

lowed by a small cross. The year of Champlain's first visit to Canada, was 1603. On departing from Honfleur with his friend Pontgravé, in that year, he may have provided himself with this instrument, then fresh from the manufacturer's hands. The weight of the whole apparatus is about three pounds. The method of taking an observation must have been somewhat thus: allowing the instrument to hang freely, the revolving bar would be directed towards the sun at noon in such a manner that a ray might pass through both the sights to the eye; the sun's meridian altitude would thus be roughly ascertained, and the latitude of the place approximately deduced by estimation. With the circle divided only into degrees, and unprovided with any contrivance analogous to the modern Vernier, it is surprising that Champlain should have been as nearly correct as he generally is in his latitudes.

The term 'astrolabe' as indicating simply an instrument for taking altitudes seems to have continued longer in use among the French savans than among the English. No English scientific man would, I think, at the first glance, designate the object which has been engaging our attention as an astrolabe. He would call it possibly a pocket astronomical circle, a portable mural, or a rude theodolite. But in the seventeenth century, among the French, the term seems to have familiarly presented itself, and the use of it appears to have been perpetuated among the French Canadians long after the time of Champlain. For ordinary purposes, the simple instrument probably continued to be employed in Canada and France long after Vernier's improvements. Thus in 1687, seventy-four years after Champlain's first excursion up the Ottawa, we have the Baron Lahontan, when starting westward from Fort Niagara, under orders from the Governor-in-Chief, De Denonville, congratulating himself on having brought with him from Montreal, his 'astrolabe,' just as a modern officer of a scientific turn of mind, would write of his aneroid or sextant. 'Je me suis heureusement garni de mon astrolabe en partant de Montreal,' he says (*Voyages* i. 103.): 'avec lequel je pourrais prendre les hauteurs de ce lac (Frontenac or Ontario). Il ne me sera moins utile dans mon voyage, qui sera de deux ans ou environ, selon toutes les apparences.' 'Prendre le hauteur,' is also Champlain's phrase. Thus in his journal on the 4th of June, 1613, after passing the Chaudière fall, he makes an entry in his old French thus: 'Je prins le hauteur du lieu et trouvay