

KG

11365

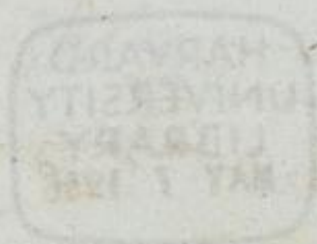
383



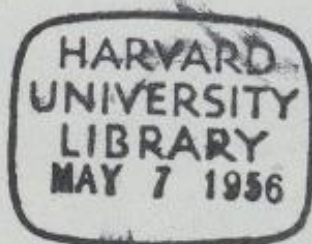
60
KG 11365.383

Mr J. J. Hornant
original minutes,
on Chronometer Expedition

1857.



15G-11365, 388



1857 Aug 23. Observations

Comp	2	24	49	2	25	49
F1703	9	32	31.0	9	33	30.5

Comp	2	27	17
F1738	9	42	15

Comp	2	28	15
B 1501	9	46	20

Comp	2	30	16
B 1599	9	49	19.0

Comp.	2	31	31
F1705	9	40	24

Comp	2	34	11
F1707	9	34	8.5

Comp	2	35	49
~~H 192~~			
H 192	9	56	9

Comp 2 36 51
H 210 9 44 43

Comp 2 37 51 2 38 51
B 1571 9 55 17.5 9 56 17

Comp 2 40 55 2 41 55
F 1699 9 50 16 9 57 15.5

Comp 2 44 3
F 1739 9 54 21.5

Comp ~~2 45 14~~ 2 47 22
F 1676 ~~9 42 27.5~~ 9 44 30.5

Comp 2 48 21
F 1704 9 49 54

Comp 2 49 50
H 208 10 5 56

Comp 2 51 25
H 220 10 2 58

Comp 2 52 35
H 222 10 19 48

Comp	2	54	1
H228	10	4	38

Comp	2	5-5	47
B1608	10	18	17.5-

Comp	2	57	6
H211	10	12	46.0-

Comp	2	5-9	6
H218	10	8	25-

Comp	3	0	54
F1731	10	14	4

Comp	3	1	47
H220	10	5-	0.5-

Comp	3	4	10.0
H217	10	14	46.0

Comp	3	5	36
H225	10	9	42.0-

Comp	3	7	7
F1624	10	10	29.0-

Comp	3	7	58
H 229	10	21	58

Comp	3	9	28
B 894	10	28	27.5

Comp	3	11	7
H 184	10	30	0

Comp	3	13	22	3	14	22
H 200	10	48	29.5	10	44	29

Comp	3	16	27
H 215	10	38	57.5

Comp	3	18	13
B 1559	10	36	30

Comp	3	19	15	3	28	15
F 1713	10	36	33.5	10	42	31.5

Comp.	3	24	53
F 1510	10	51	56.5

Comp	3	29	20
F 1698	10	24	51

Comp.	3	32	5	332	36
dis H ₂ O ₂	4	7	5.5	4	8 36
Comp	3	34	34	~~3~~	~~35~~
dis H ₂ O ₂	4	11	56	~~4~~	~~12~~
Comp	4	14	57		
H ₂ O ₂	3	37	10		

Sunday Aug 24

Thermo 1- ¹² 65
2 64.5
3 64.5

Bar 1 29.66
2 29.65

Comp 4 18 49 4 19 50
H 184 11 25 15.5 11 26 16

Comp 4 21 17 4 22 48
H 207 4 50 45 4 52 15.5

Comp 4 24 8 4 25 43
H 202 4 50 53 4 52 27.5

Comp 4 27 5 4 28 5
H 894 11 33 33 11 35 32

Comp 4 31 30 4 32 31
H 192 11 39 1 11 40 1.5

Comp 4 32 52 4 33 52
H 210 11 27 52.5 11 28 52

Comp	4 34	50	4 35	50
B 1571	11 39	19.5	11 40	19.

