Chains

arc; 8°39'N. on the decl. arc; and mark a point in the meridian determined with the solar , by a tack in the stake already driven 5 chs. N. of my station; this mark falls 0.4 ins. east of the meridian established by Polaris observations.

The solar apparatus, by p.m. and a.m. observations, defines positions for meridians, respectively about 42" and 21" east of the meridian established by the Polaris observations; therefore I conclude the adjustments of the instrument are satisfactory.

The magnetic bearing of the true meridian at 8h.15m. a.m. is N.18°30'W.; the angle thus determined gives the magnetic declination 18°15'E.

Similar teste were made on the Burt solar compass, including the correction of the level and collimation errors.

August 31, 1912: At 9h.00.m. a.m. l.m.t., I set off 40° 35'N. on the lat. arc; 8°38' on the decl. arc; and determine a meridian with the solar at the cor. of Ts. 31 and 32 N., Rs. 30 and 31 E., heretofore described; thence, I run

North on a random line along the W. bdy. of T.32 N., R. 31 E., setting temp. $\frac{1}{4}$ sec. and sec. cors. at intervals of 40.00 chs. and at 477.77 chs., intersect the S. bdy. T. 33 N., R. 30 E., 27.33 chs., N89°31'W. from the cor. of Ts. 32 and 33 N., Rs. 30 and 31 E., which is a slate rock, 10x8x8 ins. above ground, firmly set, and marked and witnessed as described by the surveyor general. This falling being in excess of the allowable limit of error, I therefore make the random line the true line and at the point of intersection I

Set an iron post, 3 ft. long, 3 ins. dia., 24 ins. in the ground, for closing cor. of T. 32 N., Rs. 30 and 31 E., with brass cap mkd.;