

proceeded to Lake Pohenagamook. Both parties began work about the 1st of March. The account given of this work in a letter from Capt. Robinson written to Professor Airy will convey a very clear idea as to the *modus operandi*. The letter says in part — "I have the pleasure of informing you that we have completed the running of the line from the outlet of Lake Pohenagamook to this point. The measured distance is $64\frac{1}{2}$ miles — agreeing closely with the computed one, and the error of the course or the distance between the ends of our two lines on the ridge where we met each other was 341 feet. I feel sure we should have been nearer than this but for the circumstances of many of our observations having been made during the winter which was a severe one." "Capt. Estcourt has expressed himself as highly satisfied, but, of course, we cannot venture to take any credit to ourselves until we have your opinion. Trigonometrically done, an error of 341 feet in a side would be very great, but astronomically I hope it will pass creditably." "As soon as we had laid off the direction of the line and had cut some four miles we came to high ground, the line passing over the shoulder of Sugar Loaf Hill. From a point on this we commanded a good view over the country up to $35\frac{1}{2}$ miles on the line, and by raising a platform we saw the $42\frac{1}{2}$ mile point. We pitched our tents on Sugar Loaf Hill, set up the transit and directed the setting of points in the line up to the time of meeting Mr. Pipon from the opposite end." "Our mode of proceeding was as follows: — At the N.W. branch I used the altitude and azimuth instrument as a transit, setting up a meridian mark, and at the same time I used the transit for getting the correct time. The altazimuth instrument stood 35 feet east of the transit, the axis being carefully levelled, and when a circumpolar star crossed the centre wire, it was also intersected by the altazimuth instrument and a meridian mark afterwards fixed under it. This was tried and re-tried with the instrument reversed. The angle was then laid off by the altazimuth instrument and a lamp on Sugar Loaf Hill was lined in by signal and fixed under the centre wire. The transit was then moved up to the point and a good firm stand