Comp	4 42	24	4 43	24
H 228	11 42	6.5	11 42	6

Comp	4 44	14	4 45	14
Ch 222	11 58	40	11 59	42.5

Comp	4 46	46	4 47	46
H 228	11 44	32	11 45	31.5

Comp	4 48	58	4 50	5
B 1608	11 58	45	11 59	51.5

Comp	4 51	57.0	4 52	5.5
H 211	11 54	45.0	11 56	41.5

~~Comp~~	~~4 54~~	~~46~~	~~4 55~~	~~52~~
~~H 218~~	~~11 51~~	~~9.5~~	~~11 52~~	~~12~~

Comp	4 57	54	4 58	52
H 218	11 52	16	11 55	15.5

Comp	5	6	35	5	1	36
H200	12	18	3	12	19	3.5

Comp	5	2	32	5	3	32
H215	12	11	27.5	12	12	27

Comp	5	7	33	5	8	33
B1594	12	13	4	12	14	3.5

Comp	5	9	19	5	10	20
F0712	12	13	51.5	12	14	51

Comp	5	11	15	5	12	15
F1510	12	17	38	12	18	37.5

Comp	5	12	54	5	13	53
F1698	11	55	36.5	11	56	35

Comp	5	16	31	5	17	31
F1699	12	12	41.5	12	13	41

Comp	5	17	58	5	18	57
F1729	12	14	54	12	15	54.5

Q.	5	19	9	5	20	6
F1676	12	4	41.5	12	5	1

Comp	5-20	45	5-21	45
F1704	12 9	6	12 10	5.5

Comp	5-22	26	5-23	26
H208	12 25	25.5	12 26	25

Comp	5-27	36	5-28	36
F1731	12 27	37.5	12 28	37

Comp	5-29	36	5-30	33
H223	12 20	32.5	12 21	35

Comp	5-31	54	5-32	54
H217	12 29	30	12 30	29.5

~~Comp~~	~~5-33~~	~~26~~	~~5-36~~	~~28~~
~~H225~~	~~12 24~~	~~20~~	~~12 26~~	~~23~~

Comp	5-37	0	5-38	0
F1674	12 27	15	12 28	14.5

Comp	5-38	56	5-39	56
H229	12 39	40.5	12 40	40

Comp	5-40	30	5-41	20
H225	12 31	22.5	12 32	22

Comp	7	14	0	7	14	58
F1703	2	7	24.5	2	8	22

Comp	7	15	39	7	16	44
F1738	2	16	19	2	17	23.5

Comp	7	17	47	7	18	42
B1501	2	21	37	2	22	36.5

Comp	7	19	41	7	20	40
B1599	2	24	32	2	25	30.5

Comp	7	21	59	7	22	57
F1705	2	19	36.5	2	20	36

Comp	7	23	50	7	24	50
F1707	2	9	27	2	10	26.5

Comp	7	26	38	7	27	38
H184	2	31	31.5	2	32	31.0

Monday

Sunday Aug 26.

Bar 29.7

Thermo 1 66.5

2 66.5

3 66.5

Comp 4 57 44 4 59 15
H 207 5 11 3.5 5 12 34

Comp 5 0 5 5 1 40
H 202 5 10 40.0 5 12 14.5

5 ————— 20
19.5

Comp 5 4 5 5 5 5
H 184 11 46 23.5 11 47 23.

Comp 5 6 42 5 7 42
B 84h 11 49 4 11 50 3.5

Wednesday Aug 27
Thurs 26.5

Comp	5	5	40	5	6	40
H184	11	36	5	11	37	4.5

Comp	5	7	21	5	8	21
B894	11	37	49.5	11	38	49

Comp	5	9	32	5	11	2
H207	5	14	49.5	5	16	19.

