.3 hor

Mb-21.23.0.11

3437-21.23.54.5 hor

Mb-21.24.0.11

1915-21.27.38.3 hor

Mb-21.25.0.11

7986-21.27.46.2 hor

32-239-26.7

157-2.8

 $\frac{2}{6543}$ -44.5

3437-55.5

1915-39.8

7986-47.0

Jan 3-

Me-21.15.0 hor  
 239-21.13.49.2 III  
 Me-21.16.0 hor  
 157-21.17.21.2 III  
 Me-21.17.0 hor  
 6543-21.18.9 VII  
 Me-21.19.0 hor  
 3437-21.19.57.1 I  
 Me-21.20.0 hor  
 1915-21.23.44.2 III  
 Me-21.21.0 hor  
 7986-21.23.57.8 III  


---

 4<sup>+</sup> Me-21.8.0 III  
 239-21.6.28 IX  
 Me-21.9.0 III  
 6543-21.10.02 VI  
 Me-21.13.0 III  
 157-21.14.45 IX  
 Me-21.14.0 III  
 3437-21.14.53.0 IX  
 Me-21.16.0 III  
 1915-21.19.44.5 IX  
 Me-21.17.0 III  
 7986-21.19.57.7 IX  


---

 5<sup>+</sup> Me-22.18.0 IX  
 239-22.15.47 hor  
 Me-22.19.0 IX  
 157-22.19.40 hor  
 Me-22.20.0 VI  
 6543-22.20.11 hor  
 Me-22.20.0 IX  
 3437-22.20.55.3 hor  
 Me-22.22.0 IX  
 1915-22.25.53.5 hor  
 Me-22.23.0 IX  
 7986-22.25.47.5 hor

Jan

6<sup>+</sup> Me-20.47.0 hor  
 239-20.45.55 XII  
 Me-20.49.0 hor  
 157-20.50.49.8 XII  
 Me-20.51.0 hor  
 6543-20.52.21 XII  
 Me-20.52.0 hor  
 3437-20.52.56.5 XII  
 Me-20.53.0 hor  
 1915-20.56.55 XII  
 Me-20.54.0 hor  
 7986-20.56.49.2 XII  


---

 Me-20.57.0  
 214-20.55.55.5

1855 Jan. 3<sup>rd</sup> am

## Sidereal Chronometers

$\text{EE} - 16.13.00$     $\text{EE} - 16.16.00$     $\text{EE} - 16.17.00$     $\text{EE} - 16.18.00$     $\text{EE} - 16.19.00$   
 $333 - 16.13.00.8$     $212 - 14.30.47.5$     $204 - 16.29.44.7$     $198 - 13.41.49.5$     $210 - 14.27.47.5$   
 $\quad \quad \quad + 6.4.36.6$   
 $333 - 1.35.8$

4<sup>th</sup>

$\text{EE} - 15.30.00$     $333 - 15.36.00$     $333 - 15.37.00$     $333 - 15.38.00$     $333 - 15.39.00$   
 $333 - 15.30.00$     $212 - 13.50.48.7$     $204 - 15.49.50.5$     $198 - 13.01.53.6$     $210 - 13.47.50.8$   
 $\quad \quad \quad + 11.14.8$   
 $333 \text{ changed to XII}$

alt<sup>d</sup> & set to time  
 7<sup>th</sup> 4<sup>th</sup> PM

$204 \quad 4.52. \quad \quad \quad 4.53. \quad \quad \quad$   
 $212 \quad 4.52. \quad 48.5 \quad 210 \rightarrow \quad 4.53. \quad 32.2$

$198 \rightarrow 4.55. \quad 02.2 \quad 204 \quad 4.56. \quad 25.4$

1854, Jan. 5<sup>th</sup>  
 $\text{EE} - 16.57.00$     $333 - 17.3.00$     $333 - 17.4.00$     $333 - 17.5.00$     $333 - 17.6.00$   
 $333 - 16.56.50.7$     $212 - 17.3.58.3$     $204 - 17.4.37$     $210 - 17.5.41$     $198 - 17.6.11.3$   
 $\quad \quad \quad \text{XII Jan} = 9.3$   
 $\quad \quad \quad 17.3.9.3$     $17.4.9.3$     $17.5.9.3$     $17.6.9.3$   
 $\quad \quad \quad 58.3$     $58.3$     $58.3$     $58.3$   
 $\quad \quad \quad 49.0$     $49.0$     $49.0$     $49.0$   
 $\quad \quad \quad 48.5$     $48.5$     $48.5$     $48.5$   
 $\quad \quad \quad + 0.5$     $+ 0.5$     $+ 0.5$     $+ 0.5$

