

PREFACE.

ORIGINAL PLAN OF THE WORK.

The work now presented to our patrons, at a considerably later date than was originally intended, was commenced in the autumn of 1871. We then proposed to publish an atlas in which special information of the Province of Ontario was to be given in a series of maps of all of its counties, on the scale of six miles to an inch, with a minuteness of detail, extending to the representation and laying out of townships into concessions and lots. It was to contain a general map of the Dominion, separate maps of each of the Provinces, enlarged plans of the cities in Ontario and Quebec and various auxiliary maps illustrating the Geology, Climate and Resources of the country, together with a general map of Europe.

CHANGE OF PLAN.

At the urgent solicitation of citizens of Montreal and other parts of the Province of Quebec it was deemed advisable, after a considerable portion of the country had been canvassed, to enlarge the scope of the work and give the same minute details for this Province that were proposed for Ontario, by adding a series of county maps on the same scale of six miles to an inch. In order to accomplish this it has been found necessary to increase the size of the pages from that originally intended, viz: $13\frac{1}{2} \times 16\frac{1}{2}$, to 14×18 inches. We have also added a double page general map of the United States. By this means, while the patrons of the work get a considerably larger amount of valuable information than had been agreed upon, it is expected that the increased sale will warrant the additional trouble and expense.

UNEXPECTED DIFFICULTIES.

The construction of these additional maps has been attended with far more labour and expense than was anticipated. The materials available for this purpose, in the form of plans of surveys, differ widely in their reliability, in the scale upon which they are drawn, and in the amount of detail exhibited. No systematic survey of the Province was ever made, but detached plans of all the settled portions, and of considerable areas which still remain unsettled, are contained in the archives of the Crown Land Department at Quebec. The work of compiling and uniting all the various and frequently discordant materials into one harmonious series of

maps, so as to eliminate the largest amount of error, has been extremely perplexing and difficult. It would, of course be, preposterous to claim that perfect accuracy has been attained. But the promise is made, that all errors which may hereafter be discovered, and indicated to the author or publisher, will be corrected in future editions. Of course the change in the plan of the Atlas has caused a delay in the time of its completion, but we trust our patrons will feel that the additional value given to the work will far more than compensate for the delay thus caused.

GENERAL UTILITY OF MAPS.

A few words relating to the value of works of this kind may not be out of place. In promoting emigration to a new country their usefulness is clearly evident. Since they show the topographical features of the country, its rivers, lakes, mountains, prairies, etc., with their geographical relations, the immigrant is thereby able to compare inducements held out to him in the way of convenience of access, proximity to previous settlements and to markets for his produce, and thus to avoid a leap in the dark when selecting his future home. Other things being equal, a country which has been explored and its attractive features intelligibly represented on a good map would far more rapidly become settled than a "terra incognita."

But the usefulness of maps does not cease with the first occupation of a country. On the contrary, the more it becomes settled, the greater the need of an exact and minute knowledge of its topography. New facilities for conveyance and travel are continually required. Centres of trade, of manufactures, of the administration of local government and of great educational institutions grow up to meet the wants of the people. Easy access to these cities and villages, and from them to more distant places, becomes indispensable, whence occurs a continued multiplication of the public highways. The location and construction of these public works must be preceded by a careful determination of the most favorable routes. The necessity for first consulting an accurate map of the different routes proposed is obvious.

EDUCATIONAL USES.

Besides the direct practical uses of local maps they have an educational value, of which it is well not to lose sight. Instruc-

tion in the geography of the whole world is very properly taught, in an elementary way, even in the primary schools, as a branch of the most common education. There can be no doubt that this would be most advantageously supplemented if not preceded, by a careful study of the minute geography of the student's own province, county and immediate vicinity. Even a child forms a better idea of the nature and uses of a map when he is able to observe and compare the relative position of familiar haunts and to trace out the routes of his rambles about his home.

CONSTRUCTION OF THE MAPS.

Nearly all of the maps in this atlas, including those of the Counties in Ontario and Quebec, are from original drawings by Mr. Walling, aided by a competent corps of assistants. Among these may be mentioned the names of Thomas W. Baker and Melville Clemens, who rendered very valuable services in preparing the Ontario maps; also of H. S. Packard and B. T. Thulstrup, who finished the final draughts for photo-lithographing, of the Counties of Quebec. The excellent mechanical execution of these draughts is made manifest by the process of reproducing them, the maps of the counties in the Atlas being fac-similes, on a reduced scale, of the original drawings.

LATITUDES AND LONGITUDES.

No trigonometrical survey of the whole country or of any considerable portion of it having been made, the most reliable mode of connecting together, with any degree of accuracy, the detached surveys of different sections, was by ascertaining, astronomically, the latitudes and longitudes of a great many conveniently located points. This is a simple process in theory, but in practice it requires instruments of the nicest precision, and the exercise of great care and skill in their use.

Latitudes north of the equator are ascertained by measuring the angles of altitude above the horizon, of the north pole of the heavens, near the pole star. Longitudes, or more properly differences of longitude, are determined by measuring the intervals of time which elapse between the passages of a star across the meridians of the places in question, thus making use of the dynamical principle that the rotation of the earth on its axis is precisely uniform in its angular velocity. The initial or zero point for longitudes