Comp	5	12	5	5	13	36
H202	5	14	37	5	16	7.5

Comp	5	15	20	5	16	20.
H192	11	46	54	11	47	53.5

Comp	5	16	54	5	17	58
H210	11	35	54	11	36	54.5

Comp	5	19	7	5	20	7
B15-31	11	47	35	11	48	34.5

Comp	5	26	42	5	27	43
H220	11	49	17.5	11	50	17

Comp	5	29	5	5	30	5
Sh222	12	12	44.5	12	13	44

Comp	5-30	47	5-31	47
A228	11 52	25.5	11 53	25

Comp	5-32	10	5-33	10
B4608	12 6	12	12 7	11.5

Comp	5-33	29	5-34	24
A211	12 0	21	12 1	10.5

Comp	5-35	18	5-36	14
A218	11 55	28	11 56	28.5

Comp	5-39	45	5-40	45
F1731	12 3	52.5	12 4	52

Comp	5-41	5-1	5-42	5-1
H223	11 56	5-5.5	11 57	5-5

Comp	5-44	6	5-45	6
H217	12 5	48	12 6	47.5

Comp	5-45	49	5-46	44
H225	12 0	42.5	12 1	42

Comp	5-47	30	5-48	30
F1674	12 1	59.5	12 2	59

Comp	5-49	7	5-50	7
H229	12 10	46	12 14	45.5

Camp	5	52	17	5	53	17
F1699	12	12	29.5	12	13	29.5

Camp	5	53	31	5	54	31
F1759	12	14	24	12	15	23.5

Camp	5	54	46	5	55	46
F1676	12	2	35.5	12	3	35.5

Camp	5	56	47	5	57	47
F1704	12	9	2.5	12	10	2

Camp	5	58	33	5	59	33
H208	12	25	40.5	12	26	40.5

Camp	6	2	53	6	2	53
H200	12	44	29.5	12	45	29.5

Camp	6	4	56	6	5	57
H215	12	37	49.5	12	38	52

Camp	6	6	12	6	7	10
B1559	12	35	37.5	12	36	35

Camp	6	8	30	6	9	30
F1713	12	36	54	12	37	54.5

Camp	6	10	8	6	11	8
F1510	12	48	32	12	46	31.5

Comp	6 11	5.5	6 12	5.5
F1698	12 18	15.5	12 19	15

Comp	6 17	0	6 18	0
F 1700	12 35	10.5	12 36	10

Comp	6 18	50	6 19	50
F1708	12 44	13.	12 45	12.5

Comp	6 20	39	6 21	40
B1501	12 49	22.5	12 50	23

Comp	6 22	25	6 23	25
B1599	12 52	15	12 52	14.5

Comp	6 24	10	6 25	10
F1705	12 46	41.5	12 47	41

Comp	6 26	2	6 27	2
F1707	12 36	19.5	12 37	19

Comp	6 28	40	6 29	40
B184	12 58	24	12 59	23.5

Comp	6 30	18	6 31	18
~~H184~~	12 0	5.5	12 1	5
B294				

Thursday 28.

Comp ~~6 25 15~~ ~~6 26 15~~

H 184 ~~12 43 7.5~~ ~~12 44 7~~
~~6 28 15~~ ~~6 29 15~~

Comp 12 46 7 12 47 6.5

B 894 6 30 30 6 31 30
 12 48 24.5 12 49 24

Comp 6 32 33 6 35 33

H 207 6 29 25 6 32 24

Comp 6 35 51 6 37 20

A 202 6 29 56.5 6 31 25

Thu 66 5-

66 5

66, 5

Friday 29. - 1887

Thurs 1 6 5.5
 6 5-
6 5-

Comp	8	15	9	8	16	9
H184	2	20	16.	2	21	15.5-

Comp	8	16	58	8	17	58
B894	2	22	7	2	23	6.5-

Comp	8	18	23	8	19	52
H207	8	6	42	8	8	10.5

Comp	8	22	50	8	24	20
H202	8	8	21	8	9	50.5

Comp	8	27	12	8	28	11
H192	2	33	27	2	39	26.5

Comp	8	29	24	8	30	24
H210	2	22	58.5	2	23	58

Comp	8	31	58	8	32	58
B1571	2	35	4.5	2	36	4.