12 hours &amp; rate of EE

$204 = 4.14. \quad 08.5 \quad 7 \text{ AM} + 12.1$

alt<sup>d</sup> rateJan 6<sup>th</sup>

$\text{EE} - 16.01.00$     $333 - 16.3.00$     $333 - 16.5.00$     $333 - 16.07.00$     $333 - 16.8.00$   
 $333 - 16.00.49.8$     $212 - 16.3.58$     $204 - 16.5.20$     $210 - 16.07.41$     $198 - 16.8.10.3$   
 $\quad \quad \quad 1.02$

$7 \text{ alt} \quad 204 = 2.09. \quad 39.8$   
 $\quad \quad \quad 2.11. \quad 38.0$   
 $204 \text{ alt} = 58.5$

1859. Jan

#116-21.12.0 XII  
 239-21.10.408 hor.  
 116-21.13.0 XII  
 157-21.15.01.0 hr  
 116-21.15.0 III  
 2-21.16.16.2 hr  
 6543-21.16.0 XII  
 3437-21.16.50 hr  
 116-21.17.0 XII  
 1915-21.20.56 hr  
 116-21.18.0 XII  
 7986-21.20.52 hr  
 116-21.26.0-0  
 214-21.24.57.2  
 8<sup>th</sup>  
 116-21.30.0 hr  
 239-21.28.57.7  
 116-21.31.0 hr  
 157-21.33.9.2  
 116-21.32.0  
 6543-21.33.28.7 hr  
 116-21.33.0  
 3437-21.33.57 hr  
 116-21.34.0  
 7986-21.37.55 hr  
 116-21.36.0 hr  
 214-21.34.59.5  
 10<sup>th</sup>  
 116-21.43.0 hr  
 239-21.42.0  
 116-21.44.0 hr  
 157-21.46.29  
 116-21.45.0 hr  
 6543-21.46.52  
 116-21.46.0 hr  
 3437-21.46.53  
 116-21.47.0 hr  
 1915-21.51.0  
 116-21.48.0 hr  
 7986-21.51.0.4  
 116-21.49.0 hr  
 214-21.48.03.7

Jan

12<sup>th</sup>  
 116-22.38.0 r.d  
 239-22.37.54.5 packet  
 116-22.39.0 hr  
 157-22.41.48  
 2-22.40.10 hr  
 6543-22.42.17  
 116-22.41.6 hr  
 3437-22.41.52.8  
 116-22.42.8  
 1915-22.46.1.3 hr  
 116-22.43.0 hr  
 7986-22.46.2.1  
 116-22.44.0 hr  
 214-22.43.6.2 packet  
 14<sup>th</sup>  
 116-20.54.0 packet  
 239-20.54.0  
 116-20.55.0 hr  
 157-20.58.05 XII  
 116-20.56.0 hr  
 6543-20.58.37 III  
 116-20.58.0 hr  
 3437-20.58.53.3 XII  
 116-20.59.0 hr  
 1915-21.03.3 XII  
 116-21.0.0 hr  
 7986-21.03.7. XII  
 116-21.2.0 hr  
 1905-20.58.57.3 III  
 116-21.05.0 hr  
 214-21.04.8.5  
 15<sup>th</sup>  
 116-21.55.0 packet  
 239-21.54.54  
 116-21.56.0 XII  
 157-21.59.17.5  
 116-21.57.0 III  
 6543-21.59.33.2  
 116-21.59.0 XII  
 3437-21.59.47.2  
 116-22.0.0 XII  
 1915-22.4.4.8  
 116-22.1.0 XII  
 7986-22.4.11  
 116-22.2.0 hr  
 214-22.1.9.7  
 116-22.3.0 III  
 1905-21.57.46.5

