

COMPARISONS OF ERRORS OF CHRONOMETERS.

MURRAY 652, and TOBIAS 664, at WINNIPEG.

(Bishop's Court, St. John's College.)

Day. 1892.	Hour.	664		Errors. + fast; - slow.		REMARKS.
		Fast of 652.	Slow of 652.	664	652	
Nov. 22.....	8 p.m.		38.5			
" 23.....	"		35.8			
" 24.....	"		33.8			Up to 8 p.m. on the 27th both chronometers were in a room, mean temperature about 65° with a range of perhaps 20°.
" 25.....	"		31.3			
" 26.....	"		29.3			
" 27.....	"		28.9			664 in transit house on 27th from 8 to 10 p.m.
" 28.....	"		21.4			664 in transit house on 28th from 8 to 12 p.m.
" ".....	12 m.		22.4			
" 29.....	9 a.m.		22.4			
" ".....	8 p.m.		22.0			664 in transit house; temp. 11°.
" ".....	12 m.		18.3	+6.1	+24.4	
" 30.....	9 a.m.		17.8		+24.1	Errors from observation.
" ".....	10 p.m.		16.8			
Dec. 1.....	9 a.m.		15.8		+23.5	Error from rate.
" ".....	5 p.m.		15.3			
" ".....	7 "		17.2 (?)			664 in transit house (from 5 to 7 p.m., temp. - 5°.) 17.2 probably a mistake for 7.2.
" ".....	8 "		7.5			
" ".....	10 "		4.0			664 in transit house at temp. - 5°.
" ".....	9 a.m.		3.3		+23.9	
" ".....	11.30 "		3.2			Error from rate.
" ".....	2 p.m.		3.0			
" ".....	3 "		2.3			Owing to unsteady running of 664 on exposure, it was decided to use it hereafter as the standard, and 652 was set at work.
" 3.....	9 a.m.		1.2	+21.1	+23.3	
" ".....	9 p.m.		0.7			Errors from rate.
" 4.....	8 a.m.	0.5		+22.2	+21.7	
" ".....	6.30 p.m.	1.1				652 exposed during transit work to temp. 0°.
" ".....	11 p.m.	1.5		+22.6	+21.3	
" 5.....	9 a.m.	1.9				Errors from observation.
" ".....	10 "	2.2				
" ".....	1 p.m.	2.3				652 in transit house, temp. 8° below zero.
" ".....	6 "	2.6		+22.7	+20.1	
" ".....	11 "		42.8			652 in transit house, temp. 11° below zero. Jump forward occurred after receiving Chicago time, probably in carrying chronometer home.
" 6.....	7 a.m.		41.8			
" ".....	9 "		42.2			652 at observing station; temp. 11° below zero.