Comp	8 37 46	8 38 46
H220	2 34 55	2 35 54.5

Comp	8 39 4	8 40 5
H222	2 52 32.5	2 53 33

Comp	8 40 55	8 41 55
H228	2 37 12	2 38 11.5

Comp	8 42 31	8 43 31
B1608	2 51 24	2 52 23.5

Comp	8 50 6	8 51 7
H211	2 46 38	2 47 38.5

Comp	8 47 5	8 48 5
H218	2 41 44	2 42 43.5

Comp	8 51 35	8 52 35
F1701	2 55 15	2 56 14.5

Comp	8 53 3	8 54 3
H223	2 42 58	2 43 37.5

Comp	8 54 27	8 55 27
H227	2 50 43.5	2 51 43

Comp	8 56 33	8 57 33
H225	2 46 31.5	2 47 3

Comp	8	57	57	8	58	57
F1673	2	47	7	2	48	6.5

Comp	9	0	17	9	1	17
H229	2	59	22	3	0	21.5

Comp	9	3	36	9	4	36
F1689	2	58	27	2	59	26.5

Comp	9	4	53	9	5	53
F1739	3	0	10.5	3	1	15

Comp	9	6	48	9	7	48
F1676	2	49	8.5	2	50	8

Comp	9	8	55	9	9	55
F1704	2	55	43.5	2	56	42

Comp	9	10	27	9	11	28
H208	3	12	17.5	3	13	18

Comp	9	15	27	9	16	30
H200	3	34	56.5	3	32	59

Comp	9	17	20	9	18	21
H215	3	24	58	3	25	58.5

Comp	9	19	4	9	20	4
B1559	3	22	10	3	24	9.5

Comp	9	20	45	9	21	48
F1713	3	23	50.5	3	24	50

Comp	8	22	16	8	23	18
F1570	3	22	28	3	23	27.5

Comp	8	24	42	8	25	42
F1698	3	5	32	3	6	31.5

Comp	9	28	59	9	29	58
F1700	3	21	46.5	3	22	45

Comp	9	30	47	9	31	
F1708	3	30	49.5	3	31	

Comp	9	33	42	9	34	42
F1706	3	33	47	3	34	46.5

Comp	9	35	50	9	36	50
B1501	3	39	14	3	40	12.5

Comp	9	37	15	9	38	15
B1599	3	41	50	3	42	49.5

Comp 9 28 38
F1705 3 30 48.5

9 29 28
3 36 48

Comp 9 40 5
F1707 3 24 54

9 41 5
3 25 52.5

Comp 9 46 8
H184 3 50 30

9 47 8
3 57 29.5

Comp 9 47 55
B894 3 52 19

9 48 56
3 53 19.5

Sat 30.

Pms 31.15

Comp	8 18	18	8 19	18
H-184	2 11	31	2 12	30.0

Comp	2 20	6	2 21	6
B 894	2 13	20.5	2 14	20.

Sunday Aug 31.