1859 Jan. 7<sup>th</sup>

$$\begin{array}{rclclclcl}
 66-16.27.0 & 333-16.32.0 & 333-16.33.0 & 333-16.34.0 & 333-16.35.0 \\
 333-16.26.47.7 & 204-16.31.52 & 198-16.33.11.8 & 212-16.35.0.3 & 210-16.35.40.5 \\
 \hline
 16.28.58.0 & 16.32.12.3 & 16.33.12.3 & 16.34.12.3 & 16.35.12.3 \\
 -12.3 & 31.52.2 & 33.11.8 & 35.00.3 & 16.35.40.5 \\
 16.28.47.7 & 204-20.7 & 198-0.5 & 212+48.0 & 210+28.2 \\
 \hline
 16.28.35.4 & & & & 
 \end{array}$$

18<sup>th</sup> Jan

$$\begin{array}{rclclclcl}
 66-17.14.0 & 333-17.50.0 & 333-17.51.0 & 333-17.52.0 & 333-17.53.0 \\
 333-17.13.38.5 & 204-17.50.58 & 198-17.52.18.7 & 212-17.54.9.8 & 210-17.54.45.2 \\
 \hline
 17.15.0.3 & 17.50.21.5 & 17.51.21.5 & 17.52.21.5 & 17.53.21.5 \\
 -21.5 & 58.0 & 17.52.18.7 & 17.54.09.8 & 17.54.45.2 \\
 & +36.5 & +57.2 & 1.48.3 & 1.23.7 \\
 \hline
 & & & & 
 \end{array}$$

12<sup>th</sup>

$$\begin{array}{rclclclcl}
 66-17.27.0 & 333-17.55.0 & 333-17.56.0 & 333-17.57.0 & 333-17.58.0 \\
 333-17.25.38.3 & 204-17.55.57.7 & 198-17.57.17.0 & 212-17.59.10 & 210-17.59.42.7 \\
 \hline
 & 17.56.40.3 & & & \\
 & -52.6 & & & 
 \end{array}$$

14<sup>th</sup>

$$\begin{array}{rclclclcl}
 66-16.48.0 & 333-16.59.0 & 333-17.0.0 & 333-17.2.0 & 333-17.3.0 \\
 333-16.46.37.7 & 204-16.59.57.7 & 198-17.1.17 & 212-17.4.10 & 210-17.4.42 \\
 \hline
 & & & & 
 \end{array}$$

15<sup>th</sup>

$$\begin{array}{rclclclcl}
 66-17.21.0 & 333-17.24.0 & 333-17.25.0 & 333-17.26.0 & 333-17.27.0 \\
 333-17.19.38 & 204-17.24.56.8 & 198-17.26.16.3 & 212-17.28.9.8 & 210-17.28.40 \\
 \hline
 & & & & 
 \end{array}$$

59-Jan.

17<sup>th</sup>  
MC-21..27..0 hor

239-21..26..48 XII

MC-21..28..0 XII

157-21..31..12 hor

MC-21..30..0 III

6563-21..32..31 hor

MC-21..31..0 XII

3437-21..31..36 hor

MC-21..33..0 XII

1915-21..37..85 hor

MC-21..37..0 XII

7986-21..40..18 hor

MC-21..38..0 III

1905-21..34..46 hor

MC-21..41..0 hor

214-21..40..13 <sup>than</sup> <sub>in</sub> <sub>pastor</sub>18<sup>th</sup>  
MC-22..23..0 XII

239-22..22..33 XII

MC-22..25..0 hor

157-22..28..52 XII

MC-22..26..6 hor +13.9

6563-22..28..45 III

MC-22..27..0 hor

3437-22..27..37 XII

MC-22..28..0 hor

1915-22..32..12 XII

MC-22..29..0 hor

7986-22..32..22 XII

19<sup>th</sup>  
MC-21..33..0 hor

1905-21..29..40 III

Jan.

20

MC-21..21..00 XII

239-21..20..9.2 hor

MC-21..23..0 XII

157-21..27..28 hor

MC-21..25..00 III

1905-21..21..38.6 hor

MC-21..27..00 III -4 = 2.0

6563-21..29..41.2 hor

MC-21..29..0 XII

3437-21..29..24.6 hor

MC-21..31..0 XII

1915-21..35..14.7 hor

MC-21..33..0 XII

7986-21..36..30.6 hor

MC-21..35..0 hor

214-21..34..17.5

21

MC-21..26..0 hor

239-21..25..22 "

MC-21..26..6 hor

157-21..30..26.7 "

MC-21..27..0 hor

1905-21..23..35 "

MC-21..28..0 hor 13.8

6563-21..30..55 "

MC-21..29..0 hor

3437-21..30..26 "

MC-21..30..0 hor

7986-21..34..32.7 "