Thurs 65- 1900 29.9

64.5
3 64.5
820 38 82138
21 57.5 2257

Comp 6 34 24 6 35 24
H 184 12 16 36 12 17 35.5
8 23 38
2 4 55

Comp 6 36 22 6 37 22
B 894 12 18 35 12 19 34.5

~~Comp 6 38 18 6 40 22~~
~~H 207 6 11 46 6 13 46.5~~

Comp 6 42 7 6 43 34
H 202 6 12 14 6 13 40.5

Comp 6 44 47 6 46 24
H 207 6 18 41 6 20 17.5

Comp 8 13 1 8 14 1
H 192 1 55 40.5 1 56 40

Comp 5 14 33 8 15 33
H 210 1 44 28 1 45 27.5

Comp 8 16 3 8 17 3
B 10-71 1 55 31.5 1 56 21

Comp	7 5	25	7 6	25
H220	12 39	29.0	12 40	29

Comp	7 7	5	7 8	5
H222	12 57	41.0	12 58	41

Comp	7 8	27	7 9	25
H228	12 46	42.0	12 47	40

Comp	7 10	37	7 11	37
B1608	12 56	40	12 57	39.5

Comp	7 12	43	7 13	43
H211	12 57	18.0	12 52	15

Comp	7 14	45	7 15	45
H218	12 46	15	12 47	14.5

Comp	7 19	0	7 20	2
F1701	12 54	33.5	12 55	35

Comp	7 21	45	7 22	45
H223	12 48	11.5	12 49	11

Comp	7 23	53	7 24	53
H217	12 57	3.5	12 58	3

Camp	7	25	26	7	26	26
H225	12	57	49	12	52	48.5

Camp	7	28	42	7	29	42
F1674	12	54	49	12	55	48.5

Camp	7	30	3	7	31	5
H229	1	5	54.5	1	6	56.0

Camp	7	33	45	7	34	45
F1699	1	5	33.5	1	6	33

Camp	7	35	10	7	36	10
F1709	1	7	22	1	8	21.5

Camp	7	37	5	7	38	5
F1676	12	56	17.5	12	57	17

Camp	7	38	43	7	39	43
F1704	1	2	25	1	3	24.5

Camp	7	41	0	7	42	0
H208	1	19	52	1	20	57.5

Camp	7	44	45	7	45	45
H200	1	38	26	1	39	25.5

Camp	7	46	13	7	47	13
F1507	1	30	54.5	1	31	52

Comp	7 47	35	7 48	35
B1559	1 28	42	1 29	41.5

Comp	7 49	52	7 50	52
F1713	1 29	58	1 30	57.5

Comp	7 52	34	7 53	34
F1570	1 34	48.5	1 35	48

Comp	7 53	59	7 53	59
F1698	1 11	39.5	1 12	39

Comp	7 58	23	7 59	23
F1703	1 28	7.5	1 29	7

Comp	8 0	40	8 1	40
F1738	1 37	32	1 38	31.5

Comp	8 2	33	8 3	34
B1501	1 43	0	1 44	0.5

Comp	8 4	48	8 5	48
B1599	1 46	29.5	1 47	29

Comp	8 6	41	8 7	41
F1705	1 40	57.5	1 42	57

Comp	8 8	37	8 9	37
F1707	1 30	19.5	1 31	19

Monday Sept 1.

Thurs 66
 65.5 Bar 20.18
 66

Comp 65.7 15 65.8 16
 H183 1227 20 1228 23.5

Comp 65.9 14 7 0 15
 43544 1229 22.5 12.00 20

Tuesday

66

65.5-

65.5-

Bar 36.4

Comp	7	22	13	7	23	13
H184	12	40	15.5-	12	41	15

Comp	7	24	30	7	25	30
H184	12	42	32.5-	12	43	32

Comp	7	26	32	7	28	2
H207	6	43	15	6	44	14.5-

Comp	7	29	0	7	30	30
H202	6	42	51.5	6	44	21.

Comp	7	32	50	7	33	50
H192	12	52	5	12	53	4.5

Comp	7	34	21	7	35	21
H210	12	40	48	12	41	47.5-

Comp	7	35	40	7	36	40
B1571	12	51	42	12	52	41.5-

Comp	7	51	32	7	52	32
H220	1	1	23.5	1	2	23

Comp	7	53	28	7	54	28
H222	1	20	3.5	1	21	3

Comp	7	55	10	7	56	10
H228	1	4	13	1	5	12.5

Comp	7	56	20	7	57	25
B1608	1	18	28	1	19	27.5

Comp	7	58	25	7	59	25
H211	1	12	48	1	13	47.5

Comp	7	59	52	8	0	52
H218	1	7	2.5	1	8	2

Comp	8	4	10	8	5	10
F1731	1	15	27	1	16	26.5

Comp	8	6	~~48~~	8	7	48
H223	1	8	57.0	1	9	56.5

Comp	8	8	26	8	9	27
H217	1	17	23.5	1	18	23

Comp	8	10	35	8	11	36
H225	1	12	41.5	1	13	42

Comp	8	11	57	8	12	57
F1674	1	13	52	1	14	57.5

Comp	8	14	3	8	15	3
H229	1	25	32	1	26	31.5

Comp	8	18	0	8	19	0
F1699	125	39		1	26	38.5

Comp	8	20	6	8	21	7
F1739	1	28	0.	1	29	0.5

Comp	8	21	50	8	22	50
F1676	1	16	46.5	1	17	46

Comp	8	23	14	8	24	14
F1704	122	41.5		1	25	41.