MC-21..31..6 hor

214-21..31..29

24<sup>th</sup> 235-

157-

1905- 25

6563-

1915-

3437-

7986-

214- 25.5

1859  
Jan. 17<sup>th</sup>

EE-17.28.0 333-18.9.0 333-18.10.0 333-18.11.0 333-18.12.0  
 333-17.26.38.5 210-18.10.37.8 204-18.10.55.8 198-18.12.16.3 212-18.14.10.5

18<sup>th</sup>

EE-18.07.0 333-18.17.0 333-18.18.0 333-18.19.0 333-18.20.0  
 333-18.05.41.6 210-18.18.36.3 204-18.18.52.7 198-18.20.17 212-18.22.10.8  
 then set X11 up

20<sup>th</sup>

EE-17.33.00 X11 333-17.36.0 - 333-17.37.0 333-17.38.0 333-17.39.0  
 333-17.31.30.5 hr 210 17.37.57.5 204-17.38.11.3 212-17.40.28 198-17.40.33.3  
 hor-

21<sup>st</sup>

EE-17.13.0 333-17.30.0 333-17.31.0 333-17.32.0 333-17.33.0 Right  
 333-17.11.33.5 210-17.31.49.8 204-17.33.18.2 198-17.33.34 212-17.35.28  
 EE-17.13.0 333-17.37.0 333-17.38.0 333-17.39.0 333-17.40.0  
 333 17.11.33.5 210-17.38.49.8 204 17.39.10.2 198-17.40.34 212-17.42.28.2

1857  
Jan. 24<sup>th</sup>26<sup>th</sup>

116-22.12.0 hor

239-22.12.3.2 III

116-22.14.0 hor

157-22.18.57.2 III

2 22.15.0 hor

6563-22.18.42 XII

116-22.17.0 hor

3437-22.17.30.2 III

116-22.18.0 hor

1915-22.22.23.5 III

116-22.19.0 hor

7986 22.22.39 III

25<sup>th</sup> 116-21.21.0 III

239-21.20.42 IX

116-21.22.0 III

157 21.27.14.2 IX

116 21.23.0 XII

2 21.27.05.6 VI

116-21.25.0 III

3437-21.25.26.7 IX

116-21.26.0 III

1915-21.30.23.8 IX

116-21.27.0 III

7986-21.30.36.2 IX

116-21.30.0 hor

1905-21.26.22.6 VI

26<sup>th</sup> 116-20.54.0 IX

239-20.53.57.2 XII

116-20.56.0 IX

157-21.01.10.3 6+X

116-20.26.0 VI

6545-20.30.11.6 6+VI

116-20.58.0 IX

3437-20.58.29.5 IX

116- taken at Boston.

1915-20.55.0 IX

7986-20.58.32 IX

116-20.59.6 VI

1905-20.55.40.3 6+X

All the membranes Chroos  
 set or adjusted and a new  
 set of companions on the  
 Blank forms

1859

Jan. 24 <sup>b</sup> 2C slow.

EC - 18..14..0    333-18..16..0    333-18..17..0    333-18..18..0    333-18..19..0  
 333-18..12..39    210-18..15..48.8    204-18..18..11.5    198-18..19..37    212-18..24..32.5  
 has been hor  
 chg. to XII up

25<sup>th</sup> 2C slow

EC - 17..23..0    333-17..29..0    333-17..30..0    333-17..31..0    333-17..32..0  
 333-17..21..33    210-17..30..58    204-17..31..21    198-17..32..46.7    212-17..34..42.3  
 has been XII up  
 chg. to XII

26<sup>th</sup> 2C slow

EC - 17..53..0    333-18..17..0    333-18..18..0    333-18..19..0    333-18..20..0  
 333-17..57..29.2    210-18..19..4.2    204-18..19..28    198-18..20..54    212-18..22..50.2  
 has been. III up  
 chg. to hor

The above were the last comparisons  
 even made by W. C. Bond. He was  
 taken sick only a few minutes after  
 having finished making them.

1857

Feb 19<sup>th</sup>

$$E.C. = 8.11.00.0$$

$$210 = 7.59.20.3$$

$$E.C. = 8.12.00.0$$

$$204 = 7.59.59.5$$

$$E.C. = 8.14.00.0$$

$$198 = 8.02.33.5$$

9

$$E.C. = 8.16.00.0$$

$$212 = 8.05.30.0$$