Comp	8	25	0	8	26	0
H208	139	46.5		140	46.0	

Comp	8	27	46	8	28	46
H200	1	57	31	1	58	30

Comp	8	30	5	8	31	5
H215	150	42		157	41.5	

Comp	8	31	53	8	32	53
B1599	148	53.5		149	53	

Comp	8	33	32	8	34	33
F1712	1	49	31.5	1	50	32
Comp	8	35	40	8	36	40
F1570	1	58	57.5	1	59	57
Comp	8	36	50	8	37	50
F1698	1	30	13	1	31	12.5

Comp	8	41	29	8	42	29
F1705	1	47	3.5	1	48	3

Comp	8	42	42	8	43	42
F1738	1	55	22	1	56	21.5

Comp	8	44	31	8	45	32
B1501	2	0	54.5	2	1	55

Comp	8	46	32	8	47	32
B1599	2	4	13.5	2	5	13

Comp	8	48	0	8	49	0
F1705	1	58	3.5	1	59	3

Comp	8	49	36	8	50	36
F1767	1	47	5	1	48	4.5

Comp	8	52	15	8	53	15
H154	2	9	33	2	10	32.5
Comp	8	54	31	8	55	31
B154	2	11	49	2	12	48.5

Wednesday

Thurs 62
61.5
61.5

Bar 30.2

Cmfs	8	15	50	8	16	50
A184	1	21	53	1	22	32.5

Cmfs	8	17	58	8	18	58
B844	1	23	46.5	1	24	40.

Camp 9 18 9 9 19 9
 F1699 2 1 30.5 2 2 30

Camp 9 19 44 9 20 44
 F1709 2 3 12.5 2 4 12

Camp 9 21 54 9 22 54
 F1676 1 52 27 1 53 26.5

Camp 122 42 123 42
 F1704 1 57 59.5 1 58 47.

Camp 9 25 24 9 26 24
 H208 2 15 57 2 16 56.5

Camp 9 29 52 9 30 52
 H200 2 30 32 2 36 31.5

Camp ~~9 31 24~~ 9 32 21
 H215 ~~2 27 48~~ 2 28 46.5
 9 32 24 9 33 24
 9 28 48.5 2 29 48

Camp 9 35 15 9 36 15
 H1553 2 27 59.5 2 28 59

Camp 9 36 57 9 37 57
 F1710 2 28 40 2 29 39.5

Camp 9 38 39 9 39 39
 H1570 2 27 38 2 38 37.5

Camp	940	24	941	24
F1698	29	19	210	18.5

Camp	946	24	947	24
F1703	227	37.5	228	37

Camp	948	8	949	8
F1758	236	24	237	20.5

Camp	949	45	950	45
B1881	241	54.5	242	54

Camp	951	30	952	31
B1899	245	0	246	0.5

Camp	953	44	954	44
F1705	234	27.5	235	37

Camp	955	27	956	27
F1707	228	30	229	29.5

Camp	958	10	959	10
A184	257	9.5	252	9

Camp	959	44	100	44
B894	252	43	253	42.5

6th Voyage

From Aht Oct 4th - Boston Oct 17

Coincidence Comp. at Aht.

Sept. 28th Oct 2nd & 3rd - with him

start give the date complete for
the Voyage -

Mem. Write to Mr. Hartup for

direct comparisons of Chron. which

do not find for the 3-4-5 & 6 Voyages
for time start in April at 22nd

and July previous to 12th

found for July 10th
they was determination of value
of time this & error of first -

Coincidence comparisons July 12th

and Aug. 18th ^{18th 18th} August to 20

separat. into the Roman Books

For Mr. Huntington with 25¢

5th Voyage

From Boston Sept 16th to Sept 28th

Coincidence Comp. Sept 28th

Oct 2nd

Oct 3rd

There are also Star observations

Sept 28th & Oct 2nd & 3rd

data for this voyage complete

4th Voyage

Left Night Aug 23 at Boston Sept 4th

For Camp en voyage see this Book -

State wanting only Mr Henry

back for comparisons on Aug. 18th

referred to in Mr. Sturtevant's letter of

Aug. 25th - found everything

Mr C & Mount Cook with

1507 - ^{in Aug 18} there are however

stuck. of direct comparison

H223
 Cent 2 24 11 2 25 17
 10 40 32.5 10 41 32

H221
 Cent 2 22 52 2 23 47
 10 49 53.5 10 48 52

H218
 Cent 2 18 19 2 19 19
 10 39 42.5 10 40 42

H211
 Cent 2 16 19 2 17 20
 10 45 35.5 10 44 36

B1608
 Cent 2 15 7 2 16 6
 10 48 45.5 10 49 44

H228
 Cent 2 13 43 2 14 43
 10 36 5.5 10 37 5

H222
 Cent 2 12 6 2 13 6
 10 50 32 10 57 31.5

13894	11	5	52.5	11	9	55
Comp	10	35	19	10	36	22
1184	11	4	20.5	11	5	20
Comp	2	33	5.5	2	34	55
14229	10	57	6	10	58	6.5
Comp	2	36	49	2	31	50
14225	10	34	13	10	35	12.5
Comp	2	28	4	2	29	4
14217	10	49	16	10	50	15.5
Comp	2	26	36	2	27	36
Comp	2	29	22	2	30	27
1034	10	34	22	10	45	21.5

1851 3rd Voyage

Left Boston Aug. 6 arrived at Chicago 18th

By Mr. Thompson letter of Aug 25th

He says 'Mr. Thompson has the comparison -

now of Aug. 18th in his note book - 5. No 9

There are given lat. for personal

Equation between Mr. Thompson & Thomas

Clock start for Aug 18th to 25th

Coincidence comparisons Aug 23rd

& Hunting Mr. Thompson book with the

Coincidence comparisons of Aug 18th

only found those were that

in this book of comparisons Aug 18

but no comparison with clock

& Jan copy also copy on

one of comparisons sheet of May

with said clock - But Not of

May with 1507 There is a
March Comparison sheet

Star abt Mr H states were
taken only on July 10th
Compositions on voyage
See also Richards note book for
more on -

For this voyage as for the first
Yankee Ship 220

1510 - 222 - 1498 - 1676 - 1704 - 1649 - 1709

1559 - 1499 - 1705 - 1707 - 1674 - 215 - 211

1731 - 184 - 210 - 1501 - 1571 $\frac{2}{894}$ 1608

192 - 218 - 208 - 228 - 1713 - 1739 - 1738

207 - 202 - 220 - 229 - 225 - 223 - 217 - 200

Compositions at the of

July 12th Boston July 24th
1857 2nd Voyage - Liverpool

Chronometric Expedition

- 1851 -

of which papers are follows from Mr.

Sturtevant -

for the voyage from Boston Apr. 9th to

Apr. 22nd

Compendium of J. H. 211 - 215 - H. 1510 -

" " 202 - 207

" Ship 226 appears to have been

entered and afterwards cut out

There were 6 Chert. which were
cut so that the comparison of one

(226?) is wanting

See Memo. of J. C. R. for Ratio & error

in Boston of 1510 - 211 - 215 -

There was some difficulty experienced upon the landing of the chronometers employed on the Chronometrical Ex. of the U.S.C.S. ~~at~~ on the ~~17th~~ ~~Aug~~ arrival of Steam America, Aug 17. in consequence of the Custom House Officer obliging said instruments to be taken to the Depot -

Will you be kind enough to convey instructions to be given to the Custom House officers. that these instr. ^{may} be ~~allowed~~ ^{all must be passed} to be ~~passed~~ immediately to the Liverpool

Observatory, where they will
return by first steamer to
Boston -

These chorists are all of
English.
~~British~~ Manuf. and are
used only for the determi-
nation of the song. but Camb &
Liverpool - I understand
that some time since ^{similar} ~~some~~
instructions were given
~~to the officers~~, but these
on duty in which seemed
to be entirely forgotten
by the ^{these} officers on duty -

These chronometers are all
 of British manufacture,
 and are used by the U.S. C.S.
 for the more accurate
 determination of the long.
 between ^{the} Liverpool & Camb.
 Observatories. and are sent
 from the Cunard Steamship
 to the Liverpool Observatory
 for comparison, ~~and to be~~
 while said Steamship is in
 port. and ~~are~~ until she is
 ready to sail for the U.S.
 when they are intended to
 be carried on board

Hon Abbott Lawrence,

Son.

My object in
writing this is to ~~request~~
ask the favor of you to confer
instructions ^{to be given} to the Collector of
Liverpool for passing the
Chronometers of the United
States Coast Survey to be
~~passed~~ thru the Custom
House without ^{the} delay usually
attended upon this landing -

91 61 2

47 8 3

69 5 6

